Toward zero-fault production

The Tensor SL is designed to improve your process quality, ensure productivity gains and dramatically cut costs.

Process quality is achieved in part by our five-step process quality control system. Tensor SL fulfills all steps including the final two steps – safety critical tightening and zero-fault fastening – concluding a full-loop process in which error proofing and traceability are ensured.

Productivity increases are the result of a tool that is small, fast and intelligent. For example, the Tensor SL is 50% lighter than its predecessor in the Tensor range, 40% smaller and runs at 10% higher speed.

Through the multiple programming features available, operators can optimize the tool for complex and demanding tightening situations. Superior ergonomic characteristics improve health, safety and productivity on the factory floor.

Cost reductions are achieved through rapid payback of the initial investment as the tool will help you to avoid common assembly errors. Using the tool’s advanced programming, you can apply the correct torque each time, avoiding damaged parts and loose screws. Based on a modular system, the tools are easy and less costly to service. The fact that the front nut can be released simply is an example of the tool’s serviceability.
Technical data

Tools

Controllers/Software

Cables

QIF modules

Atlas Copco

www.atlascopco.com
Tensor SL Screwdrivers
Intelligent tools for demanding applications
An extremely compact transducerised screwdriver

Scale 1:1

Compare the Tensor SL with your current tool!
In the motor vehicle industry, tier-one sub-suppliers are required to ensure that torque levels are traceable on a high number of joints. For example, the security of safety belts and airbags depends entirely on how tightly they are fastened. With its transducer, controller and networking capacity, the Tensor SL system offers full traceability and documentation on all work performed.

The aerospace industry has high demands in the assembly field. With its extensive programming capacity, the Tensor SL system can tighten a wide diversity of joints with a single tool, ensuring high quality, assembly efficiency and low-cost production.
A smart, compact and powerful electronic screwdriver, the new Tensor SL is the ideal tool for achieving zero-fault production in a wide range of low-torque applications.

**Traceable processes**

In a quality focused and consumer protective environment, you will increasingly need to keep detailed records of critical torque results. With its proven transducer, the Tensor SL ensures that the torque applied is traceable and stored in the controller. A complementary solution for documentation of tightening results is provided by ToolsNet, an optional software program.

**Industrial network integration**

Our complete Tensor SL system, which includes the screwdriver, a controller and a smart cable, is based on advanced digital communications technology, enabling you to integrate the system with your existing plant network through standard Ethernet TCP/IP, serial or optional Fieldbus connectivity.

**Tightening flexibility**

When assembling a wide diversity of products, operators need to be able to use the right torque, speed, and angle. Instead of using several different tools, you can program the Tensor SL to allow for quick and accurate changes in tightening sequences during assembly.

**Full operator support**

Due to its high power-to-weight ratio and soft grip handle, the 0.7 kg screwdriver is a comfortable and easy-to-use electronic tool. Coupled with a number of configurable features, such as 4 signal lights and buzzer for operator feedback, the Tensor SL provides full operator support and productivity.

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**Keep that fridge grounded!**

Although not every joint in the white goods industry is critical, many are. For example, large appliances, such as a washing machine or a refrigerator, require ground wires. Such cables are attached to the frame, ensuring electrical safety.

**And many other industries**

The electronics, telecommunications and brown goods industries are among many that are ideal for the smart, low-torque Tensor SL system. The Power Focus 3100 helps to tackle diversity in production by proposing different tightening sequences, or "jobs," depending on the product.
Tensor SL screwdrivers

1. Configurable function button
2. Signal lights
3. Configurable buzzer
4. Handle with superior ergonomics
5. High-performance motor
6. Tool front lights
7. Configurable push-to-start
8. Transducer
9. Angle head with spiral gears
10. Built in mounting plate
11. 25 mm stroke
12. Ergonomic handle
13. Front lights

Power Focus 4002 SL

1. Two versions – graph and compact
   The graph has an LCD display, which gives you easy access to SPC monitor charts and Cpk alarm. The compact version has a basic interface with a six-button keypad.

2. USB connector
   is located on the front. New functionality features from Power Focus 4002 SL.

3. Logic configurator
   No more PLC on your station. It saves you time and trouble.

4. SynchroTork™
   This gives you consistent clamp force. Extremely small CC for narrow applications.

10. Mounting plate
    For fixtured applications. This tool has a center to side distance of only 18 mm for fixtured applications with close tightenings.

11. 25 mm stroke
    The special socket holder allows you to reach into applications or parts with tight clearances.

12. Ergonomic handle
    Ergonomic and well balanced tool.
1. Function button
   The configurable function button can be set up for reverse mode and toggling between parameter sets, for example.

2. Signal lights
   Four signal lights for operator feedback, including a blue LED light. The blue light can be configured, for example, to show when a batch of screws is finished. Also, a red LED light ensures immediate detection of NOK tightenings by the operator.

3. Configurable buzzer
   Different buzzer sounds can be downloaded and used as alert sounds for immediate detection of NOK tightenings by the operator, or to indicate that a Job sequence has been accomplished.

4. Superior ergonomics
   Soft grip handle and high power-to-weight ratio. The 10 Nm tool weighs only 0.7 kg.

5. High-performance motor
   High-speed Tensor motor with wide torque range gives shorter cycle times and enables faster production.

6. Tool front lights
   Powerful and programmable lights on the straight version guide the operator.

7. Configurable push-to-start
   Push-to-start on the ETD version is preferred for fast, accurate tool triggering. Otherwise, lever start may be used.

8. Proven transducer
   Torque transducer for traceable results. Transducer signals are sent digitally to the controller.

9. Spiral gears
   Tensor ETV version has an angle head with spiral gears ensuring better durability and accuracy.

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Tensor SL cable
The Tensor SL cable is a highly flexible and durable electric cable for line assembly. Low voltage requirements enable the cable to be light and slim. A reinforced version is available for greater bending requirements. The cable has a built-in chip with a serial number and counting capability.