

Schedule

Norbar Torque Tools Pte Ltd
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Certificate No. : LA-2005-0322-C

Issue No. : 8

Date : 24 April 2014

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FIELD OF TESTING : Calibration and Measurement

MEASURED QUANTITIES/ INSTRUMENT/ RANGE TO BE CALIBRATED	Method	CALIBRATION AND MEASUREMENT CAPABILITY (CMC*)
A <u>TORQUE</u>		
1. Hand Torque Tools 0.04 N·m to 2711.6 N·m	ISO 6789 : 2003 (Section 6)	0.67 %
2. Mechanical and Electronic Torque Measuring Devices 0.035 N·m to 0.5 N·m 0.5 N·m to 1500 N·m 1500 N·m to 6800 N·m	BS EN 7882 : 2008	0.13 % 0.04 % 0.034 %
3. Torque Ratio Multipliers 17.5 N·m to 6780 N·m	In-house Procedure NTTS 24 : 2005	1.5 %
4. Electrical Torque Indicators (Norbar brand only) 0.5 mV DC 1.0 mV DC 2.0 mV to 11 mV DC 5 V DC (Excitation Voltage) 0.05 V DC 0.1 V DC 0.2 V to 2.0V DC 10 mA to 22 mA DC, (Constant Current)	In-house Procedures NTTS 45 : 2012 NTTS 46 : 2004 NTTS 47 : 2010 NTTS 49 : 2010	0.16 % 0.094 % 0.074 % 0.0014 % 0.35 % 0.18 % 0.11 % 0.014 %

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MEASURED QUANTITIES/ INSTRUMENT/ RANGE TO BE CALIBRATED	Method	CALIBRATION AND MEASUREMENT CAPABILITY (CMC*)
5. Mechanical & Hydraulic Torque Wrenches 17.5 N·m to 6780 N·m	In-house Procedure NTTS 25 : 2005	0.6%

* CMC is expressed as an expanded uncertainty estimated at a level of confidence of approximately 95%.

Approved signatories

Mr Lim Chi Kah

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Note :

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid calibration results. The **management system requirements** in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 **Quality Management Systems — Requirements** and are aligned with its pertinent requirements.