

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.

5 Zero-fault fastening

4 Safety critical tightening OK!

3 Joint OK!

2 Batch OK!

1 Torque OK!

Atlas Copco 5 steps
to zero fault fastening.
Tensor SL fulfills all five steps.

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

ETD



Model	Torque		Speed	Weight		Length	CS Dist.	Ordering No.
Push-to-start and front lights	Nm	in lbs	rpm	kg	lb	mm	mm	
ETD SL21-01-106-PS	0.3 - 1.2	2.7 - 10	2950	0.7	1.6	246	18/19.5	8433 2102 92
ETD SL21-04-106-PS	0.8 - 4	7 - 35	1600	0.7	1.6	246	18/19.5	8433 2104 91
ETD SL21-07-106-PS	1.5 - 7.5	13 - 66	970	0.7	1.6	246	18/19.5	8433 2107 69
ETD SL21-10-106-PS	2.0 - 10	18 - 89	720	0.7	1.6	246	18/19.5	8433 2108 25

CS distance without / with handle

All models have quick change chuck and female hexagon drive for bits

ETV



Model	Torque		Speed	Weight		Length	CS Dist.	Ordering No.
Lever start	Nm	in lbs	rpm	kg	lb	mm	mm	
ETV SL21-04-106	0.8 - 4	7 - 35	1600	0.75	1.7	264	9	8433 2004 47
ETV SL21-04-106-QC	0.8 - 4	8 - 35	1600	0.75	1.7	264	9	8433 2004 73
ETV SL21-04-06	0.8 - 4	9 - 35	1600	0.75	1.7	264	9	8433 2004 91
ETV SL21-07-106	1.5 - 7.5	13 - 66	970	0.75	1.7	264	9	8433 2007 66
ETV SL21-07-106-QC	1.5 - 7.5	14 - 66	970	0.75	1.7	264	9	8433 2007 79
ETV SL21-07-06	1.5 - 7.5	15 - 66	970	0.75	1.7	264	9	8433 2007 94
ETV SL21-12-106	2.5 - 12	22 - 106	610	0.8	1.8	267	11	8433 2008 34
ETV SL21-12-106-QC	2.5 - 12	23 - 106	610	0.8	1.8	267	11	8433 2008 61
ETV SL21-12-06	2.5 - 12	24 - 106	610	0.8	1.8	267	11	8433 2008 77
ETV SL21-20-10	4.0 - 20.0	36 - 178	465	0.95	2.5	285	14	8433 2009 55

CS distance over angle head

ETP



Model	Torque		Speed	Weight		Length	CS Dist.	Ordering No.
Pistol grip push-to-start	Nm	in lbs	rpm	kg	lb	mm	mm	
ETP SL21-01-106-PS	0.3 - 1.2	2.7 - 10	3000	0.85	1.9	246	20.5	8433 2201 16
ETP SL21-04-PS	0.8 - 4	7 - 35	1600	0.85	1.9	246	20.5	8433 2204 66
ETP SL21-07-PS	1.5 - 7.5	13 - 66	970	0.85	1.9	246	20.5	8433 2207 53
ETP SL21-10-PS	2 - 10	18 - 89	720	0.85	1.9	246	20.5	8433 2208 28

ETF



Model	Torque		Speed	Weight		Length	CS Dist.	Stroke	Ordering No.
Fixture tools (lever start or remote control)	Nm	in lbs	rpm	kg	lb	mm	mm	mm	
ETF SL21-01-106	0.3 - 1.2	2.7 - 10	3000	0.95	2.1	322	18	25	8433 2401 13
ETF SL21-04	0.8 - 4	7 - 35	1600	0.95	2.1	322	18	25	8433 2404 19
ETF SL21-07	1.5 - 7.5	13 - 66	970	0.95	2.1	322	18	25	8433 2407 26
ETF SL21-10	2 - 10	18 - 89	720	0.95	2.1	322	18	25	8433 2408 13

Controllers/Software



Controller hardware	Ordering No.
Power Focus 4002 G	8433 3100 00
Power Focus 4002 C	8433 3100 05
Power Focus 4002 G-DN	8433 3140 00
Power Focus 4002 C-DN	8433 3140 05
Power Focus 4002 G-PB	8433 3142 00
Power Focus 4002 C-PB	8433 3142 05
Power Focus 4002 G-IB	8433 3145 00

Controller hardware	Ordering No.
Power Focus 4002 C-IB	8433 3145 05
Power Focus 4002 G-MB	8433 3147 00
Power Focus 4002 C-MB	8433 3147 05
Power Focus 4002 G-EIP	8433 3148 00
Power Focus 4002 C-EIP	8433 3148 05
Power Focus 4002 G-PN	8433 3149 00
Power Focus 4002 C-PN	8433 3149 05

Cables



Tensor SL Tool Cable	Ordering No.
Length	
3m	4220 3319 03
5m	4220 3319 05
10m	4220 3319 10

Heavy duty Tensor SL cable	Ordering No.
Length	
3m	4220 3378 03
5m	4220 3378 05
10m	4220 3378 10

Extension cable	Ordering No.
Length	
3m	4220 2795 03
5m	4220 2795 05
10m	4220 2795 10



Tensor SL Tool Cable with 90° connector	Ordering No.
Length	
3m	4220 3607 03
5m	4220 3607 05
10m	4220 3607 10
15m	4220 3607 15
20m	4220 3607 20



Tensor SL Spiral Cable with 90° connector	Ordering No.
Length	
5 m work length with 7.6 m total length	4220 3617 05

QIF modules



Bit selector,
8 positions
8433 0612 08



Mini Display
8433 0570 13



Stacklight ESL-04
8433 0570 13



Maxi Display
8435 3070 10



Operator Panel
advanced
8433 0565 00

Controller software	Ordering No.
RBU-DS/DL*	8433 0005 10
RBU-Bronze	8433 0010 10
RBU-Silver	8433 0015 20
RBU-Gold	8433 0020 20

ToolsTalk PF W07	Ordering No.
No. of users	
1-user Licence	8092 1183 01
5-user Licence	8092 1183 05
10-user Licence	8092 1183 10
Plant licence	8092 1183 99

Tensor SL Screwdrivers

Intelligent tools for demanding applications



Atlas Copco

An extremely compact transducerised screwdriver

246 mm



36 mm

Scale 1:1

Compare the
Tensor SL with
your current tool!

Lead the way with

Not too loose on the airbags!



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.

And keep those planes flying!



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.

h the right tool

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.

The smart tightening solution

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.

Tensor SL screwdrivers



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.

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.

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.

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.

