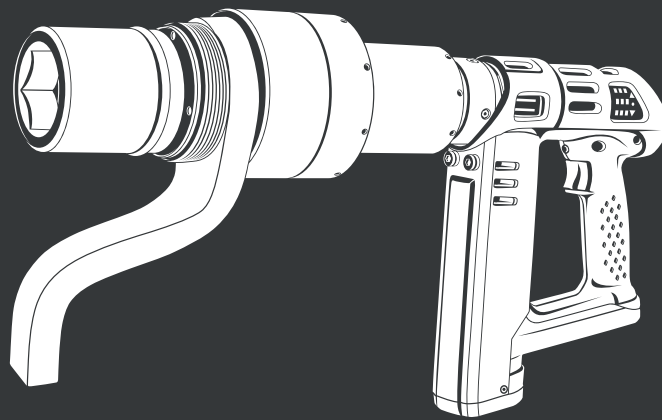


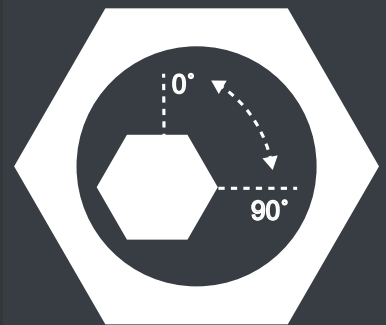
ELECTRIC TRANSDUCERIZED NUTRUNNER



***OPERATOR
FEEDBACK***



TRACEABILITY



TORQUE AND ANGLE



TENSOR REVO

ELECTRIC TRANSDUCERIZED NUTRUNNER

INTERCHANGEABLE REACTION BAR

Many optional reaction bars are available to best suit your work application.

360° TRANSDUCERIZED TOOL

The swiveling front part increases usability and enables faster and easier positioning on the bolt head.

OPTIONAL TWO-HANDED START

Operator handle for two-handed start (optional)



EASY CONNECTION

Connects to controller via quick-connecting cord.

Smarter, lighter and faster, the new electric pistol nutrunner Tensor Revo offers high torque tightening in a hand held package. Meet the market's first and only transducerized handheld nutrunner with 360° swivel capability.



OPERATOR FEEDBACK

Multiple LEDs, Results Display and Program Selector gives direct feedback of tightening result

TENSOR MOTOR

Fast and strong Tensor motor for maximum speed

Tensor Revo
Electric Nutrunner Datasheet

TENSOR REVO TECHNICAL DATA

Model with fan	Square Drive	Torque Range		Speed	Weight		Length			Ordering No.
	in	Nm	ft lb	r/min	kg	lb	mm	mm	Spline	
ETP ST101-200-20-F	3/4	60 - 200	45 - 145	396	5.2	11.5	303	32.5	3	8433 2302 02
ETP ST101-300-20-F	3/4	90 - 300	66 - 221	293	5.2	11.5	303	32.5	3	8433 2303 02
ETP ST101-500-20-F	3/4	150 - 500	110 - 365	186	5.9	13	334	33.5	4	8433 2305 02
ETP ST101-750-25-F	1	220 - 750	160 - 550	132	6.2	13.7	353	33.5	5	8433 2307 52
ETP ST101-1000-25-F	1	300 - 1000	220 - 735	99	6.4	14.1	364	33.5	5	8433 2310 02
ETP ST101-1500-25-F	1	450 - 1500	332 - 1106	47	8.8	19.4	402	43.5	9	8433 2321 52
ETP ST101-2000-38-F	1 1/2	600 - 2000	442 - 1475	38	11.5	25.4	454	48	7	8433 2322 02
ETP ST101-3000-38-F	1 1/2	900 - 3000	664 - 2212	24	14.8	33	476	59	8	8433 2323 02
ETP ST101-4000-38-F	1 1/2	1200 - 4000	885 - 2950	20	15	33	481	59	8	8433 2324 02

Support handle and tool protective cover are included with tool delivery. Reaction bars are not included with tool. For all models in the table declared noise and vibration emissions according to ISO 15744 and ISO 28927-2 are: sound pressure level <70 dB(A) and vibrations <2.5 m/s².



TENSOR REVO 2000 Nm



TENSOR REVO -with support handle

Reaction bars (optional)

Tool Model	Bar	Square Bracket	L-Type Aluminium Bar	Sliding Drive, Short (cc in mm) Drive Size	Sliding Drive, Long (cc in Mm) Drive Size	S Type	Ext. Sliding Drive – Spring Loaded	
							cc 68 – 112 mm	cc 68 – 112 mm
ETP ST101-200 20-F								
ETP ST101-200 20-F	4210 2219 80	4210 2219 03	4210 2219 08	4210 4481 63, (70-120) 3/4"	4210 4616 83, (82-218) 1/2"	4210 4480 03	-	-
ETP ST101-300 20-F	4210 2219 80	4210 2219 03	-	4210 4481 63, (70-120) 3/4"	4210 4616 83, (82-218) 1/2"	4210 4480 03	-	-
ETP ST101-200 20-F	-	-	-	-	4210 4616 63, (82-218) 3/4**	-	-	-
ETP ST101-300 20-F	-	-	-	-	4210 4616 63, (82-218) 3/4**	-	-	-
ETP ST101-500 20-F	4210 2183 80	4210 2183 01	4210 2183 08	4210 4481 84, (76-126) 3/4"	4210 4616 84, (82-218) 3/4"	4210 4480 04	-	-
ETP ST101-750 25-F	4210 2726 80	4210 2726 01	-	4210 4481 85, (80-125) 1"	4210 4616 85, (82-218) 1"	4210 4480 05	4210 4498 80	4210 4498 82
ETP ST101-1000 25-F	4210 2726 80	4210 2726 01	-	4210 4481 85, (80-125) 1"	4210 4616 85, (82-218) 1"	4210 4480 05	4210 4498 80	4210 4498 82
ETP ST101-1500-25-F	4210 3899 80	4210 3899 01	-	4210 4481 89, (80-130) 1"	4210 4616 89, (80-280) 1"	4210 4480 09	-	-
ETP ST101-2000-38-F	4210 3899 02	4220 1445 00	-	-	-	4210 4480 07	-	-
ETP ST101-3000-38-F	4210 3899 03	4220 1972 91	-	-	-	4210 4480 08	-	-
ETP ST101-4000-38-F	4210 3899 03	4220 1972 91	-	-	-	4210 4480 08	-	-

*Recommended 3/4" drive for ETP ST 101-300

TENSOR REVO ACCESSORIES

Accessories

Designation	Ordering No.
Tool accessories	
ST barcode scanner	8433 0615 50
Protective cover for ST scanner	4220 2762 10
Suspension yoke adjustable ST101 200-1000	4220 4075 90
Suspension yoke adjustable (with ST scanner)	4220 4075 91
Swiveling suspension yoke ST101 750-2000	4210 3088 87
Swiveling suspension yoke ST101 3000-4000	4210 3088 81
Tool protective cover (included)	4220 4299 00
Support handle, ST101 200-500 (included)	4220 4001 84
Support handle, ST101 750-4000 (included)	4220 4001 83
Adjustable operator handle with trigger	4220 4522 82
Fan module	4220 4417 90
Quick change socket release kit 3/4"	4210 3476 80
Quick change socket release kit 1"	4210 3524 80
Telescopic front 25mm, ST101 200	4220 4592 90
Telescopic front 40mm, ST101 500	4210 3781 81
Telescopic front 50mm, ST101 750-1000	4210 3788 80
Telescopic front 50mm ST101 1500	4210 3788 81
Quick change nut for reaction bar, spline 5	4210 2725 87
Quick change nut for reaction bar, spline 4	4210 2182 87
Cable protection	4220 2977 90
Error proofing modules	
Stacklight ESL04	8433 0570 13
Operator panel advanced	8433 0565 00
Selector, large sockets	8433 0610 44
ComNode 2 Touch, ATS 10 spindles	8433 2711 11
MaxiDisplay 3 (19")	8435 3070 20

For additional accessories, cable/controller configurations and software, see Atlas Copco Industrial Power Tools catalogue.

Quick change for reaction bar



Swiveling suspension yoke (gear mounted)



Telescopic front



Suspension yoke adjustable (motor mounted)



Large socket selector



MaxiDisplay 3 (19")

Controller Hardware & Software

Designation	Ordering No.
Controller hardware	
Power Focus 4000-Graph W10	8433 7100 00
Power Focus 4000-Compact W10	8433 7100 05
Controller software	
RBU-Bronze	8433 0010 10
RBU-Silver	8433 0015 20
RBU-Gold	8433 0020 20
Tools Talk Power Focus W10, 1-user license	8092 1190 01



Power Focus 4000 Graph



Stacklight

Tool cables

Designation	Ordering No.
ST cable, 5m	4220 2636 05
ST cable, 10m	4220 2636 10
ST cable, 15m	4220 2636 15

CONTROLLERS AND SOFTWARE FOR TENSOR REVO



Power Focus 4000

The Power Focus range controls tools from the Tensor DS, ST, SR, STR, STB and ETX families. With its built-in functions, it also participates in controlling the station or line segment. The PowerFocus and associated software packages provide easy-to-understand information for everyone, from operators to plant managers.

The Power Focus is based on standard hardware and software components which, when combined, will fulfill all demands, from the most basic stand-alone installation to full integration into the factory network. The modules fit together using the “plug-and-play” concept. Assembly process control and quality assurance is made easy by advanced control functions. On receipt of assembly information, the Power Focus automatically selects the correct tightening sequence and parameters. The operator is guided through the process, avoiding mistakes that can result in costly quality problems.

Programming software ToolsTalk PF

ToolsTalk PF is the user-friendly tool that enables you to communicate with your Power Focus tool controller. It makes programming and process analysis of a tightening station simple.

General Functionality Level / RBU Runs Tool Types	Power Focus 4000		
	Bronze	Silver	Gold
	ST/SR/STR	ST/SR/STR	ST/SR/STR
Tensor controllers			
Compact hardware	x	x	x
LED display	x	x	x
6 button keyboard	x	x	x
Graph hardware		x	x
LCD display		x	x
Full keyboard		x	x
Functionality			
Number of tools	1	1	1
Number of Psets	64	250	250
Batch count	x	x	x
Open end spanner	x	x	x
Quick programming	x	x	x
Cross thread / Rehit detection	x	x	x
Tool service indicator	x	x	x
Autoset	x	x	x
Lock on reject	x	x	x
Line control		x	x
Transducer torque traceability	x	x	x
Tightening status storage (default)	5 000	5 000	5 000
Tightening data storage (default)	5 000	5 000	5 000
MultiStages		8	8
Trace storage	8	8	8
Real time statistics	x	x	x
SPC	x	x	x
RBU	x	x	x
Bar code reading		x	x
ID input to select Pset		x	x
Job function		x	x
Number of jobs (default)		99	99
ID input to select job		x	x
Logic Configurator (4000 only)		x	x
Cell programming		x	x
Label printer (via Open protocol)		x	x
Cell Job			x
Strategies and options			
Two stage/Quick step/Ergoramp	x	x	x
Torque control and angle monitoring	x	x	x
DS control		x	x
Auto zoom step	x	x	x
CW / CCW operation	x	x	x
Rundown angle monitoring	x	x	x
Self tap / PVT monitoring	x	x	x
Reverse angle	x	x	x
Rotate spindle	x	x	x
Click wrench input	x	x	x
Torque and angle control	x	x	x
Angle control and torque monitoring	x	x	x
Current monitoring	x	x	x
Post view torque		x	x
Yield control (PF 4000 and ETX combination only)			x
StepSync, SynchroTork (PF 4000 only)			x
Home position			x
Snug gradient			x
I/O			
RS232 programming port	x	x	x
USB port (PF 4000 only)	x	x	x
Discrete I/O	x	x	x
Remote start	x	x	x
Socket selector (optional)	x	x	x
RE Alarm (optional)	x	x	x
Parallel printer port	x	x	x
I/O Expander (optional)	x	x	x
Expandable I/O (up to 124 in / 124 out)	x	x	x
Operator ID card input		x	x
Fieldbus card		Optional	Optional
RS232 bar code reader port		x	x
Easily programmed fieldbus protocol		x	x
Ethernet port for remote prog		x	x
Ethernet port for data collection		x	x
Protocols			
Open protocol serial	x	x	x
Open protocol Siemens 3964R serial	x	x	x
Open protocol Ethernet		x	x

CONTROLLERS AND SOFTWARE FOR TENSOR REVO

Advanced process control and monitoring functions

Power Focus is a modular range of controllers, with full flexibility, designed for applications ranging from single spindle hand-held operations to fixtured multiple nutrunning systems. Advanced process control and monitoring functions make it easy to view and collect data using the Internet infrastructure.

- Choose your controller – either Graph or Compact.
- Choose your RBU software key to run a tool.
- Choose from various ways to use the controller, as a stand-alone or in a network.
- Run many different kinds of tool, stand-alone, FS, crowfoot or open tools.
- Realtime statistics analysis.
- Error-proofing solution.
- Advanced tightening control and/or monitoring method.
- Trace view.
- Logic configurator.
- Can handle different level of communication.

The Power Focus 4000 is available in two versions, Compact and Graph. The difference between them is the user interface, where the Graph features the color display and a full keyboard.

Compact

This version offers full functionality at a lower cost, but requires a PC with the ToolsTalk PF software for process set-up.

Graph

With the Graph hardware, you have full stand-alone programming possibilities. When networked, the Graph can function as a programming terminal for other Power Focus units.

RBU cuts downtime

Atlas Copco's patented Rapid Backup Unit (RBU) concept transfers functionality to a non-configured hardware unit, ensuring that hardware can easily be upgraded should functionality requirements change. The RBU also acts as back-up for programming and configuration. If a change of hardware is required, just fit the RBU to the new hardware, switch on the unit and you're ready. All programming and network configurations are transferred in seconds. The RBU cuts downtime to a minimum.



Compact



Graph

Power Focus 4000 for Tensor DS, ST, SR, STR, STB and ETX

Model	Ordering No.
Power Focus 4000 W 10	
PF 4000-G-HW	8433 7100 00
PF 4000-C-HW	8433 7100 05
PF 4000-G-DN- HW	8433 7140 00
PF 4000-C-DN-HW	8433 7140 05
PF 4000-G-FLN-HW	8433 7141 00
PF 4000-C-FLN-HW	8433 7141 05
PF 4000-G-PB-HW	8433 7142 00
PF 4000-C-PB-HW	8433 7142 05
PF 4000-G-CC-HW	8433 7143 00
PF 4000-C-CC-HW	8433 7143 05
PF 4000-G-IB-HW	8433 7145 00
PF 4000-C-IB-HW	8433 7145 05
PF 4000-G-MB-HW	8433 7147 00
PF 4000-C-MB-HW	8433 7147 05
PF 4000-G-PN-HW	8433 7148 00
PF 4000-C-PN-HW	8433 7148 05
PF 4000-G-EIP-HW	8433 7149 00
PF 4000-C-EIP-HW	8433 7149 05

Controller functionality

Hardware key	Ordering No.
RBU-Bronze	8433 0010 10
RBU-Silver	8433 0015 20
RBU-Gold	8433 0020 20
RBU-DS	8433 0005 10
RBU-X	8433 0080 20



RBU

Power Focus 4002 for Tensor SL

Model	Ordering No.
Power Focus 4002 W 07	
PF 4002-G-HW	8433 3100 00
PF 4002-C-HW	8433 3100 05
PF 4002-G-DN-HW	8433 3140 00
PF 4002-C-DN-HW	8433 3140 05
PF 4002-G-PB-HW	8433 3142 00
PF 4002-C-PB-HW	8433 3142 05
PF 4002-G-IB-HW	8433 3145 00
PF 4002-C-IB-HW	8433 3145 05
PF 4002-G-MB-HW	8433 3147 00
PF 4002-C-MB-HW	8433 3147 05
PF 4002-G-PN-HW	8433 3148 00
PF 4002-C-PN-HW	8433 3148 05
PF 4002-G-EIP-HW	8433 3149 00
PF 4002-C-EIP-HW	8433 3149 05

IRC Focus for STwrench and Tensor STB

Model	Ordering No.
IRC Focus W 10	
IRC FOCUS-B-G-HW	8433 6500 00
IRC FOCUS-B-C-HW	8433 6500 02
IRC FOCUS-B-G-DN-HW	8433 6500 04
IRC FOCUS-B-C-DN-HW	8433 6500 06
IRC FOCUS-B-G-FLN-HW	8433 6500 08
IRC FOCUS-B-C-FLN-HW	8433 6500 10
IRC FOCUS-B-G-PB-HW	8433 6500 12
IRC FOCUS-B-C-PB-HW	8433 6500 14
IRC FOCUS-B-G-IB-HW	8433 6500 16
IRC FOCUS-B-C-IB-HW	8433 6500 18
IRC FOCUS-B-G-MB-HW	8433 6500 20
IRC FOCUS-B-C-MB-HW	8433 6500 22
IRC FOCUS-B-G-PN-HW	8433 6500 24
IRC FOCUS-B-C-PN-HW	8433 6500 26
IRC FOCUS-B-G-EIP-HW	8433 6500 28
IRC FOCUS-B-C-EIP-HW	8433 6500 30

CONTROLLERS AND SOFTWARE FOR TENSOR REVO

ToolsTalk PF

ToolsTalk PF provides tightening parameter set-up, fieldbus and Logic Configurator set-up, plus customized reporting and presentation of statistics. With a simple click, results can be exported into other commercial file formats.

ToolsTalk communicates with the PowerFocus via Ethernet, USB or serial RS232. If you are networking from your office desk, ToolsTalk PF allows for quickest access to the different control units connected.

Model	Ordering No.
ToolsTalk PF W10	
1-user license	8092 1190 01
5-user license	8092 1190 05
10-user license	8092 1190 10
Plant license	8092 1190 99

ToolsTalk PF Functionality

General			
Functionality Level of RBU	Bronze	Silver	Gold
Serial connection	x	x	x
Off line programming	x	x	x
Real time analysis	x	x	x
Tightening database to PC (Excel)	x	x	x
Tightening simulation	x	x	x
Operator monitor	x	x	x
Picture monitor	x	x	x
Fieldbus quick set-up		x	x
Job monitor		x	x
Bar code reader configuration		x	x
Ethernet connection		x	x
Remote programming		x	x
View tightening traces	x	x	x
Overlay traces	x	x	x
Logic Configurator (PF 4000 only)		x	x
Multiple identifiers		x	x
Tensor ST sound files		x	x