

An evolution of the Atlas Copco business model

- A major step with the PF6000 is to run multiple tools
 - This works up to 2.8 only for our high end tools
 - Competition can also run multiple tools on one controller
- To enable the PF6000 as a platform for the assembly station, we need to connect wider range of tools
 - Competition needs often different controller for different tool
 - Tools range of competition is often smaller

The Flexible offering enables us to make this vision real with the PF6000!





Virtual Stations and the IAM – up to 2.8

- The Virtual Station model is a good solution for running multiple tools on one controller
 - Same logic as the old 1-1 set up, just that some controllers are "virtual"
 - Good way to interact with the line protocols, I/O, etc.
- The IAM, blocking a more flexible model
 - With 2.8 we choose functionality on a controller level, via the IAM
 - With a "Critical" IAM, all VS on that controller will have "Critical" level functionality
 - Additional VS have one part number and therefore one price

Moving functionality to the Virtual Station with 3.0

- Flexible Offering is removing functionality levels from IAM
- Functionality levels are chosen by Virtual Station Types
- This allow us to make sure each VS on a controller runs with optimized functionality for the application.
- We get more flexible upgrade and rebalancing possibilities and can also optimize our price and offering to the customer
- We enable lower level tools to live on the same controller at the same time as higher level tools.



FMS is the delivery system for the Flexible Offering

- We already have the FMS system in place, but today it delivers just features like TurboTight and True Angle
- With the flexible offering, the main part of our revenue will be delivered with FMS.
- Virtual Station Types are FMS licenses, and are purchased and deployed in the same way as other licenses.
- Having FMS rolled out is a must for the flexible offering to work.
- Much more easy to modify or create specific Virtual Station type. Without need for another HW.





Summary

Up to 2.8

A major step with the PF6000 is

to run multiple tools on one

This works up to 2.8 – for our

multiple tools on one controller

Competition can also run

To enable the PF6000 as a

platform for the assembly station – we need to enable

connection of wider range of

controller.

our tools

high end tools.

The Change with 3.0

IAM

- Consolidating to one type (Power Focus)
- IAMs Process/+ will be able to upgrade to 3.0

License Types

- Virtual Station Types (Batch, Joint, Station, Critical, Process)
- Virtual Station Features (TrueAngle, Low Reaction Strategies, etc.)
- Controller Features (SoftPLC, Step Sync)

Additional Tool Support

Wider tool support (SB,ES,MWR, BCV/P-RE)

One infrastructure – Any Tool





IAMs in 3.0

Consolidating to one type

- IAM Power Focus (Article number: 8436 0910 00)
 - One IAM for all configurations
 - No more issues moving configurations between IAM types
 - IAM comes without licenses
 - Will only work with 3.0 valid licenses
- Process type IAMs will be able to upgrade to 3.0
 - Will then convert to same specs as the "IAM Power Focus 6000"
 - Not possible to convert back.
 - Critical type IAMs and older IAMs (Multi, Line, ...) will NOT allow upgrade to 3.0 as they are not FMS enabled
- Existing customer special IAMs (VW, Ford,...) will be handled individually

General IAM Specs

- Up to 600 Programs in program library
- Up to 16 I/O bus accessories
- Open Protocol
- Last 10 000 tightening data saved
- Last 10 000 traces saved
- Last 1000 events saved



IAM & License types

IAMs in 3.0 - Consolidated

- One IAM for all configurations, No more issues moving configurations between IAM types
- IAM comes without licenses. Will only work with 3.0 valid licenses

General IAM Specs

- Virtual Station Features
- Up to 600 Psets in program library
- Up to 16 I/O bus accessories
- •Open Protocol
- Last 10 000 tightening data saved
- Last 10 000 traces saved
- Last 1000 events saved
- Process type IAMs will be able to upgrade to 3.0, then it will convert to same specs as the "IAM Power Focus 6000"
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- Functions that can be added optionally to a Virtual Station
- Features like TurboTight, True Angle etc.
- Needs to correspond to used tool

Controller Features

- Functions that has effect on every Virtual station on the controller
- Features like Soft PLC

Virtual Station Types

- Defines the functionality available to a Virtual Station
- Every Virtual Station needs to have one assigned

Allowed tool types

Which tools can run on the virtual station

Process related behaviors

- Number of programs that can be dynamically selected in Source tightening
- Number of sequences that can be used in Source batch tasks
- Number of identifier strings that can be used
- Reporting (OK/NOK or full)
- Available Trace types

Tightening related behaviors

- Allowed tightening strategies
- Allowed target types (Torque, Angle)
- Allowed Steps, Monitors and Restrictions in Multistep



Virtual Station Types





Virtual Station Types



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System overview – HW & SW Components example





System overview – HW & SW Components example part needed

•	Power Focus 6000	1x	8433 2305 10
•	IAM Power Focus	1x	8436 0910 00
•	VS Batch	2x	8436 1960 10
•	VS Joint	1x	8436 1960 20
•	VS Station	1x	8436 1960 30
•	VS Critical	1x	8436 1960 40
•	VS Process	1x	8436 1960 50
•	Soft PLC	1x	8436 1910 04
•	Low reaction	1x	8436 1910 80
•	True Angle	2x	8436 1910 03
•	PVT Compensate	1x	XXXX XXXX XX
•	Snug Gradient	1x	XXXX XXXX XX
•	IL-Guidance	1x	XXXX XXXX XX



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Timeline





Licenses in 3.0

Article Numbers – Virtual Station Types

NAME	ARTICLE NUMBER	DELIVERY
EL. DEL. BATCH CONTROL	8436 1960 10	Eletronic
BATCH CONTROL 10 PCS	8436 1960 16	Physical
BATCH CONTROL 5 PCS	8436 1960 15	Physical
BATCH CONTROL 2 PCS	8436 1960 12	Physical
BATCH CONTROL 1 PCS	8436 1960 11	Physical
EL. DEL. JOINT CONTROL	8436 1960 20	Electronic
JOINT CONTROL 10 PCS	8436 1960 26	Physical
JOINT CONTROL 5 PCS	8436 1960 25	Physical
JOINT CONTROL 2 PCS	8436 1960 22	Physical
JOINT CONTROL 1 PCS	8436 1960 21	Physical
EL. DEL. STATION CONTROL	8436 1960 30	Electronic
STATION CONTROL 10 PCS	8436 1960 36	Physical
STATION CONTROL 5 PCS	8436 1960 35	Physical
STATION CONTROL 2 PCS	8436 1960 32	Physical
STATION CONTROL 1 PCS	8436 1960 31	Physical



Licenses in 3.0

Article Numbers – Virtual Station Types

NAME	ARTICLE NUMBER	DELIVERY
EL. DEL. CRITICAL CONTROL	8436 1960 40	Eletronic
CRITICAL CONTROL 10 PCS	8436 1960 46	Physical
CRITICAL CONTROL 5 PCS	8436 1960 45	Physical
CRITICAL CONTROL 2 PCS	8436 1960 42	Physical
CRITICAL CONTROL 1 PCS	8436 1960 41	Physical
EL. DEL. PROCESS CONTROL	8436 1960 50	Eletronic
PROCESS CONTROL 10 PCS	8436 1960 56	Physical
PROCESS CONTROL 5 PCS	8436 1960 55	Physical
PROCESS CONTROL 2 PCS	8436 1960 52	Physical
PROCESS CONTROL 1 PCS	8436 1960 51	Physical



Licenses in 3.0

Article Numbers – New Features & Name Change

NAME	ARTICLE NUMBER	DELIVERY
EL. DEL. STEPSYNC	8436 1950 00	Eletronic
STEPSYNC LICENSE	8436 1950 01	Physical
EL. DEL. LOW REACTION STRATEGIES	8436 1910 80	Eletronic
LOW REACTION STRATEGIES LICENSE 10 PCS	8436 1910 86	Physical
LOW REACTION STRATEGIES LICENSE 5 PCS	8436 1910 85	Physical
LOW REACTION STRATEGIES LICENSE 2 PCS	8436 1910 82	Physical
LOW REACTION STRATEGIES LICENSE 1 PCS	8436 1910 81	Physical

Note Low Reaction Strategies (consisting of TurboTight and TensorPulse) replaces the FMS feature named TurboTight in the 3.0 release. The Low Reaction Strategies feature is needed in order to use TurboTight in the 3.0 release.



