



# **TORQUE MONITORING ENCLOSURE METER**

**OPERATOR'S HANDBOOK (PART NO. 34143)**  
ISSUE 2

**MODEL NOS. 60072 & 60097**

# TORQUE MONITORING ENCLOSURE METER

## INTRODUCTION

---

The enclosure meter instrument is for monitoring the torques required to remove and replace the tops of many kinds of screw top enclosures.

Used in conjunction with the Norbar electronic transducer system (ETS) it is able to display and record the torques required to open and close most small and medium size container tops. (Both clockwise and anti-clockwise torques can be monitored).

Analog torque signals can be transmitted to a Y/T chart recorded for graphical presentation or to a computer for data analysis. If the ETS is fitted with an RS-232-C serial data output option, peak torques can be transmitted to a printer or computer.

## PRINCIPLE OF OPERATION

---

The container to be tested is clamped between four adjustable rubber sleeved pillars on the top of the enclosure meter. The ETS unit is tared to read zero and set to require mode, track, memory or first peak memory. (See ETS operator's handbook for detailed operating and setting instructions of ETS). The container cap may then be twisted as required. Torques will be monitored and displayed by the ETS.

## SPECIFICATION

---

Torque range for 60072:	0.5 N.m to 5 N.m.
Torque range for 60097:	5 lbf. in. to 50 lbf. in.
Torque and Load Transducer Accuracy:	± 0.1% of full scale.
Maximum clamp diameter:	190 mm.
Weight:	10.02 kg.
Overall Diameter:	265 mm.
Height:	218 mm.

## OPERATING INSTRUCTIONS

---

1. Connect the transducer lead between one ETS and the torque transducer plug on the enclosure meter. Plug the torque transducer amplifier module into the ETS back panel. Switch ETS on. Units of N.m, lbf. ft. or lbf. in. may be selected as required.
2. Allow the ETS unit to warm up for 2 minutes.
3. Connect up any chart recorder, printer, etc. as required and switch on.
4. Clamp container between the 4 rubber sleeved pins.
5. Tare the ETS unit (and chart recorder if connected) for zero. The transducer zero adjustment is a trim pot on the transducer amplifier module. (Use trim tool provided to adjust).
6. Set the ETS unit to required mode, track, memory or memory auto reset as required.

The enclosure meter is now ready for use.

NOTE: *Refer to the ETS operator's handbook for further details on operating and setting the ETS units, transducers and transducer amplifiers.*