

Industrial Power Tools 2010

The world's premier productivity solutions



Sustainable Productivity

Atlas Copco

CONTENTS

PNEUMATIC ASSEMBLY TOOLS	11	GRINDERS	189
Pneumatic screwdrivers	14	Electric grinder – Brazor	194
Pistol grip models	16	Turbo grinders and sanders	196
Straight models	20	Die grinders	200
Angle models	22	Straight grinders	202
Impact wrenches	25	Vertical grinders	206
Pistol grip models	27	Vertical sanders	208
Straight models	29	Angle grinders	210
Hydraulic impulse nutrunners – ErgoPulse	33	Angle sanders	212
Pistol grip models	35	Orbital and random orbital sanders	214
Straight models	38	Dust extraction	216
Controlled impulse nutrunners	42	Router	219
Pulsor C	43	Nibbler	219
Pneumatic nutrunners	45	Circular cutters	220
Angle models	46	PERCUSSIVE TOOLS	221
Straight models	61	Chipping hammers	224
Pistol grip models	66	Scalers	226
BATTERY ASSEMBLY TOOLS	73	Rammers	229
BCP screwdriver, clutch type	76	Riveting systems	230
BTV nutrunners, clutch type	78	Riveting hammers	231
Tensor STB nutrunners transducerized type	81	Bucking bars	233
ELECTRIC ASSEMBLY TOOLS AND SYSTEMS	85	Chisels	235
Electric screwdrivers	88	DRILLS	239
EBL	89	Pistol grip drills	242
MicroTorque	91	Straight drills	246
Tensor STR	94	Angle drills	248
Tensor DL	95	Micro stop drills	252
Tensor SL	96	Tappers	254
Electric nutrunners	100	Screw-feed drills	256
Tensor DS	102	AUTOMATIC DRILLING AND TAPPING UNITS	257
Tensor S	108	Automatic drilling and tapping units	258
Tensor ST	111	Dimension sketches	262
Tensor STR	119	AIRLINE ACCESSORIES	265
Controller and software	127	Air preparation units	268
DS/DL Drive	129	Optimizer air tool oil	274
Power Focus	130	Direct lubrication units	275
Software ToolsTalk	132	Quick couplings	277
Quality Integrated Fastening	133	Claw couplings	289
Station hardware	135	Ball valves	290
Station software	137	Swivel connectors	291
TOOL ACCESSORIES	139	Fittings	292
Torque arms	140	Blow protector	294
Bits and power sockets	150	Hoses	295
FIXTURED APPLICATIONS	155	Spiral hoses	298
Fixture nutrunners QST	158	Productivity kits	299
Fixture nutrunners ETX	162	Hose reels	300
Controllers and software	164	Balancers	304
Power MACS	165	Blow guns	307
MSB, DB	166	Test equipment	308
Power FOCUS	169	AIR MOTORS	309
Software ToolsTalk	170	Vane air motors	310
QUALITY ASSURANCE IN TIGHTENING	171	LZB vane air motors	311
ACTA 400	173	LZL vane air motors	311
ACTA 4000	174	Air motor support	312
QRTT Transducers	175	HOISTS AND TROLLEYS	314
IRTT-B Transducers	175	Air hoists	315
SRTT-B Transducers	176	Trolleys	316
MRTT-B Transducers	177	SERVICE	318
ACTA MT Transducer	178	ToolScan RCM	319
STwrench	180	Service agreements	320
BLM TPT, μ -Tester	186	Calibration and ToolStart	321
BLM Joint Simulator Bench AD	187	DECLARATION OF NOISE & VIBRATION EMISSION	322
Joint Simulator Bench 1060	187	TOOL KEY	329
ToolsTalk QAT	188	TOOL DESIGNATIONS	335

Whatever your business, we can add value



The global technology leader, Atlas Copco is a true solutions provider to the manufacturing industries of the world. You will find the high-tech tools, assembly systems and process software of the future in our range today. From big bolt fastening technology for offroad vehicles, down to “micro” tools for tiny fasteners in the electronics industry, Atlas Copco has the solutions you need to stay ahead of the game.

You talk, we listen

For us, listening is crucial. Whether you build vehicles, aircraft, appliances or electronics, your ongoing feedback gives us valuable insights into your business and the challenges you face to remain competitive. Our response? A continuous stream of innovations that raise productivity in your operation.

We lead, others follow

Atlas Copco leads the world for high-tech operator-friendly tools supported by advanced process control and quality assurance software. We currently have more than 4,000 tools in our range and our dynamic product development program generates a large number of innovative new products every year.



Lean production

In the automotive and other industries our high-performance, hand-operated and fixtured assembly tools and extensive know-how make a major contribution to lean production. Every third car in the Western world was built using our cutting-edge fastening solutions.

Safety critical applications

On assembly lines in the manufacturing industries many joints are safety critical. Atlas Copco controlled fastening tools, fixtured solutions and market-leading assembly process software enable our customers to meet today's demands for joint validation, documentation and traceability.

Productivity starts with people

Atlas Copco continues to lead the field for ergonomically designed tools that minimize operator fatigue and increase individual productivity. Outstanding examples are our vibration-damped riveting systems, chosen by major aircraft manufacturers, and our turbo-powered grinders that have made heavy tasks lighter for tool operators in heavy metal fabrication operations.

Committed to sustainable productivity

Our brand promise embraces virtually all aspects of our operations. It means that Atlas Copco people do everything they can to ensure reliable, lasting results with responsible use of resources – human, natural and capital.

In our own operations worldwide we focus on maintaining a high competence level, and health and safety in the workplace. We constantly strive to reduce the impact of production on the environment.

A true innovator, Atlas Copco continuously develops new, energy efficient products with lowest cost of ownership. Safeguarding health and boosting productivity at our customers' plants through better ergonomics have long been part of our business philosophy.

All-in-all, we are acting for a better society around us.

Our commitment to your productivity is total



With resources in more than 90 countries, we can offer you a profitable partnership on a local or global basis. Atlas Copco product specialists, distributors and service engineers are on hand worldwide to share the responsibility for keeping your production on-line around the clock. We understand the challenges you face and our commitment to your productivity is total.



Customer Centers

Unique among competitors, Atlas Copco has Customer Centers throughout the world. Their common goal is to give you the best return on your investment. Once the tools are installed, our entire organization is dedicated to keeping your operation on-line.

Application centers

Our strategically located Application Centers configure complete assembly stations with process monitoring and control for the automotive, aerospace and other industries where joint quality is crucial. Using standard components we can deliver a complete tightening station for quality integrated fastening in just three weeks.

Whatever your language

We offer customer training and a wide range of training materials, including e-learning, interactive presentations and pocket guides in several languages. Operator and service instructions, supplied with all products, are available in 21 languages.

Order-driven production

At our tool plant, production is order driven and lead times are extremely short. Before leaving our factory every tool and system is rigorously tested. Quality control and test data are stored for each product.

Fast delivery

Place orders by phone or on-line. Orders received before 16:00 are packed and shipped the same day. European customers receive deliveries from our standard range within 24 to 48 hours from our worldwide distribution warehouse in Belgium. Deliveries to other continents take up to 72 hours.

Quality, every step of the way



Atlas Copco is a truly innovative company, continuously striving for excellence. Our dynamic product development program generates a large number of new products every year. We currently have more than 4,000 tools in our range and we own more than 400 patents. Covering all our operations, we have a quality target: To attain maximum quality at all stages from initial development to spare part deliveries.

Proof of company excellence

The ISO 9001 Certificate confirms that Atlas Copco Tools product company conforms to the Quality Standard ISO 9001.

Our quality policy is:

- To fulfill customers' expectations.
- To deliver problem-free products at the right time.
- To continuously improve our products, services and processes.
- To have motivated personnel with clearly defined goals.

In effect it means you know what you are getting. Carefully specified manufacturing processes guarantee that every product leaving our factory meets exactly the same standards of quality and performance.

EC declaration of conformity

From January 1, 1995, all machines produced by Atlas Copco conform with the EC Machine Directive which focuses on safety. From December 29, 2009 the directive is 2006/42/EC.

Each Atlas Copco tool bears the CE marking and is accompanied by detailed safety and operating instructions and a declaration of conformity.



Our obligations

- The manufacturer must ensure that the machine is designed in conformance with the standards laid down for the machine type in question.
- The machine must be accompanied by a declaration of conformity.
- The design project must be thoroughly documented.
- The sign affixed to the machine must carry:
 - Name and address of manufacturer.
 - Product designation and technical data, defined in the relevant standard.
 - The CE marking.
 - Country and year of manufacture.
- The machine must be accompanied by safety and operating instructions warning of possible hazards when the machine is in use. The instructions must also include a declaration of noise and vibration based on tests performed according to test codes such as EN standards or other recognized standards. The instructions must be written in all EC languages.

Ergonomics

Our goal is to supply the market with the most ergonomic and operator friendly tools available. For us ergonomics embraces all the factors involved in the interaction between the equipment and the operator. Important parameters are handle design, load on the operator, torque reaction from tightening tools, temperature, vibration emission, noise emission, dust and oil.

The vibration and noise values included in the instructions and in this catalogue are measured according to internationally accepted standards. For vibration we use the ISO 28927 series and for noise ISO 15744. The values are emission values primarily intended to compare tools.

Environment

We continuously strive to reduce our environmental impact on nature and people. To achieve this we require our product companies to be certified according to ISO 14001. Our other major units are required to implement and become verified according the Atlas Copco Environmental Management System (EMS). EMS focus areas include:

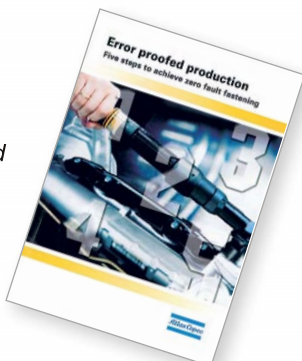
- Design for Environment – including environmental criteria in our design process.
- Improving energy efficiency in our production and products.
- Reducing hazardous substances in our production and products.
- Promoting sustainability “best practice” in our supply chain.
- Supplying environmental information to our customers.
- Providing environmental awareness training for our employees.

Five steps to zero-fault fastening



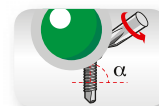
As joint fastening grows more complex, error-proofing becomes a key factor for the profitability of your operation. The later an assembly defect is identified, the more it costs to correct further down the line. At worst, it could reach the end customer and result in warranty claims and loss of goodwill. Leading the field for tightening process control, Atlas Copco has defined five steps towards zero-fault fastening.

Read more in the guide "Error proofed production – five steps to achieve zero fault fastening".



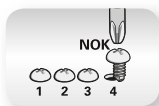
Step 1. To assure a correct tightening torque

The first step to zero fault production is obtained by using an assembly tool that delivers a precise and pre-determined torque. However, only the tightening torque is controlled at this first step, operators and work pieces are not yet involved in the monitoring process.



Step 2. To assure that all screws are tightened

One of the most common causes of a faulty assembly is the fact that the operator simply forgets to tighten a screw or makes a re-hit on an already tightened screw. The remedy against this possible error is to use an REcontroller. It monitors the tightening cycle and identifies a proper shut-off of a tool.



Step 3. To assure that the joint is correct

With step 1 and 2 the tool and the operator have been taken into consideration. However, the joint itself can also be a cause of the incorrect tightening. There can be several reasons for this. Missing parts like seals or washers will change the characteristics of the joint. Damaged threads or debris in the joint also lead to an improperly tightened joint.

The way to detect these types of faulty joints is to monitor the tightening angle during the tightening process.

Operator guidance and feedback is provided by signal lights on the tool and by using socket selectors etc.



Step 4. To assure that safety critical joints are tightened properly

This is the level required for safety critical joints. All tightening data is documented and can be retrieved for error analyses. Documented tightening data for safety critical fasteners are essential in order to avoid or limit recalls and warranty claims.



Step 5. To assure zero fault production

Having reached step 4 in the advance to zero fault production still leaves room for mistakes. With step 5 two further elements are introduced for fault-free production. One element is the introduction of part identification, the other is reject management. With step five the tool controllers are not only networked – they are also connected to the factory network. Information about the components is sent over the factory network. By identifying the components that are to be assembled, relevant information is transferred to the tool controller via the network. This safeguards both that the correct component is being assembled and that corresponding tightening parameters are chosen.

Your guide to the catalogue

Accessories included

Under this heading a specification is given for each type of tool and of the parts (nipples, keys, guards, etc.) supplied with the tool. Instructions and a list of spare parts are always included in the package.

Optional accessories

Here you will find the specifications for most of the accessories. They are dependent on the job the tool is to be used for and have to be ordered separately.

Air consumption

The air consumption of the tools is stated in litres per second, l/s, and relates to free air, i.e., the compressed air expanded to atmospheric pressure. Unless otherwise stated, the figures are valid at a working pressure of 6.3 bar and indicate the maximum air consumption.

Maximum air consumption is valid for the tool without a speed governor when idling, i.e., when the tool is running at no load. A tool with a speed governor, has the maximum air consumption at the maximum power output.

Speed

The tool speeds are indicated in revolutions per minute, r/min, and indicate the idling speed, i.e., the speed at which the tool runs at no load and at a working pressure of 6.3 bar, if not otherwise specified. The speed at max. output is 50% of the idling speed for tools without a speed governor and 80 – 90% of the idling speed for tools with a speed governor.

Selected service kits to order

Under this heading, service kits for the most frequent service jobs done on the tool in question are listed.

Vibration and noise emission

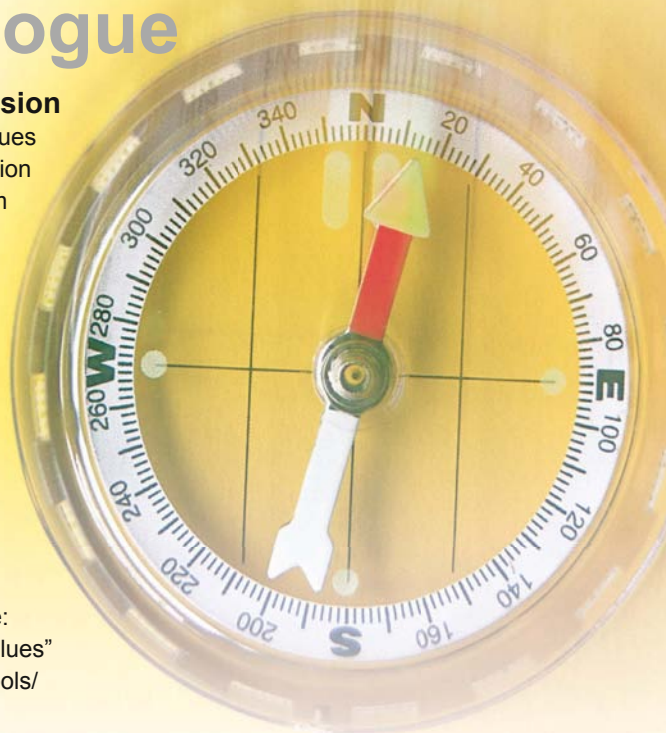
Vibration and noise emission values are presented in a separate section at the end of the catalogue. From December 29, 2009 vibration emission shall be given as vibration total values (3-axes values). To avoid confusion both the old 1-axis vibration values, according to ISO 8662, and the new 3-axes values, according to ISO 28927, are given. At the time of publication values for all tools in the catalogue could not be given. For the most updated information use the pdf file: "Vibration and noise emission values" linked to www.atlascopco.com/tools/ergonomics.

Vibration values referring to the ISO 28927 are always given as a measured vibration value and an uncertainty. The uncertainty is an indication of the spread in the vibration when measured. The spread in the in-use vibration emitted in a real work situation is at least of the same magnitude, often considerably bigger.

Vibration values referring to ISO 28927 can in many cases also be used as rough estimates of the in-use vibration values when tools are used in typical applications.

In-use vibration is influenced by factors beyond our control such as poor maintenance, pirate parts, unbalanced grinding wheels, etc. For more information visit our website www.atlascopco.com/tools/ergonomics.

When measuring noise, Atlas Copco uses the standard ISO 15744. The figure given in this catalogue is the measured sound pressure level. If the measured value exceeds 80 dB(A), the sound power level is also given. The standards describe how to calculate this figure. The uncertainty in the fig-



ures from variations in the test method and production is 3 dB(A). In-use noise values close to the operator's ear may differ considerably from the given values particularly since in many applications the sound from the process is higher than the unloaded tool noise.

We, Atlas Copco Tools AB, cannot be held liable for the consequences of using the declared values, instead of values reflecting the actual exposure, in an individual risk assessment in a workplace situation over which we have no control. We recommend a program of health surveillance to detect early symptoms which may relate to noise or vibration exposure, so that management procedures can be modified to help prevent future impairment.

Length	
1 in	= 0.0254 m
1 m	= 39.3701 in / 3.2808 ft
1 mm	= 0.0393701 in

Weight	
1 lb	= 0.4536 kg
1 kg	= 2.2046 lb

Torque	
1 kpm	= 9.8067 Nm
1 Ft lb	= 1.3558 Nm

Torque	
1 In lb	= 0.1130 Nm
1 Nm	= 0.1020 kpm 0.7376 ft lb

Pressure	
1 bar	= 100 kPa
1 kp/cm ² (at)	= 98.0665 kPa
1 psi	= 6.8948 kPa
1 kPa	= 0.0101972 kp/cm ² (at)

Power	
1 kpm/s	= 9.8067 W
1 hp	= 745.7 W 101.972 kpm/s
1 kW	= 1.3410 hp

Flow	
1 m ³ /min	= 16.6667 l/s
1 cfm	= 0.4720 l/s
1 m ³ /h	= 0.2778 l/s
1 l/s	= 2.1189 cfm



Pneumatic Assembly Tools

Contents	Page
Introduction	12
Screwdrivers	14
Pistol grip models	16
Straight models.....	20
Angle models.....	22
Impact wrenches	25
Pistol grip models	27
Straight models.....	29
Hydraulic impulse nutrunners	33
ErgoPulse	35
Pistol grip models	35
Straight models.....	38
Controlled impulse nutrunners	42
Pulsor C.....	43
Nutrunners	45
Angle models.....	46
Straight models.....	61
Pistol grip models	66

Fast, accurate and operator friendly

Atlas Copco supplies a broad range of pneumatic assembly tools designed to give you highest possible productivity on your assembly line. The result of decades of development, the tools include ergonomically designed screwdrivers, pulse tools, nutrunners and impact wrenches, that offer superior productivity. High productive tools means less air consumption that translates into big energy savings since energy consumption and CO₂ emissions are reduced. Vibration and noise levels are minimized, power-to-weight ratios are high. It all adds up to maximum operator comfort and highest individual productivity.

Impact wrenches (LMS, LTS)

Impact wrenches have unmatched speed and power-to-weight characteristics, which makes them ideal e.g. for loosening applications. They productify raw power and cover a wide torque range including both non shut-off and shut-off models. They are also reaction free.

Impulse tools (ErgoPulse XS, PTS, PTX)

Impulse tools are the ideal choice for fast and reaction-free one-hand tightenings. They have the same advantages as impact wrenches but with higher accuracy. In addition you will get a tool with good ergonomics, which means lower sound levels and less vibrations. Pulse tools also have a longer service life. They come in non shut-off and shut-off version.

Controlled impulse tools (Pulsor C)

The Pulsor C is a further developed pulse tool with advanced error-proofing functionality. It is a multi torque pulse tool for quality critical tightenings offering complete control of the tightening process with result reporting.

Screwdrivers

We offer a wide range of extremely accurate, ergonomically designed screwdrivers for all kinds of jobs involving smaller screw sizes, up to M6. All models are lubrication-free.

• Direct drive (LUD, LUF, HRD)

The low cost alternative for wood and self-drilling screws.

• Slip clutch (TWIST, LUF)

Best for sheet metal screws, wood screws or self-tapping screws.

• Shut-off control (LUM)

Best practice in most cases, especially for machine screws and screws in plastic. Very good accuracy and lowest bit consumption.

Nutrunners

Suitable for all kinds of tightening tasks from 0.5 Nm, nutrunners in Atlas Copco's extensive range are extremely accurate. Due to their ergonomic designs they are also very comfortable to operate. All models are lubrication-free.

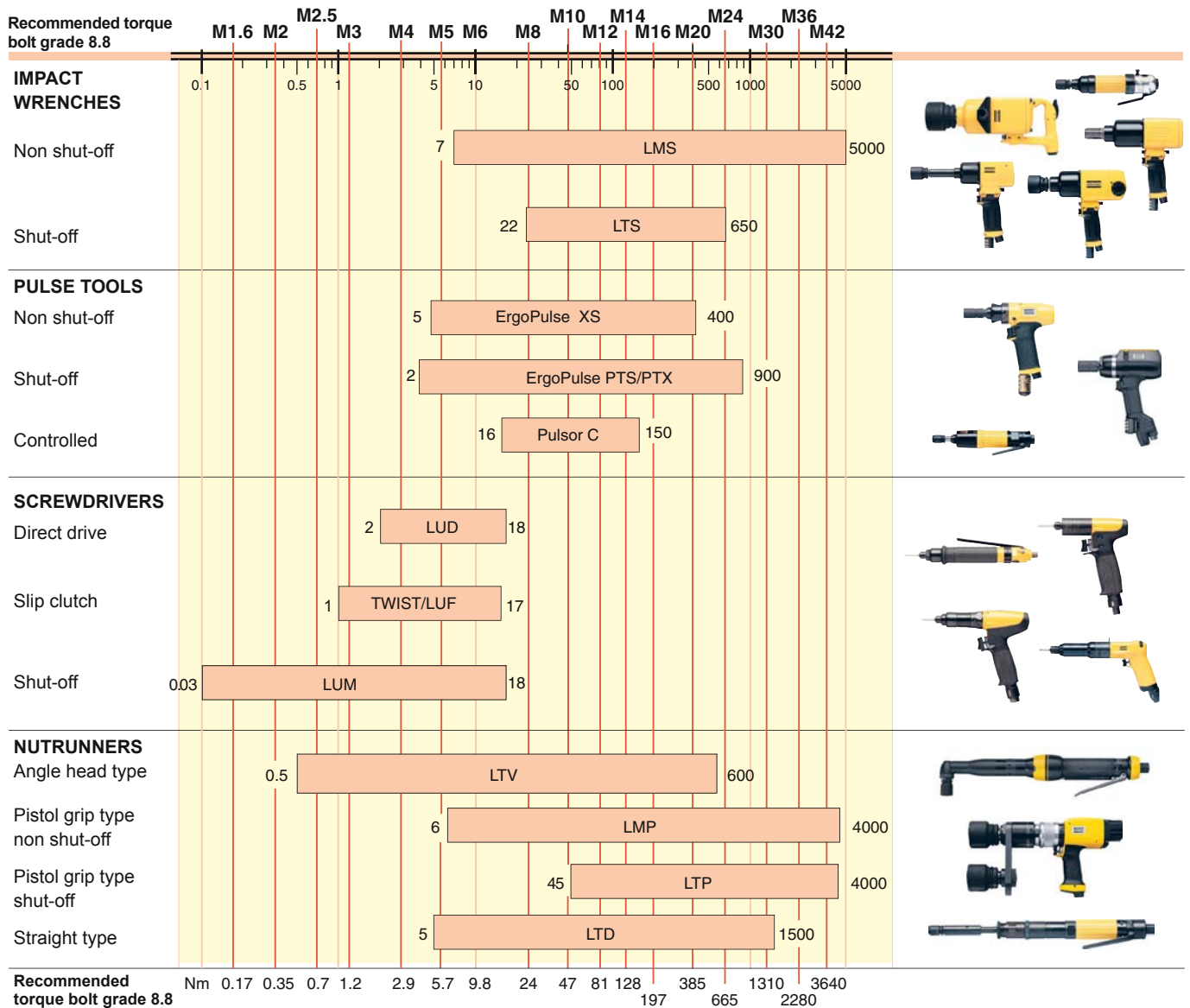
• Angle and straight type (LTV, LTD)

Accurate workhorses for limited spaces suitable for high volume serial production. Very good accuracy, small angle head and possible to attach special heads. Low noise and vibration levels.

• Pistol grip type (LMP, LTP)

High torque tools for super fast, accurate tightenings. Low noise, and low vibration tools for operator comfort.





Torque recommendations

The torque is important to ensure the required clamping force. The table shows the recommended max tightening torque for the most common types of screws and bolts: untreated, oil-smearred screws (friction coefficient = 0.125) with metric coarse thread. The torque corresponds to approximately 62% of tensile stress.

M-threaded screws/bolts Tightening torque Nm, according to ISO 898/1

Bolt grade								Bolt grade							
Thread	3.6	4.6	4.8	5.8	8.8	10.9	12.9	Thread	4.6	4.8	5.8	8.8	10.9	12.9	
M1.6	0.05	0.065	0.086	0.11	0.17	0.24	0.29	M14	48	58	80	128	181	217	
M2	0.10	0.13	0.17	0.22	0.35	0.49	0.58	M16	74	88	123	197	277	333	
M2.2	0.13	0.17	0.23	0.29	0.46	0.64	0.77	M18	103	121	172	275	386	463	
M2.5	0.20	0.26	0.35	0.44	0.70	0.98	1.20	M20	144	170	240	385	541	649	
M3	0.35	0.46	0.61	0.77	1.20	1.70	2.10	M22	194	230	324	518	728	874	
M3.5	0.55	0.73	0.97	1.20	1.90	2.70	3.30	M24	249	295	416	665	935	1120	
M4	0.81	1.10	1.40	1.80	2.90	4.00	4.90	M27	360	435	600	961	1350	1620	
M5	0.60	2.20	2.95	3.60	5.70	8.10	9.70	M30	492	590	819	1310	1840	2210	
M6	2.80	3.70	4.90	6.10	9.80	14.0	17.0	M36	855	1030	1420	2280	3210	3850	
M8		8.90	10.50	15.0	24.0	33.0	40.0	M42	1360		2270	3640	5110	6140	
M10		17.0	21.0	29.0	47.0	65.0	79.0	M45	1690		2820	4510	6340	7610	
M12		30.0	36.0	51.0	81.0	114.0	136.0	M48	2040		3400	5450	7660	9190	

High accuracy, good ergonomics

Atlas Copco pneumatic screwdrivers bring accuracy and good ergonomics into the production process, while offering robust, reliable designs. The range includes models to fit any low torque application. The tools are available in pistol grip, angle and straight configurations with drive types spanning a wide range of speeds and torques.

In this range of pneumatic screwdrivers, the proven and patented Atlas Copco clutch design gives high torque accuracy and repeatable results over time. All screwdrivers are lightweight, with optimum non-slip grip and handle design for operator comfort. A fast clutch shut-off gives minimum reaction impulse, thus reducing operator strain. All Atlas Copco screwdrivers are lubrication-free.

A complete range

Our pneumatic screwdrivers are available in pistol grip, angle and straight configurations. The LUM, TWIST, LUF and LUD models are pistol grip and straight tools, and the LTV and TWIST VR are angle tools.

Shut-off type screwdrivers

LUM and LTV models have a fast and accurate shut-off clutch for smooth performance and high quality tightening. They are suitable for joints with demands on torque accuracy, providing accurate tightening time-after-time, independent of variations in joint stiffness. Electro Static Discharge (ESD) approved models and RE models are available in this range. RE models enable a signal to be received from the tool, in order to control batch count. All RE models need to be combined with an external RE control system. Shut-off tools are the best choice for machine screws, thread-rolling screws and thread-forming screws for plastic.

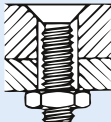
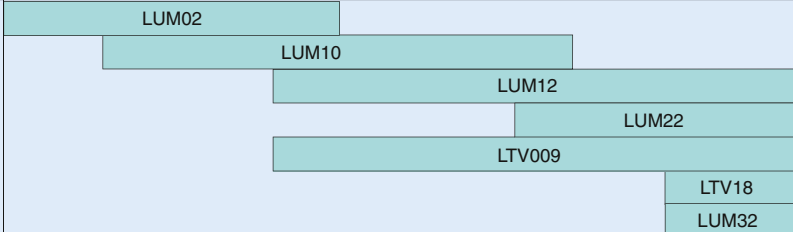
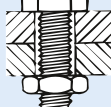
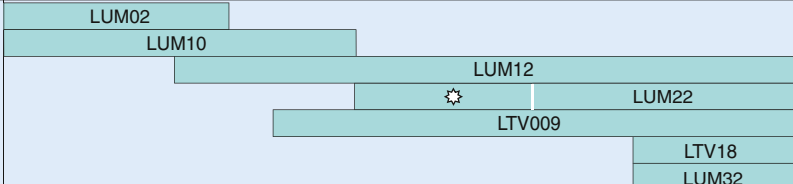
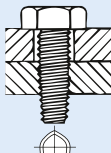
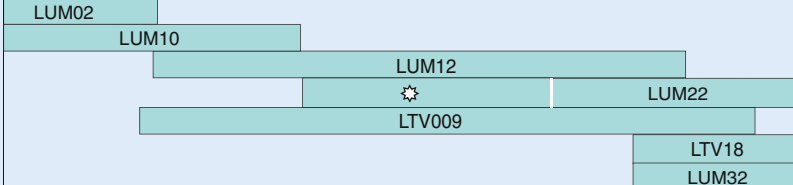
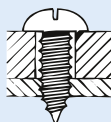
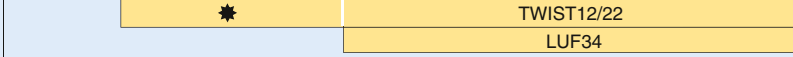
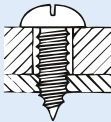
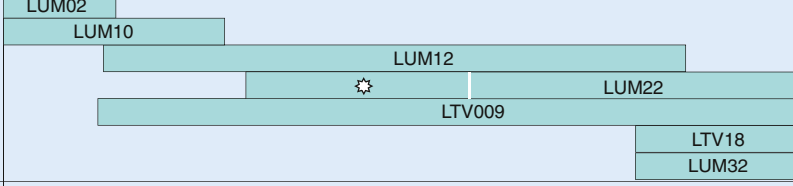
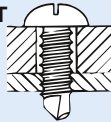
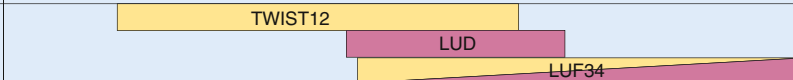
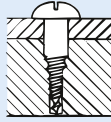
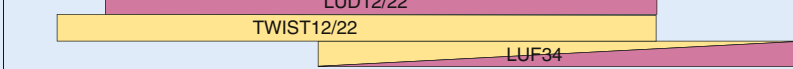
Slip clutch type screwdrivers

TWIST and LUF HR screwdrivers have a slip clutch that applies a pulsating force when the torque level is reached. These tools are suitable where the torque level may temporarily rise during the rundown phase, for instance when using sheet metal screws, wood screws or self-tapping screws.

Direct drive type screwdrivers

LUD and LUF HRD are direct drive screwdrivers that stall when final torque is reached. The torque level is adjusted by regulating the air pressure. LUD and LUF HRD are mainly used for self-drilling and wood screws.



SCREW TYPE	SCREWDRIVER										
Machine screw 4.8 Property class 4.8 normal for cross recessed and slotted screws 	Ø Screw size	M1.6	M2	M2.5	M3	M3.5	M4	M5	M6		
	Torque Nm/in lb	0.09/0.8	0.2/1.8	0.4/3.5	0.6/5.3	1.0/8.8	1.4/12.4	2.9/25.7	4.9/43.4		
	Recommended tool										
Machine screw 8.8 Property class 8.8 normal for hexagon, Allen head and Torx® Locking nut with plastic insert, increase torque 10%, mechanical-lock nut, increase torque 20% 	Ø Screw size	M1.6	M2	M2.5	M3	M3.5	M4	M4.5	M5	M6	
	Torque Nm/in lb	0.2/1.8	0.4/3.5	0.7/6.2	1.2/10.6	1.9/16.8	2.9/25.7	4.3/38.1	5.7/50.4	9.8/86.7	
	Recommended tool										
Thread rolling screw-M Property class between 8.8 and 10.9 due to case hardening. TapTite® and Swageform are examples 	Ø Screw size	M2		M3		M4		M5	M6		
	Torque Nm/in lb	0.5/4.4		1.4/12.4		3.2/28.3		6.5/57.5	11.0/97.3		
	Recommended tool										
Thread forming screw-ST 	Ø Screw size	ST2.2	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3			
	Torque Nm/in lb	0.3/2.7	1.0/8.8	1.8/15.9	2.9/25.7	4.2/37.2	6.7/59.3	9.1/80.5			
	Recommended tool										
Thread forming screw-ST for plastic 	Ø Screw size	ST2.2	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3			
	Torque Nm/in lb	0.3/2.7	1.0/8.8	1.8/15.9	2.9/25.7	4.2/37.2	6.7/59.3	9.1/80.5			
	Recommended tool										
Self drilling screw-ST 	Ø Screw size	ST2.2	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3			
	Torque Nm/in lb	0.3/2.7	1.0/8.8	1.8/15.9	2.9/25.7	4.2/37.2	6.7/59.3	9.1/80.5			
	Recommended tool										
Wood screw 	Torque Nm/in lb	1.5/13.3		3/26.5		5/44.2		7.5/66.4		12/106.2	
	Recommended tool										
 Shut-off clutch  Slip clutch  Direct drive		* With optional coupling-ring. * With optional spring.					Ordering No. 4210 2316 01 Ordering No. 4210 1831 00				

The LUM pistol grip range comes in several different configurations:

- HR: Model with non-balanced grip can be used with high grip when feed force is needed or with low grip for minimal reaction force.
- HRX: Model with balanced grip perfectly balanced for standard pistol grip applications.
- HRF: Balanced grip with multiple air inlets for flexible connection.

RE reporting models are available, designated with suffix –RE. Soft stop options are available, designated with the suffix SS.



Model	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb			l/s	cfm			
With trigger start												
LUM22 HR3	0.6 - 3	5.3 - 26.5	2200	0.85	1.9	186	18	7.5	16	8	1/4	8431 0269 00
LUM22 HR3-RE	0.6 - 3	5.3 - 26.5	2200	0.85	1.9	186	18	7.5	16	8	1/4	8431 0278 63
LUM22 HR4	0.6 - 4	5.3 - 35.4	1650	0.85	1.9	186	18	7.5	16	8	1/4	8431 0269 02
LUM22 HR4-RE	0.6 - 4	5.3 - 35.4	1650	0.85	1.9	186	18	7.5	16	8	1/4	8431 0278 65
LUM22 HR6	1.5 - 6.5	13.3 - 57.5	1150	0.85	1.9	186	18	7.5	16	8	1/4	8431 0269 01
LUM22 HR6-RE	1.5 - 6.5	13.3 - 57.5	1150	0.85	1.9	186	18	7.5	16	8	1/4	8431 0278 64
LUM22 HR10	3.5 - 10	31 - 88.5	750	1	2.2	218	18	7.5	16	10	1/4	8431 0269 03
LUM22 HR10-RE	3.5 - 10	31 - 88.5	750	1	2.2	218	18	7.5	16	10	1/4	8431 0278 66
LUM22 HR12	3.5-12.5	31 - 110.6	500	1	2.2	210	18	7.5	16	10	1/4	8431 0269 04
LUM22 HR12-370	3.5-12.5	31 - 110.6	370	1	2.2	210	18	7.5	16	10	1/4	8431 0269 05
LUM22 HR12-RE	3.5-12.5	31 - 110.6	500	1	2.2	210	18	7.5	16	10	1/4	8431 0278 67
LUM32 HR10	5 - 10	44.2 - 88.5	750	0.72	1.6	183	18.5	7.5	16	10	1/4	8431 0269 90
LUM32 HR15	7.5-15.5	66 -137.2	450	0.72	1.6	183	18.5	7.5	16	10	1/4	8431 0269 91
With trigger and push start												
LUM22 HR3-P	0.6 - 3	5.3 - 26.5	2200	0.85	1.9	186	21	7.5	16	8	1/4	8431 0269 06
LUM22 HR4-P	0.6 - 4	5.3 - 35.4	1650	0.85	1.9	186	21	7.5	16	8	1/4	8431 0269 08
LUM22 HR6-P	1.5 - 6.5	13.3 - 57.5	1150	0.85	1.9	186	21	7.5	16	8	1/4	8431 0269 07
LUM22 HR10-P	3.5 - 10	31 - 88.5	750	1	2.2	218	21	7.5	16	10	1/4	8431 0269 09
LUM22 HR12-P	3.5-12.5	31 - 110.6	500	1	2.2	210	21	7.5	16	10	1/4	8431 0269 10
LUM22 HR12-370-P	3.5-12.5	31 - 110.6	370	1	2.2	210	21	7.5	16	10	1/4	8431 0269 11

Continued....

Model	Torque range soft joint				Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm		in lb			kg	lb			l/s	cfm			
Balanced grip models with trigger start														
LUM12 HRX1	0.6-	1.8	5.3-	15.9	2300	0.65	1.4	176	15	6	13	6	1/8	8431 0278 58
LUM12 HRX1-50	0.6-	1.8	5.3-	15.9	50	0.7	1.5	196	16	6	13	6	1/8	8431 0279 58
LUM12 HRX1-110	0.6-	1.8	5.3-	15.9	110	0.7	1.5	196	16	6	13	6	1/8	8431 0279 60
LUM12 HRX1-RE	0.6-	1.8	5.3-	15.9	2300	0.65	1.4	176	16	6	13	6	1/8	8431 0278 59
LUM12 HRX2	0.6-	2.5	5.3-	22.1	1650	0.65	1.4	176	16	6	13	6	1/8	8431 0278 56
LUM12 HRX2-RE	0.6-	2.5	5.3-	22.1	1650	0.65	1.4	176	16	6	13	6	1/8	8431 0278 57
LUM12 HRX3	0.4-	3.5	5.3-	31.9	1150	0.7	1.5	186	16	6	13	6	1/8	8431 0278 54
LUM12 HRX3-RE	0.4-	3.5	3.5-	31.9	1150	0.7	1.5	186	16	6	13	6	1/8	8431 0278 55
LUM12 HRX5	0.4-	5	3.5-	44.2	850	0.7	1.5	186	16	6	13	6	1/8	8431 0278 51
LUM12 HRX5-RE	0.4-	5	3.5-	44.2	850	0.7	1.5	186	16	6	13	6	1/8	8431 0278 53
LUM12 HRX5-170	0.4-	5	3.5-	44.2	170	0.7	1.5	196	16	6	13	6	1/8	8431 0278 47
LUM12 HRX5-350	0.4-	5	3.5-	44.2	350	0.7	1.5	186	16	6	13	6	1/8	8431 0278 48
LUM12 HRX5-350-RE	0.4-	5	3.5-	44.2	350	0.7	1.5	186	16	6	13	6	1/8	8431 0278 49
LUM12 HRX8	1.5-	8	13.3-	70.8	500	0.7	1.5	186	16	6	13	6	1/8	8431 0278 60
LUM12 HRX8-250	1.5-	8	13.3-	70.8	250	0.7	1.5	186	16	6	13	6	1/8	8431 0278 69
LUM12 HRX8-RE	1.5-	8	13.3-	70.8	500	0.7	1.5	186	16	6	13	6	1/8	8431 0278 61
LUM12 HRX8-50	1.5-	8	13.3-	70.8	50	0.7	1.5	196	16	6	13	6	1/8	8431 0280 25
LUM12 HRX8-110	1.5-	8	13.3-	70.8	110	0.7	1.5	196	16	6	13	6	1/8	8431 0280 27
LUM22 HRX2	1.2-	2 ^a	10.6-	17.7	4500	0.9	2	187	18	9	19	8	1/4	8431 0269 29
LUM22 HRX2-3200	1.1-	2.6 ^a	9.7-	23	3200	0.9	2	187	18	9	19	8	1/4	8431 0278 85
LUM22 HRX3	0.6-	3 ^a	5.3-	26.5	2250	0.9	2	187	18	9	19	8	1/4	8431 0269 22
LUM22 HRX3.5	0.6-	3.5	5.3-	29.2	2250	0.9	2	187	18	9	19	8	1/4	8431 0269 99
LUM22 HRX3-RE	0.6-	3 ^a	5.3-	26.5	2250	0.9	2	187	18	9	19	8	1/4	8431 0278 70
LUM22 HRX4	0.6-	4 ^a	5.3-	35.4	1650	0.9	2	187	18	9	19	8	1/4	8431 0269 20
LUM22 HRX6	1.5-	6.5 ^a	13.3-	57.5	1100	0.95	2.1	197	18	9	19	8	1/4	8431 0269 21
LUM22 HRX6-RE	1.5-	6.5 ^a	13.3-	57.5	1100	0.95	2.1	197	18	9	19	8	1/4	8431 0278 71
LUM22 HRX10	3.5-	10 ^a	31-	88.5	800	1.1	2.4	219	18	9	19	10	1/4	8431 0269 23
LUM22 HRX10-RE	3.5-	10 ^a	31-	88.5	800	1.1	2.4	219	18	9	19	10	1/4	8431 0278 73
LUM22 HRX11-220	3.5-	12.5 ^a	31-	110.6	220	1.15	2.5	229	18	9	19	10	1/4	8431 0282 20
LUM22 HRX12	3.5-	12.5 ^a	31-	110.6	500	1.1	2.4	211	18	9	19	10	1/4	8431 0269 24
LUM22 HRX12-RE	3.5-	12.5 ^a	31-	110.6	500	1.1	2.4	211	18	9	19	10	1/4	8431 0278 74
LUM22 HRX12-50	3.5-	12.5 ^a	31-	110.6	50	1.15	2.5	229	18	9	19	10	1/4	8431 0280 26
LUM22 HRX12-120	3.5-	12.5 ^a	31-	110.6	120	1.15	2.5	229	18	9	19	10	1/4	8431 0280 28
LUM22 HRX12-370	3.5-	12.5 ^a	31-	110.6	370	1.1	2.4	211	18	9	19	10	1/4	8431 0269 25
LUM22 HRX12-370-RE	3.5-	12.5 ^a	31-	110.6	370	1.1	2.4	211	18	9	19	10	1/4	8431 0278 75
LUM22 HRX26 ^b	3-	26	26.6-	230	220	1.2	2.6	233	18	9	19	10	1/4	8431 0269 39
Balanced grip models with trigger start and soft stop function														
LUM10 HRX1-SS	0.2-	0.6	1.8-	5.3	800	0.65	1.4	176	16	6	13	6	1/8	8431 0280 02
LUM12 HRX1-SS	0.6-	1.3	5.3-	11.5	800	0.65	1.5	176	16	6	13	6	1/8	8431 0280 01
Multiple air inlet models and air-on-top models with trigger start														
LUM12 HRF2	0.6-	2.5	5.3-	22.1	1650	0.65	1.4	190	16	6	13	6	1/8	8431 0269 31
LUM12 HRF3	0.4-	3.6	3.5-	31.9	1150	0.7	1.5	200	16	6	13	6	1/8	8431 0269 32
LUM12 HRF5	0.4-	5	3.5-	44.2	850	0.7	1.5	200	16	6	13	6	1/8	8431 0269 33
LUM12 HRF8	1.5-	8	13.3-	70.8	500	0.7	1.5	200	16	6	13	6	1/8	8431 0269 34
LUM25 HRF11-U	3.5-	5.5 ^a	31-	49	1100	1.2	2.6	226	26	6	13	8	1/4	8431 0249 09
LUM25 HRF08-U-RE	3.5-	7.5 ^a	31-	66	800	1.2	2.6	226	26	6	13	8	1/4	8431 0264 98
LUM25 HRF08-U	3.5-	7.5 ^a	31-	66	800	1.2	2.6	226	26	6	13	8	1/4	8431 0249 07
LUM25 HRF05-U-RE	3.5-	12.0 ^a	31-	110	500	1.2	2.6	226	26	6	13	8	1/4	8431 0264 96
LUM25 HRF05-U	3.5-	12.0 ^a	31-	110	500	1.2	2.6	226	26	6	13	8	1/4	8431 0249 05

^a 1.4-4 Nm with spring, Ordering No. 4210 1831 00.

^b 1/4" square drive.

All models: Are reversible and have quick change chuck.

All data at an air pressure of 6.3 bar.

For operator comfort a support handle is recommended for high torque, see Optional Accessories.

The LUD and LUF pistol grip range comes in several different configurations:

- HR/HRD: Model with non balanced grip can be used with high grip when feed force is needed or with low grip for minimal reaction force.
- HRX: Models with balanced grip are perfectly balanced for standard pistol grip applications.



Model	Torque range soft joint				Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb	kg	lb		l/s	cfm							
With trigger start														
LUD12 HRX2	1 - 2.5	8.8- 22.1			1600	0.5	1.1	115	16	6.5	14	8	1/8	8431 0278 77
LUD12 HRX5	2 - 5	17.7- 44.2			850	0.5	1.1	125	16	6.5	14	8	1/8	8431 0278 78
LUD12 HRX8	3.5- 8	31.0- 70.8			500	0.5	1.1	125	16	6.5	14	8	1/8	8431 0278 79
LUD22 HR3	1.5- 2.8	13.3- 24.8			3600	0.65	1.4	125	18	8	17	8	1/4	8431 0269 17
LUD22 HR5	2.8- 5.5	24.8- 48.7			1650	0.65	1.4	125	18	8	17	8	1/4	8431 0269 18
LUD22 HR12	5 - 12	44.2- 106.2			750	0.75	1.7	143	18	8	17	8	1/4	8431 0269 19
LUF34 HRD04	8.0- 18.0	71- 160			440	1.2	2.6	212	20	9	19	10	1/4	8431 0311 22
LUF34 HRD08	8.0- 11.0	71- 97			750	1.2	2.6	212	20	9	19	10	1/4	8431 0311 24
LUF34 HRD16	4.0- 8.0	35- 71			1600	0.9	2.0	179	20	9	19	10	1/4	8431 0311 26
LUF34 HRD21	2.2- 4.5	20- 40			2000	0.9	2.0	179	20	9	19	10	1/4	8431 0311 28
Reversible drill, tapper and screwdriver														
COMBI22 HR10	5.0 - 10.0	44- 89			800	1.1	2.4	240	20	7	15	8	1/4	8431 0255 62
COMBI22 HR5	2.7 - 5.7	24- 50			1600	0.9	2.0	205	20	7	15	8	1/4	8431 0255 80
COMBI22 HR2	2.0 - 2.7	18- 24			3600	0.9	2.0	205	20	7	15	8	1/4	8431 0255 89
COMBI34 HR04	8.0 - 18.0	71- 160			400	1.5	3.3	228	20	9	19	10	1/4	8431 0311 32
COMBI34 HR08	8.0 - 11.0	71- 97			750	1.3	2.9	218	20	9	19	10	1/4	8431 0311 34
COMBI34 HR16	4.0 - 8.0	35- 71			1600	1.0	2.2	179	20	9	19	10	1/4	8431 0311 36

All models: Are reversible.
 Female hexagon drive for bits: 1/4" on pistol grip models.
 Combi-tools are delivered with drill chuck and 1/4" female hex drive for bits.
 Torque at min 3 bar and max 6 bar.

The TWIST and LUF pistol grip range comes in several different configurations:

- HR: Model with non-balanced grip can be used with high grip when feed force is needed or with low grip for minimal reaction force.
- HRX: models with balanced grip are perfectly balanced for standard pistol grip applications.
- HRF: Balanced grip with multiple air inlets for flexible connection.



Model	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb			l/s	cfm			
With trigger and push start												
TWIST12 HRX2	0.6 - 2.4	5.3 - 21.2	1650	0.65	1.4	176	15	6.5	14	6	1/8	8431 0278 40
TWIST12 HRX3	0.6 - 3.5	5.3 - 31.0	1150	0.65	1.4	186	15	6.5	14	6	1/8	8431 0278 39
TWIST12 HRX4	0.5 - 4.4	4.4 - 38.9	800	0.65	1.4	186	15	6.5	14	6	1/8	8431 0278 38
TWIST22 HRX7	1.5 - 7.5	13.3 - 66.4	1100	1.05	2.3	205	15	9	19	8	1/4	8431 0269 26
TWIST22 HRX10	1.5 - 10	13.3 - 88.5	750	1.1	2.4	205	15	9	19	8	1/4	8431 0269 27
TWIST22 HRX12	5 - 12	44.2 -106.2	500	1.05	2.3	205	15	9	19	8	1/4	8431 0269 28
TWIST22 HR3	1.0 - 3.5	8.9 - 31	2100	0.95	2.1	195	15	8	17	8	1/4	8431 0278 86
TWIST22 HR6	2.2 - 6.5	19.5 - 57.5	1600	0.95	2.1	195	15	8	17	8	1/4	8431 0269 70
TWIST22 HR7	1.5 - 7.5	13.3 - 66.4	1150	0.95	2.1	195	15	8	17	8	1/4	8431 0269 14
TWIST22 HR10	1.5 -10.0	13.3 - 88.5	750	1	2.2	205	15	8	17	8	1/4	8431 0269 15
TWIST22 HR12	5.0 -12.0	44.2 -106.2	500	1	2.2	195	15	8	17	8	1/4	8431 0269 16
LUF34 HR04	3.0 -17.0	27.0 -150.0	440	1.4	3.1	265	21	9.5	19	8	1/4	8431 0311 05
LUF34 HR08	2.0 -15.0	18.0 -133.0	750	1.4	3.1	265	21	9.5	19	8	1/4	8431 0311 09
LUF34 HR16	3.0 -12.0	27.0 -107.0	1600	1.4	3.1	265	21	9.5	19	8	1/4	8431 0311 17
Multiple air inlet models (12) and air-on-top models with trigger start and push start												
TWIST12 HRF3	0.6 - 3.5	5.3 - 31	1150	0.7	1.5	200	15	6	2.8	6	1/8	8431 0269 41
TWIST12 HRF4	0.5 - 4.4	4.4 - 38.9	850	0.7	1.5	200	15	6	2.8	6	1/8	8431 0269 40
TWIST HRF08 ^a	1.5 - 7.5	13.0 - 66.0	800	1.2	2.6	212	25	7	15	8	1/4	8431 0252 42
TWIST HRF16 ^a	2.2 - 6.5	20.0 - 58.0	1600	1.2	2.6	212	25	7	15	8	1/4	8431 0252 44

^a Only air-on-top models.

All models: Are reversible.

Female hexagon drive for bits: 1/4".

Have quick change chuck.

Straight screwdrivers should be used with a torque arm for best ergonomics.

LUM straight screwdrivers come in two different configurations:

- PR: Model with push-to-start function and reverse button.
- SR: Model with lever start function and reverse ring.

RE reporting conversion kits are available for SR models, see accessory page.

Soft stop options are available, designated with the suffix -SS.

LUM12 PR



LUM12 SR



LUM02 PR



Model	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb			l/s	cfm			
With push start and button reverse												
LUM02 PR04-1800	0.03 - 0.32	0.027 - 0.29	1800	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 02
LUM02 PR04-1200	0.03 - 0.32	0.027 - 0.29	1200	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 04
LUM02 PR07-500	0.025 - 0.6	0.023 - 0.54	500	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 06
LUM02 PR07-350	0.025 - 0.6	0.023 - 0.54	350	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 08
LUM02 PR04-1800-Q	0.03 - 0.32	0.027 - 0.29	1800	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 12
LUM02 PR04-1200-Q	0.03 - 0.32	0.027 - 0.29	1200	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 14
LUM02 PR07-500-Q	0.025 - 0.6	0.023 - 0.54	500	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 16
LUM02 PR07-350-Q	0.025 - 0.6	0.023 - 0.54	350	2.2	4.7	165	10	0.16	0.35	°	M5	8431 0146 18
LUM10 PR03	0.1 - 1.5	0.8 - 13	300	0.4	0.9	206	15	3	6	6	1/8	8431 0146 05
LUM10 PR05	0.1 - 1.5	0.8 - 13	460	0.4	0.9	206	15	3	6	6	1/8	8431 0146 09
LUM10 PR12	0.1 - 1.1	0.8 - 10	1200	0.4	0.9	196	15	3	6	6	1/8	8431 0146 17
LUM10 PR21	0.1 - 0.7	0.8 - 6	2000	0.4	0.9	196	15	3	6	6	1/8	8431 0146 25
LUM12 PR1	0.6 - 1.6	5.3 - 14.2	1900	0.55	1.2	195	17	4.5	10	6	1/8	8431 0278 29
LUM12 PR2	0.4 - 2.3	3.5 - 20.4	1450	0.55	1.2	195	17	4.5	10	6	1/8	8431 0278 27
LUM12 PR3	0.4 - 3.2	3.5 - 28.3	1000	0.55	1.2	195	17	4.5	10	6	1/8	8431 0278 26
LUM12 PR4	0.4 - 4.2	3.5 - 37.2	750	0.55	1.2	195	17	4.5	10	6	1/8	8431 0278 25
LUM12 PR5	0.4 - 5	3.5 - 44.2	450	0.55	1.2	195	20	4.5	10	6	1/8	8431 0278 30
LUM22 PR2-3500	1.1 - 2.5	9.7 - 22.1	3500	0.75	1.7	211	20	7	15	8	1/4	8431 0278 89
LUM22 PR3	0.6 - 3.2	5.3 - 28.3	2100	0.75	1.7	211	20	7	15	8	1/4	8431 0269 61
LUM22 PR4	0.5 - 4.0	4.4 - 35.4	1600	0.75	1.7	211	20	7	15	8	1/4	8431 0269 55
LUM22 PR4-2300	0.7 - 4.5	5.9 - 38.2	2300	0.75	1.7	211	20	7	15	8	1/4	8431 0278 81
LUM22 PR5-260	0.4 - 5.0	3.5 - 44.2	260	0.75	1.7	211	20	7	15	8	1/4	8431 0269 62
LUM22 PR5-350	0.4 - 5.0	3.5 - 44.2	350	0.75	1.7	211	20	7	15	8	1/4	8431 0269 60
LUM22 PR6	1.5 - 6.0	13.3 - 53.1	1000	0.75	1.7	211	20	7	15	8	1/4	8431 0269 56
LUM22 PR8-1100	1.5 - 8.0	13.3 - 70.8	1100	0.9	2.0	224	20	7	15	8	1/4	8431 0278 88
LUM22 PR10	3.5 - 10.0	31 - 88.5	700	0.95	2.1	232	22	7	15	8	1/4	8431 0269 58
LUM22 PR12	3.5 - 12.5	31 - 110.6	450	0.9	2.0	224	22	7	15	8	1/4	8431 0269 57
LUM22 PR12-260	3.5 - 12.5	31 - 110.6	260	0.9	2.0	224	22	7	15	8	1/4	8431 0269 63
LUM22 PR12-350	3.5 - 12.5	31 - 110.6	350	0.95	2.1	224	22	7	15	8	1/4	8431 0269 59
LUM22 PR12-850	3.5 - 12.0	31 - 106.2	850	1	2.2	246	22	8.5	15	8	1/4	8431 0278 80
With push start, button reverse and soft stop function												
LUM12 PR3-SS	1 - 1.8	8.8 - 15.9	900	0.55	1.2	195	15	4.5	10	6	1/8	8431 0280 07
LUM10 PR1-SS	0.2 - 0.6	1.8 - 5.3	460	0.4	0.9	206	15	3	6	6	1/8	8431 0280 06
LUM12 PR1-SS	0.6 - 1.3	5.3 - 11.5	800	0.55	1.2	195	20	4.5	10	6	1/8	8431 0280 05

* Front end 12.5 mm (4210 3918 01) included.

* Optional front end 21 mm (4210 3918 02).

* Air inlet thread M5. Nipple and coupling included accessory for all LUM 02 models, hose size diameter 6 mm.

ESD approved: LUM10/12/22 SR/PR

All models: Are reversible and have quick change chuck.

SR-models have ring reverse control.

PR-models have push button reverse.

Continued....

Model	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb			l/s	cfm			
With lever start and without push start												
LUM12 SR1	0.6 - 1.8	5.3 - 15.9	2200	0.6	1.3	217	17	6	13	6	1/8	8431 0278 35
LUM12 SR2	0.5 - 2.5	4.4 - 22.1	1700	0.6	1.3	217	17	6	13	6	1/8	8431 0278 34
LUM12 SR3	0.4 - 3.5	3.5 - 31	1200	0.6	1.3	217	17	6	13	6	1/8	8431 0278 33
LUM12 SR4	0.4 - 4.5	3.5 - 39.8	850	0.6	1.3	217	17	6	13	6	1/8	8431 0278 32
LUM22 SR3	0.6 - 3.2	5.3 - 28.3	1950	0.8	1.8	239	20	7	15	8	1/4	8431 0269 44
LUM22 SR4	0.6 - 4	5.3 - 35.4	1500	0.8	1.8	239	20	7	15	8	1/4	8431 0269 46
LUM22 SR5-300	0.4 - 5	3.5 - 44.2	300	0.8	1.8	239	20	7	15	8	1/4	8431 0269 51
LUM22 SR6	1.5 - 6	13.3 - 53.1	1000	0.85	1.9	239	20	7	15	8	1/4	8431 0269 47
LUM22 SR10	3.5 - 10	31 - 88.5	700	1	2.2	260	22	7	15	8	1/4	8431 0269 49
LUM22 SR12	3.5-12.5	31 -110.6	430	0.95	2.1	252	22	7	15	8	1/4	8431 0269 48
LUM22 SR12-300	3.5-12.5	31 -110.6	300	1	2.2	252	22	7	15	8	1/4	8431 0269 50

ESD approved: LUM10/12/22 SR/PR

All models: Are reversible and have quick change chuck.

Slip-clutch

Straight Models

Straight screwdrivers should be used with a torque arm for best ergonomics

The TWIST straight screwdrivers come in two different configurations:

- PR: Model with push to start function and reverse button
- SR: Model with lever start function and reverse ring.



TWIST12 SR

Model	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb			l/s	cfm			
With lever start												
TWIST12 SR3	0.7 - 3.3	6.2- 29.2	1650	0.65	1.4	225	15	6	13	6	1/8	8431 0278 44
TWIST12 SR4	0.5 - 4.2	4.4- 37.2	1100	0.65	1.4	225	15	6	13	6	1/8	8431 0278 43
TWIST22 SR6	1.5 - 6.0	13.3- 53.1	1500	0.85	1.9	239	15	7	15	8	1/8	8431 0269 52
TWIST22 SR10	1.5 - 10.0	13.3- 88.5	700	0.9	2.0	246	15	7	15	8	1/8	8431 0269 53
With push start												
TWIST22 PR2	1.1 - 2.6	9.7- 23	3200	0.75	1.7	242	15	7	15	8	1/4	8431 0278 93
TWIST22 PR7	1.5 - 7.5	13.3- 66.4	1100	0.75	1.7	211	15	7	15	8	1/4	8431 0278 90
TWIST22 PR6	2.2 - 6.5	19.5- 57.5	1600	0.75	1.7	211	15	7	15	8	1/4	8431 0278 91
TWIST22 PR4-2300	1.0 - 4.0	8.9- 35.4	2300	0.75	1.7	242	15	7	15	8	1/4	8431 0278 92

Angle Models

Shut-off

LTV angle screwdriver models have a fast, accurate shut-off clutch and are designed for durability.

- Slim design of the angle head allows good access in limited spaces and awkward positions.
- Spiral cut gears give high accuracy.

RE reporting conversion kits are available for LTV screwdriver models. For kit, see accessory page.



LTV009



LTV18 R07-6

Model	Torque range soft joint		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb				l/s	cfm			
LTV009 R025-Q	0.6 - 2.5	5.3 - 22.1	1650	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 00
LTV009 R025-42	0.6 - 2.5	5.3 - 22.1	1650	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 01
LTV009 R025-6	0.6 - 2.5	5.3 - 22.1	1650	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 02
LTV009 R03-10	0.7 - 3	6.2 - 26.5	1400	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 23
LTV009 R035-Q	0.4 - 3.5	3.5 - 31	1100	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 03
LTV009 R035-42	0.4 - 3.5	3.5 - 31	1100	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 04
LTV009 R035-6	0.4 - 3.5	3.5 - 31	1100	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 05
LTV009 R05-Q	0.4 - 5	3.5 - 44.2	850	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 06
LTV009 R05-42	0.4 - 5	3.5 - 44.2	850	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 07
LTV009 R05-6	0.4 - 5	3.5 - 44.2	850	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 08
LTV009 R07-Q	1.1 - 7	9.7 - 61.9	500	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 09
LTV009 R07-42	1.1 - 7	9.7 - 61.9	500	0.7	1.5	266	25	9	6	13	6	1/8	8431 0278 10
LTV009 R07-6	1.1 - 7	9.7 - 61.9	500	0.7	1.5	266	28.5	11	6	13	6	1/8	8431 0278 11
LTV009 R07-6-230	0.3 - 7	0.3 - 7	230	0.8		266		11	6	13	6	1/8	8431 0279 18
LTV009 R08-FS-10	1.5 - 8	1.5 - 8	340	1.1		261		13.5	6	13	6	1/8	8431 0632 11
LTV009 R08-6-200	1.3 - 9	11.5 - 79.6	200	0.7	1.5	266	28.5	11	6	13	6	1/8	8431 0278 24
LTV009 R08-6-200-B	1.3 - 9	1.3 - 9	200	0.8		266		11	6	13	6	1/8	8431 0278 31
LTV009 R09-Q	1.3 - 9	11.5 - 79.6	430	0.7	1.5	266	28.5	11	6	13	6	1/8	8431 0278 12
LTV009 R09-10	1.3 - 9	11.5 - 79.6	430	0.7	1.5	266	28.5	11	6	13	6	1/8	8431 0278 13
LTV009 R09-42	1.3 - 9	11.5 - 79.6	430	0.7	1.5	266	28.5	11	6	13	6	1/8	8431 0278 15
LTV009 R09-42M	1.3 - 9	11.5 - 79.6	430	0.7	1.5	266	28.5	11	6	13	6	1/8	8431 0278 16
LTV009 R09-6	1.3 - 9	11.5 - 79.6	430	0.7	1.5	266	28.5	11	6	13	6	1/8	8431 0278 17
LTV009 R11-Q	1.3 - 11	11.5 - 97.3	320	0.8	1.8	266	28.5	11	6	13	6	1/8	8431 0278 19
LTV009 R11-10	1.3 - 11	11.5 - 97.3	320	0.8	1.8	266	28.5	11	6	13	6	1/8	8431 0278 20
LTV009 R11-42	1.3 - 11	11.5 - 97.3	320	0.8	1.8	266	28.5	11	6	13	6	1/8	8431 0278 21
LTV009 R11-6	1.3 - 11	11.5 - 97.3	320	0.8	1.8	266	28.5	11	6	13	6	1/8	8431 0278 22
LTV009 R13-FS-10	4 - 13	4 - 13	160	1.1		261		13.5	6	13	6	1/8	8431 0632 10
LTV18 R07-Q	3.5 - 7	31 - 61	700	1.2	2.6	290	28.5	10	6	13	6	1/4	8431 0326 76
LTV18 R07-42	3.5 - 7	31 - 61	700	1.2	2.6	290	28.5	10	6	13	6	1/4	8431 0326 61
LTV18 R07-6	3.5 - 7	31 - 61	700	1.2	2.6	290	28.5	10	6	13	6	1/4	8431 0326 72
LTV18 R15-Q	6.0 - 15	53 - 132	360	1.2	2.6	308	28	11	7	15	8	1/4	8431 0326 58
LTV18 R15-10	6.0 - 15	53 - 132	360	1.2	2.6	308	28	11	7	15	8	1/4	8431 0326 56
LTV18 R15-42	6.0 - 15	53 - 132	360	1.2	2.6	308	28	11	7	15	8	1/4	8431 0326 54
LTV18 R15-6	6.0 - 15	53 - 132	360	1.2	2.6	308	28	11	7	15	8	1/4	8431 0326 55

ESD approved: LTV009.

All models: Are reversible.

-42 = 1/4" female hexagon drive for bits.

-10 = 3/8" square drive.

-6 = 1/4" square drive for sockets.

-Q = 1/4" quick change chuck.

FS = Flush socket.

Angle Models

Slip-clutch

Model	Torque range soft joint		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb				l/s	cfm			
With 1/4" square drive													
Twist VR07-6	1.3 - 7.0	12 - 62	700	1.0	2.2	280	29	10	4	8	8	1/4	8431 0256 11
With 1/4" female hexagon drive													
Twist VR07-I6	1.3 - 7.0	12 - 62	700	1.0	2.2	280	29	10	4	8	8	1/4	8431 0256 03
Twist VR13-I6	2.0 - 6.0	18 - 53	1300	1.0	2.2	280	29	10	4	8	8	1/4	8431 0256 29

Accessories Included

Clutch adjustment key

Included with all shut-off and slip clutch tools



Clutch adjustment key

Exhaust hose

Included with straight and air-on-top models

Hose nipple

Included with all tools



Hose nipple

Optional Accessories

Model	Ordering No.
Threaded clutch houses	
LUM12 PR/SR 1, 2, 3, 4	4210 4386 04
LUM12 HRX/HRF 1, 3, 5, 8	4210 4386 04
LUM22 HRX/HR 2, 3, 4, 6	4210 4386 04
LUM22 HRX/HR 10, 12	4210 4392 03
LUM22 SR/PR 3, 4, 5, 6	4210 4383 04
LUM22 SR/PR 10, 12	4210 4383 03
Angle head covers	
LTV009 R025-R07	4210 4115 00
LTV009 R08-R11	4210 4116 00
Protective covers	
LUM22/32 HR	4210 3150 00
LUM22/25 HRX	4210 3151 00
LUM12 HRX	4210 3152 00
Threaded fronts	
LUM 32 HR10, 15	4210 4252 90
Suspension yoke for LTV009	4210 4461 80
Quick change chuck kit , extra wide diameter for easy handling	4210 2326 91
Angle-head for LTV009, 90° hex drive magnetic bit holder ^a	4210 3857 91
Extended lever for LTV18	4210 2306 02
Handle small size for LUM 25 HRF	4210 3139 00

^a Substitute for 4210 3857 XX angle heads.

Suspension yoke



Quick change chuck kit



Angle-head for LTV009



Extended lever for LTV18



Vacuum screw pick-up for LUM02

RE-conversion kits

Model	Ordering No.
LUM12 HRF	4210 3624 99
LUM12 SR	4210 4137 90
LUM22 SR	4210 2057 80
LTV009	4210 4137 90
LTV18	4210 4023 90



Exhaust hose



Support handle



ESD hose

Torque arms
adaptersInstallation
proposalESD approved
pistol handle

Designation	Exhaust hose	Support handle	ESD hose	Torque arms adapters	Installation proposal	ESD approved pistol handle
LUM12 HRX/HRF	4210 2052 00	4110 1355 92	8202 0501 06	—	8202 1180 67	4210 3616 04
LUM22 HR 3, 4, 6	4210 2052 00	4110 1355 92	8202 0501 10	—	8202 1180 77	4210 4337 04
LUM22 HR 10, 12	4210 2052 00	4110 1355 93	8202 0501 10	—	8202 1180 77	4210 4337 04
LUM22 HRX 3, 4, 6	4210 2052 00	4110 1355 92	8202 0501 10	—	8202 1180 77	4210 3616 04
LUM12 SR	4210 2052 00	—	8202 0501 06	4390 1735 52	8202 1180 67	—
LUM12 PR	4210 2052 00	—	8202 0501 06	4390 1735 53	8202 1180 67	—
LUM22 SR	4210 2053 00	—	8202 0501 10	4390 1735 51	8202 1180 77	—
LUM22 PR	4210 2053 00	—	8202 0501 10	4390 1735 54	8202 1180 77	—
LTV009	4210 2052 00	—	8202 0501 06	—	8202 1180 67	—
LUM32 HR	4210 2052 00	4110 1355 94	8202 0501 10	—	8202 1180 77	4210 4337 04
LUF34	4210 2053 00	4110 1355 82	8202 0501 10	—	8202 1180 77	—

Installation Proposals



Model	Max air flow	Hose, 5 m	Coupling	Lubrication	Ordering No.
For small screwdrivers with 1/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C06-1/8	6 l/s	Cablaire 6 mm	ErgoQIC 08	Yes	8202 0850 10
MIDI Optimizer F/R EQ08-C06-1/8	6 l/s	Cablaire 6 mm	ErgoQIC 08	No	8202 0850 19
For small screwdrivers with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C06	6 l/s	Cablaire 6 mm	ErgoQIC 08	Yes	8202 0850 06
For screwdrivers with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	Yes	8202 0850 00
MIDI Optimizer F/R EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	No	8202 0850 01



Service Kits

The spare parts included in the service kits cover a normal overhaul of your tool. Always have them available for a fast and economical repair.

Main parts included:

- Vane kit
- Motor bearings
- Gaskets
- O-rings
- Circlips
- Pins etc.

Model	Ordering No.
LUM10 PR	4081 0070 90
LUM12 HRX, HRF	4081 0247 90
LUM12 SR	4081 0254 90
LUM12 PR	4081 0250 90
LUM22 HR/HRX 3, 4, 6, 12	4081 0281 90
LUM22 HR/HRX 10	4081 0282 90
LUM22 PR/SR 3, 4, 6, 12	4081 0284 90
LUM22 PR/SR 10	4081 0285 90
LUM25 HRF	4081 0075 90
LUM32 HR	4081 0316 90
LUF34 HR	4081 0086 90
TWIST HRF	4081 0079 90
TWIST VR	4081 0078 90
TWIST HR 3, 7, 12	4081 0291 90
TWIST HR 6	4081 0281 90
TWIST HR 10	4081 0292 90
TWIST12 HRX 2, 3, 4	4081 0247 90
TWIST22 HRX 2-3200, 7, 12	4081 0296 90
TWIST22 HRX 10	4081 0295 90
LTV009	4081 0248 90
LTV18	4081 0085 90

Power you can depend on

Atlas Copco impact wrenches are designed to provide dependability and a long, trouble-free service life in the toughest conditions. Few other tools can match the Atlas Copco impact wrench when it comes to flexibility, capacity-to-weight ratio and simplicity in use and maintenance.

Atlas Copco's powerful, high-speed impact wrenches are designed to cut production times by providing rapid run-down and fast tightening. Impact wrenches build up torque in joints through a series of rotary impacts, where air pressure and tightening time affect the torque obtained. As a general rule, if a wrench impacts longer than 5 seconds on a fastener, a larger wrench should be used in order to achieve better durability.

The LMS models are non shut-off, which means they will shut off once the operator releases the trigger, whereas the LTS models are designed to shut off automatically when a preset torque is reached.

LMS

The LMS is a non shut-off impact wrench with extraordinary power to weight qualities and virtually no reaction force during tightening. The torque is applied to the joint, not to your wrist.

These tools are typically used where fast tightening or disassembly is needed and the range covers recommended torque levels between 7-5000 Nm.

LTS

The LTS models cover a recommended torque range of 22-650 Nm.

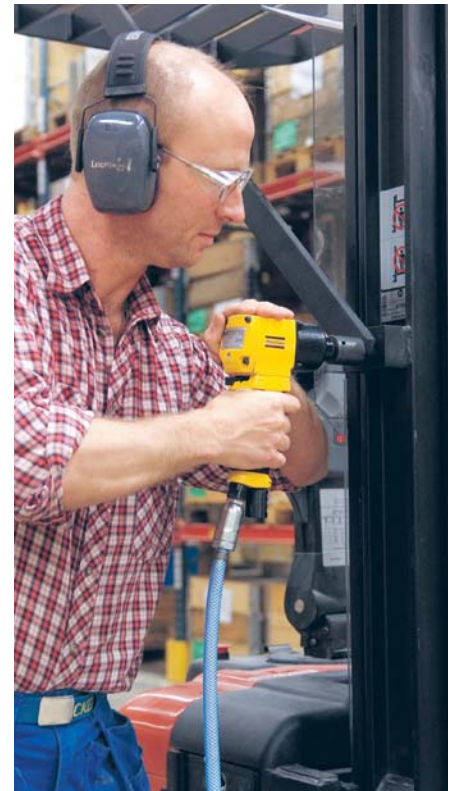
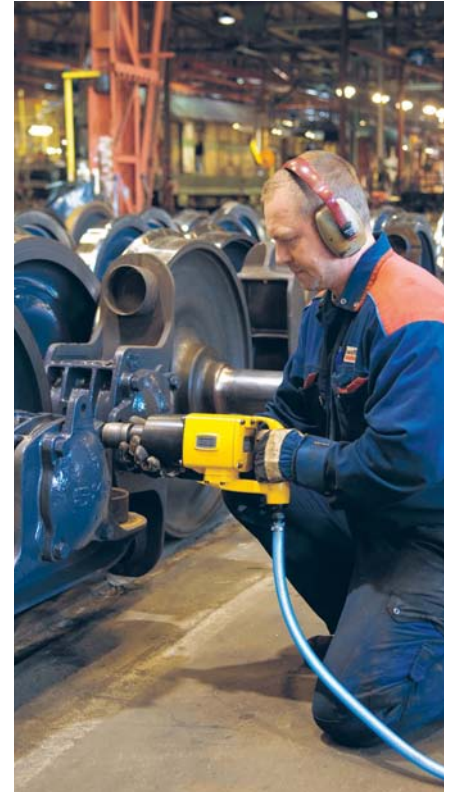
Place the tool on the joint to be fastened and press the trigger. The tool will shut-off automatically at a predetermined torque level, thus providing an operator independent tightening. This means correct tightening with less risk of over-tightening due to operator influence. It also means higher joint quality, improved operator confidence and reduced tightening time. There are two different shut-off principles for the LTS models.

Shut-off mechanism for LTS17 and LTS27

The purpose of the torsion bar principle is to increase the bounce angle of the impact mechanism. The tool shuts off once it has reached the pre-set bounce angle. The LTS27 HR43 has a female hexagon quick change chuck for separate torsion bars with a 1/2" square drive especially suitable for tightening different bolt sizes at the same workplace. The LTS17 and 27 HR13 have a built-in torsion bar to increase accuracy and reduce vibration levels. These models are designed for frequent tightening of the same bolt size.

Shut-off mechanism for LTS37 and LTS57

The purpose of the added bounce energy principle is that the energy content of each impact is added to the next and following impact until the preset level is reached and the tool shuts off.



Selection Guide

	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M36	M42	M45	M48
Nm	9.8	24	47	81	128	197	275	385	518	665	961	1310	2280	3640	4510	5450
LMS 	LMS06 LMS06	LMS17 LMS17	LMS17 LMS27	LMS27 LMS37	LMS37 LMS37	LMS37 LMS47	LMS47 LMS57	LMS57 LMS57	LMS57 LMS57	LMS61 LMS67	LMS61 LMS67	LMS67 LMS67	LMS86 LMS86	LMS86	LMS86	LMS86
LTS		LTS17 LTS17	LTS17 LTS27	LTS27 LTS37	LTS27 LTS37	LTS37 LTS37	LTS57 LTS57	LTS57 LTS57	LTS57							
	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M36	M42	M45	
Nm	14	33	65	114	181	277	386	541	728	935	1350	1840	3210	5110	6340	
LMS 	LMS06 LMS17	LMS17 LMS17	LMS27 LMS27	LMS27 LMS37	LMS37 LMS47	LMS37 LMS47	LMS47 LMS57	LMS57 LMS61	LMS61 LMS67	LMS61 LMS67	LMS67 LMS86	LMS86	LMS86	LMS86	LMS86	
LTS		LTS17 LTS17	LTS17 LTS27	LTS27 LTS37	LTS37 LTS37	LTS57 LTS57	LTS57 LTS57	LTS57								
	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M36	M42		
Nm	17	40	79	136	217	333	463	649	874	1120	1620	2210	3850	6140		
LMS 	LMS06 LMS17	LMS17 LMS17	LMS27 LMS27	LMS27 LMS37	LMS37 LMS47	LMS47 LMS57	LMS57 LMS61	LMS61 LMS67	LMS61 LMS67	LMS67 LMS86	LMS86	LMS86	LMS86	LMS86		
LTS		LTS17 LTS17	LTS17 LTS27	LTS27 LTS37	LTS37 LTS37	LTS57 LTS57	LTS57 LTS57									

■ = HEAVY DUTY

■ = EXTRA HEAVY DUTY

The torque figures are normal tightening torque for untreated oil-smeared and rust-protected bolts and nuts in the most common strength grades. The torque figures correspond to approximately 63% of tensile stress.

LTS models

- Recommended operating range 22-650 Nm.
- Fast tightening and disassembly.
- Negligible reaction force.
- Low weight.
- High power-to-weight ratio.
- Tightening time should not exceed 5 seconds, to avoid excess wear on the tool.
- Automatic shut-off shortens tightening time.
- Consistent torque accuracy.
- No over-torquing.
- Adjustable torque setting.
- LTS17 and LTS 27 are lubrication free.
- LTS17 and LTS27 – Torsion bar principle.
- LTS27 HR43 – Quick change chuck for separate torsion bars.
- LTS37 and LTS57 – Added bounce energy principle.



Model	Bolt size mm	Square drive in	Torque range		Impacts per min	Free speed r/min	Weight		Length excl anvil mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb			kg	lb			l/s	cfm			
LTS17 HR10	8-10	3/8	22 ^b - 45	16 - 33	960	10000	2.0	4.4	214	24	6	13	8	3/8	8434 1172 19
LTS17 HR13	8-10	1/2	34 ^b - 66	25 - 49	1100	10000	2.0	4.4	214	24	6	13	8	3/8	8434 1172 01
LTS27 HR13-1	10-12	1/2	50 ^b - 110	37 - 82	960	9300	2.6	5.7	226	29	6	13	10	3/8	8434 1272 00
LTS27 HR13-2	12-14	1/2	70 ^b - 140	52 - 104	1100	9300	2.6	5.7	226	29	8	17	10	3/8	8434 1272 18
LTS27 HR43	10-14	7/16 ^a	40 ^b - 165	29 - 123	1200	11500	2.5	5.5	164	29	8	17	10	3/8	8434 1272 59
LTS37 HR13	12-14	1/2	80 ^c - 340	59 - 250	1140	8800	3.7	8.1	200	33	10	21	10	3/8	8434 1372 41
LTS37 HR16	12-16	5/8	120 ^c - 340	88 - 250	1140	8800	3.7	8.1	220	33	10	21	10	3/8	8434 1372 09
LTS57 HR20	18-20	3/4	200 ^c - 500	147 - 369	960	4600	5.3	12.0	225	38	13	27	10	3/8	8434 1571 08
LTS57 HR25	18-22	1	200 ^c - 650	147 - 479	960	4600	5.3	12.0	225	38	13	27	10	3/8	8434 1571 40

^a Female hex. quick change chuck – 1/2" square drive on torsion bar.

^b Min torque at 3 bar air pressure and min setting of torque control mechanism.

^c Min torque at 4 bar air pressure and min setting of torque control mechanism.

LMS models

- Recommended operating range 7-1800 Nm.
- Fast tightening and disassembly.
- Negligible reaction force.
- Low weight.
- High power-to-weight ratio.
- Tightening time should not exceed 5 seconds, to avoid excess wear on the tool.
- Soft-start throttle.
- LMS06 – LMS27 are lubrication-free.



Model	Bolt size mm	Square drive in	Torque range		Max torque		Impacts per min	Free speed r/min	Weight		Length excl anvil mm	CS dist- ance mm	Air con- sumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb	Nm	ft lb			kg	lb			l/s	cfm			
LMS06 HR10	6-8	3/8	7- 30	5- 22	55	40	2100	13500	0.9	2.0	184	20	4	8	6.3	1/4	8434 1060 04
LMS06 HR10-HD	6-8	3/8	7- 30	5- 22	55	40	2100	10000	0.9	2.0	184	20	4	8	6.3	1/4	8434 1060 08
LMS06 HR42	6-8	1/4 ^a	7- 30	5- 22	55	40	2100	13500	0.9	2.0	184	20	4	8	6.3	1/4	8434 1060 20
LMS06 HR42-HD	6-8	1/4 ^a	7- 30	5- 22	55	40	2100	10000	0.9	2.0	184	20	4	8	6.3	1/4	8434 1060 16
LMS17 HR10	10	3/8	10- 70	7- 52	110	81	1260	10000	1.7	3.8	141	24	10	21	10.0	3/8	8434 1170 60
LMS17 HR13	10	1/2	10- 70	7- 52	110	81	1260	10000	1.7	3.8	141	24	10	21	10.0	3/8	8434 1170 29
LMS27 HR13	12	1/2	30- 180	22- 133	220	162	1200	8700	2.1	4.6	142	29	10	21	10.0	3/8	8434 1270 02
LMS27 HR43	12	7/16 ^a	30- 180	22- 133	220	162	1200	8700	2.1	4.6	142	29	10	21	10.0	3/8	8434 1270 77
LMS37 HR13	14-16	1/2	40- 340	30- 251	480	354	1200	7800	2.7	6.0	165	33	13	27	10.0	3/8	8434 1360 41
LMS37 HR16	14-16	5/8	40- 340	30- 251	480	354	1200	7800	2.7	6.0	165	33	13	27	10.0	3/8	8434 1370 01
LMS47 HR20	16-19	3/4	70- 460	52- 339	550	405	900	4800	3.5	7.7	170	37	14	30	12.5	3/8	8434 1470 42
LMS57 HR20	18-20	3/4	100- 500	74- 369	900	664	960	4500	4.3	9.5	189	38	16	34	12.5	3/8	8434 1570 09
LMS57 HR25	18-22	1	100- 650	74- 479	900	664	960	4500	4.3	9.5	189	38	16	34	12.5	3/8	8434 1570 41
LMS61 HR20	20-24	3/4	300- 1300	220- 960	1800	1327	900	4000	5.1	11.2	212	44	12	25	12.5	3/8	8434 1611 00
LMS61 HR25	20-24	1	300- 1300	220- 960	1800	1327	900	4000	5.1	11.2	212	44	12	25	12.5	3/8	8434 1610 00
LMS61 HRS4	20-24	1 1/4 ^b	300- 1300	220- 960	1800	1327	900	4000	5.1	11.2	212	44	12	25	12.5	3/8	8434 1612 00
LMS67 HR25	24-32	1	600- 1800	440- 1320	2800	2065	600	3000	9.6	21.2	252	55	27	58	16	1/2	8434 1650 06
LMS67 HR S5	24-32	1 5/8 ^a	600- 1800	440- 1320	2800	2065	600	3000	9.6	21.2	252	55	27	58	16	1/2	8434 1650 10

^a Female hex. quick change chuck.

^b Spline drive No. 4.

LMS models

- Recommended operating range 7-5000 Nm.
- Fast tightening and disassembly.
- Negligible reaction force.
- Low weight.
- High power-to-weight ratio.
- Soft-start throttle.
- Tightening time should not exceed 5 seconds, to avoid excess wear on the tool.



LMS86 GOR



LMS06 SR



LMS67 GR

Model	Bolt size mm	Square drive in	Torque range		Max torque		Impacts per min	Free speed r/min	Weight		Length excl anvil mm	CS dist- ance mm	Air con- sumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb	Nm	ft lb			kg	lb			l/s	cfm			
LMS06 SR10	6-8	3/8	7-30	5-22	55	40	2100	12500	0.9	2.0	182	20	4	8	6.3	1/4	8434 1060 12
LMS67 GIR25	24-32	1	600-1800	440-1320	2800	2065	600	3000	9.4	20.7	339	55	27	58	16	1/2	8434 1650 02
LMS67 GIR S5	24-32	1 5/8 ^a	600-1800	440-1320	2800	2065	600	3000	9.8	21.6	339	55	27	58	16	1/2	8434 1650 14
LMS86 GOR38/B	32-45	1 1/2	1000-5000	737-3688	10000	7375	450	3720	16.4	36.0	376	63	29	61	16.0	1/2	8434 1860 12
LMS86 GIR38/B	32-45	1 1/2	1000-5000	737-3688	10000	7375	450	3720	16.4	36.0	376	63	29	61	16.0	1/2	8434 1860 20
LMS86 GORS5/B	32-45	1 5/8 ^a	1000-5000	737-3688	10000	7375	450	3720	16.4	36.0	376	63	29	61	16.0	1/2	8434 1860 18
LMS86 GIRS5/B	32-45	1 5/8 ^a	1000-5000	737-3688	10000	7375	450	3720	16.4	36.0	376	63	29	61	16.0	1/2	8434 1860 26

^a Spline drive No. 5.

GOR = Outside trigger.

GR/GIR = Inside trigger.

Accessories Included

LTS

Silenced air exhaust through handle

Hose fitting

Torsion bar No. 06 LTS27 HR43

Adjusting key LTS17 and LTS27

LMS

Silenced air exhaust through handle

(LMS47/57/61)

Hose fitting

Optional Accessories

Protective covers

Model	Ordering No.
LMS17	4250 1503 00
LMS27	4250 1273 00
LMS37	4250 1213 00
LMS47	4250 1338 00
LMS57	4250 1282 00
LMS61	4250 2464 00
LMS64	4250 0828 00
LTS17	4250 1410 00
LTS27 HR13	4250 1411 00
LTS27 HR43	4250 1340 00
LTS37	4250 1337 00
LTS57	4250 1339 00



Protective covers

Power regulator valve

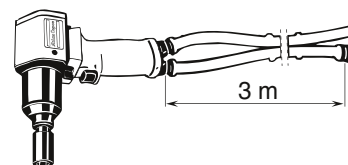
Model	Ordering No.
LMS17/LTS17	4250 1091 90
LMS27/LTS27	4250 1091 91
LMS37/LTS37	4250 1091 92
LMS47	4250 1091 93
LMS57/LTS57	4250 1091 94
LTS17	4250 1091 87
LTS27	4250 1091 86
LTS37	4250 1091 85
LTS57	4250 1091 88



Power regulators

Piped-away exhaust kit

Model	Ordering No.
LMS06 HR	4210 2052 00
LMS17, -27, -37, -47, -57, LTS17, -27, -37, -57	4250 1366 90



Exhaust kit

Tool holder with square drive, for 7/16" quick change chuck

Model	Drive size in	Length mm	Ordering No.
LMS17, -27	3/8	75	4023 1210 03
	1/2	75	4023 1211 03



Socket holders

Optional Accessories



Suspension yokes

Model	Horizontal Ordering No.	Vertical Ordering No.	Swivelling Ordering No.
LMS06 HR	—	—	4210 0243 00
LMS17	—	—	4250 1365 00
LMS27	4250 0872 00	4250 1159 00	—
LMS37	4250 0872 00	4250 1058 00	—
LMS47	4250 0872 00	4250 1327 00	—
LMS57	4250 0872 00	4250 1160 00	—
LMS61	4250 0872 00	4250 1620 90	—
LMS67	4250 0677 80	—	—
LMS86	0371 1102 00	—	—
LTS17	—	—	4250 1365 00
LTS27	4250 0872 00	—	4250 1365 00
LTS37	4250 0872 00	—	4250 1253 00
LTS57	4250 0872 00	—	4250 2229 00

Extended anvils

Model	Drive size in	Extension mm	Ordering No.
Extended square drive anvil			
LMS17	1/2	75	4250 1147 80 ^{ab}
LMS27	1/2	75	4250 1085 80 ^{ab}
LMS27	1/2	150	4250 1086 80 ^{ab}
LMS37/LTS37	1/2	75	4250 1031 80 ^{ab}
LMS37/LTS37	1/2	150	4250 1032 80 ^{ab}
LMS37/LTS37	5/8	75	4250 1034 80 ^{ab}
LMS37/LTS37	5/8	150	4250 1035 80 ^{ab}
LMS47/LTS47	3/4	75	4250 1208 00
LMS47/LTS47	3/4	150	4250 1209 00
LMS57/LTS57	3/4	75	4250 1109 00
LMS57/LTS57	3/4	150	4250 1110 00
LMS57/LTS57	3/4	200	4250 1111 00
LMS57/LTS57	1	75	4250 1113 00
LMS57/LTS57	1	150	4250 1114 00
Spline type anvil			
LMS67	1 5/8-14	—	4250 2473 80
Heavy duty anvil (thru hole)			
LMS37/LTS37	1/2	80	4250 1041 01

Quick change chuck

Model	Drive size in	Extension mm	Ordering No.
Anvil with female hexagon quick change chuck			
LMS06	1/4	—	4250 1513 80
LMS17	7/16	—	4250 1154 80
LMS27	7/16	—	4250 1088 80
LMS37	7/16	—	4250 1050 80 ^c

^a Retainer pin – locking type 4250 0851 00

^b Retainer pin – quick change type 4250 1190 00

^c NOTE: To be used together with reversing valve 4250 1345 95 (marked "1") only.

Torsion bars

Torsion bar No.	Torque Nm	Ordering No.	Colour of bar
02	60	4250 1230 82	orange
03	75	4250 1230 83	yellow
04	90	4250 1230 84	green
05	100	4250 1230 85	blue
06	115	4250 1230 86	red (standard)
07	125	4250 1230 87	orange
08	140	4250 1230 88	yellow
09	150	4250 1230 89	green
10	165	4250 1230 90	blue



Installation Proposals

Model	Max air flow	Hose, 5 m	Coupling	Lubrication	Ordering No.
For small impact with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	Yes	8202 0850 00
MIDI Optimizer F/R EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	No	8202 0850 01
For 1/2" impact wrenches with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 07
For 1/2" impact wrenches with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 03
MIDI Optimizer F/RD EQ10-R10	16 l/s	Rubair 10 mm	ErgoQIC 10	Yes	8202 0850 16
For impact wrenches with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 02
For impact wrenches with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13-1/4	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 11



Service Kits

The spare parts included in the service kits cover a normal overhaul of your tool. Always have them available for a fast and economical repair.

Main parts included:

- Vane kit
- Motor bearings
- Gaskets
- O-rings
- Circlips
- Pins etc.

Model	Service kit
LMS06	4081 0008 90
LMS06 SR	4081 0168 90
LMS17/LTS17	4081 0204 90
LMS27/LTS27	4081 0205 90
LMS37/LTS37	4081 0206 90
LMS47	4081 0207 90
LMS57/LTS57	4081 0208 90
LMS61	4081 0257 90
LMS64	4081 0015 90
LMS67	4081 0394 90
LMS86	4081 0016 90

ErgoPulse impulse tools – fast, reliable and operator friendly

The speed, reliability, and accuracy of ErgoPulse hydraulic impulse nutrunners, combined with the fact that they are comfortable to operate, make them suitable for continuous heavy production. Since there is no metal-to-metal impact in a pulse tool, it provides a softer, more controlled pulse with considerably less vibration and noise than an impact wrench.

A complete range

ErgoPulse impulse tools are available in straight and pistol grip, shut-off and non shut-off versions. The range covers torque from 2–900 Nm.

The ErgoPulse principle – The heart of a pulse tool is the hydraulic pulse unit. Since the pulses are very short, there is almost no reaction force in the handle, only the much lower motor torque is transferred to the operator's hand. In addition, there are less vibrations and noise than with an impact wrench. Combined with good balance and low weight the result is a tool that is very comfortable to operate.

PTS and PTX shut-off pulse tools

Atlas Copco shut-off pulse tools shut off the air supply when the pre-set torque is reached. Operator influence is minimized and the result is increased accuracy and faster tightening.

Torque sensing system – In ErgoPulse PTS and PTX nutrunners torque is “sensed” by means of a rotatable inertial mass acting against an adjustable spring. The result is a highly accurate and easily adjustable shut-off system.

Pulse mechanism – The pulse mechanism has pistons for minimum weight and long service life. The design is based on cam-guided pistons and rollers and the pulse cylinder is oil-filled. The moving parts are thus completely immersed in oil, which ensures a long service life.

Twin chamber vane motor – This is designed to give high torque at low speed, which gives the best characteristics for fast, accurate tightening.

TRIM valve – A patented adjustable valve at the air outlet is used to maximize tool accuracy on one type of joint, which could be hard, medium or soft.

AUTOTRIM valve – PTS/PTX-AT tools are equipped with an automatic two-stage trim valve. The tool runs down the screw with reduced free speed. After 1-2 pulses it shifts automatically to full power thus enabling both hard and soft joints to be tightened with excellent results with-

out any adjustments. The PTS/PTX-AT tools can also be used for reporting applications. ErgoPulse PTS-HRF – These are Air-on-Top versions which offer full flexibility. You either use the air inlet on top to avoid the disturbing hose hook or you use the conventional air inlet at the bottom of the handle – a convenient tool for use in workstations.

ErgoPulse PTX – The new ErgoPulse PTX series is intended for applications where weight is critical. The tools are available in both Trim and AutoTrim versions.

ErgoPulse 25PTX

At the top of the PTX range, is the new ErgoPulse 25PTX, which gives you 900 Nm of tightening torque in a tool weighing only 10.3 kg.

ErgoPulse XS non shut-off tools

ErgoPulse XS is the correct choice when the operator needs to control the process. The tools provide high torque, fast, accurate tightening and long service lifetimes.

Twin chamber vane motor – This is designed to give high torque at low speed, which provides the best characteristics for fast, reliable and accurate tightening.

Double or triple bladed pulse mechanisms – The tools are equipped with pulse units with two or three blades. They employ the Atlas Copco patented cam-guided design to push out the blades, giving very high reliability. The pulse units have a high power-to-weight ratio, making the tools very powerful for their size. Torque is adjusted by regulating an artificial leak in the hydraulic circuit.

ErgoPulse 6PS

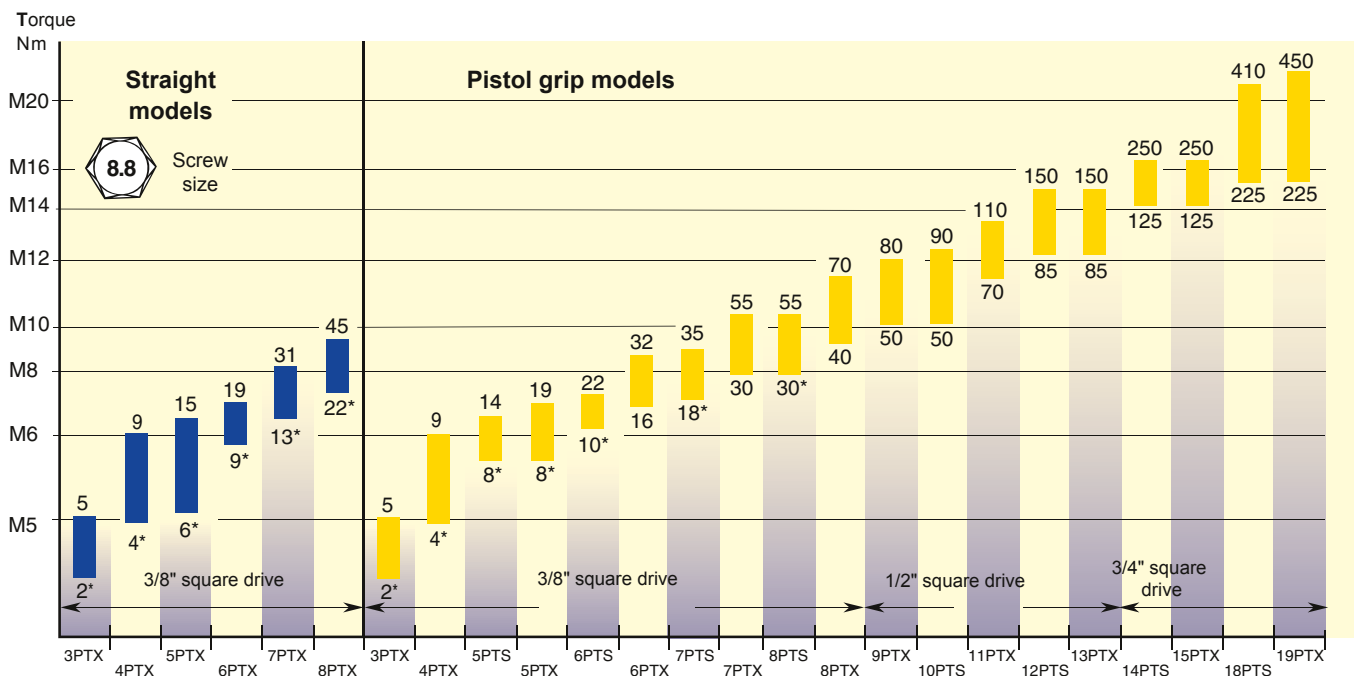
This model is a good choice for tightening self-tapping screws and when fast, powerful reversing is needed. Torque is adjusted by regulating the air pressure.



Selection Guide

EP PTS/PTX Shut-off models

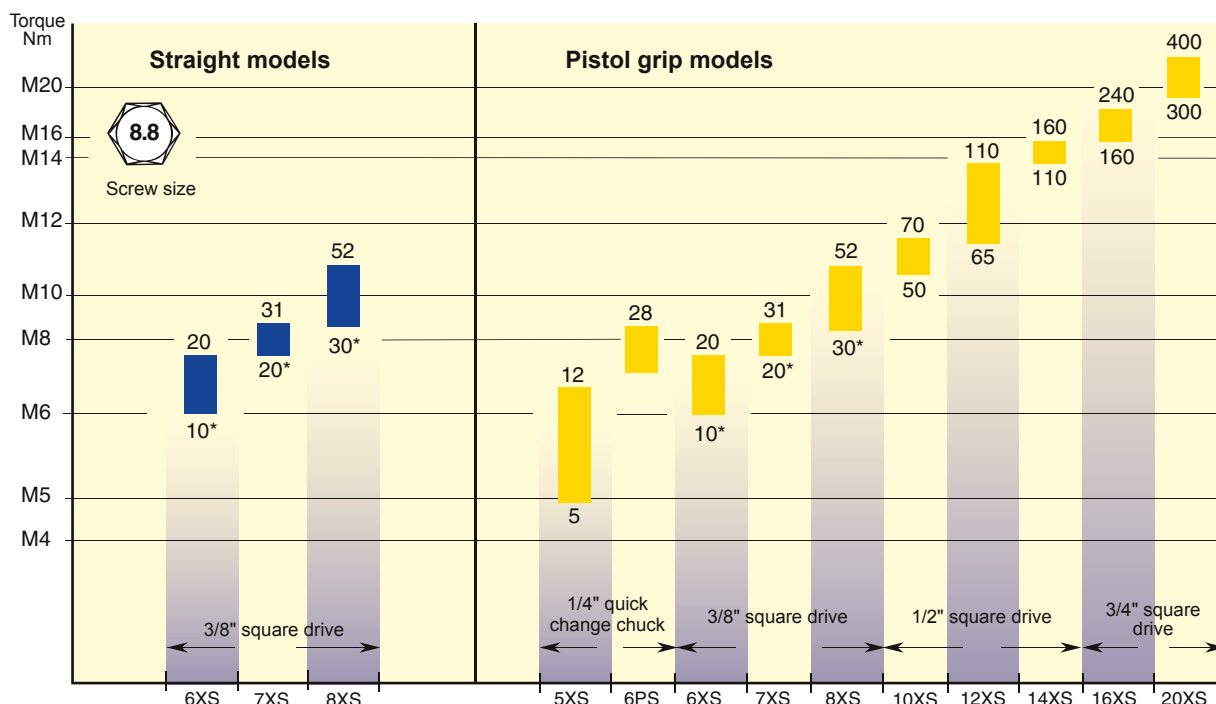
The ErgoPulse PTS and PTX tools can be adjusted within a wide torque range by simply setting the spring force that counteracts the inertia body. Torque should preferably be checked with a hand torque wrench. Electronic monitoring with an in-line transducer is possible but should be verified with a manual hand torque wrench to avoid measuring errors due to the extremely short pulse sequence.



* For tools with quick change chuck, see technical data.

EP XS/PS Non shut-off models

The size of tool is determined on the basis of torque and/or bolt dimension. Torque should preferably be checked with a hand torque wrench. Electronic monitoring with an in-line transducer is possible but should be verified with a manual hand torque wrench to avoid measuring errors due to the extremely short pulse sequence.



* For tools with quick change chuck, see technical data.

EP PTX models

In ErgoPulse shut-off tools the air supply is shut off as soon as the pre-set torque has been reached, minimizing operator influence. The result is increased accuracy and faster tightening.

- High reliability.
- Consistent torque over time, low mean-shift.
- High level of durability.
- High speed, short cycle times.
- One-handed operation.
- High power-to-weight ratio.
- No springs to wear out.
- No wear on key parts.
- High precision components.
- No reaction forces.
- Light, well-balanced tools.
- Low noise levels.
- Lubrication free.



	Bolt size	Square drive	Torque range ^a				Free speed	Weight		Length	CS distance	Air con- sumption under load		Rec. hose size	Air inlet thread	Ordering No.
Model	mm	in	Nm ft lb				r/min	kg	lb	mm	mm	l/s	cfm	mm	in	
TRIM-RE																
EP3PTX5 HR42-RE	M4-M5	1/4 ^b	2- 5	1.6 - 4	5000 ^c	0.8	1.7	154	21	4	9	8	1/4	8431 0375 51		
EP4PTX9 HR42-RE	M5	1/4 ^b	4- 9	3 - 7	3400 ^d	0.9	1.9	164	22	4	9	8	1/4	8431 0375 50		
EP4PTX9 HR10-RE	M5	3/8	4- 9	3 - 7	3400 ^d	0.9	1.9	164	22	4	9	8	1/4	8431 0375 54		
EP5PTX17 HR42-RE	M6	1/4 ^b	7- 17	5 - 13	7000 ^d	0.9	1.9	164	22	7	15	8	1/4	8431 0375 00		
EP5PTX19 HR10-RE	M6	3/8	8- 19	6 - 14	7000 ^d	0.9	1.9	164	22	7	15	8	1/4	8431 0375 04		
EP6PTX28 HR42-RE	M6-M8	1/4 ^b	15- 28	11 - 21	8500 ^d	0.9	1.9	164	22	7	15	8	1/4	8431 0375 10		
EP6PTX32 HR10-RE	M6-M8	3/8	16- 32	12 - 23	8500 ^d	0.9	1.9	164	22	7	15	8	1/4	8431 0375 20		
EP7PTX55 HR10-RE	M8-M10	3/8	30- 55	22 - 40	7200 ^d	1.2	2.5	176	25	9	19	10	1/4	8431 0375 30		
EP8PTX70 HR10-RE	M10	3/8	40- 70	29 - 51	6900 ^d	1.2	2.5	176	25	9	19	10	1/4	8431 0375 60		
EP9PTX80 HR13-RE	M10	1/2	50- 80	37 - 59	5200 ^d	1.5	3.3	188	29	11	23	10	1/4	8431 0375 40		
EP11PTX120 HR13-RE	M12	1/2	70- 110	51 - 88	5100 ^d	1.7	3.8	196	29	12	25	10	1/4	8431 0376 50		
EP13PTX150 HR13-RE	M12-M14	1/2	85-150	63 -110	5300 ^d	2.3	5.1	197	33.5	15	32	13	3/8	8431 0376 60		
EP15PTX250 HR20-RE	M12-M16	3/4	125-250	92 -184	4300 ^d	3.1	6.8	216	36.5	21	45	13	3/8	8431 0376 70		
EP19PTX450 HR20-RE	M16-M20	3/4	225-450	166 -332	3300 ^d	4.2	9.2	221	44	23	49	13	3/8	8431 0376 80		
Trim-RE Low pressure models																
EP5PTX HR42-RE-L	M4-M5	1/4 ^b	6- 13	1.6 - 4	5900 ^e	0.8	1.8	154	21	4	9	8	1/4	8431 0379 00		
EP5PTX HR10-RE-L	M5	3/8	7- 15	3 - 7	5900 ^e	0.9	2.0	164	22	4	9	8	1/4	8431 0379 04		
EP6PTX HR42-RE-L	M5	1/4 ^b	11- 22	3 - 7	7900 ^e	0.9	2.0	164	22	4	9	8	1/4	8431 0379 10		
EP6PTX HR10-RE-L	M6	3/8	13- 25	5 - 13	7900 ^e	0.9	2.0	164	22	7	15	8	1/4	8431 0379 20		
EP7PTX HR10-RE-L	M6	3/8	23- 35	6 - 14	6200 ^e	0.9	2.0	164	22	7	15	10	1/4	8431 0379 30		
EP8PTX HR10-RE-L	M6-M8	3/8	33- 45	11 - 21	6300 ^e	0.9	2.0	164	22	7	15	10	1/4	8431 0379 60		
AutoTrim ^d																
EP3PTX5 HR42-AT	M4-M5	1/4 ^b	2- 5	1.6 - 4	4500 ^c	0.8	1.8	154	21	4	9	8	1/4	8431 0375 53		
EP4PTX9 HR42-AT	M5	1/4 ^b	4- 9	3 - 7	3300 ^c	0.9	2.0	164	22	4	9	8	1/4	8431 0375 52		
EP4PTX9 HR10-AT	M5	3/8	4- 9	3 - 7	3300 ^c	0.9	2.0	164	22	4	9	8	1/4	8431 0375 56		
EP5PTX17 HR42-AT	M6	1/4 ^b	7- 17	5 - 13	5400 ^c	0.9	2.0	164	22	7	15	8	1/4	8431 0375 02		
EP5PTX19 HR10-AT	M6	3/8	8- 19	6 - 14	5400 ^c	0.9	2.0	164	22	7	15	8	1/4	8431 0375 06		
EP6PTX28 HR42-AT	M6-M8	1/4 ^b	15- 28	11 - 21	8500 ^c	0.9	2.0	164	22	7	15	8	1/4	8431 0375 12		
EP6PTX32 HR10-AT	M6-M8	3/8	16- 32	12 - 23	8500 ^c	0.9	2.0	164	22	7	15	8	1/4	8431 0375 22		
EP7PTX55 HR10-AT	M8-M10	3/8	30- 55	22 - 40	6900 ^c	1.2	2.5	176	25	9	19	10	1/4	8431 0375 32		
EP8PTX70 HR10-AT	M10	3/8	40- 70	29 - 51	6900 ^c	1.2	2.5	176	25	9	19	10	1/4	8431 0375 62		
EP9PTX80 HR13-AT	M10	1/2	50- 80	37 - 59	5100 ^c	1.5	3.4	188	29	11	23	10	1/4	8431 0375 42		
EP11PTX120 HR13-AT	M12	1/2	70- 110	51 - 88	5100 ^c	1.7	3.8	196	29	12	25	10	1/4	8431 0376 52		
EP13PTX150 HR13-AT	M12-M14	1/2	85-150	63 -110	5300 ^c	2.3	5.0	197	33.5	15	32	13	3/8	8431 0376 62		
EP15PTX250 HR20-AT	M12-M16	3/4	125-250	92 -184	4200 ^c	3.1	6.8	216	36.5	21	45	13	3/8	8431 0376 72		
EP19PTX450 HR20-AT	M16-M20	3/4	225-450	166 -332	3300 ^c	4.2	9.2	221	44	23	49	13	3/8	8431 0376 82		
AutoTrim Low pressure models																
EP5PTX HR42-AT-L	M4-M5	1/4 ^b	6- 13	1.6 - 4	5900 ^e	0.8	1.8	154	21	4	9	8	1/4	8431 0379 02		
EP5PTX HR10-AT-L	M5	3/8	7- 15	3 - 7	5900 ^e	0.9	2.0	164	22	4	9	8	1/4	8431 0379 06		
EP6PTX HR42-AT-L	M5	1/4 ^b	11- 22	3 - 7	7900 ^e	0.9	2.0	164	22	4	9	8	1/4	8431 0379 12		
EP6PTX HR10-AT-L	M6	3/8	13- 25	5 - 13	7900 ^e	0.9	2.0	164	22	7	15	8	1/4	8431 0379 22		
EP7PTX HR10-AT-L	M6	3/8	23- 35	6 - 14	6200 ^e	0.9	2.0	164	22	7	15	10	1/4	8431 0379 32		
EP8PTX HR10-AT-L	M6-M8	3/8	33- 45	11 - 21	6300 ^e	0.9	2.0	164	22	7	15	10	1/4	8431 0379 62		

^a To be used as a guide only, final torque depends on type of joint, accessories used and air pressure.

^b Female hexagon drive. Quick change chuck.
^c In full speed mode.

^d RE-reporting kit not included (Ordering No. 4250 1854 91).

^e Measured at 5 bar air pressure.

EP PTS models

ErgoPulse PTS is the reliable and powerful workhorse and offers the same shut-off mechanism as the peak performer PTX. The PTS series has some air on top HRF models, making it possible to feed the air from above to the tool to make it easier to use in many applications. All PTS models can also be used as lubrication free, just like other ErgoPulse tools.



Model	Bolt size mm	Square drive in	Torque range ^a		Free speed r/min	Weight		Length mm	CS distance mm	Air con- sumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
TRIM-RE														
EP5PTS12 HR42-RE	M5-M6	1/4 ^b	6 - 12	4 - 9	5400 ^c	1.0	2.2	196	21	6.5	14	8	1/4	8431 0374 05
EP5PTS14 HR10-RE	M5-M6	3/8	8 - 14	6 - 10	5400 ^c	1.0	2.2	191	21	6.5	14	8	1/4	8431 0374 00
EP6PTS20 HR42-RE	M6	1/4 ^b	8 - 20	6 - 15	7300 ^c	1.0	2.2	196	21	7	15	8	1/4	8431 0374 15
EP6PTS22 HR10-RE	M6	3/8	10 - 22	7 - 16	7300 ^c	1.0	2.2	191	21	7	15	8	1/4	8431 0374 20
TRIM-RE														
EP7PTS30 HR42-RE	M8	1/4 ^b	16 - 31	12 - 23	5700 ^c	1.4	3.0	175	26	8	17	10	1/4	8431 0374 35
EP7PTS35 HR10-RE	M8	3/8	18 - 35	13 - 26	5700 ^c	1.4	3.0	176	26	8	17	10	1/4	8431 0374 40
EP8PTS40 HR42-RE	M8	1/4 ^b	22 - 40	16 - 29	7300 ^c	1.4	3.0	175	26	9	19	10	1/4	8431 0374 55
EP8PTS55 HR10-RE	M8-M10	3/8	30 - 55	22 - 40	7300 ^c	1.4	3.0	176	26	9	19	10	1/4	8431 0374 60
EP10PTS90 HR13-RE	M10-M12	1/2	50 - 90	37 - 66	5200 ^c	1.8	4.0	193	29	11	23	10	1/4	8431 0374 80
EP12PTS150 HR13-RE	M12-M14	1/2	85 -150	63 -110	4200 ^c	2.5	5.5	201	34	13	27	13	3/8	8431 0374 90
EP14PTS250 HR20-RE	M12-M16	3/4	125 -250	92 -185	4000 ^c	3.3	7.2	216	37	20	42	13	3/8	8431 0374 95
EP18PTS410 HR20-RE	M16-M20	3/4	225 -410	166 -302	3000 ^c	4.3	9.5	202	42	22	46	13	3/8	8431 0374 98
TRIM-RE with Air on top														
EP7PTS35 HRF10-RE	M8	3/8	18 - 35	13 - 26	5700 ^c	1.4	3.0	176	31	8	17	10	1/4	8431 0374 41
EP8PTS55 HRF10-RE	M8-M10	3/8	30 - 55	22 - 40	7300 ^c	1.4	3.0	176	31	9	19	10	1/4	8431 0374 61
EP10PTS90 HRF13-RE	M10-M12	1/2	50 - 90	37 - 66	5200 ^c	1.8	4.0	193	34	11	23	10	1/4	8431 0374 81
AutoTrim with balanced grip ^e														
EP6PTS20 HR42-AT	M6	1/4 ^b	8 - 20	6 - 15	6300 ^d	1.0	2.2	196	21	7	15	8	1/4	8431 0374 16
EP6PTS22 HR10-AT	M6	3/8	10 - 22	7 - 16	6300 ^d	1.0	2.2	191	21	7	15	8	1/4	8431 0374 21
AutoTrim balanced grip ^e														
EP7PTS30 HR42-AT	M8	1/4 ^b	16 - 31	12 - 23	5400 ^d	1.4	3.0	175	26	8	17	10	1/4	8431 0374 37
EP7PTS35 HR10-AT	M8	3/8	18 - 35	13 - 26	5400 ^d	1.4	3.0	176	26	8	17	10	1/4	8431 0374 42
EP8PTS40 HR42-AT	M8	1/4 ^b	22 - 40	16 - 29	6900 ^d	1.4	3.0	175	26	9	19	10	1/4	8431 0374 57
EP8PTS55 HR10-AT	M8-10	3/8	30 - 55	22 - 40	6900 ^d	1.4	3.0	176	26	9	19	10	1/4	8431 0374 62
EP10PTS90 HR13-AT	M10-12	1/2	50 - 90	37 - 66	4900 ^d	1.8	4.0	193	29	11	23	10	1/4	8431 0374 82
EP12PTS150 HR13-AT	M12-14	1/2	85 -150	63 -110	4100 ^d	2.5	5.5	201	34	13	27	13	3/8	8431 0374 92
EP14PTS250 HR20-AT	M12-16	3/4	125 -250	92 -185	3900 ^d	3.3	7.2	216	37	20	42	13	3/8	8431 0374 97
EP18PTS410 HR20-AT	M16-20	3/4	225 -410	166 -332	2900 ^d	4.3	9.5	202	42	22	46	13	3/8	8431 0374 99

^a To be used as a guide only, final torque depends on type of joint, accessories used and air pressure.

^b Female hexagon drive. Quick change chuck.
^c With TRIM valve fully open.

^d In full speed mode.

^e RE-reporting kit not included (Ordering No. 4250 1854 91).

EP-XS models

In ErgoPulse non shut-off tools the tool produces pulses until the operator releases the trigger. Preferred in applications where it is an advantage for the operator to be able to control the process by shutting off the tool manually.

- High reliability and durability.
- High speed, short cycle times.
- One-handed operation.
- High power-to-weight ratio.
- No springs to wear out.
- High precision components.
- No reaction forces.
- Light, well-balanced tools.
- Low noise levels.
- Lubrication free.



Model	Bolt size mm	Square drive in	Torque range ^a		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
EP5XS HR42	M5-M6	1/4 ^b	5- 12	4- 9	8500	0.8	1.8	165	21	9	19	8	1/4	8431 0372 30
EP6XS HR42	M6	1/4 ^b	9- 19	6- 14	8000	0.8	1.8	150	22	8	17	8	1/4	8431 0372 23
EP6XS HR10	M6	3/8	10- 20	7- 15	8000	0.8	1.8	152	22	8	17	8	1/4	8431 0372 20
EP6PS HR42	M8	1/4 ^b	^c - 28	^c - 21	8000	0.8	1.8	148	21	9	19	10	1/4	8431 0368 22
EP6PS HR10	M8	3/8	^c - 30	^c - 22	8000	0.8	1.8	150	21	9	19	10	1/4	8431 0368 21
EP8PS HR10	M8-M10	3/8	^c - 65	^c - 48	8000	1.0	2.2	158	23	9	19	10	1/4	8431 0368 24
EP7XS HR42	M8	1/4 ^b	17- 28	13- 21	9000	0.8	1.8	150	22	8	17	8	1/4	8431 0372 10
EP7XS HR10	M8	3/8	20- 31	15- 23	9000	0.8	1.8	152	22	8	17	8	1/4	8431 0372 00
EP8XS HRX42	M8	1/4 ^b	22- 40	16- 29	7000	1.0	2.2	172	23	9	19	10	1/4	8431 0369 16
EP8XS HRX10	M8-M10	3/8	30- 52	22- 38	7000	1.0	2.2	174	23	9	19	10	1/4	8431 0369 09
EP10XS HR13	M10	1/2	50- 70	37- 52	6000	1.3	2.9	168	26	11	23	10	1/4	8431 0369 40
EP12XS HR13	M12	1/2	65- 110	48- 81	4500	1.6	3.5	178	29	12	25	10	1/4	8431 0371 00
EP14XS HR13	M14	1/2	110- 160	81- 118	3500	2.4	5.3	188	34	14	30	13	3/8	8431 0371 50
EP16XS HR20	M16	3/4	160- 240	118- 177	2800	3.3	7.3	205	37	15	32	13	3/8	8431 0371 55
EP20XS HR20	M20	3/4	300- 400	221- 295	3700	5.1	11.2	240	43	16	34	13	3/8	8431 0371 60

^a To be used as a guide only, final torque depends on type of joint, accessories used and air pressure.

^b Female hexagon drive. Quick change chuck.

^c Torque is adjusted by regulating the air pressure.

EP PTX models

In ErgoPulse shut-off tools the air supply is shut off as soon as the pre-set torque has been reached, minimizing operator influence. The result is increased accuracy and faster tightening.

- High reliability.
- Consistent torque over time, low mean-shift.
- High level of durability.
- High speed, short cycle times.
- One-handed operation.
- High power-to-weight ratio.
- No springs to wear out.
- High precision components.
- No reaction forces.
- Low noise levels.
- Lubrication free.



Model	Bolt size mm	Square drive in	Torque range ^a		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
TRIM														
EP3PTX5 SR42	M4-M5	1/4 ^b	2 - 5	1.6 - 4	4500 ^d	0.7	1.6	202	21	4	9	8	1/4	8431 0376 01
EP4PTX9 SR42	M5	1/4 ^b	4 - 9	3 - 7	3400 ^d	0.9	2.0	207	21	4	9	8	1/4	8431 0376 00
EP4PTX9 SR10	M5	3/8	4 - 9	3 - 7	3400 ^d	0.9	2.0	207	21	4	9	8	1/4	8431 0376 04
EP5PTX14 SR42	M6	1/4 ^b	7 - 14	5 - 10	5300 ^d	0.9	2.0	207	21	7	15	8	1/4	8431 0376 10
EP5PTX15 SR10	M6	3/8	9 - 15	7 - 11	5300 ^d	0.9	2.0	207	21	7	15	8	1/4	8431 0376 14
EP6PTX18 SR42	M6	1/4 ^b	9 - 18	7 - 13	6800 ^d	0.9	2.0	207	21	7	15	8	1/4	8431 0376 20
EP6PTX19 SR10	M6	3/8	10 - 19	7 - 14	6800 ^d	0.9	2.0	207	21	7	15	8	1/4	8431 0376 24
EP7PTX28 SR42	M6-M8	1/4 ^b	17 - 28	13 - 21	4300 ^d	1.2	2.5	235	25	8	17	10	1/4	8431 0376 30
EP7PTX31 SR10	M6-M8	3/8	18 - 31	13 - 23	4300 ^d	1.2	2.5	235	25	8	17	10	1/4	8431 0376 34
EP8PTX38 SR42	M8	1/4 ^b	22 - 38	16 - 28	5500 ^d	1.2	2.5	235	25	9	19	10	1/4	8431 0376 44
EP8PTX45 SR10	M8	3/8	24 - 45	18 - 33	5500 ^d	1.2	2.5	235	25	9	19	10	1/4	8431 0376 40
TRIM-RE														
EP25PTX900 GR25-RE	M24-M27	1	450 - 900	330 - 660	4500 ^d	10.3	22.7	406	58.5	30	63	13	1/2	8431 0376 90
AutoTrim ^e														
EP3PTX5 SR42-AT	M4-M5	1/4 ^b	2 - 5	1.6 - 4	4500 ^c	0.8	1.7	262	21	4	9	8	1/4	8431 0376 03
EP4PTX9 SR42-AT	M5	1/4 ^b	4 - 9	3 - 7	3300 ^c	0.9	2.0	267	21	4	9	8	1/4	8431 0376 02
EP4PTX9 SR10-AT	M5	3/8	4 - 9	3 - 7	3300 ^c	0.9	2.0	267	21	4	9	8	1/4	8431 0376 06
EP5PTX14 SR42-AT	M6	1/4 ^b	7 - 14	5 - 10	4800 ^c	0.9	2.0	267	21	7	15	8	1/4	8431 0376 12
EP5PTX15 SR10-AT	M6	3/8	9 - 15	7 - 11	4800 ^c	0.9	2.0	267	21	7	15	8	1/4	8431 0376 16
EP6PTX18 SR42-AT	M6	1/4 ^b	9 - 18	7 - 13	6700 ^c	0.9	2.0	267	21	7	15	8	1/4	8431 0376 22
EP6PTX19 SR10-AT	M6	3/8	10 - 19	7 - 14	6700 ^c	0.9	2.0	267	21	7	15	8	1/4	8431 0376 26
EP7PTX28 SR42-AT	M6-M8	1/4 ^b	17 - 28	13 - 21	4300 ^c	1.2	2.5	295	25	7	15	10	1/4	8431 0376 32
EP7PTX31 SR10-AT	M6-M8	3/8	18 - 31	13 - 23	4300 ^c	1.2	2.5	295	25	7	15	10	1/4	8431 0376 36
EP8PTX38 SR42-AT	M8	1/4 ^b	22 - 38	16 - 28	5900 ^c	1.2	2.5	295	25	9	19	10	1/4	8431 0376 46
EP8PTX45 SR10-AT	M8	3/8	24 - 45	18 - 33	5900 ^c	1.2	2.5	295	25	9	19	10	1/4	8431 0376 42
AutoTrim Low pressure models														
EP5PTX SR42-AT-L	M4-M5	1/4 ^b	7 - 12	1.6 - 4	4800 ^f	0.7	1.6	267	21	4	9	8	1/4	8431 0368 03
EP5PTX SR10-AT-L	M5	3/8	8 - 13	3 - 7	4800 ^f	0.9	2.0	267	21	4	9	8	1/4	8431 0368 01
EP6PTX SR42-AT-L	M5	1/4 ^b	9 - 16	3 - 7	6300 ^f	0.9	2.0	267	21	4	9	8	1/4	8431 0368 15
EP6PTX SR10-AT-L	M6	3/8	10 - 17	5 - 10	6300 ^f	0.9	2.0	267	21	7	15	8	1/4	8431 0368 09
EP7PTX SR42-AT-L	M6	1/4 ^b	15 - 21	7 - 11	4000 ^f	0.9	2.0	295	21	7	15	8	1/4	8431 0368 46
EP7PTX SR10-AT-L	M6	3/8	16 - 22	7 - 13	4000 ^f	0.9	2.0	295	21	7	15	8	1/4	8431 0368 35
EP8PTX SR42-AT-L	M6	1/4 ^b	20 - 28	7 - 14	5300 ^f	0.9	2.0	295	21	8	15	10	1/4	8431 0367 81
EP8PTX SR10-AT-L	M6-M8	3/8	21 - 32	13 - 21	5300 ^f	1.2	2.5	295	25	8	17	10	1/4	8431 0367 83

^a To be used as a guide only, final torque depends on type of joint, accessories used and air pressure.

^d With TRIM valve fully open.

^e RE-reporting kit not included (Ordering No. 4250 1854 91).

^b Female hexagon drive. Quick change chuck.

^f Measured at 5 bar air pressure.

^c In full speed mode.

XS models

In ErgoPulse non shut-off tools the tool produces pulses until the operator releases the trigger. Preferred in applications where it is an advantage for the operator to be able to control the process by shutting off the tool manually.

- High reliability and durability.
- High speed, short cycle times.
- One-handed operation.
- High power-to-weight ratio.
- No springs to wear out.
- No wear on key parts.
- High precision components.
- No reaction forces.
- Light, well-balanced tools.
- Low noise levels.
- Lubrication free.



Model	Bolt size mm	Square drive in	Torque range ^a		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
EP6XS SR42	M6	1/4 ^b	9 - 19	6 - 14	8000	0.7	1.5	219	22	8	17	8	1/4	8431 0372 27
EP6XS SR10	M6	3/8	10 - 20	7 - 15	8000	0.7	1.5	221	22	8	17	8	1/4	8431 0372 25
EP7XS SR42	M8	1/4 ^b	17 - 28	13 - 21	10000	0.7	1.5	219	22	8	17	8	1/4	8431 0372 15
EP7XS SR10	M8	3/8	20 - 31	15 - 23	10000	0.7	1.5	221	22	8	17	8	1/4	8431 0372 05
EP8XS SR42	M8	1/4 ^b	22 - 40	16 - 29	8000	0.9	2.0	242	24	9	19	8	1/4	8431 0369 30
EP8XS SR10	M8-M10	3/8	30 - 52	22 - 38	8000	0.9	2.0	244	24	9	19	8	1/4	8431 0369 20

^a To be used as a guide only, final torque depends on type of joint, accessories used and air pressure.

^b Female hexagon drive. Quick change chuck.

Optional Accessories

Guided extensions

Available for	Square drive in	Dia. of outgoing spindle mm	Length mm	Marking	Ordering No.
6-8XS, 5-8PT/PTS/PTX	3/8	13	100	EP10-13-100	4023 3600 00
	3/8	13	150	EP10-13-150	4023 3601 00
	3/8	13	200	EP10-13-200	4023 3611 00
	3/8	13	250	EP10-13-250	4023 3612 00
	3/8	13	300	EP10-13-300	4023 3613 00
10C, 10-12XS	1/2	16	100	EP13-16-100	4023 3602 00
	1/2	16	150	EP13-16-150	4023 3603 00
	1/2	16	200	EP13-16-200	4023 3604 00
	1/2	16	250	EP13-16-250	4023 3614 00
	1/2	16	300	EP13-16-300	4023 3615 00
14XS, 9-13PTX, 10-12PT/PTS	1/2	18	100	EP13-18-100	4023 3605 00
	1/2	18	150	EP13-18-150	4023 3606 00
	1/2	18	200	EP13-18-200	4023 3607 00
	1/2	18	250	EP13-18-250	4023 3616 00
	1/2	18	300	EP13-18-300	4023 3617 00
16XS/20XS, 14PTS/18PTS, 15PTX/19PTX	3/4	25	100	EP20-25-100	4023 3608 00
	3/4	25	150	EP20-25-150	4023 3609 00
	3/4	25	200	EP20-25-200	4023 3610 00
	3/4	25	250	EP20-25-250	4023 3618 00
	3/4	25	300	EP20-25-300	4023 3619 00



Guided extensions

Guided sockets

Available for	Square in	Width across mm/in	Diameter of outgoing mm	Marking	Ordering No.
Metric sockets					
6-8XS, 5-8PT/PTS/PTX	3/8	10	13	EP10-13	4026 4210 00
	3/8	13	13	EP13-13	4026 4213 00
	3/8	16	13	EP16-13	4026 4216 00
	3/8	17	13	EP17-13	4026 4217 00
	3/8	18	13	EP18-13	4026 4218 00
14XS, 9-13PTX, 10-12PT/PTS	3/8	19	13	EP19-13	4026 4219 00
	1/2	13	18	EP13-18	4026 4313 00
	1/2	16	18	EP16-18	4026 4316 00
	1/2	17	18	EP17-18	4026 4317 00
	1/2	18	18	EP18-18	4026 4318 00
16XS/20XS, 14PTS/18PTS, 15PTX/19PTX	1/2	19	18	EP19-18	4026 4319 00
	1/2	24	18	EP24-18	4026 4324 00
	3/4	18	25	EP18-25	4026 4418 00
	3/4	24	25	EP24-25	4026 4424 00
	3/4	30	25	EP30-25	4026 4430 00
UNC/UNF-sockets					
6-8XS, 5-8PT/PTS/PTX	3/8	7/16	13	EP7/16-13	4026 4211 00
	3/8	1/2	13	EP1/2-13	4026 4212 00
	3/8	9/16	13	EP9/16-13	4026 4214 00
	3/8	3/4	13	EP3/4-13	4026 4219 00
14XS, 9-13PTX, 10-12PT/PTS	1/2	1/2	18	EP1/2-18	4026 4312 00
	1/2	9/16	18	EP9/16-18	4026 4314 00
	1/2	3/4	18	EP3/4-18	4026 4319 00
	1/2	15/16	18	EP15/16-18	4026 4323 00
16XS/20XS, 14PTS/18PTS, 15PTX/19PTX	3/4	3/4	25	EP3/4-25	4026 4419 00
	3/4	15/16	25	EP15/16-25	4026 4423 00
	3/4	11/8	25	EP11/8-25	4026 4429 00



Guided sockets

Guided quick change chuck for power tools

Available for	Square drive in	Female hex in	Diameter of outgoing spindle mm	Marking	Ordering No.
6-8XS, 5-8PT/PTS/PTX	3/8	1/4	13	EP3/8-1/4-13	4026 4501 00
	3/8	7/16	13	EP3/8-7/16-13	4026 4502 00
14XS, 9-13PTX, 10-12PT/PTS	1/2	7/16	18	EP1/2-7/16-18	4026 4503 00



Guided quick change chuck

Optional Accessories

Pistol grip models	Protective cover	Support handle
EP6/7XS HR	4250 2089 00	
EP8XS HRX	4250 1895 00	
EP10XS HR	4250 1784 00	
EP12XS HR	4250 2459 00	
EP14XS HR	4250 2160 00	
EP16XS HR	4250 2282 00	4250 2396 91 Included
EP20XS HR	4250 2288 00	
EP4/5/6PTX HR	4250 2465 00	
EP7/8PTX HR	4250 2466 00	
EP9PTX HR	4250 2467 00	
EP11PTX HR	4250 2551 00	
EP13PTX HR	4250 2718 00	4250 2396 81
EP15PTX HR	4250 2674 00	4250 2396 83
EP19PTX HR	4250 2719 00	4250 2396 82
EP5/6PT/PTS HR	4250 2393 00	
EP7/8PT/PTS HR	4250 1784 00	
EP10PT/PTS HR	4250 1743 00	
EP12PT/PTS HR	4250 1858 00	
EP14PTS HR	4250 2228 00	4250 2396 81
EP18PTS HR	4250 2319 00	4250 2396 80



Support handle



Protective cover

For complete information, see spare parts list.



Service Kits

The spare parts included in the service kits cover a normal overhaul of your tool. Always have them available for a fast and economical repair.

Main parts included:

- Vane kit
- Motor bearings
- Gaskets
- O-rings
- Circlips
- Pins etc.

Model	O-ring kit pulse unit	Service kit	Model	O-ring kit pulse unit	Service kit
EP5XS	4210 2532 93	4081 0264 90	EP7PTX HR	4250 2058 90	4081 0122 90
EP6/7XS HR	4250 2084 90	4081 0188 90	EP8PTX HR	4250 2267 91	4081 0279 90
EP6/7XS SR	4250 2084 90	4081 0189 90	EP9PTX HR	4250 2058 90	4081 0122 90
EP6PS HR	4250 2058 91	4081 0274 90	EP11PTX HR	4250 2267 95	4081 0310 90
EP8PS HR	4250 2059 90	4081 0120 90	EP13PTX HR	4250 2267 92	4081 0226 90
EP8XS HR	4250 2085 90	4081 0119 90	EP15PTX HR	4250 2267 93	4081 0242 90
EP8XS SR	4250 2085 90	4081 0190 90	EP19PTX HR	4250 2267 94	4081 0256 90
EP10XS HR	4250 2086 90	4081 0191 90	EP5/6PTS HR	4250 2058 90	4081 0122 90
EP12XS HR	4250 2087 90	4081 0192 90	EP7/8PTS HR	4250 2267 91	4081 0225 90
EP14XS HR	4250 2170 90	4081 0200 90	EP10PTS HR	4250 2267 90	4081 0222 90
EP16XS HR	4250 2281 90	4081 0223 90	EP12PTS HR	4250 2267 92	4081 0226 90
EP20XS HR	4250 2281 91	4081 0245 90	EP14PTS HR	4250 2267 93	4081 0242 90
EP4PTX HR	4250 2058 90	4081 0122 90	EP18PTS HR	4250 2267 94	4081 0256 90
EP5/6PTX HR	4250 2058 90	4081 0122 90			

Oil filling kit (150 ml oil, syringe) 4081 0121 90

For complete information, see spare parts list.

An impulse tool with fastening system intelligence

Atlas Copco's Pulsor C System gives you all the advantages of a controlled impulse tool, plus the intelligence of an electric fastening system. Like all Atlas Copco impulse tools, Pulsor C is fast, powerful, light and compact and generates virtually no reaction force. The controller remembers up to 4,000 tightenings that can be stored and analyzed. This enables you to fine-tune your process and ensure that every tightening in every shift is perfect. If they are not perfect, you can see why.

The Pulsor C, with its control system, is designed for quality critical applications. Pulsor C alerts you to mistakes as soon as they are made. Lights on the back of the tool indicate if screws are correctly tightened. They inform the user about torque, early shut-off or if parts have been forgotten. Pulsor C will control repeatability and can report results.

The system

The Pulsor C system comprises the tool, cable, controller and tool control box where the shut-off valve is located.

The tool

Pulsor C tools are an ergonomic, high-performance range of impulse nutrunners with signal lights to provide direct operator feedback. No mechanical torque setting in tool.

Cables

The strong, resistant electric tool cable is available in three versions: straight, coil and spiral.

Tool Control Box

Pressure adjustment and tool shut-off valves are located in this box.

Controller

The controller remembers up to 4,000 tightenings – everything from torque results and rundown time to identification number (see below for a full list of parameters). The results can easily be sent to a network and stored on a server. They can also be transferred directly to a PC and then analyzed in a program such as Excel. This means that you can easily fine-tune your process.

Pulsor monitors and records:

- Torque result
- Angle result
- Premature shut-off
- Number of pulses
- Tightening time
- Rundown time
- Barcode number

Software

The PC based ToolsTalk Pulsor C software is used for making all system settings.

- Tool settings
- Communication settings to factory networks



The Pulsor C tool is fast and powerful. It is also light, compact and generates virtually no reaction force, making it a very comfortable tool to work with.

- Fast rundown. Up to 9000 rpm for highest productivity.
- No need for reaction arm. Virtually no reaction force due to pulse tightening.
- Avoid downtime. Get an early warning with Tool drift alarm.
- Easy to service. Patented pulse technology with few parts.
- Plan service with service alarms.
- Illumination of working area with bright LED.
- Operator feedback after tightening with LED lights (OK/NOK).



EPP10 C

Check with your local Atlas Copco Tools representative regarding availability on your market.

Model	Bolt size mm	Square drive in	Torque range		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
Tools with ball retainer														
EPP6 C32 HR-B10	M6-M8	3/8	16-32	12-24	9000	1.3	2.8	164	23	7	15	10	1/4	8431 0380 55
EPP8 C55 HR-B10	M8-M10	3/8	30-55	22-40	7000	1.5	3.4	172	26	8	17	10	1/4	8431 0380 59
EPP10 C90 HR-B13	M10	1/2	50-90	37-66	5500	2	4.5	184	30	11	23	10	1/4	8431 0380 64
EPP11 C110 HR-B13	M12	1/2	70-110	51-88	5100	2.1	4.6	192	30	12	25	13	1/4	8431 0380 68
Tools with pin retainer														
EPP6 C32 HR10	M6-M8	3/8	16-32	12-24	9000	1.3	2.8	164	23	7	15	10	1/4	8431 0380 48
EPP8 C55 HR10	M8-M10	3/8	30-55	22-40	7000	1.5	3.4	172	26	8	17	10	1/4	8431 0380 57
EPP10 C90 HR13	M10	1/2	50-90	37-66	5500	2	4.5	184	30	11	23	10	1/4	8431 0380 62
EPP11 C110 HR13	M12	1/2	70-110	51-88	5100	2.1	4.6	192	30	12	25	13	1/4	8431 0380 66

Controller software

Pulsor's functionality is unlocked with the RBU (Rapid Backup Unit) key. This patented device gives you access to the functionality you need while providing a backup for the data you have programmed yourself.

Function	RBU Gold
Number of results in the result database	4000
Tool Setup	Yes
Tool Lock Box	Yes
Network/TCP/IP	Yes
I/O-bus (CAM-cabel)	Yes
Click wrench	Yes
ToolsNet	Yes
Number of Psets	up to 100
Number of jobs	up to 100
Statistics	Yes
Number of events	500
Barcode reader	Yes
Tool drift alarm	Yes

Optional Accessories

Tool accessories

Model	Ordering No.
Controllers	
Pulsor Focus 4000-C-HW	8433 6900 20
Pulsor Focus 4000-C-DN-HW	8433 6940 20
Pulsor Focus 4000-C-PB-HW	8433 6942 20
Pulsor Focus 4000-C-PN-HW	8433 6948 20
Pulsor Focus 4000-C-EIP-HW	8433 6949 20
Pulsor Focus 4000-C-IB-HW	8433 6945 20
Tool Control Box	
TCB-1E	8433 0606 40
RBU	
Pulsor C - Gold	8433 6020 20
TCB cables	
Cable PF - TCB, 1.2 m	4250 2901 01
Cable PF - TCB, 5 m	4250 2901 05
Cable PF - TCB, 10 m	4250 2901 10
Tool cables	
Straight 5 m	4250 2533 05
12 m	4250 2533 12
Spiral 5 m	4250 2533 06
12 m	4250 2533 13
Coil 3 m	4250 2533 53
5 m	4250 2533 55
7 m	4250 2533 57
Back plate (for attaching PF and TCB in one plate)	
	4250 2829 90
PCU - Pulsor Control Unit (Includes: controller, RBU, TCB, back plate, cable 1 m)	
PCU	8433 6990 30
ToolsTalk Pulsor C	
1-user license	8092 1281 01
5-user license	8092 1281 05
10-user license	8092 1281 10
Plant license	8092 1281 99
Suspension yoke (for upside down hanging, all models)	
	4250 2720 00



Tool Control Box (TCB)



Pulsor Focus



Spiral cable



Straight cable



Coil cable



Selector 4

Controller accessories

Model	Ordering No.
Rotary selector	8433 0606 15
I/O Expander	8433 0564 39
RE-Alarm	8433 0560 03
Selector 4	8433 0610 04
Selector 8	8433 0610 08
Operator panel basic	8433 0565 10
Operator panel advanced	8433 0565 00
Stacklights	
ESL-04 Standard	8433 0570 13
Rotating red	8433 0570 30
Rotating yellow	8433 0570 35
Siren	8433 0570 40
Compact	8433 0570 16
DSL-03 with push button	8433 0570 10
with blanking plugs	8433 0570 11



Stacklight DSL-03



Operator panel Basic

Tool hose kits

Model	Hose kit	Ordering No.
EPP6 - EPP10	Cablair 10, 5 m + Ergo couplings	8202 1180 78
EPP11	Cablair 13, 5 m + Ergo couplings	8202 1180 79

User-friendly tools offering power, speed and accuracy

The tools in Atlas Copco's broad range of pneumatic nutrunners offer a superior combination of power, speed and accuracy. With their advanced ergonomic designs, they are also extremely user-friendly and will contribute to raising productivity in a wide range of applications in your assembly plant.

Tools in Atlas Copco's range of pneumatic nutrunners are divided into three main categories: Angle, straight and pistol grip versions. These are also available in optional models, such as crowfoot, hold-and-drive, and flush socket.

The power to raise productivity

The high power output provided by Atlas Copco nutrunners is decisive for productivity, i.e., the combined performance of operator and tool. The tools are set at the optimal speed for every torque capacity rating. The balance between speed and clutch response gives high accuracy, ensuring torque repeatability, regardless of joint characteristics.

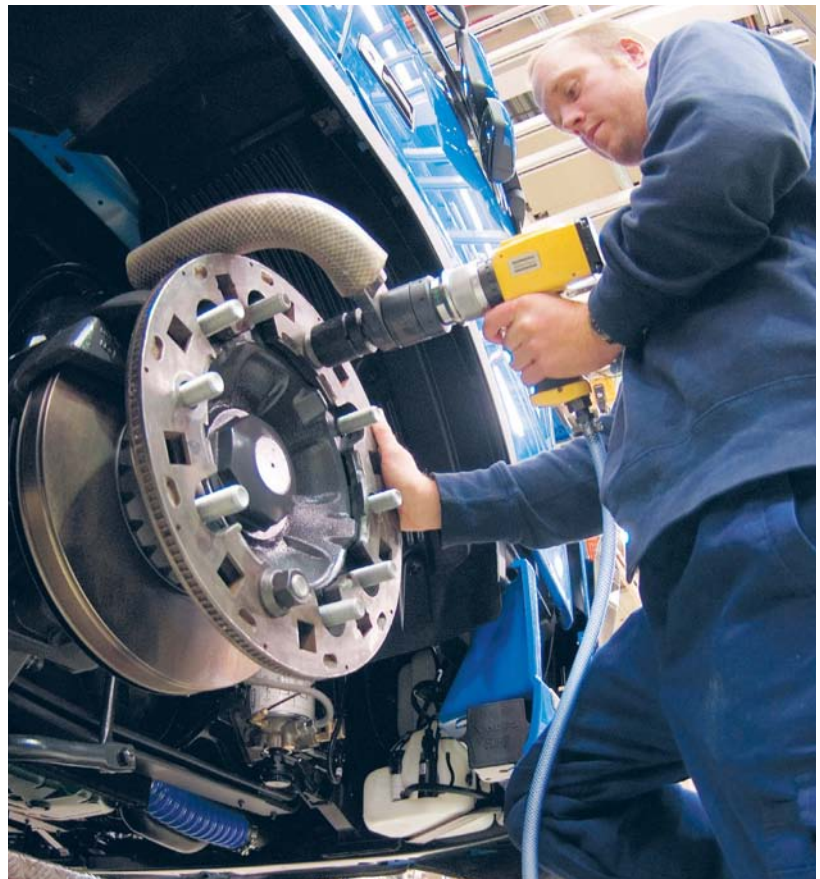
Comfortable to work with

Our pneumatic nutrunners live up to Atlas Copco's reputation for developing tools with good ergonomics. Low tool weights, thermally insulated grips and low noise and vibration levels all help to reduce operator fatigue and raise individual productivity in your plant.

Simplicity in selection and installation allow you to set the torque once and that is the torque you will get, joint after joint, without complicated analyses.

Choosing the right tool is easy

No joint is too complicated for a nutrunner. To set the torque, just adjust it to the required level, regardless of joint conditions.



A new angle on productivity

The LTV 9-2 and LTV 8 angle nutrunner range from Atlas Copco successfully combines two key performance factors – speed and accuracy. Consistently accurate, high-speed tightening is complemented by advanced ergonomic design, ensuring an unmatched level of productivity. All this is presented in a tool that is very easy to handle.

Angle nutrunners from Atlas Copco are certified for accuracy and durability by major car manufacturers. They are easy to choose, easy to set, and easy to operate.

Accurate every time

Hard or soft joint? You don't need to think about it. The tool gives the torque you install, independent of joint variations and variations in air pressure and lubrication. The clutch shuts off at the same torque, tightening after tightening.

Highest productivity

Instant disengagement of the clutch keeps torque over-shoot to a minimum even on the fastest tools. Our new models were developed to meet the most extreme requirements on operational speeds.

As always, we kept operator comfort in mind. The tools are well balanced, slim and comfortable to handle. Reaction forces are extremely low.

Job verification

For remote indication of clutch release function the tools can be equipped with air signal outlet – RE. This is often used for counting the number of fasteners in a tightening cycle.



LTV29-2 series

- Designed for high speed and small dimensions.
- Slim lightweight design.
- Soft, comfortable grip.
- Easy to reverse.
- Low reaction force.

**LTV29-2****LTV39-2 series**

- The fastest nutrunners of this type.
- Powerful motor.
- Consistently high accuracy.
- Many operator-friendly features.

**LTV39-2****LTV FS flush socket tools**

- Minimum angle head size gives good access.
- High torque accuracy.
- Integrated sockets give reduced angle head height.

Model	Bolt size mm	Square drive in	Socket size mm	Torque range soft joint		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
				Nm	ft lb		kg	lb				l/s	cfm			
Reversible																
LTV29-2 R12-Q	M6	1/4 ^a	—	6 - 12	4.5 - 9	850	1.3	2.9	351	44	11	10	21	10	1/4	8431 0631 17
LTV29-2 R12-42	M6	1/4 ^b	—	6 - 12	4.5 - 9	850	1.3	2.9	351	34	11	10	21	10	1/4	8431 0631 18
LTV29-2 R12-6	M6	1/4	—	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 15
LTV29-2 R12-B6	M6	1/4	—	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 00
LTV29-2 R12-10	M6	3/8	—	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 16
LTV29-2 R12-B10	M6	3/8	—	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 01
LTV29-2 R16-Q	M6	1/4 ^a	—	9 - 16	7 - 12	850	1.3	2.9	351	44	11	10	21	10	1/4	8431 0631 24
LTV29-2 R16-42	M6	1/4 ^b	—	9 - 16	7 - 12	850	1.3	2.9	351	34	11	10	21	10	1/4	8431 0631 23
LTV29-2 R16-6	M6	1/4	—	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 22
LTV29-2 R16-B6	M6	1/4	—	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 02
LTV29-2 R16-10	M6	3/8	—	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 21
LTV29-2 R16-B10	M6	3/8	—	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4	8431 0631 03
LTV29-2 R24-10	M8	3/8	—	12 - 24	9 - 18	640	1.4	3.1	374	30	14	10	21	10	1/4	8431 0631 29
LTV29-2 R24-B10	M8	3/8	—	12 - 24	9 - 18	640	1.4	3.1	374	30	14	10	21	10	1/4	8431 0631 04
LTV29-2 R30-10	M8	3/8	—	15 - 30	11 - 22	500	1.4	3.1	374	30	14	10	21	10	1/4	8431 0631 37
LTV29-2 R30-B10	M8	3/8	—	15 - 30	11 - 22	500	1.4	3.1	374	30	14	10	21	10	1/4	8431 0631 36
LTV39-2 R16-10	M6	3/8	—	7 - 16	5 - 12	1200	1.5	3.3	375	27	11	16	34	10	1/4	8431 0633 09
LTV39-2 R16-B10	M6	3/8	—	7 - 16	5 - 12	1200	1.5	3.3	375	27	11	16	34	10	1/4	8431 0631 05
LTV39-2 R24-10	M8	3/8	—	12 - 24	9 - 18	870	1.6	3.5	385	30	14	16	34	10	1/4	8431 0633 14
LTV39-2 R24-B10	M8	3/8	—	12 - 24	9 - 18	870	1.6	3.5	385	30	14	16	34	10	1/4	8431 0631 06
LTV39-2 R30-10	M8	3/8	—	15 - 30	11 - 22	870	1.6	3.5	385	35	14	16	34	10	1/4	8431 0633 19
LTV39-2 R30-B10	M8	3/8	—	15 - 30	11 - 22	870	1.6	3.5	385	35	14	16	34	10	1/4	8431 0631 07
LTV39-2 R37-10	M8	3/8	—	22 - 37	16 - 27	708	1.7	3.7	405	35	18	16	34	10	1/4	8431 0633 24
LTV39-2 R37-B10	M8	3/8	—	22 - 37	16 - 27	708	1.7	3.7	405	35	18	16	34	10	1/4	8431 0631 08
LTV39-2 R48-10	M8	3/8	—	24 - 48	18 - 35	560	1.7	3.7	405	35	18	16	34	10	1/4	8431 0633 27
LTV39-2 R48-B10	M8	3/8	—	24 - 48	18 - 35	560	1.7	3.7	405	35	18	16	34	10	1/4	8431 0631 09
LTV39-2 R48-13	M8	1/2	—	24 - 48	18 - 35	560	2.0	4.4	425	41	20	16	34	10	1/4	8431 0633 43
LTV39-2 R48-B13	M8	1/2	—	24 - 48	18 - 35	560	2.0	4.4	425	41	20	16	34	10	1/4	8431 0631 10
LTV39-2 R56-10	M10	3/8	—	28 - 56	21 - 41	460	1.7	3.7	405	35	18	16	34	10	1/4	8431 0633 35
LTV39-2 R56-B10	M10	3/8	—	28 - 56	21 - 41	460	1.7	3.7	405	35	18	16	34	10	1/4	8431 0631 11
LTV39-2 R56-13	M10	1/2	—	28 - 56	21 - 41	460	2.0	4.4	425	41	20	16	34	10	1/4	8431 0633 51
LTV39-2 R56-B13	M10	1/2	—	28 - 56	21 - 41	460	2.0	4.4	425	41	20	16	34	10	1/4	8431 0631 12
LTV39-2 R70-13	M10	1/2	—	35 - 70	26 - 51	350	2.1	4.6	425	41	20	16	34	10	1/4	8431 0633 59
LTV39-2 R70-B13	M10	1/2	—	35 - 70	26 - 51	350	2.1	4.6	425	41	20	16	34	10	1/4	8431 0631 13
LTV39-2 R85-13	M10-12	1/2	—	43 - 85	32 - 63	305	2.5	5.5	500	52	25	16	34	10	1/4	8431 0633 67
LTV39-2 R85-B13	M10-12	1/2	—	43 - 85	32 - 63	305	2.5	5.5	500	52	25	16	34	10	1/4	8431 0631 14
Flush socket																
LTV29-2 R24 FS	M8	—	13	12 - 24	9 - 18	640	1.4	3.7	374	30	14	10	21	10	1/4	8431 0632 34
LTV29-2 R30 FS	M8	—	13	15 - 30	11 - 22	500	1.3	3.1	355	34	15	10	21	10	1/4	8431 0632 38
LTV39-2 R37 FS	M8	—	13	22 - 37	16 - 27	708	1.7	3.7	405	35	18	16	34	10	1/4	8431 0632 41
LTV39-2 R48 FS	M8	—	13	24 - 48	18 - 35	560	1.7	3.7	406	40	18	16	34	10	1/4	8431 0632 42
LTV39-2 R56 FS	M8	—	13	28 - 56	21 - 41	460	1.7	3.7	406	40	18	16	34	10	1/4	8431 0632 46
LTV39-2 R70 FS	M10	—	16	35 - 70	26 - 51	350	2.1	4.6	425	50	20	16	34	10	1/4	8431 0632 51
LTV39-2 R85 FS	M10-12	—	19	43 - 85	32 - 63	305	2.5	5.5	500	70	25	16	34	10	1/4	8431 0632 58

^a Quick change chuck. ^b Female hex drive.

LTV28 and 38 series

- Highest reliability when tightening M5-M12 screws.
- Small, durable gears.
- Precise clutch.
- Reliable motor.



LTV28

LTV48 series

- Robust, reliable tools.
- Reversible for torques up to 200 Nm.
- Comfortable to operate due to low weight and smooth handles.
- Reaction bars and other accessories available.



LTV38

LTV FS flush socket tools

- Minimum angle head size gives good access.
- High torque accuracy.
- Integrated sockets give reduced angle head height.
- Same tightening characteristics as LTV tools.
- Same motor, clutch and gear parts as the LTV range.



LTV48

Model	Bolt size mm	Square drive in	Socket size mm	Torque range soft joint		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
				Nm	ft lb		kg	lb				l/s	cfm			
Reversible																
LTV28 R07-6	M5	1/4	—	2.5 - 7	1.8 - 5	1100	1.3	2.9	334	28.5	10	8	17	8	1/4	8431 0601 65
LTV28 R07-42	M5	1/4 ^a	—	2.5 - 7	1.8 - 5	1100	1.3	2.9	334	28.5	10	8	17	8	1/4	8431 0601 73
LTV28 R07-Q	M6	1/4 ^b	—	2.5 - 7	1.8 - 5	1100	1.3	2.9	334	28.5	10	8	17	8	1/4	8431 0601 68
LTV28 R15-6	M6	1/4	—	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4	8431 0601 52
LTV28 R15-42	M6	1/4 ^a	—	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4	8431 0601 58
LTV28 R15-Q	M6	1/4 ^b	—	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4	8431 0601 53
LTV28 R15-10	M6	3/8	—	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4	8431 0601 55
LTV28 R20-10	M6	3/8	—	10 - 19	7 - 15	530	1.4	3.1	355	34.5	13.5	10	21	10	1/4	8431 0601 50
LTV28 R20-42	M6	1/4 ^a	—	10 - 20	7 - 15	420	1.4	3.1	350	34	13.5	10	21	10	1/4	8431 0601 48
LTV28 R28-10	M8	3/8	—	14 - 28	10 - 21	340	1.4	3.1	350	29.5	13.5	10	21	10	1/4	8431 0601 40
LTV28 R28-42	M8	3/8	—	14 - 28	10 - 21	340	1.4	3.1	350	29.5	13.5	10	21	10	1/4	8431 0601 40
LTV28 RL28-10	M8	3/8	—	14 - 28	10 - 21	80	1.4	3.1	350	29.5	13.5	10	21	10	1/4	8431 0601 33
LTV38 R42-10	M8	3/8	—	20 - 42	15 - 31	400	2.0	4.4	436	34.5	18	16	34	10	1/4	8431 0603 55
LTV38 R42-13	M8	1/2	—	20 - 42	15 - 31	400	2.2	4.8	453	41	20	16	34	10	1/4	8431 0603 69
LTV38 R50-10	M10	3/8	—	25 - 50	18 - 36	330	2.0	4.4	436	34.5	18	16	34	10	1/4	8431 0603 63
LTV38 R50-13	M10	1/2	—	25 - 50	18 - 36	330	2.2	4.8	453	41	20	16	34	10	1/4	8431 0603 71
LTV38 R57-13	M10	1/2	—	30 - 57	22 - 41	280	2.2	4.8	453	41	20	16	34	10	1/4	8431 0603 51
LTV38 R70-13	M10	1/2	—	34 - 70	24 - 50	225	2.4	5.3	487	41	20	16	34	10	1/4	8431 0603 46
LTV38 R85-13	M10-12	1/2	—	40 - 85	29 - 61	190	2.8	6.1	530	52	25	16	34	10	1/4	8431 0603 38
LTV48 R120-L13	M12	1/2	—	70 - 120	51 - 88	215	3.5	7.6	590	52	25	28	59	12.5	1/2	8431 0534 88
LTV48 R150-L13	M12	1/2	—	70 - 150	51 - 111	170	3.5	7.6	590	52	25	28	59	12.5	1/2	8431 0534 93
LTV48 R200-L13	M14	1/2	—	115 - 200	85 - 148	100	3.8	8.3	610	52	25	28	59	12.5	1/2	8431 0534 98
Reversible. Flush socket models																
LTV28 R20 FS	M6	—	13	8 - 20	6 - 15	500	1.4	3.1	352	34	13.5	10	21	10	1/4	8431 0608 02
LTV28 R28 FS	M8	—	13	14 - 28	10 - 21	340	1.4	3.1	350	34	13.5	10	21	10	1/4	8431 0608 00
LTV38 R50 FS	M10	—	15	25 - 50	18 - 37	360	2.2	4.8	454	53	20	18	38	10	1/4	8431 0609 85
LTV38 R65 FS	M12	—	16	34 - 65	25 - 48	280	2.6	5.7	515	53	20	18	38	10	1/4	8431 0609 87
LTV48 R120 FS	M12	—	19	70 - 120	37 - 88	220	3.5	7.6	590	70	25	28	59	12.6	1/2	8431 0610 12
LTV48 R150 FS	M12	—	19	70 - 150	44 - 111	180	3.5	7.6	590	70	25	28	59	12.7	1/2	8431 0610 17
LTV48 R200 FS	M14	—	19	115 - 200	85 - 148	100	3.8	8.3	610	70	25	28	59	12.8	1/2	8431 0610 21

^a Female hex drive.

^b Quick change chuck.

LTV69 series

- New twin motor – higher rundown speed, accurate tightening.
- High torques.
- Good access in cramped spaces.

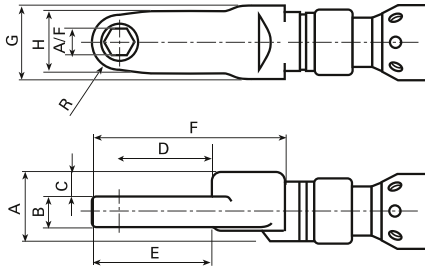
**LTV69**

Model	Bolt size mm	Square drive in	Min torque at 3 bar soft joint		Min torque at 6.3 bar soft joint		Max torque at 6.3 bar soft joint		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb	Nm	ft lb	Nm	ft lb		kg	lb				l/s	cfm			
Reversible																			
LTV69 R180-13 ^a	M16	1/2	70	52	100	74	170	125	840	5.1	11.1	592	50	25.3	20	42	13	1/2"	8431 0830 04
LTV69 R370-20 ^a	M18	3/4	140	103	190	140	370	273	480	7.6	16.6	634	62	32.9	20	42	13	1/2"	8431 0830 15
LTV69 R600-25 ^a	M22	1	230	170	400	295	600	443	280	10.2	22.6	676	77	54.0	20	42	13	1/2"	8431 0830 21
Non-reversible																			
LTV69 N180-13	M16	1/2	70	52	100	74	170	125	840	4.6	10.1	577	50	25.3	20	42	13	1/2"	8431 0830 35
LTV69 N370-20	M18	3/4	140	103	190	140	370	273	480	7.1	15.6	619	62	32.9	20	42	13	1/2"	8431 0830 46
LTV69 N600-25	M22	1	230	170	400	295	600	443	280	9.7	21.3	661	77	54.0	20	42	13	1/2"	8431 0830 52

^a Fixed reverse.

In-Line crowfoot tools

Dimensions

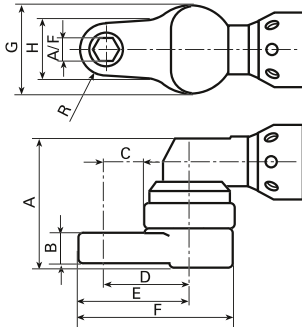


LTC

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
LTC009 R08-10-LI4	4 - 8	3 - 6	210	1.3	2.9	330	10	34	10	13.5	37	41	65.6	35	22	10	8431 0613 72
LTC009 R12-10-LI5	6 - 12	4 - 8	140	1.3	2.9	346	10	34	15	12.5	36.7	59	65.6	35	22	10	8432 0613 64
LTC009 R14-10-LI4	5 - 14	5 - 10	175	1.3	2.9	346	10	34	10	15	52	54	79.5	35	31	14.5	8431 0613 56
LTC28 R07-10-LI3	2.5 - 7	1.9 - 5.3	920	2.2	4.9	573	10	36	15	12.5	46.7	59.2	82.2	35	22	10	8431 0616 00
LTC28 R13-10-LI3	6 - 13	5 - 10	555	2.2	4.9	590	10	36	15	12.5	46.7	59.2	82.2	35	22	10	8431 0616 01
LTC28 R18-10-LI3	10 - 18	8 - 14	386	2.2	4.9	590	10	36	15	12.5	46.7	59.2	82.2	35	22	10	8431 0616 02
LTC28 R08-12-LI3	3 - 8	2.3 - 6	770	2.2	4.9	573	12	34	15	12.5	58.5	71	94	35	30	13	8431 0616 03
LTC28 R15-12-LI3	7 - 15	5 - 11	460	2.2	4.9	590	12	34	15	12.5	58.5	71	94	35	30	13	8431 0616 04
LTC28 R20-12-LI3	12 - 20	9 - 15	320	2.2	4.9	600	12	34	15	12.5	58.5	71	94	35	30	13	8431 0616 05
LTC28 R08-12-LI3	3 - 8	2.3 - 6	830	2.2	4.9	590	12	34	10	15	54.3	54.3	102	35	31	14.5	8431 0616 06
LTC28 R14-12-LI3	6 - 14	5 - 11	500	2.2	4.9	590	12	34	10	15	54.3	54.3	102	35	31	14.5	8433 0616 07
LTC28 R22-12-LI3	11 - 22	8 - 17	345	2.2	4.9	600	12	34	10	15	54.3	54.3	102	35	31	14.5	8431 0616 08
LTC38 R28-12-LI3	14 - 28	11 - 22	470	2.9	6.4	560	12	34	10	15	54.3	54.3	102	35	31	14.5	8431 0616 09
LTC38 R34-21-LI3	16 - 34	12 - 26	390	3.4	7.6	560	21	47	20	16	95.1	44	158.8	64	40	20	8431 0616 10
LTC38 R57-21-LI3	28 - 57	21 - 43	490	4.0	8.9	647	21	47	20	16	95.1	44	158.8	64	40	20	8431 0616 12
LTC48 R150-22-LI3	103 - 150	78 - 113	605	5.1	11.3	780	22	48	33	14	84	84	161.5	64	40	20	8431 0616 15

Offset crowfoot tools

Dimensions

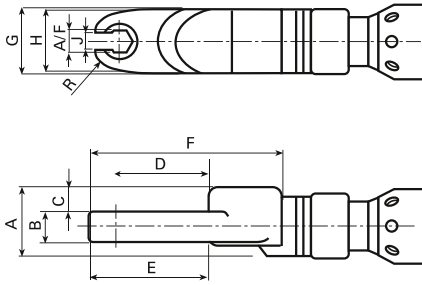


LTC

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
LTC29-2 R08-13-LO5	4 - 8	3 - 6	850	1.4	3.1	400	13	57	10	71.6	93.6	108.1	128.6	44	31	14.5	8431 0615 00
LTC29-2 R10-10-LO3	5 - 10	4 - 7	850	1.4	3.1	374	10	60.3	15	14.55	32.8	42.8	57.8	36.5	22	10	8431 0615 01
LTC29-2 R18-10-LO3	10 - 18	7 - 13	640	1.4	3.1	435	10	60.3	15	14.55	32.8	42.8	57.8	36.5	22	10	8431 0615 02
LTC29-2 R21-13-LO5	11 - 21	8 - 15	500	1.7	3.8	457	13	57	10	71.6	93.6	108.1	128.6	44	31	14.5	8431 0615 04
LTC39-2 R28-12-LO5	17 - 28	13 - 21	560	2.5	5.6	484	12	69.5	15	62	84	97	117.5	44	30	13	8431 0615 08
LTC39-2 R40-14-LO3	22 - 40	16 - 29	460	2.4	5.3	466	14	69.5	18	24.8	46.8	61.3	81.8	44	31	14.5	8431 0615 11
LTC39-2 R60-16-LO3	34 - 60	25 - 44	305	3.0	6.7	471	16	77.8	24	27	51	66	88.5	48	30	15	8431 0615 14
LTC48 R80-17-LO3	56 - 80	41 - 59	215	4.0	8.9	638	17	81	27	31.8	55.8	72.3	94.8	48	33	16.5	8433 0615 17
LTC48 R90-21-LO5	49 - 90	48 - 66	170	4.7	10.4	717	21	89.4	20	24	132	152	178	62.5	40	20	8432 0615 19
LTC48 R96-18-LO3	56 - 96	41 - 71	210	4.7	10.4	620	18	96.6	32	32	63.2	82.2	108.2	62.5	38	19	8431 0615 21
LTC48 R140-18-LO3	92 - 140	68 - 103	100	5.0	11.1	645	18	96.6	32	32	63.2	82.2	108.2	62.5	38	19	8433 0615 23
LTC58 R200-21-LO3	120 - 200	88 - 147	240	9.7	21.6	723	21	148.8	40	46.2	70.4	91.4	125.4	77	42	21	8432 0615 28
Extra heavy duty attachments																	
LTC38 R33-13-AO3	16 - 33	16 - 29	430	2.6	5.7	508	13	60	19	33	53	69	86	40	35	16	8431 0611 01
LTC38 R40-17-AO3	23 - 40	17 - 29	360	3.0	6.6	540	17	66	19	45	68	87	109	45	43	19.5	8431 0611 08
LTC48 R56-17-AO3	24 - 56	18 - 41	400	3.9	8.6	600	17	66	19	45	68	87	109	45	43	19.5	8431 0611 06
LTC48 R96-19-AO3	40 - 96	30 - 71	220	4.3	9.5	640	19	87	25	62	68	88	113	51	50	20	8431 0611 11
LTC48 R120-19-AO3	48 - 120	36 - 89	180	4.3	9.5	640	19	87	25	62	68	88	113	51	50	20	8431 0611 15

In-Line tube nut tools

Dimensions

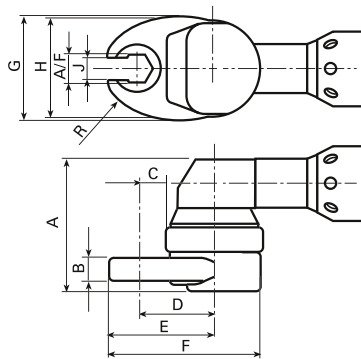


LTO

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
LTO28 R06-8-LI3	4 - 6	3 - 4	1100	1.7	3.7	3.7	8	32	11	12.3	26.2	21.6	60	33.5	29	7.8	8431 0617 00
LTO28 R08-8-LI3	6 - 8	4 - 6	560	1.7	3.7	3.7	8	32	11	12.3	26.2	21.6	60	33.5	29	7.8	8431 0617 01
LTO28 R12-8-LI3	8 - 12	6 - 9	430	1.7	3.7	3.7	8	32	10	13	27.3	15.6	67.1	33.5	31	9.8	8431 0617 03
LTO28 R12-10-LI3	9 - 12	7 - 9	430	1.7	3.7	3.7	10	32	10	13	27.3	15.6	67.1	33.5	31	9.8	8431 0612 44
LTO28 R14-8-LI3	8 - 14	6 - 10	430	1.7	3.7	3.7	8	32	10	13	27.3	15.6	67.1	33.5	31	9.8	8431 0617 04
LTO28 R15-10-LI3	9 - 15	7 - 11	410	1.9	4.2	4.2	10	32	12	11	27.9	26.1	67.7	33.5	32	10.3	8431 0612 46
LTO28 R15-10-LI3	11 - 15	8 - 11	340	2.0	4.4	4.4	10	32	12	11	27.9	26.1	67.7	33.5	32	10.3	8431 0617 05
LTO28 R17-13-LI3	11 - 17	8 - 13	340	2.0	4.4	4.4	13	36	12	14.5	36.3	19.9	84.2	38	38	12.4	8431 0612 48
LTO28 R17-10-LI3	11 - 17	8 - 13	340	2.0	4.4	4.4	10	32	12	11	27.9	26.1	67.7	33.5	32	10.3	8431 0617 06
LTO38 R20-10-LI3	13 - 20	10 - 15	215	2.3	5.0	5.0	10	34	14	13	43.4	29.7	78.6	38	38	20	8431 0617 07
LTO38 R20-10-LI3	13 - 20	10 - 15	215	2.8	6.1	6.1	10	43	11	17.5	43.7	29.6	96.5	50	50	15	8431 0617 08
LTO38 R26-13-LI3	13 - 26	10 - 19	520	3.3	7.2	7.2	13	46	11	20.8	52	30.1	123	55	55	17.2	8431 0612 50
LTO38 R28-10-LI3	22 - 28	16 - 20	225	2.8	6.1	6.1	12	43	11	17.5	43.7	29.6	96.5	50	50	15	8431 0617 09
LTO38 R20-12-LI3	13 - 20	10 - 15	215	2.8	6.1	6.1	12	43	18	14	34.3	44	83	40	40	12.4	8431 0617 10
LTO38 R26-17-LI3	13 - 26	10 - 19	570	3.3	7.2	7.2	17	46	12	20	60.3	18.7	150	59	59	20.1	8431 0612 54
LTO38 R30-12-LI3	22 - 30	16 - 22	225	2.8	6.1	6.1	12	43	18	14	34.3	44	83	40	40	12.4	8431 0617 11

Offset tube nut tools

Dimensions



LTO

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	J mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
LTO28 R05-10-LO3	3 - 5	2.3 - 3.8	1100	1.9	4.2	353	10	63.3	12	6.8	25.1	35.6	50.6	36.5	7	9.8	8431 0618 00
LTO28 R11-10-LO3	7 - 11	5 - 8	560	1.9	4.2	373	10	63.3	12	6.8	25.1	35.6	50.6	36.5	7	9.8	8431 0618 01
LTO28 R05-10-LO5	3 - 5	2.3 - 3.8	1100	2.0	4.4	381	10	61.8	10	42.7	60.9	71.4	86.4	36.5	7	9.8	8431 0618 02
LTO28 R09-10-LO5	6 - 9	5 - 7	560	2.1	4.7	381	10	61.8	10	42.7	60.9	71.4	86.4	36.5	7	9.8	8431 0618 03
LTO28 R11-12-LO5	8 - 11	6 - 8	470	2.1	4.7	409	12	62	11	22.6	72	84.9	105.4	44	8	11.9	8431 0618 04
LTO28 R17-12-LO5	11 - 17	8 - 13	300	2.1	4.7	418	12	62	11	22.6	72	84.9	105.4	44	8	11.9	8431 0618 05
LTO28 R13-12-LO3	9 - 13	7 - 10	470	2.0	4.4	379	12	64	11	9.4	31.4	47.4	64.3	44	8.5	11.9	8431 0618 06
LTO28 R18-12-LO3	13 - 18	10 - 14	300	2.0	4.4	379	12	64	11	9.4	31.4	47.4	64.3	44	8.5	11.9	8431 0618 07
LTO28 R13-12-LO3	9 - 13	7 - 10	470	2.0	4.4	377	12	64	14	7	29	40.2	60.7	44	8	14	8431 0618 08
LTO28 R18-12-LO3	13 - 18	10 - 14	300	2.0	4.4	377	12	64	14	7	29	40.2	60.7	44	8	14	8431 0618 09
LTO28 R18-13-LO3	13 - 18	10 - 14	300	2.0	4.4	379	13	65	11	12.8	36.8	51.8	74.3	48	10.4	15	8431 0618 10
LTO28 R25-13-LO3	18 - 25	14 - 19	184	2.0	4.4	485	13	65	11	12.8	36.8	51.8	74.3	48	10.4	15	8431 0618 11
LTO38 R22-13-LO5	16 - 22	12 - 17	184	2.3	5.1	520	13	72.5	18	52.4	74.4	87.7	108.2	44	10.4	12.4	8431 0618 12
LTO38 R32-13-LO5	22 - 32	17 - 24	190	2.3	5.1	520	13	72.5	18	52.4	74.4	87.7	108.2	44	10.4	12.4	8431 0618 13

Hold and Drive

Hold and drive bolts are being used increasingly by, for example, truck manufacturers on the frame assembly line, making what used to be a two-man operation, a one-man task. No reaction arms. The distinguishing feature of a hold and drive bolt is that one part is held and the other is tightened from the same side.

LTV HAD

- Especially suitable for shock absorber assembly.
- Special tools based on the standard LTV series are available for use on hold and drive bolts.
- Reaction torque is absorbed while the bolt is gripped during assembly.
- HAD sockets are available in three different lengths.
- Special sockets available upon request.
- Also suitable for break-away bolts, Hi Lok/Hi Shear.



LTV38 HAD

NOTE: The screw must be strong enough to carry the final torque.

Model	Bolt size mm	Torque range soft joint ^a		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
		Nm	ft lb		kg	lb				l/s	cfm			
LTV38 R40 LT HAD ^b	M8-10	15 - 40	11 - 30	210	3.0	6.5	530	52	25	10	16	10	1/4	8431 0609 52
LTV38 R42 HAD	M8	20 - 42	15 - 31	430	2.2	4.8	453	41	20	10	16	10	1/4	8431 0603 75
LTV38 R50 HAD	M10	25 - 50	18 - 36	360	2.2	4.8	453	41	20	10	16	10	1/4	8431 0603 82
LTV38 R85 HAD	M10-12	40 - 85	30 - 67	210	3.0	6.5	530	52	25	10	16	10	1/4	8431 0609 58
LTV48 R120 HAD	M12-14	70 - 120	52 - 89	220	3.3	7.3	590	70	25	28	59	12.5	1/2	8431 0610 26
LTV48 R150 HAD	M14	70 - 150	52 - 111	180	3.3	7.3	590	70	25	28	59	12.5	1/2	8431 0610 30
LTV48 R200 HAD	M14	115 - 200	85 - 150	100	3.3	7.3	610	70	25	28	59	12.5	1/2	8431 0610 32
LTV69 R370 HAD	M18	190 - 370	140 - 273	480	7.6	16.6	634	62	33	20	42	12.5	1/2	8431 0831 65

^a At min 5 bar.

^b For low torque applications.

NOTE: For sockets and holders see accessory pages.

Other types of Hold and Drive equipped tools are available on special request.

Stall type

- Low inertia design gives accurate torque independent of joint stiffness – in other words, low mean shift.
- Easy torque setting by adjusting the inlet air pressure.
- Reliable, well-proven design.
- Good accessibility due to small dimensioned angle head.



Model	Bolt size mm	Square drive in	Torque range soft joint				Free speed r/min	Weight kg lb Length mm			Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
			at 6.3 bar		at 3 bar								l/s	cfm			
			Nm	ft lb	Nm	ft lb											
Reversible																	
LMV28 R11-10	M6	3/8	11	8	5	4	1200	1.1	2.4	264	28	11	10	21	10	1/4	8431 0591 07
LMV28 R14-10	M6	3/8	14	10	7	5	1000	1.1	2.4	264	29.5	13.5	10	21	10	1/4	8431 0591 09
Non reversible																	
LMV28 N16-10	M6	3/8	16	12	8	6	1000	1.0	2.2	239	29.5	13.5	11	23	10	1/4	8431 0590 17

Ratchet wrenches

- Unique accessibility, the ratchet wrench is a superior tool for limited space applications.
- To loosen, turn the tool upside down.



Model	Bolt size mm	Square drive in	Torque range soft joint		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
			at 6.3 bar	at 3 bar		kg	lb				l/s	cfm			
LBR33 S26/114-13	M8	13 ^a	22 16	11 8	185	1.4	3.1	290	15	13	9.5	20	10	1/4	8431 0345 71
LBR33 S26/118-16	M8-10	16 ^a	30 22	15 11	135	1.4	3.1	300	15	18	9.5	20	10	1/4	8431 0346 70
LBR33 S26/118-17	M8-10	17 ^a	30 22	15 11	135	1.4	3.1	300	15	18	9.5	20	10	1/4	8431 0346 62

^a Female hex drive.

Worm-drive nutrunners

- Teasing throttle characteristics give significantly reduced free speed.
- Suitable for:
 - Nutrunning
 - Light reaming
 - Tapping
 - Tube-rolling
- Can also be incorporated in rigs as air motors for intermittent operation.



Model	Bolt size mm	Square drive in	Torque range soft joint		Free speed r/min	Weight		Length mm	Angle head height mm	Angle head center to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
			at 6.3 bar	at 3 bar		kg	lb				l/s	cfm			
LMK22 S004	M8	7/16 ^a	19 14	9 7	450	1.0	2.2	240	30	31	6	13	6	1/4	8431 0242 26
LMK22 S002	M10	7/16 ^a	23 17	11 8	200	1.0	2.2	240	30	31	6	13	6	1/4	8431 0242 18
LMK33 S005	M10	7/16 ^a	29 21	14 10	480	1.7	3.7	263	39	41	9.5	20	10	1/4	8431 0343 24
LMK33 S002	M10-12	7/16 ^a	32 24	16 12	235	1.9	4.2	291	39	41	9.5	20	10	1/4	8431 0343 16
LMK33 S001	M10-12	7/16 ^a	55 41	27 20	130	2.2	4.9	385	39	41	9.5	20	10	1/4	8431 0343 08

^a Female hex drive.

Accessories Included

For LTV models

Clutch adjustment key

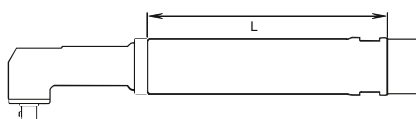
For LBR, LMV and LMK models

Socket adapter, 3/8" square drive LMK22,
1/2" square drive LMK33

Optional Accessories

Extensions for LTV

Suitable for tool	Length of extension – "L"		Ordering No.
	mm	in	
LTV28	75	3	4210 3491 93
LTV28	150	6	4210 3491 95
LTV38 (not R70/R85)	75	3	4210 4301 80
LTV38 (not R70/R85)	150	6	4210 4302 80
LTV38 R70/R85/LTV48	75	3	4210 4303 80
LTV38 R70/R85/LTV48	150	6	4210 4304 80
LTV39-2 R48-10	75	3	4210 4472 81
LTV39-2 R48-10	150	6	4210 4472 83
LTV39-2 R48/56/70-13	75	3	4210 4472 80
LTV39-2 R48/56/70-13	150	6	4210 4473 80
LTV39-2 R56-10	75	3	4210 4472 82
LTV39-2 R56-10	150	6	4210 4472 84
LTV39-2 R85	75	3	4210 4474 80
LTV39-2 R85	150	6	4210 4475 80



Reaction bar kit



Protective cover (a)



Protective cover (b)



Signal connection kit (RE)

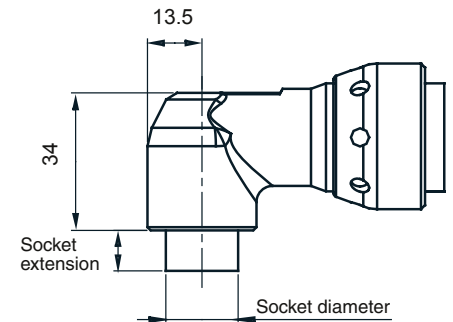
For LTV and LTC models

Model	Exhaust hose	Suspension yoke		Protective cover (see picture)	Reaction bar kit	Signal connection kit (-RE)
		Fixed	Swivelling			
LTV28 R07	4210 2053 00	4210 1631 82	4210 3931 80	4210 3990 00 ^a		4210 4019 90
LTV28, all models except R07	4210 2053 00	4210 1631 82	4210 3931 80	4210 3990 00 ^a		4210 4018 90
LTV29-2/39-2	4210 2053 00	4210 1631 82	4210 4408 80			4210 4017 90
LTV29-2/39-2 R12/R16				4220 2744 05 ^b		
LTV29-2/39-2 R24/R30				4220 2744 03 ^b		
LTV38 R42/R50/R57	4210 2053 00	4210 1631 82	4210 3931 81	4210 3992 90 ^a (not LTC)		4210 4017 90
LTC38, LTV38 FS						
LTV38 R70	4210 2053 00	4210 1631 82	4210 3931 81	4210 4003 90 ^a		4210 4017 90
LTV38 R85, LTV38 HAD	4210 2053 00	4210 1631 82	4210 3931 81	4210 4004 90 ^a	4210 4020 80	4210 4017 90
LTV39-2 R48-10/R50-10				4220 2744 02 ^b		
LTV39-2 R48-13/R50-13/R70				4220 2744 04 ^b		
LTV48 R65	4210 4011 00	4210 4061 80	4210 4021 80	4210 4058 90 ^a	4210 4020 80	4210 4057 90
LTV48 R120/R150/R200, LTC48, LTV48 FS, LTV48 HAD	4210 4011 00	4210 4061 80	4210 4021 80	4210 4059 90 ^a	4210 4020 80	4210 4057 90
LTV69 N/R180	4210 4011 00		4210 3088 87	4210 4059 90 ^a	4220 1128 80	
LTV69 N/R370	4210 4011 00		4210 3088 87		4220 1201 80	
LTV69 N/R600	4210 4011 00		4210 3088 87		4220 1746 80	

Optional Accessories

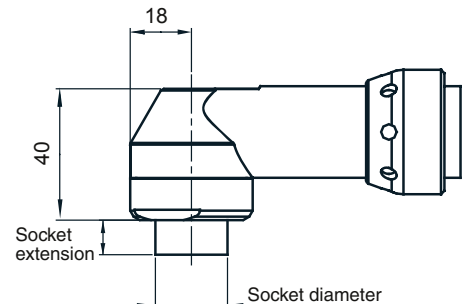
Integrated sockets – LTV28 R20 FS/R28 FS/XX R28 FS and LTV29 R30 FS

Width across flats mm/in	Socket extension mm	Socket diameter mm	Socket type	Bit lock principle	Ordering No.
10	0	17.9	HEX		4220 1589 10
10	15	17.9	HEX		4220 1589 20
13	0	17.9	HEX		4220 1589 13
13	2	17.9	HEX		4220 1589 33
13	5	17.9	HEX		4220 1589 23
13	15	17.9	HEX		4220 1589 34
6.35=1/4"	0	17.9	HEX, bit holder	magnet	4220 3354 14
8=5/16"	0	17.9	HEX, bit holder	magnet	4220 3354 08



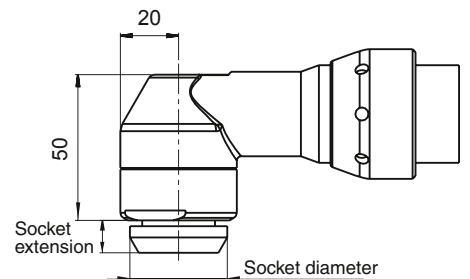
Integrated sockets – LTV38 R50 FS/N55 FS, LTV39-2 R48 FS and LTV39-2 R56 FS

Width across flats mm/in	Socket extension mm	Socket diameter mm	Socket type	Bit lock principle	Ordering No.
12.7=1/2"	0.1	20.9	HEX		4220 1676 33
13	0.1	20.9	HEX		4220 1676 01
13	10.1	20.9	HEX		4220 1676 13
13	21.1	20.9	HEX		4220 1676 23
14	0.1	20.9	HEX		4220 1676 14
15	0.1	20.9	HEX		4220 1676 15
7.95=5/16"	0.1	20.9	HEX	special	4220 1676 04
8=5/16"	12.1	20.9	HEX	special	4220 1676 06



Integrated sockets – LTV38 R65/N85 FS, LTV39-2 R70 FS

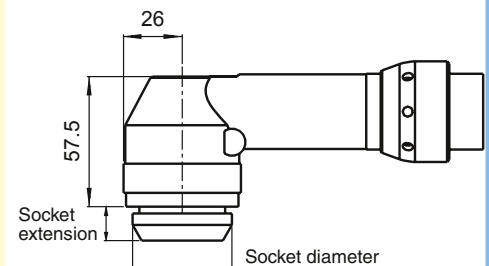
Width across flats mm/in	Socket extension mm	Socket diameter mm	Socket type	Bit lock principle	Ordering No.
10	3.3	27.5	HEX		4220 1621 04
11	2.8	27.5	HEX	Side hole	4220 0815 01
12	3.3	27.5	HEX		4210 2749 03
13	3.3	27.5	HEX		4210 2749 01
14	3.3	27.5	HEX		4210 2749 04
15	1.3	27.5	HEX		4220 1621 01
15	3.3	27.5	HEX		4210 2749 02
15	8.3	27.5	HEX	Special	4210 2749 10
15	16.3	27.5	HEX		4220 1621 00
16	0.5	27.5	HEX		4220 1251 00
16	4.3	27.5	HEX		4210 2882 01
17	4.3	27.5	HEX		4210 2882 02
18	4.3	27.5	HEX		4210 2882 03
7/16"	3.3	27.5	HEX		4210 2749 06
9/16"	3.3	27.5	HEX		4210 2749 05



Other dimensions on request.

Integrated sockets – LTV39-2 R85 FS and LTV48 R120 FS/R150 FS/R200 FS

Width across flats mm	Socket extension mm	Socket diameter mm	Bit lock principle	Ordering No.
Hex				
15	6.5	37.5	SF	4210 3534 15
17	8.5	37.5	SF	4210 3534 17
18	2	37.5	SF	4210 3534 68
18	5.5	41.5	SF	4220 1595 02
18	8.5	37.5	SF	4210 3534 18
19	9.5	37.5	SF	4210 3534 19
21	10.5	37.5	SF	4210 3534 21
22	10.5	37.5	SF	4210 3534 22
24	10.5	37.5	SF	4210 3534 24
24	13.5	41.5	SF	4220 1595 01
27	13.8	40.5	SF	4210 3534 27
Female Torx				
E-10	5.5	37.5	Female TX	4210 3534 30
E-12	5.5	37.5	Female TX	4210 3534 32
E-14	5.5	37.5	Female TX	4210 3534 34
E-16	5.5	37.5	Female TX	4210 3534 36
E-18	5.5	37.5	Female TX	4210 3534 38
E-20	5.5	37.5	Female TX	4210 3534 40
E-20	8.5	40.5	Female TX	4220 2044 01



Other dimensions on request.

Optional Accessories for Crowfoot tools

Hex sockets

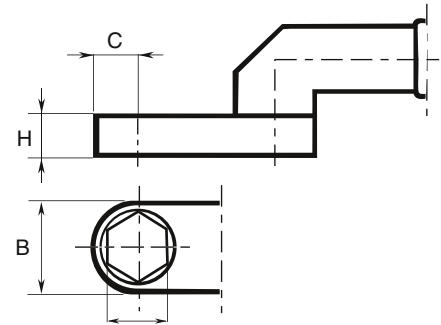
Width across flats		Ordering No.
mm	in	
For LTC38 R33/N41-13-A-O-3 ^a		
	7/16	4210 2625 03
12		4210 2625 04
	1/2	4210 2625 01
13		4210 2625 00
14		4210 2625 02
15		4210 2625 06
For LTC38 R40/N48-17-A-O-3 ^b , LTC48 R56-17-A-O-3 ^b		
13		4210 2626 06
14		4210 2626 04
15		4210 2626 03
	1/2	4210 2626 05
	5/8	4210 2626 02
16		4210 2626 00
17		4210 2626 01
18		4210 2626 10
19		4210 2626 08
For LTC48 R96/R120-19-A-O-3 ^c		
13		4210 2624 06
14		4210 2624 05
15		4210 2624 04
16		4210 2624 03
17		4210 2624 02
18		4210 2624 01
19	3/4	4210 2624 00

^a 13 mm socket mounted on tool.

^b 17 mm socket mounted on tool.

^c 19 mm socket mounted on tool.

Model	H mm	B mm	C mm
LTC38 R33-13-A-O-3	19	32	16
LTC38 R40-17-A-O-3	19	39	20
LTC48 R56-17-A-O-3	19	39	20
LTC48 R96-19-A-O-3	25	39	20
LTC48 R120-19-A-O-3	25	39	20
LTC38 N41-13-A-O-3	19	32	16

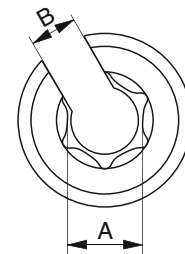


Optional Accessories for Open End Type

Sockets

A Socket size mm	B Open end mm	Ordering No.
LTO28 R12-10-L-I-3		
5/16"	7	4210 4288 54
8 mm	7	4210 4288 55
3/8"	7	4210 4288 53
9 mm	7	4210 4288 52
10 mm	7	4210 4288 51
LTO28 R15-10-L-I-3		
8 mm	8	4210 4289 56
9 mm	8	4210 4289 55
3/8"	8	4210 4289 54
10 mm	8	4210 4289 51
11 mm	8	4210 4289 57
7/16"	8	4210 4289 58
12 mm	8	4210 4289 53
LTO28 R17-13-L-I-3		
3/8"	8.5	4210 4290 52
10 mm	8.5	4210 4290 53
11 mm	8.5	4210 4290 59
7/16"	8.5	4210 4290 54
12 mm	8.5	4210 4290 57
1/2"	8.5	4210 4290 55
13 mm	8.5	4210 4290 51
14 mm	8.5	4210 4290 58
9/16"	8.5	4210 4290 56

A Socket size mm	B Open end mm	Ordering No.
LTO38 R26-13-L-I-3		
11 mm	12.5	4210 4291 63
13 mm	12.5	4210 4291 51
14 mm	12.5	4210 4291 58
9/16"	12.5	4210 4291 53
15 mm	12.5	4210 4291 55
5/8"	12.5	4210 4291 54
16 mm	12.5	4210 4291 52
17 mm	12.5	4210 4291 60
11/16"	12.5	4210 4291 56
18 mm	12.5	4210 4291 61
19 mm	12.5	4210 4291 62
3/4"	12.5	4210 4291 57
LTO38 R26-17-L-I-3		
14 mm	14	4210 4292 55
5/8"	14.6	4210 4292 54
17 mm	16	4210 4292 51
18 mm	16	4210 4292 53
19 mm	16	4210 4292 57
3/4"	16	4210 4292 52
20 mm	16	4210 4292 61
13/16"	16	4210 4292 63
21 mm	16	4210 4292 62
22 mm	16	4210 4292 56
7/8"	16	4210 4292 58
15/16"	16	4210 4292 60
24 mm	17.2	4210 4292 59



Optional Accessories for Stall type

Female hex sockets

Dimensions in	Ordering No. LBR33 S26/114	Ordering No. LBR33 S26/118	Dimensions in	Ordering No. LBR33 S26/114	Ordering No. LBR33 S26/118
1/4	4210 0360 05	—	10	4210 0414 10	—
5/16	4210 0360 02	—	12	4210 0414 12	4210 0418 12
3/8	4210 0360 03	4210 0389 02	13	4210 0414 13	4210 0418 13
7/16	4210 0360 04	4210 0389 03	14	4210 0414 14	4210 0418 14
1/2	4210 0360 01	4210 0389 04	15	4210 0414 15	4210 0418 15
9/16	—	4210 0389 06	16	—	4210 0418 16
5/8	—	4210 0389 01	17	—	4210 0418 17
3/4	—	4210 0389 05	18	—	4210 0418 18
			19	—	4210 0389 05

NOTE: That 1/2" female hex sockets must be used together with socket adapters.

Socket adapters

Dimensions	Ordering No. LBR33 S26/114	Ordering No. LBR33 S26/118
1/2" hex 3/8" square drive	4090 0163 00	4090 0163 00
1/2" hex 1/2" square drive	4090 0164 00	4090 0164 00

Optional Accessories for Hold and Drive tools

Nut socket, screw holder and bit holder for LTV38 R42-HAD/LTV38 R50-HAD

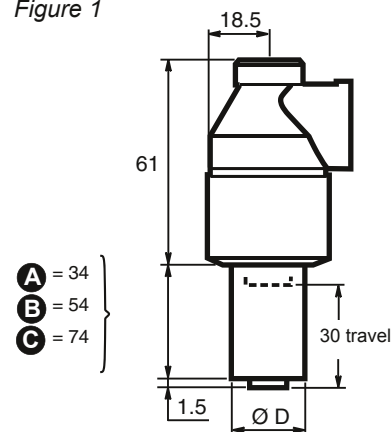
Nut socket (Fig. 1)					
Width across flats W mm	Socket Ø D mm	Ordering No.			
		A	B	C	
10	22	4220 1769 16	4220 1769 31	4220 1769 51	
11	22	4220 1769 15	4220 1769 32	4220 1769 52	
12	22	4220 1769 13	4220 1769 33	4220 1769 53	
13	22	4220 1769 09	4220 1769 12	4220 1769 54	
14	22	4220 1769 05	4220 1769 35	4220 1769 08	
15	22	4220 1769 14	4220 1769 36	4220 1769 56	
16	25	4220 1888 71	4220 1888 81	4220 1888 91	
17	25	4220 1888 72	4220 1888 82	4220 1888 92	
18	26	4220 1888 73	4220 1888 83	4220 1888 93	
19	27	4220 1888 74	4220 1888 84	4220 1888 94	
20	31	4220 1888 75	4220 1888 85	4220 1888 95	
21	31	4220 1888 76	4220 1888 86	4220 1888 96	

Screw holder					
Dimension X x Y mm	Suitable socket size mm	Ordering No.			
		A	B	C	
6.6 x 5	10-21	4220 1770 19	—	—	
7 x 5	10-21	—	4220 1770 17	—	
5.1 x 8.2	10-21	4220 1770 01	—	4220 1770 16	
8 x 6	10-21	4220 1770 02	—	—	

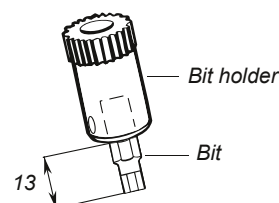
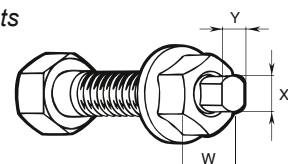
Bit holder					
Bit holder 1/4"					
A	B	C	Width N, mm	Bits	
4220 1959 01	4220 1959 04	4220 1959 03	10-21	1/4"	

Measurements in mm

Figure 1



Two flats



Optional Accessories for Hold and Drive tools

Nut socket, screw holder and bit holder for LTV38 R40 LT/R 85 HAD and LTV48 HAD

Nut socket (Fig. 2)				
Width across flats W mm	Socket Ø D mm	Ordering No.		
		A	B	C
13	30	4210 3513 13	4210 3513 33	4210 3513 53
14	30	4210 3513 14	4210 3513 34	4210 3513 54
15	30	4210 3513 15	4210 3513 35	4210 3513 55
16	30	4210 3513 16	4210 3513 36	4210 3513 56
17	30	4210 3513 17	4210 3513 37	4210 3513 57
18	31	4210 3513 18	4210 3513 38	4210 3513 58
19	32	4210 3513 19	4210 3513 39	4210 3513 59
21	35	4210 3513 21	4210 3513 41	4210 3513 61
22	35	4210 3513 22	4210 3513 42	4210 3513 62
24	35	4210 3513 24	4210 3513 44	4210 3513 64

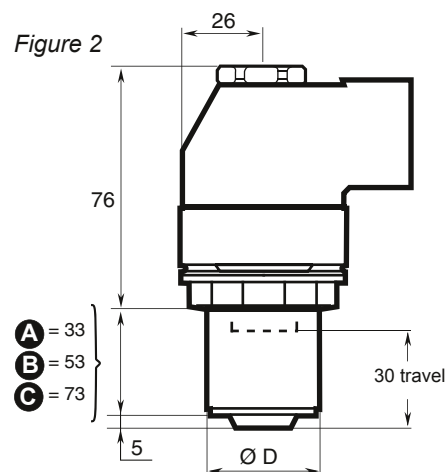
Screw holder – Two flats				
Dimension X x Y mm	Suitable socket size mm	Ordering No.		
		A	B	C
8 x 6.3	15-24	4210 2694 17	4210 2694 18	4210 2694 19
8 x 6	15-24	4210 2694 05	4210 2694 10	4210 2694 15
9.55 x 7.6	18-24	4210 2694 01	4210 2694 06	4210 2694 11
11.20 x 8.9	19-24	4210 2694 02	4210 2694 07	4210 2694 12
13 x 9.8	19-24	4210 2694 03	4210 2694 08	4210 2694 13
13.20 x 10.5	19-24	4210 2694 04	4210 2694 09	4210 2694 14

Screw holder – Male hexagon				
Dimension N mm	Suitable socket size mm	Ordering No.		
		A	B	C
7	14-24	4210 2825 41	4210 2825 42	4210 2825 43
8	14-24	4210 2825 01	4210 2825 05	4210 2825 09
9	15-24	4210 2825 02	4210 2825 06	4210 2825 10
10	18-24	4210 2825 03	4210 2825 07	4210 2825 11
11	19-24	4210 2825 04	4210 2825 08	4210 2825 12
12	19-24	4210 2825 13	4210 2825 14	4210 2825 15

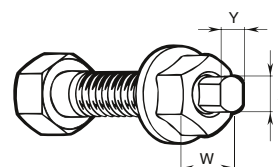
Bit holder – Female hexagon				
Bit holder 5/16"			5/16" Bits	
A	B	C	Width N, mm	Ordering No.
4210 2991 91	4210 2991 92	4210 2991 93	5	4023 1215 00
			6	4023 1216 00
			7	4023 1219 00
			8	4023 1217 00
			10	4023 1218 00

Measurements in mm

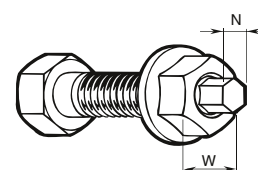
Figure 2



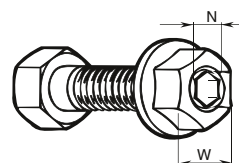
Two flats



Male hexagon



Female hexagon



Optional Accessories for Hold and Drive tools

Nut socket, screw holder and bit holder for LTV58 R350-HAD

Nut socket (Fig. 3)				
Width across flats W mm	Socket Ø D mm	Ordering No.		
		A	B	C
18	41	4220 1778 04	4220 1778 14	4220 1778 24
19	41	4220 1778 05	4220 1778 15	4220 1778 25
20	41	4220 1778 06	4220 1778 16	4220 1778 26
21	41	4220 1778 07	4220 1778 17	4220 1778 27
22	41	4220 1778 08	4220 1778 18	4220 1778 28
23	41	4220 1778 09	4220 1778 19	4220 1778 29
24	41	4220 1778 01	4220 1778 11	4220 1778 21
25	41	4220 1778 02	4220 1778 12	4220 1778 22
25.4=1"	41	4220 1778 10	4220 1778 20	4220 1778 30
26	41	4220 1778 03	4220 1778 13	4220 1778 23
27	46	—	4220 2139 84	4220 2139 94
28	46	—	4220 2139 83	4220 2139 93
29	46	—	4220 2139 82	4220 2139 92
30	46	—	4220 2139 81	4220 2139 91
31	54	—	4220 2297 81	4220 2297 91
32	54	—	4220 2297 82	4220 2297 92
33	54	—	4220 2297 83	4220 2297 93
34	54	—	4220 2297 84	4220 2297 94
35	54	—	4220 2297 85	4220 2297 95
36	54	—	4220 2297 86	4220 2297 96

Screw holder – Two flats for LTV69 R370-HAD

Dimension X x Y N mm	Suitable socket size mm	Ordering No.		
		A	B	C
13 x 9.8	18-36	4220 1777 80	4220 1777 83	4220 1777 85
13.20 x 10.5	18-36	4220 1777 81	4220 1777 84	4220 1777 86

Screw holder – Male hexagon for LTV69 R370-HAD

Dimension N mm	Suitable socket size mm	Ordering No.		
		A	B	C
10	18-36	4220 1777 52	4220 1777 54	4220 1777 72
11	18-36	4220 1777 51	4220 1777 50	4220 1777 73
12	20-36	4220 1777 53	4220 1777 55	4220 1777 74
14	20-36	4220 1777 57	4220 1777 56	4220 1777 75
16	24-36	4220 1777 58	4220 1777 70	4220 1777 76
18	24-36	4220 1777 59	4220 1777 71	4220 1777 77

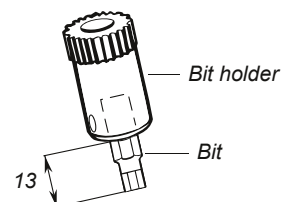
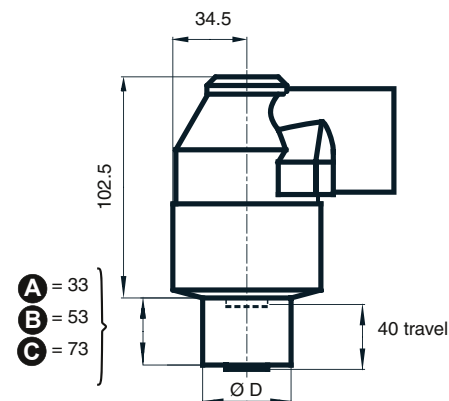
Bit holder

Bit holder	Socket size mm	Ordering No.		
		A	B	C
7	14-24	4210 2825 41	4210 2825 42	4210 2825 43
5/16"	18-20	4220 1777 88	4220 1777 89	4220 1777 90
5/16"	21-36	4220 1777 82	4220 1777 85	4220 1777 87

NOTE: 8 mm bit is included in the bit holders.

Measurements in mm

Figure 3



Installation Proposals



Model	Max air flow	Hose, 5 m	Coupling	Lubrication	Ordering No.
For small nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 07
For small nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 03
MIDI Optimizer F/RD EQ10-R10	16 l/s	Rubair 10 mm	ErgoQIC 10	Yes	8202 0850 16
For nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 02
For nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13-1/4	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 11
For nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 17
For nutrunners with 1/2" BSP air inlet					
MIDI Optimizer F/R EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	No	8202 0850 04
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 13



Service Kits

The spare parts included in the service kits cover a normal overhaul of your tool. Always have them available for a fast and economical repair.

Main parts included:

- Vane kit
- Motor bearings
- Gaskets
- O-rings
- Circlips
- Pins etc.

Model	Service kit
LTV28	4081 0102 90
LTV29-2	4081 0299 90
LTV38	4081 0103 90
LTV39-2	4081 0298 90
LTV48	4081 0236 90
LTV69	4081 0397 90

Fast, flexible and user-friendly

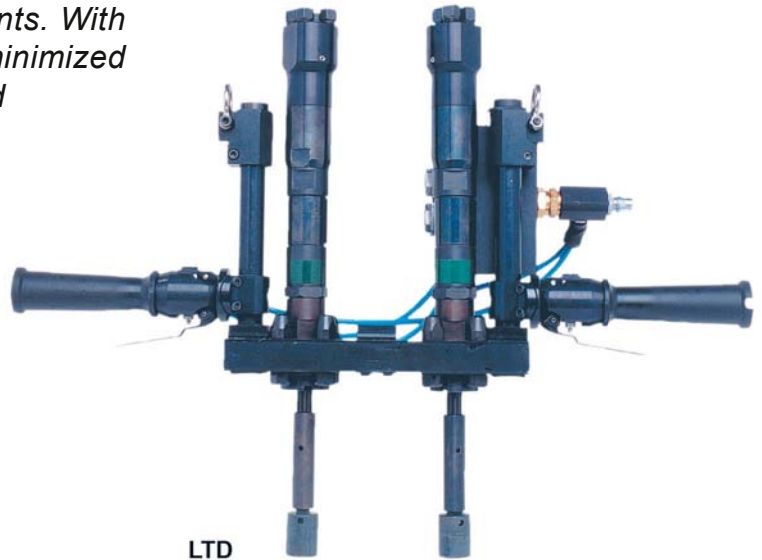
The LTD system offers a flexible, low-cost solution to many advanced tightening requirements. With fixtured tools the operator influence is minimized and very high torque accuracy is achieved

Articulating arms

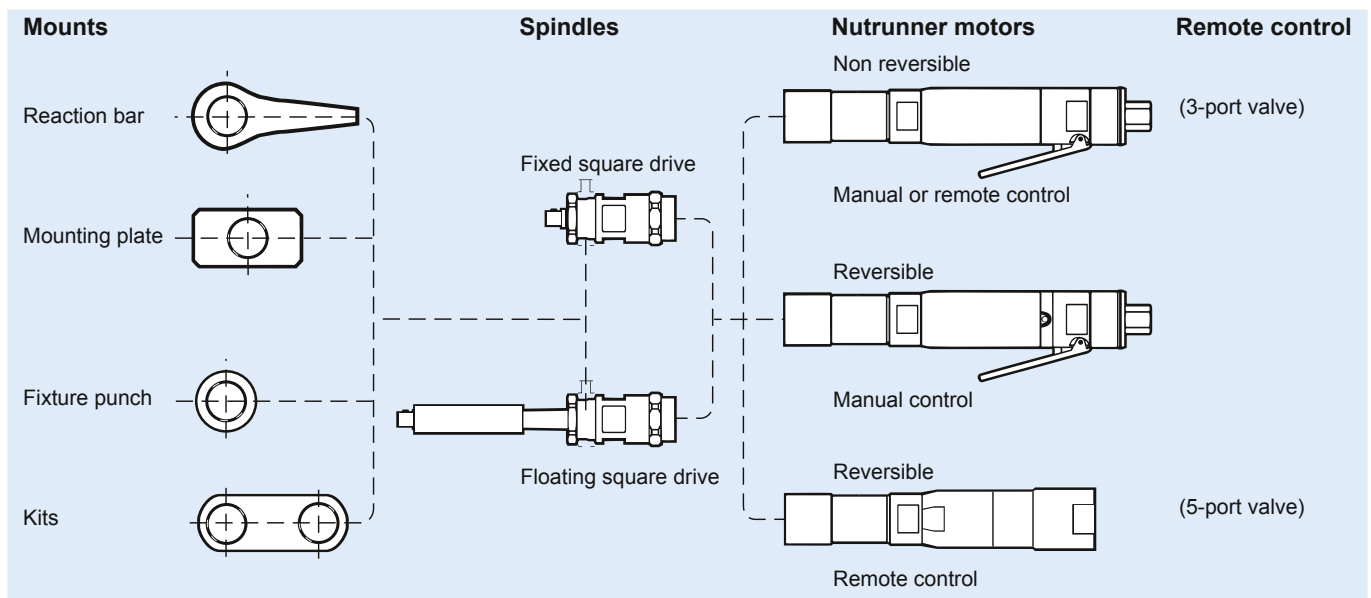
Where a fixed support on the workpiece for a reaction bar is not available, a telescopic or articulated arm mounted LTD nutrunner can be an efficient solution.

Second fastener

By combining two LTD straight nutrunners in a twin spindle unit the screws can be tightened simultaneously.



The LTD system



- **Reaction bar blanks** – For single spindle hand-held applications.
- **Mounting plates** – The LTD/LMD straight nutrunners have a splined reaction bar connection which can also be used for fixed assembly of the nutrunner. A number of standard mounting plates are available to order.
- **Floating square drive** – For two or more spindles the units must usually have floating spindles to compensate for run-down variations. Models with floating square drive or telescopic front parts are available.

- **Fixture punches** – For mounting of the nutrunner to locally made base plates a punch for the spines connection is available as optional equipment.
- **TwinSpin Kit** – A kit for building your own twin spindle assembly unit is available as extra equipment. Atlas Copco offers three sizes of twin spindle multiples, intended for 28, 38 and 48/61 sizes. The CC-distance in the TwinSpin is adjustable and the largest size has a maximum CC-distance of 364 mm. The smallest size has a minimum CC-distance of 53 mm. The complete

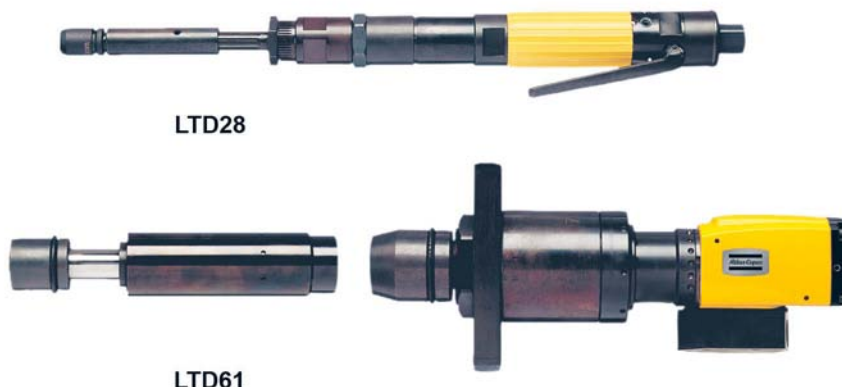
set has two throttle handles, one for forward and one for reverse (if the system is non reversible there is only one throttle handle).

- **Remote control** – Remote control valves are available as optional equipment.
- **Air signal outlets** – All LTD models are equipped with air signal outlets for completed operation.

LTD28, 38 and 48 straight nutrunners are based on the power package and clutch from the LTV angle nutrunners.

LTD/LMD61 nutrunners are based on the unique LTP/LMP61 range of twin motor pistol grip nutrunners. With fast run-down and accurate final tightening they offer high productivity and unmatched torque accuracy as well as joint independence.

- Remote control back head – A remote valve is connected to the back head of the LTD-RR tools allowing a better multiple.
- Accessibility – Slim design allows the building of smooth, simple multiples or paired spindle designs. The absence of a clutch makes these tools shorter.
- Flexibility – The range of LTD tools provides you with the options you need to meet your requirements.
- Reversibility – Reversible LTD tools are available.



Model	Bolt size mm	Square drive in	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
Non reversible, lever start														
LTD28 N9-RE	M5-6	3/8	5 - 9	4 - 6	1400	1.1	2.4	339	20	9	19	10	1/4	8431 0534 05
LTD28 N18-RE	M6	3/8	8 - 18	6 - 13	780	1.2	2.6	358	20	9	19	10	1/4	8431 0534 08
LTD28 N21-RE	M6	3/8	10 - 21	7 - 15	570	1.2	2.6	358	20	9	19	10	1/4	8431 0534 13
LTD28 N22-RE	M6	3/8	10 - 22	7 - 16	140	1.2	2.6	358	20	9	19	10	1/4	8431 0534 18
Reversible, lever start														
LTD28 R8-RE	M5-6	3/8	3 - 8	2 - 6	1100	1.2	2.6	363	20	8	17	10	1/4	8431 0534 61
LTD28 R16-RE	M6	3/8	7 - 16	6 - 12	610	1.3	2.9	383	20	8	17	10	1/4	8431 0534 65
LTD28 R20-RE	M6-8	3/8	10 - 20	7 - 15	520	1.3	2.9	383	20	8	17	10	1/4	8431 0534 51
LTD28 R22-RE	M6-8	3/8	10 - 22	7 - 16	125	1.3	2.9	383	20	8	17	10	1/4	8431 0534 54
Reversible, remote control back head														
LTD13 R05-RR	M3-5	1/4 ^b	1.5 - 5	1.1 - 3.7	850	0.7	1.6	197	16	7	15	8	1/8	8431 0533 05
LTD13 R08-RR	M3-5	1/4 ^b	1.5 - 8	1.1 - 6	500	0.8	1.7	197	16	7	15	8	1/8	8431 0533 06
LTD25 R13-RR	M2.5-6	1/4 ^b	8 - 13	6 - 10	300	1.1	2.4	224	19	7	15	10	1/4	8431 0533 11
LTD28 R8-RR	M5-6	3/8	3 - 8	2 - 6	1100	1.2	2.6	294	20	8	17	10/13	^a	8431 0703 80
LTD28 R16-RR	M6	3/8	7 - 16	6 - 12	610	1.3	2.9	313	20	8	17	10/13	^a	8431 0703 82
LTD28 R20-RR	M6-8	3/8	10 - 20	7 - 15	520	1.3	2.9	313	20	8	17	10/13	^a	8431 0703 83
Non reversible, lever start, telescopic front part, travel 25 mm														
LTD28 N9F-RE	M5-6	3/8	5 - 9	4 - 6	1400	1.5	3.3	447	20	9	19	10	1/4	8431 0534 21
LTD28 N18F-RE	M6	3/8	8 - 18	6 - 13	780	1.6	3.5	466	20	9	19	10	1/4	8431 0534 27
LTD28 N21F-RE	M6	3/8	10 - 21	7 - 15	570	1.6	3.5	466	20	9	19	10	1/4	8431 0534 39
LTD28 N22F-RE	M6	3/8	10 - 22	7 - 16	140	1.6	3.5	466	20	9	19	10	1/4	8431 0534 43
Reversible, lever start, telescopic front part, travel 25 mm														
LTD28 R8F-RE	M5-6	3/8	3 - 8	2 - 6	1100	1.6	3.5	471	20	8	17	10	1/4	8431 0534 78
LTD28 R16F-RE	M6	3/8	7 - 16	6 - 12	620	1.7	3.7	491	20	8	17	10	1/4	8431 0534 85
LTD28 R20F-RE	M6-8	3/8	10 - 20	7 - 15	570	1.7	3.7	491	20	8	17	10	1/4	8431 0534 37
LTD28 R22F-RE	M6-8	3/8	10 - 22	7 - 16	125	1.7	3.7	491	20	8	17	10	1/4	8431 0534 89
Reversible, remote control back head, telescopic front part, travel 25 mm														
LTD28 R8F-RR	M5-6	3/8	3 - 8	2 - 6	1100	1.6	3.5	401	20	8	17	10/13	^a	8431 0703 84
LTD28 R16F-RR	M6	3/8	7 - 16	6 - 12	620	1.7	3.7	421	20	8	17	10/13	^a	8431 0703 86
LTD28 R20F-RR	M6-8	3/8	10 - 20	7 - 15	570	1.7	3.7	421	20	8	17	10/13	^a	8431 0703 88
Non-reversible, lever start														
LTD38 N30-RE	M8	1/2	14 - 30	10 - 21	820	2.2	4.8	414	20	16	34	10	1/4	8431 0535 04
LTD38 N38-RE	M8	1/2	20 - 38	15 - 27	680	2.2	4.8	414	20	16	34	10	1/4	8431 0535 12
LTD38 N44-RE	M8-10	1/2	18 - 44	13 - 32	580	2.2	4.8	414	20	20	42	10	1/4	8431 0535 17
LTD38 N55-RE	M10	1/2	27 - 55	20 - 40	470	2.2	4.8	487	20	20	42	10	1/4	8431 0535 20
Reversible, lever start														
LTD38 R27-RE	M8	1/2	13 - 27	10 - 20	670	2.1	4.6	441	20	16	34	10	1/4	8431 0534 53
LTD38 R32-RE	M8	1/2	18 - 32	13 - 24	560	2.1	4.6	441	20	16	34	10	1/4	8431 0534 52
LTD38 R38-RE	M8-10	1/2	19 - 38	14 - 28	480	2.1	4.6	441	20	16	34	10	1/4	8431 0535 78
LTD38 R47-RE	M8-10	1/2	22 - 47	16 - 35	380	2.3	5.1	513	20	20	42	10	1/4	8431 0535 83

Continued...

Shut-off

Straight Nutrunners

Model	Bolt size mm	Square drive in	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
Reversible, remote control back head														
LTD38 R27-RR	M8	1/2	13-27	10-20	670	2.1	4.6	377	21	16	34	10/16	a	8431 0704 22
LTD38 R32-RR	M8	1/2	18-32	13-24	560	2.1	4.6	377	21	16	34	10/16	a	8431 0704 24
LTD38 R38-RR	M8-10	1/2	19-38	14-28	480	2.1	4.6	377	21	16	34	10/16	a	8431 0704 26
LTD38 R47-RR	M8-10	1/2	22-47	16-35	380	2.3	5.1	448	21	16	34	10/16	a	8431 0704 28
Non-reversible, lever start, telescopic front part, travel 25 mm														
LTD38 N30F-RE	M8	1/2	14-30	10-21	820	2.3	5.0	521	20	20	42	10	1/4	8431 0535 38
LTD38 N38F-RE	M8	1/2	20-38	15-27	680	2.3	5.0	521	20	20	42	10	1/4	8431 0535 46
LTD38 N44F-RE	M8-10	1/2	18-44	13-32	580	2.3	5.0	521	20	20	42	10	1/4	8431 0535 31
LTD38 N55F-RE	M10	1/2	27-55	20-40	470	2.5	5.5	599	23	20	42	10	1/4	8431 0535 53
Reversible, lever start, telescopic front part, travel 25 mm														
LTD38 R27F-RE	M8	1/2	13-27	10-20	670	2.5	5.5	546	20	16	34	10	1/4	8431 0535 65
LTD38 R32F-RE	M8	1/2	18-32	13-24	560	2.5	5.5	546	20	16	34	10	1/4	8431 0535 91
LTD38 R38F-RE	M8-10	1/2	19-38	14-28	480	2.5	5.5	546	20	16	34	10	1/4	8431 0535 95
LTD38 R47F-RE	M8-10	1/2	22-47	16-35	380	2.7	5.9	625	23	16	34	10	1/4	8431 0535 99
Reversible, remote control back head, telescopic front part, travel 25 mm														
LTD38 R27F-RR	M8	1/2	13-27	10-20	670	2.5	5.5	482	21	16	34	10/16	a	8431 0704 30
LTD38 R32F-RR	M8	1/2	18-32	13-24	560	2.5	5.5	482	21	16	34	10/16	a	8431 0704 32
LTD38 R38F-RR	M8-10	1/2	19-38	14-28	480	2.5	5.5	482	21	16	34	10/16	a	8431 0704 34
LTD38 R47F-RR	M8-10	1/2	22-47	16-35	380	2.7	5.9	566	23	16	34	10/16	a	8431 0704 36
Reversible, lever start														
LTD48 R65-RE ^d	M10	1/2	27-65	20-48	400	3.1	6.8	582	30	28	59	12.5	1/2	8431 0637 07
LTD48 R81-RE ^d	M12	1/2	32-81	24-60	320	3.1	6.8	582	30	28	59	12.5	1/2	8431 0637 12
Reversible, remote control back head														
LTD48 R65-RR	M10	1/2	27-65	20-48	400	3.5	7.7	410	28	30	63	12.5/16	c	8431 0704 46
LTD48 R81-RR	M12	1/2	32-81	24-60	330	3.5	7.7	410	28	30	63	12.5/16	c	8431 0704 48
Reversible, lever start, telescopic front part, travel 25 mm														
LTD48 R65F-RE ^d	M10	1/2	27-65	20-48	400	3.5	7.7	700	30	28	59	12.5	1/2	8431 0637 17
LTD48 R81F-RE ^d	M12	1/2	32-81	24-60	320	3.5	7.7	700	30	28	59	12.5	1/2	8431 0637 23
Reversible, remote control back head														
LTD48 R65F-RR	M10	1/2	27-65	20-48	400	3.7	8.2	522	28	30	63	12.5/16	c	8431 0704 50
LTD48 R81F-RR	M12	1/2	32-81	24-60	330	3.7	8.2	522	28	30	63	12.5/16	c	8431 0704 52

^a Air inlet thread = 2 x 1/4" + 1 x 3/8".

^c Air inlet thread = 2 x 1/2" + 1 x 3/4".

^b 1/4" quick change chuck.

^d Optional RE kit LTD48 RE Ordering No. 4210 4057 90.

Shut-off

Straight Nutrunners

Model	Bolt size mm	Square drive in	Torque range at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Air inlet thread in	Spline type	Ordering No.
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm			
Torque control models with fixed square drive																
LTD61 H100-13-RE	M12	1/2	55-100	40- 75	45	35	1800	3.0	6.6	223	29	20	42	3/8	3	8431 0808 06
LTD61 H170-13-RE	M14	1/2	95-170	70- 125	70	50	1100	3.0	6.6	223	29	20	42	3/8	3	8431 0808 15
LTD61 H230-19-RE	M16	3/4	125-230	90- 170	85	60	820	3.0	6.6	223	29	20	42	3/8	3	8431 0808 23
LTD61 H350-20-RE	M18	3/4	190-350	140- 255	145	105	520	3.9	8.6	260	31	20	42	3/8	4	8431 0808 27
LTD61 H500-20-RE	M20	3/4	275-500	200- 370	220	160	360	3.9	8.6	260	31	20	42	3/8	4	8431 0808 36
LTD61 H700-25-RE	M22	1	360-650	265- 480	280	207	280	4.5	9.9	305	34	20	42	3/8	5	8431 0808 43
LTD61 H900-25-RE	M24	1	480-870	350- 640	300	220	210	4.5	9.9	282	32	20	42	3/8	5	8431 0808 45

NOTE: Change over torque is around 4% of maximum torque on a given pressure.

Non Shut-off

Straight Nutrunners

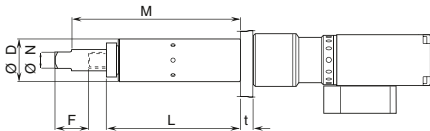
Model	Bolt size mm	Square drive in	Max torque at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight		Length mm	CS distance mm	Air con- sumption at free speed		Air inlet thread in	Spline type	Ordering No.
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm			
Stall type models with fixed square drive																
LMD61 H100-13-RE	M12	1/2	100	75	60	45	2200	3.0	6.6	223	29	20	42	3/8	3	8431 0809 02
LMD61 H170-13-RE	M14	1/2	170	125	100	75	1400	3.0	6.6	223	29	20	42	3/8	3	8431 0809 10
LMD61 H230-19-RE	M16	3/4	230	170	130	95	1000	3.0	6.6	223	29	20	42	3/8	3	8431 0809 12
LMD61 H350-20-RE	M18	3/4	350	260	200	145	650	3.9	8.6	260	31	20	42	3/8	4	8431 0809 28
LMD61 H500-20-RE	M20	3/4	500	370	300	220	450	3.9	8.6	260	31	20	42	3/8	4	8431 0809 30
LMD61 H700-25-RE	M22	1	700	520	400	295	350	4.5	9.9	305	34	20	42	3/8	5	8431 0809 41
LMD61 H900-25-RE	M24	1	900	665	500	365	260	4.5	9.9	282	34	20	42	3/8	5	8431 0809 49

NOTE: Change over torque is around 4% of maximum torque on a given pressure.

Dimensions

Telescopic front part LMD/LTD61

Model	Dimensions						Ordering No.
	N in	D mm	F mm	L mm	M mm	t mm	
LMD/LTD61 H100, H170	1/2	34	25	101	127	12	4210 3864 80
LMD/LTD61 H230	3/4	41	25	117	148	12	4210 3789 80
LMD/LTD61 H350, H500	3/4	50	40	160	201	15	4210 3781 81
LMD/LTD61 H700, H900	1	67	50	226	278	15	4210 3788 80



Installation Proposals

Model	Max air flow	Hose, 5 m	Coupling	Lubrication	Ordering No.
For small nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablair 10 mm	ErgoQIC 08	Yes	8202 0850 07
For small nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablair 10 mm	ErgoQIC 08	Yes	8202 0850 03
MIDI Optimizer F/RD EQ10-R10	16 l/s	Rubair 10 mm	ErgoQIC 10	Yes	8202 0850 16
For nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13	23 l/s	Cablair 13 mm	ErgoQIC 10	Yes	8202 0850 02
For nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13-1/4	23 l/s	Cablair 13 mm	ErgoQIC 10	Yes	8202 0850 11
For nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 17
For nutrunners with 1/2" BSP air inlet					
MIDI Optimizer F/R EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	No	8202 0850 04
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 13

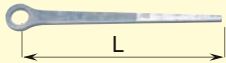
Accessories Included

For all models

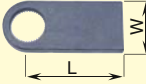
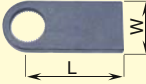
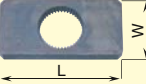
Torque adjustment key

Optional Accessories

Reaction bar

		Dimensions mm	LTD28	LTD38	LTD38 N55/R47 LTD48	LMD/LTD61	LMD/LTD61
					LMD/LTD61 -13, -19	-20	-25
		L					
Bar blank (steel)		250 200 500	4210 1798 00	4210 2134 00	4210 2219 02	4210 2183 80	4210 2726 80
Bar blank (aluminum)		400			4210 2219 01		

Mounting plate

		Dimensions mm	LTD28	LTD38	LTD38 N55/R47 LTD48	LMD/LTD61	LMD/LTD61
					LMD/LTD61 -13, -19	-20	-25
Side mount		L x W 90 x 40 120 x 70	4210 1798 01	4210 2134 01		4210 2809 80	4210 2808 80
Center mount		L x W 70 x 40 100 x 50 125 x 65	4210 1798 02	4210 2134 02	4210 2219 03	4210 2183 01	4210 2726 01
Flange mount		D 55			4210 2219 10		

TwinSpin kit. Includes: 2 support handles, 2 mounting plates (with corresponding splines), 2 handle attachments, 1 suspension wire, 1 reaction arm, 2 beams, 1 assembly tool, 1 mounting plate for reaction bar, 2 posts, 2 brackets.

TwinSpin kit	Max CC-distance ^a	Min CC-distance ^a	Ordering No.
LTD28 RE/RR	383	53	4210 4159 80
LTD38 N30/N38/N44/R27/R32/R38-RE/RR	376	60	4210 4160 80
LTD38 N55/R47-RE/RR	364	72	4210 4161 80
LTD48 RE/RR	364	72	4210 4161 80
LMD/LTD61 H100, H170, H230	364	72	4210 4161 82
LMD/LTD61 H350, H500	362	87	4210 4161 81

^a CC-distance = distance between center of spindles.

Valve kits. Includes: main valve, throttle handle valve/valves, bracket, hose nipples and hose clamps.

Intended for tool type	Valve type	Ordering No.
LTD28/38 RE	3-gate for non reversible	4210 4162 80
LTD28 RR	5-gate for reversible	4210 4163 80
LTD48 RE	3-gate for non reversible	4210 4166 80
LTD38/48 RR	5-gate for reversible	4210 4167 80
LMD/LTD61 H100, H170, H230	3-gate for non reversible	4210 4166 80

Exhaust manifolds. Includes: Block, silencer with gasket and nipples.

Intended for tool type	Ordering No.
LTD28 RR	4210 4168 80
LTD38 RR	4210 4168 81
LTD48 RR	4210 4168 81

An optimum combination of torque, speed and weight

With the LMP/LTP61 range of pistol grip nutrunners from Atlas Copco you get the highest possible torque and speed in relation to the weight of the tool. Fast, accurate and highly operator friendly, the tools are available in reversible versions for maximum flexibility.

Fast and accurate

In LTP/LMP61 tools the twin motor concept provides extremely fast rundown with good torque accuracy, even on soft joints.

Operator friendly

Our pistol grip nutrunners are comfortable to operate. The reaction bar eliminates reaction forces and the exhaust through the handle arrangement keeps noise levels low.

Single-handed operation combined with the low weight and perfectly balanced pistol grip design make LMP24/61 and LTP61 nutrunners safe and comfortable to use.

Reversible for maximum flexibility

Being able to loosen fasteners without changing tools saves time and effort and raises productivity.



The twin motor in the 61 series gives faster production and increased accuracy with a minimum of air consumption. Torque level on LMP models depends on the pressure of the air fed to the tool, higher pressure creates higher torque.

- High torque accuracy.
- Swiveling function makes tool positioning easy.
- Fast rundown motor saves time.
- Extremely good torque output to weight ratio compared to single motor pistol grip nutrunners.
- Available as both reversible and non-reversible models.



Model	Bolt size mm	Square drive in	Max torque at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight ^a		Length mm	CS distance mm	Air consumption at free speed		Air inlet thread in	Spline type	Ordering No.
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm			
Non-reversible																
LMP24 H011-10	M6	3/8	13	10	6	4	1550	1.0	2.2	210	18	11	23	1/4	1	8431 0245 56
LMP24 H005-10	M8	3/8	30	22	14	10	500	1.0	2.2	210	18	11	23	1/4	1	8431 0245 49
LMP24 H003-13	M8	1/2	40	30	14	10	330	1.2	2.6	210	18	11	23	1/4	1	8431 0245 64
LMP24 H002-13	M10	1/2	58	43	27	20	240	1.3	2.9	230	21	11	23	1/4	2	8431 0245 31
LMP61 H100-13	M12	1/2	100	75	60	45	2200	3.0	6.6	223	29	20	42	3/8	3	8431 0803 05
LMP61 H170-13	M14	1/2	170	125	100	75	1400	3.0	6.6	223	29	20	42	3/8	3	8431 0803 12
LMP61 H230-19	M16	3/4	230	170	130	95	1000	3.0	6.6	223	29	20	42	3/8	3	8431 0803 19
LMP61 H350-20	M18	3/4	350	260	200	145	650	3.9	8.6	260	31	20	42	3/8	4	8431 0803 26
LMP61 H500-20	M20	3/4	500	370	300	220	450	3.9	8.6	260	31	20	42	3/8	4	8431 0803 33
LMP61 H700-25	M22	1	700	520	400	295	350	4.5	9.9	305	34	20	42	3/8	5	8431 0803 40
LMP61 H900-25	M24	1	900	665	500	365	260	4.5	9.9	282	34	20	42	3/8	5	8431 0803 47
LMP61 H1500-25	M30	1	1600	1180	900	660	140	6.8	14.9	323	42	20	42	3/8	9	8431 0803 54
LMP61 H1900-38	M30	1 1/2	2000	1475	1100	810	120	14.1	31	380	68	20	42	3/8	8	8431 0803 61
LMP61 H2800-38	M36	1 1/2	3000	2210	1600	1180	80	14.1	31	380	68	20	42	3/8	8	8431 0803 68
LMP61 H3800-38	M42	1 1/2	4000	2950	2200	1620	60	14.1	31	380	68	20	42	3/8	8	8431 0803 75
Reversible																
LMP24 HR011-10	M6	3/8	10	7	5	4	860	1.0	2.2	210	18	11	23	1/4	1	8431 0245 85
LMP24 HR005-10	M8	3/8	22	16	10	7	380	1.0	2.2	210	18	11	23	1/4	1	8431 0245 77
LMP24 HR003-13	M8	1/2	30	22	14	10	250	1.2	2.6	210	18	11	23	1/4	1	8431 0245 91
LMP24 HR002-13	M10	1/2	40	33	20	15	180	1.3	2.9	230	21	11	23	1/4	2	8431 0245 70
LMP61 HR100-13	M12	1/2	100	75	60	45	2200	3.0	6.6	235	30	20	42	3/8	3	8431 0804 04
LMP61 HR170-13	M14	1/2	170	125	100	75	1400	3.0	6.6	238	30	20	42	3/8	3	8431 0804 11
LMP61 HR230-19	M16	3/4	230	170	130	95	1000	3.0	6.6	275	34	20	42	3/8	3	8431 0804 18
LMP61 HR350-20	M18	3/4	350	260	200	145	650	3.9	8.6	275	34	20	42	3/8	4	8431 0804 25
LMP61 HR500-20	M20	3/4	500	370	300	220	450	3.9	8.6	320	35	21	42	3/8	4	8431 0804 32
LMP61 HR700-25	M22	1	700	520	400	295	350	4.5	9.9	305	34	20	42	3/8	5	8431 0804 39
LMP61 HR900-25	M24	1	900	665	500	365	260	4.5	9.9	305	34	20	42	3/8	5	8431 0804 46
LMP61 HR1500-25	M30	1	1600	1180	900	660	140	6.8	14.9	345	42	20	42	3/8	9	8431 0804 53
LMP61 HR1900-38	M30	1 1/2	2000	1475	1100	810	120	14.1	31	380	68	20	42	3/8	8	8431 0804 60
LMP61 HR2800-38	M36	1 1/2	3000	2210	1600	1180	80	14.1	31	380	68	20	42	3/8	8	8431 0804 67
LMP61 HR3800-38	M42	1 1/2	4000	2950	2200	1620	60	14.1	31	380	68	20	42	3/8	8	8431 0804 74

^a Weight excluding reaction bar.

Recommended hose size 13 mm for hose length up to 5 m.

- LTP61 models are equipped with twin motors and a shut-off valve to ensure that the tool shuts off when the preset torque level is reached.
- Rundown is twice as fast as the LTP51.
- High torque accuracy, non depending on air pressure feeded.
- Extremely high torque output to weight ratio.
- A reversible tool with fixed positions for both forward and reverse.



LTP61 H900-25

Model	Bolt size mm	Square drive in	Torque range at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight ^a		Length mm	CS distance mm	Air con- sumption at free speed		Air inlet thread in	Spline type	Ordering No.
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm			
Non reversible																
LTP61 H100-13	M12	1/2	55 - 100	40- 75	45	35	1800	3.0	6.6	223	29	20	42	3/8	3	8431 0800 07
LTP61 H170-13	M14	1/2	95 - 170	70- 125	70	50	1100	3.0	6.6	223	29	20	42	3/8	3	8431 0800 14
LTP61 H230-19	M16	3/4	125 - 230	90- 170	85	60	820	3.0	6.6	223	29	20	42	3/8	3	8431 0800 21
LTP61 H350-20	M18	3/4	190 - 350	140- 255	145	105	520	3.9	8.6	260	31	20	42	3/8	4	8431 0800 28
LTP61 H500-20	M20	3/4	275 - 500	200- 370	220	160	360	3.9	8.6	260	31	20	42	3/8	4	8431 0800 35
LTP61 H700-25	M22	1	360 - 650	265- 480	280	207	280	4.5	9.9	305	34	20	42	3/8	5	8431 0800 42
LTP61 H900-25	M24	1	480 - 870	350- 640	300	220	210	4.5	9.9	282	32	20	42	3/8	5	8431 0800 49
LTP61 H1500-25	M30	1	850 - 1500	625- 1100	700	516	115	6.8	14.5	323	42	20	42	3/8	9	8431 0800 56
LTP61 H1900-38	M30	1 1/2	1050 - 1900	770-1400	800	590	90	14.1	31.0	380	68	20	42	3/8	8	8431 0800 63
LTP61 H2800-38	M36	1 1/2	1550 - 2800	1140-2060	1200	885	65	14.1	31.0	380	68	20	42	3/8	8	8431 0800 70
LTP61 H3800-38	M42	1 1/2	2100 - 3800	1540-2800	1600	1180	50	14.1	31.0	380	68	20	42	3/8	8	8431 0800 77
Reversible																
LTP61 HR100-13	M12	1/2	55 - 100	40- 75	45	35	1800	3.0	6.6	235	30	20	42	3/8	3	8431 0801 08
LTP61 HR170-13	M14	1/2	95 - 170	70- 125	70	50	1100	3.0	6.6	238	30	20	42	3/8	3	8431 0801 15
LTP61 HR230-19	M16	3/4	125 - 230	90- 170	85	60	820	3.0	6.6	275	34	20	42	3/8	3	8431 0801 22
LTP61 HR350-20	M18	3/4	190 - 350	140- 255	145	105	520	3.9	8.6	275	34	20	42	3/8	4	8431 0801 29
LTP61 HR500-20	M20	3/4	275 - 500	200- 370	220	160	360	3.9	8.6	275	34	20	42	3/8	4	8431 0801 36
LTP61 HR700-25	M22	1	360 - 650	265- 480	280	207	280	4.5	9.9	305	34	20	42	3/8	5	8431 0801 43
LTP61 HR900-25	M24	1	480 - 870	350- 640	300	220	210	4.5	9.9	305	34	20	42	3/8	5	8431 0801 50
LTP61 HR1500-25	M30	1	850 - 1500	625- 1100	700	516	115	6.8	14.5	345	42	20	42	3/8	9	8431 0801 57
LTP61 HR1900-38	M30	1 1/2	1050 - 1900	770-1400	800	590	90	14.1	31.0	380	68	20	42	3/8	8	8431 0801 64
LTP61 HR2800-38	M36	1 1/2	1550 - 2800	1140-2060	1200	885	65	14.1	31.0	380	68	20	42	3/8	8	8431 0801 71
LTP61 HR3800-38	M42	1 1/2	2100 - 3800	1540-2800	1600	1180	50	14.1	31.0	380	68	20	42	3/8	8	8431 0801 78

^a Without reaction bar.

Recommended hose size: 13 mm

Change over torque is around 4% of maximum torque on a given air pressure.

For prevailing applications

- LTP61 PH is specially designed to handle prevailing applications, such as locking nuts.
- Special gear gives a higher change-over torque.
- Fast rundown motor handles most of the rundown before the slower but stronger tightening motor is used.



LTP61 PH900-25

Model	Bolt size mm	Square drive in	Torque range at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight ^a		Length mm	CS distance mm	Air consumption at free speed		Air inlet thread in	Spline type	Ordering No.		
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm					
Non-reversible																		
LTP61 PH100-13	M12	1/2	60-	110	45-	80	45	33	700	3.0	6.6	223	34	20	42	3/8	3	8431 0807 04
LTP61 PH170-13	M14	1/2	100-	180	75-	135	70	52	440	3.0	6.6	223	34	20	42	3/8	3	8431 0807 12
LTP61 PH230-19	M16	3/4	130-	240	95-	180	90	66	320	3.0	6.6	223	34	20	42	3/8	3	8431 0807 17
LTP61 PH350-20	M18	3/4	210-	370	155-	275	150	110	200	3.9	8.6	260	34	20	42	3/8	4	8431 0807 24
LTP61 PH500-20	M20	3/4	300-	520	220-	380	200	150	140	3.9	8.6	260	34	20	42	3/8	4	8431 0807 31
LTP61 PH700-25	M22	1	400-	680	295-	500	280	205	100	4.5	9.9	305	34	20	42	3/8	5	8431 0807 38
LTP61 PH900-25	M24	1	500-	900	370-	665	350	260	80	4.5	9.9	282	34	20	42	3/8	5	8431 0807 41
LTP61 PH1500-25	M30	1	900-	1600	665-	1180	650	480	45	6.8	14.9	323	42	20	42	3/8	9	8431 0807 52
Reversible																		
LTP61 PHR700-25	M22	1	400-	680	295-	500	280	205	100	4.5	9.9	305	34	20	42	3/8	5	8431 0807 55
LTP61 PHR900-25	M24	1	500-	900	370-	665	350	260	80	4.5	9.9	305	34	20	42	3/8	5	8431 0807 62
LTP61 PHR1500-25	M30	1	900-	1600	665-	1180	650	480	45	6.8	14.9	345	42	20	42	3/8	9	8431 0807 68
Reversible with Multi Torque unit																		
LTP61 PHR700-25-MT	M22	1	400-	680	295-	500	280	205	100	4.8	10.6	305	34	20	42	3/8	5	8431 0807 77
LTP61 PHR900-25-MT	M24	1	500-	900	370-	665	350	260	80	4.8	10.6	305	34	20	42	3/8	5	8431 0807 81

^a Without reaction bar.

Recommended hose size 13 mm for hose length up to 5 m and 16 mm hose size for length 5-10 m.

Change over torque is around 10% of maximum torque on a given air pressure.

LTP with Multi Torque Selector

- The Multi Torque Selector makes it possible to preset up to four different shut-off levels.
- The Rotary dial mounted on the tool allows the operator to select different torque levels without changing the tool.
- Ideal for situations where:
 - Several different assembly operations take place.
 - Multi-stage tightening operations are required.
 - Several different torque settings are needed.
- Reverse function that has fixed positions for both forward and reverse.



LTP61 HR900-25-MT

Model	Bolt size mm	Square drive in	Torque range at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight ^a		Length mm	CS distance mm	Air consumption at free speed		Air inlet thread in	Spline type	Ordering No.
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm			
LTP61 HR100-13-MT	M12	1/2	55 - 100	40 - 75	45	35	1800	3.3	7.3	288	30	20	42	3/8	3	8431 0806 02
LTP61 HR170-13-MT	M14	1/2	95 - 170	70 - 125	70	50	1100	3.3	7.3	288	30	20	42	3/8	3	8431 0806 09
LTP61 HR230-19-MT	M16	3/4	125 - 230	90 - 170	85	60	820	3.3	7.3	288	34	20	42	3/8	3	8431 0806 16
LTP61 HR350-20-MT	M18	3/4	190 - 350	140 - 255	145	105	520	4.2	9.2	325	34	20	42	3/8	4	8431 0806 23
LTP61 HR500-20-MT	M20	3/4	275 - 500	200 - 370	220	160	360	4.2	9.2	325	34	20	42	3/8	4	8431 0806 30
LTP61 HR700-25-MT	M22	1	360 - 650	265 - 480	280	207	280	4.8	10.6	355	34	20	42	3/8	5	8431 0806 33
LTP61 HR900-25-MT	M24	1	480 - 870	350 - 640	300	220	210	4.8	10.6	355	34	20	42	3/8	5	8431 0806 37
LTP61 HR1500-25-MT	M30	1	850 - 1500	625 - 1100	700	516	115	7.1	15.6	395	42	20	42	3/8	9	8431 0806 44
LTP61 HR1900-38-MT	M30	1 1/2	1050 - 1900	770 - 1400	800	590	90	14.4	31.7	430	68	20	42	3/8	8	8431 0806 51
LTP61 HR2800-38-MT	M36	1 1/2	1550 - 2800	1140 - 2060	1200	885	65	14.4	31.7	430	68	20	42	3/8	8	8431 0806 58
LTP61 HR3800-38-MT	M42	1 1/2	2100 - 3800	1540 - 2800	1600	1180	50	14.4	31.7	430	68	20	42	3/8	8	8431 0806 65

^a Without reaction bar.

Recommended hose size: 13 mm.

Change over torque is around 4% of maximum torque on a given air pressure.

Installation Proposals



Model	Max air flow	Hose, 5 m	Coupling	Lubrication	Ordering No.
For small nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 07
For small nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 03
MIDI Optimizer F/RD EQ10-R10	16 l/s	Rubair 10 mm	ErgoQIC 10	Yes	8202 0850 16
For nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 02
For nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13-1/4	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 11
For nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 17
For nutrunners with 1/2" BSP air inlet					
MIDI Optimizer F/R EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	No	8202 0850 04
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 13

Accessories Included

For LMP24

Suspension yoke, reaction bar

For LMP/LTP61

Swivel type reaction bar

Optional Accessories

For LMP24

Model	Ordering No.
Hose nipple	9000 0247 00
Swivel attachment	4210 2249 80
Exhaust hose	4210 2053 00
Support handle (for H/HR002 only)	4110 1355 82
Spindle extension 115 mm x 1/2" (for H/HR002 only)	4210 2154 80
50 mm x 3/8" (for H/HR011/005 only)	4210 2158 80
1/4" hex bit holder (for H/HR011/005 only)	4021 0443 00
1/2" square adapter (for H/HR011/005 only)	4210 2157 80

For LMP/LTP61

Model	Ordering No.
Hose nipple	9000 0242 00
Exhaust hose	4210 2201 00
Protective cover Standard LTP61	4210 4672 00
LTP 61 with MT unit	4210 4672 01
Multi torque selector LTP61	4210 4636 95
Quick change retainer – 1/2" square models	4250 1190 00
– 3/4" square models	4210 3476 80
– 1" square models	4210 3524 80
Shut-off override for LTP61	4210 3545 80
Swivelling type MultiFlex connector 3/8" (BSP)	8202 1350 22
Swivelling type MultiFlex connector 3/8" (NPT)	8202 1350 28



Multi torque selector LTP61



Protective cover

Swivelling suspension yoke LMP/LTP61

Model	Ordering No.
Mounting dia Ø 54 mm	
PH/H 100-13	4210 3088 80
PH/H 170-13	
PH/H 230-19	
PH/H 350-20	
PH/H 500-20	
PH/H 700-25	
PH/H 900-25	

Model	Ordering No.
Mounting dia Ø 60 mm	
HR 100-13	4210 3088 84
HR 170-13	
HR 230-19	
Ø 63.5 mm	
H 1900-38	4210 3088 83
H 2800-38	
H 3800-38	

Model	Ordering No.
Mounting dia Ø 67 mm	
HR 350-20	4210 3088 82
HR 500-20	
PHR/HR 700-25	
PHR/HR 900-25	
HR 1900-38	4210 3088 85
HR 2800-38	
HR 3800-38	
Ø 83.5 mm	
PH/H 1500-25	4210 3088 81
PHR/HR 1500-25	

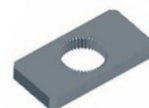
Reaction bars LMP/LTP 61

Spline dia mm	Square drive size mm/in	CC distance mm	Ordering No.
Steel bar			
Spline 1	268/36/18		4210 1798 01
Spline 2	270/35/10		4220 1903 00
Spline 3	400/56/12		4210 2219 80
Spline 4	500/62/15		4210 2183 80
Spline 5	500/62/15		4210 2726 80
Spline 6	560/80/15		4220 1200 01
Spline 9	500/85/20		4210 3899 80
Square steel bracket			
Spline 3	100/50/12		4210 2219 03
Spline 4	125/65/16		4210 2183 01
Spline 5	125/65/16		4210 2726 01
Spline 6	200/100/15		4220 1200 00
Spline 7	250/150/20		4220 1445 00
Spline 8	250/160/20		4220 1972 91
Spline 9	150/85/20		4210 3899 01
Triangular steel bracket			
Spline 2	73/72/14		4220 2137 02
Spline 3	82/80/15		4220 2137 03
Spline 6	112/109/15		4220 2137 06
Spline 7	150/145/20		4220 2137 16
Sliding drive reaction bar			
Spline 3	1/2	70-120	4210 4481 83
Spline 3	3/4	70-120	4210 4481 63
Spline 4	3/4	76-126	4210 4481 84
Spline 4	3/4	82-218	4210 4616 84
Spline 5	1	80-125	4210 4481 85
Spline 5	1	82-218	4210 4616 85
Spline 9	1	80-130	4210 4481 89
Spline 9	1	80-280	4210 4616 89
S-Type reaction bar			
Spline 3	110/18/12		4210 4480 03
Spline 4	120/22/15		4210 4480 04
Spline 5	130/25/15		4210 4480 05
Spline 6	125/25/15		4210 4480 06
Spline 8	200/65/20		4210 4480 08
Spline 9	160/40/20		4210 4480 09
L-Type aluminum bar			
Spline 3	266x300/29/15		4210 2219 08
Spline 4	144x150/42/15		4210 2183 08
Straight aluminum bar			
Spline 3	L = 400		4210 2219 01
Extended sliding drive reaction bar			
Spline 5	1	68-112	4210 4498 80
Extended sliding tube reaction bar			
Spline 5	1	68-112	4210 4498 82
Bracket stepped			
Spline 1	70/36/13		4210 1798 02
Spline 2	70/41/14		4210 2134 02

Steel bar



Square steel bracket



Triangular steel bracket



Sliding drive reaction bar



S-Type reaction bar



L-Type aluminum bar



Straight aluminum bar



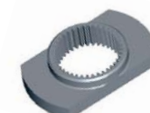
Extended sliding drive reaction bar



Extended sliding tube reaction bar

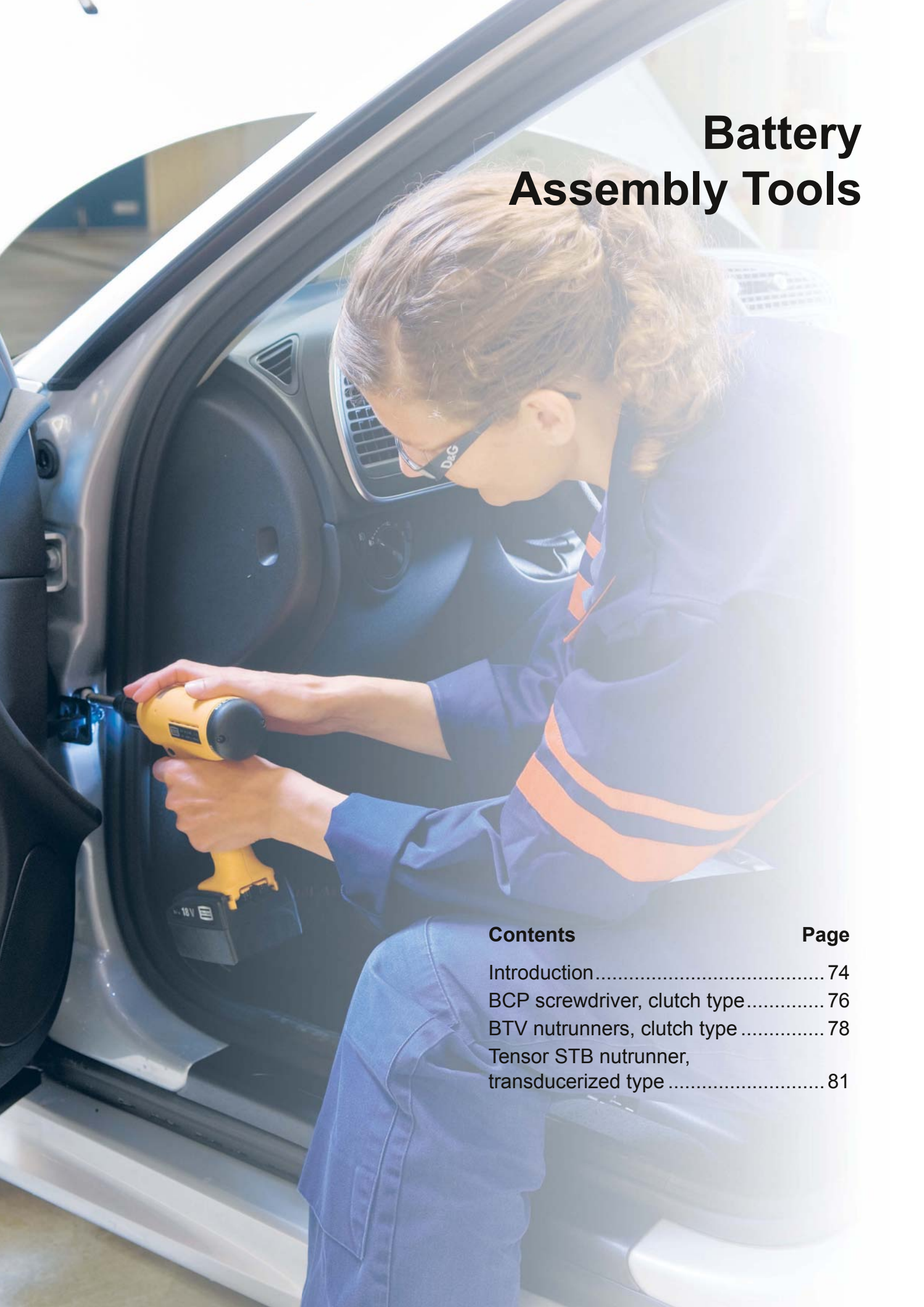


Bracket stepped



Service Kits

Model	Trigger kit	General service kit
LMP24	4210 1934 91	4081 0105 90
LMP/LTP61	4210 2190 91	4081 0397 90
LMD/LTD61	—	4081 0397 90



Battery Assembly Tools

Contents	Page
Introduction.....	74
BCP screwdriver, clutch type.....	76
BTV nutrunners, clutch type.....	78
Tensor STB nutrunner, transducerized type.....	81

True cordless freedom

Atlas Copco's range of industrial battery assembly tools includes both shut-off and transducerized nutrunners and screwdrivers. They allow maximum freedom of movement along the line and inside narrow or closed compartments. Tensor STB tools also offer advanced process control.

The main advantage of battery tools is their superior flexibility due to the absence of cables. This, in turn, improves the efficiency of the operator. Battery assembly tools also contribute to improving safety in the workplace, since there are no air hoses or electric cables to become entangled or jammed. Also, in the automotive industry, for instance, there is no risk of scratches on the car body finish from air hoses or electric cables.

BCP screwdrivers – a pleasure to work with

The BCP screwdriver is ideal for quality critical applications where flexibility is essential. The slim, well-balanced design and ergonomic pistol grip on the BCP screwdriver make it a pleasure to hold. Its compact size and Lithium-Ion batteries put it among the lightest battery screwdrivers on the market. BCP screwdrivers also offer variable speed and plenty of power, with torque levels ranging from 0.8 up to 12 Nm.

All these ergonomic features make the BCP screwdriver the kind of tool you can work with all day long.

BTV nutrunners – the durable and reliable angle tool choice

The BTV nutrunner is the cordless angle tool choice for quality critical applications in cramped spaces. The robust industrial design of the BTV nutrunner means durable and reliable operation with a service life that matches any other power tool. Yet it is lightweight and handy, giving the best operator comfort for tightening operations from 2 to 28 Nm. Torque accuracy has electronic precision thanks to the ACD (Acoustic Clutch Detection) control.

Tensor STB nutrunners – fast, light, transducerized battery tools

Ergonomically designed Tensor STB pistol-grip (up to 12 Nm) and angle nutrunners (up to 100 Nm) are ideal for safety critical applications in cramped areas. No other battery powered tool can match Tensor STB's unique fastening performance and advanced process control.

Atlas Copco Industrial Radio Communication (IRC) enables the Tensor STB to be partnered with a Power Focus controller for accurate torque monitoring and full joint traceability. At a typical workstation, one Tensor STB tool can be used for several applications within the same torque range.

A new member of the STB family is the STB Stand Alone, this tool is a standard STB but you will not need a controller (apart from when you set it up for the first time). Since you do not have a controller the STB will not report any values to the controller.



Powerful, durable and highly operator friendly

For quality critical applications where flexibility is essential, the BCP screwdriver and the BTV nutrunner are the ideal tool choices. Powerful and durable with superior ergonomics and operator feedback they offer higher productivity in assembly operations, independent of the industry.

Freedom – truly flexible assembly

- No product damage from cables or hoses
- No trip hazards from trailing cables
- No cable or hose management
- Speed setting functionality for the BCP
- Reversible battery pack

Power – high performance and durability

- Robust and industrial tool design
- Li-Ion battery technology for BCP: high power-to-weight.

Ergonomics – a pleasure to work with

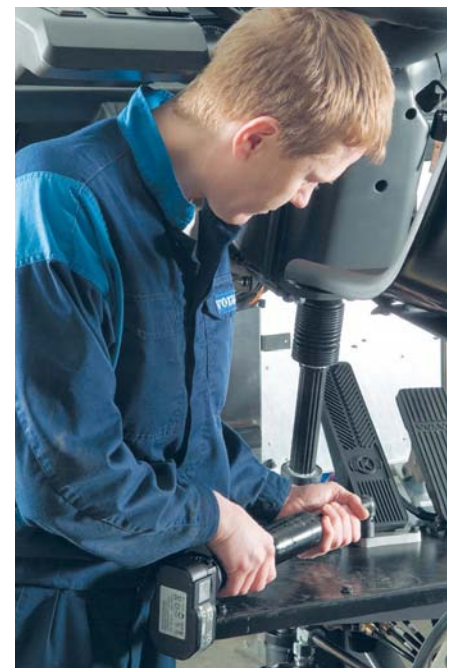
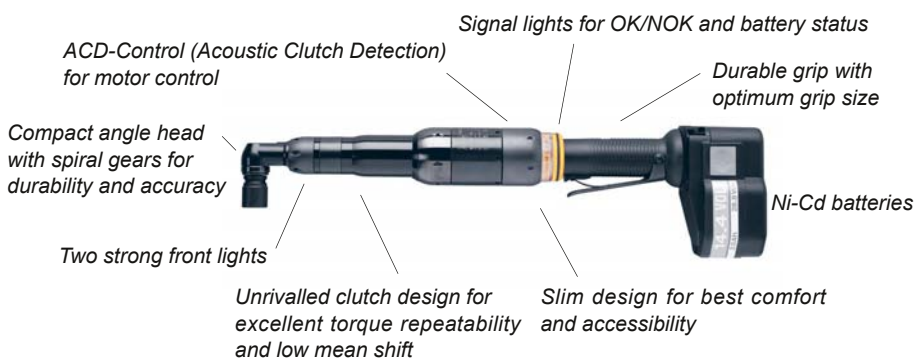
- Reduced operator fatigue and work related health problems
- Light, compact and well-balanced design
- Operator feedback



BCP Tool key features



BTV Tool key features



BCP screwdrivers offer true cordless freedom and superior ergonomics for the operator, thus contributing to outstanding performance.

- Ergonomic, lightweight pistol-grip design.
- 7 brushless models offering variable speed with a speed setting unit.
- Torque range: 0.8 – 12 Nm.
- Low speed models available.
- Choice of two 18 V Li-Ion batteries: 1.3 Ah Flat Pack or 2.6 Ah Big Pack.



BCP

Model	Square drive in	Torque		Speed r/min	Weight (excl. battery)		Length mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb			
BCP BL2-I06	1/4	0.8-2.5	0.6-1.8	500 - 1550	0.86	1.89	200	188	8431 1273 00
BCP BL6-I06	1/4	2.0-6.0	1.5-4.4	300 - 1000	0.86	1.89	200	188	8431 1273 10
BCP BL8-I06	1/4	3.0-8.0	2.2-5.9	300 - 800	0.86	1.89	200	188	8431 1273 20
BCP BL12-I06	1/4	5.0-12.0	3.7-8.8	250 - 600	0.86	1.89	200	188	8431 1273 30
BCP BL-2L-I06	1/4	0.8-2.5	0.6-1.8	150 - 440	0.86	1.89	200	188	8431 1273 50
BCP BL-6L-I06	1/4	1.5-6.0	1.1-4.4	150 - 440	0.86	1.89	200	188	8431 1273 60
BCP BL-12L-I06	1/4	3.0-12.0	2.2-8.8	150 - 440	0.86	1.89	200	188	8431 1273 40

-L stands for low speed models.

NOTE: The tools are set at maximum speed at delivery.

Optional Accessories

Batteries

Model	Current V	Electric charge Ah	Weight		Charge time min	Ordering No.
			kg	lb		
Li-Ion flat pack	18	1.3	0.37	0.81	35	4211 5426 82
Li-Ion big pack	18	2.6	0.63	1.39	70	4211 5426 83

Chargers

Model	V / Hz	Input/Output V / A	Weight		Ordering No.
			kg	lb	
EU-contact	230V / 50Hz	18V / 1.8A	0.61	1.34	4211 5428 80
UK-contact	230V / 50Hz	18V / 1.8A	0.61	1.34	4211 5428 81
BR-contact	230V / 60Hz	18V / 1.8A	0.61	1.34	4211 5428 83
US-contact	115V / 60Hz	18V / 1.8A	0.61	1.34	4211 5428 84

Cover protections

Model	Ordering No.
Battery cover protection, Flat pack	4211 5601 00
Battery cover protection, Big pack	4211 5602 00
Tool cover protection	4211 5415 00

Colour rings

Model	Ordering No.
Red	4211 5461 02
Orange	4211 5461 03
Green	4211 5461 04
Blue	4211 5461 05
White	4211 5461 06
Purple	4211 5461 07
Grey	4211 5461 08

Miscellaneous

Model	Ordering No.
Speed setting unit	4211 5462 80
Support handle	4211 5421 80
Suspension bail	4211 5600 00
Tool holder	4220 4335 80

Battery
Flat pack.Battery
Big packBattery charger
18 V.Battery cover
Flat packBattery cover
Big pack

Colour rings



Support handle



Suspension bail



Speed setting unit



Tool holder



Tool cover

BTV nutrunners are durable and reliable and offer flexible assembly. A lightweight and handy tool for maximum operator comfort.

- Robust yet ergonomic angle tool.
- Torque range 2-28 Nm.
- Choice of four Ni-Cd batteries from 9.6 to 14.4 V.
- Theft protection (PROT) versions available.



BTV28

Model	Screw size mm	Recommended torque range		Free speed			Weight excl. batttery		Tool only Ordering No.	PROT version tool only Ordering No.
				9.6 V r/min	12 V r/min	14.4 V r/min	kg	lb		
BTV7i-6	M3-M5	2 - 7	18 - 62	350	450	—	1.4	3.0	8431 0261 40	8431 0261 52
BTV7i-42	M3-M5	2 - 7	18 - 62	350	450	—	1.4	3.0	8431 0261 44	8431 0261 53
BTV7i-Q	M3-M5	2 - 7	18 - 62	350	450	—	1.4	3.0	8431 0261 49	8431 0261 54
BTV11i-6	M4-M6	4 - 11	36 - 97	300	380	—	1.4	3.0	8431 0261 55	8431 0261 59
BTV11i-42	M4-M6	4 - 11	36 - 97	300	380	—	1.4	3.0	8431 0261 56	8431 0261 60
BTV11i-Q	M4-M6	4 - 11	36 - 97	300	380	—	1.4	3.0	8431 0261 57	8431 0261 61
BTV11i-10	M4-M6	4 - 11	36 - 97	300	380	—	1.4	3.0	8431 0261 58	8431 0261 64
BTV15i-6	M6	8 - 15	70 - 132	—	340	410	1.7	3.7	8431 0261 65	8431 0261 69
BTV15i-42	M6	8 - 15	70 - 132	—	340	410	1.7	3.7	8431 0261 72	8431 0261 76
BTV15i-Q	M6	8 - 15	70 - 132	—	340	410	1.7	3.7	8431 0261 73	8431 0261 77
BTV15i-10	M6	8 - 15	70 - 132	—	340	410	1.7	3.7	8431 0261 68	8431 0261 78
BTV28i-42	M8	15 - 28	132 - 248	—	210	260	1.8	4.0	8431 0261 79	8431 0262 10
BTV28i-10	M8	15 - 28	132 - 248	—	210	260	1.8	4.0	8431 0261 80	8431 0262 11
BTV28i-B10	M8	15 - 28	132 - 248	—	210	260	1.8	4.0	8431 0261 83	8431 0262 12
BTV28i-Q	M8	15 - 28	132 - 248	—	210	260	1.8	4.0	8431 0261 86	—
BTV28i-FS10	M8	15 - 28	132 - 248	—	210	260	1.8	4.0	8431 0261 89	—
BTV28i-FS13	M8	15 - 28	132 - 248	—	210	260	1.8	4.0	8431 0261 92	—

All pistol grip models have 1/4" female hexagon drive for bits with quick change chuck.

Optional Accessories

Batteries

Model	Voltage	Capacity	Weight gram	Ordering No.
BTV 7/11	9.6 V	2.0 Ah	570	4210 3680 02
BTV 15/28	14.4 V	2.0 Ah	800	4210 3680 06
All tools	12 V Flat pack	1.4 Ah	500	4210 3680 03
All tools	12 V	2.0 Ah	730	4210 3680 05



12 V Flat pack / 1.4 Ah



12 V / 2.0 Ah

Pulse charger

Model	Voltage	Capacity	Ordering No.
15/23 min	230/240 V	(1.4/2.0 Ah)	4210 3676 10
25/36 min	110/120 V	(1.4/2.0 Ah)	4210 3676 20
1/1.3 hour	230/240 V	(1.4/2.0 Ah)	4210 3676 00



14.4 V / 2.0 Ah



9.6 V / 2.0 Ah

Mounting bracket for multiple charger

Model	Voltage	Ordering No.
Euro-contact	230/240 V	4210 3677 00
US-contact	110/120 V	4210 3677 01

NOTE: Chargers are bought separately.



Pulse charger

Decoder kit

Model	Voltage	Ordering No.
Decoder kit	230/240 V	4210 3679 90
Decoder kit	110/120 V	4210 3679 91



Decoder

Suspension yoke

Model	Ordering No.
BTV (swivelling)	4211 5080 80

Cordless freedom with full process control

Tensor STB battery powered nutrunners offer the same benefits in terms of process control as Tensor ST nutrunners, yet with the freedom of cordless tools. The tools have the capability to communicate with a Power Focus controller, via IRC, for full process control.

Flexibility – no more cables

- No more cables and cable management
- No more damaged cables
- No product damage from cables
- No trip hazards from trailing cables

Productivity – save time

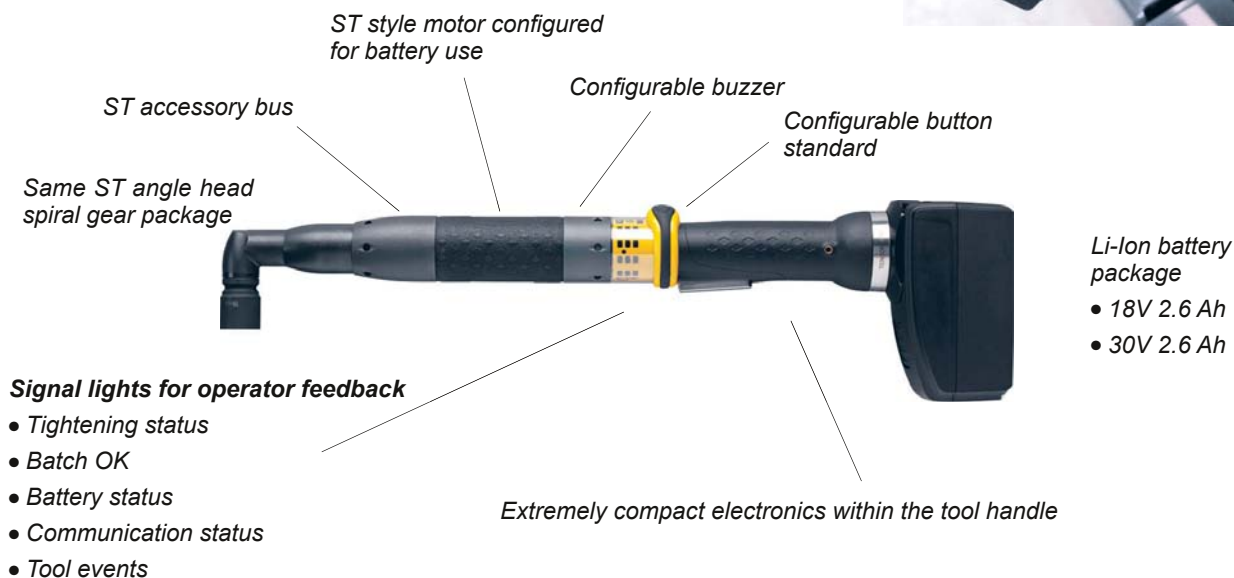
- Increased operator efficiency
- Easy to set up and replace
- Eliminate need for multiple operations
- Up to 100% faster than competing products

Ergonomics

- Reduced operator fatigue and work related health problems
- Unhindered access
- Low weight – up to 20 % lighter than competing products
- Compact size



STB Tool key features



Tensor STB

Nutrunners – Transducerized Type

Tensor STB offers genuine ergonomic and flexibility advantages for the operator which, in turn, raises operator efficiency.

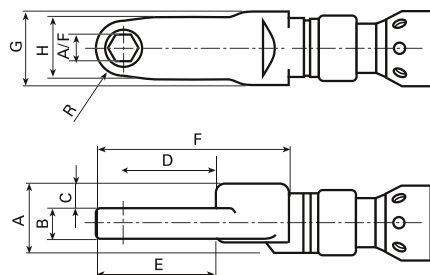
- Low tool weight and high spindle speed reduce cycle time.
- Freedom of movement in all working positions.
- Lightweight components help reduce operator fatigue.
- Torque range ETV: 2-100 Nm.
- Torque range ETP: 2-12 Nm.
- STB is also available with ETO and ETC models.



Model	Square drive in	Torque		Battery	Speed r/min	Weight		Weight incl. battery		Length mm	CS distance	Height mm	Ordering No.
		Nm	ft lb			kg	lb	kg	lb				
Angle													
ETV STB32-10-10	3/8	2-10	2-7.5	Li-Io 18 V	943	1.3	2.9	1.9	4.2	406	11	41	8433 3010 20
ETV STB32-10-10-BCR	3/8	2-10	2-7.5	Li-Io 18 V	943	1.5	3.2	2.05	4.5	406	11	41	8433 3010 25
ETV STB32-10-B10	3/8	2-10	2-7.5	Li-Io 18 V	943	1.3	2.9	1.9	4.2	406	11	41	8433 3010 30
ETV STB32-10-B10-BCR	3/8	2-10	2-7.5	Li-Io 18 V	943	1.5	3.2	2.05	4.5	406	11	41	8433 3010 35
ETV STB32-15-10	3/8	4-15	3-11	Li-Io 18 V	720	1.3	2.9	1.9	4.2	406	11	41	8433 3010 82
ETV STB32-15-10-BCR	3/8	4-15	3-11	Li-Io 18 V	720	1.5	3.2	2.05	4.5	406	11	41	8433 3010 89
ETV STB32-15-B10	3/8	4-15	3-11	Li-Io 18 V	720	1.3	2.9	1.9	4.2	406	11	41	8433 3010 96
ETV STB32-15-B10-BCR	3/8	4-15	3-11	Li-Io 18 V	720	1.5	3.2	2.05	4.5	406	11	41	8433 3010 99
ETV STB32-20-10	3/8	5-20	4-14.5	Li-Io 18 V	480	1.4	3.08	1.99	4.41	440.3	14	41.8	8433 3011 05
ETV STB32-20-10-BCR	3/8	5-20	4-14.5	Li-Io 18 V	480	1.5	3.41	2.14	4.74	440.3	14	41.8	8433 3011 10
ETV STB32-20-B10	3/8	5-20	4-14.5	Li-Io 18 V	480	1.4	3.08	1.99	4.41	440.3	14	41.8	8433 3011 15
ETV STB32-20-B10-BCR	3/8	5-20	4-14.5	Li-Io 18 V	480	1.5	3.41	2.14	4.74	440.3	14	41.8	8433 3011 20
ETV STB32-30-10	3/8	6-30	4.5-22	Li-Io 18 V	380	1.5	3.3	2.1	4.6	444	14	41.8	8433 3011 66
ETV STB32-30-10-BCR	3/8	6-30	4.5-22	Li-Io 18 V	380	1.6	3.6	2.2	4.9	444	14	41.8	8433 3011 69
ETV STB32-30-B10	3/8	6-30	4.5-22	Li-Io 18 V	380	1.5	3.3	2.1	4.6	444	14	41.8	8433 3011 76
ETV STB32-30-B10-BCR	3/8	6-30	4.5-22	Li-Io 18 V	380	1.6	3.6	2.2	4.9	444	14	41.8	8433 3011 79
ETV STB62-30-10	3/8	6-30	4.5-22	Li-Io 30 V	610	1.75	3.85	2.65	5.8	466	14	41.8	8433 3030 21
ETV STB62-30-10-BCR	3/8	6-30	4.5-22	Li-Io 30 V	610	1.9	4.2	2.8	6.2	466	14	41.8	8433 3030 28
ETV STB62-30-B10	3/8	6-30	4.5-22	Li-Io 30 V	610	1.75	3.85	2.65	5.8	466	14	41.8	8433 3030 36
ETV STB62-30-B10-BCR	3/8	6-30	4.5-22	Li-Io 30 V	610	1.9	4.2	2.8	6.2	466	14	41.8	8433 3030 38
ETV STB62-40-10	3/8	12-40	9-29	Li-Io 30 V	465	1.7	3.8	2.55	5.7	479	18	47	8433 3031 22
ETV STB62-40-10-BCR	3/8	12-40	9-29	Li-Io 30 V	465	1.9	4.1	2.75	6.1	479	18	47	8433 3031 28
ETV STB62-40-B10	3/8	12-40	9-29	Li-Io 30 V	465	1.7	3.8	2.55	5.7	479	18	47	8433 3031 39
ETV STB62-40-B10-BCR	3/8	12-40	9-29	Li-Io 30 V	465	1.9	4.1	2.75	6.1	479	18	47	8433 3031 48
ETV STB62-50-10	3/8	15-50	10-37	Li-Io 30 V	375	1.7	3.8	2.55	5.7	479	18	47	8433 3032 67
ETV STB62-50-10-BCR	3/8	15-50	10-37	Li-Io 30 V	375	1.9	4.1	2.75	6.1	479	18	47	8433 3032 68
ETV STB62-50-B10	3/8	15-50	10-37	Li-Io 30 V	375	1.7	3.8	2.55	5.7	479	18	47	8433 3032 75
ETV STB62-50-B10-BCR	3/8	15-50	10-37	Li-Io 30 V	375	1.9	4.1	2.75	6.1	479	18	47	8433 3032 78
ETV STB62-70-13	1/2	15-70	10-50.7	Li-Io 30 V	265	2.3	5.1	3.2	7.1	492	20	58	8433 3033 05
ETV STB62-70-13-BCR	1/2	15-70	10-50.7	Li-Io 30 V	265	2.5	5.4	3.35	7.4	492	20	58	8433 3033 10
ETV STB62-70-B13	1/2	15-70	10-50.7	Li-Io 30 V	265	2.3	5.1	3.2	7.1	492	20	58	8433 3033 15
ETV STB62-70-B13-BCR	1/2	15-70	10-50.7	Li-Io 30 V	265	2.5	5.4	3.35	7.4	492	20	58	8433 3033 20
ETV STB62-100-13	1/2	20-100	15-72.5	Li-Io 30 V	170	2.9	6.4	3.8	8.4	528.5	22.5	60.5	8433 3034 05
ETV STB62-100-13-BCR	1/2	20-100	15-72.5	Li-Io 30 V	170	3.1	6.73	3.95	8.71	528.5	22.5	60.5	8433 3034 10
ETV STB62-100-B13	1/2	20-100	15-72.5	Li-Io 30 V	170	2.9	6.4	3.8	8.4	528.5	22.5	60.5	8433 3034 15
ETV STB62-100-B13-BCR	1/2	20-100	15-72.5	Li-Io 30 V	170	3.1	6.73	3.95	8.71	528.5	22.5	60.5	8433 3034 20
Pistol grip													
ETP STB32-06-10	3/8	2-6	2-4	Li-Io 18 V	1500	0.9	2	1.5	3.3	218	-	186	8433 3110 25
ETP STB32-06-10-BCR	3/8	2-6	2-4	Li-Io 18 V	1500	1	2.3	1.6	3.5	218	-	186	8433 3110 28
ETP STB32-06-i06	1/4	2-6	2-4	Li-Io 18 V	1500	0.9	2	1.5	3.3	218	-	186	8433 3110 37
ETP STB32-06-i06-BCR	1/4	2-6	2-4	Li-Io 18 V	1500	1	2.3	1.6	3.5	218	-	186	8433 3110 38
ETP STB32-12-10	3/8	4-12	3-9	Li-Io 18 V	750	0.9	2	1.5	3.3	218	-	186	8433 3111 35
ETP STB32-12-10-BCR	3/8	4-12	3-9	Li-Io 18 V	750	1	2.3	1.6	3.5	218	-	186	8433 3111 38
ETP STB32-12-i06	1/4	4-12	3-9	Li-Io 18 V	750	0.9	2	1.5	3.3	218	-	186	8433 3111 48
ETP STB32-12-i06-BCR	1/4	4-12	3-9	Li-Io 18 V	750	1	2.3	1.6	3.5	218	-	186	8433 3111 58

In-Line crowfoot tools

Dimensions

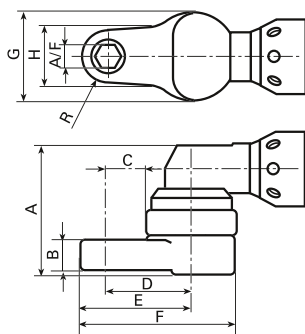


ETC STB

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
ETC STB62																	
ETC STB62-18-10-LI3	4-18	3-13	470	2.4	5.2	470	10	34	15	13	47	59	82	35	22	10	8433 2316 11
ETC STB62-23-12-LI3	9-28	6-20	226	2.4	5.2	470	12	34	15	13	59	71	94	35	30	13	8433 2316 17
ETC STB62-28-12-LI3	9-28	6-20	226	2.4	5.2	470	12	34	15	13	59	71	94	35	30	13	8433 2316 14

Offset crowfoot tools

Dimensions

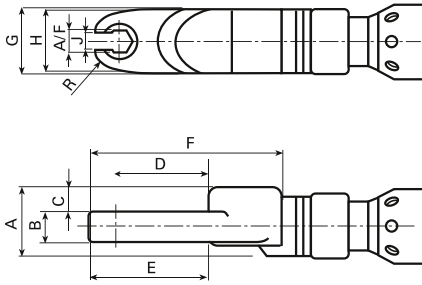


ETC STB

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
ETC STB62																	
ETC STB62-18-10-LO3	5-18	4-13	610	3.85	8.5	495	10	60.3	15	17	33	43	58	37	22	10	8433 2315 09
ETC STB62-20-13-LO5	5-20	4-15	610	2.25	5	568	13	57	10	72	94	108	129	44	31	14	8433 2315 15
ETC STB62-28-12-LO5	9-28	7-20	465	2.27	5	558	12	69.5	15	62	84	97	118	44	30	13	8433 2315 12
ETC STB62-40-14-LO3	12-40	9-29	375	2.2	4.9	522	14	69.5	18	25	47	61	82	44	31	14	8433 2315 18
ETC STB62-40-3/8-LO3	12-40	9-29	375	2.4	5.2	512	10	90.3	36	18	40	51	71	44	29	10	8433 2315 24
ETC STB62-50-16-LO3	11-50	8-39	265	2.9	6.4	538	16	77.8	24	27	51	66	89	48	30	15	8433 2315 27

In-Line tube nut tools

Dimensions

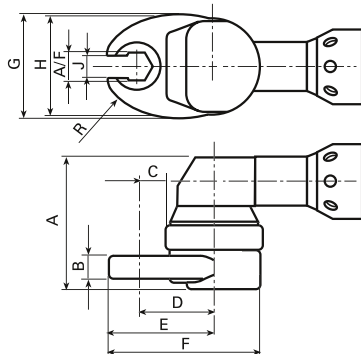


ETO STB

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	R mm	Ordering No.
	Nm	ft lb		kg	lb													
ETO STB62																		
ETO STB62-8-8-LI3	3-8	2-6	945	2.3	5.1	446	8	32	11	12	31	22	60	34	-	6	8	8433 2316 53
ETO STB62-12-8-LI3	4-12	3-13	723	2.3	5.1	453	8	32	10	13	37	25	66	34	-	7	11	8433 2316 56
ETO STB62-15-10-LI3	6-15	5-11	589	2.3	5.1	454	10	32	12	11	38	26	68	34	-	8	14	8433 2316 62

Offset tube nut tools

Dimensions



ETO STB

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	R mm	Ordering No.
	Nm	ft lb		kg	lb													
ETO STB32																		
ETO STB32-12-10-LO5	4-12	3-9	480	1.8	3.9	495	10	62	10	43	70	71	86	37	31	7	11	8433 2315 66
ETO STB32-15-10-LO3	4-15	3-11	480	1.7	3.7	460	10	63	12	7	25	36	51	37	31	7	11	8433 2315 63
ETO STB62																		
ETO STB62-18-12-LO5	4-18	3-13	610	2.3	5	533	12	65	14	47	70	80	102	44	41	8	14	8433 2315 75
ETO STB62-20-12-LO3	5-20	3-15	610	2.2	4.7	492	12	64	14	7	29	40	61	44	41	8	14	8433 2315 72
ETO STB62-30-13-LO5	10-30	7-22	375	2.4	5.2	550	13	72.5	18	53	75	89	110	44	-	10	25	8433 2315 81
ETO STB62-30-13-LO3	9-30	7-22	465	2.2	4.7	513	13	65	11	13	37	52	74	50	-	10	31	8433 2315 84
ETO STB62-40-17-LO5	10-40	7-29	265	3.2	7.1	578	17	80	18	29	91	107	129	50	-	12	31	8433 2315 87
ETO STB62-50-17-LO3	12-50	9-37	265	3.1	6.9	537	17	73.8	12	18	49	69	97	59	-	16	32	8433 2315 90
ETO STB62-50-21-LO3	12-50	9-37	265	3.1	6.9	537	21	73.8	12	18	49	69	97	59	-	16	32	8433 2315 93

Optional Accessories

Chargers

Chargers	Voltage	Region	Ordering No.
18 V	230V/50Hz	EU	4211 5428 80
18 V	230V/50Hz	UK	4211 5428 81
18 V	115V/60Hz	US	4211 5428 84
18 V	230V/60V	BRA	4211 5428 83
30 V	230V/50Hz	EU	4211 5424 80
30 V	230V/50Hz	UK	4211 5424 81
30 V	120V/60Hz	US	4211 5424 84
30 V	230V/60V	BRA	4211 5424 83

Battery – Li-Io

Voltage	Capacity	Weight kg	Ordering No.
18 V	2.6 Ah	0.60	4211 5426 83
30 V	2.6 Ah	0.85	4211 5426 86

Controller software

Controller software	Ordering No.
RBU-Bronze	8433 0010 10
RBU-Silver	8433 0015 20
RBU-Gold	8433 0020 20

Controller hardware

Model	Ordering No.
Power Focus 4000	
PF 4000-G-HW	8433 6100 00
PF 4000-C-HW	8433 6100 05
PF 4000-G-DN-HW	8433 6140 00
PF 4000-C-DN-HW	8433 6140 05
PF 4000-C-FLN-HW	8433 6141 05
PF 4000-G-PB-HW	8433 6142 00
PF 4000-C-PB-HW	8433 6142 05
PF 4000-G-IB-HW	8433 6145 00
PF 4000-C-IB-HW	8433 6145 05
PF 4000-G-MB-HW	8433 6147 00
PF 4000-C-MB-HW	8433 6147 05
PF 4000-G-EIP-HW	8433 6149 00
PF 4000-C-EIP-HW	8433 6149 05
IRC FOCUS-B-G-HW*	8433 6500 00
IRC FOCUS-B-C-HW*	8433 6500 02

*) IRC Focus Communication kit is not needed. The IRC Focus is specially designed for the Tensor STB. The main benefit, except for all PF4000 advantages, is that the external access point is built into the IRC Focus. The IRC Focus cannot be used together with Atlas Copco cable tools.

ToolsTalk PF

No. of users	Ordering No.
Basic version W7	
1-user license	8092 1183 01
5-user license	8092 1183 05
10-user license	8092 1183 10
Plant license	8092 1183 99
Basic version W10	
1-user license	8092 1190 01
5-user license	8092 1190 05
10-user license	8092 1190 10
Plant license	8092 1190 99
Upgrade from W7 to W10	
1-user license	8092 1190 31
5-user license	8092 1190 35
10-user license	8092 1190 40
Plant license	8092 1190 49
Communication kit, (minimum PF SW 7.5) (Includes: Serial port adapter, I/O cable and 3 m serial cable.)	8433 3900 20

	Ordering No.
Operator panel advanced	8433 0565 00
Stacklight ESL04	8433 0570 13
Parameter Set Selector	8433 0616 05
Barcode Scanner	8433 0615 10
I/O Device module	8433 0617 12
Adjustable headlights	4220 3292 94
Level trigger 135°	4220 3311 90
Level trigger on top	4220 3186 90
Front button	4220 3184 90
Selector 4	8433 0610 04
Scanner protection	4220 2762 10
Protective cover	4220 2744 04
ETP Tool holder	4220 3584 80
Battery protection (18V)	4211 5602 00
Battery protection (30V)	4211 5444 00



Stacklight ESL-04



Operator panel advanced



Barcode scanner



Parameter set selector



Selector 4



I/O device module



Scanner protection

Battery cover
18 V, 2.6 Ah.Battery cover
30 V, 2.6 Ah.

Protective cover Tensor ST

Adjustable
headlightsFront trigger
button

Lever trigger 135 deg.



Lever trigger top



Tool holder

Electric Assembly Tools and Systems

Contents	Page
Introduction.....	86
Product safety.....	87
Screwdrivers	88
EBL.....	89
MicroTorque.....	91
Tensor STR.....	94
Tensor DL.....	95
Tensor SL.....	96
Nutrunners	100
Tensor DS.....	102
Tensor S.....	108
Tensor ST.....	111
Tensor STR.....	119
Controllers and software	127
Tensor DS/DL.....	129
Power Focus.....	130
Programming software.....	132
Quality Integrated Fastening	133
Station hardware.....	135
Station software.....	137

Highest productivity with lowest life-cycle cost

Atlas Copco supplies a comprehensive range of high productivity assembly tools with intelligent controllers and a sharp focus on ergonomics. Our many product lines were developed to meet all your tightening needs and give you lowest life-cycle cost. Products range from low torque MicroTorque tools providing 0.5 Ncm of torque, to high torque Tensor ST tools, offering up to 4,000 Nm.

Power Focus controller

The Power Focus is the market-leading controller for handheld tools and has the capability to run fixtured tools. Power Focus is a modular range of controllers with full flexibility and connectivity to fit your production infrastructure. The Power Focus 4000 controls tools in the Tensor S, ST, STB, DS, SL and ETX family. The Power Focus 4002 controls Tensor SL tools.

DS/DL controller

The DS/DL system offers a quick and easy route to improved process monitoring in your assembly operations. With a range of alternative drives, you can choose the functionality best suited for your operations. The DS drive runs Tensor DS tools and exists as Box, Basic or Advanced version. The DL drive runs Tensor DL tools and is available as Basic or Advanced models.

EBL Screwdriver

Low voltage, brushless screwdriver for demanding applications, with shut-off clutch for high fastening precision, time after time.

MicroTorque Ultra low torque screwdriver

Ultra low torque intelligent screwdrivers that ensure joint integrity in high volume consumer applications and high value critical products.

Tensor Tools

The Tensor tool range covers all assembly requirements for safety critical and quality critical applications.

Tensor SL: Safety-critical low torque tools for small screw applications. It offers compact screwdriver ergonomics with traceability and error proofing capability.

Tensor S: Tensor S is the well proven range for safety critical applications where traceability and error proofing capability are required.

Tensor ST: The second generation of Tensor tools was developed with the focus on reducing tool weight and increasing productivity. Tensor ST has an internal bus connection for intelligent accessories such as a barcode reader and P-selector switch.

Tensor STR: The latest generation of Tensor tools where ergonomics and productivity are taken to a new level.

Tensor DS: Quality critical applications where demands on accuracy and ergonomics are high.

Tensor DL: Quality critical applications with high demands on quality assurance.

Tensor STB: The battery version of Tensor ST for safety critical applications.



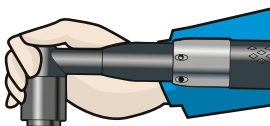
Safety

Atlas Copco wants everyone to operate our tools safely. Always read and follow all product operating and safety instructions, and follow all local safety regulations. We have produced a range of additional accessories for use with Atlas Copco productive tools. They are intended to reduce the risk of injury during certain assembly processes. Please ask your local sales representative about the important, user-friendly accessories we offer in the catalogue.

HOW TO MAKE TOOL OPERATION SAFER

1 Entanglement hazard

- Hands and other objects (long hair, necklaces etc.) can get entangled with the rotating drive, causing severed or broken fingers.
- Do not use gloves.
- Never hold the drive, socket or extension with your hands.



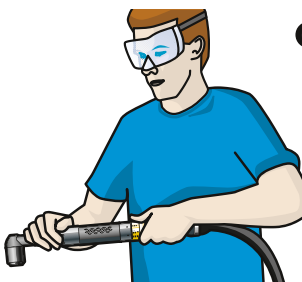
5 Reaction bar

- When a reaction bar is used, keep hands away from the reaction bar while tightening a joint, otherwise hands may get squeezed.



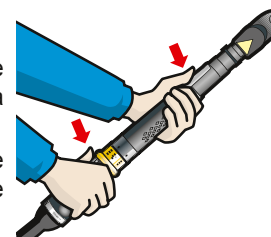
2 Hold the tool correctly

- Keep hands and other objects (long hair, necklace, etc.) away from the rotating drive, socket or extension.
- Hold the tool correctly with one hand on the handle of the tool and the other hand on the top of the angle head.



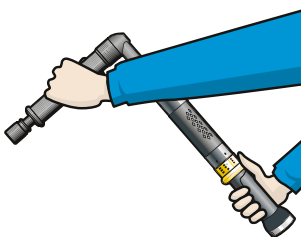
6 Open end tools

- Never put your finger into the open end of a tool, even if a dual action trigger is used.
- To avoid accidents, to activate the tool, both triggers must be pressed within 500 ms.



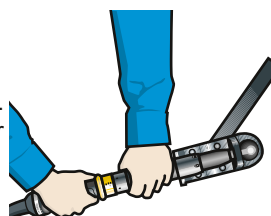
3 Supported extensions

- If you use an extension, never hold the extension with your hand while it is rotating. If you need to guide the extension, in order to locate the socket quickly and accurately, use an accessory to reduce the risk of entanglement.
- Other advantages are:
- Longer life for angle gear.
 - More uniform tightening results.



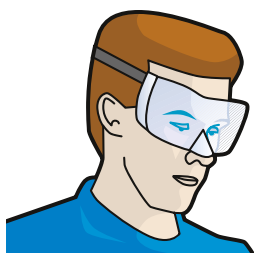
7 Angle nutrunners with reaction bar

- Use reaction bar at high torque. For soft joints, a reaction bar should be used at >60 Nm.



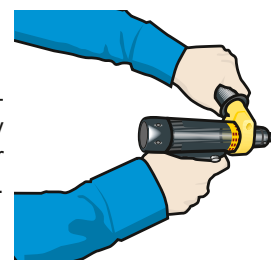
4 Use goggles

- Always use goggles to protect your eyes from objects that might accidentally fly into your face.



8 Screwdrivers

- Consider using a support handle or support arms, particularly for straight versions and for torques of 6 Nm and upwards.



If you're looking for quality, you've found it

Atlas Copco supplies a complete range of advanced electric screwdrivers to match your needs. If it's cutting-edge ergonomics you want, true reliability, or long-life, low maintenance motors, we have them. Models range from EBL and MicroTorque low-torque tools up to Tensor tools with torques of up to 20 Nm. They all have one thing in common – quality.

EBL screwdrivers

Atlas Copco's EBL screwdriver sets new standards for electric low-torque screwdrivers. The brushless motor offers prolonged tool working lifetime and the patented ergonomics provide a high level of operator comfort.

MicroTorque

Whether you are manufacturing high-value consumer goods or sensitive electronics, with torques starting at 0.5 Ncm, MicroTorque electric screwdrivers are designed to perform consistently and precisely, time after time.

Tensor STR tools

ESD certified, Tensor STR angle tools are fast, compact and easy to operate. They feature an easy-to-configure function button and front LED's for clear operator feedback.

With a push-to-start mechanism and an integrated front guide light, STR straight tools are suitable for both hand-held and fixtured applications

Tensor DL

Optimized for small screw assembly, Tensor DL non-transducerized screwdrivers are available in straight, right angle and pistol grip versions. There are also Tensor DL straight screwdrivers for fixtured applications. All models have good ergonomic designs and brushless motors offering low maintenance costs.

Tensor SL

Tensor SL screwdrivers are also available in straight, right angle and pistol grip versions, with a straight model for fixtured applications that is very light and compact. All the tools offer high power-to-weight ratios, good ergonomic designs and clear operator feedback via LED's lights and buzzers (depending on the model).



ESD certified screwdrivers

Atlas Copco offers ESD certified tools in the standard range of screwdriver models most frequently used in the electronics industries. ESD certification means a guarantee against damage of electronic components by an uncontrolled electrostatic discharge (ESD) from the tools.

Conformity to the requirements of IEC 61340-5-1 standard proposal is approved by SP, the Swedish National Testing and Research Institute. In practice it certifies that at no point will the material of the equipment hold an electrostatic potential above 100 V for more than 2 seconds.



Designed for low-torque assembly operations

Featuring superior ergonomics and the latest technology, Atlas Copco's EBL screwdriver is setting new standards for electric low-torque screwdrivers.

- Brushless motor provides long working life, extended service intervals, low maintenance requirements.
- Good ergonomics mean maximum operator comfort: comfortable grip, low tool weight and lower noise level due to the brushless motor.
- Reporting tool models have a batch count feature that ensures that all screws have been tightened.
- Soft-stop feature on certain models prevents damage to sensitive electronics and plastic assembly components.



Model	Screw capacity	Torque range Soft joint		Free speed r/min	Weight		Length mm	Bit drive	Ordering No.
		Nm	in lb		kg	lb			
Standard models									
EBL03	M1-2	0.05 - 0.3	0.4 - 2.7	870	0.3	0.7	185	Wing type 4 mm	8431 0170 02
EBL03-Q	M1-2	0.05 - 0.3	0.4 - 2.7	870	0.3	0.7	185	1/4" Hex	8431 0170 04
EBL12	M2-3	0.2 - 1.2	1.8 - 10.6	910	0.5	1.1	215	1/4" Hex	8431 0170 11
EBL12-1500	M2-3	0.2 - 1.2	1.8 - 10.6	1500	0.5	1.1	215	1/4" Hex	8431 0170 41
EBL20	M2-3	0.5 - 2.0	4.5 - 18	750	0.5	1.1	215	1/4" Hex	8431 0170 16
EBL21-1500	M2-3	0.5 - 2.1	4.5 - 19	1500	0.8	1.8	235	1/4" Hex	8431 0170 43
EBL25	M2.5-4	1.0 - 2.5	8.8 - 22.1	930	0.8	1.8	235	1/4" Hex	8431 0170 23
EBL25-1500 ^a	M2.5-4	1.0 - 2.5	8.8 - 22.1	1500	0.8	1.8	235	1/4" Hex	8431 0170 25
EBL35	M2.5-4	1.0 - 3.5	8.8 - 31	700	0.8	1.8	235	1/4" Hex	8431 0170 33
EBL45 ^a	M2.5-5	1.0 - 4.5	8.8 - 40	700	0.8	1.8	235	1/4" Hex	8431 0170 40
Soft-stop models									
EBL03-SS	M1-2	0.05 - 0.3	0.4 - 2.7	870	0.3	0.7	185	Wing type 4 mm	8431 0170 07
EBL12-SS	M2-3	0.2 - 1.2	1.8 - 10.6	910	0.5	1.1	215	1/4" Hex	8431 0170 15
EBL20-SS	M2-3	0.5 - 2.0	4.5 - 18	750	0.5	1.1	215	1/4" Hex	8431 0170 20
EBL25-SS	M2.5-4	1.0 - 2.5	8.8 - 22.1	930	0.8	1.8	235	1/4" Hex	8431 0170 28
EBL35-SS	M2.5-4	1.0 - 3.5	8.8 - 31	700	0.8	1.8	235	1/4" Hex	8431 0170 38
Reporting									
EBL03-RE	M1-2	0.05 - 0.3	0.4 - 2.7	870	0.3	0.7	185	Wing type 4 mm	8431 0170 55
EBL03-Q-RE	M1-2	0.05 - 0.3	0.4 - 2.7	870	0.3	0.7	185	1/4" Hex	8431 0170 06
EBL12-RE	M2-3	0.2 - 1.2	1.8 - 10.6	910	0.5	1.1	215	1/4" Hex	8431 0170 13
EBL12-1500-RE	M2-3	0.2 - 1.2	1.8 - 10.6	1500	0.5	1.1	215	1/4" Hex	8431 0170 18
EBL20-RE	M2-3	0.5 - 2.0	4.5 - 18	750	0.5	1.1	215	1/4" Hex	8431 0170 19
EBL21-1500-RE	M2-3	0.5 - 2.1	4.5 - 19	1500	0.8	1.8	235	1/4" Hex	8431 0170 47
EBL25-RE	M2.5-4	1.0 - 2.5	8.8 - 22.1	930	0.8	1.8	235	1/4" Hex	8431 0170 26
EBL35-RE	M2.5-4	1.0 - 3.5	8.8 - 31	700	0.8	1.8	235	1/4" Hex	8431 0170 36
Soft-stop Reporting models									
EBL03-SS-RE	M1-2	0.05 - 0.3	0.4 - 2.7	870	0.3	0.7	185	Wing type 4 mm	8431 0170 08
EBL12-SS-RE	M2-3	0.2 - 1.2	1.8 - 10.6	910	0.5	1.1	215	1/4" Hex	8431 0170 17
EBL20-SS-RE	M2-3	0.5 - 2.0	4.5 - 18	750	0.5	1.1	215	1/4" Hex	8431 0170 21
EBL25-SS-RE	M2.5-4	1.0 - 2.5	8.8 - 22.1	930	0.8	1.8	235	1/4" Hex	8431 0170 29
EBL35-SS-RE	M2.5-4	1.0 - 3.5	8.8 - 31	700	0.8	1.8	235	1/4" Hex	8431 0170 39
Soft-start									
EBL12 ST	M2-3	0.2 - 1.2	1.8 - 10.6	910	0.5	1.1	215	1/4" Hex	8431 0170 14
EBL25 ST	M2.5-4	1.0 - 2.5	8.8 - 22.1	930	0.8	1.8	235	1/4" Hex	8431 0170 24
EBL35 ST	M2.5-4	1.0 - 3.5	8.8 - 31	700	0.8	1.8	235	1/4" Hex	8431 0170 37

^a EBL 45 and EBL 25-1500 to be used with EBL Drive Plus.

All tools models, drives and cables are ESD and UL certified.

Tool box include cable for drive connection (standard models with 5 pins cable and reporting models with 6 pins cable)

All the models are push-to-start or lever start configurable.

Optional Accessories

Drives

Model		Ordering No.
EBL Drive	For standard models and soft-stop models	8431 0170 70
EBL RE-Drive	For reporting models and soft-stop + reporting models	8431 0170 75
EBL Drive Plus	For all standard models and soft-stop models	8431 0170 85



EBL Drive

EBL Soft start controller

Model	Ordering No.
EBL ST controller (ESD approved)	8431 0170 80

- EBL ST controller to be used in applications that require slow start speed
- EBL ST controller to be connected between the tool and the driver



EBL RE-Drive



EBL Drive Plus



EBL Soft start controller

Vacuum pick-up accessories

Accessories (not ESD approved)	Ordering No.
Vacuum pump – 220V	4220 0062 00
Vacuum pump – 115V	4220 0062 05
Nozzle blank Ø 8 mm for EBL03	4220 0067 03
Nozzle blank Ø 8 mm for EBL 12, 20, 21, 25, 35	4220 0070 03
Nozzle blank Ø 14 mm for EBL 12, 20, 21, 25, 35	4220 0072 03
Vacuum pick-up adapter for EBL 03	4220 0080 30
Vacuum pick-up adapter for EBL 12, 20	4220 0080 31
Vacuum pick-up adapter for EBL 21, 25, 35	4220 0080 33

Connectors ISO standard

Designation	Ordering No.
Male plug	4220 0095 00
2-way female socket For wall mounting (Not ESD approved)	4220 0096 00

Cables

	Ordering No.
Cable (not ESD approved)	
Spiral cable, 1.3 m (5 pin)	4220 0347 00
Spiral cable, 1.3 m (6 pin)	4220 0349 00
Heavy duty, cable 2.0 m (5 pin)	4216 0132 00
Heavy duty, cable 2.0 m (6 pin)	4216 0133 00
Cable (ESD approved)	
Extension cable ^b 3.0 m (5 pin)	4220 0138 01
Extension cable ^b 3.0 m (6 pin)	4216 0115 00

^b Maximum total length 8 m.



Nozzles for EBL

Pistol grip

Model	Ordering No.
EBL 12, 20	4220 0051 04
EBL 21, 25, 35 (ESD approved)	4220 0051 05



Angle head, EBL

Angle head

Model	Ordering No.
EBL	
Square drive 1/4" (06)	4210 4033 80
Hex bit drive 1/4" (42)	4210 4033 81
Hex quick change 1/4" (Q)	4210 4033 82
Adapter EBL 12, 20 ^a	4210 4609 85
Adapter EBL 21, 25, 35 ^a	4210 4609 80

^a Need to be ordered separately.



EBL



Pistol grip



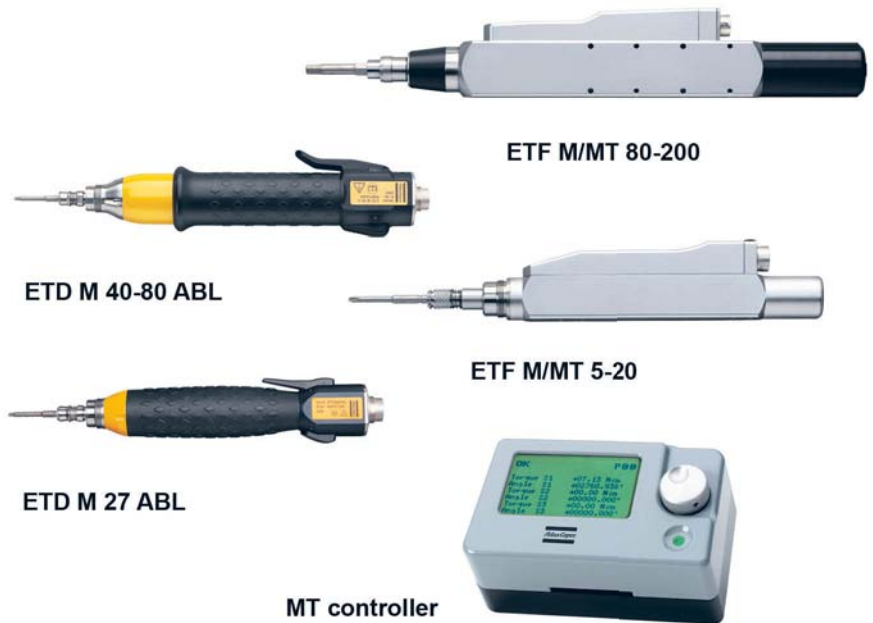
Service Kits

Model	Small parts kit	Brush kit
EBL	4216 0049 90	–

Ultra low-torque applications, starting at 0.5 Ncm, don't need to be demanding. Electric screwdrivers in the MicroTorque range from Atlas Copco are designed to perform consistently and precisely, time after time.

Compact controller

- Tightening strategy with programming in one to eight independent steps.
- 32 different P-sets and 9 jobs.
- Torque, angle and speed control.
- Additional external torque/angle transducer control.
- Configurable display.
- Operator feedback on the process.
- Supports PC/ToolsTalk MT.
- Communication via USB or RS232.
- "Digitork" / transducerized compatible.
- Fixed 12 inputs / 8 output digital signals.



Model	Torque range		Speed range r/min	Length mm	Overall width mm	Weight		Bit drive	Ordering No.
	Ncm	in lb				kg	lb		
Fixtured transducerized									
ETF MT 5	0.5 - 5	0.04 - 0.4	600	184	20	0.4	0.90	HM 4 mm	8432 0800 10
ETF MT 10	1 - 10	0.09 - 0.9	600	184	20	0.4	0.90	HM 4 mm	8432 0800 11
ETF MT 20	2 - 20	0.18 - 1.8	800	184	20	0.4	0.90	HM 4 mm	8432 0800 12
ETF MT 50	5 - 50	0.44 - 4.4	1000	255	30	0.76	1.67	HM 4 mm	8432 0800 13
ETF MT 50 F	5 - 50	0.44 - 4.4	1000	218	30	0.76	1.67	HM 4 mm	8432 0800 20
ETF MT 80	8 - 80	0.71 - 7.1	1200	274	30	1.18	2.60	HM 4 mm	8432 0800 14
ETF MT 100 HM4	10 - 100	0.88 - 8.8	1200	274	30	1.18	2.60	HM 4 mm	8432 0800 21
ETF MT 100	10 - 100	0.88 - 8.8	1000	274	30	1.18	2.60	1/4" HEX	8432 0800 15
ETF MT 200	20 - 200	1.77 - 17.7	800	274	30	1.18	2.60	1/4" HEX	8432 0800 16
ETF MT 500	50 - 500	4.42 - 44.2	500	260	40	1.84	4.05	1/4" HEX	8432 0800 17
Hand-held "Digitork", without push-to-start									
ETD M 03 A	0.5 - 2.5	0.04 - 0.2	1000	132	16	0.1	0.22	Ø 2 mm	8432 0810 05
ETD M 05 A	1.5 - 5	0.13 - 0.4	750	132	16	0.1	0.22	Ø 2 mm	8432 0810 06
ETD M 10 A	3 - 10	0.27 - 0.9	750	132	16	0.1	0.22	Ø 2 mm	8432 0810 08
ETD M 25 AVB	7.5 - 25	0.66 - 2.2	750	174	22	0.25	0.55	HM 4 mm	8432 0810 09
ETD M 27 ABL	7.5 - 27	0.66 - 2.4	800	185	29	0.26	0.57	HM 4 mm	8432 0815 02
Hand-held "Digitork", push-start configurable									
ETD M 40 ABL	10 - 40	0.71 - 3.6	850	225.4	36	0.52	1.1	HM 4 mm	8432 0815 05
ETD M 50 ABL	15 - 50	1.33 - 4.4	850	225.4	36	0.52	1.1	HM 4 mm	8432 0815 08
ETD M 80 ABL	16 - 80	1.42 - 7.1	850	225.4	36	0.52	1.1	HM 4 mm	8432 0815 11
ETD M 100 L	25 - 100	2.21 - 8.8	700	240	27	0.65	1.43	1/4" HEX	8432 0810 12
ETD M 200 L	50 - 200	4.42 - 17.7	700	240	27	0.65	1.43	1/4" HEX	8432 0810 13
ETD M 250 L	75 - 250	6.62 - 23.5	600	240	27	0.65	1.43	1/4" HEX	8432 0810 24
Fixtured "Digitork"									
ETF M 05	1.5 - 5	0.13 - 0.4	800	184	20	0.4	0.90	HM 4 mm	8432 0810 15
ETF M 10	3 - 10	0.27 - 0.9	500	184	20	0.4	0.90	HM 4 mm	8432 0810 16
ETF M 20	5 - 20	0.44 - 1.8	650	184	20	0.4	0.90	HM 4 mm	8432 0810 17
ETF M 50	15 - 50	1.33 - 4.4	850	230	30	0.8	1.76	HM 4 mm	8432 0810 18
ETF M 80	16 - 80	1.42 - 7.1	850	272	30	1.2	2.64	HM 4 mm	8432 0810 19
ETF M 100	25 - 100	2.21 - 8.8	700	272	30	1.2	2.64	1/4" HEX	8432 0810 20
ETF M 200	50 - 200	4.42 - 17.7	600	272	30	1.2	2.64	1/4" HEX	8432 0810 21
ETF M 400	150 - 400	13.27 - 35.4	320	260	40	1.8	3.96	1/4" HEX	8432 0810 22
ETF M 800	300 - 800	26.55 - 70.8	300	322	45	2.6	5.73	1/4" HEX	8432 0810 23

^a ETD M 20-25 M AXXX: C - tool cable connector, V - vacuum through the tool cable, B - reverse button, S - short lever start.

NOTE: "Complete system" (single ordering number) includes: Controller, screwdriver, tool cable, Tools Talk MT, USB communication cable and power supply.

Optional Accessories

Controller accessories

Model	Ordering No.
Combi (Remote control + program selector)	8432 0830 88
Remote control	8432 0830 08
Digital program selector	8432 0830 34
Controller fixture table	8432 0830 84
Controller fixture wall	8432 0830 32
Footswitch	8432 0830 07
Y cable for I/O connector ^a	8432 0831 99
Desktop socket (with screwdriver presence sensor)	8432 0831 89

^a Y cable suitable when two I/O accessories are required.

For our vacuum adapter please consult your local Atlas Copco representative.

Tool cable

Model	Length	Ordering No.
M-(AB)L	2 m	8432 0830 37
MT/M/M-AXXX	2 m	8432 0830 36
M-(AB)L	3.5 m	8432 0831 02
MT/M/M-AXXX	3.5 m	8432 0831 01

Cable accessories

Model	Ordering No.
Cable, RS232	8432 0830 38
Cable, USB	8432 0830 39
Transducer cable	8432 0830 35

Software

Model	Ordering No.
Tools Talk MT (for programming)	8432 0830 30
Tools Talk MT Analysis (for graph analysis)	8432 0830 31
Tools Talk MT Analysis/Net (for graph analysis and data collection)	8432 0830 45

Stacklights

Model	Ordering No.
Table stand	8432 0830 97
Wall mount	8432 0830 99



Digital program selector



Controller fixture wall



Remote control



Footswitch



Tool cable



Desktop socket



Controller fixture table



Stacklight wall mount



Stacklight table stand

Vacuum adapter

Model	Bit mm / Nozzle Ø mm	Ordering No.
ETD 03-25 xVx	36-44 / 6	8432 0770 02
ETD M 27 ABL	64 / 6	8432 0770 12
ETD 40-80 ABL	44 / 6	8432 0770 13
ETD 40-80 ABL	64 / 6	8432 0770 15
ETD 40-80 ABL	44 / 8	8432 0770 17
ETD 40-80 ABL	64 / 8	8432 0770 05
ETD 100-250 L	50 / 6	8432 0770 20
ETD 100-250 L	70 / 6	8432 0770 23
ETD 100-250 L	50 / 8	8432 0770 27
ETD 100-250 L	70 / 8	8432 0770 30
ETD 100-250 L	90 / 8	8432 0770 25
ETF 5-80	44 / 6	8432 0770 33
ETF 5-80	64 / 6	8432 0770 35
ETF 5-80	44 / 8	8432 0770 38
ETF 5-80	64 / 8	8432 0770 40
ETF 100-200	70 / 8	8432 0770 43
ETF 400-800	70 / 10	8432 0770 45



Vacuum adapter



VPX 6 vacuum pump

Vacuum pump

Model	Ordering No.
Vacuum pump, VPX 3	8432 0830 05
Vacuum pump, VPX 6	8432 0830 06

Blank nozzles

Model	Ø mm	Ordering No.
Blank nozzle	6	8432 0830 21
	8	8432 0830 22
	10	8432 0830 24



VPX 3, vacuum pump

Shaker tray

Type	Slot mm	Ordering No.	Type	Slot mm	Ordering No.
SGQ Large^a (110x110x35 mm)			MSG Small^b (70x70x15 mm)		
SGQ 15	1.5	8432 0830 09	MSG 06	0.6	8432 0830 20
SGQ 20	2	8432 0830 10	MSG 07	0.7	8432 0830 21
SGQ 25	2.5	8432 0830 11	MSG 08	0.8	8432 0830 22
SGQ 30	3	8432 0830 12	MSG 09	0.9	8432 0830 23
SGQ 35	3.5	8432 0830 13	MSG 10	1.0	8432 0830 24
SGQ 40	4	8432 0830 14	MSG 11	1.1	8432 0830 25
SGQ 45	4.5	8432 0830 15	MSG 12	1.2	8432 0830 26
SGQ 50	5	8432 0830 16	MSG 13	1.3	8432 0830 27
SGQ 55	5.5	8432 0830 17	MSG 14	1.4	8432 0830 28
SGQ 60	6	8432 0830 18	MSG 15	1.5	8432 0830 29

^a SGQ type (big version): For screws up to 30 mm length. From Ø 1.5 up to Ø 6 mm.

^b MSG type (small version): For screws up to 10 mm length. From Ø 1.5 up to Ø 6 mm.



Blank nozzles



Shaker tray box

Tensor STR

ETV STR

- STR Angle tools are extremely fast, compact and easy to operate.
- ESD certified.
- Easy to configure the function button.
- Front LED's gives better operator feedback.
- Torque range from 2.5 to 25 Nm.

ETD STR

- STR Straight tools are ideal for hand-held applications and fixture applications.
- Torque range from 1.4 to 16 Nm.
- Front light guide is integrated.
- Push-to-start mechanism.



ETV STR



ETD STR

Model	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
	Nm	ft lb		kg	lb				
Angle models									
ETV STR21-12-10	2.5 - 12	1.9 - 8.9	1350	1.1	2.4	297	14	-	8436 6120 12
ETV STR21-25-10	5 - 25	3.7 - 18.5	1000	1.2	2.6	297	14	-	8436 6120 25
Straight models									
ETD STR21-07-I06-PS	1.5 - 7	1.0 - 5.2	2090	0.9	1.9	259	24	-	8436 6220 07
ETD STR21-16-I06-PS	3.5 - 16	2.6 - 11.8	1460	1.0	2.2	276	24	-	8436 6220 16

Tensor DL non-transducerized screwdrivers exist in four different tool configurations:

ETD – Straight screwdrivers with configurable function button. Available as lever and push to start.

ETV – Right angle screwdrivers with lever start and configurable function button.

ETP – Pistol grip handle screwdriver with configurable function button. Available as lever and push to start.

ETF – Straight screwdrivers for fixtured applications. Configurable lever or remote start.

- The DL screwdriver range has been optimized for small screw assembly.
- Torque range up to 12 Nm.
- All tools have ESD certification.
- Ergonomic design promotes operator safety.
- Brushless motor gives long service intervals and low maintenance costs.
- Signal lights ensure detection of incorrectly tightened fasteners.



Model	Torque		Speed r/min	Weight		Length mm	CS distance ^a mm	Ordering No.
	Nm	in lb		kg	lb			
Straight tools (lever start)								
ETD DL21-04-I06	1 - 4	8.8 - 35.4	1600	0.6	1.3	235	18 / 19.5	8433 4014 25
ETD DL21-07-I06	2.2 - 7.5	19.5 - 66	970	0.6	1.3	235	18 / 19.5	8433 4017 31
ETD DL21-10-I06	3 - 10	26.6 - 88.5	720	0.6	1.3	235	18 / 19.5	8433 4019 10
Straight tools (push-to-start and front lights)								
ETD DL21-01-I06-PS	0.3 - 1.2	2.6 - 10	2200	0.6	1.3	243	18 / 19.5	8433 4010 89
ETD DL21-04-I06-PS	1 - 4	8.8 - 35.4	1600	0.6	1.3	243	18 / 19.5	8433 4014 91
ETD DL21-07-I06-PS	2.2 - 7.5	19.5 - 66	970	0.6	1.3	243	18 / 19.5	8433 4017 69
ETD DL21-10-I06-PS	3 - 10	26.6 - 88.5	720	0.6	1.3	243	18 / 19.5	8433 4019 25
Right angle tools (lever start)								
ETV DL21-04-I06	1 - 4	8.8 - 35.4	1600	0.7	1.5	268	9	8433 4004 47
ETV DL21-04-I06-QC	1 - 4	8.8 - 35.4	1600	0.7	1.5	268	9	8433 4004 73
ETV DL21-04-I06	1 - 4	8.8 - 35.4	1600	0.7	1.5	268	9	8433 4004 91
ETV DL21-07-I06	2.2 - 7.5	19.5 - 66	970	0.7	1.5	268	9	8433 4007 66
ETV DL21-07-I06-QC	2.2 - 7.5	19.5 - 66	970	0.7	1.5	268	9	8433 4007 79
ETV DL21-07-I06	2.2 - 7.5	19.5 - 66	970	0.7	1.5	268	9	8433 4007 94
ETV DL21-10-I06	3 - 12	26.6 - 106.4	610	0.7	1.5	282	11	8433 4009 34
ETV DL21-10-I06-QC	3 - 12	26.6 - 106.4	610	0.7	1.5	282	11	8433 4009 61
ETV DL21-10-I06	3 - 12	26.6 - 106.4	610	0.7	1.5	282	11	8433 4009 77
Pistol grip (lever start)								
ETP DL21-04-I06	1 - 4	8.8 - 35.4	1600	0.6	1.3	235	20	8433 4024 19
ETP DL21-07-I06	2.2 - 7.5	19.5 - 66	970	0.6	1.3	235	20	8433 4027 26
ETP DL21-10-I06	3 - 10	26.6 - 88.5	720	0.6	1.3	235	20	8433 4029 13
Pistol grip (push-to-start and front lights)								
ETP DL21-01-I06-PS-H	0.3 - 1.2	2.6 - 10	2200	0.6	1.3	243	20	8433 4020 77
ETP DL21-04-I06-PS-H	1 - 4	8.8 - 35.4	1600	0.6	1.3	243	20	8433 4024 66
ETP DL21-07-I06-PS-H	2.2 - 7.5	19.5 - 66	970	0.6	1.3	243	20	8433 4027 53
ETP DL21-10-I06-PS-H	3 - 10	26.6 - 88.5	720	0.6	1.3	243	20	8433 4029 28
Fixtured tools (lever start or remote start)								
ETF DL21-01-I06-T25	0.3 - 1.2	2.6 - 10	2200	0.7	1.5	328	18 / 19.5	8433 4040 04
ETF DL21-04-I06-T25	1 - 4	8.8 - 35.4	1600	0.7	1.5	328	18 / 19.5	8433 4042 13
ETF DL21-07-I06-T25	2.2 - 7.5	19.5 - 66	970	0.7	1.5	328	18 / 19.5	8433 4043 22
ETF DL21-10-I06-T25	3 - 10	26.6 - 88.5	720	0.7	1.5	328	18 / 19.5	8433 4044 11

^a For ETV, CS distance over angle head.

Tensor SL

ETD SL

- ETD SL is a very compact screwdriver with excellent power to weight ratio.
- Torque range from 0.3 to 10 Nm.
- Push-to-start function and front lights.
- Small center-to-side distance.
- Ergonomic design.
- Buzzer and additional blue LED for better operator support.



ETD SL



ETP SL

ETV SL

- ETV SL is the most compact transducerised angle screwdriver in the Tensor range.
- Torque range from 0.8 to 20 Nm.
- High durability with spiral angle gears.
- Ergonomic design.
- Buzzer and additional blue LED for better operator support.



ETV SL



ETF SL

ETP SL

- ETP SL is our first push-to-start pistol tool.
- Torque range from 0.3 to 10 Nm.
- Ergonomic, balanced pistol tool.
- Front lights for dark applications.
- Blue light and buzzer.

ETF SL

- ETF SL is the smallest and lightest fixtured tool.
- Torque range from 0.3 to 10 Nm.
- Stroke with 25 mm suspension.
- Small center-to-side distance.

Model	Torque		Speed r/min	Weight		Length mm	CS distance ^a mm	Stroke mm	Ordering No.
	Nm	in lb		kg	lb				
Straight tools (push-to-start and front lights)									
ETD SL21-01-I06-PS	0.3-1.2	2.7- 10	2950	0.7	1.6	246	18/19.5	—	8433 2102 92
ETD SL21-04-I06-PS	0.8- 4	7- 35	1600	0.7	1.6	246	18/19.5	—	8433 2104 91
ETD SL21-07-I06-PS	1.5-7.5	13- 66	970	0.7	1.6	246	18/19.5	—	8433 2107 69
ETD SL21-10-I06-PS	2.0- 10	18- 89	720	0.7	1.6	246	18/19.5	—	8433 2108 25
Right angle tools (lever start)									
ETV SL21-04-I06	0.8- 4	7- 35	1600	0.75	1.7	279	9	—	8433 2004 47
ETV SL21-04-I06-QC	0.8- 4	8- 35	1600	0.75	1.7	279	9	—	8433 2004 73
ETV SL21-04-I06	0.8- 4	9- 35	1600	0.75	1.7	279	9	—	8433 2004 91
ETV SL21-07-I06	1.5-7.5	13- 66	970	0.75	1.7	279	9	—	8433 2007 66
ETV SL21-07-I06-QC	1.5-7.5	14- 66	970	0.75	1.7	279	9	—	8433 2007 79
ETV SL21-07-I06	1.5-7.5	15- 66	970	0.75	1.7	279	9	—	8433 2007 94
ETV SL21-12-I06	2.5- 12	22-106	610	0.8	1.8	282	11	—	8433 2008 34
ETV SL21-12-I06-QC	2.5- 12	23-106	610	0.8	1.8	282	11	—	8433 2008 61
ETV SL21-12-I06	2.5- 12	24-106	610	0.8	1.8	282	11	—	8433 2008 77
ETV SL21-20-10	4- 20	36-180	465	0.95	2.1	285	14	—	8433 2009 55
ETV SL21-20-B10	4- 20	36-180	465	0.95	2.1	285	14	—	8433 2009 60
Pistol grip (push-to-start)									
ETP SL21-01-I06-PS	0.3-1.2	2.7- 10	3000	0.85	1.9	246	20.5	—	8433 2201 16
ETP SL21-04-PS	0.8- 4	7- 35	1600	0.85	1.9	246	20.5	—	8433 2204 66
ETP SL21-07-PS	1.5-7.5	13- 66	970	0.85	1.9	246	20.5	—	8433 2207 53
ETP SL21-10-PS	2- 10	18- 89	720	0.85	1.9	246	20.5	—	8433 2208 28
Fixtured tools (lever start or remote start)									
ETF SL21-01-I06-T25	0.3-1.2	2.7- 10	3000	0.95	2.1	322	18	25	8433 2404 13
ETF SL21-04-I06-T25	0.8- 4	7- 35	1600	0.95	2.1	322	18	25	8433 2404 19
ETF SL21-07-I06-T25	1.5-7.5	13- 66	970	0.95	2.1	322	18	25	8433 2407 26
ETF SL21-10-I06-T25	2- 10	18- 89	720	0.95	2.1	322	18	25	8433 2408 13

^a For ETV, CS distance over angle head.

Optional Accessories

Supported extensions (~154 mm)

Model	Ordering No.
STR21, ETV SL21	4220 3868 80

*Supported extensions***Covers for standard sockets**

Model	Ordering No.
ETV SL21	4220 3154 03

*Cover for standard sockets***Pistol grip Tensor DL / SL**

Model	Ordering No.
Tensor DL	4220 2743 90
Tensor SL	4220 3516 80

Pistol grip can be mounted on all straight DL tools.

*Pistol grip
Tensor DL/SL***Tool holder DL / SL**

Model	Ordering No.
ETP / ETD	4220 3584 80

*Tool holder*

Optional Accessories

Support handle

Model	Ordering No.
ETD STR21	4220 4347 80



Support handle

Lever

Model	Ordering No.
Lever, DL/SL	4220 2540 81
Extended lever, DL/SL	4220 2540 88
Spoon lever, STR21	4220 4338 83



STR Cable

Suspension yokes DL / SL

Model	Type	Assembly	Ordering No.
ETD/ETV 21	Horizontal	Motor	4220 0987 81
STR21	For rear		4220 4410 80
STR21	For front		4220 4409 80



STR Cable with 90 degrees connector

Cables Tensor STR

Model	Ordering No.
Tool cable	
2 m	4220 2636 02
3 m	4220 2636 03
5 m	4220 2636 05
7 m	4220 2636 07
10 m	4220 2636 10
15 m	4220 2636 15
Cables with 90 degrees connector	
2 m	4220 3891 02
3 m	4220 3891 03
5 m	4220 3891 05
7 m	4220 3891 07
10 m	4220 3891 10
15 m	4221 3891 15
Extension cable	
5 m	4220 1007 05
10 m	4220 1007 10
15 m	4220 1007 15
Extension cables for fixtured applications	
5 m	4220 1563 05
10 m	4220 1563 10
15 m	4220 1563 15
Spiral cable (length/stretched length)	
3 m / 4 m	4220 2757 03
7 m / 8 m	4220 2757 07
10 m / 12 m	4220 2757 10
Cable protection	4220 2977 90



STR Spiral cable



STR Cable protection

Optional Accessories

Cables Tensor DL

Model	Ordering No.
Tool cable	
3 m	4220 2604 03
5 m	4220 2604 05
10 m	4220 2604 10
15 m	4220 2604 15
20 m	4220 2604 20
Heavy duty cable	
3 m	4220 3265 03
5 m	4220 3265 05
10 m	4220 3265 10
15 m	4220 3265 15
20 m	4220 3265 20
Cables with 90 degrees connector	
3 m	4220 3705 03
5 m	4220 3705 05
10 m	4220 3705 10
15 m	4220 3705 15
20 m	4220 3705 20
Spiral cable straight	
5 m	4220 3240 05
Spiral cable with 90 degrees connector	
5 m	4220 3706 05
Extension cable	
3 m	4220 2795 03
5 m	4220 2795 05
10 m	4220 2795 10



DL Cable



DL cable with 90 degrees connector



DL spiral cable

Cables Tensor SL

Model	Ordering No.
Tool cable	
3 m	4220 3319 03
5 m	4220 3319 05
10 m	4220 3319 10
15 m	4220 3319 15
20 m	4220 3319 20
Heavy duty cable	
3 m	4220 3378 03
5 m	4220 3378 05
10 m	4220 3378 10
15 m	4220 3378 15
20 m	4220 3378 20
Cables with 90 degrees connector	
3 m	4220 3607 03
5 m	4220 3607 05
10 m	4220 3607 10
15 m	4220 3607 15
20 m	4220 3607 20
Spiral cable straight	
5 m	4220 3746 05
Spiral cable with 90 degrees connector	
5 m	4220 3617 05
Extension cable	
3 m	4220 2795 03
5 m	4220 2795 05
10 m	4220 2795 10



SL Cable



SL Cable with 90 degrees connector



SL Spiral cable

Tensor – the operators' choice

The Tensor range of electric assembly tools covers all station and assembly line requirements for safety critical and quality critical fastening applications. At Atlas Copco we have a proud legacy of putting the operator first and we continuously improve the ergonomic features on each new generation of Tensor tools. Tensor is also one of the most advanced tool ranges on the market in terms of high power-to-weight ratios and operator guidance in the form of clear result feedback via LED's or audio signals.

Productivity gains

Atlas Copco's unique Tensor motors give the Tensor range outstanding spindle speeds and, thus, help you achieve lower cycle times in your operation. Exceptional ergonomics in terms of balance, grip and low weight make the tools a favorite of the operators and increase individual productivity.

Operator feedback

All Tensor tools are equipped with LED's that will indicate the tightening result, green light for tightening OK and red light for NOK. Tensor ST and STR have configurable LED's and an integrated speaker for indicating results via audio signals.

Lowest cost of operation

At Atlas Copco we believe that quality is the road to lowest cost of operation over time. A maintained Tensor tool produces the same performance year after year at minimum and predictable costs while ensuring highest possible uptime.

Tensor DL: quality critical

The Tensor DL range is used for quality critical screws. Optimized for small screw assembly, the DL is the electric choice in the low torque segment.

Tensor SL: low torque safety critical, configurable tool functions

The Tensor SL range is optimized for safety critical small screw assembly. It offers compact screwdriver ergonomics, combined with traceability and error proofing capabilities.

Tensor DS: quality critical

Tensor DS is used for quality critical applications not requiring traceable measured torque value. DS offers major productivity and quality gains compared with conventional tooling.

Tensor S: safety critical

Tensor S is the well proven range for safety critical applications where traceability and error proofing capability is required.

Tensor ST: safety critical, configurable tool functions

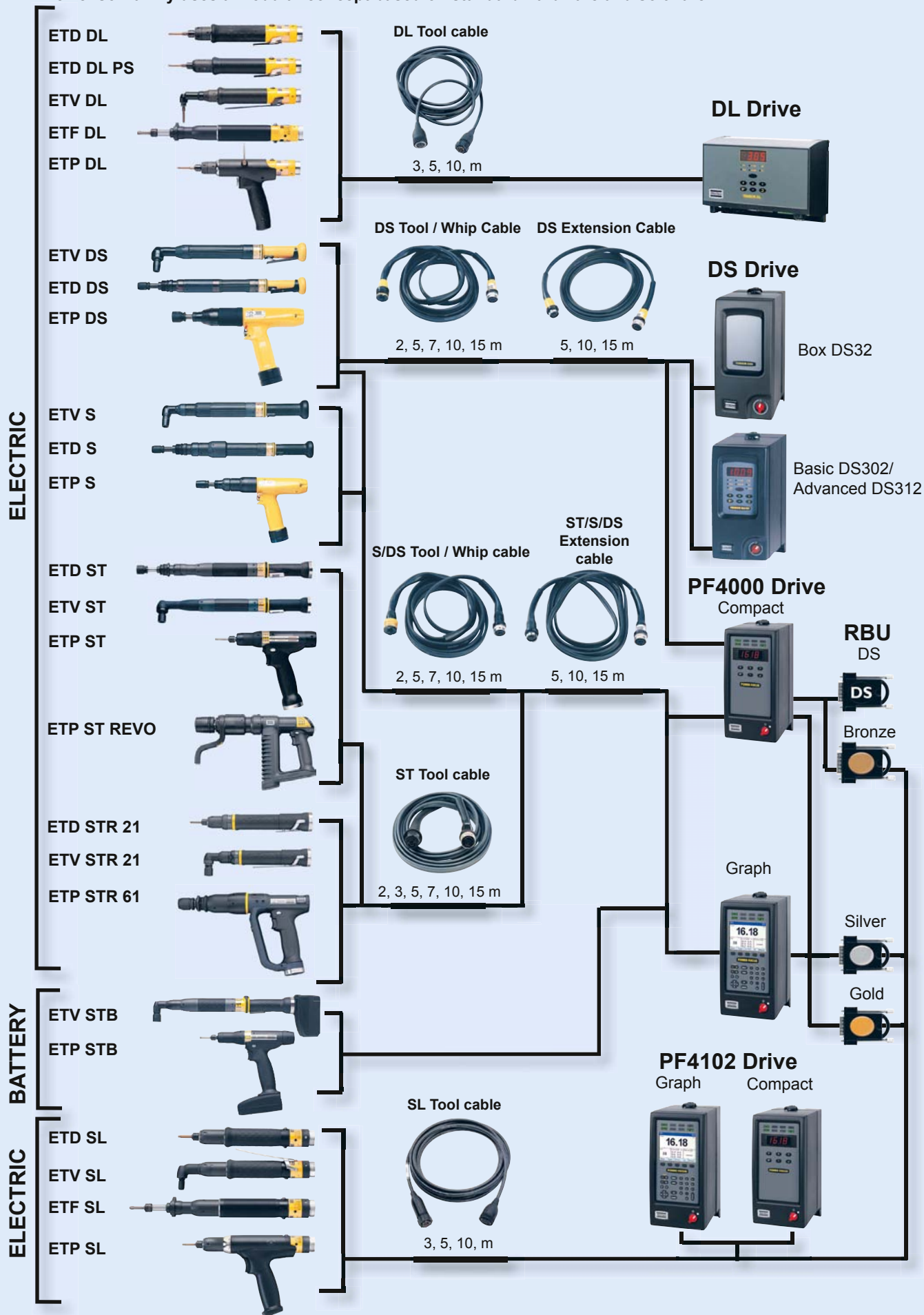
The second generation of Tensor tools was developed with low weight and productivity in mind. Tensor ST has an internal bus connection for intelligent accessories such as a barcode reader and torque selector switch.

Tensor STR: safety critical, configurable tool functions

The latest generation of Tensor tools where ergonomics and productivity are taken to a new level.



The Tensor family uses a modular concept based on standard hardware and software.



ETV DS

Tensor DS non-transducerized angle tool is equipped with spiral gears in the angle heads with improved contact ratio. This allows for smoother tightening and improved accuracy throughout the service life of the tool. The new molded ergonomic motor sleeve improves grip and comfort for the operator.



ETV DS

- Angle tools are ideal for hand-held operations.
- Torque range from 2 to 4000 Nm.
- Flush Socket and Hold & Drive tools.
- Ball retainer models for easy socket changes.

Model	Square drive in	Torque				Speed r/min	Weight		Length mm	CS distance mm	Ordering No.
		Nm		ft lb			kg	lb			
ETV DS42											
ETV DS42-05-06	1/4	1.5 -	6	1.1 -	4.4	1488	1.2	2.6	381	11	8433 1705 31
ETV DS42-05-10	3/8	1.5 -	6	1.1 -	4.4	1488	1.2	2.6	381	13.5	8433 1705 49
ETV DS42-08-06	1/4	2 -	8	1.5 -	5.9	1105	1.2	2.6	381	11	8433 1706 10
ETV DS42-10-06	1/4	3 -	12	2.2 -	8.8	762	1.3	2.9	381	11	8433 1706 14
ETV DS42-10-10	3/8	3 -	12	2.2 -	8.8	762	1.3	2.9	381	13.5	8433 1706 21
ETV DS42-20-10	3/8	5 -	20	3.7 -	14	401	1.3	2.9	381	13.5	8433 1706 49
ETV DS42 Ball retainer											
ETV DS42-10-B10	3/8	3 -	12	2.2 -	8.8	762	1.3	2.9	381	13.5	8433 1706 31
ETV DS42-20-B10	3/8	5 -	20	3.7 -	14	401	1.3	2.9	381	13.5	8433 1706 51
ETV DS72											
ETV DS72-15-10	3/8	4.5 -	17	3.3 -	12	1525	1.4	3.1	412	13.5	8433 1720 10
ETV DS72-28-10	3/8	7 -	28	5.1 -	20	1171	1.4	3.1	412	13.5	8433 1720 28
ETV DS72-30-10	3/8	9 -	35	6.6 -	25	800	1.4	3.1	412	13.5	8433 1721 42
ETV DS72-40-10	3/8	10 -	40	7.4 -	29	800	1.6	3.5	434	18	8433 1721 94
ETV DS72-50-10	3/8	14 -	55	11 -	40	480	1.6	3.5	434	18	8433 1722 58
ETV DS72-70-13	1/2	20 -	80	15 -	59	348	2.1	4.6	461	20	8433 1723 16
ETV DS72-100-13	1/2	28 -	110	21 -	81	229	2.3	5.1	482	20	8433 1723 70
ETV DS72-160-13	1/2	40 -	160	30 -	118	152	2.8	6.2	525	25.5	8433 1723 98
ETV DS72-180-13	1/2	45 -	180	34 -	133	123	2.8	6.2	525	25.5	8433 1724 15
ETV DS72-200-20	3/4	53 -	210	39 -	155	123	3.0	6.6	525	27	8433 1724 40
ETV DS72 Flush Socket											
ETV DS72-30-FS	-	9 -	35	6.6 -	25	800	1.4	3.1	412	13.5	8433 1721 65
ETV DS72-50-FS	-	14 -	55	11 -	40	480	1.6	3.5	434	18	8433 1722 75
ETV DS72-70-FS	-	20 -	80	15 -	59	345	2.1	4.6	461	20	8433 1723 26
ETV DS72-160-FS	-										8433 1724 00
ETV DS72-200-FS	-	50 -	200	37 -	147	137	3.5	7.7	527	28	8433 1725 05
ETV DS72 Hold & Drive											
ETV DS72-50-HAD	-	14 -	55	11 -	40	480	3.0	6.6	504	26	8433 1722 60
ETV DS72-70-HAD	-	20 -	80	15 -	59	348	3.1	6.8	479	26	8433 1723 30
ETV DS72-100-HAD	-	28 -	110	21 -	81	229	3.2	7.1	525	26	8433 1723 73
ETV DS72-160-HAD	-	40 -	160	30 -	118	152	3.3	7.3	525	26	8433 1724 02
ETV DS72-200-HAD	-	50 -	200	37 -	148	123	3.5	7.7	525	26	8433 1724 45
ETV DS72 Ball retainer											
ETV DS72-15-B10	3/8	5 -	17	3.7 -	12	1525	1.4	3.1	412	13.5	8433 1720 20
ETV DS72-30-B10	3/8	9 -	35	6.7 -	25	800	1.4	3.1	412	13.5	8433 1721 54
ETV DS72-40-B10	3/8	10 -	40	7.4 -	29	800	1.6	3.5	434	18	8433 1721 99
ETV DS72-50-B10	3/8	14 -	55	11 -	40	480	1.6	3.5	434	18	8433 1722 63
ETV DS72-70-B13	1/2	20 -	80	15 -	59	348	2.1	4.6	461	20	8433 1723 21
ETV DS72-100-B13	1/2	28 -	110	21 -	81	240	2.3	5.1	482	20	8433 1723 68
ETV DS72-160-B13	1/2	40 -	160	36 -	118	152	2.8	6.2	525	25.5	8433 1724 12
ETV DS72-180-B13	1/2	45 -	180	34 -	133	123	2.8	6.2	525	25.5	8433 1724 20
ETV DS92											
ETV DS92-100-13	1/2	25 -	100	19 -	74	642	3.3	7.3	534	20	8433 1750 21
ETV DS92-180-13	1/2	45 -	180	34 -	113	395	3.8	8.4	578	25.5	8433 1750 68
ETV DS92-270-20	3/4	70 -	270	52 -	199	240	7.0	15.4	661	33.5	8433 1751 38
ETV DS92-370-20	3/4	95 -	370	70 -	273	152	7.1	15.7	661	33.5	8433 1751 86
ETV DS92-450-20	3/4	115 -	450	85 -	333	131	11.6	25.6	702	54	8433 1752 04
ETV DS92-600-25	1	150 -	600	111 -	444	112	11.6	25.6	702	54	8433 1752 63
ETV DS92-600-20TM	3/4	150 -	600	111 -	444	97	9.7	21.4	603	26.3	8433 1752 40
ETV DS92-1000-25TM	1 1/2	250 -	1000	185 -	740	60	12.0	26.5	666	32	8433 1752 90
ETV DS92-2000-38TM	1 1/2	500 -	2000	370 -	1480	30	17.0	37.5	706	63.5	8433 1752 96
ETV DS92-4000-38TM	1 1/2	1000 -	4000	740 -	2960	14	21.0	46.3	615	71	8433 1753 25
ETV DS92 Flush Socket											
ETV DS92-270-FS	-	68 -	270	51 -	199	235	7.0	15.4	661	34	8433 1751 46
ETV DS92-600-FS	-	150 -	600	111 -	442	124	10	22	701	54	8433 1752 70
ETV DS92 Hold & Drive											
ETV DS92-370-HAD	-	95 -	370	70 -	273	170	8.3	18.3	661	35	8433 1751 95

ETD DS

- ETD DS inline non-transducerized tools. The low torque series is ideal for hand-held bench assembly. The high torque tools are well suited for fixtured applications.
- Torque range from 1 to 4000 Nm.
- Telescopic spindles for fixtured applications.
- Female hex drives for bits.
- Swivelling front parts for easy positioning of reaction force.



ETD DS

Model	Square drive in	Torque				Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm	ft lb				kg	lb				
ETD DS4												
ETD DS4-05-10S	3/8	2 -	5	1.5 -	3.6	1315	1.1	2.5	380	28	- / 1	8433 0710 29
ETD DS4-10-10S	3/8	4 -	14	3 -	10	620	1.1	2.5	380	28	- / 1	8433 0710 52
ETD DS42-20-10	3/8	5 -	20	3.7 -	15	390	1.1	2.5	380	28	- / 1	8433 1711 16
ETD DS4 Telescopic												
ETD DS4-05-10ST	3/8	2 -	5	1.5 -	3.6	1315	1.3	2.9	418	28	2 / 2	8433 0710 37
ETD DS4-10-10ST	3/8	4 -	14	3 -	10	620	1.3	2.9	418	28	2 / 2	8433 0710 73
ETD DS4 Female Hex												
ETD DS4-02-I06S	1/4	1 -	2.5	0.7 -	1.8	2942	1.1	2.5	371	28	- / 1	8433 0710 22
ETD DS4-05-I06S	1/4	2 -	5	1.5 -	3.6	1310	1.1	2.5	371	28	- / 1	8433 0710 26
ETD DS4-10-I06S	1/4	4 -	14	3 -	10	620	1.1	2.5	371	28	- / 1	8433 0710 46
ETD DS7												
ETD DS7-20-10S	3/8	6 -	20	4.4 -	14.5	1240	1.4	3.1	411	28	- / 1	8433 0730 23
ETD DS72-30-10S	3/8	10 -	35	7.3 -	25	745	1.4	3.1	411	28	- / 1	8433 1730 88
ETD DS72-50-13S	1/2	17 -	55	12 -	40	540	1.9	4.2	456	28	2 / 2	8433 1731 12
ETD DS7-70-13S	1/2	21 -	70	15 -	51	370	2.2	4.9	477	28	2 / 2	8433 0731 31
ETD DS7-90-13S	1/2	28 -	95	21 -	69	275	2.2	4.9	477	28	2 / 2	8433 0731 45
ETD DS7-120-13S	1/2	38 -	125	28 -	91	225	2.2	4.9	477	28	2 / 2	8433 0731 84
ETD DS7 Telescopic												
ETD DS7-20-10ST	3/8	6 -	20	4.4 -	14.5	1240	1.5	3.3	449	28	2 / 2	8433 0730 44
ETD DS7-30-10ST	3/8	10 -	35	7.3 -	25	745	1.5	3.3	449	28	2 / 2	8433 0731 05
ETD DS7-30-10ST50	3/8	10 -	35	7.3 -	25	745	1.6	3.5	500	28	2 / 2	8433 0730 93
ETD DS7-50-13ST	1/2	17 -	55	12 -	40	540	2.1	4.7	483	28	3 / 5	8433 0731 24
ETD DS7-50-13ST50	1/2	17 -	55	12 -	40	540	2.2	4.8	540	28	3 / 5	8433 0731 22
ETD DS7-70-13ST	1/2	21 -	70	15 -	51	370	2.4	5.4	504	29.5	3 / 5	8433 0731 40
ETD DS7-70-13ST50	1/2	21 -	70	15 -	51	370	2.5	5.5	562	29.5	3 / 5	8433 0731 38
ETD DS72-70-13ST75	1/2	21 -	70	15 -	51	370	2.5	5.5		29.5	3 / 5	8433 1731 39
ETD DS7-90-13ST	1/2	28 -	95	21 -	69	275	2.9	6.5	504	29.5	3 / 5	8433 0731 52
ETD DS7-90-13ST50	1/2	28 -	95	21 -	69	275	3.0	6.6	562	29.5	3 / 5	8433 0731 64
ETD DS7-120-13ST	1/2	38 -	125	28 -	91	225	3.0	6.6	504	29.5	3 / 5	8433 0731 96
ETD DS7-120-13ST50	1/2	38 -	125	28 -	91	225	3.1	6.8	562	29.5	3 / 5	8433 0731 99
ETD DS7-200-13ST	1/2											8433 0732 10
ETD DS7 Ball Retainer												
ETD DS7-50-B13S	1/2	17 -	55	12 -	40	540	1.9	4.2	456	28	2 / 2	8433 0731 20
ETD DS7-90-B13S	1/2	28 -	95	21 -	69	275	2.2	4.9	477	28	2 / 2	8433 0731 48
ETD DS9												
ETD DS9-100-13S	1/2	40 -	100	29 -	73	715	3.0	6.7	529	32	2 / 2	8433 0756 42
ETD DS9-150-13S	1/2	60 -	150	44 -	110	455	3.2	7.1	544	32	2 / 2	8433 0757 54
ETD DS9-200-13S	1/2	80 -	200	58 -	146	340	3.2	7.1	544	32	2 / 2	8433 0758 71
ETD DS9-270-20S	3/4	68	270	50	199	220	6.2	14	603	36	6 / 8	8433 0760 53
ETD DS9-450-20S	3/4	115 -	450	85 -	328	125	7.4	16	639	40.5	6 / 8	8433 0760 71
ETD DS92-600-20S	3/4		600									8433 1761 29
ETD DS9-1000-25S	1	250 -	1000	184 -	730	68	12.3	27	769	47	7 / 11	8433 0763 60
ETD DS9-1200-25S	1	300 -	1200	220 -	880	55	12.3	27	769	47	7 / 11	8433 0763 80
ETD DS9-1500-38S	1 1/2	375 -	1500	280 -	1100	42	16.8	37	725	68	8 / 12	8433 0763 91
ETD DS9-2000-38S	1 1/2	600 -	2000	440 -	1475	34	20.5	45	725	68	8 / 12	8433 0764 05
ETD DS9-3000-38S	1 1/2	750 -	3000	550 -	2200	21	21.7	47.8	809	68	8 / 12	8433 0764 23
ETD DS92-4000-38S	1 1/2	1000 -	4000	730 -	2950	17	21.7	48	809	68	8 / 12	8433 1764 37

Continued....

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.	
		Nm	ft lb		kg	lb					
ETD DS9 Telescopic											
ETD DS9-100-13ST	1/2	40- 100	29 - 73	715	3.2	7.1	557	32	3 / 5	8433 0756 92	
ETD DS9-150-13ST	1/2	60- 150	44 - 110	455	3.4	7.6	572	32	3 / 5	8433 0758 03	
ETD DS9-200-13ST	1/2	80- 200	58 - 146	340	3.4	7.6	572	32	3 / 5	8433 0759 11	
ETD DS9-270-20ST	3/4	108- 270	79 - 197	225	6.0	13	653	36	6 / 8	8433 0760 55	
ETD DS9-450-20ST	3/4	115- 450	85 - 328	125	7.6	17	689	40.5	6 / 8	8433 0760 88	
ETD DS9-600-20ST	3/4	150- 600	110 - 438	110	7.6	17	689	40.5	6 / 8	8433 0761 35	
ETD DS9-1000-25ST	1	250-1000	184 - 730	68	12.5	28	824	47	7 / 11	8433 0763 63	
ETD DS9-1200-25ST	1	300-1200	220 - 880	55	12.5	28	824	47	7 / 11	8433 0763 83	
ETD DS9-1500-38ST	1 1/2	375-1500	280 - 1100	42	17	37.5	824	68	8 / 12	8433 0763 93	
ETD DS9-2000-38ST	1 1/2	600-2000	440 - 1475	34	21	47	824	68	8 / 12	8433 0764 20	
ETD DS92-3000-38ST	1 1/2	750-3000	550 - 2200	21	21.9	48.3	904	68	8 / 12	8433 1764 25	
ETD DS9-4000-38ST	1 1/2	1000-4000	730 - 2950	17	21.9	48	904	68	8 / 12	8433 0764 40	
ETD DS9 Swivelling											
ETD DS92-750-25SSW	1	188- 750	138 - 552	84	5.5	12.1	579	47	5	8433 0761 75	
ETD DS92-1000-25SSW	1	250-1000	185 - 737	68	12.3	27	769	47	7/11	8433 0763 70	
ETD DS92-1200-25SSW	1	300-1200	220 - 884	55	12.3	27	769	47	7/11	8433 0763 85	
ETD DS92-2000-25SSW	1 1/2	500-2000	370 - 1480	34	20.5	45	725	68	8/12	8433 0764 10	
ETD DS92-4000-25SSW	1 1/2	1000-4000	740 - 2960	17	21.7	48	809	68	8/12	8433 0764 45	

ETP DS

- ETP DS pistol grip tool for both hand-held and fixtured applications.
- Torque range from 2 to 4000 Nm.
- Telescopic spindles for fixtured applications.
- Swivelling front parts for easy positioning of reaction force.
- Female hex drives for bits.
- Swivelling tools are equipped with non-reversible start button, for operator safety.



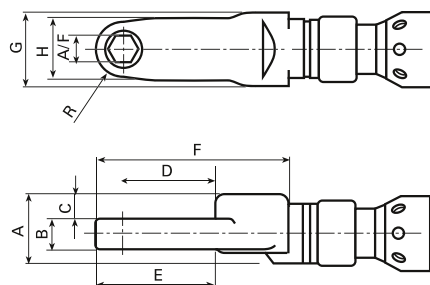
ETP DS

Model	Square drive in	Torque				Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm		ft lb			kg	lb				
ETP DS4												
ETP DS4-05-06S	1/4	2 -	5	1.5 -	3.6	1310	1.1	2.5	193	21.5	- / -	8433 0708 76
ETP DS4-10-06S	1/4	3.5 -	12	2.5 -	8.8	660	1.1	2.5	193	21.5	- / -	8433 0708 92
ETP DS42-10-10S	3/8	3.5 -	12	2.5 -	8.8	905	1.0	2.2	188	21.3	- / -	8433 0709 11
ETP DS4 Female Hex												
ETP DS42-02-106	1/4	1.0 -	2.5	0.7 -	1.8	2950	0.9	2.0	188	21.3	- / -	8433 0708 40
ETP DS42-05-106	1/4	2 -	5	1.5 -	3.6	1770	0.9	2.0	188	21.3	- / -	8433 0708 69
ETP DS4-07-106S	1/4	2.1 -	7	1.5 -	5.1	905	1.1	2.5	201	21.5	- / -	8433 0708 80
ETP DS42-10-106	1/4	3.5 -	12	2.5 -	8.8	905	1.0	2.2	188	21.3	- / -	8433 0708 87
ETP DS42-20-106	1/4	6	20	4.4	14.5	471	1.0	2.2	188	21.3	- / -	8433 0709 34
ETP DS7												
ETP DS7-20-10S	3/8	6 -	20	4.4 -	14.5	1240	1.6	3.6	273	21.5	- / 1	8433 0726 36
ETP DS7-30-10S	3/8	10 -	35	7.3 -	25	750	1.6	3.6	273	21.5	- / 1	8433 0726 53
ETP DS7-50-13S	1/2	17 -	55	12 -	40	540	1.9	4.2	318	21.5	2 / 2	8433 0726 87
ETP DS7-70-13S	1/2	21 -	70	15 -	51	370	2.1	4.7	340	21.5	2 / 2	8433 0727 01
ETP DS7-90-13S	1/2	28 -	95	21 -	69	275	2.1	4.7	340	21.5	2 / 2	8433 0727 19
ETP DS7-120-13S	1/2	38 -	125	28 -	91	220	2.1	4.7	340	21.5	2 / 2	8433 0727 47
ETP DS7 Telescopic												
ETP DS7-30-10ST	3/8	10 -	35	7.3 -	25	750	1.7	3.7	313	21.5	2 / 2	8433 0726 55
ETP DS7-50-13ST	1/2	17 -	55	12 -	40	540	2.1	4.6	350	21.5	2 / 2	8433 0726 92
ETP DS7-70-13ST	1/2	21 -	70	15 -	51	370	2.2	4.9	367	22.5	3 / 5	8433 0727 05
ETP DS7 Female Hex												
ETP DS7-20-106	1/4	6 -	20	4.4	14.5	1240	1.6	3.6	273	21.5	- / 1	8433 0726 38
ETP DS7 Swivelling ^a												
ETP DS7-50-13SSW												8433 0726 95
ETP DS7-70-13SSW	1/2	21 -	70	15 -	51	370	2.2	4.9	339	29.5	2 / 4	8433 0727 09
ETP DS7-90-13SSW	1/2	28 -	95	21 -	69	275	2.2	4.9	339	29.5	2 / 4	8433 0727 28
ETP DS7-120-13SSW	1/2	38 -	125	28 -	91	220	2.2	4.9	339	29.5	2 / 4	8433 0727 84
ETP DS9												
ETP DS9-100-13S	1/2	40 -	100	29 -	73	790	3.8	8.5	378	32	2 / 2	8433 0765 39
ETP DS9-150-13S	1/2	60 -	150	44 -	110	510	3.8	8.5	392	32	2 / 2	8433 0765 58
ETP DS9-200-13S	1/2	80 -	200	58 -	146	375	3.8	8.5	392	32	2 / 2	8433 0766 05
ETP DS9-270-20S	3/4	108 -	270	79 -	197	250	5.8	12.9	451	36	6 / 8	8433 0766 49
ETP DS9-450-20S	3/4	115 -	450	85 -	328	140	7.4	16.5	487	40.5	6 / 8	8433 0767 52
ETP DS9-600-20S	3/4	150 -	600	110 -	438	120	7.4	16.5	487	40.5	6 / 8	8433 0768 08
ETP DS9-1000-25S	1	250 -	1000	184 -	730	68	12.1	26.7	620	47	7 / 11	8433 0768 66
ETP DS9-1200-25S	1	300 -	1200	220 -	880	55	12.1	26.7	620	47	7 / 11	8433 0768 83
ETP DS9-2000-38S	1 1/2	500 -	2000	440 -	1475	34	16.8	37	574	68	8 / 12	8433 0769 10
ETP DS9-3000-38S	1 1/2	750 -	3000	550 -	2200	21	21.7	47.8	654	68	8 / 12	8433 0769 30
ETP DS9-4000-38S	1 1/2	1000 -	4000	730 -	2950	17	21.7	47.8	654	68	8 / 12	8433 0769 50
ETP DS9 Telescopic												
ETP DS9-1000-25ST	1	250 -	1000	184 -	730	68	12.3	27.1	672	47	7 / 11	8433 0768 79
ETP DS9-2000-38ST	1 1/2	500 -	2000	440 -	1475	34	17	37.5	672	68	8 / 12	8433 0769 20
ETP DS9-3000-38ST	1 1/2	750 -	3000	550 -	2200	21	21.9	48.3	753	68	8 / 12	8433 0769 33
ETP DS9-4000-38ST	1 1/2	1000 -	4000	730 -	2950	17	21.9	48.3	753	68	8 / 12	8433 0769 60
ETP DS9 Swivelling ^a												
ETP DS9-150-13SSW	1/2	60 -	150	44 -	110	510	3.9	8.7	394	32	2 / 4	8433 0765 69
ETP DS9-200-13SSW	1/2	80 -	200	58 -	146	375	3.9	8.7	394	32	2 / 4	8433 0766 12
ETP DS9-350-20SSW	3/4	100 -	370	75 -	270	180	5.2	11.5	387	35	4	8433 0766 56
ETP DS9-500-20SSW	3/4	140 -	530	105 -	390	125	5.2	11.5	387	35	4	8433 0767 71
ETP DS9-750-25SSW	1	220 -	750	162 -	553	84	5.5	12.1	428	47	5	8433 0768 24
ETP DS9-1000-25SSW	1	250 -	1000	184 -	730	68	12.1	26.7	620	47	7 / 11	8433 0768 76
ETP DS9-1500-25SSW	1	375 -	1500	280 -	1100	45	8.5	18.8	450	46	9	8433 0768 99
ETP DS9-2000-38SSW	1 1/2	500 -	2000	440 -	1475	34	16.8	37	574	68	8 / 12	8433 0769 15

^a Non-reversible start button as standard.

In-Line crowfoot tools

Dimensions

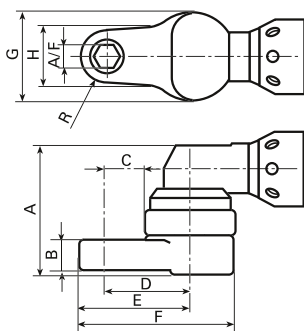


ETC DS

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
ETC DS72																	
ETC DS72-25-13-LI3	6- 28	4.4- 20.7	622	1.9	4.2	507	13	34	15	13	46	71	94	35	30	13	8433 1701 90

Offset crowfoot tools

Dimensions

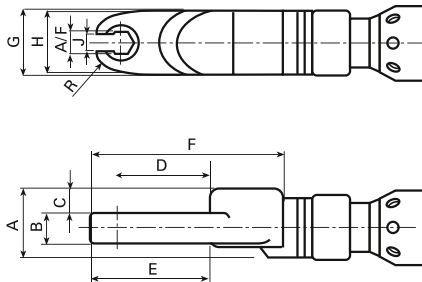


ETC DS

Model	Torque			Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.	
	Nm		ft lb		kg	lb													
ETC DS42																			
ETC DS42-12-8-LO3	4.8-	12	2.8-	8.9	401	1.55	3.4	411	1256.15	10	12.4	32.8	42.8	57.8	36.5	22	10	8433 1704 00	
ETC DS72																			
ETC DS72-15-10-LO5	3.5-	18	2.6-	13	1164	1.7	3.7	474	10	60	15	48	66	76	91	37	22	10	8433 1701 12
ETC DS72-25-13-LO5	5.6-	28	4.2-	21	796	2.0	4.4	514	13	68	15	62	84	97	118	44	30	13	8433 1701 29
ETC DS72-40-13-LO3	8.8-	44	6.5-	33	478	2.2	4.8	478	13	68	18	25	47	62	82	44	31	14.5	8433 1701 34
ETC DS72-40-13-LO5	8.8-	44	6.5-	33	478	2.2	4.8	425	13	69	18	72	94	108	129	44	31	14.5	8433 1701 38
ETC DS72-50-19-LO5	17-	56	12.5-	43	348	3.5	7.7	581	19	94	28	54	123	140	166	63	36	18	8433 1701 49
ETC DS72-60-17-LO3	13-	65	9.6-	48	346	2.7	5.9	507	17	77	24	29	51	66	89	48	30	15	8433 1701 46
ETC DS72-80-21-LO3	18-	90	13.3-	67	236	3.3	7.3	585	21	90	20	35	66	86	112	63	40	20	8433 1701 60
ETC DS72-80-21-LO5	18-	90	13.3-	67	236	4.1	9.0	651	21	92	20	101	132	152	178	63	40	20	8433 1701 65
ETC DS72-90-18-LO6	32-	90	24-	66	152	4.5	9.7	684	18	93	20	24	165	185	216	58	40	20	8433 1701 67
ETC DS72-90-21-LO5	23-	77	17-	57	229	3.6	7.9	619	21	81	20	24	132	152	178	63	40	20	8433 1710 65
ETC DS72-100-17-LO5	42-	100	31-	74	123	4.7	10	728	17	99	24	116	209	229	254	58	40	20	8433 1701 69
ETC DS72 Extra heavy duty																			
ETC DS72-40-13-AO3	8-	40	6-	29	480	2.3	5.0	486	13	60	19	33	53	69	86	40	17	16	8433 1702 15
ETC DS72-70-17-AO3	14-	70	11-	51	345	2.9	6.4	528	17	67	19	45	68	87	107	45	21	20	8433 1702 32
ETC DS92																			
ETC DS92-140-18-LO7	65-	145	47-	107	240	10	22	864	18	156	43	149	185	204	221	77	37	19	8433 1703 95
ETC DS92-140-21-LO3	58-	144	43-	106	395	5	11	636	21	100	33	35	66	86	112	63	40	20	8433 1701 75
ETC DS92-200-21-LO3	43-	215	23-	160	174	10	22	718	21	146	40	33	70	91	125	77	42	21	8433 1701 80
ETC DS92-215-19-LO3	86-	215	63-	158	240	9	20	718	19	150	40	25	70	91	125	77	42	26	8433 0214 09

In-Line tube nut tools

Dimensions

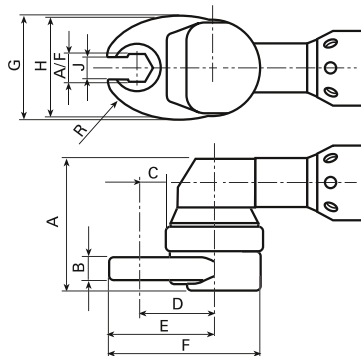


ETO DS

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	R mm	Ordering No.
	Nm	ft lb		kg	lb													
ETO DS72																		
ETO DS72-15-10-LI3	3 - 15	2.2 - 11	1046	1.7	3.7	483	10	32	12	11	39	26	68	34	32	8	14	8433 1703 10
ETO DS72-18-13-LI3	3.6 - 18	2.7 - 13	743	1.7	3.7	499	13	34	11	15	49	32	84	35	38	8	16	8433 1703 15
ETO DS72-30-13-LI3	6.6 - 33	4.7 - 24	453	2.4	5.2	525	13	43	18	14	47	31	83	38	40	10	25	8433 1703 21
ETO DS72-30-19-LI4	10 - 35	7 - 26	556	2.5	5.5	560	19	46	11	21	69	47	114	55	49	12	32	8433 1703 30
ETO DS72-35-13-LI3	7 - 35	5.2 - 26	438	2.6	5.7	569	13	46	11	21	70	48	113	45	55	12	32	8433 1703 25
ETO DS72-50-17-LI3	11 - 55	8.2 - 41	290	3.0	6.6	628	17	46	12	20	81	39	124	45	59	16	32	8433 1703 35
ETO DS72-50-17-LI4	17 - 56	13 - 41	539	4	8.8	595	17	46	18	17	41	38	99	50	47	12	31	8433 1213 94
ETO DS72-80-19-LI3	16 - 80	12 - 60	226	3.5	7.7	629	19	46	18	17	74	52	137	64	59	17	32	8433 1703 40

Offset tube nut tools

Dimensions



ETO DS

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	R mm	Ordering No.
	Nm	ft lb		kg	lb													
ETO DS42																		
ETO DS42-08-8-LO3	1.7 - 8.5	1.3 -6.3	584	1.5	3.3	397	8	59	11	4	22	30	45	37	29	6	10	8433 1703 50
ETO DS72																		
ETO DS72-10-10-LO3	2.4- 12	1.8 -8.9	1164	1.6	3.5	434	10	59	10	7	25	35	50	37	31	7	12	8433 1703 60
ETO DS72-18-13-LO3	3.6- 18	2.7 - 13	796	1.8	3.9	441	13	61	11	8	30	42	63	44	38	8	15	8433 1703 68
ETO DS72-25-13-LO3	5.6- 28	4.2 - 21	796	1.9	4.2	469	13	65	11	13	37	52	75	48	50	11	31	8433 1703 75
ETO DS72-35-19-LO5	11- 36	8 - 27	480	2.6	5.7	542	19	67	11	37	107	124	150	63	55	13	32	8433 1703 78
ETO DS72-50-17-LO3	11- 55	8.2 - 41	346	2.8	6.2	510	17	76	12	18	49	69	97	63	59	16	32	8433 1703 80
ETO DS72-80-22-LO3	25- 83	18 - 61	229	3.2	7	610	22	82	18	19	122	143	170	63	59	17	32	8433 1703 85
ETO DS72-100-24-LO3	22-110	16 - 81	198	4.3	9.5	584	24	92	20	23	60	85	119	74	77	21	33	8433 1703 90

ETV S Mark II

Our new Tensor S 42/72/92 angle tool series is now equipped with spiral gears in the angle heads which have already been used successfully in other Atlas Copco tools. The new spiral gears improve the contact ratio between the gears, making the gears run more smoothly. The new molded ergonomic motor sleeve improves grip and comfort for the operator.

- ETV S II right angle tools are ideal for hand-held operations.
- Torque range from 1 to 4000 Nm (higher torque models available on request).
- Ball retainers for fast and easy socket changes.
- Female hex drive and quick chucks for bits.



ETV S Mark II

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Ordering No.
		Nm	ft lb		kg	lb			
ETV S42									
ETV S42-05-06	1/4	1 - 6	0.7 - 3.6	1232	1.5	3.3	381	11	8433 1236 12
ETV S42-05-10	3/8	1 - 6	0.7 - 3.6	1232	1.5	3.3	381	13.5	8433 1236 26
ETV S42-10-06	1/4	3 - 15	2.2 - 11	798	1.5	3.3	381	11	8433 1236 35
ETV S42-10-10	3/8	3 - 15	2.2 - 11	798	1.5	3.3	381	13.5	8433 1236 51
ETV S42-20-10	3/8	4 - 25	2.9 - 18.3	447	1.5	3.3	382	13.5	8433 1236 91
ETV S42-30-10	3/8	6 - 35	4.4 - 27.7	268	1.6	3.5	384	15.5	8433 1237 04
ETV S42 Ball Retainer									
ETV S42-10-B10	3/8	3 - 15	2.2 - 11	798	1.5	3.3	381	11	8433 1236 62
ETV S42-20-B10	3/8	4 - 25	2.9 - 18.3	447	1.5	3.3	382	13.5	8433 1236 95
ETV S72									
ETV S72-28-10	3/8	5 - 29	4 - 21	1305	1.6	3.5	413	13.5	8433 1245 20
ETV S72-30-10	3/8	6 - 35	5 - 25	893	1.6	3.5	415	15.5	8433 1247 33
ETV S72-40-10	3/8	8 - 40	6 - 29	887	1.7	3.7	435	18	8433 1250 00
ETV S72-50-10	3/8	10 - 55	7 - 40	533	1.9	4.2	435	18	8433 1252 87
ETV S72-70-13	1/2	14 - 80	10 - 58	384	2.2	4.8	461	20	8433 1273 09
ETV S72-100-13	1/2	20 - 100	15 - 80	307	2.5	5.5	489	22.5	8433 1280 00
ETV S72-150-13	1/2	30 - 160	22 -117.3	190	2.9	6.4	525	25.5	8433 1288 67
ETV S72-180-13	1/2	40 - 180	29 - 132	142	3.0	6.6	525	25.5	8433 1291 17
ETV S72-200-20	3/4	40 - 210	29 - 154	142	3.2	10.4	527	27	8433 1291 35
ETV S72 Ball Retainer									
ETV S72-28-B10	3/8	5 - 29	4 - 21	1300	1.6	3.5	413	13.5	8433 1245 23
ETV S72-30-B10	3/8	6 - 35	5 - 25	893	1.6	3.5	415	15.5	8433 1247 35
ETV S72-40-B10	3/8	8 - 40	6 - 29	887	1.7	3.7	435	18	8433 1250 42
ETV S72-50-B10	3/8	10 - 55	7 - 40	533	1.9	4.2	435	18	8433 1252 62
ETV S72-70-B13	1/2	14 - 80	10 - 58	384	2.2	4.8	461	20	8433 1273 44
ETV S72-100-B13	1/2	20 - 110	15 - 80	307	2.5	5.5	489	22.5	8433 1280 31
ETV S72-150-B13	1/2	30 - 160	22 -117.3	190	2.9	6.4	525	25.5	8433 1288 46
ETV S72-180-B13	1/2	40 - 180	29 - 132	142	3.0	6.6	525	25.5	8433 1291 44

ETD S

- ETD S inline tools. The low torque series is ideal for hand-held bench assembly. The high torque tools are excellent for fixtured applications.
- Torque range from 1 to 4000 Nm.
- Telescopic spindles for fixtured applications.
- Female hex drives for bits.

**ETD S**

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm	ft lb		kg	lb				
ETD S4										
ETD S4-04-10CTADS	3/8	1 - 5	0.7 - 3.6	1465	1.4	3.1	381	28	- / 1	8433 0237 81
ETD S4-10-10CTADS	3/8	3 - 14	2.2 - 10.3	690	1.4	3.1	381	28	- / 1	8433 0238 18
ETD S4-20-10CTADS	3/8	5 - 20	3.6 - 15	415	1.4	3.1	381	28	- / 1	8433 0239 72
ETD S4 Telescopic										
ETD S4-04-10CTADST	3/8	1 - 5	0.7 - 3.6	1465	1.5	3.3	419	28	2 / 2	8433 0237 94
ETD S4-10-10CTADST	3/8	3 - 14	2.2 - 10.3	690	1.5	3.3	419	28	2 / 2	8433 0238 79
ETD S4-20-10CTADST	3/8	5 - 20	3.6 - 15	415	1.5	3.3	419	28	2 / 2	8433 0239 84
ETD S4 Female Hex										
ETD S4-02-106CTADS	1/4	0.5 - 2.5	0.35 - 1.8	2930	1.4	3.1	372	28	- / 1	8433 0237 43
ETD S4-04-106CTADS	1/4	1 - 5	0.7 - 3.6	1465	1.4	3.1	372	28	- / 1	8433 0237 47
ETD S4-10-106CTADS	1/4	3 - 14	2.2 - 10.3	690	1.5	3.3	372	28	- / 1	8433 0238 06
ETD S7										
ETD S7-20-10CTADS	3/8	5 - 20	3.6 - 15	1380	1.6	3.6	411	28	- / 1	8433 0294 42
ETD S7-30-10CTADS	3/8	6 - 35	4.4 - 25	830	1.6	3.6	411	28	- / 1	8433 0295 07
ETD S7-50-13CTADS	1/2	10 - 55	7.3 - 40	595	2.1	4.7	456	28	2 / 2	8433 0297 37
ETD S7-70-13CTADS	1/2	14 - 80	11 - 58	410	2.4	4.7	477	29.5	2 / 2	8433 0298 04
ETD S7-90-13CTADS	1/2	20 - 95	15 - 69	335	2.8	6.2	477	29.5	2 / 2	8433 0299 11
ETD S7-120-13CTADS	1/2	25 - 125	18 - 91	280	2.9	6.5	477	29.5	2 / 2	8433 0299 72
ETD S7 Telescopic										
ETD S7-20-10CTADST	3/8	5 - 20	3.6 - 15	1380	1.7	3.8	450	28	2 / 2	8433 0294 81
ETD S7-20-10CTADS-T50	3/8	5 - 20	3.6 - 15	1380	1.8	4.0	500	28	2 / 2	8433 0294 85
ETD S7-30-10CTADST	3/8	6 - 35	4.4 - 25	830	1.7	3.8	450	28	2 / 2	8433 0295 21
ETD S7-30-10CTADS-T50	3/8	6 - 35	4.4 - 25	830	1.8	4.0	500	28	2 / 2	8433 0295 84
ETD S7-50-13CTADST	1/2	10 - 55	7.3 - 40	595	2.2	4.9	483	28	3 / 5	8433 0297 83
ETD S7-50-13CTADS-T50	1/2	10 - 55	7.3 - 40	595	2.3	5.1	540	28	3 / 5	8433 0297 94
ETD S7-70-13CTADST	1/2	14 - 80	11 - 58	410	2.5	5.6	504	29.5	3 / 5	8433 0298 34
ETD S7-70-13CTADS-T50	1/2	14 - 80	11 - 58	410	2.6	5.7	562	29.5	3 / 5	8433 0298 63
ETD S7-90-13CTADST	1/2	20 - 95	15 - 69	335	2.9	6.5	504	29.5	3 / 5	8433 0299 41
ETD S7-90-13CTADS-T50	1/2	20 - 95	15 - 69	335	3.0	6.6	562	29.5	3 / 5	8433 0299 43
ETD S7-120-13CTADST	1/2	25 - 125	18 - 91	280	3.0	6.7	504	29.5	3 / 5	8433 0299 85
ETD S7-120-13CTADS-T50	1/2	25 - 125	18 - 91	280	3.1	6.8	562	29.5	3 / 5	8433 0299 93
ETD S7-140-13CTADST	1/2	35 - 140	26 - 103	280	3.0	6.7	504	29.5	3 / 5	8433 0299 98
ETD S7 Ball Retainer										
ETD S7-30-B10CTADS	3/8	6 - 35	3.6 - 15	830	1.6	3.6	411	28	- / 1	8433 0295 09
ETD S7-50-B13CTADS	1/2	10 - 55	7.3 - 40	595	2.1	4.7	456	28	2 / 2	8433 0297 56
ETD S7-70-B13CTADS	1/2	14 - 80	11 - 58	410	2.4	4.7	477	29.5	2 / 2	8433 0298 07
ETD S7 Female Hex										
ETD S7-20-106CTADS	1/4	5 - 20	3.6 - 15	1380	1.6	3.6	402	28	- / 1	8433 0294 47

ETP S

- ETP S pistol grip tool for both hand-held and fixtured applications.
- Torque range from 1 to 4000 Nm.
- Telescopic spindles for fixtured applications.
- Female hex quick change drives for bits.



ETP S

Model	Square drive in	Torque				Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm		ft lb			kg	lb				
ETP S4												
ETP S4-10-06CTADS	1/4	3 -	12	2.2 -	8.8	735	1.2	2.7	192	21.3	- / -	8433 0235 11
ETP S4-10-10CTADS	3/8	3 -	12	2.2 -	8.8	735	1.2	2.7	194	21.3	- / -	8433 0235 39
ETP S4-20-10CTADS	3/8	5 -	20	3.6 -	15	415	1.7	3.7	243	21.3	- / -	8433 0235 64
ETP S4 Female Hex												
ETP S4-02-106CTADS	1/4	0.5 -	2.5	0.35 -	1.8	2930	1.2	2.7	200	21.3	- / -	8433 0233 50
ETP S4-04-106CTADS	1/4	1 -	5	0.7 -	3.6	1465	1.2	2.7	200	21.3	- / -	8433 0234 75
ETP S4-10-106CTADS	1/4	3 -	12	2.2 -	8.8	735	1.2	2.7	200	21.3	- / -	8433 0235 01
ETP S4 Ball Retainer												
ETP S4-10-B10CTADS	3/8	3 -	12	2.2 -	8.8	735	1.2	2.7	194	21.3	- / -	8433 0235 53
ETP S7												
ETP S7-20-10CTADS	3/8	5 -	20	3.6 -	15	1380	1.9	4.2	274	21.5	- / 1	8433 0313 84
ETP S7-30-10CTADS	3/8	6 -	35	4.4 -	25	830	1.9	4.2	274	21.5	- / 1	8433 0314 03
ETP S7-50-13CTADS	1/2	10 -	55	7.3 -	40	595	2.2	4.9	318	26.8	2 / 2	8433 0314 91
ETP S7-70-13CTADS	1/2	14 -	80	11 -	58	410	2.4	5.4	340	29.5	2 / 2	8433 0315 02
ETP S7-90-13CTADS	1/2	20 -	95	15 -	69	335	2.5	5.6	340	29.5	2 / 2	8433 0315 27
ETP S7-120-13CTADS	1/2	25 -	125	18 -	91	280	2.7	6.0	340	29.5	2 / 2	8433 0315 43
ETP S7 Telescopic												
ETP S7-30-10CTADST	3/8	6 -	35	4.4 -	25	830	2.0	4.4	313	21.5	2 / 2	8433 0314 15
ETP S7-120-13CTADST	1/2	25 -	125	18 -	91	280	2.9	6.4	367	29.5	3 / 5	8433 0315 59
ETP S7 Female Hex												
ETP S7-20-106CTADS	1/4	5 -	20	3.6 -	15	1380	1.9	4.2	265	21.5	- / 1	8433 0313 61
ETP S7-30-106CTADS	1/4	6 -	35	4.4 -	25	830	1.9	4.2	265	21.5	- / 1	8433 0314 28
ETP S7 Ball Retainer												
ETP S7-30-B10CTADS	3/8	6 -	35	4.4 -	25	830	1.9	4.2	274	21.5	- / 1	8433 0314 18
ETP S9												
ETP S9-70-13CTADS	1/2	25 -	70	18 -	49	1180	3.7	8.3	395	31.8	2 / 2	8433 0367 19
ETP S9-100-13CTADS	1/2	40 -	100	29 -	73	795	3.9	8.7	395	31.8	2 / 2	8433 0367 45
ETP S9-200-13CTADS	1/2	50 -	200	36 -	146	370	3.9	8.7	395	31.8	2 / 2	8433 0367 86
ETP S9-270-20CTADS	3/4	65 -	270	47 -	198	250	6.5	14.5	451	36	6 / 8	8433 0368 52
ETP S9-450-20CTADS	3/4	110 -	450	80 -	330	140	7.9	17.6	487	40.5	6 / 8	8433 0368 99
ETP S9-600-20CTADS	3/4	150 -	600	110 -	440	120	7.9	17.8	487	40.5	6 / 8	8433 0369 38
ETP S9-1000-25CTADS	1	250 -	1000	180 -	730	76	12	26.5	620	47	7 / 11	8433 0370 11
ETP S9-1200-25CTADS	1	300 -	1200	220 -	880	62	12	26.5	620	47	7 / 11	8433 0370 50
ETP S9-1500-38CTADS	1 1/2	375 -	1500	280 -	1100	47	16.8	37.0	572	68	8 / 12	8433 0370 62
ETP S9-2000-38CTADS	1 1/2	500 -	2000	440 -	1475	38	16.8	37.0	572	68	8 / 12	8433 0371 05
ETP S9-3000-38CTADS	1 1/2	750 -	3000	550 -	2200	24	21.7	47.8	654	68	8 / 12	8433 0372 12
ETP S9-4000-38CTADS	1 1/2	1000 -	4000	730 -	2950	18	21.7	47.8	654	68	8 / 12	8433 0372 55
ETP S9 Telescopic												
ETP S9-100-13CTADST	1/2	40 -	100	29 -	73	795	4.0	8.8	422	31.8	3 / 5	8433 0367 51
ETP S9-270-20CTADST	3/4	65 -	270	47 -	198	250	6.7	14.8	501	36	6 / 8	8433 0368 63
ETP S9-450-20CTADST	3/4	110 -	450	80 -	330	140	8.0	17.6	537	40.3	6 / 8	8433 0369 07
ETP S9-600-20CTADST	3/4	150 -	600	110 -	440	120	8.0	17.6	537	40.3	6 / 8	8433 0369 53
ETP S9-1000-25CTADST	1	250 -	1000	180 -	730	76	12.2	26.9	669	47	7 / 11	8433 0370 31
ETP S9-1200-25CTADST	1	300 -	1200	220 -	880	62	12.2	26.9	669	47	7 / 11	8433 0370 55
ETP S9-1500-38CTADST	1 1/2	375 -	1500	280 -	1100	47	17	37.5	669	68	8 / 12	8433 0370 66
ETP S9-2000-38CTADST	1 1/2	500 -	2000	440 -	1475	35	17	37.5	669	68	8 / 12	8433 0371 08
ETP S9-3000-38CTADST	1 1/2	750 -	3000	550 -	2200	24	21.9	48.3	750	68	8 / 12	8433 0372 24
ETP S9-4000-38CTADST	1 1/2	1000 -	4000	730 -	2950	18	21.9	48.3	750	68	8 / 12	8433 0372 62

ETV ST

- ETV ST right angle tools are ideal for hand-held and fixtured applications.
- Torque range from 1 to 1000 Nm.
- Tensor ST complements the S range by:
 - Extremely high productivity.
 - More ergonomic benefits.
 - Better operator feedback.
- The ETV ST ATEX tools are certified to be used in environments with hazardous gases and liquids.

**ETV ST**

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb				
ETV ST31										
ETV ST31-05-10	3/8	1 - 5	0.7 - 3.6	2390	1.0	2.2	381	11	39	8433 2011 21
ETV ST31-10-10	3/8	3 - 12	2.2 - 8.8	1020	1.0	2.2	381	11	39	8433 2013 66
ETV ST31-15-10	3/8	5 - 15	3.6 - 10	755	1.0	2.2	381	11	39	8433 2015 98
ETV ST31-20-10	3/8	5 - 22	3.7 -16.1	545	1.2	2.6	415	14	42	8433 2017 10
ETV ST31 Ball Retainer										
ETV ST31-05-B10	3/8	1 - 5	0.7 - 3.6	2390	1.0	2.2	381	11	39	8433 2011 87
ETV ST31-10-B10	3/8	3 - 12	2.2 - 8.8	1020	1.0	2.2	381	11	39	8433 2014 12
ETV ST31-15-B10	3/8	5 - 15	3.6 - 10	755	1.0	2.2	381	11	39	8433 2016 36
ETV ST31-20-B10	3/8	5 - 22	3.7 -16.1	545	1.2	2.6	415	14	42	8433 2018 23
ETV ST31 Female Hex										
ETV ST31-05-I06-QC	-	1 - 5	0.7 - 3.6	2390	1.0	2.2	381	11	39	8433 2011 95
ETV ST31-10-I06-QC	-	3 - 12	2.2 - 8.8	1020	1.0	2.2	381	11	39	8433 2014 21
ETV ST61										
ETV ST61-28-10	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2021 76
ETV ST61-30-10	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2023 92
ETV ST61-40-10	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2027 85
ETV ST61-50-10	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2031 58
ETV ST61-70-13	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	58	8433 2035 30
ETV ST61-100-13	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	60	8433 2039 02
ETV ST61-150-13	1/2	30 - 160	22 -117	227	3.0	6.6	536	25.5	65	8433 2042 70
ETV ST61-180-13	1/2	35 - 180	26 133	190	3.0	6.6	536	25.5	65	8433 2045 53
ETV ST61-200-20	3/4	40 -200	30 -154	185	3.0	6.6	537	27	70	8433 2046 39
ETV ST61 ATEX										
ETV ST61-28-10-ATEX	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2023 76
ETV ST61-30-10-ATEX	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2026 92
ETV ST61-40-10-ATEX	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2030 85
ETV ST61-50-10-ATEX	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2034 98
ETV ST61-70-13-ATEX	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	58	8433 2037 90
ETV ST61-100-13-ATEX	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	60	8433 2041 41
ETV ST61-150-13-ATEX	1/2	30 - 160	22 -117	230	3.0	6.6	536	25.5	65	8433 2045 20
ETV ST61-200-20-ATEX	3/4	40 -200	30 -154	185	3.0	6.6	537	27	70	8433 2048 49
ETV ST61 Ball Retainer										
ETV ST61-28-B10	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2022 32
ETV ST61-30-B10	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2025 09
ETV ST61-40-B10	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2029 13
ETV ST61-50-B10	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2032 87
ETV ST61-70-B13	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	60	8433 2036 93
ETV ST61-100-B13	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	58	8433 2040 70
ETV ST61-150-B13	1/2	30 - 160	22 - 117	230	3.0	6.6	536	25.5	65	8433 2043 62
ETV ST61-180-B13	1/2	35 - 180	26 -133	190	3.0	6.6	536	25.5	65	8433 2045 61

Continued....

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb				
ETV ST61 Flush Socket										
ETV ST61-30-FS	-	7 - 35	5 - 25	1090	1.3	2.9	440	16	32	8433 2025 50
ETV ST61-40-FS	-	8 - 40	6 - 29	1090	1.5	3.3	454	18	39	8433 2029 50
ETV ST61-50-FS	-	10 - 55	7 - 40	655	1.5	3.3	454	18	39	8433 2033 15
ETV ST61-70-FS	-	15 - 80	10 - 58	475	2.0	4.5	466	20	50	8433 2037 36
ETV ST61-100-FS	-	20 - 110	15 - 80	350	2.5	5.5	502	23	51	8433 2040 75
ETV ST61-150-FS	-	30 - 160	22 - 117	220	3.0	6.6	539	26	58	8433 2044 14
ETV ST61-180-FS	1/2	35 180	26 133	190	3.0	6.6	539	26	58	8433 2045 72
ETV ST61-200-FS	-	40 - 200	30 - 154	185	3.0	6.6	541	27	58	8433 2047 21
ETV ST61 Hold & Drive										
ETV ST61-28-HAD	-	6 - 29	4 - 21	1450	1.9	4.2	463	18.3	80	8433 2023 21
ETV ST61-30-HAD	-	7 - 35	5 - 25	1090	1.9	4.2	463	18.3	80	8433 2026 25
ETV ST61-40-HAD	-	8 - 40	6 - 29	1090	2.0	4.4	440	18.3	80	8433 2030 08
ETV ST61-50-HAD	-	10 - 55	7 - 40	655	2.0	4.4	440	18.3	80	8433 2033 92
ETV ST61-90-HAD	-	20 - 95	15 - 70	400	2.1	4.5	522	26	80	8433 2038 25
ETV ST61-120-HAD	-	30 - 130	22 - 100	350	2.6	5.5	540	26	80	8433 2041 53
ETV ST61-150-HAD	-	30 - 160	22 - 117	220	3.1	6.6	540	26	80	8433 2044 80
ETV ST61-180-HAD		35 180	26 133	190	3.1	6.6	540	26	80	8433 2045 80
ETV ST61-200-HAD	-	40 - 200	30 - 154	185	3.1	6.6	541	26	80	8433 2048 27
ETV ST61 with Barcode Scanner										
ETV ST61-28-10-BCR	3/8	6 - 29	4 - 21	1450	1.4	3.2	440	14	42	8433 2023 46
ETV ST61-28-B10-BCR	3/8	6 - 29	4 - 21	1450	1.4	3.2	440	14	42	8433 2023 55
ETV ST61-30-10-BCR	3/8	7 - 35	5 - 25	1090	1.4	3.2	440	15.5	42	8433 2026 66
ETV ST61-30-B10-BCR	3/8	7 - 35	5 - 25	1090	1.4	3.2	440	15.5	42	8433 2026 72
ETV ST61-50-10-BCR	3/8	10 - 55	7 - 40	655	1.6	3.6	454	18	47	8433 2034 67
ETV ST61-50-B10-BCR	3/8	10 - 55	7 - 40	655	1.6	3.6	454	18	47	8433 2034 75
ETV ST61-70-10-BCR	1/2	15 - 80	10 - 58	475	2.1	4.8	466	20	58	8433 2037 55
ETV ST61-70-B10-BCR	1/2	15 - 80	10 - 58	475	2.1	4.8	466	20	58	8433 2037 61
ETV ST81										
ETV ST81-50-10	3/8	16 - 55	12 - 40	1090	1.8	3.9	473	18	48	8433 2051 55
ETV ST81-70-13	1/2	20 - 80	15 - 58	790	2.3	5.0	485	20	58	8433 2053 48
ETV ST81-100-13	1/2	20 - 100	15 - 80	540	2.7	5.9	522	22.5	60	8433 2056 82
ETV ST81-150-13	1/2	30 - 160	22 - 117	380	3.2	7.0	555	26	65	8433 2060 12
ETV ST81-180-13	1/2	35 - 180	26 133	310	3.2	7.0	555	26	65	8433 2062 31
ETV ST81-200-20	3/4	40 - 200	30 - 154	300	3.2	7.0	556	27	70	8433 2063 42
ETV ST81 Ball Retainer										
ETV ST81-50-B10	3/8	16 - 55	12 - 40	1090	1.8	3.9	473	18	48	8433 2052 36
ETV ST81-70-B13	1/2	20 - 80	15 - 58	790	2.3	5.0	485	20	58	8433 2054 62
ETV ST81-100-B13	1/2	20 - 100	15 - 80	540	2.7	5.9	522	22.5	60	8433 2058 24
ETV ST81-150-B13	1/2	30 - 160	22 - 117	380	3.3	7.0	555	25.5	65	8433 2060 97
ETV ST81-180-B13	1/2	35 - 180	26 - 133	310	3.2	7.0	555	25.5	65	8433 2062 43
ETV ST81 Flush Socket										
ETV ST81-50-FS	-	16 - 55	12 - 40	1090	1.8	3.9	472	18	39	8433 2052 53
ETV ST81-70-FS	-	20 - 80	15 - 58	790	2.3	5.0	497	20	50	8433 2055 07
ETV ST81-100-FS		20 100	15 80	540	2.7	5.9	522	23	51	8433 2058 68
ETV ST81-180-FS		35 180	26 133	310	3.2	7.0	555	26	58	8433 2062 50
ETV ST81-200-FS		40 200	30 154	300	3.2	7.0	557	28	58	8433 2064 59
ETV ST81 Hold & Drive										
ETV ST81-50-HAD	-	16 - 55	12 - 40	1090	2.3	5.0	473	18.5	80	8433 2052 80
ETV ST81-90-HAD	-	20 - 95	15 - 70	665	2.4	5.1	540	26	80	8433 2056 03
ETV ST81-120-HAD	-	30 - 130	22 - 100	540	2.8	6.0	560	26	80	8433 2058 65
ETV ST81-150-HAD	-	30 - 160	22 - 117	365	3.3	7.0	560	26	80	8433 2061 81
ETV ST81-180-HAD		35 180	26 133	310	3.3	7.0	560	26	80	8433 2062 60
TV ST81-200-HAD	-	40 - 200	30 - 154	300	3.3	7.0	561	28	81	8433 2065 09
ETV ST81 Extended										
ETV ST81-70-13-L150	1/2	20 - 80	15 - 58	790	2.3	5.0	633	20	58	8433 2055 62
ETV ST81-100-13-L150	1/2	20 - 110	15 - 80	540	2.7	5.9	672	22.5	60	8433 2059 36
ETV ST81-200-20-L150	3/4	40 - 200	30 - 154	300	3.2	7.0	708	27	70	8433 2065 29
ETV ST101										
ETV-ST101-100-13	1/2	20 - 100	15 - 74	920	4.2	9.3	572	22.5	44	8433 2080 10
ETV-ST101-180-13	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25.3	47	8433 2080 52
ETV-ST101-200-20	3/4	50 - 200	37 - 147	485	4.4	9.7	602	27.5	47	8433 2080 92
ETV-ST101-270-20	3/4	65 - 270	48 - 199	380	7.3	16.1	672	32.9	62	8433 2081 23
ETV-ST101-370-20	3/4	90 - 370	66 - 273	280	7.3	16.1	672	32.9	62	8433 2082 26
ETV-ST101-450-20	3/4	110 - 450	81 - 332	230	10.6	23.4	715	54.0	76	8433 2082 81
ETV-ST101-600-25	1	150 - 600	111 - 443	151	10.6	23.4	715	54.0	76	8433 2083 56

Continued....

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb				
ETV ST101 Ball Retainer/Fan										
ETV-ST101-100-B13	1/2	20 - 100	15 - 74	920	4.2	9.3	572	23	44	8433 2080 20
ETV-ST101-100-B13-F	1/2	20 - 100	15 - 74	920	4.2	9.3	572	23	44	8433 2080 35
ETV-ST101-180-B13	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25	47	8433 2080 56
ETV-ST101-180-B13-F	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25	47	8433 2080 66
ETV ST101 Flush Socket/Fan										
ETV-ST101-100-FS	-	20 - 100	15 - 74	920	4.2	9.3	572	23	50	8433 2080 25
ETV-ST101-100-FS-F	-	20 - 100	15 - 74	920	4.2	9.3	572	23	50	8433 2080 40
ETV-ST101-180-FS	-	50 - 180	37 - 133	485	4.2	9.3	600	26	58	8433 2080 61
ETV-ST101-180-FS-F	-	50 - 180	37 - 133	485	4.2	9.3	600	26	58	8433 2080 71
ETV-ST101-200-FS	-	50 - 200	37 - 147	485	4.4	9.7	602	28	58	8433 2080 96
ETV-ST101-200-FS-F	-	50 - 200	37 - 147	485	4.4	9.7	602	28	58	8433 2081 03
ETV-ST101-270-FS	-	65 - 270	48 - 199	380	7.5	16.4	672	33	77	8433 2081 35
ETV-ST101-270-FS-F	-	65 - 270	48 - 199	380	7.5	16.5	672	33	77	8433 2081 60
ETV-ST101-370-FS	-	90 - 370	66 - 273	280	7.5	16.5	672	33	77	8433 2082 38
ETV-ST101-370-FS-F	-	90 - 370	66 - 273	280	7.5	16.5	672	33	77	8433 2082 52
ETV-ST101-450-FS	-	110 - 450	81 - 332	230	10.0	22.0	715	54	69	8433 2082 88
ETV-ST101-450-FS-F	-	110 - 450	81 - 332	230	10.0	22.0	715	54	69	8433 2082 96
ETV-ST101-600-FS	-	150 - 600	111 - 443	150	10.0	22.0	715	54	69	8433 2083 64
ETV-ST101-600-FS-F	-	150 - 600	111 - 443	150	10.0	22.0	715	54	69	8433 2083 80
ETV ST101 Fan										
ETV-ST101-100-13-F	1/2	20 - 100	15 - 74	920	4.2	9.3	572	23	44	8433 2080 30
ETV-ST101-180-13-F	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25	47	8433 2080 63
ETV-ST101-200-20-F	3/4	50 - 200	37 - 147	485	4.4	9.7	602	28	47	8433 2080 93
ETV-ST101-270-20-F	3/4	65 - 270	48 - 199	380	7.3	16.1	672	33	62	8433 2081 45
ETV-ST101-370-20-F	3/4	90 - 370	66 - 273	280	7.3	16.1	672	33	62	8433 2082 48
ETV-ST101-450-20-F	3/4	110 - 450	81 - 332	230	10.6	23.4	715	54	76	8433 2082 90
ETV-ST101-600-25-F	1	150 - 600	111 - 443	150	10.6	23.4	715	54	76	8433 2083 69
ETV ST101 Intel/Fan										
ETV-ST101-100-Intel	1/2	20 - 100	15 - 74	920	4.6	10.2	572	23	82	8433 2080 28
ETV-ST101-100-Intel-F	1/2	20 - 100	15 - 74	920	4.6	10.2	572	23	82	8433 2080 47
ETV-ST101-180-Intel	1/2	50 - 180	37 - 133	485	4.6	10.1	600	26	90	8433 2080 62
ETV-ST101-180-Intel-F	1/2	50 - 180	37 - 133	485	4.6	10.2	600	26	90	8433 2080 99
ETV-ST101-200-Intel	1/2	50 - 200	37 - 147	485	4.8	10.6	602	28	90	8433 2081 01
ETV-ST101-200-Intel-F	1/2	50 - 200	37 - 147	485	4.8	10.6	602	28	90	8433 2081 02
ETV-ST101-270-Intel	3/4	65 - 270	48 - 199	380	8.4	18.5	672	33	113	8433 2081 40
ETV-ST101-270-Intel-F	3/4	65 - 270	48 - 199	380	8.4	18.5	672	33	113	8433 2081 98
ETV-ST101-370-Intel	3/4	66 - 273	90 - 370	280	8.4	18.5	672	33	113	8433 2082 40
ETV-ST101-370-Intel-F	3/4	66 - 273	90 - 370	280	8.4	18.5	672	33	113	8433 2082 59
ETV ST101 Hold & Drive/Fan										
ETV-ST101-100-HAD	-	20 - 100	15 - 74	920	4.9	10.8	572	23	71.4	8433 2080 45
ETV-ST101-100-HAD-F	-	20 - 100	15 - 74	920	4.6	10.2	572	23	71.4	8433 2080 46
ETV-ST101-180-HAD	-	50 - 180	37 - 133	485	4.9	10.8	600	26	80.1	8433 2080 89
ETV-ST101-180-HAD-F	-	50 - 180	37 - 133	485	4.6	10.1	600	26	80.1	8433 2080 90
ETV-ST101-200-HAD	-	50 - 200	37 - 147	485	5.1	11.2	602	28	80.2	8433 2080 99
ETV-ST101-200-HAD-F	-	50 - 200	37 - 147	485	5.1	11.2	602	28	80.2	8433 2081 04
ETV-ST101-270-HAD	-	65 - 270	48 - 199	380	8.3	18.3	672	33	103.5	8433 2081 92
ETV-ST101-270-HAD-F	-	65 - 270	48 - 199	380	8.3	18.3	672	33	103.5	8433 2081 95
ETV-ST101-370-HAD	-	90 - 370	66 - 273	280	8.3	18.3	672	33	103.5	8433 2082 55
ETV-ST101-370-HAD-F	-	90 - 370	66 - 273	280	8.3	18.3	672	33	103.5	8433 2082 58
ETV-ST101-450-HAD	-	110 - 450	81 - 332	230	11.7	25.8	715	54	104.2	8433 2082 97
ETV-ST101-450-HAD-F	-	110 - 450	81 - 332	230	11.7	25.8	715	54	104.2	8433 2082 98
ETV-ST101-600-HAD	-	150 - 600	111 - 443	150	11.7	25.8	715	54	104.2	8433 2083 90
ETV-ST101-600-HAD-F	-	150 - 600	111 - 443	150	11.7	25.8	715	54	104.2	8433 2083 93
ETV ST101 Fixtured Extension/Fan										
ETV ST101-180-13-M	1/2	50 - 180	37 - 133	485	5.0	11	673	25	47	8433 2080 83
ETV ST101-180-13-M-F	1/2	50 - 180	37 - 133	485	5.0	11	673	25	47	8433 2080 86
ETV ST101-270-20-M	3/4	65 - 270	48 - 199	380	8.5	18.8	763	33	62	8433 2081 82
ETV ST101-370-20-M	3/4	90 - 370	66 - 273	280	8.5	18.8	763	33	62	8433 2082 60
ETV ST101 Torque Multiplier/Fan										
ETV ST101-600-TM	3/4	150 - 600	111 - 443	132	7.6	16.8	613	34	143	8433 2083 62
ETV-ST101-600-TM-F	3/4	150 - 600	111 - 443	132	7.6	16.8	613	34	143	8433 2083 96
ETV-ST101-1000-TM	1	250 - 1000	184 - 734	77	11.3	24.3	679	40	191	8433 2084 05
ETV-ST101-1000-TM-F	1	250 - 1000	184 - 734	77	11.3	24.3	679	40	191	8433 2084 10
ETV ST101-1500-38-TM	1 1/2	325 - 1500	240 -1100	48	19	42	719	71	233	8433 2084 70
ETV ST101-2000-38-TM	1 1/2	500 - 2000	370 -1475	35	19	42	719	71	231	8433 2084 80

ETD ST

- ETD ST inline tools.
- Torque range from 1 to 4000 Nm.
- Tensor ST complements the S range by ensuring extremely high levels of productivity and better operator feed-back.



ETD ST

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm	ft lb		kg	lb				
ETD ST31										
ETD ST31-05-10	3/8	1 - 5	1.1 - 3.6	2825	0.9	2.0	388	24	- / 1	8433 2112 42
ETD ST31-10-10	3/8	2 - 10	2.2 - 7.2	1200	1.1	2.4	388	24	- / 1	8433 2114 86
ETD ST31 Telescopic										
ETD ST31-05-10-T25	3/8	1 - 5	1.1 - 3.6	2825	0.9	2.0	437	24	- / 13	8433 2111 34
ETD ST31-10-10-T25	3/8	2 - 10	2.2 - 7.2	1200	1.1	2.4	437	24	- / 13	8433 2113 79
ETD ST31 Ball Retainer Telescopic										
ETD ST31-05-B10-T25	3/8	1 - 5	1.1 - 3.6	2825	1.1	2.4	437	24	- / 13	8433 2113 44
ETD ST31 Female Hex										
ETD ST31-05-I06	1/4	1 - 5	1.1 - 3.6	2825	0.9	2.0	350	24	- / 14	8433 2112 87
ETD ST61										
ETD ST61-15-10	3/8	4 - 16	3 - 12	2250	1.4	3.1	438	24	- / 1	8433 2120 91
ETD ST61-20-10	3/8	5 - 22	3.6 - 16	1700	1.4	3.1	438	24	- / 1	8433 2122 62
ETD ST61-30-10	3/8	6 - 35	4.4 - 25	1020	1.4	3.1	429	24	- / 1	8433 2125 06
ETD ST61-50-13	1/2	10 - 55	7.3 - 40	740	1.9	4.2	474	24	2 / 2	8433 2128 79
ETD ST61-70-13	1/2	15 - 80	12 - 58	505	2.3	5.0	491	26.5	2 / 2	8433 2132 51
ETD ST61-90-13	1/2	20 - 95	15 - 70	410	2.3	5.0	491	26.5	2 / 2	8433 2136 22
ETD ST61 Telescopic										
ETD ST61-15-10-T25	3/8	4 - 16	3 - 12	2250	1.5	3.3	477	24	2 / 2	8433 2120 43
ETD ST61-20-10-T25	3/8	5 - 20	3.6 - 15	1700	1.5	3.3	477	24	2 / 2	8433 2121 55
ETD ST61-30-10-T25	3/8	6 - 35	4.4 - 25	1020	1.5	3.3	468	24	2 / 2	8433 2123 80
ETD ST61-50-13-T25	1/2	10 - 55	7.3 - 40	740	2.1	4.6	501	24	3 / 5	8433 2127 54
ETD ST61-70-13-T25	1/2	15 - 80	12 - 58	505	2.4	5.4	518	26.5	3 / 5	8433 2131 27
ETD ST61-90-13-T25	1/2	20 - 95	15 - 70	410	2.4	5.4	518	26.5	3 / 5	8433 2134 99
ETD ST61-120-13-T25	1/2	25 - 125	19 - 95	305	2.4	5.4	518	26.5	3 / 5	8433 2138 68
ETD ST61 Female Hex										
ETD ST61-15-I06	1/4	4 - 16	3 - 12	2250	1.4	3.1	430	24	- / 1	8433 2121 36
ETD ST81										
ETD ST81-30-10	1/2	10 - 30	7 - 22	1700	1.8	4.0	450	24	- / 1	8433 2151 93
ETD ST81-50-13	1/2	16 - 50	12 - 37	1230	2.1	4.6	493	24	2 / 2	8433 2153 34
ETD ST81-70-13	1/2	15 - 70	12 - 51	880	2.5	5.5	510	26.5	2 / 2	8433 2156 03
ETD ST81-90-13	1/2	20 - 95	15 - 70	675	2.5	5.5	510	26.5	2 / 2	8433 2158 14
ETD ST81-120-13	1/2	25 - 125	19 - 91	505	2.5	5.5	510	26.5	2 / 2	8433 2160 25
ETD ST81 Telescopic										
ETD ST81-30-10-T25	3/8	10 - 30	7 - 22	1700	1.9	4.2	488	24	2 / 2	8433 2151 21
ETD ST81-50-13-T25	1/2	16 - 50	12 - 37	1230	2.3	5.0	520	24	3 / 5	8433 2152 72
ETD ST81-70-13-T25	1/2	15 - 70	12 - 51	880	2.6	5.8	538	26.5	3 / 5	8433 2154 98
ETD ST81-90-13-T25	1/2	20 - 95	15 - 70	675	2.6	5.8	538	26.5	3 / 5	8433 2157 25
ETD ST81-120-13-T25	1/2	25 - 125	19 - 91	505	2.6	5.8	538	26.5	3 / 5	8433 2159 53
ETD ST101										
ETD ST101-100-13	1/2	25 - 100	18 - 73	1043	3.2	7.0	631	30.5	-	8433 2179 00
ETD ST101-120-13	1/2	30 - 120	22 - 88	875	3.2	7.0	631	30.5	-	8433 2180 22
ETD ST101-150-20	3/4	30 - 150	22 - 109	685	4.3	9.3	706	33	-	8433 2181 36
ETD ST101-200-20	3/4	50 - 200	36 - 146	500	4.3	9.3	706	33	-	8433 2182 05
ETD ST101-300-20	3/4	70 - 300	51 - 221	345	4.3	9.3	706	33	-	8433 2182 70
ETD ST101-500-20	3/4	120 - 500	88 - 368	204	8.3	18.5	717	33	-	8433 2183 28
ETD ST101-750-25	1	150 - 750	109 - 553	143	9.1	20.3	681	45	-	8433 2184 40
ETD ST101-1000-25	1	250 - 1000	184 - 737	100	9.7	21.6	708	45	-	8433 2185 60
ETD ST101-1200-25	1	300 - 1200	220 - 885	81	12	26	787	47	-	8433 2186 10
ETD ST101-1200-25-S	1	300 - 1200	220 - 885	81	12	26	787	47	7	8433 2196 10
ETD ST101-2000-38	1 1/2	500 - 2000	370 - 1475	48	17	37	742	68	-	8433 2187 22
ETD ST101-2000-38-S	1 1/2	500 - 2000	370 - 1475	48	17	37	742	68	8	8433 2197 22
ETD ST101-4000-38	1 1/2	1000 - 4000	735 - 2950	25	22	48	823	68	-	8433 2187 40
ETD ST101-4000-38-S	1 1/2	1000 - 4000	735 - 2950	25	22	48	823	68	8	8433 2197 40

Continued....

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm	ft lb		kg	lb				
ETD ST101 Fan										
ETD ST101-100-13-F	1/2	25 - 100	18 - 73	1043	3.2	7.0	631	30.5	-	8433 2179 05
ETD ST101-120-13-F	1/2	30 - 120	22 - 88	875	3.2	7.0	631	30.5	-	8433 2180 28
ETD ST101-150-20-F	3/4	30 - 150	22 - 109	685	4.3	9.3	706	33	-	8433 2181 40
ETD ST101-200-20-F	3/4	50 - 200	36 - 146	500	4.3	9.3	706	33	-	8433 2182 10
ETD ST101-300-20-F	3/4	70 - 300	51 - 221	345	4.3	9.3	706	33	-	8433 2182 72
ETD ST101-500-20-F	3/4	120 - 500	88 - 368	204	8.3	18.5	717	33	-	8433 2183 30
ETD ST101-750-25-F	1	150 - 750	109 - 553	143	9.1	20.3	681	45	-	8433 2184 50
ETD ST101-1000-25-F	1	250 - 1000	184 - 737	100	9.7	21.6	708	45	-	8433 2185 70
ETD ST101 Telescopic										
ETD-ST101-100-13-T25	1/2	25 - 100	18 - 73	1043	3.3	7.3	656	30.5	-	8433 2179 10
ETD-ST101-120-13-T25	1/2	30 - 120	22 - 88	873	3.3	7.3	656	30.5	-	8433 2180 32
ETD-ST101-150-20-T40	3/4	30 - 150	22 - 109	685	4.4	9.7	656	30.5	-	8433 2181 46
ETD-ST101-200-20-T40	3/4	50 - 200	36 - 146	500	4.4	9.7	756	33	-	8433 2182 23
ETD-ST101-300-20-T40	3/4	70 - 300	51 - 221	345	4.4	9.7	756	33	-	8433 2182 82
ETD-ST101-500-20-T40	3/4	120 - 500	88 - 368	204	8.4	18.5	768	37	-	8433 2183 38
ETD-ST101-750-25-T50	1	150 - 750	109 - 553	143	9.2	20.3	727	45	-	8433 2184 56
ETD-ST101-1000-25-T50	1	250 - 1000	184 - 737	100	9.8	21.6	754	45	-	8433 2185 78
ETD ST101-1200-25-T50	1	300 - 1200	22 - 885	81	12	26	844	47	-	8433 2186 12
ETD ST101-1200-25-T50-S	1	300 - 1200	220 - 885	81	12	26	844	47	7	8433 2196 12
ETD ST101-2000-38-T50	1 1/2	500 - 2000	370 - 1475	48	17	37	840	68	-	8433 2187 20
ETD ST101-2000-38-T50-S	1 1/2	500 - 2000	370 - 1475	48	17	37	840	68	8	8433 2197 20
ETD ST101-4000-38-T50	1 1/2	1000 - 4000	735 - 2950	25	22	48	921	68	-	8433 2187 42
ETD ST101-4000-38-T50-S	1 1/2	1000 - 4000	735 - 2950	25	22	48	921	68	8	8433 2197 42
ETD ST101 Telescopic Fan										
ETD-ST101-100-13-T25F	1/2	25 - 100	18 - 73	1043	3.3	7.3	656	30.5	-	8433 2179 15
ETD-ST101-120-13-T25F	1/2	30 - 120	22 - 88	873	3.3	7.3	656	30.5	-	8433 2180 48
ETD-ST101-150-20-T40F	3/4	30 - 150	22 - 109	685	4.4	9.7	656	30.5	-	8433 2181 59
ETD-ST101-200-20-T40F	3/4	50 - 200	36 - 146	500	4.4	9.7	756	33	-	8433 2182 45
ETD-ST101-300-20-T40F	3/4	70 - 300	51 - 221	345	4.4	9.7	756	33	-	8433 2182 91
ETD-ST101-500-20-T40F	3/4	120 - 500	88 - 368	204	8.4	18.5	769	37	-	8433 2183 49
ETD-ST101-750-25-T50F	1	150 - 750	109 - 553	143	9.2	20.3	769	45	-	8433 2184 69
ETD-ST101-1000-25-T50F	1	250 - 1000	184 - 737	100	9.8	21.6	755	45	-	8433 2185 89

ETP ST

- ETP ST is a pistol grip model for hand-held applications.
- Torque range from 1 to 20 Nm.
- Female hex drive for bits.
- Low weight and ergonomic grip.
- Easy to access, reverse button.
- Operator friendly, feedback signals with sound and lights.



ETP ST

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb			
ETP ST32									
ETP ST32-05-10	3/8	1 - 5	0.7 - 3.6	2820	0.75	1.7	197	179	8433 2211 03
ETP ST32-05-106	1/4	1 - 5	0.7 - 3.6	2820	0.75	1.7	197	179	8433 2212 19
ETP ST32-10-10	3/8	3 - 11	2.2 - 8.0	1210	0.8	1.8	197	179	8433 2213 48
ETP ST32-10-106	1/4	3 - 11	2.2 - 8.0	1210	0.8	1.8	197	179	8433 2214 63
ETP ST32-20-106	1/4	5 - 20	3.6 - 15.0	677	0.91	2	235	179	8433 2217 11
ETP ST32-20-10	3/8	5 - 20	3.6 - 15.0	677	0.91	2	235	179	8433 2216 95
ETP ST32 with Barcode Scanner									
ETP ST32-05-10BCR	3/8	1 - 5	0.7 - 3.6	2820	0.87	2	197	205	8433 2211 13
ETP ST32-05-106BCR	1/4	1 - 5	0.7 - 3.7	2820	0.87	2	197	205	8433 2212 29
ETP ST32-10-10BCR	3/8	3 - 11	2.2 - 8.0	1210	0.92	2.1	197	205	8433 2213 58
ETP ST32-10-106BCR	1/4	3 - 11	2.2 - 8.0	1210	0.92	2.1	197	205	8433 2214 73
ETP ST32-20-106BCR	1/4	5 - 20	3.6 - 15.0	677	1.03	2.3	237	205	8433 2217 26
ETP ST32-20-10BCR	3/8	5 - 20	3.6 - 15.0	677	1.03	2.3	237	205	8433 2217 05

Pistol Grip Models

Tensor ST Rev0

ST Rev0

- Unique and patented 360° swivel with transducer.
- Ultra-compact size improves access.
- Reduced weight means less need for fixtures.
- Display on tool gives direct feedback of tightening result.
- Program selection is made directly on tool.
- Ideal for handheld application or fixtures with reduced space.
- Torque range from 60-1000 Nm.



ETP ST Rev0

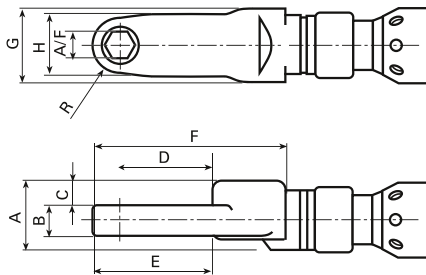
Check with your local Atlas Copco Tools representative regarding availability on your market.

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline	Ordering No.
		Nm	ft lb		kg	lb				
ETP ST101-200-20	3/4	60 - 200	45 - 145	396	4.8	10.5	303	32.5	3	8433 2302 01
ETP ST101-500-20	3/4	150 - 500	110 - 365	186	5.5	12.1	334	33.5	4	8433 2305 01
ETP ST101-750-25	1	220 - 750	160 - 550	132	5.8	12.8	353	33.5	5	8433 2307 51
ETP ST101-1000-25	1	300 - 1000	220 - 735	99	6	13.2	364	33.5	5	8433 2310 01
Model with fan										
ETP ST101-200-20-F	3/4	60 - 200	45 - 145	396	5.2	10.9	303	32.5	3	8433 2302 02
ETP ST101-500-20-F	3/4	150 - 500	110 - 365	186	5.9	12.4	334	33.5	4	8433 2305 02
ETP ST101-750-25-F	1	220 - 750	160 - 550	132	6.2	13	353	33.5	5	8433 2307 52
ETP ST101-1000-25-F	1	300 - 1000	220 - 735	99	6.4	13.4	364	33.5	5	8433 2310 02

Reaction bar not included for ETP ST101. See accessory pages.

In-Line crowfoot tools

Dimensions

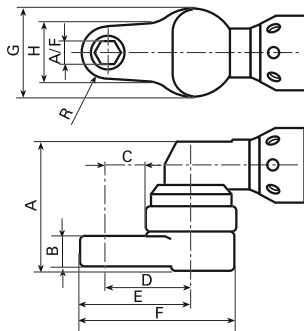


ETC ST

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
ETC ST61																	
ETC ST61-18-10-LI3	4 - 18	3 - 13	1429	1.9	4.2	523	10	36	15	12.5	36.7	59.2	82.2	35	22	10	8433 2311 11
ETC ST61-28-12-LI3	6 - 28	4 - 20	767	1.9	4.3	524	12	34	15	12.5	45.5	71	94	35	30	13	8433 2311 14
ETC ST61-20-12-LI3	4 - 20	9 - 14	1189	1.8	4.0	524	12	34	10	15	51.9	54.3	102	35	31	14.5	8433 2311 17
ETC ST61-90-21-LI3	18 - 90	13 - 66	316	4.2	9.1	684	21	47	20	16	74.5	44	158.8	64	40	20	8433 2311 44
ETC ST61-100-19-LI3	20 - 100	14 - 74	250	4.3	9.4	678	19	46	28	13.5	70	75	151.6	64	36	18	8433 2311 35
ETC ST61-100-20-LI3	20 - 100	14 - 74	256	4.3	9.4	694	24	46	20	15.5	82.5	50	169	64	45	22.5	8433 2311 50
ETC ST61-120-18-LI3	24 - 120	17 - 88	217	4.4	9.6	684	18	46	32	11.5	74.8	146.3	157.8	64	38	19	8433 2311 38
ETC ST61-150-22-LI3	30 - 150	22 - 111	197	4.4	9.7	688	22	48	33	14	77.5	84	161.5	64	40	20	8433 2311 47

Offset crowfoot tools

Dimensions

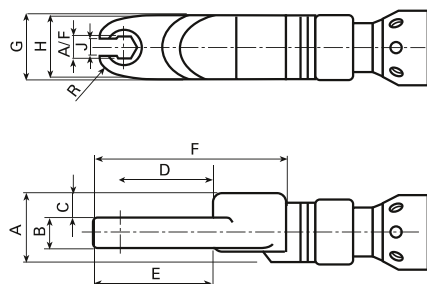


ETC ST

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	R mm	Ordering No.
	Nm	ft lb		kg	lb												
ETC ST61																	
ETC ST61-18-10-LO3	4 - 18	9 - 13	1450	1.5	3.4	469	10	60.3	15	14.55	32.8	42.8	57.8	36.5	22	10	8433 2310 09
ETC ST61-28-12-LO5	6 - 28	4 - 20	1090	2.1	4.6	533	12	69.5	15	62	84	97	117.5	44	30	13	8433 2310 12
ETC ST61-20-13-LO5	4 - 20	3 - 14	1090	1.8	4.0	534	13	57	10	71.6	93.6	108.1	128.6	44	31	14.5	8433 2310 15
ETC ST61-40-14-LO3	8 - 40	6 - 29	655	2.0	4.4	497	14	69.5	18	24.8	46.8	61.3	81.8	44	31	14.5	8433 2310 18
ETC ST61-40-3/8-LO3	8 - 40	6 - 29	655	2.2	4.8	487	3/8" SD	90.3	36	18.2	40.2	50.5	71	44	29	10.3	8433 2310 24
ETC ST61-60-16-LO3	12 - 60	9 - 44	475	2.6	5.7	512	16	77.8	24	27	51	66	88.5	48	30	15	8433 2310 27
ETC ST61-80-17-LO3	16 - 80	12 - 59	310	3.2	7.0	534	17	81	27	31.8	55.8	72.3	94.8	48	33	16.5	8433 2310 30
ETC ST61-90-21-LO5	18 - 90	13 - 66	227	4.3	9.4	665	21	89.4	20	24	132	152	178	62.5	40	20	8433 2310 45
ETC ST61-100-19-LO5	20 - 100	15 - 74	227	4.5	9.9	653	19	96.9	28	91.2	122.4	140.4	166.4	62.5	36	18	8433 2310 36
ETC ST61-140-18-LO3	28 - 140	21 - 103	190	4.1	9.0	596	18	96.6	32	32	63.2	82.2	108.2	62.5	38	19	8433 2310 39
ETC ST61-150-21-LO3	30 - 150	22 - 111	185	4.1	9.0	597	21	99.7	33	34.8	66	86	112	62.5	40	20	8433 2310 48
ETC ST101																	
ETC ST101-200-21-LO3	40 - 200	30 - 148	381	3.3	7.2	731	21	148.8	40	46.2	70.4	91.4	125.4	77	42	21	8433 2310 51
ETC ST101-200-22-LO3	40 - 200	30 - 148	381	3.3	7.2	738	22	139.8	37	26.1	76.2	98.7	132.7	77	45	22.5	8433 2310 57

In-Line tube nut tools

Dimensions

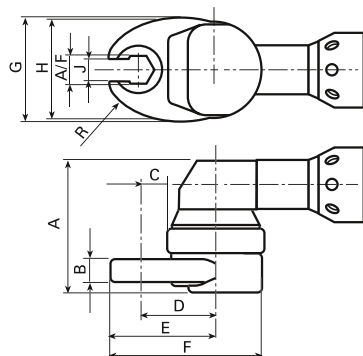


ETO ST

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	R mm	Ordering No.
	Nm	ft lb		kg	lb													
ETO ST61																		
ETO ST61-8-8-LI3	1 - 8	1 - 5	2250	1.8	4.0	499	8	32	11	12.25	22.7	21.6	60	33.5	-	6	7.8	8433 2311 53
ETO ST61-12-8-LI3	3 - 12	2 - 8	1705	1.8	4.0	499	8	32	11	12.3	27.3	21.6	60	33.5	-	6	9.8	8433 2311 56
ETO ST61-15-8-LI3	3 - 14	2 - 10	1705	1.8	4.0	505	8	32	10	13	27.3	25.4	66.6	33.5	-	6	11.5	8433 2311 59
ETO ST61-15-10-LI3	3 - 15	2 - 11	1630	1.8	4.0	506	10	32	12	11	27.9	26.3	67.8	33.5	-	8	11.5	8433 2311 62
ETO ST61-18-10-LI3	3 - 18	2 - 13	1278	1.9	4.2	522	10	36	11	14.5	34.1	31.1	81.5	38	-	8	15	8433 2311 68
ETO ST61-20-10-LI3	4 - 20	3 - 14	1278	1.9	4.2	519	10	34	14	13	31.9	29.7	78.6	38	-	-	20	8433 2311 64
ETO ST61-28-12-LI3	6 - 28	4 - 20	767	2.4	5.2	558	12	43	11	17.5	34.3	29.6	96.5	50	-	10.4	31	8433 2311 77
ETO ST61-30-12-LI3	6 - 30	4 - 22	772	2.3	5.1	544	12	43	18	14	34.3	44	83	40	-	10.4	25	8433 2311 74
ETO ST61-35-16-LI3	7 - 35	5 - 25	761	2.5	5.6	578	16	46	11	20.5	52.0	47.8	113.7	55	-	12.5	32	8433 2311 83
ETO ST61-50-19-LI3	12 - 60	9 - 44	371	3.6	8.0	638	19	46	18	17	49.3	44.6	111	59	-	14	32	8433 2311 86
ETO ST61-80-19-LI3	16 - 80	12 - 59	267	4.1	9.1	663	19	46	18	16	53.8	51.3	137.2	64	59	17	32	8433 2311 92
ETO ST61-100-21-LI3	20 - 100	15 - 74	267	4.5	9.9	674	21	46	20	16	64.4	54.7	148.9	76	-	18	32	8433 2311 95
ETO ST81																		
ETO ST81-160-24-LI3	32 - 160	24 - 118	240	4.6	10.2	691	24	46	20	16	96.4	62.4	160.4	77	-	20.5	33	8433 2311 98

Offset tube nut tools

Dimensions



ETO ST

Model	Torque		Speed r/min	Weight		Length mm	A/F mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	R mm	Ordering No.
	Nm	ft lb		kg	lb													
ETO ST31																		
ETO ST31-12-10-LO3	2 - 12	2 - 8	545	3.3	7.3	437	10	63.3	12	6.8	25.1	35.6	50.6	36.5	31	7	11.5	8433 2310 63
ETO ST31-12-10-LO5	2 - 12	2 - 8	545	3.3	7.2	473	10	61.8	10	42.7	60.9	71.4	86.4	36.5	31	7	11.5	8433 2310 66
ETO ST61																		
ETO ST61-18-12-LO3	4 - 18	3 - 13	1450	1.7	3.7	470	12	64	11	8.2	31.4	47.4	64.3	44	-	8.5	16	8433 2310 78
ETO ST61-18-12-LO5	4 - 18	3 - 13	1450	1.8	4.0	511	12	62	11	22.6	72	84.9	105.4	38	-	8	15	8433 2310 75
ETO ST61-20-12-LO3	4 - 20	3 - 14	1450	1.7	3.7	466	12	64	14	7	29	40.2	60.7	44	-	8	14	8433 2310 72
ETO ST61-28-13-LO3	6 - 28	4 - 20	1090	2.0	4.3	488	13	65	11	12.8	36.8	51.8	74.3	50	-	10.4	31	8433 2310 84
ETO ST61-33-13-LO5	7 - 33	5 - 24	1090	2.2	4.8	524	13	72.5	18	52.4	74.4	87.7	108.2	44	-	10.4	25	8433 2310 81
ETO ST61-50-17-LO5	10 - 50	7 - 37	475	2.9	6.4	552	17	80	18	66.8	90.8	106.5	129	50	-	12	31	8433 2310 87
ETO ST61-55-21-LO3	11 - 55	8 - 40	445	2.8	6.1	515	21	73.8	12	11.1	42.4	69.3	96.8	62.5	-	16	31	8433 2310 93
ETO ST61-100-21-LO3	20 - 100	15 - 74	227	4.5	9.8	588	21	97.8	20	17.9	54.6	75.8	109.8	76	-	18	32	8433 2310 99
ETO ST61-100-27-LO3	20 - 100	15 - 74	227	4.5	9.9	597	27	95.8	20	23	60	84.6	118.6	77	-	20.5	33	8433 2311 02

ETV STR

- STR Angle tools are extremely fast, compact and easy to operate.
- ESD certified.
- Easy to configure the function button.
- Front LED's give better operator feedback.
- Torque range from 2.5 to 25 Nm



ETV STR

Check with your local Atlas Copco Tools representative regarding availability on your market.

Model	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
	Nm	ft lb		kg	lb				
ETV STR21-12-10	2.5 - 12	1.9 - 8.9	1350	1.1	2.4	297	14	-	8436 6120 12
ETV STR21-25-10	5 - 25	3.7 - 18.5	1000	1.2	2.6	297	14	-	8436 6120 25

ETD STR

- STR Straight tools are ideal for hand-held applications and fixtured applications.
- Torque range from 1.4 to 16 Nm.
- Front light guide is integrated.
- Push-to-start mechanism.



ETD STR

Check with your local Atlas Copco Tools representative regarding availability on your market.

Model	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
	Nm	ft lb		kg	lb				
ETD STR21-07-I06-PS	1.5 - 7	1.0 - 5.2	2090	0.9	1.9	259	24	-	8436 6220 07
ETD SRT21-16-I06-PS	3.5 - 16	2.6 - 11.8	1460	1.0	2.2	276	24	-	8436 6220 16

ETP STR

- The STR61 is available in two models, Standard tool and Cable on Top tool.
- New D-grip handle gives more robustness, safety and less heat transfer.
- Speed increased by up to 45% compared to Tensor S range.
- Weight reduced by up to 45% compared to Tensor S pistol grip range.
- Torque range from 5 to 125 Nm.
- Easy to mount tool accessories such as scanner and parameter selector.
- Optional operation handle is available.



Check with your local Atlas Copco Tools representative regarding availability on your market.

Model	Torque		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
	Nm	ft lb		kg	lb				
ETP STR61-20-10	5 - 22	3.7 - 16.2	2100	1.3	2.87	244	24	-	8436 6360 20
ETP STR61-30-10	6 - 32	4.4 - 23.5	1530	1.3	2.87	244	24	-	8436 6360 30
ETP STR61-50-13	10 - 55	7.4 - 40.6	820	1.7	3.75	282	24	-	8436 6360 50
ETP STR61-70-13	14 - 80	10.3 - 59	560	2.0	4.41	298	26.5	-	8436 6360 70
ETP STR61-90-13	20 - 95	14.7 - 70.4	450	2.0	4.41	298	26.5	-	8436 6360 90
ETP STR61-120-13	24 - 125	17.7 - 89.4	380	2.0	4.41	298	26.5	-	8436 6360 12
COT-version									
ETP STR61-20-10 COT	5 - 22	3.7 - 16.2	2100	1.7	3.75	296	24	-	8436 6368 20
ETP STR61-30-10 COT	6 - 32	4.4 - 23.5	1530	1.7	3.75	296	24	-	8436 6368 30
ETP STR61-50-13 COT	10 - 55	7.4 - 40.6	820	2.1	4.63	334	24	-	8436 6368 50
ETP STR61-70-13 COT	14 - 80	10.3 - 59	560	2.4	5.29	350	26.5	-	8436 6368 70
ETP STR61-90-13 COT	20 - 95	14.7 - 70.4	450	2.4	5.29	350	26.5	-	8436 6368 90
ETP STR61-120-13 COT	24 - 125	17.7 - 89.4	380	2.4	5.29	350	26.5	-	8436 6368 12

Optional Accessories

Tensor ST/STR

Model	Ordering No.
Tool cable	
2 m	4220 2636 02
3 m	4220 2636 03
5 m	4220 2636 05
7 m	4220 2636 07
10 m	4220 2636 10
15 m	4220 2636 15
Cables with 90 degrees connector	
2 m	4220 3891 02
3 m	4220 3891 03
5 m	4220 3891 05
7 m	4220 3891 07
10 m	4220 3891 10
15 m	4221 3891 15
Spiral cable (length/stretched length)	
3 m / 4 m	4220 2757 03
7 m / 8 m	4220 2757 07
10 m / 12 m	4220 2757 10
Cable protection	4220 2977 90



ST/STR Cable



ST/STR Cable protection



ST/STR Spiral cable



S/ST/STR Cable with 90 degrees connector

Tensor S/ST/STR

Model	Ordering No.
Extension cable	
5 m	4220 1007 05
10 m	4220 1007 10
15 m	4220 1007 15
Extension cables for fixtured applications	
5 m	4220 1563 05
10 m	4220 1563 10
15 m	4220 1563 15

Tensor S

Model	Ordering No.
Tool cable flat	
2 m	4220 3606 02
3 m	4220 3606 03
5 m	4220 3606 05
7 m	4220 3606 07
10 m	4220 3606 10
15 m	4220 3606 15
Cables with 90 degrees connector	
5 m	4220 1560 05
10 m	4220 1560 10
15 m	4220 1560 15
Cable with loop for high flexibility	
5 m	4220 1845 05
10 m	4220 1845 10
15 m	4220 1845 15



S Cable with 90 degrees connector



S Cable flat



S Cable with loop

Tensor DS

Model	Ordering No.
Tool cable	
2 m	4220 4380 02
3 m	4220 4380 03
5 m	4220 4380 05
7 m	4220 4380 07
10 m	4220 4380 10
15 m	4220 4380 15
Extension cable	
5 m	4220 2047 05
10 m	4220 2047 10
15 m	4220 2047 15



DS Tool cable

Optional Accessories

Tool extensions

Model	Length	Ordering No.
ETD/ETV DS4/S4	150	4220 1131 80
ETD DS7/S7 20-30	150	4220 1131 80
ETV DS7/S7 30-50	150	4220 1131 80
ETD/ETV DS4/S4	100	4220 1131 86
ETD S7 50-120	150	4220 1132 80
ETV S7 70-200	150	4220 1132 80
ETF S7 50-100	150	4220 1132 80
ETV S9 50	150	4220 1132 80
ETD/ETV DS7 70-200	150	4220 1714 80
ETD S9 200	150	4220 1132 81
ETD S9 200	100	4220 1132 82
ETD/ETV DS9/S9 270-370	150	4220 1585 80
ETD DS9/S9 450-600	150	4220 1585 85
ETV ST31 15-20	150	4220 2903 80
ETV ST61 20-30	150	4220 2903 96
ETV ST61 40-50	150	4220 2903 95
ETV ST61 70	150	4221 2903 97
ETV ST61 100-200	150	4222 2903 91



Tool extension



Supported extensions

Supported extensions (~154 mm)

Tensor ST/STR	Tensor S/DS	Ordering No.
STR21, ETV ST31 20, ST61 28-30	ETV S4/S7/DS2/DS7 20-30	4220 3868 80
ETV ST61/ST81 40-50	ETV S7/S9/DS7/DS9 40-50	4220 2209 81
ETV ST61/ST81 70	ETV S7/S9/DS7/DS9 70	4220 2596 81
ETV ST61/81/101 150-180		4220 4125 90
ETV ST81/101 200		4220 4125 91
	ETV S9 200	4220 1960 82

Reaction plate for fixturing

Model	Ordering No.
ETV ST61 30, ETV ST61/81 200	4220 1677 91
ETV ST61 40-50	4220 1677 93
ETV ST61/81 70	4220 1677 95
ETV ST61/81 100	4220 1678 97
ETV ST61/81 150-180	4220 1678 90
ETV ST10 180	4220 1677 99
ETV ST10 200-600	Included
ETP ST32 20 106BCR	4220 3491 00



Reaction plate

Covers for standard sockets

Model	Ordering No
ETV S4/ST 28	4220 3154 03
ETV S4/ST 30	4220 3154 04
ETV S7/S9/ST 100	4220 3154 05
ETV S7/S9/ST 150-180	4220 3154 06
ETV S7/S9/ST 40-50	4220 1995 05
ETV S7/S9/ST 70	4220 1993 03
ETV S9/ST 200	4220 3154 07
ETV S9/ST 270-370	4220 3154 08
ETD S7 50-120 CTADS, ETP/ETF S7/S9 50-120,	4220 3251 00
ETD S9 100, ETD ST61/81 50-120	
ETD S4 02/04 IO6/10CTADS,	4220 3251 01
ETD S4 10 IO6/10CTADS/B10CTADS,	
ETD S4 20 10CTADS, ETD ST61/ST81 15-30	
ETD S7 20-30	4220 3251 02
ETD S7 50-140 CTADST	4220 3251 02
ETV ST31 20, STR21	4220 3154 03



Cover for standard sockets

Optional Accessories

Lever Tensor DS / S / ST / STR

Model	Ordering No.
Lever, DS/S	4220 1642 80
Lever, ST	4220 3511 81
Spoon lever, STR21	4220 4338 83
Extended lever, DS/S	4220 1642 85
Extended lever, ST	4220 3511 85
Lock-off lever, DS/S	4220 2356 80
Lock-off lever, ST	4220 3511 83



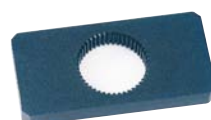
Lock-off lever

Reaction bars and mounting brackets

Number	Spline type	Type	L / W / H	Ordering No.
1	—	Bracket	100/60/8	4220 1029 00
2	Spline type 2	Bracket	70/41/14	4210 2134 02
3		Triangular	73/72/14	4220 2137 02
4		Bar	270/35/14	4220 1903 00
5	Spline type 3	Bracket	100/50/12	4210 2219 03
6		Triangular	82/80/12	4220 2137 03
7		Bar	400/29/12	4210 2219 80
8	Spline type 6	Bracket	200/100/15	4220 1200 00
9		Triangular	112/109/15	4220 2137 06
10		Bar	560/80/15	4220 1200 01
11	Spline type 7	Bracket	250/150/20	4220 1445 00
12	Spline type 8	Bracket	250/160/20	4220 1972 00
13	—	Bracket	100/60/8	4220 1029 01
14	—	Bracket	100/60/8	4220 1029 02
For model				
ETD ST10 120		Bracket	150/100/16	4220 3677 00
ETD ST10 200/300/500		Bracket	200/150/16	4220 3677 01
ETD ST10 750/1000		Bracket	200/150/20	4220 3677 02
ETP STR61 20/30		Bar	250/15/8	4220 4495 00
ETP STR61 50/70/90/120		Bar	270/35/14	4220 1903 00



Reaction bar



Mounting bracket



Triangular

Mounting bracket is included for some tool models.

Please match the number from the table with the tool tables.

Suspension yokes

Model	Type	Assembly	Ordering No.
ETD/ETV DS9	Horizontal	Motor	4220 1418 96
ETD/ETV DS4/DS7	Horizontal	Motor	4220 0987 85
ETD/ETV S4/S7/S9/ DS4/DS7/DS9	Vertical	Handle	4220 1417 80
ETD/ETV S9	Horizontal	Motor	4220 1418 93
ETP S4/S7/DS4/DS7	Horizontal	Motor	4220 1154 90
ETD/ETV S4	Fixed	Motor front nut	4220 1675 86
ETD/ETV S4/S7	Horizontal	Motor	4220 0987 90
ETV/ETD ST31/61	Horizontal	Motor	4220 2657 90
ETV/ETD ST31/61	Fixed	Motor	4220 2843 92
ETV/ETD ST81	Horizontal	Motor	4220 0987 90
ETV/ETD ST81	Fixed	Motor	4220 2843 91
ETV/ETD ST31/61,	Vertical	Handle	4220 1417 85
ETD ST10 120-300,	Vertical	Planetary gear	4220 1418 91
ETV ST10 270-600			
ETD ST10 500-1000	Vertical	Planetary gear	4220 1418 90
ETV ST10 100-200	Vertical	Planetary gear	4220 1418 92
ETP DS9 350/500	Swivelling		4210 3088 86
ETP DS9 750	Swivelling		4210 3088 83
ETP DS9 1500	Swivelling		4210 3088 81
ETP STR61	tool upside down		4220 3037 00
ETP STR61	fixed, one side		4220 4334 00
ETP STR61	fixed, both sides		4220 4399 80
ETP STR61 20/30/50	Swivelling		4220 4381 80
ETP STR61 70/90/120	Swivelling		4220 4394 80
ETV ST101 ^a	Horizontal	Motor	4220 3930 90
ETP ST101	Swivelling		4220 4075 90
ETP ST101 BCR ^b	Swivelling		4220 4075 90
STR21	For rear		4220 4410 80
STR21	For front		4220 4409 80

^a Not telescopic

^b To be used if barcode scanner is mounted.



Suspension yokes

Optional Accessories

Dual trigger for open end

Model	ETV	ETD	Ordering No.
ST61-S	ST31, ST61 05-50	ST31, ST61 15-30	4220 3186 90
ST61-L	ST61 70-200	ST61 50-120	4220 3186 91
ST81-S	ST81 50	ST81 30	4220 3186 92
ST81-L	ST81 70-180	ST81 50-120	4220 3186 93
ST101	ST10 100-1000	ST10 100-1000	4220 3186 96

Dual trigger for open end 135 deg.

Model	ETV	ETD	Ordering No.
ST61-S	ST31, ST61 28-50	ST31, ST61 15-30	4220 3311 90
ST61-L	ST61 70-200	ST61 50-120	4220 3311 91
ST81-S	ST81 50	ST81 30	4220 3311 92
ST81-L	ST81 70-200	ST81 50-120	4220 3311 93
ST101	ST10 100-1000	ST10 100-1000	4220 3311 94

Fixtured extensions

Model	For ext + nut Ordering No.	For nut only Ordering No.
ETV ST10 100, 150, 180, ETD ST10 120	4220 3571 90	Included
ETD ST10 150, 200, 300	4220 3572 90	
ETD ST10 500	4220 3573 90	Included

Protective covers

Model	Ordering No.
ETV ST31 5-15	4220 2744 05
ETV ST31/ST61 20-30, ETV ST31 200	4220 2744 03
ETV ST61 40-50/ST81 50	4220 2744 02
ETV ST61 70/ST81 70	4220 2744 04
ETP ST31-05	4220 2744 06
ETP ST31-10	4220 2744 07
ETV ST81/ST10 150-180	4220 2744 10
ETV ST81/ST10 100	4220 2744 09
ETP ST101 (included)	4220 4299 00

Torque multiplier (reaction bar included)

Model	Max. torque Nm	Gear ratio	Square in	Square out	Ordering No.
T-Mult 120	30	4.54	3/8	1/2	8431 0453 53
T-Mult 200	50	4.62	3/8	3/4	8433 0310 07
T-Mult 400	100	4.10	1/2	3/4	8431 0493 65
T-Mult 500	30	16.11	3/8	3/4	8433 0310 28
T-Mult 800	45	18.50	1/2	1	8433 0311 81
T-Mult 1000	250	4.00	3/4	1	8433 0312 16
T-Mult 1500	72	21.10	1/2	1	8433 0312 20

Operator handle for ETP STR61

Model	Ordering No.
ETP STR61	4220 4487 80

Support handle

Model	Ordering No.
ETP DS9 350/500/750/1500	4220 4374 90
ETP ST31/32 5-10	4220 3517 80
ETP STR61	4220 4343 80
ETD STR21	4220 4347 80
ETP ST101 200/500 (included)	4220 4001 84
ETP ST101 750/1000 (included)	4220 4001 83

Tool holder

Model	Ordering No.
ETP ST32	4220 3584 80



Lever trigger top



Lever trigger 135 deg.



Fixtured extension



Protective cover Tensor ST



Operator handle



Support handle



Tool holder

Optional Accessories

Barcode scanner

Model	ETV	ETD	Ordering No.
ST61-S	ST31, ST61 28-50	ST31, ST61 15-30	8433 0615 10
ST61-L	ST61 70-200	ST61 50-120	8433 0615 20
ST81-S	ST81 50	ST81 30	8433 0615 30
ST81-L	ST81 70-200	ST81 50-120	8433 0615 40
ETP STR61			8433 0999 90
ETP ST101			8433 0615 50



Barcode scanner

Parameter set selector

Model	ETV	ETD	Ordering No.
ST61-S	ST31, ST61 28-50	ST31, ST61 15-30	8433 0616 05
ST61-L	ST61 70-200	ST61 50-120	8433 0616 15
ST81-S	ST81 50	ST81 30	8433 0616 25
ST81-L	ST81 70-200	ST81 50-120	8433 0616 35
ST101	ST10	ST10	8433 0616 45
ETP STR61			8433 0999 91



Parameter set selector

I/O device module

Model	ETV	ETD	Ordering No.
ST61-S	ST31, ST61 28-50	ST31, ST61 15-30	8433 0617 12
ST61-L	ST61 70-200	ST61 50-120	8433 0617 22
ST81-S	ST81 50	ST81 30	8433 0617 32
ST81-L	ST81 70-200	ST81 50-120	8433 0617 42
ST101	ST10	ST10	8433 0617 52



I/O device module

Protection

Model	Ordering No.
Scanner protection ST61-S >50, ST31/ST32	4220 2762 10
Selector protection	4220 2917 06
I/O device protection	4220 2917 06



Scanner protection

Front button

Model	ETV	ETD	Ordering No.
ST61-S	ST31, ST61 28-50	ST31, ST61 15-30	4220 3184 90
ST61-L	ST61 70-200	ST61 50-120	4220 3184 91
ST81-S	ST81 50	ST81 30	4220 3184 92
ST81-L	ST81 70-200	ST81 50-120	4220 3184 93
ST101	ST10	ST10	4220 3184 94



Front button

Adjustable headlights

Model	ETV	ETD	Ordering No.
ST61-S	ST31, ST61 28-50	ST31, ST61 15-30	4220 3292 94
ST61-L	ST61 70-200	ST61 50-120	4220 3292 95
ST81-S	ST81 50	ST81 30	4220 3292 96
ST81-L	ST81 70-100	ST81 50-120	4220 3292 97
ST101	ST10	-	4220 3292 98



Adjustable headlights

Telescopic front part

Model	Ordering No.
ETP ST101 500	4210 3781 81
ETP ST101 700-1000	4210 3788 81

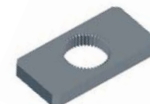
Optional Accessories

Reaction bars

Spline dia mm	Square drive size mm/in	CC distance mm	Ordering No.
Steel bar			
Spline 1	268/36/18		4210 1798 01
Spline 2	270/35/10		4220 1903 00
Spline 3	400/56/12		4210 2219 80
Spline 4	500/62/15		4210 2183 80
Spline 5	500/62/15		4210 2726 80
Spline 6	560/80/15		4220 1200 01
Spline 9	500/85/20		4210 3899 80
Ø 26 mm	270/34/8		4220 3491 00
Square steel bracket			
Spline 3	100/50/12		4210 2219 03
Spline 4	125/65/16		4210 2183 01
Spline 5	125/65/16		4210 2726 01
Spline 6	200/100/15		4220 1200 00
Spline 7	250/150/20		4220 1445 00
Spline 8	250/160/20		4220 1972 91
Spline 9	150/85/20		4210 3899 01
Ø 24 mm	100/60/8		4220 1029 00
Ø 26 mm	100/60/8		4220 1029 02
Ø 28 mm	100/60/8		4220 1029 01
Triangular steel bracket			
Spline 2	73/72/14		4220 2137 02
Spline 3	82/80/15		4220 2137 03
Spline 6	112/109/15		4220 2137 06
Spline 7	150/145/20		4220 2137 16
Sliding drive reaction bar			
Spline 3	1/2"	70-120	4210 4481 83
Spline 3	3/4"	70-120	4210 4481 63
Spline 4	3/4"	76-126	4210 4481 84
Spline 4	3/4"	82-218	4210 4616 84
Spline 5	1"	80-125	4210 4481 85
Spline 5	1"	82-218	4210 4616 85
Spline 9	1"	80-130	4210 4481 89
Spline 9	1	80-280	4210 4616 89
S-Type reaction bar			
Spline 3	110/18/12		4210 4480 03
Spline 4	120/22/15		4210 4480 04
Spline 5	130/25/15		4210 4480 05
Spline 6	125/25/15		4210 4480 06
Spline 8	200/65/20		4210 4480 08
Spline 9	160/40/20		4210 4480 09
L-Type aluminum bar			
Spline 3	266x300/29/15		4210 2219 08
Spline 4	144x150/42/15		4210 2183 08
Straight aluminum bar			
Spline 3	L = 400		4210 2219 01
Extended sliding drive reaction bar			
Spline 5	1"	68-112	4210 4498 80
Extended sliding tube reaction bar			
Spline 5	1"	68-112	4210 4498 82
Bracket stepped			
Spline 1	70/36/13		4210 1798 02
Spline 2	70/41/14		4210 2134 02



Steel bar



Square steel bracket



Triangular steel bracket



Sliding drive reaction bar



S-Type reaction bar



L-Type aluminum bar



Straight aluminum bar



Extended sliding drive reaction bar



Extended sliding tube reaction bar



Bracket stepped

Error-proofing through intuitive control of the assembly process

Atlas Copco advanced controllers and software provide intuitive monitoring and control of tightening operations performed using Atlas Copco electric assembly tools. Assembly process control and quality assurance is made easy by advanced control functions. The system guides the operator through the assembly process, avoiding mistakes that can result in costly quality problems.

Power Focus 4000

The Power Focus range controls tools from the Tensor S, STB, STR, ST, SL, DS and ETX families. With its built-in functions, it also participates in controlling the station or line segment. The Power Focus and associated software packages provide easy-to-understand information for everyone, from operators to plant managers.

The Power Focus is based on standard hardware and software components which, when combined, will fulfill all demands, from the most basic stand-alone installation to full integration into the factory network. The modules fit together using the “plug-and-play” concept.

Assembly process control and quality assurance is made easy by advanced control functions. On receipt of assembly information, the Power Focus automatically selects the correct tightening sequence and parameters. The operator is guided through the process, avoiding mistakes that can result in costly quality problems.

Programming software ToolsTalk PF

ToolsTalk PF is the user-friendly tool that enables you to communicate with your Power Focus tool controller. It makes programming and process analysis of a tightening station simple.

Tensor DS/DL Drives

Tensor DS nutrunners and DL screwdrivers have been developed to give you the benefits of controlled tightening and advanced electric systems throughout your assembly operations.

Their simplicity, reliability, outstanding flexibility and accuracy, can significantly reduce your assembly costs and improve overall productivity.

A suitable choice for quality critical applications, the Tensor DS and DL series have a proven track record in many industries, including aerospace, automotive, construction, white goods and electronics.



General Functionality Level / RBU Runs Tool Types	DS / DL			Power Focus 4000			
	Box DS	Basic DS / DL	Advanced DS / DL	DS DS	Bronze S / ST / SL	Silver DS / S / ST / SL	Gold DS / S / ST / SL
Tensor controllers							
Compact hardware	x	x	x	x	x	x	x
LED display		x	x	x	x	x	x
6 button keyboard		x	x	x	x	x	x
Graph hardware						x	x
LCD display						x	x
Full keyboard						x	x
Functionality							
Number of tools	1	1	1	1	1	1	1
Number of Psets	1	1	10	64	64	250	250
Batch count	x	x	x	x	x	x	x
Open end spanner	x	x	x	x	x	x	x
Quick programming	x	x	x	x	x	x	x
Cross thread / Rehit detection	x	x	x	x	x	x	x
Tool service indicator	x	x	x	x	x	x	x
Autoset	x	x	x	x	x	x	x
Lock on reject	x	x	x	x	x	x	x
Line control			x	x		x	x
Transducer torque traceability					x	x	x
Tightening status storage (default)				5 000	5 000	5 000	5 000
Tightening data storage (default)					5 000	5 000	5 000
MultiStages				8		8	8
Trace storage					8	8	8
Real time statistics					x	x	x
SPC					x	x	x
RBU				x	x	x	x
Bar code reading				x		x	x
ID input to select Pset				x		x	x
Job function				x		x	x
Number of jobs (default)				32		99	99
ID input to select job				x		x	x
Logic Configurator (4000 only)				x		x	x
Cell programming				x		x	x
Label printer (via Open protocol)				x		x	x
Cell Job							x
Strategies and options							
Two stage/Quick step/Ergoramp	x	x	x	x	x	x	x
Torque control and angle monitoring	x	x	x	x	x	x	x
DS control	x	x	x	x		x	x
Auto zoom step	x	x	x	x	x	x	x
CW / CCW operation	x	x	x	x	x	x	x
Rundown angle monitoring	x	x	x	x	x	x	x
Self tap / PVT monitoring	x	x	x	x	x	x	x
Reverse angle	x	x	x	x	x	x	x
Rotate spindle	x	x	x	x	x	x	x
Click wrench input					x	x	x
Torque and angle control					x	x	x
Yield control (PF 4000 only)							x
Angle control and torque monitoring					x	x	x
StepSync, SynchroTork (PF 4000 only)							x
Home position							x
Snug gradient							x
I/O							
RS232 programming port	x	x	x	x	x	x	x
USB port (PF 4000 only)				x	x	x	x
Discrete I/O	x	x	x	x	x	x	x
Remote start	x	x	x	x	x	x	x
Socket selector (optional)			x	x	x	x	x
RE Alarm (optional)			x	x	x	x	x
Parallel printer port				x	x	x	x
I/O Expander (optional)				x	x	x	x
Expandable I/O (up to 124 in / 124 out)				x	x	x	x
Operator ID card input				x		x	x
Fieldbus card				Optional		Optional	Optional
RS232 bar code reader port				x		x	x
Easily programmed fieldbus protocol				x		x	x
Ethernet port for remote prog				x		x	x
Ethernet port for data collection				OK-NOK		x	x
Protocols							
Open protocol serial				x	x	x	x
Open protocol Siemens 3964R serial				x	x	x	x
Open protocol Ethernet				x		x	x
Open protocol sessions				x		x	x

Drive functionality overview

Used to control and monitor tools, the DS and DL drives provide a high degree of functionality with minimal setup and configuration. The DS drive runs with the Tensor DS nutrunners and the DL drive is used together with Tensor DL screwdrivers.

Tensor DS and DL reduce costs

The Tensor DS and DL systems reduce costs by offering three major benefits:

Elimination of assembly problems

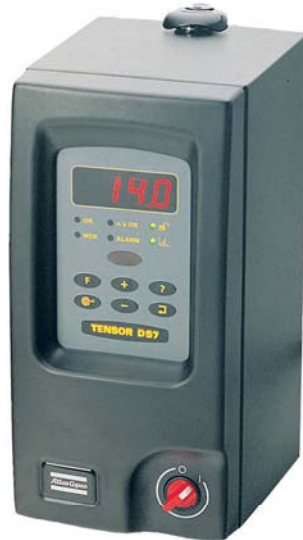
Through its control and monitoring functionality, Tensor DS/DL will bring you closer to zero-fault production. By alerting the operator to the most common errors before they continue down the line, the system ensures high-quality end products, and saves you a fortune in re-working costs.

One tool for several applications

The Tensor DS/DL can be set with up to 10 different torque settings making it possible to use the same tool for several applications. This reduces operating costs and allows a cleaner design of the work area.

Tensor DS/DL improves productivity

Tensor DS/DL tools shorten the cycle times through high speed and power. The controller calculates and monitors torque through the highly accurate DigiTork algorithm. The tools are equipped with angle encoders monitoring the rundown angle as well as the tightening angle. Combining torque and angle monitoring you will detect if something is wrong with the joint, guaranteeing quality.



DS Drive



DL Drive

Model	Ordering No.
DL Drive	
D303-DL Basic	8433 4850 48
D313-DL Advanced	8433 4850 33
DS Drive	
D32-DS4 Box	8433 0820 66
D302-DS4 Basic	8433 0820 48
D312-DS4 Advanced	8433 0820 33
D32-DS7 Box	8433 0822 66
D302-DS7 Basic	8433 0822 48
D312-DS7 Advanced	8433 0822 33
D32-DS9 Box	8433 0824 66
D302-DS9 Basic	8433 0824 48
D312-DS9 Advanced	8433 0824 33

Advanced process control and monitoring functions

Power Focus is a modular range of controllers, with full flexibility, designed for applications ranging from single spindle hand-held operations to fixtured multiple nutrunning systems. Advanced process control and monitoring functions make it easy to view and collect data using the Internet infrastructure.

- Choose your controller – either Graph or Compact.
- Choose your RBU software key to run a tool.
- Choose from various ways to use the controller, as a stand-alone or in a network.
- Run many different kinds of tool, standard, FS, crowfoot or open tools.
- Realtime statistics analysis.
- Error-proofing solution.
- Advanced tightening control and/or monitoring method.
- Trace view.
- Logic configurator.
- Can handle different level of communication.

The Power Focus 4000 is available in two versions, Compact and Graph. The difference between them is the user interface, where the Graph features the color display and a full keyboard.

Compact

This version offers full functionality at a lower cost, but requires a PC with the ToolsTalk PF software for process set-up.

Graph

With the Graph hardware, you have full stand-alone programming possibilities. When networked, the Graph can function as a programming terminal for other Power Focus units.

RBU cuts downtime

Atlas Copco's patented Rapid Backup Unit (RBU) concept transfers functionality to a non-configured hardware unit, ensuring that hardware can easily be upgraded should functionality requirements change. The RBU also acts as back-up for programming and configuration. If a change of hardware is required, just fit the RBU to the new hardware, switch on the unit and you're ready. All programming and network configurations are transferred in seconds. The RBU cuts downtime to a minimum.



Compact



Graph

Power Focus 4000 for Tensor DS, S, ST, ETX, STB and STR.

Model	Ordering No.
Power Focus 4000 W 07	
PF 4000-G	8433 6100 00
PF 4000-C	8433 6100 05
PF 4000-G-DN	8433 6140 00
PF 4000-C-DN	8433 6140 05
PF 4000-C-FLN	8433 6141 05
PF 4000-G-PB	8433 6142 00
PF 4000-C-PB	8433 6142 05
PF 4000-G-IB	8433 6145 00
PF 4000-C-IB	8433 6145 05
PF 4000-G-MB	8433 6147 00
PF 4000-C-MB	8433 6147 05
PF 4000-G-EIP	8433 6149 00
PF 4000-C-EIP	8433 6149 05
Power Focus 4000 W 10	
PF 4000-G-HW	8433 7100 00
PF 4000-C-HW	8433 7100 05
PF 4000-G-DN-HW	8433 7140 00
PF 4000-C-DN-HW	8433 7140 05
PF 4000-G-FLN-HW	8433 7141 00
PF 4000-C-FLN-HW	8433 7141 05
PF 4000-G-PB-HW	8433 7142 00
PF 4000-C-PB-HW	8433 7142 05
PF 4000-G-CC-HW	8433 7143 00
PF 4000-C-CC-HW	8433 7143 05
PF 4000-G-IB-HW	8433 7145 00
PF 4000-C-IB-HW	8433 7145 05
PF 4000-G-MB-HW	8433 7147 00
PF 4000-C-MB-HW	8433 7147 05
PF 4000-G-PN-HW	8433 7148 00
PF 4000-C-PN-HW	8433 7148 05
PF 4000-G-EIP-HW	8433 7149 00
PF 4000-C-EIP-HW	8433 7149 05

Controller functionality

Hardware key	Ordering No.
RBU-Bronze	8433 0010 10
RBU-Silver	8433 0015 20
RBU-Gold	8433 0020 20
RBU-DS	8433 0005 10
RBU-X	8433 0080 20

Power Focus 4002 for Tensor SL.

Model	Ordering No.
Power Focus 4002 W 07	
PF 4002-G-HW	8433 3100 00
PF 4002-C-HW	8433 3100 05
PF 4002-G-DN-HW	8433 3140 00
PF 4002-C-DN-HW	8433 3140 05
PF 4002-G-PB-HW	8433 3142 00
PF 4002-C-PB-HW	8433 3142 05
PF 4002-G-IB-HW	8433 3145 00
PF 4002-C-IB-HW	8433 3145 05
PF 4002-G-MB-HW	8433 3147 00
PF 4002-C-MB-HW	8433 3147 05
PF 4002-G-PN-HW	8433 3148 00
PF 4002-C-PN-HW	8433 3148 05
PF 4002-G-EIP-HW	8433 3149 00
PF 4002-C-EIP-HW	8433 3149 05

IRC Focus for STWrench and Tensor STB

Model	Ordering No.
IRC Focus W 07	
IRC FOCUS-B-G-HW	8433 6500 00
IRC FOCUS-B-C-HW	8433 6500 02
IRC FOCUS-B-G-DN-HW	8433 6500 04
IRC FOCUS-B-C-DN-HW	8433 6500 06
IRC FOCUS-B-G-FLN-HW	8433 6500 08
IRC FOCUS-B-C-FLN-HW	8433 6500 10
IRC FOCUS-B-G-PB-HW	8433 6500 12
IRC FOCUS-B-C-PB-HW	8433 6500 14
IRC FOCUS-B-G-IB-HW	8433 6500 16
IRC FOCUS-B-C-IB-HW	8433 6500 18
IRC FOCUS-B-G-MB-HW	8433 6500 20
IRC FOCUS-B-C-MB-HW	8433 6500 22
IRC FOCUS-B-G-PN-HW	8433 6500 24
IRC FOCUS-B-C-PN-HW	8433 6500 26
IRC FOCUS-B-G-EIP-HW	8433 6500 28
IRC FOCUS-B-C-EIP-HW	8433 6500 30



RBU

Spindle synchronization

All Atlas Copco tightening spindles are easily fixtured using our standard range of Express mechanics. The StepSync and SynchroTork tightening strategies give various levels of spindle synchronization during clamp force build-up. Communication between the controllers in the cell or group takes place via the I/O bus. Depending on user-interface preferences and budget, the SyncMaster may be a Compact or Graph hardware unit.

MultiStage functionality reduces relaxation

The inherent "MultiStage" functionality permits the combination of up to eight different parameter sets in a linear sequence. The entire process is activated with just one press of the tool trigger. For joint conditioning, fasteners can be run down to a pre-torque value, backed off by a configurable number of degrees and then re-tightened to the desired final torque. This advanced functionality is ideal for reducing relaxation in a joint.

Cell networking gives process security

The Cell concept allows for Ethernet networking without a PC, and offers overall station process control at a lower cost. A Cell consists of up to 20 units, where



Tensor spindles are easily fixtured using our standard range of Express mechanics. The control strategies StepSync and SynchroTork synchronize Tensor spindles to provide consistent clamp forces over the entire component mating face.

the Master controls the process of all Members in the tightening station, and communicates process data as a single interface point.

Advanced statistics for better quality control

Data is continuously collected and analyzed, and can be presented as statistics on, e.g., the Graph color display. Diagnostics and statistical alarms such as

SPC monitor charts, and capability (Cpk) alarms highlight changes and trends in the assembly process. Effective information and SPC are good motivators, and encourage operators to adopt a proactive approach to monitoring the quality of the assembly process.

Integrated ways to communicate**Controller level**

Realtime communication over I/O bus independent of the factory net.

Fieldbus level

The common industry field buses are supported, for example Profibus, Ethernet IP and FL-Net.

Cell level

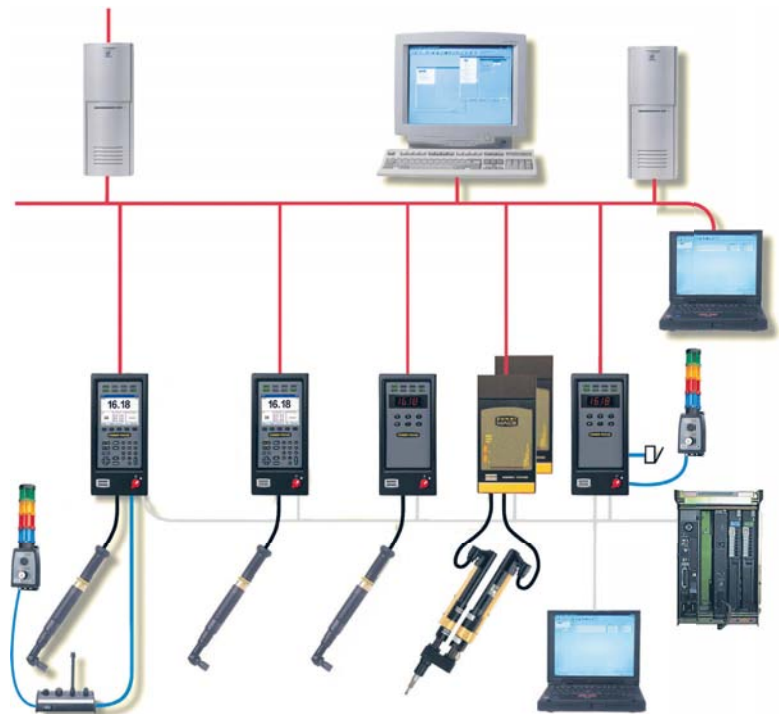
The cell is a key concept in the system design. It is a cluster of max. 20 controllers networked together via built-in Ethernet TCP/IP. No need for use of a PC.

Factory level

Power Focus can be integrated with the factory Ethernet network which enables easy access and reporting anywhere in the plant.

Internet level

Worldwide communication is a matter of giving access through a factory network gateway to Power Focus.



Discrete I/O, I/O bus, Fieldbus, Compact, Graph, PC, access router, host database.

ToolsTalk PF

ToolsTalk PF provides tightening parameter set-up, fieldbus and Logic Configurator set-up, plus customized reporting and presentation of statistics. With a simple click, results can be exported into other commercial file formats.

ToolsTalk communicates with the PowerFocus via Ethernet, USB or serial RS232. If you are networking from your office desk, ToolsTalk PF allows for quickest access to the different control units connected.

**ToolsTalk Power Focus**

Model	Ordering No.
ToolsTalk PF W10	
1-user license	8092 1190 01
5-user license	8092 1190 05
10-user license	8092 1190 10
Plant license	8092 1190 99
ToolsTalk PF W07	
1-user license	8092 1183 01
5-user license	8092 1183 05
10-user license	8092 1183 10
Plant license	8092 1183 99
ToolsTalk PF W05 upgrade to W07	
1-user license	8092 1183 31
5-user license	8092 1183 35
10-user license	8092 1183 40
Plant license	8092 1183 49
ToolsTalk PF W05 upgrade to W10	
1-user license	8092 1190 51
5-user license	8092 1190 55
10-user license	8092 1190 60
Plant license	8092 1190 69
ToolsTalk PF W07 upgrade to W10	
1-user license	8092 1190 31
5-user license	8092 1190 35
10-user license	8092 1190 40
Plant license	8092 1190 49

Model	Ordering No.
ToolsTalk DS/DL	
Swedish	8092 1138 60
English	8092 1138 62
German	8092 1138 64
French	8092 1138 66
Spanish	8092 1138 68
Italian	8092 1138 70
Power Focus controller software	
PF World 07 sticker, (12 package)	4222 0820 20
PF World 10 sticker, (12 package)	4222 0820 25

Software Functionality Overview

General		Power Focus 4000/4002/IRC			
Functionality Level	DS	Bronze	Silver	Gold	
Runs Tool Types	DS	S / ST / SL	DS / S / ST / SL	DS / S / ST / SL	
ToolsTalk PF					
ToolsTalk Functionality					
Serial connection	x	x	x	x	
Off line programming	x	x	x	x	
Real time analysis	x	x	x	x	
Tightening database to PC (Excel)	x	x	x	x	
Tightening simulation	x	x	x	x	
Operator monitor	x	x	x	x	
Picture monitor	x	x	x	x	
Fieldbus quick set-up	x		x	x	
Job monitor	x		x	x	
Bar code reader configuration	x		x	x	
Ethernet connection	x		x	x	
Remote programming	x		x	x	
View tightening traces		x	x	x	
Overlay traces		x	x	x	
Logic Configurator (PF 4000 only)	x		x	x	
Multiple identifiers			x	x	
Tensor ST sound files			x	x	

QIF error-proofing stations reduce costs and ensure quality

As part of Atlas Copco's Quality Integrated Fastening (QIF) concept we offer complete error proofing stations. These are created by combining our advanced tightening equipment with standard Atlas Copco hardware and software components. Integrated error-proofing assembly stations help you avoid costly reworking, raise productivity and ensure quality on your production line.

Atlas Copco is one of the few suppliers able to offer a range of products comprehensive enough to build a fully integrated assembly station. QIF error-proofing stations offer the following benefits:

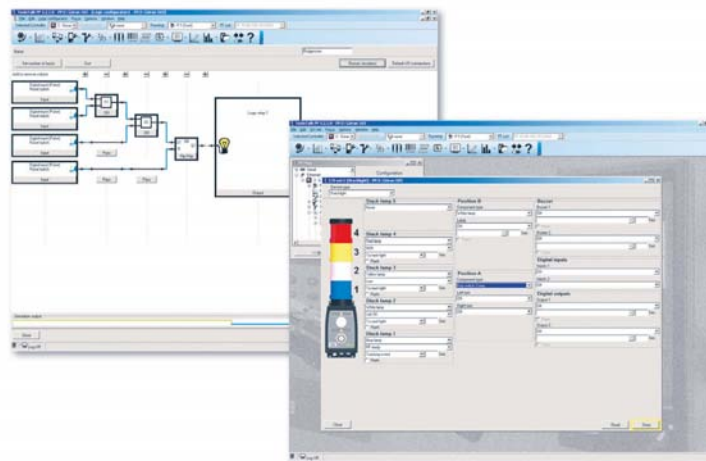
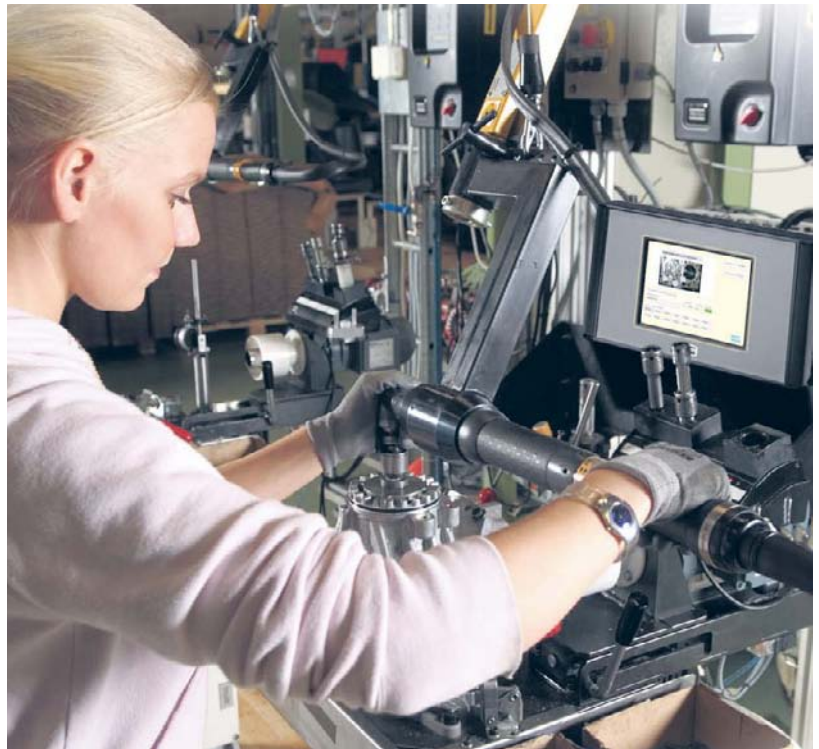
- Increased product quality.
- Standard modules reduce project and set-up time.
- Fast line re-balancing with standard interfaces.
- Higher productivity due to improved operator guidance.
- Full after sales support from Atlas Copco.

Atlas Copco is one of a few suppliers able to offer such a large range of products to build a fully integrated assembly station.

Fast, easy set-up

Most QIF products can easily be connected to Power Focus and Pulsor Focus using one I/O Bus cable, and to Power MACS using one MACS I/O cable. They can be configured using standard Atlas Copco software ToolsTalk. This user-friendly PC software makes programming very simple.

A key factor that makes QIF products so well accepted by users is their logical and intuitive set-up. By combining QIF products with ToolsTalk Logic Configurator, it is possible to make logical diagrams with inputs and outputs that further enhance the flexibility of the products.



A complete offering

Feedback

Higher quality can be achieved by giving audio and/or visual feedback about the assembly process to the operators. Time and costs can be saved by reducing reworking and avoiding faulty products leaving the production line. For feedback use Atlas Copco's Stacklights.



ESL-04 Standard and ESL-04 Compact

Variance support

Productive assembly lines demand efficient operators. These should be supported with appropriate tools providing feedback for all actions. This will save time changing program settings and when performing reworkings in station. For variance support use Atlas Copco's Selectors and Operator Panels.



Selector 4, selector for Large Sockets and Operator Panel Advanced

Operator guidance

Flexible assembly lines demand different products to be assembled at the same station. It is possible to reduce the number of decisions taken by the operator by providing direct instructions on a screen with photos and texts of the assembly process. For operator guidance use Atlas Copco's HMI's (Human Machine Interface).



MaxiDisplay 19 and MiniDisplay MD-01

Process monitoring

Storing production data for documentation and further analysis is a key factor for traceability. Process improvements can be made by analyzing data. This contributes to increasing quality and boosting productivity by minimizing the number of recalls. For process monitoring use Atlas Copco's ToolsNet 4000.



ComNode 2 Touch with ToolsNet 4000

Reducing the cost of peripherals



Selectors

Socket and bit selectors minimize the risk of errors relating to product diversity by automatically selecting correct torque according to the socket or bit selected.

Stacklights

Lamps and a buzzer give clear feedback and a key switch can be used to acknowledge errors. This arrangement enables you to detect errors at the workstation and correct them in station instead of further down the line.

Operator Panels

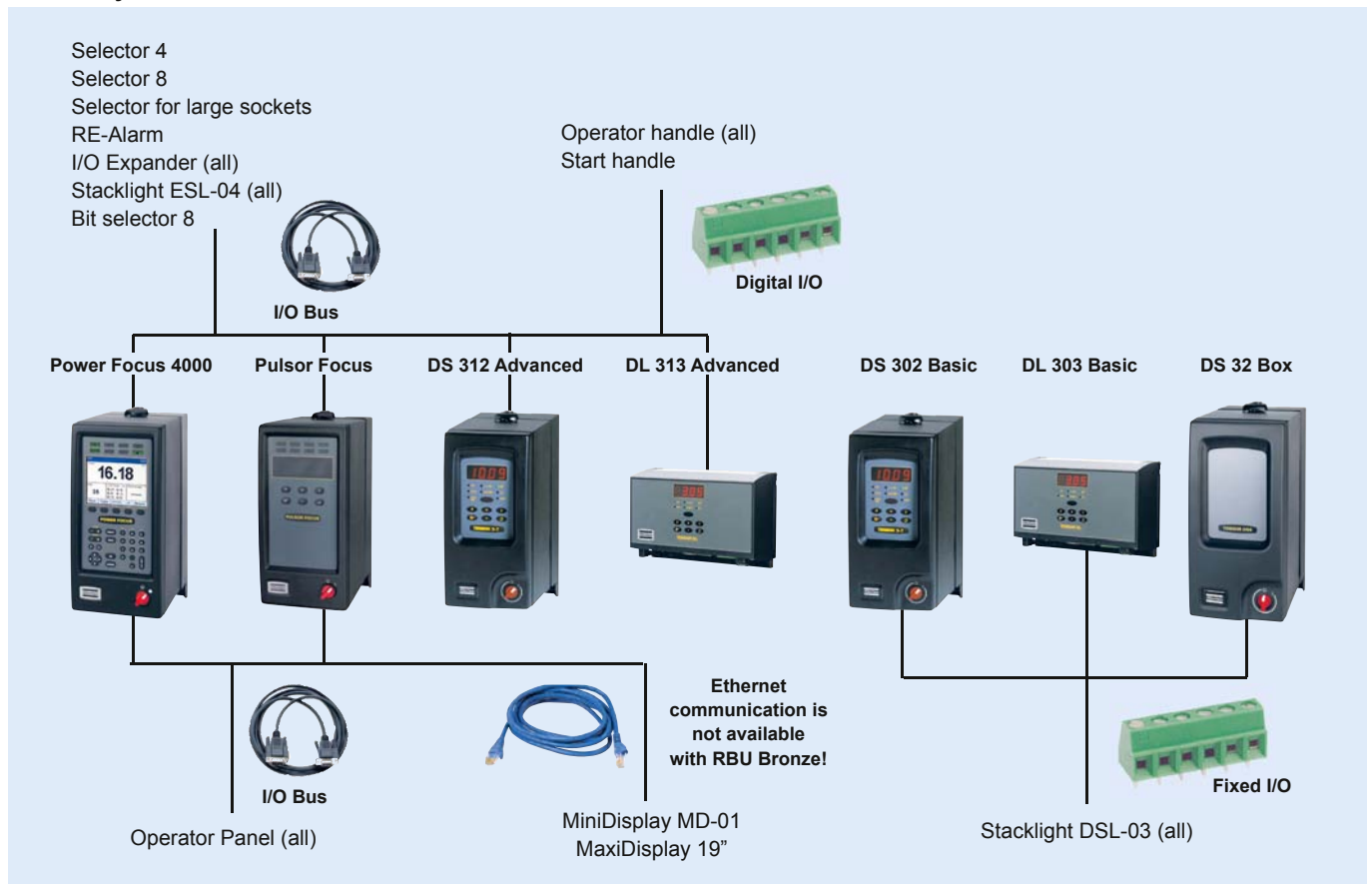
Command buttons and integrated lamps provide a highly effective operator interface and enable manual selection of various program settings.

HMI's

Mini/Maxi display with Operator Guidance software shows photo of the product on the screen, clearly indicating joints to be tightened and giving build instructions.



Modularity



Model	Ordering No.
Remote Start	
Selector 4	8433 0610 04
Selector 8	8433 0610 08
Selector for large sockets	8433 0610 44
Rotary selector	8433 0606 15
Bit selector 8	8433 0612 08
double ^a	4222 0933 92
single ^b	4222 0933 91
RE-Alarm	8433 0560 03

^a Only compatible with Bit selector.

^b Only compatible with Socket selector 4 and 8.

I/O Expanders	
Open	8433 0564 39
Sealed	8433 0564 45

Stacklights	
ESL-04 Standard	8433 0570 13
Rotating red	8433 0570 30
Rotating yellow	8433 0570 35
Siren	8433 0570 40
Compact	8433 0570 16
DSL-03 with push button	8433 0570 10
with blanking plugs	8433 0570 11

Operator panel	
Advanced	8433 0565 00
Basic	8433 0565 10

HMI's (Human Machine Interface)	
MiniDisplay MD-01,	8435 3070 00
incl. Operator Guidance	
MaxiDisplay 19,	8435 3070 10
incl. Operator Guidance	

ComNode 2	
Compact	8433 2711 00
Compact with ATS,	8433 2711 01
10 spindle license	
Compact with I/O card	8433 2711 03
Touch	8433 2711 10
Touch with ATS,	8433 2711 11
10 spindle license	
Touch with I/O card	8433 2711 13

Communication	
WEAFlex - LAN	8433 1010 00

Remote Start	
Operator handle (ball joint/handle)	
- front/plastic	8435 3030 00
- front/rubber	8435 3030 01
- rear/plastic	8435 3030 02
- rear/rubber	8435 3030 03
Start handle	4220 1391 91

Cables	
Accessory cables	
I/O bus cable 0.5 m	4222 0917 00
1 m	4222 0917 01
3 m	4222 0917 03
5 m	4222 0917 05
10 m	4222 0917 10
15 m	4222 0917 15
I/O Termination plug	4222 0443 00

M12-4 pin	
Female - Open end 5 m	4243 0166 05
Male - Female 5 m	4243 0167 05
10 m	4243 0167 10
15 m	4243 0167 15

WEAFlex (cable 1 m)	
Power24vDC, M12-5 pin	4243 0286 80
EthernetRJ45, M12-4 pin	4222 1540 01

Model	Ordering No.
Cables Ethernet	
Crossed 0.5 m	4222 0682 00
1 m	4222 0682 01
3 m	4222 0682 03
5 m	4222 0682 05
10 m	4222 0682 10
15 m	4222 0682 15
25 m	4222 0682 25
50 m	4222 0682 50
Straight 0.5 m	4222 0754 00
1 m	4222 0754 01
3 m	4222 0754 03
5 m	4222 0754 05
10 m	4222 0754 10
15 m	4222 0754 15
25 m	4222 0754 25
50 m	4222 0754 50



I/O expander sealed



RE-Alarm



Operator panel Basic



Bit selector



Stacklight DSL-03



ComNode compact



Operator handle



WEAFlex



Start handle

ToolsNet 4000 is a data collection and process improvement software application for use with Power Focus, Pulsor Focus, PowerMACS and STWrench. Combined, these products provide total control of the assembly process, providing a platform for quality improvements. Historical data, statistics and capability indexes can be accessed at any time via a standard web browser such as Microsoft Internet Explorer. ToolsNet is the complete assembly process improvement tool.

Traceability minimizes recall costs

The production can be followed in real-time or monitored through different reports such as the Result List report or Product List report which provides information of every tightening related to a specified period or product. In the event of warranty recalls, the result database provides access to critical information which can easily minimize the extent of any recall leading to an overnight pay-back on your investment.



The right solution for your needs

ToolsNet 4000 is divided in three different packages to cover different needs.

Reports

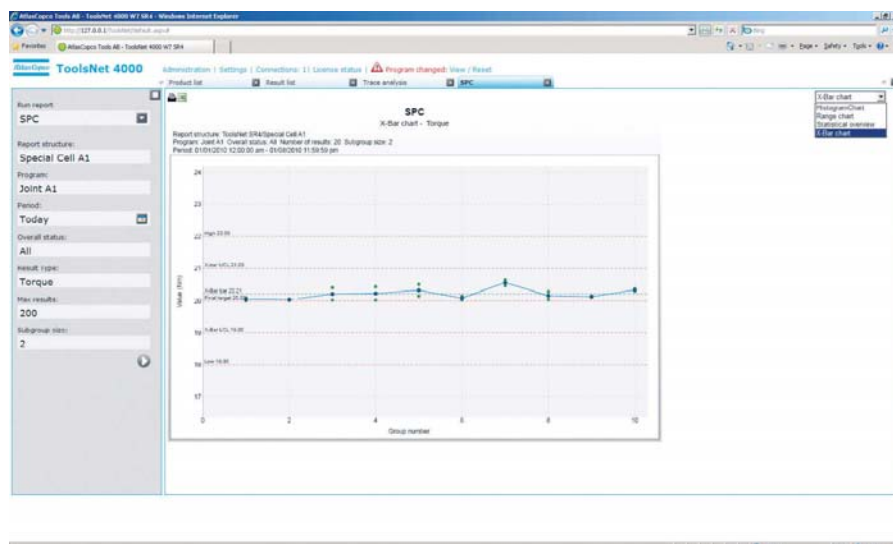
Take the first step in traceability by collecting all tightening results and storing them in a secure database system. Legal documentation and process improvements can be handled by running several pre-formatted reports specially designed to save user time and effort.

Alert

Extend the usage of available information by collecting all events as they occur on the assembly line, in real time. Generate reports to identify events that are happening often and trigger emails to the right personnel based on event distribution rules you create. Be always on the alert for quality variation and workstations that require preventative or corrective tool maintenance.

History

Full traceability of programming changes. Any change that may be done on the controller will be reported to the ToolsNet database. Super users can approve or not approve the change and later on cross check which products were built with detailed information.



Software	Ordering No.
ToolsNet W05	
5 Spindle license	8092 1166 05
10 Spindle license	8092 1166 10
25 Spindle license	8092 1166 25
50 Spindle license	8092 1166 50
75 Spindle license	8092 1166 75
125 Spindle license	8092 1166 80
200 Spindle license	8092 1166 85
350 Spindle license	8092 1166 90
500 Spindle license	8092 1166 95
Event Monitor W05	
5 Spindle license	8092 1167 05
10 Spindle license	8092 1167 10
25 Spindle license	8092 1167 25
50 Spindle license	8092 1167 50
75 Spindle license	8092 1167 75
125 Spindle license	8092 1167 80
200 Spindle license	8092 1167 85
350 Spindle license	8092 1167 90
500 Spindle license	8092 1167 95
Factory Overview W05	
5 Spindle license	8092 1168 05
10 Spindle license	8092 1168 10
25 Spindle license	8092 1168 25
50 Spindle license	8092 1168 50
75 Spindle license	8092 1168 75
125 Spindle license	8092 1168 80
200 Spindle license	8092 1168 85
350 Spindle license	8092 1168 90
500 Spindle license	8092 1168 95
Program History W05	
05 Spindle license	8092 1175 05
10 Spindle license	8092 1175 10
25 Spindle license	8092 1175 25
50 Spindle license	8092 1175 50
125 Spindle license	8092 1175 80
200 Spindle license	8092 1175 85
350 Spindle license	8092 1175 90
500 Spindle license	8092 1175 95
E-mail Module	
5 Spindle license	8092 1178 05
10 Spindle license	8092 1178 10
25 Spindle license	8092 1178 25
50 Spindle license	8092 1178 50
75 Spindle license	8092 1178 75
125 Spindle license	8092 1178 80
200 Spindle license	8092 1178 85
350 Spindle license	8092 1178 90
500 Spindle license	8092 1178 95

Software	Ordering No.	Upgrade Ordering No.
ToolsNet 4000 - Reports		Upgrade¹
5 Spindle license	8092 1410 05	8092 1510 05
10 Spindle license	8092 1410 10	8092 1510 10
25 Spindle license	8092 1410 25	8092 1510 25
50 Spindle license	8092 1410 50	8092 1510 50
75 Spindle license	8092 1410 75	8092 1510 75
125 Spindle license	8092 1410 80	8092 1510 80
200 Spindle license	8092 1410 85	8092 1510 85
350 Spindle license	8092 1410 90	8092 1510 90
500 Spindle license	8092 1410 95	8092 1510 95
Plant Spindle license	8092 1410 00	8092 1510 00
ToolsNet 4000 - Alerts		Upgrade²
5 Spindle license	8092 1411 05	8092 1511 05
10 Spindle license	8092 1411 10	8092 1511 10
25 Spindle license	8092 1411 25	8092 1511 25
50 Spindle license	8092 1411 50	8092 1511 50
75 Spindle license	8092 1411 75	8092 1511 75
125 Spindle license	8092 1411 80	8092 1511 80
200 Spindle license	8092 1411 85	8092 1511 85
350 Spindle license	8092 1411 90	8092 1511 90
500 Spindle license	8092 1411 95	8092 1511 95
Plant Spindle license	8092 1411 00	8092 1511 00
ToolsNet 4000 - History		Upgrade³
5 Spindle license	8092 1412 05	8092 1512 05
10 Spindle license	8092 1412 10	8092 1512 10
25 Spindle license	8092 1412 25	8092 1512 25
50 Spindle license	8092 1412 50	8092 1512 50
75 Spindle license	8092 1412 75	8092 1512 75
125 Spindle license	8092 1412 80	8092 1512 80
200 Spindle license	8092 1412 85	8092 1512 85
350 Spindle license	8092 1412 90	8092 1512 90
500 Spindle license	8092 1412 95	8092 1512 95
Plant Spindle license	8092 1412 00	8092 1512 00
Operator guidance		
1 User license	8092 1185 01	

¹ ToolsNet 3000 W5 is required

² ToolsNet 3000 W5, Event Monitor W5 and E-mail module are required.

³ ToolsNet 3000 W5, Event Monitor W5, E-Mail module and Program History are required.



Software

Tool Accessories

Contents

Page

Torque arms	
Parallel SM A1	140
Parallel SM A2	141
Parallel SM S2	142
Linear arm SML	143
Telescopic reaction arm SMC	144
MicroTorque GHP	145
Torque arm accessories	146
Bits and power sockets	150

SM A1 – Parallel arm for 50 Nm

Atlas Copco torque arm SM A1 is an excellent means of assistance when using hand-held straight or pistol grip tools e.g. screwdrivers, nutrunners, thread inserts etc.

The torque arms in the SM A1 series are made for heavy duty applications where the tool torque is limited to 50 Nm.

Tool weight should be in the range 1 to 4 kg. In order to balance the tool weight in a proper and durable way the arms are equipped with gas spring cylinders.

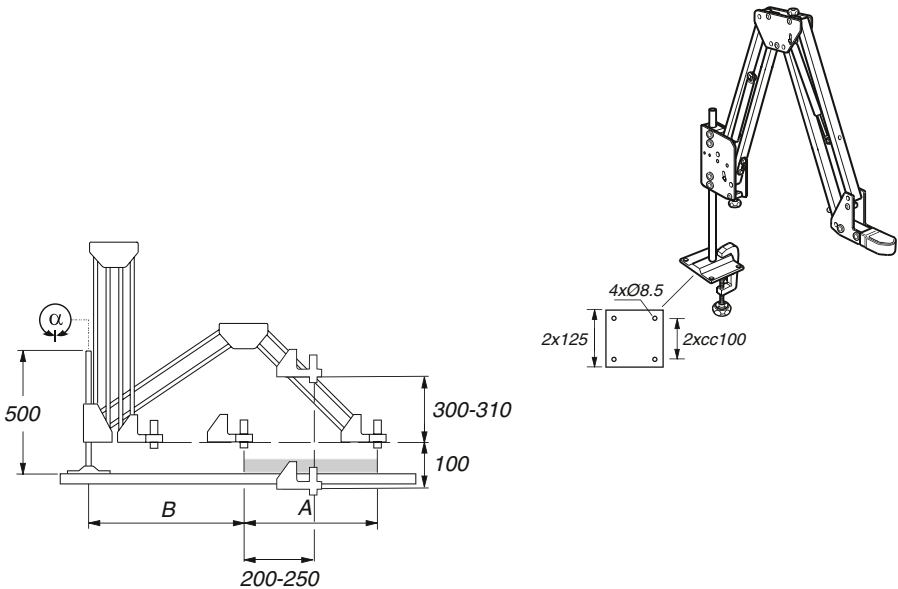
A table stand is included as standard. Tool holder and table stand clamp have to be ordered separately.



Model	Tool weight		Tool torque		Tool diameter mm	Ordering No.
	kg	lb	Nm	ft lb		
SM A1-400-2	1 - 2	2.2 - 4.4	50	36.88	40-60	8202 9000 15
SM A1-400-3	2 - 3	4.4 - 6.6	50	36.88	40-60	8202 9000 16
SM A1-400-4	2.5 - 4	5.5 - 8.8	50	36.88	40-60	8202 9000 19
SM A1-500-2	1 - 2	2.2 - 4.4	50	36.88	40-60	8202 9000 17
SM A1-500-3	1.5 - 3	3.3 - 6.6	50	36.88	40-60	8202 9000 18

Dimensions

Model	Working range		
	A mm	B mm	alfa
SM A1-400-2	0-400	600	360°
SM A1-400-3	0-400	600	360°
SM A1-400-4	0-400	600	360°
SM A1-500-2	0-500	700	360°
SM A1-500-3	0-500	700	360°



SM A2 – Parallel arm for max 20 Nm

Atlas Copco torque arm SM A2 is an excellent means of assistance when using hand-held straight or pistol grip tools e.g. screwdrivers, nutrunners, thread inserts etc.

Torque arms in the SM A2 series are recommended when there is a lot of equipment on the working bench and the space is limited. The SM A2 is exceptionally easy to position and handle. The design is intended for heavy duty operations over a long period of time. Tool torque should not exceed 20 Nm.

Tool weight should be in the range 0 to 2 kg for SM A2-300 and 0 to 2.5 kg for SM A2-400.

A table stand is included as standard. Tool holder and table stand clamp have to be ordered separately.

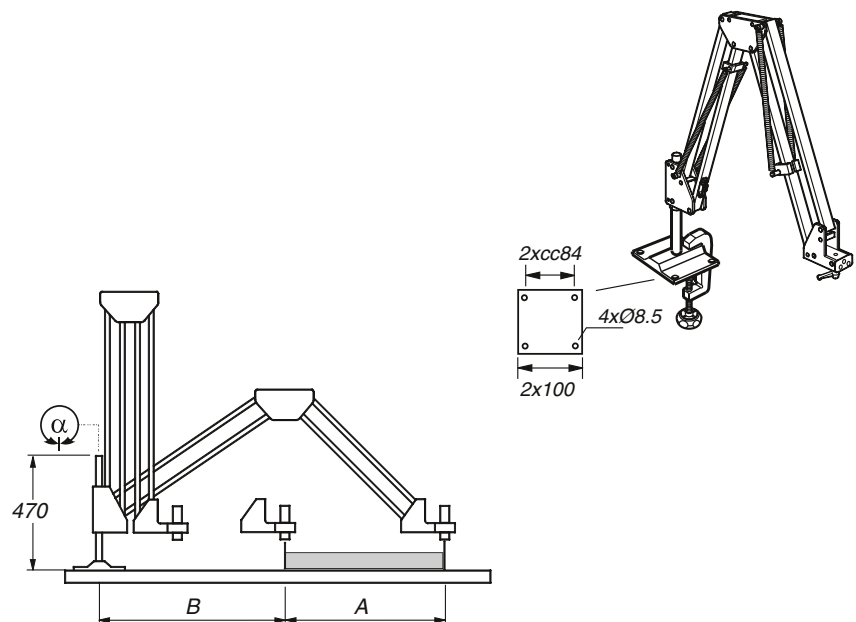


Model	Tool weight Max.		Tool torque		Tool diameter mm	Ordering No.
	kg	lb	Nm	ft lb		
SM A2-Complete ^a	2	4.4	20	14.75	25-40	8202 9000 20
SM A2-300	2	4.4	20	14.75	25-50	8202 9000 10
SM A2-400	2.5	5.5	20	14.75	25-50	8202 9000 11

^a SM A2-Complete includes adjustable vertical tool holder Ø 25-40 mm and a heavy duty 22-82 mm table stand clamp.

Dimensions

Model	Working range		
	A mm	B mm	alfa
SM A2-Complete	0-300	400	360°
SM A2-300	0-300	400	360°



SM S2 – Parallel arm for max 20 Nm

Atlas Copco torque arm SM S2 is an excellent means of assistance when using hand-held straight or pistol grip tools e.g. screwdrivers, nutrunners, thread inserts etc.

Torque arm SM S2 is recommended when there is a lot of free space and a large working area is required. The SM S2 is exceptionally easy to position and handle. The design is intended for heavy duty operations over a long period of time. The open angle between jib and arm should not exceed 120°.

Tool weights should be in the range 0 to 2.5 kg. In order to handle weights in the range 1-2.5 kg special springs are supplied as standard.

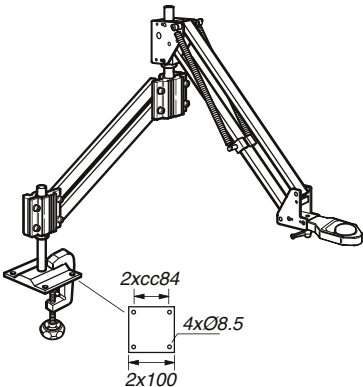
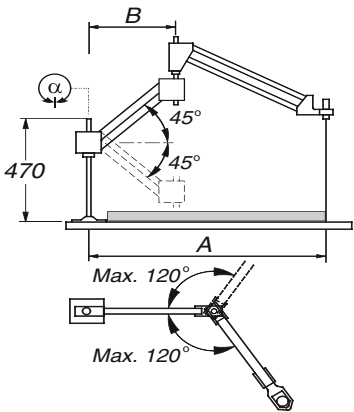
A table stand is included as standard. Tool holder and table stand clamp have to be ordered separately.



Model	Tool weight Max.		Tool torque		Tool diameter mm	Ordering No.
	kg	lb	Nm	ft lb		
SM S2-750	2.5	5.5	20	14.75	25-50	8202 9000 12
SM S2-900	2.5	5.5	20	14.75	25-50	8202 9000 21

Dimensions

Model	Working range		alfa
	A mm	B mm	
SM S2-750	0-750	410	360°
SM S2-900	0-900	410	360°



SML – Linear torque arms

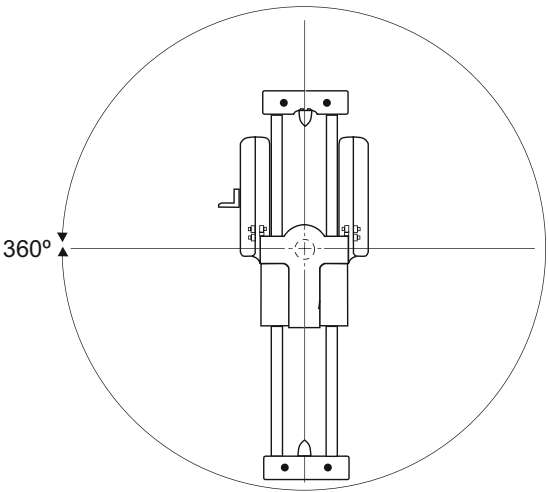
By mounting your assembly tool on a SM-Linear torque arm the payback begins immediately and continues throughout the duration of your assembly process. All components are available as standard, allowing fast delivery and quick installation. Each model comes complete with appropriate balancing system to support the weight of the tool, and the flexibility offered by movement in 3-axis allows the user to ease the arm effortlessly around the workstation.



Model	Tool weight		Weight		Max torque		Horizontal stroke mm	Vertical stroke mm	Height mm	Ordering No.
	kg	lb	kg	lb	Nm	ft lb				
SML 10	1.1	2.4	3.1	6.8	10	7	300	380	722.5	8202 9003 00
SML 40	3.1	6.8	5.1	11.2	40	29.5	300	370	707	8202 9003 01
SML 80	7.4	16.3	8.9	19.6	80	59	360	390	910	8202 9003 08
SML 150	6.9	15.2	17.5	38.6	150	111	330	520	1012	8202 9003 02
SML 300	11.9	26.2	19.2	42.3	300	221	330	520	1012	8202 9003 03
SML 500	22.1	48.7	27.0	59.5	500	369	480	500	1752	8202 9003 04
SML 1000	40.0	88.2	34.0	75.0	1000	738	480	500	1752	8202 9003 05

Dimensions

Model	Working area alfa
SML 10-1000	360°



SMC – Telescopic reaction arm

Atlas Copco's range of SMC arms offers outstanding ergonomics and flexibility to help ease your production, as well as lowering health and safety related costs.

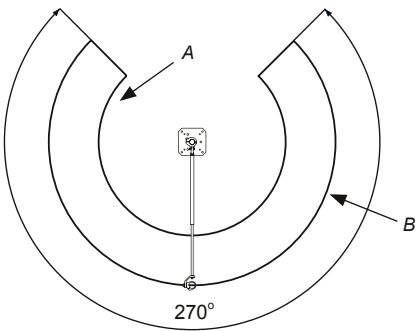
- Built with the best carbon fibre rods on the market – unbeatable stiffness-to-weight ratio – for lightness.
- Strong construction in the highest grade aluminum (AA7075) – for durability.
- Bearings and carbon fibre designed for the lowest possible friction and maximum flexibility.
- The SMC arms are equipped with an aluminium bracket that can easily be fitted to all flat surfaces.
- For fixation on tubes a holder for bench stand can be purchased separately.
- Atlas Copco recommends using a tool balancer together with the arm to carry the weight of the tool.



Model	Tool holder type	Tool holder dia. mm	Stroke		Ordering No.
			A	B	
SMC 12 Tensor	Special holder designed for Tensor DL and SL 21	36	552	1165	8202 9001 12
SMC 12 Universal	Adjustable holder designed to fit a variety of tools	25 - 46	552	1165	8202 9001 13
SMC 25 Tensor	Special holder designed for Tensor tools with 36 mm diameter	36	587	1152	8202 9001 22
SMC 25 Universal	Adjustable holder designed to fit a variety of tools	25 - 46	587	1152	8202 9001 23

Dimensions

Model	Working area	
	A mm	B mm
SMC 12 Tensor	552	1165
SMC 12 Universal	552	1165
SMC 25 Tensor	587	1152
SMC 25 Universal	587	1152



GHP – Torque arm for MicroTorque range

Atlas Copco GHP torque arm is an excellent means of assistance when using hand-held or fixtured straight microtorque screwdrivers.

Torque arm GHP Mini is recommended with screwdrivers below 100 Ncm, and GHP Small below 200 Ncm.

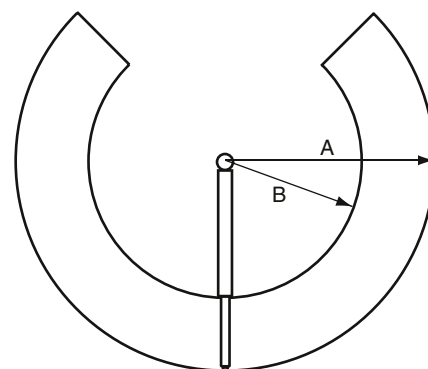
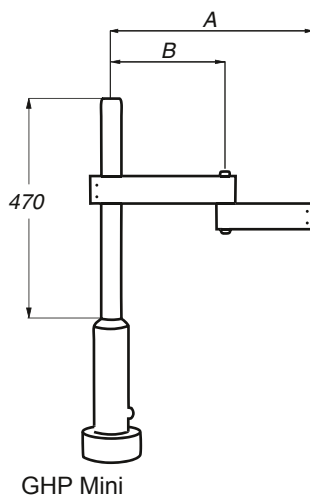
The GHP torque arms is exceptionally easy to position and handle. The design is intended for low torque applications and work tasks over a long period of time. Comes with appropriate balancing system to support the weight of the tool.



Model	Stroke		Ordering No.
	mm	alfa	
GHP Mini	200	270°	8432 0830 02
GHP Mini Clean room	200	270°	8432 0830 92
GHP Small	400	270°	8432 0830 03
GHP Large	730	270°	8432 0830 04

Dimensions

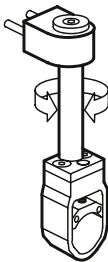
Model	Working range, mm	
	A	B
GHP Mini	280	150
GHP Mini Clean room	280	150
GHP Small	460	250
GHP Large	500	250



Torque Arm Accessories

Optional Accessories for SM A1

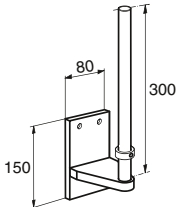
Description	Ordering No.
Adjustable vertical tool holder	
Ø 40-50 mm	4390 1735 07
Ø 50-60 mm	4390 1735 08
Horizontal turnable tool holder	
Ø 40-50 mm	4390 1735 09
Ø 50-60 mm	4390 1735 35
Heavy duty 22-82 mm table stand clamp	4390 1734 02
Wall mounted stand with four 8.5 mm mounting holes	4390 1735 50
Table stand 510 mm	4390 1735 33



Horizontal tool holder



Vertical tool holder



Wall mounted stand



Table stand clamp

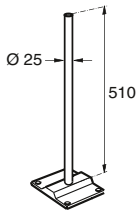


Table stand

Optional Accessories for SM A2 and SM S2

Description	Ordering No.
Vertical extension for SM A2/SM S2 700 mm	4390 1735 46
Vertical telescope extension for SM A2/SM S2, 400-750 mm	4390 1735 47
Heavy duty 22-82 mm table stand clamp	4390 1734 02
Wall mounted stand with two 8.5 mm mounting holes	4390 1734 01

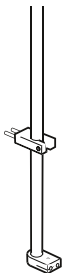
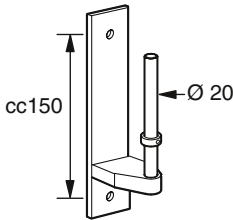


Table stand

Optional Accessories for SM A2 and SM S2

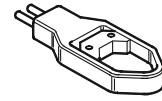
Description		Ordering No.
Adjustable vertical tool holder	Ø 25-40 mm	4390 1734 04
	Ø 40-50 mm	4390 1734 05
Two-axis turnable tool holder with adjustable turning torque	Ø 36 mm	4390 1734 06
	Ø 38 mm	4390 1735 34
	Ø 46 mm	4390 1734 07
	Ø 56 mm	4390 1735 36
Horizontal turnable tool holder	Ø 36 mm	4390 1735 10
	Ø 38 mm	4390 1735 03
	Ø 46 mm	4390 1735 05
	Ø 56 mm	4390 1735 37
Vertical tool holder	Ø 36 mm	4390 1735 04
	Ø 38 mm	4390 1735 30
	Ø 46 mm	4390 1735 00
	Ø 56 mm	4390 1735 38
Horizontal two-axis turnable tool holder	Ø 36 mm	4390 1735 11
	Ø 38 mm	4390 1735 02
	Ø 46 mm	4390 1735 06
	Ø 56 mm	4390 1735 39
Special adapters for Atlas Copco screwdrivers to be used with SM A2, SM S2		
LUM10 PR ^a		4390 1734 09
ELI ^a		4390 1734 08
LUM21 PR-P ^a		4390 1735 44
LUM21 SR ^b		4390 1735 45
LUM22 SR ^b		4390 1735 51
LUM12 SR ^a		4390 1735 52
LUM12 PR ^a		4390 1735 53
LUM22 PR ^a		4390 1735 54

^a To be used together with a Ø 46 mm tool holder.

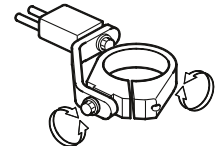
^b To be used together with a Ø 56 mm tool holder.



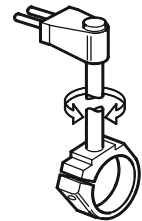
Special adapters



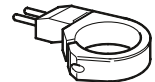
Adjustable vertical tool holder



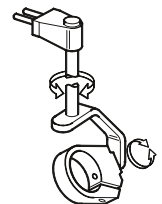
Two-axis turnable tool holder



Horizontal turnable tool holder



Vertical tool holder



Horizontal two-axis turnable tool holder

Optional Accessories for SMC

Model	Description	Ordering No.
Holder for bench stand	Attachment that can be used to attach torque arm to any circular pole with diameter 25 - 46 mm.	4390 1729 00
Bench stand	Bench stand with height 753 mm. Holder must be ordered separately, Ordering No. 4390 1729 00.	4390 1728 00
Table clamp	Clamp for heavy duty applications, 22 - 82 mm	4390 1734 02

Tool balancers

Model	Capacity range		Cable length m	Ordering No.
	kg	lb		
COL1 01	0.7 - 1.3	1.5 - 2.9	1.7	8202 0750 01
RIL2C	0.4 - 1.0	0.9 - 2.2	1.5	8202 0701 19
RIL4C	1.0 - 2.0	2.2 - 4.4	1.5	8202 0702 18
RIL5C	1.4 - 2.3	3.0 - 5.0	1.5	8202 0703 25



Holder for bench stand



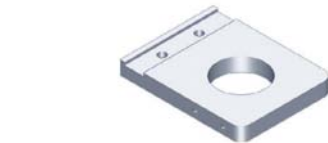
Table clamp



Bench stand

Torque Arm Accessories

Optional Accessories for SML



Mounting plate



Vertical adapter



Start handle



Extended mounting plate



Horizontal adapter

Description	Ordering No.
Mounting plate	
Spline type 1	4390 1760 00
Spline type 1 (for SML 10/40)	4390 1788 00
Spline type 2	4390 1761 00
Spline type 2 (for SML 10/40)	4390 1787 00
Spline type 3	4390 1762 00
Spline type 4	4390 1763 00
Spline type 5	4390 1764 00
Spline type 6	4390 1765 00
Spline type 7	4390 1766 00
QMX/ETX42	4390 1781 00
QMX/ETX50	4390 1782 00
QMX/ETX62	4390 1783 00
QMX80/ETX72	4390 1784 00
QMX90/ETX90	4390 1785 00
Horizontal adapter (handle mount)	4390 1770 00
Vertical adapter (handle mount)	4390 1769 00
Start handle	
(electric, 1 signal)	4390 1772 00
(electric, 2 signal)	4390 1773 00
(pneumatic)	4390 1771 00
Handgrip (dead handle)	4390 1786 00
Extension mounting plate (for extended reach)	4390 1768 00
Remote start cable 3 m	4390 1774 00
5 m	4390 1775 00
10 m	4390 1776 00
Extension remote start cable	
10 m	4390 1778 00
15 m	4390 1779 00
Y– piece connector (for 2 x electric handles)	4390 1777 00

- NOTE:**
- All models are supplied complete with suitable balancers (air cylinder with SML 500/1000).
 - SML 10/40 are supplied with integrated tool holder as standard. If additional accessories such as handles are required, then relevant accessory mounting plate should also be ordered. (Suitable for tools with splined front part only).
 - All mounting plates compatible with models SML 150, 300, 500 and 1000.
 - Extension mounting plates are not compatible with SML 10/40 arms.
 - For forward and reverse tool operation, a 2 signal handle is required (electric tools only).

Installation Proposals for SML



Optional Accessories for GHP MicroTorque

Description	Ordering No.
Adapter	
Adapter between GHP Mini and ETF 5, 10, 20	8432 0830 70
Adapter between GHP Mini and ETD M 03/05/10A	8432 0831 81
Adapter between GHP Mini and ETD M25AVB	8432 0830 83
Adapter between GHP Small and ETF 50-200	8432 0830 72
Adapter between GHP Small and ETD M-40-250 L	8432 0830 73
Adapter between GHP Large and ETF 400, 500, 800	8432 0830 74
Universal adapter for GHP Small (LUM, EBL, DL, SL)	8432 0831 80
Handle	
Handle between GHP Mini and ETF 05, 10, 20	8432 0830 90
Handle between GHP Small and ETF 50, 100, 200	8432 0830 53
Handle between GHP Large and ETF 400, 500, 800	8432 0830 54

Bits and Power Sockets

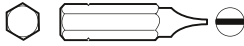
Screwdriver Bits – Hexagon Drive

DRIVE SYSTEM: 1/4" HEXAGON, STYLE C 6.3

SCREW PROFILE:



Slotted bits



Application: For slotted screws
Drive: 1/4" Hexagon, Style C 6.3

Blade thickness mm	Blade width mm	Length mm	Ordering No.
0.7	3.4	25	4023 1400 21
0.8	3.9	25	4023 1400 22
1	5.5	25	4023 1400 26

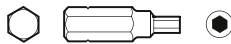
Phillips bits



Application: For Phillips screws
Drive: 1/4" Hexagon, Style C 6.3

Point	Length mm	Ordering No.
PH0	25	4023 1326 00
PH1	25	4023 0696 01
PH2	25	4023 0697 01
PH3	25	4023 0698 01

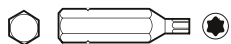
Hex bits



Application: For Hex-socket screws
Drive: 1/4" Hexagon, Style C 6.3

Point	Length mm	Ordering No.
2	25	4023 1318 00
2.5	25	4023 1319 00
3	25	4023 0819 00
4	25	4023 1320 00
5	25	4023 0820 00
6	25	4023 0821 00
7	25	4023 1430 00
8	25	4023 0905 00

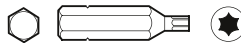
TorxPlus bits



Application: For TorxPlus screws
Drive: 1/4" Hexagon, Style C 6.3

Point	Length mm	Ordering No.
IP6	25	4023 0001 70
IP8	25	4023 0001 74
IP10	25	4023 0001 78

Torx bits



Application: For Torx screws
Drive: 1/4" Hexagon, Style C 6.3

Point	Length mm	Ordering No.
TX6	25	4023 0001 60
TX8	25	4023 1329 00
TX9	25	4023 1330 00
TX10	25	4023 1321 00
TX15	25	4023 1331 00
TX20	25	4023 1322 00
TX25	25	4023 1332 00
TX27	25	4023 1333 00
TX30	25	4023 1323 00
TX40	25	4023 1334 00

Pozidriv bits



Application: For Pozidriv screws
Drive: 1/4" Hexagon, Style C 6.3

Point	Length mm	Ordering No.
PZ1	25	4023 1101 11
PZ2	25	4023 1101 12
PZ3	25	4023 1101 13

DRIVE SYSTEM: 5/16" HEXAGON, STYLE C 8

SCREW PROFILE:



Hex Bits



Application: For Hex-socket screws
Drive: 5/16" Hexagon, Style C 8

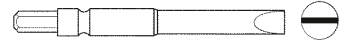
Point mm	Length mm	Ordering No.
5	25	4023 1215 00
6	25	4023 1216 00
7	25	4023 1219 00
8	25	4023 1217 00
10	25	4023 1218 00

DRIVE SYSTEM: 3 MM HEXAGON

SCREW PROFILE:



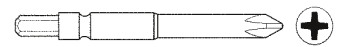
Slotted bits



Application: For slotted screws
Drive: 3 mm Hexagon

Blade thickness mm	Blade width mm	Length mm	Ordering No.
0.3	1.8	50	4023 0004 03
0.4	2	50	4023 0004 04
0.4	2.5	50	4023 0004 05
0.5	3	50	4023 0004 06
0.5	4	50	4023 0004 07
0.5	3.5	50	4023 0004 08
0.5	4.5	50	4023 0004 09
0.8	4	50	4023 0004 10
0.8	5.5	50	4023 0004 11

Phillips bits

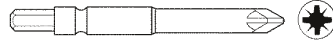


Application: For Phillips screws
Drive: 3 mm Hexagon

Point	Length mm	Ordering No.
00	50	4023 0004 00
0	50	4023 0004 01
1	50	4023 0004 02

Torx bits

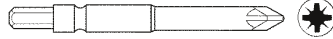
Application: For Torx screws
Drive: 3 mm Hexagon



Point	Length mm	Ordering No.
T6	50	4023 0004 14
T7	50	4023 0004 15
T8	50	4023 0004 16
T10	50	4023 0004 17

Pozidriv bits

Application: For Pozidriv screws
Drive: 3 mm Hexagon



Point	Length mm	Ordering No.
PZ0	50	4023 0004 12
PZ1	50	4023 0004 13

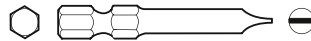
DRIVE SYSTEM: 1/4" HEXAGON, STYLE E 6.3

SCREW PROFILE:



Slotted bits

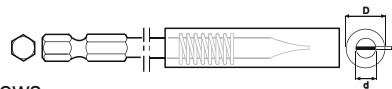
Application: For slotted screws
Drive: 1/4" Hexagon, Style E 6.3



Blade thickness mm	Blade width mm	Length mm	Ordering No.
3.2	0.7	49	4023 2020 21
3.9	0.8	49	4023 2020 23
4.7	0.9	49	4023 2020 24
6.3	1	49	4023 2020 26
7	1.1	49	4023 2020 27
7.9	1.2	49	4023 2020 28
9.1	1.3	49	4023 2020 29
3.2	0.7	76	4023 2030 21
3.9	0.8	76	4023 2030 23
4.7	0.9	76	4023 2030 24

Slotted bits with finder

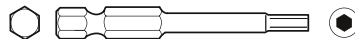
Application: For slotted screws
Drive: 1/4" Hexagon, Style E 6.3



Outside dia (D) mm	Blade thickness (t) mm	Blade width (d) mm	Length mm	Ordering No.
9.5	0.9	4.9	95	4023 0683 00
11.1	1	6.1	93	4023 1313 00
12.7	1.1	7.4	93	4023 0684 00
14.3	1.2	8.9	96	4023 0949 00
15.9	1.3	10.0	95	4023 0685 00

Hex bits

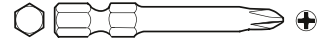
Application: For Hex-socket screws
Drive: 1/4" Hexagon, Style E 6.3



Point mm	Length mm	Ordering No.
2	49	4023 1311 00
2.5	49	4023 1312 00
3	49	4023 0710 00
4	49	4023 0711 00
5	49	4023 0712 00
6.35	49	4023 0906 00
8	49	4023 1369 00
10	49	4023 1370 00

Phillips bits

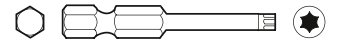
Application: For Phillips screws
Drive: 1/4" Hexagon, Style E 6.3



Point	Length mm	Ordering No.
PH00	50	4023 0001 51
PH00	70	4023 0001 52
PH00	90	4023 0001 53
PH0	50	4023 1325 00
PH1	50	4023 2320 21
PH1	70	4023 2327 21
PH1	89	4023 2335 21
PH1	152	4023 2360 21
PH2	50	4023 2320 22
PH2	70	4023 2327 22
PH2	89	4023 2335 22
PH2	152	4023 2360 22
PH3	50	4023 2320 23
PH3	70	4023 2327 23
PH3	89	4023 2335 23
PH3	152	4023 2360 23

Torx bits

Application: For Torx screws
Drive: 1/4" Hexagon, Style E 6.3



Point	Length mm	Ordering No.
TX5	50	4023 0002 16
TX5	70	4023 0002 17
TX6	50	4023 0001 61
TX6	70	4023 0001 62
TX6	90	4023 0001 63
TX7	50	4023 0002 18
TX7	70	4023 0002 19
TX8	50	4023 2220 21
TX8	89	4023 2235 21
TX9	50	4023 2220 22
TX9	89	4023 2235 22
TX10	50	4023 2220 23
TX10	89	4023 2235 23
TX15	50	4023 2220 24
TX15	89	4023 2235 24
TX20	50	4023 2220 25
TX20	89	4023 2235 25
TX25	50	4023 2220 26
TX25	89	4023 2235 26
TX27	50	4023 2220 27
TX27	89	4023 2235 27
TX30	50	4023 2220 28
TX30	89	4023 2235 28
TX40	89	4023 2235 29

TorxPlus bits

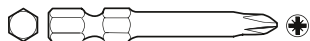
Application: For TorxPlus screws
Drive: 1/4" Hexagon, Style E 6.3



Point	Length mm	Ordering No.
IP5	50	4023 0002 20
IP5	70	4023 0002 21
IP6	50	4023 0001 71
IP6	70	4023 0001 72
IP6	90	4023 0001 73
IP7	50	4023 0002 23
IP7	70	4023 0002 24
IP7	90	4023 0002 25
IP8	50	4023 0001 75
IP8	70	4023 0001 76
IP8	90	4023 0001 77
IP10	50	4023 0001 79
IP10	70	4023 0001 80
IP10	90	4023 0001 81

Bits and Power Sockets

Pozidriv bits



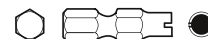
Application: For Pozidriv screws
Drive: 1/4" Hexagon, Style E 6.3

Point	Length mm	Ordering No.
PZ0	50	4023 0001 41
PZ0	70	4023 0001 42
PZ1	50	4023 2420 21
PZ1	70	4023 2427 21
PZ1	89	4023 2435 21
PZ2	50	4023 2420 22
PZ2	70	4023 2427 22
PZ2	70	4023 2435 22
PZ3	50	4023 2420 23
PZ3	89	4023 2435 23

Adapters

DRIVE SYSTEM: 1/4" HEXAGON, STYLE E 6.3

APPLICATION: FOR BITS WITH WING-SHANK 4 MM DRIVE



Adapters

	Ordering No.
Adapter	4220 0105 00

Screwdriver Bits – Wing-shank Drive

DRIVE SYSTEM: 7/16" HEXAGON, STYLE E 11.2

SCREW PROFILE:



Hex bits



Application: For Hex-socket screws
Drive: 7/16" Hexagon, Style E 11.2

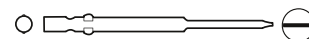
Point mm	Length mm	Ordering No.
5	70	4023 0800 00
6	70	4023 0801 00
8	70	4023 0802 00
10	70	4023 0760 00

DRIVE SYSTEM: 4 MM WING-SHANK

SCREW PROFILE:



Slotted bits



Application: For Slotted screws
Drive: Wing-shank 4 mm

Blade thickness mm	Blade width mm	Length mm	Ordering No.
0.28	1.3	60	4023 1327 01
0.30	1.7	60	4023 1327 02
0.3	2.0	60	4023 1327 03
0.3	2.5	60	4023 1327 04

Bit Holders

DRIVE SYSTEM: 1/4" HEXAGON, STYLE E 6.3

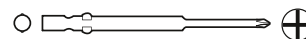
**APPLICATION: SUITABLE FOR BITS WITH
1/4" HEXAGON DRIVE**



Standard type

Hex- drive	Hex female	Diam. (D) mm	Diam. (D1) mm	Length L mm	Length L1 mm	Magnetic	Ordering No.
1/4"	1/4"	9.5	7.9	47.8	53.8	Yes	4023 1208 00
1/4"	1/4"	9.5	7.9	47.8	104.8	Yes	4023 1209 00

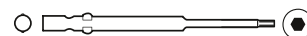
Phillips bits



Application: For Phillips screws
Drive: Wing-shank 4 mm

Point	Length mm	Ordering No.
PH00	40	4023 0002 56
PH0	40	4023 0002 57
PH0	60	4023 0002 03
PH1	40	4023 0002 58
PH2	40	4023 0002 59

Hex bits



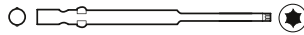
Application: For Hex screws
Drive: Wing-shank 4 mm

Point	Length mm	Ordering No.
1.5	60	4023 0002 60
2	60	4023 0002 61
2.5	60	4023 0002 62
3	60	4023 0002 63

Quick release type

Hex- drive	Hex-female	Dia- meter (D) mm	Length L mm	Length L1 mm	Magnetic	Ordering No.
1/4"	1/4"	9.4	35.7	25.4	Yes	4023 1353 00
1/4"	1/4"	9.4	50	25.4	Yes	4023 0707 00

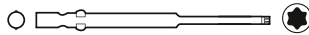
Torx bits



Application: For Torx screws
Drive: Wing-shank 4 mm

Point	Length mm	Ordering No.
TX1	40	4023 0002 52
TX2	60	4023 0002 53
TX3	60	4023 0002 54
TX4	60	4023 0001 90
TX5	60	4023 0001 91
TX6	60	4023 0001 92
TX8	60	4023 0001 93
TX10	60	4023 0001 94

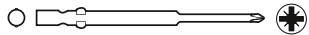
TorxPlus bits



Application: For TorxPlus screws
Drive: Wing-shank 4 mm

Point	Length mm	Ordering No.
IP4	60	4023 0002 10
IP5	60	4023 0002 11
IP6	60	4023 0002 12
IP8	60	4023 0002 13
IP10	60	4023 0002 14

Pozidriv bits



Application: For Pozidriv screws
Drive: Wing-shank 4 mm

Point	Length mm	Ordering No.
PZ0	60	4023 0002 03
PZ1	60	4023 0002 04
PZ2	60	4023 0002 55

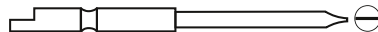
Screwdriver Bits – Halfmoon Drive

DRIVE SYSTEM: 4 MM HALFMOON

SCREW PROFILE:



Slotted bits



Application: For slotted screws
Drive: Halfmoon 4 mm

Blade width mm	Blade thickness mm	Length mm	Ordering No.
2	0.3	44	4023 0002 37
2.5	0.3	44	4023 0002 38
3	0.4	44	4023 0002 39
4	0.5	44	4023 0002 40

Phillips bits



Application: For Phillips screws
Drive: Halfmoon 4 mm

Point	Length mm	Ordering No.
PH000	44	4023 0001 10
PH000	64	4023 0001 11
PH00	44	4023 0001 12
PH00	64	4023 0001 13
PH0	44	4023 0001 14
PH0	64	4023 0001 15
PH1	44	4023 0001 16
PH1	64	4023 0001 17
PH1	90	4023 0001 18
PH2	44	4023 0002 30
PH2	64	4023 0002 31

Hex bits



Application: For Hex-socket screws
Drive: Halfmoon 4 mm

Point	Length mm	Ordering No.
1.5	44	4023 0002 41
2	44	4023 0002 42
2.5	44	4023 0002 43
3	44	4023 0002 44

Hex-socket bits



Nutsetter. Application: For nuts and thread-headed screws
Drive: Halfmoon 4 mm

Point	Length mm	Ordering No.
2.3	44	4023 0002 45
2.5	44	4023 0002 46
3	44	4023 0002 47
4	44	4023 0002 48
4.5	44	4023 0002 49
5	44	4023 0002 50
5.5	44	4023 0002 51

Torx bits

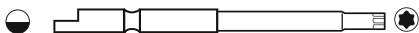


Application: For Torx screws
Drive: Halfmoon 4 mm

Point	Length mm	Ordering No.
TX1	44	4023 0002 32
TX2	44	4023 0001 06
TX3	44	4023 0001 08
TX3	64	4023 0001 09
TX4	44	4023 0001 20
TX4	64	4023 0001 21
TX5	44	4023 0001 22
TX5	64	4023 0001 23
TX6	44	4023 0001 24
TX6	64	4023 0001 25
TX8	44	4023 0001 26
TX8	64	4023 0001 27
TX10	44	4023 0001 28
TX10	64	4023 0001 29

Bits and Power Sockets

TorxPlus bits



Application: For TorxPlus screws
 Drive: Halfmoon 4 mm

Point	Length mm	Ordering No.
IP2	44	4023 0002 35
IP3	44	4023 0002 36
IP4	44	4023 0001 30
IP4	64	4023 0001 31
IP5	44	4023 0001 32
IP5	64	4023 0001 33
IP6	44	4023 0001 34
IP6	64	4023 0001 35
IP8	44	4023 0001 36
IP8	64	4023 0001 37
IP10	44	4023 0001 38
IP10	64	4023 0001 39

Pozidriv bits



Application: For Pozidriv screws
 Drive: Halfmoon 4 mm

Point	Length mm	Ordering No.
PZ0	44	4023 0002 26
PZ0	64	4023 0002 27
PZ1	44	4023 0002 28
PZ1	64	4023 0002 29

Adapters

DRIVE SYSTEM: 4 MM HALFMoon
APPLICATION: SUITABLE FOR BITS WITH
1/4" HEXAGON DRIVE

Adapters

	Ordering No.
Non magnetic	4023 0002 15

Fixtured Applications

Contents	Page
Introduction.....	156
Fixtured nutrunners QST	158
Fixtured nutrunners ETX	162
Power MACS	165
MSB, DB.....	166
Power FOCUS.....	169
ToolsTalk.....	170

With our vast experience, we are a supplier you can rely on

Atlas Copco is the world-leading supplier of fixtured nutrunner systems. Our vast experience of designing components for multiple nutrunner systems, combined with knowledge of building, commissioning and maintaining fixtured solutions, makes Atlas Copco a supplier you can rely on.

For fixtured nutrunner systems, Atlas Copco offers a complete portfolio of products designed to satisfy your needs. These range from individual components to operator controlled Multiples by Express® stations and demanding stitching applications. There are two different systems designed for fixtured applications, as well as user-friendly controller software.

Please contact your local Atlas Copco sales representative who will be pleased to discuss your needs.

Power MACS 4000 and QST nutrunners

A state-of-the-art, stand-alone system offering high reliability, accuracy and capability. The system is designed with user friendliness in mind and is easy to build and integrate into production lines.

Power Focus 4000 and ETX nutrunners

A flexible solution that makes it possible to run durable and accurate fixtured nutrunners on the Power Focus controller designed for hand-held tools.

ToolsTalk software

ToolsTalk software for Power MACS 4000 has been developed with user-friendliness and customer adaptation in mind. This Window-based program can be installed on a station PC, a laptop or a back office PC.



Power MACS 4000 stand alone system – small, cost efficient and powerful. No needs for bulky cabinets.



A vertical two channel Multiple by Express® fixture with QST spindles.

Nutrunners to match your needs

The QST nutrunner is a true state-of-the-art product. Partnered with the Power MACS 4000 tightening controller, QST offers one of the most advanced and reliable tightening solutions on the market. ETX nutrunners are compact, durable and easy to integrate. Since ETX is controlled by the Power Focus, like the Tensor S and Tensor ST tools, it is possible to achieve 100% controller communality in a line.

QST and ETX nutrunners – common features

Designed specifically for fixtured systems, these two reliable, durable nutrunners have many common features.

With QST and ETX nutrunners pilot mount or sandwich are possible. Different socket holder lengths (0-200 mm) permit access to applications or parts with tight clearances. For longer bolt lengths, spring travel can be increased from the standard 50 mm to 76 or 100 mm on request.

A built-in memory chip in QST and ETX nutrunners stores calibration values and general tool and service data. Both tools are ISO certified to +/- 2.5% accuracy and 1 million duty cycles on hard and soft joints.

QST and ETX – different features

The QST nutrunner is available in inline, off-set, angle head, angle head travel, U-shaped, angel, SPN and co-axial designs. The ETX comes in inline, offset and angle head versions.

Connectors on both tools are designed to provide cable management flexibility. The robust connector and pin design on the QST is adjustable in 2 DOF. The ETX has a rotatable single connector.

QST offers a standard torque range of 2-1,750 Nm (up to 8,000 on request) and has a 60 m cable. ETX has a torque range of 6-950 Nm and a cable length of 25 m.

QST nutrunners – extra features

- Digital communication between nutrunner and controller.
- Hot Swap – replace cable or spindle without turning off the power.
- Increased speed characteristics, up to 3,000 rpm.
- Optional redundant angle encoder and transducer.
- MTBF better than 5 million cycles under normal conditions.



- Inline nutrunner, CT – Equipped with commutation sensor and transducer.
- Off-set nutrunner, COT – Comes with a commutation sensor, off-set gears for narrow bolts and transducer.
- Extended spring travel 76 mm and 100 mm – Nutrunners with extended spring travel for longer bolt lengths.
- Dual transducers, CTT – Nutrunners with dual torque transducer feedback.
- Dual transducers and angle feedback, CATT – Nutrunners with dual angle and torque transducer feedback.
- Angle head nutrunners, CTV – Nutrunners with angle heads. Available with or without travel.



QST COT



QST CT

Model	Travel mm	Torque range			Speed r/min	Min C-C	Weight		Gear ratio	Socket holder size		Ordering No.	Socket holder	
		Nm	ft lb				kg	lb		in			Ordering No.	
QST34-8CT-T50-L150-H6	50	2-	8	1.5 - 6	3000	34	2.0	4.4	7.428	1/4	8435 6000 10	4230 2753 01		
QST34-20CT-T50-L150-H10	50	4-	20	2.9 - 14.7	1000	34	2.0	4.4	21.2	3/8	8435 6010 10	4230 2753 00		
QST42-20CT-T50-L134-H9.5	50	6-	20	4 - 14	2000	43	3.1	6.9	7.50	3/8	8435 6020 10	4230 1818 00		
QST42-20COT-T50-L134.5-H9.5	50	6-	20	4 - 14	2000	31	4.2	9.3	7.50	3/8	8435 6020 20	4230 1818 00		
QST42-50CT-T50-L134-H12.7	50	10-	50	7 - 35	700	43	3.8	8.4	21.33	1/2	8435 6030 10	4230 1819 00		
QST42-50COT-T50-L134.5-H12.7	50	10-	50	7 - 35	700	31	4.5	9.9	21.33	1/2	8435 6030 20	4230 1819 00		
QST50-90CT-T50-L137-H12.7	50	20-	90	15 - 65	650	51	5.8	12.7	18.21	1/2	8435 6040 10	4230 1820 00		
QST50-90COT-T50-L137-H12.7	50	20-	90	15 - 65	650	37	7.8	17.2	18.21	1/2	8435 6040 20	4230 1820 00		
QST50-150CT-T50-L137-H12.7	50	30-	150	22 - 110	380	51	5.8	12.8	31.24	1/2	8435 6050 10	4230 1820 00		
QST50-150COT-T50-L137-H12.7	50	30-	150	22 - 110	380	37	7.8	17.2	31.24	1/2	8435 6050 20	4230 1820 00		
QST62-150CT-T50-L152-H12.7	50	30-	150	22 - 110	450	63	10.2	22.5	13.94	1/2	8435 6060 10	4230 1829 00		
QST62-150COT-T50-L152.5-H12.7	50	30-	150	22 - 110	450	45	12.8	28.2	13.94	1/2	8435 6060 20	4230 1829 00		
QST62-230CT-T50-L152-H19.1	50	40-	230	29 - 170	330	63	10.2	22.5	19.04	3/4	8435 6065 10	4230 1822 00		
QST62-230COT-T50-L152.5-H19.1	50	40-	220	29 - 162	330	45	12.8	28.2	19.04	3/4	8435 6065 20	4230 1822 00		
QST62-350CT-T50-L152-H19.1	50	50-	350	37 - 258	220	63	10.2	22.5	28.33	3/4	8435 6070 10	4230 1822 00		
QST62-350COT-T50-L152-H19.1	50	50-	330	37 - 243	220	45	12.8	28.2	28.33	3/4	8435 6070 20	4230 1822 00		
QST80-450CT-T50-L146-H19.1	50	90-	450	66 - 332	260	81	16.7	37	22.67	3/4	8435 6075 10	4230 1971 00		
QST80-450COT-T50-L146-H19.1	50	90-	450	66 - 332	260	55	21	46	22.67	3/4	8435 6075 20	4230 1971 00		
QST80-600CT-T50-L146-H19.1	50	120-	600	88 - 442	200	81	17	37	29.56	3/4	8435 6080 10	4230 1971 00		
QST80-600COT-T50-L146-H19.1	50	120-	600	88 - 442	200	55	21	46	29.56	3/4	8435 6080 20	4230 1971 00		
QST90-750CT-T50-L152-H25.4	50	150-	750	111 - 553	150	91	25	55	38.89	1	8435 6085 10	4230 1824 00		
QST90-750COT-T50-L153-H25.4	50	150-	750	111 - 553	150	63	29	64	38.89	1	8435 6085 20	4230 1824 00		
QST90-1000CT-T50-L152-H25.4	50	200-	1000	147 - 737	130	91	26	57	46.84	1	8435 6090 10	4230 1824 00		
QST90-1000COT-T50-L153-H25.4	50	200-	1000	147 - 737	130	63	30	66	46.84	1	8435 6090 20	4230 1824 00		
QST95-1750CT-T50-L149-H38	50	350-	1750	258 -1291	60	96	28	61.7	98.21	1 1/2	8453 6095 10	4230 2767 00		
QST95-1750COT-T50-L155-H38	50	350-	1750	258 -1291	60	73	43	94.8	98.21	1 1/2	8454 6095 20	4230 2811 00		
Extended spring travel 76 mm and 100 mm														
QST42-20CT-T76-L189-H9.5	76	6-	20	4 - 14	2000	43	3.1	6.9	7.5	3/8	8435 6020 11	4230 2114 00		
QST42-50CT-T76-L189-H12.7	76	10-	50	7 - 35	700	43	3.8	8.4	21.3	1/2	8435 6030 11	4230 2120 00		
QST50-90CT-T76-L200-H12.7	76	20-	90	15 - 65	650	51	5.78	12.7	18.2	1/2	8435 6040 11	4230 2127 00		
QST50-150CT-T76-L200-H12.7	76	30-	150	22 - 110	380	51	5.8	12.8	31.2	1/2	8435 6050 11	4230 2127 00		
QST62-230CT-T76-L200-H19.1	76	40-	230	29 - 170	330	63	10.2	22.5	19.0	3/4	8435 6065 11	4230 2137 00		
QST62-350CT-T76-L200-H19.1	76	50-	350	37 - 258	220	63	10.2	22.5	28.3	3/4	8435 6070 11	4231 2137 00		
QST80-600CT-T76-L214-H19.1	76	120-	600	88 - 442	200	81	17	37.0	29.6	3/4	8435 6080 11	4231 2664 99		
QST90-1000CT-T76-L176-H25.4	76	200-	1000	147 - 737	130	91	26	57.0	46.8	1	8435 6090 11	4231 1106 00		
QST42-50CT-T100-L191-H12.7	100	10-	50	7 - 35	700	43	3.8	8.4	21.3	1/2	8435 6030 12	4231 2055 00		
QST50-150CT-T100-L186-H12.7	100	30-	150	22 - 110	380	51	5.8	12.8	31.2	1/2	8435 6050 12	4231 3189 00		

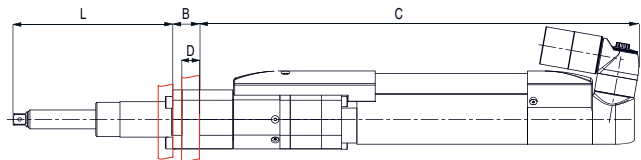
Model	Travel mm	Torque range			Speed r/min	Min C-C	Weight		Gear ratio	Socket holder size in	Ordering No.	Socket holder	
		Nm	ft lb				kg	lb				Ordering No.	
Dual transducers, CTT													
QST42-20CTT -T50 -L134 -H9.5	50	6-	20	4 - 14	2000	43	3.1	6.9	7.50	3/8	8435 6020 50	4230 1818 00	
QST42-20COTT -T50 -L134.5 -H9.5	50	6-	20	4 - 14	2000	31	4.2	9.3	7.50	3/8	8435 6020 60	4230 1818 00	
QST42-50CTT -T50 -L134 -H12.7	50	10-	50	7 - 35	700	43	3.8	8.4	21.33	1/2	8435 6030 50	4230 1819 00	
QST42-50COTT -T50 -L134.5 -H12.7	50	10-	50	7 - 35	700	31	4.5	9.9	21.33	1/2	8435 6030 60	4230 1819 00	
QST50-90CTT -T50 -L137 -H12.7	50	20-	90	15 - 65	650	51	5.8	12.7	18.21	1/2	8435 6040 50	4230 1820 00	
QST50-90COTT -T50 -L137 -H12.7	50	20-	90	15 - 65	650	37	7.8	17.2	18.21	1/2	8435 6040 60	4230 1820 00	
QST50-150CTT -T50 -L137 -H12.7	50	30-	150	22 - 110	380	51	5.8	12.8	31.24	1/2	8435 6050 50	4230 1820 00	
QST50-150COTT -T50 -L137 -H12.7	50	30-	150	22 - 110	380	37	7.8	17.2	31.24	1/2	8435 6050 60	4230 1820 00	
QST62-150CTT -T50 -L152 -H12.7	50	30-	150	22 - 110	450	63	10.2	22.5	13.94	1/2	8435 6060 50	4230 1829 00	
QST62-150COTT -T50 -L152.5 -H12.7	50	30-	150	22 - 110	450	45	12.8	28.2	13.94	1/2	8435 6060 60	4230 1829 00	
QST62-230CTT -T50 -L152 -H19.1	50	40-	230	29 - 170	330	63	10.2	22.5	19.04	3/4	8435 6065 50	4230 1822 00	
QST62-230COTT -T50 -L152.5 -H19.1	50	40-	220	29 - 162	330	45	12.8	28.2	19.04	3/4	8435 6065 60	4230 1822 00	
QST62-350CTT -T50 -L152 -H19.1	50	50-	350	37 - 258	220	63	10.2	22.5	28.33	3/4	8435 6070 50	4230 1822 00	
QST62-350COTT -T50 -L152 -H19.1	50	50-	330	37 - 243	220	45	12.8	28.2	28.33	3/4	8435 6070 60	4230 1822 00	
QST80-450CTT -T50 -L146 -H19.1	50	90-	450	66 - 332	260	81	16.7	37	22.67	3/4	8435 6075 50	4230 1971 00	
QST80-450COTT -T50 -L146 -H19.1	50	90-	450	66 - 332	260	55	21	46	22.67	3/4	8435 6075 60	4230 1971 00	
QST80-600CTT -T50 -L146 -H19.1	50	120-	600	88 - 442	200	81	17	37	29.56	3/4	8435 6080 50	4230 1971 00	
QST80-600COTT -T50 -L146 -H19.1	50	120-	600	88 - 442	200	55	21	46	29.56	3/4	8435 6080 60	4230 1971 00	
QST90-750CTT -T50 -L152 -H25.4	50	150-	750	111 - 553	150	91	25	55	38.89	1	8435 6085 50	4230 1824 00	
QST90-750COTT -T50 -L153 -H25.4	50	150-	750	111 - 553	150	63	29	64	38.89	1	8435 6085 60	4230 1824 00	
QST90-1000CTT -T50 -L152 -H25.4	50	200-1000	147 - 737		130	91	26	57	46.84	1	8435 6090 50	4230 1824 00	
QST90-1000COTT -T50 -L153 -H25.4	50	200-1000	147 - 737		130	63	30	66	46.84	1	8435 6090 60	4230 1824 00	
Dual transducers and angle feedback, CATT													
QST42-20CATT -T50 -L134 -H9.5	50	6-	20	4 - 14	2000	43	3.1	6.9	7.50	3/8	8435 6020 70	4230 1818 00	
QST42-50CATT -T50 -L134 -H12.7	50	10-	50	7 - 35	700	43	3.8	8.4	21.33	1/2	8435 6030 70	4230 1819 00	
QST50-90CATT -T50 -L137 -H12.7	50	20-	90	15 - 65	650	51	5.8	12.7	18.21	1/2	8435 6040 70	4230 1820 00	
QST50-150CATT -T50 -L137 -H12.7	50	30-	150	22 - 110	380	51	5.8	12.8	31.24	1/2	8435 6050 70	4230 1820 00	
QST62-150CATT -T50 -L152 -H12.7	50	30-	150	22 - 110	450	63	10.2	22.5	13.94	1/2	8435 6060 70	4230 1829 00	
QST62-230CATT -T50 -L152 -H19.1	50	40-	230	29 - 170	330	63	10.2	22.5	19.04	3/4	8435 6065 70	4230 1822 00	
QST62-350CATT -T50 -L152 -H19.1	50	50-	350	37 - 258	220	63	10.2	22.5	28.33	3/4	8435 6070 70	4230 1822 00	
QST80-450CATT -T50 -L146 -H19.1	50	90-	450	66 - 332	260	81	16.7	36.9	22.67	3/4	8435 6075 70	4230 1971 00	
QST80-600CATT -T50 -L146 -H19.1	50	120-	600	88 - 442	200	81	17	37	29.56	3/4	8435 6080 70	4230 1971 00	
QST90-750CATT -T50 -L152 -H25.4	50	150-	750	111 - 553	150	91	25	55	38.89	1	8435 6085 70	4230 1824 00	
QST90-1000CATT -T50 -L152 -H25.4	50	200-1000	147 - 737		130	91	26	57	46.84	1	8435 6090 70	4230 1824 00	
Angle head, CTV													
QST42-20CTV -P10	-	6-	20	4 - 14	1200	28	3.5	7	11.6	3/8	9831 4077 27	-	
QST42-20CTV -T25 -H10	25	6-	20	4 - 14	1200	28	5	10	11.6	3/8	9831 4077 57	-	
QST42-30CTV -P10	-	6-	30	4.5 - 22	440	36	3.5	7	11.6	3/8	9831 4077 26	-	
QST42-30CTV -T25 -H10	25	6-	30	4.5 - 22	440	36	5.5	11	33.0	3/8	9831 4077 58	-	
QST42-70CTV -P13	-	14-	70	10 - 52	440	40	4.5	9	33.0	1/2	9831 4077 28	-	
QST42-70CTV -T25 -H13	25	14-	70	10 - 52	440	40	5.5	9	33.0	1/2	9831 4077 59	-	
QST50-170CTV -P13	-	34-	170	25 - 125	210	51	6.8	14	56.2	1/2	9831 4078 38	-	
QST50-170CTV -T50 -P13	50	34-	170	25 - 125	210	48	8.6	17	56.2	1/2	9831 4078 44	-	
QST50-200CTV -H19	-	40-	200	29 - 145	210	51	7.0	14	56.2	3/4	9831 4078 43	-	
QST50-200CTV -T25 -H19	25	40-	200	29 - 145	210	51	9.5	19	56.2	3/4	9831 4078 46	-	
QST50-200CTV -T50 -H19	50	40-	200	29 - 145	210	51	10	20	56.2	3/4	9831 4078 47	-	
QST62-310CTV -H19	-	60-	310	44 - 229	175	66	13.5	27	34.3	3/4	9831 4079 78	-	
QST62-310CTV -T25 -H19	25	60-	310	44 - 229	175	66	16.5	33	34.3	3/4	9831 4079 76	-	
QST62-350CTV -H19	-	70-	350	52 - 258	120	66	13.5	27	51.0	3/4	9831 4079 73	-	
QST62-350CTV -T25 -H19	25	70-	350	52 - 258	120	66	16.5	33	51.0	3/4	9831 4087 10	-	
QST62-600CTV -H25	-	120-	600	88 - 440	100	109	16.5	33	93.5	1	9831 4087 02	-	

Dimensions

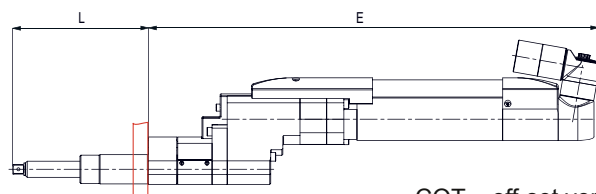
Model	L mm	B mm	C mm	D mm	E mm
Extended spring travel 76 mm and 100 mm					
QST42-20CT-T76-L189-H9.5	190	23	372	15	-
QST42-50CT-T76-L189-H12.7	190	23	399	15	-
QST50-90CT-T76-L200-H12.7	200	23	441	15	-
QST50-150CT-T76-L200-H12.7	201	23	441	15	-
QST62-230CT-T76-L200-H19.1	200	25	517	15	-
QST62-350CT-T76-L200-H19.1	200	25	517	15	-
QST80-600CT-T76-L214-H19.1	214	30	595	20	-
QST90-1000CT-T76-L176-H25.4	176	32	600	20	-
QST42-50CT-T100-L191-H12.7	191	23	399	15	-
QST50-150CT-T100-L186-H12.7	186	23	441	15	-
Dual transducers, CTT					
QST42-20CTT-T50-L134-H9.5	134	23	372	15	-
QST42-20COTT-T50-L134.5-H9.5	134.5	-	-	-	446
QST42-50CTT-T50-L134-H12.7	134	23	399	15	-
QST42-50COTT-T50-L134.5-H12.7	134.5	-	-	-	472
QST50-90CTT-T50-L137-H12.7	137	23	441	15	-
QST50-90COTT-T50-L137-H12.7	137	-	-	-	521
QST50-150CTT-T50-L137-H12.7	137	23	441	15	-
QST50-150COTT-T50-L137-H12.7	137	-	-	-	521
QST62-150CTT-T50-L152-H12.7	152	25	517	15	-
QST62-150COTT-T50-L152.5-H12.7	152.5	-	-	-	586
QST62-230CTT-T50-L152-H19.1	152	25	517	15	-
QST62-230COTT-T50-L152.5-H19.1	152.5	-	-	-	586
QST62-350CTT-T50-L152-H19.1	152	25	517	15	-
QST62-350COTT-T50-L152-H19.1	152	-	-	-	592
QST80-450CTT-T50-L146-H19.1	146	30	595	20	-
QST80-450COTT-T50-L146-H19.1	146	-	-	-	685
QST80-600CTT-T50-L146-H19.1	146	30	595	20	-
QST80-600COTT-T50-L146-H19.1	146	-	-	-	685
QST90-750CTT-T50-L152-H25.4	152	32	600	20	-
QST90-750COTT-T50-L153-H25.4	153	-	-	-	705
QST90-1000CTT-T50-L152-H25.4	152	32	600	20	-
QST90-1000COTT-T50-L153-H25.4	153	-	-	-	710

Model	L mm	B mm	C mm	D mm	E mm
Standard					
QST34-8CT-T50-L150-H6	150	16.5	358.5	10	-
QST34-20CT-T50-L150-H10	150	16.5	358.5	10	-
QST42-20CT-T50-L134-H9.5	134	23	372	15	-
QST42-20COT-T50-L134.5-H9.5	134.5	-	-	-	446
QST42-50CT-T50-L134-H12.7	134	23	399	15	-
QST42-50COT-T50-L134.5-H12.7	134.5	-	-	-	472
QST50-90CT-T50-L137-H12.7	137	23	441	15	-
QST50-90COT-T50-L137-H12.7	137	-	-	-	521
QST50-150CT-T50-L137-H12.7	137	23	441	15	-
QST50-150COT-T50-L137-H12.7	137	-	-	-	521
QST62-150CT-T50-L152-H12.7	152	25	517	15	-
QST62-150COT-T50-L152.5-H12.7	152.5	-	-	-	586
QST62-230CT-T50-L152-H19.1	152	25	517	15	-
QST62-230COT-T50-L152.5-H19.1	152.5	-	-	-	586
QST62-350CT-T50-L152-H19.1	152	25	517	15	-
QST62-350COT-T50-L152-H19.1	152	-	-	-	592
QST80-450CT-T50-L146-H19.1	146	30	595	20	-
QST80-450COT-T50-L146-H19.1	146	-	-	-	685
QST80-600CT-T50-L146-H19.1	146	30	595	20	-
QST80-600COT-T50-L146-H19.1	146	-	-	-	685
QST90-750CT-T50-L152-H25.4	152	32	600	20	-
QST90-750COT-T50-L153-H25.4	153	-	-	-	705
QST90-1000CT-T50-L152-H25.4	152	32	600	20	-
QST90-1000COT-T50-L153-H25.4	153	-	-	-	710
QST95-1750CT-T50-L149-H38	149	32	683	20	-
QST95-1750COT-T50-L155-H38	155	-	-	-	795

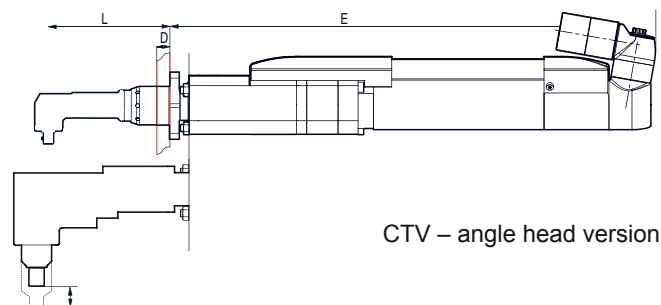
Model	L mm	B mm	C mm	D mm	E mm
Dual transducers and angle feedback, CATT					
QST42-20CATT-T50-L134-H9.5	134	23	372	15	-
QST42-50CATT-T50-L134-H12.7	134	23	399	15	-
QST50-90CATT-T50-L137-H12.7	137	23	441	15	-
QST50-150CATT-T50-L137-H12.7	137	23	441	15	-
QST62-150CATT-T50-L152-H12.7	152	25	517	15	-
QST62-230CATT-T50-L152-H19.1	152	25	517	15	-
QST62-350CATT-T50-L152-H19.1	152	25	517	15	-
QST80-450CATT-T50-L146-H19.1	146	30	595	20	-
QST80-600CATT-T50-L146-H19.1	146	30	595	20	-
QST90-750CATT-T50-L152-H25.4	152	32	600	20	-
QST90-1000CATT-T50-L152-H25.4	152	32	600	20	-
Angle head					
QST42-20CTV-P10	65	-	-	-	409
QST42-20CTV-T25-H10	-	-	-	-	-
QST42-30CTV-P10	83	-	-	-	436
QST42-30CTV-T25-H10	-	-	-	-	-
QST42-70CTV-P13	84	-	-	-	431
QST42-70CTV-T25-H13	-	-	-	-	-
QST50-170CTV-P13	136	-	-	-	481
QST50-170CTV-T50-P13	-	-	-	-	-
QST50-200CTV-H19	136	-	-	-	481
QST50-200CTV-T25-H19	-	-	-	-	-
QST50-200CTV-T50-H19	-	-	-	-	-
QST62-310CTV-H19	153	-	-	-	564
QST62-310CTV-T25-H19	-	-	-	-	-
QST62-350CTV-H19	153	-	-	-	564
QST62-350CTV-T25-H19	-	-	-	-	-
QST62-600CTV-H25	174	-	-	-	563



CT – straight version



COT – off-set version



CTV – angle head version

Optional Accessories

Tool and extension cables

Length	Ordering No.
2 m	4220 3799 02
3 m	4220 3799 03
5 m	4220 3799 05
7 m	4220 3799 07
10 m	4220 3799 10
15 m	4220 3799 15
20 m	4220 3799 20
25 m	4220 3799 25
30 m	4220 3799 30
35 m	4220 3799 35
40 m	4220 3799 40



Tool and extension cable



Additional socket holder length

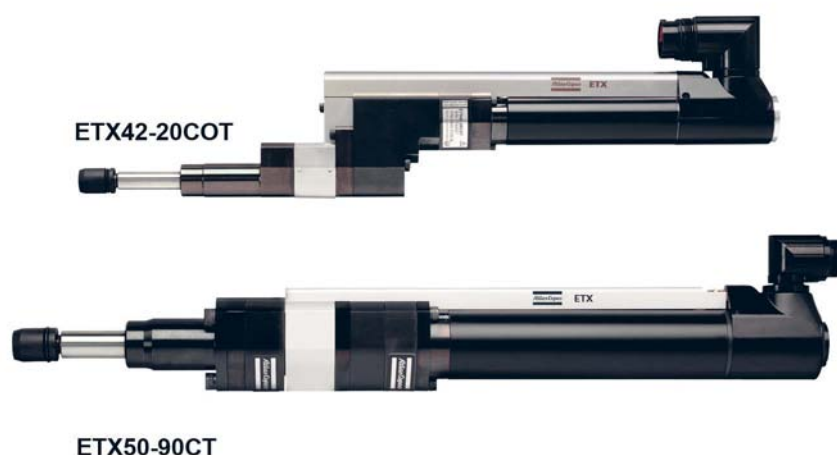
Additional sockets

	A mm	Product No.	Socket holder size in	Socket holder ^a Ordering No.
QST42-20CT	0 ^b	8435 6020 10	3/8	4230 1818 00
	50	8435 4083 08	3/8	4230 2217 00
	100	8435 4083 10	3/8	4230 2217 01
	150	8435 4083 12	3/8	4230 2217 02
	200	8435 4083 14	3/8	4230 2217 03
QST42-50CT	0 ^b	8435 6030 10	1/2	4230 1819 00
	50	8435 4083 19	1/2	4230 2218 00
	100	8435 4083 21	1/2	4230 2218 01
	150	8435 4083 23	1/2	4230 2218 02
	200	8435 4083 25	1/2	4230 2218 03
QST50-90CT	0 ^b	8435 6040 10	1/2	4230 1820 00
	50	8435 4083 28	1/2	4230 2219 00
	100	8435 4083 29	1/2	4230 2219 01
	150	8435 4083 30	1/2	4230 2219 02
	200	8435 4083 31	1/2	4230 2219 03
QST50-150CT	0 ^b	8435 6050 10	1/2	4230 1820 00
	50	8435 4083 68	1/2	4230 2219 00
	100	8435 4083 33	1/2	4230 2219 01
	150	8435 4083 34	1/2	4230 2219 02
	200	8435 4083 35	1/2	4230 2219 03
QST62-150CT	0 ^b	8435 6060 10	1/2	4230 1829 00
	50	8435 4083 37	1/2	4230 2223 00
	100	8435 4083 40	1/2	4230 2223 01
	150	8435 4083 43	1/2	4230 2223 02
	200	8435 4083 46	1/2	4230 2223 03
	0	8435 4083 70	5/8	4230 1821 00
	50	8435 4083 38	5/8	4230 2224 00
	100	8435 4083 41	5/8	4230 2224 01
	150	8435 4083 44	5/8	4230 2224 02
	200	8435 4083 47	5/8	4230 2224 03

	A mm	Product No.	Socket holder size in	Socket holder ^a Ordering No.
QST62-230CT	0	8435 4083 81	5/8	4230 1821 00
	50	8435 4083 83	5/8	4230 2224 00
	100	8435 4083 98	5/8	4230 2224 01
	150	8435 4083 88	5/8	4230 2224 02
	200	8435 4083 91	5/8	4230 2224 03
	0 ^b	8435 5170 10	3/4	4230 1822 00
	50	8435 4083 84	3/4	4230 2226 00
	100	8435 4083 86	3/4	4230 2226 01
	150	8435 4083 89	3/4	4230 2226 02
	200	8435 4083 92	3/4	4230 2226 03
QST62-350CT	0	8435 4083 72	5/8	4230 1821 00
	50	8435 4083 53	5/8	4230 2224 00
	100	8435 4083 56	5/8	4230 2224 01
	150	8435 4083 59	5/8	4230 2224 02
	200	8435 4083 62	5/8	4230 2224 03
	0 ^b	8435 6070 10	3/4	4230 1822 00
	50	8435 4083 54	3/4	4230 2226 00
	100	8435 4083 57	3/4	4230 2226 01
	150	8435 4083 60	3/4	4230 2226 02
	200	8435 4083 83	3/4	4230 2226 03

^a This socket holder is included when you order the complete spindle.^b This socket holder follows when you order the standard nutrunner.**NOTE:** The spindle travel is 50 mm for all sockets holders.

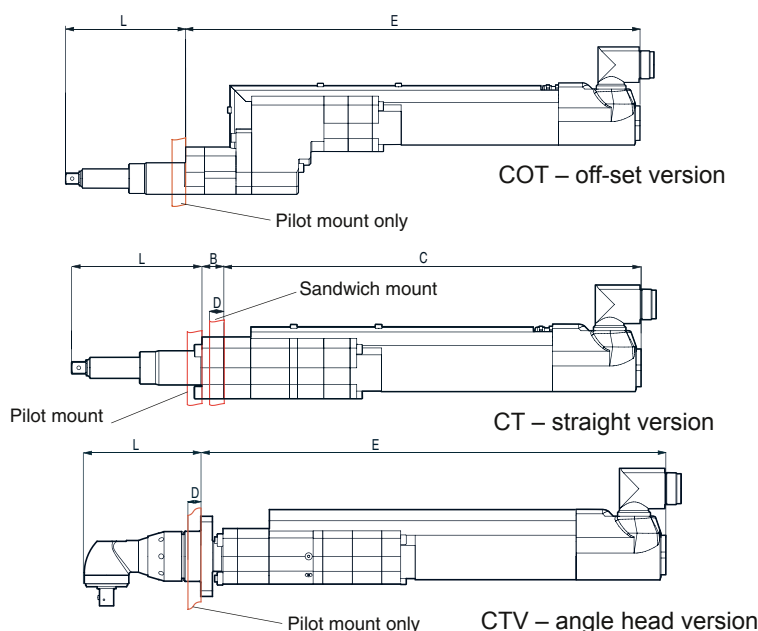
- Inline nutrunner, CT – Equipped with commutation sensor and transducer.
- Off-set nutrunner, COT – Comes with a commutation sensor, off-set gears for narrow bolts and transducer.
- Extended spring travel 76 mm and 100 mm – Nutrunners with extended spring travel for longer bolt lengths.
- Angle head nutrunners, CTV – Nutrunners with angle heads. Available with or without travel.



Model	Travel mm	Torque range		Speed r/min	Min C-C	Weight		Gear ratio	Socket holder size in	Ordering No.	Socket holder Ordering No.
		Nm	ft lb			kg	lb				
ETX42-20CT	50	6 - 20	4 - 14	2000	43	3.2	7.1	7.50	3/8	8435 5120 10	4230 1818 00
ETX42-20COT	50	6 - 20	4 - 14	2000	31	4.3	9.5	7.50	3/8	8435 5120 20	4230 1818 00
ETX42-50CT	50	10 - 50	7 - 35	700	43	3.5	7.7	21.33	1/2	8435 5130 10	4230 1819 00
ETX42-50COT	50	10 - 50	7 - 35	700	31	4.6	10.1	21.33	1/2	8435 5130 20	4230 1819 00
ETX50-90CT	50	20 - 90	15 - 65	650	51	5.9	13.0	18.21	1/2	8435 5140 10	4230 1820 00
ETX50-90COT	50	20 - 90	15 - 65	650	37	8.1	17.9	18.21	1/2	8435 5140 20	4230 1820 00
ETX50-150CT	50	30 - 150	22 - 110	380	51	5.8	12.8	31.24	1/2	8435 5150 10	4230 1820 00
ETX50-150COT	50	30 - 150	22 - 110	380	37	8.0	17.6	31.24	1/2	8435 5150 20	4230 1820 00
ETX62-150CT	50	30 - 150	22 - 110	450	63	9.5	20.9	13.94	1/2	8435 5160 10	4230 1829 00
ETX62-150COT	50	30 - 150	22 - 110	450	46	9.5	20.9	13.94	1/2	8435 5160 20	4230 1829 00
ETX72-450CT	50	40 - 230	29 - 170	330	63	10.2	22.5	19.04	3/4	8435 5170 10	4230 1822 00
ETX62-230COT	50	40 - 220	29 - 162	330	46	12.8	28.2	19.04	3/4	8435 5170 20	4230 1822 00
ETX62-350CT	50	50 - 350	37 - 258	220	63	10.2	22.5	28.33	3/4	8435 5180 10	4230 1822 00
ETX62-350COT	50	50 - 330	37 - 243	220	50	12.9	28.4	28.33	3/4	8435 5180 20	4230 1822 00
ETX72-450CT	50	90 - 450	65 - 331	160	73	11.3	25	41.6	3/4	8435 5182 10	4230 1971 00
ETX72-600CT	50	120 - 600	90 - 441	110	73	11.3	25	58.0	3/4	8435 5183 10	4230 1971 00
ETX72-600COT	50	120 - 580	90 - 425	110	55	17	37.5	57.99	3/4	8435 5183 20	4230 1971 00
ETX90-750CT	50	150 - 750	110 - 551	90	91	17.8	39	68.3	1	8435 5184 10	4230 1824 00
ETX90-950CT	50	200 - 950	150 - 699	70	91	17.8	39	90.0	1	8435 5185 10	4230 1824 00
Angle head tools											
ETX42-70CTV	–	15 - 70	11 - 50	355	45	4.9	10.8	21.33	1/2	8435 4072 07	–
ETX50-170CTV	–	22 - 170	16 - 125	200	50	9.1	20	31.24	1/2	8435 4073 04	–
ETX62-350CTV	–	50 - 350	37 - 221	175	70	13.9	28.9	19.04	3/4	8435 4074 72	–

Dimensions

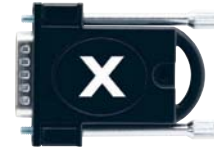
Model	L mm	B mm	C mm	D mm	E mm
ETX42-20CT	134	23	363	15	–
ETX42-50CT	134	23	389	15	–
ETX50-90CT	137	23	439	15	–
ETX50-150CT	137	23	439	15	–
ETX62-150CT	152	25	506	15	–
ETX62-230CT	152	25	506	15	–
ETX62-350CT	152	25	506	15	–
ETX72-450CT	146	30	580.5	20	–
ETX72-600CT	146	30	580.5	20	–
ETX90-750CT	152	32	549.5	20	–
ETX90-950CT	152	32	549.5	20	–
ETX42-20COT	134.5	–	–	–	436
ETX42-50COT	134.5	–	–	–	463
ETX50-90COT	137	–	–	–	519
ETX50-150COT	137	–	–	–	519
ETX62-150COT	152.5	–	–	–	575
ETX62-230COT	152.5	–	–	–	575
ETX62-350COT	152	–	–	–	580.5
ETX72-600COT	146	–	–	–	672
ETX42-70CTV	85	–	–	15	422
ETX50-170CTV	133	–	–	15	479
ETX62-350CTV	153	–	–	14	553



Optional Accessories

Cables

Model	Ordering No.
Tool cables	
2 m	4230 2195 02
5 m	4230 2195 05
7 m	4230 2195 07
10 m	4230 2195 10
15 m	4230 2195 15
20 m	4230 2195 20
Extension cables	
5 m	4220 1563 05
10 m	4220 1563 10
15 m	4220 1563 15



RBU

RBU

Model	Ordering No.
RBU-X	8433 0080 20
RBU-Gold	8433 0020 20

Additional socket holder length



Additional sockets

	A mm	Product No.	Socket holder size in	Socket holder ^a Ordering No.
ETX42-20CT	0 ^b	8435 5120 10	3/8	4230 1818 00
	50	8435 4063 08	3/8	4230 2217 00
	100	8435 4063 10	3/8	4230 2217 01
	150	8435 4063 12	3/8	4230 2217 02
	200	8435 4063 14	3/8	4230 2217 03
ETX42-50CT	0 ^b	8435 5130 10	1/2	4230 1819 00
	50	8435 4063 19	1/2	4230 2218 00
	100	8435 4063 21	1/2	4230 2218 01
	150	8435 4063 23	1/2	4230 2218 02
	200	8435 4063 25	1/2	4230 2218 03
ETX50-90CT	0 ^b	8435 5140 10	1/2	4230 1820 00
	50	8435 4063 28	1/2	4230 2219 00
	100	8435 4063 29	1/2	4230 2219 01
	150	8435 4063 30	1/2	4230 2219 02
	200	8435 4063 31	1/2	4230 2219 03
ETX50-150CT	0 ^b	8435 5150 10	1/2	4230 1820 00
	50	8435 4063 68	1/2	4230 2219 00
	100	8435 4063 33	1/2	4230 2219 01
	150	8435 4063 34	1/2	4230 2219 02
	200	8435 4063 35	1/2	4230 2219 03
ETX62-150CT	0 ^b	8435 5160 10	1/2	4230 1829 00
	50	8435 4063 37	1/2	4230 2223 00
	100	8435 4063 40	1/2	4230 2223 01
	150	8435 4063 43	1/2	4230 2223 02
	200	8435 4063 46	1/2	4230 2223 03
	0	8435 4063 70	5/8	4230 1821 00
	50	8435 4063 38	5/8	4230 2224 00
	100	8435 4063 41	5/8	4230 2224 01
	150	8435 4063 44	5/8	4230 2224 02
	200	8435 4063 47	5/8	4230 2224 03

	A mm	Product No.	Socket holder size in	Socket holder ^a Ordering No.
ETX62-230CT	0	8435 4063 81	5/8	4230 1821 00
	50	8435 4063 83	5/8	4230 2224 00
	100	8435 4063 98	5/8	4230 2224 01
	150	8435 4063 88	5/8	4230 2224 02
	200	8435 4063 91	5/8	4230 2224 03
	0 ^b	8435 5170 10	3/4	4230 1822 00
	50	8435 4063 84	3/4	4230 2226 00
	100	8435 4063 86	3/4	4230 2226 01
	150	8435 4063 89	3/4	4230 2226 02
	200	8435 4063 92	3/4	4230 2226 03
ETX62-350CT	0	8435 4063 72	5/8	4230 1821 00
	50	8435 4063 53	5/8	4230 2224 00
	100	8435 4063 56	5/8	4230 2224 01
	150	8435 4063 59	5/8	4230 2224 02
	200	8435 4063 62	5/8	4230 2224 03
	0 ^b	8435 5180 10	3/4	4230 1822 00
	50	8435 4063 54	3/4	4230 2226 00
	100	8435 4063 57	3/4	4230 2226 01
	150	8435 4063 60	3/4	4230 2226 02
	200	8435 4063 63	3/4	4230 2226 03

^a This socket holder is included when you order the complete nutrunner.

^b This socket holder follows when you order the standard nutrunner.

NOTE: The spindle travel is 50 mm for all sockets holders.

Advanced process control and monitoring

State-of-the-art tightening controllers Power MACS 4000 and Power Focus with their advanced process control and monitoring functions, and supported by ToolsTalk software, can put your assembly operation on the path to zero-fault production.

Power MACS 4000

Power MACS 4000 is Atlas Copco's latest, most advanced tightening controller for fixtured tools. It has effective tools for statistical process control to ensure that quality issues are identified long before they cause production problems.

The controller supports a zero-fault production philosophy with its capacity to collect tightening data for analysis, continuous improvement and traceability. Power MACS processing power and memory are designed to handle and send large amounts of data without influencing the tightening process.

Power Focus

Power Focus is a modular range of controllers, with full flexibility, designed for applications ranging from single nut-runner hand-held operations to fixtured multiple nutrunning systems. Advanced process control and monitoring functions make it easy to view and collect data using the Internet infrastructure.

The Power Focus 4000 is available in two versions, Compact and Graph. The difference between them is the user interface, where the Graph features the color display and a full keyboard.

ToolsTalk Power MACS

The new ToolsTalk software for Power MACS 4000 has been developed with user friendliness and customer adaptation in mind and can be installed on a laptop or a back office PC.



Power MACS 4000

One primary controller or master is needed per system. The primary controller takes care of external communication and comes with most field busses used in modern production lines (optional). A primary controller can be run as a secondary controller

The secondary controller, or slave, comes in two versions; with or without Ethernet switch in the back plate.

- One servo covers the complete torque range from 2 to 8,000 Nm.
- No external PC required, inherent back-up functionality for increased reliability.
- Define your tightening strategy based on results to make sure valuable time and resources are not wasted.
- Powerful PLC onboard supports Reject Management enabling you to handle faulty tightening in the most efficient way.
- Extensive library of tested tightening strategies – each joint can be tightened in the best possible way in terms of cycle time and quality.
- Stand alone design (no need for bulky cabinets).
- 24V DC supply, integrated Ethernet switch, E-stop circuit.
- Informative display, integrated line filter.



Power MACS 4000 controllers

Model	Fieldbus version	Ordering No.
Primary controller		
TC-4000-P-ES	No Fieldbus	8435 6511 00
TC-4000-P-PB-ES	Profibus	8435 6511 10
TC-4000-P-DN-ES	DeviceNet	8435 6511 30
TC-4000-P-EIP-ES	Ethernet IP	8435 6511 60
TC-4000-P-MTCP-ES	ModBus TCP	8435 6511 70
TC-4000-P-PN-ES	Profi Net	8435 6511 50
TC-4000-P-CC-ES	CC link	8435 6511 90
Secondary controller		
TC-4000-S	No fieldbus, No Ethernet switch	8435 6500 00
TC-4000-S-ES	No fieldbus, Ethernet switch	8435 6501 00

Main Switch Box – MSB

The MSB is used for power distribution and makes power management easy. It is designed be fed with 380-480 V AC 3-phase without requiring an external transformer. The MSB leaves room for customer adaptations and the E-stop functionality can be upgraded from class 3 to class 4. Each MSB supplies up to 6 controllers with power.

Distribution Box – DB

The DB provides the same functionality as the MSB except for the main switch and is used as a complement to the MSB for systems with more than 6 channels.

General Box – GB

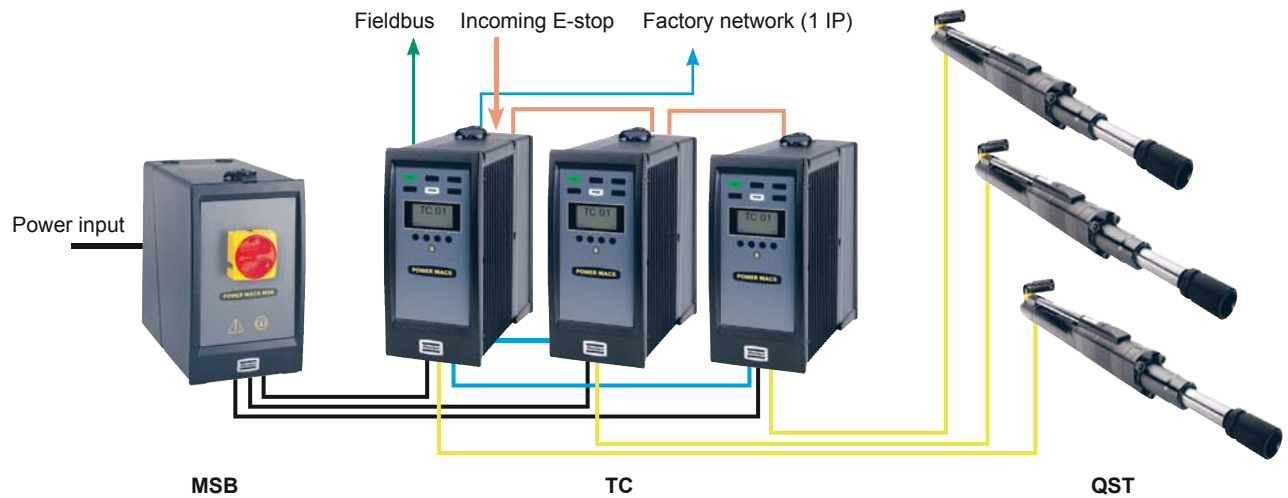
An empty DB, suitable for external system devices.



Model	Ordering No.
MSB	
Main switch box (Max 6 channels)	8435 5660 00
DB	
Distribution box (Max 6 channels) + Power cable 1800 mm	8435 6560 50
GB	
General box	4222 1249 85

Easy-to-build system

Power cables	4222 1248 xx	Ethernet cable	4222 1246 xx
E-Stop cable	4222 1247 xx	Motor cable	4220 3799 xx



With the Power MACS 4000 controller, multiple-spindle systems are easy to configure. Simply refer to the system ordering table to see which components you need.

System ordering table for a system with one station

No. of spindles	Number of				tool cables	System cable kit ^a
	TC-P	TC-S	MSB	DB		
1	1	0	1	0	1	1
2	1	1	1	0	2	1
3	1	2	1	0	3	1
4	1	3	1	0	4	1
5	1	4	1	0	5	1
6	1	5	1	0	6	1
7	1	6	1	1	7	1
8	1	7	1	1	8	1
9	1	8	1	1	9	1

No. of spindles	Number of				tool cables	System cable kit ^a
	TC-P	TC-S	MSB	DB		
10	1	9	1	1	10	1
11	1	10	1	1	11	1
12	1	11	1	1	12	1
13	1	12	1	2	13	1
14	1	13	1	2	14	1
15	1	14	1	2	15	1
16	1	15	1	2	16	1
17	1	16	1	2	17	1
18	1	17	1	2	18	1

^a See system cable kits below.

System cable kit

No. of spindles	Power cable			Ethernet cable			E-stop cable		Ethernet switch incl. Backplate 4222 0982 90	Ordering No. ^b
	1350 mm 4222 1248 13	1650 mm 4222 1248 16	1950 mm 4222 1248 19	1 m 4222 1246 01	2 m 4222 1246 02	3 m 4222 1246 03	1200 mm 4222 1247 12	3000 mm 4222 1247 30		
1	1	-	-	-	-	-	-	-	-	8435 6560 01
2	2	-	-	1	-	-	1	-	-	8435 6560 02
3	2	1	-	1	1	-	1	1	-	8435 6560 03
4	2	2	-	1	2	-	2	1	-	8435 6560 04
5	2	2	1	1	3	-	3	1	1	8435 6560 05
6	2	2	2	4	1	-	4	1	1	8435 6560 06
7	4	3	-	5	1	-	5	1	1	8435 6560 07
8	4	4	-	6	1	-	6	1	1	8435 6560 08
9	4	3	2	4	1	3	7	1	2	8435 6560 09
10	4	4	2	5	1	3	8	1	2	8435 6560 10
11	4	4	3	6	1	3	9	1	2	8435 6560 11
12	4	4	4	7	1	3	10	1	2	8435 6560 12
13	5	4	4	7	1	4	10	2	3	8435 6560 13
14	6	4	4	8	1	4	11	2	3	8435 6560 14
15	6	5	4	9	1	4	12	2	3	8435 6560 15
16	6	6	4	10	1	4	13	2	3	8435 6560 16
17	6	6	5	10	2	4	14	2	4	8435 6560 17
18	6	6	6	11	2	4	15	2	4	8435 6560 18

^b Based on Atlas Copco suggested set-up.

Optional Accessories

Ethernet cables

Length	Ordering No.
0.5 m	4222 1246 00
1 m	4222 1246 01
2 m	4222 1246 02
3 m	4222 1246 03
5 m	4222 1246 05
10 m	4222 1246 10
15 m	4222 1246 15



Ethernet cable

E-stop cables and termination

Components	Length	Ordering No.
E-stop cable	1200 mm	4222 1247 12
E-stop cable	3000 mm	4222 1247 30
E-stop termination		4222 0755 00



E-stop cable

Power cables between MSB and TC

Suitable for	Length	Ordering No.
TC1-TC2, TC7-TC8, TC13-TC14	1350 mm	4222 1248 13
TC3-TC4, TC9-TC10, TC15-TC16	1650 mm	4222 1248 16
TC5-TC6, TC11-TC12, TC17-TC18	1950 mm	4222 1248 19
For longer distances	5 m	4222 1248 50
	10 m	4222 1370 10
	15 m	4222 1370 15
	20 m	4222 1370 20



Power cable between MSB and TC

Indicator box and cable

Model	Ordering No.
Indicator box	8435 3010 03
Indicator box cable	4243 0158 81
Extension cable	
3 m	4243 0070 03
5 m	4243 0070 05
10 m	4243 0070 10
15 m	4243 0070 15
20 m	4243 0070 20
25 m	4243 0070 25



Indicator box

Handle

Model	Ordering No.
Operator handle	4220 4487 80

Advanced process control and monitoring functions

Power Focus is a modular range of controllers, with full flexibility, designed for applications ranging from single spindle hand-held operations to fixtured multiple nutrunning systems. Advanced process control and monitoring functions make it easy to view and collect data using the Internet infrastructure.

- Choose your controller – either Graph or Compact.
- Choose your RBU software key to run a tool.
- Choose from various ways to use the controller, as a stand-alone or in a network.
- Run many different kinds of tool, standard, FS, crowfoot or open tools.
- Realtime statistics analysis.
- Error-proofing solution.
- Advanced tightening control and/or monitoring method.
- Trace view.
- Logic configurator.
- Can handle different levels of communication.

The Power Focus 4000 is available in two versions, Compact and Graph. The difference between them is the user interface, where the Graph features the color display and a full keyboard.

Compact

This version offers full functionality at a lower cost, but requires a PC with the ToolsTalk PF software for process set-up.

Graph

With the Graph hardware, you have full stand-alone programming possibilities. When networked, the Graph can function as a programming terminal for other Power Focus units.

RBU cuts downtime

Atlas Copco's patented Rapid Backup Unit (RBU) concept transfers functionality to a non-configured hardware unit, ensuring that hardware can easily be upgraded should functionality requirements change. The RBU also acts as back-up for programming and configuration. If a change of hardware is required, just fit the RBU to the new hardware, switch on the unit and you're ready. All programming and network configurations are transferred in seconds. The RBU cuts downtime to a minimum.

**Compact****Graph****Power Focus 4000 for ETX**

Model	Ordering No.
Power Focus 4000 W 07	
PF 4000-G	8433 6100 00
PF 4000-C	8433 6100 05
PF 4000-G-DN	8433 6140 00
PF 4000-C-DN	8433 6140 05
PF 4000-C-FLN	8433 6141 05
PF 4000-G-PB	8433 6142 00
PF 4000-C-PB	8433 6142 05
PF 4000-G-IB	8433 6145 00
PF 4000-C-IB	8433 6145 05
PF 4000-G-MB	8433 6147 00
PF 4000-C-MB	8433 6147 05
PF 4000-G-EIP	8433 6149 00
PF 4000-C-EIP	8433 6149 05

Model	Ordering No.
Power Focus 4000 W 10	
PF 4000-G-HW	8433 7100 00
PF 4000-C-HW	8433 7100 05
PF 4000-G-DN- HW	8433 7140 00
PF 4000-C-DN-HW	8433 7140 05
PF 4000-G-FLN-HW	8433 7141 00
PF 4000-C-FLN-HW	8433 7141 05
PF 4000-G-PB-HW	8433 7142 00
PF 4000-C-PB-HW	8433 7142 05
PF 4000-G-CC-HW	8433 7143 00
PF 4000-C-CC-HW	8433 7143 05
PF 4000-G-IB-HW	8433 7145 00
PF 4000-C-IB-HW	8433 7145 05
PF 4000-G-MB-HW	8433 7147 00
PF 4000-C-MB-HW	8433 7147 05
PF 4000-G-PN-HW	8433 7148 00
PF 4000-C-PN-HW	8433 7148 05
PF 4000-G-EIP-HW	8433 7149 00
PF 4000-C-EIP-HW	8433 7149 05

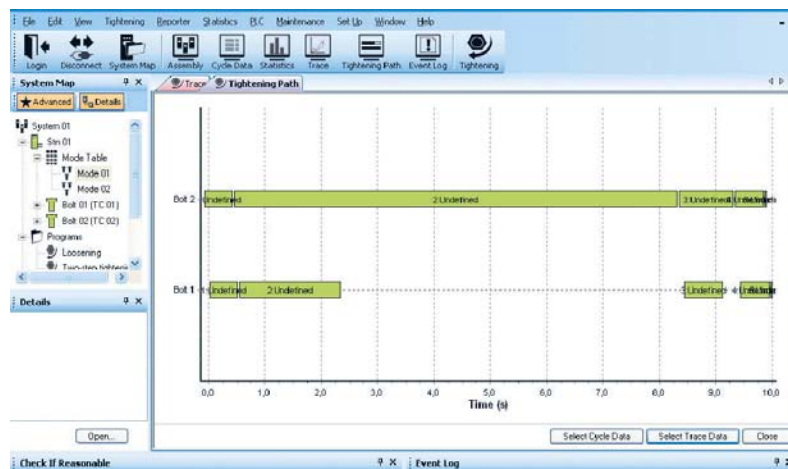
Controller functionality

Hardware key	Ordering No.
RBU-Gold	8433 0020 20
RBU-X	8433 0080 20

ToolsTalk Power MACS

The new ToolsTalk software for Power MACS 4000 has been developed with user friendliness and customer adaptation in mind. This Window-based program can be installed on a station PC, a laptop or a back office PC. ToolsTalk supports off-line programming; to edit or upload programs, simply connect the PC to the Power MACS 4000 controller using an Ethernet cable.

- New user friendly Windows programming interface with “drag-and-drop” and “copy-paste” functionalities.
- 10 levels of read and write security.
- Trace reporting on torque, angle, current, current as torque and time.
- Improved read-at-a-glance graphics with actual pictures of customer parts.
- Possible to view up to 20 tightening traces simultaneously.
- Graphical system map of hardware and software.
- Configurable cycle data menu for station reporting.
- Real time SPC and TDA reporting.
- Event logging of security access, parameter changes, errors, faults, alarms and warnings.
- Maintenance menus to verify hardware and software changes without machine intervention.
- Run the program in Basic or Advanced mode depending on needs.
- New Quick-set functionality for trimming a process in seconds.
- Optimize each tightening by means of the execution path for each bolt, including start times, stop times, and execution times for the steps.

**ToolsTalk Power MACS World Release 07**

	Designation	Ordering No.
1 user	English	8092 1307 01
5 user	English	8092 1307 05
10 user	English	8092 1307 10
Plant license	English	8092 1307 97
1 user	German	8092 1307 11
5 user	German	8092 1307 15
10 user	German	8092 1307 20
Plant license	German	8092 1307 98
1 user	French	8092 1307 21
5 user	French	8092 1307 25
10 user	French	8092 1307 30
Plant license	French	8092 1307 99

ToolsTalk Power MACS World Release 10

	Designation	Ordering No.
1 user	English	8092 1308 01
5 user	English	8092 1308 05
10 user	English	8092 1308 10
Plant license	English	8092 1308 97
1 user	German	8092 1308 11
5 user	German	8092 1308 15
10 user	German	8092 1308 20
Plant license	German	8092 1308 98
1 user	French	8092 1308 21
5 user	French	8092 1308 25
10 user	French	8092 1308 30
Plant license	French	8092 1308 99

ToolsTalk Power MACS World Release 10 Gauging

	Designation	Ordering No.
1 user	English	8092 1309 01
5 user	English	8092 1309 05
10 user	English	8092 1309 10
Plant license	English	8092 1309 97
1 user	German	8092 1309 11
5 user	German	8092 1309 15
10 user	German	8092 1309 20
Plant license	German	8092 1309 98
1 user	French	8092 1309 21
5 user	French	8092 1309 25
10 user	French	8092 1309 30
Plant license	French	8092 1309 99

Quality Assurance in Tightening

Contents

Page

ACTA 400	173
ACTA 4000	174
QRTT transducers	175
IRTT-B transducers	175
SRTT-B transducers	176
MRTT-B transducers	177
ACTA MT transducers	178
STwrench	180
BLM TPT, μ -Tester	186
BLM Joint Simulator Bench AD	187
Joint Simulator Bench 1060	187
ToolsTalk QAT	188

Quality assurance that gives peace of mind

Problems related to tightening account for a growing percentage of total warranty costs. A loose or improperly tightened joint in any assembly operation can cause serious problems and have serious consequences for end-users and result in damaged brand image for the manufacturer. Atlas Copco has developed a comprehensive quality assurance system designed to eliminate these problems.

Atlas Copco's tightening quality assurance system meets torque, angle and pulse measurement requirements for all types of fastening tools and joint verification through the residual torque check process.

In this range there are products that enable you to:

- Test the tool capability in the crib or along the line.
- Calibrate the tool in the fastest, most convenient way.
- Perform statistical process control of the performance of the tool along the line to prevent possible tool error.
- Check the residual torque in an already tightened joint with an advanced algorithm to avoid operator error and influence.

Data analyser plus rotary and static transducer

The ACTA 400/4000 is a complete range of systems for checking the tool in the tool crib or along the line.

STwrench

State-of-the-art, four-patent wrench that employs the modularity concept to check the residual torque on an already tightened joint. It can also be used to tighten a bolt with the most advanced torque or torque/angle strategies with complete traceability and error-proofing functionalities.

Benches

A full range of Joint Simulator Benches with a patented system for testing tools in real production conditions, or Static transducer benches as an all-in-one mobile system.

Software

ToolsTalk QAT can be used with the ACTA 4000 to manage the tool test activity.

Torque Supervisor can be used with benches and wrenches to manage the quality process.



ACTA 400

The ACTA 400 provides you with “Easy to use” torque measurement equipment, which is the perfect solution if you do not need a complete tool management system.

ACTA 400 TT, Torque Tester

The ideal solution for testing lower torque assembly tools. The ACTA 400 TT has an integrated torque transducer. With the exchangeable test joints on top, the system is complete.

ACTA 400 IT, Inline Tester

This is the flexible solution. ACTA 400 IT can be connected to all Atlas Copco transducers to measure dynamic and static torque. With the small, portable ACTA 400 IT unit you can also perform a quick and easy check of your tools’ performance directly on the applications.

Data storage

The ACTA 400 has a data memory recording 200 time-stamped measurements. With the included PC software, data can be transferred to your computer via the USB interface for printing or storage in Excel.



ACTA 400 TT



ACTA 400 IT

ACTA 400 TT

Model	Measurement range		Ordering No.
	Nm	ft lb	
ACTA 400 TT 1-06	0.2 - 1	0.15 - 0.7	8092 1173 01
ACTA 400 TT 4-06	0.8 - 4	0.6 - 3.0	8092 1173 04
ACTA 400 TT 12-06	2.4 - 12	1.8 - 8.9	8092 1173 12
ACTA 400 TT 30-10	6 - 30	4.4 - 22	8092 1173 30

ACTA 400 IT

Model	Ordering No.
ACTA 400 IT	8092 1172 20

Test joints ACTA 400 TT

Screw	Range		Stiffness	Ordering No.	
	Nm	ft lb		Test joint	Service kit ^b
M4	1	0.7	Soft	4145 0984 80 ^a	4081 2039 90 ^a
M4	1	0.7	Hard	4145 0984 83	-
M6	4	3.0	Soft	4145 0984 82 ^a	4081 2040 90 ^a
M6	4	3.0	Hard	4145 0984 85	-
M6	12	8.9	Soft	4145 0985 80 ^a	4081 2041 90 ^a
M6	12	8.9	Hard	4145 0985 82	-
M8	12	8.9	Soft	4145 0985 81	4081 2042 90
M8	12	8.9	Hard	4145 0985 83	-
M8	30	22	Soft	4145 0986 80 ^a	4081 2043 90 ^a
M8	30	22	Hard	4145 0986 82	-
M10	30	22	Soft	4145 0986 81	4081 2044 90
M10	30	22	Hard	4145 0986 83	-

^a Included with the ACTA 400 TT.

^b 5 screws and 5 nuts are included in the kit.

Optional Accessories

For ACTA 400 TT / IT

	Ordering No.
ACTA 400 TT Aluminum carry case	4222 1200 00
ACTA 400 IT Aluminum carry case	4222 1200 01

The ACTA 4000 complemented with the PC program ToolsTalk ACTA provides you with a complete tool database in which you have easy access to all the information you need regarding torque measurement and analysis. The system cuts tool administration costs and systematically controls the status of your tools during their entire life-cycle. It keeps track of tightening data, calibration data, service history, application analyses, purchase details, supplier information, etc. It checks and reminds the user when it is time for tool calibration and/or preventive maintenance (PM).

All data stored per tool in one place!

ACTA 4000 comes in three different models and can be upgraded depending on your needs:

B – Basic

Measures torque and angle. You can calibrate your tools and check basic statistics.

QC – Quality Control

Calculates all advanced statistics, including SPC, and has a database of up to 1000 tools/joints. This database includes information regarding tool programming, tightening and events.

AA – Advanced Analysis

This is the complete quality system. It offers all the above and shows an advanced tightening trace for joint analysis.

Hardware characteristic

- The ACTA 4000 has color screen.
- USB port, eight times more memory.
- Ethernet port and new improved ergonomic advantages.
- Battery time is 8 hours.



ACTA 4000

ACTA 4000

Model	Ordering No.
ACTA 4000 B	8092 1177 20
ACTA 4000 QC	8092 1177 30
ACTA 4000 AA	8092 1177 40

Software upgrades

ACTA 4000 software upgrades	Ordering No.
B to QC (8092 1177 20 to 8092 1177 30)	8092 1149 07
B to AA (8092 1177 20 to 8092 1177 40)	8092 1149 18
QC to AA (8092 1177 30 to 8092 1177 40)	8092 1149 26

Optional Accessories

ACTA 4000

Model	Ordering No.
Demo cases	
Leather carry bag for ACTA 4000	4222 0623 02
Battery units	
7.2V/3.8 Ah	4222 0368 00
7.2V/9.5 Ah	4222 0927 80
7.2V/15 Ah	4222 0928 80
Battery charger	
External charger	4222 0964 80

QRTT

Transducers used for QST, QMX and ETX nutrunner as well as for fixtured Tensor tool calibration. This transducer enables fast, easy set-up with highest system accuracy. By using the QRTT, no special test adaptation device between the spindle and the product itself is needed.



Model	Drive square in	For QMX spindle	Rated capacity		Ordering No.
			Nm	ft lb	
QRTT 20 Nm kit	3/8	42	2 - 20	1.5 - 15	8092 1164 13
QRTT 75 Nm kit	3/8	42	7.5 - 75	5.5 - 55	8092 1164 18
QRTT 200 Nm kit	1/2	50	20 - 200	15 - 150	8092 1164 23
QRTT 500 Nm kit	3/4	62	50 - 500	37 - 369	8092 1164 28
QRTT 1000 Nm kit	1	80, 90	100 - 1000	75 - 750	8092 1164 33

IRTT-B

IRTT-B is the new generation of Atlas Copco torque and torque/angle in-line rotary transducers incorporating significant improvements in durability and accuracy. They can also work with pulse tools thanks to their revolutionary and unique solution for the slip ring and brush block. Also new is the angle reading system that uses a patent solution which gives better resolution and longer life. The mechanics have also been completely reviewed to achieve a higher level of durability.

IRTT-B is equipped by a memory chip that is read by the Atlas Copco data analyser. In this way the Data analyser is automatically calibrated to the transducer sensitivity and avoid any possible set up errors.



		Drive						Drive						
		Hex	Square	Rated capacity				Hex	Square	Rated capacity				
Model		in	in	Nm	ft lb	Ordering No.		Model		in	in	Nm	ft lb	Ordering No.
Torque models						Torque/angle models								
IRTT-B 5-I06	1/4			5	4	8059 0942 05		IRTT-B 1A-I06	1/4			1	0.8	8059 0943 96
IRTT-B 5-06		1/4		5	4	8059 0942 07		IRTT-B 2A-I06	1/4			2	1.5	8059 0943 01
IRTT-B 20-I06	1/4			20	15	8059 0942 10		IRTT-B 5A-I06	1/4			5	4	8059 0943 06
IRTT-B 20-06		1/4		20	15	8059 0942 15		IRTT-B 5A-06		1/4		5	4	8059 0943 08
IRTT-B 25 -10		3/8		25	18	8059 0942 20		IRTT-B 20A-I06	1/4			20	15	8059 0943 11
IRTT-B 75-10		3/8		75	55	8059 0942 25		IRTT-B 20A-06		1/4		20	15	8059 0943 16
IRTT-B 180-13		1/2		180	133	8059 0942 30		IRTT-B 25A-10		3/8		25	18	8059 0943 21
IRTT-B 500-20		3/4		500	369	8059 0942 35		IRTT-B 75A-10		3/8		75	55	8059 0943 26
IRTT-B 750-25		1		750	553	8059 0942 40		IRTT-B 180A-13		1/2		180	133	8059 0943 31
IRTT-B 1400-25		1		1400	1033	8059 0942 45		IRTT-B 500A-20		3/4		500	369	8059 0943 36
IRTT-B 3000-38		1 1/2		3000	2200	8059 0942 52		IRTT-B 750A-25		1		750	553	8059 0943 41
IRTT-B 5000-38		1 1/2		5000	3685	8059 0942 56		IRTT-B 1400A-25		1		1400	1033	8059 0943 46
								IRTT-B 3000A-38		1 1/2		3000	2200	8059 0943 52
								IRTT-B 5000A-38		1 1/2		5000	3685	8059 0943 56
NOTE: All IRTT are equipped with 19-pin connector.														

NOTE: All IRTT are equipped with 19-pin connector.

SRTT-B

Stationary reaction torque transducer

Stationary reaction torque transducers are designed for testing wrenches, click wrenches or for tightening tools where rotary action is not desired during measurement. When testing a shut-off tool, a joint simulator is required as an accessory.

The SRTT-B is the new generation of Atlas Copco stationary reaction torque transducers with improved durability thanks to their new mechanical design. The new patented system of fixing the joint simulator on top avoids any possible errors due to the play between the two devices.

A complete range of accessories and a mechanical joint simulator enables you to test shut-off tools or wrenches with square drive output.

SRTT-B



Model	Drive		Rated capacity		Ordering No.
	Hex mm	Square in	Nm	ft lb	
SRTT-B 0.5-13		1/2	0.5	0.37	8059 0946 03
SRTT-B 2-13		1/2	2	1.47	8059 0946 09
SRTT-B 5-13		1/2	5	3.69	8059 0946 15
SRTT-B 25-36	36		25	18.40	8059 0946 28
SRTT-B 50-36	36		50	36.88	8059 0946 36
SRTT-B 100-36	36		100	73.76	8059 0946 45
SRTT-B 250-36	36		250	184.40	8059 0946 54
SRTT-B 500-50	50		500	368.78	8059 0946 63
SRTT-B 1000-50	50		1000	737.60	8059 0946 75
SRTT-B 2000-50	50		2000	1475.00	8059 0946 84

Test joint for SRTT-B

Model	Drive		Rated capacity		Ordering No.
	Hex mm	Square in	Nm	ft lb	
TJ SRTT-B S -0.5		1/2	0.5	0.37	8059 0940 01
TJ SRTT-B H -0.5		1/2	0.5	0.37	8059 0940 02
TJ SRTT-B S -2		1/2	2	1.47	8059 0940 03
TJ SRTT-B H -2		1/2	2	1.47	8059 0940 04
TJ SRTT-B S -5		1/2	5	3.69	8059 0940 05
TJ SRTT-B H -5		1/2	5	3.69	8059 0940 06
TJ SRTT-B S -25	36		25	18.40	8059 0940 07
TJ SRTT-B H -25	36		25	18.40	8059 0940 08
TJ SRTT-B S -50	36		50	36.88	8059 0940 09
TJ SRTT-B H -50	36		50	36.88	8059 0940 10
TJ SRTT-B S -100	36		100	73.76	8059 0940 11
TJ SRTT-B H -100	36		100	73.76	8059 0940 12
TJ SRTT-B S -250	36		250	184.40	8059 0940 13
TJ SRTT-B H -250	36		250	184.40	8059 0940 14
TJ SRTT-B S -500	50		500	368.78	8059 0940 15
TJ SRTT-B H -500	50		500	368.78	8059 0940 16
TJ SRTT-B 1000-50	50		1000	737.60	8059 0940 17



Test joint for SRTT-B

Optional Accessories

Adapters

Adapter	Drive		Ordering No.
	Hex mm	Square in	
1/2" to 1/4"		1/2	8059 0978 63
1/2" to 3/8"		1/2	8059 0978 64
3/8" to 36	36		8059 0978 65
1/2" to 36	36		8059 0978 66
1/2" to 50	50		8059 0978 67
3/4" to 50	50		8059 0978 68
1" to 50	50		8059 0978 69



Adapter

MRTT-B**Manual wrench torque transducers**

Designed to be connected to the ACTA 4000 or BLM 5000. Length-independent reading makes possible to get an accurate torque reading independent of the point of handling. Extended range covering 3 to 2000 Nm. The MRTT-B uses the same female drive as the STwrench. This makes it possible to use the same end fitting attachment. The end fitting has to be ordered separately.

**MRTT-B**

Model	Capacity		Drive	Weight		Length mm	Ordering No.
	Nm	ft lb		kg	lb		
MRTT-B 30	30	22	9x12	0.45	0.99	218.5	8059 0937 30
MRTT-B 50	50	37	9x12	0.46	1.01	218.5	8059 0937 36
MRTT-B 70	70	51	9x12	0.56	1.23	282	8059 0937 39
MRTT-B 100	100	74	9x12	0.66	1.45	362	8059 0937 45
MRTT-B 150	150	110	14x18	1.40	3.08	473.5	8059 0937 48
MRTT-B 250	250	180	14x18	1.46	3.21	473.5	8059 0937 54
MRTT-B 400	400	300	14x18	2.00	4.40	733.5	8059 0937 60
MRTT-B 600	600	440	14x18	4.93	10.86	944.5	8059 0937 66
MRTT-B 1000	1000	730	Ø28	8.55	18.84	1087	8059 0937 75
MRTT-B 2000	2000	1460	Ø28	13.08	28.83	2092	8059 0937 84

MRTT-B Screwdriver

MRTT-B is also available in a screwdriver version for low torque applications from 0.1 to 15 Nm. The 15 Nm model has a precision reversible 1/4" drive ratchet consisting of two needle clutches. Sliding bush to convert left and right tightening. The very low friction avoids dragging the screws on the return motion.

**MRTT-B**

Model	Capacity		Square drive in	Weight		Length mm	Ordering No.
	Nm	ft lb		kg	lb		
MRTT-B 1-06	0.1-1	0.07-0.74	1/4	0.3	0.66	169	8059 0931 06
MRTT-B 5-06	0.5-5	0.36-3.67	1/4	0.3	0.66	169	8059 0931 15
MRTT-B 15-06	1.5-15	1.1-11.1	1/4	0.4	0.88	223	8059 0931 24

Optional Accessories

Transducer cable

The cable needed for all transducers and MRTT-B.

Cables

Length	Ordering No.
1 m	4145 0982 01
3 m	4145 0982 03
5 m	4145 0982 05
3 m curled cable	4145 0971 03

If non Atlas Copco transducers are used one of the following cables are required.

Model	Ordering No.
Industrial style Transducer cable 3 m 19 - 4	4145 0965 03
Industrial style Transducer cable 3 m 19 - 6	4145 0968 03
Industrial style Transducer cable 3 m 19 - 10	4145 0967 03

Quality assurance system – sharpening your competitive edge

To ensure the highest quality of your fastening – and ultimately your company's products – Atlas Copco has developed a comprehensive quality assurance system for micro torques. The controller-cable-transducer package provides fast, accurate and reliable measurement of critical parameters.

ACTA MT4 – smart new features

- Connect to PC via USB/RS232/Ethernet.
- 16 different engineering units to choose from.
- Colour configurable display (Torque/ Angle/ Status/Trace).
- Battery for portable usage.
- Programmable via keypad or software "ToolsTalk ACTA MT".
- Dual transducer inputs.
- High resolution OLED colour display.
- Audio signal for operator feedback.
- Digital I/O signals for communication with external devices such as PLC.
- ESD grounding terminal.



MT TR(A) 500



MT TH



ACTA MT 4



MT TS

Model	Capacity		Drive	Overall length mm	Ordering No.
	Ncm	in lb			
Manual screwdriver torque transducer					
MT TH 1	1.0	0.09	Ø 3 mm	115	8432 0820 10
MT TH 2	2.0	0.18	Ø 3 mm	115	8432 0820 11
MT TH 5	5.0	0.44	Ø 3 mm	115	8432 0820 12
MT TH 10	10.0	0.88	Ø 3 mm	115	8432 0820 13
MT TH 20	20.0	1.77	1/4"	115	8432 0820 14
MT TH 50	50.0	4.42	1/4"	124	8432 0820 15
MT TH 100	100.0	8.85	1/4"	124	8432 0820 16
MT TH 200	200.0	17.70	1/4"	124	8432 0820 17
Static reaction torque transducer					
MT TS 1	1.0	0.09	Ø 3 mm	81	8432 0820 18
MT TS 2	2.0	0.18	Ø 3 mm	81	8432 0820 19
MT TS 5	5.0	0.44	Ø 3 mm	81	8432 0820 20
MT TS 10	10.0	0.88	Ø 3 mm	81	8432 0820 21
MT TS 20	20.0	1.77	Ø 3 mm	81	8432 0820 22
MT TS 50	50.0	4.42	1/4"	98	8432 0820 23
MT TS 100	100.0	8.85	1/4"	98	8432 0820 24
MT TS 200	200.0	17.70	1/4"	98	8432 0820 25
MT TS 500	500.0	44.25	1/4"	111	8432 0820 52
In-line rotary torque transducer					
MT TR 2	2.0	0.18	Ø 3 mm	76	8432 0820 29
MT TR 5	5.0	0.44	Ø 3 mm	76	8432 0820 30
MT TR 10	10.0	0.88	Ø 5 mm	76	8432 0820 31
MT TR 20	20.0	1.77	Ø 5 mm	76	8432 0820 32
MT TR 50	50.0	4.42	1/4"	105	8432 0820 33
MT TR 100	100.0	8.85	1/4"	105	8432 0820 34
MT TR 200	200.0	17.70	1/4"	105	8432 0820 35
MT TR 500	500.0	44.25	1/4"	105	8432 0820 36
In-line rotary torque and angle transducer					
MT TRA 2	2.0	0.18	Ø 3 mm	76	8432 0820 41
MT TRA 5	5.0	0.44	Ø 3 mm	76	8432 0820 42
MT TRA 10	10.0	0.88	Ø 5 mm	76	8432 0820 43
MT TRA 20	20.0	1.77	Ø 5 mm	76	8432 0820 44
MT TRA 50	50.0	4.42	1/4"	105	8432 0820 45
MT TRA 100	100.0	8.85	1/4"	105	8432 0820 46
MT TRA 200	200.0	17.70	1/4"	105	8432 0820 47
MT TRA 500	500.0	44.25	1/4"	105	8432 0820 48

Torque analyzer

Model	Ordering No.
ACTA MT 4 ^a (programmable over keypad)	8432 0820 04
ToolsTalk MT Analysis (trace analysis)	8432 0830 31
Transducer cable	8432 0830 35
RS232 cable ACTA MT	8432 0831 39

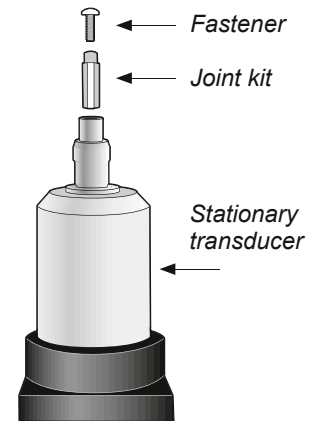
^aToolsTalk ACTA MT (programming software) included

Stationary torque transducers, accessories

Model	Ordering No.
Joint Kit M1.6 for MT TS - 3H7 adapter (up to 20 Ncm)	8432 0830 79
M2 for MT TS - 1/4" adapter (up to 50 Ncm)	8432 0830 78
M2.5 for MT TS- 1/4" adapter (up to 100 Ncm)	8432 0830 77
M3.0 for MT TS- 1/4" adapter (up to 200 Ncm)	8432 0830 87
M4.0 for MT TS- 1/4" adapter (up to 300 Ncm)	8432 0830 86
M5.0 for MT TS- 1/4" adapter (up to 600 Ncm)	8432 0830 85
M6.0 for MT TS- 1/4" adapter (up to 800 Ncm)	8432 0832 67

Fasteners for joint kits

Model	Ordering No.
Lens head screw DIN7985 PH0 M1.6x4 V2A PH0	4023 0005 01
ISO14583 TX6 M2.0x10 V2A TX6	4023 0005 02
ISO14583 TX8 M2.5x10 V2A TX8	4023 0005 03
ISO14583 TX10 M3.0x10 V2A TX10	4023 0005 04
ISO14583 TX20 M4.0x12 V2A TX20	4023 0005 05
ISO14583 TX25 M5.0x12 V2A TX25	4023 0005 06
ISO14583 TX30 M6.0x12 V2A TX30	4023 0005 07



Where the joints are critical

Critical fastening duties are among the most essential tightening operations within industry today. So whether you're in the business of assembling cars or trucks, tractors or harvesters, trains or planes, you need to be in control when it comes to production and quality assurance.

STwrench

The Atlas Copco STwrench is much more than a standard transducerized hand-held nutrunner. Due to its modular design, you can build the STwrench to meet your exact requirements and create a tool that perfectly matches your applications.

Use the STwrench for production to get full traceability of the entire tightening operation, including torque control, angle control and yield control. Or build your wrench to just tighten your joint with high torque accuracy. Or use it for quality control to check residual torque, to perform joint analysis, including joint behaviour and stiffness, to set the correct tightening parameters for production and to test the reproducibility of joint stiffness on the benches.

The ultimate wrench for production and quality assurance

With the STwrench you can build the functionality you need into your own tool. Choose three patented components – smarHEAD, RBU and the power supply solution to suit your exact requirements. Then add a fourth: the patented controller that is standard for all STwrenches. Due to the modular design of the STwrench, you can mix and match components to suit all types of applications.

Use it as a basic stand-alone system or integrate it with Atlas Copco hardware and software. The STwrench is versatile enough to tighten hard-to-reach bolts using a variety of torque and angle strategies while providing complete traceability. Yet it handles quality control of residual torque just as easily as it does comprehensive joint analysis.

smarHEAD

The smarHEAD has a built-in memory chip to store calibration values that are automatically recognized by the STwrench controller. Choose from six different sizes ranging from 30 to 600 Nm, which is connected to the controller by a patented system allowing a fast connection. It can be with or without

Gyroscope and the torque transducer is made to guarantee length-independent reading. TAG recognition patented solution is used to assure Poka-Yoke operations. It includes at front a Led bright light to improve visibility in dark bolt area.

STwrench Controller

This is the brain of the wrench. It has a clear and visible display, LED ring, vibrating handle and buzzer for immediate feedback to the operator. It has dedicated slots where you can insert the RBU, one wireless module and the Bar Code Module (see Optional Accessories).

The STwrench Controller can be powered by a patented bi-energy solution such as the long life STwrench Battery or by Tensor SL connected to the Power Focus via the STwrench Cable Box.

STwrench RBU

Atlas Copco's patented Rapid Backup Unit (RBU) concept transfers functionality to a non-configured hardware unit, ensuring that hardware can easily be upgraded. The RBU also acts as back-up for programming and configuration. If a change of hardware is required, just fit the RBU to the new hardware, switch on the unit and you're ready. All programming and network configurations are transferred in seconds. The RBU cuts downtime to a minimum.



Functionality	Quality		Production	
	smartHEAD	smartHEAD A	smartHEAD	smartHEAD A
Controller				
360° LED lights on board for operator feedback	x	x	x	x
Keyboard	x	x	x	x
Graphic Display	x	x	x	x
USB mini to connect ToolsTalk BLM	x	x	x	x
Infrared communication	x	x	x	x
Buzzer	x	x	x	x
Rapid Back Up Unit (RBU)	x	x	x	x
Vibration	x	x	x	x
Shock detector	x	x	x	x
smartHEAD				
Interchangeable head –	x	x	x	x
Tag recognition				
Light in front of smartHEAD	x	x	x	x
Gyroscope for angle measurement		x		x
Length-independent torque transducer	x	x	x	x
Free mode – programs				
Track torque	x	x	x	x
Peak torque	x	x	x	x
Residual check torque/time	x	x	x	x
Residual check torque/angle		x		x
Tightening torque with angle monitoring		x		x
Quality audit				
Peak	x	x	x	x
Residual Check Torque/Time	x	x	x	x
Residual Check Torque/Angle		x		x
Loosen And Retighten		x		x
Loosen		x		x
Joint Analysis				
Torque/angle graphing		x		x
Yield point detection		x		x
Tightening				
Torque with time monitoring			x	x
Torque with angle monitoring				x
Torque plus angle				x
Yield				x
Yield plus angle				x

Functionality	Quality		Production	
	smartHEAD	smartHEAD A	smartHEAD	smartHEAD A
PSET				
Number of Psets	200	200	200	200
Batch count	x	x	x	x
Number of job	100	100	100	100
Number of multistage	200	200	200	200
CW/CCW operation	x	x	x	x
Bending correction		x		x
Extension torque correction	x	x	x	x
Extension angle correction		x		x
General				
Transducer torque traceability	x	x	x	x
Result data storage	5000	5000	5000	5000
Trace storage	10	10	10	10
SPC	x	x	x	x
Multi units (Nm, Kg/m)	x	x	x	x
Multi language menu	x	x	x	x
Interchangeable head –	x	x	x	x
Tag recognition writing function				
Connectivity				
PF connectivity for I/O or any type of fieldBus	x	x	x	x
ToolsNet	x	x	x	x
QATnode	x	x	x	x
Optional				
Barcode Reader	x	x	x	x
IRC-W	x	x	x	x
IRC-B for Power Focus connectivity	x	x	x	x
QATnode	x	x	x	x
ToolsTalk BLM				
USB Connection	x	x	x	x
Off Line programming	x	x	x	x
Tightening Database to PC (Excel)	x	x	x	x
View trace	x	x	x	x
Export trace in several formats	x	x	x	x
Overlay Traces	x	x	x	x
Trace zoom	x	x	x	x
Statistical analysis	x	x	x	x
Bar code reader configuration	x	x	x	x



STwrench

How to order your STwrench

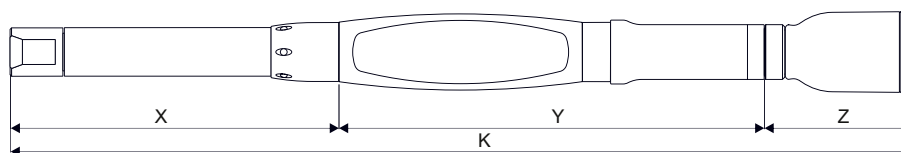
1. Take the STwrench Controller
2. Select your smarHEAD
3. Select your End fitting tool
4. Select your RBU
5. Select the Battery
6. Select if you want optional modules

Model	Capacity		Drive mm	Weight		Length mm	Ordering No.
	Nm	ft lb		kg	lb		
Controller							
STwrench Controller				0.48	1.08	313	8059 0930 00
smarHEAD only Torque							
smarHEAD 30	30	23	9x12	0.20	0.44	167.5	8059 0920 30
smarHEAD 80	80	59	9x12	0.22	0.48	167.5	8059 0920 42
smarHEAD 150	150	111	14x18	0.55	1.21	271.0	8059 0920 48
smarHEAD 250	250	185	14x18	0.78	1.72	417.0	8059 0920 54
smarHEAD 400	400	295	14x18	0.93	2.05	584.0	8059 0920 60
smarHEAD 600	600	443	21x26	1.70	3.75	1048.5	8059 0920 66
smarHEAD A Torque + Angle							
smarHEAD A30	30	23	9x12	0.22	0.48	167.5	8059 0930 30
smarHEAD A80	80	59	9x12	0.24	0.53	167.5	8059 0930 42
smarHEAD A150	150	111	14x18	0.57	1.25	271.0	8059 0930 48
smarHEAD A250	250	185	14x18	0.80	1.76	417.0	8059 0930 54
smarHEAD A400	400	295	14x18	0.95	2.09	584.0	8059 0930 60
smarHEAD A600	600	443	21x26	1.72	3.79	1048.5	8059 0930 66
RBU Rapid Backup unit							
STwrench RBU Quality							8059 0930 90
STwrench RBU Production							8059 0930 91
Battery							
STwrench battery							8059 0930 86

Software

	Ordering No.
TT BLM W09 1 user license	8059 0981 10
TT BLM W09 5 user license	8059 0981 11
TT BLM W09 10 user license	0805 9098 12
TT BLM W09 plant license	8059 0981 13

Dimensions



Model	Length				Total Weight	
	X mm	Y mm	Z mm	K mm	kg	lb
STwrench 30 Nm	159	280	96	535	0.90	2.00
STwrench 80 Nm	159	280	96	535	0.80	2.00
STwrench 150 Nm	262	280	96	638	1.23	2.56
STwrench 250 Nm	408	280	96	784	1.46	3.00
STwrench 400 Nm	575	280	96	951	1.63	3.59
STwrench 600 Nm	1040	280	96	1416	2.40	5.29

X. – smarHEAD, Y. – STwrench Controller, Z. – Battery, K. – Total length

IRC Modules

Three different IRC modules each with different wireless technology. No extra special software is needed, it is necessary only to plug in the new module to activate the communication. The communication can be to the Power Focus, to the QAT node, to the STwrench cradles or to different systems on the net.

	Ordering No.
STwrench IRC-B Module	8059 0920 10
STwrench IRC-W Module	8059 0920 11



IRC-module

Bar Code Module

Enables the Bar Code to be read. STwrench is able to handle four different Bar Codes that can be used to activate or control the process and for traceability purposes. It is only necessary to plug in the module to activate the function.

	Ordering No.
Bar Code	8059 0920 12



Bar Code

STwrench battery

A Lithium ion battery that gives 16 h of working time (10 h if wireless communication is used).

	Ordering No.
Battery	8059 0930 86

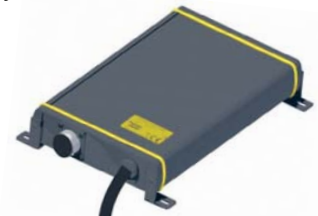


Battery

STwrench cable box

Wired to connect the STwrench to the Power Focus using a standard Tensor SL cable. The STwrench cable box supplies power to the wrench and handles the communication between the wrench and the Power Focus.

	Ordering No.
Cable box	8059 0920 24



Cable box

STwrench battery charger

To recharge the battery, it can be mounted in a horizontal or vertical position. It takes 4 hours to completely recharge the STwrench battery.

	Ordering No.
Battery charger	8059 0930 88



Battery charger

QATnode

Three different models of QATnode enable the solution to be customized to specific needs. The QATnode can be connected to the STwrench in WiFi via access point, in real time connection, or via IrDa with wrench locked on the QATnode, in non real time connection when wireless is not possible.

QATnode P

Used to print out a ticket result on a 40 column serial printer. The layout of the ticket is fully configurable via TT BLM.

QATnode I/O

In addition to QATnode P functionality it has 6 digital inputs and 5 digital outputs. All of them are fully configurable and it is possible to enable/disable the wrench, select a PSet or JOB and send out an OK or NOK.

QATnode T

In addition to STwrench PokaYoke functionality it makes it possible to send data to the ToolsNet server.

	Ordering No.
QATnode P	8059 0920 25
QATnode I/O	8059 0920 26
QATnode T	8059 0920 27



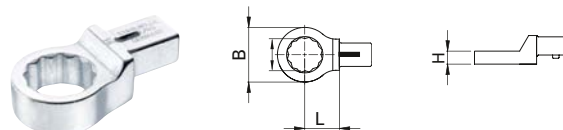
QATnode

PF, IRC focus & QIF accessories

For fieldbus connectivity and additional I/O port, or for backup station, the STwrench can be connected in wireless with PF or IRC Focus. It allow also the possibility to connect all QIF accessories such as stack light etc ...

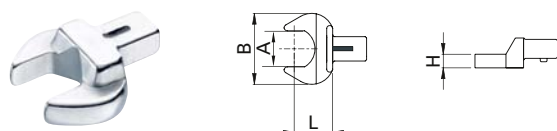
End fitting tools for wrenches

The end fitting tools are the tool that can be attached in front of the wrench. There are two types of models, without and with TAG. TAG is a patented solution used by the STwrench to check the process. In the TAG the STwrench can write a number that can be used for socket recognition and the Torque/ Angle calibration factor of the extension for automatic calibration. Both types are also compatible with LABwrench.

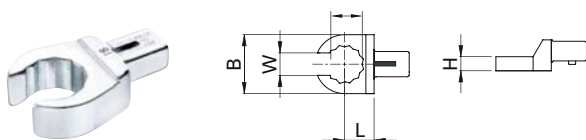


Type	Hex mm	B mm	H mm	L mm	g	Ordering No.
Ring end 9 x 12	7	13	8	17.5	37	4620 0014 00
	8	14.2	8	17.5	40	4620 0015 00
	10	17.2	9	17.5	44	4620 0016 00
	11	18.5	9	17.5	41	4620 0017 00
	12	20	12	17.5	49	4620 0018 00
	13	21.5	12	17.5	56	4620 0019 00
	14	23	12	17.5	52	4620 0020 00
	15	24.2	12	17.5	52	4620 0021 00
	16	25.7	13	17.5	54	4620 0022 00
	17	27.2	13	17.5	59	4620 0023 00
	18	28.5	13	17.5	56	4620 0024 00
	19	30.3	13	17.5	65	4620 0025 00
	21	33	15	17.5	71	4620 0026 00
	22	34.5	15	17.5	74	4620 0027 00
14 x 18	13	21.5	11	25	127	4620 0063 00
	14	23	11	25	123	4620 0064 00
	15	24.2	11	25	128	4620 0065 00
	16	25.7	12	25	133	4620 0066 00
	17	27.2	12	25	135	4620 0067 00
	18	28.5	12	25	134	4620 0068 00
	19	30.5	12	25	138	4620 0069 00
	21	33	15	25	144	4620 0070 00
	22	34.5	15	25	145	4620 0071 00
	24	37.5	15	25	153	4620 0072 00
	27	41.5	17	25	162	4620 0073 00
	30	45	19	25	182	4620 0074 00
	32	47.5	19	25	181	4620 0075 00
	34	50.5	19	28	210	4620 0076 00
	36	53	19	28	203	4620 0077 00
	41	59	20	30	240	4620 0078 00

Standard end fitting tools with TAG



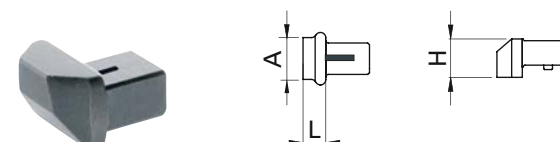
Type	A mm	B mm	H mm	L mm	g	Ordering No.
Open end 9 x 12	7	22	5	17.5	40	4620 0001 00
	8	22	5	17.5	39	4620 0002 00
	9	26	5.5	17.5	38	4620 0003 00
	10	26	5.5	17.5	42	4620 0004 00
	11	26	5.5	17.5	41	4620 0005 00
	12	30	7	17.5	43	4620 0006 00
	13	30	7	17.5	48	4620 0007 00
	14	35	8	17.5	52	4620 0008 00
	15	35	8	17.5	51	4620 0009 00
	16	38	8.5	17.5	58	4620 0010 00
	17	38	8.5	17.5	60	4620 0011 00
	18	42	9	20	71	4620 0012 00
	19	42	9	20	74	4620 0013 00
14 x 18	13	30	7	25	128	4620 0049 00
	14	35	8	25	129	4620 0050 00
	15	35	8	25	132	4620 0051 00
	16	38	9	25	140	4620 0052 00
	17	38	9	25	136	4620 0053 00
	18	42	10	25	147	4620 0054 00
	19	42	10	25	147	4620 0055 00
	21	50	11	25	171	4620 0056 00
	22	50	11	25	165	4620 0057 00
	24	53	12	25	167	4620 0058 00
	27	60	13	30	219	4620 0059 00
	30	66	14	30	245	4620 0060 00
	32	66	14	32.5	246	4620 0061 00
	34	66	14	32.5	239	4620 0062 00



Type	Hex in	B mm	H mm	L mm	g	Ordering No.
Reversible ratchet 9 x 12	1/4	22	14.5	17.5	62	4620 0043 00
	3/8	33	24	17.5	136	4620 0044 00
	1/2	33	28.3	17.5	147	4620 0045 00
14 x 18	1/2	43	26.2	25	302	4620 0081 00
	3/4	50	30.7	25	467	4620 0082 00
21 x 26	3/4	69	30	62.5	1350	4620 0086 00

The TAG placed on the ratchet defines the Pset.

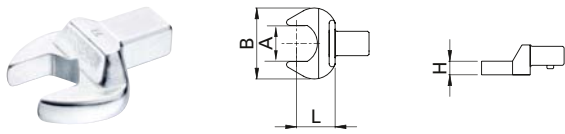
NOTE: Since several sockets could be used, it is recommended to hold the socket in such a way that it is not possible to remove it (e.g. using a pin).



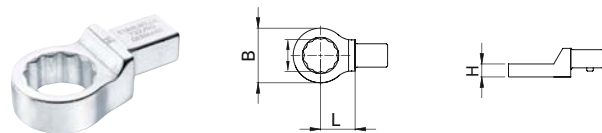
Type	A mm	H mm	L mm	g mm	Ordering No.
Blank end 9 x12 for making up specials	8 x 14	14.5	8	30	4620 0048 00
Blank end 14 x18	11 x 25	21.5	21	98	4620 0084 00
21 x26	13 x 30	30	13	220	4620 0085 00

NOTE: During the welding, the shaft of the tool must be kept cool to avoid TAG damage.

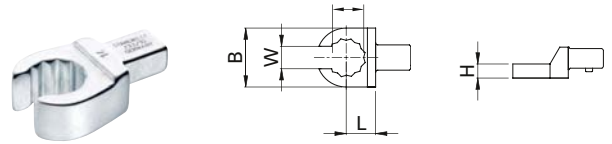
Standard end fitting tools without TAG



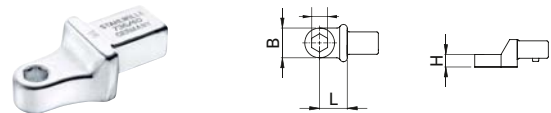
Type	A mm	B mm	H mm	L mm	g	Ordering No.
Open end 9 x 12	7	22	5	17.5	40	8059 0975 00
	8	22	5	17.5	39	8059 0975 01
	9	26	5.5	17.5	38	8059 0975 02
	10	26	5.5	17.5	42	8059 0975 03
	11	26	5.5	17.5	41	8059 0975 04
	12	30	7	17.5	43	8059 0975 05
	13	30	7	17.5	48	8059 0975 06
	14	35	8	17.5	52	8059 0975 07
	15	35	8	17.5	51	8059 0975 08
	16	38	8.5	17.5	58	8059 0975 09
	17	38	8.5	17.5	60	8059 0975 10
	18	42	9	20	71	8059 0975 11
	19	42	9	20	74	8059 0975 12
14 x 18	13	30	7	25	128	8059 0976 00
	14	35	8	25	129	8059 0976 01
	15	35	8	25	132	8059 0976 02
	16	38	9	25	140	8059 0976 03
	17	38	9	25	136	8059 0976 04
	18	42	10	25	147	8059 0976 05
	19	42	10	25	147	8059 0976 06
	21	50	11	25	171	8059 0976 07
	22	50	11	25	165	8059 0976 08
	24	53	12	25	167	8059 0976 09
	27	60	13	30	219	8059 0976 10
	30	66	14	30	245	8059 0976 11
	32	66	14	32.5	246	8059 0976 12
	34	66	14	32.5	239	8059 0976 13



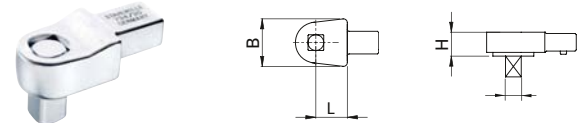
Type	Hex mm	B mm	H mm	L mm	g	Ordering No.
Ring end 9 x 12	7	13	8	17.5	37	8059 0975 13
	8	14.2	8	17.5	40	8059 0975 14
	10	17.2	9	17.5	44	8059 0975 15
	11	18.5	9	17.5	41	8059 0975 16
	12	20	12	17.5	49	8059 0975 17
	13	21.5	12	17.5	56	8059 0975 18
	14	23	12	17.5	52	8059 0975 19
	15	24.2	12	17.5	52	8059 0975 20
	16	25.7	13	17.5	54	8059 0975 21
	17	27.2	13	17.5	59	8059 0975 22
	18	28.5	13	17.5	56	8059 0975 23
	19	30.3	13	17.5	65	8059 0975 24
	21	33	15	17.5	71	8059 0975 25
	22	34.5	15	17.5	74	8059 0975 26
14 x 18	13	21.5	11	25	127	8059 0976 14
	14	23	11	25	123	8059 0976 15
	15	24.2	11	25	128	8059 0976 16
	16	25.7	12	25	133	8059 0976 17
	17	27.2	12	25	135	8059 0976 18
	18	28.5	12	25	134	8059 0976 19
	19	30.5	12	25	138	8059 0976 20
	21	33	15	25	144	8059 0976 21
	22	34.5	15	25	145	8059 0976 22
	24	37.5	15	25	153	8059 0976 23
	27	41.5	17	25	162	8059 0976 24
	30	45	19	25	182	8059 0976 25
	32	47.5	19	25	181	8059 0976 26
	34	50.5	19	28	210	8059 0976 27
	36	53	19	28	203	8059 0976 28
	41	59	20	30	240	8059 0976 29



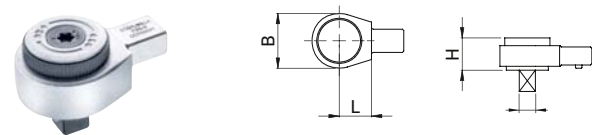
Type	Hex mm	B mm	H mm	W mm	L mm	g	Ordering No.
Flared end 9 x 12	10	22	12	7.1	17.5	57	8059 0975 27
	11	22.5	12	8.6	17.5	55	8059 0975 28
	12	23.5	12	9	17.5	59	8059 0975 29
	13	25.2	12	10	17.5	55	8059 0975 30
	14	27	13	11	17.5	60	8059 0975 31
	16	30	13	13	17.5	65	8059 0975 32
	17	31.5	13	14	17.5	65	8059 0975 33
	18	33	15	14.8	17.5	74	8059 0975 34
	19	34.5	15	15.8	19	80	8059 0975 35
	21	37.5	15	16.2	19	88	8059 0975 36
	22	39	15	17	19	92	8059 0975 37
	24	42	15	18	19	75	8059 0975 38



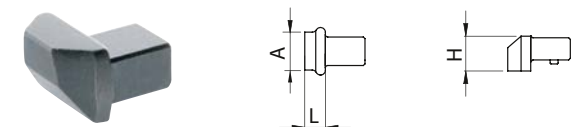
Type	Hex in	B mm	H mm	L mm	g	Ordering No.
Bits holder 9 x 12	1/4	14	10	17.5	50	8059 0975 45
	5/16	16	12.5	17.5	47	8059 0975 46
	14 x 18	5/16	16	12.5	25	112 8059 0976 34



Type	Hex in	B mm	H mm	L mm	g	Ordering No.
Fixed square 9 x 12	1/4	22	14	17.5	71	8059 0975 39
	3/8	22	14	17.5	76	8059 0975 40
	1/2	22	14	17.5	82	8059 0975 41
	14 x 18	1/2	30	18	25	203 8059 0976 30
	3/4	40	25	25	396	8059 0976 31



Type	Hex in	B mm	H mm	L mm	g	Ordering No.
Reversible ratchet 9 x 12	1/4	22	14.5	17.5	62	8059 0975 42
	3/8	33	24	17.5	136	8059 0975 43
	1/2	33	28.3	17.5	147	8059 0975 44
	14 x 18	1/2	43	26.2	25	302 8059 0976 32
	3/4	50	30.7	25	467	8059 0976 33
	21 x 26	3/4	69	30	62.5	1350 4620 0086 01



Type	A mm	H mm	L mm	g	Ordering No.
Blank end 9 x 12 for making up specials	8 x 14	14.5	8	30	8059 0975 47
	11 x 25	21.5	21	98	8059 0976 35
Blank end 14 x 18 21 x 26	13 x 30	30	13	220	4620 0085 01

Friction Coefficient Analysis

BLM μ Tester

The BLM μ Tester is a complete set for measuring the friction coefficient. In addition to being used in the tool crib, it can be used along the line for a fast and easy fastener evaluation. The advantages of using a bench are many: portable measuring equipment, "all in one" complete and ready, PC with touch screen, already fixed transducer, adapter kit in the drawer. Built-in battery charger, operating time >16 hours. The μ Tester 25 and 200 can be supplied with additional transducers. It is not possible to have TPT 2000 on a bench due to high torque. If a TPT 2000 is requested, then this transducer must be mounted separately on a fixed table.

The adapter kit provides all needed accessories to test bolts of different diameters, pitches and lengths. Bolts can be tested with the original nut used in production, or with the supplied hardened threaded adapter. Spacers allow testing bolts of different lengths. For each size of bolt, there are three adapter plates available: one flat, one to be used with washers and one designed for customer made plates. Adapter kits 25 and 200 are supplied in a wooden case. For the BLM μ Tester, the adapters are stored in the drawers. The kit for TPT 2000 is supplied in a heavy duty trolley due to the weight and size of the parts.



BLM μ Tester

Model	Description	Ordering No.
BLM μ Tester - 25	Mobile Bench for μ Evaluation, includes TPT and adapter kit	8059 0966 00
BLM μ Tester - 200	Mobile Bench for μ Evaluation, includes TPT and adapter kit	8059 0966 10



Standard adapter kit

BLM Joint Simulator Bench AD

The BLM Joint Simulator Bench AD provides maximum tool evaluation flexibility. DC electric, clutch, impulse and battery tools as well as torque wrenches can be evaluated.

The hydraulic brakes simulate the behaviour of a real joint, reproducing the stiffness from hard to soft.

This allows the tool to be tested in accordance with VDI/VDE 2647. Machine capability (Cm, Cmk) can be tested quickly and easily under real shop floor conditions without the need to run tests on the product on the line that would interfere with production.

- Large LCD touch screen, intuitive and easy to use.
- Efficient hydraulic pump fills the pressure accumulator in just 15 seconds reducing battery drain.
- Connector panel manages all operator connections such as external in-line torque transducers, printers, Ethernet, USB and serial.

**JSB AD**

Model	Hydraulic brakes, range		ISO rig	Spindle fixture holder	Dimensions L x W x H	Ordering No.
	Nm	lb ft				
Mobile benches						
JSB AD 250	1- 250	0.8 - 150	—	—	1000 x 550 x 920	8059 0962 00
JSB AD 250 ISO	1- 250	0.8 - 150	yes	—	1150 x 550 x 920	8059 0962 30
JSB AD 500 ISO	1- 500	0.8 - 365	yes	—	1150 x 550 x 920	8059 0962 35
JSB AD 1000 ISO	1- 1000	0.8 - 735	yes	—	1400 x 700 x 950	8059 0962 40
JSB AD 2000 ISO	1- 2000	0.8 - 1470	yes	—	1400 x 700 x 950	8059 0962 50
Fix benches						
JSB AD HD 500	1- 500	0.8 - 365	—	yes	2100 x 850 x 1000	8059 0963 00
JSB AD HD 2000	1- 2000	0.8 - 1470	—	yes	2300 x 900 x 1000	8059 0963 50
JSB AD HD 3000	1- 3000	0.8 - 2215	—	yes	2300 x 900 x 1000	8059 0963 60

JSB 1060

Equipped with a battery as an independent power source, the JSB 1060 Joint Simulator Bench can easily be moved along the assembly line. This enables you to test your tools under actual conditions, with the right hose length and air pressure. The hydraulic brake on the bench can be set to simulate actual joint stiffness. The software allows you to build a “virtual” assembly line and thus avoid interrupting production on the real assembly line. The JSB 1060 provides maximum flexibility and accuracy.

- 12" touch screen display.
- Patented joint simulation brake for testing and calibration of direct driven tools (5-85 Nm).
- Static transducer for easy testing and calibration of pulse tools (20-200 Nm).
- One extra channel, allowing you to connect on more transducers if needed.
- 16 hours of battery time.
- Serial printer port connection.
- Database for up to 2000 tools.
- Easy SPC analysis.

**JSB 1060**

Model	Hydraulic brakes, range		Static transducer		Dimensions L x W x H	Ordering No.
	Nm	lb ft	Nm	lb ft		
JSB 1060 200	5- 85	0.8 - 150	20 -200	5 - 8	1000 x 550 x 920	8059 0962 00
JSB 1060 500	25- 250	0.8 - 150	50 -500	5 - 8	1150 x 550 x 920	8059 0962 30

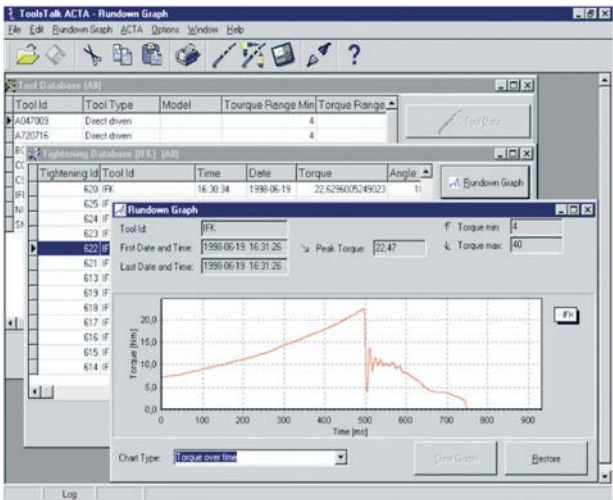
Quality Assurance in Tightening Management Software

ToolsTalk QAT

The PC program ToolsTalk QAT completes the quality assurance system to calculate and provide all the information you want regarding your tools. In Tool-Talk QAT you manage your tools in a tool database, a tightening database and a supplier database. It enables advanced statistics/SPC and graphs.

ToolsTalk QAT also communicates with ToolsNet making it possible to get exact information on to calibrate and service based not only on time but also on the exact number of tightenings performed. Its Zone Management function makes it possible to supervise the entire factory. The Cost Management function keeps you informed of the costs related to each tool, calibration and spare parts.

ToolsTalk QAT communicates with ACTA 4000.



BLM Torque Supervisor

The software BLM Torque Supervisor is the ideal program for handling tools, tightening and joint analysis. It automatically keeps track of calibration due date schedules for power tools and torque wrenches, as well as supervising the complete tool stock within the factory. It manages and collects data from residual torque checks done on the assembly line as well as tool checks done at the tool crib, and supervises statistics for each tool and application. The software can be installed either on a single pc station or on multi factory stations in the factory network.

ToolsTalk QAT

Model/Product	Ordering No.
Basic	
1 user	8092 1180 01
Crib	
1 user	8092 1181 01
Network 5 users	8092 1181 05
Line	
1 user	8092 1186 01
Network 5 users	8092 1186 05
Network 10 users	8092 1186 10
Network 20 users	8092 1186 20
Full	
1 user	8092 1187 01
Network 5 users	8092 1187 05
Network 10 users	8092 1187 10
Network 20 users	8092 1187 20

Torque Supervisor

Version	Ordering No.
Full version	on request
Light version	on request
Client version, installed on JSB	on request
Server version, installed at server	on request
Upgrade from version Light to Full	on request

Upgrade TT ACTA to TT QAT Full

License	Ordering No.
Upgrade 1 license	8092 1188 01
Upgrade 5 licenses	8092 1188 05
Upgrade 10 licenses	8092 1188 10
Upgrade 20 licenses	8093 1188 20

Optional Accessories

Cables for ToolsTalk ACTA/QAT

Length	Ordering No.
RS232 cable 3 m	4222 0546 03
RS232 cable 5 m	4222 0546 05
USB cable 3 m	4222 1238 03



Grinders

Contents	Page
Introduction.....	190
Product safety.....	191
Selection guide.....	192
Electric grinder – Brazor.....	194
Turbo grinders and sanders	196
Die grinders	200
Straight grinders	202
Vertical grinders.....	206
Vertical sanders	208
Angle grinders	210
Angle sanders.....	212
Orbital and random orbital sanders	214
Dust extraction.....	216
Routers	219
Nibblers	219
Circular cutters	220

Maximum material removal with minimum effort

Atlas Copco GTG21 and GTG40 Turbo Grinders give you twice the power with half the weight and are impossible to stall with the right installation! Brazor is our mobile electric grinder system, offering high productivity and low cost of ownership. These are some of the grinders in Atlas Copco's wide range covering virtually all applications. With all our grinders, you can rely on maximum material removal with minimum effort.

Die grinding

Small precision deburring – die grinding is performed with either tungsten carbide, high speed steel burrs or mounted points.

The choice of burr depends on the size of your job. A larger volume of removed material will require a bigger size of the burr's head.

Select the tool r/min depending on the diameter of the burr head, the material to be ground and the material in the rotary burr. Use tungsten carbide burrs for hard and tough materials. High speed steel burrs are recommended for unhardened and medium hard materials. Example, see table below:

Burr head Ø		Unhardened steel		Soft material Wood, brass Plastics, Al.
		Hardened steel Tough materials	Softer materials Cast iron	
Up to 6 mm	– TC	38000	38000	38000
	– HSS	–	20000	20000
Up to 12 mm	– TC	30000	30000	30000
	– HSS	–	–	20000

TC – Tungsten carbide tipped rotary burr.

HSS – High speed steel burrs.

For mounted points, follow the recommendations that relate to the particular mounted point.

Rough grinding

Pure material removal, regardless of whether it is removed from a cramped or an open space, is determined by the power generated at the grinding process. The applied feed force and the rotation of the wheel generates a cutting force which multiplied by the peripheral speed of the wheel represents the power removing material (power = peripheral speed x cutting force).

A powerful grinder will provide enough power with almost maintained rotational speed, when applying feed-force. Higher feed-force requires higher effort from the operator which leads to fatigue. A suitable combination of operative rotational speed, suitable feed-force applied by the operator and the necessary power of the grinder will give you the best combination for the material removal required.

As rough grinding is performed with bonded abrasives, a limitation of rotational speed is necessary in order to prevent wheel fractures due to centrifugal force.

The peripheral speed is limited to 80 m/s for fibre reinforced depressed center, straight and cutting off wheels. Resin bonded cup and straight wheels are limited to a peripheral speed of 50 m/s.

Sanding and polishing

Unlike die and rough grinding, sanding and polishing applies to requirements of a surface. A fine surface will require a fine grit paper, fine Scotch-Brite, Bear Tex or a soft polishing bonnet. Rougher surface grinding will require a higher material removal rate and thus a coarser grit paper.

Similar to rough grinding, a rough surface, ground with coarse grit will benefit from a high rotational speed. The limitations are, however, the maximum allowed speed of the backing pad and the fibre disc.

Normal sanding speeds for fibre discs of diameter 125 mm, 180 mm and 230 mm are 4000 to 6000 r/min.

Polishing with different pastes and compounds requires low speed in combination with high torque. Suitable speeds are 1800 to 2200 r/min.

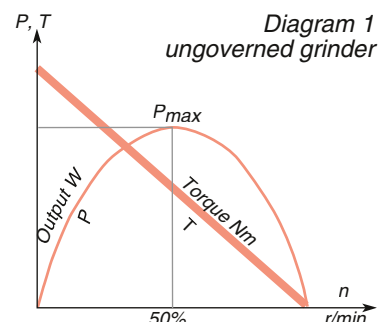
Sanding with wet coated abrasives is best performed at low speeds, partly because water is thrown out into the periphery and partly because of the fine grit.

Scotch-Brite, Bear Tex and flap wheels perform best at 50% of their maximum allowed rotational speeds.

The speed governor

The amount of material removed in the grinding process depends on the power of the tool and the operative rotational speed. The diagram below shows the correlation between torque, power and rotational speed of a non governed pneumatic grinder.

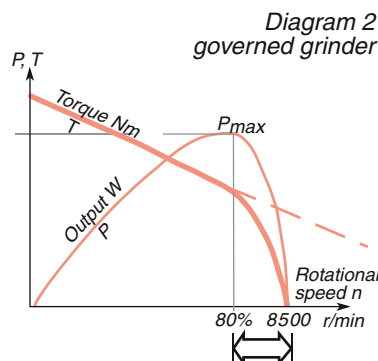
In order to remove material, the operator has to apply a feedforce on the work-piece. Consequently the rotational speed decreases and having passed approximately 50% of the free speed, the operative power outtake starts to decrease. Theoretically, the most material would be removed at approximately 50% of the free speed on a non governed grinder, (diagram 1).



Atlas Copco grinders are compact and smooth running, partly due to their speed governor. The air is governed to the air flow necessary to maintain the rotational speed regardless of load (to the extent of the power of the grinder).

The correlation between power, torque and rotational speed of a governed grinder is shown in diagram 2.

A theoretical optimum of material removal is reached at approximately 80% of the free speed. The grinder generates maximum power, removing more material with applied feed force. The rotational speed decreases negligibly.



Air is used economically, as the flow through the motor is adjusted after applied load. Air consumption at free speed is minimized. The governor opens and lets in more air during load thus keeping the optimal r/min.

Built-in safety

Atlas Copco grinders feature a high degree of safety. Over-speed shut-off, safety throttles and wheel guards are good examples of product safety features carried by our grinders.

Performance checked

Every grinder leaving our factory is checked on maximum free speed and general functions.

How to make it safer

1 Check the free speed

The measured speed at a pressure of 6.3 bars should not exceed the rated speed of the grinder. A tolerance of +10% is acceptable if stated in the documentation of the tool. The wheel must be removed before the grinder is checked. The checks should be carried out regularly, especially after a longer standstill. Make sure that the speed marking on the tool is readable.



2 Check the wheelguard

Always use the recommended wheelguard and check that it is not damaged. Never use a grinder without the wheelguard when the grinding wheel requires one.



3 Match the maximum speed of the wheel to the right grinder

Make sure that the stated maximum speed of the grinder never exceeds the maximum speed of the grinding wheel.



4 Check the grinding wheel

Make sure that the grinding wheel is not cracked or damaged in any way. The grinding wheel should have the correct hole dimensions and should be fitted properly on the spindle to avoid unbalanced vibrations.



This is your responsibility

There are, however, measures the operator has to take in order to avoid any risk of misuse or accident. The safety manual, supplied with every grinder contains a number of safety rules for the operator. The 8 steps below are a basic summary of the safety manual. Remember to read the safety manual as well.

5 Check that flange and wheel

combinations correspond to national regulations. Check that the flanges are undamaged and that they are clean.



6 Wear

- personal protection goggles
- ear protection
- gloves (helmet in heavier applications)



7 Test run your grinder in a protected area after assembling the wheel

Keep the space around the grinding operation free from other people.



8 Maintenance

Make sure you follow prescribed service instructions and intervals. Do not disassemble security parts, e.g. speed governor or overspeed shut-off. These parts have to be completely replaced when damaged.



Diameter – peripheral speed – r/min

The table below will help you to translate the peripheral speed of the grinding wheel to the correct rotational speed of the grinder when using a specific diameter of grinding wheel.

Grinding wheel dia mm	Peripheral speed in meters per second													
	10	15	20	25	28	30	33	35	40	45	48	50	60	80
25	7640	11460	15280	19100	21390	22920	25210	26740	30560	34380	36670	38200	45840	61120
40	4770	7160	9550	11930	13370	14320	15750	16710	19100	21480	22920	23870	28650	38200
50	3820	5730	7640	9550	10690	11460	12600	13370	15280	17190	18330	19100	22920	30560
63	3303	4540	6060	7560	8480	9090	10000	10610	12120	13640	14550	15150	18190	24250
80	2380	3580	4770	5960	6680	7160	7870	8350	9550	10740	11460	11930	14320	19100
100	1910	2860	3820	4770	5340	5730	6300	6680	7640	8590	9160	9550	11460	15280
115	1160	2490	3320	4150	4650	4980	5480	5810	6640	7470	7970	8300	9960	13400
125	1520	2290	3050	3820	4270	4580	5040	5340	6110	6870	7330	7640	9160	12280
150	1270	1910	2540	3180	3560	3820	4200	4450	5090	5730	6110	6360	7640	10180
180	1060	1590	2120	2650	2970	3180	3500	3710	4240	4770	5090	5300	6360	8480
200	950	1430	1910	2380	2670	2860	3150	3340	3820	4290	4580	4770	5730	7640
230	830	1240	1660	2070	2320	2490	2740	2900	3320	3730	3980	4150	4980	6640
250	760	1140	1520	1910	2130	2290	2520	2670	3050	3430	3660	3820	4580	6110
300	630	950	1270	1590	1780	1910	2100	2220	2540	2860	3050	3180	3820	5090

Selection Guide

Die grinding and deburring with die grinders

1 Carbide burrs



2 Mounted points



Rough grinding and cutting off with rough grinders

3 Depressed centre wheels



4 Cut off wheels



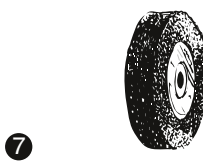
5 Cup wheels



6 Flap wheels



7 Straight wheels

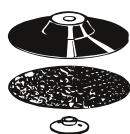


8 Cone wheels



Sanding and polishing with sanders and polishers

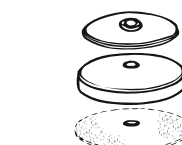
9 Fibre discs



10 Wire brushes



11 Coated abrasives



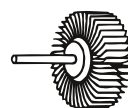
12 Polishing bonnets



13 Radial flap wheels

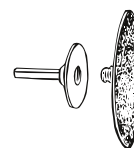
12

13



14 Scotch-brite

14



PAGE

LSF07
LSF18
LSV18
LSF28
LSV28
LSF38



188



ESV G71



182-183

GTG21
GTG40
GTR40



184-187

LSS53
LSS64
LSS84



194

LSV18
LSV28
LSV38
LSV48



198

LSR28
LSR38 CW
LSR48
LSR64



190



LSS53
LSS64



196

LSV18
LSV28
LSV38



200

LSO30
LSO31
LSO32



202

LST20
LST21
LST22
LST30
LST31
LST32



202

LSF28
LSV18



188



The Brazor Mark II range

Thanks to its unparalleled low weight and high power the Brazor grinding system is an excellent choice for grinding, cutting off and sanding. There is no need for complicated installations – simply plug in to the one-phase 230 V net. All models are equipped with the highly efficient G71 motor and the system will generate superior power with <10% energy losses. This, in combination with the features stated below, makes Brazor Mark II a safe and ergonomic choice for the most efficient grinding, cutting and sanding:

- Power feedback for most efficient material removal.
- Minimal abrasive costs due to small angle head, speed control and low vibrations.
- Reduced service costs and minimum downtime thanks to overload protection, temperature control and service-indicator.
- Full mobility and no installation required.
- Built-in Ground Fault Interrupter (GFI) in PU for electricity safety.
- Superior ergonomics with low vibrations.
- Service indicator notifies you of preventive maintenance for longer operational life.



Model	Max free speed r/min	For wheel dia mm	Max output kW		Weight without support handle		Length mm	Width mm	Height over spindle mm	Outgoing spindle	Ordering No.
			peak	cont.	kg	lb					
For grinding and cutting											
ESV G71 F120-13	12000	125	>3	2.3	2.8	6.2	350	65	55	M14	8433 5001 00
ESV G71 F085-18	8500	180	>3	2.3	2.9	6.4	350	65	55	Internal	8433 5000 00
ESV G71 F060-23	6000	230	>3	2.3	3.5	7.7	375	85	60	Internal	8433 5002 00
For sanding											
ESV G71 S060	6000	180	>3	2.3	3.2	7.0	375	85	83	5/8	8433 5003 00

Model	Max free speed r/min	Spindle thread in x mm	Max output kW		Weight incl. guard and flanges		Width at front housing, mm (excl. wheel guard)	Ordering No.
			peak	cont.	kg	lb		
Straight grinders								
ESF S180	18000	Collet	5	1.5	2.2	4.9	40	8433 6000 00
ESF S150	15000	Collet	5	1.1	2.2	4.9	40	8433 6000 01
ESF S180-CW 3/8	18000	3/8" 15.6	5	1.5	2.4	5.3	43	8433 6001 00
ESF S180-CW 5/8	18000	5/8" 21	5	1.1	2.4	5.3	43	8433 6005 00
ESF S150-CW 3/8	15000	3/8" 15.6	5	1.5	2.4	5.3	43	8433 6002 00
ESF S150-CW 5/8	15000	5/8" 21	5	1.1	2.4	5.3	43	8433 6006 00
ESF S180-CW M14	18000	M14 24.1	5	1.5	2.4	5.3	43	8433 6003 00
ESF S150-CW M14	15000	M14 24.1	5	1.1	2.4	5.3	43	8433 6004 00
ESF S150-10	15000	5/8" 11	5	1.1	3.3	7.3	43 (85)	8433 6007 00

- CW = Cone wheel model

- 10 = For straight wheel, dia in mm 100x25x16-25

Power unit

Model	Length mm	Width mm	Height mm	Weight kg	Power uptake	Ordering No.
PU81 ^a Single drive	350	200	200	10	1 phase 230 V	8433 5100 00
PU81 ^a Multi drive	350	200	400	11.5	1 phase 230 V	8433 5101 00

^a Power net cable included.

Tool cables

Length	Ordering No.
2 m	3608 0250 02
5 m	3608 0250 05
10 m	3608 0250 10
20 m	3608 0250 20



Multi drive power unit



Single drive power unit



Tool cable

Accessories Included

All models

- Support handle
- Adjustable wheel guard (9" requires key, included)
- Attachment flanges for grinding and cutting wheels
- Key for wheel change
- Backing pad with ribbed surface for cooler process (for ESV G71 S060)

Optional Accessories

Sander adaption kit (for sanding with ESV G71 F085-18)

Backing pad with ribbed surface for cooler
process.

Support pad dia mm	Ordering No.	
	5/8"	M14
120	4175 0883 92	4175 0883 93
162	4175 0883 90	4175 0883 91

Leather cable cover

Length	Ordering No.
2 m	3608 0440 02
5 m	3608 0440 05
10 m	3608 0440 10
20 m	3608 0440 20



Leather cable cover



Handle bracket

Handle bracket

Model	Ordering No.
Multi position handle bracket	3608 0110 01

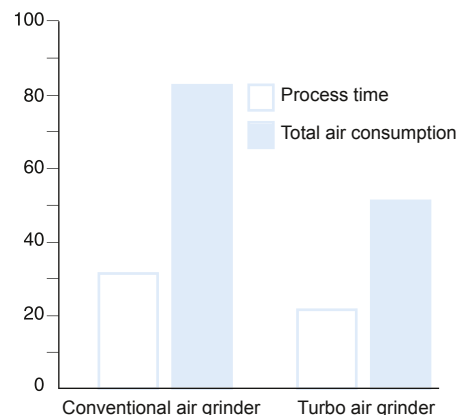
Twice the power. Half the weight. The Turbo grinder gives you twice the power of today's 5", 7" and 9" angle grinders. It is about half the size and weight of high frequency tools with comparable power.

- **High material removal** – The Turbo is powerful and keeps on working at high rotational speed. It gives a higher rate of cutting-off or material removal, with low wheel consumption.
- **Power for efficiency** – The Turbo is driven by a turbine motor, providing power-to-weight ratios never before achieved in grinders. This means you can choose a lighter, more compact tool for ease of use and good accessibility without sacrificing any of the power.
- **Long service life** – The turbine means there are no vanes to slide against the cylinder. The gear runs in oil in a housing with patented seals. The result is consistent performance and uninterrupted free operation.
- **Minimized vibrations** – on the Turbo, vibration has been cut to below 2.5 m/s². This has been achieved by an entirely new vibration-damping technique, Auto Balancing, in which a set of bearing balls is used to counterbalance the imbalance in the wheel.
- **Lubrication-free** – The unique turbine drive in the Turbo means that the motor doesn't need oil in the air for lubrication. This provides several benefits in terms of working environment, quality and productivity.
- **Dust extraction** – Efficient accessory and standard model for extraction of air-borne dust in sanding applications with fiber discs.

GTG21 is the latest of the Turbo grinders. It is the best choice for rough grinding and sanding applications.



MORE EFFECTIVE



The turbine motor is more efficient than a conventional grinder motor. Therefore it takes less time to do the same job. Also the total air consumption will be a lot less for a specific job.

Model	Max free speed r/min	For wheel dia mm	Max output		Weight		Height over spindle		Air consumption at max output				Rec. hose size		Air inlet thread	Ordering No.
			kW	hp	kg	lb	mm	in	l/s	cfm	l/s	cfm	mm	in	BSP	
For grinding and cutting																
GTG21 F120-13	12000	125	2.1	2.8	1.8	3.9	68	2.7	30	64	10	21	13	1/2	3/8	8423 2963 00
GTG21 F085-18	8500	180	2.1	2.8	2.0	4.2	72	2.8	30	64	10	21	13	1/2	3/8	8423 2963 02
For sanding																
GTG21 S085 ^a	8500	180	2.1	2.8	1.6	3.5	80	3.1	30	64	10	21	13	1/2	3/8	8423 2963 05
GTG21 S085 M14	8500	180	2.1	2.8	1.6	3.5	80	3.1	30	64	10	21	13	1/2	3/8	8423 2963 07
GTG21 D120	12000	125	2.1	2.8	1.6	3.5	92	3.6	30	64	10	21	13	1/2	3/8	8423 0800 00
GTG21 D085	8500	180	2.1	2.8	1.6	3.5	92	3.6	30	64	10	21	13	1/2	3/8	8423 0800 01

^a UNC 5/8"-11 spindle.

Flow requirement 250 m³/h.

-D prepared for accessories for spot suction kit.

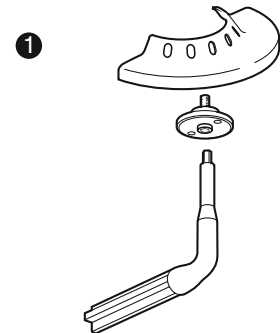
Accessories Included

All models

Adjustable support handle
Whip hose 0.7 m long, 13 mm dia
complete with nipple and
ErgoNIP 10
Gearbox oil, one tube

① GTG21 F120/F085

Adjustable wheel guard
Attachment flanges for 1-10 mm
thick grinding wheels
Hex key for wheel change

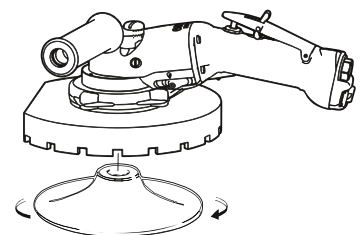


Optional Accessories

Air hose set for maximum performance	Ordering No.
RUBAIR 13, L=5 m, included ErgoNIP 10, ErgoQIC 10	8202 1180 22
Air preparation unit, incl MIDI F/R, ball valve ErgoQIC 10	8202 0845 48
TURBO 16, L=10 m, included ErgoNIP 10, ErgoQIC 10	8202 1180 46

Spot suction kit for GTG21 D120 and GTG21 D085

Model	Ordering No.	
	Dia 125 mm	Dia 180 mm
Grinding depressed center wheel		
GTG21 D120	3780 4090 23	
GTG21 D085		3780 4090 21
Sanding fiber disc		
GTG21 D120	3780 4090 24	
GTG21 D085	3780 4090 24	3780 4090 26
Cutting GRP with diamond disc		
GTG21 D120	3780 4090 25	
GTG21 D085		3780 4090 22
Diamond disc	3780 5074 61	3780 5074 62

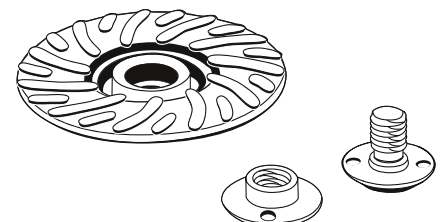


Spot suction kit (ex. sanding fiber disc)

Spindle adapter kit for sanding

Sanding kit for	Support pad dia mm	Ordering No.	
		5/8"	M14
GTG21 F120-13	120	4175 0883 92	4175 0883 93
GTG21 F085-18	162	4175 0883 90	4175 0883 91
Adapter ^a		4175 0883 04	4175 0883 03
Nut ^a		4175 0893 00	4175 0893 02

^a Included in the kit.



Spindle adapter kit



Service Kits

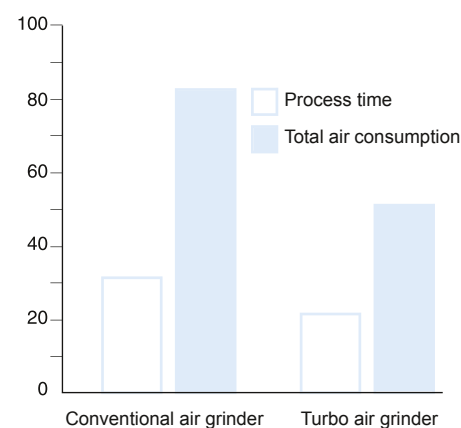
4081 0220 90

The GTG/GTR40 are the most powerful grinders in the Turbo grinder range, with incredible power for their size and weight. The range includes angle and straight type grinders for virtually every common rough grinding application.

- GTG40 F – for rough grinding and cutting off with depressed center wheels.
- GTG40 S – for surface finishing with coated abrasives and wire brushes.
- GTG40 C – for rough grinding with cup wheels.
- GTR40 – for rough grinding and applications such as internal and external cleaning of castings with straight grinding wheels.
- Dust extraction – Efficient accessory and standard model for extraction of air-borne dust in sanding applications with fiber discs.



MORE EFFECTIVE



The turbine motor is more efficient than a conventional grinder motor. Therefore it takes less time to do the same job. Also the total air consumption will be a lot less for a specific job.

Model	Max free speed r/min	For wheel dia mm	Max output		Weight		Height over spindle		Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
									max output		free speed					
			kW	hp	kg	lb	mm	in	l/s	cfm	l/s	cfm	mm	in		
For grinding and cutting																
GTG40 F085-18	8500	180	4.5	6.1	3.8	8.4	128	5.0	60	126	20	42	16	5/8	1/2	8423 2900 10
GTG40 F066-23	6600	230	4.5	6.1	4.0	8.8	128	5.0	60	126	20	42	16	5/8	1/2	8423 2910 10
For wire brush and sanding																
GTG40 S060	6000	140 ^a	4.5	6.1	3.6	7.9	132	5.2	60	126	20	42	16	5/8	1/2	8423 2930 00
For cup wheel type 11																
GTG40 S060-C15 ^b	6000	150	4.5	6.1	4.3	10.5	126	5.0	60	126	20	42	16	5/8	1/2	8423 2930 10

^a For wire brush, Ø 230 mm for fibre disc.

^b Spindle thread: UNC 5/8". Length 23.5 mm.

Model	Max free speed r/min	For wheel dia DxTxH ^a mm	Spindle thread	Max output		Weight		Length mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
				kW	hp	kg	lb		max output l/s	free speed cfm	l/s	cfm	mm	in		
GTR40 S085-15	8500	150x25x25	UNC 5/8x11	4.5	6.1	5.6	12.3	563	60	126	20	42	16	5/8	1/2	8423 2950 00
GTR40 S072-13	7200	125x25x25	UNC 5/8x11	4.5	6.1	5.6	12.3	563	60	126	20	42	16	5/8	1/2	8423 2951 00
GTR40 S060-15	6000	150x25x25	UNC 5/8x11	4.5	6.1	5.8	12.8	563	60	126	20	42	16	5/8	1/2	8423 2952 00
GTR40 S060-20	6000	200x25x25	UNC 5/8x11	4.5	6.1	5.8	12.8	563	60	126	20	42	16	5/8	1/2	8423 2954 00

^a For straight wheels.

Accessories Included

GTG40

Adjustable wheel guard
Support handle
Attachments flanges for 1.5-7 mm thick cut-off wheels and 2.5-8 mm thick depressed center wheels
Whip hose 0.7 m long, 16 mm dia complete with nipple and ErgoNIP 10
Gearbox oil, one tube
Hex key for wheel change

GTR40

Wheel guard
Attachments flanges for grinding wheels 20-25 mm thick and with hole Ø 25 mm
Whip hose 0.7 m long, 16 mm dia complete with nipple and ErgoNIP 10
Gearbox oil, one tube
Key and spanner for wheel change

Optional Accessories

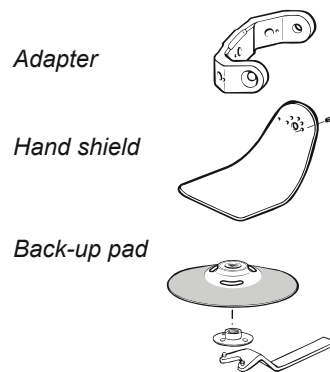
GTG40

	Ordering No.
Wire brush Ø 140 mm	4170 0685 00
Wire brush attachment set	4170 0550 82
Heavy duty backing pad for sanding Ø 180 mm (7")	4170 1192 90
Ø 230 mm (9")	4170 1193 90
Hand shield	4175 0165 90
Adapter for positioning support handle 120/135° between handles	4175 0164 90*
Dust extraction kit ^a for 180 mm fiber disc GTG40 S060	3780 4090 10
Hose kit including 1.8 m vacuum hose, Ø 38 mm and air hose Ø 13 mm	3780 2724 41
Friction plate complete	4175 0186 90
Attachment for cup wheel with plane hole	4175 0178 90
Modification kit for handle inclined 10°	4170 1157 93

^a Incl flow chamber, suction cap and support pad.

* Included as standard in GTG40 S060-C15.

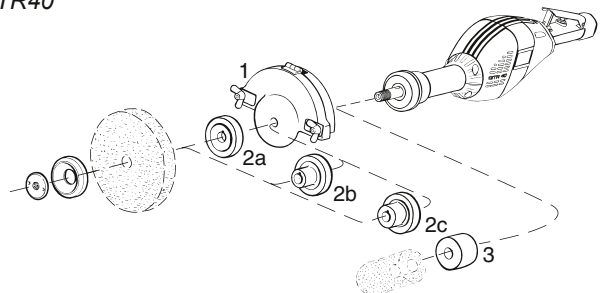
GTG40



GTR40

	Thickness x Hole dia mm	Ordering No.
2 Rear flange	TxH20-25x 16	2a 4150 0619 00
	x 20	2b 4150 1650 00
	x 32	2c 4150 0620 00
3 Spacer for cone wheel		3 4150 0787 00

GTR40



Air hose sets for GTG40 and GTR40

Air hose set	Length	Air pressure	Ordering No.
Fixed installation 5 m, Ø 16 mm TURBO 16/5 M/CLAW	5 m	<6 bar	8202 1181 95
Flexible installation 5 m, Ø 16 mm^b TURBO 16/5 M/EQ 10	5 m	>6 bar	8202 1181 80
Flexible installation 20 m, Ø 19 mm^b TURBO 20/20 M/EQ 10	20 m	>6 bar	8202 1181 75
Air preparation unit, including MAXI F/R 25 with ball valve and claw coupling			8202 0845 74

^b Whip hose 0.5 m included as standard in GTG/GTR40.



Service Kits

GTG40	4081 0153 90
GTR40	4081 0153 91

- LSF07 is a high speed model for precise grinding and polishing. LSF 07 is equipped with a 3 mm collet and can be equipped with a 1/8" collet as optional. (Without speed governor)
- LSF18 series – All the models in the 18 series are equipped with a powerful 0.5 kW air motor and speed governor. The angled models (LSV) have a patented solution that overcomes temperature and leakage problems commonly associated with angle head tools. The result is a leak-free and self-cooled angle head. All models are lubrication free except for the high speed model LSF18 S460.
- LSF28 series – Powerful 0.85 kW air motor, with speed governor and scatter damping. Impressive power-to-weight ratio.
- LSF38 – One of the most powerful one hand die grinder on the market, up to 1.35 kW. If you are looking for a tool that can boost your productivity and save you money, the LSF38 is the right tool! The die grinders in the 38 series are lubrication free with scatter damping for maximum operator comfort and safety.



Model	Rec. max dia of								Air consumption at				Rec.		Air inlet thread	Ordering No. with collet		
	Max free speed	Tungsten carbide burrs	Mount- ed point	Max output	Weight	Length	max output	free speed										
	r/min	mm	mm	kW	hp	kg	lb	mm	l/s	cfm	l/s	cfm	hose size	mm	in	BSP	6 mm	1/4"
Straight models																		
LSF18 S460E-1R	46000	9	16	0.51	0.68	0.7	1.5	291	11.4	24	15.0	31.5	10	3/8	1/4	8423 1224 12		
LSF18 S460-1 ^a	46000	9	16	0.51	0.68	0.5	1.1	193	11.4	24	15.0	31.5	10	3/8	1/4	8423 1224 04		
LSF18 S460E-1 ^a	46000	9	16	0.51	0.68	0.7	1.5	291	11.4	24	15.0	31.5	10	3/8	1/4	8423 1224 09		
LSF18 S300	30000	12	20	0.50	0.67	0.5	1.1	193	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 03	8423 1224 06	
LSF18 S300/R	30000	12	20	0.50	0.67	0.5	1.1	193	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 11		
LSF18 S300E-1	30000	12	20	0.50	0.67	0.7	1.5	291	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 08		
LSF18 S300E-1/R	30000	12	20	0.50	0.67	0.7	1.5	291	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 10		
LSF18 S200	20000	12	20	0.50	0.54	0.5	1.1	193	9.6	20.1	3.5	7.4	10	3/8	1/4	8423 1224 02	8423 1224 05	
LSF18 S200E-1	20000	12	20	0.50	0.54	0.7	1.5	291	9.6	20.1	3.5	7.4	10	3/8	1/4	8423 1224 07		
LSF28 S250 ^a	25000	12	32	0.86	1.15	0.75	1.65	210	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 11		
LSF28 S250E ^a	25000	12	32	0.86	1.15	1.25	2.75	335	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 60		
LSF28 S250E-R ^a	25000	12	32	0.86	1.15	1.25	2.75	335	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 49		
LSF28 S250-R ^a	25000	12	32	0.86	1.15	0.75	1.65	210	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 48		
LSF28 S180 ^a	18000	16	40	0.82	1.10	0.75	1.65	210	17.4	36.9	11.0	23.3	10	3/8	3/8	8423 1235 04		
LSF28 S180E ^a	18000	16	40	0.82	1.10	1.25	2.75	335	17.4	36.9	7.0	14.8	10	3/8	3/8	8423 1235 05		
LSF28 S180E-1R ^a	18000	16	40	0.82	1.10	1.25	2.75	335	17.4	36.9	7.0	14.8	10	3/8	3/8	8423 1235 42		
LSF28 S180-1R ^a	18000	16	40	0.82	1.10	0.75	1.65	210	17.4	36.9	7.0	14.8	10	3/8	3/8	8423 1235 41		
LSF28 S150 ^a	15000	16	40	0.70	0.94	0.75	1.65	210	15.0	31.8	5.5	11.7	10	3/8	3/8	8423 1235 64		
LSF28 S150E ^a	15000	16	40	0.70	0.94	1.25	2.75	335	15.0	31.8	4.3	9.1	10	3/8	3/8	8423 1235 61		
LSF28 S120 ^a	12000	16	40	0.66	0.89	0.75	1.65	210	13.8	29.3	4.0	8.5	10	3/8	3/8	8423 1235 67		
LSF38 S250E-01 ^a	25000	16	40	1.35	1.8	1.5	3.3	352	28	58	25	53	13	1/2	3/8	8423 1231 17		
LSF38 S180E-01	18000	16	40	1.35	1.8	1.5	3.3	352	28	58	15	31	13	1/2	3/8	8423 1231 16		
LSF38 S180E-01/R	18000	16	40	1.35	1.8	1.5	3.3	356	28	58	15	31	13	1/2	3/8	8423 1231 15		
LSF38 S150E-01/R	15000	16	40	1.25	1.7	1.5	3.3	356	24	50	13	27	13	1/2	3/8	8423 1231 14		
Angle grinders																		
LSV18 S200-1	20000	12	20	0.46	0.61	0.6	1.3	185	11	23	7	14.7	10	3/8	1/4	8423 0111 11		
LSV18 S120-1	12000	12	20	0.46	0.61	0.6	1.3	185	11	23	7	14.7	10	3/8	1/4	8423 0111 13		
LSV18 S080-1	8000	12	20	0.37	0.5	0.6	1.3	185	11	23	6.5	13.6	10	3/8	1/4	8423 0111 16		
LSV28 S150	15000	16	40	0.68	0.91	1.15	2.53	250	17.0	36.0	8.3	17.6	10	3/8	3/8	8423 0125 54		
Grinders for polishing																		
LSF28 ST030	3000	—	—	0.67	0.90	1.16	2.55	275	18.0	38.2	8.6	18.2	10	3/8	3/8	8423 1235 63		
LSF28 ST030E	3000	—	—	0.67	0.90	1.76	3.87	400	18.0	38.2	8.6	18.2	10	3/8	3/8	8423 1235 62		
LSF28 ST070 ^a	7000	—	—	0.76	1.02	1.16	2.55	275	18.9	40.1	12.4	26.3	10	3/8	3/8	8423 1235 66		
LSF28 ST070E ^a	7000	—	—	0.76	1.02	1.76	3.87	400	18.9	40.1	12.4	26.3	10	3/8	3/8	8423 1235 65		
High speed pen model																		
LSF07 S850	88000	4	6	0.10	0.13	0.4	0.9	170	2.2	4.9	2.3	4.6	4.5	3/16	—	8423 1222 03		

^a Not lubrication-free. -1 = 6 mm collet E = Extended version R = Model is rigid, without scatter damping

Accessories Included

LSF07

Air hose
ErgoNIP 08
Collet 3 mm (1. se ill.)

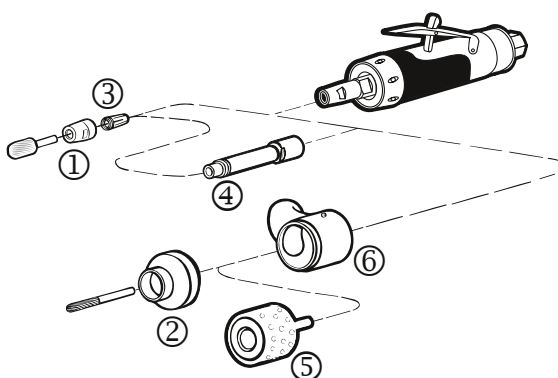
LSF/LSV/18/28

Spanner
Collet 6 mm (1. se ill.)
Air hose, air hose nipple and clamp
Exhaust hose

LSF38

Air hose nipple
Collet 6 mm (1. se ill.)

Optional Accessories



	LSF07	LSF/LSV18	LSF/LSV28	LSF38	See illustration
Optional collets					
Collet 1/8"	4150 1822 00	-	-	-	3
Collet 3 mm	-	4150 0081 00	4150 0081 00	-	3
Collet 6 mm	-	4150 0075 00	4150 0075 00	-	3
Collet 8 mm	-	4150 0074 00	4150 0074 00	-	3
Collet 1/4"	-	4150 0076 00	4150 0076 00	4150 1754 00	3
Collet 10 mm	-	-	-	4150 0681 00	3
Collet nut	-	4150 0760 00	4150 0760 00	4150 0849 00	3
Extension 75 mm /3 in	-	4150 0674 00 ^a	4150 0674 00 ^a	-	4
For machining of plastic and glas fibre					
Diamond burr Ø 6 mm	-	3780 5013 70	-	-	2
Diamond burr Ø 8 mm	-	-	3780 5014 20	-	2
Diamond drum Ø 27 mm	-	3780 5033 00	-	-	5
Diamond drum Ø 50 mm	-	-	3780 5035 00	-	5
Spot suction kit for burr (burr not included)	-	3780 3015 22	3780 4007 41	-	6
Spot suction kit for drum (drum not included)	-	3780 4011 61 ^b	3780 4011 71 ^c	-	6

^a Only for rigid (-R) models

^b For use with 6 mm collet

^c For use with 8 mm collet



Service Kits

07 series	4081 0243 90
18 series	4081 0355 90
28 series	4081 0315 90
38 series	4081 0308 90

Straight Grinders

For Cone Wheels and Collet

Atlas Copco straight grinders for cone wheel or collet, are suitable for grinding in holes and cavities in castings, etc. They require rough abrasives, which must be attached to the tool with a rigid shank or be mounted directly to the spindle.

The power ranges from 0.7 kW (0.88 hp) to 2 kW (2.7 hp). All Atlas Copco tools are designed with focus on operator ergonomics and maximum power, the best combination for maximum productivity.

- The LSR28 and 38 are suitable for lighter applications where accessibility is first priority.
- LSR43 has a proven and rigid design, and is suitable for those really tough applications where durability is needed.
- If you need maximum power, then LSR48 is the natural choice, where you will have access to 2 kW in combination with auto balancer for even less vibrations. All packed in a strong and light package.



Model	Max free speed r/min	Max output		Weight		Length mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
							max output	free speed						
		kW	hp	kg	lb		l/s	cfm	l/s	cfm	mm	in		
LSR28 S120-CW ^a	12000	0.66	0.88	1.2	2.6	305	15.8	33.5	4.3	8.6	13	3/8	3/8	8423 1325 05
LSR28 S150-CW ^a	15000	0.70	0.94	1.2	2.6	308	18.0	38.2	5.8	12.3	13	3/8	3/8	8423 1325 06
LSR38 S150-CW	15000	1.25	1.7	1.5	3.3	320	24	50	13	27	13	3/8	3/8	8423 1232 31
LSR38 S180-CW	18000	1.35	1.8	1.5	3.3	320	28	58	15	31	13	3/8	3/8	8423 1232 30
LSR43 S150-CW ^a	15000	1.0	1.3	2.0	4.4	438	23	49	10	21	13	1/2	1/2	8423 1432 32
LSR43 S150-CW ^a	15000	1.0	1.3	2.1	4.6	503	23	49	10	21	13	1/2	1/2	8423 1432 33
LSR43 S120-CW ^a	12000	0.9	1.2	2.0	4.4	438	20	42	7	15	13	1/2	1/2	8423 1432 24
LSR43 S090-CW ^a	9000	0.8	1.1	2.0	4.4	438	18	38	5	11	13	1/2	1/2	8423 1432 57
LSR43 S072-CW ^a	7200	0.8	1.1	2.0	4.4	438	17	36	4	8	13	1/2	1/2	8423 1432 40
LSR48 S150-CW	15000	2.0	2.7	2.3	5.0	447	35	74	19	40	16	5/8	1/2	8423 1430 08
LSR48 S120-CW	12000	1.8	2.4	2.3	5.0	447	30	64	13	27	16	5/8	1/2	8423 1430 05
LSR48 S090-CW	9000	1.5	2.0	2.3	5.0	447	28	59	11	23	16	5/8	1/2	8423 1430 03

^a Not lubrication free.

- CW = Cone wheel model

LSR28/38 CW indicates use for cone wheel or collet, thread M12x1 to be combined with adapter for wheel thread. LSR48 has UNC 1/2 spindle for direct attachment of CW. For 5/8 and collet use adapter, see page for accessories.

Accessories Included

LSR28/38 CW version

Air hose nipple and clamp
Exhaust hose
Wrenches
Whip hose (only LSR 28)

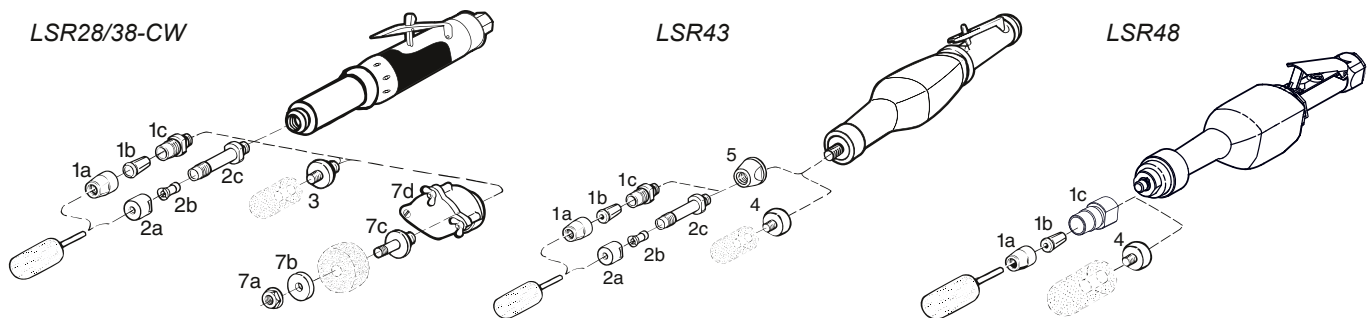
LSR43 CW

Hose nipple
Wrench

LSR48 CW

Whip hose
Wrench

Optional Accessories

**LSR28/38**

	See illustration	Ordering No.
Adapter for cone wheel with thread		
UNC/W 3/8"	3	4150 0318 00
UNF 3/8"	3	4150 0318 01
UNC 1/2"	3	4150 1357 00
UNC/W 5/8"	3	4150 0767 00
Collet type 1b		
Nut	1a	4150 8049 00
Collet Ø 6 mm	1b	4150 1453 00
Collet Ø 8 mm	1b	4150 0706 00
Collet Ø 9 mm	1b	4150 0765 00
Collet Ø 10 mm	1b	4150 0681 00
Collet Ø 1/4"	1b	4150 1754 00
Collet holder	1c	4150 0680 00
Collet type 2b		
Nut	2a	4150 0221 00
Collet Ø 6 mm	2b	4150 0222 00
Collet Ø 8 mm	2b	4150 0325 00
Collet Ø 1/4"	2b	4150 0223 00
Collet holder 90 mm	2c	4150 0441 00
Collet holder 45 mm	2c	4150 0211 00
Parts for (50x19x10) wheels		
Nut	7a	0266 2111 00
Flange	7b	4106 5938 00
Holder	7c	4150 0212 00
Wheel guard	7d	4150 1299 81
Parts for (50x13x10) wheels		
Nut	7a	0266 2111 00
Flange	7b	4106 5938 00
Holder	7c	4150 1145 00
Wheel guard	7d	4150 1299 81

^a Adapters are not included with the tool, and need to be ordered to attach a cone wheel.

LSR43

	See illustration	Ordering No.
Adapter for cone wheel with thread		
UNC/W 3/8"	4	4150 0943 00
UNF 3/8"	4	4150 0943 01
UNC 1/2"	4	4150 0944 00
UNC/W 5/8"	4	4150 0945 00
Collet type 1b		
Nut	1a	4150 0680 00
Collet Ø 6 mm	1b	4150 1453 00
Collet Ø 8 mm	1b	4150 0706 00
Collet Ø 9 mm	1b	4150 0765 00
Collet Ø 10 mm	1b	4150 0681 00
Collet Ø 1/4"	1b	4150 1754 00
Collet holder	1c	4150 0849 00
Collet type 2b		
Nut	2a	4150 0221 00
Collet Ø 6 mm	2b	4150 0222 00
Collet Ø 8 mm	2b	4150 0325 00
Collet Ø 1/4"	2b	4150 0223 00
Collet holder 90 mm	2c	4150 0441 00
Adapter to mount 1c and 2c	5	4150 0861 00

LSR48

	See illustration	Ordering No.
Adapter for cone wheel with thread		
UNC/W 5/8"	4	4150 0945 01
Collet type 1b		
Nut	1a	4150 0849 00
Collet Ø 6 mm	1b	4150 1453 00
Collet Ø 8 mm	1b	4150 0706 00
Collet Ø 9 mm	1b	4150 0765 00
Collet Ø 10 mm	1b	4150 0681 00
Collet Ø 1/4"	1b	4150 1754 00
Collet holder	1c	4150 0680 01



Service Kits

28 series	4081 0315 90
38 series	4081 0311 90
43 series	4081 0020 90
48 series	4081 2023 90

Straight Grinders

For Straight Wheels

Atlas Copco straight grinders, equipped with a straight sided wheel, offer a high rate of material removal in open spaces.

The power ranges from 0.6 kW (0.83 hp) to 2.9 kW (4.0 hp).

- The LSR28 is suitable for lighter applications where accessibility is first priority. Low sound and low vibration levels thanks to the unique vibration damping system. Thermally insulated throttle handle and piped away exhaust air are some of the LSR28 product features, all designed for the best comfort for the operator.
- LSR43 has a proven and rigid design, and is suitable for those really tough applications where durability is needed.
- If you need maximum power, then LSR48 or LSR64 is the choice. 2.9 kW in combination with auto balancer for even less vibrations (LSR48). The length of these grinders can be used as a lever for higher feed force.

The LSR48 has minimal vibration levels thanks to the autobalancer and is equipped with an overspeed shut-off device.



Model	Max free speed r/min	For wheel dia. DxTxH mm	Spindle thread	Max output		Weight		Length mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
				kW	hp	kg	lb		max output	free speed	l/s	cfm	mm	in		
LSR28 S180-05	18000	50x13x10	UNC 3/8x42	0.82	1.09	1.86	4.09	340	19.8	42.0	7.3	15.5	13	3/8	1/2	8423 1325 04
LSR28 S150-10	15000	100x13x20	UNC 1/2x42	0.70	0.94	2.16	4.75	340	18.0	38.2	5.8	12.3	13	3/8	1/2	8423 1325 02
LSR28 S110-08	11000	80x13x10	UNC 3/8x42	0.62	0.83	1.9	4.18	340	15.8	33.5	3.6	7.6	13	3/8	1/2	8423 1325 03
LSR43 S150-10	15000	100x25x25	UNC 1/2x49	1.0	1.4	2.8	6.2	438	23	49	10	21	13	1/2	1/2	8423 1430 34
LSR43 S120-08	12000	80x25x13	UNC 1/2x49	0.9	1.2	2.5	5.5	438	20	42	7	15	13	1/2	1/2	8423 1430 26
LSR43 S090-10	9000	100x25x13	UNC 1/2x49	0.8	1.1	2.4	5.3	438	18	38	5	11	13	1/2	1/2	8423 1430 18
LSR48 S150-10	15000	100x25x16-25	UNC 5/8x42	2.0	2.7	3.5	7.7	482	35	74	19	40	16	5/8	1/2	8423 1430 07
LSR48 S120-08 ^b	12000	80x25x13-25	UNC 1/2x37	1.8	2.4	3.0	6.6	495	30	64	13	28	16	5/8	1/2	8423 1430 04
LSR48 S120-08 ^a	12000	80x25x13-25	UNC 1/2x37	1.8	2.4	3.1	6.8	478	30	64	13	28	16	5/8	1/2	8423 1431 04
LSR48 S120-13	12000	125x25x16-25	UNC 5/8x42	1.8	2.4	3.6	7.9	482	30	64	13	28	16	5/8	1/2	8423 1430 06
LSR48 S120-10	12000	100x32x16-25	UNC 5/8x49	1.8	2.4	3.5	7.7	489	30	64	13	28	16	5/8	1/2	8423 1430 09
LSR48 S090-10 ^b	9000	100x25x13-25	UNC 1/2x37	1.5	2.0	3.2	7.0	495	28	59	11	23	16	5/8	1/2	8423 1430 02
LSR48 S090-10 ^a	9000	100x25x13-25	UNC 1/2x37	1.5	2.0	3.3	7.2	478	28	59	11	23	16	5/8	1/2	8423 1431 02
LSR64 S100-15	10000	150x25x25	UNC 5/8x55	2.9	4.0	5.8	12.8	535	53	112	26	55	16	5/8	1/2	8423 1640 55
LSR64 S072-13	7200	125x25x16	UNC 5/8x55	2.5	3.4	5.4	11.9	535	45	95	14	30	16	5/8	1/2	8423 1640 30
LSR64 S060-15	6000	150x25x16	UNC 5/8x55	2.3	3.1	5.4	11.9	535	41	87	11	23	16	5/8	1/2	8423 1640 22

DxTxH = Diameter x Thickness x Hole.

^a Requires reinforced grinding wheels according to standard.

^b LSR48 S120-08 and LSR48 S090-10 are equipped with closed wheel guard.

Model	Max free speed r/min	Spindle thread in x mm	Max output		Weight		Length mm	Air consumption at				Rec.		Air inlet thread BSP	Ordering No.
			kW	hp	kg	lb		max output l/s	free speed cfm	l/s	cfm	hose size			
												mm	in		
For wire brushes															
LSR28 ST070E-CW	7000	UNC 1/2 x 20	0.76	1.0	1.9	4.3	445	18.9	40.1	12.4	26.3	10	3/8	3/8	8423 1235 71
LSR43 S072	7200	UNC 1/2 x 49	0.8	1.1	2.0	4.4	438	17	36	4	8	13	1/2	1/2	8423 1430 00
LSR64 S041	4100	UNC 5/8 x 55	1.6	2.5	5.4	11.9	535	29	61	7	15	16	5/8	1/2	8423 1640 14

Accessories Included

LSR28

Wheel guard, size according to type
Nut, flanges
Air hose, air hose nipple and clamp
Exhaust hose
Wrenches

LSR43

Wheel guard, size according to type
Nut
Flanges
Pin key

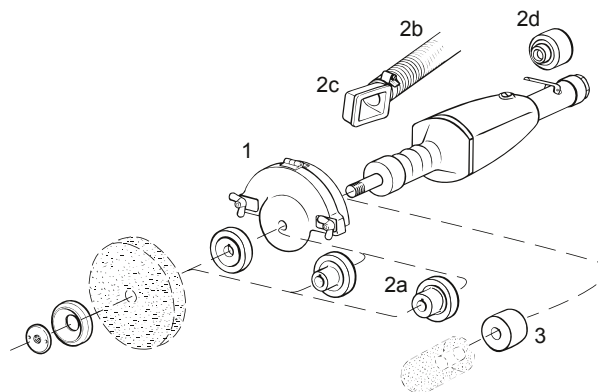
LSR48

Whip hose
Hook wrench
Pin key
Wheel guard, size according to type
Flanges that suit wheels with inner diameter of 13/16/20 and 25 mm are included LSR 48.

LSR64

Wheel guard, size according to type
Nut, flanges
Air hose nipple and clamp
Wrenches

Optional Accessories



	LSR28	LSR43	LSR48	LSR64	See illustration
Flange (for 125-150x25x32 wheel)	-	-	-	4150 0620 00	2a
Flange (for 80x19x10 wheel)	4150 1268 05 ^c	-	-	-	2a
Silencer	-	4150 1005 80 ^a	-	4150 1006 80 ^a	2b
Exhaust guard	-	4150 0938 80	-	4150 0968 80	2c
Lubricator	-	4150 1405 80	-	4150 1405 80	2d
Spacer	-	-	-	4150 0787 00 ^d	3
Spot suction	3780 4027 60 ^b	3780 4027 60 ^b	3780 4027 60 ^b	3780 4027 60 ^b	-

^a Can reduce sound level by 8-12 dB.

^b Suits wheelguard 80-150 mm.

^c Suits LSR 28S110-08.

^d Spacer to fit cone wheel.



Service Kits

28 series	4081 0317 90
43 series	4081 0020 90
48 series	4081 2023 90
53 series	4081 0132 90
64 series	4081 0138 90

Vertical Grinders For Depressed Center, Cut-off and Cup Wheels

The rigid design with a vertically standing air motor and nodular cast iron cylinder gives impressively long service life and durability. The nodular cast iron has a "lubricating" effect, which prolongs the intervals between services.

- LSS series is suitable for rough material removal and cutting off operations on open surfaces.
- The power is impressive and ranges from 1.4 kW (1.9 hp) to a massive 3.8 W (5.1 hp).
- LSS53 is equipped with a unique silencer that reduces the sound peaks created at start and shut-off.



Model	Max free speed r/min	For wheel dia mm	Spindle thread	Max output kW hp		Weight kg lb		Height over spindle mm	Air consumption at				Rec. hose size mm in		Air inlet thread BSP	Ordering No.
									max output		free speed					
									l/s	cfm	l/s	cfm				
LSS53 S120-13	12000	125	5/8	1.6	2.2	2.7	6.0	180	31	66	16	34	13	1/2	1/2	8423 2530 88
LSS53 S085-18	8500	180	5/8	1.4	1.9	2.9	6.4	180	27	57	10	21	13	1/2	1/2	8423 2530 72
LSS64 S085-18	8500	180	5/8	2.6	3.5	4.7	10.4	201	50	106	13	28	16	5/8	1/2	8423 2641 38
LSS53 S072-C13	7200	125	5/8	1.3	1.8	3.1	6.8	180	26	55	8	17	13	1/2	1/2	8423 2534 12
LSS64 S060-C15	6000	150	5/8	2.2	3.0	5.0	11.0	201	40	85	9	19	16	5/8	1/2	8423 2641 04
LSS64 S060-23	6000	230	5/8	2.2	3.0	5.1	12.6	201	40	85	9	19	16	5/8	1/2	8423 2641 46
LSS84 S060-23	6000	230	5/8	3.8	5.1	6.0	13.2	217	65	138	17	36	19	3/4	1/2	8423 2840 26

-12= 125 mm wheel.
 -18= 180 mm wheel.
 -23= 230 mm wheel.
 -C13= 125 mm cup wheel.
 -C15= 150 mm cup wheel.

Accessories Included

①

Attachment according to EN 68 (1. se ill.)

Wheel guard

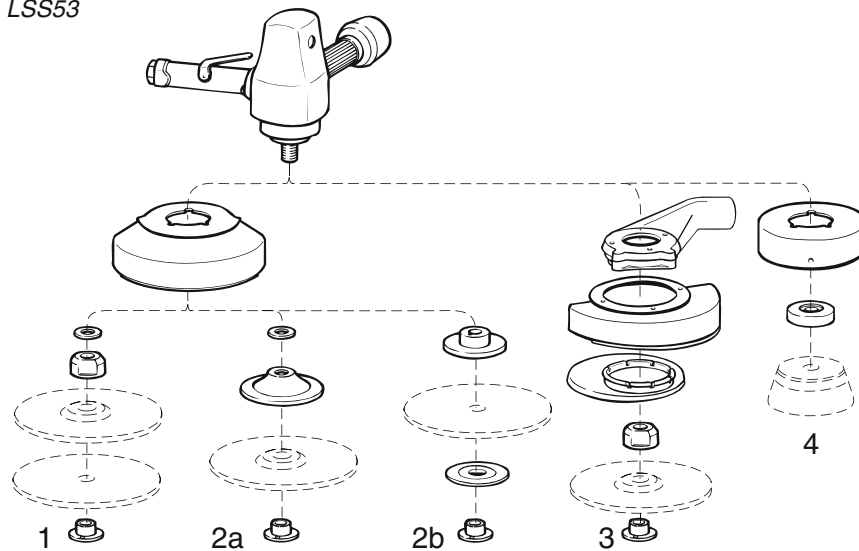
Flange 4170 0758 01

Nut 4170 0220 01

Wrenches

Optional Accessories

LSS53



	LSS53	LSS64	LSS84	See illustration
Accessory for depressed center wheel Includes: Rear and outer flange, nut and pin wrench	4170 0219 87	4150 0758 87	-	2a
Accessory for cut off wheel Includes: Rear and outer flange, nut and pin wrench	4170 1133 87	-	-	2b
Accessory for cup wheel 125 mm Includes: Wheel guard and flange	4170 0664 80	-	-	4
Accessory for cup wheel 150 mm Includes: Wheel guard and flange	-	4170 0652 80	-	4
Spot suction kit for depressed center wheel 180 mm	3780 4011 10	-	-	-
Spot suction kit for fibre disc 180 mm	3780 4011 00	-	-	3



Service Kits

LSS53 4081 0132 90

LSS64 4081 0133 90

LSS84 4081 0136 90

Surface sanding jobs with coarse grit fiber disc on stiff pads or with wire brush, require power. The Atlas Copco LSS series are reliable workhorses with lots of power that will be at your service for a long time. The rigid design with a vertically standing air motor and nodular cast iron cylinder gives impressively long service life and durability. The nodular cast iron has a “lubricating” effect, which prolongs the interval between services.

- LSS series is a good choice where accessibility is of less importance.
- LSS53 is equipped with a unique silencer that reduces the sound peaks created at start and shut-off.



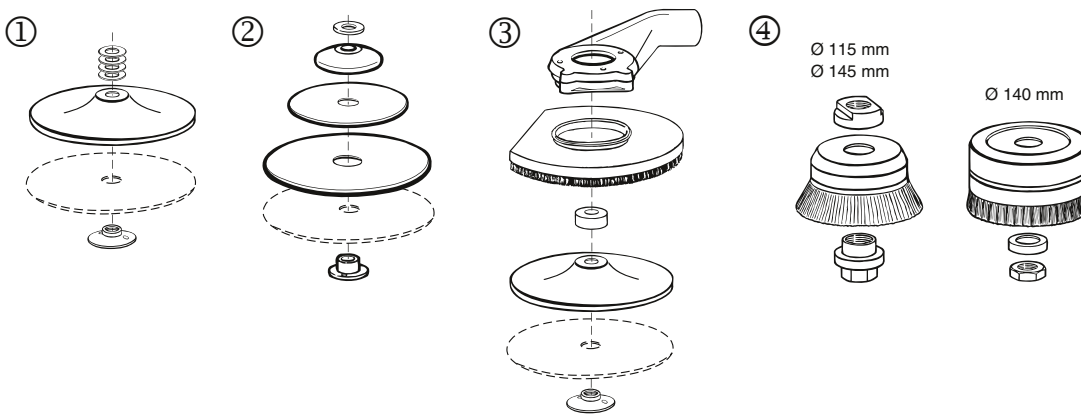
LSS53



LSS64

Model	Max free speed r/min	Rec. pad size dia mm	Spindle thread	Max output		Weight		Height mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
									max output	free speed	max output	free speed				
				kW	hp	kg	lb		l/s	cfm	l/s	cfm	mm	in		
LSS53 S060	6000	180	5/8	1.2	1.6	2.3	5.1	180	24	51	7	15	13	1/2	1/2	8423 2530 23
LSS53 S060-M14	6000	180	M14	1.2	1.6	2.3	5.1	180	24	51	7	15	13	1/2	1/2	8423 2530 27
LSS64 S060	6000	180	5/8	2.2	3.0	4.1	9.0	201	40	85	9	19	16	5/8	1/2	8423 2640 12

Optional Accessories



Backing set for LSS53 and LSS64	Soft	Medium	Stiff	See illustration
Standard type Ø 125 mm - M14 and 5/8"	4170 0768 80	-	-	1
Standard type Ø 180 mm - M14 and 5/8"	4170 0756 80	-	4170 0757 80	1
Medium rough type - Ø 125-230 - 5/8"	-	4170 0259 80 ^a	-	2
Heavy duty type - Ø 180 mm - 5/8"	4170 0660 81 ^b	4170 0660 82 ^b	4170 0660 83 ^b	
Spot suction kit for fiber disc	LSS53	LSS64		See illustration
Ø 180 mm	3780 4011 00 ^c	-		3
Wire brushes	LSS53	LSS64		See illustration
Wire brush 115 mm	4170 0491 00	-	-	4
Wire brush 140 mm	-	4170 0685 00	-	4
Attachment set for wire brush	4170 0459 81	4170 0550 80	-	4

^a = Includes three pads 125, 180 and 230 mm, washer, hub, nut and wrench.

^b = Includes washers, rubber hub, back-up pad, nut, wrench.

^c = Includes flow chamber, cap, washers, backingpad, nut.



Service Kits

LSS53	4081 0132 90
LSS64	4081 0133 90

Angle Grinders

For Depressed Center and Cut-off Wheels

No matter which of our vane grinders you choose you will get high power, low weight, vibrations and noise levels, and durability.

- **LSV18 series** – For work in cramped spaces, the LSV 18 series is small yet powerful, and lubrication free. Features: Speed governor, sealed angle head, thermally insulated handle and lubrication-free air motor.
- **LSV28 series** – Small, yet powerful giving 0.75 kW (1 hp), available in an extended version, for optimal accessibility. Features: Speed governor, sealed angle head, thermally insulated handle and lubrication-free air motor (LSV 28 S060-18 model).
- **LSV38** – If you are looking for the most powerful one-hand die grinder on the market, then you have found it – up to 1.3 kW (1.7 hp). Features: Speed governor, sealed angle head and lubrication-free air motor, thermally insulated handle. Autobalancer (SA models) reduces the vibrations by up to 50 %, lockable spindle and adjustable wheel guard.
- **LSV48** – Our most powerful angle vane grinder, 1.9 kW (2.5 hp) for ultimate productivity. Features: Speed governor, sealed angle head and lubrication-free air motor, thermally insulated handle. Autobalancer (SA models) reduces the vibrations by up to 50%, lockable spindle.



Model	Max free speed r/min	For wheel dia DxTxH ^a mm	Spindle thread	Max output		Weight		Height over spindle mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
				kW	hp	kg	lb		max output	free speed	l/s	cfm	l/s	cfm	mm	in
LSV18 S170-08	17000	80x7x10	UNF 3/8"	0.45	0.6	0.7	1.55	71	11.2	23	6.6	14	10	3/8	1/4	8423 0111 10
LSV28 ST13-10E	13000	100x7x9.5	3/8	0.75	1.0	1.5	3.3	68	21.5	45	14.5	30	10	3/8	3/8	8423 0125 29
LSV28 ST12-10	12000	100x7x16	3/8	0.75	1.0	1.7	3.7	80	17.4	36.9	7.5	15.9	10	3/8	3/8	8423 0125 14
LSV28 ST12-12	12000	115x7x22	3/8	0.75	1.0	1.7	0.0	80	17.4	36.9	7.5	15.9	10	3/8	3/8	8423 0125 16
LSV28 ST12-13	12000	125x7x22	3/8	0.75	1.0	1.7	0.0	80	17.4	36.9	7.5	15.9	10	3/8	3/8	8423 0125 17
LSV28 S060-18	6000	180 ^b	5/8"-11	0.73	0.98	2.5	5.4	87	16	33.9	7.3	15.5	10	3/8	3/8	8423 0135 53
LSV38 S12-125	12000	125x7x22	M14	1.30	1.7	1.6	3.5	83	28	58	15	31	13	3/8	1/2	8423 0131 08
LSV38 ST12-125	12000	125x7x22	M14	1.30	1.7	1.8	4.0	83	28	58	15	31	13	3/8	1/2	8423 0131 09
LSV38 SA12-125	12000	125x7x22	M14	1.30	1.7	2.0	4.4	83	28	58	15	31	13	3/8	1/2	8423 0131 13
LSV48 SA120-13	12000	125x7x22	M14	1.9	2.5	2.5	5.5	78	36	76	17	36	16	5/8	1/2	8423 0132 07
LSV48 SA085-18	8500	180x7x22	M14	1.9	2.5	2.7	5.9	78	36	76	17	36	16	5/8	1/2	8423 0132 06
LSV48 SA066-23	6600	230x7x22	5/8"-11	1.9	2.5	2.9	6.4	82	36	76	17	36	16	5/8	1/2	8423 0132 08

^a DxTxH = Diameter x Thickness x Hole.

^b Specially for flexible depressed center wheel.

SA = Autobalancer.

E = Extended version.

With wheel guard for disc

-08 = Ø 75 mm

-12 = Ø 115 mm

-13 = Ø 125 mm

-18 = Ø 180 mm

-23 = Ø 230 mm

Accessories Included

LSV18

Wheel guard 80 mm
 Flanges 4150 1158 80
 Air Hose nipple, clamp
 Wrenches
 Exhaust hose set

LSV28

Wheel guard
 Flanges 4150 1160 80
 Support handle 4150 1521 80
 Air hose, air hose nipple, clamp
 Wrenches
 Exhaust hose set

LSV38

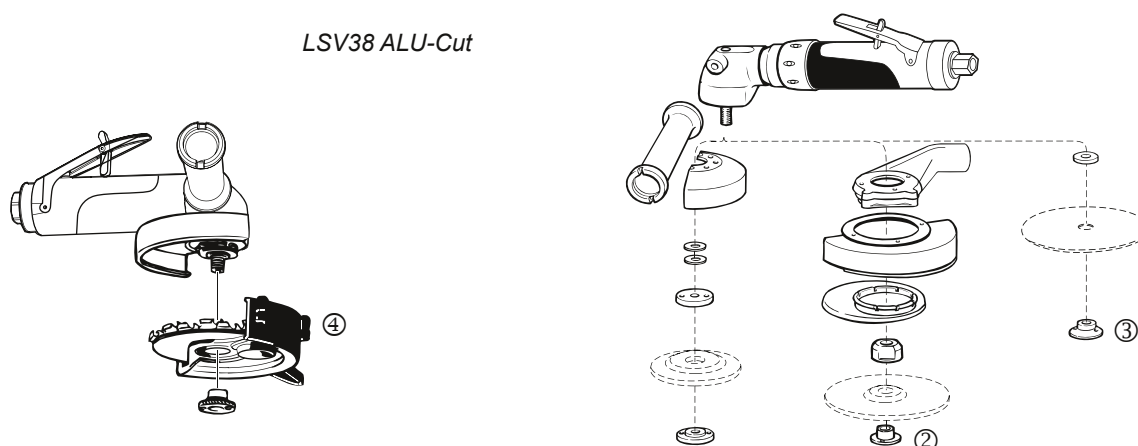
Wheel guard (LSV38 S)
 Adjustable wheel guard (LSV38 ST, -SA)
 Wheel attachment flanges
 Wrenches for flanges
 Spindle lock
 Soft grip support handle
 Exhaust hose (LSV38 ST)
 Reinforced exhaust hose (LSV38 SA)
 Autobalancer (LSV38 SA)
 Whip hose Turbo 13 with ErgoNIP 10 (LSV38 ST, -SA)

LSV48

Wheel guard
 Flange nut 4150 1160 02
 Support handle 4175 0868 82

Optional Accessories

LSV38 ALU-Cut



	LSV18	LSV28	LSV38	LSV48	See illustration
Spot suction kit for depressed center wheel					
Ø 125 mm	-	3780 4008 70	3780 4008 73	-	2
Ø 180 mm	-	-	-	3780 4093 41	2
Spot suction for diamond cutting blade					
Ø 100 mm (Cutting depth 25 mm)	-	3780 4009 20	-	-	-
Ø 125 mm (Cutting depth 30 mm)	-	-	3780 4008 74	-	-
Ø 180 mm (Cutting depth 50 mm)	-	-	-	3780 4093 42	-
Diamond cutting blade					
Ø 100 mm	-	3780 5074 00	-	-	-
Ø 125 mm	-	-	3780 5074 61	-	-
Ø 180 mm	-	-	-	3780 5074 62	-
Alu-Cut					
Alu-Cut guard kit	-	-	4112 1161 90	-	4
Carbide tipped cutter Ø 125 mm, t=2 mm	-	-	4112 1164 00 ^a	-	-
Carbide tipped cutter Ø 125 mm, t=4 mm	-	-	4112 1162 00 ^b	-	-
Adapter for fitting flexible depressed for LSV28 S060-18	-	4170 0759 00	-	-	3

^a For cutting applications in aluminum.

^b For milling applications in aluminum.



Service Kits

LSV18	4081 0355 90
LSV28	4081 0317 90
LSV38	4081 0309 90
LSV48	4081 0312 90

- **LSV18 series sander** – For work in cramped spaces, collet or threaded spindle versions.
Features: Speed governor, sealed angle head and lubrication-free air motor.
- **LSV28 series sander** – The 28 series comes in various speeds and in a wet sanding version. Wet sanders have central water supply (water feed through angle head) for optimal water distribution on the work surface.
Features: Speed governor, sealed angle head, LF models have lubrication-free air motor.
- **LSV38 series sander** – Powerful one hand sander for medium rough to rough sanding.
Features: Speed governor, sealed angle head and lubrication-free air motor, Autobalancer (SA models) and lockable spindle.
- **LSV48 series sander** – Our most powerful angle vane sander, 1.9 kW (2.5 hp) for ultimate productivity.
Features: Speed governor, sealed angle head and lubrication-free air motor, Autobalancer (SA models) and lockable spindle.



Model	Max free speed r/min	Rec. pad size max dia mm	Spindle thread	Max output		Weight kg	Length lb	mm	Height over spindle mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
				kW	hp					max	output	free speed	l/s	cfm	l/s		
With collet																	
LSV18 S200-1	20000	50	— ^b	0.46	0.62	0.6	1.32	193	79	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 11
LSV18 S120-1	12000	75	— ^b	0.46	0.62	0.6	1.32	185	79	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 13
LSV18 S080-1	8000	75	— ^b	0.37	0.50	0.6	1.32	185	79	11.3	23.9	6.5	13.8	10	3/8	1/4	8423 0111 16
With threaded spindle																	
LSV18 S200	20000	50	1/4"-20	0.46	0.62	0.6	1.32	193	58	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 12
LSV18 S120	12000	75	1/4"-20	0.46	0.62	0.6	1.32	185	58	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 14
LSV18 S080	8000	75	1/4"-20	0.37	0.50	0.6	1.32	185	58	11.3	23.9	6.5	13.8	10	3/8	1/4	8423 0111 15
Rotary sanders. Dry sanding																	
LSV28 S060	6000	180	5/8"-11	0.73	0.98	1.5	3.2	265	87	16	33.9	7.3	15.5	10	3/8	3/8	8423 0125 30
LSV28 S060-M14	6000	180	M14	0.73	0.98	1.5	3.2	265	87	16	33.9	7.3	15.5	10	3/8	3/8	8423 0125 64
LSV28 S040	4000	180	5/8"-11	0.62	0.83	1.5	3.2	265	87	15	31.8	4	8.5	10	3/8	3/8	8423 0126 22
LSV28 ST034	3400	180	5/8"-11	0.71	0.95	1.7	3.7	305	87	18	38.2	7.7	16.3	10	3/8	3/8	8423 0135 80
LSV28 S021	2100	180	5/8"-11	0.68	0.91	1.9	4.1	285	87	16	33.9	5.6	11.9	10	3/8	3/8	8423 0125 19
LSV28 S021-M14	2100	180	M14	0.68	0.91	1.9	4.1	285	87	16	33.9	5.6	11.9	10	3/8	3/8	8423 0125 72
Wet sanding																	
LSV28 S040-01-M14	4000	180	M14	0.62	0.83	1.5	3.2	265	87	15	31.8	5	10.6	10	3/8	3/8	8423 0125 12
LSV28 ST008-01 LF	800	200	5/8"-11	0.68	0.91	2.0	4.3	285	87	16	33.9	5.6	11.9	10	3/8	3/8	8423 0125 51
LSV28 ST018-01-M14	1800	180	M14	0.74	0.99	1.7	3.7	305	87	19	40.3	13	27.6	10	3/8	3/8	8423 0125 96
Lubrication-free. Dry sanding																	
LSV28 ST013-M14 LF	1300	180	M14	0.68	0.91	1.7	3.7	285	87	20	42.4	9	19.1	10	3/8	3/8	8423 0125 28
LSV28 ST013 LF	1300	180	5/8"-11	0.68	0.91	1.7	3.7	285	87	20	42.4	9	19.1	10	3/8	3/8	8423 0126 26
LSV38 S085	8500	180	5/8	1.30	1.7	1.5	3.3	217	96	28	58	15	31	13	1/2	3/8	8423 0130 69
LSV38 S085-M14	8500	180	M14	1.30	1.7	1.5	3.3	217	96	28	58	15	31	13	1/2	3/8	8423 0130 72
LSV38 S066	6600	180	5/8	1.20	1.6	1.5	3.3	217	96	24	50	13	27	13	1/2	3/8	8423 0130 73
LSV38 S066-M14	6600	180	M14	1.20	1.6	1.5	3.3	217	96	24	50	13	27	13	1/2	3/8	8423 0130 77
LSV38 S066 D	6600	180	5/8	1.20	1.6	2.3	5.0	217	96	24	50	13	27	13	1/2	3/8	8423 0130 75
LSV38 S085 D	8500	180	5/8	1.30	1.7	2.3	5.0	217	96	28	58	15	31	13	1/2	3/8	8423 0130 76
LSV48 SA085	8500	180	5/8	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 02
LSV48 SA085-M14	8500	180	M14	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 03
LSV48 SA066	6600	180	5/8	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 00
LSV48 SA066-M14	6600	180	M14	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 01
LSV48 SA085 D	8500	180	5/8	1.9	2.5	2.8	6.2	310	94	36	76	17	36	16	5/8	1/2	8423 0132 05

^a LSV18/28/38 measured with exhaust hose.

^b Ø 6 mm collet.

-1 = 6 mm collet.

-01 = Wet sanding.

-D = Spot suction kit included.

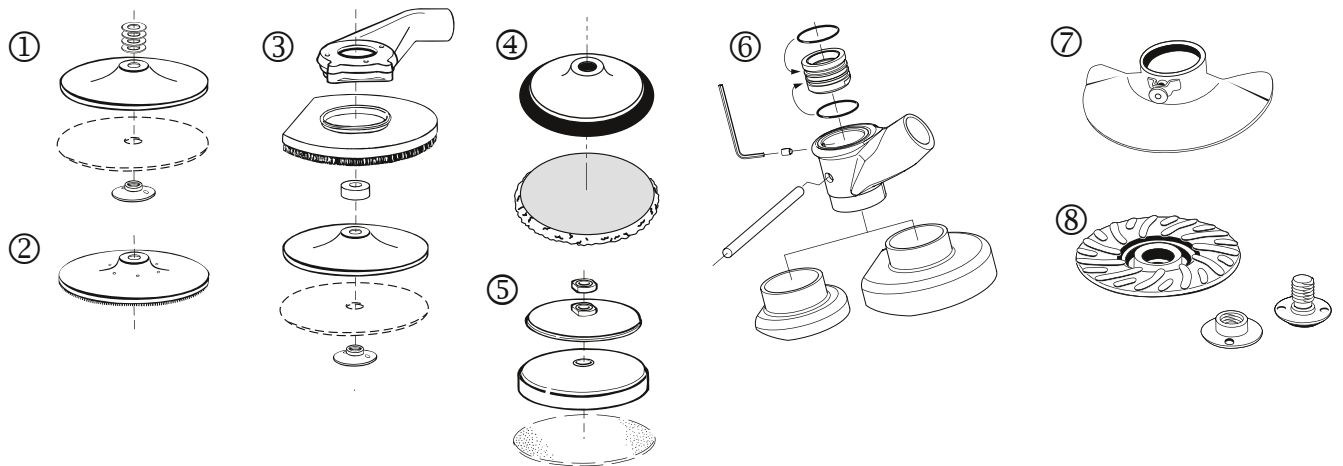
-M14 = M14 thread.

ST models have planetary gears.

Accessories Included

Air hose nipple
Clamp
Exhaust hose (LSV18/28/38)
Support handle (LSV28/38/48)
Wrenches
Spot suction equipment (D-version)

Optional Accessories



	LSV18	LSV28	LSV38	LSV48	See illustration
Backing set, standard type					
Ø 125 mm - 5/8" - soft	-	4170 0768 80	4170 0768 80	4170 0768 80	1
Ø 180 mm - 5/8" - soft	-	4170 0756 80	4170 0756 80	4170 0756 80	1
Ø 180 mm - 5/8" - stiff	-	4170 0757 80	4170 0757 80	4170 0757 80	1
Backing set with cooling ribs					
Ø 125 mm - 5/8" and M14	-	4150 1962 80	4150 1962 80	4150 1962 80	2
Ø 180 mm - 5/8" and M14	-	4150 1962 81	4150 1962 81	4150 1962 81	2
Backing set, heavy duty type					
Ø 120 mm - M14	-	-	4175 0883 93	4175 0883 93	8
Ø 162 mm - M14	-	-	4175 0883 91	4175 0883 91	8
Ø 120 mm - 5/8"	-	-	4175 0883 92	4175 0883 92	8
Ø 162 mm - 5/8"	-	-	4175 0883 90	4175 0883 90	8
Backing set for polishing - velcro					
Ø 150 mm - 5/8" (max 2500 rpm)	-	4112 6092 15	-	-	6
Ø 150 mm - Lambs woll bonnet	-	4112 6093 15	-	-	
Backing set for wet sanding					
Ø 180 mm - 5/8" - foam rubber (max 2500 rpm)	-	4170 0428 83	-	-	5
Spot suction kit for fiber disc					
Ø 125 mm	-	3780 4007 80 ^a	3780 4008 85 ^d	-	7
Ø 180 mm	-	3780 4007 90 ^b /3780 4031 60 ^c	3780 4008 84 ^e	3780 4093 40	
Ø 50 - 75 mm	3780 4092 62	-	-	-	9
Hand shield for 125-180 mm	-	-	4150 1936 80	-	10

^a = Suits LSV28 S060

^b = Suits LSV28S040/060

^c = Suits LSV28S021

^d = Can only be retrofitted on LSV 38D (8423 0800 02 and 8423 0800 03)

^e = Can only be retrofitted on LSV 38D (8423 0800 03 and 8423 0800 04)



Service Kits

LSV18	4081 0355 90
LSV28	4081 0317 90
LSV38	4081 0309 90
LSV48	4081 0312 90

Orbital and Random Orbital Sanders

The new series of random orbital sanders combines all the important customer and application requirements in a very competitive range of products. Applications like sanding before painting and surface coating, polishing with wax and surface conditioner are all quickly done with the small and easily operated LST20-range of sanders.

All models are lubrication free and have silicone free components. They have two grip options in the same handle. In addition, one smaller grip model is included. The full range includes standard models and extraction models. There are also two orbit diameters to choose from in the model range.

- **Lubrication-free** – Avoids contamination of workpiece. No oil in the exhaust air.



Model	Max free speed r/min	Pad size mm	Orbit dia mm	Max output		Weight		Height mm	Length mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread BSP	Ordering No.
				kW	hp	kg	lb			l/s	cfm			
Random orbital – Standard														
LST30 H090-11	9000	110	8	0.3	0.4	1.2	2.6	120	255	7.5	16	8	1/4	8423 0361 64
LST30 H090-15	9000	150	8	0.3	0.4	1.2	2.6	120	275	7.5	16	8	1/4	8423 0361 72
LST30 S090-15	9000	150	8	0.3	0.4	1.1	2.4	120	175	7.5	16	8	1/4	8423 0361 98
Self suction ^a														
LST31 H090-15	9000	150	8	0.3	0.4	1.4	3.0	120	300	7.5	16	8	1/4	8423 0363 19
Central suction ^b														
LST32 H090-15	9000	150	8	0.3	0.4	1.4	3.0	120	300	7.5	16	8	1/4	8423 0362 55
LST32 S090-15	9000	150	8	0.3	0.4	1.3	2.9	120	200	7.5	16	8	1/4	8423 0362 71
Orbital – Standard														
LSO30 S070-3	7000	93x170	5	0.3	0.4	1.6	3.5	125	185	7.5	16	8	1/4	8423 0360 16
LSO30 H070-3	7000	93x170	5	0.3	0.4	1.7	3.7	125	285	7.5	16	8	1/4	8423 0360 24
Self suction ^a														
LSO31 S070-3	7000	93x170	5	0.3	0.4	1.6	3.5	125	210	7.5	16	8	1/4	8423 0362 79
LSO31 H070-3	7000	93x170	5	0.3	0.4	1.7	3.7	125	310	7.5	16	8	1/4	8423 0363 03
Central suction ^c														
LSO32 H070-3	7000	93x170	5	0.3	0.4	1.8	4.0	125	310	7.5	16	8	1/4	8423 0361 07
Standard model														
LST20 R350	12000	90	5	0.2	0.27	0.85	1.85	95	127	8	17	8	1/4	8423 0361 65
LST20 R550	12000	125	5	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4	8423 0361 69
LST20 R650	12000	150	5	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4	8423 0361 73
LST20 R325	12000	90	2.4	0.2	0.27	0.85	1.85	95	127	8	17	8	1/4	8423 0361 76
LST20 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4	8423 0361 81
LST20 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4	8423 0361 84
Extraction model – self suction														
LST21 R350	12000	90	5	0.2	0.27	0.85	1.85	95	133 ^d	8	17	8	1/4	8423 0361 66
LST21 R550	12000	125	5	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 70
LST21 R650	12000	150	5	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 74
LST21 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 82
LST21 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 85
Extraction model – central suction ^c														
LST22 R350	12000	90	5	0.2	0.27	0.85	1.85	95	133 ^d	8	17	8	1/4	8423 0361 67
LST22 R550	12000	125	5	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 71
LST22 R650	12000	150	5	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 75
LST22 R650-9	12000	150	5	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 40
LST22 R325	12000	92	2.4	0.2	0.27	0.85	1.85	95	133 ^d	8	17	8	1/4	8423 0361 78
LST22 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 83
LST22 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 86
LST22 R625-9	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 ^d	8	17	8	1/4	8423 0361 50

^a Includes dust collecting bag.

^b Required air flow 150 m³/h or 88 cfm.

^c Required air flow 60 m³/h or 35 cfm.

^d 186 mm (7.3") suction hose connector included.

H = With handle.

S = Without handle.

All data at 6.3 bar.

-9 Velcro pad, 9 holes.

Accessories Included

LSO

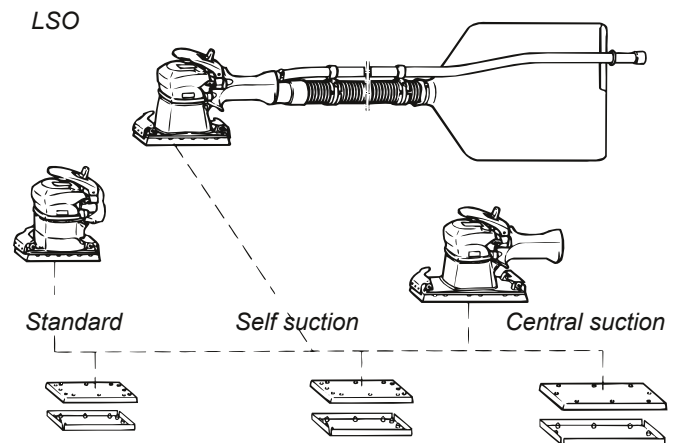
Base pad
Perforating plate
Hose nipple for 8 mm hose
LSO31 including dust collection kit

LST20/21/22

Velcro pad
U-wrench for pad change
Air hose nipple
Dust hose and bag (LST21)
Large and small grip cover

LST30/31/32

Velcro pad
Bar for changing pad
Hose nipple for 8 mm hose
LST31 incl dust collection kit



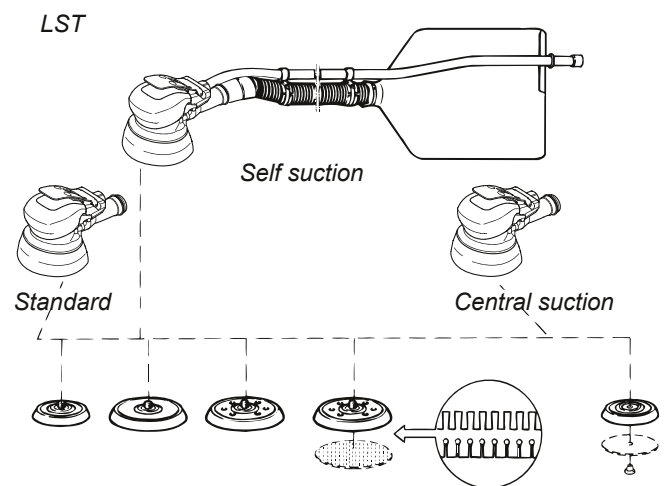
Optional Accessories

LSO

For LSO	Ordering No.
Base pad, vinyl for -3F-type	4112 0787 01
Hose set Dust hose, for LSO32, Ø 32 mm, L=1.8 m including air hose	3780 2724 34
Suspension yoke	4112 0975 00

LST20/21/22, pad for self stick paper

	Ordering No.		
	Dia 89 mm	Dia 125 mm	Dia 150 mm
For LST20	4112 1231 00	4112 1233 00	4112 1235 00
For LST21/22		4112 1232 00	4112 1234 00

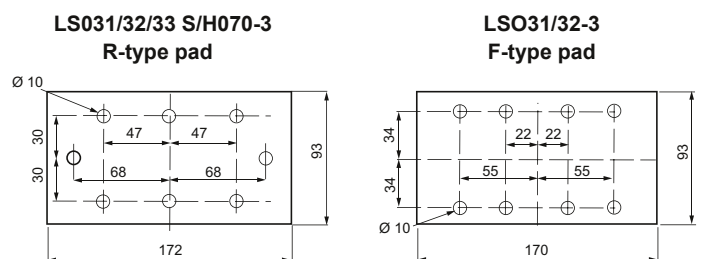


LST30/31/32

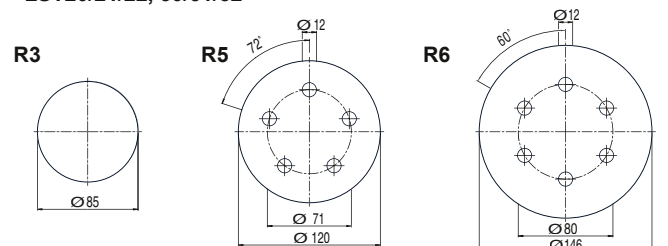
	Ordering No.
Pad velcro, Ø 150 mm	4112 0795 01 ^a
Pad velcro, Ø 110 mm	4112 0792 02 ^b
Pad velcro, Ø 150 mm, 6 holes	4112 0796 00 ^c
Hose set Dust hose Ø 32 mm, L=1.8 m including air hose	3780 2724 34 ^d
Suspension yoke	4112 0975 00

^aLST30-15 ^bLST30/32-11 ^cLST31/32-15 ^dLST32

Hole pattern dimensions for sanding paper, dust extraction models



LST20/21/22, 30/31/32



Service Kits

LST20/21/22 4112 1300 90

Dust Extraction

The fact that dust can represent a hazard in the working environment is well documented.

Dust particles from certain materials are dangerous to health. Even inert dust particles that cause no permanent damage can still be retained in the body and make breathing more difficult. The size of dust particles of most concern are those below 0.005 mm.

Efficient dust control can make a significant contribution to efficiency and productivity in industrial operations. It is already a requirement in countries with strict health and safety regulations.

Efficient dust control will:

- Reduce the health risk for operators exposed to potentially dangerous particles.
- Give a more favourable working environment which will encourage greater efficiency and effort from those who operate industrial tools.

The most efficient method of dust collection is dust extraction at the point of dust creation, i.e. on the tool itself. This not only ensures very efficient extraction but also allows a relatively low power vacuum source to be used.

Atlas Copco spot suction kits provide an extraction hood fixed to the tool. It



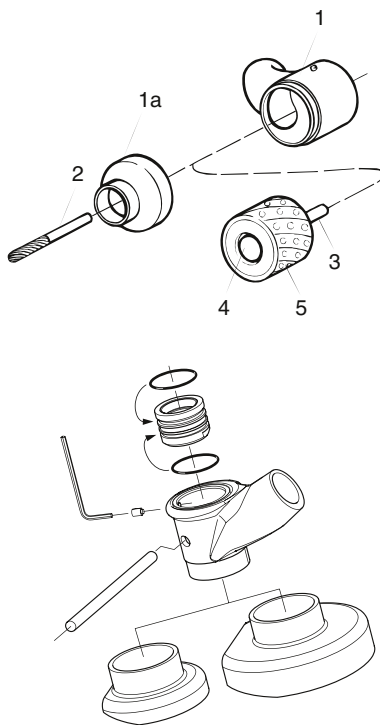
is fitted with a plastic or brush edge to trap heavier particles as well as the small ones. The following pages show a number of applications and the necessary dust extraction kits with their contents.

Model	Max free speed r/min	Max output		Weight		Height over spindle		Air consumption at				Spindle thread	Air inlet thread BSP	Ordering No.
		kW	hp	kg	lb	mm	in	max power l/s cfm	free speed l/s cfm					
GTG21 D120	12000	2.1	2.8	1.6	3.5	92	3.6	30 64	10	21		UNC 5/8"-11	3/8	8423 0800 00
GTG21 D085	8500	2.1	2.8	1.6	3.5	92	3.6	30 64	10	21		UNC 5/8"-11	3/8	8423 0800 01
LSV48 SA085	8500	1.9	2.5	2.3	5.1	78	3	36 76	17	36		UNC 5/8"-11	1/2	8423 0132 02
LSV48 SA066	6600	1.9	2.5	2.3	5.1	78	3	36 76	17	36		UNC 5/8"-11	1/2	8423 0132 06
LSV38 D120	12000	1.3	1.7	2.0	4.4	96	3.8	28 58	15	31		UNC 5/8"-11	1/2	8423 0800 02
LSV38 D085	8500	1.3	1.7	2.0	4.4	96	3.8	28 58	15	31		UNC 5/8"-11	1/2	8423 0800 03
LSV38 D066	6600	1.3	1.7	2.0	4.4	96	3.8	24 50	13	27		UNC 5/8"-11	1/2	8423 0800 04

Spot suction kit for GTG21, LSV48 and LSV38

		Application					
		Grinding Depressed center wheel dia, mm		Sanding Fiber disc dia, mm		Cutting GRP cutting with cutter disc dia, mm	
Model	Ordering No.	125	180	125	180	125	180
GTG21 D120	8423 0800 00	3780 4090 23		3780 4090 24		3780 4090 25	
GTG21 D085	8423 0800 01		3780 4090 21	3780 4090 24			3780 4090 22
LSV48 SA085	8423 0132 02		3780 4093 41		3780 4090 26		3780 4090 22
LSV48 SA066	8423 0132 00				3780 4093 40		3780 4093 42
LSV38 D120	8423 0800 02	3780 4008 73			3780 4093 40		
LSV38 D085	8423 0800 03			3780 4008 85		3780 4008 74	
LSV38 D066	8423 0800 04			3780 4008 85	3780 4008 84		
Optional accessory							
Cutting disc						3780 5074 61	3780 5074 62

Die grinders

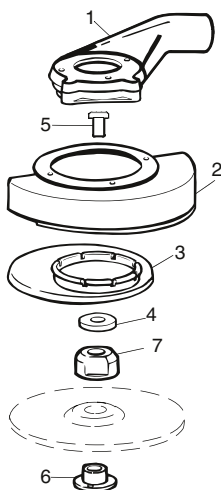


Spot suction kit for die grinders

Suction requirement: 125 m³/h (LSF18), 200 m³/h (LSF28)

			Ordering No.
LSF18 S	1	Chamber for burr	3780 3015 22
	Optional 2	Diamond burr 6 mm	3780 5013 70
LSF18 S		KIT for drum	3780 4011 61
	Includes 1	Chamber	3780 3015 22
	3	Shaft dia 6 mm	3780 5090 30
	4	Locking screw	3780 5090 60
	Optional 5	Diamond drum 27 mm	3780 5033 00
LSF28 S		KIT for burr	3780 4007 41
	Includes 1	Chamber	3780 3300 51
	1a	Nozzle	3780 2730 10
LSF28 S		KIT for drum	3780 4011 71
	Includes 1	Chamber	3780 3300 51
	3	Shaft 8 mm	3780 5091 00
		Distance nut	3780 5091 50
	4	Locking nut	3780 5092 00
	Optional 5	Diamond drum, Ø 50 mm	3780 5035 00
LSV 18 S-1		KIT for sanding pad dia 50 and 75 mm	3780 4092 62
	Includes 2	O-ring 23x1.6	0663 2103 85
	3	Clamp ring	4112 1065 04
	4	Flow chamber	3780 3027 61
	5	Lock screw M4x6 A1	0192 1168 00
	6	Lock pin	4112 0779 00
	7	Suction cap 50 mm	3780 2782 90
	8	Suction cap 75 mm	3780 2782 91
	9	Hexagon wrench 2 mm	3780 9902 10

Rough grinders for depressed center and cut off wheel



Spot suction kit for depressed center wheels

Suction requirement: 250 m³/h

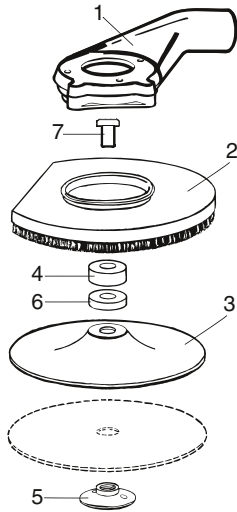
			Ordering No.
LSV28 ST12 125 mm wheel		KIT	3780 4008 70
	Includes 1	Chamber	3780 3101 10
	2	Wheel guard 125 mm	3780 2726 43
	3	Suction cap 125 mm	3780 2500 20
	4	Distance washer	4150 1364 00
	5	Adapter UNF 3/8" UNC 5/8"	4021 0457 00
	6	Nut UNC 5/8"	3780 2722 00
LSS53 S085 18 180 mm wheel		KIT	3780 4011 10
	Includes 1	Chamber	3780 3101 00
	2	Wheel guard 180 mm	3780 2726 50
	3	Suction cap 180 mm	3780 2500 10
	7	Flange EN 68	4170 0758 00
	6	Nut 5/8"	3780 2722 00

Hose kits including 1.8 m vacuum hose Ø 38 mm and air hose Ø 13 mm (Ø 10 mm for LSV28)

LSV28	3780 2724 40
LSS53	3780 2724 41

Kit for fiber disc sanding

LSV28/38/48/GTG40



Spot suction kit for sanding with fiber disc. Sanders with UNC 5/8" spindle.

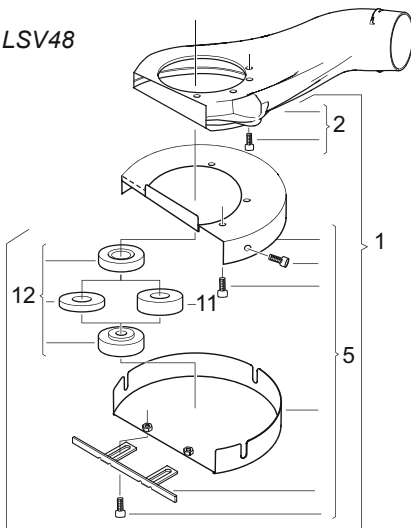
Suction requirement: 250 m³/h

			Ordering No.
LSV28 S040/S060/S085 125 mm	Includes	KIT	3780 4007 80
		1 Chamber	3780 3100 40
		2 Suction cap 125 mm with brush	3780 2650 20
		3 Backing pad 125 mm	3780 2710 30
		4 Distance washer 12 mm	3780 2721 60
LSV28 ST12-13 125 mm	Includes	KIT	3780 4008 60
		1 Chamber	3780 3101 10
		2 Suction cap 125 mm with brush	3780 2650 20
		3 Backing pad 125 mm	3780 2710 30
		6 Distance washer 9 mm	3780 2721 50
LSV28 S040/S060 180 mm	Includes	KIT	3780 4007 90
		1 Chamber	3780 3100 40
		2 Suction cap 180 mm with brush	3780 2675 00
		3 Backing pad 180 mm	3780 2710 60
		6 Distance washer 9 mm	3780 2721 50
LSV28 S021 180 mm	Includes	KIT	3780 4031 60
		1 Chamber	3780 6101 50
		2 Suction cap 180 mm with brush	3780 2675 00
		3 Backing pad	3780 2710 60
		6 Distance washer 12 mm	3780 2721 60
LSV38 S066 180 mm	Includes	KIT^a	3780 4008 84
		1 Chamber	4175 0888 02
		2 Suction cap 180 mm with brush	3780 2675 00
		3 Backing pad 180 mm	3780 2710 60
		5 Nut 5/8"	3780 2726 70
LSV38 S085 125 mm	Includes	KIT^a	3780 4008 82
		1 Chamber	4175 0888 02
		2 Suction cap 125 mm with brush	3780 2650 20
		3 Backing pad 125 mm	3780 2710 30
		5 Nut 5/8"	3780 2726 70
LSV48 SA066 180 mm	Includes	KIT	3780 4093 40
		1 Chamber	3780 3103 51
		2 Suction cap 180 mm with brush	3780 2675 00
		3 Backing pad 180 mm	3780 2710 60
		4 Distance washer 9 mm	3780 2721 50
LSS53 S060 180 mm	Includes	KIT	3780 4011 00
		1 Chamber	3780 3101 00
		2 Suction cap 180 mm with brush	3780 2675 00
		3 Backing pad 180 mm	3780 2710 60
		4 Distance washer 12 mm	3780 2721 60
GTG40 S060 180 mm	Includes	KIT	3780 4090 10
		1 Chamber	3780 3180 10
		2 Suction cap 180 mm with brush	3780 2675 30
		3 Backing pad 180 mm	3780 2710 30
		4 Distance washer 3 mm	3780 2721 30
		5 Flange nut 5/8"	3780 2722 00

^a Use with adapter, Ordering No. 4150 1928 90, to be ordered separately.

Kit for GRP-cutting

LSV48



Kit for GRP-cutting

			Ordering No.
LSV48 SA085/SA066 180 mm	Includes	KIT	3780 4093 42
		2 Suction chamber, complete	3780 3103 54
		5 Gable cover plate, complete	3780 2732 20
		11 Spacer 10 mm	3780 2726 60
		12 Flange set	3780 2799 50
	Optional	180 mm cutting-off disc	3780 5074 62

Hose kits including 1.8 m vacuum hose, Ø 38 mm and air hose Ø 13 mm (Ø 10 mm for LSV28)

LSV28	3780 2724 40
LSV38/41, LSS53, GTG21/40	3780 2724 41

Brush for suction cap	
Separate brush for cap Ø 125 mm	3780 2678 00
Separate brush for cap Ø 180 mm	3780 2677 50
Separate brush (30 mm high) for cap Ø 180 mm	3780 2677 30
Cover with brush for suction cap Ø 180 mm	3780 2675 03

Router

Pattern fixture cutting of composite in the aerospace industry as well as trimming of composite materials is preferably done with a router. The LSK37 is the only router with dust extraction and support bearing integrated into one unit. This gives the LSK37 excellent performance and ergonomics in most composite applications.

- **Productive** – The speed governor maintains the rotational speed at applied feed-force which enables fast and effective cutting and prevents the bit from clogging.
- **Ergonomic** – An integrated dust extraction hood for deportation of hazardous dust, thermally insulated throttle handle, sound dampening exhaust valve and piped-away exhaust air provides the operator with the best working environment.



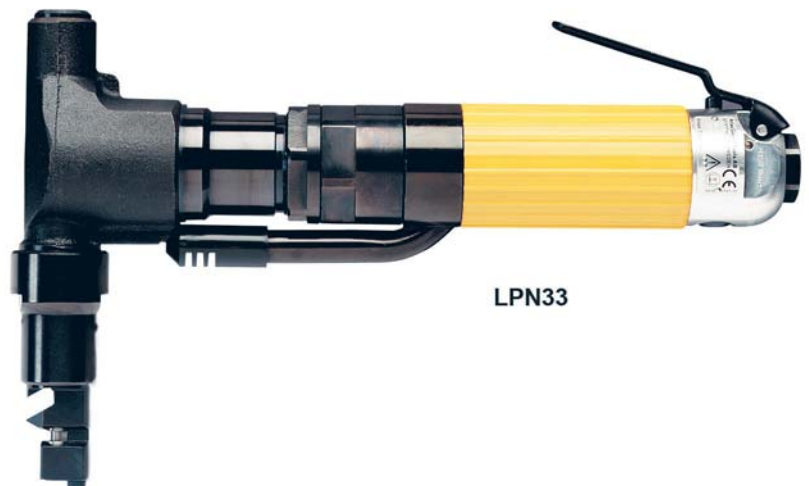
Model	Free speed r/min	Collet size	Weight		Power		Air consumption		Recommended hose size		Hose fitting thread BSP	Ordering No.
			kg	lb	kW	hp	l/s	cfm	mm	in		
LSK37 S250-DS1	25000	6 mm	2.8	6.1	0.7	0.95	18	32	13	1/2	3/8	8423 1234 41
LSK37 S250-DS2	25000	1/4"	2.8	6.1	0.7	0.95	18	32	13	1/2	3/8	8423 1234 42

Suction requirement: 200 m³/h.

Nibbler

The Atlas Copco LPN33 nibbler can cut iron sheet up to 2 mm in thickness and aluminum sheet in thicknesses up to 2.5 mm.

- **Sturdy design** – To ensure optimal tool life, the cutter and die insert are made of tungsten carbide and the other parts of the nibbler head of high-grade steel.
- **Good accessibility** – The cutter works in an upward direction reducing the risk of die failure. The die insert has cutting edges all round and can be rotated through 360° before being worn out.
- **Piped-away exhaust air** – Some of the exhaust air is conducted through the nibbler head so as to blow out the chips and cool the cutter.



Model	Nibbler cutting speed 2 mm sheet m/min	Max sheet thickness mm			Weight		Length mm	Rec. hose size		Hose fitting thread BSP	Ordering No.
		Steel	Stainless	Aluminum	kg	lb		mm	in		
LPN33	1.6	2.0	1.0	2.5	2.1	4.6	270	10	3/8	1/4	8424 0301 07*

Accessories Included

3 mm hexagon wrench

Hose fitting for 10 mm air hose

Cutting operations in glass and carbon fiber as well as metal sheet, wood and steel can successfully be performed with a circular cutter.

- **Effective** – LCS10 and -38 cut to a depth of 10 and 26 mm respectively.
- LCS38 is suitable for diamond coated blades only.
- **Dust extraction** – Cutting of composite materials generates dust containing particles hazardous to health. The dust must be deported in order to prevent the operator from inhaling it.

LCS38 is equipped with a cutter blade guard with integrated dust extraction hood for external vacuum source.



Model	Free speed r/min	Max output		Max cutting depth mm	Max cutter blade dia mm	Weight		Air consumption at free speed		Rec. hose size		Air inlet thread BSP	Ordering No.
		kW	hp			kg	lb	l/s	cfm	mm	in		
LCS10	3000	0.3	0.4	10	50	1.4	3.1	7.6	16	6.3	1/4	1/4	8424 1161 38
LCS38 S150D ^a	15000	1.3	1.7	26	100	1.7	3.7	28.0	58	13.0	1/2	3/8	8424 1125 06

^a Suction requirement: 200 m³/h.

Accessories Included

LCS10

Cutter blade, 62 teeth
Hexagon wrench
Hose nipple for 6.3 mm air hose

LCS38

Flanges for diamond blade
Hose nipple for 13 mm air hose

Optional Accessories

Cutter blades

Model	Application	Max thickness of material mm	No. of teeth mm	Dia mm	Hole mm	Ordering No.
LCS10	Steel sheet	1.0	92	50	10	4190 0394 00
	Steel sheet	1.0	62	50	10	4190 0395 00 (std)
	Aluminum	2.5	34	50	10	4190 0396 00
	Wood	10.0	34	50	10	4190 0396 00
LCS38	Glassfibre	18.0	44/60 (Grain)	75	12	3780 5073 00
	Glassfibre	25.0	44/60 (Grain)	100	12	3780 5074 00

Model	Ordering No.
Suction hose set (L= 5.9 in, Dia 1 1/4") for LCS38	3780 2724 31
Bladeguard for LCS10	4150 1964 00

A full-page background image showing a worker in a blue helmet with a clear face shield, an orange long-sleeved shirt, a dark grey apron, and heavy-duty gloves. The worker is using a yellow and black pneumatic tool to work on a large metal beam. The background is a blurred industrial setting.

Percussive Tools

Contents	Page
Introduction.....	222
Product safety.....	223
Chipping hammers	224
Scalers.....	226
Rammers.....	229
Riveting system	230
Riveting hammers.....	231
Bucking bars.....	233
Chisels.....	235

These tools make light of the toughest jobs

Atlas Copco percussive tools are ideal for all material removal tasks in foundries, engineering workshops, shipyards, and the construction and off-shore industries. Built-in-ergonomic features such as vibration damping reduce the human load, delay fatigue and help protect the operator against the ill effects of long-term exposure to vibration and noise. Vibration-damped models are available over almost the entire power range.

The designs use lightweight alloys to keep tool weight down while maintaining performance.

This makes these tools extremely effective in the hands of your skilled operators.

Weld flux removal

Applications – Fettling welds from flux and spatter. General scaling operations. The tools – Modern welding methods generate slag that is easily removed and almost no spatter. In these applications RVM 07B is the right choice. It has power enough to do the job, very low noise and is vibration damped below 2.5 m/s². The standard chisel delivered with the tool is carbide tipped for a long service life. The tool is also equipped with clean blowing capacity.

For heavy slag chipping and tougher scaling the conventional scaler RRC 13 and RRC 13B with a blowing function are the preferred models. These tools have the right power for this type of job and a sturdy reliable design. The gripping diameter is only 45 mm, including the throttle lever. They also have a low vibration level for conventional models.

Rust and paint removal

Rust and paint removal – Industrial maintenance. Shipyards. On board ships and offshore rigs.

For lighter jobs the needle scaler RRC I3 is the ideal tool. Needle sets of different shapes and material are available to suit most operations.

Chipping

General chipping and multipurpose “chiseling” in heavy industrial use. Fettling of castings in foundries. Offshore and shipyard applications.

Efficient – For highest efficiency, choose tools with a high power-to-weight ratio. RRF 21/31 have an excellent material removal rate.

Well proven design. Simple and well proven design for a long, trouble-free tool life.

The conventional RRC 22 – 75 range models, which have forged steel handles, are basic versions with excellent handling and reliability.

Vibration damped chippers are easy on your operators. The RRF and RRD models are vibration damped.



IMPORTANT: All local safety regulations with respect to installation, operation and overhaul must always be followed.

AVOID ACCIDENTS

- 1 The chisel, die or punch may fall out or may be shot out of the tool accidentally causing serious injury.**



To prevent injury from a flying chisel:

- Always use a retainer.
- Inspect the retainer for wear or damage regularly.



- Be aware that the chisel may break during operation.
- Never trigger a hammer unless held against a work piece.
- Remove chisel, die or punch from tool when work is over.
- When finishing a job, disconnect the tool from its air supply.
- Before changing accessories, chisel or die – disconnect the tool from the air supply.

- 2 Chips and sparks should be prevented from striking an eye or another worker.**



To prevent vision loss:

- Always wear eye protection.
- Isolate work of this kind by using barriers between work stations.
- Do not use the tool for other purposes than it is intended for.

- 3 Gloves protect fingers from pinching, scuffing and scraping.**

- Protective shoes may prevent your feet from being injured.



- 4 Explosive atmosphere must not be ignited.**

To prevent injury and property loss from fires:

- Use other technique.
- Use accessories of non sparking material (e.g. needle attachment of Beryllium copper for a needle scaler).

- 5 Electric shock may be fatal.**

- Avoid chiseling into electric wiring hidden inside walls etc.

LONG TERM RISKS

- 6 Always use ear protection.**



To prevent gradual loss of hearing due to exposure to high noise level – wear ear protection.

- 7 Vibration may be harmful to hands and arms.**



- Use vibration dampened tools if available.
- Reduce the total time of exposure to vibrations, particularly if the operator has to guide the chisel by hand.

- 8 Dust generated during operation may be harmful.**

- Use spot suction or a breathing apparatus.

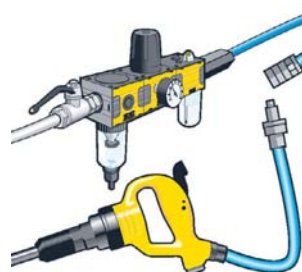
PROPER USE AND MAINTENANCE

- 9 Do not perform idle blows with a hammer.**



- They will cause high internal stresses and shorten the life of the tool.
- Note the risk of shooting out the chisel, die or punch if the retainer is not in order or damaged.

- 10 Quick coupling.**



- If a coupling is used on a percussive tool, it should be separated from the tool by a whip hose (length 0.5 m).

- 11 Follow the tool manual and the lubrication instructions.**

- 12 Perform overhauls at regular intervals.**

Chipping Hammers

Vibration-damped and Silenced

- **RRF21/31** have a sturdy D-handle in light metal alloy for a high power-to-weight ratio and steady grip. The compact, vibration-controlled design offers good accessibility and ease of use.
- **RRD37/57** are light, quiet and have a long service life. They have light alloy tool casings, very low vibration and noise levels, vibration damping in both hand grips, and piped away exhaust.



Model	Blows Hz	Piston dia		Stroke		Energy per blow		Length mm	Weight		Bushing		Air consumption		Hose size		Air inlet BSP	Ordering No.
		mm	in	mm	in	J	ft lb		kg	lb	mm	in	l/s	cfm	mm	in		
RRF21-01	57	18	0.7	33	1.3	2.0	1.5	245	1.75	3.3	12.7 ^c	0.50	6.5	13.8	10.0	3/8	3/8	8425 1104 05
RRF31-01	38	22	0.9	43	1.7	4.4	3.2	265	2.5	5.3	12.7 ^c	0.50	7.5	15.9	10.0	3/8	3/8	8425 1104 15
RRD37-11	35	27/19 ^a	1.1/0.8	70	2.8	6.8	5.0	418	3.0	6.6	17.3 ^d	0.68	7.2	15.3	12.5	1/2	special ^e	8425 1101 22
RRD37-12	35	27/19 ^a	1.1/0.8	70	2.8	6.8	5.0	418	3.0	6.6	17.3 ^d	0.68	7.2	15.3	12.5	1/2	special ^e	8425 1101 30
RRD57-11	31	28/18 ^b	1.1/0.8	92	3.6	9.3	6.9	458	3.4	7.5	17.3 ^d	0.68	9.5	20.1	12.5	1/2	special ^e	8425 1103 20
RRD57-12	31	28/18 ^b	1.1/0.8	92	3.6	9.3	6.9	458	3.4	7.5	17.3 ^d	0.68	9.5	20.1	12.5	1/2	special ^e	8425 1103 38

^a Effective piston dia 19 mm, 0.75 in.

^b Effective piston dia 21.5 mm, 0.85 in.

^c ISO.

^d Spline.

^e Integrated hose barb.

-01 and -11: Guided models,

-02 and -12: Non guided models.

Chipping Hammers

- **Dependable** – Their robust construction makes them highly dependable.
- **Efficient** – RRC65 and RRC75 have a blow rate which makes them particularly suitable for roughening.
- **Chisel retainer** – for safer jobs – RRC22-RRC75 are delivered with a chisel retainer as standard. For the same reason choose a tool that can be guided via the machine itself and not by holding the chisel.

As standard, Atlas Copco chipping hammers of series RRC are delivered with a standard, guided ISO hexagon nozzle (-01) or a round, non guided shank nozzle (-02).



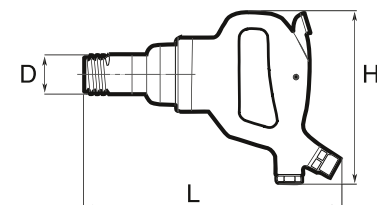
Model	Blows Hz	Piston dia		Stroke		Energy per blow		Length mm	Weight		Bushing		Air consumption		Hose size		Air inlet BSP	Ordering No.
		mm	in	mm	in	J	ft lb		kg	lb	mm	in	l/s	cfm	mm	in		
RRC22F-01	62	15	0.6	52	2.0	2.7	2.0	260	2.2	4.9	12.7 ^a	0.50	6.2	13.1	10	3/8	3/8	8425 0202 22
RRC22F-02	62	15	0.6	52	2.0	2.7	2.0	260	2.2	4.9	12.7 ^a	0.50	6.2	13.1	10	3/8	3/8	8425 0202 30
RRC34B-01	45	24	0.9	67	2.6	5.5	4.1	330	4.5	9.9	17.3 ^a	0.68	8.0	14.0	12.5	1/2	special ^b	8425 0212 53
RRC34B-02	45	24	0.9	67	2.6	5.5	4.1	330	4.5	9.9	17.3 ^a	0.68	8.0	17.0	12.5	1/2	special ^b	8425 0212 61
RRC65B-01	40	29	1.1	50	2.0	10.0	7.3	335	5.9	13.0	17.3 ^a	0.68	10.8	22.9	12.5	1/2	special ^b	8425 0225 33
RRC65B-02	40	29	1.1	50	2.0	10.0	7.3	335	5.9	13.0	17.3 ^a	0.68	10.8	22.9	12.5	1/2	special ^b	8425 0225 41
RRC75B-01	30	29	1.1	75	3.0	16.0	11.8	390	6.5	14.3	17.3 ^a	0.68	14.0	29.6	12.5	1/2	special ^b	8425 0225 58

^a ISO.

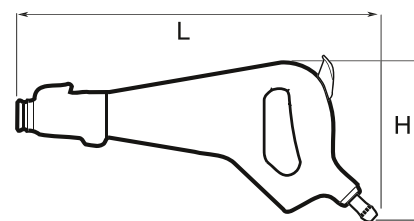
^b Integrated hose barb.

Dimensions

Model	L mm	H mm	D mm
RRF21	245	160	33
RRF31	265	170	36
RRD37	418	175	—
RRD57	458	190	—

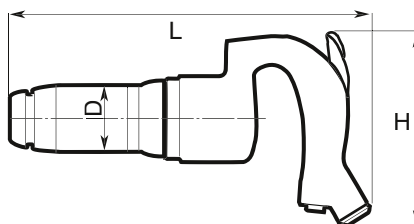


RRF21/31



RRD37/57

Model	L mm	H mm	D mm
RRC22	260	155	34
RRC34	330	160	43
RRC65	335	170	54
RRC75	390	170	54



RRC

Accessories Included

RRF models

Chisel retainer and a hose fitting

RRD models

Flat chisel
Silencer complete
Hand grip
Key

RRC models

Chisel retainer and hose fitting

Optional Accessories

Model	Ordering No.
Power regulator	
RRF21 and -31	3512 0273 80
Retainer, open type	
RRF21	3512 0290 90
RRF31	3512 0305 90

A selection of chisels for
RRF21/31 ISO 12.7 mm
RRD37/57 ISO with splines

Chisels

For a wide choice of chisels, see separate page.

A selection of chisels fitting RRC -01, -02 type, see separate page for chisels.

Installation Proposals



Model	Max air flow	Hose, 5 m	Coupling	Lubrication	Ordering No.
For percussive tools with 3/8" BSP air inlet incl. whip hose					
MIDI Optimizer F/RD EQ10-R13-W	23 l/s	Rubair 13 mm	ErgoQIC 10	Yes	8202 0850 14
For percussive tools incl whip hose, no tool nipple included					
MIDI Optimizer F/RD EQ10-R13-W	23 l/s	Rubair 13 mm	ErgoQIC 10	Yes	8202 0850 15

Scaler RVM07B is ideal for tasks such as weld dressing, etc.

- **Vibration-damped with low-noise level.**
- **Vibration is very low.**
- **Two-job capacity** – RVM07B features a clean-blowing device (B) which is very useful for clean-blowing work on steel structures etc.
- **RVM07B** is the obvious choice for light concrete trimming and for removal of paint and rust.



RVM07B

Model	Blows Hz	Length mm	Weight incl. standard chisel		Air consumption		Hose size		Air inlet BSP	Ordering No.
			kg	lb	l/s	cfm	mm	in		
RVM07B	100	273	1.7	3.8	3.8	8.1	6.3	1/4	1/4	8425 0105 25

Scalers

Choose between two different models for heavy slag chipping and for instant trimming of concrete.

- **High removal rate** – RRC13 is very effective and has a high removal rate in relation to its low weight.
- **Well proven** percussive mechanism and retainer.
- **Two-job capacity** – RRC13B with extra clean-blowing device.
- **Improved back head** – Throttle valve and lever with really Heavy Duty performance for long service life. Clean blowing system with twice the previous blow capacity. Big blow button for easy operation and sturdy valve stem to resist rough handling.



RRC13B

Model	Blows Hz	Piston dia		Stroke		Energy per blow		Length mm	Weight		Air consumption		Hose size		Air inlet BSP	Ordering No.
		mm	in	mm	in	J	ft lb		kg	lb	l/s	cfm	mm	in		
RRC13	73	15	0.6	35	1.4	1.4	1.0	221	1.4	3.1	4.0	8.0	10	3/8	3/8	8425 0101 30
RRC13B	73	15	0.6	35	1.4	1.4	1.0	231	1.6	3.5	4.0	8.0	10	3/8	3/8	8425 0101 33

The effective needle scaler, type RRC13N, is based on the same fundamental design as the straight chipping hammers of type RRC13 described above.

- **Sturdy design** – Easy to maintain.
- **Versatile** – The needle scaler is used to remove welding slag, rust and paint from steel structures.

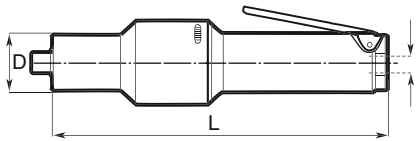


RRC13N

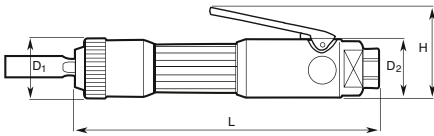
Model	Blows Hz	Piston dia		Stroke		Energy per blow		Length mm	Weight		Air consumption		Hose size		Air inlet BSP	Ordering No.
		mm	in	mm	in	J	ft lb		kg	lb	l/s	cfm	mm	in		
RRC13N	73	15	0.6	35	1.4	1.4	1.0	352	1.9	4.2	4.0	8.0	10	3/8	3/8	8425 0101 36

Dimensions

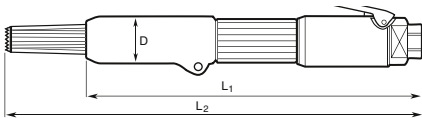
Model	L mm	D mm
RVM07B	273	38



Model	L mm	H mm	D ₁ mm	D ₂ mm
RRC13	221	65	45	41.5
RRC13B	231	65	45	41.5



Model	L ₁ mm	L ₂ mm	D mm
RRC13N	282	352	38



Accessories Included

For all RRC13

Hose fitting
Scaling chisel

For RMV07B

Hose fitting
Flat carbide tipped chisel 10x120 mm

Optional Accessories

For RRC13, 13B

RRC13 / RRC13B	Ordering No.
Hand guard	3510 0246 90
All steel retainer	3510 0245 80
Silencer	3510 0366 80

Chisels for RRC13 and -13B, Square shank 13.0 mm

For RRC13N

Needle-set of 19 needles, length 100 mm

Material	Ordering No.
Steel, standard	3510 0221 90
Steel flat ends	3510 0227 90
Stainless steel flat ends	3510 0228 90
Beryllium copper flat ends (spark resistant)	3510 0229 90

For RMV07B

Carbide tipped chisels and through hardened chisels with other length and width, see separate page for chisels.

Installation Proposals



Model	Max air flow	Hose	Coupling	Lubrication	Ordering No.
For percussive tools with 3/8" BSP air inlet incl. whip hose					
MIDI Optimizer F/RD EQ10-R13-W	23 l/s	Rubair 13 mm	ErgoQIC 10	Yes	8202 0850 14
For percussive tools incl whip hose, no tool nipple included					
MIDI Optimizer F/RD EQ10-R13-W	23 l/s	Rubair 13 mm	ErgoQIC 10	Yes	8202 0850 15

Atlas Copco dependable and simple floor and bench rammers are intended for ramming of casting sand in cylinders, core boxes, large moulds and casting pits, or for stamping work, for instance with filling sand, and stamping of refractory furnace linings.

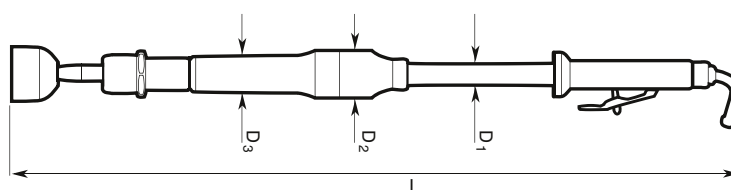


Model	Blows Hz	Piston dia		Stroke		Length mm	Weight		Air consumption		Hose size		Air inlet thread BSP	Ordering No.
		mm	in	mm	in		kg	lb	l/s	cfm	mm	in		
RAM06	20	20/10	0.8/0.5	84	3.3	415	2.5	5.5	3.0	6.4	6.3	1/4	1/4	8467 0105 29
RAM12	11	27	1.1	102	4.0	457	4.2	9.3	6.0	12.7	12.5	1/2	1/4	8467 0106 51
RAM20A	12	34	1.3	203	8.0	1315	10.9	24.0	10.5	22.2	12.5	1/2	special	8467 0108 18

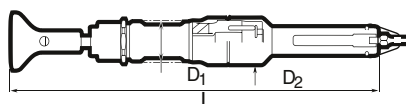
Dimensions

Model	L mm	D ₁ mm	D ₂ mm	D ₃ mm
RAM06	415	39	48	—
RAM12	480	51	51	—
RAM20A	1315	57	70	32

RAM20A



RAM06/12



Accessories Included

RAM06

Cast iron butt, 60 mm dia, hose nipple

RAM12

Rubber butt, 73 mm dia, hose nipple

RAM20A

Cast iron butt, 75 mm dia, hose attachment

Optional Accessories

Model	Ordering No.
RAM06	
Rubber peen, 18x50 mm	3086 0006 00
Rubber peen, 60 mm dia	3086 0009 00
RAM12	
Rubber peen, 19x61 mm	3512 0216 00
RAM20A	
Rubber peen, 75 mm	3086 0013 00

Minimum vibration, maximum productivity

Atlas Copco's top-of-the-line riveting systems are designed to minimize the riveter's exposure to vibration, while maintaining high tool performance. The RRH recoilless riveting hammer has an air cushion behind the hammer piston which efficiently kills vibrations. The same air dampening technique is used in RBB bucking bars. It raises individual productivity and boosts output in your plant.

The Atlas Copco riveting system includes vibration-damped hammers RRH and bucking bars RBB – as well as conventional riveting hammers RRN.

The vibration-damped riveting hammers – RRH – are available in different sizes.

Each size is available in "Trigger start" and "Push to start" models.

The conventional riveting hammer – RRN – is available in one size: RRN11P.

Critical factors

The number of blows and the power are critical factors which determine the strength of a riveted joint. A few powerful blows are needed to fill out the hole and form a head when upsetting the rivet. The impact force is critical to some extent when working with aluminum alloys, as too many blows can embrittle the metal.

In terms of capacity, the tools overlap. The selection guide below helps you to find the right tool for your particular application of riveting.

The vibration-damped bucking bars RBB are available in two versions – the simple spring damped – SP type and the air servo assisted SA type.



Selection Guide

Hammer model ^a	Nominal Max. Rivet Diameter Capacity						Bucking bar model required ^b	
	Dural		Steel		Titanium			
	mm	in	mm	in	mm	in		
RRN11	2-5	3/32 - 3/16	1-4	3/32 - 5/32				
RRH04	2-5	3/32 - 3/16	1-4	3/21 - 5/32			RBB04	RBB10
RRH06	4-7	5/32 - 1/4	3-6	1/8 - 1/4	2-4	3/32 - 5/32	RBB10	RBB16
RRH08	5-8	3/16 - 5/16	4-7	5/32 - 1/4	3-6	1/8 - 1/4	RBB10	RBB16
RRH10	5-9	3/16 - 3/8	6-8	1/4 - 5/16	4-7	5/32 - 1/4	RBB16	
RRH12	8-11	5/16 - 7/16	7-10	1/4 - 3/8	6-9	1/4 - 1/8	RBB16	
RRH14	11-13	7/16 - 1/2	9-12	3/8 - 15/32	8-11	5/16 - 7/16	RBB16	

^a Hammer capacity depends on direct/indirect riveting as well as Panel density and stiffness.

^b Bucking bar capacity is dependent on dolly weight.

Vibration-damped

Riveting Hammers

RRH is a unique series of riveting hammers incorporating completely revolutionary ergonomic advantages.

- **Versatile** – RRH can easily cope with rivets in diameters up to 13 mm.
- **Vibration-damped system** – The RRH vibration-damped riveting hammer, combined with the RBB vibration-damped bucking bar, offer an unbeatable system for riveting.
- **Adjustable power.**
- **Adjustable hand guard** – Support hand grip is vibration-damped.
- Now new models with trigger start for excellent handling. Pistol grip with rubber coating.



Model	Blows Hz	Nozzle		Piston dia		Stroke		Energy per blow		Weight		Air consumption		Hose size		Air inlet BSP	Ordering No.
		mm	in	mm	in	mm	in	J	ft lb	kg	lb	l/s	cfm	mm	in		
With push start																	
RRH04P-01	66	10.0	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	1/4	8426 1109 07
RRH04P-02	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	1/4	8426 1109 15
RRH04P-12	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	1/4	8426 1109 25
RRH06P	36	10.2	0.4	15	0.6	102	4.0	6.0	4.4	1.3	2.9	9.0	19	10.0	3/8	1/4	8426 1110 04
RRH08P	24	10.2	0.4	15	0.6	137	5.4	8.0	5.9	1.4	3.0	10.0	21	10.0	3/8	1/4	8426 1110 09
RRH10P	25	12.7	0.5	19	0.7	118	4.6	13.0	9.6	2.0	4.4	12.0	24	10.0	3/8	1/4	8426 1110 20
RRH12P	20	12.7	0.5	19	0.7	153	6.0	16.0	11.8	2.1	4.6	13.0	28	10.0	3/8	1/4	8426 1110 47
RRH14P	18	12.7	0.5	19	0.7	188	7.4	19.5	14.4	2.2	4.8	13.0	28	10.0	3/8	1/4	8426 1110 80
With trigger start																	
RRH04P TS-12	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	1/4	8426 1109 27
RRH06P TS	36	10.2	0.4	15	0.6	102	4.0	6.0	4.4	1.3	2.9	9.0	19	10.0	3/8	1/4	8426 1110 66
RRH08P TS	24	10.2	0.4	15	0.6	137	5.4	8.0	5.9	1.4	3.0	10.0	21	10.0	3/8	1/4	8426 1110 68
RRH10P TS	25	12.7	0.5	19	0.7	118	4.6	13.0	9.6	2.0	4.4	12.0	24	10.0	3/8	1/4	8426 1110 70
RRH12P TS	20	12.7	0.5	19	0.7	153	6.0	16.0	11.8	2.1	4.6	13.0	28	10.0	3/8	1/4	8426 1110 72
RRH14P TS	18	12.7	0.5	19	0.7	188	7.4	19.5	14.4	2.2	4.8	13.0	28	10.0	3/8	1/4	8426 1110 81

-01 means 10 mm short shank rivet set.

-02 means 10.2 mm short shank rivet set.

-12 means 10.2 mm stand shank rivet set.

Conventional Type

Riveting Hammers

For riveting in confined spaces we recommend our RRN11 riveting hammer.

- **RRN11** – is the smallest riveting hammer available on the market, with unique accessibility.
- **Adjustable** – The RRN11 has a built-in adjustment knob with which you can set the power for different rivet materials and sizes.
- **Controllable** – The trigger is easily operated and provides excellent control.



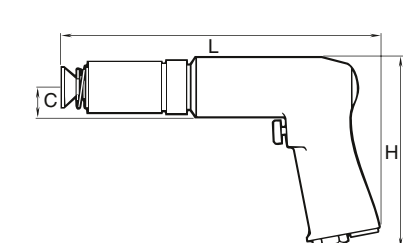
Model	Blows Hz	Nozzle mm in		Piston dia mm in		Stroke mm in		Energy per blow J ft lb		Weight kg lb		Air consumption l/s cfm		Hose size mm in		Air inlet BSP	Ordering No.
RRN11P-01	66	10.0	0.4	15	0.6	40	1.6	2.0	1.5	1.2	2.6	3.4	7.2	6.3	1/4	1/8	8426 1101 05
RRN11P-02	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.2	2.6	3.4	7.2	6.3	1/4	1/8	8426 1101 13

-01 means 10 mm short shank rivet set.

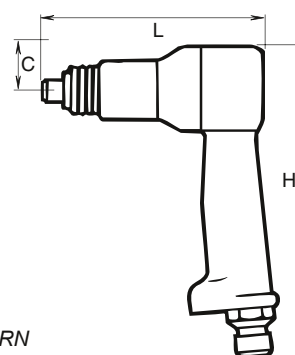
-02 means 10.2 mm short shank rivet set.

Dimensions

Model	L mm	H mm	C mm
RRH			
RRH04-01	160	147	23
RRH04-02	160	147	23
RRH04-12	175	147	23
RRH06	225	147	24
RRH08P	244	147	24
RRH10P	264	150	27
RRH12P	299	150	27
RRH14P	334	150	27
RRN			
RRN11P	100	170	23



RRH



RRN

Accessories Included

For RRH models

Hose fitting
Flush set
Open spring retainer

For RRN11P

Hose fitting and retainer
Blank rivet set
Retainers for blank and flush rivet set

Optional Accessories

Rivet sets. RRH and RRN

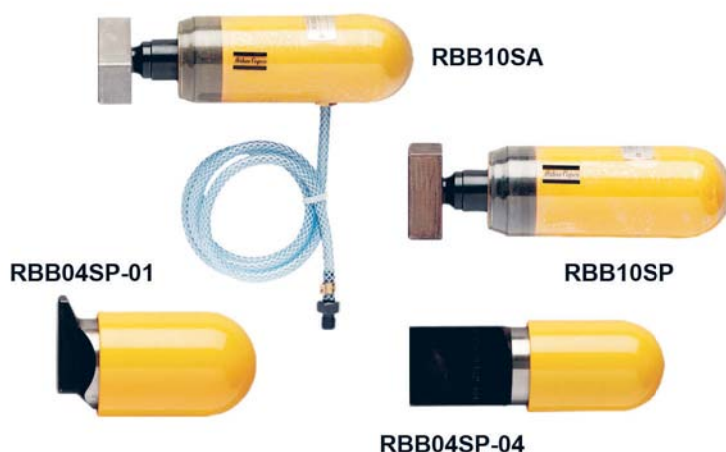
Hammer type	Model	Shank mm		Flush set Ordering No.		Blank rivet set Ordering No.
RRH04P-01 RRN11P-01	(-01)	10.0 spec		3085 0347 00		3006 0983 00
RRH04P-02 RRN11P-02	(-02)	10.2 spec		3085 0352 00		3085 0353 00
RRH04P-12 RRH06P RRH08P	(-12)	10.2 std 10.2 std 10.2 std		3085 0324 00		3085 0022 00
RRH10P RRH12P RRN14P		12.7 std 12.7 std 12.7 std		3085 0323 00		3085 0021 00
RRH04P-12 RRH06P RRH08P		10.2 std				3085 0212 00
RRH04P-12 RRH06P RRH08P		10.2 std				3085 0212 02

Kits for conversion to trigger start operation

Model	Ordering No.
RRH04P-12	3520 0363 80
RRH06/08P	3520 0210 81
RRH10/12P/14P	3520 0364 80

An efficient riveting system consists of vibration-damped bucking bars together with vibration-damped riveting hammers.

- **Self-adjustable** – RBB10SA and RBB16SA feature a self-adjusting damping system which requires a compressed air supply. RBB04SP, RBB10SP and RBB16SP use a spring as damping element and consequently do not require an air supply.
- **Flexible** – The bucking bars can be fitted with several different interchangeable dolly configurations via a quick change retainer for maximum flexibility.
- **Cramped spaces** – Mini bucking bars RBB04SP are ideal for work in confined spaces. The large mass types -04, -05 will in most applications set the rivet faster than the smaller models.



Model	Weight		Diameter		Air consumption		Ordering No.
	kg	lb	mm	in	l/s	cfm	
With standard dolly ^a							
RBB10SA	1.3	2.9	48	2.0	0.5	1.1	8426 9101 77
RBB10SP	1.1	2.4	48	2.0	—	—	8426 9101 74
RBB16SA	1.9	4.2	48	2.0	0.5	1.1	8426 9101 78
RBB16SP	1.7	3.7	48	2.0	—	—	8426 9101 76
Without dolly and rod							
RBB10SP-U	0.9	2.0	48	2.0	—	1.1	8426 9101 86
Mini bucking bars							
RBB04SP-01	0.8	1.8	46	1.8	—	—	8426 9101 10
RBB04SP-04	1.3	2.9	46	1.8	—	—	8426 9101 13
RBB04SP-05	1.4	3.1	46	1.8	—	—	8426 9101 14
RBB04SP-06	1.1	2.5	46	1.8	—	—	8426 9101 15

^a Standard dolly assy (3085 0335 93).

Accessories Included

All SA-models

Hose and hose fitting

All 10/16 models

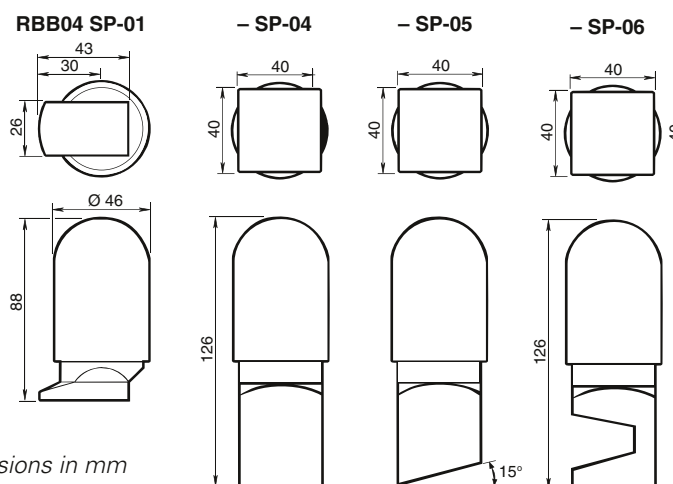
Plastic cover

Optional Accessories

Designation	Ordering No.
Rod 5 mm	3085 0365 03
Rod 50 mm	3085 0365 04
Rod 100 mm	3085 0365 05
Plastic cover for	
RBB10SA	3520 0317 00
RBB10SP	3520 0315 00
RBB16SA	3520 0318 00
RBB16SP	3520 0316 00

Dimensions

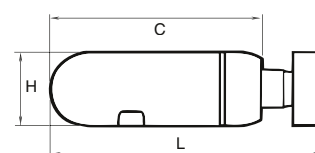
Dimensions Mini bucking bars



Dimensions in mm

Dimensions RBB10/16

Model	L mm	H mm	C mm
RBB10SA/SP	165	49	140
RBB16SA/SP	200	49	198



Optional Accessories

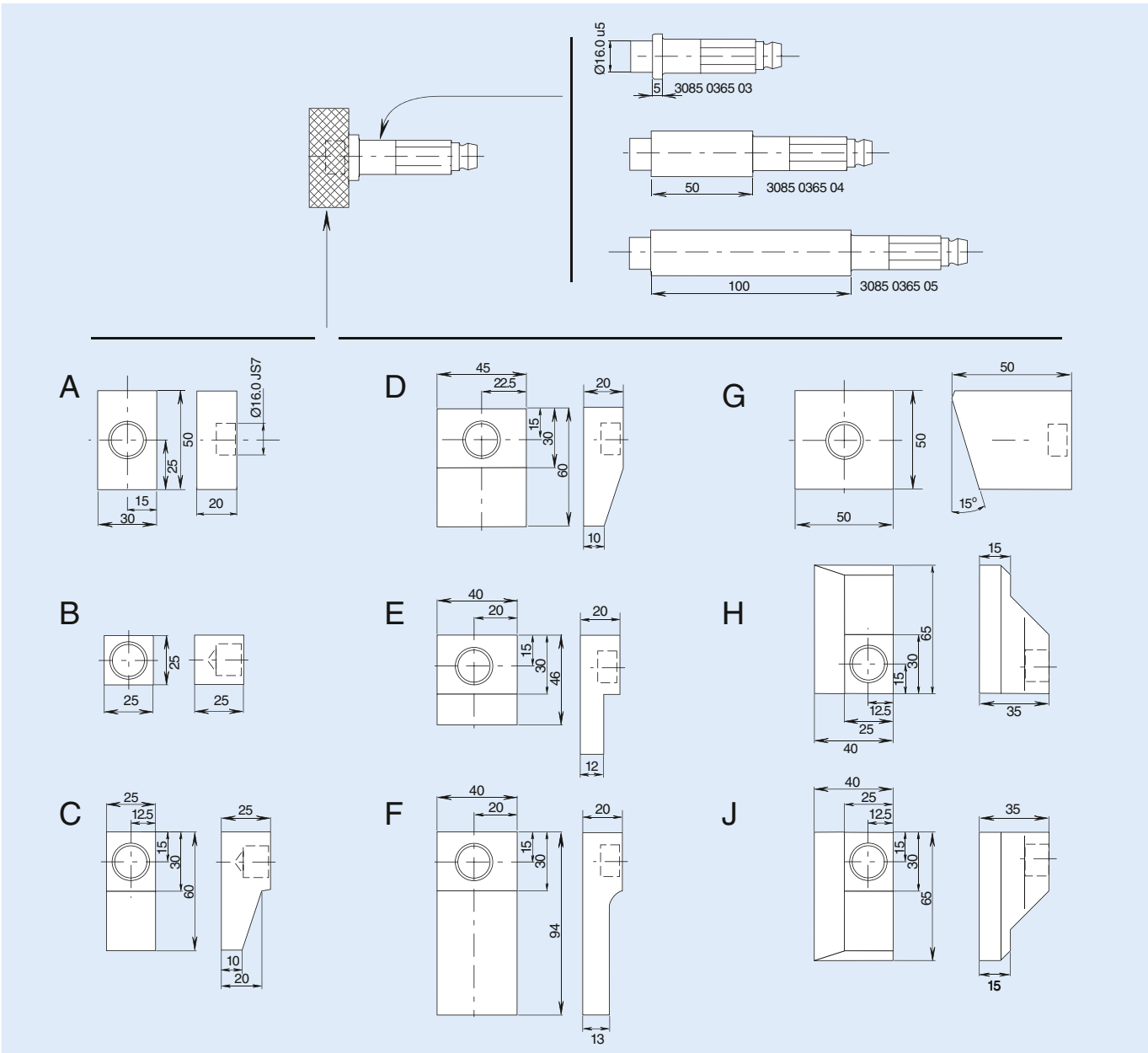
Dollies for RBB10 and RBB16, all models

Dolly type	Weight		Ordering No. With rod 5 mm	Weight		Ordering No. With rod 50 mm	Weight		Ordering No. With rod 100 mm
	kg	lb		kg	lb		kg	lb	
A	0.37	0.8	3085 0335 93 ^a	0.47	1.0	3085 0335 94	0.67	1.5	3085 0335 95
B	0.25	0.55	3085 0363 93	0.35	0.8	3085 0363 94	0.55	1.3	3085 0363 95
C	0.36	0.8	3085 0364 93	0.46	1.0	3085 0364 94	0.66	1.5	3085 0364 95
D	0.43	0.9	3085 0337 93	0.53	1.2	3085 0337 94	0.73	1.6	3085 0337 95
E	0.35	0.8	3085 0339 93	0.45	1.0	3085 0339 94	0.65	1.5	3085 0339 95
F	0.57	1.3	3085 0336 93	0.67	1.5	3085 0336 94	0.87	1.9	3085 0336 95
G	1.00	2.2	3085 0338 93	1.10	2.4	3085 0338 94	1.30	2.9	3085 0338 95
H	0.62	1.4	3085 0340 93	0.72	1.6	3085 0340 94	0.92	2.0	3085 0340 95
J	0.62	1.4	3085 0341 93	0.72	1.6	3085 0341 94	0.92	2.0	3085 0341 95

^a Standard dolly assy.

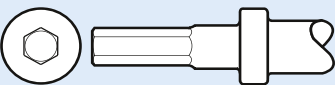
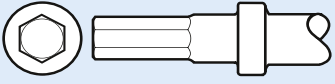
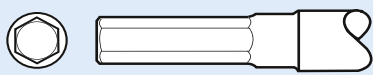
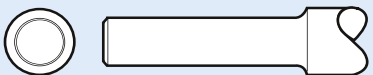
Other dollies can also be used, apart from Atlas Copco's, and press fitted onto a rod. Please see rod (i.e. hole) specification in the below drawing. Custom design dollies are recommended to be manufactured locally and fitted on to Atlas Copco rods.

DIMENSIONAL DRAWING of dollies available



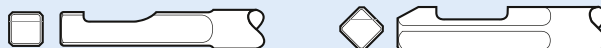


Chisels for Chipping hammers. All chisels are normally through hardened. Otherwise, see tables.

Figure	Shank type	Tools	Table
	Square shank 13.0 mm	RRC13, RRC13B	1
	Extended square shank ISO, 12.7 mm	RRC15	1
	Hexagon and round shank ISO, round collar 12.7 mm	RRC22F-01, RRC22F-02 RRF21, RRF31	2
	Hexagon shank ISO round collar 17.3 mm	RRC34B-01, RRC65B-01, RRC75B-01	3
	Round shank ISO, with splines 17.3 mm	RRD37, RRD57	3
	Hexagon shank ISO without round collar 17.3 mm	RRC34-01, RRC65-01, RRC75-01	4
	Round shank ISO, without collar 17.3 mm	RRC34-02, RRC65-02, RRC75-02	4
	Special shank	RVM07B	5

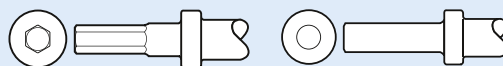
Chisels

1 A. Chisels with square shank 13.0 mm B. Chisels with square shank ISO 12.7 mm



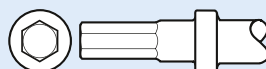
Chisel type	Designation	Width		Length		A Square 13 mm (1/2") Ordering No.	B ISO Extended square 12.7 mm (1/2") Ordering No.
		mm	in	mm	in		
	Chisel blank	15	0.59	155	6.1	3085 0020 00	3085 0228 02
		15	0.59	200	7.9	3085 0020 01	
		15	0.59	300	11.8	3085 0020 02	
	Flat chisel	15	0.59	165	6.1	3085 0227 00	3085 0230 01
		15	0.59	200	7.9	3085 0227 01	
	Wide flat chisel	35	1.38	165	6.5	3085 0032 00	3085 0232 01
		35	1.38	200	7.9	3085 0032 01	
		35	1.38	300	11.8	3085 0032 02	
		55	2.17	165	6.5	3085 0332 00	
	Angle scraper chisel	35	1.38	165	6.5	3085 0176 00	3085 0362 00
		35	1.38	200	7.9	3085 0176 01	
		55	2.17	165	6.5	3085 0333 00	
	Scaling chisel	15	0.59	155	6.1	3085 0018 00	3085 0229 01
		15	0.59	200	7.9	3085 0018 02	
		15	0.59	300	11.8	3085 0018 01	

2 A. Chisels with hexagon shank ISO, round collar 12.7 mm B. Chisels with round shank ISO, round collar 12.7 mm



Chisel type	Designation	Width		Length		A Hex ISO 12.7 mm (1/2") Ordering No.	B Round ISO 12.7 mm (1/2") Ordering No.
		mm	in	mm	in		
	Chisel blank	13	0.51	200	7.9	3085 0182 00	
		13	0.51	350	13.8	3085 0182 01	
		13	0.51	400	15.7	3085 0182 04	
		13	0.51	500	19.7	3085 0182 05	
	Flat chisel	13	0.51	200	7.9	3085 0183 00	3085 0184 00
		35	1.38	300	11.8	3085 0376 00	
	Sharp chisel	15	0.59	200	7.9	3085 0170 00	
		15	0.59	300	11.8	3085 0170 01	
	Spot weld chisel	17	0.69	200	7.9	3085 0301 00	
	Angle scraper chisel	30	1.18	200	7.9	3085 0262 00	
	Pipe cutting chisel	20	0.78	200	7.9	3085 0302 00	
		35	1.38	200	7.9	3085 0303 00	
	Plate cutting chisel	14.5	0.57	200	7.9	3085 0263 00	
	Plate cutting chisel	16	0.62	200	7.9	3085 0173 00	
	Moll point chisel	13	0.51	200	7.9	3085 0297 00	
		13	0.51	305	12.0	3085 0297 01	

3 A. Chisels with hexagon shank ISO, round collar 17.3 mm B. Chisels with round ISO shank with splines 17.3 mm



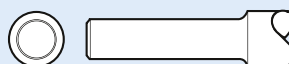
A



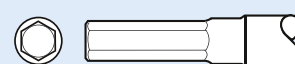
B

Chisel type	Designation	Width		Length		Hex ISO 17.3 mm (0.68") Ordering No.	Width		Length		Round ISO with splines 17.3 mm (0.68") Ordering No.
		mm	in	mm	in		mm	in	mm	in	
	Chisel blank	22	0.86	335	13.1	3085 0220 00	22	0.86	250	9.8	3085 0242 00
		22	0.86	560	22.0	3085 0220 01	22	0.86	340	13.4	3085 0242 01
		22	0.86	1060	41.7	3085 0220 02	22	0.86	550	21.7	3085 0242 02
		22	0.86				22	0.86	800	31.5	3085 0242 03
		22	0.86				22	0.86	1200	47.2	3085 0242 04
	Flat chisel	22	0.86	260	10.2	3085 0221 00	22	0.86	215	8.5	3085 0236 00
		22	0.86	335	13.1	3085 0221 01	22	0.86	250	9.8	3085 0236 01
		22	0.86	560	41.9	3085 0221 02	22	0.86	340	13.4	3085 0236 02
		22	0.86				22	0.86	550	21.7	3085 0236 03
	Flat chisel	32	1.26	335	13.1	3085 0989 00	32	1.26	340	13.4	3085 0252 00
	Wide flat chisel Extra wide flat chisel	50	1.97	335	13.1	3085 0235 00	50	1.97	340	13.4	3085 0250 00
		130	5.12	400	15.7	3085 0342 00	130	5.12	400	15.7	3085 0998 00
	Angle scraper chisel	50	1.97	335	13.1	3085 0349 00	50	1.97	335	13.2	3085 0350 00
	Moil point chisel	22	0.86	335	13.1	3085 0223 00	22	0.86	340	13.4	3085 0249 00
		22	0.86	560	15.7	3085 0223 01					
	Shank rod for roughing head	—	—	180	7.1	3085 0257 00	—	—	195	7.7	3085 0254 00
	Roughing head for shank rod (tungsten carbide)	39	1.53	—	—	3085 0255 00	39	1.53	—	—	3085 0255 00
	Roughing head for shank rod	40	1.57	—	—	3085 0253 00	40	1.57	—	—	3085 0253 00

4 A. Chisels with ISO shank without collar, round B. Chisels with ISO shank without collar, hexagon



A



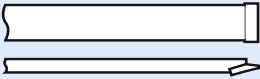
B

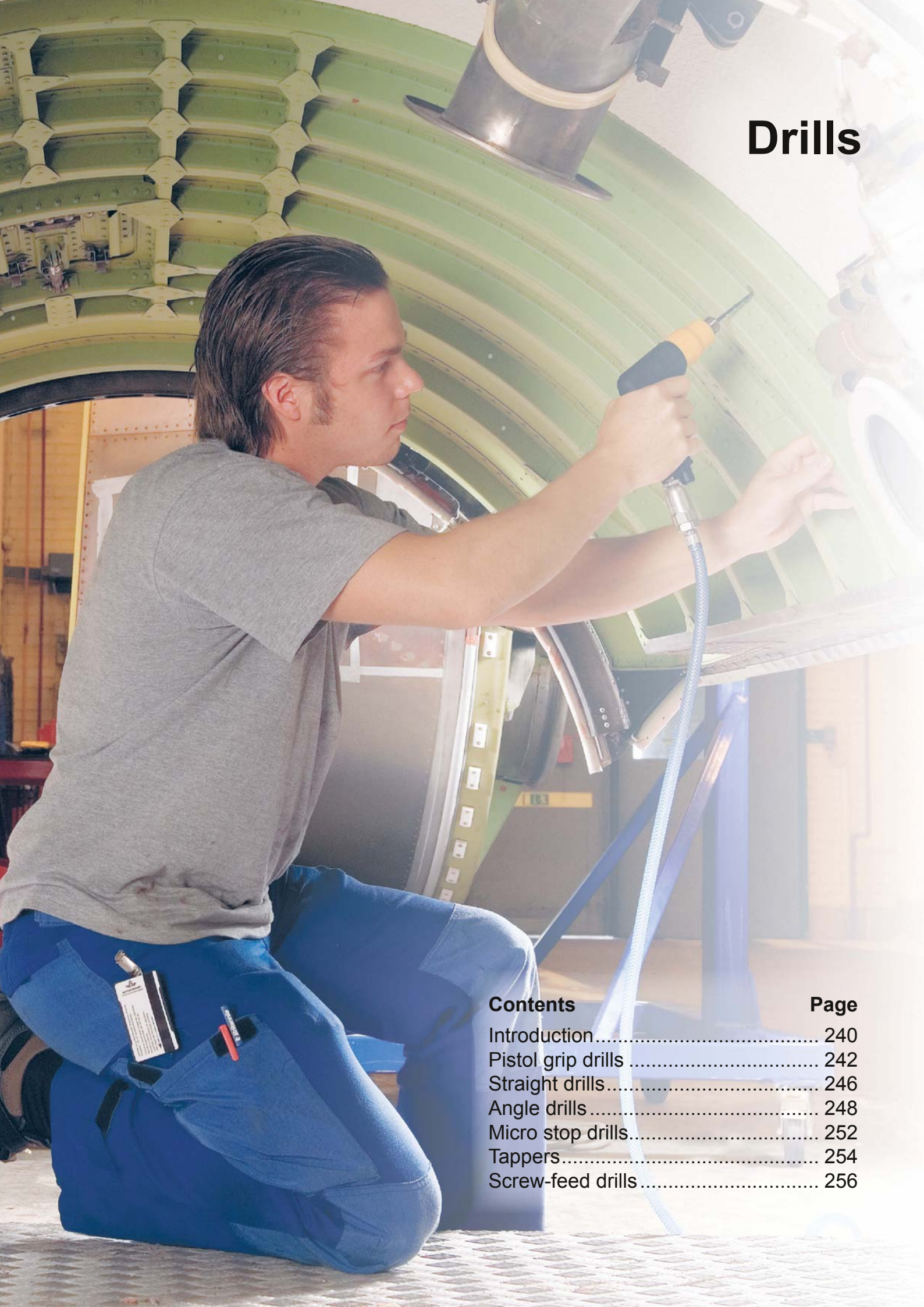
Chisel type	Designation	Width		Length		Round 17.3 mm (0.68") ISO Ordering No.	Width		Length		Hexagon 17.3 mm (0.68") ISO Ordering No.
		mm	in	mm	in		mm	in	mm	in	
	Chisel blank	23	0.91	200	7.9	3085 0150 00					3085 0140 00 3085 0140 01
		23	0.91	560	22.0						
	Flat chisel	23	0.91	225	8.9	3085 0225 00					3085 0224 00

Chisels

5. Chisels with special shank



Chisel type	Designation	Material	Width		Length		Ordering No.
			mm	in	mm	in	
	Flat chisel	Tungsten carbide	10	0.39	120	4.7	3085 0321 00
		Through hardened steel	10	0.39	120	4.7	3085 0325 00
		Tungsten carbide	10	0.39	200	7.9	3085 0321 01
		Tungsten carbide	10	0.39	300	11.8	3085 0321 02
		Tungsten carbide	20	0.79	120	4.7	3085 0345 00
		Through hardened steel	20	0.79	120	4.9	3085 0346 00
	Wide chisel	Tungsten carbide	35	1.38	120	4.7	3085 0322 00
		Through hardened steel	35	1.38	120	4.7	3085 0327 00



Drills

Contents	Page
Introduction.....	240
Pistol grip drills	242
Straight drills.....	246
Angle drills	248
Micro stop drills.....	252
Tappers.....	254
Screw-feed drills	256

Reliable, productive and comfortable to work with

The handheld drills in Atlas Copco's wide range are of the highest quality and built to provide consistent reliability and performance in a wide range of applications. Their advanced ergonomic designs make your job easier, safer and more efficient.

From the time our first drill was produced in 1901, Atlas Copco has demonstrated a genuine understanding of customer needs. Our drills have evolved to meet changing customer demands over the years. Whatever the job, Atlas Copco has a drill to match your exact requirements.

Reliable

When you pick up an Atlas Copco drill, you can be confident that it will do the job over and over again.

Powerfully productive

Despite their compact designs, our drills consistently deliver all the power you need. Their high power-to-weight ratio ensures maximum material removal in the shortest possible time.

Ergonomic

Thanks to 50 years of focusing on ergonomics, Atlas Copco drills fit comfortably in your hand. Grips are anatomically shaped to keep your arm and wrist straight, reducing the risk of injury during long-term use. The light weight and perfect balance of each drill enables you to guide it smoothly and easily. Low noise and vibration levels make the tools comfortable to work with all day long.

Durable, low maintenance

The rugged, lubrication-free designs of our drills can withstand the toughest industrial situations and go on working day in, day out. Maintenance requirements are low.

Quality throughout the tools' life-cycle

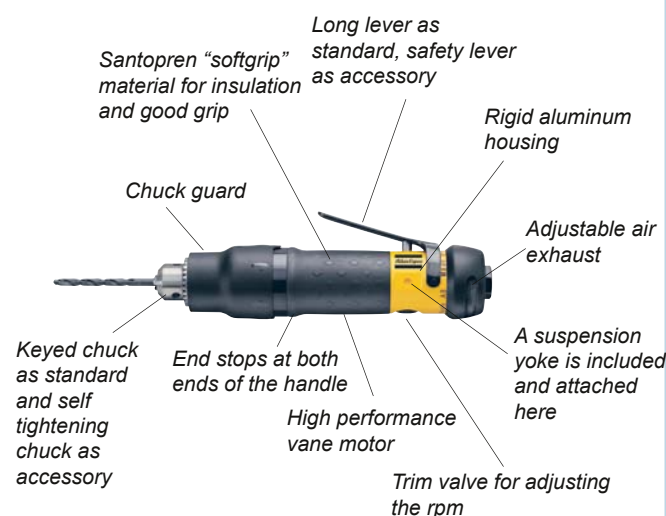
Atlas Copco stands for quality, from the manufacture of critical drill components, through production and sales, to service and support throughout the tools' long life-cycle.



LBB 16 features



LBB 16S features



Selection Guide

The speed for a specific drilling operation should be chosen on the basis of the material in the workpiece and the diameter of the hole.

In the selection guide, you will find proposals for suitable free speeds for selection of the correct tool.

Please use the information below as a guide only. Many variables contribute to the optimal speed choice for a specific application.

Cutting speed ^a m/min	Material			rpm																													
				300	400	500	600	700	800	1000	1200	1300	1500	1700	1900	2200	2400	2600	2900	3000	3300	3700	3800	4500	5500	6000	6400	6500	20000	23000	26000		
5	Cast iron	Titanium	Alloy Steel	5	4	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
10				11	8	6	5	5	4	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
15		Hard plastics	Mild steel	12	10	8	7	6	5	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
20				16	13	11	9	8	6	5	5	4	4	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
25							13	11	10	8	7	6	5	5	4	4	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	
30	Hard plastics	Mild steel							10	8	7	6	6	5	4	4	4	3	3	3	3	3	3	3	2	2	2	2	2	2	2		
35										9	9	7	7	6	5	5	4	4	4	3	3	3	3	2	2	2	2	2	2	2	2		
40												10	8	7	7	6	5	5	4	4	4	3	3	3	2	2	2	2	2	2	2	2	
45													10	8	8	7	6	6	5	5	4	4	4	3	3	3	3	3	3	3	3		
50	Composite	Aluminum and bronze												9	8	7	6	5	5	5	4	4	4	3	3	3	3	3	3	3	3		
55															10	9	8	7	6	6	5	5	4	3	3	3	3	3	3	3	3	3	
60															11	10	9	7	7	6	6	5	5	4	3	3	3	3	3	3	3	3	
65															12	9	8	7	6	6	5	5	5	4	3	3	3	3	3	3	3	3	
70															13	10		8	7	6	6	5	5	4	3	3	3	3	3	3	3	3	
75															14						7	6	6	5	4	4	4	4	4	4	4	4	
80															15						8	7	6	5	4	4	4	4	4	4	4	4	
85															16							7	6	5	4	4	4	4	4	4	4	4	
90																							8	6	6	5	4	4	4	4	4	4	
95																							8	7	6	5	5	5	5	5	5	5	
100			Wood and board	Aluminum and bronze																			9	7	7	5	5	5	5	5	5	5	5
105																						9	7	7	6	5	5	5	5	5	5	5	
110																						9	8	8	6	5	5	5	5	5	5	5	
115																							10			6	6	6	6	6	6	6	
120																										6	6	6	6	6	6	6	
125																											7	6	6	6	6	6	6
130																											7	6	6	6	6	6	6
135																												7					
140																												7					
145																												8					
150																												8					

^a Remember that, if the speed is too low the cycle time increases.

Regardless of which model you choose, you'll get a product with superior ergonomics and productivity.

- Quiet – Very low noise level.
- Comfortable grip – For high precision.
- Two-hand grip available – Gives even greater flexibility.
- Lubrication-free – For clean working environment and operator comfort.



Model	Free speed r/min	Chuck capacity mm	Weight		Air consumption at free speed		Hose size		Air inlet thread BSP	Power W hp	With chuck Ordering No.	Without chuck			
			kg	lb	l/s	cfm	mm	in				Model	Ordering No.		
Non-reversible drills with air supply through handle															
LBB16 EP-200 ^a	20000	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 60	200-U	8421 0108 61	
LBB16 EP-060 ^a	6000	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 50	060-U	8421 0108 51	
LBB16 EP-045 ^a	4500	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 40	045-U	8421 0108 41	
LBB16 EP-033 ^a	3300	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 30	033-U	8421 0108 31	
LBB16 EP-024 ^a	2400	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 20	024-U	8421 0108 21	
LBB16 EP-010	1000	10.0	0.7	1.5	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 10	010-U	8421 0108 11	
LBB16 EP-005 ^b	500	10.0	0.7	1.5	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 06	005-U	8421 0108 07	
LBB16 EP-003 ^b	300	10.0	0.7	1.5	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 01	003-U	8421 0108 02	
LBB16 EPX-200 ^a	20000	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 82	200-U	8421 0108 63	
LBB16 EPX-060 ^a	6000	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 52	060-U	8421 0108 53	
LBB16 EPX-045 ^a	4500	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 42	045-U	8421 0108 43	
LBB16 EPX-033 ^a	3300	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 32	033-U	8421 0108 33	
LBB16 EPX-024 ^a	2400	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 22	024-U	8421 0108 23	
LBB16 EPX-010 ^b	1000	10.0	0.7	1.5	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 12	010-U	8421 0108 03	
LBB16 EPX-005 ^b	500	10.0	0.7	1.5	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 08	050-U	8421 0108 09	
LBB26 EPX-060 ^a	6000	8	0.69	1.5	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 14	060-U	8421 0500 15	
LBB26 EPX-045 ^a	4500	8	0.69	1.5	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 12	045-U	8421 0500 13	
LBB26 EPX-033 ^a	3300	8	0.69	1.5	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 10	033-U	8421 0500 11	
LBB26 EPX-026 ^a	2600	8	0.79	1.7	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 08	026-U	8421 0500 09	
LBB26 EPX-019 ^a	1900	10	0.79	1.7	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 24	026-U	8421 0500 25	
LBB26 EPX-013 ^{ab}	1300	10	0.79	1.7	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 06	013-U	8421 0500 07	
LBB26 EPX-007 ^b	700	13	0.82	1.8	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 04	007-U	8421 0500 05	
LBB26 EPX-005 ^b	500	13	0.82	1.8	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 02	005-U	8421 0500 03	
LBB26 EPX-003 ^b	300	13	0.82	1.8	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 00	003-U	8421 0500 01	
LBB36 H200 ^a	20000	6.5	1.0	2.2	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 55	-H200U	8421 0408 53	
LBB36 H060 ^a	6000	6.5	1.2	2.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 49	-H060U	8421 0408 47	
LBB36 H033 ^a	3300	10.0	1.2	2.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 41	-H033U	8421 0408 39	
LBB36 H026 ^a	2600	10.0	1.2	2.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 33	-H026U	8421 0408 31	
LBB36 H013 ^a	1300	10.0	1.5	3.3	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 15	-H013U	8421 0408 13	
LBB36 H007 ^b	700	13.0	1.6	3.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 07	-H007U	8421 0408 05	
LBB36 H005 ^b	500	—	1.2	3.3	16.5	34.9	10.0	3/8	3/8	700	0.9	—	-H005U	8421 0408 03	
LBB37 H230	23000	6.5	1.0	2.2	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 03	-H230U	8421 0608 18	
LBB37 H065	6500	6.5	1.2	2.5	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 11	-H065U	8421 0608 17	
LBB37 H037	3700	10.0	1.2	2.5	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 13	-H037U	8421 0608 16	
LBB37 H015	1500	10.0	1.5	3.3	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 05	-H015U	8421 0608 15	
LBB37 H006	600	13.0	1.2	2.5	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 06	-H006U	8421 0608 14	
LBB45 H017 ^b	1700	16.0	4.2	9.3	10.0	21.0	10.0	3/8	1/4	700	0.9	8421 0501 32	—	—	
LBB45 H006 ^b	600	16.0	4.3	9.3	10.0	21.0	10.0	3/8	1/4	700	0.9	8421 0501 24	—	8421 0501 40	
LBB45 H004 ^b	400	16.0	4.3	9.3	10.0	21.0	10.0	3/8	1/4	700	0.9	8421 0501 16	—	—	
Reversible drills with drill chuck and quick change 1/4" bit holder															
COMBI22 HR2	3600	6.5	0.9	2.0	7.0 ^b	15.0	8.0	5/16	1/4	230	0.3	8431 0255 89	—	—	
COMBI22 HR5	1600	10.0	0.9	2.0	7.0	15.0	8.0	5/16	1/4	230	0.3	8431 0255 80	—	—	
COMBI22 HR10	800	10.0	1.1	2.4	7.0	15.0	8.0	5/16	1/4	230	0.3	8431 0255 62	—	—	
COMBI34 HR16	1600	10.0	1.0	2.2	8.0	17.0	10.0	3/8	1/4	200	0.27	8431 0311 36	—	—	
COMBI34 HR08	800	10.0	1.3	2.9	8.0	17.0	10.0	3/8	1/4	200	0.27	8431 0311 34	—	—	
COMBI34 HR04 ^b	400	13.0	1.5	3.3	8.0	17.0	10.0	3/8	1/4	200	0.27	8431 0311 32	—	—	

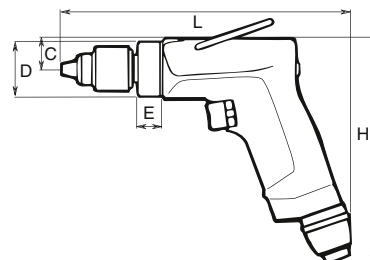
^a Including chuck guard.

^b Including support handle.

Dimensions

LBB EP/EPX/H

Model	L mm	H mm	C mm	D mm	E mm
LBB16 EP/EPX-200	177	131	16.5	31.4	13.8
LBB16 EP/EPX-060	177	131	16.5	31.4	13.8
LBB16 EP/EPX-045	177	131	16.5	31.4	13.8
LBB16 EP/EPX-033	177	131	16.5	31.4	13.8
LBB16 EP/EPX-024	177	131	16.5	31.4	13.8
LBB16 EP/EPX-010	190	131	16.5	31.4	27.0
LBB16 EP/EPX-005	190	131	16.5	31.4	27.0
LBB16 EP-003	190	131	16.5	31.4	27.0
LBB26 EPX-060	180	147	21	39	-
LBB26 EPX-045	180	147	21	39	-
LBB26 EPX-033	180	147	21	39	-
LBB26 EPX-026	180	147	21	39	-
LBB26 EPX-019	196	147	21	39	-
LBB26 EPX-013	196	147	21	39	-
LBB26 EPX-007	196	147	21	39	-
LBB26 EPX-005	196	147	21	39	-
LBB26 EPX-003	196	147	21	39	-
LBB36 H200	217	157	23	41.5	16.5
LBB36 H060	217	157	23	41.5	16.5
LBB36 H033	217	157	23	41.5	16.5
LBB36 H026	217	157	23	41.5	16.5
LBB36 H013	256	157	23	41.5	64.0
LBB36 H007	256	157	23	41.5	64.0
LBB36 H005	256	157	23	41.5	64.0
LBB37 H230	217	157	23	41.5	16.5
LBB37 H065	217	157	23	41.5	16.5
LBB37 H037	217	157	23	41.5	16.5
LBB37 H015	256	157	23	41.5	64.0
LBB37 H006	256	157	23	41.5	64.0
LBB45 H006	360	185	33	60	113
LBB45 H017	360	185	33	60	113
LBB45 H004	360	185	33	60	113



Accessories Included

Chuck, chuck key, hose nipple.

LBB16, 34 and -36/37 with suspension yoke and with chuck guard where possible.

LBB16, 34 and -36/37 have a 3/8" -24 UNF spindle thread.

LBB 36 H005 and LBB37 H006 have a 1/2" thread.

LBB45 has a JT3 taper mount.

Optional Accessories

Quick chucks

Mount	Chuck dia mm	Chuck capacity mm	Ordering No.
3/8-24UNF	34	0.0- 6.5	4021 0400 00
3/8-24UNF	34	0.0- 8.0	4021 0401 00
3/8-24UNF	36	0.0-10.0	4021 0402 00
3/8-24UNF	36	2.0-13.0	4021 0403 00



Quick chuck

Support handles

For model	Ordering No.
LBB16	4110 1355 92
LBB36/37	4110 1355 82
LBB45	4110 1355 84



Support handle

Optional Accessories

Collet chuck and collets

Designation	Capacity		Ordering No.
	mm	in	
Collet	3		4150 0081 00
	6		4150 0075 00
	8	5/16	4150 0074 00
		1/8	4150 0082 00
		5/32	4150 0648 00
		3/16	4150 0649 00
		1/4	4150 0076 00
Collet holder			4110 0844 90
Collet nut			4150 0760 00



Collet chuck and collets

Flex connect

For model	Ordering No.
LBB16	4110 1601 80



Flex connect

Spot suction attachment

For model	Hose size in	Spot suction kit ^a Ordering No.	Hose kit Ordering No.
LBB16	1 1/4	4110 1715 80	4112 1227 00
LBB26	1 1/4	4110 1715 84	4112 1227 00
LBB36/37	1 1/4	4110 1716 80	4112 1227 00

^a Spare part, nose piece kit, Ordering No. 4110 1700 90.
Other standard sizes of front nozzle available.



Spot suction attachment

Silencer sets

For model	Ordering No.
LBB45 External silencer	4112 0863 80



Silencer set

Power feed arm for extra feed force – LBB36 H005 and LBB37 H006

	Ordering No.
Adapter piece (SR295), lever arm (SR201), chain (SR202) and No. 2 Morse socket (SR206)	4110 1416 80
Two extension pieces (SR204-1 and SR204-2), 370 and 750 mm long	4110 1417 80
No. 2 Morse socket	4110 1416 01



Power feed arm

Chuck guards

For model	Max chuck dia mm	Ordering No.
LBB16 ^a	30	4110 1619 04
LBB26	36	4110 1728 02
LBB26	30	4110 1728 03
LBB36 ^b	36	4110 1415 00
LBB37 ^b	36	4110 1415 00

^a The guards do not fit 1000 r/min models, 500 r/min and 300 r/min models.

^b The chuck guards do not fit the 500 r/min, 600 r/min or 700 r/min models.



Chuck guard

Key chucks

Mount	Body diameter mm	Chuck capacity mm	Ordering No.		
			Chuck (key incl)	Key only	Key designation
1/2-24UNF	43	2.0-13.0	4021 0289 01	4021 0465 00	S2
3/8-24UNF	30	0.0- 6.5	4021 0283 00	4021 0293 00	S1
3/8-24UNF	30	0.5- 8.0	4021 0495 00	4021 0293 00	S1
3/8-24UNF	36	2.0-10.0	4021 0416 00	4021 0449 00	S8
3/8-24UNF	46	2.0-13.0	4021 0289 00	4021 0465 00	S2
JT3	59	3.0-16.0	4021 0423 00	4021 0301 00	S3



Key chuck

Optional accessories – LBB45

Designation	Ordering No.
Feed screw	4110 0976 80
No. 2 Morse socket	4130 1080 00
Ratchet wrench for feed screw	4130 2000 00
Breast plate	4110 0974 80
Silencer set	4112 0863 80



Installation Proposals

Model	Max air flow	Hose, 5m	Coupling	Lubrication	Ordering No.
For small drills with 1/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C06-1/8	6 l/s	Cablaire 6 mm	ErgoQIC 08	Yes	8202 0850 10
MIDI Optimizer F/R EQ08-C06-1/8	6 l/s	Cablaire 6 mm	ErgoQIC 08	No	8202 0850 19
For small drills with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C06	6 l/s	Cablaire 6 mm	ErgoQIC 08	Yes	8202 0850 06
For and drills with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	Yes	8202 0850 00
MIDI Optimizer F/R EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	No	8202 0850 01
For 1/2" drills with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 07
For drills with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 02
For drills 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13-1/4	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 11



Service Kits

LBB16	4081 0271 90
LBB26	4081 0208 90
LGB/LBV34	4081 0035 90
LBB36/37	4081 0194 90
LBB45	4081 0139 90

Atlas Copco straight drills are primarily intended for vertical drilling operations and for drilling in cramped spaces.

- Quiet – Very low noise level.
- Very high power to weight ratio.
- Adjustable exhaust – The exhaust air is directed away from the operator.
- Lubrication-free – LBB16 drills are lubrication-free for clean working environment and operator comfort.



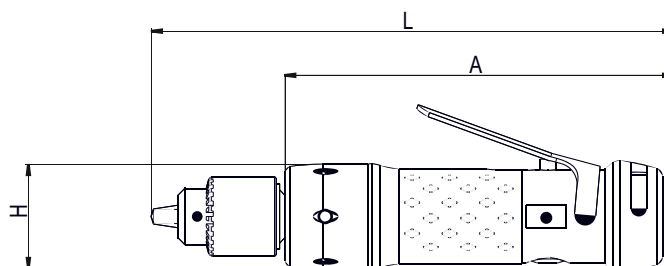
LBB16

Model	Free speed ^a r/min	Chuck capacity mm	Weight		Air consumption at free speed		Hose size		Air inlet thread BSP	Power		With chuck Ordering No.	Without chuck	
			kg	lb	l/s	cfm	mm	in		W	hp		Model	Ordering No.
Drills with rear exhaust														
LBB16 S260	26000	0-6.5	0.55	1.1	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 00	S260-U	8421 0210 10
LBB16 S064	6400	0-6.5	0.55	1.1	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 01	S064-U	8421 0210 11
LBB16 S045	4500	0-6.5	0.55	1.1	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 02	S045-U	8421 0210 12
LBB16 S038	3800	0-6.5	0.55	1.1	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 03	S038-U	8421 0210 13
LBB16 S029	2900	0-8.0	0.60	1.2	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 04	S029-U	8421 0210 14
LBB16 S022	2200	0-10.0	0.70	1.5	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 05	S022-U	8421 0210 15
LBB16 S012	1200	0-10.0	0.70	1.5	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 06	S012-U	8421 0210 16

^a The free speed can be reduced to 50% of the maximum speed using the trim valve.

Dimensions

Model	L	H	A
LBB16 S260	196	39	146
LBB16 S064	196	39	146
LBB16 S045	196	39	146
LBB16 S038	196	39	146
LBB16 S029	196	39	146
LBB16 S022	219	39	159
LBB16 S012	219	39	159



Accessories Included

Chuck, chuck key
Suspension yoke and chuck guard

Optional Accessories

Key chucks

Mount	Body diameter mm	Chuck capacity mm	Ordering No.		
			Chuck (key incl)	Key only	Key designation
1/2-24UNF	43	2.0-13.0	4021 0289 01	4021 0465 00	S2
3/8-24UNF	30	0.0- 6.5	4021 0283 00	4021 0293 00	S1
3/8-24UNF	30	0.5- 8.0	4021 0495 00	4021 0293 00	S1
3/8-24UNF	36	2.0-10.0	4021 0416 00	4021 0449 00	S8
3/8-24UNF	46	2.0-13.0	4021 0289 00	4021 0465 00	S2
JT3	59	3.0-16.0	4021 0423 00	4021 0301 00	S3



Key chuck

Quick chucks

Mount	Chuck dia mm	Chuck capacity mm	Ordering No.
3/8-24UNF	34	0.0- 6.5	4021 0400 00
3/8-24UNF	34	0.0- 8.0	4021 0401 00
3/8-24UNF	36	0.0-10.0	4021 0402 00
3/8-24UNF	36	2.0-13.0	4021 0403 00



Quick chuck

Collet chuck and collets

Designation	Capacity		Ordering No.
	mm	in	
Collet	3		4150 0081 00
	6		4150 0075 00
	8	5/16	4150 0074 00
		1/8	4150 0082 00
		5/32	4150 0648 00
		3/16	4150 0649 00
		1/4	4150 0076 00
			4110 0844 90
Collet holder			4150 0760 00
Collet nut			



Collet chuck and collets

Push button set

For model	Ordering No.
LBB16S	4110 1679 90



Push button set

Safety levers

For model	Ordering No.
LBB16S	4110 1681 90



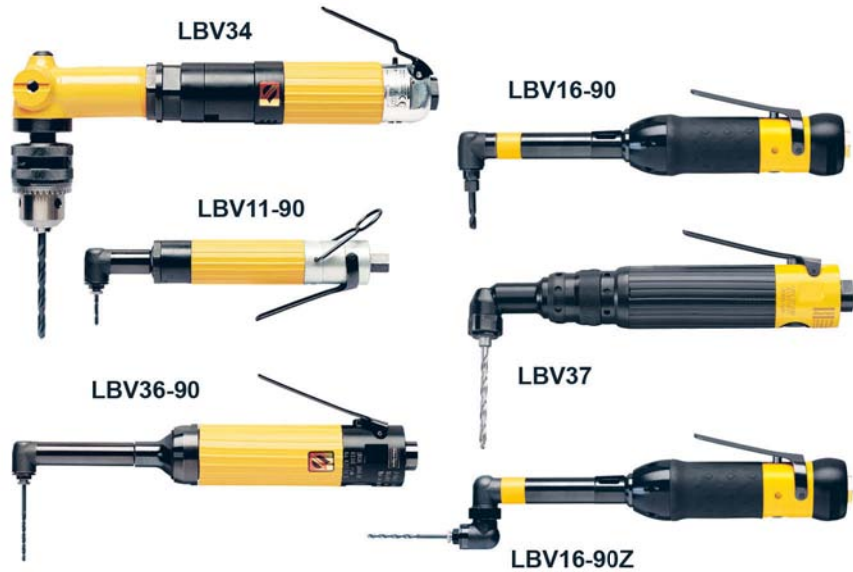
Safety lever



Service Kits

LBB16 4081 0438 90

- Quiet – Very low noise level.
- Low air consumption – Good operating economy.
- Side exhaust – The air can be directed to suit the operator.
- Rear exhaust – The air is piped away through a pliant hose.
- Lubrication-free – For clean working environment and operator comfort.
- Collet chuck or threaded spindle.
- Multiple lever options.



Model	Free speed r/min	Setting range rpm	Collet or chuck capacity mm	Weight		Air consumption at free speed		Hose dimension		Air inlet thread	Power		Ordering No.	With spindle lock Ordering No.
				kg	lb	l/s	cfm	mm	in	BSP	W	hp		
30° angle head														
LBV11 S027-S30	2700	—	5.0	0.5	1.1	3.2	6.8	5.0	1/8	1/4	110	0.16	8421 0108 70	—
LBV16 032-S30	3200	1500-3200	5.0	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 04	8421 0110 29
LBV16 032-30	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 05	8421 0110 30
LBV16 032-S32	3200	1500-3200	°	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 06	—
LBV16 032-32	3200	1500-3200	°	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 07	—
LBV36 S030-30°	3000	—	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 70	—
LBV36 S045-30°	4500	—	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 72	—
LBV16 045-32	4500	3200-4500	°	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	—	8421 0110 57
45° angle head														
LBV16 032-45	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 59	—
LBV16 032-46	3200	1500-3200	°	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 60	—
90° angle head														
LBV11 S025-S90	2500	—	5.0	0.5	1.1	3.2	6.8	5.0	1/8	1/4	110	0.16	8421 0109 79	—
LBV16 032-90	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 00	8421 0110 25
LBV16 032-S90	3200	1500-3200	5.0	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 01	8421 0110 26
LBV16 032-S92	3200	1500-3200	°	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 02	8421 0110 27
LBV16 032-92	3200	1500-3200	°	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 03	—
LBV16 045-90	4500	3200-4500	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 20	8421 0110 44
LBV16 045-92	4500	3200-4500	°	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 21	—
LBV16 055-90	5500	4500-5500	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 23	8421 0110 46
LBV16 055-92	5500	4500-5500	°	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 24	—
LBV16 055-S92	5500	4500-5500	°	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 58	—
LBV36 S030-90°	3000	—	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 60	—
LBV36 S030-S90°	3000	—	5.0	0.9	2.0	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 61	—
LBV36 S045-90°	4500	—	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 62	—
LBV36 S045-S90°	4500	—	5.0	0.9	2.0	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 63	—
LBV36 S030-92°	3000	—	°	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 64	—
LBV36 S030-S92°	3000	—	°	0.9	2.0	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 65	—
360° angle head														
LBV16 032-90Z	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 64	8421 0110 65
LBV16 032-92Z	3200	1500-3200	°	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 68	—
90° angle head – large angle head														
LBV16 045-91	4500	3200-4500	6.6	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 38	—
LBV16 032-91	3200	1500-3200	6.6	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 09	8421 0110 34
LBV16 032-93	3200	1500-3200	°	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 10	—
LBV16 032-S93	3200	1500-3200	°	0.45	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 39	—
LBV16 010-91	1000	500-1000	6.6	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 16	8421 0110 40
LBV16 010-93	1000	500-1000	°	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 17	—
LBV16 018-91	1800	800-1800	6.6	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 18	8421 0110 42
LBV16 018-93	1800	800-1800	°	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 19	—
LBV16 005-91	500	200-500	6.6	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 11	8421 0110 36
LBV16 005-93	500	200-500	°	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 12	—
LBV36 S030-91°	3000	—	6.6	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 50	—
LBV36 S060-91°	6000	—	6.6	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 51	—
LBV36 S030-93°	3000	—	°	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 52	—
LBV36 S060-93°	6000	—	°	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 53	—

Model	Free speed r/min	Setting range rpm	Collet or chuck capacity mm	Weight		Air consumption at free speed		Hose dimension		Air inlet thread		Power		Ordering No.	With spindle lock Ordering No.
				kg	lb	l/s	cfm	mm	in	BSP	W	hp			
	90° angle head – Key chuck models														
LBV16 018-11	1800	800-1800	6.5 ^a	0.8	1.7	8.7	18.4	6.3	1/4	1/4	110	0.4	8421 0110 22	–	
LBV34 S040 ^b	4000	–	6.5 ^a	1.5	3.3	7.5	15.9	10.0	3/8	1/4	400	0.6	8421 0309 46	–	
LBV34 S010 ^b	1000	–	10.0 ^a	2.0	4.4	7.5	15.9	10.0	3/8	1/4	400	0.6	8421 0309 12	–	
LBV34 S005 ^b	500	–	13.0 ^a	2.1	4.6	7.5	15.9	10.0	3/8	1/4	400	0.6	8421 0309 04	–	
90° angle head – heavy-duty															
LBV37 030	3000	–	c	1.1	2.4	22	46	10.0	3/8	3/8	820	1.1	–	8421 0414 54	
LBV37 055	5500	–	c	1.1	2.4	22	46	10.0	3/8	3/8	820	1.1	–	8421 0414 55	
LBV37 HD030	3000	–	d	1.1	2.4	22	46	10.0	3/8	3/8	820	1.1	–	8421 0414 56	
LBV37 HD055	5500	–	d	1.1	2.4	22	46	10.0	3/8	3/8	820	1.1	–	8421 0414 57	

^a Spindle thread, male 3/8"-24 UNF.

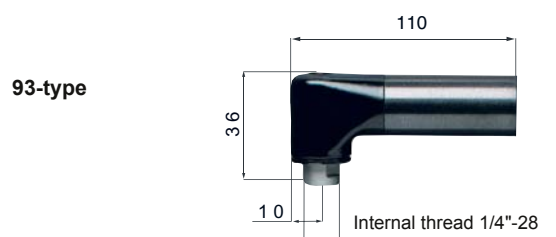
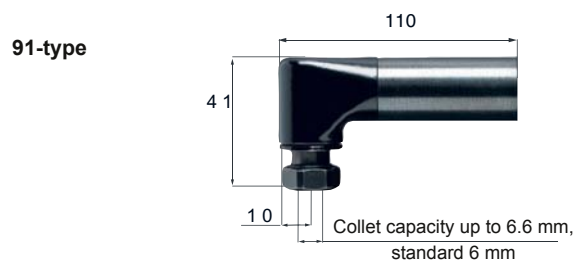
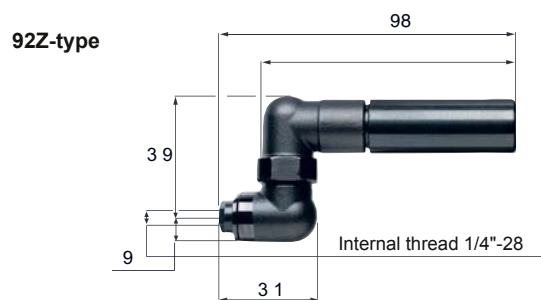
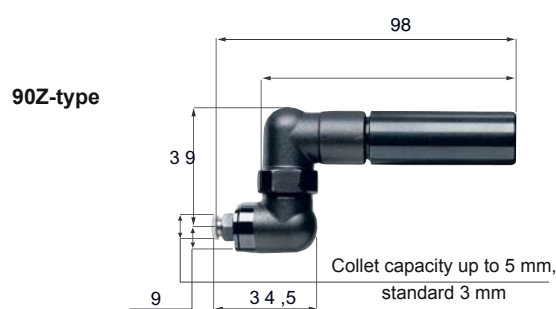
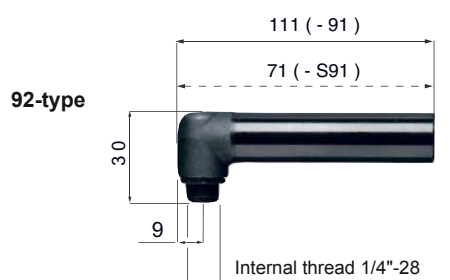
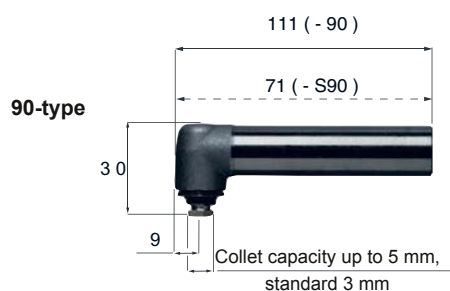
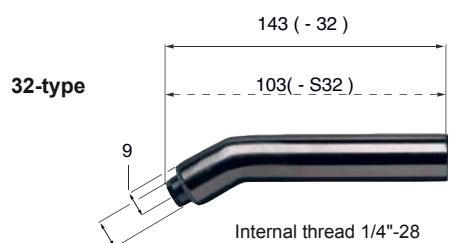
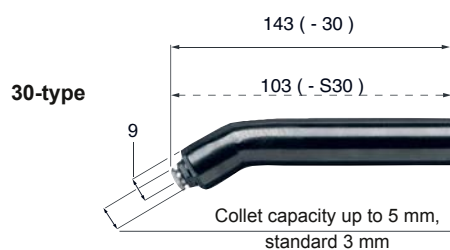
^b Side exhaust.

^c Internal thread 1/4"-28.

^d Internal thread 5/16".

^e Short lever as standard.

Dimensions

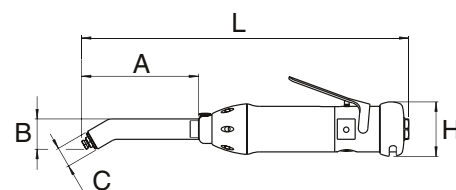


Dimensions

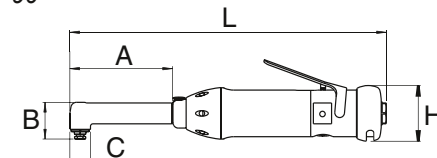
Drilling capacity

Model	Angle head mm				
	A	B	C	L	H
LBV11 S027-S30	59	25	18	224	30
LBV11 S025-S90	44	30	18	204	30
LBV16 032-S30	103	25	17	241	42
LBV16 032-30	143	25	17	281	42
LBV16 032-S32	103	25	17	241	42
LBV16 032-32	143	25	17	281	42
LBV16 032-90	111	30	17	248	42
LBV16 032-S90	71	30	17	209	42
LBV16 032-S92	71	30	17	209	42
LBV16 032-92	111	30	17	249	42
LBV16 032-90Z	145	48	17	283	42
LBV16 032-91	110	39	20	248	42
LBV16 032-93	110	36	20	248	42
LBV16 005-91	110	39	20	248	42
LBV16 005-93	110	36	20	248	42
LBV16 010-91	110	39	20	248	42
LBV16 010-93	110	36	20	248	42
LBV16 018-91	110	39	20	248	42
LBV16 018-93	110	36	20	248	42
LBV34 S040	92	97	20	255	43
LBV34 S010	92	114	20	290	43
LBV34 S005	92	120	20	290	43
LBV36 S030-91	92	41	20	252	43
LBV36 S060-91	92	41	20	252	43
LBV36 S030-93	92	36	20	252	43
LBV36 S060-93	92	36	20	252	43
LBV36 S030-30	122	26	18	281	43
LBV36 S045-30	122	26	18	281	43
LBV36 S030-90	112	30	18	272	43
LBV36 S030-S90	72	30	18	232	43
LBV36 S045-90	112	30	18	272	43
LBV36 S045-S90	72	30	18	232	43
LBV36 S030-92	112	30	18	272	43
LBV36 S030-S92	72	30	18	232	43
LBV37 030	55	39	23	262	43
LBV37 055	55	39	23	262	43
LBV37 HD030	55	39	23	262	43
LBV37 HD055	55	39	23	262	43

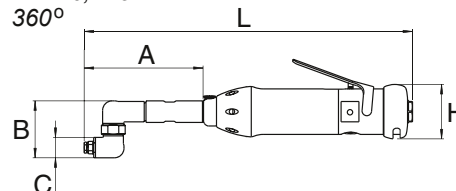
LBV11, -16, -36
30°



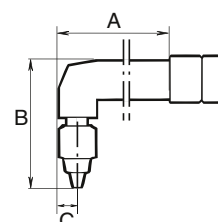
LBV11, -16, -36
90°



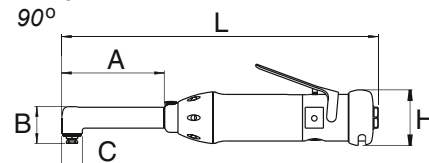
LBV16, -25
360°



LBV34
90°



LBV37
90°



Accessories Included

Key wrenches

Collet or chuck with key
3 mm collet (5.0 collet capacity head)
6 mm collet (6.6 collet capacity head)

Optional Accessories

Safety levers

For model	Ordering No.
LBV16	4110 1681 90
LBV36/37	4150 1594 97



Safety lever

Push button set

For model	Ordering No.
LBV16	4110 1679 90
LBV34 S	4110 1427 91



Push button set

Short levers

For model	Ordering No.
LBV16	4210 2306 04
LBV36/37	4110 1581 01

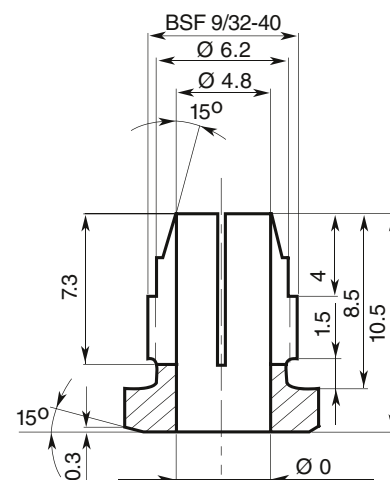


Short lever

Collets for 5.0 mm capacity head LBV11, LBV16 – (-30, -90, -90Z) and LBV36 (-30, -90)

Capacity mm	Ordering No.	Capacity mm	Ordering No.	Capacity in	Ordering No.
1.0	4110 0438 01	3.4	4110 0438 33	1/16	4110 0438 19
1.5	4110 0438 02	3.5	4110 0438 13	3/32	4110 0438 20
1.8	4110 0438 28	3.6	4110 0438 24	1/8	4110 0438 21
2.0	4110 0438 03	3.7	4110 0438 34	5/32	4110 0438 22
2.1	4110 0438 29	3.8	4110 0438 14	3/16	4110 0438 23
2.2	4110 0438 04	3.9	4110 0438 35		
2.3	4110 0438 30	4.0	4110 0438 15		
2.4	4110 0438 05	4.1	4110 0438 25		
2.5	4110 0438 06	4.2	4110 0438 26		
2.6	4110 0438 07	4.3	4110 0438 36		
2.7	4110 0438 31	4.4	4110 0438 37		
2.8	4110 0438 32	4.5	4110 0438 16		
2.9	4110 0438 08	4.6	4110 0438 38		
3.0	4110 0438 09	4.7	4110 0438 39		
3.1	4110 0438 10	4.8	4110 0438 18		
3.2	4110 0438 11	4.9	4110 0438 40		
3.3	4110 0438 12	5.0	4110 0438 27		

Collets for 5.0 mm (Thread BSF 9/32 -40)

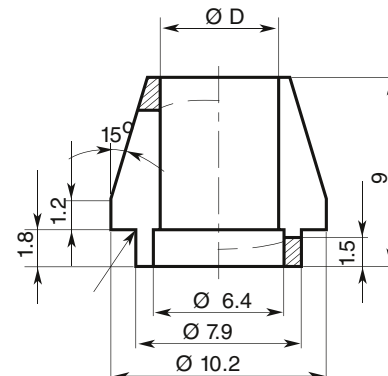


Collets for 6.6 mm capacity head LBV16 (-91) and LBV36 (-91)

Capacity mm	Ordering No.	Capacity mm	Ordering No.
1.6	4110 1411 01	4.2	4110 1411 14
1.8	4110 1411 02	4.4	4110 1411 15
2.0	4110 1411 03	4.6	4110 1411 16
2.2	4110 1411 04	4.8	4110 1411 17
2.4	4110 1411 05	5.0	4110 1411 18
2.6	4110 1411 06	5.2	4110 1411 19
2.8	4110 1411 07	5.4	4110 1411 20
3.0	4110 1411 08	5.6	4110 1411 21
3.2	4110 1411 09	5.8	4110 1411 22
3.4	4110 1411 10	6.0	4110 1411 23
3.6	4110 1411 11	6.2	4110 1411 24
3.8	4110 1411 12	6.4	4110 1411 25
4.0	4110 1411 13	6.6	4110 1411 26

Collet nut 4110 1410 00, to be ordered separately.

Collets for 6.6 mm



Service Kits

LBV16	4081 0322 90
LBV24	4081 0005 90
LBV25	4081 0272 90
LGB/LBV34	4081 0035 90
LBV36 (30, 90/92)	4081 0263 90
LBV36 (91/93)	4081 0251 90
LBV37	4081 0251 90

The Atlas Copco LBS36 drill is equipped with an integrated micro stop. It is designed for the aerospace industry where the focus is on high-precision drilling, reaming and countersinking.

- Accurate – The integrated micro stop function makes the LBS36 unique for high-precision drilling of rivet holes and other fasteners. Minimized spindle run-out is achieved by eliminating standard drill chuck.
- Ergonomic handle design – The integrated micro stop function makes the tool shorter and lighter in weight.
- Flexible – Can be used for drilling, reaming, countersinking and, in certain applications, a combined operation using a form bit.
- Dust extraction – Equipped with a specially designed spot suction system for working in composite materials.
- Lubrication-free – For clean working environment and operator comfort.

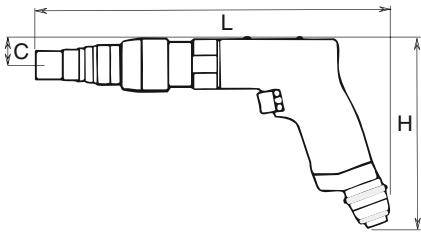


LBS36

Model	Free speed r/min	Spindle thread in/mm	Stroke		Setting range		Weight		Hose size		Air con- sumption		Air inlet thread BSP	Ordering No.
					+						l/s	cfm		
					mm	in								
LBS36 H033-40	3300	1/4"-28	40	1.6	6	1/4	1.2	2.6	10	3/8	16.5	34.9	3/8	8421 0220 80
LBS36 H013-40	1300	1/4"-28	40	1.6	6	1/4	1.5	3.3	10	3/8	16.5	34.9	3/8	8421 0220 90

Dimensions

Model	L mm	H mm	C mm
LBS36 H033-40	281	157	21
LBS36 H013-40	314	157	21



Accessories Included

Hose nipple
2x2 mm Allen wrenches

Optional Accessories

Designation		Attachment	Ordering No.
Plain base, dia 24 mm	Fig 1	M 20x1	4110 1521 00
Plain base for nylon ring (attached with thread M35x1)	Fig 2	M 20x1	4110 1522 00
Separate nylon ring for above base, outer dia 40 mm, thread M35x1	Fig 3	M 20x1	4110 1523 00
Plain base, dia 14.5 mm	Fig 4	M 20x1	4110 1520 00
Tripod, nylon supported	Fig 5	Dia 22 mm	4110 1524 00
Spot suction attachment for drilling in composite, to be used in combination with plain base, dia 24 mm	See photo above		4110 1529 90

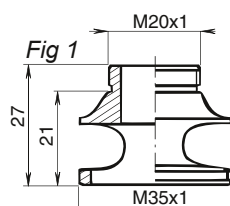
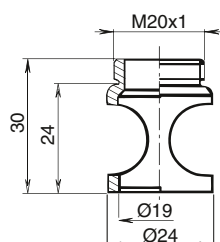


Fig 2

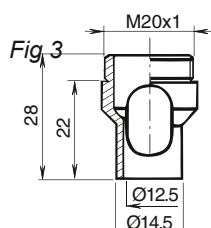
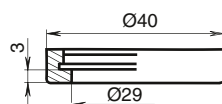


Fig 4

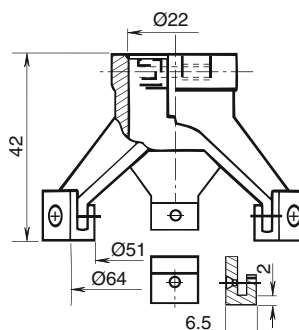


Fig 5



Service Kits

4081 0005 90

Atlas Copco tappers are designed for tapping and thread-cleaning operations with thread taps. The tools are fitted with a tap chuck as standard.

- Comfortable and effective – The ergonomically designed handle gives a comfortable grip and maximum performance.
- Higher productivity – Double speed when you withdraw the machine.
- Low noise level – Rear-directed exhaust gives a lower noise level.
- Lubrication-free – For a clean working environment and operator comfort.
- Quick change system – Upgrade your old tool, or order a new one with this system. Various tap holders can be used to change a broken tap or to change to a different tap size.
- Lower cost – The efficient air motor, together with interchangeable components from our standard drills, cut your costs.



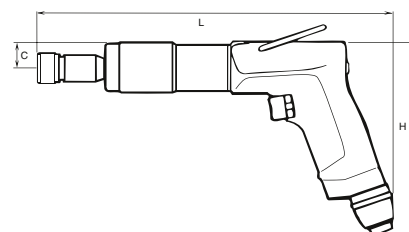
Model	Free speed		Tapping capacity mm	Weight		Hose dimension		Air inlet thread BSP	Air con- sumption		With chuck Ordering No.	Without chuck	
	Forward	Reverse		kg	lb	mm	in		l/s	cfm		Model	Ordering No.
	r/min	r/min											
Pistol-grip tappers with air supply through handle													
LGB34 H007	700	1400	10	1.8	4.0	10.0	3/8	1/4	7.5	15.9	8421 0311 66	-U	8421 0311 68
LGB34 H007Q ^a	700	1400	10	1.8	4.0	10.0	3/8	1/4	7.5	15.9	8421 0311 76	—	—
LGB36 H007Q ^a	700	1400	12	2.0	4.4	10.0	3/8	3/8	16.5	34.9	8421 0411 00	—	—
Straight tappers													
LGB34 S007	700	1400	10	1.8	4.0	10.0	3/8	1/4	7.5	15.9	8421 0311 72	-U	8421 0311 74

^a Quick change system.

Taper: Jacob 1

Dimensions

Model	L	H	C
LGB34 H007	300	156	20
LGB34 S007	293	43	21
LGB36 H007	335	157	20



Accessories Included

Non Quick change system

LGB34 Chuck complete with collet 6.4-10 mm 4021 0469 00

Quick change system

Chuck plus one tap holder with collet for M6 shank Ø 6.3 mm.

Optional Accessories

Collets for non Quick change system

Model	Capacity mm	Ordering No.
LGB34	3.5- 6.5	4021 0337 00
	4.5- 8.0	4021 0336 00
	6.4-10.0	4021 0456 00

Collets for Quick change system

Collets for tap size mm	Shank dia mm	Ordering No.
M2.2/M2.5	2.8	4021 0414 01
M3	3.15	4021 0414 02
M3.5	3.5	4021 0414 03
M4	4.0	4021 0414 04
M4.5	4.5	4021 0414 05
M5	5.0	4021 0414 06
M5.5	5.6	4021 0414 07
M6	6.3	4021 0414 08
M6 (DIN)	6.0	4021 0414 13
M7	7.1	4021 0414 09
M8/M11	8.0	4021 0414 10
M9/M12	9.0	4021 0414 11
M10	10.0	4021 0414 12

Completing existing equipment with Quick change system

Accessories	Length mm	Ordering No.
Quick change chuck	47	4021 0406 90
Tap holder	58	4021 0408 00

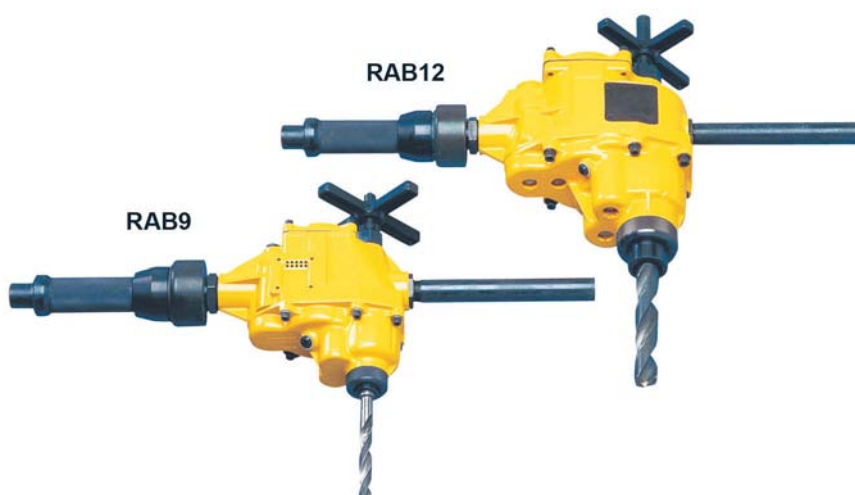


Service Kits

LGB34 4081 0035 90
LGB36 4081 0194 90

Atlas Copco screw-feed drills are ideal for heavy-duty drilling operations requiring high feed forces. They can also be used for reaming and tube-rolling.

- **Reliable** – Simple, reliable design.
- **Constant speed** – The speed governor keeps the drilling speed constant and reduces air consumption as power is reduced.
- **Safer** – The safety catch prevents accidental starting. The throttle is also self-closing.



Model	Forward	Reverse
RAB9	0.85 kW (1.14 hp)	0.55 kW (0.74 hp)
RAB12	1.5 kW (2.0 hp)	1.1 kW (1.5 hp)

Model	Free speed r/min	Capacity			Morse taper No.	Length feed mm	Height		Weight		Hose dimension		Air con- sumption max output		Distance centre to side		Air inlet thread BSP	Ordering No.
		Drill- ing mm	Ream- ing mm	Tapp- ing mm			mm	in	kg	lb	mm	in	l/s	cfm	mm			
RAB9 VR006	600	23	23	12	2	75	265	10.4	9.5	20.9	13	1/2	23	49	40	1/2	8421 5109 45	
RAB9 VR003	300	23	23	16	2	75	265	10.4	9.5	20.9	13	1/2	22	47	40	1/2	8421 5109 37	
RAB12 L450	475	32	32	24	3	90	340	13.4	12.9	28.4	16	5/8	32	68	50	1/2	8421 5112 24	
RAB12 L250	240	51	40	30	4	90	385	13.2	14.9	32.8	16	5/8	33	70	50	1/2	8421 5112 16	
RAB12 L150	140	51	40	32	4	90	385	15.2	14.9	32.8	16	5/8	30	64	50	1/2	8421 5112 08	

Accessories Included

Hose nipple

Optional Accessories

Breast plate

Model	Ordering No.
RAB9	4110 0974 82
RAB12	4110 0974 83



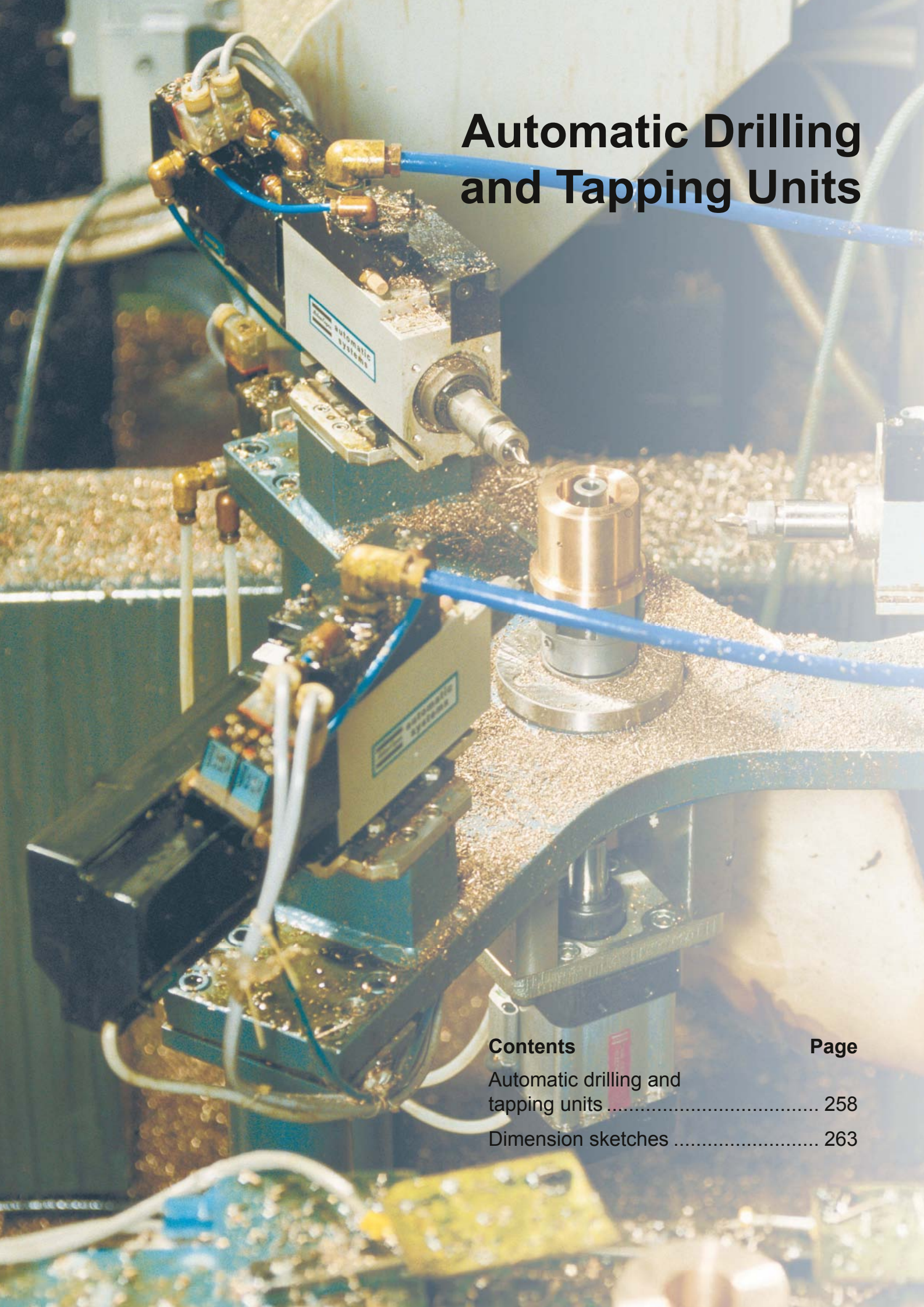
Breast plate

Square drive adapter

Morse taper No.	Square drive in	Ordering No.
3	1	4021 0394 00
4	1	4021 0395 00



Square drive adapter



Automatic Drilling and Tapping Units

Contents	Page
Automatic drilling and tapping units	258
Dimension sketches	263

Simple and cost effective, Atlas Copco automatic drilling and tapping units cut costs by reducing machining time in ancillary equipment, or in highly automated special machines. Modular designs allow the units to be easily replaced, transferred to other machines, or combined to form new special-purpose machines.



○ Steel ● Aluminum

LBL45

025	015	010	007	003
—	7.0	10.0	14.0 (M8)	20.0 (M12)
				
				

LBL35			
054	030	014	007
3.0	5.0	8.0 (M4)	11.0 (M8)
			
			
5.0	7.0	10.0 (M5)	13.0 (M10)

LBL25

220	049	022	011
1.2	3.2	5.0	8.0
			
			
2.0	5.0	6.5	10.0

These units are available in three sizes, LBL25, LBL35 and LBL45, each size covering a specific diameter range, totally up to 20 mm in steel.

The basic units can be fitted with different chucks, twin heads for simultaneous drilling of two holes and attachments for chip removal and tapping.

- **Highly dependable** – LBL drilling and tapping units feature quick and precise clamping, making them highly dependable.
- **Easy to build together** – Several holes can be drilled in a single operation since several of these compact units can easily be built together.
- **Low noise level** – The units have a low noise level as the exhaust air is discharged through silencers inside the protective casing.



LBL25



LBL35



LBL45

Model	Capacity		Feed force N	Max output		Feed stroke mm	Free speed r/min	Weight		Air consumption				Ordering No.
	Steel mm	Alumi- num mm		kW	hp			kg	lb	Max output		Free speed		
										l/s	cfm	l/s	cfm	
LBL25E 220	1.2	2.0	350	0.22	0.3	80	21000	3	6.6	5.2	11	5.8	12	8421 9208 47
LBL25E 049	3.2	5.0	350	0.22	0.3	80	4600	3	6.6	5.2	11	5.8	12	8421 9208 55
LBL25E 022	5.0	6.5	350	0.22	0.3	80	2100	3	6.6	5.2	11	5.8	12	8421 9208 63
LBL25E 011	8.0	10.0	350	0.22	0.3	80	1100	3	6.6	5.2	11	5.8	12	8421 9208 71
LBL35E 054	3.0	5.0	1050	0.33	0.5	80	5400	7	15.0	9.5	21	10.6	22	8421 9308 46
LBL35E 030	5.0	7.0	1050	0.33	0.5	80	3000	7	15.0	9.5	21	10.6	22	8421 9308 38
LBL35E 014	8.0 ^a	10.0 ^b	1050	0.33	0.5	80	1400	7	15.0	9.5	21	10.6	22	8421 9308 12
LBL35E 007	11.0 ^c	13.0 ^d	1050	0.33	0.5	80	700	16	15.0	9.5	21	10.6	22	8421 9308 04
LBL45E 025	—	10.0	2500	0.80	1.1	120	2500	16	35.0	20.0	44	9.0	19	8421 9408 52
LBL45E 015	7.0	14.0	2500	0.80	1.1	120	1500	16	35.0	20.0	44	9.0	19	8421 9408 45
LBL45E 010	10.0	16.0	2500	0.80	1.1	120	1000	16	35.0	20.0	44	9.0	19	8421 9408 37
LBL45E 007	14.0 ^e	22.0 ^d	2500	0.80	1.1	120	700	16	35.0	20.0	44	9.0	19	8421 9408 29
LBL45E 003	20.0 ^e	32.0 ^f	2500	0.80	1.1	120	320	16	35.0	20.0	44	9.0	19	8421 9408 03

Recommended max tapping size: ^a M4 ^b M5 ^c M8 ^d M10 ^e M12 ^f M16

Optional Accessories

LBL25

Designation	Ordering No.
Hydraulic damper (feed stroke 65 mm)	4130 1844 80
Key chuck (0-6.5 mm)	4021 0283 00
Key chuck (2-10 mm)	4021 0416 00



Hydraulic damper

LBL35

Designation	Ordering No.
Hydraulic damper (feed stroke 65 mm)	4130 1844 80
Key chuck (2.0-13.0 mm)	4021 0452 00
Sleeve chuck (2.0-9.5 mm)	4021 0459 00
Twin spindle head, speed ratio 1:1, center to center adjustment range 12.7-63.5 mm	4130 1363 84
Other multiple heads on request	
Tapping unit, M2-M7	
SPD3, Taper socket J33	4130 1938 00
Holder for tapping unit SPD3	4130 1787 00
Collet 2.5-5 mm	4021 0412 00
Collet 5-6.3 mm	4021 0413 00
Tapping unit, M3-M12	
SPD5, Tapping Socket J33	4130 1939 00
Holder for tapping unit SPD5	4130 1860 00
Collet 3.3-6.8 mm	4021 0337 00
Collet 4.5-8.7 mm	4021 0336 00
Collet 6-10 mm	4021 0456 00



Key chuck



Sleeve chuck



Morse taper socket

LBL45

Designation	Ordering No.
Hydraulic damper (feed stroke 110 mm)	4130 1895 80
Key chuck (3.2-16.0 mm)	4021 0423 00
Sleeve chuck (2.0-9.5 mm)	4021 0458 00
No. 2 Morse taper socket	4130 1080 00
No. 3 Morse taper socket	4130 1079 00
Twin spindle head, speed ratio 1:1, center to center adjustment range 19-95 mm	4130 1364 82
Other multiple heads on request	
Tapping unit, M15-M18	4130 1940 00
SPD7, Taper socket, J3	
Holder for tapping unit SPD7	4130 1773 00
Collet 6-10 mm	4023 1059 00



Tapping unit

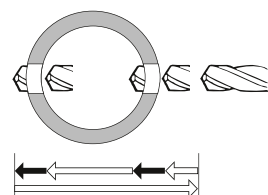


Twin spindle head

Programmed damping device

Model	Ordering No.
LBL35, -45	4130 1961 80

To be used together with the hydraulic damper.



Programmed damping device

Optional Accessories

Collets for Twin head LBL35

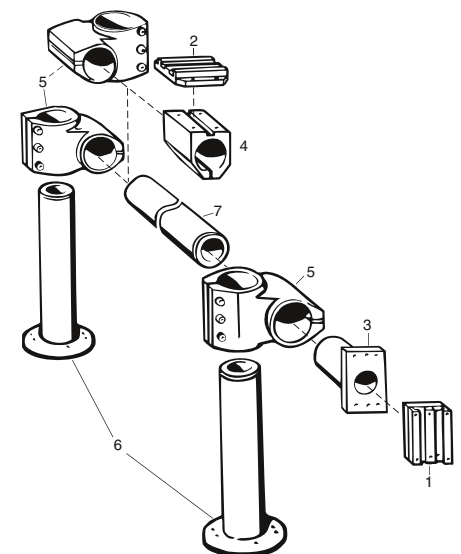
Size mm	Ordering No.	Size mm	Ordering No.
2.1	4130 1367 11	5.0	4130 1367 40
2.3	13	5.1	41
2.5	15	5.2	42
		5.3	43
3.0	4130 1367 20	5.4	44
3.1	21		
3.2	22	6.0	4130 1367 50
3.5	25	6.2	52
3.8	28	6.4	54
3.9	29	6.5	55
4.0	4130 1367 30		
4.1	31		
4.5	35		

Collets for Sleeve chuck LBL35/45 Twin head LBL45

Size mm	Ordering No.	Size mm	Ordering No.
2.0	4130 1561 00	5.4	34
2.2	02	5.5	35
2.5	05	5.8	38
		5.9	39
3.0	4130 1561 10		
3.2	12	6.0	4130 1561 40
3.5	15	6.2	42
3.6	16	6.4	44
3.7	17	6.5	45
4.0	4130 1561 20	6.7	47
4.2	22	6.9	49
4.5	25		
4.6	26	7.0	4130 1561 50
4.9	29	7.5	55
		8.0	4130 1561 60
5.0	4130 1561 30	8.5	65
5.2	32	9.0	4130 1561 70
5.3	33	9.5	75

Mountings

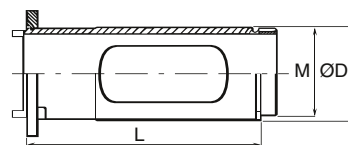
Ref. No.	Designation	Ordering No.	
		LBL25, LBL35	LBL45
1	Base plate	4140 0077 80	4140 0081 80
2	Base plate	4140 0080 80	4140 0084 80
3	Column mount	4140 0050 00	
4	Side mount	4140 0047 80	4140 0018 80
5	Crossmount	4140 0048 80	4140 0029 80
6	Column socket		
	500 mm long	4140 0051 01	
	250 mm long	4140 0051 02	
	600 mm long		4140 0019 02
	300 mm long		4140 0019 01
7	Column		
	500 mm long	4140 0052 01	
	600 mm long		4140 0020 02
	300 mm long		4140 0020 01
8	Locking bar	4140 0078 00 ^a	4140 0082 00 ^a
9	Locking bar	4140 0079 00 ^a	4140 0083 00 ^a

^a Two per unit.

Optional Accessories

Tip mount

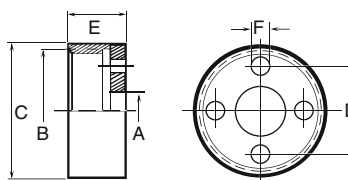
Model	Max stroke	Dimensions, mm			Ordering No.
		L	D	M	
LBL35	73	159	60	M56x1.5L	4140 0090 80
LBL45	110	215	80	M56x1.5L	4140 0092 80



Drill guide (Screw mount)

A ^a	B	C	D	Dimensions, mm					Ordering No.
				E	F	G	H	I	
8	M56x1.5L	60	39	25	6.2	—	—	—	4140 0044 08
10	M56x1.5L	60	39	25	6.2	—	—	—	4140 0044 10
12	M56x1.5L	60	39	25	6.2	—	—	—	4140 0044 12

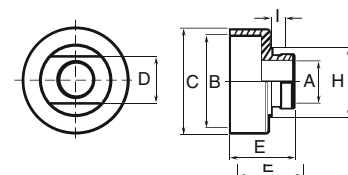
^a Dimensions mentioned under A refer to the outside diameter for drill guide bushings.



Drill guide (Bayonet mount)

A ^a	B	C	D	Dimensions, mm					Ordering No.
				E	F	G	H	I	
4	M56x 1.5L	60	30	37	—	—	40h8	6.2	4140 0058 04
18	M56x 1.5L	60	30	37	—	—	40h8	6.2	4140 0058 18

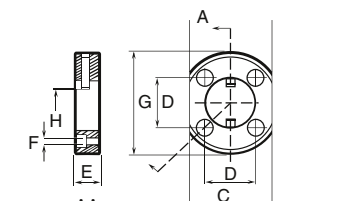
^a Dimensions mentioned under A refer to the outside diameter for drill guide bushings.



Drill guide (Bayonet mount)

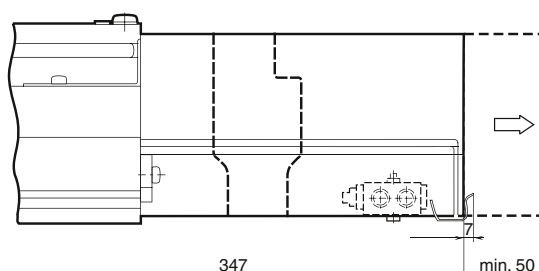
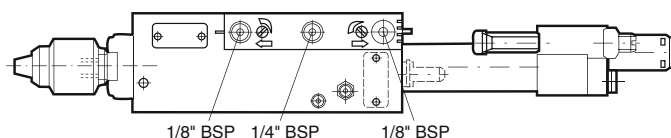
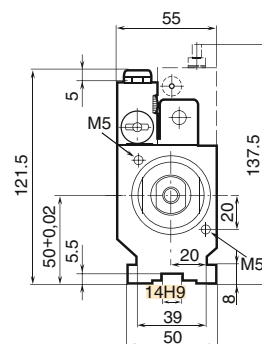
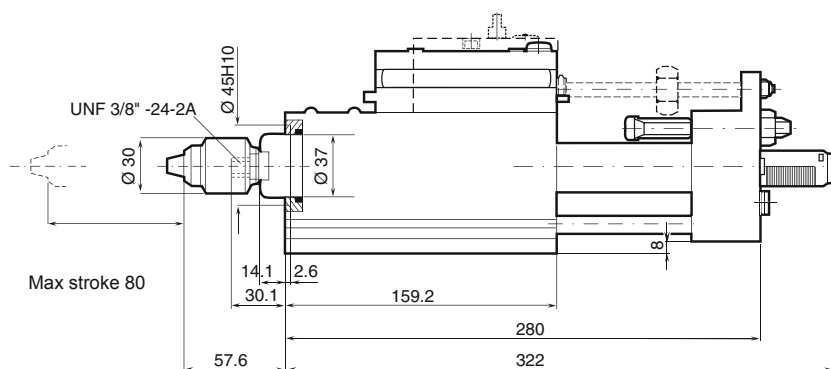
A ^a	B	C	D	Dimensions, mm					Ordering No.
				E	F	G	H	I	
—	—	56	36	15	6.5	67	40F8	—	4140 0059 80

^a Dimensions mentioned under A refer to the outside diameter for drill guide bushings.

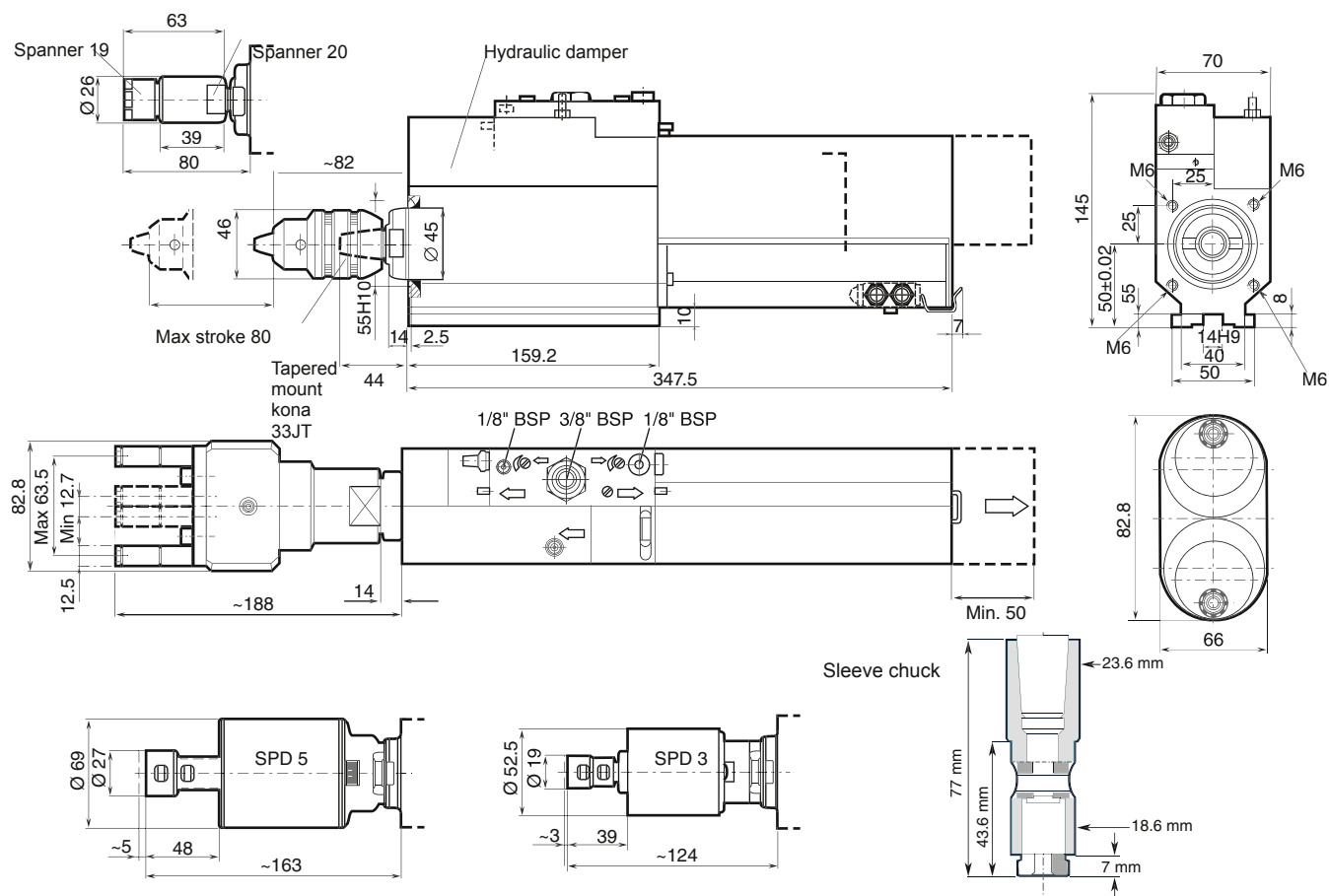


Dimensions

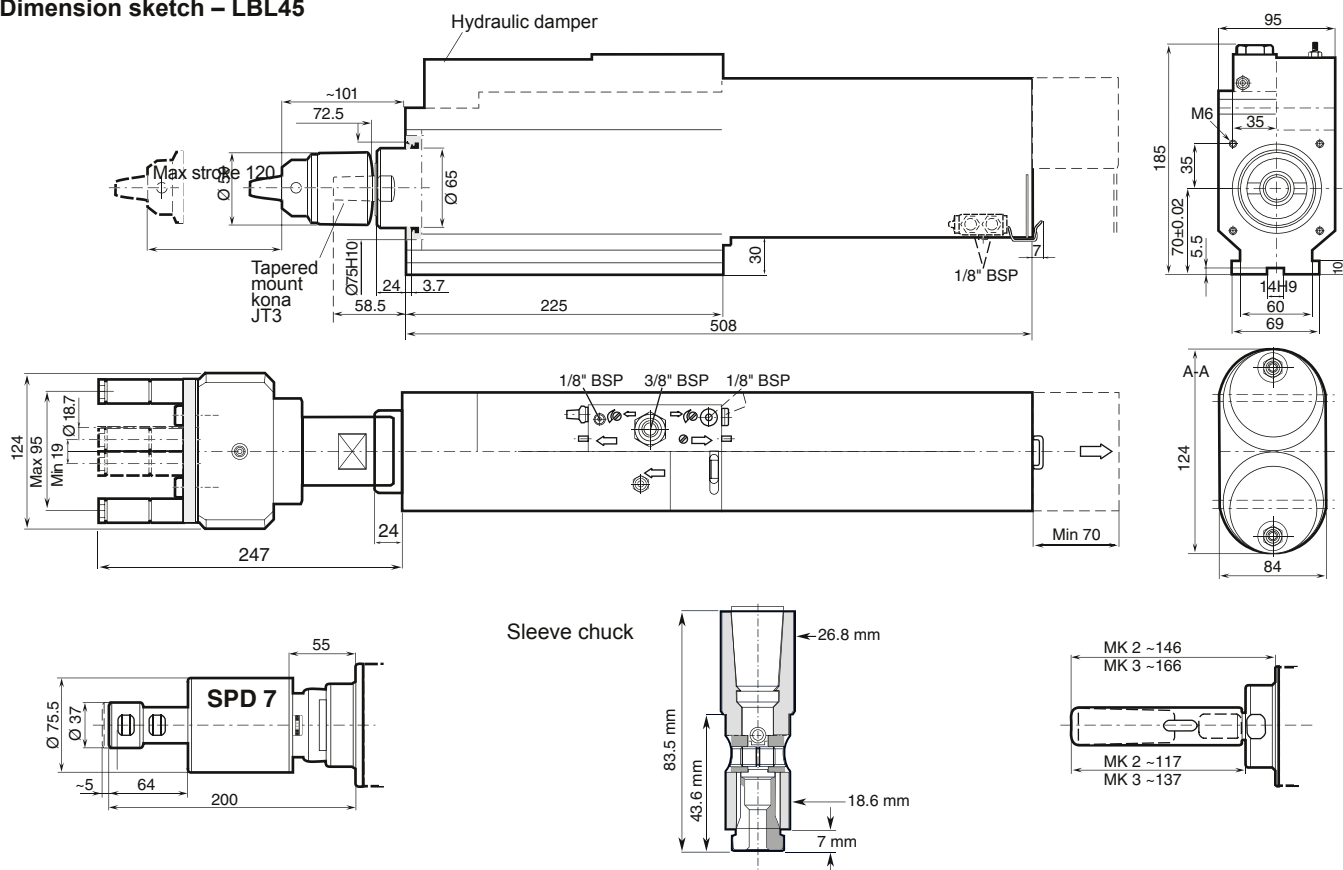
Dimension sketch – LBL25



Dimension sketch – LBL35



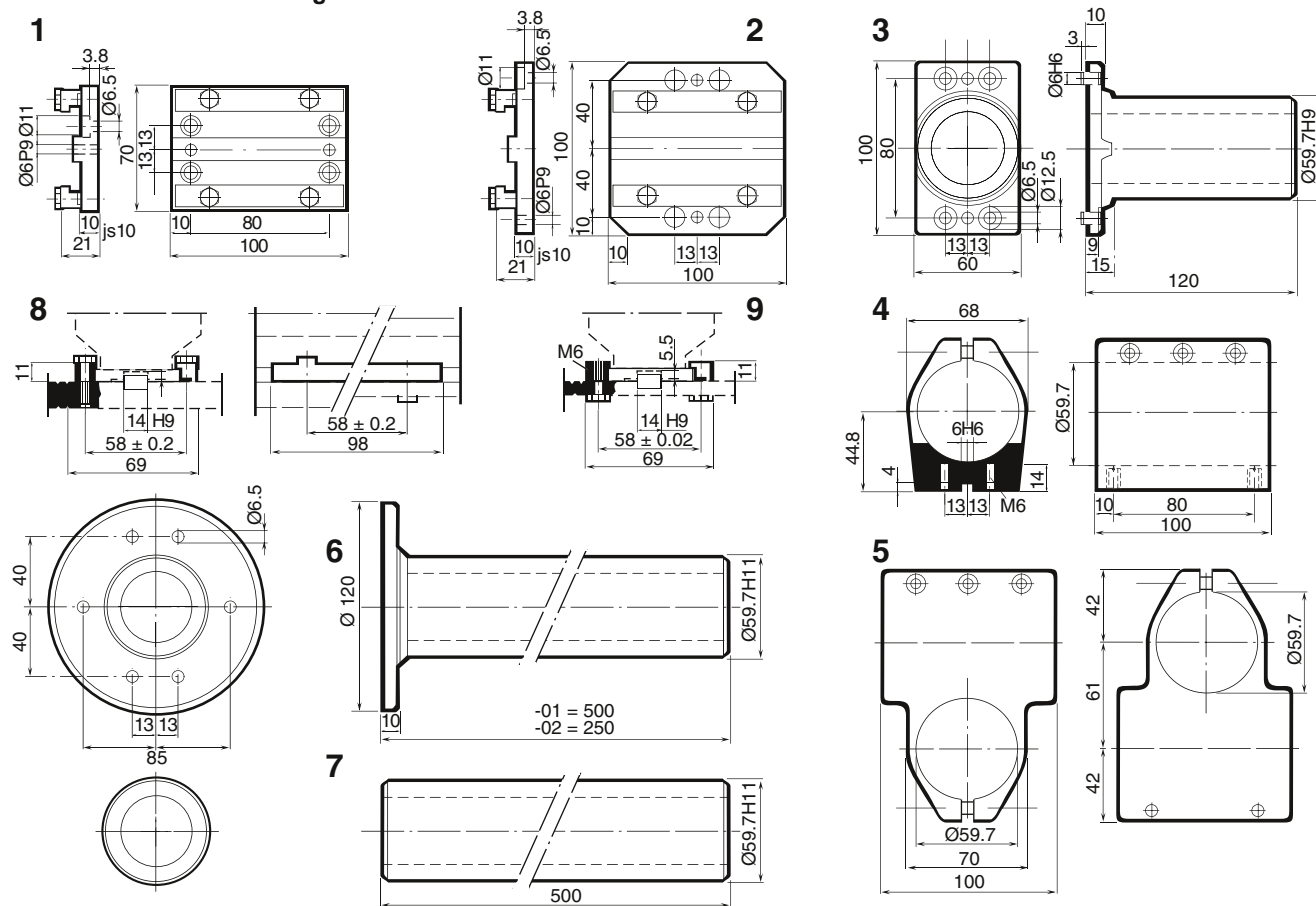
Dimension sketch – LBL45



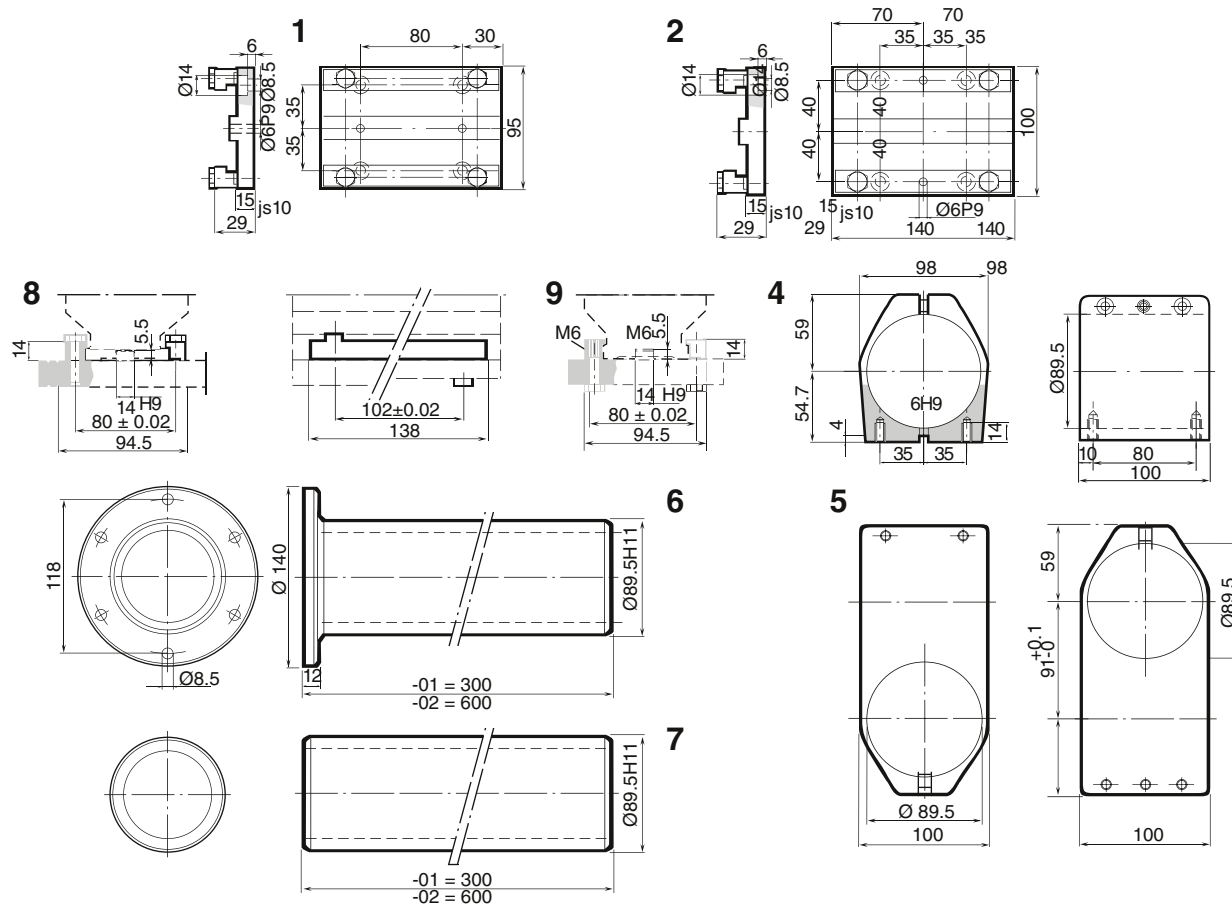
Dimensions

Automatic Drilling and Tapping Units

Dimension sketch – Mountings for LBL25E and -35E



Dimension sketch – Mountings for LBL45E



Air Line Accessories

Contents	Page
Introduction.....	266
Product safety.....	267
Air preparation units	268
Optimizer air tool oil.....	274
Direct lubrication units	275
Quick couplings	277
Claw couplings	289
Ball valves.....	290
Swivel connectors.....	291
Fittings.....	292
Blow protector.....	294
Hoses	295
Spiral hoses.....	298
Productivity kits.....	299
Hose reels	300
Balancers.....	304
Blow guns	307
Test equipment	308

Contents	Page
Introduction.....	266
Product safety.....	267
Air preparation units	268
Optimizer air tool oil.....	274
Direct lubrication units.....	275
Quick couplings	277
Claw couplings	289
Ball valves.....	290
Swivel connectors.....	291
Fittings.....	292
Blow protector.....	294
Hoses	295
Spiral hoses.....	298
Productivity kits.....	299
Hose reels	300
Balancers.....	304
Blow guns	307
Test equipment	308

Ensure that your tools achieve their full potential

To ensure that you benefit from the full potential power of your tools, Atlas Copco has developed a full range of air line accessories for use with Atlas Copco tools and air motors. All accessories can be used for other applications and pneumatic equipment.

Productivity

By using Atlas Copco's air line accessories you ensure that you have a correct air line installation for your tool. This will provide the correct air flow to the tool, ensuring that you benefit from its full potential power, and that you reach the correct torque in torque-controlled tools. By using the recommended accessories you will also minimize the service requirements of the tool.

Energy efficiency

With a correct installation you will not only achieve the tool's full potential power, you will also reduce energy costs. All Atlas Copco accessories are designed for minimum pressure drop, which ensures that the compressor is not "working overtime".

Safety

All accessories are designed to meet the highest demands for a safe working environment. Atlas Copco has developed a wide range of safety couplings, balancers, blow protectors and hose reels to meet today's high standards in terms of workplace safety.

Ergonomics

Operator health and well-being are important factors. Atlas Copco accessories, such as torque arms, balancers, screw presenters and reaction bars, enable you to configure ergonomically correct workstations for operators.

Quality

All Atlas Copco accessories are made of the highest quality materials for long production cycles and to withstand rough treatment. Choose Atlas Copco accessories and you will be sure of high quality products.



All local safety regulations with respect to installation, operation and overhaul must always be followed. Please read the separate instructions regarding safety which are supplied with all products in order to improve your own safety!

Ball valve

- Switch off the compressed air with the ball valve when you are not working (see fig. 1).
- Open all ball valves gently in order to discover improperly tightened devices (see fig. 5).

Air preparation units

- Please check for solvents which change the structure of polycarbonate^a bowls.

These solvents make the polycarbonate brittle so it can break. Normally polycarbonate is not easy to break. If you need to use aggressive solvents, please contact us and we will help you choose the right equipment.

- Use bowl guard.

An easy way to eliminate this type of accident is to use a bowl guard on MINI and MIDI units. The MAXI unit has an aluminum bowl with a new, more chemical resistant plastic on the inside as standard.

Check that the bowls are properly tightened and that all units are fitted together before switching on the compressed air with the ball valve.

Quick safety couplings

To increase the safety and reduce the risk of operator injuries we recommend you to always buy couplings with a safety function. Couplings with a safety function are disconnected in two stages in order to vent the coupling and minimize the risk of sudden component separation, which has the potential to cause operator injury.

Follow this order when working with claw couplings.

How to open a claw coupling:

- 1 Close the ball valve.



- 2 Run the tool so the air ventilates out.



- 3 Release the claw coupling.



How to close a claw coupling:

- 4 Make sure that the two claw couplings are mounted together.

Use claw couplings with lock nut (LNH) or use a lock spring for safer locking.



Never open a quick coupling with a screwdriver in order to ventilate the air.

Claw couplings

- Be very careful (see fig. 1+2+3).

They are always open and must be used very carefully. To increase safety when using claw couplings, we recommend the claw LNH claw coupling with a lock nut.

Clamps and connections

- Avoid screwdrivers when tightening.

Check that they are properly tightened. Avoid screwdrivers when tightening, they can easily slip and damage your hand. Use a wrench. If you need to use a screwdriver, mount the clamp in a vice.

Hoses

When mounting hoses on hose connections, use water and soap in order to make the hose slip on to the connection. Do not use oil. Water and soap will dry up. Remove leaking hoses. A small leakage can quickly become a large hole.

Blow protector (see fig. 6+7).

A dangerous situation can arise with a hose that is accidentally blowing compressed air in an uncontrolled way, causing it to whip.

Blow guns

- Use the safety version. It eliminates the risk of air at high pressure coming into direct contact with skin.

^a Polycarbonate has good chemical resistance to all solvents except chemicals containing acetone, benzol, glycerine, some hydraulic and synthetic oils, chloroform, methyl alcohol, carbon tetrachloride (and similar solvents), carbon disulphide, perchloroethylene, toluene, trichloroethylene, xylene (nitrocellulose, thinner), acetic acid.

- 5 Open the ball valve gently.



Use of blow protector:

- 6 This dangerous situation can be avoided by using a blow protector.

A BLOCK blow protector shuts off the air flow so the risk of personal injuries is minimized.



- 7 We strongly recommend the use of blow protector BLOCK when using claw couplings.

When a broken hose has been replaced and the compressed air is switched on again, the BLOCK is automatically reset.



Get maximum productivity from your tools

Atlas Copco air preparation units are designed to help you get maximum productivity from your tools. They ensure minimal pressure drop and thus minimum energy losses in the air distribution system, benefiting the environment and cutting your operating costs. The lifetimes of your tools will be extended by using air preparation units and with that comes lower repair costs and less downtime.

A correct air installation ensures productivity and good total economy.

Filter – FIL

Water and dirt in your compressed air system will cause extensive corrosion damage and wear.

Productivity

Atlas Copco filters are equipped with a cyclone system. Using centrifugal force, this separates out a high percentage of the heavier solid water particles, while the filter ensures that the amount of dirt entering your tool is kept to a minimum. This means longer working cycles for the tools and minimum service time.

Regulator– REG

Atlas Copco regulators ensure optimal flow at the specific flow rates required by Atlas Copco tools, or any other pneumatic tools.

Energy efficiency

By installing a regulator you will ensure that there will not be any unnecessary consumption of compressed air. The regulators reduce a variable primary pressure to a practically constant secondary pressure with a minimum of pressure drop.

Productivity

The regulator will optimize the performance of your tool, ensure torque accuracy and boost productivity.

Lubricator – DIM

Atlas Copco oil lubricators ensure a long, efficient and trouble-free life for your pneumatic tools and components.

Productivity

The use of a lubricator will increase the power in vane motors by about 10-15%.

Energy efficiency

With the use of a lubricator you will prolong the lifetime of a vane motor up to three times and the motor will work much more efficiently, and with less friction.



Filter – FIL



Regulator – REG



Lubricator – DIM

Air preparation unit MINI-K's main application is to prepare the air for pneumatic components. MINI-K units have a 1/4" BSP connection thread, a composite housing made of polyamide 66 and the bowls are made of polycarbonate.

Working temperature

0°C to +50°C at 10 bar

Operating pressure

Inlet pressure 0-10 bar

Outlet pressure 0.5-8 bar

Standard filter

30 µm

Pressure gauge

1/8" BSP



Model	Economical air flow l/s	Maximum air flow l/s	Bowl	Filter condensate drainage	Max condensate capacity cm³	Max oil capacity cm³	Weight kg	Ordering No.
Filters								
MINI FIL 08K-B	12	30	Polycarbonate	Manual	12	-	0.1	9092 0000 01
Regulators								
MINI REG 08K	10	20	-	-	-	-	0.11	9092 0000 61
Lubricators								
MINI DIM 08K	9	23	Polycarbonate	-	-	35	0.09	9092 0000 91
Filter/regulator								
MINI F/R 08K	12	17	Polycarbonate	Manual	12	-	0.12	9092 0001 21
Filter/regulator+lubricator								
MINI F/RD 08K	9	14	Polycarbonate	Manual	12	35	0.32	9092 0001 51

NOTE: **Economical air flow:** 8 bar inlet pressure, 6.3 bar outlet pressure, 0.2 bar pressure drop.

Maximum air flow: 10 bar inlet pressure, 6.3 bar outlet pressure, 1 bar pressure drop.

All separate units, mounting brackets, assembly kits and pressure gauges need to be ordered separately. MINI-K F/RD unit is delivered complete with mounting bracket, assembly kit and pressure gauge.

Air preparation unit MINI-B's main application is to prepare the air for pneumatic components and tools with low air consumption. MINI-B has a 1/4" BSP connection thread and the housing is made of diecast zinc. The bowls are made of polycarbonate or the unit has metal bowls in zinc.

Working temperature

0°C to +50°C at 10 bar

Operating pressure

Inlet pressure 0-16 bar

Outlet pressure 0.5-8 bar

Standard filter

30 µm

Pressure gauge

1/8" BSP



Model	Economical air flow l/s	Maximum air flow l/s	Bowl	Filter condensate drainage	Max condensate capacity cm³	Max oil capacity cm³	Weight kg	Ordering No.
Filters								
MINI FIL 08B-B	12	24	Polycarbonate	Semi/automatic	22	-	0.25	9093 0032 11
MINI FIL 08B-C	12	24	Polycarbonate	Manual	22	-	0.25	9093 0032 41
MINI FIL 08B-D	13	24	Metal	Manual	22	-	0.25	9093 0032 71
Regulators								
MINI REG 08B	9	47.5	-	-	-	-	0.30	9093 0033 01
MINI REG 08B-LP	9	47.5	-	-	-	-	0.30	9093 0073 21
MINI REG 08P	8	47.5	-	-	-	-	0.30	9093 0000 31
Lubricators								
MINI DIM 08B	12	23	Polycarbonate	-	-	45	0.25	9093 0033 31
MINI DIM 08B-D	12	23	Metal	-	-	45	0.25	9093 0033 61
Filter/regulator								
MINI F/R 08B-B	9	38	Polycarbonate	Semi/automatic	22	-	0.35	9093 0033 91
MINI F/R 08B-C	9	38	Polycarbonate	Manual	22	-	0.35	9093 0034 21
Filter/regulator+lubricator								
MINI F/RD 08B-B	9	14.8	Polycarbonate	Semi/automatic	22	45	0.75	9093 0034 51
MINI F/RD 08B-C	9	14.8	Polycarbonate	Manual	22	45	0.75	9093 0034 81
Filter+regulator+lubricator								
MINI FRD 08B-B	9	13.8	Polycarbonate	Semi/automatic	22	45	0.95	9093 0062 11
MINI FRD 08B-C	9	13.8	Polycarbonate	Manual	22	45	0.95	9093 0062 41

NOTE: Economical air flow: 8 bar inlet pressure, 6.3 bar outlet pressure, 0.2 bar pressure drop.

Maximum air flow: 10 bar inlet pressure, 6.3 bar outlet pressure, 1 bar pressure drop.

All separate units, mounting brackets, assembly kits and pressure gauges need to be ordered separately. The MINI F/RD and FRD units are delivered complete with mounting bracket, assembly kit and pressure gauge.

The MIDI Optimizer is suitable for more than 90% of the Atlas Copco tool range and is the best choice for assembly tools, percussive tools, drills, nibblers and grinders up to Turbo. The MIDI Optimizer has a 1/2" BSP connection thread and a housing and bowl of high-tech polymer. The bowl has a highly chemical resistant polypropylene insert and the bowl is directly screwed to the housing for easy handling.

MIDI Optimizer self-regulating nano-lubricator

Adjusts automatically to the flow demand and ensures that the right amount of oil is supplied to the motor at all flow rates. This minimizes the lubrication needed. The nano oil mist, with a particle size of 200 nm, can be transported by the air stream up to 40 m. This means there is no oil in the hose and direct lubrication is not necessary. The lubricator can be refilled during operation.

Working temperature

-40°C to +60°C at 10 bar

+2°C to +60°C at 10 bar for filters

NOTE: For dry compressed air, ice formation must be avoided.

Operating pressure

Inlet pressure 0-16 bar

Outlet pressure 0.5-8 bar

Standard filter

30 µm

Pressure gauge

1/4" BSP

Included in F/RD and FRD units



Model	Economical air flow l/s	Maximum air flow l/s	Bowl	Filter condensate drainage	Max condensate capacity cm³	Max oil capacity cm³	Weight kg	Ordering No.
Filters								
MIDI Optimizer FIL A	-	117	Polymer, plastic insert	Automatic	60	-	0.3	9093 0021 01
MIDI Optimizer FIL M/S	-	117	Polymer, plastic insert	Manual/semi auto	60	-	0.3	9093 0021 02
Regulators								
MIDI Optimizer REG	-	97	-	-	-	-	0.35	9093 0021 05
MIDI Optimizer REG LP	-	97	-	-	-	-	0.35	9093 0021 06
Lubricators								
MIDI Optimizer DIM	31	120	Polymer, plastic insert	-	-	90	0.3	9093 0021 10
Filter/regulator								
MIDI Optimizer F/R A	-	90	Polymer, plastic insert	Automatic	60	-	0.5	9093 0021 12
MIDI Optimizer F/R M/S	-	90	Polymer, plastic insert	Manual/semi auto	60	-	0.5	9093 0021 13
Filter/regulator+lubricator								
MIDI Optimizer F/RD A	31	55	Polymer, plastic insert	Automatic	60	90	1.0	9093 0021 16
MIDI Optimizer F/RD M/S	31	55	Polymer, plastic insert	Manual/semi auto	60	90	1.0	9093 0021 17
Filter+regulator+lubricator								
MIDI Optimizer FRD A	31	55	Polymer, plastic insert	Automatic	60	90	1.1	9093 0021 24
MIDI Optimizer FRD M/S	31	55	Polymer, plastic insert	Manual/semi auto	60	90	1.1	9093 0021 25

NOTE: **Economical air flow:** 8 bar inlet pressure, 6.3 bar outlet pressure, 0.2 bar pressure drop.

Maximum air flow: 10 bar inlet pressure, 6.3 bar outlet pressure, 1 bar pressure drop.

All separate units, mounting brackets, assembly kits and pressure gauges need to be ordered separately. The MIDI Optimizer F/RD and FRD units are delivered complete with mounting bracket, assembly kit and pressure gauge.

The high flow MAXI-B air preparation unit's main application is to prepare the air for pneumatic tools which are large air consumers when long distribution hoses and multi connectors are used. A good example is Atlas Copco Turbo grinders. The MAXI-B has a diecast zinc housing and aluminum bowls with polypropylene inserts and the bowl is directly screwed to the housing for easy handling.

Working temperature

-10°C to +50°C at 10 bar

NOTE: For dry compressed air, ice formation must be avoided.

Operating pressure

Inlet pressure 0-17.5 bar

Outlet pressure 0.5-12 bar

Standard filter

30 µm

Pressure gauge

1/4" BSP



Model	Economical air flow l/s	Maximum air flow l/s	Bowl	Filter condensate drainage	Max condensate capacity cm³	Max oil capacity cm³	Weight kg	Ordering No.
Filters								
MAXI FIL 25B-B	106	190 ^a	Metal	Semi/automatic	130	-	0.9	9093 0074 21
Regulators								
MAXI REG 25B	85	333	-	-	-	-	1.2	9093 0074 61
MAXI REG 25B-LP	85	333	-	-	-	-	1.2	9093 0074 81
Lubricators								
MAXI DIM 25B	87	295	Metal	-	-	500	0.8	9093 0075 21
Filter/regulator								
MAXI F/R 25B-B	84	316	Metal	Semi/automatic	130	-	1.5	9093 0075 51
Filter/regulator+lubricator								
MAXI F/RD 25B-B	82	244	Metal	Semi/automatic	130	500	2.8	9093 0075 81
MAXI FRD 25B-B	81	209	Metal	Semi/automatic	130	500	3.3	9093 0076 01

^a 8 bar inlet pressure, 1 bar pressure drop.

NOTE: **Economical air flow:** 8 bar inlet pressure, 6.3 bar outlet pressure, 0.2 bar pressure drop.

Maximum air flow: 10 bar inlet pressure, 6.3 bar outlet pressure, 1 bar pressure drop.

All separate units, mounting brackets, assembly kits and pressure gauges need to be ordered separately. The MAXI F/RD and FRD units are delivered complete with mounting bracket, assembly kit and pressure gauge.

Optional Accessories

Common accessories

Designation	Ordering No.			
	MINI-K	MINI-B	MIDI OPTIMIZER	MAXI-B
Mounting bracket kit	9090 1902 00	9092 0063 01	9093 0022 01	9093 0076 15
Assembly kit	9090 1901 90	9092 0062 71	9093 0022 02	9093 0076 31

Are included in combination units (FD, FTD, F/RD and FRD)

Common accessories have to be ordered separately for separate units.

Filter (FIL) accessories (30 µm filter element is included with all filters)

Designation	Ordering No.			
	MINI-K	MINI-B	MIDI OPTIMIZER	MAXI-B
Filter element				
30 µm	9090 1898 00	9092 0063 31	9093 0023 04	9093 0076 61
5 µm		9092 0063 61	9093 0023 05	9093 0076 71
Bowl guard		9092 0063 91		

Regulator (REG) accessories

Designation	Ordering No.			
	MINI-K	MINI-B	MIDI OPTIMIZER	MAXI-B
Pressure gauge				
0-10 bar				
Ø 40 mm	9090 1907 00	9090 1907 00		
Ø 50 mm		9090 1172 00	9090 2052 00	
0-16 bar				
Ø 49 mm			9090 0239 00	9090 0239 00
Ø 50 mm		9090 1657 00		
Ø 63 mm				9093 0076 45
Panel mounting pressure gauge				
0-10 bar				
Ø 50 mm		9090 1173 00	9090 1173 00	
0-16 bar				
Ø 63 mm				9093 0076 43
Key lock for regulator -LP		9092 0074 11	9092 0074 11	9092 0074 11

Pressure gauge 0-10 bar is included in the combination units (F/RD and FRD)

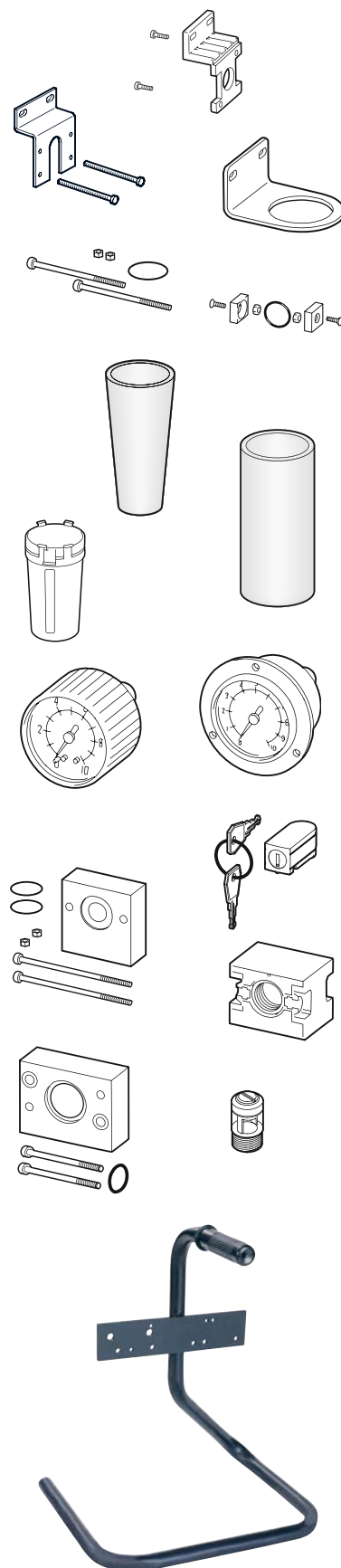
Pressure gauge has to be ordered separately for separate units.

Lubricator (DIM) accessories

Designation	Ordering No.			
	MINI-K	MINI-B	MIDI OPTIMIZER	MAXI-B
Air distribution block kit	9090 1900 90	9092 0064 51	9093 0022 03	9093 0076 41
Bowl guard		9092 0063 91		
Glass sight dome		9090 1121 00		9090 1873 00

FRL stand

Designation	Ordering No.
Suits all models	9090 2101 00



Optimizer Air Tool Oil

Optimizer air tool oil

Atlas Copco Optimizer air tool oil is a white, oil based lubricant for pneumatic tools. It has excellent antiwear properties and contains additives preventing oxidation and foaming. Optimizer air tool oil provides a better working environment, compared to conventional mist lubrication oils and is recommended when stringent demands are placed on the working environment.

- Provides a better working environment.
- Excellent antiwear properties.
- Minimizes wear on components.



Technical Data

Temperature range	-25°C to +70°C
Density at 15°C	869 kg/m ³
Viscosity at 40°C	22 mm ² /s
Pour point	-48°C
Flash point COC	>170°C

Model	Ordering No.
Optimizer 0.5 liter	9090 0000 02
Optimizer 1 liter	9090 0000 04
Optimizer 4 liter	9090 0000 06
Optimizer 10 liter	9090 0000 08

Single point lubricator DOSOL

Accurate lubrication for tools in intermittent service.

The Atlas Copco DOSOL system for direct lubrication is based on an injector pump which meters out the oil in exact doses, actuated by pulses of compressed air. The oil dosage can be regulated from a fraction of a drop to a full drop.

- **Exact amount** – Precision injector, adjustable for exact amount of oil.
- **Oil directly at the tool** – The oil is conveyed through a capillary tube directly to the lubrication point.

A single-point lubricator (SPL) consists of an injector pump fitted to a valve body, converting interruptions in compressed air flow into pulses. In the majority of cases, an oil bowl is fitted on each lubricator.

Every DOSOL SPL unit can be finely tuned to inject from 1 to 1/10 of a drop of oil in 40 steps (30 to 3 mm³). Every DOSOL SPL unit includes as standard a counter with a switch that allows the lubricator to operate every first, fifth or tenth tool cycle.

The adjusting knob features a positive stop at both maximum and minimum settings, which means that a zero setting is not possible.

The preset quantity of oil is supplied to the tool through a small-bore nylon tube inside the air hose. 7.5 m of oil-filled nylon tubing is included as standard.



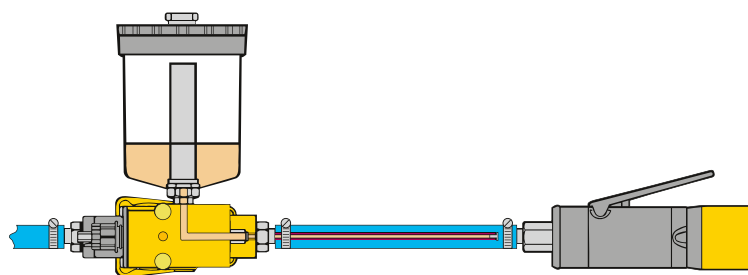
Multiple-point lubricator DOSOL

For supplying lubricant to an unlimited number of lubrication points on a machine or in a pneumatic system.

The DOSOL multiple-point lubricator (MPL) consists of a number of JECT 01 oil metering pumps assembled into a "package" with a common BASE baseplate. A stack may contain up to ten JECT 01 units. Several such assemblies may be used together.

- All oil pumps are supplied with oil via the BASE from an oil container or central oil reservoir. A line for pneumatic signals from the equipment to be lubricated is also connected to the BASE.
- The lubricant is conveyed through small-bore nylon tubing which should be ended with check valves.
- With the TEN counter the lubricator can be actuated every first, fifth or tenth tool cycle.

Every DOSOL MPL unit can be finely tuned to inject from 1 to 1/10 drop of oil in 40 steps (30 to 3 mm³). This helps to minimize the oil dose. The adjusting knob features a positive stop at both maximum and minimum settings, which means that zero setting is not possible.



Single-point lubricator, DOS

Model	Connection thread BSP in	Air flow l/s		Working pressure bar		Temperature range °C		Ordering No.
		min	max ^a	min	max	min	max	
DOS 15B-C ^b	1/2	2.3	45	3.2	10	-30°	+60°	8202 4201 73
DOS 15B-CR ^c	1/2	2.3	45	3.2	10	-30°	+60°	8202 4202 72
DOS 20B-C ^b	3/4	2.3	53	3.2	10	-30°	+60°	8202 4201 81
DOS 20B-CR ^c	3/4	2.3	53	3.2	10	-30°	+60°	8202 4202 80

^a At 6 bar and DP = 0.2 bar.

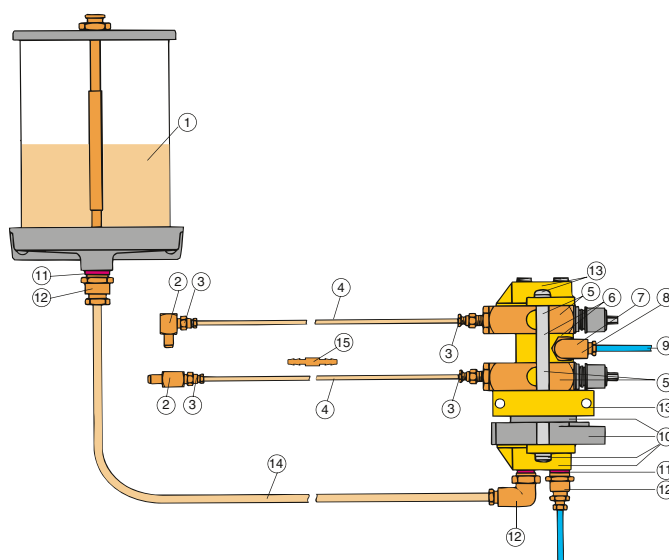
^b With counter and 7.5 m oil-filled nylon tubing.

^c With 0.3 l oil container counter and 7.5 m oil-filled nylon tubing.

Optional Accessories

FOR SINGLE POINT LUBRICATOR DOSOL

Designation	Ordering No.
Nylon tubing 3.2 mm outside diameter	
7.5 m, oil-filled	9090 1418 00
7.5 m, without oil	9090 1419 00
100 m, with oil	9090 1420 00
Barbed nipple for joining of 3.2 mm tubes	9090 1423 00
Check valve for outer end of nylon tubing, dia ext. 3.2 mm	9090 2050 00



NOTE: When the counter TEN is used in MPL installations an intermediate, black plastic part is used (supplied with all TEN counters) between BASE and TEN.

FOR MULTI POINT LUBRICATOR DOSOL

Multiple-point lubricator, BASE, JECT 01

Designation	BSP in	Ordering No.
BASE baseplate		8202 4205 04
Plate		
Oil port	1/4	
Air port	1/4	
Clamp		
Oil port	1/4	
Air port	1/4	
JECT 01 oil pump	1/8	8202 4203 10

TEN-counter

When lubricating equipment with a very low air consumption or very short time in operation it may be difficult to set a sufficiently small dose of oil. In such cases a counter is connected underneath the base plate BASE. The oil pumps will then be actuated only on each, every fifth or every tenth air pulse. The air signal is connected to the clamp underneath the counter. Ordering No. 8202 4206 03

Side ported air block kit

If all pumps are not to be actuated simultaneously, a signal block is installed between the oil pumps in the stack. The pumps below the signal block will then be actuated via the base plate BASE and those above it from a separate signal via the signal block.

Ordering No. 8202 4206 03

Ref No. in figure	Designation	Ordering No.
1	Oil container 0.3 l for direct mounting 0.95 l for wall mounting (1/4" BSP female) 1.9 l for wall mounting (1/4" BSP female)	9090 1415 00 9090 1416 00 9090 1417 00
2	Check valve 1/8" BSPT 90° elbow male x 1/8" BSP female 1/8" BSPT, straight male x 1/8" BSP female	9090 1427 00 9090 1426 00
3	Male adapter 1/8" BSPT, straight for tube outer diameter 3.2 mm	9090 1425 00
4	Capillary tubing 7.5 m, outer dia. 3.2 mm prefilled with oil 7.5 m, outer dia. 3.2 mm without oil 100 m, outer dia. 3.2 mm with oil	9090 1418 00 9090 1419 00 9090 1420 00
5	JECT 01 kit ^a	8202 4203 10
6	Side ported air block kit	9090 1424 00
7	Fiber packing for 1/8" BSP	0657 5742 00
8	Male adapter 1/8" BSP, straight for tube outer diameter 5 mm	9090 0714 00
9	Nylon tube outer diameter 5 mm (sold by the meter)	9030 0059 00
10	Counter TEN kit	8202 4206 03
11	Fiber packing for 1/4" BSP	0657 5764 00
12	Male adapter 1/4" BSP, straight for tube outer diameter 8 mm	9090 0715 00
13	BASE kit	8202 4205 04
14	Nylon tube, outer diameter 8 mm (sold by the meter)	9030 0060 00
15	Barbed nipple for joining of nylon tubes outer diameter 3.2 mm	9090 1423 00

^a With high temperature Viton seals 8202 4203 15.

Simply the best choice!

Whenever tools or pneumatic equipment need to be changed, or you need to make quick connections of hoses to an air outlet, Atlas Copco couplings are simply the best choice.

Energy efficiency

All Atlas Copco couplings are designed for a minimum pressure drop to reduce energy consumption.

Productivity

Exceptionally high air flow will guarantee full power in the tools.

Quality

The bodies of the couplings are made of hardened steel with a no-leakage design for long service life and heavy duty applications.

Ergonomics

Compact dimensions and low weight.

Safety

ErgoQIC and QIC S are vented safety versions to minimize the risk of sudden component separation and sound bang. The safety features are according to EN 983 and ISO 4414.



Selection Guide

The range consists of twelve different types, ErgoQIC 08, ErgoQIC 08E, ErgoQIC 10, QIC 08, QIC 08S, QIC 10, QIC 10S, QIC 10SE, QIC 15, QIC 15S, QIC 15SE and CLAW. The ErgoQIC system is a ball valve coupling with a safety feature offering a higher flow than ordinary coupling systems. The QIC system is a normal quick coupling system with high air flow. The QIC S and QIC SE are quick couplings with a safety function. The Claw coupling is a large bore claw coupling system offering a very high air flow.

For assembly tools, riveting hammers and drills it is recommended that a smaller sized coupling such as QIC 10 /S /SE and ErgoQIC 08 /E is used, but

Standard / Quick coupling / Flow capacity

ISO 6150 B / A-A 59439	QIC 08 / S	16 l/s
Atlas Copco standard	QIC 10 / S	29 l/s
Eurostandard 7.6	QIC 10SE	29 l/s
Atlas Copco standard	ErgoQIC 08	30 l/s
Eurostandard 7.6	ErgoQIC 08E	34 l/s
Atlas Copco standard	QIC 15 / S	57 l/s
Eurostandard 10.4	QIC 15SE	57 l/s
Atlas Copco standard	ErgoQIC 10	65 l/s

for assembly tools and drills with higher air consumption than 20 l/s it is recommended that QIC 15 /S /SE or ErgoQIC 10 are used. For grinders and percussive tools it is recommended that the bigger

sized couplings QIC 15 /S /SE and ErgoQIC 10 and Claw are used. For smaller grinders with air consumption below 10 l/s ErgoQIC 08 /E and QIC 10 /S /SE can be used.

ErgoQIC 08

Atlas Copco standard profile

The ErgoQIC 08 is a full flow quick coupling with no air restriction inside the coupling. It is suitable for assembly tools, drills and small grinders. Upgrading any air system with ErgoQIC 08 will give the benefits of productivity and energy efficiency.

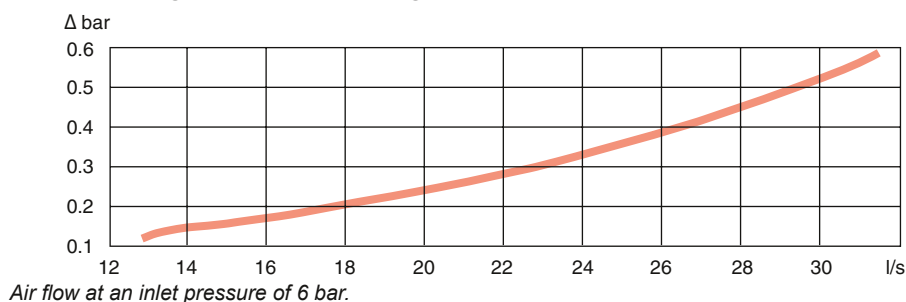
- Full flow coupling.
- Ergonomic design, small size and low weight.
- Strong and durable.
- Safety feature according to EN 983 / ISO 4414.



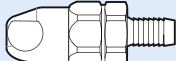
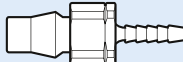
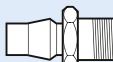
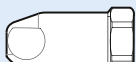
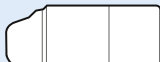
Technical Data

Max flow capacity 30 l/s (0.5 bar ΔP)
 Economical air flow 18 l/s (0.2 bar ΔP)
 Max working pressure 16 bar
 Temperature range -10°C to +70°C

Flow chart. ErgoQIC 08 M15 and ErgoNIP 08 M10



ErgoQIC 08 and ErgoNIP 08, 18 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling ErgoQIC 08	Ordering No.	Size		Connection type	Nipple ErgoNIP 08	Ordering No.	Size	
			mm	in				mm	in
	H06	8202 1110 04	6.3	1/4		H06	8202 1210 37	6.3	1/4
	H08	8202 1110 12	8	5/16		H08	8202 1210 45	8	5/16
	H10	8202 1110 38	10	3/8		H10	8202 1210 52	10	3/8
	H13	8202 1110 40	12.5	1/2		H13	8202 1210 54	12.5	1/2
						SH06	8202 1210 39	6.3	1/4
						SH08	8202 1210 47	8	5/16
						SH10	8202 1210 50	10	3/8
						SH13	8202 1210 55	12.5	1/2
	M08	8202 1110 61	1/4 BSP			M06	8202 1210 03	1/8 BSP	
	M10	8202 1110 79	3/8 BSP			M08	8202 1210 11	1/4 BSP	
	M15	8202 1110 87	1/2 BSP			M10	8202 1210 29	3/8 BSP	
						M15	8202 1210 31	1/2 BSP	
	F08	8202 1110 90	1/4 BSP			F08	8202 1210 60	1/4 BSP	
	F10	8202 1110 95	3/8 BSP			F10	8202 1210 62	3/8 BSP	
Protective cover		9090 1940 00							
									

^a For joining hoses longer than 3 meters.

ErgoQIC 08E

Eurostandard 7.6 (7.4)

The ErgoQIC 08E is a full flow quick coupling with no air restriction inside the coupling. It is suitable for assembly tools, drills and small grinders. Upgrading any air system using Eurostandard nipples with ErgoQIC 08E couplings will give the benefits of productivity and energy efficiency.

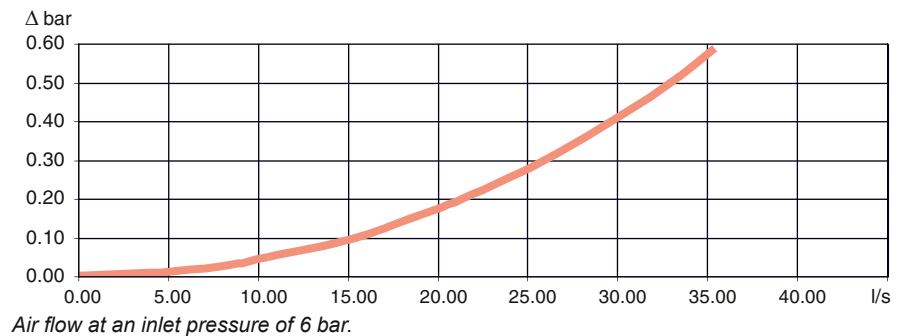
- Full flow coupling.
- Ergonomic design, small size and low weight.
- Strong and durable.
- Safety feature according to EN 983 / ISO 4414.



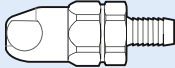
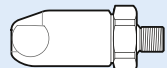
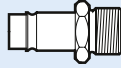
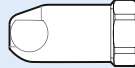
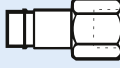
Technical Data

Max flow capacity 34 l/s (0.5 bar ΔP)
 Economical air flow 22 l/s (0.2 bar ΔP)
 Max working pressure 16 bar
 Temperature range -10°C to +70°C

Flow chart. ErgoQIC 08 E and NIP EU 7.6



ErgoQIC 08 E and NIP EU 7.6, 20 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling ErgoQIC 08 E		Size		Connection type	Nipple NIP EU 7.6		Size	
		Ordering No.	mm	in			Ordering No.	mm	in
H – Hose 	H06	8202 1106 00	6.3	1/4	H – Hose 	H05	8202 1204 00	5	3/16
	H08	8202 1106 01	8	5/16		H06	8202 1204 05	6.3	1/4
	H10	8202 1106 02	10	3/8		H08	8202 1204 10	8	5/16
	H13	8202 1106 03	12.5	1/2		H10	8202 1204 15	10	3/8
M – Male thread 	M08	8202 1106 04	1/4 BSP			H13	8202 1204 20	12.5	1/2
	M10	8202 1106 05	3/8 BSP		M – Male thread 	M06	8202 1204 25	1/8 BSP	
	M15	8202 1106 06	1/2 BSP			M08	8202 1204 30	1/4 BSP	
F – Female 	F08	8202 1106 07	1/4 BSP			M10	8202 1204 35	3/8 BSP	
	F10	8202 1106 08	3/8 BSP		F – Female 	F08	8202 1204 55	1/4 BSP	
	F15	8202 1106 09	1/2 BSP			F10	8202 1204 60	3/8 BSP	

ErgoQIC 10

Atlas Copco standard profile

The ErgoQIC 10 is a full flow coupling with no air restriction inside the coupling. It is suitable for assembly tools, drills and grinders. Upgrading any air system with ErgoQIC 10 will give the benefits of productivity and energy efficiency.

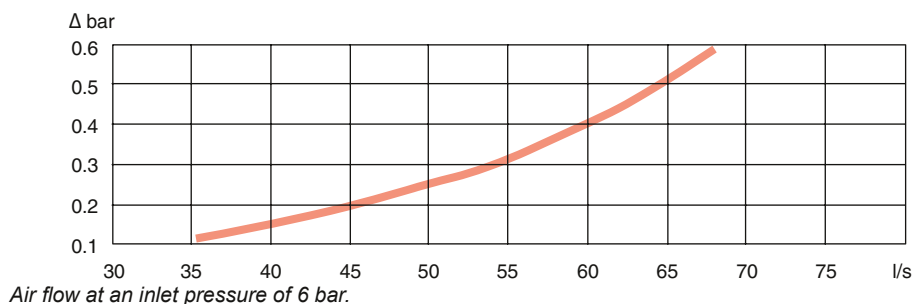
- Extreme full flow coupling.
- Strong and durable.
- Minimized connection force.
- Safety feature according to EN 983 / ISO 4414.



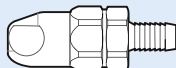
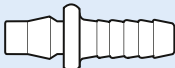
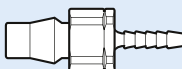
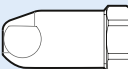
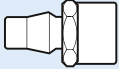
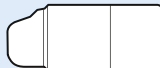
Technical Data

Max flow capacity 65 l/s (0.5 bar ΔP)
 Economical air flow 47 l/s (0.2 bar ΔP)
 Max working pressure 16 bar
 Temperature range -10°C to +70°C

Flow chart. ErgoQIC 10 M15 and ErgoNIP 10 M15



ErgoQIC 10 and ErgoNIP 10, 47 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling ErgoQIC 10	Ordering No.	Size		Connection type	Nipple ErgoNIP 10	Ordering No.	Size						
			mm	in				mm	in					
	H06	8202 1120 30	6.3	1/4		H06	8202 1220 35	6.3	1/4					
	H08	8202 1120 40	8	5/16		H08	8202 1220 43	8	5/16					
	H10	8202 1120 02	10	3/8		H10	8202 1220 50	10	3/8					
	H13	8202 1120 10	12.5	1/2		H13	8202 1220 68	12.5	1/2					
	H16	8202 1120 50	16	5/8		H16	8202 1220 76	16	5/8					
	H20	8202 1120 60	19	3/4		H20	8202 1220 77	19	3/4					
					SH – Safety Hose ^a									
					SH06	8202 1220 37	6.3	1/4						
					SH08	8202 1220 45	8	5/16						
					SH10	8202 1220 52	10	3/8						
					SH13	8202 1220 70	12.5	1/2						
					SH16	8202 1220 74	16	5/8						
					M – Male									
					M08	8202 1120 85	1/4	BSP	M08	8202 1220 01	1/4	BSP		
					M10	8202 1120 93	3/8	BSP	M10	8202 1220 19	3/8	BSP		
					M15	8202 1120 97	1/2	BSP	M15	8202 1220 27	1/2	BSP		
										F – Female				
										F08	8202 1121 00	1/4	BSP	F08
F10	8202 1121 05	3/8	BSP	F10						8202 1220 86	3/8	BSP		
					F15					8202 1220 88	1/2	BSP		
					Protective cover					9090 1931 00				
														

^a For joining hoses longer than 3 meters.

QIC 08S

ISO 6150 B / A-A 59439 (former US standard MIL C 4109 1/4")

The QIC 08S is a compact safety coupling suitable for small screwdrivers and drills. The light, compact design of QIC 08S couplings makes them easy to work with.

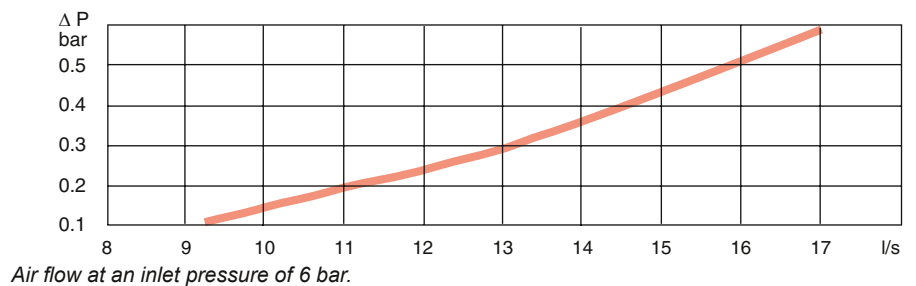
- High flow coupling.
- One-hand operation.
- Safety feature according to EN 983 / ISO 4414.



Technical Data

Max flow capacity 16 l/s (0.5 bar ΔP)
 Economical air flow 11 l/s (0.2 bar ΔP)
 Max working pressure 16 bar
 Temperature range -20°C to +80°C

Flow chart. QIC 08S M08 and NIP 08 F08



QIC 08S and NIP 08, 11 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 08S	Ordering No.	Size		Connection type	Nipple NIP 08	Ordering No.	Size	
			mm	in				mm	in
H – Hose 	H06	8202 1300 06	6.3	1/4	H – Hose 	H06	8202 1205 18	6.3	1/4
	H08	8202 1300 15	8	5/16		H08	8202 1205 26	8	5/16
	H10	8202 1300 25	10	3/8		H10	8202 1205 34	10	3/8
M – Male thread 	M08	8202 1300 40	1/4	BSP	M – Male thread 	M06	8202 1205 42	1/8	BSP
	M10	8202 1300 50	3/8	BSP		M08	8202 1205 59	1/4	BSP
F – Female thread 	F08	8202 1300 55	1/4	BSP		M10	8202 1205 67	3/8	BSP
	F10	8202 1300 65	3/8	BSP	F – Female thread 	F08	8202 1205 83	1/4	BSP
						F10	8202 1205 91	3/8	BSP

QIC 08
ISO 6150 B / A-A 59439 (former US standard MIL C 4109 1/4")
The QIC 08 coupling is suitable for small screwdrivers and drills. Its lightweight, compact design makes the QIC 08 coupling easy to work with.

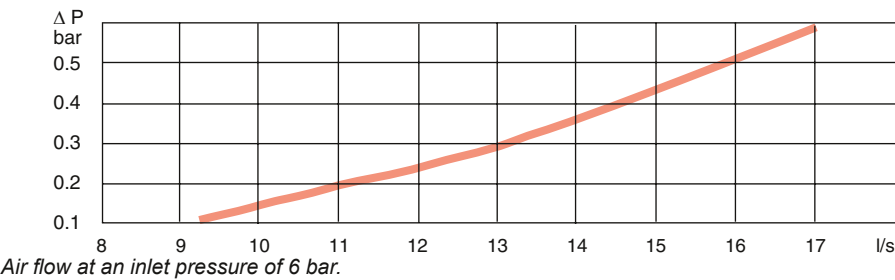
- High flow coupling.
- One-hand operation.
- Low connection force.



Technical Data

Max flow capacity 16 l/s (0.5 bar ΔP)
Economical air flow 11 l/s (0.2 bar ΔP)
Max working pressure 16 bar
Temperature range -20°C to +80°C

Flow chart. QIC 08 M08 and NIP 08 F08



QIC 08 and NIP 08, 11 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 08	Ordering No.	Size		Connection type	Nipple NIP 08	Ordering No.	Size	
			mm	in				mm	in
H – Hose 	H06	8202 1300 04	6.3	1/4	H – Hose 	H06	8202 1205 18	6.3	1/4
	H08	8202 1300 12	8	5/16		H08	8202 1205 26	8	5/16
	H10	8202 1300 20	10	3/8		H10	8202 1205 34	10	3/8
M – Male thread 	M08	8202 1300 38		1/4 BSP	M – Male thread 	M06	8202 1205 42		1/8 BSP
	M10	8202 1300 46		3/8 BSP		M08	8202 1205 59		1/4 BSP
						M10	8202 1205 67		3/8 BSP
F – Female thread 	F08	8202 1300 53		1/4 BSP	F – Female thread 	F08	8202 1205 83		1/4 BSP
	F10	8202 1300 61		3/8 BSP		F10	8202 1205 91		3/8 BSP

QIC 10S

Atlas Copco standard profile

QIC 10S safety coupling is suitable for assembly tools and drills. The QIC 10S is strong and durable and interchangeable with the QIC 10 coupling.

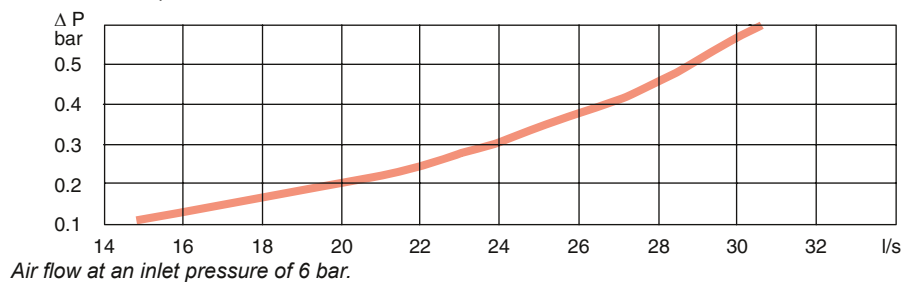
- High flow coupling.
- One-hand operation.
- Safety feature according to EN 983 / ISO 4414.



Technical Data

Max flow capacity 29 l/s (0.5 bar ΔP)
 Economical air flow 20 l/s (0.2 bar ΔP)
 Max working pressure 16 bar
 Temperature range -20°C to +80°C

Flow chart. QIC 10S M10 and NIP 10 M10



QIC 10S and NIP 10, 20 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 10S	Ordering No.	Size		Connection type	Nipple NIP 10	Ordering No.	Size	
			mm	in				mm	in
H – Hose 	H06	8202 1302 05	6.3	1/4	H – Hose 	H06	8202 1202 11	6.3	1/4
	H08	8202 1302 15	8	5/16		H08	8202 1202 94	8	5/16
	H10	8202 1302 30	10	3/8		H10	8202 1202 29	10	3/8
	H13	8202 1302 35	12.5	1/2		H13	8202 1202 34	12.5	1/2
M – Male thread 	M08	8202 1302 40	1/4	BSP	M – Male thread 	M06	8202 1202 37	1/8	BSP
	M10	8202 1302 50	3/8	BSP		M08	8202 1202 45	1/4	BSP
	M15	8202 1302 78	1/2	BSP		M10	8202 1202 52	3/8	BSP
MT – Male taper thread 	MT15	8202 1302 55	1/2	BSPT	MT – Male taper thread 	MT08	8202 1202 60	1/4	BSPT
						MT10	8202 1202 78	3/8	BSPT
						MT15	8202 1203 02	1/2	BSPT
F – Female 	F08	8202 1302 75	1/4	BSP	F – Female 	F08	8202 1202 86	1/4	BSP

QIC 10SE

Eurostandard 7.6 (7.4)

The QIC 10SE safety coupling is easy to handle and suitable for assembly tools and drills. The QIC 10SE is compatible with eurostandard nipples. QIC 10SE has a wide range of connections available.

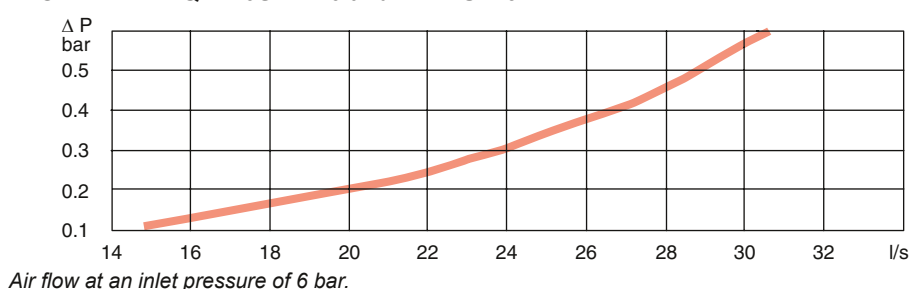
- High flow coupling.
- One-hand operation.
- Safety feature according to EN 983 / ISO 4414.



Technical Data

Max flow capacity	29 l/s (0.5 bar ΔP)
Economical air flow	20 l/s (0.2 bar ΔP)
Max working pressure	16 bar
Temperature range	-20°C to +80°C

FLOW CHART. QIC 10SE M10 and NIP EU 7.6



QIC 10SE and NIP EU 7.6, 20 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 10SE	Ordering No.	Size	Connection type	Nipple NIP EU 7.6	Ordering No.	Size
			mm in				mm in
H – Hose 	H06	8202 1303 20	6.3 1/4	H – Hose 	H05	8202 1204 00	5 3/16
	H08	8202 1303 21	8 5/16		H06	8202 1204 05	6.3 1/4
	H10	8202 1303 22	10 3/8		H08	8202 1204 10	8 5/16
	H13	8202 1303 23	12.5 1/2		H10	8202 1204 15	10 3/8
M – Male thread 	M08	8202 1303 24	1/4 BSP	M – Male thread 	M06	8202 1204 25	1/8 BSP
	M10	8202 1303 25	3/8 BSP		M08	8202 1204 30	1/4 BSP
	M15	8202 1303 36	1/2 BSP		M10	8202 1204 35	3/8 BSP
MT – Male taper thread 	MT15	8202 1303 26	1/2 BSPT	MT – Male taper thread 	MT08	8202 1204 40	1/4 BSPT
					MT10	8202 1204 45	3/8 BSPT
					MT15	8202 1204 50	1/2 BSPT
F – Female 	F08	8202 1303 27	1/4 BSP	F – Female 	F08	8202 1204 55	1/4 BSP
	F15	8202 1303 33	1/2 BSP		F10	8202 1204 60	3/8 BSP

QIC 10

Atlas Copco standard profile

The QIC 10 is a small quick coupling suitable for assembly tools and drills. The QIC 10 can withstand extremely rough handling in tough applications.

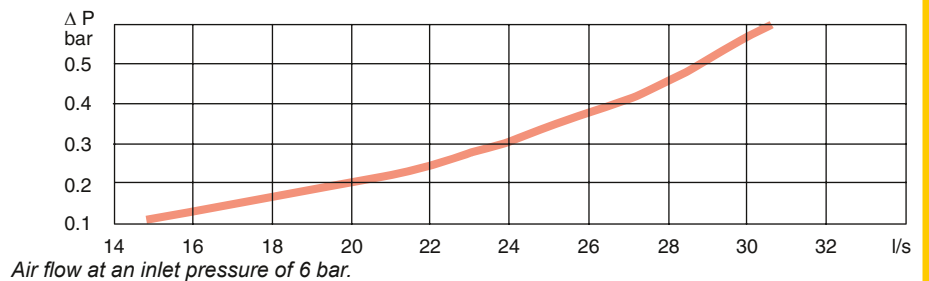
- High flow coupling.
- Strong and durable.
- One-hand operation.



Technical Data

Max flow capacity 29 l/s (0.5 bar ΔP)
 Economical air flow 20 l/s (0.2 bar ΔP)
 Max working pressure 16 bar
 Temperature range -20°C to +80°C

Flow chart. QIC 10 M10 and NIP 10 M10



QIC 10 and NIP 10, 20 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 10	Ordering No.	Size		Connection type	Nipple NIP 10	Ordering No.	Size	
			mm	in				mm	in
H – Hose 	H06	8202 1302 02	6.3	1/4	H – Hose 	H06	8202 1202 11	6.3	1/4
	H08	8202 1302 10	8	5/16		H08	8202 1202 94	8	5/16
	H10	8202 1302 28	10	3/8		H10	8202 1202 29	10	3/8
	H13	8202 1302 34	12.5	1/2		H13	8202 1202 34	12.5	1/2
M – Male thread 	M08	8202 1302 36	1/4 BSP		SH – Safety Hose^a 	SH06	8202 1203 10	6.3	1/4
	M10	8202 1302 44	3/8 BSP			SH08	8202 1203 36	8	5/16
						SH10	8202 1203 28	10	3/8
MT – Male taper thread 	MT15	8202 1302 51	1/2 BSPT		M – Male thread 	M06	8202 1202 37	1/8 BSP	
						M08	8202 1202 45	1/4 BSP	
						M10	8202 1202 52	3/8 BSP	
F – Female 					MT – Male taper thread 	MT08	8202 1202 60	1/4 BSPT	
						MT10	8202 1202 78	3/8 BSPT	
						MT15	8202 1203 02	1/2 BSPT	
F – Female 	F08	8202 1302 69	1/4 BSP		F – Female 	F08	8202 1202 86	1/4 BSP	

^a For hoses longer than 3 meters.

QIC 15S

Atlas Copco standard profile

The QIC 15S safety coupling is suitable for assembly tools, grinders and drills. The QIC 15S is easy to handle, strong and durable.

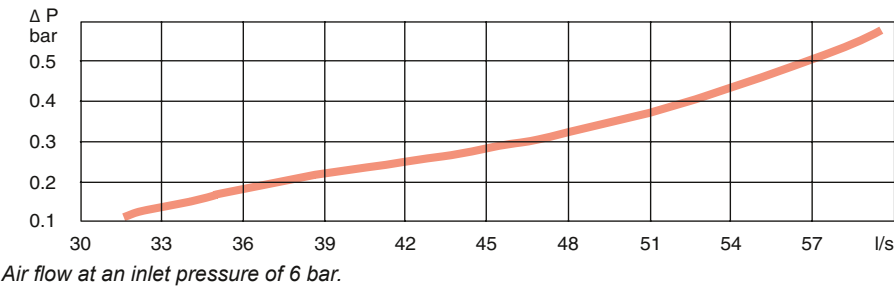
- Exceptionally high flow.
- One-hand operation.
- Safety feature according to EN 983 / ISO 4414.



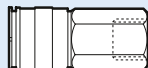
Technical Data

Max flow capacity 57 l/s (0.5 bar ΔP)
 Economical air flow 37 l/s (0.2 bar ΔP)
 Max working pressure 10 bar
 Temperature range -20°C to +80°C

Flow chart. QIC 15S M15 and NIP 15 F15



QIC 15S and NIP 15, 37 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 15S	Ordering No.	Size		Connection type	Nipple NIP 15	Ordering No.	Size	
			mm	in				mm	in
H – Hose 	H10 H13 H16	8202 1304 05 8202 1304 20 8202 1304 30	10 12.5 16	3/8 1/2 5/8	H – Hose 	H06 H08 H10 H13 H16	8202 1251 03 8202 1252 28 8202 1251 11 8202 1251 29 8202 1251 37	6.3 8 10 12.5 16	1/4 5/16 3/8 1/2 5/8
M – Male thread 	M08 M10 M15	8202 1304 35 8202 1304 45 8202 1304 65	1/4" BSP 3/8" BSP 1/2" BSP		M – Male thread 	M10 M15	8202 1251 45 8202 1251 52	3/8" BSP 1/2" BSP	
					MT – Male taper thread 	MT08 MT10 MT15	8202 1251 60 8202 1251 78 8202 1251 86	1/4" BSPT 3/8" BSPT 1/2" BSPT	
F – Female thread 	F15	8202 1304 70	1/2" BSP		F – Female thread 	F08 F10 F15	8202 1251 94 8202 1252 02 8202 1252 10	1/4" BSP 3/8" BSP 1/2" BSP	

QIC 15SE

Eurostandard 10.4

The QIC 15SE safety coupling is suitable for assembly tools, grinders and drills. The QIC 15SE is interchangeable with eurostandard nipples and can withstand rough handling.

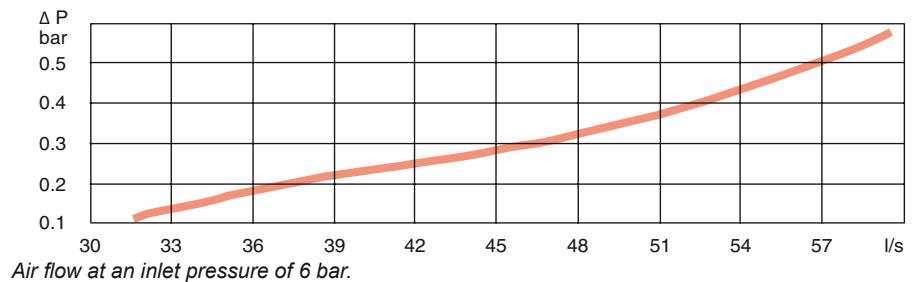
- Exceptionally high flow.
- One-hand operation.
- Safety feature according to EN 983 / ISO 4414.



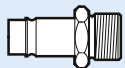
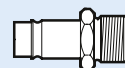
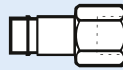
Technical Data

Max flow capacity 57 l/s (0.5 bar ΔP)
 Economical air flow 37 l/s (0.2 bar ΔP)
 Max working pressure 10 bar
 Temperature range -20°C to +80°C

Flow chart. QIC 15SE M15 and NIP 15E F15



QIC 15SE and NIP 15E, 37 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 15SE	Ordering No.	Size		Connection type	Nipple NIP 15E	Ordering No.	Size			
			mm	in				mm	in		
H – Hose	H10 H13 H16	8202 1305 20 8202 1305 21 8202 1305 22	10 12.5 16	3/8 1/2 5/8		H06 H08 H10 H13 H16	8202 1253 00 8202 1253 05 8202 1253 10 8202 1253 15 8202 1253 20	6.3 8 10 12.5 16	1/4 5/16 3/8 1/2 5/8		
M – Male thread	M08 M10 M15	8202 1305 23 8202 1305 24 8202 1305 25	1/4" 3/8" 1/2"	BSP BSP BSP			M10 M15	8202 1253 25 8202 1253 30	3/8" 1/2"	BSP BSP	
								MT08 MT10 MT15	8202 1253 35 8202 1253 40 8202 1253 45	1/4" 3/8" 1/2"	BSPT BSPT BSPT
F – Female thread	F15	8202 1305 26	1/2"	BSP			F08 F10 F15	8202 1253 50 8202 1253 55 8202 1253 60	1/4" 3/8" 1/2"	BSP BSP BSP	

QIC 15

Atlas Copco standard profile

The QIC 15 quick coupling is suitable for assembly tools, grinders and drills. The QIC 15 can withstand extremely rough handling in tough applications.

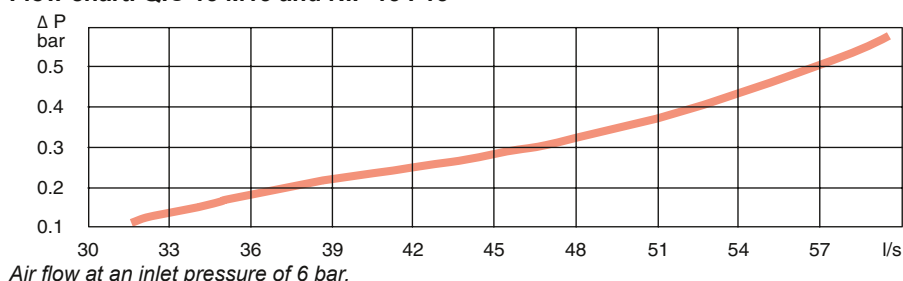
- Extremely high flow.
- Strong and durable.
- One-hand operation.



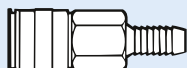
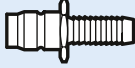
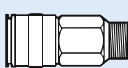
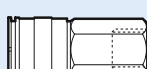
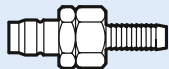
Technical Data

Max flow capacity 57 l/s (0.5 bar ΔP)
 Economical air flow 37 l/s (0.2 bar ΔP)
 Max working pressure 10 bar
 Temperature range -20°C to +80°C

Flow chart. QIC 15 M15 and NIP 15 F15



QIC 15 and NIP 15, 37 l/s (recommended air flow at 6 bar pressure)

Connection type	Coupling QIC 15	Ordering No.	Size		Connection type	Nipple NIP 15	Ordering No.	Size	
			mm	in				mm	in
	H – Hose								
	H10	8202 1304 00	10	3/8		H06	8202 1251 03	6.3	1/4
	H13	8202 1304 18	12.5	1/2		H08	8202 1252 28	8	5/16
	H16	8202 1304 26	16	5/8		H10	8202 1251 11	10	3/8
	M – Male thread								
	M08	8202 1304 34	1/4	BSP		M10	8202 1251 45	3/8	BSP
	M10	8202 1304 42	3/8	BSP		M15	8202 1251 52	1/2	BSP
	M15	8202 1304 59	1/2	BSP					
	F – Female thread								
	F15	8202 1304 67	1/2	BSP		MT08	8202 1251 60	1/4	BSPT
						MT10	8202 1251 78	3/8	BSPT
						MT15	8202 1251 86	1/2	BSPT
	SH – Safety Hose ^a								
	SH10	8202 1203 44	10	3/8		F08	8202 1251 94	1/4	BSP
	SH13	8202 1203 51	12.5	1/2		F10	8202 1252 02	3/8	BSP
	SH16	8202 1203 69	16	5/8		F15	8202 1252 10	1/2	BSP

^a For hoses longer than 3 meters.

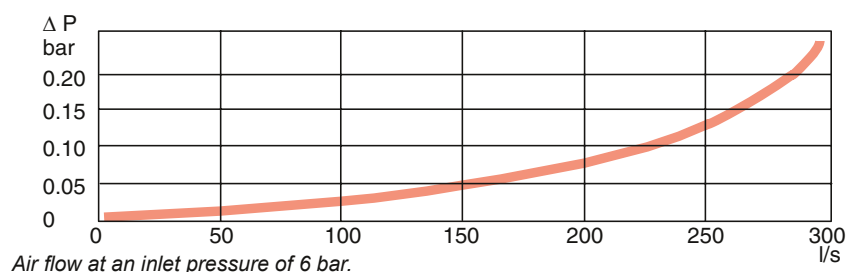
CLAW couplings are made from drop-forged, hardened steel which can withstand rough treatment and ensures a long life even under difficult conditions. The coupling head is the same for all sizes, which can therefore be freely combined.

The recommended maximum working pressure is 10 bar.

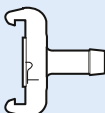
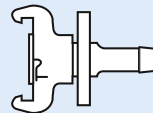
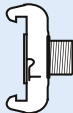
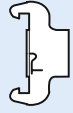
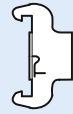
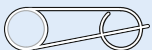
- Large bore – machined surfaces give low air resistance and minimum pressure drop.
- Robust claws – will withstand rough handling without deformation.
- Locking lugs – precision-made to provide a reliable lock.
- Special rubber packings – resistant to oil and temperature changes. Max. temperature 80°C (176°F).
- Packing seats – lathe-turned grooves ensure a leak-proof seal.
- Couplings are zinc-plated and thus effectively treated against corrosion.



Flow chart. For 2 pieces of CLAW



CLAW

Connection type	Coupling CLAW	Ordering No.	Size		Bore B, mm
			mm	in	
H – Hose 	H06	9000 0308 00	6.3	1/4	5.0
	H10	9000 0309 00	10	3/8	8.0
	H13	9000 0310 00	12.5	1/2	10.5
	H16	9000 0311 00	16	5/8	13.5
	H20	9000 0312 00	19	3/4	17.0
	H25	9000 0313 00	25	1	22.0
LNH – Lock nut, Hose 	LNH10	9000 0260 00	10	3/8	8.0
	LNH13	9000 0261 00	12.5	1/2	10.5
	LNH16	9000 0262 00	16	5/8	13.5
	LNH20	9000 0263 00	19	3/4	17.2
	LNH25	9000 0264 00	25	1	22.0
M – Male thread 	M10	9000 0300 00	3/8	BSP	11.2
	M15	9000 0301 00	1/2	BSP	14.8
	M20	9000 0302 00	3/4	BSP	19.0
	M25	9000 0303 00	1	BSP	25.5
F – Female thread 	F10	9000 0304 00	3/8	BSP	15.0
	F15	9000 0305 00	1/2	BSP	18.6
	F20	9000 0306 00	3/4	BSP	24.0
	F25	9000 0307 00	1	BSP	25.0
Protection cover for CLAW couplings		9000 0314 00			
Extra packing for CLAW couplings		For type H, M and F	9000 0000 00 (+80°C), 9000 0000 01 (+200°C) ^a		
		For LNH10, -13 and -16	9000 0015 00		
		For LNH20 and -25	9000 0268 00 (+80°C), 9000 0319 00 (+200°C) ^a		
Safety lock spring		3176 8640 90	25 pieces		

^a Viton-green.

BAL and BAL-1A

The Atlas Copco valves BAL and BAL-1A are both suitable for air, water and many other liquids and gases due to the choice of material.

- Silicone-free grease – Both are lubricated with silicone-free grease which is important when spray-painting.
- Maximum through flow – Full bore valve to DIN standards.
- Housing and ball made of chrome-plated hot-stamped brass MS 58.
- Handle of enamelled aluminum.



BAL – with nitrile rubber seals

BAL valves can be used in all settings between fully open and fully closed.

The balls and the seals can be replaced without the body being removed from the piping.

BAL-1A – with teflon seals

Intended for operating either fully open or fully closed.

Technical data

BAL

Maximum working pressure: 16 bar.

Working temperature range: -20°C to +90°C.

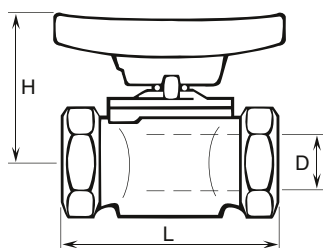
BAL-1A

Maximum working pressure: 16 bar (BAL-1A 40 and 50: max. 16 bar up to +100°C).

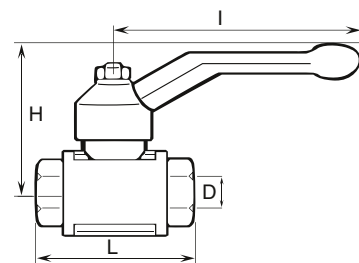
Working temperature range: -30°C to +200°C. (BAL-1A 40 and 50: at +200°C max. working pressure is reduced to 8 bar).

Model	Connection thread in BSP	Bore D mm	L mm	H mm	I mm	Ordering No.
BAL 08	1/4	9.5	50	41	-	8202 0301 05
BAL 10	3/8	9.5	50	41	-	8202 0302 04
BAL 15	1/2	12.5	60	43	-	8202 0303 03
BAL 20	3/4	19	75	55	-	8202 0304 02
BAL 25	1	24.5	90	64	-	8202 0305 01
BAL-1A 08	1/4	8	43	44	73	8202 0306 03
BAL-1A 10	3/8	10	50	47	73	8202 0306 11
BAL-1A 15	1/2	15	61	53	94	8202 0306 29
BAL-1A 20	3/4	20	70	57	94	8202 0306 37
BAL-1A 25	1	25	83	67.5	122	8202 0306 45
BAL-1A 32	1 1/4	32	100	83	150	8202 0306 52
BAL-1A 40	1 1/2	38	107	87	150	8202 0306 60
BAL-1A 50	2	50	129	103	193	8202 0306 78

Dimensions



Double connection



BAL

MultiFlex Swivel
Multi-directional connector

The MultiFlex swivel is an ingenious multi-directional connector. Connect your tool and the hose will stay in the ideal position however much you and the tool move around. The MultiFlex bends and rotates 360° in all directions while the hose stays straight. It takes the effort out of working in those cramped spaces. What's more, the hose feels almost weightless and it reduces hose wear. It's the magic of MultiFlex – a marriage of ergonomic thinking and ingenious design.

- Ergonomic.
- Reduces hose wear.
- High flow capacity.
- Minimum pressure drop.
- Strong and durable.

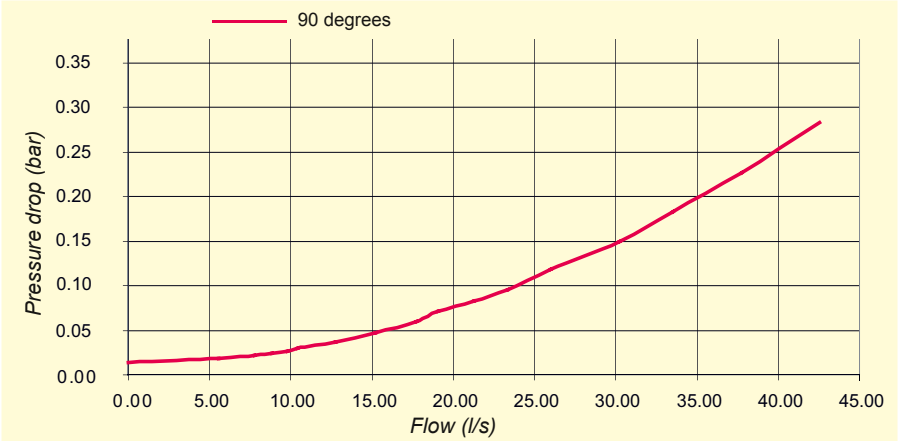


Model	Max rec. air flow ^a		Thread		Weight g	Length mm	Dia mm	Ordering No.
			Inlet female in	Outlet male in				
MultiFlex 1/8" BSP	12	25	1/8 BSP	1/8 BSP	73	66.2	24	8202 1350 18
MultiFlex 1/4" BSP	12	25	1/4 BSP	1/4 BSP	73	66.2	24	8202 1350 20
MultiFlex 3/8" BSP	32	68	3/8 BSP	3/8 BSP	130	80.6	29.5	8202 1350 22
MultiFlex 1/2" BSP	32	68	1/2 BSP	1/2 BSP	125	80.6	29.5	8202 1350 24

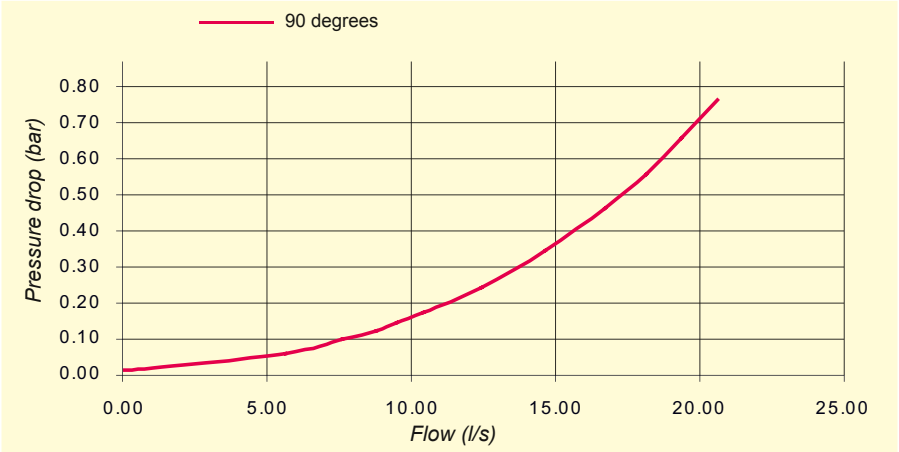
^a The pressure drop will be 0.2 bar at an inlet pressure of 6 bar.

Flow chart

MultiFlex 1/2" or 3/8"



MultiFlex 1/8" or 1/4"



Fittings

Simple pressure clamps for PVC HOSES



For CABLAIR	For PVC	One-lugged steel clamp mm	Ordering No.
–	–	5.2- 6.2	0347 0122 18
–	–	5.9- 7.0	0347 0122 19
–	03	7.0- 8.5	0347 0122 05
06	05	8.5-10.0	0347 0122 06
08	06	9.8-11.8	0347 0122 07
–	08	11.3-13.3	0347 0122 08
10	–	12.8-14.8	0347 0122 09
–	10	14.6-16.8	0347 0122 10
13	–	16.5-18.8	0347 0122 11
–	13	18.0-20.3	0347 0122 12
16	–	20.2-22.8	0347 0122 13
–	–	22.0-24.8	0347 0122 14
20	–	23.3-26.3	0347 0122 15
–	–	26.5-30.0	0347 0122 16
25	–	29.8-33.1	0347 0122 22

Hose connection Male thread – hose nipple



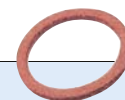
Thread in	Hose size		Ordering No.
	mm	in	
1/8 BSP	3.2	1/8	9000 0523 00
1/8 BSPT	5	3/16	4010 0031 00
1/8 BSPT	6.3	1/4	9000 0240 00
1/4 BSP	3.2	1/8	9000 0524 00
1/4 BSPT	6.3	1/4	9000 0241 00
1/4 BSPT	8	5/16	9090 1715 00
1/4 BSPT	10	3/8	9000 0247 00
3/8 BSPT	10	3/8	9000 0242 00
3/8 BSPT	12.5	1/2	9000 0248 00
1/2 BSPT	12.5	1/2	9000 0243 00
1/2 BSPT	16	5/8	9000 0244 00
1/2 BSPT	20	3/4	4150 0429 00
3/4 BSPT	20	3/4	9000 0245 00
1 BSPT	25	1	9000 0246 00

Medium pressure clamps for PVC HOSES



For CABLAIR	For PVC, POLUR	Medium clamp worm drive mm	Ordering No.
–	–	8.0-14.0	0347 6102 00
–	08	11.0-17.0	0347 6103 00
–	10	11.0-17.0	0347 6103 00
–	–	13.0-20.0	0347 6104 00
16	13	15.0-24.0	0347 6105 00
20	16	19.0-28.0	0347 6106 00
–	20	22.0-32.0	0347 6107 00
25	25	26.0-38.0	0347 6109 00
–	–	32.0-44.0	0347 6111 00
–	–	38.0-50.0	0347 6112 00
–	–	50.0-65.0	0347 6113 00

Gaskets



For couplings with male parallel thread	Fiber gasket between material and nipple Ordering No.
M5	0657 5710 00
1/8" BSP	0657 5742 00
1/4" BSP	0657 5764 00
3/8" BSP	0657 5785 00
1/2" BSP	0653 0500 01
3/4" BSP	0657 5823 00
1" BSP	0657 5830 00

Medium pressure clamps for RUBBER HOSES



For TURBO	For RUBAIR	Medium clamp worm drive mm	Ordering No.
–	06	11.0-17.0	0347 6103 00
13	10	13.0-20.0	0347 6104 00
16	13	15.0-24.0	0347 6105 00
–	16	19.0-28.0	0347 6106 00
20	–	22.0-32.0	0347 6107 00
–	20	26.0-38.0	0347 6109 00

Reducing nipple in brass



Female thread in	Male thread in	Ordering No.
1/4 BSP	1/8 BSP	9721 4000 94
3/8 BSP	1/4 BSP	9721 4000 92
1/2 BSP	3/8 BSP	9721 4000 93

Heavy-duty pressure clamps for RUBBER HOSES



For TURBO	For RUBAIR	Heavy-duty clamp mm	Ordering No.
–	–	22.0-25.0	9000 0194 00
20	16	25.0-28.0	9000 0195 00
–	20	29.0-32.0	9000 0196 00
–	25	34.0-38.0	9000 0197 00

Swivels



Air inlet	Air outlet Male BSP	Max Swivel bend from centre line	Ordering No.
5/16" hose	1/4	30°	4210 3134 80

Recommended flow max 10 l/s

Bushing

Male thread – female thread



Male thread in	Female thread in	Ordering No.
1/4 BSP	1/8 BSP	9090 0799 00
3/8 BSP	1/4 BSP	9090 0798 00
1/2 BSP	1/4 BSP	9090 1469 00
1/2 BSP	3/8 BSP	9090 0797 00
3/4 BSP	1/2 BSP	9090 0796 00
1 BSPT	3/4 BSP	9090 0795 00

Double connection

Male taper thread – male taper thread



From thread in	To thread in	Ordering No.
1/8 BSPT	1/8 BSPT	9090 0100 00
1/8 BSPT	1/4 BSPT	9090 0110 00
1/4 BSPT	1/4 BSPT	9090 0120 00
1/4 BSPT	3/8 BSPT	9090 0130 00
3/8 BSPT	3/8 BSPT	9090 0140 00
3/8 BSPT	1/2 BSPT	9090 0150 00
1/2 BSPT	1/2 BSPT	9090 0160 00
1/2 BSPT	3/4 BSPT	9090 0170 00
3/4 BSPT	3/4 BSPT	9090 0180 00
3/4 BSPT	1 BSPT	9090 0190 00
1 BSPT	1 BSPT	9090 0200 00

Double adjustable connection

Male thread – male thread



From thread in	To thread in	Ordering No.
1/2 BSP	1/2 BSP	9090 0806 00

Sealing rings for double adjustable connection



For coupling with male thread in	Spare rubber sealing ring for adjustable connections Ordering No.
1/2 BSP	9090 0884 00
1 BSP	9090 0886 00

Hose connection with clamp nut and spring guard



1 Clamp nut, brass

Hose diameter Outside/Inside mm	Male thread in	Ordering No.
10/8 ^a	1/4 BSP	9721 4002 89
10/8 ^a	3/8 BSP	9721 4002 90
12/9	1/4 BSP	9721 4000 86
12/10 ^b	3/8 BSP	9721 4000 88
15/12.5 ^c	1/2 BSP	9721 4000 89

Male threaded hose nipple with clamp nut should be used with female threaded quick couplings.

2 Spring guard in steel

Hose diameter Outside/Inside mm	Ordering No.
10/8 ^a	9721 4002 88
12/10 ^b	9721 4000 91
15/12 ^c	9721 4002 85

The spring guard should be used with the clamp nut above.

^a CABLAIR 08

^b CABLAIR 10

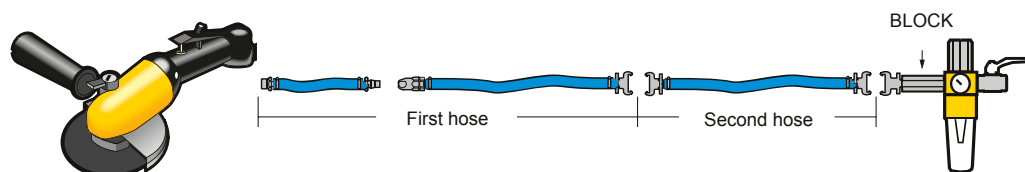
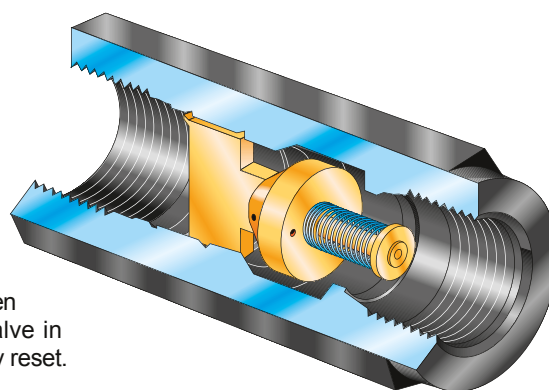
^c CABLAIR 13

When a fitting comes loose from a pressurized hose, the hose starts blowing compressed air in an uncontrolled way. The blow protector shuts off the airflow, thus minimizing the risk of injuries to personnel and damage to the workpiece or the surroundings.

The selection parameters are the air pressure and the air flow. For proper function the air pressure should be set at 7 bar in order to reach 6 bar at the air tool. The air flow is determined by the air consumption of the tool and the hose length.

When working with impact wrenches and pulse tools care must be taken in the choice of blow protector. The value of air flow under full load must be increased by 50% when selecting a blow protector for impact wrenches and pulse tools as there will otherwise be a risk of shut-off when free running.

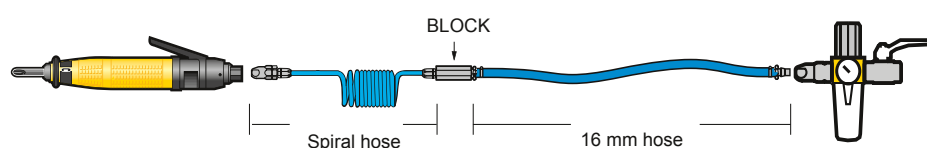
BLOCK has automatic reset. When the air is switched on again the valve in BLOCK opens and is automatically reset.



Selection table using standard hoses

The air flow, hose length and hose sizes must all be within the recommended range in order to choose the correct blow protector. The second hose is only used when hoses longer than 20 m are used. The second hose will always be 20 m and the first hose will be cut to the right length.

Air flow air tool l/s	First hose		Second hose		Shut off air flow l/s	Product	Female thread BSP in	Ordering No.
	length m	size mm	length m	size mm				
0- 5	1- 5	6.3	0	—	7.8	BLOCK 08L	1/4	8202 0100 50
0- 5	6-10	8	0	—	13	BLOCK 08H	1/4	8202 0100 52
0- 8	1- 5	8	0	—	13	BLOCK 08H	1/4	8202 0100 52
0- 8	6-10	10	0	—	13	BLOCK 08H	1/4	8202 0100 52
0-10	1-10	10	0	—	13	BLOCK 08H	1/4	8202 0100 52
0-10	11-20	12.5	0	—	13	BLOCK 08H	1/4	8202 0100 52
0-14	1- 5	10	0	—	18	BLOCK 10L	3/8	8202 0100 54
0-14	6-10	13	0	—	18	BLOCK 10L	3/8	8202 0100 54
0-15	11-20	16	0	—	32	BLOCK 10H	3/8	8202 0100 56
0-25	1- 5	12.5	0	—	32	BLOCK 10H	3/8	8202 0100 56
0-25	6-10	16	0	—	32	BLOCK 10H	3/8	8202 0100 56
0-35	1- 5	12.5	0	—	45	BLOCK 15H	1/2	8202 0100 58
0-35	6-10	16	0	—	45	BLOCK 15H	1/2	8202 0100 58
0-35	11-20	19	0	—	45	BLOCK 15H	1/2	8202 0100 58
0-60	1-10	19	0	—	75	BLOCK 20H	3/4	8202 0100 60
0-60	1-10	19	20	25	75	BLOCK 20H	3/4	8202 0100 60
0-70	1- 7	19	0	25	86	BLOCK 25H	1	8202 0100 62
0-70	8-20	25	0	25	86	BLOCK 25H	1	8202 0100 62
0-70	1-20	25	20	25	86	BLOCK 25H	1	8202 0100 62



Selection table when using spiral hoses and hose balancers

The airflow, spiral hose and hose balancer must all be within recommended range in order to choose the correct BLOCK blow protector.

The second hose, only used when needed, is a 16 mm normal hose with a maximum length of 5 meter. The second hose should be placed between the BLOCK and the FRI unit.

Air flow air tool l/s	Model	Spiral hose or balancer		Shut off air flow l/s	Product	Female thread BSP in	Ordering No.
		Hose length m	Hose size mm				
0- 4	SPI 06-3	2.5	6	8.3	BLOCK 08L	1/4	8202 0100 50
0- 6	HRIL 3	1.4	—	8.3	BLOCK 08L	1/4	8202 0100 50
0- 6	SPI 1S	2.0	6	8.3	BLOCK 08L	1/4	8202 0100 50
0- 6	SPI 2L	6.0	8	8.3	BLOCK 08L	1/4	8202 0100 50
0- 8	HRIL 4	1.1	—	14	BLOCK 08H	1/4	8202 0100 52
0- 8	SPI 09-3	2.5	9	14	BLOCK 08H	1/4	8202 0100 52
0- 8	SPI 2M	4.0	8	14	BLOCK 08H	1/4	8202 0100 52
0-11	SPI 2S	3.0	8	14	BLOCK 08H	1/4	8202 0100 52
0-11	SPI 2L	6.0	11	14	BLOCK 08H	1/4	8202 0100 52
0-15	SPI 3M	4.0	11	19	BLOCK 10L	3/8	8202 0100 54
0-20	SPI 3S	3.0	11	32	BLOCK 10H	3/8	8202 0100 56

CABLAIR hoses**Super-light flexible PVC-hose**

Cablaire is made of high-strength, high performance PVC compound. The Cablaire hose weighs 30-50% less and is much softer and more flexible than conventional PVC hoses. This ensures complete freedom of movement for operators of pneumatic hand tools in any working environment.

- Low weight.
- Extremely soft and flexible.
- Silicone free.
- Ergonomic.
- Working temperature -25°C to +60°C.



Model	Hose inside dia		Hose outside dia		Max working pressure ^a bar	Max rec. air flow ^b l/s	Weight per 30 m coil kg	Ordering No.
	mm	in	mm	in				
CABLAIR 06	6.3	1/4	9		18	4	1.2	9093 0035 11
CABLAIR 08	8	5/16	10.5		18	7.5	1.7	9093 0035 41
CABLAIR 10	10	3/8	13		14	13	2.1	9093 0035 71
CABLAIR 13	12.5	1/2	16.5		13	21	3.0	9093 0036 01
CABLAIR 16	16	5/8	21		11	43	5.4	9093 0036 31
CABLAIR 20	19	3/4	24		11	75	5.8	9093 0036 61
CABLAIR 25	25	1	31		10	125	10.4	9093 0036 91

^a With a safety factor of 3 at 20°C (at the max temp of +60°C the working pressure should be reduced by 50%).

^b The pressure drop will be 0.2 bar on a hose length of 5 m.

CABLAIR ESD**Extra flexible antistatic air hose**

Cablaire ESD is designed specifically for use within the computer manufacturing industry. The hose possesses properties which enable ESDS (electrostatic sensitive devices) to be handled in a protected area with a low risk level, as a result of electrostatic discharge. In addition to a known demand in the computer industry, it is expected that potential exists in the electronics, radio and communication fields. The connection device must be earthed/grounded.

- Extra flexible.
- Antistatic.
- Silicone free.
- Testing in accordance with BS2050:1978 (1998) 4.12.
- Working temperature -15°C to +60°C.



Model	Hose inside dia		Hose outside dia		Max working pressure ^a bar	Max rec. air flow l/s	Weight per 30 m coil kg	Ordering No.
	mm	in	mm	in				
CABLAIR ESD 06	6	1/4	11	7/16	10	4	2.34	8202 0501 06
CABLAIR ESD 08	8	5/16	12	1/2	9	7.5	2.56	8202 0501 08
CABLAIR ESD 10	10	3/8	14	9/16	8	13	2.71	8202 0501 10
CABLAIR ESD 13	13	1/2	18	23/32	7	21	4.41	8202 0501 13

^a With a safety factor of 3 at 20°C (at the max temp of +60°C the working pressure should be reduced by 50%).

PVC hoses

Strong PVC hose for heavy-duty applications

PVC hose has high resistance to abrasion, which makes it the ideal hose for tough working environments such as workshops, factories, garages, etc. It is mainly recommended for indoor use.

- Long service life.
- Pliable.
- Transparent.
- Working temperature -25°C to +60°C.



Model	Hose inside dia		Hose outside dia mm	Max working pressure ^a bar	Max rec. air flow ^b l/s	Weight per 30 m coil kg	Ordering No.
	mm	in					
PVC 03	3.2	1/8	7	20	0.7	1.4	9093 0037 21
PVC 05 ^c	5	3/16	9	18	2.1	1.9	9093 0037 51
PVC 06 ^d	6.3	1/4	11	18	4	2.5	9093 0037 81
PVC 08	8	5/16	12	18	7.5	2.9	9093 0038 11
PVC 10 ^e	10	3/8	14	14	13	3.7	9093 0038 41
PVC 13	12.5	1/2	18	13	21	5.9	9093 0038 71
PVC 16	16	5/8	22	12	43	7.2	9093 0039 01
PVC 20	19	3/4	25	12	75	8.3	9093 0039 31
PVC 25	25	1	32	11	125	12.5	9093 0039 61

^a With a safety factor of 3 at 20°C (at the max temp of +60°C the working pressure should be reduced by 50%).

^b The pressure drop will be 0.2 bar on a hose length of 5 m.

POLUR

High resistant polyurethane hose

Polur hose is the most environmentally friendly solution. It has high resistance to abrasion and it is oil resistant. Polur hose has a much longer lifetime than PVC hoses. Polur is ideal in tough working conditions such as workshops, factories, garages, shipyards and construction sites due to its flexibility, even at minus degrees. Polur is recommended for indoor and outdoor use.

- Oil resistant.
- Flexible.
- Long service life.
- Working temperature -30°C to +80°C.



Model	Hose inside dia		Hose outside dia mm	Max working pressure ^a bar	Max rec. air flow ^b l/s	Weight per 25 m coil kg	Ordering No.
	mm	in					
POLUR 08	8	5/16	12	20	7.5	2.2	8202 0601 08
POLUR 10	10	3/8	14	16	13	2.5	8202 0602 10
POLUR 13	13	1/2	18	13	21	4.0	8202 0603 13

^a With a safety factor of 3 at 20°C (at the max temp of +60°C the working pressure should be reduced by 50%).

^b The pressure drop will be 0.2 bar on a hose length of 5 m, including 2 nipples and at an inlet pressure of 7 bar.

TURBO

Super-light flexible rubber hose

Turbo hose has been developed for flexible use both indoor and outdoor. The hose weighs 30-40% less than conventional rubber hoses, making it ideal for foundries, shipyards, engineering workshops and construction sites. Turbo hose is oil resistant.

- Extremely low weight.
- Soft and flexible.
- Antistatic.
- Grinding and welding spatter resistant.
- Working temperature -40°C to +90°C.



Model	Hose inside dia		Hose outside dia mm	Max working pressure ^a bar	Max rec. air flow ^b l/s	Weight per 20 m coil kg	Ordering No.
	mm	in					
TURBO 13	12.5	1/2	18.6	16	21	3.9	9093 0057 91
TURBO 16	16.5	5/8	22.5	16	43	4.8	9093 0057 31
TURBO 20	20.1	3/4	26.1	16	75	5.4	9093 0057 61

^a With a safety factor of 4 at 20°C.

^b The pressure drop will be 0.2 bar on a hose length of 5 m, including 2 nipples and at an inlet pressure of 7 bar.

RUBAIR

Durable reinforced heavy duty rubber hose

Rubair hose is double reinforced to fulfil all general heavy duty demands and is recommended for indoor and outdoor use. Rubair hose is oil resistant.

- Durable.
- Antistatic.
- Grinding and welding spatter resistant.
- Working temperature -40°C to +90°C.



Model	Hose inside dia		Hose outside dia mm	Max working pressure ^a bar	Max rec. air flow ^b l/s	Weight per 20 m coil kg	Ordering No.
	mm	in					
RUBAIR 06	6.3	1/4	11.3	16	4	2.0	8202 0401 06
RUBAIR 10	10	3/8	16.0	16	13	3.6	8202 0402 10
RUBAIR 13	12.5	1/2	19.1	16	21	4.7	8202 0403 13
RUBAIR 16	16	5/8	23.0	16	43	6.1	8202 0404 16
RUBAIR 20	20	3/4	26.6	16	75	7.8	8202 0405 20
RUBAIR 25	25	1	34.0	16	125	11.8	8202 0406 25

^a With a safety factor of 5 at 20°C.

^b The pressure drop will be 0.2 bar on a hose length of 5 m, including 2 nipples and at an inlet pressure of 7 bar.

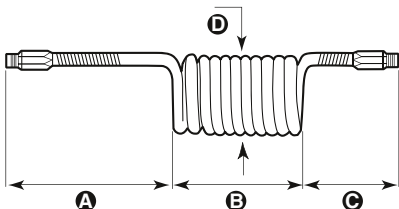
SPI
Elastic hose for vertical and horizontal applications

SPI elastic spiral hose is ideal for air tools used at varying distances from a fixed air outlet. It is easily stretched and retracts immediately when released. When used with hand tools, its self-storage principle ensures that the hose is kept off the floor and out of the way of the operator. The SPI 1 and SPI 2 have ball bearing swivels fitted on the long hose side to allow 360° rotation. All spiral hoses, except the SPI4, are fitted with plastic spring guard. SPI is the ideal hose in combination with a balancer.

- Self-retractable.
- Light and flexible.
- Strong and durable.
- Tubing material: Polyurethane (100% PUR).
- Hardness: Shore A 98 +2.
- Colour: Blue.
- Working pressure: 8 bar at 23°C.
- Burst pressure: 25 bar at 23°C.
- Temperature range: -40°C to +70°C.



Dimensions



Model	Hose inside dia mm	Hose outside dia mm	Max. rec. air flow ^a l/s	Working range m	Length			Max spiral dia (D) mm	Male threads in BSP	Ordering No.
					(A) mm	(B) mm	(C) mm			
SPI 1SPSW-S	6.5	10	7	2	500	165	150	55	1/4	8202 0508 71
SPI 1SPSW-M	6.5	10	5	4	500	330	150	55	1/4	8202 0508 73
SPI 2SPSW-S	8	12	13	2	500	130	150	70	3/8	8202 0508 75
SPI 2SPSW-M	8	12	10	4	500	270	150	70	3/8	8202 0508 77
SPI 2SPSW-L	8	12	9	6	500	435	150	70	3/8	8202 0508 79
SPI 2SPSW-XL	8	12	6	8	500	600	150	70	3/8	8202 0508 81
SPI 3SP-S	11	16	25	2	500	185	150	98	3/8	8202 0508 82
SPI 3SP-M	11	16	22	4	500	250	150	98	3/8	8202 0508 84
SPI 3SP-L	11	16	17	6	500	390	150	98	3/8	8202 0508 86
SPI 3SP-XL	11	16	13	8	500	550	150	98	3/8	8202 0508 88
SPI 4SP-XXL	13	19	25	10	500	850	500	115	3/8	8202 0508 90

^a At inlet pressure 6 bar and pressure drop 0.5 bar.

Productivity kits boost productivity, extend tool lifetime and ensure minimum pressure drop.

Each productivity kit includes ball valve, air preparation unit, and the couplings, hose and nipples needed for correct and safe installation of the tool.

Just choose the correct productivity kit based on the air flow requirement of the tool and whether the tool needs lubrication or not. You'll be surprised how much the productivity kit improves the performance of the tool.

- Improves the performance of the tool.
- Fast and easy installation.
- Extends tool lifetime.



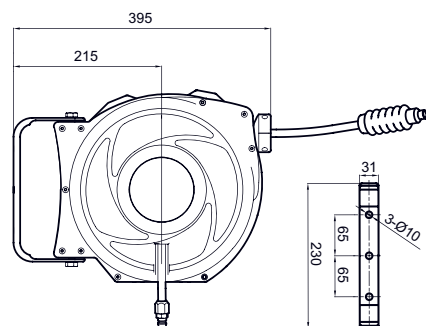
Model	Max air flow	Hose	Coupling	Lubrication	Ordering No.
For small screwdrivers and small drills with 1/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C06-1/8	6 l/s	Cablaire 6 mm	ErgoQIC 08	Yes	8202 0850 10
MIDI Optimizer F/R EQ08-C06-1/8	6 l/s	Cablaire 6 mm	ErgoQIC 08	No	8202 0850 19
For small screwdrivers and small drills with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C06	6 l/s	Cablaire 6 mm	ErgoQIC 08	Yes	8202 0850 06
For screwdrivers, small impacts and drills with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	Yes	8202 0850 00
MIDI Optimizer F/R EQ08-C08	9 l/s	Cablaire 8 mm	ErgoQIC 08	No	8202 0850 01
For 1/2" impact wrenches, pulse tools, drills and small nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 07
For 1/2" impact wrenches, pulse tools and small nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ08-C10	16 l/s	Cablaire 10 mm	ErgoQIC 08	Yes	8202 0850 03
MIDI Optimizer F/RD EQ10-R10	16 l/s	Rubair 10 mm	ErgoQIC 10	Yes	8202 0850 16
For percussive tools and grinders with 3/8" BSP air inlet incl. whiphose					
MIDI Optimizer F/RD EQ10-R13-W	23 l/s	Rubair 13 mm	ErgoQIC 10	Yes	8202 0850 14
For percussive tools and grinders, incl. whiphose, no tool nipple included					
MIDI Optimizer F/RD EQ10-R13-W	23 l/s	Rubair 13 mm	ErgoQIC 10	Yes	8202 0850 15
For impact wrenches, pulse tools, drills and nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 02
For impacts, pulse tools, drills and nutrunners with 1/4" BSP air inlet					
MIDI Optimizer F/RD EQ10-C13-1/4	23 l/s	Cablaire 13 mm	ErgoQIC 10	Yes	8202 0850 11
For grinders, impacts and nutrunners with 3/8" BSP air inlet					
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 17
For grinders, impacts and nutrunners with 1/2" BSP air inlet					
MIDI Optimizer F/R EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	No	8202 0850 04
MIDI Optimizer F/RD EQ10-T13	35 l/s	Turbo 13 mm	ErgoQIC 10	Yes	8202 0850 13
For grinders with 1/2" BSP air inlet					
MIDI Optimizer F/RD EQ10-T16	40 l/s	Turbo 16 mm	ErgoQIC 10	Yes	8202 0850 12
For large Turbo grinders with 1/2" BSP air inlet					
MAXI F/R C-T16	60 l/s	Turbo 16 mm	Claw	No	8202 0850 05
For large Turbo grinders with 1/2" BSP air inlet					
MAXI F/RD C-T20	65 l/s	Turbo 20 mm	Claw	No	8202 0850 20

HM LIGHT

The HM Light has a composite casing and a highly wear and oil resistant PUR hose. The HM Light hose reel is recommended for small screwdrivers and small pulse tools.

- Revolving hinge for flexible use.
- Light and compact.
- Kink resistant PUR-hose.
- Working temperature: -30°C - +60°C.
- Max working pressure is 20 bar.
- Inlet hose length: 0.9 m.

Dimensions



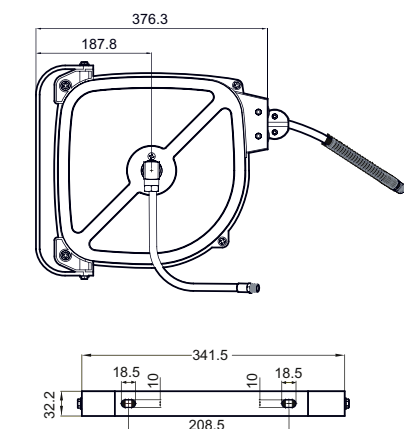
Model	Length m	Hose	Hose inside dia		Connection inlet BSP male	Connection distribution hose BSP male	Air flow l/s	Weight kg	Ordering No.
			mm	in					
HM LIGHT	8	PUR	8	5/16	1/4"	1/4"	10	4.5	8202 1180 92
HM LIGHT	10	PUR	8	5/16	1/4"	1/4"	9	4.5	8202 1180 91

HM FLEX

The HM FLEX has a high quality, compact steel casing and is recommended for small and medium screwdrivers, small and medium pulse tools, small drills, impact wrenches up to 1/2" size, small grinders and riveting and chipping hammers.

- HM FLEX Grinding with spatter resistant rubber hose.
- Revolving hinge for flexible use.
- Strong and durable.
- Working temperature: -30°C - +60°C.
- Max working pressure: 20 bar.
- Inlet hose length: 1.5 m.

Dimensions



Model	Length m	Hose	Hose inside dia		Connection inlet BSP male	Connection distribution hose BSP male	Air flow l/s	Weight kg	Ordering No.
			mm	in					
HM FLEX Grinding	8	Rubber	8	5/16	1/4"	1/4"	9	8.5	8202 1181 02
HM FLEX	10	PUR	10	3/8"	1/4"	1/4"	14	8.5	8202 1181 00

HM OPEN FLEX

Hose reels in the HM Open Flex series have an open steel casing and 10 mm or 13 mm hose. HM Open Flex hose reels are recommended for screwdrivers, impact wrenches, pulse tools, drills, chipping and riveting hammers and grinders up to 1000 W.

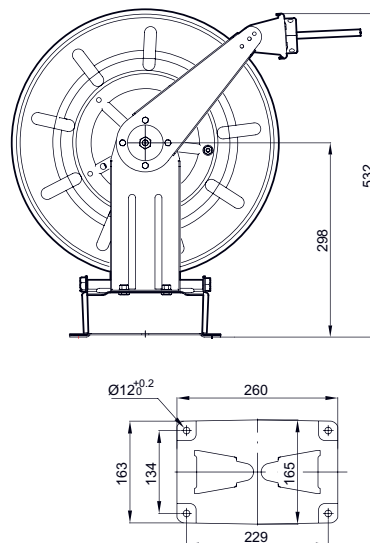
- Kink resistant PUR hose or spatter resistant rubber hose.
- Floor, wall or ceiling mounting.
- Revolving hinge for flexible use.
- Working temperature: -30°C - +60°C.
- Max working pressure: 20 bar.
- Inlet hose length: 1.5 m.



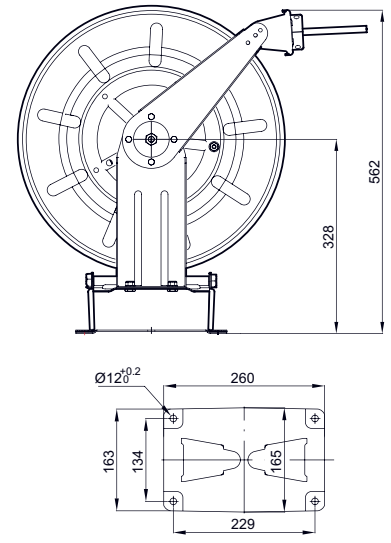
Model	Length m	Hose	Hose inside dia		Connection inlet BSP male	Connection distribution hose BSP male	Air flow l/s	Weight kg	Ordering No.
			mm	in					
HM OPEN FLEX	10	PUR	10	3/8	1/4	1/4	12	10.5	8202 1181 12
HM OPEN FLEX	15	PUR	10	3/8	1/4	1/4	8	11	8202 1181 10
HM OPEN FLEX	15	Rubber	10	3/8	1/4	1/4	8	11	8202 1181 09
HM OPEN FLEX L	10	PUR	13	1/2	1/2	1/2	16	13	8202 1181 22
HM OPEN FLEX L	15	PUR	13	1/2	1/2	1/2	14	14	8202 1181 20
HM OPEN FLEX L	15	Rubber	13	1/2	1/2	1/2	14	14	8202 1181 14

Dimensions

HM OPEN FLEX



HM OPEN FLEX L



Hose Reels

HM Flex L, HM Turbo, HM XL

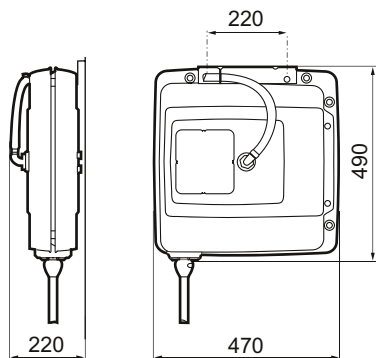
HM FLEX L

The HM FLEX L, with a steel casing and high quality rubber hose, handles both air and water. The HM FLEX L is recommended for all screwdrivers, pulse tools, impact wrenches, drills, chipping tools and riveting hammers and grinders up to 1000 W.

- NBR rubber hose.
- Movable brackets for floor, wall and ceiling mounting.
- High flow capacity.
- Working temperature: -30°C - +60°C.
- Max working pressure is 15 bar.
- Inlet hose length: 1 m.



Dimensions



Model	Length m	Hose	Hose inside dia		Connection inlet BSP male	Connection distribution hose BSP male		Air flow l/s	Weight kg	Ordering No.
			mm	in						
HM FLEX L	10	Rubber	12.5	1/2"	1/2"	1/2"		22	16	8202 1181 56

HM TURBO and HM XL

The HM Turbo and HM XL have an open steel casing with 20 mm Turbo hose or 25 mm rubber hose. The HM Turbo and HM XL are recommended for use with high powered grinders.

- Spatter resistant hoses.
- Extremely high flow capacity.
- Floor, wall or ceiling mounting.
- Revolving hinge for flexible use.
- Working temperature: -30°C - +60°C.
- Max working pressure: 20 bar.
- No hose, inlet coupling on casing.



Dimensions

Model	L	H	W
HM TURBO	660	765	340

Model	Length m	Hose	Hose inside dia		Connection inlet BSP male	Connection distribution hose BSP male		Air flow l/s	Weight kg	Ordering No.
			mm	in						
HM Turbo	20	TURBO	20	3/4"	3/4"	No thread		50	42	8202 1181 30
HM XL	15	Rubber	25	1"	1"	No thread		60	42	8202 1181 33

Hose reel balancer – HRIL

Models in the HRIL range of hose reel balancers are specifically designed for use with small pneumatic hand tools.

The integrated air hose and support cable ensure the work area is kept tidy and the tool is easy to control.

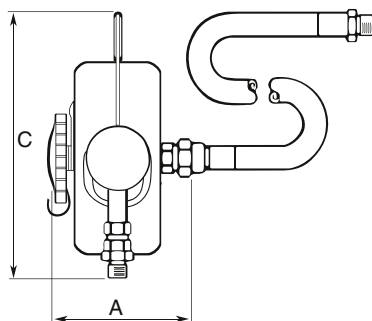
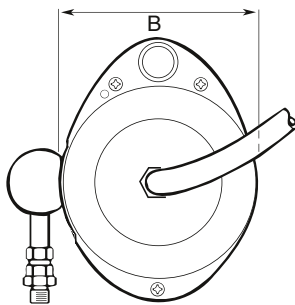
- Ergonomics – The retraction force over hose travel remains almost constant which minimizes load on the operator and ensures smooth operation.
- An easily adjusted rubber stop is fitted on the hose which allows the tool to be set at the optimum position.
- The retraction force is easily adjustable by means of a hand wheel on the rear casing (this can be removed if desired, once the retraction force is set).
- Long service life – The design features a rugged casing, self lubricating spindle bearing bushes and a 360 degrees rotary inlet connector.
- A durable hose is fitted with additional protection to prevent excessive bending around air connectors.
- Low pressure drop – The HRIL balancers have very good flow characteristics.



Model	Capacity range		Max rec. air flow ^a l/s	Hose travel m	Weight		Max working pressure bar	Dimensions			Ordering No.
	kg	lb			kg	lb		A	B	C	
HRIL 1	0.2-0.5	0.4-1.1	3.5	1.2	1.2	2.6	10	92	132	173	8202 0600 03
HRIL 3	0.5-1.4	1.1-3.1	5.5	1.0	1.2	2.6	10	92	132	173	8202 0600 11
HRIL 4	0.7-2.0	1.5-4.4	6.5	1.0	1.4	3.1	10	92	132	173	8202 0600 29

^a At inlet pressure of 6 bar pressure drop is 0.4 bar.

Dimensions



Air line fittings

All models have a BSP 1/4" inlet fitting.

HRIL 1 supplied with M5 and BSP 1/8" outlet fittings.

HRIL 3 supplied with BSP 1/8" and BSP 1/4" outlet fittings.

HRIL 4 supplied with BSP 1/4" outlet fitting.

Optional Accessories

Designation	Ordering No.
Conversion kit for air inlet from below, - HRIL 3, HRIL 4	4390 1687 90
Safety chain	4391 4045 90

COLIBRI – COL

Balancers in the unique COL range hold the load and keep it weightless throughout the entire cable length.

Productivity

COL balancers always hold the tool in the correct position

Ergonomic

COL balancers reduce the stress level in the operator's muscles.

Safety

The load is not pulled back when released and the surroundings are protected from accidental hoisting of the load.

The cable locks in the event of spring failure (downward braking power).

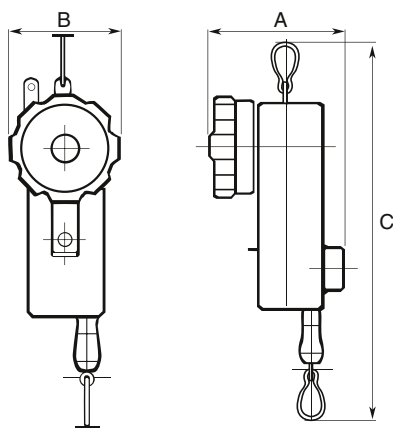
In all models the braking function can be activated upwards by using the “bow and arrow” principle if you need to slacken the cable to change the tool.

COLIBRI S

The COL S models feature an extra safety brake mechanism (double braking system) for applications with extremely high safety requirements.



Dimensions



Model	Capacity range		Cable length m	Weight		Dimensions			Ordering No.
	kg	lb		kg	lb	A mm	B mm	C mm	
COL 1 01	0.7 - 1.3	1.5 - 2.9	1.7	0.5	1.1	108	72	245	8202 0750 01
COL 1 02	1.0 - 2.0	2.2 - 4.4	1.7	0.5	1.1	108	72	245	8202 0750 19
COL 2 03	1.7 - 3.5	3.7 - 7.7	2.4	2.3	5.1	155	116	427	8202 0750 27
COL 2 04	3.0 - 6.0	6.6 - 13.2	2.4	2.3	5.1	155	116	427	8202 0750 35
COL 2 05	4.7 - 7.0	10.4 - 15.4	2.4	2.5	5.5	155	116	427	8202 0750 43
COL 3 07	5.5 - 9.0	12.1 - 19.8	2.4	3.3	7.3	196	116	427	8202 0750 50
COL 3 10	8.0 - 13.0	17.6 - 28.7	2.4	3.4	7.5	196	116	427	8202 0750 68
COL 3 15	12.5 - 17.0	27.6 - 37.5	2.4	3.8	8.4	196	116	427	8202 0750 76
COL 4 18	14.0 - 22.0	30.9 - 48.5	2.4	13.2	29.1	244	193	620	8202 0774 11
COL 4 22	17.0 - 28.0	37.4 - 61.7	2.4	13.9	30.6	244	193	620	8202 0750 84
COL 4 30	24.0 - 38.0	52.9 - 83.8	2.4	14.5	32.0	244	193	620	8202 0750 92
COL 4 42	36.0 - 49.0	79.4 - 107.8	2.4	14.9	32.8	244	193	620	8202 0751 00
COL 4 50	43.0 - 55.0	98.4 - 121.3	2.4	15.3	33.7	244	193	620	8202 0751 18
Safety brake									
COL 2 03S	1.7 - 3.5	3.7 - 7.7	2.4	2.3	5.1	155	116	427	8202 0775 93
COL 2 04S	3.0 - 6.0	6.6 - 13.2	2.4	2.3	5.1	155	116	427	8202 0776 01
COL 2 05S	4.7 - 7.0	10.4 - 15.4	2.4	2.5	5.3	155	116	427	8202 0776 19
COL 3 07S	5.5 - 9.0	12.1 - 19.8	2.4	3.3	7.3	196	116	427	8202 0776 27
COL 3 10S	8.0 - 13.0	17.6 - 28.7	2.4	3.4	7.5	196	116	427	8202 0776 35
COL 3 15S	12.5 - 17.0	27.6 - 37.5	2.4	3.8	8.4	196	116	427	8202 0776 43

Optional Accessories

Safety chain

	Ordering No.
COL 1	4391 4045 90
COL 2 and 3	4391 4046 90
COL 4	4391 4047 90

RIL balancer

RIL balancers always keep the tool in place, handy and easily accessible. RIL balancers are available as retractors or weightless positioning balancers.

RIL Retractors

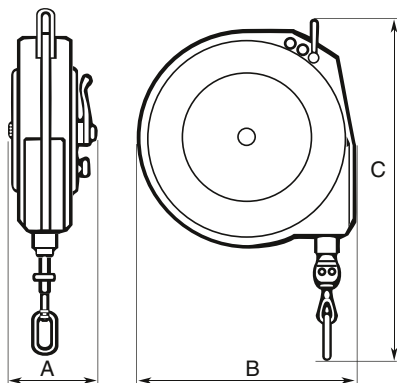
- Adjustable wire stop.
- High quality spring and construction.
- Load range 0 to 10 kg.

RIL Weightless positioning

- Adjustable wire stop.
- Automatic safety lock.
- Load range 5 to 107 kg.



Dimensions



Model	Capacity range		Cable length m	Weight		Dimensions			Ordering No.
	kg	lb		kg	lb	A mm	B mm	C mm	
Retractors									
RIL 1C	0.0 - 0.5	0.0 - 1.7	1.5	0.6	1.3	51	106	238	8202 0700 02
RIL 2C	0.4 - 1.0	0.9 - 2.2	1.5	0.6	1.3	51	106	238	8202 0701 19
RIL 4C	1.0 - 2.0	2.2 - 4.4	1.5	0.6	1.3	51	106	238	8202 0702 18
RIL 5C	1.4 - 2.3	3.1 - 5.1	1.5	0.6	1.3	51	106	238	8202 0703 25
RIL 5	0.4 - 2.3	0.9 - 5.1	2.4	2.0	4.4	70	157	308	8202 0703 09
RIL 5LR ^b	0.4 - 2.3	0.9 - 5.1	2.4	2.0	4.4	70	157	308	8202 0703 15
RIL 10C	2.0 - 5.0	4.4 - 11.0	2.4	2.7	6.0	84	190	369	8202 0704 16
RIL 10CS ^a	2.0 - 5.0	4.4 - 11.0	2.4	2.7	6.0	84	190	369	8202 0704 20
RIL 15C	5.0 - 7.0	11.0 - 15.4	2.4	3.2	7.1	84	190	369	8202 0705 15
RIL 15CS ^a	5.0 - 7.0	11.0 - 15.4	2.4	3.2	7.1	84	190	369	8202 0705 20
RIL 22C	6.0 - 10.0	13.2 - 22.0	2.4	3.2	7.1	84	190	369	8202 0706 14
RIL 22CS ^a	6.0 - 10.0	13.2 - 22.0	2.4	3.2	7.1	84	190	369	8202 0706 20
Weightless positioning									
RIL 20 ^a	5 - 9	15 - 20	1.8	7.2	15.9	178	203	495	8202 0707 05
RIL 30 ^a	9 - 14	20 - 31	1.8	7.2	15.9	178	203	495	8202 0708 04
RIL 40 ^a	13 - 18	29 - 40	1.8	7.2	15.9	178	203	495	8202 0709 03
RIL 50JA ^a	18 - 25	40 - 55	2.1	15	33	191	305	711	8202 0713 07
RIL 50A ^a	18 - 23	40 - 51	1.8	7.5	16.5	178	203	495	8202 0728 00
RIL 60JA ^a	24 - 29	53 - 64	2.1	15	33	191	305	711	8202 0714 06
RIL 60A ^a	23 - 30	51 - 57	1.8	7.5	16.5	178	203	495	8202 0729 09
RIL 70JA ^a	24 - 32	53 - 71	2.1	15	33	191	305	711	8202 0715 05
RIL 80JA ^a	31 - 39	68 - 86	2.1	15	33	191	305	711	8202 0716 04
RIL 90JA ^a	36 - 41	79 - 90	2.1	15	33	191	305	711	8202 0717 03
RIL 100JA ^a	40 - 45	88 - 99	2.1	15	33	191	305	711	8202 0718 02
RIL 110KA ^a	38 - 52	84 - 115	2.1	24	53	260	305	711	8202 0719 01
RIL 120KA ^a	52 - 57	115 - 126	2.1	24	53	260	305	711	8202 0720 08
RIL 130KA ^a	56 - 61	123 - 135	2.1	24	53	260	305	711	8202 0721 07
RIL 140KA ^a	61 - 66	135 - 146	2.1	24	53	260	305	711	8202 0722 06
RIL 150KA ^a	65 - 70	143 - 154	2.1	24	53	260	305	711	8202 0723 05
RIL 160KA ^a	70 - 75	153 - 165	2.1	24	53	260	305	711	8202 0724 04
RIL 170KA ^a	72 - 79	159 - 171	2.1	24	53	260	305	711	8202 0725 03
RIL 190KA ^a	79 - 88	174 - 194	2.1	24	53	260	305	711	8202 0726 02
RIL 200KA ^a	86 - 91	190 - 201	2.1	24	53	260	305	711	8202 0727 01
RIL 230LA ^a	95 - 107	209 - 236	2.1	37	82	359	292	711	8202 0731 05

^a Balancer equipped with automatic safety drum lock in case of spring failure.

^b Contains a lock ratchet to lock the cable in increments along its entire length.

Optional Accessories

Safety chain

	Ordering No.
1C, 2C, 4C and 5C	4391 4045 90
10C ^a , 15C ^a and 22C ^a	4391 4156 00
5, 20, 30, 40	4391 4046 90
50A and 60A	4391 4047 90
JA, KA and LA	4390 1543 00

^a Safety chain included.

WP balancer

Weightless positioning balancers with a cone-shaped drum hold the load and keep it weightless throughout the entire cable length.

Productivity

WP balancers always hold the tool in the correct position and minimize worker fatigue

Ergonomic

WP balancers reduce stress level in the operator's muscles.

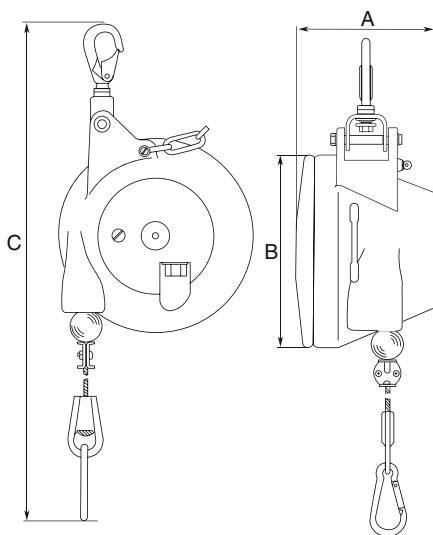
Safety

The load is not pulled back when released and the environment is protected from accidental hoisting of the load.

- Steel cable with cable stop buffer.
- Safety chain.
- Quick and easy cable replacement.



Dimensions



Model	Capacity range		Cable length m	Weight		Dimension in			Ordering No.
	kg	lb		kg	lb	A mm	B mm	C mm	
WP 10-3	3 - 5	6.6 - 11	2	2.9	6.4	129.5	188	520.7	8202 0779 00
WP 10-4.5	4.5 - 7	10 - 15.4	2	3.1	6.8	129.5	188	520.7	8202 0779 01
WP 10-6	6 - 10	13 - 22	2	3.2	7.0	129.5	188	520.7	8202 0779 02
WP 10-9	9 - 14	20 - 31	2	3.4	7.5	129.5	188	520.7	8202 0779 03
WP 10-13	13 - 17	29 - 37	2	3.6	8.0	129.5	188	520.7	8202 0779 04
WP 10-16	16 - 21	35 - 46	2	3.8	8.4	129.5	188	520.7	8202 0779 05
WP 20-15	15 - 25	33 - 55	2	7.8	17.2	152.4	218.4	520.7	8202 0780 00
WP 20-25	25 - 35	55 - 77	2	8.9	19.6	152.4	218.4	520.7	8202 0780 01
WP 20-35	35 - 45	77 - 99	2	9.5	21.0	152.4	218.4	520.7	8202 0780 02
WP 20-45	45 - 55	99 - 121	2	9.8	21.5	152.4	218.4	520.7	8202 0780 03
WP 30-12	12 - 20	26 - 44	2	14.8	32.6	203.2	284.5	749.3	8202 0781 00
WP 30-20	20 - 30	44 - 66	2	15.2	33.5	203.2	284.5	749.3	8202 0781 01
WP 30-30	30 - 45	66 - 99	2	16.9	37.3	203.2	284.5	749.3	8202 0781 02
WP 30-45	45 - 60	99 - 132	2	17.3	38.1	203.2	284.5	749.3	8202 0781 03
WP 30-60	60 - 75	132 - 165	2	18.7	41.2	203.2	284.5	749.3	8202 0781 04
WP 30-75	75 - 90	165 - 198	2	19.7	43.4	203.2	284.5	749.3	8202 0781 05
WP 30-90	90 - 100	198 - 220	2	19.9	43.4	203.2	284.5	749.3	8202 0781 06
WP 40-100	100 - 115	220 - 254	3	42.0	43.9	348	320	800	8202 0782 00
WP 40-115	115 - 130	254 - 287	3	44.0	97.0	348	320	800	8202 0782 01
WP 40-130	130 - 140	287 - 309	3	46.0	101	348	320	800	8202 0782 02
WP 40-140	140 - 150	309 - 331	3	48.0	106	348	320	800	8202 0782 03

Atlas Copco blow guns are a hard-wearing, user-friendly solution for all cleaning applications. Their plastic bodies offer flexibility in handling for both right and left-handed users, insulate against cold and reduce the risk of scratches to work surfaces. Both blow guns have excellent throttling properties allowing easy regulation of the air flow.

ErgoGUN B2602

The ErgoGUN B2602 is available with two different nozzles. ErgoGUN B2602 with star-tip nozzle with silencing effect and ErgoGUN B2602-HF for high flow demands.

- Ergonomic handle
- Lightweight design
- Exchangeable tubes
- High blowing force

GUN

The Atlas Copco blow gun GUN is available in three different models. GUN F06A for high flow demands, GUN F06A-S with safety nozzle and GUN F06A-SS with a combined safety/silencer nozzle with silencing effect.

- Strong and durable
- Easily regulated flow
- Exchangeable nozzles



Model	Max working pressure bar	Max working temperature °C	Blow force N	Air flow l/s	Weight		Air inlet thread BSP	Ordering No.
					kg	lb		
GUN F06A-SS, safety/silencer nozzle	10	+50	2	3.8	0.16	0.35	1/4"	8202 1005 69
GUN F06A-S, safety nozzle	10	+50	4	7.0	0.15	0.33	1/4"	8202 1005 51
GUN F06A	10	+50	4	7.0	0.14	0.31	1/4"	8202 1005 28
ErgoGUN 2602, star-tip	16	+60	2.2	3.1	0.11	0.25	1/4"	8202 1006 10
ErgoGUN 2602-HF, high flow	16	+60	4.3	8.5	0.11	0.25	1/4"	8202 1006 11

Optional Accessories

For GUN F06

	Ordering No.
Transparent guard	9090 1886 90
Holder for suspension	9090 1808 80
Hose nipple	9000 0241 00
Safety/Silencer nozzle	9090 1809 81
Safety nozzle	9090 1809 80



Transparent guard



Holder for suspension

For ErgoGUN F06

	Ordering No.
Extension tube	
HF 300 mm, 6.3 l/s	8202 1006 30
HF 500 mm, 6.3 l/s	8202 1006 31

Test Equipment

Air tool simulator

In order to check whether the pressure or the flow is sufficient the air tool simulator can be connected instead of the tool. The simulator is delivered with different connections.

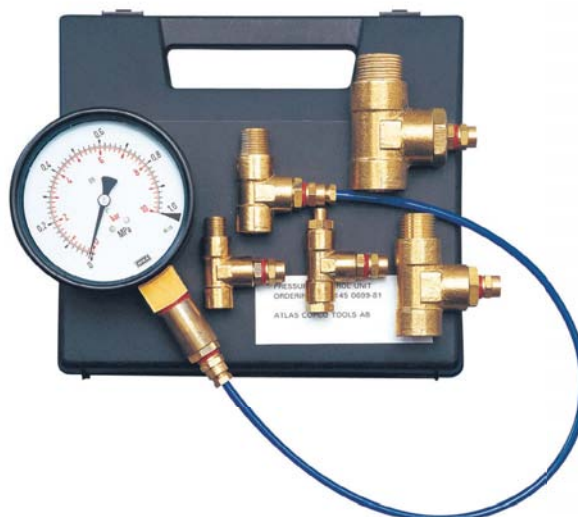
Ordering No. 4145 0698 81.



Pressure control unit

The unit consists of a high quality pressure gauge and the necessary couplings for checking the air pressure at the air inlet of the machine.

Ordering No. 4145 0699 81.



Air leakage detector

The air leakage detector is used to find leaks (e.g. in compressed air installations, vacuum installations, etc.) It works by "listening" on a frequency band normally containing no interference and non-audible for humans (>20kHz). Leaking compressed air or electrical flashover (sparks) generate, e.g. ultrasonic sound.

The equipment is delivered in a suitcase and consists of: Detecting device, headphone set and directional probe.

Ordering No. 8202 9002 00.





Air Motors

Contents	Page
Vane air motors	310
LZB vane air motors	311
LZL vane air motors.....	311
Air motor support.....	312

Introduction – Vane Air Motors

Air motors from Atlas Copco – the reliable, cost-effective solution when applying power to rotating machines. Consider the air motor features and characteristics giving large benefits to the designer.

- Power-to-weight performance that is superior to most other motors, in fact, 75% lighter and 85% smaller than an asynchronous electric motor with the same output.
- Can be held stalled at full torque indefinitely, and accepts repeated starting and stopping without limitation.
- Torque, speed and direction of rotation can be changed easily using simple control methods.
- Output that automatically adjusts to match the applied load.
- Controllable over a wide speed range.
- Ideal for many applications in hazardous or hostile environments.
- Smooth start-up to minimize “shock” loading on transmission components.
- Unaffected by, and will not generate, electrical interference.



Features for LZB motors

Lubrication-free air motors for sensitive processes where hygienic operation is crucial

Equipped with low friction vanes and sealed bearings the lubrication-free motors release no lubricants into the air. They offer a viable drive solution for sensitive processes and hygienic environments where oil contamination would be at best a problem and, at worst, a catastrophe.

Stainless steel air motors for harsh and aggressive environments

The stainless steel air motors are ideal for harsh or even aggressive environments where hygiene is essential. They have a “clean” design with no pockets where dirt can collect. They are fitted with double shaft seals to prevent water from entering the gears. Lubrication-free versions are also available.

High torque air motors when a real workhorse is needed

Fitted with extra strong planetary gears the high torque air motors provide torques up to 680 Nm. The gears are dimensioned to stand being loaded at full stall torque indefinitely. Despite their strength the high torque air motors are compact compared to solutions with helical or worm gears. Lubrication-free versions are also available.

Customized air motors to your individual specifications

Whatever the requirement, Atlas Copco is always happy to help customers find solutions to their special needs. For OEMs, for instance, a customized air motor can be the most efficient solution when integrating an air motor into a machine or a tool. Special motors may have unique casings or mounting arrangements. They may utilize non-standard materials or surface coatings and be designed to achieve a specific output.

For more information on Atlas Copco vane motors see our air motor catalogue, Ordering No. 9833 8998 01.



Explosion proof certified versions

Our air motors are available in explosion proof certified versions, in compliance with the European Union's ATEX Directive on equipment for potentially explosive environments.

LZB**0.1 – 1.2 kW**

The Atlas Copco LZB vane air motors are compact in design, light in weight and available in a host of different gear ratios to meet a variety of speed requirements. They are particularly suited to be built into hand held machines and also many different types of industrial equipment.



	Max output		Speed at max output r/min	Torque at max output		Min start torque		Free speed r/min	No. of gear ratios	Motor diameter	
Model	kW	hp		Nm	ft lb	Nm	ft lb			mm	in
Non-reversible											
LZB14	0.16	0.22	330 - 9100	0.17 - 4.7	0.12 - 3.4	0.26 - 7	0.19 - 5.1	690 - 19500	5	27	1.1
LZB22	0.25	0.34	235 - 9600	0.25 - 9.9	0.18 - 7.3	0.45 - 17	0.33 - 12.5	510 - 21500	7	36	1.4
LZB33	0.39	0.52	10 - 9400	0.40 - 340	0.30 - 251	0.76 - 680	0.56 - 501	21 - 20000	17	42	1.6
LZB42	0.65	0.87	25 - 10500	0.59 - 236	0.44 - 174	1.10 - 430	0.80 - 315	50 - 21000	12	46	1.8
LZB46	0.84	1.13	25 - 10800	0.74 - 300	0.55 - 220	1.20 - 490	0.88 - 360	50 - 21000	12	46	1.8
LZB54	1.20	1.60	65 - 9300	1.20 - 175	0.88 - 129	1.80 - 250	1.30 - 180	125 - 18000	10	60	2.4
Reversible											
LZB14	0.10	0.14	230 - 6500	0.15 - 4.1	0.11 - 3.0	0.19 - 5	0.14 - 3.7	460 - 13000	5	27	1.1
LZB22	0.16	0.22	5 - 6500	0.24 - 10.8	0.18 - 8	0.35 - 13.4	0.26 - 9.9	5 - 13800	9	36	1.4
LZB33	0.24	0.32	7 - 7000	0.34 - 305	0.25 - 225	0.46 - 412	0.34 - 304	5 - 14000	21	42	1.6
LZB42	0.53	0.71	19 - 8100	0.62 - 250	0.46 - 184	0.70 - 270	0.52 - 200	37 - 16000	12	46	1.8
LZB46	0.62	0.83	20 - 8600	0.68 - 275	0.50 - 200	0.75 - 300	0.55 - 220	40 - 17000	12	46	1.8
LZB54	0.82	1.10	45 - 6800	1.20 - 165	0.88 - 122	1.20 - 165	0.88 - 122	90 - 13000	10	60	2.4

The LZB14, LZB22 and LZB33 models are available in lubrication-free versions. LZB14, LZB22 and LZB33 can be obtained in a stainless steel version. The standard non-reversible motors have clockwise rotation but can also be obtained with anti-clockwise rotation.

LZL**1.3 – 6.5 kW**

The Atlas Copco LZL vane motors are reversible air motors which have been designed to offer outstanding starting and low speed performance. These general purpose motors are powerful, durable and offer long service life.



Model	Torque at half free speed		Stall torque		Air consumption at half free speed ^a		Free speed r/min	Weight	
	Nm	ft lb	Nm	ft lb	l/s	cfm		kg	lb
LZL03 M	1.5	1.1	3.2	2.35	16	34	5800	2.9	6.4
LZL05 M	3	2.2	6	4.4	23	49	5000	3.9	8.6

^a Note that the air consumption in a typical mixing application normally is less than 50% of the values in the table.

LZL 03/05M – EX certified according to ATEX directive Ex II 2G T5 IIC D85° C.

LZL 03/05 available with IEC and Nema flange.

	Max output		Speed at max output r/min	Torque at max output		Min start torque		Free speed r/min	No. of gear ratios
Model	kW	hp		Nm	ft lb	Nm	ft lb		
Motor only									
LZL03 S	1.05	1.4	5300	1.9	1.4	2.8	2.05	11000	—
LZL05 S	1.3	1.7	4200	3	2.2	4.8	3.5	9000	—
LZL15	3.2	4.3	4500	6.8	5.0	10.9	8.0	7200	—
LZL25	5.0	6.7	4000	12.0	8.8	18.0	13.2	6000	—
LZL35	6.5	8.7	3100	20.0	14.7	32.0	23.6	5000	—
With helical gear unit									
LZL05	1.7	2.3	17 - 594	26 - 705	19 - 520	42 - 1112	31 - 820	37 - 1012	11
LZL15	3.2	4.3	17 - 495	58 - 1331	43 - 981	96 - 2134	71 - 1573	35 - 792	11
LZL25	5.0	6.7	14 - 438	103 - 2349	76 - 1732	159 - 3471	117 - 2560	29 - 657	11
LZL35	6.5	8.7	19 - 615	98 - 2459	72 - 1814	156 - 3935	115 - 2902	39 - 992	9
With worm gear unit									
LZL05	0.9	1.2	67 - 525	19 - 117	15 - 88	—	—	130 - 1030	7
LZL15	1.8	2.4	58 - 422	46 - 279	34 - 206	—	—	115 - 840	7
LZL25	2.8	3.8	44 - 361	82 - 571	60 - 421	—	—	90 - 740	7

LZL 03/05S – Can be Ex certified according to the ATEX directive Ex II 2G T2 IIC D240° C.

Air Motor Support

Customized air motors to your individual specifications

Whatever the requirement, Atlas Copco is always happy to help customers find solutions to their special needs. For OEMs, for instance, a customized air motor can be the most efficient solution when integrating an air motor into a machine or tool.

Special motors may have unique casings or mounting arrangements. They may utilize non-standard materials or surface coatings and be designed to achieve a specific output.



Select your air motor in 30 seconds!

Designed for Windows-based PCs, Atlas Copco has developed an Air Motor Selection Guide. It stores data on all of Atlas Copco's air motors.

The designer specifies the required torques and speed of the motor and within seconds the program chooses the optimum motor. It also supplies complete documentation with performance curves and motor data.

Ordering No. 9833 9093 00



Air motor drawing library

CAD-drawings of any of the hundreds of different Atlas Copco air motors are available to designers on CD or to download from Internet (in both .DXF and .IGS formats) from the Atlas Copco Air Motor Draw Library. These CAD-drawings can then be quickly and easily inserted into the designer's machine drawing.

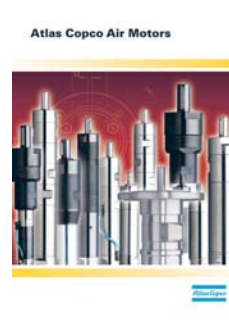
Ordering No. 9833 1139 00



When more information is required

For further information on Atlas Copco vane motors please ask for a copy of our Air Motor catalogue,

Ordering No. 9833 8998 01



Hoists and Trolleys



Contents	Page
Air hoists.....	315
Trolleys	316
Accessories	317

Explosion-proof operation and stepless control for a smoother safer lift

Atlas Copco air hoists and trolleys are the industry benchmark for fast, precise and reliable lifting of heavy loads – even in cramped and sometimes hostile industrial environments.

Compact and lightweight, they are easy to control, survive rough handling and provide heavyweight performance.

Explosion proof for safe operation

Our air hoists and trolleys are ideal for lift applications in hazardous environments. All are certified Explosion-proof, to stringent European standards, in compliance with the EU ATEX Directive. Available in six sizes, they offer lift capacities from 200 kg to 5 tons. All hoists and trolleys are certified to level Ex II 2G T5 II B D100°C.

Simple installation

The trolleys are easy to install. The wheels are designed so that the trolley is equally suitable on both parallel and tapered I-beam section beams. The distance between the wheels is easily adjusted to suit the beam width by turning the suspension yoke.



Selection guide

Air hoist selection program

The fastest way to choose correct hoists and accessories is by using the Windows based computer program available on CD-rom.

Ordering No. 9833 1087 00

To order your hoist or trolley with accessories factory fitted, simply list all items required and add the

Ordering No. 8990 0001 00

EXAMPLE: To order a 500 kg hoist with motor driven trolley, four button five-metre long pendant control and a load chain for a ten-metre lift, send the following:

Order to be sent	Comments
1 x 8451 1540 28	LLA500 EX Hoist block
11 x 4310 2293 00	Load chain for hoist = Required height of lift + 0.5 m, (see technical data for LLA Hoists)
1 x 8451 1520 14	TLT1000MN Motor driven trolley
1 x 4310 2263 90	4 button handle + hoist actuator
5 x 4380 0576 94	Hose set for 4 button pendant control
1 x 8990 0001 00	Instruction to assemble above items

- **Precise and stepless speed control** – Through effective stepless control with excellent creep characteristics the LLA air hoists are fast to use over the entire speed range.
- **Heavy duty performance** – These air hoists can continually operate at maximum load with frequent start and stop cycles without risk of damage.
- **Elimination of load sink** – The patented brake mechanism eliminates load-sink when starting lifting, and automatically holds the load if the air supply fails.
- **Compact size** – The small dimensions make the LLA hoists easy to install, even in the most restricted space. Also the low weight means the hoists can easily be moved for maintenance or relocation purposes.
- **Lubrication free** – The complete range is also available in lubrication free versions.



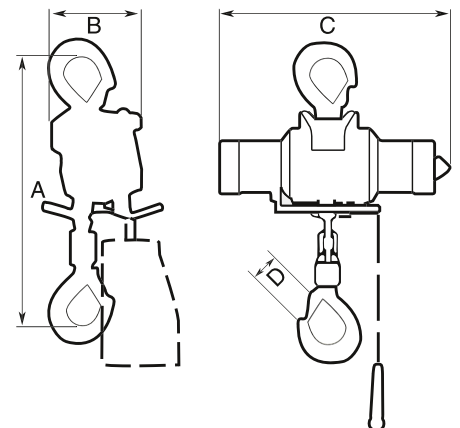
Model	Max lifting capacity kg	Lifting speed at full load		Chain drops qty	Weight excl chain		Chain weight		Required chain-length metre	Air consumption		Hose size		Air inlet thread BSP	Ordering No.
		m/min	ft/min		kg	lb	kg/m	lb/ft		l/s	cfm	mm	in		
LLA200 EX	200	20.2	66.3	1	12.7	28.0	0.9	0.6	Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1540 02
LLA250 EX	250	18.6	61.0	1	12.7	28.0	0.9	0.6	Lifting height + 0.5	37	78	12.5	1/2	1/2	8451 1540 10
LLA500 EX	500	12.6	41.3	1	12.7	28.0	0.9	0.6	Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1540 28
LLA1000 U EX ^a	1000	6.3	20.7	2	14.5	32.0	0.9	0.6	2 x Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1540 69
LLA1000 EX	1000	6.3	20.7	2	15.0	33.0	0.9	0.6	2 x Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1540 36
LLA2500 EX	2500	3.2	10.5	1	42.5	93.7	2.9	1.9	Lifting height + 0.6	40	85	12.5	1/2	1/2	8451 1540 44
LLA5000 EX	5000	1.6	5.2	2	65.5	144.4	2.9	1.9	2 x Lifting height + 0.9	40	85	12.5	1/2	1/2	8451 1540 51
Lubrication free															
LLA200L EX	200	20.2	66.3	1	12.7	28.0	0.9	0.6	Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1550 09
LLA250L EX	250	18.6	61.0	1	12.7	28.0	0.9	0.6	Lifting height + 0.5	37	78	12.5	1/2	1/2	8451 1550 17
LLA500L EX	500	12.6	41.3	1	12.7	28.0	0.9	0.6	Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1550 25
LLA1000L U EX ^a	1000	6.3	20.7	2	14.5	32.0	0.9	0.6	2 x Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1550 66
LLA1000L EX	1000	6.3	20.7	2	15.0	33.0	0.9	0.6	2 x Lifting height + 0.5	38	81	12.5	1/2	1/2	8451 1550 32
LLA2500L EX	2500	3.2	10.5	1	42.5	93.7	2.9	1.9	Lifting height + 0.6	40	85	12.5	1/2	1/2	8451 1550 41
LLA5000L EX	5000	1.6	5.2	2	65.5	144.4	2.9	1.9	2 x Lifting height + 0.9	40	85	12.5	1/2	1/2	8451 1550 58

^a Without overload protection device, not to be used within the European Community.

NOTE: Load chain and control chain must be ordered separately.
Performance figures are at 6 bar working pressure.

Dimensions

Model	A		B		C		D	
	mm	in	mm	in	mm	in	mm	in
LLA200 / 250 EX	377	14.8	122	4.8	390	15.4	29	1.1
LLA500 EX	377	14.8	122	4.8	390	15.4	29	1.1
LLA1000 U EX	445	17.5	122	4.8	390	15.4	29	1.1
LLA1000 EX	495	19.4	122	4.8	390	15.4	29	1.1
LLA2500 EX	575	22.6	212	8.3	546	21.5	50	2.0
LLA5000 EX	785	30.9	249	9.8	546	21.5	60	2.4



Atlas Copco trolleys are available in 3 sizes, for maximum loads of 1, 3 and 5 tonnes. All models can be offered with air motor drive. The 1 tonne trolley includes motor without pedant control. The 3 and 5 tonne includes handle for control chain (control chain must be ordered separately). The 1 and 3 tonne trolleys are also available in manual versions.



Model	Max capacity kg	Max speed with full load		Air consumption		Beam width		Curve radius min		Weight		Ordering No.
		m/min	ft/min	l/s	cfm	mm	in	mm	in	kg	lb	
Manual												
TLT1000 HN	1000	-	-	-	-	50-160	2-6.3	1250	50	9.4	21	8451 1520 06
TLT1000 HW	1000	-	-	-	-	161-280	6.3-11	1250	50	10.7	23.6	8451 1520 63
TLT3000 HN	3000	-	-	-	-	74-180	2.9-7.1	2200	86.6	31.5	69.5	8451 1520 55
TLT3000 HW	3000	-	-	-	-	181-300	7.1-11.8	2200	86.6	34	75	8451 1520 89
Motor driven												
TLT1000 MN ^a	1000	14	45.9	4	8.5	50-160	2-6.3	1250	50	11	24	8451 1520 14
TLT1000 MW ^a	1000	14	45.9	4	8.5	161-280	6.3-11	1250	50	12.3	27.1	8451 1520 71
TLT3000 MN ^b	3000	17.8	58.4	42	89	74-180	2.9-7.1	2200	86.6	48	105.8	8451 1520 30
TLT3000 MW ^b	3000	17.8	58.4	42	89	181-300	7.1-11.8	2200	86.6	51.5	113.5	8451 1520 97
TLT5000 M ^b	5000	16.2	53.1	42	89	181-300	7.1-11.8	2500	98.4	74	163.2	8451 1520 48

^a Pendant control must be ordered separately.

^b Includes handle for control chain. Control chain must be ordered separately.

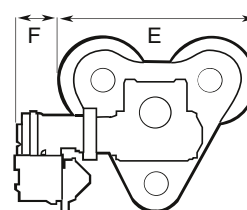
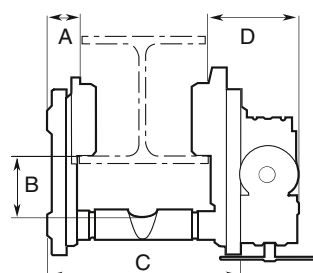
Performance figures are at 6 bar working pressure.

Motor-driven trolleys have 1/2" BSP air connection.

12.5 mm (1/2") hose size is recommended for TLT1000MN/MW, 20 mm for TLT3000MN/MW and TLT5000M.

Dimensions

Model	A		B		C		D		E		F	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Manual												
TLT1000 HN	26	1.1	52	2.0	212	8.3	-	-	264	10.4	-	-
TLT1000 HW	26	1.1	52	2.0	Beam width + 57	Beam width + 2.3	-	-	264	10.4	-	-
TLT3000 HN	35	1.4	78	3.1	262	10.3	-	-	384	15.2	-	-
TLT3000 HW	35	1.4	78	3.1	Beam width + 89	Beam width + 3.5	-	-	384	15.2	-	-
Motor driven												
TLT1000 MN	24	1.0	52	2.0	212	8.3	225	8.9	264	10.4	-	-
TLT1000 MW	24	1.0	52	2.0	Beam width + 57	Beam width + 2.3	225	8.9	264	10.4	-	-
TLT3000 MN	37	1.5	78	3.1	262	10.3	148	5.9	380	15.0	94	3.7
TLT3000 MW	37	1.5	78	3.1	Beam width + 89	Beam width + 3.5	148	5.9	380	15.0	94	3.7
TLT5000 M	41	1.6	93	3.7	Beam width + 97	Beam width + 3.8	166	6.6	437	17.2	59	2.4



Accessories Included

For hoists

Wooden handle for pull chain hose nipple BSP 1/2"

Suspension hook and load hook

For trolleys

TLT 3000 MN/MW/ 5000 M

Wooden handle for pull chain

Optional Accessories

For air hoists

Designation	LLA200/250/ 500/1000 EX Ordering No.	LLA2500/5000 Ordering No.
Load chain, zinc plated, per m	4310 2293 00	4310 2296 00
Control chain, zinc plated, per m	4310 0748 00	4310 0748 00
2 button pendant control		
Handle and actuators only	4310 2261 90	4310 2262 90
Hose set per m	4380 0576 91	4380 0576 91
4 button pendant control		
Handle and actuators only	4310 2263 90	4310 2264 90
Hose set per m	4380 0576 94	4380 0576 93
Twist rod control		
Complete (1.1-2.0 m)	4310 0774 91	4310 0774 91
Extension set (1.1-1.9 m)	4310 0780 91	4310 0780 91
Articulating link	4310 0876 91	4310 0876 91
Chain collectors		
PVC for length of chain		
– 4 m	4310 0742 04	
– 7 m	4310 0742 07	4310 2291 07
–12 m	4310 0742 12	
–18 m	4310 0742 18	
–25 m	4310 0742 25	
Chain collectors		
Steel for length of chain		
–12 m	4310 2102 80	
–18 m	4310 2109 80	
Overload protection device		
LLA200 EX / 250 EX	4310 0812 83	
LLA500 EX	4310 0812 84	
LLA1000 U EX	4310 0812 85	
LLA1000 EX / 2500 EX / 5000 EX	incl as standard	incl as standard
Safety hooks, zinc plated	4310 0739 01	
Chain stop, zinc plated	4310 0740 91	4310 2097 91

NOTE: For items specified per metre, the required length should be indicated by multiplying the Ordering No. by the required length, ie. to order 12 m of chain for an LLA250 the order should be **12 x 4310 2293 00**.

When ordering load chain, follow the recommendations on chain given in the technical data for LLA hoists.

For trolleys

Designation	TLT1000M Ordering No.	TLT3000M Ordering No.	TLT5000M Ordering No.
Zinc plated control chain per m		4310 0748 00	4310 0748 00
2 button pendant control			
Handle and actuator only	4310 0835 91	4310 2262 90	4310 2262 90
Hose kit per m	4380 0576 92	4380 0576 91	4380 0576 91

A man with a goatee and dark hair tied back, wearing a dark blue polo shirt, is working in a factory. He is holding a yellow power tool and is in the process of opening a large, dark blue Atlas Copco toolbox. The toolbox is filled with various tools and is sitting on a blue metal surface. In the background, another person is visible, and the factory environment is filled with industrial equipment and bright lighting.

Service

Contents	Page
ToolScan RCM.....	319
Service agreements.....	320
Calibration service and ToolStart.....	321

TOOLSCAN RCM

Do you know for sure that you perform the optimal level of service on your tools and equipment? ToolScan RCM enables Atlas Copco fastening and systems experts to identify your precise needs in terms of tool and equipment service intervals. We help you optimize your existing service program or, if necessary, develop a new one.

Based on the Reliability-centered Maintenance (RCM) process, ToolScan RCM is a well tried and tested method of rationalizing and reducing tool repair costs and increasing operator safety. It also assures quality in your assembly operations, reducing downtime, reworking, and warranty costs.

We start by reviewing your assembly operation to detect safety and quality critical applications. These are subjected individually to a full ToolScan RCM analysis. Your non-critical applications are normally handled in groups.

Based on the ToolScan RCM analysis, our experts will recommend a combination of the maintenance options described below.

On-condition Maintenance

Where appropriate, we test your equipment at regular intervals and can detect if it is between the point at which failure starts and the point where a functional failure occurs. We then perform a service action agreed with you in advance.

Scheduled Restoration

Scheduled Restoration involves replacing components in your tools before they enter their wear out zone. Where On-condition Maintenance is not technically feasible or profitable, a Scheduled Restoration schedule by application is the best solution. The life of the tool is prolonged by putting it into an "Intelligent" Preventive Maintenance Program, replacing it with a back-up tool each time it is taken out of service.



Scheduled Discard

Scheduled Discard involves replacing the entire tool with a new one before it enters its wear out zone. The lifetime of the tool is calculated based on the application.

No-schedule Maintenance

Where On-condition Maintenance, Scheduled Restoration, and Scheduled Discard are not economically viable, it is agreed to run the tools until mechanical failure occurs. Then corrective, or No-schedule Maintenance is performed. The tool is normally repaired as part of our Fixed Price repair system.



Atlas Copco Service

ATLAS COPCO SERVICE AGREEMENTS

Continuous monitoring and maintenance is one of the most cost-efficient ways to optimise your production. Scheduled service intervals eliminate the risk of unwelcome surprises – and enhance availability as well as ensure your production quality.

Choose from our service programs, tailored to your specific requirements.

Full Coverage Service

Our full coverage service program is at the top of our program of service agreements. The program covers all spare parts, labour costs and repairs at a fixed cost. The agreement basically comprises a preventive maintenance program for your tools and equipment, tailored to your application. Various standard modules can be selected within this program, for example controller check, calibration, and software upgrades. With a fixed cost for the period, you gain full control over your operating budget and achieve the highest possible productivity.

Preventive Maintenance

Our preventive maintenance program is built on our standard service kits, labour and any agreed parts.

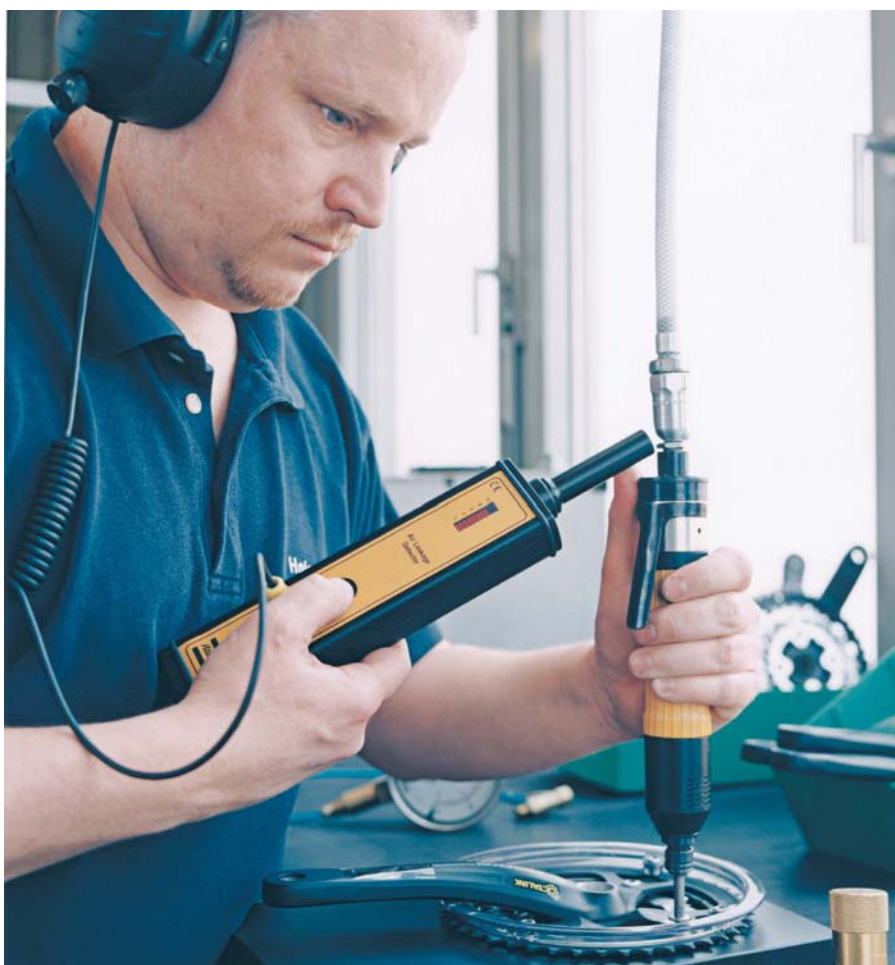
The base of the agreement is a preventive maintenance program tailored to your application. Various standard modules can be selected within this program, for example controller check, calibration, and software upgrades. Atlas Copco will maintain your equipment in peak condition for a specified number of years at a fixed cost, with full documentation.

Fixed Price Repair

A fixed-price program ensuring faster turn-arounds and cutting administration costs at every level. The tools are repaired and tested according to Atlas Copco specifications. We also change basic wear parts as necessary, thus ensuring the longest lifetime to next repair and the lowest possible life cycle cost. Combining this program with our service box concept would cut your cost for administration and handling even further.

ToolScan™

Identify problems before they occur. Ask for ToolScan™ and an experienced Atlas Copco service engineer will check the status of your tools on-site for a fixed price per tool. A full report of the findings on each tool is provided after every ToolScan™.



CALIBRATION SERVICE

On the assembly line, you need to be certain about the performance of your power tools. The tools have to be calibrated at regular intervals. This service keeps your transducerized tools and torque measurement equipment calibrated, for optimum performance. Atlas Copco offers a complete range of calibration services for all your tools and equipment. Most Atlas Copco Service Centers are today ISO 17025 certified.

Whether you choose a verification program or a fully documented accredited calibration program, we keep track of when it should be performed. You can then have complete peace of mind.

Calibration

Calibration of transducerized tools and electronics against traceably calibrated references in compliance with industry standards.

Capability

The tool or spindle is measured in compliance with ISO 5393 (both on soft and hard joints) to determine tool capability (Cm and Cmk).

Verification

To verify tool performance, delivered torque and associated scatter, for a specific joint/application. All measurements conducted on the actual joint (Cp and Cpk).

Accredited calibration

Calibration equipment must be calibrated too. This demands greater precision than for normal calibration. The quality of the calibration result is assured by ISO 17025 accredited calibration labs. Atlas Copco has today six accredited calibration labs for torque transducer calibration. Three in Europe (Essen, Dingolfing, Milano), one in NorthAmerica (Detroit) and one in Brazil (SaoPaulo) and one in Mexico.

TOOLSTART

This product cover everything needed for your new tool and system installation.

- Joint analysis and documentation.
- Reproduction of your joints on a simulator.
- Installation.
- Start-up.
- Optimization of the system program.
- Test running.
- Operator training.

With this information together with our RCM reliability data an optimized service agreement can easy be developed.



Atlas Copco calibration service

Product	Calibration	Capability	Verification	Accredited calibration
Air assembly tools		X	X	
Tensor S	X	X	X	
Tensor DS		X	X	
QMX/QMR	X	X	X	
Power Focus/Focus	X			
ACTA 400/3000	X			
IRTT/QRTT/MT	X			X
MRTT/SRTT	X			X
BLM 5000	X			
BLM Testbenches	X			
Wrenches	X			

For more information, please contact your local Atlas Copco representative



Vibration and Noise Emission Values

The values you will find in this table are the official declared values both for vibration and noise. On December 29, 2009 the new Machinery Directive, 2006/42/EC repealed the directive 98/37/EC. From that date the 3-axes vibration total values are the official values. For most of our tools the new values are measured according to the relevant part in the ISO 28927 series, while the previous values were measured to one part of the ISO 8662 series, or for electric tools one part of the EN 60745 series. For machines where no specific test code exists the ISO 20643 is used. In such cases the test procedure must be described in detail in connection to the given values.

Measuring vibrations in three directions

A vibration total value is based on a vibration measurement in three directions. The value is the vector sum of the three different directions. The vector sum is always higher than one single direction. On machines intended to be used with two hands, two positions are measured and the position with the highest value is declared. There is no fixed relation between 3-axes and 1-axis values. Therefore comparisons can only be made between values referring to the same part of the same standard. Values with no reference to a standard are meaningless and can not be used for comparisons.

Suitable for comparison purposes only

The declared values given in this table were obtained by laboratory type testing in accordance with the stated standards and are suitable for comparison with the declared values of other tools tested in accordance with the same standards. These declared values are not adequate for use in risk assessments and values measured in individual work places may be higher. The actual exposure values and risk of harm experienced by an individual user are unique and depend upon the way the user works, the workpiece and the workstation design, as well as upon the exposure time and the physical condition of the user.

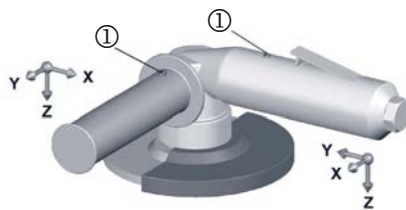
We, Atlas Copco Tools AB, cannot be held liable for the consequences of using the declared values, instead of values reflecting the actual exposure, in an individual risk assessment in a work place situation over which we have no control.

Managing hand-arm vibration

Power Tools may cause hand-arm vibration syndrome if the use is not adequately managed. An EU guide to managing hand-arm vibration can be found at www.humanvibration.com/EU/VIBGUIDE.htm

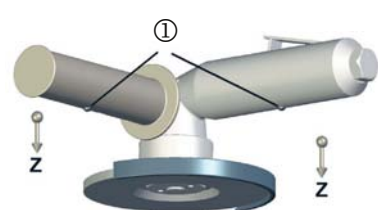
We recommend a programme of health surveillance to detect early symptoms which may relate to vibration exposure, so that management procedures can be modified to help prevent future impairment.

Measurement of the **vibration total value** (3-axes value) with new transducer positions according to ISO 28927. Valid from 2010.



① transducer position

Measurement of the **vibration value** (1-axis value) with previous transducer positions according to ISO 8662. Valid until 2009.



① transducer position

According to the new standard ISO 28927 vibrations are measured in 3 directions both on the trigger and the support handle. The transducer positions are also moved. The new locations between thumb and index finger are chosen to avoid disturbance of the operators normal hand grip.



Atlas Copco has a well equipped laboratory for measuring tool noise and vibration emissions. It contains advanced vibration measurement tools, a state-of-the-art acoustics laboratory and dedicated computer software for analysing measurement and test results.

Additional information about the tests, vibration control and regarding in-use vibrations can be found at: www.atlascopco.com/tools/ergonomics.

From this website you can download an up-to-date pdf file containing all the vibration total values for our tools.

Assembly tools

Model	Vibration total value (3 axes value) according to ISO 28927-2 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-1 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Pneumatic screwdrivers						
Pistol grip						
Shut-off						
LUM22 HR	<2.5	-	<2.5	78	-	
LUM32 HR	<2.5	-	<2.5	77	-	
LUM12 HRX	<2.5	-	<2.5	74	-	
LUM22 HRX	<2.5	-	<2.5	78	-	
LUM10 HRX	<2.5	-	<2.5	72	-	
LUM12 HRF	<2.5	-	<2.5	<70	-	
LUM25 HRF	<2.5	-	<2.5	74	-	
Straight						
Shut-off						
LUM02 PR	<2.5	-	<2.5	71	-	
LUM10 PR	<2.5	-	<2.5	<70	-	
LUM12 PR	<2.5	-	<2.5	75	-	
LUM22 PR	<2.5	-	<2.5	75	-	
LUM12 SR	<2.5	-	<2.5	75	-	
LUM22 SR	<2.5	-	<2.5	78	-	
Angle						
Shut-off						
LTV009	<2.5	-	<2.5	75	-	
LTV18	<2.5	-	<2.5	71	-	
Pistol grip						
Direct drive						
LUD12 HRX	<2.5	-	<2.5	74	-	
LUD22 HR	<2.5	-	<2.5	76	-	
LUF34 HRD	<2.5	-	<2.5	79	90	
COMBI22	<2.5	-	<2.5	76	-	
COMBI34	<2.5	-	<2.5	79	-	

Model	Vibration total value (3 axes value) according to ISO 28927-2 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-7 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Pneumatic screwdrivers						
Slip clutch^b						
Pistol grip						
TWIST12 HRF	<2.5	-	6	80	-	
TWIST12 HRX	<2.5	-	6	80	-	
TWIST22 HR	<2.5	-	6	86	97	
TWIST22 HRX	<2.5	-	6	86	97	
TWIST HRF	<2.5	-	6	80	-	
LUF34 HR	<2.5	-	6	81	92	
Straight						
TWIST12 SR3	<2.5	-	6	85	96	
TWIST12 SR4	<2.5	-	16	85	96	
TWIST22 PR	<2.5	-	15	86	97	
TWIST22 SR6	<2.5	-	15	86	97	
TWIST22 SR10	<2.5	-	>30	86	97	
Angle						
TWIST VR07	<2.5	-	6	81	92	
TWIST VR13	<2.5	-	8	82	93	

^a The uncertainty in the sound levels is 3 dB(A).

^b 1-axis value measured with clutch slipping.

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, www.atlascopco.com/tools/ergonomics.

Model	Vibration total value (3 axes value) according to ISO 28927-2 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-7 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Impact Wrenches						
Pistol grip						
Shut-off						
LTS17 HR	<2.5	-	2.5	88	99	
LTS27 HR	2.8	1.5	< 2.5	82	93	
LTS37 HR	3.6	1.2	< 2.5	83	94	
LTS57 HR	4.6	0.8	5.4	83	94	
Non shut-off						
LMS06 HR	<2.5	-	< 2.5	85	96	
LMS17 HR	2.9	0.9	2.5	88	99	
LMS27 HR	<2.5	-	< 2.5	85	96	
LMS37 HR	3.1	0.7	< 2.5	84	95	
LMS47 HR	5.4	1.1	4.1	84	95	
LMS57 HR	4.2	0.9	3.2	88	99	
LMS61 HR	5.3	0.6	7.8	90	101	
LMS67 HR	12.8	1.1	6.9	103	114	
Straight						
Non shut-off						
LMS06 SR	5.8	1.5	3	86	97	
LMS67 GIR/GOR	13.5	4.7	6.9	103	114	
LMS86	5.8	0.6	9	107	118	

^a The uncertainty in the sound levels is 3 dB(A).

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, www.atlascopco.com/tools/ergonomics.

Model		Vibration Total Value (3 axes value) according to ISO 28927-2 Valid from 2010		Vibration Value (1 axis value) according to ISO 8662-7 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
		Value 3-axes m/s ²	Uncer- tainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Hydraulic impulse nutrunners						
	Pistol grip					
	Shut-off					
	EP3PTX5 HR42	<2.5	-	<2.5	76	-
	EP4PTX9 HR42	<2.5	-	<2.5	<70	-
	EP4PTX9 HR10	<2.5	-	<2.5	<70	-
	EP5PTX17 HR42	<2.5	-	<2.5	74	-
	EP5PTX19 HR10	<2.5	-	<2.5	73	-
	EP6PTX28 HR42	3	1	<2.5	77	-
	EP6PTX32 HR10	<2.5	-	<2.5	75	-
	EP7PTX55 HR10	4.2	0.8	<2.5	79	-
	EP8PTX70 HR10	3.5	1	<2.5	80	-
	EP9PTX80 HR13	5.6	0.8	<2.5	82	93
	EP11PTX120 HR13	5.4	1.2	2.8	83	94
	EP13PTX150 HR13	4.7	0.7	6.2	85	96
	EP15PTX250 HR20	6.5	0.4	6	88	99
	EP19PTX450 HR20	8.2	1	8.2	88	99
	EP5PTS12 HR42	4.3	0.7	<2.5	75	-
	EP5PTS14 HR10	2.8	0.8	<2.5	73	-
	EP6PTS20 HR42	3.4	0.5	<2.5	76	-
	EP6PTS22 HR10	2.9	0.7	<2.5	77	-
	EP7PTS30 HR42	5.9	0.9	<2.5	78	-
	EP7PTS35 HR10	4.3	0.8	3	76	-
	EP8PTS40 HR42	5.7	0.7	<2.5	79	-
	EP8PTS55 HR10	4.6	1.5	<2.5	76	-
	EP10PTS90 HR13	4.8	0.9	3.5	80	-
	EP12PTS150 HR13	4.7	0.6	3.6	82	93
	EP14PTS250 HR20	6.3	1	5.3	85	96
	EP18PTS450 HR20	7.1	0.8	7.6	87	98
	EP7PTS35 HRF10	4.3	0.8	2.9	76	-
	EP8PTS55 HRF10	4.6	1.5	2.8	76	-
	EP10PTS90 HRF13	4.8	0.9	2.6	80	-
	Non shut-off					
	EP5XS HR42	<2.5	-	<2.5	78	-
	EP6XS HR42	3	0.5	<2.5	81	92
	EP6XS HR10	<2.5	-	<2.5	79	-
	EP6PS HR42	3.7	0.5	<2.5	81	92
	EP6PS HR10	3.1	0.7	<2.5	79	-
	EP8PS HR10	4.1	1.2	<2.5	82	93
	EP7XS HR42	2.7	0.7	<2.5	80	-
	EP7XS HR10	2.8	1	<2.5	79	-
	EP8XS HRX42	2.8	0.6	3.7	78	-
	EP8XS HRX10	3	0.7	3.7	82	93
	EP10XS HR13	4.6	0.8	<2.5	83	94
	EP12XS HR13	6	1.1	2.5	85	96
	EP14XS HR13	4	1.4	3.9	85	96
	EP16XS HR20	6.7	0.9	5.5	86	97
	EP20XS HR20	6.8	1.4	5.8	87	100

^a The uncertainty in the sound levels is 3 dB(A).

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, www.atlascopco.com/tools/ergonomics.

Assembly tools

Model	Vibration total value (3 axes value) according to ISO 28927-2 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-1 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Pneumatic nutrunners						
Angle						
LTV29-2 R	<2.5	-	<2.5	80	-	
LTV39-2 R	<2.5	-	<2.5	81	92	
LTV28 R	<2.5	-	<2.5	76	-	
LTV38 R	<2.5	-	<2.5	82	93	
LTV48 R	<2.5	-	<2.5	84	95	
LTV69 R	<2.5	-	<2.5	80	-	
LTV69 N	<2.5	-	<2.5	80	-	
LMV28 R	<2.5	-	<2.5	76	-	
LMV28 N	<2.5	-	<2.5	76	-	
LMK22	<2.5	-	<2.5	90	101	
LMK33	<2.5	-	<2.5	90	101	
Straight						
LTD28 N	b	-	-	76	-	
LTD38 N	b	-	-	78	-	
LTD28 R	b	-	-	76	-	
LTD38 R	b	-	-	82	93	
LTD48 R	b	-	-	84	95	
Pistol grip						
LTP61 PH	<2.5	-	<2.5	80	-	
LTP61 H	<2.5	-	<2.5	80	-	
LTP61 HR	<2.5	-	<2.5	80	-	
LMP24 H	<2.5	-	<2.5	78	-	
LMP24 HR	<2.5	-	<2.5	79	-	
Open end						
LTO28 R	<2.5	-	<2.5	76	-	
LTO38 R	<2.5	-	<2.5	82	93	
Crowfoot						
LTC009 R	<2.5	-	<2.5	75	-	
LTC28 R	<2.5	-	<2.5	76	-	
LTC29-2 R	<2.5	-	<2.5	80	-	
LTC38 R	<2.5	-	<2.5	78	-	
LTC39-2 R	<2.5	-	<2.5	81	92	
LTC48 R	<2.5	-	<2.5	84	95	
Battery screwdrivers/nutrunner						
BCP BL	<2.5	-	<2.5	<70	-	
BTB	<2.5	-	<2.5	<70	-	
ETV STB	<2.5	-	<2.5	<70	-	
ETP STB	<2.5	-	<2.5	<70	-	
ETC STB	<2.5	-	<2.5	<70	-	
ETO STB	<2.5	-	<2.5	<70	-	
Electric screwdrivers						
EBL						
EBL	<2.5	-	<2.5	<70	-	
Micro Torque						
ETF MT	b	-	-	<70	-	
ETD M	<2.5	-	<2.5	<70	-	
ETF M	b	-	-	<70	-	
Tensor DL						
ETD DL	<2.5	-	<2.5	<70	-	
ETV DL	<2.5	-	<2.5	<70	-	
ETP DL	<2.5	-	<2.5	<70	-	
ETF DL	b	-	-	<70	-	
Tensor SL						
ETD SL	<2.5	-	<2.5	<70	-	
ETV SL	<2.5	-	<2.5	<70	-	
ETP SL	<2.5	-	<2.5	<70	-	
ETF SL	b	-	-	<70	-	
Electric nutrunners						
Tensor DS						
ETV DS	<2.5	-	<2.5	<70	-	
ETD DS	b	-	-	<70	-	
ETP DS	<2.5	-	<2.5	<70	-	
ETC DS	<2.5	-	<2.5	<70	-	
ETO DS	<2.5	-	<2.5	<70	-	
Tensor S						
ETV S	<2.5	-	<2.5	<70	-	
ETD S	b	-	-	<70	-	
ETP S	<2.5	-	<2.5	<70	-	
Tensor ST						
ETV ST	<2.5	-	<2.5	<70	-	
ETD ST	b	-	-	<70	-	
ETP ST	<2.5	-	<2.5	<70	-	
ETC ST	<2.5	-	<2.5	<70	-	
ETO ST	<2.5	-	<2.5	<70	-	
Tensor STR						
ETV STR	<2.5	-	-	<70	-	
ETD STR	<2.5	-	-	<70	-	
ETP STR	<2.5	-	-	<70	-	

^a The uncertainty in the sound levels is 3 dB(A).

^b Tools for fixtured applications have no vibration values.

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, www.atlascopco.com/tools/ergonomics.

Vibration and Noise Emission Values

Material removal tools

		Vibration total value (3 axes value) according to ISO 28927-1 Valid from 2010		Uncer- tainty m/s ²	Vibration value (1 axis value) according to EN 60745-2-3 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
Model		Value 3-axes m/s ²			Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Grinders							
Electric grinder							
Angle							
ESV F120		3.7		1	<2.5	84	95
ESV F085		4.2		1.2	2.8	84	95
ESV F060		2.7		0.7	<2.5	84	95
		Vibration total value (3 axes value) according to ISO 28927-3 Valid from 2010		Uncer- tainty m/s ²	Vibration value (1 axis value) according to EN 60745-2-3 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
Model		Value 3-axes m/s ²			Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Electric sander							
Angle							
ESV S060		<2.5		-	<2.5	84	95
		Vibration total value (3 axes value) according to ISO 28927-1 Valid from 2010		Uncer- tainty m/s ²	Vibration value (1 axis value) according to ISO 8662-4 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
Model		Value 3-axes m/s ²			Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Turbo grinder							
Angle							
GTG40 F085-18		3.5		0.8	<2.5	84	95
GTG40 F066-23		<2.5		-	<2.5	84	95
GTG40 S060-C15		3.4		0.8	<2.5	84	95
		Vibration total value (3 axes value) according to ISO 28927-4 Valid from 2010		Uncer- tainty m/s ²	Vibration value (1 axis value) according to ISO 8662-4 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
Model		Value 3-axes m/s ²			Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Turbo grinder							
Straight							
GTR40 S072-13		<2.5		-	<2.5	85	96
GTR40 S060-15		<2.5		-	<2.5	85	96
GTR40 S060-20		3.3		0.8	<2.5	85	96
		Vibration total value (3 axes value) according to ISO 28927-3 Valid from 2010		Uncer- tainty m/s ²	Vibration value (1 axis value) according to ISO 8662-8 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
Model		Value 3-axes m/s ²			Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Turbo sander							
GTG40 S060		<2.5		-	<2.5	84	95

		Vibration total value (3 axes value) according to ISO 28927-12 Valid from 2010		Uncer- tainty m/s ²	Vibration value (1 axis value) according to ISO 8662-13 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
Model		Value 3-axes m/s ²			Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Grinders							
Die grinder							
Straight							
LSF18 S460		4.7		2	<2.5	79	-
LSF18 S460E		3.6		1.3	<2.5	82	-
LSF18 S300		<2.5		-	<2.5	70	-
LSF18 S300/R		3.2		2.2	<2.5	73	-
LSF18 S300E		3.4		1.8	<2.5	73	-
LSF18 S300E/R		3.3		1	<2.5	73	-
LSF18 S200		3.4		0.9	<2.5	<70	-
LSF18 S200E		3.1		1.8	<2.5	70	-
LSF28 S250		2.7		0.7	5.6	81	92
LSF28 S250E		<2.5		-	<2.5	81	92
LSF28 S250E-R		3		0.7	<2.5	81	92
LSF28 S250-R		3.1		1.8	<2.5	81	92
LSF28 S180		2.8		1.1	4	74	-
LSF28 S180E		<2.5		-	<2.5	74	-
LSF28 S180E-R		2.8		1	<2.5	74	-
LSF28 S180-R		3.4		0.9	<2.5	74	-
LSF28 S150		3.6		1.2	5.7	<70	-
LSF28 S150E		<2.5		-	3.1	<70	-
LSF28 S120		2.8		0.7	<2.5	<70	-
LSF38 S250E		2.8		1.3	<2.5	90	101
LSF38 S180E		<2.5		-	<2.5	86	97
LSF38 S180E/R		<2.5		-	<2.5	85	96
LSF38 S150E/R		<2.5		-	<2.5	81	92
LSF28 ST030		<2.5		-	<2.5	74	-
LSF28 ST030E		2.7		1.5	<2.5	74	-
LSF28 ST070		<2.5		-	3.5	81	92
LSF28 ST070E		2.7		1.2	4.2	81	92
LSF07 S850		<2.5		-	<2.5	75	-
Angle							
LSV18 S200		<2.5		-	<2.5	73	-
LSV18 S120		<2.5		-	<2.5	73	-
LSV18 S080		<2.5		-	<2.5	70	-
		Vibration total value (3 axes value) according to ISO 28927-4 Valid from 2010		Uncer- tainty m/s ²	Vibration value (1 axis value) according to ISO 8662-4 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
Model		Value 3-axes m/s ²			Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Grinders							
Straight							
LSR28 S120-CW		<2.5		-	<2.5	<70	-
LSR28 S150-CW		2.8		1.2	0	70	-
LSR43 S150-CW		3		1	<2.5	87	98
LSR43 S150-CW		3		1	<2.5	87	98
LSR43 S120-CW		<2.5		-	3.9	86	97
LSR43 S090-CW		2.6		1.2	2.6	82	93
LSR43 S072-CW		<2.5		-	<2.5	83	94
LSR48 S150-CW		<2.5		-	2.7	80	-
LSR48 S120-CW		<2.5		-	0	80	-
LSR48 S090-CW		6.5		1.8	0	76	-
LSR28 S180-05		<2.5		-	<2.5	85	96

Continued...

Material removal tools

		Vibration total value (3 axes value) according to ISO 28927-4 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-4 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
		Value 3-axes m/s²	Uncer- tainty m/s²	Value 1-axis m/s²	Sound pressure dB(A)	Sound power dB(A)
Model						
Grinders						
Straight						
LSR28 S150-10		<2.5	-	<2.5	70	-
LSR28 S110-08		<2.5	-	<2.5	<70	-
LSR43 S150-10		2.9	1	5.6	86	97
LSR43 S120-08		<2.5	-	3.9	84	95
LSR43 S090-10		<2.5	-	3.6	82	93
LSR48 S150-10		3.9	2.2	4.3	85	96
LSR48 S120-08		<2.5	-	<2.5	78	-
LSR48 S120-08R		<2.5	-	0	78	-
LSR48 S120-13		2.9	1.2	3.6	83	94
LSR48 S120-10		<2.5	-	2.9	80	-
LSR48 S090-10		<2.5	-	<2.5	76	-
LSR48 S090-10R		<2.5	-	<2.5	78	-
LSR64 S100-15		<2.5	-	5.5	88	99
LSR64 S072-13		<2.5	-	3	82	93
LSR64 S060-15		<2.5	-	3	83	94
LSR28 ST070E-CW		3.1	1.1	0	81	92
LSR43 S072		<2.5	-	<2.5	83	94
		Vibration total value (3 axes value) according to ISO 28927-1 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-4 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
		Value 3-axes m/s²	Uncer- tainty m/s²	Value 1-axis m/s²	Sound pressure dB(A)	Sound power dB(A)
Model						
Grinders						
Vertical grinder						
LSS53 S120-13		4.1	1.3	3.4	81	92
LSS53 S085-18		3.8	1.1	3.2	78	-
LSS64 S085-18		4.6	1.5	5.2	86	97
LSS53 S072-C13		2.8	1.3	3.2	76	-
LSS64 S060-C15		<2.5	-	4.2	82	93
LSS64 S060-23		3.9	1.2	4.4	82	93
LSS84 S060-23		3.9	1.2	4.4	88	99
Angle grinders						
LSV28 ST13-10E		8.3	2.8	4.4	81	92
LSV28 ST12-10		4	1.3	3.9	86	97
LSV28 ST12-12		5.3	1.6	3.9	86	97
LSV28 ST12-13		5.6	1.7	3.9	86	97
LSV28 S060-18		4.5	1.4	<2.5	81	92
LSV38 S12-125		5.2	1.6	3	77	-
LSV38 ST12-125		4.9	1.5	4.4	77	-
LSV38 SA12-125		3.3	0.8	<2.5	77	-
LSV48 SA120-13		4.8	1.1	<2.5	87	98
LSV48 SA085-18		3.9	0.9	<2.5	87	98
LSV48 SA066-23		3.9	1.6	<2.5	87	98

		Vibration total value (3 axes value) according to ISO 28927-3 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-8 Valid until 2009	pressure levels and sound power levels ^a according to ISO 15744	
		Value 3-axes m/s²	Uncer- tainty m/s²	Value 1-axis m/s²	Sound pressure dB(A)	Sound power dB(A)
Model						
Grinders						
Angle sanders						
LSV28 S060		<2.5	-	<2.5	77	-
LSV28 S060-M14		<2.5	-	<2.5	77	-
LSV28 S040		<2.5	-	<2.5	78	-
LSV28 ST034		<2.5	-	<2.5	86	97
LSV28 S021		<2.5	-	<2.5	74	-
LSV28 S021-M14		<2.5	-	<2.5	74	-
LSV28 S040-01-M14		<2.5	-	<2.5	78	-
LSV28 ST013-M14-LF		<2.5	-	<2.5	77	-
LSV28 ST013-LF		<2.5	-	<2.5	77	-
LSV38 S085		<2.5	-	3	85	96
LSV38 S085-M14		<2.5	-	3	85	96
LSV38 S066		<2.5	-	<2.5	82	93
LSV38 S066-M14		<2.5	-	<2.5	82	93
LSV38 S066 D		<2.5	-	<2.5	82	93
LSV38 S085 D		<2.5	-	3	85	96
LSV48 SA085		<2.5	-	<2.5	87	98
LSV48 SA085-M14		<2.5	-	<2.5	87	98
LSV48 SA066		<2.5	-	<2.5	87	98
LSV48 SA066-M14		<2.5	-	<2.5	87	98
LSV48 SA085 D		<2.5	-	<2.5	87	98
LSV38 D120		<2.5	-	<2.5	77	-
LSV38 D085		<2.5	-	<2.5	85	96
LSV38 D066		<2.5	-	<2.5	82	93
Vertical sanders						
LSS53 S060		<2.5	-	<2.5	76	-
LSS64 S060		<2.5	-	4.4	81	92
Orbital and random orbital sanders						
LST30 H090-11		5.5	1.6	<2.5	82	93
LST30 H090-15		6.0	1.7	<2.5	82	93
LST30 S090-15		5.1	1.3	<2.5	82	93
LST31 H090-15		3.4	0.8	<2.5	84	95
LST32 H090-15		5.1	1.4	<2.5	82	93
LST32 S090-15		5.2	1.5	<2.5	82	93
LSO30 S070-3		11.0	1.7	<2.5	81	92
LSO30 H070-3		11.5	1.6	<2.5	81	92
LSO31 S070-3		11.0	1.7	<2.5	82	93
LSO31 H070-3		11.0	1.7	<2.5	82	93
LSO32 H070-3		7.8	1.3	<2.5	79	-
LST20 R350		3.8	1.7	<2.5	76	-
LST20 R550		4.3	1.5	<2.5	76	-
LST20 R650		3.4	1.3	<2.5	76	-
LST20 R325		5.6	2.1	<2.5	76	-
LST20 R525		4.7	2.4	<2.5	76	-
LST20 R625		5	2.3	<2.5	76	-
LST21 R350		3.8	1.7	<2.5	85	96
LST21 R550		3.2	1.7	<2.5	85	96
LST21 R650		4.4	1.5	<2.5	85	96
LST21 R525		3.2	1.4	<2.5	85	96
LST21 R625		4.6	2.9	<2.5	85	96
LST22 R350		3.5	1.3	<2.5	78	-
LST22 R550		3.9	1.4	<2.5	78	-
LST22 R650		5.7	2.9	<2.5	78	-
LST22 R525		3.2	1.4	<2.5	78	-
LST22 R625		3.2	1.4	<2.5	78	-

Model	Vibration total value (3 axes value) according to ISO 28927-3 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-8 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s²	Uncer- tainty m/s²	Value 1-axis m/s²	Sound pressure dB(A)	Sound power dB(A)
Grinders					
Angle sanders					
LSV28 S060	<2.5	-	<2.5	77	-
LSV28 S060-M14	<2.5	-	<2.5	77	-
LSV28 S040	<2.5	-	<2.5	78	-
LSV28 ST034	<2.5	-	<2.5	86	97
LSV28 S021	<2.5	-	<2.5	74	-
LSV28 S021-M14	<2.5	-	<2.5	74	-
LSV28 S040-01-M14	<2.5	-	<2.5	78	-
LSV28 ST013-M14-LF	<2.5	-	<2.5	77	-
LSV28 ST013-LF	<2.5	-	<2.5	77	-
LSV38 S085	<2.5	-	3	85	96
LSV38 S085-M14	<2.5	-	3	85	96
LSV38 S066	<2.5	-	<2.5	82	93
LSV38 S066-M14	<2.5	-	<2.5	82	93
LSV38 S066 D	<2.5	-	<2.5	82	93
LSV38 S085 D	<2.5	-	3	85	96
LSV48 SA085	<2.5	-	<2.5	87	98
LSV48 SA085-M14	<2.5	-	<2.5	87	98
LSV48 SA066	<2.5	-	<2.5	87	98
LSV48 SA066-M14	<2.5	-	<2.5	87	98
LSV48 SA085 D	<2.5	-	<2.5	87	98
LSV38 D120	<2.5	-	<2.5	77	-
LSV38 D085	<2.5	-	<2.5	85	96
LSV38 D066	<2.5	-	<2.5	82	93
Vertical sanders					
LSS53 S060	<2.5	-	<2.5	76	-
LSS64 S060	<2.5	-	4.4	81	92
Orbital and random orbital sanders					
LST30 H090-11	5.5	1.6	<2.5	82	93
LST30 H090-15	6.0	1.7	<2.5	82	93
LST30 S090-15	5.1	1.3	<2.5	82	93
LST31 H090-15	3.4	0.8	<2.5	84	95
LST32 H090-15	5.1	1.4	<2.5	82	93
LST32 S090-15	5.2	1.5	<2.5	82	93
LSO30 S070-3	11.0	1.7	<2.5	81	92
LSO30 H070-3	11.5	1.6	<2.5	81	92
LSO31 S070-3	11.0	1.7	<2.5	82	93
LSO31 H070-3	11.0	1.7	<2.5	82	93
LSO32 H070-3	7.8	1.3	<2.5	79	-
LST20 R350	3.8	1.7	<2.5	76	-
LST20 R550	4.3	1.5	<2.5	76	-
LST20 R650	3.4	1.3	<2.5	76	-
LST20 R325	5.6	2.1	<2.5	76	-
LST20 R525	4.7	2.4	<2.5	76	-
LST20 R625	5	2.3	<2.5	76	-
LST21 R350	3.8	1.7	<2.5	85	96
LST21 R550	3.2	1.7	<2.5	85	96
LST21 R650	4.4	1.5	<2.5	85	96
LST21 R525	3.2	1.4	<2.5	85	96
LST21 R625	4.6	2.9	<2.5	85	96
LST22 R350	3.5	1.3	<2.5	78	-
LST22 R550	3.9	1.4	<2.5	78	-
LST22 R650	5.7	2.9	<2.5	78	-
LST22 R525	3.2	1.4	<2.5	78	-
LST22 R625	3.2	1.4	<2.5	78	-

^a The uncertainty in the sound levels is 3 dB(A).

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, www.atlascopco.com/tools/ergonomics.

Vibration and Noise Emission Values

Material removal tools

Model	Vibration total value (3 axes value) according to ISO 28927-7 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-10 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Grinders						
Nibbler						
LPN33	7.3	2.3	4	86	97	
Model	Vibration total value (3 axes value) according to ISO 28927-8 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-12 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Grinders						
Circular cutters						
LCS10	2.6	0.9	<2.5	92	103	
LCS38 S150-D	<2.5	-	<2.5	86	97	
Model	Vibration total value (3 axes value) according to ISO 28927-10 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-2 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Percussive						
Chipping hammers						
Vibration-damped						
RRF21	3.5	0.8	2.5	95	106	
RRF31	5	1.6	3.5	94	105	
RRD37	<2.5	-	<2.5	95	106	
RRD57	<2.5	-	<2.5	96	107	
Conventional type						
RRC22F	6.1	1.7	4	99	110	
RRC34B	7.7	1.3	7	99	110	
RRC65B	12	1.6	15	103	114	
RRC75B	11.5	1.5	15	102	113	
Scalers						
RVM07	5	1.9	<2.5	74	-	
RRC13	11.5	2.7	4.6	91	102	
RRC13N	8.1	1.8	4.9	91	102	
Riveting hammers						
Vibration damped						
RRH04P	<2.5	-	<2.5	93	104	
RRH06P	3.9	1.4	<2.5	91	102	
RRH08P	4.8	1.6	<2.5	92	103	
RRH10P	5.1	1.7	<2.5	91	102	
RRH12P	4.4	1.1	<2.5	93	104	
RRH14P	5.4	2.9	<2.5	93	104	
Conventional type						
RRN11P	4	1.6	7.8	98	109	

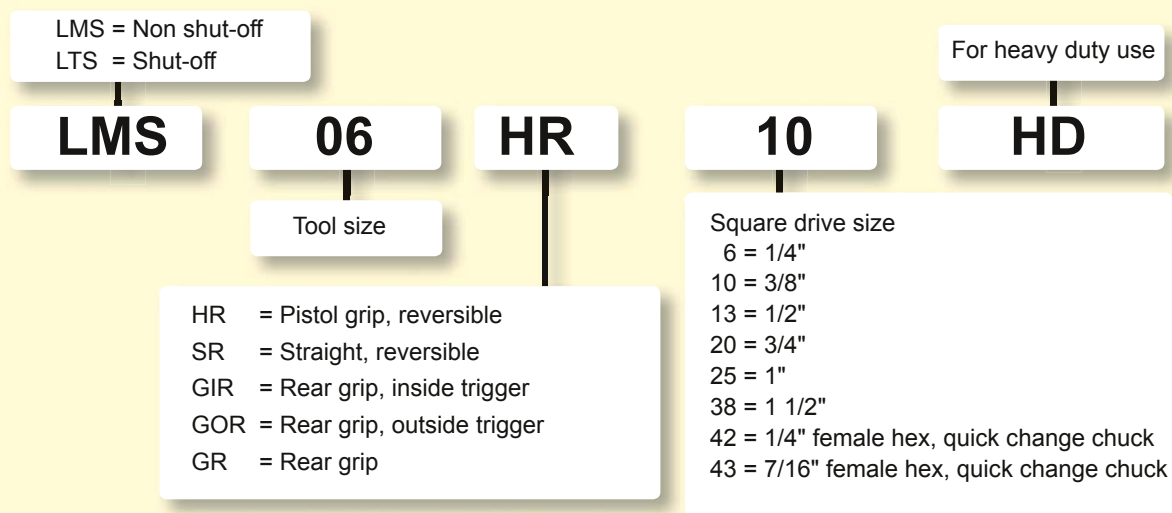
Model	Vibration total value (3 axes value) according to ISO 28927-5 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-1 Valid until 2009		Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)	
Drills						
Pistol grip						
LBB16 EP	<2.5	-	<2.5	80	-	
LBB16 EPX	<2.5	-	<2.5	82	93	
LBB26 EPX	<2.5	-	<2.5	82	93	
LBB36	<2.5	-	<2.5	83	94	
LBB37	<2.5	-	<2.5	86	97	
LBB45 H017	<2.5	-	<2.5	88	99	
LBB45 H006	3.7	1.6	<2.5	88	99	
LBB45 H004	<2.5	-	<2.5	88	99	
COMBI22	<2.5	-	<2.5	76	-	
COMBI34	<2.5	-	<2.5	79	-	
Straight						
LBB16 S260	<2.5	-	<2.5	75	-	
LBB16 S064	<2.5	-	<2.5	75	-	
LBB16 S045	<2.5	-	<2.5	75	-	
LBB16 S038	<2.5	-	<2.5	75	-	
LBB16 S029	<2.5	-	<2.5	75	-	
Angle						
LBV11 30°	<2.5	-	<2.5	72	-	
LBV16 30°	2.7	0.9	<2.5	75	-	
LBV36 30°	<2.5	-	<2.5	81	92	
LBV16 45°	<2.5	-	<2.5	75	-	
LBV11 90°	<2.5	-	<2.5	72	-	
LBV16 90°	<2.5	-	<2.5	75	-	
LBV36 90°	<2.5	-	<2.5	81	92	
LBV16 Z	<2.5	-	<2.5	75	-	
LBV16 90° Large	<2.5	-	<2.5	75	-	
LBV36 90° Large	<2.5	-	<2.5	81	92	
LBV37 90° Heavy duty	<2.5	-	<2.5	84	95	
Micro stop drills						
LBS36	<2.5	-	<2.5	86	97	

^a The uncertainty in the sound levels is 3 dB(A).

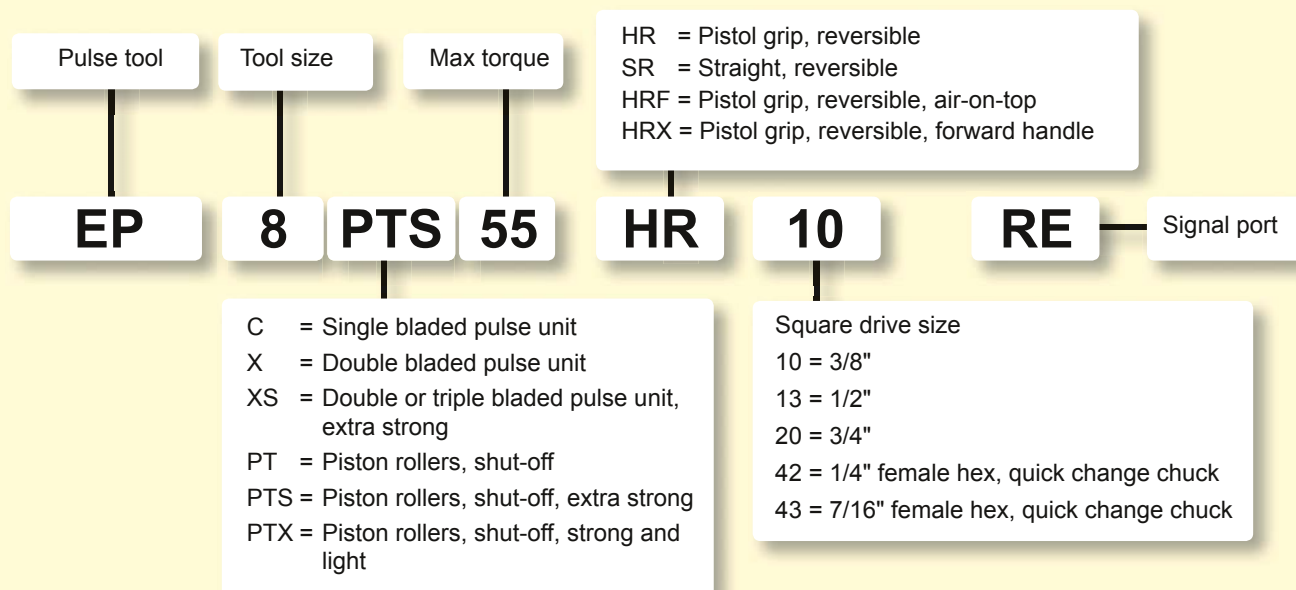
Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, www.atlascopco.com/tools/ergonomics.

The tool key below explains the significance of the letters/numbers forming the name of the tool model.

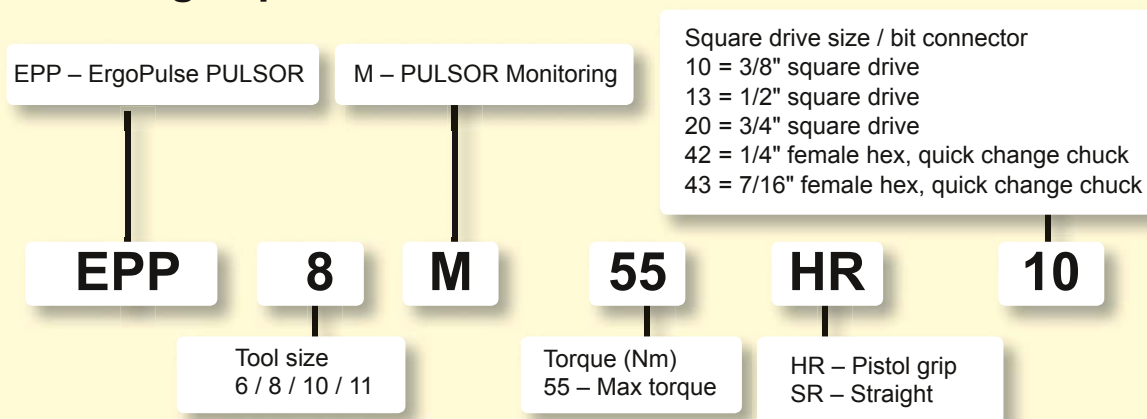
Impact wrenches



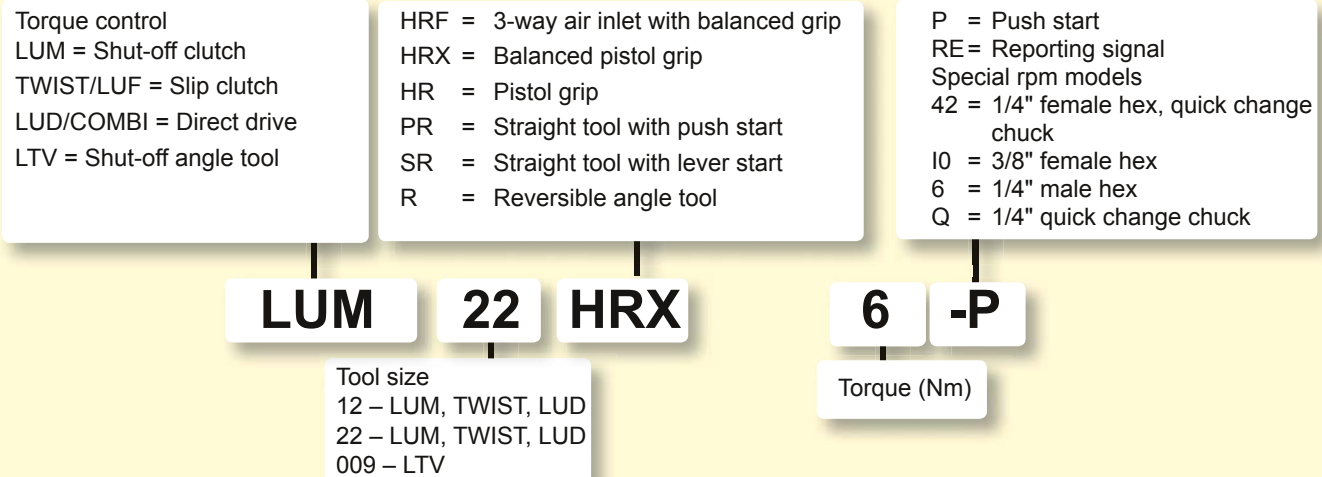
Hydraulic impulse nutrunners



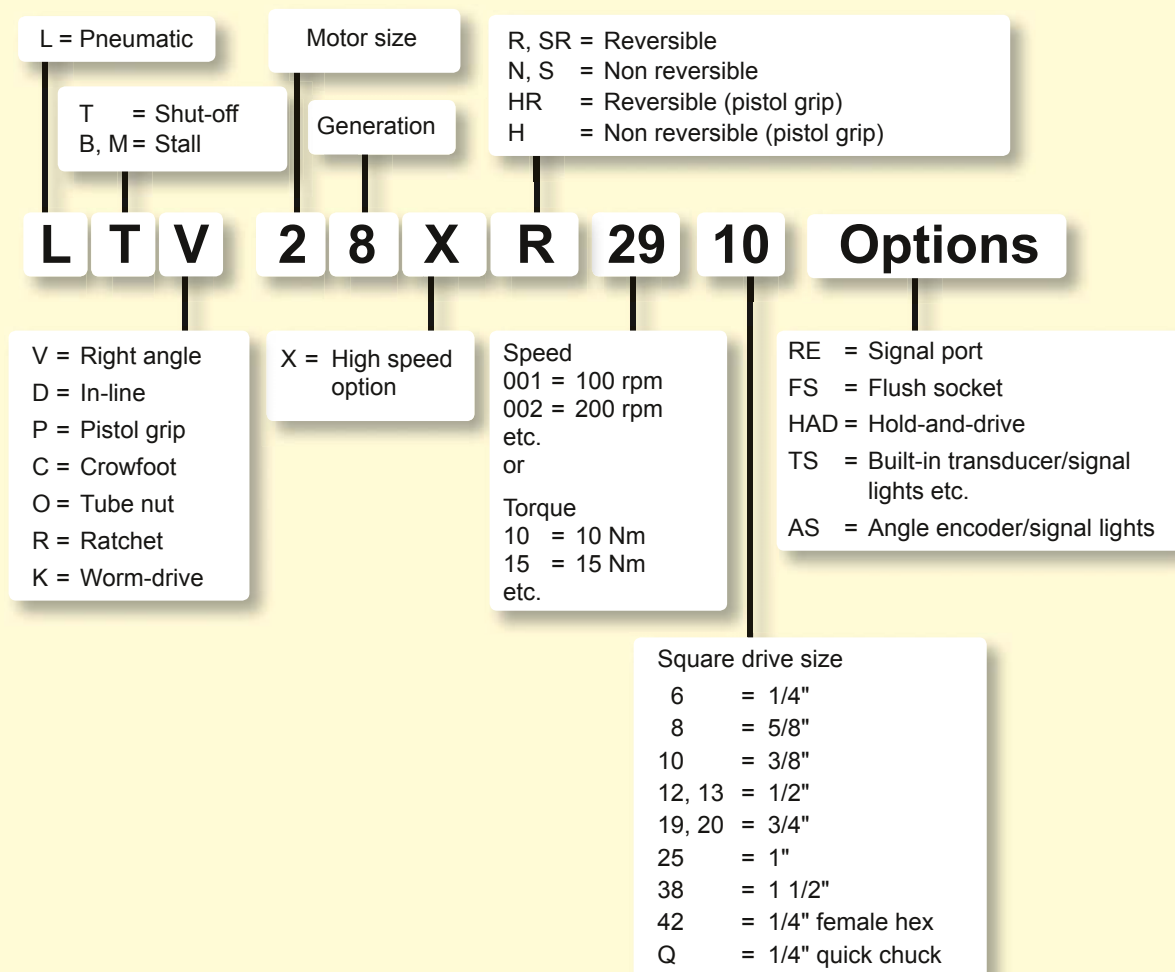
Monitoring impulse nutrunners



Pneumatic screwdrivers

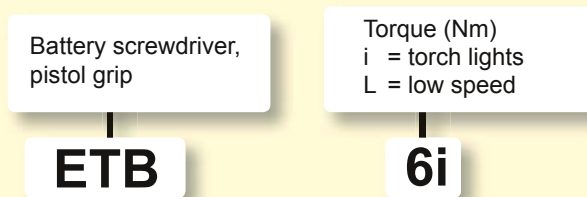


Pneumatic nutrunners

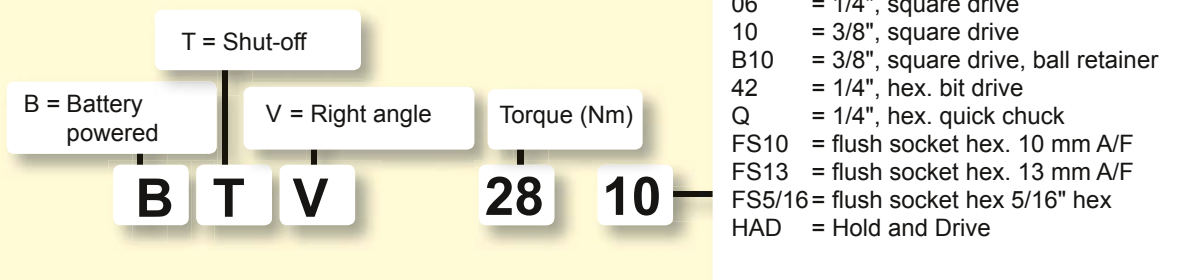


The tool key below explains the significance of the letters/numbers forming the name of the tool model.

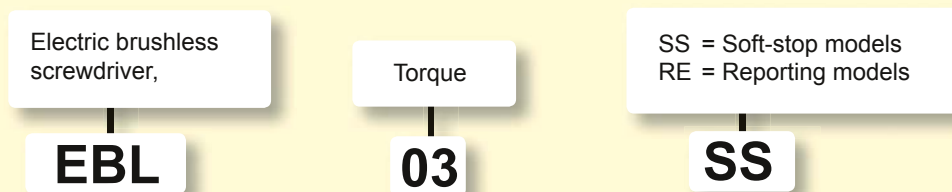
Battery screwdriver – ETB



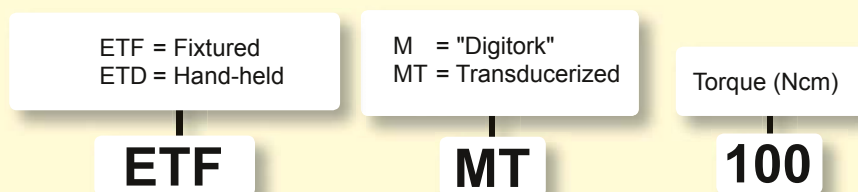
Battery screwdriver – BTV



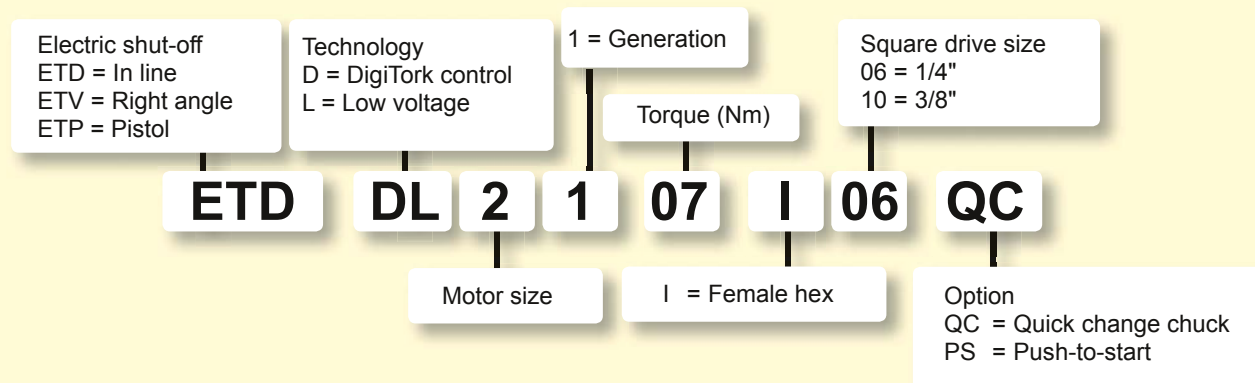
Electric screwdriver – EBL



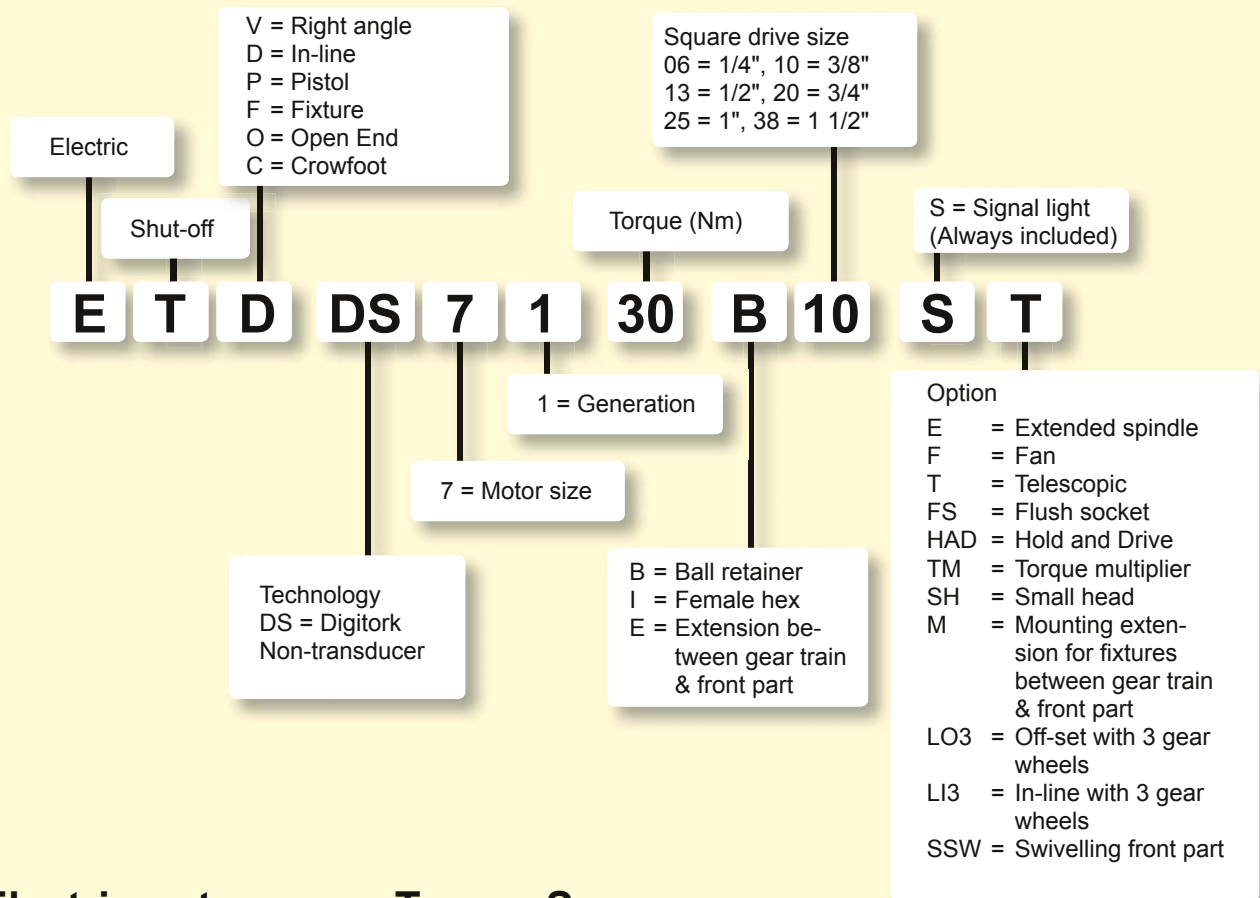
Electric screwdriver – MicroTorque



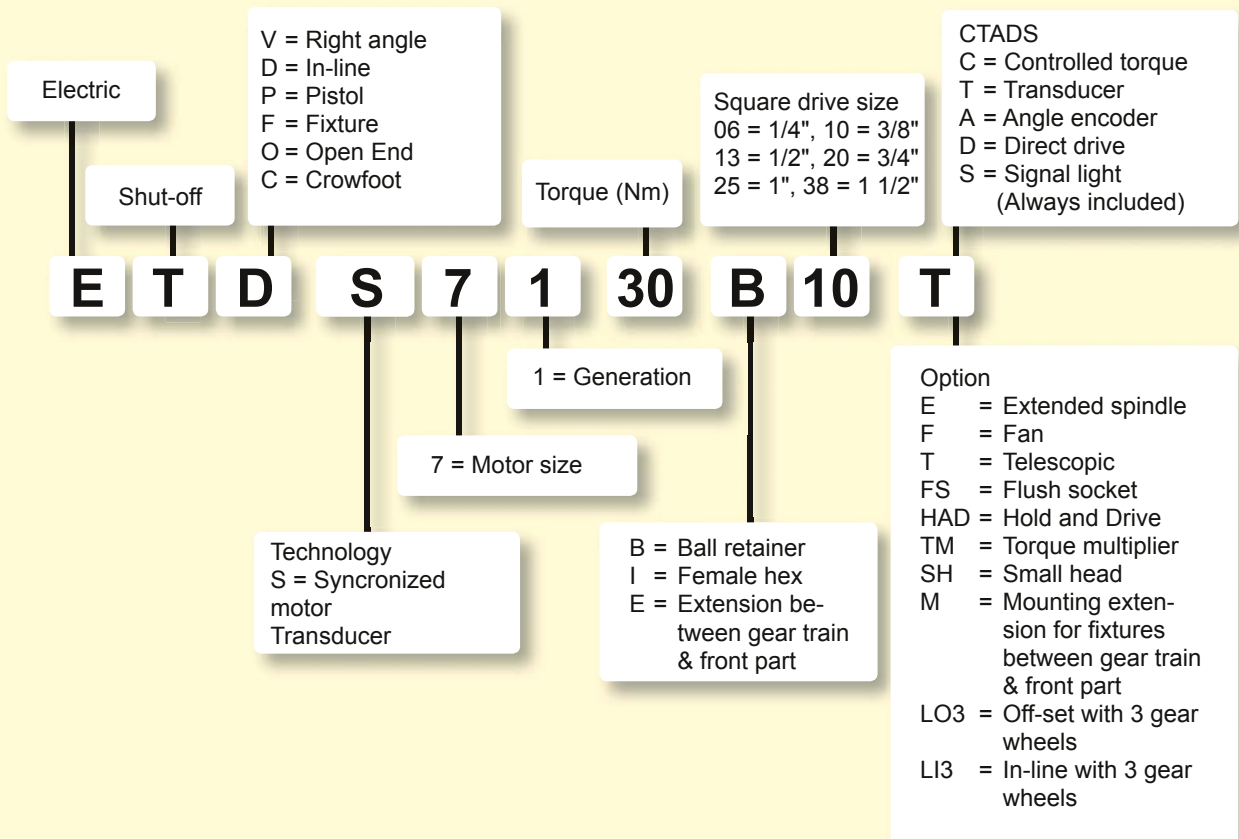
Electric screwdriver – Tensor DL



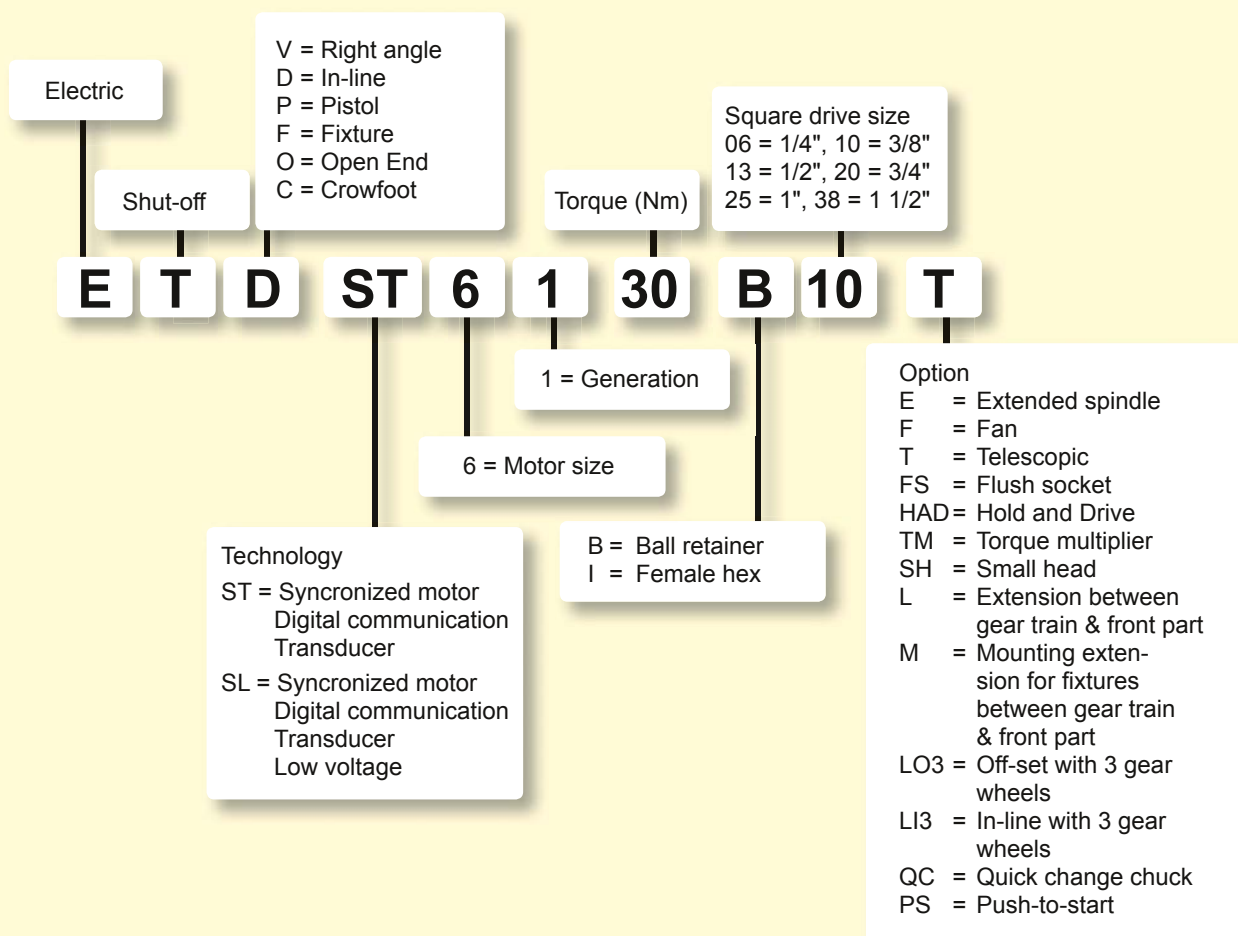
Electric nutrunner – Tensor DS



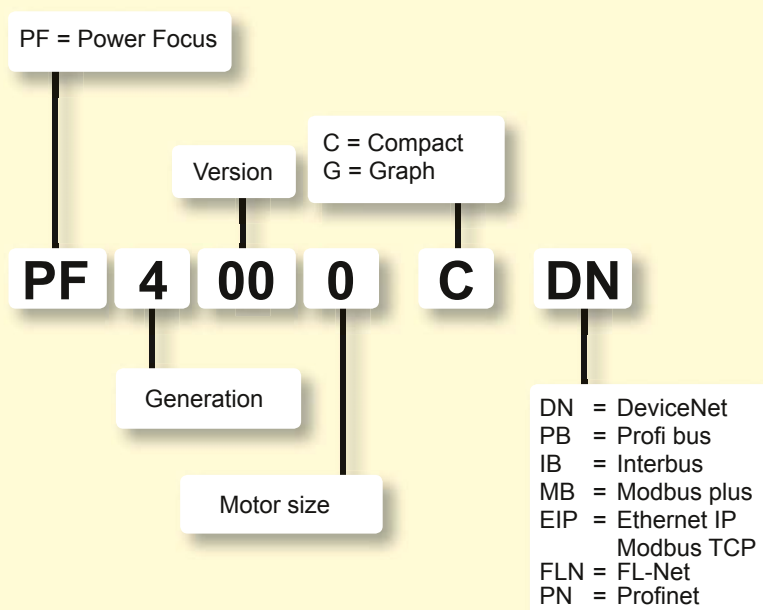
Electric nutrunner – Tensor S



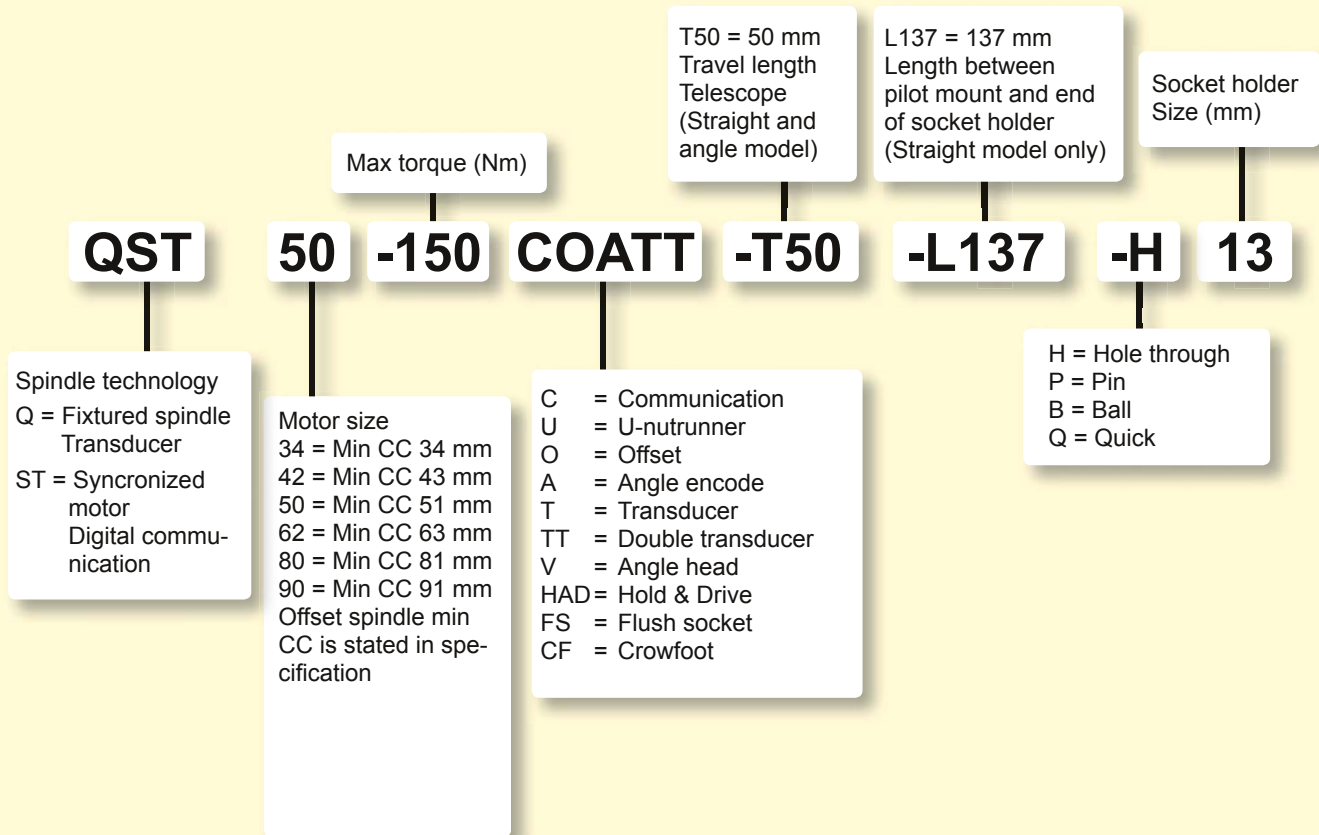
Electric nutrunner – Tensor ST/SL



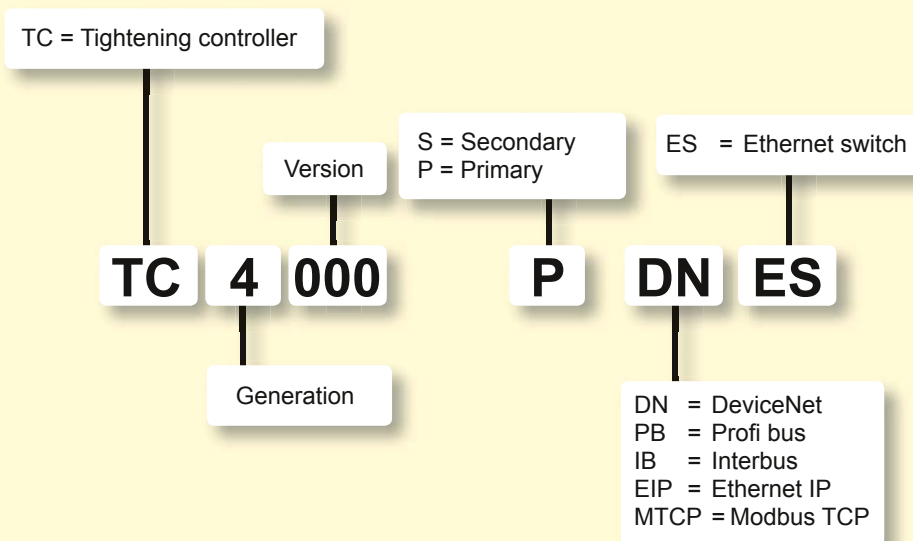
Power Focus



Fixtured nutrunner – QST



Power MACS 4000



BAL – Ball valve	LLA – Air hoist
BCP BL – Battery screwdriver, pistol grip, clutch type	LLT – Trolley
BLOCK – Blow protector	LMD – Pneumatic nutrunner, stall type, straight model
BTV – Battery screwdriver, shut-off type, angle model	LMK – Pneumatic nutrunner, stall type, worm drive
	LMP – Pneumatic nutrunner, stall type, pistol grip
CABLAIR – CABLAIR hose	LMPV – Pneumatic nutrunner, stall type, pistol grip, angle model
CLAW – Claw coupling	LMS – Impact wrenches, non shut-off type
COL – Colibri balancer	LMV – Pneumatic nutrunner, stall type, angle model
COMBI – Pneumatic screwdriver, direct drive	LPN – Nibbler
COMBI – Pistol grip drill	LSF – Die grinder
	LSK – Routers
DIM – Air preparation unit, lubricator	LSO – Orbital sander
DOS – Direct lubricator unit	LSR – Straight grinder
	LSS – Vertical grinder and sander
EBL – Electric screwdriver, brushless clutch type	LST – Random orbital sander
EP C/X/XS – Hydraulic impulse nutrunner, non shut-off, ERGOPULSE	LSV – Angle grinder and sander
EP PT/PTS/PTX – Hydraulic impulse nutrunner, shut-off, ERGOPULSE	LTC – Pneumatic nutrunner, shut-off type, crowfoot
EPP – Monitoring impulse nutrunner, PULSOR C	LTD – Pneumatic nutrunner, shut-off type, straight model
ErgoGUN – Blow gun	LTO – Pneumatic nutrunner, shut-off type, tube nut
ErgoNIP – Nipple	LTP – Pneumatic nutrunner, shut-off type, pistol grip
ErgoQIC – Quick coupling	LTPV – Pneumatic nutrunner, shut-off type, pistol grip, angle model
ESF – Electric grinder, straight model, BRAZOR	LTS – Impact wrenches, shut-off type
ESV – Electric grinder, BRAZOR	LTV – Pneumatic nutrunner/screwdriver, shut-off angle model
ETC DS – Electric nutrunner, shut-off type, crowfoot, TENSOR DS	LUD – Pneumatic screwdriver, direct drive
ETC ST – Electric nutrunner, shut-off type, crowfoot, TENSOR ST	LUF – Pneumatic screwdriver, slip-clutch
ETC STB – Battery nutrunner, crowfoot, TENSOR STB	LUM – Pneumatic screwdriver, shut-off clutch
ETD DL – Electric screwdriver, shut-off type, straight model, TENSOR DL	LZB – Small vane air motor
ETD DS – Electric nutrunner, shut-off type, straight model, TENSOR DS	LZL – Vane air motor
ETD M – Electric screwdriver, hand-held "Digitork", MicroTorque	
ETD S – Electric nutrunner, shut-off type, straight model, TENSOR S	MRTT-B – Manual screwdriver/wrench torque transducer
ETD SL – Electric screwdriver, straight model, TENSOR SL	MT TH – Torque In/Line rotary transducer
ETD ST – Electric nutrunner, shut-off type, straight model, TENSOR ST	MT TR – Torque&Angle In/Line rotary transducer
ETD STR – Electric screwdriver, straight model, TENSOR STR	MT TRA – Stationary torque transducer
ETF DL – Electric screwdriver, shut-off type, fixture, TENSOR DL	MT TS – Manual screwdriver torque transducer
ETF M – Electric screwdriver, fixtured "Digitork", MicroTorque	MultiFlex – Swivel connectors
ETF MT – Electric screwdriver, fixtured transducerized, MicroTorque	
ETF SL – Electric screwdriver, shut-off type, fixture, TENSOR SL	NIP – Nipple
ETO DS – Electric nutrunner, shut-off type, open end, TENSOR DS	
ETO ST – Electric nutrunner, shut-off type, open end, TENSOR ST	Optimizer – Air tool oil
ETO STB – Battery nutrunner, tube nut, TENSOR STB	
ETP DL – Electric screwdriver, shut-off type, pistol grip, TENSOR DL	POLUR – Polyurethane hose
ETP DS – Electric nutrunner, shut-off type, pistol grip, TENSOR DS	PVC – PVC hose
ETP S – Electric nutrunner, shut-off type, pistol grip, TENSOR S	
ETP SL – Electric screwdriver, shut-off type, pistol grip, TENSOR SL	QIC – Quick coupling
ETP STB – Battery nutrunner, pistol grip TENSOR STB	QRTT – Transducer for spindle and fixtured tool calibration
ETP ST – Electric nutrunner, shut-off type, pistol grip, TENSOR ST	QST – Fixtured electric nutrunner, shut-off type
ETP STR – Electric screwdriver, pistol grip, TENSOR STR	
ETV DL – Electric screwdriver, shut-off type, angle model, TENSOR DL	RAB – Screw-feed drill
ETV DS – Electric nutrunner, shut-off type, angle model, TENSOR DS	RAM – Rammer
ETV S – Electric nutrunner, shut-off type, angle model, TENSOR S	RBB – Bucking bar, vibration damped
ETV SL – Electric screwdriver, angle model, TENSOR SL	REG – Air preparation unit, regulator
ETV ST – Electric nutrunner, shut-off type, angle model, TENSOR ST	RIL – Balancer
ETV STR – Electric screwdriver, angle model, TENSOR STR	RRC – Chipping hammer, conventional type
ETV STB – Battery nutrunner, angle model, TENSOR STB	RRD – Chipping hammer, vibration damped
ETX – Fixtured electric nutrunner, shut-off type	RRF – Chipping hammer, vibration damped
	RRH – Riveting hammers, vibration damped
FIL – Air preparation unit, filter	RRN – Riveting hammer, conventional type
	RUBAIR – Rubber hose
GHP – Torque arm, MicroTorque	RVM – Scaler, vibration damped
GTG – Turbo grinder	
GTR – Straight turbo grinder	SM – Torque arm, parallel
GUN – Blow gun	SMC – Telescopic reaction arm
	SML – Torque arm, linear
HM – Hose reel	SPI – Spiral hose
HRIL – Hose reel	SRTT-B – Static reaction torque transducer
HT – Torque testers	
	TLT – Trolley
IRTT-B – In-line rotary torque and torque/angle transducer	TT – Torque testers
	TURBO – Rubber hose
JSB – Testbenches	TWIST – Pneumatic screwdriver, slip-clutch
LBB – Pistol grip and straight drill	WP – Balancer
LBL – Automatic drilling and tapping unit	
LBR – Pneumatic nutrunner, stall type, ratchet wrenches	
LBS – Micro stop drill	
LBV – Angle drill	
LCS – Circular cutters	
LGB – Tapper	

This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin, light gray lines. The grid covers the entire area of the page, leaving no margins or other markings. There are 20 columns and 20 rows of squares, creating a total of 400 square units.

