

Torque Measuring Instruments



SPEC by DOGA

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Torque Testers

Torque testers

Equipped with a built-in Transducer the EZ serie may be used to calibrate quickly and accurately every kind of fastening tools (torque wrenches, electric and air screwdrivers). Memorized readings can be easily transfered to any kind of computer or printer through RS 232 C port. With The EZ **SMART** version enjoy extreme measuring flexibility and full traceability of your tools thanks to additional functionalities. External transducers may be connected to the EZ **SMART** becoming a small-sized portable torque readout to achieve torque audit along the assembly line!



QUALITY - COMFORT - FLEXIBILITY

- Easy to use scroll menu
- Real time clock
- 500 datas FIFO memory capacity
- RS232 output
- Minilok/Maxi torque limits
- Peak, first peak, track measuring mode
- Automatic and manual reset
- Calibration display

SMART additional functionalities :

- Transducer input (to connect external transducer - static or rotary B serie)
- Minilok/Maxi torque limits with dry contact output
- Impulse tools measuring mode
- CM,CMK statistics, average, standard deviation
- Dry contact output to manage torque limit signal



Model	Capacity	Power supply	Autonomy drive	Male hexagonal	Statistics	Impulse	Code
EZ 2	2 Nm +/- 0,01 Nm	9V Cell / 220V	18 h 00	13 mm A/F	Without	No	7600288
EZ 2V2 SMART	2 Nm +/- 0,01 Nm	9V Cell / 220V	18 h 00	13 mm A/F	With	Yes	7600278
EZ 5	5 Nm +/- 0,02 Nm	9V Cell / 220V	18 h 00	13 mm A/F	Without	No	7600257
EZ5 V2 SMART	5 Nm +/- 0,02 Nm	9V Cell / 220V	18 h 00	13 mm A/F	With	Yes	7600280
EZ 20	20 Nm +/- 0,08 Nm	9V Cell / 220V	18 h 00	13 mm A/F	Without	No	7600500
EZ20 V2 SMART	20 Nm +/- 0,08 Nm	9V Cell / 220V	18 h 00	13 mm A/F	With	Yes	7600282

Delivered with a suitcase, one 9 volts cell, one charger and a control certificate.
The test joint is not included and must be ordered separately.

Test joints for EZ testers and static torque transducers

The test joints allow to simulate franc, semi-elastic or elastic assembly. They integrate the screwdriver rotation speed and they simulate your assembly conditions for an optimized adjustment.



Model	Fastening simulation	Drive	Code
SVS I3 F	Franc	1/4" male hexagonal	7602000
SVS I3 SE	Semi-elastic	1/4" male hexagonal	7602001
SVS I3 E	Elastic	1/4" male hexagonal	7602002

Dedicated to very low torques, the screw test joints SAV13 are suitable with all the EZ testers and static transducers until 20 Nm.

Model	Drive	Code
SAV I3 M2	M2 hex. int. screw	7600502
SAV I3 M3	M3 hex. int. screw	7600503
SAV I3 M4	M4 hex. int. screw	7600504

Static Transducers

NST static transducers

The NST transducers are suitable with TA and MTA torque Analysers. Ideal for calibration lab they are dedicated to the calibration of electric and pneumatic tools, pulse and torque wrenches. Auto-recognition with MTA Torque Analyser – Bi-directional



Model	Capacity	Accuracy	Female Square Drive	Code
NST 1	1 Nm	0,25 %	1/4"	7600071
NST 3	3 Nm	0,25 %	1/4"	7600072
NST 10	10 Nm	0,25 %	1/4"	7600073
NST 50	50 Nm	0,25 %	3/8"	7600074
NST 100	100 Nm	0,25 %	1/2"	7600075
NST 300	300 Nm	0,25 %	1/2"	7600076
NST 500	500 Nm	0,25 %	3/4"	7600077
NST 1000	1000 Nm	0,25 %	1"	7600090
NST 3000	3000 Nm	0,25 %	1-1/2"	7600091

Test joints for NST transducers

The test joints allow to simulate franc, semi-elastic or elastic assembly. Taking into account the rotation speed of the tested tool, actual assembly conditions may be approached.



Model	Square Drive	Capacity	Code
RDA 100 i	M/F 1/4" square	10 Nm	7600092
RDA 50 f	M/F 3/8" square	60 Nm	7600094
RDA 250 f	M/F 1/2" square	350 Nm	7600095
RDA 500 f	M/F 3/4" square	600 Nm	7600096
RDA 1000 f	M/F 1" square	1300 Nm	7600097
RDA 2500 f	M/F 1-1/2" square	3300 Nm	7600098

Rotary Transducers

Rotary torque transducers with brushes

The B serie rotary torque transducers are suitable with "TA", "MTA", "TA SMART" and "DAQ" torque readouts. They are equipped with self-lubricating brushes and high accurate ball bearings. This range will answer to your quality and lifetime requirements



- Self lubricating brushes for an increased lifetime
- 1/4" quick chuck for all the transducers until 20 Nm
- Speed rotation up to 3000 rpm
- Allowable overload until 150% of full scale



Model	Capacity	Maxi speed	Input drive	Output drive	Code
B 2 H	2 Nm +/- 0,008 Nm	3000 rpm	1/4" male hexagonal	1/4" fast hex.chuck	7600053
B 6 H	6 Nm +/- 0,02 Nm	3000 rpm	1/4" male hexagonal	1/4" fast hex.chuck	7600054
B 12 H	12 Nm +/- 0,04 Nm	3000 rpm	1/4" male hexagonal	1/4" fast hex.chuck	7600057
B 20 H	20 Nm +/- 0,08 Nm	3000 rpm	1/4" male hexagonal	1/4" fast hex.chuck	7600058
B 25 Q	25 Nm +/- 0,1 Nm	3000 rpm	3/8" female square	3/8" male square	7600060
B 63 Q	63 Nm +/- 0,2 Nm	3000 rpm	3/8" female square	3/8" male square	7600061
B 160 Q	160 Nm +/- 0,6 Nm	3000 rpm	1/2" female square	1/2" male square	7600062

Connection cables to be ordered in addition : see page 7

Brushless rotary torque transducers

The solution to fit your requirements of accuracy level, life time, reduced maintenance costs and fast application. The brushless rotary torque transducers are equipped with a brushless signal transmission, a power supply system and one integrated amplifier. You have at your disposal a complete range adapted to intensive use for any kind of fastening tools.



- Suitable with "TA SBV2", "TA SB SMARTV2" and "MTA"
- Suitable with impulse tools
- Maximum rotation speed : 12000 rpm
- +/- 5 volts analog output
- Allowable overload until 150%

Model	Capacity	Maxi speed	Input drive	Output drive	Code
SB 2 H	2 Nm +/- 0,008 Nm	12 000 rpm	1/4" male hexagonal	1/4" fast hex chuck	7600063
SB 6 H	6 Nm +/- 0,02 Nm	12 000 rpm	1/4" male hexagonal	1/4" fast hex chuck	7600064
SB 12 H	12 Nm +/- 0,04 Nm	12 000 rpm	1/4" male hexagonal	1/4" fast hex chuck	7600065
SB 18 H	18 Nm +/- 0,06 Nm	12 000 rpm	1/4" male hexagonal	1/4" fast hex chuck	7600066
SB 50 Q	50 Nm +/- 0,2 Nm	9000 rpm	3/8" female square	3/8" male square	7600067
SB 150 Q	150 Nm +/- 0,6 Nm	9000 rpm	1/2" female square	1/2" male square	7600068
SB 250 Q	250 Nm +/- 1 Nm	7000 rpm	3/4" female square	3/4" male square	7600069
SB 500 Q	500 Nm +/- 2 Nm	7000 rpm	3/4" female square	3/4" male square	7600070

Connection cables to be ordered in addition : see page 7

Torque Analysers

Memory torque readouts for external static and dynamic transducers

Easy to use and equipped with a high accurate electronics.



- Easy to use scroll menu
- 500 data FIFO memory capacity
- RS232 output
- Mini/ok/Maxi torque limits with dry contact output
- Peak/first peak/track signals
- Suitable with impulse tools (SMART model only)
- Cp, Cpk statistics, average, standard deviation (SMART model only)



Model	Accuracy	Power supply	Autonomy (on cell)	Statistics	Impulse tool	Code
TA V2	0,05 %	9V Cell/220V Charger	18h00	Without	No	7600283
TA SMARTV2	0,05 %	9V Cell/220V Charger	18h00	With	Yes	7600284

Delivered with a suitcase, one 9 volts cell, one charger and a control certificate.

Connection cables to be ordered in addition : see page 7

Memory torque readouts for brushless transducers

Easy to use and equipped with a high accurate electronics.



- Easy to use scroll menu
- Real time clock
- 500 datas FIFO memory capacity
- RS232 output
- Mini/ok/Maxi torque limits
- Peak, first peak, track measuring mode
- Automatic and manual reset
- Calibration display

TA SB SMART V2

- Suitable with impulse tools
- Cp, cpk, statistics...



Model	Accuracy	Power supply	Battery autonomy	Statistics	Impulse tool	Code
TA SBV2	0,05 %	220V and battery	8h00	Without	No	7600285
TA SB SMART V2	0,05 %	220V and battery	8h00	With	Yes	7600286

Delivered with a carrying case, a battery charger and a control certificate.

Connection cables to be ordered in addition : see page 7

Torque/Angle Analyser

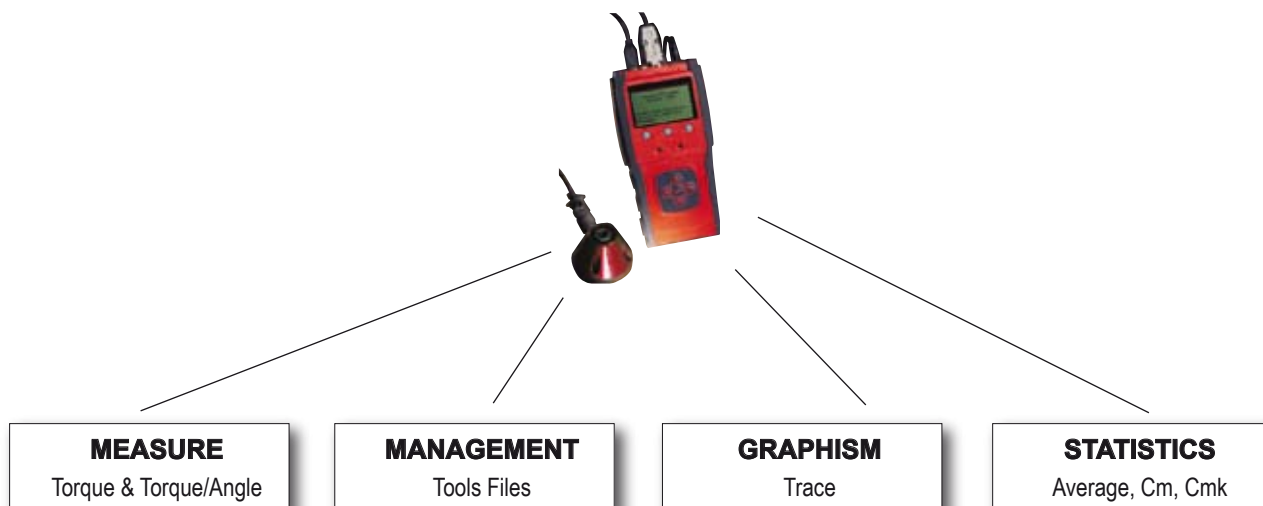
The MTA is a hand-held Torque/Angle Analyser suitable with all our transducers (NST, B and SB models). Easy to start and use it offers tool testing, graphing capabilities and a graphical menu for easy navigation.

The MTA allows you to set up and create tool tests and save the readings so that you can export the data to a PC for documentation. It's the ideal solution for organizing and storing test data for ISO and SPC documentation.

- System Accuracy +/- 0,5% of reading from 20% to 100% of full scale.
- System Accuracy +/- 1% of reading from 10% to 20% of full scale.
- Instant auto-recognition system of the transducer connected to the MTA
- Selection of six operating modes : (Track, Peak, First Peak, Audit, Torque + Angle, and Tool Test).
- Features built-in Tool Tests operation.
- Includes three PC Windows based software programs :
 - DOGA Torque Meter Interface Program** - for sensor calibrations, meter calibration and tool test.
 - Torque Meter Bootloader** - for updating the MTA operating systems.
 - DOGA Statistics Calculator** - for SPC, CP & CPK calculations.
- "Flash" memory allows upgrades to be done by the user in the field & internet through the USB port.
- Five low-pass filter selections (3000, 2000, 1500, 500 and 200 Hz).
- Real Time Clock for time stamping of readings.
- USB interface to download readings to PC.
- High Capacity Li-Ion Batteries for long life (30 hrs with standard transducers and 16 hrs with brushless rotary transducers).
- Torque and Angle readings are displayed simultaneously and supports up to 8000 RPM.
- Stores a total of 2500 data points.
- Real time graph of torque vs. time using associated PC Windows software.
- Features a Buzzer and Go/No Go LEDs that illuminate when high or low setting is achieved.



Model	Power supply	Code
SPEC MTA	Main & Battery	760010



USB Amplifier/Conditioner

DAQ Amplifier-conditioner

The DAQ electronic module enables Torque Measurements and Acquisition directly on pc USB port. Very easy to connect and use.

- Suitable with NST and B transducers
- Programming through USB
- 16 bits conversion
- 0,01% linearity
- Direct and real time acquisition on Excel with Trace
- Built-in programmable filter
- Torque limits Management
- Power supply through PC USB port



Model	Power supply	Transducers	Code
DAQ	Through USB	Static & dynamic (with brushes)	7600292

Connection Cables

Connection cables for NST transducers

For	Length	Code
EZ & TA Series	2 m	7600404
DAQ	2 m	3150018
MTA	2 m	7600050

Connection cables for rotary transducers (B serie)

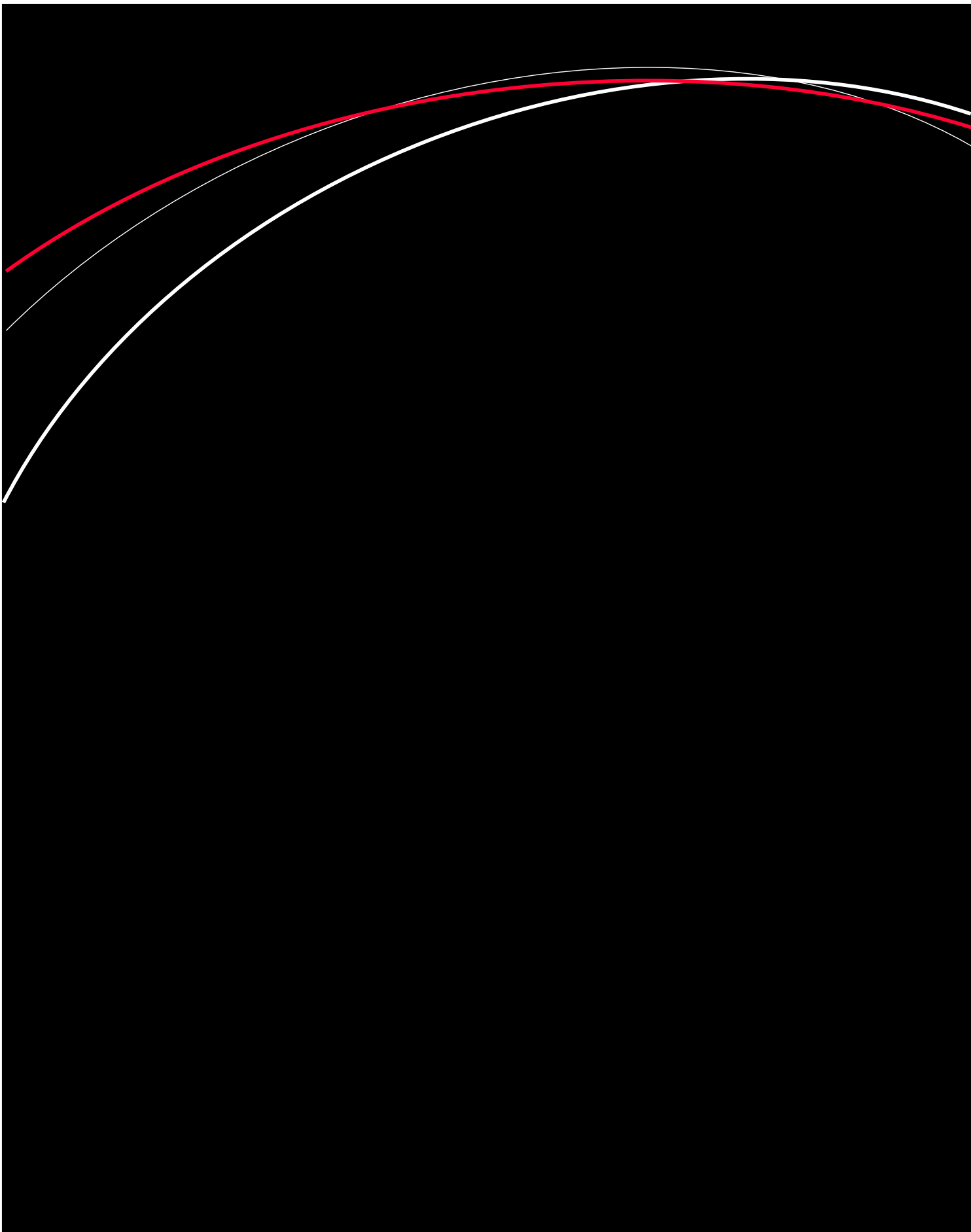
For	Length	Code
EZ & TA Series	2 m	3180047
DAQ	2 m	3100172
MTA	2 m	7600051

Connection cables for rotary transducers (SB serie)

For	Length	Code
TA SB Serie	2 m	7600111
MTA	2 m	7600052

Power supply

For	Code
EZ & TA Series	7600291
TA SB Serie	7600403



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06.05.60062.10/08