

# TORQUE WRENCHES

Norbar Torque Tools manufacture an extensive range of high quality torque screwdrivers and torque wrenches to cover torque values from 0.3 N·m to 2000 N·m. They are designed and manufactured to exceed international standards for accuracy.

In addition to the normal 'adjustable' torque wrenches, Norbar offer Production 'P' Type versions which can be pre-set and dedicated to a particular application. This setting system is designed to discourage unauthorised alteration.

All Norbar torque wrenches are offered as standard with a quality ratchet. For applications where interchangeable end fittings are required, 'Torque Handles', which allow for interchangeable spanner fittings, are also available in various models up to 650 N·m.

Torque Screwdrivers	4
TT Wrenches	5
Electronic Torque Wrenches	7
Non-Magnetic	8
Insulated	8
Model 5 Professional	8
Professional Wrenches	9
650 Series Professional	13
SL0 Wrenches	14
Industrial Wrenches	15
Electrode Wrenches	17
Torque Wrench Accessories	18

## TORQUE SCREWDRIVERS



Shown with TruCheck™



Screwdriver Kit

### Versatile, accurate and easy torquing for smaller fasteners and restricted spaces

- Accuracy exceeds the requirements of ISO6789
- Supplied with 1/4" hexagon bit holder
- Bit holder can be removed and replaced with widely available screwdriver blades
- Single scale, either N·m or lbf·in

#### Part No ADJUSTABLE N·m

13475	TTs1.5 N·m, 1/4", 0.3 - 1.5 N·m
13476	TTs3.0 N·m, 1/4", 0.6 - 3 N·m
13509	TTs6.0 N·m, 1/4", 1.2 - 6 N·m

#### Part No ADJUSTABLE lbf·in

13515	TTs13 in·lb, 1/4", 2.5 - 13 lbf·in
13516	TTs26 in·lb, 1/4", 5 - 26 lbf·in
13517	TTs53 in·lb, 1/4", 10 - 53 lbf·in

#### Part No PRODUCTION 'P' TYPE

13510	TTs1.5, 1/4", 0.3 - 1.5 N·m, 2.5 - 13 lbf·in
13511	TTs3.0, 1/4", 0.6 - 3 N·m, 5 - 26 lbf·in
13512	TTs6.0, 1/4", 1.2 - 6 N·m, 10 - 53 lbf·in
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)

#### Part No ADJUSTABLE N·m KIT

13700	TTs0.3 - 1.5 N·m Kit with 12 piece bit set and case
13701	TTs0.6 - 3 N·m Kit with 12 piece bit set and case
13702	TTs1.2 - 6 N·m Kit with 12 piece bit set and case

Bits included in the kit: T10 Torx, T15 Torx, T20 Torx, 1/4" Male Square, 2mm Male Hexagon, 2.5mm Male Hexagon, 3mm Male Hexagon, 4mm Male Hexagon, 5mm Male Hexagon, PH.1 "Phillips Drive", PH.2 "Phillips Drive", 3mm Flat. Part No. 28937 when ordering separately.

TTi TORQUE WRENCHES



**Part No RATCHET ADJUSTABLE - DUAL SCALE**

13285	TTi20, ¼", 1 - 20 N·m, 10 - 180 lbf·in
13640	TTi20, ⅜", 1 - 20 N·m, 10 - 180 lbf·in
13658	TTi50, ⅜", 10 - 50 N·m, 8 - 35 lbf·ft
13659	TTi50, ½", 10 - 50 N·m, 8 - 35 lbf·ft
13679	TTi60, ⅜", 12 - 60 N·m, 10 - 45 lbf·ft
13680	TTi60, ½", 12 - 60 N·m, 10 - 45 lbf·ft
13440	TTi100, ⅜", 20 - 100 N·m, 15 - 75 lbf·ft
13441	TTi100, ½", 20 - 100 N·m, 15 - 75 lbf·ft
13442	TTi150, ½", 30 - 150 N·m, 20 - 110 lbf·ft
13443	TTi200, ½", 40 - 200 N·m, 30 - 150 lbf·ft
13444	TTi250, ½", 50 - 250 N·m, 40 - 185 lbf·ft
13445	TTi300, ½", 60 - 300 N·m, 45 - 220 lbf·ft

**Part No RATCHET ADJUSTABLE - N·m ONLY**

13648	TTi20 N·m, ¼", 1 - 20 N·m
13649	TTi20 N·m, ⅜", 1 - 20 N·m
13662	TTi50 N·m, ⅜", 10 - 50 N·m
13663	TTi50 N·m, ½", 10 - 50 N·m
13681	TTi60 N·m, ⅜", 12 - 60 N·m
13682	TTi60 N·m, ½", 12 - 60 N·m
13450	TTi100 N·m, ⅜", 20 - 100 N·m
13451	TTi100 N·m, ½", 20 - 100 N·m
13452	TTi150 N·m, ½", 30 - 150 N·m
13453	TTi200 N·m, ½", 40 - 200 N·m
13454	TTi250 N·m, ½", 50 - 250 N·m
13455	TTi300 N·m, ½", 60 - 300 N·m

**Part No RATCHET ADJUSTABLE - lbf·ft ONLY**

13652	TTi15 ft·lb, ¼", 10 - 180 lbf·in
13653	TTi15 ft·lb, ⅜", 10 - 180 lbf·in
13664	TTi35 ft·lb, ⅜", 8 - 35 lbf·ft
13665	TTi35 ft·lb, ½", 8 - 35 lbf·ft
13683	TTi45 ft·lb, ⅜", 10 - 45 lbf·ft
13684	TTi45 ft·lb, ½", 10 - 45 lbf·ft
13460	TTi75 ft·lb, ⅜", 15 - 75 lbf·ft
13461	TTi75 ft·lb, ½", 15 - 75 lbf·ft
13462	TTi110 ft·lb, ½", 20 - 110 lbf·ft
13463	TTi150 ft·lb, ½", 30 - 150 lbf·ft
13464	TTi185 ft·lb, ½", 40 - 185 lbf·ft
13465	TTi220 ft·lb, ½", 45 - 220 lbf·ft
13466	TTi250 ft·lb, ½", 50 - 250 lbf·ft



TTi20 and TTi50 Reversible Ratchet



TTi60 - TTi300 Ratchet is 'push through' for clockwise and anti-clockwise torque control

For no-nonsense torquing - comfortable, accurate and easy to use

- Accurate to ±3% of reading
- Micrometer scale for simple and error free setting
- Available with either dual scale (N·m and lbf·ft) or single denomination torque scale
- 'Push Through' ratchets adapt for torque control in both the clockwise and anticlockwise directions
- Tough ratchets with narrow engagement angles allow for easy positioning of the tool in confined spaces
- All models feature a lock to prevent accidental adjustment of the set torque
- Handle and lens materials resistant to commonly used industrial chemicals

## TTf FIXED HEAD TORQUE WRENCHES



TTf Fixed Head

### Ultra robust, non-ratcheting fixed head

- Accurate to  $\pm 3\%$  of reading
- Micrometer scale for simple, error free setting
- Available with either dual scale (N·m and lbf·ft) or single denomination torque scale

#### Part No | ADJUSTABLE - DUAL SCALE

13550	TTf20 $\frac{3}{8}$ ", 1 - 20 N·m, 10 - 180 lbf·in
13685	TTf60 $\frac{3}{8}$ ", 12 - 60 N·m, 10 - 45 lbf·ft
13552	TTf100 $\frac{3}{8}$ ", 20 - 100 N·m, 15 - 75 lbf·ft
13553	TTf100 $\frac{1}{2}$ ", 20 - 100 N·m, 15 - 75 lbf·ft
13554	TTf150 $\frac{1}{2}$ ", 30 - 150 N·m, 20 - 110 lbf·ft
13555	TTf200 $\frac{1}{2}$ ", 40 - 200 N·m, 30 - 150 lbf·ft
13556	TTf250 $\frac{1}{2}$ ", 50 - 250 N·m, 40 - 185 lbf·ft
13557	TTf300 $\frac{1}{2}$ ", 60 - 300 N·m, 45 - 220 lbf·ft

#### Part No | ADJUSTABLE - N·m ONLY

13559	TTf20 N·m, $\frac{3}{8}$ ", 1 - 20 N·m
13686	TTf60 N·m, $\frac{3}{8}$ ", 12 - 60 N·m
13565	TTf100 N·m, $\frac{3}{8}$ ", 20 - 100 N·m
13566	TTf100 N·m, $\frac{1}{2}$ ", 20 - 100 N·m
13567	TTf150 N·m, $\frac{1}{2}$ ", 30 - 150 N·m
13568	TTf200 N·m, $\frac{1}{2}$ ", 40 - 200 N·m
13569	TTf250 N·m, $\frac{1}{2}$ ", 50 - 250 N·m
13570	TTf300 N·m, $\frac{1}{2}$ ", 60 - 300 N·m

#### Part No | ADJUSTABLE - lbf·ft ONLY

13573	TTf15 ft·lb, $\frac{3}{8}$ ", 10 - 180 lbf·in
13687	TTf45 ft·lb, $\frac{3}{8}$ ", 10 - 45 lbf·ft
13575	TTf75 ft·lb, $\frac{3}{8}$ ", 15 - 75 lbf·ft
13576	TTf75 ft·lb, $\frac{1}{2}$ ", 15 - 75 lbf·ft
13577	TTf110 ft·lb, $\frac{1}{2}$ ", 20 - 100 lbf·ft
13578	TTf150 ft·lb, $\frac{1}{2}$ ", 30 - 150 lbf·ft
13579	TTf185 ft·lb, $\frac{1}{2}$ ", 40 - 185 lbf·ft
13580	TTf220 ft·lb, $\frac{1}{2}$ ", 45 - 220 lbf·ft

## TTfth FEMALE TORQUE HANDLES



TTfth Torque Handle

- Accurate to  $\pm 3\%$  of reading
- Micrometer scale for simple, error free setting
- Available with either dual scale (N·m and lbf·ft) or single denomination torque scale
- Two fittings are catered for: Rectangular female type, 9 x 12mm and 14 x 18mm
- Suitable for a huge range of widely available fittings

#### Part No | ADJUSTABLE - DUAL SCALE

13600	TTfth20, 9 x 12 mm, 1 - 20 N·m, 10 - 180 lbf·in
13666	TTfth50, 9 x 12 mm, 10 - 50 N·m, 8 - 35 lbf·ft
13667	TTfth60, 9 x 12 mm, 12 - 60 N·m, 10 - 45 lbf·ft
13603	TTfth100, 9 x 12 mm, 20 - 100 N·m, 15 - 75 lbf·ft
13604	TTfth150, 9 x 12 mm, 30 - 150 N·m, 20 - 110 lbf·ft
13605	TTfth200, 9 x 12 mm, 40 - 200 N·m, 30 - 150 lbf·ft
13606	TTfth200, 14 x 18 mm, 40 - 200 N·m, 30 - 150 lbf·ft
13607	TTfth250, 14 x 18 mm, 50 - 250 N·m, 40 - 185 lbf·ft
13608	TTfth300, 14 x 18 mm, 60 - 300 N·m, 45 - 220 lbf·ft

#### Part No | ADJUSTABLE - N·m ONLY

13670	TTfth20 N·m, 9 x 12 mm, 1 - 20 N·m
13671	TTfth50 N·m, 9 x 12 mm, 10 - 50 N·m
13672	TTfth60 N·m, 9 x 12 mm, 12 - 60 N·m
13673	TTfth100 N·m, 9 x 12 mm, 20 - 100 N·m
13674	TTfth150 N·m, 9 x 12 mm, 30 - 150 N·m
13675	TTfth200 N·m, 9 x 12 mm, 40 - 200 N·m
13676	TTfth200 N·m, 14 x 18 mm, 40 - 200 N·m
13677	TTfth250 N·m, 14 x 18 mm, 50 - 250 N·m
13678	TTfth300 N·m, 14 x 18 mm, 60 - 300 N·m

NORTRONIC® ELECTRONIC TORQUE WRENCH



Compatible with Norbar's huge range of spanner end fittings

Unique Torque Data System software enables data management and archiving to a PC

The NorTronic®, our first electronic torque wrench, sets the benchmark with its unique Torque Data System (TDS) software and combination of accuracy, wireless capability and angle measurement, in a versatile, robust and easy to use package.

- Accurate and traceable torque and angle control
- Two full colour OLED displays positioned at 90° to each other for visual indication both horizontally and vertically
- 3 Models covering 5 N·m - 330 N·m
- IP44 protection against dust and water ingress
- One piece aluminium handle
- Extruded aluminium case
- Torque and Angle readings can be sent to TDS in real time or downloaded via the USB lead or wi-fi. For wi-fi a wireless adaptor is required for your PC, each wireless adaptor can handle up to 8 wrenches.

Note: Optional UKAS accredited calibration is from 20% to 100% of full scale.

Part No	NORTRONIC® 868 MHZ
43500	NorTronic 50, 3/8" sq. dr., 868 MHz, 5 - 50 N·m
43501	NorTronic 50, 1/2" sq. dr., 868 MHz, 5 - 50 N·m
43502	NorTronic 200, 1/2" sq. dr., 868 MHz, 20 - 200 N·m
43503	NorTronic 330, 1/2" sq. dr., 868 MHz, 30 - 330 N·m
43508	USB Wireless Adaptor, 868 MHz

For UK, Europe, Singapore and India

Part No	NORTRONIC® 915 MHZ
43504	NorTronic 50, 3/8" sq. dr., 915 MHz, 5 - 50 N·m
43505	NorTronic 50, 1/2" sq. dr., 915 MHz, 5 - 50 N·m
43506	NorTronic 200, 1/2" sq. dr., 915 MHz, 20 - 200 N·m
43507	NorTronic 330, 1/2" sq. dr., 915 MHz, 30 - 330 N·m
43509	USB Wireless Adaptor, 915 MHz

For USA, Canada, Australia and New Zealand



## TT NON MAGNETIC TORQUE WRENCH



Carefully selected and tested materials replace the ferrous components present in standard torque wrenches, therefore giving an extremely low magnetic footprint. Being based on the TT range of torque wrenches means that they also retain the high standards of Norbar's other Torque Wrenches. Perfect for MRI scanner applications.

Part No	ADJUSTABLE - DUAL SCALE
13292	TT20, 3/8", 1 - 20 N·m, 10 - 180 lbf·in
13585	TT20, 1/2", 1 - 20 N·m, 10 - 180 lbf·in
13294	TT50, 3/8", 8 - 50 N·m, 6 - 35 lbf·ft
13295	TT50, 1/2", 8 - 50 N·m, 6 - 35 lbf·ft

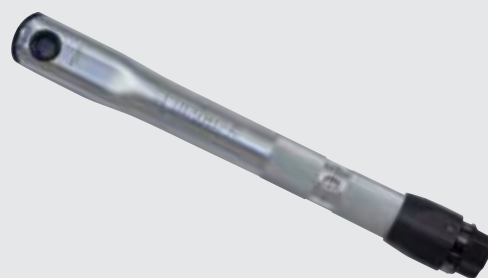
## INSULATED TORQUE WRENCH



Using injection moulded Nylon 11, Norbar's insulated torque wrench complies with IEC 60900:2004 and is more durable than the traditional PVC dipped insulated tools. Certified to 1000 volts.

Part No	ADJUSTABLE - DUAL SCALE
13540	TT60, 3/8", 8 - 60 N·m, 6 - 44 lbf·ft
13541	TT60, 1/2", 8 - 60 N·m, 6 - 44 lbf·ft

## PROFESSIONAL TORQUE WRENCHES MODEL 5



The Model 5 is a unique Torque Wrench that offers high accuracy and the convenience of interchangeable 1/4" hexagon bits. (ISO 1173:1988 Form C drive bits).

- Accuracy of  $\pm 3\%$  of reading exceeds all torque wrench standards
- Traceable calibration certificate supplied, to satisfy ISO9000 quality systems
- Non length dependent. The Model 5 remains accurate regardless of hand position
- Supplied in a storage case. The case allows space for the storage of additional drive bits, and optional stepless ratchet

Part No	ADJUSTABLE
13001	Pro 5, 1/4" female hex, 1 - 5 N·m
13002	Pro 5, 1/4" female hex, 10 - 50 lbf·in
13003	Pro 5, 1/4" female hex, 10 - 50 kgf·cm



Model 5 'P' Type in storage case

Also available as Production 'P' Types, preventing unauthorised alteration of torque setting. No external calibration equipment is required to set the Model 5 'P' Type.

Part No	PRODUCTION 'P' TYPE
13004	Pro 5, 1/4" female hex, 1 - 5 N·m
13005	Pro 5, 1/4" female hex, 10 - 50 lbf·in
13006	Pro 5, 1/4" female hex, 10 - 50 kgf·cm

Part No	MODEL 5 ACCESSORY
13122	Stepless Ratchet 1/4" Female hex

Part No	MODEL 5 SPARES
28900	1/4" Hex 1/4" male square drive

PROFESSIONAL TORQUE WRENCH ADJUSTABLE



Automotive Ratchet



Industrial Ratchet



Unlocked



Locked



Timestrip®



Professional Scale

Since its original, award winning launch in 1984 and extensive face-lift in 2000, Norbar's Professional Torque Wrench range has become one of the most popular wrench ranges available worldwide. In this re-engineered version, the core principles of accuracy, durability and comfort are carried over but every component part is new and improved.

**Compared with the outgoing Professional models, the new range has these features:**

- The scale is 60% larger for better visibility and more accurate setting
- The scale adjusts 40% faster but the effort required to adjust is reduced. If you adjust your wrench regularly, you can do more work
- The lock is now a push/pull type. It is faster and more intuitive to use. A coloured band on the lock clearly shows that the wrench is unlocked.
- Improved serviceability means longer life and reduced ownership costs
- The handle has a superior, ergonomic shape and has a higher proportion of soft-feel, high grip material. It is more comfortable to use
- Square drive adaptors are provided with the 50 N·m and 100 N·m Industrial Ratchet models
- 'Industrial Ratchet' versions have a 'mushroom square drive' to allow more rapid bolt run-down, and also allows clockwise and anti-clockwise operation
- The 200 N·m 'Automotive Ratchet' version is fitted with a new, high strength 48 tooth reversible ratchet

**Compared with other torque wrenches:**

Norbar's 'harmonic drive' scale provides a long scale length for good resolution and accurate setting in both scale units. By contrast, micrometre type scales allow accurate setting in the primary scale unit but relatively poor accuracy of setting in the secondary units because of limited resolution. When this is coupled with Norbar's 60% increased scale size, the new Professional wrench is amongst the easiest wrenches on the market to accurately set.

**Unique Feature**

Torque wrenches should be calibrated once a year as a minimum, more frequently in harsh environments and with high levels of usage. Norbar's Timestrip® gives a visual indication that the wrench is due for re-calibration and has 3, 6, 9 and 12 month graduations. (Timestrip® is a registered trademark of TimeStrip UK Ltd.)

## PROFESSIONAL TORQUE WRENCH ADJUSTABLE



'Mushroom' Square Drive

Part No	ADJUSTABLE - INDUSTRIAL RATCHET ('Mushroom' head) - DUAL SCALE
15002	Pro 50, 3/8", 10 - 50 N·m, 7.5 - 37.5 lbf·ft
15003	Pro 100, 1/2", 20 - 100 N·m, 15 - 75 lbf·ft
15004	Pro 200, 1/2", 40 - 200 N·m, 30 - 150 lbf·ft
15005	Pro 300, 1/2", 60 - 300 N·m, 50 - 220 lbf·ft
15006	Pro 340, 1/2", 60 - 340 N·m, 50 - 250 lbf·ft
15007	Pro 400, 3/4", 80 - 400 N·m, 60 - 300 lbf·ft

Part No	ADJUSTABLE - INDUSTRIAL RATCHET ('Mushroom' head) - N·m ONLY
15042	Pro 50, 3/8", 10 - 50 N·m
15043	Pro 100, 1/2", 20 - 100 N·m
15044	Pro 200, 1/2", 40 - 200 N·m
15045	Pro 300, 1/2", 60 - 300 N·m
15046	Pro 340, 1/2", 60 - 340 N·m
15047	Pro 400, 3/4", 80 - 400 N·m

Part No	ADJUSTABLE - INDUSTRIAL RATCHET ('Mushroom' head) - lbf·ft ONLY
15172	Pro 50, 3/8", 7.5 - 37.5 lbf·ft
15173	Pro 100, 1/2", 15 - 75 lbf·ft
15174	Pro 200, 1/2", 30 - 150 lbf·ft
15175	Pro 300, 1/2", 50 - 220 lbf·ft
15176	Pro 340, 1/2", 50 - 250 lbf·ft
15177	Pro 400, 3/4", 60 - 300 lbf·ft

Part No	ADJUSTABLE - INDUSTRIAL RATCHET ('Mushroom' head) - lbf·in ONLY
15052	Pro 50, 3/8", 90 - 440 lbf·in
15053	Pro 100, 1/2", 200 - 800 lbf·in
15054	Pro 200, 1/2", 400 - 1800 lbf·in
15055	Pro 300, 1/2", 500 - 2500 lbf·in
15056	Pro 340, 1/2", 500 - 3000 lbf·in
15057	Pro 400, 3/4", 700 - 3500 lbf·in

Part No	ADJUSTABLE - AUTOMOTIVE RATCHET (Reversible) - DUAL SCALE
15012	Pro 50, 3/8", 10 - 50 N·m, 7.5 - 37.5 lbf·ft
15013	Pro 50, 1/2", 10 - 50 N·m, 7.5 - 37.5 lbf·ft
15014	Pro 100, 3/8", 20 - 100 N·m, 15 - 75 lbf·ft
15015	Pro 100, 1/2", 20 - 100 N·m, 15 - 75 lbf·ft
15016	Pro 200, 1/2", 40 - 200 N·m, 30 - 150 lbf·ft

Part No	ADJUSTABLE - AUTOMOTIVE RATCHET (Reversible) - N·m ONLY
15022	Pro 50, 3/8", 10 - 50 N·m
15023	Pro 50, 1/2", 10 - 50 N·m
15024	Pro 100, 3/8", 20 - 100 N·m
15025	Pro 100, 1/2", 20 - 100 N·m
15026	Pro 200, 1/2", 40 - 200 N·m

Part No	ADJUSTABLE - AUTOMOTIVE RATCHET (Reversible) - lbf·ft ONLY
15142	Pro 50, 3/8", 7.5 - 37.5 lbf·ft
15143	Pro 50, 1/2", 7.5 - 37.5 lbf·ft
15144	Pro 100, 3/8", 15 - 75 lbf·ft
15145	Pro 100, 1/2", 15 - 75 lbf·ft
15146	Pro 200, 1/2", 30 - 150 lbf·ft

Part No	ADJUSTABLE - AUTOMOTIVE RATCHET (Reversible) - lbf·in ONLY
15032	Pro 50, 3/8", 90 - 440 lbf·in
15033	Pro 50, 1/2", 90 - 440 lbf·in
15034	Pro 100, 3/8", 200 - 800 lbf·in
15035	Pro 100, 1/2", 200 - 800 lbf·in
15036	Pro 200, 1/2", 400 - 1800 lbf·in



**Part No** TORQUE HANDLES ADJUSTABLE 16mm SPIGOT - DUAL SCALE

15062	Pro 50, 16mm spigot, 10 - 50 N·m, 7.5 - 37.5 lbf·ft
15063	Pro 100, 16mm spigot, 20 - 100 N·m, 15 - 75 lbf·ft
15064	Pro 200, 16mm spigot, 40 - 200 N·m, 30 - 150 lbf·ft
15065	Pro 300, 16mm spigot, 60 - 300 N·m, 50 - 220 lbf·ft

**Part No** TORQUE HANDLES ADJUSTABLE 16mm SPIGOT - N.m ONLY

15072	Pro 50, 16mm spigot, 10 - 50 N·m
15073	Pro 100, 16mm spigot, 20 - 100 N·m
15074	Pro 200, 16mm spigot, 40 - 200 N·m
15075	Pro 300, 16mm spigot, 60 - 300 N·m

**Part No** TORQUE HANDLES ADJUSTABLE 16mm SPIGOT - lbf.ft ONLY

15082	Pro 50, 16mm spigot, 7.5 - 37.5 lbf·ft
15083	Pro 100, 16mm spigot, 15 - 75 lbf·ft
15084	Pro 200, 16mm spigot, 30 - 150 lbf·ft
15085	Pro 300, 16mm spigot, 50 - 220 lbf·ft

**Part No** TORQUE HANDLES ADJUSTABLE 16mm SPIGOT - lbf.in ONLY

15092	Pro 50, 16mm spigot, 90 - 440 lbf·in
15093	Pro 100, 16mm spigot, 200 - 800 lbf·in
15094	Pro 200, 16mm spigot, 400 - 1800 lbf·in
15095	Pro 300, 16mm spigot, 500 - 2500 lbf·in



**Part No** FEMALE TORQUE HANDLES ADJUSTABLE - DUAL SCALE

15102	Pro 50, 9 x 12mm, 10 - 50 N·m, 7.5 - 37.5 lbf·ft
15103	Pro 100, 9 x 12 mm, 20 - 100 N·m, 15 - 75 lbf·ft
15104	Pro 200, 9 x 12 mm, 40 - 200 N·m, 30 - 150 lbf·ft
15105	Pro 200, 14 x 18 mm, 40 - 200 N·m, 30 - 150 lbf·ft
15106	Pro 300, 14 x 18 mm, 60 - 300 N·m, 50 - 220 lbf·ft
15107	Pro 340, 14 x 18 mm, 60 - 340 N·m, 50 - 250 lbf·ft
15108	Pro 400, 14 x 18 mm, 80 - 400 N·m, 60 - 300 lbf·ft

**Part No** FEMALE TORQUE HANDLES ADJUSTABLE - N.m ONLY

15112	Pro 50, 9 x 12mm, 10 - 50 N·m
15113	Pro 100, 9 x 12 mm, 20 - 100 N·m
15114	Pro 200, 9 x 12 mm, 40 - 200 N·m
15115	Pro 200, 14 x 18 mm, 40 - 200 N·m
15116	Pro 300, 14 x 18 mm, 60 - 300 N·m
15117	Pro 340, 14 x 18 mm, 60 - 340 N·m
15118	Pro 400, 14 x 18 mm, 80 - 400 N·m

**Part No** FEMALE TORQUE HANDLES ADJUSTABLE - lbf.ft ONLY

15122	Pro 50, 9 x 12mm, 7.5 - 37.5 lbf·ft
15123	Pro 100, 9 x 12 mm, 15 - 75 lbf·ft
15124	Pro 200, 9 x 12 mm, 30 - 150 lbf·ft
15125	Pro 200, 14 x 18 mm, 30 - 150 lbf·ft
15126	Pro 300, 14 x 18 mm, 50 - 220 lbf·ft
15127	Pro 340, 14 x 18 mm, 50 - 250 lbf·ft
15128	Pro 400, 14 x 18 mm, 60 - 300 lbf·ft

**Part No** FEMALE TORQUE HANDLES ADJUSTABLE - lbf.in ONLY

15132	Pro 50, 9 x 12 mm, 90 - 440 lbf·in
15133	Pro 100, 9 x 12 mm, 200 - 800 lbf·in
15134	Pro 200, 9 x 12 mm, 400 - 1800 lbf·in
15135	Pro 200, 14 x 18 mm, 400 - 1800 lbf·in
15136	Pro 300, 14 x 18 mm, 500 - 2500 lbf·in
15137	Pro 340, 14 x 18 mm, 500 - 3000 lbf·in
15138	Pro 400, 14 x 18 mm, 700 - 3500 lbf·in

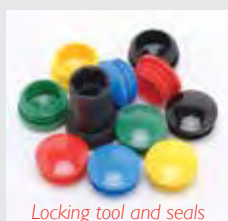


## PROFESSIONAL TORQUE WRENCH RATCHET 'P' TYPE



For production line applications requiring a sealed torque setting, 'P' Type wrenches have no scale and must be set against a suitable torque measuring device (see pages 36 - 38).

- Accurate to within  $\pm 3\%$  of torque setting
- Colour coded adjustment seals and locking tool provided
- On request 'P' Type wrenches can be set, marked with the setting and certified for production line applications requiring a sealed torque setting.



Locking tool and seals



- Push through ratchet allows clockwise and anti-clockwise torque control

Part No	PRODUCTION 'P' TYPE - INDUSTRIAL RATCHET (Push through square)
13051	Pro 60, $\frac{3}{8}$ ", 8 - 60 N·m, 5 - 45 lbf-ft
13052	Pro 60, $\frac{1}{2}$ ", 8 - 60 N·m, 5 - 45 lbf-ft
13053	Pro 100, $\frac{3}{8}$ ", 20 - 100 N·m, 15 - 80 lbf-ft
13054	Pro 100, $\frac{1}{2}$ ", 20 - 100 N·m, 15 - 80 lbf-ft
13055	Pro 200, $\frac{1}{2}$ ", 40 - 200 N·m, 30 - 150 lbf-ft
13057	Pro 300, $\frac{1}{2}$ ", 60 - 300 N·m, 45 - 220 lbf-ft
13056	Pro 400, $\frac{3}{4}$ " 80 - 400 N·m, 60 - 300 lbf-ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)



- Reversible, 72 tooth ratchet

Part No	PRODUCTION 'P' TYPE AUTOMOTIVE RATCHET (Reversible)
11164	Pro 60, $\frac{3}{8}$ ", 8 - 60 N·m, 5 - 45 lbf-ft
11171	Pro 60, $\frac{1}{2}$ ", 8 - 60 N·m, 5 - 45 lbf-ft
11138	Pro 100, $\frac{3}{8}$ ", 20 - 100 N·m, 15 - 80 lbf-ft
11139	Pro 100, $\frac{1}{2}$ ", 20 - 100 N·m, 15 - 80 lbf-ft
11140	Pro 200, $\frac{1}{2}$ ", 40 - 200 N·m, 30 - 150 lbf-ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)

## PROFESSIONAL TORQUE HANDLE 'P' TYPE



Setting a 'P' Type Torque Wrench



Part No	TORQUE HANDLES PRODUCTION 'P' TYPE 16mm SPIGOT
11167	Pro 60, 16mm spigot, 8 - 60 N·m, 5 - 45 lbf-ft
11143	Pro 100, 16mm spigot, 20 - 100 N·m, 15 - 80 lbf-ft
11144	Pro 200, 16mm spigot, 40 - 200 N·m, 30 - 150 lbf-ft
11117	Pro 300, 16mm spigot, 60 - 300 N·m, 45 - 220 lbf-ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)



Part No	FEMALE TORQUE HANDLES PRODUCTION 'P' TYPE
11170	Pro 60, 9 x 12mm, 8 - 60 N·m, 5 - 45 lbf-ft
11150	Pro 100, 9 x 12mm, 20 - 100 N·m, 15 - 80 lbf-ft
11151	Pro 200, 9 x 12mm, 40 - 200 N·m, 30 - 150 lbf-ft
11152	Pro 200, 14 x 18mm, 40 - 200 N·m, 30 - 150 lbf-ft
11153	Pro 300, 14 x 18mm, 60 - 300 N·m, 45 - 220 lbf-ft
13068	Pro 400, 14 x 18mm, 80 - 400 N·m, 60 - 300 lbf-ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)

**PROFESSIONAL TORQUE WRENCHES MODELS 650 - 1500 ADJUSTABLE**



**PROFESSIONAL TORQUE HANDLES MODELS 650 - 1500 ADJUSTABLE**



**Part No** TORQUE HANDLE ADJUSTABLE - DUAL SCALE  
**14040** Pro 650, 22mm spigot, 130 - 650 N·m, 100 - 480 lbf-ft



**For precision applications to 1500 N·m**

- Exceptionally clear torque signal from unique mechanism
- Non length dependant so can be used with or without the supplied extension handle (optional on Model 650)
- Extension handle significantly reduces operator effort to achieve high torque values
- Accurate to  $\pm 3\%$  of reading
- Supplied with traceable calibration certificate

Part No	ADJUSTABLE RATCHET - DUAL SCALE
14037	Pro 650, 3/4", 130 - 650 N·m, 100 - 480 lbf-ft
14015	Pro 800, 3/4", 200 - 800 N·m, 150 - 600 lbf-ft
14016	Pro 800, 1", 200 - 800 N·m, 150 - 600 lbf-ft
14002	Pro 1000, 3/4", 300 - 1000 N·m, 220 - 750 lbf-ft
14003	Pro 1000, 1", 300 - 1000 N·m, 220 - 750 lbf-ft
14004	Pro 1500, 3/4", 500 - 1500 N·m, 370 - 1100 lbf-ft
14005	Pro 1500, 1", 500 - 1500 N·m, 370 - 1100 lbf-ft

Part No	ADJUSTABLE RATCHET - N·m ONLY
14038	Pro 650, 3/4", 130 - 650 N·m
14024	Pro 800, 3/4", 200 - 800 N·m
14025	Pro 800, 1", 200 - 800 N·m
14026	Pro 1000, 3/4", 300 - 1000 N·m
14027	Pro 1000, 1", 300 - 1000 N·m
14028	Pro 1500, 3/4", 500 - 1500 N·m
14029	Pro 1500, 1", 500 - 1500 N·m

**Part No** FEMALE TORQUE HANDLES ADJUSTABLE - DUAL SCALE  
**14041** Pro 650, 14 x 18mm, 130 - 650 N·m, 100 - 480 lbf-ft



All models supplied in carry case

**PROFESSIONAL TORQUE WRENCHES MODELS 650 - 1500 'P' TYPE**



Part No	RATCHET PRODUCTION 'P' TYPE (Must be set using a Torque Tester, see pages 36-38)
14039	Pro 650, 3/4", 130 - 650 N·m, 100 - 480 lbf·ft
14017	Pro 800, 3/4", 200 - 800 N·m, 150 - 600 lbf·ft
14018	Pro 800, 1", 200 - 800 N·m, 150 - 600 lbf·ft
14007	Pro 1000, 3/4", 300 - 1000 N·m, 220 - 750 lbf·ft
14008	Pro 1000, 1", 300 - 1000 N·m, 220 - 750 lbf·ft
14009	Pro 1500, 3/4", 500 - 1500 N·m, 370 - 1100 lbf·ft
14010	Pro 1500, 1", 500 - 1500 N·m, 370 - 1100 lbf·ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)



Part No	MODELS 650-1500 ACCESSORY
14142	Extension Handle (included with Models 800-1500 as standard)



Part No	TORQUE HANDLES PRODUCTION 'P' TYPE (Must be set using a Torque Tester, see pages 36-38)
14042	Pro 650, 22mm spigot, 130 - 650 N·m, 100 - 480 lbf·ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)



Part No	FEMALE TORQUE HANDLES PRODUCTION 'P' TYPE (Must be set using a Torque Tester, see pages 36-38)
14043	Pro 650, 14 x 18mm, 130 - 650 N·m, 100 - 480 lbf·ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)

**SLIMLINE™ TORQUE WRENCHES ADJUSTABLE**



- SLO torque wrench accuracy exceeds all international standards
- Unmistakable signal when set torque is reached
- Traceable calibration certificate supplied to satisfy ISO9000:2000 quality systems
- High quality 72 tooth ratchet allows use in confined spaces
- Fixed head version has a push through square for left and right handed torque tightening
- Moulded grip aids correct hand location and operator comfort

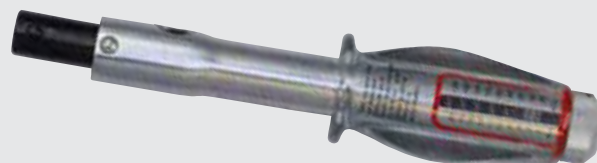
**Part No ADJUSTABLE RATCHET - DUAL SCALE**

11034	SLO Steel Knob, 3/8", 1 - 20 N·m, 10 - 180 lbf·in
11037	SLO Steel Knob, 1/4", 1 - 20 N·m, 10 - 180 lbf·in
11123	SLO Plastic Knob, 1/4", 4 - 20 N·m, 40 - 180 lbf·in
11087	SLO Plastic Knob, 3/8", 4 - 20 N·m, 40 - 180 lbf·in



**Part No ADJUSTABLE - FIXED HEAD - DUAL SCALE**

11035	SLO Steel Knob, 3/8" Fixed Head, 1 - 20 N·m, 10 - 180 lbf·in
11125	SLO Plastic Knob, 3/8" Fixed Head, 4 - 20 N·m, 40 - 180 lbf·in



Torque Handle versions are available for both 16mm spigot and 9 x 12mm fittings.

**Part No TORQUE HANDLE ADJUSTABLE - DUAL SCALE**

11036	SLO 16mm spigot, 1 - 20 N·m, 10 - 180 lbf·in
11126	SLO 16mm spigot, 4 - 20 N·m, 40 - 180 lbf·in
11122	SLO 9 x 12mm female, 4 - 20 N·m, 40 - 180 lbf·in

**SLIMLINE™ TORQUE WRENCHES 'P' TYPE**

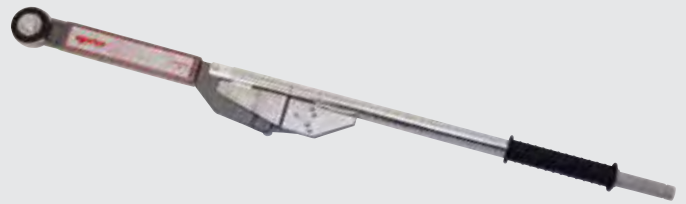


Production 'P' type versions are designed to discourage unauthorised alteration. They have no scale and so must be set against a torque testing device such as Norbar's TruCheck™ - see page 36.

Part No	PRODUCTION 'P' TYPE (Must be set using a Torque Tester, see pages 36-38)
11089	SLO 3/8" Fixed Head, 1 - 20 N·m, 10 - 180 lbf·in
11085	SLO 1/4", 1 - 20 N·m, 10 - 180 lbf·in
11086	SLO 3/8", 1 - 20 N·m, 10 - 180 lbf·in
11090	SLO 16mm spigot, 1 - 20 N·m, 10 - 180 lbf·in
11088	SLO 9 x 12mm female, 1 - 20 N·m, 10 - 180 lbf·in
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)



**INDUSTRIAL TORQUE WRENCHES ADJUSTABLE**



For ultimate torque control in heavy duty applications

- Unique 'break action' mechanism gives unparalleled control over the applied torque
- Perfect for wheel nuts and many other applications
- Accurate to ±4% of reading
- Supplied with traceable calibration certificate
- Split versions available for when storage space is limited such as vehicle tool kits

Part No	RATCHET ADJUSTABLE - DUAL SCALE
12001	3AR, 3/4", 100 - 500 N·m, 70 - 350 lbf·ft
12001.01	3AR, 1", 100 - 500 N·m, 70 - 350 lbf·ft
12006	4R, 3/4", 150 - 700 N·m, 100 - 500 lbf·ft
12006.01	4R, 1", 150 - 700 N·m, 100 - 500 lbf·ft
12007	4AR, 3/4", 200 - 800 N·m, 150 - 600 lbf·ft
12007.01	4AR, 1", 200 - 800 N·m, 150 - 600 lbf·ft
12009	5R, 3/4", 300 - 1000 N·m, 200 - 750 lbf·ft
12009.01	5R, 1", 300 - 1000 N·m, 200 - 750 lbf·ft
12012	5AR, 3/4", 700 - 1500 N·m, 500 - 1000 lbf·ft
12012.01	5AR, 1", 700 - 1500 N·m, 500 - 1000 lbf·ft

For 2000 N·m model see page number 16

Part No	RATCHET ADJUSTABLE - N·m ONLY
12105	4AR, 3/4", 200 - 800 N·m
12106	4AR, 1", 200 - 800 N·m
12107	5R, 3/4", 300 - 1000 N·m
12108	5R, 1", 300 - 1000 N·m

Part No	TORQUE HANDLE ADJUSTABLE - DUAL SCALE
12003	No.4, 22mm spigot, 130 - 550 N·m, 100 - 400 lbf·ft

Carry case not included

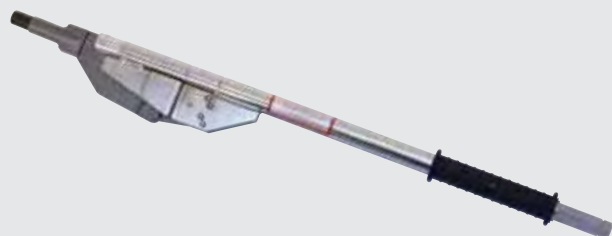
## INDUSTRIAL TORQUE WRENCHES 'P' TYPE



Production 'P' type versions are designed to discourage unauthorised alteration. They have no scale and so must be set against a torque testing device such as Norbar's TruCheck™ - see page 37.

- Unique 'break action' mechanism gives unparalleled control over the applied torque
- Perfect for wheel nuts and many other applications
- Accurate to  $\pm 4\%$  of reading

Part No	RATCHET PRODUCTION 'P' TYPE - DUAL SCALE (Must be set using a Torque Tester, see pages 36-38)
12015	3AR, $\frac{3}{4}$ ", 100 - 500 N·m, 70 - 350 lbf-ft
12020	4R, $\frac{3}{4}$ ", 150 - 700 N·m, 100 - 500 lbf-ft
12023	5R, $\frac{3}{4}$ ", 300 - 1000 N·m, 200 - 750 lbf-ft
12002	5AR, $\frac{3}{4}$ ", 700 - 1500 N·m, 500 - 1000 lbf-ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)



Part No	TORQUE HANDLE 'P' TYPE (Must be set using a Torque Tester, see pages 36-38)
12017	No.4, P Type, 22mm spigot, 130 - 550 N·m, 100 - 400 lbf-ft
SQ2222	Pre-set, etch and certify (Allow 3 days delivery for this service)

Carry case not included

## INDUSTRIAL TORQUE WRENCH - BI-SQUARE



The  $1\frac{1}{16}$ " Bi-square version of the Industrial Torque Wrench was developed specifically with rail track maintenance in mind. The critical need of the rail industry is to reduce the chance of any object being left on the track. Fitting directly onto rail fishplate bolts means that no socket or square drive is required, two components that could potentially be separated from the regular version of the Industrial Torque Wrench.

Part No	BI-SQUARE - DUAL SCALE
12026	$1\frac{1}{16}$ " Bi-Square, 300 - 1000 N·m, 200 - 750 lbf-ft

## INDUSTRIAL TORQUE WRENCHES - SPLIT



Split Industrials are supplied in two parts for easier transportation and storage, but can be assembled and disassembled in seconds.

Part No	RATCHET SPLIT ADJUSTABLE - DUAL SCALE
12102	4R, $\frac{3}{4}$ ", 150 - 700 N·m, 100 - 500 lbf-ft
12102.01	4R, 1", 150 - 700 N·m, 100 - 500 lbf-ft
12101	5R, $\frac{3}{4}$ ", 300 - 1000 N·m, 200 - 750 lbf-ft
12101.01	5R, 1", 300 - 1000 N·m, 200 - 750 lbf-ft
12100	6R, 1", 900 - 2000 N·m, 600 - 1500 lbf-ft

**INDUSTRIAL TORQUE WRENCH SQUARE DRIVES**



**Part No INDUSTRIAL SPARE SQUARE DRIVES**

12297	¾" Square Drive Assy for 3AR - 5AR
12299	1" Square Drive Assy for 3AR - 5AR
18492	1" Square Drive for 6R

**ELECTRODE WRENCHES**



**For torque tightening of carbon electrodes.**

Standard torque settings are shown. Other settings are available. The 8" Diameter electrode wrench uses the professional torque handle as the control mechanism. Above 8" the Industrial wrench is used as the control mechanism.

**Part No LOW RANGE**

12506	8" (200mm) 312 N·m
12530	10" (250mm) 542 N·m
12531	12" (300mm) 780 N·m

Other models available on request.

**Part No HIGH RANGE**

12532	14" (350mm) 1140 N·m
12533	16" (400mm) 1300 N·m
12535	18" (450mm) 1500 N·m
12536	20" (500mm) 2000 N·m
12537	22" (550mm) 2370 N·m
12538	24" (600mm) 2370 N·m
12538.HD	24" (600mm) 3200 N·m

**UKAS ACCREDITED CALIBRATION CERTIFICATION**

The prices shown below are for Comprehensive Calibration, for all new Torque Screwdrivers and Torque Wrenches, including NorTronic®, up to the maximum capacity shown.

**Part No ONE DIRECTION**

TWCC4.CW	Up to 400 N·m/300 lbf·ft
TWCC5.CW	Up to 1000 N·m/750 lbf·ft
TWCC6.CW	Up to 3000 N·m/2200 lbf·ft

**Part No TWO DIRECTIONS**

TWCC4.CW+CCW	Up to 400 N·m/300 lbf·ft
TWCC5.CW+CCW	Up to 1000 N·m/750 lbf·ft
TWCC6.CW+CCW	Up to 3000 N·m/2200 lbf·ft



SPANNER END FITTINGS FOR NORBAR 16mm TORQUE HANDLES

On this page you will find our standard range of end fittings.  
For other sizes, see page 20 & 21.



Part No	RING ENDS METRIC	Part No	RING ENDS IMPERIAL
29841	7mm	29701	¼"
29842	8mm	29702	5/16"
29843	9mm	29703	3/8"
29844	10mm	29704	7/16"
29845	11mm	29705	½"
29846	12mm	29706	9/16"
29847	13mm	29707	5/8"
29848	14mm	29708	11/16"
29849	15mm	29709	¾"
29850	16mm	29710	13/16"
29851	17mm	29711	7/8"
29876	18mm	29712	15/16"
29877	19mm	29713	1"
29852	20mm	29714	1 1/16"
29853	21mm	29715	1 1/8"
29854	22mm	29716	1 3/16"
29855	23mm	29717	1 ¼"
29856	24mm	29718	1 5/16"
29857	25mm		
29858	26mm		
29878	27mm		
29860	29mm		
29861	30mm		
29863	32mm		

Part No	RING ENDS METRIC	Part No	RING ENDS IMPERIAL
29881	7mm	29726	¼"
29882	8mm	29727	5/16"
29883	9mm	29728	3/8"
29884	10mm	29729	7/16"
29885	11mm	29730	½"
29886	12mm	29731	9/16"
29887	13mm	29732	5/8"
29888	14mm	29733	11/16"
29889	15mm	29734	¾"
29890	16mm	29735	13/16"
29891	17mm	29736	7/8"
29913	18mm	29737	15/16"
29914	19mm	29738	1"
29892	20mm	29739	1 1/16"
29893	21mm		
29894	22mm		
29895	23mm		
29896	24mm		
29915	27mm		

SPANNER END FITTINGS FOR NORBAR 22mm TORQUE HANDLES



Part No	OPEN ENDS METRIC
29963.22	22mm Open End
29963.24	24mm Open End
29963.27	27mm Open End
29963.30	30mm Open End
29963.32	32mm Open End
29963.36	36mm Open End
29963.41	41mm Open End
29963.46	46mm Open End

Part No	RING ENDS METRIC
29960.22	22mm Ring End
29960.24	24mm Ring End
29960.27	27mm Ring End
29960.30	30mm Ring End
29960.32	32mm Ring End
29960.36	36mm Ring End
29960.41	41mm Ring End
29960.46	46mm Ring End



Part No	FLARE ENDS METRIC
29921	7mm
29922	8mm
29923	9mm
29924	10mm
29925	11mm
29926	12mm
29927	13mm
29928	14mm
29929	15mm
29930	16mm
29931	17mm
29953	18mm
29954	19mm
29932	20mm
29933	21mm
29934	22mm
29935	23mm
29936	24mm
29955	27mm



SPIGOT ACCESSORIES



Part No	16mm SPIGOT ACCESSORIES
44509	3/8" Ratchet with Push through square
29825	1/2" Ratchet with Push through square
29828	3/8" Fixed Square Drive
29827	1/2" Fixed Square Drive
29829	3/8" Reversible Ratchet Head
29830	1/2" Reversible Ratchet Head
29832	Blank End Fitting
85242	Blank End Fitting for Open End
11343	Blank End Fitting for Ring End
72000	Spigot Adaptor 16mm to 22mm



Part No	22mm SPIGOT ACCESSORIES
29969	3/4" Square Drive Fixed Head
29972	3/4" Ratchet with Push through square
85719	Blank End Fitting for Open End
85720	Blank End Fitting for Ring End





## LARGE SPANNER END FITTINGS FOR NORBAR 16mm TORQUE HANDLES UP TO 300 N·m

See page 21 for explanation of Part Numbers. Other sizes available on request.



Part No	OPEN OFFSET METRIC 16mm	Part No	OPEN OFFSET IMPERIAL 16mm
29200.Mxx	28 - 42 mm	29200.lxx	1 1/8" - 1 5/16"
29200.Mxx	43 - 54 mm	29200.lxx	1 3/8" - 2 1/8"
29200.Mxx	55 - 70 mm	29200.lxx	2 3/16" - 2 3/4"

Part No	FLARE OFFSET METRIC 16mm	Part No	FLARE OFFSET IMPERIAL 16mm
29204.Mxx	25 - 39 mm	29204.lxx	1 1/8" - 1 9/16"
29204.Mxx	40 - 49 mm	29204.lxx	1 5/8" - 2"
29204.Mxx	50 - 70 mm	29204.lxx	2 1/16" - 2 3/4"



Part No	RING OFFSET METRIC 16mm	Part No	RING OFFSET IMPERIAL 16mm
29202.Mxx	25 - 39 mm	29202.lxx	1 1/8" - 1 9/16"
29202.Mxx	40 - 49 mm	29202.lxx	1 5/8" - 2"
29202.Mxx	50 - 70 mm	29202.lxx	2 1/16" - 2 3/4"

Part No	OPEN INLINE METRIC 16mm	Part No	OPEN INLINE IMPERIAL 16mm
29201.Mxx	25 - 42 mm	29201.lxx	1 1/8" - 1 5/16"
29201.Mxx	43 - 54 mm	29201.lxx	1 3/8" - 2 1/8"
29201.Mxx	55 - 70 mm	29201.lxx	2 3/16" - 2 3/4"

## LARGE SPANNER END FITTINGS FOR NORBAR 22mm TORQUE HANDLES UP TO 650 N·m

See page 21 for explanation of Part Numbers. Other sizes available on request.



Part No	OPEN OFFSET METRIC 22mm	Part No	OPEN OFFSET IMPERIAL 22mm
29206.Mxx	28 - 55 mm	29206.lxx	1 1/8" - 2 1/8"
29206.Mxx	56 - 88 mm	29206.lxx	2 3/16" - 3 3/16"

Part No	FLARE OFFSET METRIC 22mm	Part No	FLARE OFFSET IMPERIAL 22mm
29210.Mxx	28 - 51 mm	29210.lxx	1 1/8" - 1 15/16"
29210.Mxx	52 - 88 mm	29210.lxx	2" - 3 7/16"



Part No	RING OFFSET METRIC 22mm	Part No	RING OFFSET IMPERIAL 22mm
29208.Mxx	28 - 51 mm	29208.lxx	1 1/8" - 1 15/16"
29208.Mxx	52 - 88 mm	29208.lxx	2" - 3 7/16"

Part No	OPEN INLINE METRIC 22mm	Part No	OPEN INLINE IMPERIAL 22mm
29207.Mxx	28 - 55 mm	29207.lxx	1 1/8" - 2 1/8"
29207.Mxx	56 - 88 mm	29207.lxx	2 3/16" - 3 3/16"

PART NUMBERS FOR LARGE SPANNER END FITTINGS EXPLAINED



Part No	RING INLINE METRIC 16mm	Part No	RING INLINE IMPERIAL 16mm
29203.Mxx	25 - 39 mm	29203.lxx	1 1/8" - 1 1/2"
29203.Mxx	40 - 51 mm	29203.lxx	1 9/16" - 2"
29203.Mxx	52 - 70 mm	29203.lxx	2 1/16" - 2 3/4"



Part No	FLARE INLINE METRIC 16mm	Part No	FLARE INLINE IMPERIAL 16mm
29205.Mxx	25 - 39 mm	29205.lxx	5/16" - 1 1/2"
29205.Mxx	40 - 51 mm	29205.lxx	1 9/16" - 2"
29205.Mxx	52 - 70 mm	29205.lxx	2 1/16" - 2 3/4"

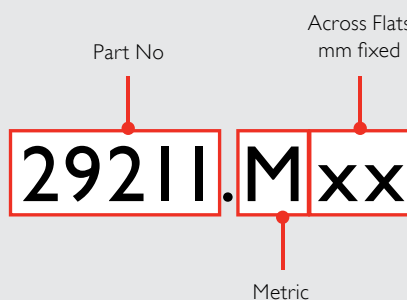


Part No	RING INLINE METRIC 22mm	Part No	RING INLINE IMPERIAL 22mm
29209.Mxx	28 - 44 mm	29209.lxx	1 1/8" - 1 3/4"
29209.Mxx	45 - 88 mm	29209.lxx	1 13/16" - 3 3/16"

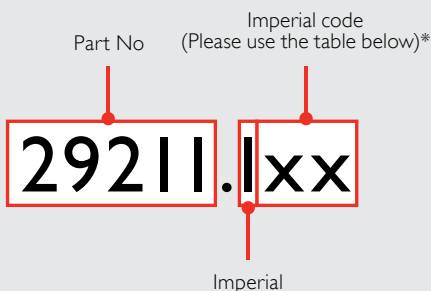


Part No	FLARE INLINE METRIC 22mm	Part No	FLARE INLINE IMPERIAL 22mm
29211.Mxx	28 - 44 mm	29211.lxx	1 1/8" - 1 3/4"
29211.Mxx	45 - 88 mm	29211.lxx	1 13/16" - 3 3/16"

METRIC



IMPERIAL



\*Example: 1 7/8" Open Inline for 22mm Spigot = 29207.I30

IMPERIAL A/F	CODE	IMPERIAL A/F	CODE
5/16"	05	1 15/16"	31
3/8"	06	2"	32
7/16"	07	2 1/16"	33
1/2"	08	2 1/8"	34
9/16"	09	2 3/16"	35
5/8"	10	2 1/4"	36
11/16"	11	2 5/16"	37
3/4"	12	2 3/8"	38
13/16"	13	2 7/16"	39
7/8"	14	2 1/2"	40
15/16"	15	2 9/16"	41
1"	16	2 5/8"	42
1 1/16"	17	2 11/16"	43
1 1/8"	18	2 3/4"	44
1 3/16"	19	2 13/16"	45
1 1/4"	20	2 7/8"	46
1 5/16"	21	2 15/16"	47
1 3/8"	22	3"	48
1 7/16"	23	3 1/16"	49
1 1/2"	24	3 1/8"	50
1 9/16"	25	3 3/16"	51
1 5/8"	26	3 1/4"	52
1 11/16"	27	3 5/16"	53
1 3/4"	28	3 3/8"	54
1 13/16"	29	3 7/16"	55
1 7/8"	30		