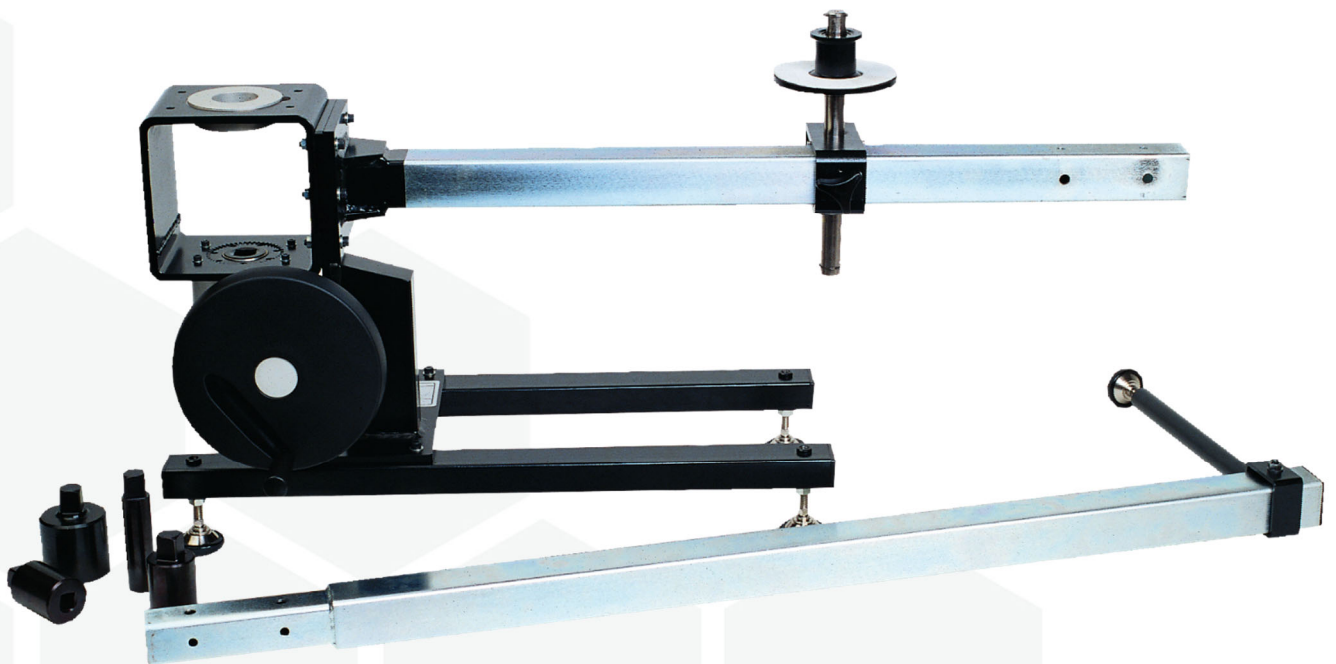


ISO 3000 TORQUE WRENCH LOADER



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SAFETY

- The ISO 3000 is heavy. Take care when installing.
- Ensure the operating area is capable of taking the weight of the ISO 3000.
- Trapping hazard - Keep hand and loose clothing away from the torque wrench during use.
- To avoid damage to the torque wrench under test do not exceed the wrench set torque value.
- To avoid damage to the transducer do not exceed the maximum capacity.
- Never exceed the maximum torque capacity of the ISO 3000 (3000 N·m / 2200 lbf·ft).
- Do not operate without a torque measurement system connected and working.
- The ISO 3000 is designed for testing torque tools, do not use for other purposes.

INTRODUCTION

The Norbar ISO 3000 Torque Wrench Loader is designed to test torque wrenches up to a maximum capacity of 3000 N·m or 2200 lbf·ft.

To measure the applied torque a torque transducer coupled to an appropriate measurement instrument are required.

This manual covers 20505 only.

Parts Included

Parts Included	Part Number	Quantity
ISO 3000	20505	1
Adaptor 1 ½" male to 1" female	21214	1
Adaptor 1 ½" male to ¾" female	86034.4	1
Adaptor 1" male to 1 ½" female	20502.49	1
Adaptor 1" male to 1" female	20502.48	1
Adaptor 1" male to ¾" female	20502.47	1
Adaptor 1" male to ½" female	20502.46	1
Adaptor ½" to ⅜"	25429	1
Adaptor ½" male to ⅜" female	29614	1
Adaptor ½" male to ¼" female	29610	1
Collar (small)	20502.51	1
Collar (medium)	20502.52	1
Collar (Large)	20502.53	1
Reaction post	-	1
Extension arm (with leg, dowels & 5mm hex key)	-	1
Hand wheel	-	1
Operators Manual	34378	1

Accessories

Accessories Available	Part Number
Norbar torque measurement system.	Consult Norbar
Reaction Plate for small torque wrenches. (Wrench length 100mm to 204mm at handle loading point).	20606

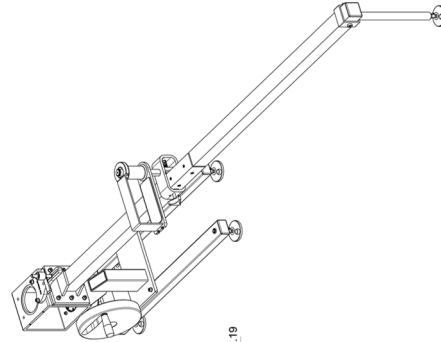
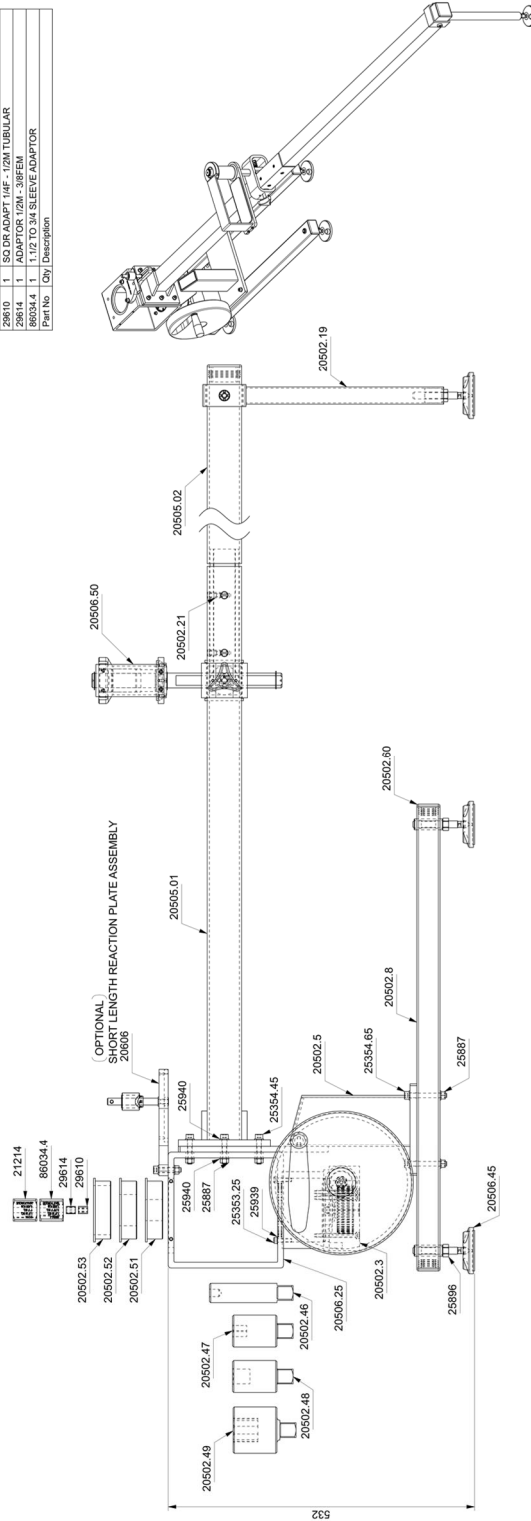
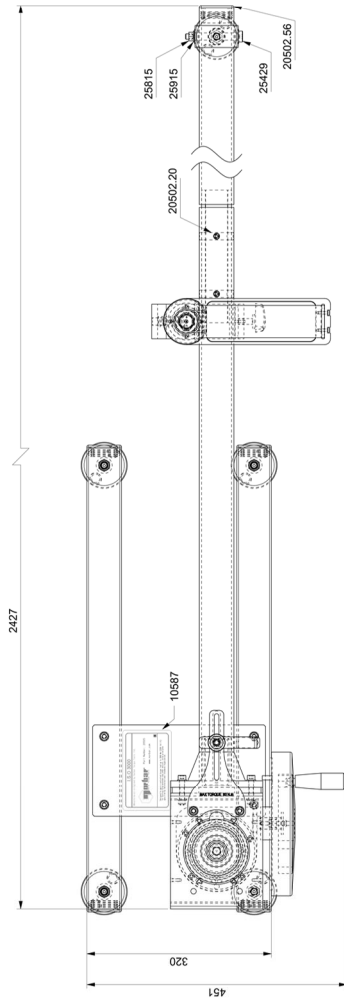
FEATURES AND FUNCTIONS

- Allows torque wrenches to be tested or calibrated to relevant standards, including BS EN ISO 6789-1:2017 and BS EN ISO 6789-2:2017, when used in an appropriate temperature-controlled environment and with appropriate ancillary equipment.
- Also available with 1500 N·m capacity, see ISO 1500 N·m (Part number 60300).
- For part identification see drawing below:

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Part No	Qty	Description
20502.19	1	LEG
20502.20	2	LOCKING PIN
20502.21	1	LOCATION BUSH
20502.22	1	LOCATING PIN
20502.23	1	GEARBOX 2501 HEAVY DUTY
20502.46	1	TRANS.ADAPT.1 IN.SQ TO 1/2 IN. F SQ.
20502.47	1	TRANS.ADAPT.1 INCH M SQ. TO 3/4 INCH F SQ.
20502.48	1	TRANS.ADAPT.1 INCH M SQ. TO 1 INCH F SQ.
20502.49	1	TRANS.ADAPT.1 INCH M SQ. TO 1 1/2 INCH FEMALE SQ.
20502.50	1	TRANS.BUSH FOR ISO2000
20502.51	1	TRANS.BUSH FOR ISO2000
20502.52	1	TRANS.BUSH FOR ISO2000
20502.53	1	TRANS.BUSH FOR ISO2000
20502.56	1	ISO 2000 BLANKING PLUG 60X60
20502.60	4	BLANKING PLUG FOR 60X60
20505.01	1	REACTION BEAM ASSY
20505.02	1	EXT REACTION BEAM
20506.25	1	BOX MOUNT FOR MOTORIZED ISO 3000
20506.45	5	FOOT ASSY
20506.50	1	REACTION HEAD ASSY
25353.25	4	M8 X 25 LG SCS
25354.45	6	M8 X 45 SCS
25354.65	4	M8 X 65 SCS
25429	1	SKT. 5H.SCR. 1/2 DIA X 3 INCH LONG. 316SSF
25815	10	NUT 3/8 BSF
25886	5	WASHER 3/8 TO DIN 934 ZINC & CLEAR
25915	1	WASHER 3/8 TO BS 3410
25939	4	WASHER M6 TYPE B BZP
25940	20	WASHER M6 FORM A TO ISO 7089 ZINC & CLEAR
25910	1	ISO ADAPT. 1 INCH M TUBULAR
25911	1	ISO ADAPT. 1 1/2 INCH M TUBULAR
86034.4	1	1 1/2 TO 3/4 SLEEVE ADAPTOR



INSTALLATION

NOTE: If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Items Required

Norbar torque transducer to suit capacity of test with suitable torque display instrument.

Location

Ensure location can cope with weight of loader.

Locate ISO 3000 on a level surface at a comfortable working height.

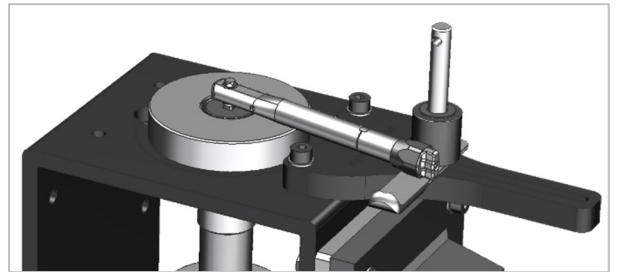
Tool Reaction Post

Slide "Tool reaction post" on to the reaction bar.

Reaction Plate for Small Torque Wrenches (Optional)

To use small torque wrenches a smaller reaction plate may be required.

Fix using M8 socket cap screws provided with reaction plate. Tighten to 20 N·m.



Extension Arm

For long torque wrenches fit extension arm as follows:

1. Fit the small square of the extension arm into the existing arm.
2. Insert the two locating dowels through the horizontal holes. Keep thread vertical.
3. Fit securing pins from the top of the arm into vertical thread. Tighten with 5mm hex key (included) as shown in picture.
4. Attach the support strut at the end of the extension arm.



Reaction Post

Slide reaction post onto ISO 3000 reaction arm.

Torque Measurement

Select the lowest capacity torque transducer to cover the wrench to be tested.

Mount the male square of the transducer into the female square of the gear box, use adaptors to suit.

Place collar over the transducer.

Connect a transducer lead from the transducer to the instrument.

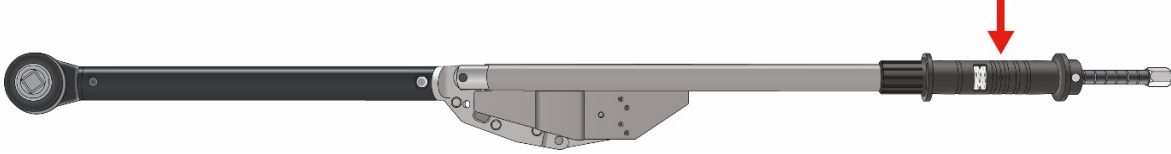
Ensure the instrument functions correctly. (If in doubt see operators manual).

OPERATING INSTRUCTIONS

Locating a Torque Wrench

Select the correct adaptor to place the torque wrench drive into the transducer.

Set the reaction post position on the reaction arm so it is in the middle of the torque wrench handle or the marked load point on the handle.



Set the reaction post height to ensure the wrench handle is parallel to the reaction arm.

If the Torque Wrench is too small for the reaction arm use reaction plate option (Part 20606).

If the Torque Wrench is too big for the reaction arm fit extension arm supplied - See installation.

The large gear box ratio makes movement in the output drive difficult to detect.

Use the 'A' and 'B' arrows on the hand wheel and gearbox output as an indication.

For clock-wise calibration 'A' indicates direction to apply force & 'B' indicates direction to release force.

TIP: In the case of a ratchet wrench, with push through square drives, it is important to ensure the square is operating on the correct side of the ratchet.

MAINTENANCE

The ISO 3000 is engineered for a long maintenance free life. Under normal operation maintenance is not required.

When cleaned do not use abrasive or solvent based cleaners.

For maintenance and recalibration of the instrument and transducer refer to their manuals.

SPECIFICATIONS

Maximum Output Torque:	3000 N·m / 2200 lbf-ft
Torque Wrench Length:	With small reaction plate option = 125mm to 210mm Standard reaction arm = 220mm to 1100mm With extension arm = up to 2200mm
Direction of Torque Application:	Clockwise and Anticlockwise
Square Drive Sizes:	¼", ⅜", ½", ¾", 1" & 1 ½"
Gear Ratio:	1250:1
Calibration Direction:	Clockwise and Anti-Clockwise
Operating Temperature Range:	0 °C to +50 °C
Storage Temperature Range:	-20 °C to +70 °C
Maximum Operating Humidity:	80% Relative Humidity @30°C
Dimensions (without extension bar):	535mm high x 1123mm wide x 446mm deep
Dimensions (with extension bar):	535mm high x 2533mm wide x 446mm deep (Height without reaction post fitted)
Weight:	55 Kg

NOTE: If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment could be impaired.

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