Torque and Positioning Arms Atlas Copco



	AX1	AX2-5	AXR	HTS	FTS	SMC	SML-T	SMS-T	SMC-TT	SML- MK II	SMF
Reach (mm)	1500	5000	2000	3000	3300	1128-2633	530-914	582-930	1013-1731	240-480	710-870
Max. Tool Weight (kg)	15	100	35	15	350	2.81*	6	6	4*	11.3	2
Max. Torque (Nm)	150	2000	370	250	1000	300	100	100	25	1000	25
ILG Compatible	Х	Х	Х	-	-	Х	-	-	-	-	-
ILG Converter Kit	-	-	-	-	-	-	Х	Х	-	-	-
TPS Compatible	-	-	-	-	-	Х	Х	Х	-	-	-
PTD Available	-	-	-	-	-	Х	Х	Х	Х	Х	Х
APC Project	Х	Х	Х	Х	Х	-	-	-	-	-	-

*Maximum tool weight is dependent on the balancer

Optimize ergonomics and quality in your workstation

Operator health is important. If your operators work with hand-held electric or pneumatic tools, the last thing you want is for their health to suffer. However light the tool, when an operator performs repetitive tasks daily, often with incorrect posture, the tool seems to grow heavier by the hour. Add torque reaction from the tightening process, and the result can be hand-arm-shoulder disorders that may lead to injury and even premature retirement.

Positioning arms do several jobs to optimize the workstation. Tightening job is done in sequence order eliminate operator fault. With the proper tool position, operators can work more efficiently by wasting less time and movement. The exerted effort to use the tool is lowered because the positioning arm counter-balances the tool. The potential benefits with a positioning arm include reduced repetitive stress injuries, reduced operator fatigue, increased productivity, improved quality, decreased handling time, greater operator satisfaction, and lower operational costs

AX1 ARTICULATED ARM

The AX1 Articulated Arm was designed for applications with compact working areas and high production rates, ideal for workbench and conveyor type applications. Equipped with a either a gas spring assembly or a pneumatic cylinder, the system provides a lift assist for the operator. The gas spring can be set to hold at a balanced position along the vertical travel, or be biased in either the up or down direction.

AX2-5 ARTICULATED ARMS

Atlas Copco AX2-5 Articulated Arms were developed to meet customer demands with the highest standard of quality. The systems are designed to allow for simple handling of tools in a variety of setups. It reacts the torque generated by the tool, eliminating the impact on the operator.The arms can be used to support single or multi-spindle nutrunners using one of many tool holder options.

AXR ARTICULATED ARMS

The AXR-S is a unique solution for hand tool applications that require a long reach, ideal for final assembly and under-body applications. By not utilizing the typical parallelogram arm design, a longer reach can be achieved while maintaining a low system mass and ultimately improving handling.

REACTION SUSPENSION SYSTEM - HTS

Atlas Copco Hand Tool Torque Reaction Suspension, designed specifically for hand tool applications, reacts the torque generated by a tool, eliminating the impact to the operator. This suspension includes a linear motion device that provides vertical travel for positioning and torque reaction of the tool.

FIXTURED TOOL SUSPENSION - FTS

Atlas Copco FTS Fixtured Tool Suspension systems have been designed to meet a wide variety of application demands. The flexible, adaptable design makes it the ideal solution for applications of all types. FTS systems utilize a sturdy, proven method for torque reaction and linear guiding, providing low operating forces and high rigidity.

SMC

The Atlas Copco carbon arms have a telescopic design for maximum flexibility in the workplace. The carbon arms are light weight with smooth movements to reduce the operator force to use the arms.

SML/SMS-T

The Atlas Copco linear/radial arms are built to handle the most demanding industrial situations. The robust design offers unmatched user friendliness. The linear arms are equipped with ball bearings for smooth operation, and an adjustable plate for maximum adjustment of minimum and maximum working area. The arms have balancer included that will absorb the weight of the arm and tool combination to reduce the weight for the operator.

SMC-TT

The SMC-TT torque arms are designed to be used in combination with handheld straight and angle tools, including both electric and pneumatic. They are suited to be utilized for various rail and roofmounted applications in all sorts of assembly environments.

SML-MK II

By mounting your assembly tool on a SML MK II torque arm you will immediately increase the productivity and reduce muscular stress from your operators. All arms are delivered with integrated balancer, enables rotation around its own axis and moves horizontally and vertically and the Atlas Copco interface for tool holders.

SMF

The SMF-25 torque arms are labor-saving extensions of the Atlas Copco handheld tools. They are made of aluminum and are suitable for straight and pistol assembly tools up to 25 Nm.



Torque and Positioning Arms

Working with ILG



AX1 Articulated Arm



BENEFITS

- Lightweight, compact design with low-operating forces and smooth, comfortable handling for reduced operator fatigue and increased productivity
- Parallel arm style for optimal accessibility and clear sight to the work piece
- Torque can be applied in horizontal, vertical or angular tightening orientations
- Easy to assemble and install, saving valuable set-up time
- Low maintenance for increased productivity
- Adaptable for various applications and tool configurations for repurposing or lean production optimization

FEATURES

- 335° rotation at pillar for increased working area (360° capability - limited by the tool cable wind up)
- Adjustable rotational stops located at shoulder and fixed rotation limiter at the elbow for limiting lateral movement
- Extensive vertical travel
- Adjustable leveling at pillar base
- Adjustable inner parallel arm/vertical rod leveling
- Parking block for parking and maintenance
- Sealed ball and plain bearings
- Integrated cable management
- Optional hand adapter type: fixed or rotating with/without torque reaction brake
- Optional lift assist type: pneumatic and gas shock
- Optional vertical rod lengths
- Standard range of tool holders and accessories
- Industrial Location Guidance ILG adaptable
- Adjustable limit switch accessories easily adaptable

ARM MODELS

	Torque Capacity	Payload Capacity	Reach	Length	
Arm Model	Nm	kg (lb)	1m (3.3ft)	1.5m (4.9ft)	Ordering No.
AX1-1	120	15 (33.1)	•		
AX1-1.5	150	15 (33.1)		•	





An Articulated Arm assists the operator with lifting the tool and provides stability for tool positioning.

AX1 Articulated Arm





Arm allows it to be used in a number of different configurations. It is easily adapted to suit a variety of unique applications.

ERGONOMICS

- Pneumatic cylinder for auto balance
- Low push/pull
- Inner parallel arm to ensure consistent tool orientation
- Tool leveling can ensure good position and operation of arm

FLEXIBILITY

- End of arm fixed
- End of arm rotation
- Various tool holders

CAPACITY

- Up to 150 Nm of torque
- ▶ 1500 mm arm reach
- ► 750 mm vertical travel

TECHNICAL

- > 335° rotation at pillar with adjustable rotational stops
- Adjustable leveling at pillar base
- Left or right mounting configuration
- Tool home position

				Α	В	С	D	Е
Model	Torque Capacity Nm (Ib ft)	Load Capacity kg (lb)	Weight kg (lb)	Vertical Travel - Total mm (in)	Vertical Travel - Up/Down mm (in)	Max. Working Radius mm (in)	Up/Down Working Radius mm (in)	Min. Inside Working Radius mm (in)
AX1-1	120 (88.5)	15 (33.1)	20.4 (44.5)	600 (23.6)	300 (11.8)	1094 (43.1)	995 (39.2)	135 (5.3)
AX1-1 - Inverted	120 (88.5)	15 (33.1)	20.4 (44.5)	600 (23.6)	300 (11.8)	1094 (43.1)	995 (39.2)	135 (5.3)
AX1-1.5	150 (110.6)	15 (33.1)	22.5 (49.6)	750 (29.5)	375 (14.7)	1577 (62.1)	1479 (58.2)	135 (5.3)
AX1-1.5 - Inverted	150 (110.6)	15 (33.1)	22.5 (49.6)	750 (29.5)	375 (14.7)	1577 (62.1)	1479 (58.2)	135 (5.3)



Workbench Station



Conveyor / Fixed Suspended Station

Technical data

AX1 Articulated Arm

APC | Positioning ILG

Working area & Vertical range of motion





				А	В	С	D	E
Model	Torque Capacity Nm (Ib ft)	Load Capacity kg (lb)	Weight kg (lb)	Vertical Travel - Total mm (in)	Vertical Travel - Up/Down mm (in)	Max. Working Radius mm (in)	Up/Down Working Radius mm (in)	Min. Inside Working Radius mm (in)
AX1-1	120 (88.5)	15 (33.1)	20.4 (44.5)	600 (23.6)	300 (11.8)	1094 (43.1)	995 (39.2)	135 (5.3)
AX1-1 - Inverted	120 (88.5)	15 (33.1)	20.4 (44.5)	600 (23.6)	300 (11.8)	1094 (43.1)	995 (39.2)	135 (5.3)
AX1-1.5	150 (110.6)	15 (33.1)	22.5 (49.6)	750 (29.5)	375 (14.7)	1577 (62.1)	1479 (58.2)	135 (5.3)
AX1-1.5 - Inverted	150 (110.6)	15 (33.1)	22.5 (49.6)	750 (29.5)	375 (14.7)	1577 (62.1)	1479 (58.2)	135 (5.3)

	F	G	Ordering	Number
Model	Vertical Rod Mounting Height mm (in)	Vertical Rod Mounting Height mm (in)	Right	Left
AX1-1	684 (26.9)	-	8439 6203 00	8439 6203 01
AX1-1 - Inverted	-	718 (28.3)	8439 6203 02	8439 6203 03
AX1-1.5	684 (26.9)	-	8439 6203 05	8439 6203 06
AX1-1.5 - Inverted	-	718 (28.3)	8439 6203 07	8439 6203 08



AX1 Articulated Arm



MOUNTING

AX1 Articulated Arm can be mounted in numerous configurations based on application requirements. For workbench applications, a Workbench Mounting Plate is used as a base for the arm. Where additional height is needed, a Workbench Pedestal is available in various heights. For floor mounted applications, a Floor Pedestal is available in various heights. The workbench and floor mounting hardware is not included.

Options





Workbench Pedestal Workbench Mounting Plate

Description	Weight kg (lb)	A mm (in)	B mm (in)	C mm (in)	Ordering N
Workbench Mounting Plate - AX1	2 (4.4)	15 (0.7)	150 (5.9)	120 (4.7)	8439 6011
Workbench Pedestal - AX1 - 100 mm	4.8 (10.6)	100 (3.9)	150 (5.9)	120 (4.7)	8439 6011
Workbench Pedestal - AX1 - 200 mm	5.9 (13)	200 (7.9)	150 (5.9)	120 (4.7)	8439 6011
Workbench Pedestal - AX1 - 300 mm	7.1 (15.7)	300 (11.8)	150 (5.9)	120 (4.7)	8439 6011
Floor Pedestal - AX1 - 500 mm	11.1 (24.5)	500 (19.7)	200 (7.9)	170 (6.7)	8439 6011
Floor Pedestal - AX1 - 750 mm	14 (30.9)	750 (29.5)	200 (7.9)	170 (6.7)	8439 6011
Floor Pedestal - AX1 - 1000 mm	17 (37.5)	1000 (39.4)	200 (7.9)	170 (6.7)	8439 6011







VERTICAL ROD

The vertical rod is used to connect a tool holder to the hand adapter on the articulated arm. Available in three lengths, it can be configured to suit part height requirements. The vertical rods feature a clevis interface at the lower end that adapts to all AX1 tool holders.

Description	Weight kg (lb)	Height kg (b)	Ordering No.
Vertical Rod - AX1 - 250 mm	0.9 (2)	265 (10.4)	8439 6204 21
Vertical Rod - AX1 - 350 mm	1.1 (2.4)	365 (14.4)	8439 6204 22
Vertical Rod - AX1 - 450 mm	1.4 (3.1)	465 (18.3)	8439 6204 23



Options

AX1 Articulated Arm

APC | Positioning ILG

HAND ADAPTER

The hand adapter is used to mount the vertical rod to the articulated arm. Both fixed and rotating options are available for flexible application set-ups, with a torque reaction brake option available for vertical tightening orientation applications with rotation required.



Fixed Hand Adapter







Rotating Hand Adapter with Brake

Description	Weight kg (lb)	Vertical Application	Horizontal Application	Angular Application ≥ 45° from horizontal	Ordering No.
Fixed Hand Adapter - AX1	0.6 (1.3)	1	1	✓	8439 6204 09
Rotating Hand Adapter - AX1	1.7 (3.8)	-	1	✓	8439 6204 10
Rotating Hand Adapter with Brake - AX1	5 (11)	1	1	1	8439 6204 12

BALANCE CONTROL

The balance control is a lift-assist for easy handling of the tool. Both options can be adjusted for the load requirements within the balancing capacity range.

PNEUMATIC CYLINDER

- Position balancing
- Adjustable based on load

GAS SPRING

- Up or down bias with position balancing
- Adjustable based on load

	Load Capacity Minimum	Load Capacity Maximum	
Description	kg (lb)	kg (lb)	Ordering No.
AX1-1 Balance Control Options			
	-	9.3 (20.5) @ 4 bar	8439 6204 50
Balance Control - AX1-1 - Pneumatic – SMC*	-	12.5 (27.5) @ 5 bar	8439 6204 50
	-	15.0 (33.0) @ 6 bar	8439 6204 50
Balance Control - AX1-1 - Gas Spring - 150 N	2.2 (4.8)	4.1 (9.0)	8439 6204 53
Balance Control - AX1-1 - Gas Spring - 200 N	3.3 (7.3)	5.6 (12.3)	8439 6204 54
Balance Control - AX1-1 - Gas Spring - 275 N	4.8 (10.6)	7.9 (17.4)	8439 6204 55
Balance Control - AX1-1 - Gas Spring - 375 N	6.8 (15.0)	10.9 (24.0)	8439 6204 56
Balance Control - AX1-1 - Gas Spring - 525 N	9.9 (21.8)	15.0 (33.1)	8439 6204 57
AX1-1.5 Balance Control Options			
Balance Control - AX1-1.5 - Pneumatic – SMC*	-	15.0 (33.1) @ 4 bar	8439 6204 60
Balance Control - AX1-1.5 - Gas Spring - 275 N	2.4 (5.3)	4.4 (9.7)	8439 6204 63
Balance Control - AX1-1.5 - Gas Spring - 375 N	3.7 (8.1)	6.5 (14.3)	8439 6204 64
Balance Control - AX1-1.5 - Gas Spring - 525 N	5.8 (12.8)	9.5 (20.9)	8439 6204 65
Balance Control - AX1-1.5 - Gas Spring - 725 N	8.5 (18.7)	13.6 (30.0)	8439 6204 66
Balance Control - AX1-1.5 - Gas Spring - 850 N	10.2 (22.5)	15.0 (33.1)	8439 6204 67



6 m 0

Hand adapters capable of inverted mounting.

AX1 Articulated Arm



WORKBENCH MOUNTING HARDWARE

The workbench mounting hardware may be used when either a workbench mounting plate or workbench pedestal option is selected. Options are available for either direct or through-benchtop mounting. Direct version is used when arm can be bolted directly to mounting surface with threaded holes. Through version is used when arm cannot be bolted directly to mounting surface – measurement indicates maximum mounting surface thickness.



Through Mounting Hardware

Description	Weight kg (lb)	Ordering No.
Workbench Mounting Hardware - Direct *Tapped hole surfaces	0.1 (0.2)	8439 6111 00
Workbench Mounting Hardware - Through - 40 mm *Bolt through hole surfaces	1.0 (2.2)	8439 6111 01
Workbench Mounting Hardware - Through - 75 mm *Bolt through hole surfaces	1.1 (2.4)	8439 6111 02

CONTROLLER MOUNTING SYSTEM

The controller mounting system for the AX1 Articulated Arm mounts directly to the pillar to allow for a compact system size. The controller mounting system is compatible with Power Focus 4000, Power Focus 600/6000, and Power MACS 4000 controllers. It includes mounting for a stacklight and integrated cable management. An optional cable enclosure can be added to protect and hide extra cable length.





Description	Weight kg (lb)	Ordering No.
Controller Mounting – AX1 - Pillar Mount	6.2 (13.6)	8439 6205 30
Controller Cable Cover	1.0 (2.2)	8439 6205 32

ASSEMBLY CONTROL NODE (AC NODE)

The Industrial PC series Assembly Control Node (AC Node) will convince you of its extreme robustness, compatibility, performance, flexibility and system stability. Choice between a basic model with Intel® Celeron® and a powerful Intel® Core™ i7 CPU. The impact resistant, high-contrast multi touch display (IP65-protection) offers a user-friendly handling - even with gloves. Further favors: extendable memories, flexible power supplies, a variety of interfaces and the optional RAID.

Description	Ordering No.
Assembly Control Node - Basic	8434 2301 10
Assembly Control Node - Value	8434 2301 20
Assembly Control Node - Value Pro	8434 2301 30
Assembly Control Node - Performance	8434 2301 40



AX Articulated Arms



AX Articulated Arms are designed for user-friendly handling of tools in a variety of applications. The arms can be used to support single-spindle, multispindle or customized solutions for reach, payload capacity and handling forces, offering the best ergonomic and safe operator environment.





MODULAR ARM & BOOM

- Higher usable load
- Certified according to crane norms
- Left/right hand configurations

MOUNTING OPTIONS

- Simple configurations
- Ensure optimal accessibility
- Easy integration and modular
- Controllers, HMIs, accessories

FOOTPRINT SIZES

Four footprint sizes available

TECHNICAL CAPACITY

- 270 Nm 2000 Nm tightening torque
- 2m 5m arm reach
- 35kg 100kg payload
- Up to 2.4m of travel

REACTION BRAKE

- High resolution brake system
- Failsafe reaction brake locks without air

ENHANCED PNEUMATICS

- Easy handling for best ergonomics
- Startup in minutes "Plug & Play"
- Efficient pneumatic control system

INTEGRATED CABLE MANAGEMENT



Adjustable inner parallel arm for vertical rod leveling 330° Shoulder Rotation Rubber Coated Parking Hook

AX Articulated Arms



FEATURES

- Extensive vertical travel
- Left and right arm configurations
- Low-friction cylinders for lower handling forces
- Position Recognition System PRS adaptable
- Range of standard tool holders and accessories
- 330° shoulder rotation

BENEFITS

- Designed to comply with ISO 14238 safety standards
- Simple assembly with low maintenance requirements
- Easily configurable to create an optimized solution
- Smooth movement and low handling forces for ease of operator handling
- Certified floor anchoring system
- Auto-CAD Models
- Sealed for life bearing ideal for humid and dirty conditions

BALANCE CONTROL

The balance control is a lift-assist offering zero-gravity positioning of the tool. The balance control system includes air preparation and safety components standard with the system. A balance control option is selected based on load ca-

CUSTOMER VALUES

- All balance control circuit components fit directly under the cylinder
- Air supply via polyamide tube safe because safety components are also directly under the cylinder
- Better handling forces due to short distance between balance control circuit and cylinder
- Better handling because of better performance low friction cylinders
- Lower overall weight because of optimized components and assembly
- No extra electric supply required
- Lower cost due to optimized circuit and staying within the standard

pacity and arm model requirements with respect to the air supply pressure. The balancing force can be adjusted based on the system weight. Improvements include: tool, fixturing, holders, downtubes and end-of-arm rotate.

INCREASED EASE OF PRODUCTIVITY **CONFIGURATION** Large working area Modular design Small footprint Reduced engineering Fast setup and installation Maintenance free Production flexibility Lower integration cost **ERGONOMICS ERROR PROOFING** AND SAFETY & QUALITY Low handling forces Operator Guidance Smooth movement Quality independent of operator Ease of operator handling Reduced scrap & rework Prevent injury to operator

Installation options



AX Articulated Arms

APC | Positioning ILG

ACCESSORY MOUNTING SYSTEM

The Accessory Mounting System has been designed to allow simple configuration of purpose-built systems. The system supports various Atlas Copco Quality Integrated Fastening products and other accessories. Options exist for both pillar and vertical rod mounting to ensure optimal accessibility of accessories.

REQUIRED EQUIPMENT

- Mounting Option for Pillar or Vertical Rod mounting
- Accessory Mounting Strap with Bracket includes (1) Bracket

• Maximum of (2) Accessory Mounting Brackets per strap

- Quality Integrated Fastening hardware (where applicable)
- Operator Handle (where applicable)

	Mounting Option					
Description	Pillar Mount	Vertical Rod Mount Single Double	Weight kg (lb)	Ordering No.		
Shelf - Small	•		2.6 (5.8)	8439 6014 10		
Shelf - Large	•		3 (6.7)	8439 6014 11		
Bin Rack Assembly - (3 Bins) Black	•		5 (11)	8439 6014 12		
Bin Rack Assembly - (3 Bins) Blue	•		5 (11)	8439 6014 13		
Bin Rack Assembly - (3 Bins) Red	•		5 (11)	8439 6014 14		
Bin Rack Assembly - (3 Bins) Yellow	•		5 (11)	8439 6014 15		
Bin Rack Assembly - (3 Bins) Blue / Red / Yellow	•		5 (11)	8439 6014 16		
Selector 4 / Bit Selector 8 Mounting	•	•	3.4 (7.6)	8439 6014 20		
Selector 8 / Selector for Large Sockets Mounting	•		5 (11)	8439 6014 21		
Stacklight Mounting	•	•	0.8 (1.9)	8439 6014 22		
Operator Panel Mounting	•	•	3.1 (6.7)	8439 6014 23		
Indicator Box Mounting		•	1.4 (3)	8439 6014 24		
MiniDisplay Mounting		•	1.4 (3)	8439 6014 25		
MaxiDisplay Mounting		•	2.8 (6.2)	8439 6014 26		
Handle Mounting		•	0.8 (1.8)	8439 6014 27		
Bar Code Reader Mounting	•	•	-	8439 6014 29		
Brake On/Off Mounting – Pneumatic Switch		•	0.6 (1.4)	8439 6014 34		



Operator Panel



Bar Code Reader



MiniDisplay



Bin Rack



Stacklight



Socket Selector 4 / Bit Selector 8



Shelf



Operator Handle

AXR Articulated Arms

MOUNTING OPTIONS

Simple configurations

TECHNICAL CAPACITY

Ensure optimal accessibility

Easy integration and modular

Controllers, HMIs, accessories



APC | Positioning ILG

AXR ARTICULATED ARMS

Only available at ACN and ACA

The AXR Articulated Arm is an inverted configuration for overhead rail mounting. This is ideal for use on moving lines providing increased productivity and floor space savings.



Mounting

Rail

- Modular design
- Fast setup and installation
- Lower integration cost

ERGONOMICS AND SAFETY

- Low handling forces
- Smooth movement
- Ease of operator handling
- Prevent injury to operator

INCREASED PRODUCTIVITY

- Large working area
- Small footprint

Arm Model

AXR1

Production flexibility



Air Supply

Pressure

psi

60

bar

4

Vertical

Travel

mm (in)

750 (29.5)

370 Nm tightening torque
2m - 5m arm reach
35kg payload
Up to .75 mm of vertical travel

2

ERGONOMICS

- Easy handling for best ergonomics
- Startup in minutes "Plug & Play"
- Efficient pneumatic control system

INTEGRATED CABLE MANAGEMENT

Reach Length						
2 m	3 m	4 m	5 m			
•						
6.6 ft	9.8 ft	13.1 ft	16.4 ft			
- Ctandard ar	m configurati	<u></u>				

configuration

	AXF	R1-2-10-S	AXR1-2-10-B		AXR1-2-12-S		AXR1-2-12-B	
Arm Model	Mass kg (lb)	Ordering No.						
Arm	89 (197)	8439 6201 50	96 (213)	8439 6201 51	96 (213)	8439 6201 52	103 (227)	8439 6201 53
Options								
Balance Control - Single Cylinder	10.3 (23)	8439 6200 10	10.3 (23)	8439 6200 10	10.3 (23)	8439 6200 10	10.3 (23)	8439 6200 10
4-Trolley Carriage - Rotating - 600 mm x 600 mm	47 (104)	8439 6201 71	47 (104)	8439 6201 71	47 (104)	8439 6201 71	47 (104)	8439 6201 71
Accessories								
Post								
1900 mm	28.4 (63)	8439 6201 81	28.4 (63)	8439 6201 81	28.4 (63)	8439 6201 81	28.4 (63)	8439 6201 81
2500 mm	35.5 (78)	8439 6201 82	35.5 (78)	8439 6201 82	35.5 (78)	8439 6201 82	35.5 (78)	8439 6201 82
Parking Brakes								
Trolley Carriage	4.2 (9)	8439 6201 85	4.2 (9)	8439 6201 85	4.2 (9)	8439 6201 85	4.2 (9)	8439 6201 85
Elbow	2.7 (6)	8439 6201 86	2.7 (6)	8439 6201 86	2.7 (6)	8439 6201 86	2.7 (6)	8439 6201 86
Parking Hook	2.1 (5)	8439 6201 89	2.1 (5)	8439 6201 89	2.1 (5)	8439 6201 89	2.1 (5)	8439 6201 89
Position Switch Assemblie	s							
Parking Hook	0.5 (1)	8439 6201 08	0.5 (1)	8439 6201 08	0.5 (1)	8439 6201 08	0.5 (1)	8439 6201 08
Parallel Arm Up / Down	1 (2)	8439 6201 09	1 (2)	8439 6201 09	1 (2)	8439 6201 09	1 (2)	8439 6201 09
Handle Mount - Parallel Arm	2 (4)	8439 6201 90	2 (4)	8439 6201 90	2 (4)	8439 6201 90	2 (4)	8439 6201 90

Maximum

Torque

Nm

370

Maximum

Payload

kg (lb)

35 (77)*

Accessories

AXR Articulated Arms

APC | Positioning

PARKING BRAKE

Parking Brakes are used to keep the arm from drifting while it is not in use by the operator. They ensure the unattended arm will not cause damage to parts or injure operators when the parking brake is engaged.

- Parking Brake Trolley Carriage
- Parking Brake Elbow Pivot Brake Assemblies

Included equipment:

- Pneumatic parking brakes
- Pneumatic control circuit

NOTE: Parking Brakes are not designed to react torque generated by the tool.

PARKING HOOK

The parking hook provides a secure location to store the arm away from the work area during extended periods of downtime and maintenance.



POSITION SWITCH ASSEMBLIES

The available position switch assemblies utilize mechanical switches mounted at different points on the arm to indicate when the arm is in a specific position. These switches are often used in conveyor lines to ensure that all tools are clear of the conveyor before advancing the parts. Standard position limit switch assemblies are available for each pivot.

 Position Switch Assembly – Parking Hook

- Indicates when parallel arm is parked in the parking hook

 Position Switch Assembly – Parallel Up/Down

- Indicates when the arm is at a specified range in its vertical travel

Included equipment:

 Switch with 1 meter open-end cable and mounting

HANDLE MOUNTING

The handle mount assembly provides an adjustable, ergonomic operator handling point used to move the arm up and down the line of travel. It can be mounted in numerous orientations on the upper parallel arm.



CONTROLLER AND HMI MOUNTING

Controller and HMI Mounting Systems enable compact, all-in-one solutions. Using accessory mounting straps, the systems can be positioned anywhere along the pillar for optimum visibility. Cables are contained and protected within the mounting enclosure.

Compatible with:

The systems accommodate Power Focus 4000 / 600 / 6000 controllers, Power MACS 4000 controllers, and ComNode / MaxiDisplay HMIs.



CONTROLLER MOUNTING ASSEMBLY

A Controller Mounting Assembly is used to mount to an existing structure. The Controller Mounting Assembly includes all benefits of the Controller Mounting Systems, but doesn't include the Accessory Mounting Straps.

Included equipment:

(2) M10 mounting screws



ILG Positioning Arms

SMC Posi 3



SMC POSI 3

SMC POSI 3 carbon arm which is compatible with ILG sw (Industrial Location Guidance) contains a linear encoder that measures the length the arm travels and an inclinometer to measure the angles of the arm in 2 axises, as a result 3D positioning of arm/tool is determined.

The SMC POSI 3 can work in vertical position and thus can be roof or wall mounted.

CEILING ATTACHMENT

 Allows the arm to rotate on two axes

POSITIONING

1

3

4

5

6

 Smart box contains a linear encoder & an inclinometer for 3D positioning

ERGONOMICS

- Light weight and smooth movements for operator comfort
- Easy to use together with balancer to create weightless solution, balancer needs to be ordered separately
- Minimizes reaction force to prevent hand-arm-shoulder disorders

FLEXIBILITY

 Telescopic design to cover big working area

TOOL HOLDER ATTACHMENT

 Interface between tool and the arm

CAPACITY

- Max Torque range: 12-200 Nm
- Length: 516-2630 mm
- Max tool weight is dependent on the balancer



Linear encoder and inclinometer

SMC CARBON ARMS POSI 3

Model	Ordering No.
SMC 12 1150 POSI 3 NEW	4390 1510 75
SMC 12 1600 POSI 3 NEW	4390 1511 75
SMC 12 2100 POSI 3 NEW	4390 1512 75
SMC 25 1150 POSI 3	4390 1514 75
SMC 25 1600 POSI 3	4390 1515 75
SMC 25 2100 POSI 3	4390 1516 75
SMC 25 2600 POSI 3	4390 1517 75
SMC 50 1600 POSI 3	4390 1518 75
SMC 50 2100 POSI 3	4390 1519 75
SMC 50 2600 POSI 3	4390 1520 75
SMC 100 1600 POSI 3	4390 1522 75
SMC 100 2100 POSI 3	4390 1523 75
SMC 100 2600 POSI 3	4390 1524 75
SMC 200 1600 POSI 3 NEW	4390 1526 75
SMC 200 2100 POSI 3 NEW	4390 1527 75
SMC 200 2600 POSI 3 NEW	4390 1528 75



Tool Holder Attachment

Reaction Suspension System - HTS was designed specifically for hand tool applications; reacting the torque generated by a tool – eliminating the impact to the operator. This suspension includes a linear motion device that provides vertical travel for positioning and torque reaction of the tool.

Equipped with a WP Balancer, the system provides a lift assist for the operator, offering low handling forces and smooth movement. The balancer can be set to hold at a balanced position along the vertical travel or set to raise to the upper travel position.

Torque can be applied in either a horizontal or vertical tightening orientation.

FEATURES

HTS 1

- 150 Nm torque capacity
- 10.8 kg to 14.2 kg lifting capacity
- 300 mm to 1200 mm travel

HTS 2

- 250 Nm torque capacity
- 11.8 kg to 16.7 kg lifting capacity
- 300 mm to 1200 mm travel

- Vertical travel distance optional: 300, 450, 600, 750, 900, 1050, and 1200 mm (Travel limited by tightening orientation – refer to Tightening Orientation Selection Guide)
- Atlas Copco WP Balancer
- Extension tube height adjustment: ± 100 mm with 50 mm increments (200 mm total)
- Internal bumpers for impact dampening
- Upper and lower pivots for position compliance
- Lower clevis for tool holder mounting
- Integrated cable management

BENEFITS

- Reduces operator fatigue
- Lightweight and smooth movement for ease of handling
- Low handling forces for improved ergonomics
- WP Balancer for tool balancing and lift assist
- Adaptable for various tools
- Easy to assemble and maintain

CONFIGURABLE

- Single carriage
- Dual carriage

CAPACITY

- > 70 Nm,150 Nm and 250 Nm
- 1550 mm min and 1975 mm max
- 300 mm, 600 mm vertical travel

TOOL FLEXIBILITY

- Fixed Clamp
- Rotating
- Fixed Inline
- Fixed Pistol



MODEL SPECIFICATIONS

Model	Ordering No.	Model	Lifting Capacity kg (lb)
	8439 5001 01	HTS1-300	14.2 (31.3)
	8439 5001 02	HTS1-450	13.6 (30)
	8439 5001 03	HTS1-600	13.1 (28.8)
HTS1	8439 5001 04	HTS1-750	12.5 (27.6)
	8439 5001 05	HTS1-900	11.9 (26.3)
	8439 5001 06	HTS1-1050	11.4 (25.1)
	8439 5001 07	HTS1-1200	10.8 (23.8)
	8439 5002 01	HTS2-300	16.7 (36.8)
	8439 5002 02	HTS2-450	15.9 (35.1)
	8439 5002 03	HTS2-600	15.1 (33.3)
HTS2	8439 5002 04	HTS2-750	14.3 (31.5)
	8439 5002 05	HTS2-900	13.5 (29.8)
	8439 5002 06	HTS2-1050	12.7 (28)
	8439 5002 07	HTS2-1200	11.8 (26)







Balancers



BALANCERS

The WP Balancer is used as a liftassist and offers near-to-weightless position balancing. It can be adjusted for the load requirements within the balancing capacity range. The balancer can be set to hold at a balanced position along the vertical travel or set to rise to the upper travel position.



Weight Height Model kg (lb) mm (in) Ordering No. WP 10-4.5 8202 0779 01 3.1 (6.8) _ WP 10-6 3.2 (7.1) 8202 0779 02 WP 10-9 3.4 (7.5) 8202 0779 03 _ WP 10-13 8202 0779 04 3.6 (7.9) WP 10-16 8202 0779 05 3.8 (8.4)

BALANCING CAPACITY - HTS2

		Balancing Capacity			
Model	Balancer Model	Minimum kg (lb)	Maximum kg (lb)		
300 mm Travel					
HTS2-300	WP 10-6	1.7 (3.7)	5.7 (12.5)		
HTS2-300	WP 10-9	4.7 (10.3)	9.7 (21.3)		
HTS2-300	WP 10-13	8.7 (19.1)	12.7 (27.9)		
HTS2-300	WP 10-16	11.7 (25.7)	16.7 (36.7)		
450 mm Travel					
HTS2-450	WP 10-6	0.9 (2)	4.9 (10.8)		
HTS2-450	WP 10-9	3.9 (8.6)	8.9 (19.6)		
HTS2-450	WP 10-13	7.9 (17.4)	11.9 (26.2)		
HTS2-450	WP 10-16	10.9 (24)	15.9 (35)		
600 mm Travel					
HTS2-600	WP 10-6	0.1 (0.2)	4.1 (9)		
HTS2-600	WP 10-9	3.1 (6.8)	8.1 (17.8)		
HTS2-600	WP 10-13	7.1 (15.6)	11.1 (24.4)		
HTS2-600	WP 10-16	10.1 (22.2)	15.1 (33.2)		
750 mm Travel					
HTS2-750	WP 10-6	0 (0)	3.3 (7.3)		
HTS2-750	WP 10-9	2.3 (5.1)	7.3 (16.1)		
HTS2-750	WP 10-13	6.3 (13.9)	10.3 (22.7)		
HTS2-750	WP 10-16	9.3 (20.5)	14.3 (31.5)		
900 mm Travel					
HTS2-900	WP 10-6	0 (0)	2.5 (5.5)		
HTS2-900	WP 10-9	1.5 (3.3)	6.5 (14.3)		
HTS2-900	WP 10-13	5.5 (12.1)	9.5 (20.9)		
HTS2-900	WP 10-16	8.5 (18.7)	13.5 (29.7)		
1050 mm Travel					
HTS2-1050	WP 10-6	0 (0)	1.7 (3.7)		
HTS2-1050	WP 10-9	0.7 (1.5)	5.7 (12.5)		
HTS2-1050	WP 10-13	4.7 (10.3)	8.7 (19.1)		
HTS2-1050	WP 10-16	7.7 (16.9)	12.7 (27.9)		
1200 mm Travel					
HTS2-1200	WP 10-6	0.0 (0.0)	0.8 (1.8)		
HTS2-1200	WP 10-9	0.0 (0.0)	4.8 (10.6)		
HTS2-1200	WP 10-13	3.8 (8.4)	7.8 (17.2)		
HTS2-1200	WP 10-16	6.8 (15.0)	11.8 (26.0)		

BALANCING CAPACITY - HTS1

		Balancing Capacity			
Model	Balancer Model	Minimum kg (lb)	Maximum kg (lb)		
300 mm Travel					
HTS1-300	WP 10-4.5	1.7 (3.7)	4.2 (9.2)		
HTS1-300	WP 10-6	3.2 (7)	7.2 (15.8)		
HTS1-300	WP 10-9	6.2 (13.6)	11.2 (24.6)		
HTS1-300	WP 10-13	10.2 (22.4)	14.2 (31.2)		
450 mm Travel					
HTS1-450	WP 10-4.5	1.1 (2.4)	3.6 (7.9)		
HTS1-450	WP 10-6	2.6 (5.7)	6.6 (14.5)		
HTS1-450	WP 10-9	5.6 (12.3)	10.6 (23.3)		
HTS1-450	WP 10-13	9.6 (21.1)	13.6 (29.9)		
600 mm Travel					
HTS1-600	WP 10-4.5	0.6 (1.3)	3.1 (6.8)		
HTS1-600	WP 10-6	2.1 (4.6)	6.1 (13.4)		
HTS1-600	WP 10-9	5.1 (11.2)	10.1 (22.2)		
HTS1-600	WP 10-13	9.1 (20)	13.1 (28.8)		
750 mm Travel					
HTS1-750	WP 10-4.5	0 (0)	2.5 (5.5)		
HTS1-750	WP 10-6	1.5 (3.3)	5.5 (12.1)		
HTS1-750	WP 10-9	4.5 (9.9)	9.5 (20.9)		
HTS1-750	WP 10-13	8.5 (18.7)	12.5 (27.5)		
900 mm Travel					
HTS1-900	WP 10-4.5	0.6 (1.3)	1.9 (4.2)		
HTS1-900	WP 10-6	0.9 (2)	4.9 (10.8)		
HTS1-900	WP 10-9	3.9 (8.6)	8.9 (19.6)		
HTS1-900	WP 10-13	7.9 (17.4)	11.9 (26.2)		
1050 mm Travel					
HTS1-1050	WP 10-4.5	0 (0)	1.4 (3.1)		
HTS1-1050	WP 10-6	0.4 (0.9)	4.4 (9.7)		
HTS1-1050	WP 10-9	3.4 (7.5)	8.4 (18.5)		
HTS1-1050	WP 10-13	7.4 (16.3)	11.4 (25.1)		
1200 mm Travel					
HTS1-1200	WP 10-4.5	0 (0)	0.8 (1.8)		
HTS1-1200	WP 10-6	0 (0)	3.8 (8.4)		
HTS1-1200	WP 10-9	2.8 (6.2)	7.8 (17.2)		
HTS1-1200	WP 10-13	6.8 (15)	10.8 (23.8)		

Options

Reaction Suspension Systems - HTS

TROLLEY CARRIAGE: STANDARD

- Includes Upper Pivot
- Extension tube required

TROLLEY CARRIAGE: COMPACT - FIXED

- No Upper Pivot included (Fixed mounting)
- Mounts directly to the torque reaction housing – no extension tube required

TROLLEY CARRIAGE: COMPACT

- Includes Upper Pivot
- Mounts directly to the torque reaction housing – no extension tube required



Standard 1-Trolley Carriage



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Compact 1-Trolley Carriage





2-Trolley Carriage



Compact - Fixed 2-Trolley Carriage

1-TROLLEY CARRIAGE - HTS1

Model	Weight kg (lb)	Ordering Number
Standard		
IR Zimmerman ZRA1	4.8 (10.6)	8439 5003 01
IR Zimmerman ZRA2	5 (11)	8439 5003 02
Knight Industries RAD4100	4.2 (9.3)	8439 5003 03
Knight Industries RAD7500	5.3 (11.7)	8439 5003 04
Unified Industries ETA-4	4.7 (10.4)	8439 5003 05
Unified Industries ETA-8	5.5 (12.1)	8439 5003 06
Model	Weight kg (lb)	Ordering Number
Model Compact	Weight kg (lb)	Ordering Number
Model Compact IR Zimmerman ZRA1	Weight kg (lb) 4.2 (9.3)	Ordering Number 8439 5007 61
Model Compact IR Zimmerman ZRA1 IR Zimmerman ZRA2	Weight kg (lb) 4.2 (9.3) 4 (8.8)	Ordering Number 8439 5007 61 8439 5007 62
Model Compact IR Zimmerman ZRA1 IR Zimmerman ZRA2 Knight Industries RAD4100	Weight kg (lb) 4.2 (9.3) 4 (8.8) 3.4 (7.5)	Ordering Number 8439 5007 61 8439 5007 62 8439 5007 63
Model Compact IR Zimmerman ZRA1 IR Zimmerman ZRA2 Knight Industries RAD4100 Knight Industries RAD7500 Knight Industries RAD7500	Weight kg (lb) 4.2 (9.3) 4 (8.8) 3.4 (7.5) 4.5 (9.9)	Ordering Number 8439 5007 61 8439 5007 62 8439 5007 63 8439 5007 64
Model Compact IR Zimmerman ZRA1 IR Zimmerman ZRA2 Knight Industries RAD4100 Knight Industries RAD7500 Unified Industries ETA-4	Weight kg (lb) 4.2 (9.3) 4 (8.8) 3.4 (7.5) 4.5 (9.9) 3.9 (8.6)	Ordering Number 8439 5007 61 8439 5007 62 8439 5007 63 8439 5007 64 8439 5007 65



Reaction Suspension System - HTS supports a series of standard tool holders that are designed to enable various tool and position configurations. There are four standard tool holder types, each designed to adapt to different tool type and size. All tool holders mount directly to the lower clevis of the suspension.

FIXED PLATE - STRAIGHT

The Fixed Plate Straight Tool Holder is configurable for either horizontal or vertical tightening orientations. It mounts rigidly to the lower clevis. The tool holder has provisions to mount two handle mounting assemblies.

FIXED CLAMP - ANGLE

The Fixed Clamp Angle Tool Holder can be used for horizontal or vertical applications. The tool clamps to the grip area of an angle tool. It has a pivot for tool angle compliance and can be locked if fixed mounting is desired. The tool body can be configured either parallel or perpendicular to the pivot axis.

ROTATING BODY - ANGLE

The Rotating Body Angle Tool Holder clamps to the grip area of an angle tool. It allows the tool to rotate up to 345° to accommodate horizontal and vertical tightening orientations. Adjustable rotational stops are included to limit tool rotation. It also has a pivot for tool angle compliance and can be locked if fixed mounting is desired.

FIXED PLATE - PISTOL

The Fixed Plate Pistol Tool Holder is designed for horizontal tightening orientations utilizing a pistol tool. It has a pivot for tool angle compliance and can be locked if fixed mounting is desired.



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HTS1 Model	Torque Range (Nm)	Mounting Type	Weight kg (lb)	Height mm (in)	Fixed Plate - Straight	Fixed Clamp - Angle	Rotating - Body Angle	Fixed Plate - Pistol	
Right Angle -	Right Angle - Mounting Type								
ETD OT24	5 - 20	M - 39	0.5 (1.1)	55 (2.2)	-	8439 5005 21	-	-	
EID 5131	5 - 20	M - 39	1.2 (2.7)	70 (2.8)	-	-	8439 5005 41	-	
	28 - 70	M - 39	0.5 (1.1)	55 (2.2)	-	8439 5005 21	-	-	
	28 - 70	M - 39	1.2 (2.7)	70 (2.8)	-	-	8439 5005 41	-	
EID SI61	100 - 200	M - 39	0.5 (1.1)	55 (2.2)	-	8439 5005 21	-	-	
	100 - 200	M - 39	1.2 (2.7)	70 (2.8)	-	-	8439 5005 41	-	
	50 - 70	M - 43	0.5 (1.1)	55 (2.2)	-	8439 5005 22	-	-	
	50 - 70	M - 43	1.2 (2.7)	70 (2.8)	-	-	8439 5005 42	-	
EIV 5181	100 - 200	M - 43	0.5 (1.1)	55 (2.2)	-	8439 5005 22	-	-	
	100 - 200	M - 43	1.2 (2.7)	70 (2.8)	-	-	8439 5005 42	-	
ETV ST101	100 - 200	M - 54.4	0.8 (1.8)	66 (2.6)	-	8439 5005 23	-	-	
Straight - Mo	unting Type								
ETD ST31	5 - 10	Dia 24 mm	0.6 (1.3)	17 (0.7)	8439 5005 01	-	-	-	
	15 - 30	Dia 24 mm	0.6 (1.3)	17 (0.7)	8439 5005 01	-	-	-	
ETD ST61	50 - 90	Spline 2	0.6 (1.3)	17 (0.7)	8439 5005 02	-	-	-	
ETD ST61	10 - 30	Spline 2	0.6 (1.3)	17 (0.7)	8439 5005 02	-	-	-	
Telescopic	50 - 120	Spline 3	0.6 (1.3)	17 (0.7)	8439 5005 03	-	-	-	
	30	Dia 24 mm	0.6 (1.3)	17 (0.7)	8439 5005 01	-	-	-	
ETD ST81	50 - 120	Spline 2	0.6 (1.3)	17 (0.7)	8439 5005 02	-	-	-	
ETD ST81	30 - 50	Spline 2	0.6 (1.3)	17 (0.7)	8439 5005 02	-	-	-	
Telescopic	70 - 120	Spline 3	0.6 (1.3)	17 (0.7)	8439 5005 03	-	-	-	
	100 - 120	Flange (2) M8	0.8 (1.8)	17 (0.7)	8439 5005 04	-	-	-	
ETD ST101	150 - 200	Flange (2) M10	0.8 (1.8)	17 (0.7)	8439 5005 05	-	-	-	
Pistol - Moun	ting Type								
ETP ST Revo	200	Spline 3	-	-	-	-	-	-	
	20 - 30	Dia 24 mm	0 2 (0 5)	50 (2)	-	-	-	8439 5005 61	
ETD STR61	50 - 120	Spline 2	0.3 (0.6)	50 (2)	-	-	-	8439 5005 62	

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TOOL HOLDERS - HTS2

HTS2 Model	Torque Range (Nm)	Mounting Type	Weight kg (lb)	Height mm (in)	Fixed Plate - Straight	Fixed Clamp - Angle	Rotating - Body Angle	Fixed Plate - Pistol
Right Angle -	Mounting Type							
	5 - 20	M - 39	0.9 (1.9)	65 (2.6)	-	8439 5005 91	-	-
EID 5131	5 - 20	M - 39	2.5 (5.5)	90 (3.5)	-	-	8439 5006 11	-
	28 - 70	M - 39	0.9 (1.9)	65 (2.6)	-	8439 5005 91	-	-
	28 - 70	M - 39	2.5 (5.5)	90 (3.5)	-	-	8439 5006 11	-
EID SI61	100 - 200	M - 39	0.9 (1.9)	65 (2.6)	-	8439 5005 91	-	-
	100 - 200	M - 39	2.5 (5.5)	90 (3.5)	-	-	8439 5006 11	-
	50 - 70	M - 43	0.9 (1.9)	65 (2.6)	-	8439 5005 92	-	-
	50 - 70	M - 43	2.4 (5.3)	90 (3.5)	-	-	8439 5006 12	-
EIV S181	100 - 200	M - 43	0.9 (1.9)	65 (2.6)	-	8439 5005 92	-	-
	100 - 200	M - 43	2.4 (5.3)	90 (3.5)	-	-	8439 5006 12	-
	100 - 200	M - 54.4	1 (2.2)	70 (2.8)	-	8439 5005 93	-	-
EIV SI101	100 - 200	M - 54.4	2.2 (4.8)	90 (3.5)	-	-	8439 5006 13	-
Straight - Mo	unting Type							
ETD ST31	5 - 10	Dia 24 mm	-	-	-	-	-	-
	15 - 30	Dia 24 mm	-	-	-	-	-	-
ETD ST61	50 - 90	Spline 2	1.3 (2.9)	22 (0.9)	8439 5005 81	-	-	-
FTD ST61	10 - 30	Spline 2	1.3 (2.9)	22 (0.9)	8439 5005 81	-	-	-
Telescopic	50 - 120	Spline 3	1.3 (2.9)	22 (0.9)	8439 5005 82	-	-	-
	30	Dia 24 mm	-	-	-	-	-	-
ETD ST81	50 - 120	Spline 2	1.3 (2.9)	22 (0.9)	8439 5005 81	-	-	-
FTD ST81	30 - 50	Spline 2	1.3 (2.9)	22 (0.9)	8439 5005 81	-	-	-
Telescopic	70 - 120	Spline 3	1.3 (2.9)	22 (0.9)	8439 5005 82	-	-	-
	100 - 120	Flange (2) M8	1.3 (2.9)	22 (0.9)	8439 5005 83	-	-	-
ETD ST101	150 - 200	Flange (2) M10	1.2 (2.6)	22 (0.9)	8439 5005 84	-	-	-
Pistol - Mounting Type								
ETP ST Revo	200	Spline 3	0.4 (0.8)	60 (2.4)	-	-	-	8439 5006 32
	20 - 30	Dia 24 mm	-	-	-	-	-	-
ETD STR61	50 - 120	Spline 2	0.4 (0.8)	50 (2.0)	-	-	-	8439 5006 31
		~						









2-Trolley Carriage

4-Trolley Carriage

Fixed

Rotating

Rotating with Reaction Brake

Atlas Copco FTS Fixtured Tool Suspension systems have been designed to meet a wide variety of application demands. The flexible, adaptable design makes it the ideal solution for applications of all types. FTS systems utilize a sturdy, proven method for torque reaction and linear guiding, providing low operating forces and high rigidity.

VALUES

- Simple, easy-to-source components
- Bolted assembly for ease of configuration and assembly
- Standard down-stroke travel limiter with bumpers for quiet operation and secure fall-prevention
- Integrated cable management

CONFIGURABLE

2 - Trolley carriage

4 - Trolley carriage

CAPACITY

3

- FTS1 270 Nm 1200 mm Vertical Travel
- FTS2 600 Nm 1200 mm Vertical Travel
- FTS3 1000 Nm 1200 mm Vertical Travel

ERGONOMICS

- Spring balancer
- Electric chain hoist
- Pneumatic cylinder

CUSTOMIZABLE END DEFACTOR

PRODUCT OFFERING



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	FTS1	FTS2	FTS3
Torque Capacity	270 Nm	600 Nm	1000 Nm
Vertical Travel			
Range	150 - 1200 mm (6 - 48 in)	150 - 1200 mm (6 - 48 in)	150 - 1200 mm (6 - 48 in)
Increment	150 mm (6 in)	150 mm (6 in)	150 mm (6 in)
Payload Capacity			
Spring Balancer	150 kg (331 lb)	150 kg (331 lb)	150 kg (331 lb)
Pneumatic Cylinder**	150 kg (331 lb)	350 kg (772 lb)	350 kg (772 lb)
Electric Hoist	150 kg (331 lb)	350 kg (772 lb)	350 kg (772 lb)
Trolley Carriage			
2-Trolley Carriage	•	•	
4-Trolley Carriage	•	•	•
Accessories	Extension Tube, Vertical T	ravel Limiter, Position Switch	, Accessory Mounting Rail

* Torque capacity is dependent on the tightening orientation, vertical travel and extended length

- reference the Maximum Extended Length Table for maximum torque capacity

** payload capacity @ 4 bar (60 psi)

Options

2-TROLLEY CARRIAGE

550 mm trolley spacing with fixed, rotating and rotating with reaction brake options.

Required equipment:

- 2-Trolley Carriage
- 2-Trolley Kit

4-TROLLEY CARRIAGE

Multiple trolley spacing options with fixed, rotating and rotating with reaction brake options.

Required equipment:

- 4-Trolley Carriage
- Carriage Mount
- 4-Trolley Kit

2-Trolley Carriage System Rotating Trolley Carriage and 2-Trolley Knight Industries RAD4110 Kit shown



4-Trolley Carriage System 610 mm x 610 mm Fixed Frame, Rotating Carriage Mount and 4-Trolley Knight Industries RAD4110 Kit shown



2-TROLLEY CARRIAGE OPTIONS

	FTS1	FTS2		
Mass (kg)	Ordering No.	Mass (kg)	Ordering No.	
14.5 kg	8439 5011 50	14.5 kg	8439 5011 50	
20.7 kg	8439 5011 52	20.7 kg	8439 5011 52	
38.5 kg	8439 5011 58	38.5 kg	8439 5011 58	
2.6 kg	8439 5012 60	2.6 kg	8439 5012 60	
	Mass (kg) 14.5 kg 20.7 kg 38.5 kg 2.6 kg	FTS1 Mass (kg) Ordering No. 14.5 kg 8439 5011 50 20.7 kg 8439 5011 52 38.5 kg 8439 5011 58 2.6 kg 8439 5012 60	FTS1 Mass (kg) Mass (kg) Ordering No. Mass (kg) 14.5 kg 8439 5011 50 14.5 kg 20.7 kg 8439 5011 52 20.7 kg 38.5 kg 8439 5011 58 38.5 kg 2.6 kg 8439 5012 60 2.6 kg	



2-Trolley Carriage Rotating shown

* Reaction Brake assembly includes all required pneumatic control components

APC | Positioning ILG

4-TROLLEY CARRIAGE - FTS1/2/3 OPTIONS

	610 mm W x 610 mm L (*600 mm W x 600 mm L)		914 mm V (*900 mm V	/ x 914 mm L V x 900 mm L)
4-Trolley Carriage - FTS1/2/3	Mass (kg)		Mass (kg)	
Fixed Frame				
Knight Industries RAD4110	25 kg	8439 5011 71	35.4 kg	8439 5011 72
Knight Industries RAD7510	25.8 kg	8439 5011 73	36.2 kg	8439 5011 74
Unified Industries ETA-4	23.6 kg	8439 5011 75	34 kg	8439 5011 76
Unified Industries ETA-8	24 kg	8439 5011 77	34.4 kg	8439 5011 78
Demag KBK I*	22.9 kg	8439 5011 81	35.4 kg	8439 5011 82
Demag KBK II*	23.6 kg	8439 5011 83	36.2 kg	8439 5011 84
Duren DR I*	23.5 kg	8439 5011 86	34 kg	8439 5011 87
Duren DR II*	23.1 kg	8439 5011 88	34.4 kg	8439 5011 89
Eepos S/M/L*	24.1 kg	8439 5011 90	35.4 kg	8439 5011 91
Carriage Mounts				
Fixed	8.4 kg	8439 5012 40	8.4 kg	8439 5012 40
Rotating	15 kg	8439 5012 42	15 kg	8439 5012 42
Rotating with Reaction Brake**	33 kg	8439 5012 52	33 kg	8439 5012 52
Accessories				
Adjustable Rotation Stops	2.6 kg	8439 5012 60	2.6 kg	8439 5012 60



Adjustable Rotation Stops



4-Trolley Carriage - Fixed Frame Knight Industries RAD4110 shown



Carriage Mount Rotating Mount shown

*Trolley carriage dimensions for Demag, Duren, and Eepos type ** Reaction Brake assembly includes all required pneumatic control components



TROLLEY KIT OPTIONS

	2-Trolley Kit for Fixed & Rotating		2-Trolley Kit for Rotating with Reaction		4-Trolley Kit	
	Mass (kg)	Ordering No.	Mass (kg)	Ordering No.	Mass (kg)	Ordering No.
Rail Type						
Knight Industries RAD4110	8 kg	8439 5014 00	8 kg	8439 5014 20	6 kg	8439 5014 40
Knight Industries RAD7510	12.4 kg	8439 5014 02	13.5 kg	8439 5014 22	17.3 kg	8439 5014 42
Unified Industries ETA-4	6 kg	8439 5014 04	7.2 kg	8439 5014 24	4.4 kg	8439 5014 44
Unified Industries ETA-8	10.9 kg	8439 5014 06	12.1 kg	8439 5014 26	14.3 kg	8439 5014 46
Demag KBK I	7.6 kg	8439 5014 08	7.8 kg	8439 5014 28	6.8 kg	8439 5014 48
Demag KBK II	13.2 kg	8439 5014 10	17.6 kg	8439 5014 30	22.9 kg	8439 5014 50
Duren DR I	5.9 kg	8439 5014 12	7 kg	8439 5014 32	3.6 kg	8439 5014 52
Duren DR II	8.2 kg	8439 5014 14	9.3 kg	8439 5014 34	8.2 kg	8439 5014 54
Eepos S/M/L	8.1 kg	8439 5014 16	8.3 kg	8439 5014 36	7.4 kg	8439 5014 56



2-Trolley Kit Knight Industries RAD4110 shown



4-Trolley Kit Knight Industries RAD4110 shown

ALLOWABLE APPLICATION TORQUE CAPACITY

	2-Trolley Carriage System Mass <200kg		2-Trolley Carriage System Mass >200kg		4-Trolley Carriage 610 mm W x 610 mm L		4-Trolley Carriage 914 mm W x 914 mm L	
	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal
Rail Type								
Knight Industries RAD4110	270 Nm	500 Nm	270 Nm	-	600 Nm	1500 Nm	900 Nm	1500 Nm
Knight Industries RAD7510	500 Nm	1000 Nm	500 Nm	1000 Nm	1000 Nm	1500 Nm	1000 Nm	1500 Nm
Unified Industries ETA-4	270 Nm	500 Nm	270 Nm	-	600 Nm	1500 Nm	900 Nm	1500 Nm
Unified Industries ETA-8	500 Nm	1000 Nm	500 Nm	1000 Nm	1000 Nm	1500 Nm	1000 Nm	1500 Nm
Demag KBK I	270 Nm	500 Nm	270 Nm	-	600 Nm	1500 Nm	900 Nm	1500 Nm
Demag KBK II	500 Nm	1000 Nm	500 Nm	1000 Nm	1000 Nm	1500 Nm	1000 Nm	1500 Nm
Duren DR I	270 Nm	500 Nm	270 Nm	-	600 Nm	1500 Nm	900 Nm	1500 Nm
Duren DR II	500 Nm	1000 Nm	500 Nm	1000 Nm	1000 Nm	1500 Nm	1000 Nm	1500 Nm
Eepos S/M/L	270 Nm	1000 Nm	270 Nm	1000 Nm	600 Nm	1500 Nm	900 Nm	1500 Nm

Critical Note: the stated capacities relate only to capacity of the trolley carriage components

 Torque Reaction Assembly torque capacities must be observed

Considerations for system stability (movement under load), rail capacity per manufacturer guidelines (based on installation-specific inputs), etc. are the responsibility of the project team.







LIFT ASSIST



SPRING BALANCER

Weightless positioning of the system throughout the entire vertical travel. The balancer requires no external energy input to function. Multiple balancer size options are available based on required payload capacity.



PNEUMATIC CYLINDERS

Zero-gravity and/or Up-Down positioning of the system throughout the entire vertical travel. Multiple cylinder size options are available based on required payload capacity.

Note:

 Pneumatic control circuit kits are not included – must be order separately based on local designs.



ELECTRIC CHAIN HOIST

Up-Down positioning of the system throughout the entire vertical travel. Multiple size options are available based on required payload capacity and travel speed requirements.

Note:

 Hoists are not include in the mounting kit - select mounting and specific hoist type.



REQUIRED LIFT CAPACITY

To determine the minimum lift capacity required, the mass of the internal torque reaction assembly components must be combined with the mass of the external payload.

	FTS1	FTS2	FTS3
Internal Component Mass	Mass (kg)	Mass (kg)	Mass (kg)
Travel Length			
150 mm	6.5 kg	12.1 kg	16.8 kg
300 mm	7.5 kg	13.8 kg	19.1 kg
450 mm	8.4 kg	15.5 kg	21.3 kg
600 mm	9.4 kg	17.1 kg	23.6 kg
750 mm	10.4 kg	18.8 kg	26 kg
900 mm	11.3 kg	20.4 kg	28.3 kg
1050 mm	12.3 kg	22.1 kg	30.5 kg
1200 mm	13.3 kg	23.7 kg	32.8 kg

$P_{min.} = M_{internal} + M_{external}$



P_{min} = min. required lift capacity M_{internal} = internal component mass M_{external} = external component mass



Internal components

EXTENSION TUBE

Used when the longest down tube cannot span the distance between the rail system and the fastening point.

500 mm shown

VERTICAL TRAVEL LIMITER

Allows the vertical travel to be limited in the up and/or down direction to fit specific application needs (adjustable).



EYE BOLT/SAFETY BELT KIT

Single Eye Bolt with Safety Belt. Mounts to Down Tube - must add holes in Down Tube at assembly.



Mechanical limit switch used to indicate when the tightening system has raised

above a specified position.

VERTICAL POSITION SWITCH



ACCESSORY MOUNTING RAIL

Extruded profile allows flexible, adjustable mounting of accessories.

	2
T	
	•

Accessory Mounting Rail with Allen Bradley 802T Shown in Raised Position



Accessory Mounting Rail with **Telemacanique XCR-E18** Shown in Raised Position









The Atlas Copco's Industrial Location Guidance (ILG) is an integrated, stand-alone error proofing system that offers high-level process security for applications ranging from simple to complex.

ILG tracks the exact location of the tool relative to the fastening position, ensuring the correct fasteners are tightened to specification, in the proper sequence.

Comprised of ILG software, positioning hardware and tightening controller, the system combines the functionality of a tightening system with position and process control.

Typical applications for ILG include: low-volume, high-value component assembly, repairs stations and flexible assembly cells.

APPLICATION

Example application comprised of the following items; one of many application possibilities.

- AX1 Articulated Arm with Positioning Hardware
- PF 6000 with ETD Tool
- HLT HMI
- ILG Industrial Location Guidance Software

REQUIREMENTS & COMPATIBILITY

INDUSTRIAL PC / OPERATING SYS-TEM REQUIREMENTS

- Minimum Intel 5 processor or equivalent
- 64 bit Windows 7 or 10
- HLTQ (recommended)
- SQS3.1 when applicable

CONTROLLER CAPABILITY

- Power Focus 4000
- Power Focus 6000 (embedded version only)
- Power MACS 4000

HARDWARE REQUIREMENTS

- Torque / Articulated Arms with Positioning Hardware*
 - SMC Posi 3
 - SMS / SML
 - AX / AXF

* Positioning hardware includes: angle and/or linear sensors, cables, gateway module, etc. - refer to Torque / Articulated Arms product information for hardware information specifics and ordering numbers.



VALUES

- Improved quality through reduction in scrapped parts and implementation of forced order operation
- Reduced job setup and programming time, resulting in reduced costs
- Increased productivity due to improved operator efficiency



ILG Dashboard

Industrial Location Guidance - ILG

APC | Positioning ILG

FEATURES

- Enables tool when in the correct location.
- Free or Forced process order.
- Initiate process from Workpiece (Part) ID on-screen input, barcode scanner, Stacklight, or fieldbus protocol.
- Workpiece process selection by controller identifier via barcode scanner or fieldbus communication protocol.
- Compensation for variable part location relative to the ILG system:
 - Static part
 - 1-Point referencing
 - 2-Point referencing
 - 3-Point referencing
- Configurable reject management select number of tightening position retry attempts.
- Configurable graphical user interface for operator guidance with Workpiece image(s), live tracking (crosshairs) of the tool's location, visualization of the tightening position status and diagnostics.
- Teaching Mode allows the tightening positions to be set up with a start and finish position. The tool is held in position and coordinates are stored with a touch of a button or tool trigger.
- Programmable Position Volumes (spheres, cylinders, or cones) depending on the application.

- Setup via web browser.
- Password protection available for configuration editing.
- Streamlined, simplified software interface for superior user experience and easy configuration changes compared to legacy positioning systems.



Visual Operator Guidance

BENEFITS



- Ensures consistent production quality through process security regardless of operator
- Provides tightening data based on location
- Provides assembly traceability
- Configurable reject management for rework of NOK tightenings



- Quick installation, setup and programming – intuitive design for easy start-up
- Saves time with clear diagnostics for ease of maintenance and troubleshooting
- Flexible for multiple and varied applications

INCREASES PRODUCTIVITY



- Visual indicators for process status and feedback
- Operator guidance
- Reduces the need for additional quality checks later
- Ideal for offline rework or repair stations

Industrial Location Guidance - ILG



SYSTEM POSSIBILITIES

EMBEDDED SOLUTION - POWER FOCUS 6000

- ILG is integrated into the Power Focus 6000 firmware.
- Uses Power Focus 6000 controller to run ILG service.
- Easy setup via web browser.
- ILG is enabled via FMS (same procedure as for virtual stations - 1 virtual station only).

INDUSTRIAL PC

- Uses Industrial PC (HMI) to run ILG services.
- Visualization of tightening position on Industrial PC (HMI).
- Guides the operator to the next task/position.
- Gives feedback to the operator OK or NOK tightening.

SCALABLE QUALITY SOLUTION - SQS3

- Uses HLTQ to run both SQS3 and ILG, together.
- SQS3 process control utilizing ILG location system for a complete error proofing solution.

EXTERNAL DEVICES

- A Stacklight can be used for operator feedback, teach positions and for Workpiece selection.
- A barcode scanner can be used for Workpiece selection.









Description	Ordering No.
Windows PC Application	
ILG PC-license, electronic delivery	8436 6772 00
ILG PC-license, physical delivery	8436 6772 01
Power Focus 6000 Embedded Application	
ILG PF6000-license, electronic delivery	8436 1950 10
ILG PF6000-license, physical delivery	8436 1950 11



TPS Positioning Arms

SML/SMST-Series

PTD | Positioning TPS

SML/SMS T-SERIES POSITIONING

The Atlas Copco SML/SMS T-series of

arms are built to handle the most demanding industrial situation when you need to control the sequence and the position. The SML/SMS T-series arms are equipped with two encoders, SMS-T positioning series have 2 angle encoders to determine the position and SMS-T positio-

ning series have 1 linear encoder and 1

angle encoder to determine the position.

The arms are delivered with balancer. encoders and encoder cables ready to

Please contact your local Application Center Proposal Team for upgrade kits

and quotes to make arm ILG ready.

be plugged into the TPS controller.

ARMS

SML-T POSI ARMS WITH 2 ENCODERS

Model	Ordering No.
SML T-5 Position	4390 2030 00
SML T-12 Position	4390 2031 00
SML T-25 Position	4390 2032 00
SML T-50 Position	4390 2034 00
SML T-100 Position	4390 2035 00

NOTE: SML/SMS-T positioning series are equipped with balancer.

ROTARY ENCODER

Measures the rotation around the main axis

ERGONOMICS

Included balancer makes the tool weight lighter for operator comfort

LINEAR ENCODER

Measures the tool travel in horizontal axis



For bench mounting











Linear Encoder

Rotary Encoder

Tool Holder Attachment PTD | Positioning TPS

SMS-T POSI ARMS WITH 2 ENCODERS

Model	Ordering No.
SMS T-5 Position	4390 2036 00
SMS T-12 Position	4390 2037 00
SMS T-25 Position	4390 2038 00
SMS T-50 Position	4390 2039 00
SMS T-100 Position	4390 2040 00

CAPACITY

- Max Torque range: 5-100 Nm
- Max reach SML: 530-914mm
- Max reach SMS: 582-930 mm
- Max tool weight: 0.8-6 Kg

ROTARY ENCODER

Measures the rotation around elbow

ADJUSTABLE PLATE



SMS-T POSI





Rotary Encoder

Rotary Encoder

SMC POSI LA

SMC POSI LA carbon arm which is compatible with TPS (Tool Positioning System) contains a linear encoder that measures the length the arm travels and an angle encoder that measures the angle of the arm, as a result 2D positioning of arm/tool is determined.

The SMC POSI LA can work in vertical position and thus can be roof or wall mounted.



SMC POSI LA

Model	Ordering No.
SMC 12 1150 POSI LA	4390 1510 79
SMC 12 1600 POSI LA	4390 1511 79
SMC 12 2100 POSI LA	4390 1512 79
SMC 25 1150 POSI LA	4390 1514 79
SMC 25 1600 POSI LA	4390 1515 79
SMC 25 2100 POSI LA	4390 1516 79
SMC 25 2600 POSI LA	4390 1517 79
SMC 50 1600 POSI LA	4390 1518 79
SMC 50 2100 POSI LA	4390 1519 79
SMC 50 2600 POSI LA	4390 1520 79
SMC 100 1600 POSI LA	4390 1522 79
SMC 100 2100 POSI LA	4390 1523 79
SMC 100 2600 POSI LA	4390 1524 79
SMC 200 1600 POSI LA	4390 1526 79
SMC 200 2100 POSI LA	4390 1527 79
SMC 200 2600 POSI LA	4390 1528 79

TPS Positioning Arms

- CEILING ATTACHMENT
- Allows the arm to rotate on two axes

POSITIONING

1

2

3

4

6

 Smart box contains a linear encoder & an angle encoder for 2D positioning

ERGONOMICS

- Light weight and smooth movements for operator comfort
- Easy to use together with balancer to create weightless solution, balancer needs to be ordered separately
- Minimizes reaction force to prevent hand-arm-shoulder disorders

FLEXIBILITY

 Telescopic design to cover big working area

TOOL HOLDER ATTACHMENT

Interface between tool and the arm

CAPACITY

- Max Torque range: 12-200 Nm
- Length: 516-2630 mm
- Max tool weight is dependent on the balancer



TPS Controller

TPS CONTROLLER – CONTROL THE SEQUENCE AND THE POSITION

With a TPS controller you are always sure that the operator tightens the joints in the correct sequence and in the correct position.

- ▶ Up to 50 jobs and up to 500 positions.
- OK/NOK signal on position.
- The tool will not start when it is out of position.
- Batch count together with OK/NOK on position.
- Works together with Atlas Copco electric tools and RE controlled pneumatic tools.
- Possibility to save and upload set up through a PC.
- Easy and fast set up and programming.
- Error proofing solution.
- ESD approved.



HOW TO ORDER

- 1. TPS Controller
- 2. Select positioning torque arm by style (T-series linear or swivel, or SMC telescopic) and torque arm capacity
- 3. Cable TPS to tool controller
- Power supply optional (needed for MTF 6000)
 NOTE:Order power cord separately.
- 5. Select other options if applicable

TPS CONTROLLER

Model	Ordering No.
TPS Controller	8202 9004 10

CONTROLLER ACCESSORY

Model	Ordering No.
I/O Extension TPS	4390 2049 00

POWER SUPPLY/CORD

Model	Ordering No.
Power supply	
24VDC 30W	4222 1728 50
Power cord	
EU	4222 1801 13
US	4222 1802 13
UK	4222 1803 13
India	4222 1804 13
Switzerland	4222 1805 13
Italy	4222 1806 13
Australia	4222 1807 13
China	4222 1809 13

OPTIONS

Model	Ordering No.
Barcode license	4390 2045 00
Pneumatic license	4390 2046 00
Reporting license	4390 2047 00

CABLES

Model	Ordering No.
Cable TPS to controller Powe	er Focus/Tensor
3 m	4222 1715 03
10 m	4222 1715 10
Cable TPS to controller Powe	er Focus 600
3 m	4222 1852 03
10 m	4222 1852 10
Cable TPS to EBL RE driver	
1.5 m	4222 1733 01
3 m	4222 1733 03
Cable TPS to controller G4	
1.5 m	4222 1734 01
3 m	4222 1734 03
Cable TPS to controller MTF4	100
1.5 m	4222 1735 01
3 m	4222 1735 03
TPS Open End cable	
3 m	4222 1743 03
10 m	4222 1743 10



Atlas Copco

Standard

SML T – SERIES TORQUE ARMS

The Atlas Copco linear arms are built to handle the most demanding industrial situations. The robust design offers unmatched user friendliness. The linear arms are equipped with ball bearings for smooth operation, and an adjustable plate for maximum adjustment of minimum and maximum working area. The linear arms have balancer included that will absorb the weight of the arm and tool combination to reduce the weight for the operator. The arms minimize the reaction force of the tool to prevent handarm-shoulder disorders. With minimized reaction force of the tool, finished product quality is also higher since there is no movement of the tool and all torque is absorbed in the joint.



ERGONOMICS

FOOT

 Included balancer makes the tool weight lighter for operator comfort

ADJUSTABLE PLATE AND ROD

3

For bench mounting



	Max tool weight		Max torque		Max torque		Max torque		Max torque		Max torqu		Max to		Min width without tool holder	A Max reach without tool holder	B Horizontal stroke	Vertical stroke	C Height	Tool holder interface	
Model	kg	lb	Nm	ft lb	mm	mm	mm	mm	mm	type	Ordering No.										
SML T-5	0.8	1.7	5	3.7	158	530	205	310	732	А	4390 2000 00										
SML T-12	1.5	3.3	12	8.8	198	648	255	465	888	А	4390 2001 00										
SML T-25	2.2	4.8	25	18.4	167	732	290	615	1100	А	4390 2002 00										
SML T-50	5	11	50	36.9	267	887	355	515	1116	В	4390 2004 00										
SML T-100	6	13.2	100	73.8	255	914	395	515	1116	В	4390 2005 00										



SMST – SERIES TORQUE ARMS

The Atlas Copco radial arms are built to handle the most demanding industrial situations. The robust design offers unmatched user friendliness and, due to the swivel function, a wide working area is covered with the SMS T-series. The swivel arms are equipped with ball bearings for smooth operation, and an adjustable plate for maximum adjustment of minimum and maximum working area. The swivel arms have a balancer included that will absorb the weight of the arm and tool combination to reduce the weight for the operator. The arms minimize reaction force of the tool to prevent hand-arm-shoulder disorders. With minimized reaction force of the tool, finished product quality is also higher since there is no movement of the tool and all torque is absorbed in the joint.



For bench mounting

ERGONOMICS

comfort

FOOT

 Included balancer makes the tool weight lighter for operator

ADJUSTABLE PLATE AND ROD



Dimensions



PTD | Standard STD

Carbon Arm

SMC – CARBON ARMS

The Atlas Copco carbon arms have a telescopic design for maximum flexibility in the workplace. The carbon arms are light weight with smooth movements to reduce the operator force to use the arms. Together with a balancer the carbon arms can either retract up or be used in a weightless position to improve operator comfort. The carbon arms minimize reaction force to prevent hand-armshoulder disorders. With minimized reaction force of the tool you will also improve finished product quality because there is no movement of the tool and all torque is absorbed in the joint.

SMC could be ceiling and wall mounted.

3 *FLEXIBILITY* → Telescopic design to cover big



5

TOOL HOLDER ATTACHMENT

working area

 Interface between tool and the arm

CAPACITY

- Max Torque range: 12-300 Nm
- Length: 516-2633 mm
- Max tool weight is on the balancer



CEILING ATTACHMENT

 Allows the arm to rotate on two axes

ERGONOMICS

- Light weight and smooth movements for operator comfort
- Easy to use together with balancer to create weightless solution, balancer needs to be ordered separately
- Minimizes reaction force to prevent hand-armshoulder disorders

PTD | Standard STD

	Max torque				A Max tool holder	Wei	abt	Tool holder	
Model	Nm	ft lb	Min length mm	Max length mm	swivel angle [deg]	kg	lb	interface type	Ordering No.
SMC 12 1150	12	8.9	516	1128	60	0.37	0.816	A	4390 1510 85
SMC 12 1600	12	8.9	666	1578	60	0.42	0.926	A	4390 1511 85
SMC 12 2100	12	8.9	835	2083	60	0.48	1.06	A	4390 1512 85
SMC 25 1150	25	18.4	524	1124	50	0.51	1.12	A	4390 1514 85
SMC 25 1600	25	18.4	674	1574	50	0.61	1.34	А	4390 1515 85
SMC 25 2100	25	18.4	841	2075	50	0.68	1.5	А	4390 1516 85
SMC 25 2600	25	18.4	1007	2573	50	0.77	1.7	А	4390 1517 85
SMC 50 1600	50	36.9	712	1624	40	0.95	2.09	В	4390 1518 85
SMC 50 2100	50	36.9	878	2125	40	1.05	2.31	В	4390 1519 85
SMC 50 2600	50	36.9	1045	2626	40	1.15	2.54	В	4390 1520 85
SMC 100 1600	100	73.8	722	1628	30	1.28	2.82	В	4390 1522 85
SMC 100 2100	100	73.8	889	2129	30	1.41	3.11	В	4390 1523 85
SMC 100 2600	100	73.8	1056	2630	30	1.53	3.37	В	4390 1524 85
SMC 200 1600	200	148	726	1628	20	1.98	4.37	-	4390 1526 85
SMC 200 2100	200	148	893	2129	20	2.18	4.81	-	4390 1527 85
SMC 200 2600	200	148	1060	2630	20	2.39	5.27	-	4390 1528 85
SMC 300 1600	300	221	744	1631	20	2.40	5.29	-	4390 1530 85
SMC 300 2100	300	221	911	2132	20	2.60	5.73	-	4390 1531 85
SMC 300 2600	300	221	1078	2633	20	2.81	6.20	-	4390 1532 85





Carbon Arm

SMC-TT

SMC-TT - CARBON ARMS

The SMC-TT torque arm range from Atlas Copco consists of three models varying from 10 to 25 Nm. The SMC-TT torque arms are designed to be used in combination with handheld straight and angle tools, including both electric and pneumatic. They are suited to be utilized for various rail and roof-mounted applications in all sorts of assembly environments. The product range has a modular setup with several available combinations and accessories to provide the most efficient and ergonomic workstation. The availability of a rigid top fixation allows the SMC-TT arm to be fastened to a roof attachment. The 10 Nm torque arm is available in one length version and the 25 Nm models are available in two length variants to achieve better reach.

CEILING ATTACHMENT

 Allows the arm to rotate on two axes

BALANCER WIRE

 Balancer wire goes through the tube (balancer needs to be ordered separately)

TELESCOPIC TUBE

 Telescopic tube with light weight

TOOL HOLDER ATTACHMENT

- Image: 10-25 Nm

 Image: 10-25 Nm
 - Max Torque range: 10-25
 - Length: 713-1731 mm
 - Max tool weight is on the balancer

PTD | Standard STD

					Α	В	С				
					Max tool holder	Max tool holder	Max tool holder			Tool holder	
	Max torque		Min length	Max length	swivel angle swivel angle		swivel angle	angle Weight		interface	
Model	Nm	ft lb	mm	mm	[deg]	[deg]	[deg]	kg	lb	type	Ordering No.
SMC-TT-10-850	10	7.4	713	1013	60	8	24	1.4	3.1	А	4390 1510 29
SMC-TT-25-1150	25	18.4	831	1131	60	8	24	3.5	7.8	A	4390 1510 31
SMC-TT-25-1600	25	18.4	1131	1731	60	8	24	4.0	8.7	A	4390 1510 32



SML MK II

Linear Arm

TORQUE ARM SML MK II

By mounting your assembly tool on a SML MK II torque arm you will immediately increase the productivity and reduce muscular stress from your operators. All arms are delivered with integrated balancer, it is rotating around one axis, and moves linear in two directions and the Atlas Copco interface for tool holders. The 3-axis movement allows the operator to ease the arm effortlessly around the workstation.

MECHANISM

 Mechanism is similar to SML but bigger size (balancer included) 1

AVAILABILITY

 Available in both bench and floor mounted suitable also for higher torque

ERGONOMICS

Move smoothly thanks to bearings

CAPACITY

- Max Torque range: 10-1000 Nm
- Max reach: 240-480 mm
- Max tool weight:1-11.3 Kg

Contraction of the second seco	
Tool Holder	



					D	С	Α	Tool holder	
	Max too	ol weight	Max torque		Horizontal stroke	Vertical stroke	Height	interface	
Model	kg	lb	Nm	ft lb	mm	mm	mm	type	Ordering No.
SML 10 MK II	1	2.2	10	7.4	240	220	680	А	8202 9003 20
SML 40 MK II	2.3	5.1	40	29.5	280	290	834	В	8202 9003 21
SML 80 MK II	5.2	11.5	80	59	320	360	964	В	8202 9003 22
SML 150 MK II	7	15.4	150	110.7	360	430	1049	С	8202 9003 23
SML 300 MK II	14	30.9	300	221.4	400	500	1231	С	8202 9003 24
SML 500 MK II	10	22	500	369	400	570	1361	С	8202 9003 25
SML 1000 MK II	11.3	24.9	1000	738	480	640	1571	С	8202 9003 26



Torque Arm

TORQUE ARM SMF The SMF torque arms are labor-saving extensions of the Atlas Copco handheld tools. They are made of aluminum and are suitable for straight and pistol assembly tools. The parallel torque arm has a foldable and space-saving design Parallel rectangular tubes with lock spring that eliminates the weight and torque of the tool, thus improving operator ergonomics, providing accurate tightening and contributing to increased productivity. SPRING LIFTING MECHANISM Spring lifting mechanism bench and wall mounted **TOOL HOLDER ATTACHMENT** Tool Holder Attachment CAPACITY 3 Max Torque range: 25 Nm Max reach: 710-870 mm SMF Max tool weight: 2 Kg PTD | Standard STD

	Max wei	tool ight	Max t	torque	A Max reach without tool holder	B Horizontal stroke	C Vertical stroke	Tool holder interface	
Model	kg	lb	Nm	ft lb	mm	mm	mm	type	Ordering No.
SMF-25-710	2.0	4.4	25	18.4	710	300	300	А	4390 2083 00
SMF-25-870	20	44	25	18.4	870	400	400	Α	4390 2083 30



Notes	

Atlas Copco Assembly Systems



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atlascopco.com