

## 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.

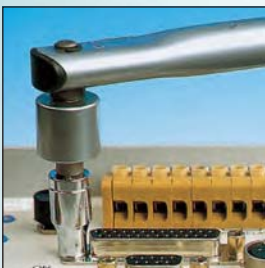


Model 5 'P' Type



### Adjustable Torque Wrenches

Model	Units	Square Drive	Part No.	Range	Length	Weight
		in			mm	kg
5	N.m	1/4	13001	1-5 N.m	170	0.12
5	lbf.in	1/4	13002	10-50 lbf.in	170	0.12
5	kgf.cm	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	kg
5 'P'	N.m	1/4	13004	1-5 N.m	154	0.12
5 'P'	lbf.in	1/4	13005	10-50 lbf.in	154	0.12
5 'P'	kgf.cm	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.



### Adjustment Lock

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

### 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.

### Torque Scale

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



### Ratchets

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



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			
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