

MT TEST KIT VERIFIER

Pressure Cell Testing Device

Safety on board ships and protection of marine environment are priority objectives to be followed in accordance with the ISM Code. With regard to portable test equipment, establishment of effective safety management system on board means the necessity to conduct regular inspections of the condition of test devices in order to ensure their accurate, error-free and reliable functioning. This basic requirement is enshrined in Article 10.3, Part A of the ISM Code which specifies the importance of "... regular testing of stand-by arrangements and equipment or technical systems that are not in continuous use".

The MT TEST KIT VERIFIER was specifically developed for easy and quick on-site diagnostics of operational capability and precision in measurements of Martechnic®'s portable test devices fitted either with pressure sensor: TWIN CHECK 4.0 or equipped with a manometer: WIO CHECK.

Option I



Features:

- Two options available:
 - Option I: assembled and ready-to-use device with 0.5 m tube
 - Option II: assembled and ready-to-use device including 0.5 m tube and additionally supplied pressure regulating valve and adjusted manometer for direct readout of water-in-oil content
- Accuracy:
 - +/-0.05% H₂O of TWIN CHECK 4.0/ WIO CHECK
 - +/-1BN of TWIN CHECK 4.0

Option II



Benefits:

- The device is equipped with 1 bar safety valve
- Avoidance of too high pressure setting which exceeds the max. measuring value
- Possibility of performance verification by the operator before measurement

The appropriate version of the MT TEST KIT VERIFIER can be chosen depending on the facilities available on board. Option I is recommended in case of availability of calibration pump. In this situation the measuring unit of the test device, for instance TWIN CHECK 4.0, must get tightly screwed to the “bottom part” of the VERIFIER and then connected with the calibration pump by means of the tube.

In the absence of the calibration pump, Option II is advisable. After the measuring unit of the test device got tightly screwed to the “bottom part” of the VERIFIER and connected with pressure regulating valve and manometer, the prepared unit is exposed to ship’s working air in order to check whether the pressure sensor (or manometer) shows correctly the occurring internal pressure. This can be verified by applying two reference pressures which can be set with the help of the adjusted manometer (for example, 0.3 and 0.6 vol. % H₂O). The corresponding value of water-in-oil concentration will be directly shown on the display (manometer in case of WIO CHECK).

In general, the MT TEST KIT VERIFIER enables on-site diagnostic assessment against three principal criteria:

1. Tightness of the test device (when the applied pressure stays at the pre-set level, for instance, 0.4 vol. % H₂O and does not drop over time, the device is gastight).
2. Software sanity testing (the overpressure in the device should be shown on the display after the beginning of the measurement as 0.00 % H₂O or 0 BN)
3. Measurement accuracy (maximum permissible deviation of the test device is +/-0.05% H₂O as well as +/- 1 BN for all BN measurements).