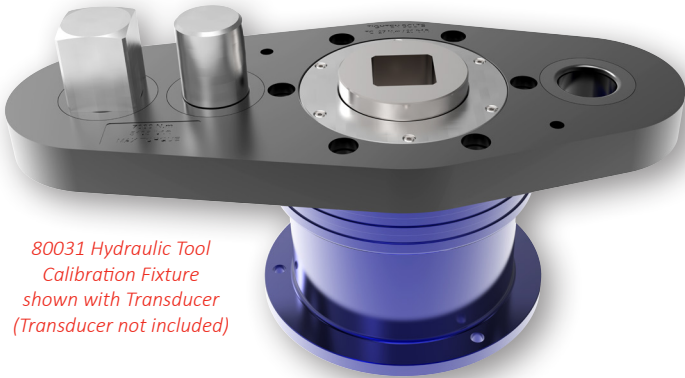




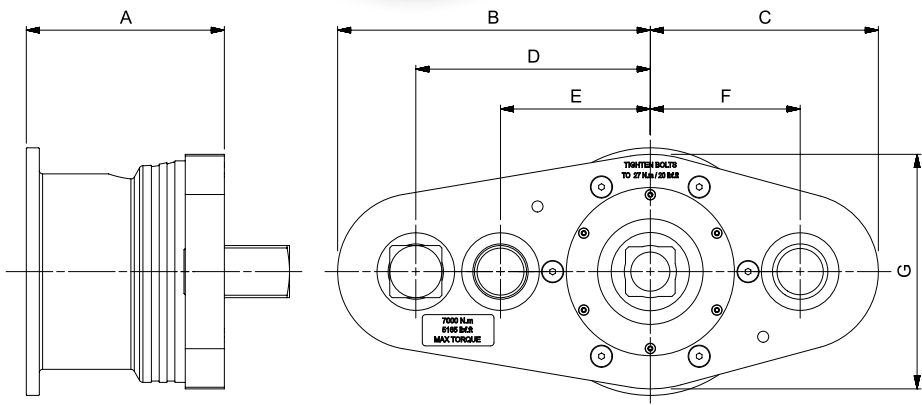
HYDRAULIC TOOL CALIBRATION FIXTURES



4 CALIBRATION FIXTURES	
80031	Hydraulic Calibration Fixture up to 7,000 N-m
80029	Hydraulic Calibration Fixture up to 50,000 N-m
80032	Hydraulic Calibration Fixture up to 80,000 N-m
81022	Reaction Bar for 80031
81023	Reaction Bar for 80029



Fixture shown with Hydraulic Torque Wrench



Model	Hydraulic Calibration Fixture up to 7,000 N-m	Hydraulic Calibration Fixture up to 50,000 N-m	Hydraulic Calibration Fixture up to 80,000 N-m	
Part Number	80031	80029	80032	
Dimensions (mm)	A	202	208	292
	B	240	325	450
	C	175	125	170
	D	180	150	260
	E	115	250	350
	F	115	N/A	N/A
	G	180	250	340
Weight (kg)	TBC	TBC	TBC	

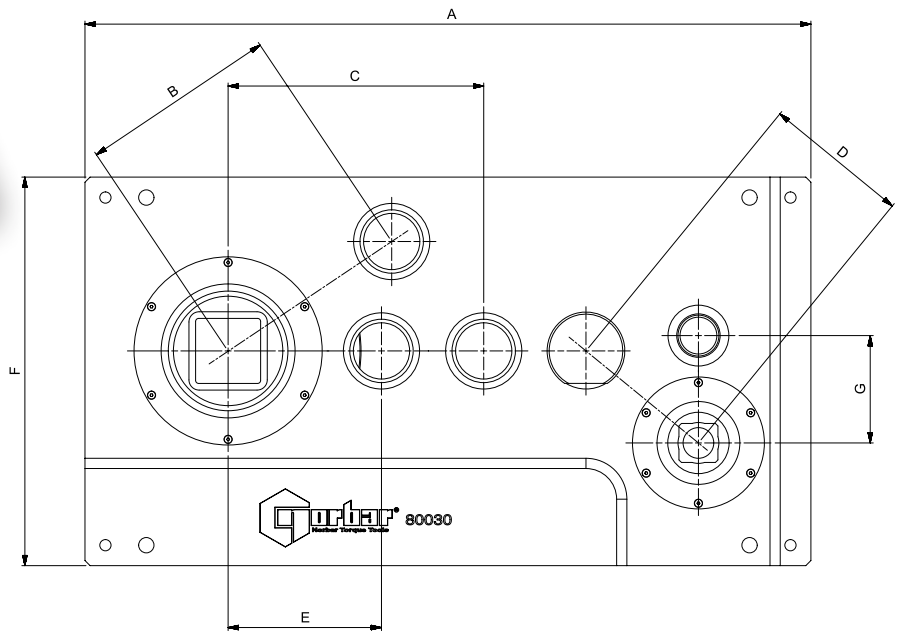
4 DUAL CALIBRATION FIXTURE

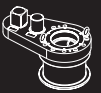
80030 Dual Calibration Fixture
 Note: Houses 1 transducer up to 7,000 N-m and 1 transducer up to 50,000 N-m in a bench top plate.



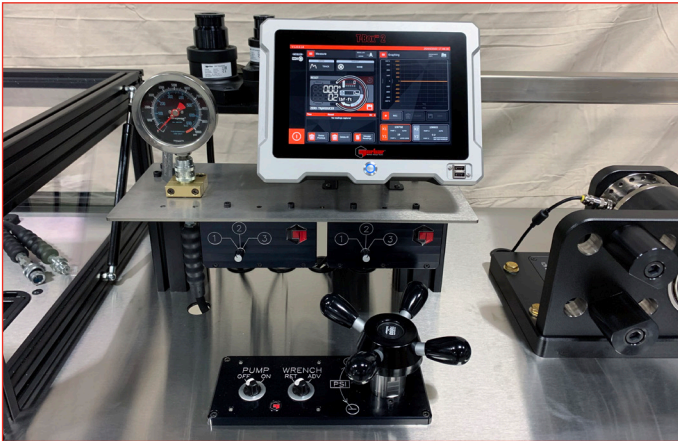
Dual Calibration Fixture (Part No. 80030)

Model	Dual Calibration Fixture	
Part Number	80030	
Dimensions (mm)	A	710
	B	193
	C	250
	D	142
	E	150
	F	380
	G	105
Weight (kg)	140.0	





HYDRAULIC TOOL CALIBRATION ACCESSORIES



T-Box™ 2 at the centre of a test bench for hydraulic torque wrenches

Rapid hydraulic wrench calibrations (for instance, from many minutes to around one minute) are possible using appropriate hydraulic calibration fixtures and accessories along with the T-Box™ 2. The T-Box™ 2 can take simultaneous hydraulic pressure readings and torque readings at pre-configured trigger points. By ramping up the hydraulic pressure from the minimum to the maximum for the torque wrench under test, pressure and torque readings will be taken and recorded at the required points. This data can be saved to Excel and exported to appropriate third party calibration certification software.

This feature is not limited to hydraulic torque wrench calibration. By substituting the hydraulic pressure transducer for a pneumatic pressure transducer along with the appropriate calibration hardware, similar benefits of ease and speed can be applied to air tool calibration.

Contact technical@Norbar.com or your distributor for further details.



4	TRANSDUCERS FOR USE WITH 80031 / 80030
50703.xxx*	250 - 2,500 N·m, 1½" sq. dr. M/F
50704.xxx*	250 - 2,500 lbf·ft, 1½" sq. dr. M/F
50599.xxx*	500 - 5,000 N·m, 1½" sq. dr. M/F
50630.xxx*	500 - 5,000 lbf·ft, 1½" sq. dr. M/F
50669.xxx	700 - 7,000 N·m, 1½" sq. dr. M/F

* 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.

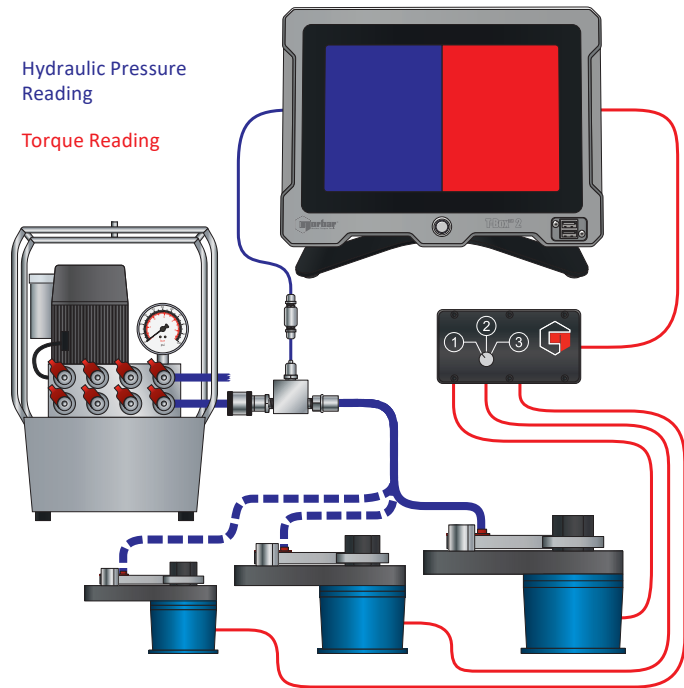
4	TRANSDUCERS FOR USE WITH 80029 / 80030
50776.xxx@	1,000 - 10,000 N·m, 2½" sq. dr. M/F
50777.xxx@	1,000 - 10,000 lbf·ft, 2½" sq. dr. M/F
50797.xxx@	2,500 - 25,000 N·m, 2½" sq. dr. M/F
50781.xxx@	5,000 - 50,000 N·m, 2½" sq. dr. M/F
50798.xxx@	25,000 lbf·ft, 2½" sq. dr. M/F

4	TRANSDUCERS FOR USE WITH 80032
50782.xxx	6,000 - 60,000 lbf·ft, 3½" sq. dr. M/F
50783.xxx	8,000 - 80,000 N·m, 3½" sq. dr. M/F

Harsh Environment Transducers available on request.



4	CALIBRATION FIXTURE ACCESSORIES
80034	External Transducer Switch Box 3 Way
56026.IND	730 bar Pressure Transducer



4	ADDITIONAL CALIBRATION
The transducers shown include clockwise only calibration from 10% to 100% of rated capacity. For other calibration options, see below:	

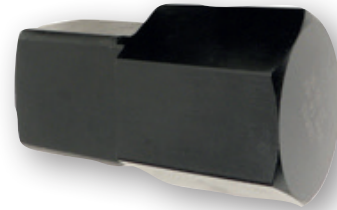
***ADDCALPOINTS.NEW**
Additional calibration steps below 10% of rated capacity to 2% for transducers up to 7,000 N·m (5,000 lbf·ft) when ordered with new unit @SECCAL.CW

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



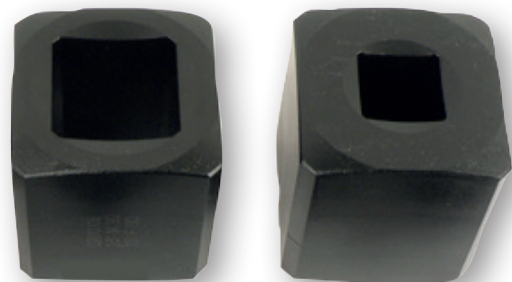
HEXAGON TO SQUARE ADAPTORS



Hexagon to Square Adaptor

9	HEXAGON TO SQUARE ADAPTORS - METRIC
29619.24	24 mm Hex to 1½" sq. dr. (Max 3,000 N·m)
29619.27	27 mm Hex to 1½" sq. dr. (Max 4,000 N·m)
29619.30	30 mm Hex to 1½" sq. dr. (Max 4,000 N·m)
29619.32	32 mm Hex to 1½" sq. dr. (Max 4,900 N·m)
29619.36	36 mm Hex to 1½" sq. dr. (Max 7,000 N·m)
29619.41	41 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.46	46 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.50	50 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.55	55 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.60	60 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.65	65 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.70	70 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.75	75 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29619.80	80 mm Hex to 1½" sq. dr. (Max 8,700 N·m)
29620.50	50 mm Hex to 2½" sq. dr. (Max 18,500 N·m)
29620.55	55 mm Hex to 2½" sq. dr. (Max 25,000 N·m)
29620.60	60 mm Hex to 2½" sq. dr. (Max 32,000 N·m)
29620.65	65 mm Hex to 2½" sq. dr. (Max 36,000 N·m)
29620.70	70 mm Hex to 2½" sq. dr. (Max 36,000 N·m)
29620.75	75 mm Hex to 2½" sq. dr. (Max 36,000 N·m)
29620.80	80 mm Hex to 2½" sq. dr. (Max 59,000 N·m)
29620.85	85 mm Hex to 2½" sq. dr. (Max 59,000 N·m)
29620.90	90 mm Hex to 2½" sq. dr. (Max 59,000 N·m)
29620.95	95 mm Hex to 2½" sq. dr. (Max 59,000 N·m)
29620.100	100 mm Hex to 2½" sq. dr. (Max 52,000 N·m)
29620.105	105 mm Hex to 2½" sq. dr. (Max 52,000 N·m)
29620.110	110 mm Hex to 2½" sq. dr. (Max 52,000 N·m)
29620.115	115 mm Hex to 2½" sq. dr. (Max 52,000 N·m)
29620.130	130 mm Hex to 2½" sq. dr. (Max 52,000 N·m)

9	HEXAGON TO SQUARE ADAPTORS - IMPERIAL
29623.I20	1¼" Hex to 1½" sq. dr. (Max 4,900 N·m)
29623.I23	1⅜" Hex to 1½" sq. dr. (Max 7,000 N·m)
29623.I26	1⅝" Hex to 1½" sq. dr. (Max 8,700 N·m)
29623.I29	1⅞" Hex to 1½" sq. dr. (Max 8,700 N·m)
29623.I32	2" Hex to 1½" sq. dr. (Max 8,700 N·m)
29623.I33	2⅛" Hex to 1½" sq. dr. (Max 8,700 N·m)
29623.I35	2⅜" Hex to 1½" sq. dr. (Max 8,700 N·m)
29623.I38	2⅝" Hex to 1½" sq. dr. (Max 8,700 N·m)
29623.I41	2⅞" Hex to 1½" sq. dr. (Max 8,700 N·m)
29624.I35	2⅜" Hex to 2½" sq. dr. (Max 25,000 N·m)
29624.I38	2⅝" Hex to 2½" sq. dr. (Max 32,000 N·m)
29624.I40	2½" Hex to 2½" sq. dr. (Max 36,000 N·m)
29624.I41	2⅞" Hex to 2½" sq. dr. (Max 36,000 N·m)
29624.I44	2¾" Hex to 2½" sq. dr. (Max 36,000 N·m)
29624.I47	2⅝" Hex to 2½" sq. dr. (Max 36,000 N·m)
29264.I48	3" Hex to 2½" sq. dr. (Max 36,000 N·m)
29624.I50	3⅞" Hex to 2½" sq. dr. (Max 59,000 N·m)
29624.I56	3½" Hex to 2½" sq. dr. (Max 59,000 N·m)
29624.I62	3⅞" Hex to 2½" sq. dr. (Max 52,000 N·m)
29624.I68	4¼" Hex to 2½" sq. dr. (Max 52,000 N·m)
29624.I74	4⅝" Hex to 2½" sq. dr. (Max 52,000 N·m)
29624.I80	5" Hex to 2½" sq. dr. (Max 52,000 N·m)
29624.I86	5⅝" Hex to 2½" sq. dr. (Max 52,000 N·m)
29624.I98	6⅞" Hex to 2½" sq. dr. (Max 52,000 N·m)



Sleeve Adaptors

9	SLEEVE ADAPTORS
86034.4	Adaptor 1½" Male sq. dr. ¾" Female sq.
21214	Adaptor 1½" Male sq. dr. 1" Female sq.
290100	Adaptor 2½" Male sq. dr. ¾" Female sq.
290101	Adaptor 2½" Male sq. dr. 1" Female sq.
29617	Adaptor 2½" Male sq. dr. 1½" Female sq.
290103	Adaptor 3½" Male sq. dr. 1½" Female sq.
29618	Adaptor 3½" Male sq. dr. 2½" Female sq.

Special 'Engineer to Order' hexagon and square adaptors available on request.