



Challenges faced by factories

Today's production situations increasingly call for greater versatility to handle a higher product mix and additional variants on the assembly line. Production becomes more complex and the human element also continues to be important, which is why user-friendly systems are essential.

In addition, with increasingly strict CO₂ emission standards and higher demands on energy efficiency, sustainability is in sharp focus. Moreover, every production process has its own problems.

Why a smart factory?

Because this is the future.

In the smart factory, state-of-the-art software provides real-time data from connected devices enabling them to learn and adapt to changing demands on the production lines.

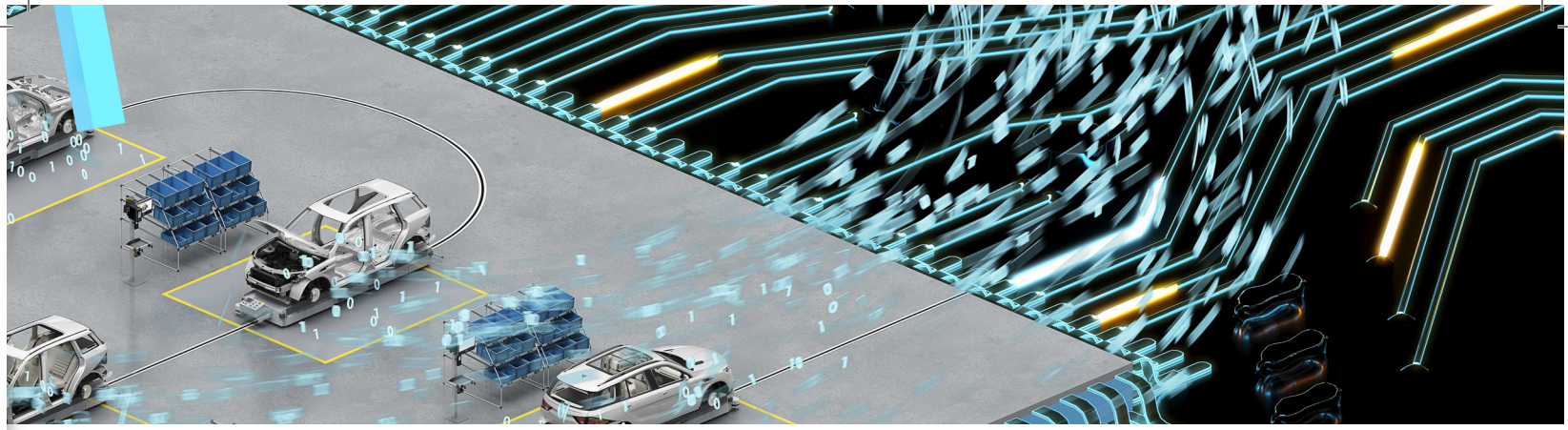
The technology contributes to managing the entire production process and enables continuous improvements in productivity and end-product quality.

How Atlas Copco can take you one step closer

Atlas Copco has the technology to solve your production challenges. Technology that can operate several tools using only one physical controller, predict tool failures, and suggest maintenance schedules. Technology that gives valuable insights into the data it generates from previous production programs. The data continuously created by Atlas Copco smart tools and solutions can be used to maximize uptime and quality in your operation and cut your production costs.

We present our Power Focus Offering. It's smart!





How Power Focus 6000 enables a Smart Connected Assembly!

Connect a wide variety of tool types

Interface a wide variety of tool types, by selecting the right tool from 12 compatible tool families.

Using different tools without the need to add a physical controller for each one, minimizes the number of components in the workstation, significantly reduces cost and improves floor space utilization.

Single interaction point for over-lying interfaces

Power Focus 6000 requires just one cable to the factory infrastructure and one IP address.

Communication with tools is easily achieved through Virtual Stations with simple verification and protocol change management. This enables multiple software changes in one station, with minimum risk and complexity.

Common secure configuration interface and results view

One common intuitive way to set up any compatible tool via the controller screen or a web browser.

The screen can be locked to avoid unauthorized changes. With one common language and programming interface for all the tool types, user learning curves are shortened. Results can be viewed from any connected web browser.

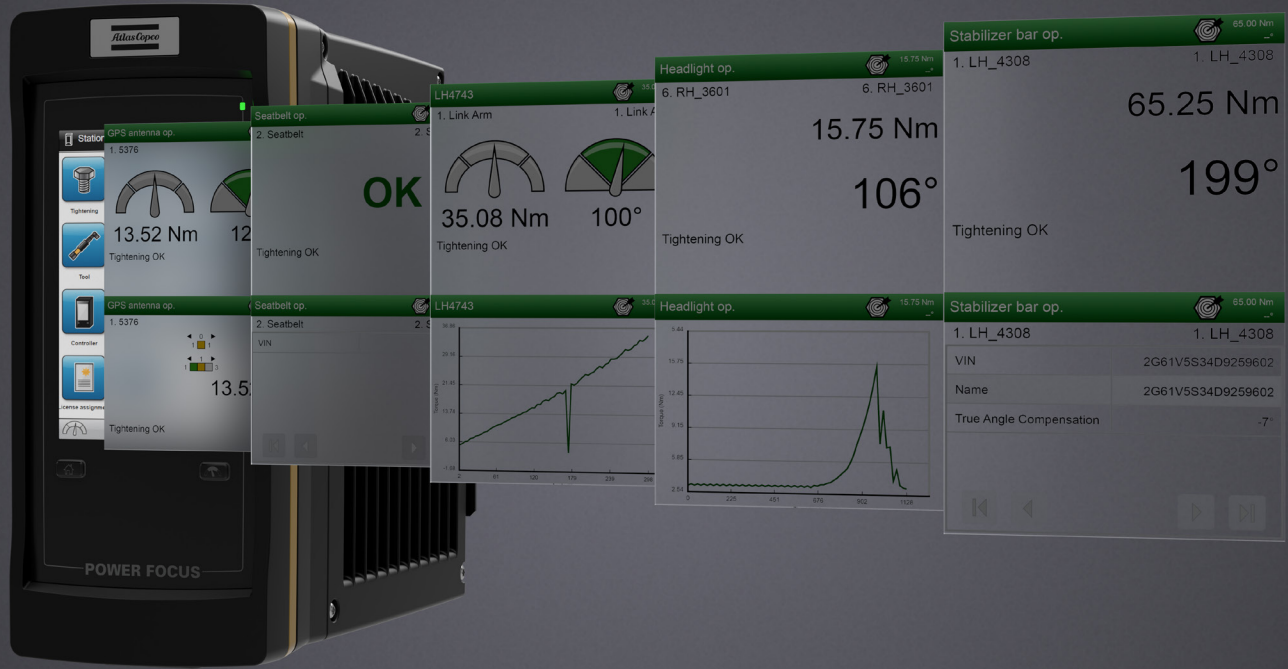
Link to a smart connected ecosystem

With Power Focus 6000, a wide variety of accessories can be connected, while monitoring the entire station with a powerful software suite for data collection, line management and quality assurance.

Operator guidance and error proofing solutions are also available and can easily be implemented on the production line.



What do you need in order to create a smart assembly?

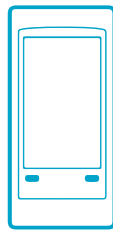


What you need in order to create a smart assembly

Our Power Focus Offering is the next level of Atlas Copco's concept for equipping the Smart Factory. The system consists of five core parts: Power Focus 6000, Power Focus IAM, Virtual Station, Tool, and additional features.

The Power Focus 6000 controller is the hardware interface between the line and the MES system, also providing power and communication for tools and accessories. The Power Focus IAM acts as a storage unit with dual partitions with dedicated memory for upgrade, back-up and restore purposes.

With these in place, tools and Virtual Station types can be added. The Virtual Station types control the functionality available and feed our unique tool offering. They can be enhanced by adding features to match specific applications.



Power Focus 6000

The physical controller is the center of our common tightening platform and has the ability to connect any cable or battery tool from our wide offer.

With the Power Focus 6000 you can control up to six tools simultaneously, giving you a simpler installation with fewer cables, hardware components and network connections.

Other advantages are lower power consumption, less floor space utilization, and a much reduced environmental footprint.



IAM – Intelligent Application Module

Intelligence in the palm of your hand. Software, tightening data and configuration – all important information in one compact format. Therefore, if an issue arises, you have an easily accessible back-up.

Easy to upgrade with a rapid back-up function. Two software areas allow for smart software management, enabling a much safer upgrade process, and always giving the possibility to switch between two software versions.

Virtual Stations

The Virtual Station is a digital version of a controller. It is one of the core parts of the Power Focus Offering and a key component of the tightening platform. The Virtual Station determines the tool type and functionality supported, protocol support, the type of data that is reported, and more.

Virtual Stations connect the entire system together, selecting and activating tightening programs.

- Tools and accessories
- Protocols for communication
- Data reporting

Virtual Station types

Modern assembly operations utilize many different tightening applications. Accordingly, Virtual Stations come in different types depending on the tightening application. To properly configure the best tool for the application, the correct Virtual Station type provides the required functionality to meet your requirements.

The Virtual Stations' different levels enable the control and connection of 12 different tool families.

Supported functionalities	Main values
<ul style="list-style-type: none"> ■ 1 program ■ 1 sequence ■ 1 identifier ■ Only clutch step 	<ul style="list-style-type: none"> ■ Batch counting ensures correct number of tightenings performed
<ul style="list-style-type: none"> ■ 1 program ■ 1 sequence ■ 1 identifier ■ Torque control ■ Angle monitoring 	<ul style="list-style-type: none"> ■ Torque controlled and angle monitored tightenings, programing options for joints not suitable for air tools ■ Supports electric battery pulse tools (TBP-S)
<ul style="list-style-type: none"> ■ 16 programs ■ 16 sequences ■ 1 identifier ■ Torque control ■ Angle monitoring 	<ul style="list-style-type: none"> ■ Possible to replace multiple air tools with one electric tool ■ Supports torque controlled tightenings, improving accuracy compared to an air tool
<ul style="list-style-type: none"> ■ 250 programs ■ 250 sequences ■ 4 identifiers ■ Torque control ■ Angle control 	<ul style="list-style-type: none"> ■ Supports angle controlled tightening strategies ■ Supports up to four VIN numbers connected to a result
<ul style="list-style-type: none"> ■ 250 programs ■ 250 sequences ■ 4 identifiers ■ Torque control / angle control ■ Advanced tightening strategies 	<ul style="list-style-type: none"> ■ Supports advanced tightening strategies for safety critical tightenings ■ Supports up to four VIN numbers connected to a result ■ TrueAngle and Low Reaction Strategies included for the start



Batch Control: Customer critical

Creates possibility to connect shut-off tools (BCV/P-Re) and click wrenches (MWR-S) to Power Focus 6000. License enables addition of OK/NOK traceability for tightening operations.



Joint Control: Quality critical

For tightening applications with a limited number of variants, but where a torque controlled tool is required. Chosen where an air tool is being replaced and better control of the tightening process is needed.



Station Control: Quality critical

Designed for stations offering more variants. Perfect for customers looking to replace multiple air tools with one electric tool, and where torque controlled tightenings are required.



Critical Control: Safety critical

Designed for tightening applications requiring full traceability and process control. All tightening results stored in the controller and reported to external systems with tightening results and traces. A highly flexible setup for most tightening applications.



Process Control: Safety critical

The highest level of Virtual Station type, built for extremely demanding tightening applications. Supports advanced tightening strategies required for safety critical tightenings with full traceability of the tightening.

Matching tools with Virtual Stations

Atlas Copco provides a full range of tightening tools, enabling you to pick the right tool for the application, with superior performance and ergonomics.

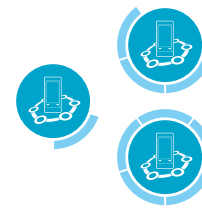
Power Focus 6000 has the possibility to connect tools from 12 families from our offer. They range from clutch tools, Mechatronic wrenches and low reaction tools to advanced transducerized tools.

<p>Batch</p> 	 <p>BCP-RE</p>	 <p>MWR-S</p>	
<p>Joint Station</p>  	 <p>Tensor ES</p>	 <p>TBP-S</p>	 <p>Tensor SB</p>
<p>Station Critical</p>   <p>Process</p> 	 <p>MWR-TA</p>	 <p>Tensor STB</p>	 <p>Tensor STR</p>
 <p>TBP</p>	 <p>SRB</p>	 <p>ST Wrench</p>	
 <p>Tensor SL</p>	 <p>QST</p>	 <p>Tensor REVO</p>	

Power up your tightening stations

Give more functionality to a selected tool by adding features for specific applications.

Additional features can be added to a Virtual Station that already has a type assigned, while a controller-wide feature impacts the whole IAM.



Low Reaction Strategies

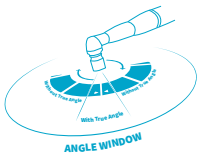


TurboTight for STR tools and TensorPulse and TurboTight for SRB tools help minimize reaction force in tightening operations.

Values:

- Improves ergonomics by eliminating reaction force; increased productivity due to faster tightening time
- Improves flexibility by eliminating reaction devices
- Reduces costs related to operator fatigue and injuries

TrueAngle



Compatible with STR tools only. Eliminates operator influence on the tightening angle during the full tightening phase. Can be added to a Critical or a Process Virtual Station.

Values:

- Improves angle control, increasing tightening quality and accuracy
- Reduces need for reaction devices, savings on equipment and installation
- Detects common assembly problems

Open Protocol Extension



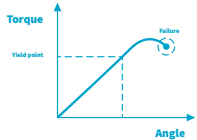
A Virtual Station feature that enables additional functionality while interacting with Open Protocol systems.

The feature has two functionalities. One is traces over Open Protocol, giving the possibility to transmit and analyze trace curve data in your interface of choice. The other allows the storing, modifying, and uploading of tightening programs in the Power Focus 6000 controller.

Values:

- Reduces defects by controlling the tightening program from an external system
- Reports tightening traces to an external system

Yield Control

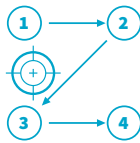


Yield Control enables a controlled strategy in the plastic zone by controlling the decrease in torque build-up when entering the plastic zone.

Values:

- Ensures consistent and high clamp force
- Gives the possibility to use smaller screws in an assembly process

Industrial Location Guidance



An integrated, stand-alone error proofing system offering high-level process security for simple to complex applications. Industrial Location Guidance tracks the exact location of the tool relative to the fastening position, ensuring the correct fasteners are tightened to specification, in the proper sequence.

Values:

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

SoftPLC

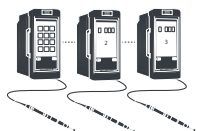


A controller-wide feature added separately. Gives the possibility to combine signals from multiple Virtual Stations, replacing external PLC and handling simple levels of automation.

Values:

- Reduces external hardware in production lines
- Achieves simple station automation
- Matches controller output with standard external PLC mappings
- A complete PLC solution
- Interconnects different Virtual Stations

StepSync



A controller-wide feature normally used in multi-spindle applications.

Allows connection of up to six Power Focus 6000 controllers and synchronized tightenings of cable tools. One SyncReference handles all programming, configuration, and result handling.

Values:

- Improves control of the tightening process
- Reduces cost and installation time
- Ensures commonality in the production line by having the same controllers and tools

Virtual Station features

Controller-wide features

Ordering numbers

Managing your licenses

Tools Talk 2 and FMS Portable both offer convenient ways to move Virtual Station types to and from the controller, allowing you to allocate licenses smoothly where needed.

- Controller infrastructure
- Virtual Station types
- Additional hardware/software
- Tools



Item	Order nr.
Hardware	
Power Focus 6000	8436 1800 02
Power Focus 6000 LV	8436 1800 11



Item	Order nr.
Power Focus IAM	8436 0910 00

Tools Talk 2

Brings line management to the next level by managing all controllers on a line over time. Moreover, Tools Talk 2 simplifies the set-up process with templates and library functions to correctly configure all the Virtual Stations from the production line in a quick, efficient and safe way.

Item	Order nr.
Line Configurator – Electronic Delivery	
ToolsTalk 2 Line Configurator 1 pcs	8092 1714 02
Line Configurator – Physical Delivery	
ToolsTalk 2 Line Configurator 1 pcs	8092 1714 03
ToolsTalk 2 Line Configurator 5 pcs	8092 1714 04
ToolsTalk 2 Line Configurator 10 pcs	8092 1714 05
Line Manager – Electronic Delivery	
ToolsTalk 2 Line Manager 1 pcs	8092 1714 06
Line Manager – Physical Delivery	
ToolsTalk 2 Line Manager 1 pcs	8092 1714 07
ToolsTalk 2 Line Manager 5 pcs	8092 1714 08
ToolsTalk 2 Line Manager 10 pcs	8092 1714 09



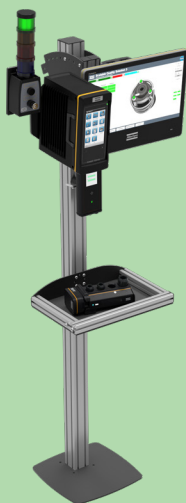
FMS Portable

The FMS Portable is a great option for you who does not have the controllers networked.

With the Atlas Copco FMS Portable it is possible to load and distribute virtual stations and features to individual controllers.



Item	Order nr.
FMS Portable	8436 1910 99



Total Workstation Solutions

In the Smart Connected Ecosystem, Atlas Copco offers Total Workstation Solutions with reaction supports, including arms, visualization equipment, positioning solutions, and error proofing accessories. Atlas Copco also offers an assembly software suite for collecting and analyzing tightening data and managing quality assurance. In addition, Atlas Copco can provide station control and work guidance solutions through Smart AMS and SQS solutions.

For more information about these solutions and their order numbers, please contact your Atlas Copco sales representative.

Fieldbus modules

Item	Order nr.
Profibus	8436 0940 05
DeviceNet	8436 0940 10
Ethernet/IP 2 PORT	8436 0940 15
ProfiNet I/O 2 PORT	8436 0940 20
Anybus CC – CC Link	8436 0940 25
Anybus CC – CC Link IE	8436 0940 30

Controller accessories

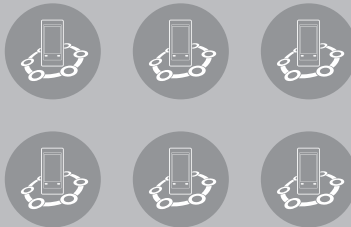
Item	Order nr.
PF6000 Mounting Stand	4222 1736 80
PF6000 Adapter Plate	4222 1783 80
PF6000 Security Seal	4222 1736 03
PF6000 Communication Cable 1M	4222 1721 01
PF6000 Communication Cable 3M	4222 1721 03
PF6000 Communication Cable 5M	4222 1721 05

Software: Virtual Stations

Virtual stations can be delivered electronically within 24 hours or physically, following standard delivery times.

Electronic delivery

Item	Order nr.
Batch Control	
Batch Control Virtual Station 1 pcs	8436 1960 10
Joint Control	
Joint Control Virtual Station 1 pcs	8436 1960 20
Station Control	
Station Control Virtual Station 1 pcs	8436 1960 30
Critical Control	
Critical Control Virtual Station 1 pcs	8436 1960 40
Process Control	
Process Control Virtual Station 1 pcs	8436 1960 50



Physical delivery

Item	Order nr.
Batch Control	
Batch Control Virtual Stations 1 pcs	8436 1960 11
Batch Control Virtual Stations 2 pcs	8436 1960 12
Batch Control Virtual Stations 5 pcs	8436 1960 15
Batch Control Virtual Stations 10 pcs	8436 1960 16
Joint Control	
Joint Control Virtual Station 1 pcs	8436 1960 21
Joint Control Virtual Station 2 pcs	8436 1960 22
Joint Control Virtual Station 5 pcs	8436 1960 25
Joint Control Virtual Station 10 pcs	8436 1960 26
Station Control	
Station Control Virtual Station 1 pcs	8436 1960 31
Station Control Virtual Station 2 pcs	8436 1960 32
Station Control Virtual Station 5 pcs	8436 1960 35
Station Control Virtual Station 10 pcs	8436 1960 36
Critical Control	
Critical Control Virtual Station 1 pcs	8436 1960 41
Critical Control Virtual Station 2 pcs	8436 1960 42
Critical Control Virtual Station 5 pcs	8436 1960 45
Critical Control Virtual Station 10 pcs	8436 1960 46
Process Control	
Process Control Virtual Station 1 pcs	8436 1960 51
Process Control Virtual Station 2 pcs	8436 1960 52
Process Control Virtual Station 5 pcs	8436 1960 55
Process Control Virtual Station 10 pcs	8436 1960 56

Manual tightening

For applications requiring only a Mechatronic wrench.

Item	Order nr.
Electronic Delivery	
Manual Tightening Control 1 pcs	8436 1970 20
Physical Delivery	
Manual Tightening Control 1 pcs	8436 1970 21
Manual Tightening Control 2 pcs	8436 1970 22
Manual Tightening Control 5 pcs	8436 1970 25
Manual Tightening Control 10 pcs	8436 1970 26

Need an extra tool?

The Power Focus 6000 connects up to six battery tools. If you need more tools, just add the required tool to the controller with the appropriate additional Virtual Station.



Software: Features

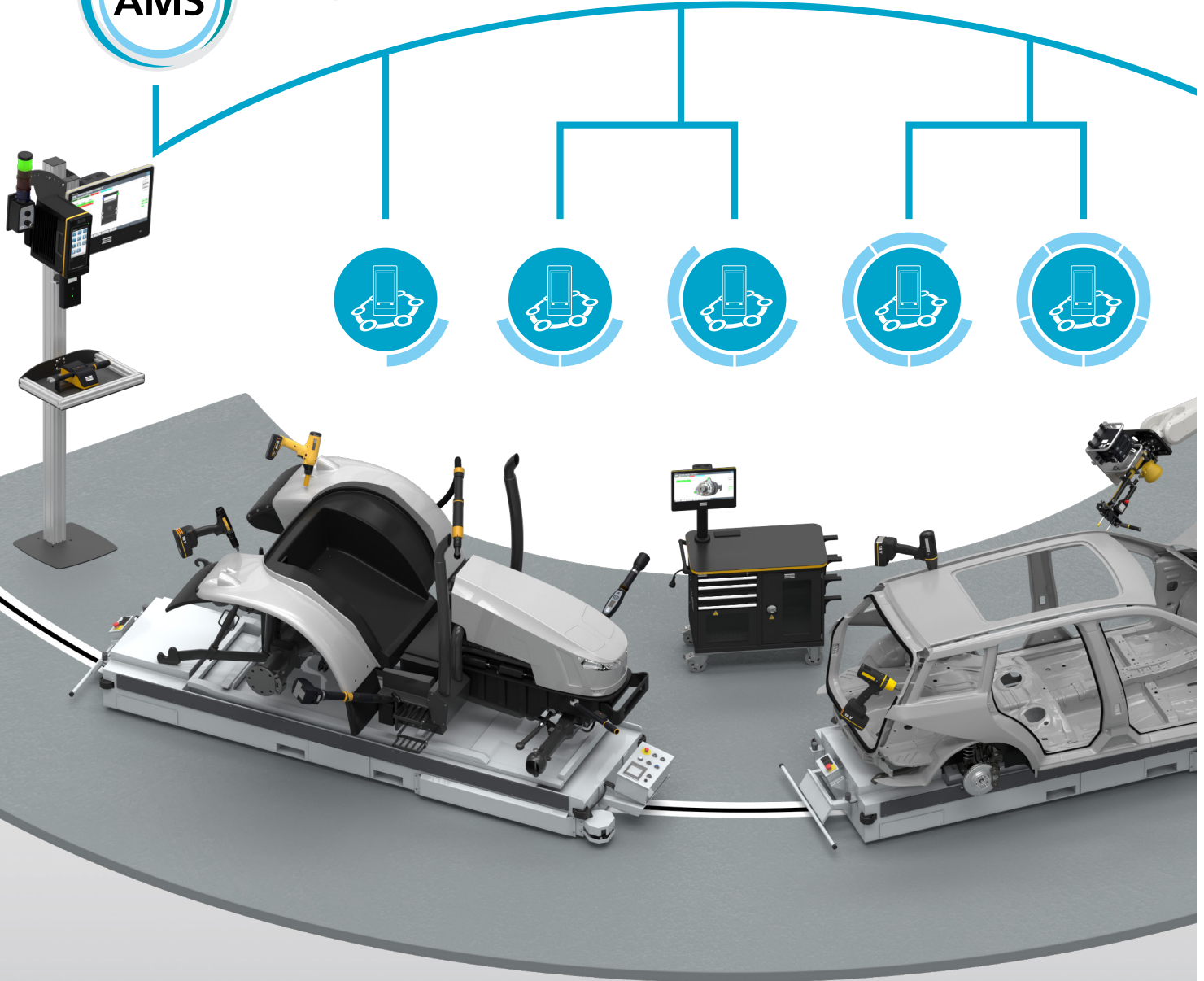
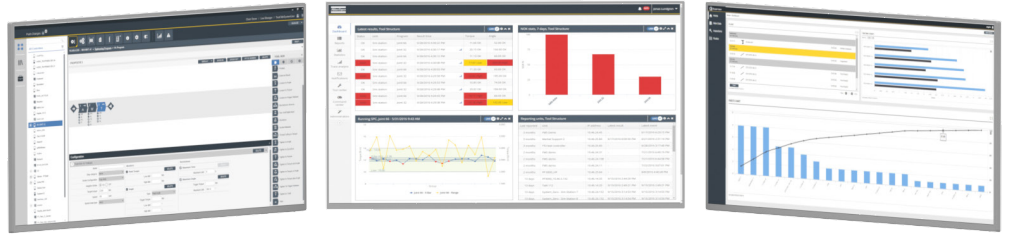
Features can be delivered electronically within 24 hours or physically, following standard delivery times.

Electronic delivery

Item	Order nr.
Low Reaction Strategies	
Low Reaction Strategies 1 pcs	8436 1910 80
TrueAngle	
TrueAngle 1 pcs	8436 1910 03
SoftPLC	
SoftPLC 1 pcs	8436 1910 04
Yield Control	
Yield Control 1 pcs	8436 1910 06
Open Protocol Extension	
Open Protocol Extension 1 pcs	8436 1950 20
StepSync	
StepSync 1 pcs	8436 1950 00
Industrial Location Guidance	
Industrial Location Guidance 1 pcs	8436 1950 10

Physical delivery

Item	Order nr.
Low Reaction Strategies	
Low Reaction Strategies 1 pcs	8436 1910 81
Low Reaction Strategies 2 pcs	8436 1910 82
Low Reaction Strategies 5 pcs	8436 1910 85
Low Reaction Strategies 10 pcs	8436 1910 86
TrueAngle	
TrueAngle 1 pcs	8436 1910 31
TrueAngle 2 pcs	8436 1910 32
TrueAngle 5 pcs	8436 1910 35
TrueAngle 10 pcs	8436 1910 36
SoftPLC	
SoftPLC 1 pcs	8436 1910 41
SoftPLC 2 pcs	8436 1910 42
SoftPLC 5 pcs	8436 1910 45
SoftPLC 10 pcs	8436 1910 46
Yield Control	
Yield 1 pcs	8436 1910 61
Yield 2 pcs	8436 1910 62
Yield 5 pcs	8436 1910 65
Yield 10 pcs	8436 1910 66
Open Protocol Extension	
OP Extension 1 pcs	8436 1950 21
OP Extension 2 pcs	8436 1950 22
OP Extension 5 pcs	8436 1950 25
OP Extension 10 pcs	8436 1950 26
StepSync	
StepSync 1 pcs	8436 1950 01
Industrial Location Guidance	
Industrial Location Guidance 1 pcs	8436 1950 11



Contact us!

As your dedicated assembly partner, Atlas Copco has the technology you need to handle today's and future production challenges. Our Smart Connected Ecosystem will meet all your needs and keep your operation ahead of the game in a sustainable way.

Service solutions from Atlas Copco

At Atlas Copco service, we create the best value from your investments

Every production line and industrial site is unique and has its own challenges. With that in mind, our service solutions are designed to help you get the most out of your industrial equipment. We combine analysis of production data with know-how and expertise to enhance your productivity and quality, while maximizing the cost efficiency of your maintenance.

For Power Focus 6000, tools and software, we can provide a wide range of services

- Startup, calibration and programming of the tightening system.
- Optimized maintenance solutions for cost savings and higher uptime.
- Operator training on systems and products.
- Tightening Services – a consultancy service for optimized tightening results.

Atlas Copco offers worldwide service

- We have a global presence and can support you at every step of the assembly production process.
- Standard service products and tailor-made solutions are available.





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