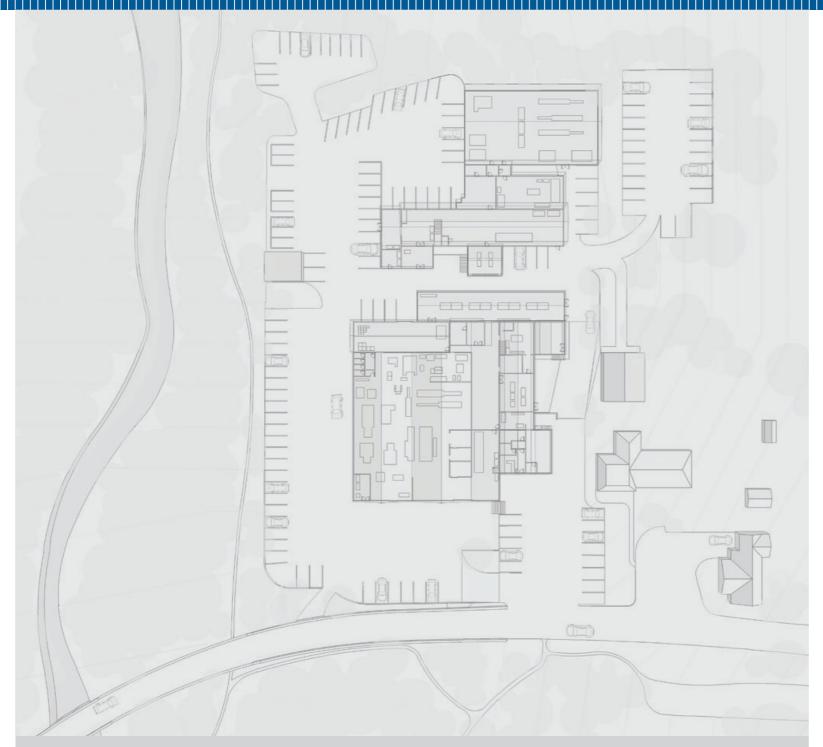


#### **TORQUE TOOLS**







#### A place for precision

For the past 75 years, all our torque tools have been designed and manufactured at our United Kingdom site, located 35 miles outside London.

Gedore Torque has built upon our proud engineering traditions and highly-skilled workforce with a multi-million pound investment in the most up-to-date manufacturing technology. Every tool is still assembled by hand, ready to provide years of accurate, reliable service.

We are within easy reach of our customers and distributors, close to the UK's motorway network, London airports and the Channel tunnel and ports. London Heathrow Airport is 30 miles away, London Gatwick Airport 35 miles and Dover 95 miles.











#### Everything in one location

Our 28,000 square feet site has been at the forefront of UK torque tool design and manufacture since 1937. Today, the same location is home to the world's most advanced and fully-integrated torque tool manufacturing facility.

Every aspect of our business is based here: Research & Development, Procurement, Manufacture, Assembly and Despatch. Our UKAS Calibration Laboratory ensures absolute accuracy, while our sales, marketing and customer service teams ensure that customers are always at the heart of our business.

Most importantly, the expertise and skills of our 70-strong team are always focused on the needs of our customers for increasingly efficient, innovative and reliable ways of measuring, applying and calibrating torque.

Everything we do conforms to exacting standards, both internal and external, including ISO and UKAS accreditations for our on site calibration laboratory. The quality of our people, process and facilities is your guarantee that our tools will deliver unsurpassed accuracy, quality and durability.



#### Torque Measuring Tools

8-15

Torque Screwdrivers and Wrenches that measure the level of torque that has been applied to a nut, bolt or threaded fastening. Used in Research & Development, Quality Auditing and Production Improvement.

#### Torque Application Tools

16-55

Torque Screwdrivers and Wrenches that apply a set torque to a fastener. Torque Application Tools will slip, break or click to signal when the set torque is reached. Used for Production Processes, Service and Repair.

#### Torque Calibration Tools

56-67

Tools that are used for the testing, calibration and recalibration of Torque Tools, to ensure accurate and consistent operation. Used in production lines for Quality Control and in Calibration Laboratories.

#### Torque Special Projects

68-71

Custom Tools and Tool Kits for the most exacting and specialised torque applications. Can also be supplied as Private Label, to meet user branding specifications.

#### Torque Accessories

72-79

A wide range of Accessories, all compatible with our Torque Screwdrivers and Accessories. Custom accessories to meet specific application or operational needs.

#### Technical Support

80-87

Unparalleled technical information, services and support. A worldwide network of factory-trained distributors. On-site Calibration Laboratory. Quality Assurance and Standards. Torque information.

#### For more information:

Tool Selector www.gedore-torque.com/tool-selector

Videos www.youtube.com/gedore-torque

Email salesandrepairs@gedore-torque.com

Telephone +44 (0) 1483 894 476

#### Torque Measuring Tools

#### Introduction

Torque Measuring Tools are used in many manufacturing and engineering businesses to check, determine or apply the correct level of torque, using a dial or digital readout. They perform a crucial role in Audit, Inspection, Production, Quality Control, Research & development and Servicing environments.

Engineering and manufacturing depend upon the accurate application of torque to nuts, bolts and fasteners. In fact, torque is essential for process conformity, product safety and total reliability: service problems and product failure can often be the result of insufficient or excessive torque. Gedore Torque Measuring Tools minimise these problems by ensuring that the correct torque settings can be applied and checked, with absolute and repeatable accuracy.

#### Types of Measuring Too

Torque Measuring Tools are available as Torque Screwdrivers or Torque Wrenches. They are fitted with a dial, or digital readout, which enables Torque to be measured as it is applied (Track mode) or when the maximum torque value has been reached (Peak mode).

#### The application of Torque Measuring Tools

Torque Measuring Tools are used in many engineering, manufacturing and service environments, where adherence to the correct level of torque is essential for process conformity.

In Research & development, Torque Measuring Tools can be used to determine what level of torque should be applied to a nut or bolt.

They can also be used in Auditing, Inspection and Quality Control in a manufacturing environment, to ensure that the correct level of torque has been applied.

Torque Measuring Tools can also be used to give absolute and repeatable accuracy in Production and Servicing, where operators may be required to tighten fasteners to various torque values.

#### ality Auditing Tests

There are three main ways in which Torque Measuring Tools can be used for Quality Audit purposes.

**Measurement.** This is used to verify the torque value of a previously tightened fastener. A clear mark is made on the surface of the nut, bolt or screw and continued onto the surface being clamped. This acts as a reference point. The fastener must then be untightened and then retightened until the marks are again in line. The torque value can then be read from the torque tool display.

**Just Move Test.** This is used to determine the torque setting of a previously tightened fastener. Using a torque measuring tool, a tightening torque is applied to the fastener until movement is just seen or felt. This torque is deemed to be a good indication of the original torque applied to the fastener.

**Break Loose Test.** This is used for checking the torque applied to a previously tightened fastener. Torque is applied in the direction that loosens the fastener and the torque is recorded at the point the fastener breaks loose. This value is an indication of the torque at which the fastener was originally tightened and is typically 20-30% lower than the tightening torque.

#### TT Dial Measuring Torque Screwdrivers

Torque range from 0.1 to 5 N.m

The Gedore Torque range of Dial Measuring cost and versatile tools provide accuracy, Torque Screwdrivers is designed for torque evaluation and torque verification, in order to ensure process conformity, product safety and absolute reliability. These low

reliability and economy in a wide range of Maintenance and Repair, Quality Control, R & D and Assembly operations in any engineering or manufacturing environment.



#### Versatile Torque Measuring Screwdrivers for any manufacturing environment

**Absolute accuracy.** Unique torsion bar mechanism to ensure total precision

**Dual scale.** Dial provides efficient measurement in Metric and Imperial torque units in both directions, delivering flexibility and minimising tool investment

Ease of use. Lightweight materials. Tools can be used by operators at any skill level

Long tool life. High quality, robust construction: stainless steel shaft, attractive coloured aluminium handle and sturdy dial

Measure Process Conformity. Unique memory function enables these tools to carry out the Just Move and Break Loose Quality Auditing Tests

No risk of tool damage. Overload Protection System with unique positive contact mechanism

Operational versatility. Torque can be measured as it is applied (Track mode) or when the maximum torque value has been recorded (Peak mode)



#### Additional features

Calibration Service enables tools to be kept accurate and up to date. See page 82

Two year warranty provides additional peace of mind

Range of accessories provides versatility. See pages 72-79

#### INDUSTRY SECTORS

Maintenance













Order Code	Model	<b>⋖</b>	—— Calibra	nted Range —— Imperial	لسلسا	— <b>→</b> Drive	k mm x		Accuracy	ISO 6789 Class	EPA
Couc	Model	150		impenai		Diive	V 1	y y	riccuracy	C.033	
017400	TT 50 FH	10-50 cN.m	2 cN.m	14-70 ozf·in	2 ozf·in	(1/4)	178	190	+/- 6%	1D	1
017500	TT 100 FH	20-100 cN.m	4 cN.m	28-140 ozf-in	4 ozf∙in	(1/ <sub>4</sub> °)	178	190	+/- 6%	1D	1
017600	TT 250 FH	50-250 cN.m	10 cN.m	4-20 lbf-in	0.5 lbf·in	(1/4)	250	465	+/- 6%	1D	1
017700	TT 500 FH	100-500 cN.m	20 cN.m	8-40 lbf·in	1 lbf·in	(1/4)	250	465	+/- 6%	1D	1



#### ADS, BDS, CDS, DDS & EDS Signal versions available. All ADS models are **EPA compliant**

#### Robust and versatile tools Dial Measuring Torque Wrenches

**Dual scale.** Dial provides effective measurement in Metric and Imperial torque units in both directions, delivering flexibility and minimising tool investment

Ease of use. Lightweight materials. Tools can be used by operators at any skill level

Long tool life. High quality construction and robust design with a two year warranty

No risk of tool damage. Overload Protection System. Recessed dial minimises damage to the dial display

Versatile usage. Use for Maintenance, Repair, Assembly and Quality Control

Wide range of applications. Tightening and untightening measurement is possible, with double-ended ratchet as standard (except EDS versions)

#### Additional features

Calibration Service enables tools to be kept accurate and up to date. See page 82

Special extension spanners.

See page 79

Optional audio visual signal system. Clear indication is given when the target torque has been reached



Order		<b>←</b>	Calibrated	Range ———	<b></b>					ISO 6789		
Code	Model	ISO	لسيلسيا	Imperial	ليسلسنا	Drive	k mm x	↓ kg ↓	Accuracy	Class	Signal	EPA
010100	ADS 4	0.8-4.0 N.m	0.1 N.m	7-35 lbf·in	1 lbf·in	1/4	244	0.52	+/- 3%	1B	Х	1
010108	ADS 4 S	0.8-4.0 N.m	0.1 N.m	7-35 lbf·in	1 lbf·in	1/4	244	0.52	+/- 3%	1B	1	1
010120	ADS 8	1.6-8.0 N.m	0.25 N.m	14-75 lbf·in	1 lbf·in	1/4	244	0.52	+/- 3%	1B	Х	1
010128	ADS 8 S	1.6-8.0 N.m	0.25 N.m	14-75 lbf·in	1 lbf·in	1/_*	244	0.52	+/- 3%	1B	1	1
010140	ADS 12 D	2.4-12 N.m	0.5 N.m	24-120 lbf·in	2 lbf·in	1/,*	244	0.52	+/- 3%	1B	Х	1
010148	ADS 12 DS	2.4-12 N.m	0.5 N.m	24-120 lbf-in	2 lbf∙in	1/4	244	0.52	+/- 3%	1B	1	1
010160	ADS 12 A	2.4-12 N.m	0.5 N.m	24-120 lbf·in	2 lbf·in	3/8	244	0.52	+/- 3%	1B	Х	1
010168	ADS 12 AS	2.4-12 N.m	0.5 N.m	24-120 lbf·in	2 lbf·in	3/8	244	0.52	+/- 3%	1B	1	1
010180	ADS 25	5-25 N.m	1 N.m	48-240 lbf·in	10 lbf·in	3/8"	244	0.52	+/- 3%	1B	Х	1
010188	ADS 25 S	5-25 N.m	1 N.m	48-240 lbf·in	10 lbf·in	3/8	244	0.52	+/- 3%	1B	1	1
010200	ADS 25 F	5-25 N.m	1 N.m	4-20 lbf·ft	0.5 lbf·ft	3/8	244	0.52	+/- 3%	1B	Х	1
010208	ADS 25 FS	5-25 N.m	1 N.m	4-20 lbf·ft	0.5 lbf·ft	3/8"	244	0.52	+/- 3%	1B	1	1
010220	ADS 40	8-40 N.m	1 N.m	72-360 lbf·in	10 lbf·in	3/8	244	0.52	+/- 3%	1B	Х	1
010228	ADS 40 S	8-40 N.m	1 N.m	72-360 lbf-in	10 lbf·in	3/8"	244	0.52	+/- 3%	1B	1	1
010240	ADS 40 F	8-40 N.m	1 N.m	6-30 lbf·ft	1 lbf·ft	3/8"	244	0.52	+/- 3%	1B	Х	1
010248	ADS 40 FS	8-40 N.m	1 N.m	6-30 lbf·ft	1 lbf·ft	3/8"	244	0.52	+/- 3%	1B	1	1
010300	BDS 80 A	16-80 N.m	2 N.m	12-60 lbf·ft	1 lbf·ft	3/8	435	1.35	+/- 3%	1B	Х	Х
010380	BDS 80 AS	16-80 N.m	2 N.m	12-60 lbf·ft	1 lbf·ft	3/8	440	1.47	+/- 3%	1B	1	Х
010320	BDS 80 E	16-80 N.m	2 N.m	12-60 lbf·ft	1 lbf·ft	1/2	435	1.36	+/- 3%	1B	Х	Х
010400	BDS 80 ES	16-80 N.m	2 N.m	12-60 lbf·ft	1 lbf·ft	1/2	440	1.49	+/- 3%	1B	1	Х
010410	BDS 100 EF	20-100 N.m	2 N.m	14-70 lbf·ft	2 lbf·ft	1/2	515	1.41	+/- 3%	1B	Х	Х
010415	BDS 100 E	20-100 N.m	2 N.m	168-840 lbf-in	24 lbf·in	1/2	515	1.41	+/- 3%	1B	Х	Х
010340	BDS 160	32-160 N.m	2.5 N.m	24-120 lbf·ft	2 lbf·ft	1/2"	515	1.41	+/- 3%	1B	Х	Х
010420	BDS 160 S	32-160 N.m	2.5 N.m	24-120 lbf·ft	2 lbf·ft	1/2	520	1.54	+/- 3%	1B	1	Х
010360	BDS 200	40-200 N.m	5 N.m	30-160 lbf-ft	5 lbf·ft	1/2"	515	1.41	+/- 3%	1B	Х	Х
010440	BDS 200 S	40-200 N.m	5 N.m	30-160 lbf·ft	5 lbf·ft	1/2	520	1.54	+/- 3%	1B	1	Х
010520	CDS 400 S	80-400 N.m	10 N.m	60-300 lbf·ft	10 lbf·ft	3/4	710	3.20	+/- 3%	1B	1	Х
010620	DDS 800 S	160-800 N.m	20 N.m	120-600 lbf·ft	20 lbf·ft	3/4"	1000	4.90	+/- 3%	1B	1	Х
010700	EDS 1400 S	280-1400 N.m	25 N.m	200-1000 lbf·ft	25 lbf·ft	1	2040	16.7	+/- 3%	1B	1	Х
010720	EDS 2000 S	400-2000 N.m	50 N.m	300-1500 lbf·ft	50 lbf·ft	1	2040	16.7	+/- 3%	1B	1	Х
			<del> </del>			1111				1 1 1 1 1	1111	

#### Torcotronic Digital Torque Wrench with Angle

Torque range from 10 to 350 N.m.

Torcotronic Digital Torque Wrenches provide highly accurate and controlled bi-directional tightening, suitable for Production, Quality Auditing, Research & Development, and Maintenance and Repair applications. These microprocessor-controlled tools have

built-in memory which stores data for download to analysis software. A comprehensive range of accessories ensures that these robust, versatile precision assembly tools provide accuracy across a wide range of applications.

#### INDUSTRY SECTORS

Maintenance







**Ouality** 







#### Robust, versatile tightening - plus data collection and auditing capability

Accuracy. Exceptionally high levels of accuracy of +/-1% of reading between 10% and 100% of full scale

Bi-directional tightening. Supplied with reversible ratchet as standard

Control. High levels of accuracy give confidence that the tightening process is under control, hence also controlling rework and warranty costs with the added benefit of five programmable

Data collection. The built-in memory can store 2,000 data points ready for download to analysis software. This also makes the tools faster and easier to use

Long tool life. High quality construction and robust design

Process traceability. Historic data storage and management features of easy to use PC software, available in 11 languages

**Versatility.** Tools integrate with 9x12 and 14x18 wrench fittings. Torque and angle capability ensures suitability for a broad range of applications across Production, Quality Auditing, Research & Development, and Maintenance and Repair



Data Analysis



For more information: Tool Selector; gedore-torque.com/tool-selector Telephone; +44 (0) 1483 894 476



Order		<b>←</b> Calibrated	d Range ———						ISO 6789
Code	Model	ISO	Imperial	Drive	Adaptors	k mm x	↓ kg ↓	Accuracy	Class
021640	120	10-120 N.m	7-88 lbf·ft	1/2	9x 12	565	1.01	+/- 1%	1C
021650	350	70-350 N.m	51-258 lbf-ft	<b>½</b>	14x 18	701	1.18	+/- 1%	1C



#### Aluminium TLS Preset Torque Screwdrivers

Torque range from 0.02 to 13.6 N.m.

A range of compact aluminium preset torque screwdrivers, each of which delivers the correct torque accurately and repeatedly. and anti clockwise torque.

All tools are also available with One Way (O/W) clockwise torque

The models in this range include: TLS 0022, Minor, Standard & TLS 1360. Technical details of all models are given on pages 18-21.

lipping Mechanism

These durable, versatile and lightweight tools can be used for Assembly, Maintenance and Servicing in any engineering or manufacturing environment.

#### INDUSTRY **SECTORS**

Manufacturing











Order		<b>←</b> Ra	inge	>				ISO 6789		18 B
Code	Model	ISO	Imperial	Drive	k mm >	↓ ġ ↓	Repeatability	Class	Colour	
015000	TLS 0022 Micro FH	4-22 cN.m	5.7-32 ozf·in	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	76	050	+/- 6%	2F	Red	
015080	TLS 0022 FH	2-22 cN.m	5.7-32 ozf·in	(1 <u>/4</u> )	104	072	+/- 6%	2F	Gold	
015085	TLS 0022 FH O/W	4-22 cN.m	5.7-32 ozf·in	<u>√1/4</u> >	116	085	+/- 6%	2F	Gold	
015200	Minor FH	14-135 cN.m	1.2-12 lbf·in	(1 <u>/</u> a)	111	210	+/- 6%	2F	Blue	
015205	Minor FH O/W	14-135 cN.m	1.2-12 lbf·in	(1/4)	125	210	+/- 6%	2F	Blue	
015220	Minor FH	14-135 cN.m	1.2-12 lbf·in	(1/4)	111	210	+/- 6%	2F	Green	
015225	Minor FH O/W	14-135 cN.m	1.2-12 lbf·in	(1/4)	125	210	+/- 6%	2F	Green	
015240	Minor FH	14-135 cN.m	1.2-12 lbf·in	⟨ <u>¼</u> °⟩	111	210	+/- 6%	2F	Red	
015245	Minor FH O/W	14-135 cN.m	1.2-12 lbf·in	⟨ <u>1</u> / <u>a</u> ⟩	125	210	+/- 6%	2F	Red	
015260	Minor FH	14-135 cN.m	1.2-12 lbf·in	⟨¹ <u>¼</u> °⟩	111	210	+/- 6%	2F	Gold	
015265	Minor FH O/W	14-135 cN.m	1.2-12 lbf-in	(1/4)	125	210	+/- 6%	2F	Gold	

#### Lightweight, high quality TLS Preset Torque Screwdriver range

Absolute accuracy and consistency. Accurate process control is ensured by eliminating under and over tightening due to the proven slipping mechanism

Ease of use. Tools can be used by operators at any skill level, due to unique slipping mechanism

Improved production quality. Accurate torque application reduces the likelihood of warranty and rework Increased production efficiency. Lightweight aluminium construction and smooth reset action of the tools increase production efficiency by reducing operator fatigue

Long tool life. High quality, robust construction

Operational versatility. These versatile tools are ideal for a wide range of applications, with wide torque range and one way slipping action option







#### Additional features

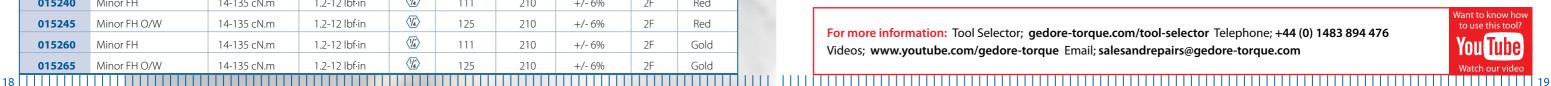
For more information on ESD compliant versions. See page 25

Comprehensive range of Accessories, Bits and Blades. See pages 76-77

TLS Screwdrivers can be customised to your exacting requirements. See page 71

TLS Screwdrivers are available in different colours to allow easy identification of what tool is set to what torque value, hence making a job more efficient.

See pages 18-21 for details



#### Aluminium TLS Preset Torque Screwdrivers

Torque range from 0.04 to 13.6 N.m



Order		<b>←</b> Ra	ange	<b>&gt;</b>				ISO 6789	
Code	Model	ISO	Imperial	Drive	k mm x	J g J	Repeatability	Class	Colour
015600	Standard FH	50-400 cN.m	4.4-36 lbf·in	⟨¹ <u>¼</u> °⟩	127	280	+/- 6%	2F	Blue
015605	Standard FH O/W	50-400 cN.m	4.4-36 lbf·in	(1/ <u>"</u> )	127	280	+/- 6%	2F	Blue
015620	Standard FH	50-400 cN.m	4.4-36 lbf·in	(1/4)	127	280	+/- 6%	2F	Green
015625	Standard FH O/W	50-400 cN.m	4.4-36 lbf·in	(1/ <u>a</u> )	127	280	+/- 6%	2F	Green
015640	Standard FH	50-400 cN.m	4.4-36 lbf·in	1/4	127	280	+/- 6%	2F	Red
015645	Standard FH O/W	50-400 cN.m	4.4-36 lbf·in	(1 <u>/4</u> )	127	280	+/- 6%	2F	Red
015660	Standard FH	50-400 cN.m	4.4-36 lbf·in	(1/4)	127	280	+/- 6%	2F	Gold
015665	Standard EH O/W	50-400 cN m	4.4-36 lhf.in	(1/")	127	280	±/- 6%	2F	Gold

#### Aluminium TLS Preset Torque Screwdrivers

Torque range from 0.04 to 13.6 N.m

Compact high-quality aluminium pre-set Torque Screwdrivers that deliver the correct torque accurately and consistently, with T-Bars as standard to assist with higher torque.







Order		<b>←</b> Rar	nge	>				ISO 6789	
Code	Model	ISO	Imperial	Drive	k mm >	J g J	Repeatability*	Class	Colour
015890	TLS 1360 FH	2.5-13.6 N.m	22-120 lbf-in	\(\frac{1/_a'}{4}\)	137	325	+/- 6%	2F	Blue
015895	TLS 1360 FH O/W	2.5-13.6 N.m	22-120 lbf-in	\(\frac{1/"}{4}\)	137	325	+/- 6%	2F	Blue
015860	TLS 1360 FH	2.5-13.6 N.m	22-120 lbf-in	⟨¹ <u>/</u> ″	137	325	+/- 6%	2F	Green
015865	TLS 1360 FH O/W	2.5-13.6 N.m	22-120 lbf-in	⟨ <u>1/</u> ″	137	325	+/- 6%	2F	Green
015870	TLS 1360 FH	2.5-13.6 N.m	22-120 lbf-in	⟨ <u>1/″</u> ⟩	137	325	+/- 6%	2F	Red
015945	TLS 1360 FH O/W	2.5-13.6 N.m	22-120 lbf-in	⟨ <u>1/</u> ″	137	325	+/- 6%	2F	Red
015920	TLS 1360 FH	2.5-13.6 N.m	22-120 lbf-in	\(\frac{1/\tilde{a}}{4}\)	137	325	+/- 6%	2F	Black
015925	TLS 1360 FH O/W	2.5-13.6 N.m	22-120 lbf-in	⟨ <u>\</u> ',"⟩	137	325	+/- 6%	2F	Black

#### Pro Preset Torque Screwdrivers

Torque range from 0.05 to 13.5 N.m.

The Redefined Preset Torque Screwdriver

These durable, versatile and lightweight tools can be used for Assembly, Maintenance and Servicing in any

#### INDUSTRY SECTORS

#### Manufacturing









## range has been designed to complement our traditional accuracy, durability and quality with the benefits of a engineering or manufacturing environment. moulded plastic body and enhanced ergonomic design. The models in this range include: ESD, Prime and Pro. Technical details of all models are given on pages 25-27.

#### The Redefined Preset Torque Screwdriver range

#### Absolute accuracy and consistency.

Accurate process control is ensured by eliminating under and over tightening due to the proven slipping mechanism

Ease of use. Tools can be used by operators at any skill level, due to unique slipping mechanism

#### Improved production quality.

Accurate torque application reduces the likelihood of warranty and rework

#### Increased production efficiency.

Moulded more ergonomic rubber handgrip is more suited to curtain production techniques, and smooth tool reset action increases production efficiency by reducing operator fatigue

**Long tool life.** High quality, robust construction. Many years of dependable service are provided by the robust design, especially if regularly calibrated

Operational versatility. These versatile tools are ideal for a wide range of applications, with wide torque range and one way slipping action option

To allow for customisation and clear identification interchangeable coloured end caps are available in packs of four (Order Code: 065800)



#### Additional features

Calibration stickers can be easily applied to the purpose designed nose

The ¼" female hexagon Pro range proves versatile with a quick conversion to male square 1/4" drive by using a convertor (Order Code: 029200)

For more information on EPA compliant versions. See page 25 Comprehensive range of Accessories, Bits and Blades. See pages 76-77

Pro Screwdrivers can be customised to your exacting requirements. See page 71

Tool presetting service. See page 82





#### **ESD Preset Torque Screwdrivers**

#### Torque range from 0.05 to 13.5 N.m

#### Preset Torque Application Screwdrivers for electronic component assembly

The ESD Preset Torque Screwdriver range is ideal for safe electronic component assembly as these tools are EPA compliant

Tools that complement our traditional accuracy, durability and quality with the benefits of a moulded plastic body and enhanced ergonomic design

ESD 450 and 1350 models come with T-Bars as standard to assist with higher torque

To allow for customisation and clear identification interchangeable coloured end caps are available in packs of four (Order Code: 065800)

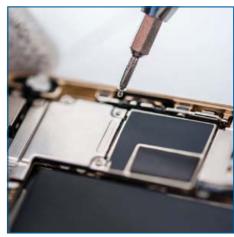
Comprehensive range of Accessories Bits and Blades. See pages 76-77

Slipping Mechanism Incorrect tightening is impossible











Order		<b>←</b> Rang	ge					ISO 6789	
Code	Model	ISO	Imperial	Drive	k mm >	J g J	Repeatability	Class	T-Bar
065400	Pro 25 FH	0.05 - 0.25 N.m	0.45 - 2.2 lbf.in	⟨¹ <u>/</u> 4 <sup>*</sup> ⟩	132	210	+/- 6%	2F	X
065500	Pro 150 FH	0.2 - 1.5 N.m	1.8 - 13 lbf.in	⟨1 <u>/4</u> ⟩	132	210	+/- 6%	2F	X
065600	Pro 450 FH	0.5 - 4.5 N.m	4.5 - 40 lbf.in	⟨1/ <sub>4</sub> ⟩	140	230	+/- 6%	2F	1
065700	Pro 1350 FH	2.5 - 13.5 N.m	22 - 120 lbf.in	(1/ <sub>4</sub> )	140	230	+/- 6%	2F	✓
065405	ESD 25 FH	0.05 - 0.25 N.m	0.45 - 2.2 lbf.in	⟨¹¼²⟩	132	210	+/- 6%	2F	X
065505	ESD 150 FH	0.2 - 1.5 N.m	1.8 - 13 lbf.in	(1/ <sub>4</sub> )	132	210	+/- 6%	2F	Х
065605	ESD 450 FH	0.5 - 4.5 N.m	4.5 - 40 lbf.in	⟨1/4"⟩	140	230	+/- 6%	2F	1
065705	ESD 1350 FH	2.5 - 13.5 N.m	22 - 120 lbf.in	(1/4)	140	230	+/- 6%	2F	✓

#### Prime Preset Torque Screwdrivers

Torque range from 0.2 to 4.5 N.m

These tools have been specifically designed replacement. They have no certification to provide a low cost product that is suitable for light or occasional use, or one-off applications. Can be used up to 2,000 cycles between calibration or

and are not intended for regular or heavy use, where our Pro Preset range of preset screwdrivers should be selected.



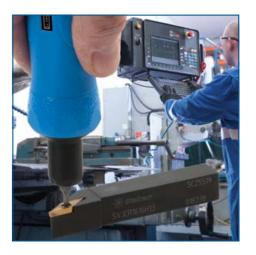
#### Low cost Preset Torque Application Screwdrivers, for one-off applications or light use

Prime Preset Torque Screwdrivers offer a low cost option for applications where a torque tool may not previously have been considered

They combine accuracy with the benefits of a moulded plastic body and ergonomic design, to remove the risk of under or over tightening. As well as the application of torque, they can also undo fasteners, as One Way (O/W) action is standard

A comprehensive range of Accessories, Bits and Blades is available.

See pages 76-77







Order		<b>←</b> Rang	ge <del>&gt;</del>				
Code	Model	ISO	Imperial	Drive	k mm >	↓ ġ ↓	Repeatability
O65100	Prime 150 FH	0.2 - 1.5 N.m	1.8 - 13 lbf.in	\(\frac{1\frac{1}{4}}{2}\)	138	198	+/- 10%
O65200	Prime 450 FH	0.5 - 4.5 N.m	4.5 - 40 lbf.in	⟨¹/₄°⟩	138	198	+/- 10%

#### TLS Preset Clean Room Torque Screwdrivers

Torque range from 0.04 to 13.6 N.m. Clean Room (CRS) Class 100 Compliant

Designed specifically for use in Clean Rooms, to protect precision products from contamination during assembly, utilising PTFE impregnated sealed anodised surface treatments and incorporating high aluminium handles.

External steel components are either high grade stainless steel or coated to inhibit corrosion thereby utilising suitable performance seals in their design.



#### Preset Torque Screwdrivers for Clean Rooms

Increased operator comfort from the soft reset action of the tool

Complete control of the tightening process is achieved. Both under and over tightening are eliminated by our unique slipping mechanism

Suitable for use by operators of any skill level, as these tools will repeatedly deliver the set torque without the need for operator intervention

CRS Torque Screwdrivers are preset type torque tools. They must be set to the required value by using a Torque Analyser. See page 64 for details

Comprehensive range of Accessories, Bits and Blades. See pages 76-77

CRS 100-0022 FH

Slipping Mechanism Incorrect tightening is impossible



INDUSTRY SECTORS

Manufacturing









Order		<b>←</b> Rar	nge	-				ISO 6789	
Code	Model	ISO	Imperial	Drive	k mm >	J g J	Repeatability	Class	Colour
015089	CRS 100-0022 FH	2-22 cN.m	6-32 ozf∙in	(1/4)	104	072	+/- 6%	2F	Grey
015209	CRS 100-0135 FH	14-135 cN.m	0.9-12 lbf-in	(1/4)	111	210	+/- 6%	2F	Grey
015609	CRS 100-0406 FH	50-400 cN.m	4.4-36 lbf-in	(1/4)	127	280	+/- 6%	2F	Grey
015939	CRS 100-1360 FH	2.5-13.6 N.m	22-120 lbf-in	(1/4)	137	325	+/- 6%	2F	Grey

INDUSTRY

Manufacturing

SECTORS

#### ESD Electric Torque Screwdrivers

Torque range from 0.05 to 4.40 N.m

ESD Electric Torque Screwdrivers are ideal for the accurate and consistent application of torque in high volume production

efficient, effective and easy to use in any manufacturing business. Special features also make them suitable for the assembly



#### Electric Torque Screwdrivers, for accurate, effective and

ESD Electric Torque Screwdrivers

Absolute accuracy and consistency.

consistent torque application

EF 120 & K 450 Series

**Ease of use.** The tools are easy to set up and require minimal operator training. The operator is able to work effectively and safely, as these tools are comfortable to use because of their ergonomic design. This can be further enhanced by pairing the driver with a tool weight balancer or torque reaction arm

Electronic assembly. Maximises the production yields of electronic assemblies as these tools protect the assembly from static shocks due to their ESD compliance

Improved production efficiency. Accurate torque application reduces the likelihood of rework and scrap by delivering controlled repeatable torque through features like 'slow start' mode that minimises cross threading

Long tool life and effective production.

These tools maximise productivity by keeping downtime to a minimum, as they are constructed from durable robust materials and designed to last

Plastic assembly. Ensures the quality of plastic assembly tightening by combating joint relaxation through use of the 'doublehit' repeat torque mode

Please note: These tools must be used in conjunction with STC 30+ Controller (Order Code: 090000)



STC 30+ Controller



#### Additional features

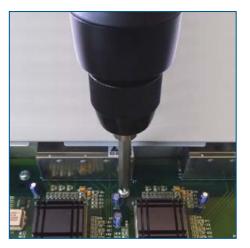
Details of Accessories and Power Bits. See pages 72-79

Set and calibrate your Screwdriver with an ET-cal II or Capture Hub Compact Torque Calibration Analyser.

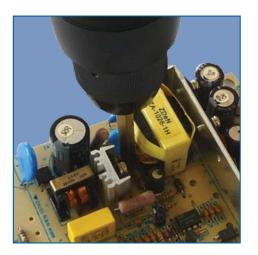
For more details see page 64 or visit www.gedore-torque.com

Torque counter balancer are available on request.

Tamper proof cover to suit K series tools, order code: 090200. EF tools, order code: 090210









		Order		<b>←</b> Rar	nge ———	RI	PM			cc		
		Order Code	Model	ISO	Imperial	Hi	Low	Drive 🗸	g 🎉	6	Repeatability	
		090010	EF 120	19.6-117.6 cN.m	1.7-10.4 lbf·in	700	460	⟨¥ <u>*</u> ⟩	311	1	+/- 10%	
		090150	K 450	50-440 cN.m	4.3-39 lbf·in	550	330	⟨1/ <sub>4</sub> ⟩	595	1	+/- 10%	
		090000	STC 30+ Controller	-	-	-	-	-	950 -	1	+/- 10%	
30								ПППП		$\Pi \Pi \Pi \Pi'$	3	31

#### Ergo Quickset Adjustable Torque Screwdrivers

#### Torque range from 0.08 to 9 N.m

Ergo Quickset Adjustable Torque Screwdrivers are calibrated scale tools that can be used for the accurate and consistent application of torque in any manufacturing, engineering or servicing environment. They are EPA compliant, for safe electronic component assembly, and

operator comfort. Unique Slipping Technology ensures that the risk of over or under tightening is eliminated. Their adjustability and wide range of torque make them suitable for a broad range of applications.



#### INDUSTRY SECTORS

Maintenance & Repair









#### Ergo Quickset Adjustable Torque Screwdrivers (ISO and Imperial Scales)

All models available with 1/4" Female Hex (FH) Drive

Absolute accuracy and consistency. Accurate process control is ensured by eliminating under and over tightening due to the unique Slipping Technology

Calibrated scale. A visible scale allows the user to adjust the tool to their desired torque setting, enabling a range of different torque settings to be applied

Ease of use. Tools can be used with confidence by operators at any skill level, due to unique slipping mechanism

Easy to set up. Fast and accurate to set, using the guick and clear to read micrometer style setting scale

Electronics. Ideal for safe electronic component assembly as this tool is EPA compliant for use in Electrostatically Sensitive Areas

Slipping Mechanism Incorrect tightening is impossible



#### Improved production quality.

Accurate torque application reduces the likelihood of warranty and rework

Increased production efficiency. Increased operator comfort and productivity, from the smooth reset action of the tool and the ergonomic design of the plastic handgrip

Long tool life. High quality, robust construction. Many years of dependable service are provided by the robust design and hard-wearing materials, that include stainless steel and aluminium

Operational versatility. These versatile tools are ideal for a wide range of applications, due to their adjustability and wide torque range





#### Additional features

Optional Lock On T-Bar for larger models of screwdriver, provides extra leverage (Order Code: P29530)

Can be supplied as part of a Service Repair Kit

Tool can be kept accurate and up to date with our Calibration service. See page 82 for details



					C; b		Order		<b>←</b> Calibrated	Range —					ISO 6789	Adjusting Lock	
	49						Code	Model	Range	ليسلسنا	Drive	k mm x	J g J	Repeatability	Class	Colour	EPA
	Consumer Products	ELL					060700	QSN 40 FH	8-40 cN.m	1 cN.m	(1/4)	159	124	+/- 6%	2D	Blue	1
							060740	QSA 60 FH	12-60 ozf.in	1 ozf.in	⟨¹½²⟩	159	124	+/- 6%	2D	Blue	1
							060720	QSA 4 FH	0.8-4 lbf.in	0.1 lbf.in	(1/4)	159	124	+/- 6%	2D	Blue	1
				V		A AR	060100	QSN 120 FH	20-120 cN.m	1 cN.m	⟨¹/₄²⟩	183	230	+/- 6%	2D	Blue	1
					M 5		060140	QSA 160 FH	20-160 ozf.in	1 ozf.in	(1/4)	183	230	+/- 6%	2D	Blue	1
					7		060120	QSA 12 FH	2-12 lbf.in	0.1 lbf.in	(1/4)	183	230	+/- 6%	2D	Blue	1
			0 0				060300	QSN 600 FH	1-6 N.m	0.1 N.m	(1/4)	196	335	+/- 6%	2D	Blue	1
			IN DE VIEW OF THE PARTY OF THE				060320	QSA 50 FH	10-50 lbf.in	1 lbf.in	(1/4)	196	335	+/- 6%	2D	Blue	1
			0. 00			11/10	060500	QSN 900 FH	4-9 N.m	0.1 N.m	(1/4)	196	335	+/- 6%	2D	Blue	1
			1 9/2	00			060520	QSA 80 FH	30-80 lbf.in	1 lbf.in	(1/4)	196	335	+/- 6%	2D	Blue	1
32	ШШШШ		<b>V</b> IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	пишиници	मामां कि/किमांब												3

#### Quickset Adjustable Torque Screwdrivers

Torque range from 0.2 to 9 N.m.

Quickset Adjustable Torque Screwdrivers are suitable for a broad range of applications. calibrated scale tools that can be used for the accurate and consistent application of torque in any manufacturing, engineering

These tools are durable, easy to use and the unique Slipping Technology means that the risk of over or under tightening



#### Quickset Adjustable Torque Screwdrivers (ISO and Imperial Scales)

All models are supplied with 1/4" Female Hex (FH) Drive

Absolute accuracy and consistency. Accurate process control is ensured by eliminating under and over tightening due to the unique Slipping Technology

Calibrated scale. A visible scale allows the user to adjust the tool to their desired torque setting, enabling a range of different torque settings to be applied

Ease of use. Tools can be used with confidence by operators at any skill level, due to unique slipping mechanism

Easy to set up. Fast and accurate to set, using the quick and clear to read micrometer style setting scale

Improved production quality. Accurate torque application reduces the likelihood of warranty and rework Increased production efficiency. Increased operator comfort and productivity, from the smooth reset

action of the tool and the ergonomic

Long tool life. High quality, robust construction. Many years of dependable service are provided by the robust design and hard-wearing materials, that include stainless steel

and aluminium

design of the plastic handgrip

Operational versatility. These versatile tools are ideal for a wide range of applications, due to their adjustability and wide torque range



#### Additional features

Accessories. See pages 72-79

EPA compliant alternative available.

See page 32

Optional Lock On T-Bar for larger models of screwdriver, provides extra leverage when required. (Order Code: P29530)

Tool can be kept accurate and up to date with our Calibration service. See page 82 for details

For more information: Tool Selector; gedore-torque.com/tool-selector Telephone; +44 (0) 1483 894 476 Videos; www.youtube.com/gedore-torque Email; salesandrepairs@gedore-torque.com



Order		<b>←</b> Calibrated F	Range ——					ISO 6789	
Code	Model	Range	لسلسنا	Drive	k mm >	J j l	Repeatability	Class	Colour
016040	Quickset Minor Metric FH	20-120 cN.m	1 cN.m	(1/4)	169	165	+/- 6%	2D	Blue
016060	Quickset Minor Imp FH	20-120 ozf.in	1 ozf.in	(1/,2)	169	165	+/- 6%	2D	Blue
016070	Quickset Minor lbf.in FH	2-12 lbf.in	0.1 lbf.in	(1/4)	169	165	+/- 6%	2D	Blue
016500	Quickset 6 FH	1-6 N.m	0.1 N.m	(1/4)	184	335	+/- 6%	2D	Blue
016600	Quickset 50 FH	5-50 lbf.in	1 lbf.in	(1/4)	184	335	+/- 6%	2D	Blue
016700	Quickset 9 FH	4-9 N.m	0.1 N.m	(1/4)	184	335	+/- 6%	2D	Blue
016800	Quickset 80 FH	30-80 lbf.in	1 lbf.in	(1/4)	184	335	+/- 6%	2D	Blue

#### Dual Scale Quickset Screwdrivers Available:

	Order		<b>←</b>	– Calibrated I	Range ———	<b>-</b>				ISO	O 6789	
	Code	Model	ISO	ليتتبلينينا	Imperial	لستلسنا	Drive	k mm y	g 🕹 Re	epeatability	Class C	Lolour
	016010	Quickset Minor DS	20-120 cN.m	1 cN.m	20-120 ozf.in	1 ozf.in	<b>V</b> 4	160	158 -	+/- 6%	2D E	3lue
	016150	Quickset 6 DS	1-6 N.m	0.1 N.m	5-50 lbf.in	1 lbf.in	V4	169	340 -	+/- 6%	2D E	Blue
34												35

#### INDUSTRY SECTORS

Maintenance & Repair









## TSN & TSP Preset Slipping Torque Wrenches Torque range from 1 to 125 N.m. High quality tools that have been designed and over tightening in Production, hence and precision-engineered to meet the ensuring absolute precision. EPA compliant. stringent demands of manufacturing businesses in most industries. The unique slipping mechanism eliminates under **TSN 55** Slipping Mechanism INDUSTRY SECTORS Manufacturing

#### Preset Slipping Torque Wrenches

Models: TSP5 & 10, TSN 25, 55 & 125

#### Absolute accuracy and consistency.

Accurate process control is ensured by eliminating under and over tightening, regardless of operator's hand position, due to the unique Slipping Technology

 Ease of use. Tools can be used with confidence by operators at any skill level, due to unique slipping mechanism

Electronics. Ideal for safe electronic component assembly as this tool is EPA compliant for use in Electrostatically Sensitive Areas. See table for details

#### Improved production efficiency.

Reduces the likelihood of warranty and rework by assuring process control through accurate and repeatable torque setting due to its adjusting system

Improved Process Control. Process control can be further enhanced by using the Switch Operated Signal Torque versions (Sw) to confirm the correct torque has been applied to a particular fastener (see pages 42-43)

**Long tool life.** High quality, robust design and construction, further guaranteed by a two year warranty

#### Additional features

Accessories. See pages 72-79

EPA compliant alternative available. **See table below** 

For details of Sockets. **See page 75** or visit **www.gedore-torque.com** 

For Switch Operated Signal Torque versions (Sw). **See pages 42-43** 

Modifications are possible. Please contact us to discuss

TSN & TSP Wrenches are preset type torque tools. They must be set to the required value by using a Torque Analyser like the DREMOTEST E or Capture Calibration System. **See page 64 for details** 

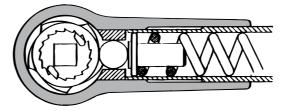
TSN 25 versions come with either 1/4" or 3/8" Drive







Working principle of the Gedore Torque Slipping Wrenches





Order		<b>←</b> Ra	nge —					ISO 6789	
Code	Model	ISO	Imperial	Drive	k mm x	kg	Repeatability	Class	EPA EPA
056090	TSP 5	1-5 N.m	10-45 lbf.in	<b>7</b> 4	185	0.19	+/- 6%	2C	1
056100	TSP 10	2-10 N.m	20-90 lbf.in	1/4	185	0.19	+/- 6%	2C	1
011017	TSN 25 D	5-25 N.m	4-18 lbf.ft	<b>1</b> /4	216	0.34	+/- 4%	2C	1
011019	TSN 25 A	5-25 N.m	4-18 lbf.ft	3/8"	216	0.34	+/- 4%	2C	1
011035	TSN 55	15-55 N.m	10-40 lbf.ft	3/8"	324	0.80	+/- 4%	2C	Х
011055	TSN 125	40-125 N.m	30-90 lbf.ft	72	460	1.36	+/- 4%	2C	Х

#### TBN Preset Breaking Torque Wrenches

Torque range from 0.4 to 200 N.m

TBN Preset Breaking Torque Wrenches are robust production tools that reduce the chance of over-tightening, because of the unique Breaking Mechanism. They can be used for a wide range of applications, with

a choice of compatible interchangeable end fittings. Their durable yet compact design makes them easy to use in restricted spaces in any manufacturing or maintenance environment.



#### INDUSTRY SECTORS

Maintenance



-Manufacturing









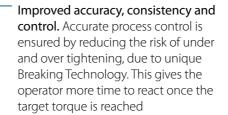


# **TBN 135 Breaking Mechanism**

#### **TBN Preset Breaking Torque Wrenches**

TBN 2, 10, 25, 65, 135 & 200





Compact slimline design. This maximises productivity in restricted space applications

Compatible End Fittings. A range of interchangeable end fittings is available, making this an extremely versatile tool. See pages 72-74 for details



 Ease of use. Tools can be used with confidence by operators at any skill level, due to the unique Breaking Technology

Increased production efficiency.
Increased operator comfort and
productivity, from the ergonomic
design, that includes lightweight
materials and moulded plastic handgrip

**Long tool life.** High quality, robust design and construction minimise tool replacement and downtime costs

Rectangular fitting version also available. **See table below** 



#### Additional features

TBN 2 and 10 Wrenches will be supplied with a Calibration Certificate when ordered with an attached end fitting and pre-set

For details on the TBN 2 & 10 SMA Connector Kit. **See page 72** 

For EPA options, **see table below** 



Order		<b>←</b> Ra	inge ———	•				ISO 6789	
Code	Model	ISO	Imperial	Drive	k mm >	↓ kg ↓	Repeatability	Class	EPA
011100	TBN 2	0.4-2 N.m	3.5-18 lbf.in	Captive Pin	105	0.11	+/- 6%	2C	✓
011110	TBN 2 G	0.4-2 N.m	3.5-18 lbf.in	9 x 12	133	0.13	+/- 6%	2C	✓
011200	TBN 10	1-10 N.m	9-89 lbf.in	Captive Pin	105	0.13	+/- 6%	2C	1
011210	TBN 10 G	1-10 N.m	9-89 lbf.in	9 x 12	133	0.15	+/- 6%	2C	1
050000	TBN 25	5-25 N.m	4-18 lbf.ft	16	265	0.41	+/- 4%	2C	Х
050010	TBN 25 G	5-25 N.m	4-18 lbf.ft	9 x 12	265	0.41	+/- 4%	2C	Х
050100	TBN 65	10-65 N.m	7-48 lbf.ft	16	302	0.75	+/- 4%	2C	Х
050110	TBN 65 G	10-65 N.m	7-48 lbf.ft	9 x 12	302	0.75	+/- 4%	2C	Х
050200	TBN 135	27-135 N.m	18-100 lbf.ft	6	408	1.03	+/- 4%	2C	Х
050210	TBN 135 G	27-135 N.m	18-100 lbf.ft	9 x 12	408	1.03	+/- 4%	2C	Х
050300	TBN 200	40-200 N.m	29-147 lbf.ft	16	520	1.40	+/- 4%	2C	Х
050310	TBN 200 G	40-200 N.m	29-147 lbf.ft	[14 X] 18	520	1.40	+/- 4%	2C	Х

#### 50V Insulated Preset Torque Wrenches

Torque range from 0.4 to 25 N.m.

These tools have been precision-engineered slipping mechanism eliminates the risk of to provide absolute accuracy and user safety during electrical assembly and maintenance. Our unique breaking or

incorrect tightening and the compact tool design provides protection where there are electrically live components, up to 50V.

#### Essential service and maintenance – with no power

Gedore Torque tools provide Helicopters require frequent maintenance and servicing, in order to ensure continuous safe operation. to power, meaning that it is not poss and military helicopters

#### INDUSTRY SECTORS

#### Manufacturing











## precision torque control, making it easier and often safer to tighten and loosen threaded fasteners to performance and safety of civilian to use hydraulic or impact wrer

#### 50V insulated preset torque wrenches for electrical assembly

#### Torque range from 0.4 to 25 N.m

#### Performing business critical work accurately, easily – and safely

Many businesses, organisations and industries depend upon emergency backup power systems to provide a continuous supply of electricity in the event of the loss of mainstream power supply. Often, this is provided by banks of batteries, that need to be checked, maintained and replaced on a regular basis – including while they are in operation and therefore electrically 'live'. Gedore Torque Insulated Torque Wrenches ensure that this essential work can be carried out accurately, easily and safely.



#### Absolute accuracy and consistency.

Accurate process control is ensured by eliminating under and over tightening, due to the unique Breaking or Slipping Technology installed in the wrench

**Ease of use.** The small and compact design combined with the totally insulated body is ideal for use in restricted space where there are electrically live components

#### Improved production efficiency.

Eliminates the possibility of product failure due to shorting, arcing or other electrical damage

User safety. Designed for use in low voltage and other battery applications where protection up to 50 volts is required. Double layer nonconductive PVC insulation provides protection against low voltage shorting

#### Additional features

Accessories. See pages 72-79

These Wrenches are preset type torque tools. They must be set to the required torque value by using a Torque Analyser like the DREMOTEST E.

See page 64 for details

Tool pre-set at point of order

Tool can be kept accurate and up to date with our Calibration service. See page 82 for details







**Breaking Mechanism** Incorrect tightening is unlikely





	Order		<b>←</b> Rang	ye <del>-</del>				
	Code	Model	ISO	Imperial	Drive	k mm 🛪	↓ kg ↓	Repeatability
	011108	TBN 2 50V	0.4-2 N.m	3.5-18 lbf.in	1/4	105	0.17	+/- 6%
	011208	TBN 10 50V	1-10 N.m	9-89 lbf.in	1/4"	105	0.17	+/- 6%
	011062	TSN 25 D 50V	5-25 N.m	4-18 lbf.ft	1/4"	220	0.40	+/- 4%
	011072	TSN 25 A 50V	5-25 N.m	4-18 lbf.ft	3/8"	220	0.40	+/- 4%
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#### Switch Operated Signal Torque Wrenches

Torque range from 0.4 to 200 N.m

Switch Operated Signal Torque Wrenches are process control tools that provide absolute confidence that the correct level of torque has been applied. As well as the Slipping or Breaking Mechanism, that reduces or eliminates the risk of incorrect tightening, the tool also sends a signal each

time the wrench achieves its pre-set torque value. This makes these tools suitable for production line control or to provide a counting function, as they can be connected to the customers production systems.



#### INDUSTRY SECTORS

Manufacturing









#### Switch Operated Signal Torque Wrenches

Ranges: TSP, TSN & TBN

#### Absolute accuracy and consistency.

Accurate process control is ensured by eliminating or reducing under and over tightening, due to the unique Slipping or Breaking Technology

Better production control. These wrenches confirm that the tightening process has been performed by validating that the torque wrenches have operated at a pre-set torque value. A signal is sent upon each successful activation of the wrench, that can be used to control production flow or count completed tightenings

Cost effective. These tools can easily be integrated into most Production Lines as the output signal is simply a switch opening and closing

Ease of use. Tools can be used with confidence by operators at any skill level, due to unique slipping or breaking mechanism

#### Additional features

A Signal Delay Unit (SDU) can be used to reduce the risk of missing wrench activations by extending the time of the signal output

Two types of cables are available either a 5 metre, straight cable (Order
Code: D94402) or a 1.5 metre coiled
cable (Order Code: D94406)

Universal Switch Module (Order Code: B25900) is connected via cable to the Production Line Control System

For End Fittings, see pages 72-74







Order		<b>←</b> Ra	ange					ISO 6789
Code	Model	ISO	Imperial	Drive	k mm* >	↓ kg ↓	Repeatability	Class
056093	TSP 5 Sw	1-5 N.m	10-45 lbf.in	V <sub>4</sub> *	335	0.53	+/- 6%	2C
056103	TSP 10 Sw	2-10 N.m	20-90 lbf.in	V <sub>4</sub>	335	0.53	+/- 6%	2C
011003	TSN 25 D Sw	5-25 N.m	4-18 lbf.ft	V <sub>4</sub>	366	0.68	+/- 4%	2C
011013	TSN 25 A Sw	5-25 N.m	4-18 lbf.ft	3/8"	366	0.68	+/- 4%	2C
011033	TSN 55 Sw	15-55 N.m	10-40 lbf.ft	3/8"	474	1.14	+/- 4%	2C
011053	TSN 125 Sw	40-125 N.m	30-90 lbf.ft	V <sub>2</sub> *	610	1.70	+/- 4%	2C
011103	TBN 2 Sw	0.4-2 N.m	3.5-18 lbf.in	Captive Pin	255	0.45	+/- 6%	2C
011113	TBN 2 G Sw	0.4-2 N.m	3.5-18 lbf.in	9 x 12	133	0.13	+/- 6%	2C
011203	TBN 10 Sw	1-10 N.m	9-89 lbf.in	Captive Pin	255	0.47	+/- 6%	2C
011213	TBN 10 G Sw	1-10 N.m	9-89 lbf.in	9 x 12	133	0.15	+/- 6%	2C
050003	TBN 25 Sw	5-25 N.m	4-18 lbf.ft	16	415	0.75	+/- 4%	2C
050013	TBN 25 G Sw	5-25 N.m	4-18 lbf.ft	9 x 12	415	0.75	+/- 4%	2C
050103	TBN 65 Sw	10-65 N.m	7-48 lbf.ft	6	452	1.09	+/- 4%	2C
050113	TBN 65 G Sw	10-65 N.m	7-48 lbf.ft	9x 12	452	1.09	+/- 4%	2C
050203	TBN 135 Sw	27-135 N.m	18-100 lbf.ft	16	558	1.68	+/- 4%	2C
050213	TBN 135 G Sw	27-135 N.m	18-100 lbf.ft	9 x 12	558	1.68	+/- 4%	2C
050303	TBN 200 Sw	40-200 N.m	29-147 lbf.ft	6	670	1.74	+/- 4%	2C
050313	TBN 200 G Sw	40-200 N.m	29-147 lbf.ft	14 X 18	670	1.74	+/- 4%	2C

#### Torcofix Production Clicker Torque Wrenches

Torque range from 2 to 200 N.m.

Versatile Production tools, with a range of interchangeable end fittings, designed for accurate and repeated torque application. An audible click provides tightening process control.

Clicking Mechanism Incorrect tightening is possible





#### INDUSTRY SECTORS

Maintenance & Repair









Audible click providing accurate process control. The risk of under and over tightening is reduced, as a click can be heard and felt when the preset torque is reached

Preset torque. Enhanced tightening process control, as unauthorised adjustment of the level of torque is not possible. These tools must be set to the required torque value by using a Torque Analyser like the DREMOTEST E. See page 64 for details

Long tool life. High quality, robust design and construction, further guaranteed by a two year warranty

Multiple industrial applications.
The versatile design allows the use of a range of end fittings and ratchets.
See pages 72-74

#### Order ↓ kg ↓ Code 024430 Torcofix 25 G 5-25 N.m 2-19 lbf.ft 9 X 12 180 0.21 +/- 4% 2C 9 X 12 024450 Torcofix 50 G 10-50 N.m 5-37.5 lbf.ft 240 0.27 +/- 4% 2C 9x 12 2C Torcofix 85 G 17-85 N.m 10-75 lbf.ft 320 0.34 +/- 4% 024470 Torcofix 200 G 20-150 lbf.ft 14 X 18 024490 40-200 N.m 400 0.75 +/- 4%

#### TSC Adjustable Slipping Torque Wrenches

Torque range from 1 to 10 N.m.



Slipping Mechanism Incorrect tightening is impossible

Absolute accuracy and consistency.

Accurate process control is ensured by eliminating under and over tightening, due to the unique Slipping Technology

Calibrated scale. A visible scale allows the user to adjust the tool to their desired torque setting, enabling a range of different torque settings to be applied

**Ease of use.** Can be used in restricted spaces through its compact slimline design

**Electronics.** Ideal for safe electronic component assembly and servicing, as this tool is EPA compliant for use in Electrostatically Sensitive Areas

Long tool life. High quality, durable design and construction, minimises replacement and downtime costs

Production efficiency. Improved operator comfort and productivity, from the ergonomic design, that includes lightweight materials and moulded plastic handgrip

 Tool can be kept accurate and up to date with our Calibration service.
 See page 82 for details

Versatility. Versatile tools ideal for Maintenance & Repair applications where a range of torques can be applied quickly and easily to a variety of fasteners and connectors

#### INDUSTRY SECTORS

Maintenance & Repair





Manufacturir







Order		ISO 6789							
Code	Model	Range	لسنلسنا	Drive	k mm x	g	Accuracy	Class	EPA
056020	TSC 5	1-5 N.m	0.05 N.m	1/4"	195	235	+/- 6%	2A	1
056040	TSC 10	2-10 N.m	0.1 N.m	1/4"	195	235	+/- 6%	2A	1
056060	TSC 45	10-45 lbf.in	0.5 lbf.in	1/4"	195	235	+/- 6%	2A	1
056080	TSC 90	20-90 lbf.in	1.0 lbf.in	1/4"	195	235	+/- 6%	2A	1

## ATB Adjustable Breaking Torque Wrenches Torque range from 0.5 to 10 N.m. Compact and versatile tools engineered to reduce the risk of under and over tightening in Production, Service and Repair. Calibrated scale allows for pre-setting of torque. EPA compliant. ATB 5 **Breaking Mechanism** INDUSTRY SECTORS & Repair Manufacturing 46

#### ATB Adjustable Breaking Torque Wrenches

ATB 2.5, 5 & 10

Accuracy and consistency. Improved process control is ensured by reducing the risk of under and over tightening, due to the unique Breaking Technology

Calibrated scale. A visible micrometer style scale allows the user to adjust the tool quickly and easily to their desired torque setting, enabling a range of different torque settings to be applied

Ease of use. Can be used in restricted spaces through its compact design

Electronics. Ideal for safe electronic component assembly and servicing, as this tool is EPA compliant for use in Electrostatically Sensitive Areas

Long tool life. High quality, durable design and construction, minimises replacement and downtime costs

Process Control. Reduces the likelihood of warranty and rework by assuring process control through accurate and repeatable torque application

**Production efficiency.** Improved operator comfort and productivity, from the ergonomic design, which includes lightweight materials and moulded plastic handgrip

Versatility. Versatile tools ideal for Maintenance & Repair applications where a range of torques can be applied quickly and easily to a variety of fasteners and connectors



#### Additional features

N.m or lbf.in versions come with either an 8 mm spigot or a 9x12 rectangular fitting

Can be supplied as part of a Customised Kit

For details of accessories, see pages 72-79

Tool can be kept accurate and up to date with our Calibration service. See page 82 for details





Order		◆	C	alibrated Kange -						ISO 6789	
Code	Model	ISO	لسلسنا	Imperial	لسلسنا	Drive	k mm x	↓ kg ↓	Accuracy	Class	EPA
050520	ATB 2.5	50-250 cN.m	1.25 cN.m	-	-	8	190	0.24	+/- 6%	2A	1
050525	ATB 2.5	-	-	4.5-22.5 lbf·in	0.1 lbf.in	8	190	0.24	+/- 6%	2A	1
050527	ATB 2.5 G	50-250 cN.m	1.25 cN.m	-	-	9x 12	192	0.27	+/- 6%	2A	1
050532	ATB 2.5 G	-	-	4.5-22.5 lbf.in	0.1 lbf.in	9x 12	192	0.27	+/- 6%	2A	1
050500	ATB 5	1-5 N.m	0.025 N.m	-	-	8	220	0.29	+/- 6%	2A	1
050505	ATB 5	-	-	10-45 lbf·in	0.25 lbf.in	8	220	0.29	+/- 6%	2A	1
050507	ATB 5 G	1-5 N.m	0.025 N.m	-	-	9x 12	230	0.29	+/- 6%	2A	1
050512	ATB 5 G	-	-	10-45 lbf·in	0.25 lbf.in	9x 12	230	0.29	+/- 6%	2A	1
050550	ATB 10	2-10 N.m	0.05 N.m	-	-	8	220	0.30	+/- 6%	2A	1
050555	ATB 10	-	-	20-90 lbf·in	0.5 lbf.in	8	220	0.30	+/- 6%	2A	1
050557	ATB 10 G	2-10 N.m	0.05 N.m	-	-	9x 12	230	0.30	+/- 6%	2A	1
050562	ATB 10 G	-	-	20-90 lbf·in	0.5 lbf.in	9× 12	230	0.30	+/- 6%	2A	1

## ATB Adjustable Breaking Torque Wrenches Torque range from 5 to 100 N.m High quality, versatile, tools that have been Service and Repair. The Calibrated Scale designed and engineered to reduce the risk allows for pre-setting of torque. of under and over tightening in Production, **Breaking Mechanism** INDUSTRY SECTORS & Repair 48 ||||||||||

#### ATB Adjustable Breaking Torque Wrenches

ATB 25, 50 & 100

Accuracy and consistency. Improved process control is ensured by reducing the risk of under and over tightening, due to the unique Breaking Technology

Calibrated scale. A visible micrometer style scale allows the user to adjust the tool quickly and easily to their desired torque setting, enabling a range of different torque settings to be applied

Long tool life. High quality, durable design and construction, minimises replacement and downtime costs

Process Control. Reduces the likelihood of warranty and rework by assuring process control through accurate and repeatable torque application

Production efficiency. Improved operator comfort and productivity, from the ergonomic design, which includes lightweight materials and moulded plastic handgrip

Versatility. Versatile tools ideal for Maintenance & Repair applications where a range of torques can be applied quickly and easily to a variety of fasteners and connectors

#### Additional features

1/4", 3/8", 1/2" interchangeable ratchet heads come as standard

Available in N.m or lbf.in or lbf.ft versions

For details of Wrench End Fittings & Sockets. See pages 72-74

Tool can be kept accurate and up to date with our Calibration service. See page 82 for details





















Order		◀	—— Calibr	ated Kange  ——	<del></del>					ISO 6789
Code	Model	ISO	لسيلسيا	Imperial	لسيلسيا	Drive	k mm >	↓ kg ↓	Accuracy	Class
050636	ATB 25 D	5-25 N.m	0.1 N.m	-	-	<b>7/4</b> *	345	1.11	+/- 4%	2A
050641	ATB 25 D	-	-	50-250 lbf·in	1 lbf.in	<b>V</b> <sub>4</sub>	345	1.11	+/- 4%	2A
050646	ATB 25 D	-	-	4-20 lbf·ft	0.1 lbf.ft	1/4"	345	1.11	+/- 4%	2A
050638	ATB 25 A	5-25 N.m	0.1 N.m	-	-	3/8"	345	1.12	+/- 4%	2A
050643	ATB 25 A	-	-	50-250 lbf·in	1 lbf.in	3/8"	345	1.12	+/- 4%	2A
050648	ATB 25 A	-	-	4-20 lbf·ft	0.1 lbf.ft	3/8"	345	1.12	+/- 4%	2A
050685	ATB 50	10-50 N.m	0.25 N.m	-	-	3/8"	365	1.14	+/- 4%	2A
050690	ATB 50	-	-	120-440 lbf·in	2 lbf.in	3/8"	365	1.14	+/- 4%	2A
050695	ATB 50	-	-	7-37 lbf·ft	0.125 lbf.ft	3/8"	365	1.14	+/- 4%	2A
050735	ATB 100	20-100 N.m	0.5 N.m	-	-	<b>V</b> <sub>2</sub> *	400	1.30	+/- 4%	2A
050740	ATB 100	-	-	240-880 lbf·in	4 lbf.in	1/2"	400	1.30	+/- 4%	2A
050745	ATB 100	-	-	14-74 lbf·ft	0.25 lbf.ft	<b>1/2</b>	400	1.30	+/- 4%	2A

#### Torcofix Adjustable Clicker Torque Wrenches

#### Torque range from 1 to 750 N.m.

Adjustable general tools for Service and Repair. Ideal for covering a wide number of tasks as the operator can adjust them to deliver a broad range of torques. An audible click informs user that correct torque has been applied. Choice of sockets.

Torcofix 100

#### INDUSTRY SECTORS

#### Maintenance









Audible click provides accuracy and control. The risk of under and over tightening is reduced, as a click can be heard and felt when the preset torque is reached

Choice of Drives. Interchangeable ¼" and 3%" Square Drive Push Through ½" Square Drive

Efficient to use. Minimises the time to complete the task as these wrenches are quick and easy to adjust due to the clear scale design and simple to use locking mechanism



Interchangeable 1/4" and 3/8" Square Drive



Push Through 1/2

Clicking I	Mecha	nism
Incorrect tight	ening is po	ossible



 Long tool life. High quality, robust design and construction, further guaranteed by a two year warranty

Socket choice. See page 75

Versatility. Versatile tools ideal for Maintenance & Repair applications where a range of torques can be applied quickly and easily to a variety of fasteners and connectors

(6)	Order Code	Drive
0	024000	1/4"
	024010	3/8"
hrough 1/2"	024020	1/."

Order	r ← Calibrated Range ← Soo7									
Code	Model	ISO	لستلسنا	Imperial	Drive	k mm x	↓ kg ↓	Accuracy	Class	
024060	Torcofix 5	1-5 N.m	0.025 N.m	0.75-3.7 lbf.ft	7/4	224	0.32	+/- 6%	2A	
024080	Torcofix 25	5-25 N.m	0.1 N.m	2-19 lbf.ft	74	285	0.45	+/- 4%	2A	
024125	Torcofix 50	10-50 N.m	0.25 N.m	5-37.5 lbf.ft	3/8	335	0.54	+/- 4%	2A	
024140	Torcofix 100	20-100 N.m	0.5 N.m	10 -75 lbf.ft	<b>½</b>	394	0.90	+/- 4%	2A	
024160	Torcofix 200	40-200 N.m	1 N.m	20-150 lbf.ft	<b>V</b> 2	485	1.10	+/- 4%	2A	
024180	Torcofix 300	60-300 N.m	1 N.m	50-220 lbf.ft	72	577	1.40	+/- 4%	2A	
024200	Torcofix 400	80-400 N.m	1 N.m	60-300 lbf.ft	3/4"	686	2.00	+/- 4%	2A	
024220	Torcofix 550	110-550 N.m	1 N.m	75-400 lbf.ft	3/4	957	3.80	+/- 4%	2A	
024240	Torcofix 750	150-750 N.m	1 N.m	100-550 lbf.ft	3/4	1236	4.80	+/- 4%	2A	

#### Torcofix Adjustable Clicker Torque Wrenches

#### Torque range from 2 to 400 N.m.

Adjustable general tools for Service and Repair. Ideal for covering a wide number of tasks as the operator can adjust them to deliver a broad range of torques.



An audible click informs user that correct torque has been applied. Multiple applications via range of end fittings and ratchets.



Audible click provides accuracy and control. The risk of under and over tightening is reduced, as a click can be heard and felt when the preset torque is reached

Efficient to use. Minimises the time to complete the task as these wrenches are quick and easy to adjust due to the clear scale design and simple to use locking mechanism

**Long tool life.** High quality, robust design and construction, further guaranteed by a two year warranty

Torcofix End Fittings. The design allows the use of a range of end fittings and ratchets for multiple industrial applications. See pages 72-74

**Clicking Mechanism** 

Incorrect tightening is possible

Versatility. Versatile tools ideal for Maintenance & Repair applications where a range of torques can be applied quickly and easily to a variety of fasteners and connectors















Order		<b>←</b>	<ul> <li>Calibrated Range</li> </ul>	ge	>	ISO 6789			
Code	Model	ISO	لسبلسنا	Imperial	Drive	k mm >	↓ kg ↓	Accuracy	Class
024305	Torcofix 25	5-25 N.m	0.10 N.m	2-19 lbf.ft	16	280	0.50	+/- 4%	2A
024325	Torcofix 50	10-50 N.m	0.25 N.m	5-37.5 lbf.ft	6	330	0.60	+/- 4%	2A
024340	Torcofix 100	20-100 N.m	0.50 N.m	10-75 lbf.ft	16	375	0.60	+/- 4%	2A
024360	Torcofix 200	40-200 N.m	1 N.m	20-150 lbf.ft	16	465	0.80	+/- 4%	2A
024380	Torcofix 300	60-300 N.m	1 N.m	50-220 lbf.ft	16	565	1.20	+/- 4%	2A
024400	Torcofix 400	80-400 N.m	1 N.m	60-300 lbf.ft	6	650	1.50	+/- 4%	2A
024510	Torcofix 25	5-25 N.m	0.10 N.m	2-19 lbf.ft	9x 12	280	0.50	+/- 4%	2A
024520	Torcofix 50	10-50 N.m	0.25 N.m	5-37.5 lbf.ft	9x 12	330	0.60	+/- 4%	2A
024530	Torcofix 100	20-100 N.m	0.50 N.m	10-75 lbf.ft	9x 12	375	0.60	+/- 4%	2A
024540	Torcofix 200	40-200 N.m	1 N.m	20-150 lbf.ft	14 X 18	465	0.80	+/- 4%	2A
024550	Torcofix 300	60-300 N.m	1 N.m	50-220 lbf.ft	14 X 18	565	1.20	+/- 4%	2A
024560	Torcofix 400	80-400 N.m	1 N.m	60-300 lbf.ft	14 X 18	650	1.50	+/- 4%	2A

### Weld Stud Test Tools Torque range from 0.4 to 20 N.m. Weld Stud Test Tools are used during the of welds holding threaded welding studs production of sheet metal products. onto sheet metal. They are most often They are designed for a quick and easy used for Quality Control in the automotive controlled test of the strength and integrity and appliance industries. **Breaking Mechanism** Incorrect tightening is unlikely INDUSTRY SECTORS Quality Control

#### Weld Stud Test Tools

WSTT 2, 10 & 20

Audit. These versatile Quality Audit tools enable Quick Go/No Go tests for weld stud integrity to be carried out quickly and efficiently on a wide range of weld studs from M2.5 to M12

**Accuracy.** The risk of under and over tightening is reduced, due to the unique Breaking Technology

Easy and effective to use. Intuitive & bi-directional "T" shaped handle for easy operation

End Fittings. A range of Interchangeable end fittings are available. End fittings are available for use with most popular weld stud thread sizes and lengths

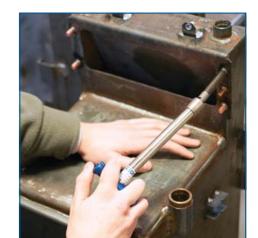
Long tool life. High quality, robust design and construction, further guaranteed by a two year warranty

**Versatility.** A range of compatible interchangeable End Fittings are available, for use with most popular weld stud thread sizes and lengths. See pages 72-74 for details

#### Additional features

All WSTT Tools are supplied with a Calibration Certificate when ordered with an attached end fitting

These Wrenches are preset type torque tools. There is no external adjustment scale and they must be set to the required torque value by using a Torque Analyser. See page 63 for details



#### Typical Maximum Torque Test Values (Capacitor discharge method)

Threaded Stud	Steel 4.8 Weldable	Stainless Steel 1.403/03 (A2-50)	Aluminium Alloy AIMg3 F23	Copper CuZn37 (Ms63)
M3	1.2 N.m	0.75 N.m	0.6 N.m	0.9 N.m
M4	2.7 N.m	1.4 N.m	1.3 N.m	1.9 N.m
M5	5.4 N.m	3.5 N.m	2.9 N.m	4.0 N.m
M6	9.2 N.m	5.7 N.m	4.6 N.m	6.75 N.m
M8	12.0 N.m	14.0 N.m	11.25 N.m	16.5 N.m
M10	18.0 N.m	20.0 N.m	-	-

NOTE: These torque values are for guidance only. The torque for each application should be calculated and proven by practical test.

Order		← Calibrated Range ← Calibrated									
Code				k mm <b>x</b>	↓ ġ ↓						
055005	WSTT 2	0.4-2 N.m	3.5-18 lbf.in	120	215						
055000	WSTT 10	1-10 N.m	9-90 lbf.in	120	215						
055010	WSTT 20	4-20 N.m	35-180 lbf.in	220	320						

#### Metric or Imperial range of End Fittings available

•	Ме	tric ———	<b>&gt;</b>
Order Code WSTT 10	Weld Stud Thread x Maximum Length	Order Code WSTT 20	Weld Stud Thread x Maximum Length
055020	M2.5 x 25	055050	M5 x 50
055025	M3 x 50	055055	M6 x 50
055030	M4 x 50	055060	M8 x 50
055035	M5 x 50	055065	M10 x 75
055040	M6 x 50	055070	M12 x 75
055045	M8 x 50	-	-

<b>←</b>	Met	ric ———	<b>———</b>
<b>Order Code</b> WSTT 10	Weld Stud Thread x Maximum Length	Order Code WSTT 20	Weld Stud Thread x Maximum Length
055075	4-40 x 1.5"	055105	10-32 x 2.5"
055080	6-32 x 2"	055110	10-24 x 2.5"
055085	8-32 x 2"	055115	½-20 x 4"
055090	10-32 x 2.5"	055120	<sup>5</sup> / <sub>16</sub> -18 x 4"
055095	10-24 x 2.5"	055125	³/ <sub>8</sub> -16 x 4"
055100	½-20 x 4"	-	-

#### RTU Dynamic Torque Limiters

Torque range from 0.2 to 10 N.m.

RTU Dynamic Torque Limiters allow conventional Hand and Power tools to be easily converted into versatile pre-set Torque Tools, giving reliable torque limited fastening to joints. Rotary Torque Units (RTUs) provide a wide range of potential

applications where conventional torque screwdrivers or wrenches might not be appropriate. They are particularly well-suited for maintenance and repair use in manufacturing industries, as they guarantee absolute accuracy and repeatability.





**Accuracy.** Accurate process control is ensured by eliminating under and over tightening, due to the unique proven Gedore Torque Slipping Technology. Absolute accuracy is delivered time after time

Ease of use. Simply install the RTU to the end of a traditional power tool or hand tool, converting it to a torque tool

Flexibility. A range of heavy duty torque limiters creates tools that are suitable for just about any occasion – and can be moved if required

Power, where you need it. Powered assembly applications can be performed accurately and quickly, including the tightening of bottles, caps and lids

Versatility. New higher range RTU gives users the ability to tighten torque up to 13.5Nm

Wide range of applications. Can be used where conventional torque screwdrivers or wrenches might not be appropriate

#### Additional features

Custom designs and higher torque settings are available



#### INDUSTRY SECTORS

Maintenance & Repair



Manufacturing







#### New for 2017

#### Torque range up to 13.5 N.m

The Gedore Torque RTU14 is the latest revision to the range of Rotary Torque Units (RTU) Dynamic Torque Limiters. The new streamlined look is modern and sleek with the added functionality giving customers even greater versatility. The RTU14 allows the RTU family, for the first time, to provide one way action. This allows users who require it, the ability to tighten fasteners to the selected torque and also loosen the fasteners back off.



Videos; www.youtube.com/gedore-torque Email; salesandrepairs@gedore-torque.com



	Order ← Range — Name Range Range Range								ISO 6789	
		Code	Model	N.m	lbf.in	Speed	Input Drive	Output Drive	Repeatability	Class
A CONTRACTOR OF THE PARTY OF TH	_	018100	RTU 170	20-170 cN.m	1.8-15 lbf.in	0-500	3/8	3/8	+/- 6%	2F
		018120	RTU 170 HEX	20-170 cN.m	1.8-15 lbf.in	0-500	₹ <mark>/</mark>	⟨¹/₄°⟩	+/- 6%	2F
	_	018200	RTU 450	1-4.5 N.m	9-40 lbf.in	0-500	3/8"	3/8"	+/- 6%	2F
	7	018220	RTU 450 HEX	1-4.5 N.m	9-40 lbf.in	0-500	V <sub>A</sub>	(1/4)	+/- 6%	2F
		018300	RTU 1000	4-10 N.m	36-88 lbf.in	0-250	3/8"	3/8"	+/- 6%	2F
		018320	RTU 1000 HEX	4-10 N.m	36-88 lbf.in	0-250	<b>√</b>	(1/ <sub>4</sub> )	+/- 6%	2F
	I			<del>                                      </del>						

For more information: Tool Selector; gedore-torque.com/tool-selector Telephone; +44 (0) 1483 894 476



#### **CAPTURE Display**

This intuitive easy to use Display can be integrated with your existing Sensors. This enables you to benefit from the industry-leading CAPTURE system, whilst minimising investment.

- Cost-effective. Minimise investment, as the CAPTURE Display is designed to integrate with customers' existing industry standard nominal 2mV/V Sensors
- Carry Case included. To protect the CAPTURE Display when not in use it is supplied complete in a high impact plastic carry case
- Tease of use. Designed to allow users to become productive quickly due to its intuitive features, such as easy to navigate menus, tool database and Plug & Play integration with CAPTURE Sensors
- Fully Inclusive. The following items are included with the Display and are stored in the Carry Case USB Power Cable (for charging from Mains or PC and also used for data transfer), Power Supply (multi-national), Calibration Certificate, Start Up Guide and Instructions

0.0 N.m 1.00 0.0 0.0

- Long Life Battery. Work for longer between battery charges as the unit is fitted with a long life Lithium-ion battery and has an auto power down mode
- Memory. CAPTURE Display can store 500 tools and 2000 data readings in the onboard memory
- Versatility. Design allows static laboratory use and mobile data collection using an onboard memory and rechargeable battery. The data can then be transferred to PC via LISB connection

CAPTURE Display will change from red to blue in Jan 2017

Order Code

036710

036226 036246

036251

036256

CAPTURE Manager - PC Software

CAPTURE Cable - CAPTURE Display to Custom Sensor

CAPTURE Cable - CAPTURE Display to Capture Sensor

CAPTURE Cable - CAPTURE Display to SDX Screwdriver

CAPTURE Cable - CAPTURE Display to ETX Wrench

**CAPTURE Display** 



#### Torque Range from 0.2 to 1500 N.m.

The CAPTURE Sensor is part of the industry-leading CAPTURE system, providing highly accurate torque measurement for Hand and Power Torque Tools.



Order Model

036771 CAPTURE Sensor ISO 1500/90° Adaptor

D18205 CAPTURE Sensor ISO-A Mount

036772 CAPTURE Sensor Quick Change Plate

Calibrated range: 10% to 100% of capacity

Carry Case. To protect the Sensor when not in use it is supplied in a high impact plastic carry case

Flexible. Built-in flexibility as the sensor can be mounted horizontally or vertically without the need for any accessories

**Ease of Use.** Fast to set up when used with a CAPTURE Display due to the imbedded Quicktec technology that passes all the Sensor information to the Display

Easy to Repair. Modular design allows for simple component replacement

Optional Torque Loading System.
Remove human error from testing by using the CAPTURE Sensor with the ISO 1500/90° Torque Loading System (Adaptor required – see page 67)

**Quick Change Plate.** For users with limited space who need to change Sensors between tests the Quick Change Plate increases calibration productivity

**UKAS Certification.** Sensors come complete with UKAS certificate to BS 7882:2008 Class 1 or better

#### New for 2017

CS1 1.N.m sensor

For more information: Tool Selector; gedore-torque.com/tool-selector Telephone; +44 (0) 1483 894 476 Videos; www.youtube.com/gedore-torque Email; salesandrepairs@gedore-torque.com



Order Code	Model	Range	Drive	k mm x HxWxD	kg	Hole Centres (mm)	Mounting Hole Size	Fixings Supplied	
036805	CS 2	0.2-2 N.m	1/4"	62 x 85 x 65	0.50	56	M8 x 1.25 (10 Deep Min)	M8 x 50 *	P34320
036807	CS 5	0.5-5 N.m	1/4"	62 x 85 x 65	0.50	56	M8 x 1.25 (10 Deep Min)	M8 x 50 *	P34320
036810	CS 10	1-10 N.m	1/4"	62 x 85 x 65	0.50	56	M8 x 1.25 (10 Deep Min)	M8 x 50 *	P34320
036815	CS 25	2.5-25 N.m	3/8	62 x 85 x 65	0.50	56	M8 x 1.25 (10 Deep Min)	M8 x 50 *	P34320
036820	CS 50	5-50 N.m	3/8	62 x 85 x 65	0.57	56	M8 x 1.25 (10 Deep Min)	M8 x 50 *	P34320
036825	CS 100	10-100 N.m	1/2"	62 x 85 x 65	0.60	56	M8 x 1.25 (10 Deep Min)	M8 x 50 *	P34320
036830	CS 250	25-250 N.m	1/2"	82 x 120 x 87	1.45	79	M12 x 1.75 (16 Deep Min)	M12 x 1.75 *	P34330
036835	CS 500	50-500 N.m	3/4"	82 x 120 x 87	1.6	79	M12 x 1.75 (16 Deep Min)	M12 x 1.75 *	P34330
036845	CS 1500	150-1500 N.m	1"	100 x 165 x 134	4.00	125	M16 x 2.0 (20 Deep Min)	M16 x 90 *	P34340
								* Socket Can Head	Scrow

Socket Cap Head Screw

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#### **CAPTURE Hub**

The Gedore Torque CAPTURE Hub is the latest addition to the industry-leading Capture range of calibration equipment and is available from 2017. A lineside torque analyser for production power tools, to be used in a production environment.

hand tools if required, and incorporates an integrated Screen and Sensor. It is portable enough to be used as part of a mobile calibration centre and robust enough The new CAPTURE Hub will replace the



#### New for 2017

#### To include innovative rundown fixture system

#### Capture Hub: the latest addition to the Capture range

Calibrated range. 10% to 100% of capacity

Easy to Repair. Modular design allows for simple component replacement

Cost-effective. Minimise investment, as the CAPTURE Hub is designed to be a standalone solution, or to integrate with customers' existing Capture components as well as other industry standard nominal 2mV/V Sensors

Ease of use. Intuitive software design is similar to Capture Display allowing existing Capture users to be familiar with the architecture and new users to become productive quickly, with its easy to use menus and Plug & Play functionality

Flexibility. The CAPTURE Hub can integrate with the existing CAPTURE Manager PC software and users with extra Sensors can plug them into the external port be used with the Hub. The unit can also be mounted horizontally or vertically to meet the existing setups of customers

Long Life Battery. Work for longer between battery charges as the unit is fitted with an improved long life Lithium-ion battery and has a customisable auto power down mode

**Carry Case.** To protect the Sensor when not in use it is supplied in a high impact plastic carry case

**UKAS Certification.** System come complete with UKAS certificate to BS 7882:2008 Class 1 or better

Versatility. The design allows static laboratory use and mobile data collection using an on-board memory and rechargeable battery. This means that the system can be used as part of mobile calibration centre and also at the point of use. The data can be transferred to PC via USB connection

Yet more versatility. Can be used with Optional Torque Loading System. Remove human error from testing by using the CAPTURE HUB with the ISOA Loading System (Adaptor required – see page 63)





	100	Order				k mm x		Hole
	100	Code	Model	Range	Drive	'HxWxD'	↓ kg ↓	Centres (mm)
	24	-	CH 2	0.2-2 N.m	[1/4"]	50 x 200 x 110	0.50	56
	80	-	CH 5	0.5-5 N.m	1/4"	50 x 200 x 110	0.50	56
	60	-	CH 25	2.5-25 N.m	3/8	50 x 200 x 110	0.50	56
60								61

#### **CAPTURE Manager**

The CAPTURE Manager is PC Software that allows storage, management and analysis of tools and data readings. It is part of the

industry-leading CAPTURE system, providing highly accurate torque measurement for Hand and Power Torque.

Data management and analysis.

Manage tool and test data through the CAPTURE Manager PC software.

the CAPTURE Manager PC software The software also makes analysing the data quick and easy through integration with Microsoft Excel®

Data storage. The CAPTURE Manager PC software allows unlimited storage of tools and data readings that can be uploaded and downloaded to the CAPTURE Display via USB connection

Test Wizard. Ensures tools are performing to the required standard through the ISO 6789:2003 test wizard. This clear and easy to use feature guides the user through the test procedure

Tool Calibration Certificates.

Tool traceability can be achieved as the CAPTURE Manager PC software can generate customised calibration certificates to the requirements of ISO 6789:2003



#### **Rotary Torque Sensors**

#### Torque range from 0.2 to 1400 N.m

These Sensors provide highly accurate torque measurement for Hand and Power Torque Tools. They can be used in conjunction with our CAPTURE Display or with your current Torque Analyser. Connect between tool and joint, to measure the actual torque being applied from the joint to the fastener.

Accurate measurement. These
Sensors are designed to ensure your
tightening process is within acceptable
limits with a high degree of certainty.
The Rotary Torque Sensor is the ideal
torque-auditing tool for testing the
actual torque being applied on the
assembly application. By connecting
a rotary torque sensor between
an electric or pneumatic tool and
assembly application, you can monitor
the torque being applied from the tool
to fastener or bolt

Inline connection. Designed to be placed inline with the tooling, they measure the actual torque being applied on the assembly application, accurate to 0.3% of maximum torque applied. By connecting a rotary torque sensor between an electric or pneumatic tool and assembly application, you can monitor the torque being applied from the tool to fastener or bolt

**UKAS certificates.** Rotary Sensors come complete with UKAS certificates to BS7882: 2008

**Versatile.** These Sensors are designed to be compatible with most industry standard devices

Work with most Torque Analysers. A cost effective solution, as in most cases, there is no need to upgrade



For more information: Tool Selector; gedore-torque.com/tool-selector Telephone; +44 (0) 1483 894 476 Videos; www.youtube.com/gedore-torque Email; salesandrepairs@gedore-torque.com



Order		Calibrated Range Maximu		Maximum l	n RPM Width		Height	Depth	
Code	Model	ISO	Drive	Continuous	Intermittent	k mm x	k mm x	k mm <b>x</b>	↓ kg ↓
036510	XR 2 HD	0.2-2 N.m	<b>V</b>	5000	11000	116	56.0	68.0	0.21
036520	XR 5 HD	0.5-5 N.m	<b>1/</b> 2	5000	11000	116	56.0	68.0	0.21
036530	XR 20 HD	2-20 N.m	<b>4</b>	5000	11000	116	56.0	68.0	0.21
036540	XR 20 SD	2-20 N.m	<b>7</b> 4	5000	11000	71.5	56.0	71.5	0.20
036550	XR 75 SD	7.5-75 N.m	3/8"	2500	10000	77.0	56.0	74.0	0.24
036560	XR 180 SD	18-180 N.m	<b>7</b> 2	2500	7600	87.0	58.0	82.5	0.43
036570	XR 500 SD	50-500 N.m	3/4	2000	5000	106	60.0	93.5	0.78
036580	XR 1400 SD	140-1400 N.m	1	1000	4400	125	64.5	104	1.50

CAPTURE Manager - PC Software

### ET-cal II Compact Torque Calibration Analysers

#### Torque range from 0.1 to 17 N.m

Compact and versatile portable Hand and Power Torque Tool Analysers, with multiple units of measurement and test modes, that can be used for a wide range of applications across most industries.

Note: this product will be REPLACED by the Capture Hub (page 60) in 2017.

Accurate measurement. These
Analysers are designed to monitor
Torque Tool performance, for both
Hand and Power Tools. Their high
accuracy of +/- 1% of reading together
with the supplied PC software make
them perfect for testing, storing and
analysing tool data with capacity of
150 data points

Battery or Mains Powered. Can be used for Calibration Laboratories and Production Lines

Ease of use. These Analysers enable users to become proficient swiftly by minimising product training times, due to their ease of use

Efficient. Torque Tools can be calibrated at the point of use, using battery power and onboard memory, hence minimising recalibration timescales

Versatile. The flexible design minimises investment, as the ET-cal II is designed to calibrate a wide range of Torque Tools including both Power and Hand Tools, as well as Electric Torque Screwdrivers. Designed to test torque in both clockwise and anticlockwise directions



Order		<b>←</b> Calibrated Range ←						
Code	Model	ISO	Imperial	Drive	↓ kg ↓			
035270	ET-cal 1	0.1-1 N.m	0.8-8.8 lbf-in	+ 1/4	2.00			
035280	ET-cal 5	0.5-5 N.m	4.4-44 lbf·in	+ 1/4	2.00	18		
035290	ET-cal 10	1-10 N.m	8.8-88 lbf·in	+ 1/4	2.00	-		
035295	ET-cal 17	1.7-17 N.m	15-150 lbf∙in	+ 1/4	2.00			

#### MTP & MTS Mechanical Torque Testers

#### Torque range from 0 to 25 N.m

Mechanical Torque Calibration Analysers that can be used in a many different situations to provide accurate measurement of torque values for hand-operated Torque Tools. These testers are portable, robust and do not require power.

Accurate measurement. Designed to monitor low torque values for Hand operated Torque Tools

Ease of use. Perfect for use by operators of any skill level, as the robust design eliminates the fear of damage caused by overloading

Fast results. The MTS Testers are designed to quickly give confidence that your Torque Tools are operating within limits. The easy to read analogue dial, peak torque and limit pointers all work together to give the operator instant confirmation of tool performance

**Versatile.** Able to operate in a wide variety of environments and situations from shop floor to field operations as the MTS and MTP have no requirement for power



For more information: Tool Selector; gedore-torque.com/tool-selector Telephone; +44 (0) 1483 894 476 Videos; www.youtube.com/gedore-torque Email; salesandrepairs@gedore-torque.com



Order	Calibrated Range									
Code	Model	ISO	ليتتبلينينا	Imperial	لستلسنا	Drive	J kg J	Accuracy		
058100	MTP 10	0-10 cN.m	0.5 cN.m	0-14 ozf∙in	1 ozf∙in	<b>1</b>	0.98	+/- 2%		
058110	MTS 35	7-35 cN.m	0.5 cN.m	10-50 ozf∙in	0.5 ozf·in	+ 1/4	3.20	+/- 2%		
058120	MTS 130	26-130 cN.m	2 cN.m	36-180 ozf-in	2 ozf∙in	+ 1/4	3.20	+/- 2%		
058130	MTS 400	0.8-4 N.m	0.05 N.m	7-36 lbf·in	0.5 lbf·in	<b>1</b> + 1/4	3.20	+/- 2%		
058140	MTS 1200	2.4-12 N.m	0.2 N.m	24-120 lbf·in	2 lbf·in	1/4" + 3/8"	3.20	+/- 2%		
058150	MTS 2500	5-25 N.m	0.5 N.m	44-220 lbf·in	5 lbf·in	1½" + 3½"	3.20	+/- 2%		

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## DREMOTEST E Torque Calibration Analysers Torque range from 0.2 to 3000 N.m

Robust, accurate Torque Calibration Analysers that are ideal for Hand Torque Tools covering a wide torque range, in a Workshop or Repair environment.

 Accurate measurement. Easy to use, robust Torque Calibration Analysers providing +/-1% accuracy

Data management capability. A RS
 232 output allows data to be exported to Hyper Terminal Software

 Full set of Accessories. Drive adaptor, mains lead, connectors and Certificate of Calibration all included  Long Service Life. Simple lightweight design, backed up by a full Aftersales and Recalibration Service

Versatility. Five models available covering a range from 0.2 to 3000 N.m.

Value for money. A comprehensive package, at a competitive price compared to traditional Mechanical Analysers



#### **Calibrated Range** Order Code $(\frac{1}{4})$ + $(\frac{1}{4})$ + $(\frac{3}{8})$ 0.001 lbf-in 2.60 +/- 1% 035205 DREMOTEST E 12 0.2-12 N.m 0.001 N.m 1.8-106 lbf-in 0.01 N.m 0.7-40 lbf·ft 0.01 lbf-ft 1/4 + 3/8 2.60 +/- 1% 035220 DREMOTEST E 55 0.9-55 N.m 3/8" **+** 1/2" 035210 DREMOTEST E 320 9-320 N.m 0.1 N.m 7-236 lbf-ft 0.1 lbf-ft 2.60 +/- 1% 035230 DREMOTEST E 1100 90-1100 N.m 1 N.m 66-811 lbf-ft 1 lbf·ft $[\frac{1}{2}] + [\frac{3}{4}]$ 10.0 +/- 1% 035240 DREMOTEST E 3000 500-3000 N.m 1 N.m 369-2214 lbf-ft 144 lbf·ft

#### ISO 1500/90° & ISO-A

#### Torque Loading Systems

Versatile Torque Loading Systems that enable precise Torque calibration and testing, up to a surprisingly high level of torque, to be undertaken on your own premises. Accurate and easy to use, the possibility of human error or variation is eliminated.

Accurate. These Torque Loading Systems enable the accurate testing of all Torque Wrenches within their given range, whilst removing the possibility of human error or variation

Adaptable. An easy adjustment system to suit the individual Torque Wrench being calibrated

Easy to use. 1400:1 Gearbox requires low operator effort, therefore torques as high as 1500 N.m can be achieved with ease

Improved in-house capability. Torque calibration and testing can be carried out on your own premises, eliminating the need to use external suppliers

ISO accreditation. Meets the International Standard ISO 6789:2003 for the calibration of Torque Wrenches





Order		Maximu	ım Capacity	Maximum Tool Length	
Code	Model	ISO	Imperial	<b>k</b> mm <b>x</b>	<b>J</b> kġ <b>J</b>
014300	ISO 1500/90° Torque Loading System	1500 N.m	1107 lbf.ft	1350	32.0
014400	Torque Master ISO-A Torque Loading System	30 N.m	22 lbf.ft	300	8.75
D18204	ET-cal 15 Mounting Kit	30 N.m	22 lbf.ft	300	1.60
D18205	Capture Sensor & ET-cal Compact ISO-A Mount	30 N.m	22 lbf.ft	300	3.40
036771	Capture Sensor ISO 1500/90° Adaptor	1500 N.m	1107 lbf.ft	-	2.60



#### **Custom Tool Kit Designs**

Our Custom Design Service can create a complete Torque Tool Kit, tailor-made to meet your application needs.

Experience and expertise. A wide range of Tool Kit needs can be met using our Custom Design Service. This draws upon our experience and expert engineering design skills to produce bespoke tools to meet the most exacting of application needs

Tool Cases. To meet operational needs, Tool Kits can be supplied in bespoke tool cases and foam cut outs. These can range from standard design for use in normal working environments to high performance cases for use in harsh operational conditions

Tool Kit Versatility. A combination of Gedore Torque and outsourced tools can be created to meet your particular specification



#### **Custom Torque Tool Designs**

Our Custom Design Service can create Torque Tools to meet specific operational needs.

Experience and expertise. Our Custom Design Service can design and produce Torque Tools to a customised specification to meet your operational and application needs. This draws upon our experience and expert engineering design skills to produce bespoke tools to meet the most exacting of application needs

Innovation. Our track record of torque innovation means that we are able to meet the wide range of performance criteria required from the modern Torque Tool with a range of innovative tool designs and appropriate materials

Operational Integrity. Our tried and tested tool designs and technology can be depended upon to produce bespoke successful engineering solutions



#### Private Label Torque Tools

Our Custom Design Service can create a complete Torque Tool Kit, tailor-made to meet your application needs.

**Image enhancement.** As well as enabling you to carry out the best possible job, private label tools can also provide you with a more professional image

Our tools, your design. A full Design Service is available for custom label tools that use a variety of materials, component design, tool labelling and Technology-aided design.

Cost-effective own branding has been made easier by the use of our modern 3D CAD Systems, laser engraving machines and custom label manufacturing technology

**Let's Torque.** Use our Tool Selector at www.gedore-torque.com/tool-selector to select the right tool for your application, then tell us your branding requirements on +44 (0) 1483 894 476





#### Torque Accessories

#### Torque Wrench End Fittings

#### Captive Pin Type

Metric & Imperial Accessories compatible with TBN Preset Breaking Torque Wrenches, Models TBN 2 & 10 (see page 38)



				_		_	
<b>←</b>			Мє	etric			<b></b>
	Order code		Order code		Order code		Order code
A/F	Open End	A/F	Ring End*	A/F	Flared End	A/F	Setting Adaptor
3.2	012000	3.2	012250	3.2	-	3.2	012700
4	012005	4	012255	4	-	4	012700
5	012010	5	012260	5	-	5	012700
5.5	012015	5.5	012265	5.5	-	5.5	012700
6	012020	6	012270	6	-	6	012705
7	012025	7	012275	7	-	7	012705
8	012030	8	012280	8	012505		012705
9	012035	9	012285	9	012510	9	012705
10	012040	10	012290	10	012515	10	012710
11	012045	11	012295	11	012520	11	012710
12	012050	12	012300	12	012525	12	012710
13	012055	13	012305	13	012530	13	012710
14	012060	14	012310	14	012535	14	012715
15	012065	15	012315	15	012540	15	012715
16	012070	16	012320	16	012545	16	012715
17	012075	17	012325	17	012550	17	012715
18	012080	18	012330	18	-	18	012720
19	012085	19	012335	19	012555	19	012720
20	012090	20	012340	20	-	20	012720
21	012095	21	012345	21	-	21	012720
22	012100	22	012350	22	012560	22	012722
23	012105	23	012355	23	-	23	012722
24	012110	24	012360	24	012565	24	012722
25	012115	25	012365	25	-	25	012722

4				<b>—</b>			
	Order code		Order code	erial	Order code		Order code
A/F	Open End	A/F	Ring End*	A/F	Flared End	A/F	Setting Adaptor
5/32	012150	5/32	012400	5/32	-	5/32	012725
3/16	012155	3/16	012405	3/16	-	3/16	012725
7/32	012160	7/32	012410	7/32	-	7/32	012725
1/4	012165	1/4	012415	1/4	012600	1/4	012725
5/16	012175	5/16	012420	5/16	012605	5/16	012730
3/8	012185	3/8	012425	3/8	012610	3/8	012730
7/16	012195	7/16	012430	7/16	012615	7/16	012730
1/2	012200	1/2	012435	1/2	012620		012730
9/16	012205	9/16	012440	9/16	012625	9/16	012735
5/8	012210	5/8	012445	5/8	012630	5/8	012735
11/16	012215	11/16	012450	11/16	-	11/16	012735
3/4	012220	3/4	012455	3/4	012635	3/4	012735
13/16	012225	13/16	012460	13/16	-	13/16	012740
7/8	012230	7/8	012465	7/8	012640	7/8	012740
15/16	012235	15/16	012470	15/16	-	15/16	012740
1	012240	1	012475	1	012645	1	012740

#### To convert TBN 2 & 10 to 1/4" Square Drive

Туре	Order Code	Centre <b>k</b> mm <b>x</b>
1/4 Fixed	A36340	27
1/4 Rachet	A73640	27



#### Hex Key Setting Adaptors

Order Code	Hex Key Sizes A/F
A45271	1.0 - 2.5 mm
A45272	3.0 - 5.0 mm
A45273	6.0 - 8.0 mm



## Order Code Hex Key Sizes k mm x A37610 1.0 - 2.5 mm A37620 3.0 - 5.0 mm

6.0 - 8.0 mm

A38350

#### Blank End For making up Specials Material 070M20 (EN3B)

Order Code	Centre	
A64440	12	
A64450	34	

#### Torque Wrench End Fittings

#### 8 mm Spigot Type

Metric & Imperial Accessories compatible with ATB Adjustable Breaking Torque Wrenches, Models ATB 2.5, 5 & 10 (see page 47)





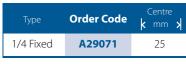
Ring End
\* Ring End supplied as bi-hex or 6pt hex



<b>←</b>			Metric			<b>→</b>
	Order code		Order code		Order code	
A/F	Open End	A/F	Ring End*	A/F	Flared End	A/F
3.2	049000	3.2	049250	3.2	-	3.2
4	049005	4	049255	4	-	4
5	049010	5	049260	5	-	5
5.5	049015	5.5	049265	5.5	-	5.5
6	049020	6	049270	6	-	6
7	049025	7	049275	7	-	7
8	049030	8	049280	8	049505	8
9	049035	9	049285	9	049510	9
10	049040	10	049290	10	049515	10
11	049045	11	049295	11	049520	11
12	049050	12	049300	12	049525	12
13	049055	13	049305	13	049530	13
14	049060	14	049310	14	049535	14
15	049065	15	049315	15	049540	15
16	049070	16	049320	16	049545	16
17	049075	17	049325	17	049550	17
18	049080	18	049330	18	-	18
19	049085	19	049335	19	049555	19
20	049090	20	049340	20	-	20
21	049095	21	049345	21	-	21
22	049100	22	049350	22	049560	22
23	049105	23	049355	23	=	23
24	049110	24	049360	24	049565	24
25	049115	25	049365	25	-	25

$\leftarrow$			—— Imperial ——			-
	Order code		Order code		Order code	
A/F	Open End	A/F	Ring End*	A/F	Flared End	A/F
5/32	049150	5/32	049400	5/32	-	5/32
3/16	049155	3/16	049405	3/16	=	3/16
7/32	049160	7/32	049410	7/32	-	7/32
1/4	049165	1/4	049415	1/4	049600	1/4
5/16	049175	5/16	049420	5/16	049605	5/16
3/8	049185	3/8	049425	3/8	049610	3/8
7/16	049195	7/16	049430	7/16	049615	<sup>7</sup> /16
1/2	049200	1/2	049435	1/2	049620	1/2
9/16	049205	9/16	049440	9/16	049625	9/16
5/8	049210	5/8	049445	5/8	049630	5/8
11/16	049215	11/16	049450	11/16	=	11/16
3/4	049220	3/4	049455	3/4	049635	3/4
13/16	049225	13/16	049460	1 <sup>13</sup> /16	=	13/16
7/8	049230	7/8	049465	7/8	049640	7/8
15/16	049235	15/16	049470	15/16	_	15/16
1	049240	1	049475	1	049645	1

#### To convert 8mm Spigot to 1/4" Square Drive



Туре	Order Code	Centre
1/4 Rachet	A28990	25





#### Torque Wrench End Fittings

#### 16 mm Spigot Type

#### Metric & Imperial Accessories compatible with the following Torque Wrenches:

ATB Adjustable Breaking Torque Wrenches, models ATB 25, 50 & 100.

See page 47

TBN Preset Breaking Torque Wrenches, models 25, 65,135 & 200.



Wrenches. See page 44

See page 38-39



Ring End





Flared End



16 mm Spigot Type Order Code: A55230 Available to customers wishing to make special

spanner end attachments



Ratchet Head **Square Drive** 16 mm Spigot Type Order Code: 3/8" - 029010 1/2" - 029030

<b>←</b>			Metric ———		
A/F	Order code	A/F	Order code	A/F	Order code Flared End
	Open End		Ring End*		
7	026020	7	027220	7	028190
8	026040	8	027240	8	028200
9	026060	9	027260	9	028210
10	026080	10	027280	10	028220
11	026100	11	027300	11	028240
12	026120	12	027320	12	028260
13	026140	13	027340	13	028280
14	026160	14	027360	14	028300
15	026180	15	027380	15	028320
16	026200	16	027400	16	028340
17	026220	17	027420	17	028360
18	026240	18	027440	18	028380
19	026260	19	027460	19	028400
20	026280	20	027480	20	028420
21	026300	21	027500	21	028440
22	026320	22	027520	22	028460
23	026340	23	027540	23	028480
24	026360	24	027560	24	028500
25	026380	25	-	25	-
26	026400	26	027600	26	-
27	026420	27	027620	27	028520
30	026440	30	-	30	-

←			Metric ———		<b>─</b>
	Order code		Order code		Order code
A/F	Open End	A/F	Ring End*	A/F	Flared End
5/16	026620	5/16	027720	5/16	=
3/8	026640	3/8	027740	3/8	028600
7/16	026650	7/16	027750	7/16	028620
1/2	026660	1/2	027760	1/2	028640
9/16	026680	9/16	027780	9/16	028660
5/8	026690	5/8	027790	5/8	028680
11/16	026700	11/16	027800	11/16	028700
3/4	026710	3/4	027810	3/4	028710
13/16	026720	13/16	027820	13/16	028720
7/8	026740	7/8	027840	7/8	028740
15/16	026750	15/16	027850	15/16	028750
1	026760	1	027860	1	028760
11/16	026770	11/16	027880	11/16	028770
11/8	026780	11/8	=	11/8	028780
13/16	026800	13/16	027920	13/16	028800
11/4	026820	11/4	-	11/4	-

16 mm Spigot Type

Order Code: 3/8" - 029040

1/2" - 029060



#### Hexagon Nut Sockets

Metric & Imperial Accessories to complement our range of Standard and Insulated Torque Wrenches (pages 40-41)











#### 1/4" Square Drive Hexagon Nut Sockets

4	Metric		▶				— Imperial —			
Туре	Order code	A/F	Туре	Order code	A/F	Type	Order code	A/F		
NS 4	030500	4	NS 8BA	031100	.152	NS 187	030800	3/16		
NS 4.5	030520	4.5	NS 7BA	031120	.172	NS 219	030820	7/32		
NS 5	030540	5	NS 6BA	031140	.193	NS 234	030840	15/64		
NS 5.5	030560	5.5	NS 5BA	031160	.220	NS 250	030860	1/4		
NS 6	030580	6	NS 4BA	031180	.248	NS 266	030880	<sup>7</sup> /64		
NS 7	030600	7	NS 3BA	031200	.282	NS 281	030900	9/32		
NS 8	030620	8	NS 2BA	031220	.324	NS 312	030920	5/16		
NS 9	030640	9	NS 1BA	031240	.365	NS 344	030940	11/32		
NS 10	030660	10	NS OBA	031260	.413	NS 375	030960	3/8		
NS 11	030680	11	-	-	-	NS 437	030980	7/16		
NS 12	030700	12	-	-	-	NS 500	031000	1/2		
NS 13	030720	13	-	-	-	=	-	-		
NS 14	030740	14	-	-	-	-	-	-		

#### Metric Insulated Nut Sockets

Voltage Applications									
A/F	Order Code 1/4" in Drive								
8	030620A11030								
10	030660A11030								
11	-								
12	030700A11030								
13	030720A11030								
14	030740A11030								
16	-								
17	-								
18	-								



#### Torque Screwdriver Accessories

Accessories to complement our range of Torque Screwdrivers (see page 18) Please note Screwdriver dimensions may change subject to availability



1/4" A/F Hexagon Shank Bits & Blades for use with all 1/4" FH Screwdrivers

<b>←</b>	Blac	de —	<b>←</b>	——— Pozidr	iv ——		<b>←</b>	——— Phillip	s ———	<b>&gt;</b>	4	Torx		
Туре	Order code	Size k mm x	Туре	Order code	Size	k mm x	Type	Order code	Size	k mm x	Type	Order code	Size	k mm x
3	029300	3 mm x 0.5 39	No. 0	029500	No. 0	25	No. 0	029600	No. 0	25	TX6	029740	1.65	25
4.5	029320	4.5 mm x 0.6 39	No. 1	029520	No. 1	50	No. 1	029610	No. 1	50	TX8	029760	2.28	25
5.5	029340	5.5 mm x 0.8 39	No. 2	029540	No. 2	50	No. 2	029620	No. 2	50	TX10	029770	2.72	25
6.5	029360	6.5 mm x 1.2 39	No. 3	029560	No. 3	50	No. 3	029640	No. 3	50	TX20	029780	3.84	25
8	029380	8 mm x 1.6 39	-	-	-	-	-	-	-	-	TX25	029790	4.39	25



Type	Blade Order code	k mm x	<b>∢</b> Type	Pozidriv — Order code	k mm x	<b>∢</b> Type	— Phillips — Order code	k mm x	<b>∢</b> Type	Torx —	k mm x
3 x 0.5	029305	50	No. 0	029505	50	No. 0	029605	50	TX06	029745	50
4 x 0.5	029325	50	No. 1	029525	50	No. 1	029615	50	TX08	029765	50
5.5 x 0.8	029345	50	No. 2	029545	50	No. 2	029625	50	TX10	029775	50
6.5 x 1.2	029361	50	No. 3	029565	50	No. 3	029645	50	TX20	029785	50

#### Lock on T-Bar

Blade

Extra leverage provided with removable T-Bar for larger screwdriver models

Accidental tool disengagement is prevented through the Lock On feature



#### Torque Screwdriver Accessories

Accessories to complement our range of Torque Screwdrivers (see page 18)

#### Converters & Adaptors

Туре	Order code	<b>←</b> To Convert From	Tool Drive ——>	k mm x
FSHA	A35640	<b>V</b>	⟨¹/₄°⟩	30 (1 <sup>1</sup> /8")
Converter	029200	⟨1 <u>/4</u> ²⟩	1/4"	50 (2")
MSHA	A25420	⟨¹ <u>¼</u> ²⟩	74	25







Inline Freewheel Adaptor

To Convert Tool Drive —									
Туре	Order code	Torque	Freewheel						
FWA-R	A8842R	Clockwise	Anticlockwise						
FWA-L	A8842L	Anticlockwise	Clockwise						



Absorbs unwanted shock loads by transmitting torque in one direction and freewheeling in the opposite direction

Roller clutch for minimal backlash

#### Special Crowsfoot Spanner Ends

Order Code	A/F Size
C62890	3/8 in
C62891	1/2 in
C62892	8 mm
C62893	14 mm
C62894	18 mm
C62895	5 mm
C62896	1/4 in
C62897	19 mm
C62898	6 mm





#### **Convertors and Adaptors**

Accessories to complement our range of Torque Screwdrivers and Wrenches

#### Socket Blanks

		<b>←</b>	Metric Dimensions	<b>→</b>
Type	Order code	А	В	C
SB2	A15720	1/4	5/8	7/8
SB3	A16200	3/8	13/16	11/8
SB4	A16210	1/2	1	11/4
SB5	A14790	3/4	11/2	2 <sup>5</sup> /16
SB6	A14800	1	2	2 <sup>9</sup> /16



#### Converters

		<b>←</b> To Convert	t Tool D <del>rive</del>
Type	Order code	From	То
DSAP	031320	<b>V</b> 4	3/8"
DPAS	031300	3/8"	1/4"
ASEP	031340	3/8"	$V_2^*$
APES	031360	<b>1/2</b>	3/8"
ESHP	031380	<b>1</b> 2	3/4"
EPHS	031400	3/4"	$V_2^*$
HSGP	031420	3/4"	1"
HPGS	031440	1	3/4"



#### Hexagon Key Bits

4	Metric —			Imperial —				Imperial —			<b>&gt;</b>
Туре	Order Code	A/F	k mm x	Туре	Order Code	A/F	k mm x	Type	Order Code	A/F	k mm x
IB 1.5	030100	1.5	25	IB 093	030300	3/32	25	G2	B1607A	.035	35
IB 2	030120	2	25	IB 109	030310	7/64	25	G3	B1607B	.050	35
IB 2.5	030140	2.5	25	IB 125	030320	1/8	25	G4	B1607C	.062	35
IB 3	030160	3	25	IB 141	030330	9/64	25	G5	B1607D	5/64	35
IB 4	030180	4	25	IB 156	030340	5/32	25	-	-	-	-
IB 5	030200	5	25	IB 187	030360	3/16	25	-	-	-	-
IB 6	030220	6	25	IB 281	030380	7/32	25	-	-	-	-
IB 7	030240	7	25	IB 250	030400	1/4	25	-	-	-	-
IB 8	030260	8	25	IB 312	030410	5/16	25	-	-	-	-
Note: IB Bits will require 1/4" FSHA Adaptor unless your tool is already a 1/4" FH Drive Integral 1/4" Square Drive											



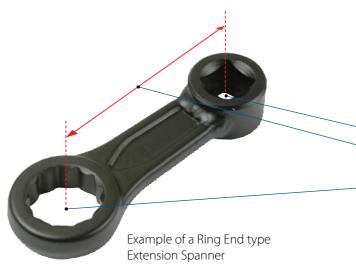


#### Special Extension Spanners & Adaptors

Accessories to complement the Dial Measuring Wrench Range (page 12)

When design or space limitations preclude the use of a Dial Measuring Wrench and a standard Nut Socket, awkward spaces. See illustrations for typical examples. special Extension Spanners can be manufactured.

These allow access and enable you to apply Torque in



#### To order a Special Extension Spanner

#### To order please supply the following information:

Centred distance between the square drive and the spanner end fitting

A/F size of spanner end

End type - Ring, Open or Flared Maximum Torque to be applied

A fully dimensioned drawing

#### Table of Effective Wrench Lengths across our Range

Model Ranges	Effective length
ADS 12/25/40	190
BDS 80	368
BDS 160/200	445
CDS	635
DDS	850
EDS	1727
Special Extension Spanners	

#### Extension Adaptors for ADS & BDS Wrenches where space is restricted

Adaptor Model	Order code	Drive						
16mm Spigot	A96102	3/8"	59					
Tomin Spigot	A96103	1/2"	0					
German 9x12	A96112	3/8"	~					
Cavity Fitting	A96113	1/2						
Wedge Fitting	A96122	3/8"						
Weageritaing	A96123	1/2						
Measure dimension of Adaptor & End Fitting for E (see diagram above)								

#### How to Calculate the True Torque when using Extension Spanners



#### Technical Support



#### **UK Head Office**

Contact us for any technical information or support that you may need.

Tannery Lane, Gosden Common, Bramley, Guildford, Surrey GU5 0AJ

Phone: +44 (0) 1483 894 476

Fax: +44 (0) 1483 898 536

Email: salesandrepairs@gedore-torque.com

#### Technical Support

For expert technical advice, contact us by phone or email. If there is a problem to be discussed, or you would like a product demonstration, a visit to your site by one of our Technical Managers can be arranged.

#### **Distributors**

With 74 Distributors in 51 countries, our products are available and supported worldwide. All Distributors are factory-trained and are able to give a full service and to offer expert advice. Contact us (details above) for your local distributor, or visit www.gedore-torque.com

#### Website

Our website contains a wealth of product information, including a Knowledge Centre and Tool Selector www.gedore-torque.com/tool-selector

#### Videos

Our YouTube channel contains videos showing how to use most of our tools. www.youtube.com/gedore-torque









#### Taking Care of Your Tools

#### Calibration, Servicing & Repair

When you buy from Gedore Torque, everything you need to maintain, service and repair your torque equipment is available in house, at our UK site. Regular re-calibration and servicing are essential if Torque Tools are to deliver absolute precision and consistent accuracy throughout their lifetime. What's more,

that measuring torque tools and calibration equipment are checked regularly and provided with traceable calibration certificates. For these reasons, Gedore Torque offers a comprehensive Calibration, Servicing & Repair service, to ensure that your tools continue to operate to the highest standards. And in most cases, we today's Quality Assurance Systems demand are able to provide a 24-hour turnaround.

#### **Torque Calibration**

Torque Calibration ensures that torque equipment operates to peak performance, ensuring absolute and consistent accuracy and adherence to National and International standards

It also ensures that potential tooling problems are identified before they arise, hence ensuring that lifetime ownership costs are minimised

#### Calibration Laboratory, Servicing and Repair Centre

Gedore Torque has a UKAS-accredited Calibration Laboratory, based at our site in the UK. Here, we are able to recalibrate most Hand Torque Tools, Analysers and Transducers in accordance with National and International Standards.

Our Calibration Laboratory offers an in-depth Torque Calibration Service. This provides:

Torque Wrench calibration to ISO 6789:2003

Torque Sensor calibration to BS 7882·2008

'As found' and 'As left' Calibration Certificates

UKAS Scope 0.14 - 3000 N.m

The technical competence of the Laboratory and its staff have been independently accredited by UKAS to ISO/IEC 17025:2005. UKAS (the United Kingdom Accreditation Service) is the only national accreditation body recognised by the British Government to assess the competence of organisations that provide certification, testing, inspection and calibration services.

We can also accommodate tools from other manufacturers subject to inspection and acceptance. For more information, call us on: +44 (0) 1483 892 772 or email: salesandrepairs@gedore-torque.com

#### In House Calibration Service

Our in house calibration service is a cost-effective method to ensure that your equipment is always in peak condition.

This provides:

**Gedore Torque Calibration Certificates** 

Clear results

Traceability to National Standards

Tools that are accurate, precise and performing to the highest standard

#### Servicing and Repairs

Our tools contain moving parts that require periodic servicing and lubrication. The recommended service interval is twelve months, or more frequent if usage is high. And even in the best work environment, repairs are sometimes necessary.

That's why we offer a full and comprehensive After Sales Service. On return of any product, the work necessary to bring the torque tool to first class condition is assessed and the customer advised of the cost involved. Once the customer has given their permission to proceed, the work is carried out to an agreed timescale.

If you choose to do your own servicing, the following lubrication tables give details of the recommended oils and greases as used in our tools.

#### Tool Lubrication Table For Gedore Torque Products

				Lubricants - Corre	ct at time of going to	print			
Torque Wrenches	Fuchs Renolit CXI 2 Grease	Total Multis MS 2	Fuchs Renolit EP X1 PBF	Total Multis EP2	Silicon Grease RS 555-083	Shell Tonna 32 Lubricating Oil	Rocol Dry Moly Paste (ASP)	Amalgam of 75% Dry Moly Paste 25% Lubricating Oil	
Dial Wrenches	ADS Ratchet & Pawl			BDS/CDS/DDS Ratchet & Pawl	Window Assembly 'O' Rings				
STB			Spring, Cam & Roller		'O' Rings	Ratchet & Pawl			
TSC & TSP	Bearings. TSC Locking Mechanism						Thrust Pin		
TSN			Spring, Cam & Roller		'O' Rings	Ratchet & Pawl			
TBN 2 & 10		Spring				Adj. Screw	Roller, Cam, Thrust Pad, Captive Pin		
TBN 25,65,135 & 200		Spring					Roller, Cam, Thrust Pad, Captive Pin	Trunnion. Adj. Screw	
ATB 5, 10, 25, 50, 100							Adj. Screw, Captive Pin, Int. Spring Adjuster, Lock Knob & Adj. Screw End, Ext. Handle		Spring, Ext. Spring Adjuster, Trunnion, Int. Handle

	Lubricants - Correct at time of going to print										
Torque Screwdrivers & Analysers	Shell Stamina EP2 Grease	Total Multis EP2	Silicon Grease RS 555-083	NYE Rheolube 368 F Strained Grease	WD-40 Lubricant/Inhibitor	Renolin B3 - VG10	All Purpose 3 in 1				
π					Torsion Bars & Spring Clamps		Memory Assembly				
Quickset, QSN & QSA	General Use Ball Housing	Handle Threads	'O' Rings								
TLS	General Use Spring Housing										
Cleanroom CRS				General Use Spring Housing							
MTS & MTP						Drive Spindle & Needle Bearings					
ISO 1000 & ISO 1500		Multiplier & Worm Gearbox									



#### British & International Standards

Our commitment to excellence means that our own business and the tools we manufacture conform to the appropriate National and International Standards. This means that you can be assured that our products are manufactured to the highest quality standards for absolute accuracy, consistency and precision.

Gedore Torque is assessed and registered to BS EN ISO 9001:2008 Certificate FM 00363

All Gedore Torque tools are manufactured to the relevant British and International Engineering Standards and conform to the International Standard on Torque Tools ISO 6789:2003 or as specified.

#### The International Standard ISO 6789:2003 for Hand Torque Tools states:

The effective working range of a tool is from 20% to 100% of its maximum torque value

The accuracy requirements for Torque Screwdrivers are +/- 6% of reading and for Torque Wrenches are +/- 4% of reading or +/- 6% for Torque Wrenches

The maximum torque value for each square drive size

Scale and marking requirements

An overload ability of 125% of maximum torque capacity

A calibration interval of 5000 cycles or 12 months

Test and measuring procedures at 23° +/- 5°C

The maximum permissible uncertainty of measurement of the calibration device shall be +/-1% of the indicated value

#### **Explanation on Terms**

**Accuracy** of Measuring and Calibrated Scale Tools is their ability to deliver the torque as set on their scale, dial or digital display. This is usually expressed as a percentage of the target torque

**Resolution** of Measuring and Calibrated Scale Tools is the number of divisions that their full torque range is divided into. This can be displayed as decimal places on a digital display, number of divisions on a dial or graduations on a scale

Repeatability of Preset Tools is the ability to consistently apply the same torque in subsequent tightening operations. This is usually expressed as a percentage of the preset torque

#### **Explanation on Serial Numbers**

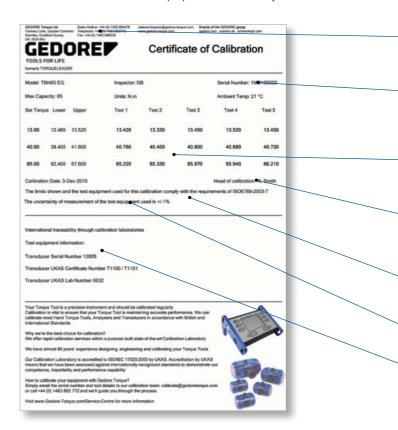
All new and newly reconditioned Gedore Torque tools are marked with a serial number that enables Complete Traceability. This number is stored together with other data such as the original works order number and calibration details



M = December

#### Calibration: Certification & Traceability

Regular Torque Tool Calibration and re-calibration guarantees the operator repeatable accuracy and adherence to international standards. To guarantee this, all Tools that have been calibrated or re-calibrated by Gedore Torque come with a Certificate of Calibration. This in turn provides confirmation that all equipment used by us has certification traceable to International Standards.



Traceability to International Standards

All equipment used by us in the Calibration of Torque

Tools is regularly checked to ensure that the results

obtained are accurate. All Calibration Equipment is

traceable to International Standards as listed below:

• Transfer Standards held by National Physical Laboratory

itself assessed using equipment with certification

• National Physical Laboratory Stabilised Lasers

• International Bureau of Weights & Measures

\*Defined as the length of the path travelled by light in vacuum during a time interval of 1/299 792 498 of a second

For Length/Metre & Weight/Mass:

• Coordinate Measuring Machine

• National Standard for the Metre\*

• Trading Standards Department

National Measurement Office

Sèvres, Paris

UKAS Accredited Mass Laboratory

**Supplier Section...** can be tailored to include our Distributor's name and address

**Tool Identification Section...** for easy identification of the tool, its maximum capacity and its individual serial number

**Test Result Section...** gives the normal point at which the tool was tested, the tolerances and the actual results obtained

**Certification Section...** date and approval signature of test

**Standard Section...** confirms the standard requirements to which the tool complies

Note Section... gives information regarding slave pointers etc

**Traceability Section...** the serial numbers of the test equipment and the route back to National Standards

Gedore Torque's testing and calibration procedures are performed using equipment traceable to National Standards

**UKAS Accreditation** Certificate for Gedore Torque's Calibration Laboratory & Personnel



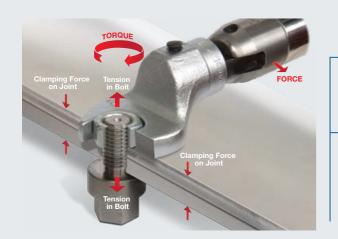




#### An Explanation of Torque

#### Information on Measuring Torque

What you need to know to avoid incorrect tightening



Torque is the application of a Force acting at a radial **Distance** and tending to cause rotation. Torque is used to create tension in threaded fasteners

When the nut and bolt are tightened the two plates are clamped together. The thread converts the applied torque into tension in the bolt shank. This in turn is converted into a clamping force. The amount of tension created in the bolt is critical

#### Explanation on the creation of a Clamping Force

The tension in the bolt creates a clamping force (generally referred to as the preload) between the two parts

If the clamping force is too low, the fasteners can work loose due to vibration or movement between the component parts

If a clamping force is too high, the fastener may permanently stretch and no longer apply the required clamping force

In severe cases the fastener may fail in assembly or during use when under load

#### Explanation on how Torque is Calculated

Torque is the result of multiplying the value of **Force** applied by the **Distance** from the point of application

Comparing the two examples see below (A and B) the same resultant torque can be achieved with a lower Force if the Distance from the nut/bolt is increased

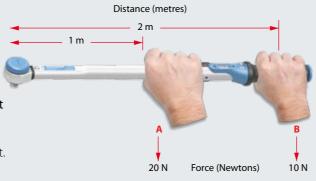
Some Torque Wrenches are length dependent that means that the actual torque applied to the fastener varies if the hand position on the wrench is varied - even with the wrench preset. This occurs if the pivot point of the wrench mechanism is not coincidental with the centre of rotation of the fastener

#### Force x Distance = Torque (See right)

Example A:  $20 \text{ N} \times 1 \text{ m} = 20 \text{ N.m}$ 

Example B:  $10 \text{ N} \times 2 \text{ m} = 20 \text{ N.m}$ 

Some Torque Wrenches are length dependent that means that the actual torque applied to the fastener varies if the hand position on the wrench is varied - even with the wrench preset. This occurs if the pivot point of the wrench mechanism is not coincidental with the centre of rotation of the fastener



#### Conversion Factors & Maximum Recommended Tightening Torques

Need help... call us on +44 (0) 1483 894 476

				Conversion	on Factors				
Units to be converted	mN.m	— ISO — cN.m	N.m	<b>▼</b> ozf.in	— Imperial — Ibf.in	lbf.ft	<b>⋖</b> gf.cm	— Metric — kgf.cm	kgf.m
1 mN.m	1	0.1	0.001	0.142	0.009	0.0007	10.2	0.01	0.0001
1 cN.m	10	1	0.01	1.416	0.088	0.007	102	0.102	0.001
1 N.m	1000	100	1	141.6	8.851	0.738	10197	10.20	0.102
1 ozf.in	7.062	0.706	0.007	1	0.0625	0.005	72	0.072	0.0007
1 lbf.in	113	11.3	0.113	16	1	0.083	1152.1	1.152	0.0115
1 lbf.ft	1356	135.6	1.356	192	12	1	13826	13.83	0.138
1 gf.cm	0.098	0.01	0.0001	0.014	0.0009	0.00007	1	0.001	0.00001
1 kgf.cm	98.07	9.807	0.098	13.89	0.868	0.072	1000	1	0.01
1 kgf.m	9807	980.7	9.807	1389	86.8	7.233	100000	100	1

Conversion Factors					
Thread Diameter (mm)	Hex Key Size (mm)	Hex Key Size (mm)	Hex Key Size (mm)	Hex Head Size (mm)	
M 2	-	1.5	1.27	4	
M 2.5	-	2	1.5	5	
M 3	2	2.5	2	5.5	
M 4	2.5	3	2.5	7	
M 5	3	4	3	8	
M 6	4	5	4	10	
M 7	-	-	-	11	
M 8	5	6	5	13	
M 10	6	8	6	17	
M 12	8	10	8	19	
M 14	-	-	-	22	
M 16	-	14	10	24	
M 18	-	-	-	27	
M 20	-	17	12	30	
M 22	-	-	-	32	
M 24	-	-	-	36	
M 27	-	-	-	-	

Recommended Tightening Torques N.m					
Bold Grade 8.8	Bold Grade 10.9	Bold Grade 12.9			
0.37	0.52	0.63			
0.86	1.21	1.45			
1.3	1.9	2.3			
3.0	4.3	5.1			
6.0	8.5	10.2			
10.3	14.7	17.9			
17.2	24.5	28.4			
25.5	35.3	42.2			
50.0	70.6	85.3			
87.3	123	147			
138	194	235			
211	299	358			
289	412	490			
412	579	698			
559	785	941			
711	1000	1198			
1049	1481	1775			

**Button Head** 

Cap Head

Countersunk Head







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#### **Brands of the GEDORE Group**

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