

MT TS - Static Torque Transducer

Printed Matter No. 9836 5437 00

Product Instructions
2018-01

MT TS 1	–	Static Torque Transducer	8432 0822 20
MT TS 2	–	Static Torque Transducer	8432 0822 21
MT TS 5	–	Static Torque Transducer	8432 0822 22
MT TS 10	–	Static Torque Transducer	8432 0822 23
MT TS 20	–	Static Torque Transducer	8432 0822 24
MT TS 50	–	Static Torque Transducer	8432 0822 25
MT TS 100	–	Static Torque Transducer	8432 0822 26
MT TS 200	–	Static Torque Transducer	8432 0822 27



WARNING

Read all safety warnings and instructions

Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference

Atlas Copco

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General Information

 **WARNING**

- Read all safety warnings and all instructions.
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
- Save all warnings and instructions for future reference.

Safety signal words

The safety signal words Danger, Warning, Caution, and Notice have the following meaning:

DANGER	DANGER indicates a hazardous situation which, if not avoided, will result in the death or serious injury.
WARNING	WARNING indicates a hazardous situation which, if not avoided, could result in the death or serious injury.
CAUTION	CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE!	NOTICE! is used to address practices not related to personal injury.

Warranty

Contact the Atlas Copco sales representative within your area to claim a product. Warranty will only be approved if the product has been installed, operated, and overhauled according to the Product Instructions. Warranty will not be approved if it should be detected that the MT TS – Static Torque Transducer has been opened. Please also see the delivery conditions applied to the local Atlas Copco company.

ServAid

ServAid is a portal that contains the most up-to-date product information such as:

- Safety Information
- Installation, Operation and Service Instructions
- Exploded views

It is also possible to order spare parts, service tools and accessories for the product of your choice directly from ServAid. It is continuously updated with information about new and redesigned products.

If translations exist, you can view content in the language of your choice. ServAid offers advanced search functionality of our entire product range and can also be used to display information about obsolete products.

ServAid is available at:
<http://servaid.atlascopco.com>

For further information contact your Atlas Copco sales representative or e-mail us at:
servaid.support@se.atlascopco.com

EC Declaration of Conformity

We, **Atlas Copco BLM – Paderno Dugnano - ITALY** declare under our sole responsibility that the product (with name and type, see front page) is in conformity with the following Directive(s):

2011/65/EC, 2012/19/EC

Information concerning **Restriction of Hazardous Substances 2 (RoHS 2)**:
This product and its information, meets the requirements of the RoHS 2 Directive (2011/65/EC).

Information concerning **Waste of Electrical and Electronic Equipment (WEEE)**:
This product and its information, meets the requirements of the WEEE Directive (2012/19/EC), and must be handled according to the directive.

The product and/or its battery are marked with a crossed trashcan, see figure on the right.



The symbol indicates that parts within the product must be handled in accordance with the WEEE Directive. Illegal wasting of this equipment may be prosecuted according to local laws.

The entire product, or the WEEE parts, can be sent to your “Customer Centre” for handling.

For more information, consult the website:

www.atlascopco.com

Choose **Products - Links and downloads**, and click **EC RoHS and WEEE directives (ENGLISH only)**.

Lars Eklöf, President MVI Division

Signature of issuer

Useful Information



Log in to Atlas Copco website: www.atlascopco.com

It is possible to find all kind of information concerning Atlas Copco Industrial Techniques products, accessories, spare parts, published matters on our Website.

Name and Address of the manufacturer or supplier

Atlas Copco BLM
via Pepe Guglielmo, 11
20037 Paderno Dugnano (MI)
Italy
Main Office Tel. +49 02 990351

Ergonomics

Ergonomic guidelines

Consider your workstation as you read through this list of general ergonomic guidelines and see if you can identify areas for improvement in posture, component placement, or work environment.

- Take frequent breaks and change work positions frequently.
- Adapt the workstation area to your needs and the work task.
- Adjust for convenient reach range by determining where parts or tools should be located to avoid static load.
- Use workstation equipment such as tables and chairs appropriate for the work task.
- Avoid work positions above shoulder level or with static holding during assembly operations.
- When working above shoulder level, reduce the load on the static muscles by reducing the weight of the tool, using for example torque arms, hose reels or weight balancers. You can also reduce the load on the static muscles by holding the tool close to the body.
- Make sure to take frequent breaks.
- Avoid extreme arm or wrist postures, particularly for operations requiring a degree of force.
- Adjust for convenient field of vision by minimizing movement of the eyes and head during the work task.
- Use the appropriate lighting for the work task.
- Select the appropriate tool for the work task.
- Use ear protection equipment in noisy environments.

- Use high-quality inserted tools or consumables to minimize exposure to excessive levels of vibration.
- Minimize exposure to reaction forces.
- When using direct-driven screw or nutrunners:
Reaction forces depend on tool setting and joint characteristics. The ability to bear reaction forces depends on the operator's strength and posture. Adapt the torque setting to the operator's strength and posture and use a torque arm or reaction bar if the torque is too high.
- Use dust extraction system or mouth protection mask in dusty environments.

Product Information

General

MT TS – Static Torque Transducers are designed to test low torque screwdrivers.

Select the correct size MT TS which is within the maximum torque capacity of the tool used.

Connect the transducer cable to the MT TS and to the measuring instrument (MicroTorque ACTA MT4).

Operate the tool on the joint making sure to align the tool/transducer to avoid any influence from side forces which may affect the measuring result. Failure to comply with this requirement and to exceed the maximum torque rating may cause irreversible damage to your MT TS.



MT TS 1 ÷ MT TS 20

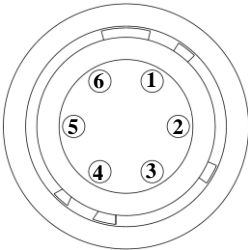


MT TS 50 ÷ MT TS 200

Technical information

- Working Range: 10% - 100%
- Accuracy: $\pm 0.5\%$ (within working range)
- Overload protection
- Integrated amplifier electronics
- Bidirectional torque sensor


Connector PIN OUT



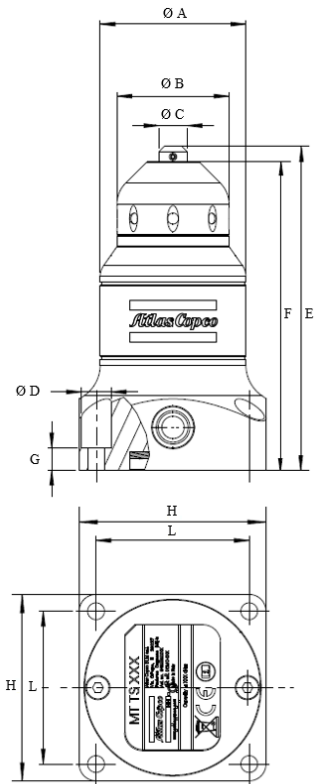
PIN	Description
1	ID
2	-
3	Analog
4	VCC
5	-
6	GND

Models

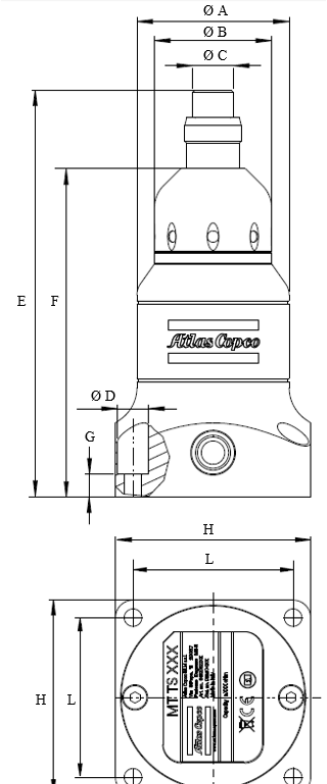
MODEL	CAPACITY cN m – in lb	DRIVE	OVERALL LENGTH mm	ORDERING NUMBER
MT TS 1	1 – 0.089	Ø 3	87	8432 0822 20
MT TS 2	2 – 0.178	Ø 3	87	8432 0822 21
MT TS 5	5 – 0.442	Ø 3	87	8432 0822 22
MT TS 10	10 – 0.885	Ø 3	87	8432 0822 23
MT TS 20	20 – 1.770	Ø 3	87	8432 0822 24
MT TS 50	50 – 4.425	¼"	104.5	8432 0822 25
MT TS 100	100 - 8.851	¼"	104.5	8432 0822 26
MT TS 200	200 – 17.701	¼"	104.5	8432 0822 27

 **WARNING:** Do not torque the *MT TS – Static Torque Transducer* over its torque capacity.

Dimensions



MT TS 1 ÷ MT TS 20



MT TS 50 ÷ MT TS 200

MODEL	Ø A (mm)	Ø B (mm)	Ø C (mm)	Ø D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	L (mm)	Ratchet socket (mm)
MT TS 1	39	30	7.5	8	87	82.7	6	50	41	R 3
MT TS 2	39	30	7.5	8	87	82.7	6	50	41	R 3
MT TS 5	39	30	7.5	8	87	82.7	6	50	41	R 3
MT TS 10	39	30	7.5	8	87	82.7	6	50	41	R 3
MT TS 20	39	30	7.5	8	87	82.7	6	50	41	R 3
MT TS 50	39	30	10.5	8	104.5	84.5	6	50	41	Hex. 6.35
MT TS 100	39	30	10.5	8	104.5	84.5	6	50	41	Hex. 6.35
MT TS 200	39	30	10.5	8	104.5	84.5	6	50	41	Hex. 6.35

Accessories

QUALITY ASSURANCE SYSTEM

MODEL	ORDERING NUMBER
Controller – MicroTorque ACTA MT4	8432 0820 04
Transducer cable	8432 0830 35
RS232 cable ACTA MT	8432 0831 39

TEST JOINTS

MATERIAL DESIGNATION	TORQUE RANGE	SUITABLE FOR TRANSDUCER MODEL	ORDERING NUMBER
M6 Soft Joint ¼” Hex	500 – 1000	MT TS 500 – 1000	8432 0833 62
M6 Soft Joint ¼” Hex	200 - 500	MT TS 200 – 500	8432 0833 61
M4 Soft Joint ¼” Hex	27 – 200	MT TS 50 – 200	8432 0833 60
M3 Soft Joint ¼” Hex	5 – 27	MT TS 50	8432 0833 59
M3 Soft Joint HM	5 – 27	MT TS 1- 20	8432 0833 58
M2 Soft Joint ¼” Hex	0 – 10	MT TS 50	8432 0833 57
M2 Soft Joint HM	0 – 10	MT TS 1 – 20	8432 0833 56
M6 Hard Joint ¼” Hex	200 – 1000	MT TS 200 – 1000	8432 0833 55
M4 Hard Joint ¼” Hex	27 – 200	MT TS 50 – 200	8432 0833 54
M3 Hard Joint ¼” Hex	5 – 27	MT TS 50	8432 0833 53
M3 Hard Joint HM	5 – 27	MT TS 1 – 20	8432 0833 52
M2 Hard Joint ¼” Hex	0 – 10	MT TS 50	8432 0833 51
M2 Hard Joint HM	0 - 10	MT TS 1 - 20	8432 0833 50

Maintenance

Cleaning

- Keep the MT TS clean.
- After use, remove any traces of oil, grease and dust from the MT TS.
- Use an anti-static cleaning cloth in order to remove dust from the MT TS.
- Avoid using harsh detergents to clean MT TS.

Calibration

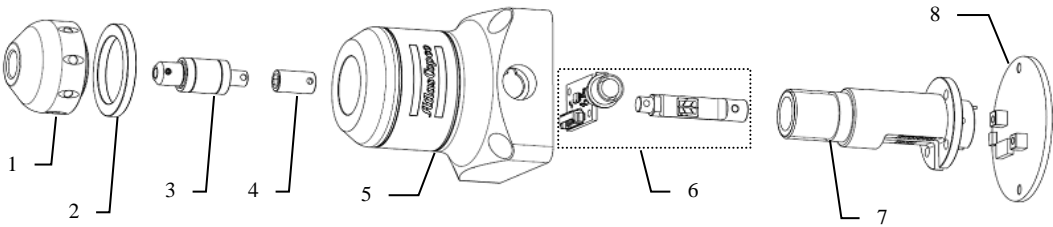
- Calibration is a set of operations that compares the values indicated by a measuring system to the corresponding values realized by external standards.
- The accuracy of electronic components drifts with time and temperature, which can affect measurement accuracy. Calibration restores these components to the specified accuracy and ensures that the device still meets Atlas Copco standards.
- Atlas Copco recommends performing a complete calibration at least once every year. You can shorten this interval based on the demands of your application.
- For further details about calibration process, contact the Service Team.

Decommissioning

Recycling intruction

When a product has served its purpose, it has to be recycled properly. Dismantle the product and recycle the components in accordance with local registration.

Recycling information



PART		RECYCLE AS
1	Closing Nut	Aluminium
2	MT Aluminium Yellow Washer	Plastic
3	Transmission Shaft	Steel
4	Joint	Steel
5	Main Body	Aluminium
6	Electronic Equipment	RAEE
7	Transducer Housing	Steel
8	Cover	Steel
	Screws	Steel



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