



STATIC TRANSDUCERS

Calibration
details

The accuracy and quality of the Norbar Static Torque Transducers has made them the first choice of many calibration laboratories throughout the world. Up to 5,000 N·m (5,000 lbf·ft) classified to BS7882:2017, typically better than Class 1 for the primary classification range ($\pm 0.5\%$ of reading from 20% to 100% of full scale).

- Robust, heat treated, alloy steel torsion shaft design
- Designed to ignore non-torsional forces
- Operates in clockwise and counter-clockwise directions
- Calibration up to 100,000 N·m with a UKAS accredited certificate
- Calibrated in clockwise direction as standard. Counter-clockwise provided on request

Static Transducers ¼" through to 1"

4	STATIC TRANSDUCERS - 0.1 - 1,500 N·m	
50587.xxx*	0.1 - 1 N·m	¼" M/F
50588.xxx	0.25 - 2.5 N·m	¼" M/F
50589.xxx	0.5 - 5 N·m	¼" M/F
50590.xxx	1 - 10 N·m	¼" M/F
50591.xxx	2.5 - 25 N·m	⅜" M/F
50592.xxx	5 - 50 N·m	⅜" M/F
50593.xxx	10 - 100 N·m	½" M/F
50594.xxx	25 - 250 N·m	½" M/F
50701.xxx	25 - 250 N·m	¾" M/F
50849.xxx	35 - 350 N·m	½" M/F
50596.xxx	50 - 500 N·m	¾" M/F
50772.xxx	100 - 1,000 N·m	1" M/F
50766.xxx	150 - 1,500 N·m	1" M/F

4	STATIC TRANSDUCERS - 0.1 - 1,000 lbf·ft	
50611.xxx	0.1 - 1 lbf·ft	¼" M/F
50615.xxx	0.5 - 5 lbf·ft	¼" M/F
50618.xxx	1 - 10 lbf·ft	¼" M/F
50620.xxx	2.5 - 25 lbf·ft	⅜" M/F
50836.xxx	5 - 50 lbf·ft	½" M/F
50624.xxx	10 - 100 lbf·ft	½" M/F
50625.xxx	25 - 250 lbf·ft	½" M/F
50702.xxx	25 - 250 lbf·ft	¾" M/F
50627.xxx	50 - 500 lbf·ft	¾" M/F
50773.xxx	100 - 1,000 lbf·ft	1" M/F

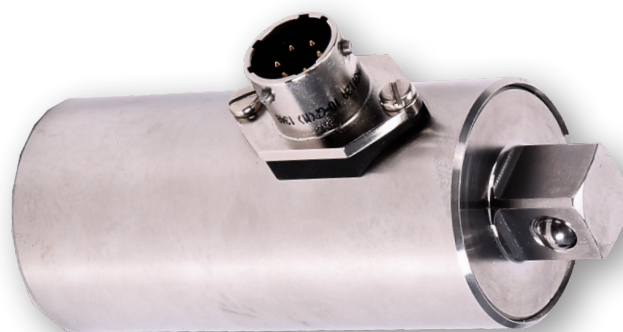
4	STATIC TRANSDUCERS - 1 - 1,000 lbf·in	
50610.xxx*	1 - 10 lbf·in	¼" M/F
50612.xxx	2.5 - 25 lbf·in	¼" M/F
50614.xxx	5 - 50 lbf·in	¼" M/F
50617.xxx	10 - 100 lbf·in	¼" M/F
50619.xxx	25 - 250 lbf·in	⅜" M/F
50621.xxx	50 - 500 lbf·in	⅜" M/F
50623.xxx	100 - 1,000 lbf·in	½" M/F

4	STATIC TRANSDUCERS - 10 - 100 ozf·in	
50609.xxx*	10 - 100 ozf·in	¼" M/F
TD2.CCW	Alternative calibration direction for transducers up to 1,500 N·m / 1,000 lbf·ft when ordered with new unit	

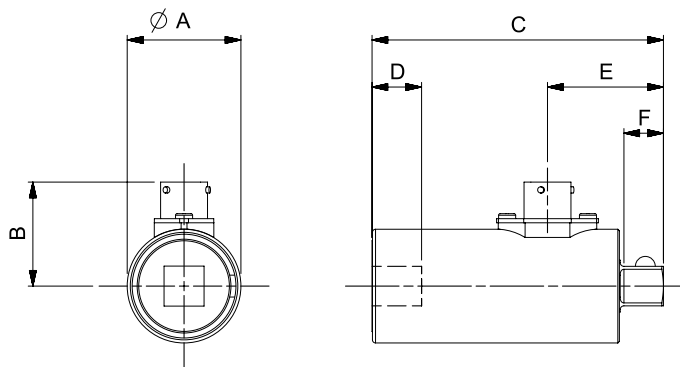
xxx Indicates .LOG or .IND versions, please see page 98.

* .LOG versions not suitable for use with TST, TTT or TTL-HE, purchased pre Feb 2016.

- Smart transducers have a built in memory circuit which contains essential information about the transducer. This information can be read by Norbar's TST, TTT, TTL-HE & T-Box™ 2 instruments meaning that when the transducer is connected, it is immediately recognised and ready for use
- Smart transducers can also be used with many other instruments, however these will operate as normal ratio calibrated (mV/V) transducers - the smart data will not be read



Model		¼" M/F	⅜" M/F	½" M/F	¾" M/F	1" M/F
Part Number		50587.xxx 50588.xxx 50589.xxx 50590.xxx 50611.xxx 50615.xxx 50618.xxx 50610.xxx 50612.xxx 50614.xxx 50617.xxx 50609.xxx	50591.xxx 50592.xxx 50620.xxx 50619.xxx 50621.xxx	50593.xxx 50594.xxx 50849.xxx 50836.xxx 50624.xxx 50625.xxx 50623.xxx	50701.xxx 50596.xxx 50702.xxx 50627.xxx	50772.xxx 50766.xxx 50773.xxx
Dimensions (mm)	ØA	36	36	36	54	54
	B	33	33	33	42	42
	C	86	90	93	142	147
	D	10	13	16	24	29
	E	30	34	37	46	51
	F	6.5	10	13	22	26
Weight (kg)		0.6	0.6	0.6	1.5	1.7





STATIC TRANSDUCERS

Calibration
details

Static Transducers 1½" through to 3½" Male to Female (M/F)

4	STATIC TRANSDUCERS - 250 - 7,000 N·m	
50703.xxx	250 - 2,500 N·m	1½" M/F
50791.xxx	300 - 3,000 N·m	1½" M/F
50599.xxx	500 - 5,000 N·m	1½" M/F
50669.xxx@	700 - 7,000 N·m	1½" M/F

4	STATIC TRANSDUCERS - 250 - 5,000 lbf·ft	
50704.xxx	250 - 2,500 lbf·ft	1½" M/F
50630.xxx	500 - 5,000 lbf·ft	1½" M/F

TD5.CCW@ Alternative calibration direction for transducers from 1,501 - 7,000 N·m / 1,001 - 5,000 lbf·ft when ordered with new unit

4	STATIC TRANSDUCERS - 1,000 - 100,000 N·m	
50776.xxx	1,000 - 10,000 N·m	2½" M/F
50797.xxx	2,500 - 25,000 N·m	2½" M/F
50781.xxx	5,000 - 50,000 N·m	2½" M/F
50783.xxx	8,000 - 80,000 N·m	3½" M/F
50816.xxx	10,000 - 100,000 N·m	3½" M/F

4	STATIC TRANSDUCERS - 1,000 - 60,000 lbf·ft	
50777.xxx	1,000 - 10,000 lbf·ft	2½" M/F
50798.xxx	2,500 - 25,000 lbf·ft	2½" M/F
50799.xxx	3,000 - 30,000 lbf·ft	2½" M/F
50782.xxx	6,000 - 60,000 lbf·ft	3½" M/F

TD3.CCW+ Alternative calibration direction for transducers from 7,001 - 100,000 N·m / 5,001 - 100,000 lbf·ft when ordered with new unit

xxx Indicates .LOG or .IND versions, please see page 98.

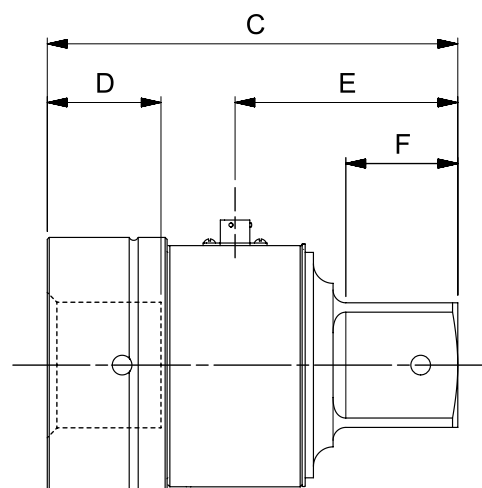
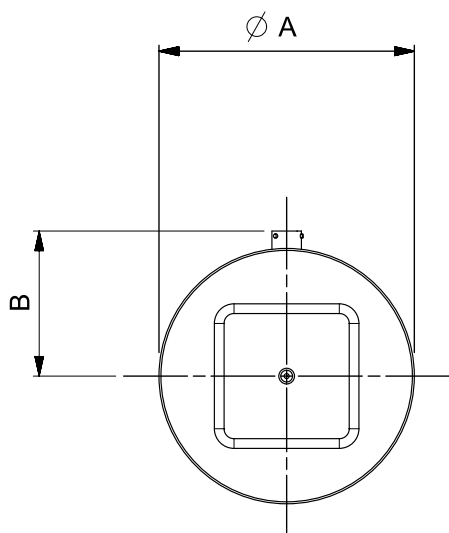
* .LOG versions not suitable for use with TST, TTT or TTL-HE, purchased pre Feb 2016.

@ UKAS accredited calibration up to 6,000 N·m. A non-accredited value at 7,000 N·m is extrapolated and provided for reference only.

+ UKAS accredited calibration up to 80,000 lbf·ft. A non-accredited value at 100,000 lbf·ft is extrapolated and provided for reference only.



Model	1½" M/F	2½" M/F	3½" M/F
Part Number	50703.xxx 50791.xxx 50599.xxx 50669.xxx 50704.xxx 50630.xxx	50776.xxx 50797.xxx 50781.xxx 50777.xxx 50798.xxx 50799.xxx	50783.xxx 50816.xxx 50782.xxx
Dimensions (mm)	ØA	95	130
	B	59	80
	C	160	209
	D	41	59
	E	85	114
	F	38	57
Weight (kg)	4.5	11.5	16.5





STATIC TRANSDUCERS

Calibration
details

Static Transducers 2½" through to 3½" Male to Male (M/M)

4	STATIC TRANSDUCERS - 2,500 - 100,000 N·m	
50603.xxx	2,500 - 25,000 N·m	2½" M/M
50794.xxx	5,000 - 50,000 N·m	3½" M/M
50796.xxx	10,000 - 100,000 N·m	3½" M/M

4	STATIC TRANSDUCERS - 2,500 - 100,000 lbf·ft	
50635.xxx	2,500 - 25,000 lbf·ft	2½" M/M
50795.xxx	5,000 - 50,000 lbf·ft	3½" M/M
50637.xxx+	10,000 - 100,000 lbf·ft	3½" M/M

TD3.CCW+ Alternative calibration direction for transducers from 7,001 - 100,000 N·m / 5,001 - 100,000 lbf·ft when ordered with new unit

4	STATIC TRANSDUCERS - 15,000 - 200,000 N·m	
-	15,000 - 150,000 N·m	4½" M/M
-	20,000 - 200,000 N·m	4½" M/M

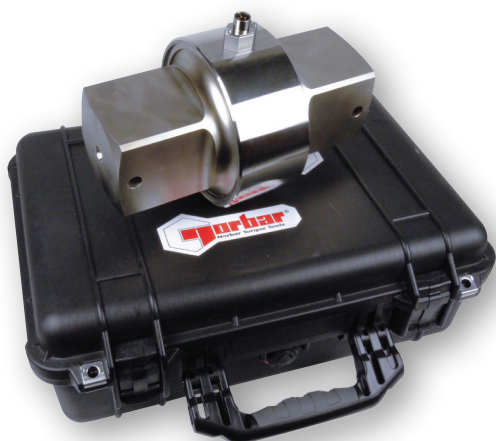
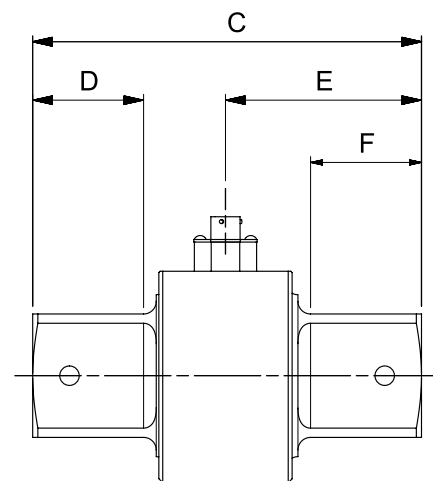
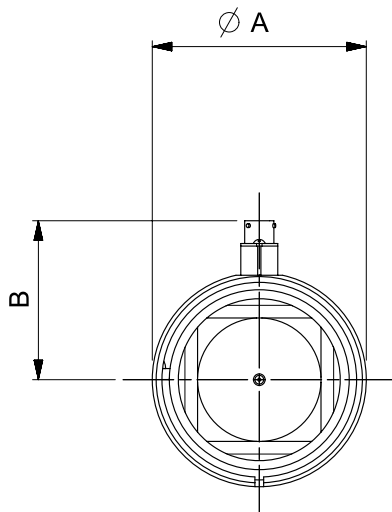
xxx Indicates .LOG or .IND versions, please see page 98.

* .LOG versions not suitable for use with TST, TTT or TTL-HE, purchased pre Feb 2016.

@ UKAS accredited calibration up to 6,000 N·m. A non-accredited value at 7,000 N·m is extrapolated and provided for reference only.

+ UKAS accredited calibration up to 80,000 lbf·ft. A non-accredited value at 100,000 lbf·ft is extrapolated and provided for reference only.

Model	2½" M/M	3½" M/M
Part Number	50603.xxx 50635.xxx	50794.xxx 50796.xxx 50795.xxx 50637.xxx
Dimensions (mm)	ØA	110
	B	82
	C	200
	D	57
	E	100
	F	57
Weight (kg)	11.5	16.5



4	STATIC TRANSDUCERS
SECCAL.CW	Secondary calibration in one direction on static transducers with 2½" square drives to extend the range below 10% of the rated capacity, when ordered with new unit
SECCAL.CW+CCW	Secondary calibration in two directions on static transducers with 2½" square drives to extend the range below 10% of the rated capacity, when ordered with new unit
ADDCALPOINTS.NEW	Additional calibration steps below 10% of rated capacity to 2% for transducers up to 7,000 N·m (5,000 lbf·ft) when ordered with new unit



SPARES FOR INSTRUMENTATION PRODUCTS

8	SPARES FOR INSTRUMENTATION PRODUCTS
38876	Rechargeable Battery Pack for Pro-Log, TST & TTT
29610	¼" Female - ½" Male Sleeve Adaptor
29611	½" Female - ¾" Male Sleeve Adaptor
29612	½" Female - 1" Male Sleeve Adaptor
29613	¾" Female - 1" Male Sleeve Adaptor
29614	¾" Female - ½" Male Sleeve Adaptor

4	SERIAL DATA LEAD KIT
60248	Serial Data Lead Kit
Note: Serial Data Lead Kit is not suitable for use with HE Instrument and TruCheck™ 2	
60259	USB to Serial Data Lead (Does not work with USM)
This kit enables Norbar 'CE Marked' instruments (Post January 1996 ETS, TWA and DTS plus all Pro-Test, TST and TTT) to connect to most PCs.	

PART NUMBER SUFFIX SYSTEM

Transducers can be ordered for use with Norbar's current range of instruments (TST, TTT, TTL-HE and T-Box™ 2), and as Industry Standard (mV/V calibrated) for certain display instruments from other manufacturers.

A part number suffix system is used to identify the type of calibration required. For example, a 1,000 N·m Static Transducer for use with a TTT instrument would become part number 50772.LOG.

SUFFIX	USAGE	CERTIFIED IN
.LOG	TST, TTT, TTL-HE & T-Box™ 2	Torque Units
.IND	Instruments of non Norbar manufacture (check with Norbar for suitability) and TST, TTT, TTL-HE & T-Box™ 2	mV/V

Where the transducer suffix .LOG is used, the transducer is calibrated with an instrument, as a system, a calibration certificate is provided in torque units. A full scale mV/V figure is also supplied.

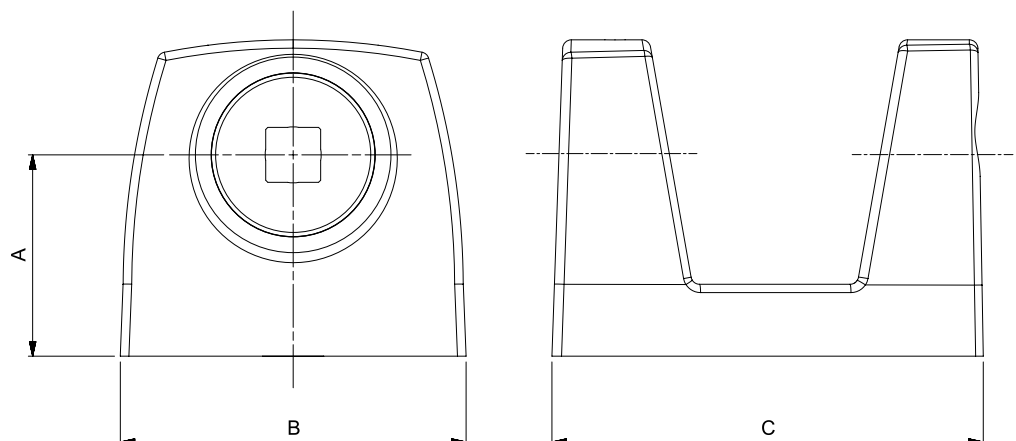
STATIC TRANSDUCER BENCH STANDS

4	BENCH STANDS FOR STATIC TORQUE TRANSDUCERS
50211	Small frame size (10 N·m) ¼" sq.
50212	Small frame size (50 N·m) ⅜" sq.
50213	Small frame size (100/250 N·m) ½" sq.
50220	Large frame size (250/500 N·m) ¾" sq.
50221	Large frame size (1,000/1,500 N·m) 1" sq.
50127.BLK9005*	Extra large size (7,000 N·m) 1½" sq.
52014	¼" Insert for Small Bench Stands
52015	⅜" Insert for Small Bench Stands
52016	½" Insert for Small Bench Stands
52017	¾" Insert for Large Bench Stands
52018	1" Insert for Large Bench Stands

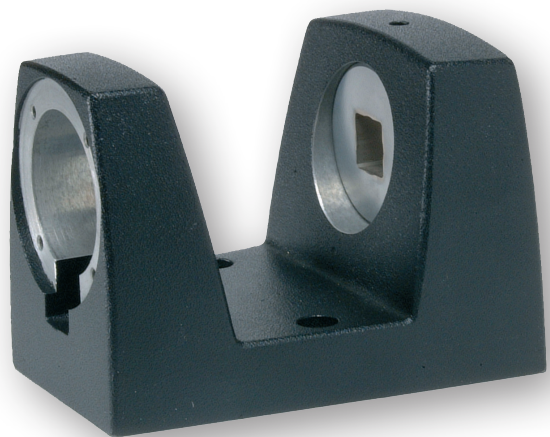
* Dimensions available on request



Model	Small Frame Size	Large Frame Size
Part Number	50211 50212 50213	50220 50221
Dimensions (mm)	A	50
	B	99
	C	120
Weight (kg)	0.8	2.5



Bench stands ensure the correct mounting of Norbar's Static Torque Transducers up to 7,000 N·m (5,000 lbf·ft).





ROTARY TRANSDUCERS



Calibration
details



Rotary transducers are designed to measure the torque from continuously rotating shafts such as impulse power tools and certain non-impulse tools with a severe clutch action.

This range offers class-leading performance with impulse tools and will be supplied with a UKAS accredited calibration certificate from Norbar's laboratory.

These transducers are known as Smart transducers. They have built-in intelligence in the form of a memory circuit which contains essential information about the transducer which can be read by the appropriate type of instrument (TST, TTT, TTL-HE & T-Box™ 2), thus reducing set-up time.

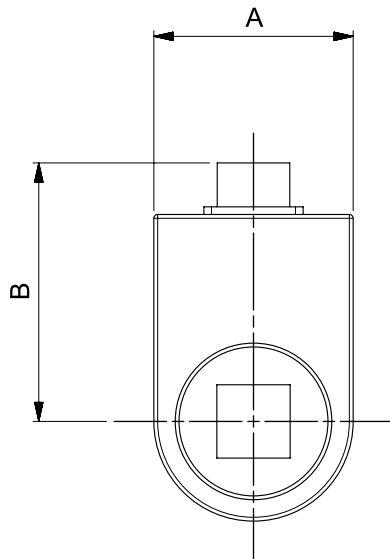
They will also work with instruments that cannot read the memory information, by inputting the relevant calibration details manually.

Note: Not for use with Impact Tools.

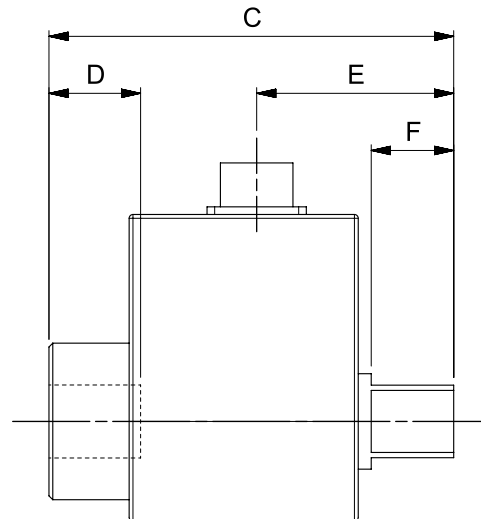
Angle measurement also available.



4	ROTARY TRANSDUCERS
50708.xxx	0.25 - 5 N·m ¼" M/F Hex
50709.xxx	1 - 20 N·m ¼" M/F Hex
50710.xxx	1 - 20 N·m ¼" M/F sq. dr.
50719.xxx	0.75 - 15 lbf·ft ¼" M/F sq. dr.
50711.xxx	3.75 - 75 N·m ⅜" M/F sq. dr.
50720.xxx	2.5 - 50 lbf·ft ⅜" M/F sq. dr.
50712.xxx	10 - 200 N·m ½" M/F sq. dr.
50721.xxx	7.5 - 150 lbf·ft ½" M/F sq. dr.



4	ROTARY TRANSDUCERS
50713.xxx	12.5 - 250 N·m ¾" M/F sq. dr.
50722.xxx	10 - 200 lbf·ft ¾" M/F sq. dr.
50714.xxx	25 - 500 N·m ¾" M/F sq. dr.
50723.xxx	15 - 300 lbf·ft ¾" M/F sq. dr.
50715.xxx	75 - 1,500 N·m 1" M/F sq. dr.
50724.xxx	50 - 1,000 lbf·ft 1" M/F sq. dr.
TD2.CCW	Counter-clockwise calibration
Angle options available, contact Norbar.	



Model	¼" M/F Hex	¼" M/F sq. dr.	⅜" M/F sq. dr.	½" M/F sq. dr.	¾" M/F sq. dr.	1" M/F sq. dr.
Part Number	50708.xxx 50709.xxx	50710.xxx 50719.xxx	50711.xxx 50720.xxx	50712.xxx 50721.xxx	50713.xxx 50714.xxx 50722.xxx 50723.xxx	50715.xxx 50724.xxx
Dimensions (mm)	A	30	30	30	42	52
	B	58	58	62	67	73
	C	116	72	77	87	106
	D	N/A	10	13	16	24
	E	49	33	36	42	51
	F	26	7	11	15	21
Weight (kg)	0.2	0.2	0.2	0.4	0.8	1.5



FLANGE MOUNTED TRANSDUCERS (FMT)

Calibration
details

FMT 2 N-m

4	FMT
50671.xxx*	0.04 - 2 N-m, 1/4" sq. dr. with Joint Simulator
50672.xxx	0.5 - 10 N-m, 1/4" sq. dr. with Joint Simulator
50673.xxx	1.25 - 25 N-m, 1/4" + 3/8" sq. dr. with Joint Simulator
50677.xxx*	0.4 - 20 lbf-in, 1/4" sq. dr. with Joint Simulator
50678.xxx	5 - 100 lbf-in, 1/4" sq. dr. with Joint Simulator
50679.xxx	12.5 - 250 lbf-in, 1/4" + 3/8" sq. dr. with Joint Simulator

Flange Mounted Transducers (FMT) incorporate mounting points for securely fixing the transducer to the working surface. The transducer lead which comes attached to the transducer, is fitted with a high quality connector, suitable for attachment to TST, TTT and T-Box™ 2 instruments. FMTs are provided with precision square drive adaptors suitable for the calibration of torque wrenches.



FMT 1,500 N-m

4	FMT
50676.xxx	30 - 1,500 N-m, 1/2", 3/4" + 1" sq. dr.
50682.xxx	20 - 1,000 lbf-ft, 1/2", 3/4" + 1" sq. dr.
TD1.CCW	Counter-clockwise calibration for FMT & STB when ordered with new unit

xxx Indicates .LOG or .IND versions, please see page 98.

* If using this transducer with a Series 1 TST or TTT (Part No.s 43198 - 43201) or a Pro-Log Display instrument, please contact Norbar.

Includes integral transducer lead with connector to suit TST, TTT and T-Box™ 2. Additional lengths can be accommodated, consult Norbar for details.



FMT 150 N-m

4	FMT
50844.xxx	3 - 60 N-m, 1/2" + 3/8" sq. dr. with Joint Simulator
50674.xxx	7.5 - 150 N-m, 1/2" + 3/8" sq. dr. with Joint Simulator
50680.xxx	5 - 100 lbf-ft, 1/2" + 3/8" sq. dr. with Joint Simulator
50675.xxx	20 - 400 N-m, 1/2" + 3/4" sq. dr.
50681.xxx	12.5 - 250 lbf-ft, 1/2" + 3/4" sq. dr.





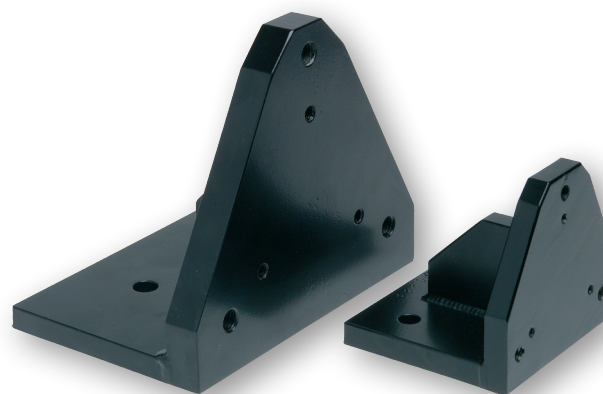
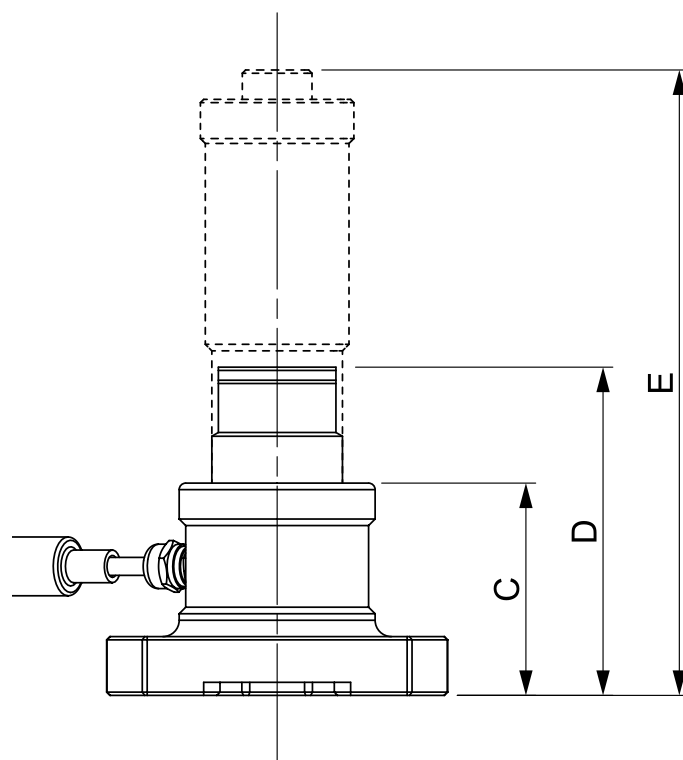
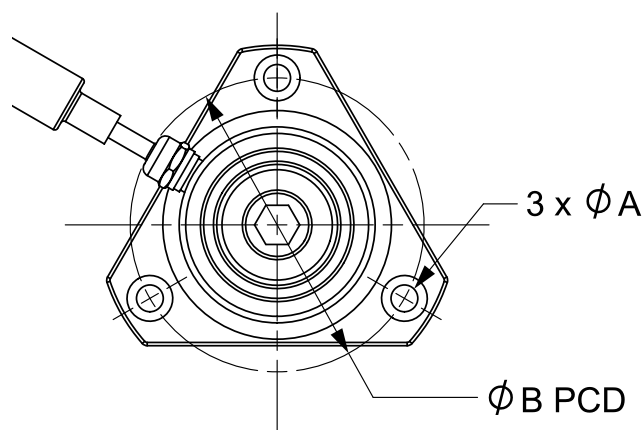
FLANGE MOUNTED TRANSDUCERS (FMT)

Calibration
details

Model		FMT (2 N·m - 25 N·m)	FMT (60 N·m - 400 N·m)	FMT (1,500 N·m)
Part Number		50671.xxx 50672.xxx 50673.xxx 50677.xxx 50678.xxx 50679.xxx	50844.xxx 50674.xxx 50680.xxx 50675.xxx 50681.xxx	50676.xxx 50682.xxx
Dimensions (mm)	ØA	5.5	8.5	12
	ØB	64	90	150
	C	63	65	84
	D	83 (¼"), 86 (⅝")	92 (¼"), 95 (⅜"), 101 (½")	128 (½"), 138 (¾"), 138 (1")
	E	132	192 (60 N·m, 150 N·m & 100 lbf·ft) N/A (400 N·m & 250 lbf·ft)	N/A
Weight (kg)		0.8 (2 N·m & 20 lbf·in) 0.8 (10 N·m & 100 lbf·in) 0.9 (25 N·m & 250 lbf·in)	3.3 (60 N·m, 150 N·m & 100 lbf·ft) 1.5 (400 N·m) 2.7 (250 lbf·ft)	7.0



FMT 400 N·m
shown with case



FMT Mounting Brackets

4	FMT (Ancillary Section)
50539	2 N·m Joint Simulator (also fits TST)
50540	10 N·m Joint Simulator (also fits TST)
50541	25 N·m Joint Simulator (also fits TST)
50845	60 N·m Joint Simulator
50692	150 N·m Joint Simulator
50819	400 N·m Joint Simulator
52236	¼" Hexagon - ¼" Square Drive Adaptor
52237	¼" Hexagon - ⅜" Square Drive Adaptor
52251	⅜" Female Square - 22 mm Bi-Square Adaptor
52246	½" Female Square - 22 mm Bi-Square Adaptor
52245	¾" Female Square - 22 mm Bi-Square Adaptor
52254	½" Female Square - 35 mm Bi-Square Adaptor
52241	¾" Female Square - 35 mm Bi-Square Adaptor
52242	1" Female Square - 35 mm Bi-Square Adaptor

4	FMT Mounting Brackets
62221.BLK9005	FMT Mounting Bracket 2 - 400 N·m
62220.BLK9005	FMT Mounting Bracket 150 - 1,500 N·m

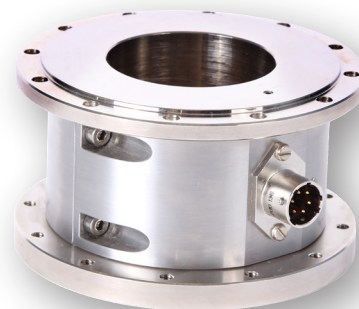


ANNULAR TRANSDUCERS

Calibration
details

These Annular Transducers are designed to fit directly to Norbar torque multipliers and will accurately measure the torque output from the gearbox, via a display instrument (instrument supplied separately, see pages 93 - 94 & 96).

- Up to 6,000 N·m classified to BS7882:2017, typically better than Class 1 for the primary classification range ($\pm 0.5\%$ of reading from 20% to 100% of full scale)
- Robust heat treated alloy steel torsion tube design
- Designed to ignore non-torsional forces
- Smart transducers have a built in memory circuit which contains essential information about the transducer. This information can be read by Norbar's TST, TTT, TTL-HE & T-Box™ 2 instruments meaning that when the transducer is connected, it is immediately recognised and ready for use
- Smart transducers can also be used with many other instruments, however, these will operate as normal ratio calibrated (mV/V) transducers - the Smart data will not be read



4 ANNULAR TRANSDUCERS FOR STANDARD SERIES GEARBOX

Suitable for PT1, PT1A and PT2

50638.xxx 100 - 1,000 N·m $\frac{3}{4}$ " sq. dr.

50648.xxx 100 - 1,000 lbf·ft $\frac{3}{4}$ " sq. dr.

Suitable for heavy duty HT2, PT1, PT1A and PT2

50639.xxx 150 - 1,500 N·m 1" sq. dr.

50649.xxx 150 - 1,500 lbf·ft 1" sq. dr.

TD2.CCW Alternative calibration direction for transducers up to 1,500 N·m / 1,000 lbf·ft when ordered with new unit

Suitable for HT5 and PT5

50640.xxx 250 - 2,500 N·m 1" sq. dr.

50650.xxx 250 - 2,500 lbf·ft 1" sq. dr.

50641.xxx 350 - 3,500 N·m 1" sq. dr.

Suitable for HT6 and PT6

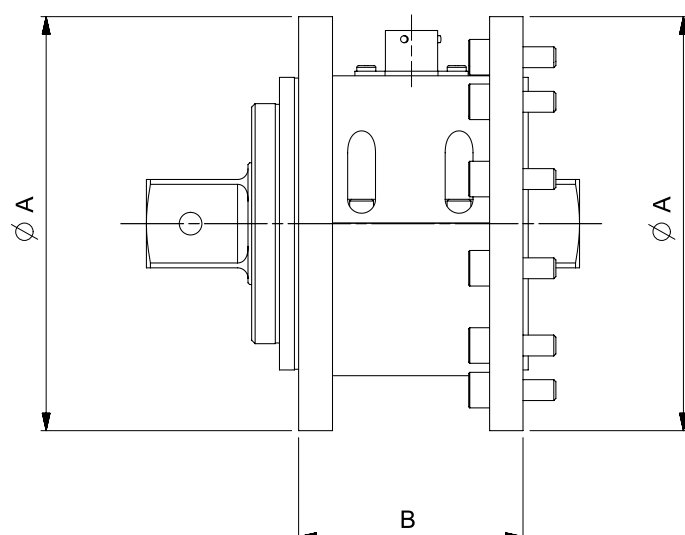
50700.xxx 350 - 3,500 N·m $1\frac{1}{2}$ " sq. dr.

Suitable for HT7 and PT7

50643.xxx 500 - 5,000 N·m $1\frac{1}{2}$ " sq. dr.

50652.xxx 500 - 5,000 lbf·ft $1\frac{1}{2}$ " sq. dr.

TD5.CCW@ Alternative calibration direction for transducers from 1,501 - 7,000 N·m / 1,001 - 5,000 lbf·ft when ordered with new unit



4 ANNULAR TRANSDUCERS FOR STANDARD SERIES GEARBOX

Suitable for HT9 and PT9

50644.xxx 1,000 - 10,000 N·m $1\frac{1}{2}$ " sq. dr.

50653.xxx 700 - 7,000 lbf·ft $1\frac{1}{2}$ " sq. dr.

Suitable for HT11 and PT11

50645.xxx 2,000 - 20,000 N·m $2\frac{1}{2}$ " sq. dr.

50654.xxx 1,500 - 15,000 lbf·ft $2\frac{1}{2}$ " sq. dr.

Suitable for HT12 and PT12

50764.xxx 3,500 - 35,000 N·m $2\frac{1}{2}$ " sq. dr.

50765.xxx 2,500 - 25,000 lbf·ft $2\frac{1}{2}$ " sq. dr.

Suitable for HT13 and PT13

50646.xxx 5,000 - 50,000 N·m $2\frac{1}{2}$ " sq. dr.

Suitable for PT14

50647.xxx 10,000 - 100,000 N·m $3\frac{1}{2}$ " sq. dr.

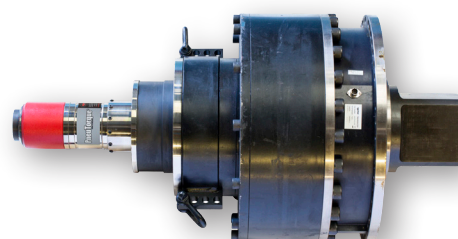
TD4.CCW Alternative calibration direction for transducers from 7,001 - 100,000 N·m / 5,001 - 75,000 lbf·ft when ordered with new unit

Suitable for PT18.MTS

- 30,000 - 300,000 N·m

Standard calibration is performed loading counter-clockwise only.

@ UKAS accredited calibration up to 6,000 N·m. A non-accredited value at 7,000 N·m is extrapolated and provided for reference only.



PT 18 fitted with 300,000 N-m
Annular Transducer and square drive

Model		Annular Transducers for use with Standard Series Multipliers		
Part Number		50638.xxx	50640.xxx	50643.xxx 50652.xxx
		50648.xxx	50650.xxx	
		50639.xxx	50641.xxx	
		50649.xxx	50700.xxx	
Dimensions (mm)	ØA	108	119	144
	B	60	65	71
Weight (kg)		1.4	2.6	3.6



ANNULAR TRANSDUCERS

Calibration
details

4 TORQUE & ANGLE ANNULAR TRANSDUCERS - FIXED CONNECTOR

Suitable for heavy duty PT1, PT1A and PT2

50820.LOGA* 100 - 1,000 N·m ¾" sq. dr.

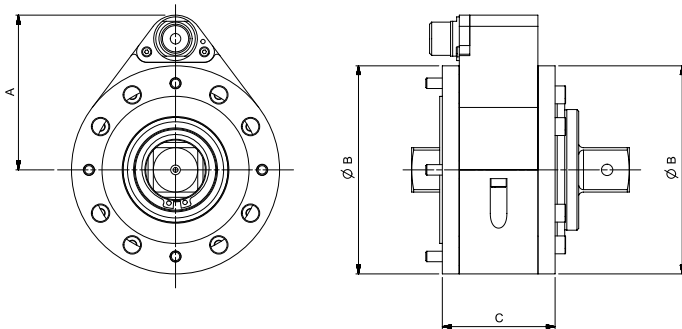
50821.LOGA** 150 - 1,500 N·m 1" sq. dr.

* Can only be used with remote/plain sleeve motors i.e. not a standard PT handle, due to cable interference.

* Only fits to PT with HD final stage carrier having 1" female sq. dr.

Suitable for HT5 and PT5

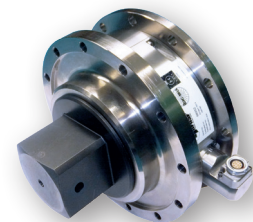
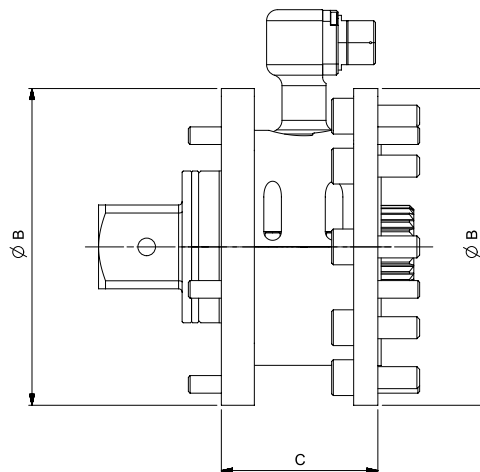
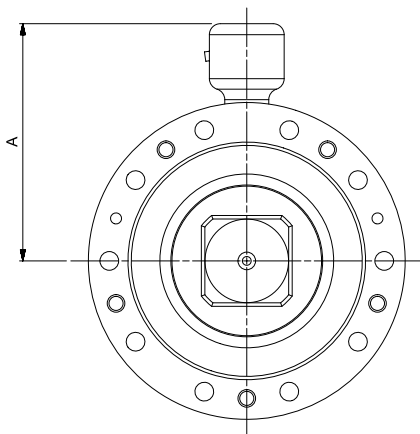
50822.LOGA 350 - 3,500 N·m 1" sq. dr.



Model		Torque & Angle Annular Transducers with Fixed Connector
Part Number		50820.LOGA 50821.LOGA 50822.LOGA
Dimensions (mm)	A	89
	ØB	119
	C	65
Weight (kg)		1.4



Fixed Connector



180° Swivel Connector

4 TORQUE & ANGLE ANNULAR TRANSDUCERS - 180° SWIVEL CONNECTOR

Suitable for HT7 and PT7

50834.LOGA 500 - 5,000 N·m 1½" sq. dr.

Suitable for HT9 and PT9

50824.LOGA 1,000 - 10,000 N·m 1½" sq. dr.

Suitable for HT11 and PT11

50825.LOGA 2,000 - 20,000 N·m 2½" sq. dr.

Suitable for HT12 and PT12

50826.LOGA 3,500 - 35,000 N·m 2½" sq. dr.

Suitable for HT13 and PT13

50827.LOGA 5,000 - 50,000 N·m 2½" sq. dr.

Suitable for HT14 and PT14

50828.LOGA 10,000 - 100,000 N·m 3½" sq. dr.

PT13 & PT14 require special front cover plate with added dowel clearance holes

Suitable for HT15 and PT15

50832.LOGA 15,000 - 150,000 N·m 4½" sq. dr.

Suitable for HT16 and PT16

50829.LOGA 20,000 - 200,000 N·m 5" sq. dr.

Suitable for HT17 and PT17

50830.LOGA 25,000 - 250,000 N·m 6" sq. dr.

Suitable for HT18 and PT18

50831.LOGA 30,000 - 300,000 N·m 6" sq. dr.

Model		Torque & Angle Annular Transducers with Swivel Connector									
		5,000 N·m	10,000 N·m	20,000 N·m	35,000 N·m	50,000 N·m	100,000 N·m	150,000 N·m	200,000 N·m	250,000 N·m	300,000 N·m
Part Number		50834.LOGA	50824.LOGA	50825.LOGA	50826.LOGA	50827.LOGA	50828.LOGA	50832.LOGA	50829.LOGA	50830.LOGA	50831.LOGA
Dimensions (mm)	A	108	120	140	151	186	186	*	*	*	289
	ØB	144	178	212	248	315	315	*	*	*	520
	C	144	184	212	240	315	315	*	*	*	520
Weight (kg)		7.0	10.0	15.0	29.3	43.5	46.6	*	*	*	149.5

* Available on request



ANNULAR TRANSDUCERS

Calibration
details**4 ANNULAR TRANSDUCERS FOR 72 mm SERIES GEARBOX (HT & PT) (Not suitable for PTS/PTM tools)**

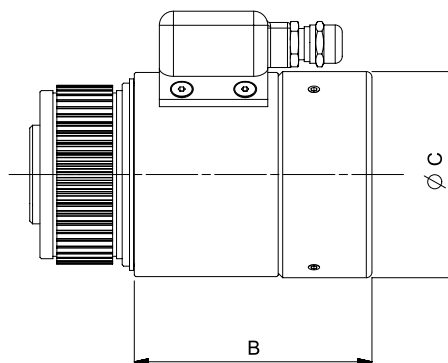
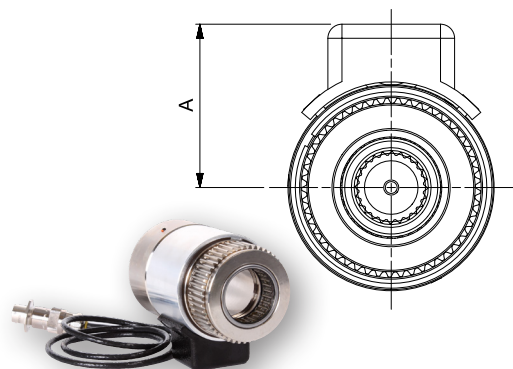
Suitable for PT-72 mm Remote Series and HT-72

50666.xxx 100 - 1,000 N·m

50667.xxx 150 - 1,500 N·m

50668.xxx 200 - 2,000 N·m

Standard calibration is performed loading counter-clockwise only.

**Torque and Angle Annular Transducer Note:**

- 5,000 N·m and above include dowels on both mounting faces
- Angle resolution < 1° when used with T-Box™ 2
- CW+CCW calibration is standard
- Use 60308.xxx series lead for direct connection to T-Box™ 2 for torque and angle/turns monitoring and storage
- PT square drive and other parts may require removal to fit transducer
- All the above are standard construction. Harsh Environment models are available on request
- 'INDA' versions are available on request

Note: PTS™ and reactions with dowel holes can be supplied at an extra cost on request. Request details on PneuTorque® Type 'XD'

4 ANNULAR TRANSDUCERS FOR PTS/PTM 72

Suitable for PTS/PTM-72 mm Series

50840.xxx 100 - 1,000 N·m

50841.xxx 150 - 1,500 N·m

50842.xxx 200 - 2,000 N·m

50846.LOGA 100 - 1,000 N·m with Angle

Model	Annular Transducers for use with 72 mm Series Multipliers	Annular Transducers for use with 72 mm Series Multipliers
Part Number	50666.xxx 50667.xxx 50668.xxx 50840.xxx 50841.xxx 50842.xxx	50846.LOGA
Dimensions (mm)	A	58
	B	84
	ØC	72
Weight (kg)	1.5	3.1

4 ANNULAR TRANSDUCERS

SECCAL.CW	Secondary calibration in one direction on annular transducers for HT/PT9 & HT/PT11 to extend the range below 10% of the rated capacity, when ordered with new unit
SECCAL.CW+CCW	Secondary calibration in two directions on annular transducers for HT/PT9 & HT/PT11 to extend the range below 10% of the rated capacity, when ordered with new unit
ADDCALPOINTS.NEW	Additional calibration steps below 10% of rated capacity to 2% for transducers up to 7,000 N·m (5,000 lbf·ft) when ordered with new unit

TRANSDUCER LEADS



If ordering a static, annular or rotary transducer you will also require a corresponding lead (see list below).

To comply with the latest calibration standards, most new transducer leads will have a suffix to indicate the length in centimetres.

4	TRANSDUCER LEADS
60216.200	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to 10 Way Transducer for use with Norbar Rotary Transducers
60217.200	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to 6 Way Transducer for use with Norbar Static & Annular Transducers
60223.200	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to no connector
60224.200	10 Way Transducer to no connector
60225.200	6 Way Transducer to no connector
51067.225	ETS to Transducer (Pre 1994) + 5 way (60055)
60152.225	ETS to Transducer (Post 1994) + 5 way (60163)

4	TRANSDUCER LEADS
60308.400	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to Torque & Angle Annular Transducers
60308.600	PRO-LOG, TST, TTT, T-Box XL & T-Box 2 to Torque & Angle Annular Transducers
60308.1000	PRO-LOG, TST & TTT to Torque & Angle Annular Transducers

Other lengths can be ordered at an additional cost.

Note: The system should be calibrated with the increased length lead, as calibration may be affected.

Note: The maximum permissible cable length is 15 m for TST, TTT or T-Box™ 2 and 7 m with a T-Box™ XL. Contact Norbar for further details.