

TruTorque™ Wrench

Models 100 N.m to 300 N.m (75 lbf.ft to 250 lbf.ft)

In engineering this range, Norbar has paid close attention to accuracy, ease of setting and comfort in use.

Durability has been a primary development goal – both in terms of the lifetime of components and longevity of calibration accuracy. Cycle testing of wrenches at full torque was a key element of the development process and, in total, several million tightening cycles were accumulated. The result is a product that you can use with complete confidence that you have the best tool for the job.

- Accuracy: +/-3% of reading exceeds all international standards for torque wrenches. Each wrench is supplied with a traceable calibration certificate.
- Micrometer Scale for simple and error free setting. (On dual scale wrenches, the micrometer increment applies to the N.m scale.)
- Quick and Light Adjustment: adjustment over the entire scale can quickly be achieved and with minimal effort in approximately ten complete turns (exact number varies by model).
- Adjustment Lock: all models feature a lock to prevent accidental adjustment of the set torque.
- Versatile Ratchets: the tough ratchets are reversible and a narrow engagement angle of 6° to allow easy positioning of the tool in the tight confines of today's vehicles and machines.
- Bi-directional Torque: the ratchets are also 'push through' meaning that these wrenches will provide torque control in both the clockwise and anticlockwise directions.
- Comfortable, Durable Handle: the handle is constructed using two materials: a base material for strength overlaid with a soft feel grip for comfort and slip resistance. The handle material and lens resist chemicals in common usage in the automotive, aviation and industrial environments.



TruTorque is available with either dual scale (N.m and lbf.ft) or single scale (N.m or lbf.ft)



Ratchet Adjustables - Dual Scale

Model	Square Drive	Part No.	Range		Resolution	Ratchet Diameter	Engagements per revolution	Length	Weight
	in		N.m	lbf.ft	N.m	mm		mm	Kg
TT100	3/8	13266	20 – 100	15 – 75	0.5	38	60	405	1.0
TT100	1/2	13267	20 – 100	15 – 75	0.5	38	60	405	1.0
TT150	1/2	13268	30 – 150	20 – 110	0.5	38	60	455	1.1
TT200	1/2	13269	40 – 200	30 – 150	1.0	46	60	505	1.2
TT250	1/2	13270	50 – 250	40 – 185	1.0	46	60	560	1.4
TT300	1/2	13271	60 – 300	45 – 220	1.0	46	60	610	1.6

N.m only and lbf.ft only versions are available, contact Norbar for details.

TruTorque™ TTi Wrench

Models 50 N.m to 300 N.m (35 lbf.ft to 220 lbf.ft)

TruTorque TTi wrenches feature the same accuracy, ease of setting and comfort in use as the regular TruTorque models. They add to this formula non-reversible push through ratchets which are ultra robust and very simple to use. Body tubes and ratchets are finished in an attractive and durable satin chrome plate.

- Accuracy: +/-3% of reading exceeds all international standards for torque wrenches. Each wrench is supplied with a traceable calibration certificate.
- Micrometer Scale for simple and error free setting. (On dual scale wrenches, the micrometer increment applies to the N.m scale.)
- Quick and Light Adjustment: adjustment over the entire scale can quickly be achieved and with minimal effort in approximately ten complete turns (exact number varies by model).
- Adjustment Lock: all models feature a lock to prevent accidental adjustment of the set torque.
- Versatile Ratchets: the tough ratchets have a narrow engagement angle of 5° on the TTi50 and 6° on all other models allowing easy positioning of the tool in the tight confines of today's vehicles and machines.
- Bi-directional Torque: the ratchets are 'push through' meaning that these wrenches will provide torque control in both the clockwise and anticlockwise directions.
- Comfortable, Durable Handle: the handle is constructed using two materials: a base material for strength overlaid with a soft feel grip for comfort and slip resistance. The handle material and lens resist chemicals in common usage in the automotive, aviation and industrial environments.



Adjustment is achieved by rotating the end knob. The centre ring provides the lock feature.



Ratchet Adjustables - Dual Scale

Model	Square Drive	Part No.	Range		Resolution	Ratchet Diameter	Engagements per revolution	Length	Weight
	in		N.m	lbf.ft	N.m	mm		mm	Kg
TTi50	3/8"	13438	8 – 50	6 – 35	0.1	30	72	278	0.5
TTi50	1/2"	13439	8 – 50	6 – 35	0.1	30	72	278	0.5
TTi100	3/8"	13440	20 – 100	15 – 75	0.5	38	60	405	1.0
TTi100	1/2"	13441	20 – 100	15 – 75	0.5	38	60	405	1.0
TTi150	1/2"	13442	30 – 150	20 – 110	0.5	38	60	455	1.1
TTi200	1/2"	13443	40 – 200	30 – 150	1.0	46	60	505	1.2
TTi250	1/2"	13444	50 – 250	40 – 185	1.0	46	60	560	1.4
TTi300	1/2"	13445	60 – 300	45 – 220	1.0	46	60	610	1.6

N.m only and lbf.ft only versions are available, contact Norbar for details.

Professional Torque Wrench Model 5

The Model 5 is a torque wrench that offers high accuracy and the convenience of interchangeable 1/4 in. 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 ISO9000:2000 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.



Production 'P' Types

The 'P' type version prevents unauthorised alteration of torque setting. No external calibration equipment is required to set the Model 5 'P' Type.

Coloured end seals are provided to identify the wrench to a particular operator, torque setting or calibration period.



Model 5 'P' Type

Adjustable Torque Wrenches



Model	Units	Square Drive	Part No.	Range	Length	Weight
		in			mm	
5	N.m	$\frac{1}{4}$	13001	1-5 N.m	170	0.12
5	lbf.in	$\frac{1}{4}$	13002	10-50 lbf.in	170	0.12
5	kgf.cm	$\frac{1}{4}$	13003	10-50 kgf.cm	170	0.12



Optional stepless ratchet (Part No. 13122)

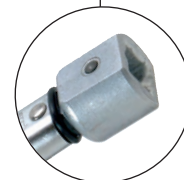
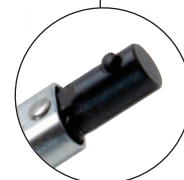
'P' Type Torque Wrenches

Model	Units	Square Drive	Part No.	Range	Length	Weight
		in			mm	
5 'P'	N.m	$\frac{1}{4}$	13004	1-5 N.m	154	0.12
5 'P'	lbf.in	$\frac{1}{4}$	13005	10-50 lbf.in	154	0.12
5 'P'	kgf.cm	$\frac{1}{4}$	13006	10-50 kgf.cm	154	0.12

Professional Torque Wrench

The 'Professional' is Norbar's core torque wrench range containing the most popular models and the most model variants to suit almost every application.

More than 60 years of torque wrench manufacture has shaped this range and no aspect of design, manufacture or materials is taken to chance. Every new product and design change is rigorously tested before introduction, a process that makes these wrenches amongst the most durable and accurate on the market.



Ratchets

The Professional torque wrench is available with a choice of ratchets and as a 'Torque Handle' for interchangeable fittings.

Torque Scale

Unique 'harmonic drive' scale mechanism allows a long scale length and therefore accurate and error free setting.

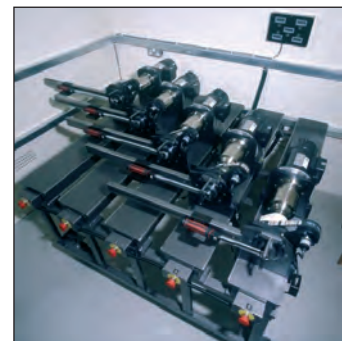


Torque Mechanism

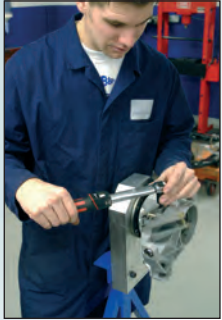
Norbar's accurate mechanism has been developed and enhanced over a 40 year period and several million examples have been produced. Less parts to maintain than 'pivot block' mechanisms. Simple calibration adjustments without disassembly.

Adjustment Lock

A robust lock prevents accidental adjustment of the wrench during use. Fingertip light adjustment comes from the best design and materials.



Norbar 5 station tester is used for durability and benchmark testing.



Professional Torque Wrench 'Automotive' Ratchet Models

The Professional torque wrench offers an ideal combination of accuracy, robust construction, comfort and ease of use.

The reversible ratchets on these models are designed with compact dimensions and a narrow engagement angle resulting from the 72 tooth pattern. These features make the wrench ideal for use in the confined spaces of modern motor vehicles and many other applications.

- Accuracy of $\pm 3\%$ of reading exceeds all international standards for torque wrenches.
- Every wrench is supplied with a calibration certificate to satisfy the requirements of ISO 9000:2000.
- Soft feel handle provides excellent grip even in oily conditions.
- Handle material and lens resist all chemicals in common automotive, industrial and aviation use.
- Locking mechanism prevents accidental adjustment of the wrench during operation.
- Long scale graduated in N.m and lbf.ft allows for foolproof and accurate setting.
- Supplied in moulded box for storage and protection.



Ratchet Adjustables - Automotive Ratchet

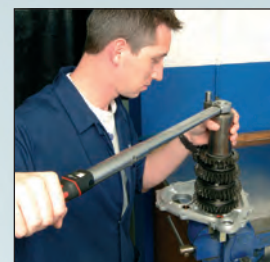
Model	Square Drive	Part No.	Range		Ratchet Diameter	Engagements per revolution	Length	Weight
	in		N.m	lbf.ft	mm		mm	Kg
60	$\frac{3}{8}$	13010	8 – 60	5 – 45	31	72	307	0.6
60	$\frac{1}{2}$	13011	8 – 60	5 – 45	31	72	307	0.6
100	$\frac{3}{8}$	13012	20 – 100	15 – 80	31	72	347	0.7
100	$\frac{1}{2}$	13013	20 – 100	15 – 80	31	72	347	0.7
200	$\frac{1}{2}$	13014	40 – 200	30 – 150	41	72	443	1.0

Professional Torque Wrench 'Industrial' Ratchet Models

These wrenches offer the same outstanding features as those on the previous page but with a wider model range – up to 400 N.m – and a different ratchet concept.

The push-through ratchets on these models are robustly engineered for strength and durability. The strength and high wear resistance comes from the design of the tooth pattern while a principle of offset ratchet pawls gives a narrow engagement angle of 5° on wrenches up to and including Model 200 and 6° on Models 300 to 400.

The push through square drive is not only a robust design but allows the wrench to be used for torque control in both the clockwise and anti clockwise directions. Please note that the 3/4" square drive of the Model 400 has to be removed and re-inserted on the other side of the ratchet head rather than pushed through.



Ratchet Adjustables - Industrial Ratchet N.m/lbf.ft Models

Model	Square Drive	Part No.	Range		Ratchet Diameter	Length	Weight
	in		N.m	lbf.ft	mm	mm	Kg
60	3/8	13042	8 – 60	5 – 45	35	312	0.66
60	1/2	13043	8 – 60	5 – 45	40	320	0.74
100	3/8	13044	20 – 100	15 – 80	35	353	0.73
100	1/2	13045	20 – 100	15 – 80	40	359	0.80
200	1/2	13046	40 – 200	30 – 150	42	442	1.01
300	1/2	13047	60 – 300	45 – 220	49	570	1.38
330	1/2	13049	60 – 330	45 – 250	49	683	1.50
400	3/4	13050	80 – 400	60 – 300	49	683	2.09

lbf.in Models

Model	Range
	lbf.in
13075	70 - 530
13076	70 - 530
13077	100 - 800
13078	100 - 800
13079	400 - 1800
13080	500 - 2500
13082	500 - 3000
13083	700 - 3500

All other features as table to the left.



Adjustable - 16mm Spigot

Model	Part No.	Range		Length	Weight
		N.m	lbf.ft	mm	Kg
60 TH	13018	8 – 60	5 – 45	301	0.55
100 TH	13019	20 – 100	15 – 80	340	0.6
200 TH	13020	40 – 200	30 – 150	423	0.78
300 TH	13021	60 – 300	45 – 220	548	1.13



Female Ended Adjustable - 9 x 12mm and 14 x 18mm

Model	Part No.		Range		Length	Weight
	9x12	14x18	N.m	lbf.ft	mm	Kg
60 TH	13022	-	8 – 60	5 – 45	300	0.55
100 TH	13023	-	20 – 100	15 – 80	340	0.6
200 TH	13024	13025	40 – 200	30 – 150	421/431	0.78
300 TH	-	13026	60 – 300	45 – 220	546.5	1.13
400 TH	-	13028	80 – 400	60 – 300	658	1.78

Professional Torque Wrench Torque Handles

Norbar Torque Handles are based on the 'Professional' wrench range and share the same high precision engineering.

Two end fitting styles are catered for: 16mm diameter spigot type and the 9 x 12mm and 14 x 18mm rectangular type.

For many applications a spanner end fitting rather than a socket is the best or, often, the only solution. Typically this will be because the joint is a pipe union (such as a brake pipe).

Production 'P' Type - 16mm Spigot

Model	Part No.	Range		Length	Weight
		N.m	lbf.ft	mm	Kg
60 THP	11167	8 – 60	5 – 45	280	0.55
100 THP	11143	20 – 100	15 – 80	320	0.6
200 THP	11144	40 – 200	30 – 150	402	0.78
300 THP	11117	60 – 300	45 – 220	640	1.13

Female Ended Production 'P' Type - 9 x 12mm & 14 x 18mm

Model	Part No.		Range		Length	Weight
	9x12	14x18	N.m	lbf.ft	mm	Kg
60 THP	11170	-	8 – 60	5 – 45	280	0.55
100 THP	11150	-	20 – 100	15 – 80	319	0.6
200 THP	11151	11152	40 – 200	30 – 150	400/410	0.78
300 THP	-	11153	60 – 300	45 – 220	528	1.13
400 THP	-	13068	80 – 400	60 – 300	640	1.75

Available Fittings

See pages 28 & 29





End Cap Kit and Locking Tool
Part No. 11698



'P' Type wrenches have no scale. They must be set against a torque testing device such as Norbar's Professional Torque Tester (see page 68).



Professional Torque Wrench Production 'P' Types

'P' Type wrenches are designed for the production environment where they will be set and then dedicated to a particular application. There is no scale, the wrench must be set against a torque testing device such as Norbar's Professional Torque Tester (see page 68).

'P' Type wrenches are available with two ratchet types – 'Industrial' and 'Automotive' (see explanation on pages 18 and 19) and as 'Torque Handles' for interchangeable end fittings.

Ratchet Torque Wrench Production 'P' Type - Automotive Ratchet

Model	Square Drive	Part No.	Range		Ratchet Diameter	Engagements per revolution	Length	Weight
	in		N.m	lbf.ft	mm		mm	Kg
60 'P'	$\frac{3}{8}$	11164	8 – 60	5 – 45	31	72	286	0.6
60 'P'	$\frac{1}{2}$	11171	8 – 60	5 – 45	31	72	286	0.6
100 'P'	$\frac{3}{8}$	11138	20 – 100	15 – 80	31	72	326	0.69
100 'P'	$\frac{1}{2}$	11139	20 – 100	15 – 80	31	72	326	0.69
200 'P'	$\frac{1}{2}$	11140	40 – 200	30 – 150	41	72	423	1.0

Ratchet Torque Wrench Production 'P' Type - Industrial Ratchet

Model	Square Drive	Part No.	Range		Ratchet Diameter	Engagements per revolution	Length	Weight
	in		N.m	lbf.ft	mm		mm	Kg
60 'P'	$\frac{3}{8}$	13051	8 – 60	5 – 45	35	72	291	0.62
60 'P'	$\frac{1}{2}$	13052	8 – 60	5 – 45	40	72	299	0.69
100 'P'	$\frac{3}{8}$	13053	20 – 100	15 – 80	35	72	332	0.68
100 'P'	$\frac{1}{2}$	13054	20 – 100	15 – 80	40	72	338	0.74
200 'P'	$\frac{1}{2}$	13055	40 – 200	30 – 150	42	72	422	0.96
300 'P'	$\frac{1}{2}$	13057	60 – 300	45 – 220	49	60	663	1.45
400 'P'	$\frac{3}{4}$	13056	80 – 400	60 – 300	49	60	663	2.04



Professional Torque Wrench Models 550 - 1500

- Accuracy of $\pm 3\%$ of reading.
- Traceable calibration certificate supplied.
- Non length dependent. Extension handle can be used to reduce operator effort (handle supplied as standard with Model 800, 1000 and 1500).
- Positive 'click' can be heard, seen and felt.
- Low weight - Model 1000 just 5.8kg.
- Long scale length in N.m and lbf.ft allows error free setting.
- Fine 60 tooth ratchet allows the wrench to be used in confined areas.
- Supplied in carry case for storage and protection.



Extension Handle Part No. 14142 - supplied as standard with Models 800 to 1500

Ratchet Adjustables

Model	Square Drive	Part No.	Range		Ratchet Diameter	Engagements per revolution	Length	Length inc ext handle	Weight*
	in		N.m	lbf.ft	mm		mm	mm	Kg
550	$\frac{3}{8}$	14001	110 – 550	80 – 400	61	60	845	-	4.0
800	$\frac{3}{8}$	14015	200 – 800	150 – 600	75	60	1035	1535	5.2
800	1	14016	200 – 800	150 – 600	75	60	1035	1535	5.2
1000	$\frac{3}{8}$	14002	300 – 1000	220 – 750	75	60	1250	1750	5.8
1000	1	14003	300 – 1000	220 – 750	75	60	1250	1750	5.8
1500	$\frac{3}{8}$	14004	500 – 1500	370 – 1100	75	60	1570	2070	6.7
1500	1	14005	500 – 1500	370 – 1100	75	60	1570	2070	6.7

* Weight excluding extension handle. Extension handle, length 700 mm, weight 1.6 kg



Adjustable Torque Handles

Model	End Fitting	Part No.	Range		Length	Weight
			N.m	lbf.ft	mm	Kg
550 TH	14x18mm Female	14011	110 – 550	80 – 400	790	3.6
550 TH	22mm Male	14012	110 – 550	80 – 400	780	3.6

Available Fittings

See page 29



Torque Handles Production 'P' Type

Model	End Fitting	Part No.	Range		Length	Weight
			N.m	lbf.ft	mm	Kg
550 THP	14x18mm Female	14013	110 – 550	80 – 400	790	3.6
550 THP	22mm Male	14014	110 – 550	80 – 400	780	3.6



End Cap Kit and Locking Tool
Part No. 14166

Ratchet Torque Wrench Production 'P' Type

Model	Square Drive	Part No.	Range		Ratchet Diameter	Engagements per revolution	Length	Length inc ext handle	Weight*
	in		N.m	lbf.ft	mm		mm	mm	Kg
550 'P'	3/8	14006	110 – 550	80 – 400	61	60	845	-	4.0
800 'P'	3/4	14017	200 – 800	150 – 600	75	60	1035	1535	5.2
800 'P'	1	14018	200 – 800	150 – 600	75	60	1035	1535	5.2
1000 'P'	3/4	14007	300 – 1000	220 – 750	75	60	1250	1750	5.8
1000 'P'	1	14008	300 – 1000	220 – 750	75	60	1250	1750	5.8
1500 'P'	3/4	14009	500 – 1500	370 – 1100	75	60	1570	2070	6.7
1500 'P'	1	14010	500 – 1500	370 – 1100	75	60	1570	2070	6.7

* Weight excluding extension handle. Extension handle, length 700 mm, weight 1.6 kg

Slimline™ Torque Wrench

Model SLO Fixed Head and Torque Handles

- Accuracy exceeds all international standards.
- Unmistakable signal when set torque is reached.
- Traceable calibration certificate supplied to satisfy ISO 9000:2000 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 handle location and operator comfort.

For 1 - 20 N.m ratchet torque wrenches, see the TruTorque range on page 13.



Adjustable Wrenches - Fixed Head

Model	Square Drive	Part No.	Range		Ratchet Diameter	Engagements per revolution	Length	Weight
	in		N.m	lbf.in	mm		mm	Kg
SLO Fixed	½	11035	1 – 20	10 – 180	-	-	211	0.4
SLO Fixed	¾	11125	4 – 20	40 – 180	-	-	213	0.4

Adjustable Torque Handles

Model	End Fitting	Part No.	Range		Length	Weight
			N.m	lbf.in	mm	Kg
SLO TH	16mm Spigot	11036	1 – 20	10 – 180	207	0.4
SLO TH	16mm Spigot	11126	4 – 20	40 – 180	210	0.4
SLO TH	9x12mm Female	11122	4 – 20	40 – 180	205	0.4

Slimline™ Torque Wrench Model SLO 'P' Type

- Torque Handle versions are available for both 16mm spigot and 9 x 12mm fittings.
- Production 'P' type versions are designed to discourage unauthorised alteration.
- 'P' Type versions have no scale. These wrenches must be set against a torque testing device such as Norbar's Professional Torque Tester (see page 68).



Torque Handles Production 'P' Types

Model	End Fitting	Part No.	Range		Length	Weight
			N.m	lbf.in	mm	Kg
SLO THP	16mm Spigot	11090	1 – 20	10 – 180	207	0.4
SLO THP	9x12mm Female	11088	1 – 20	10 – 180	203	0.4



16mm Spigot



9x12mm Female

Available Fittings
See pages 28 & 29



Fixed Head



Ratchet Head

Ratchet and Fixed Head - Production 'P' Types

Model	Square Drive	Part No.	Range		Ratchet Diameter	Engagements per revolution	Length	Weight
	in		N.m	lbf.in	mm		mm	Kg
SLO 'P'	¼	11085	1 – 20	10 – 180	29	72	218	0.4
SLO 'P'	⅜	11086	1 – 20	10 – 180	29	72	218	0.4
SLO Fixed	⅜	11089	1 – 20	10 – 180	-	-	211	0.4

Industrial Torque Wrench

Adjustable Models

- Robust construction gives accurate results, to $\pm 4\%$, even in arduous working conditions.
- Every wrench supplied with a calibration certificate to satisfy requirements of ISO 9000:2000.
- The large break angle improves accuracy by reducing the possibility of over torquing.
- Cam control of the mechanism gives a controlled break which will not throw the operator off balance.
- Dual scaled, N.m and lbf.ft.
- Supplied in a carry case for storage and protection.
- If storage space is limited, for example in vehicle tool kits, models 4R to 5R can be supplied in two piece form where the longer of the pieces is 900mm (see page 27).
- For 2000 N.m, see 6R Split Industrial on page 27



Carry case standard (except 4 TH and 4 THP)



Adjusting Scale



Ratchet Adjustables

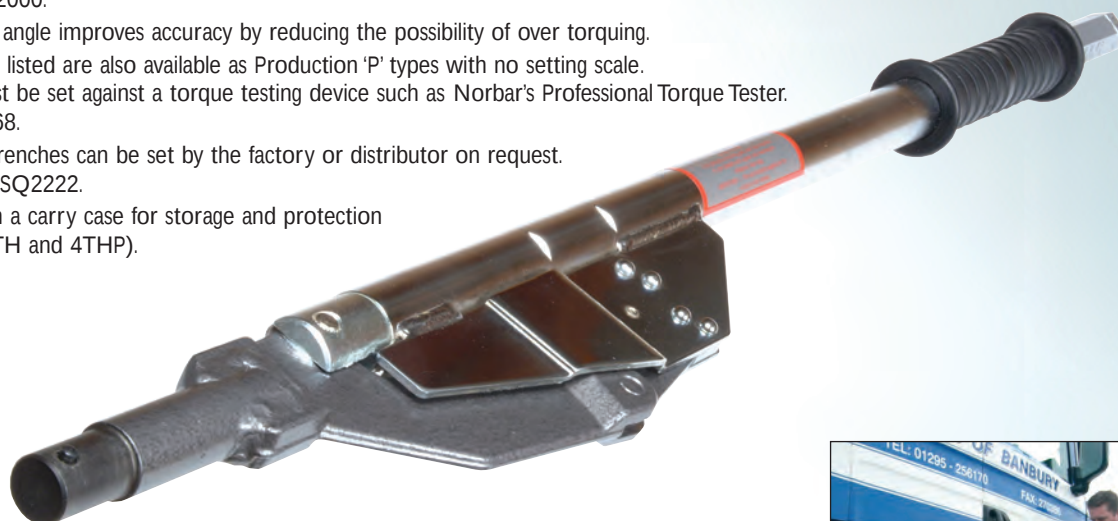
Model	Part No.		Range		Ratchet Diameter mm	Engagements per revolution	Length †	Weight
	3/4"	1"	N.m	lbf.ft			mm	Kg
3AR	12001	12001.01	100 – 500	70 – 350	70	36	910	5.2
4R	12006	12006.01	150 – 700	100 – 500	70	36	1150	6.3
4AR	12007	12007.01	200 – 800	150 – 600	70	36	1250	6.4
5R	12009	12009.01	300 – 1000	200 – 750	70	36	1475	7.3
5AR	12012	12012.01	700 – 1500	500 – 1000	70	36	1475	10.4

† Length with adjusting nut set to minimum torque.

Industrial Torque Wrench

Torque Handles, Production 'P' Type and Split Models

- Robust construction gives accurate results, to $\pm 4\%$, even in arduous working conditions.
- Every adjustable wrench supplied with a calibration certificate to satisfy requirements of ISO 9000:2000.
- The break angle improves accuracy by reducing the possibility of over torquing.
- All models listed are also available as Production 'P' types with no setting scale. These must be set against a torque testing device such as Norbar's Professional Torque Tester. See page 68.
- 'P' Type Wrenches can be set by the factory or distributor on request. Part code SQ2222.
- Supplied in a carry case for storage and protection (except 4TH and 4THP).



Split Industrial in Box.



Adjustable and Production 'P' Type Torque Handles

Model	End Fitting	Part No.	Range		Length †	Weight
			N.m	lbf.ft		
4 TH	22mm Spigot	12003	130 – 550	100 – 400	935	4.6
4 THP	22mm Spigot	12017	130 – 550	100 – 400	835	4.6

† Length with adjusting nut set to minimum torque.

Available Fittings

See page 29



Ratchet Torque Wrench Split Adjustables

Model	Part No.		Range		Ratchet Diameter	Engagements per revolution	Length †	Weight
	3/4"	1"	N.m	lbf.ft				
4R	12102	12102.01	150 – 700	100 – 500	70	36	1150	6.3
5R	12101	12101.01	300 – 1000	200 – 750	70	36	1475	7.3
6R	-	12100	900 – 2000	600 – 1500	70	36	1920	13

† Length with adjusting nut set to minimum torque.



'P' Type - Sealed Adjustment