

PORTABLE HYDRAULIC TESTER

DHM



HYDRAULIC DIGITAL TESTER

DHM401/DHM411

Flow, Pressure and
Temperature

- Up to 400 lpm
 - Up to 420 bar
 - Bi-Directional
-
- **Simplified Controls**

The ITA HYDRAULIC DHM401 and DHT411 Digital Testers accurately measure flow, pressure and temperature. Webster Testers are designed to conveniently check the performance of hydraulic pumps, motors, valves and hydrostatic transmissions.

This easy to use diagnostic tester has simplified controls and can pin point hydraulic system faults, reducing downtime and helping in preventive maintenance.

The tester comprises a turbine flow block and a large easy to read digital display which indicates both flow and temperature.

DHM411 has a built-in loading valve to simulate the working pressure during normal machine operation. The built-in safety discs protect the machine and operator in event of excessive pressure, allowing oil to safely bypass the loading valve INTERNALLY with no spillage of oil from the hydraulic circuit, eliminating clean-up costs and environmental hazards.



Features

- **ACCURATE** measurement of flow, pressure and temperature.
 - **SAFE** to use in both directions of flow. Internal oil by-pass protects system and operator against overpressure.
 - **BI-DIRECTIONAL** for unrestricted connection and simplified testing.
 - **FAST** checks on pumps, motors, valves, cylinders, hydrostatic transmissions.
 - **EASY** to operate controls. Simply "Switch on" and connect into the hydraulic system.
 - **ECONOMICAL** low power consumption from standard battery. Automatic "Power Off" feature.
 - **PORTABLE AND LEIGHTWEIGHT** with angled case for easier viewing and cleaning.
- Model DHM401**

Specifications

Model	Part No.	Flow Range	Temperature Range	Pressure Range	Port Size (SAE & metric threads available)
		lpm	°C	bar	
D H M401	FT8283	10 - 400	0 - 120	420	G1" WITHOUT LOADING VALVE
D H M411	FT8840-1	10 - 400	0 - 120	420	G1" WITH LOADING VALVE

Consult Sales office for US gpm models.

Connections

Flow block connection by flexible hoses 1 - 2 metres (3 - 6ft) long.

Adaptors

Adaptor Fitting kits and flanges are available to suit the range of flow blocks. Consult the sales office.

Measurement and Indication

Flow

Measured by the electronic count of an axial turbine designed to minimise the effects of variation in temperature and viscosity. The large digital display reads in lpm.

Accuracy: $\pm 1\%$ of full flow.

Temperature

Sensed by a thermistor pick-up in the oil flow for fast response. Temperature is permanently displayed in °C.

Accuracy: $\pm 1^\circ\text{C}$.

Pressure

Glycerine filled dual scale pressure gauge 0 - 420 bar, 0 - 6000 psi connected by capillary tube to the flow block.

Accuracy: $\pm 1.6\%$ of full scale.

Construction

Readout

DHM Testers are microprocessor based instruments providing flexibility and high accuracy with varying oil viscosity.

Flow and Temperature are permanently displayed. Data presentation is by 8 digit liquid crystal display with 8mm high characters.

The readout is programmed to refresh the display each second. An alternative "FAST" update, (1/3 second), can be supplied to show changing flow conditions when testing relief valves etc. Low power micro-circuitry minimises battery consumption.

An automatic switch turns the power off one hour after the last operation. The standard 9 volt battery is available worldwide and gives typically 6 months normal testing.

Turbine Block

High tensile aluminium block houses a six blade turbine rotating on a stainless steel bearing and shaft. Built-in flow straighteners reduce flow turbulence and allows accurate flow measurement in both directions.

General

Loading Valve

The integral loading valve allows progressive pressure loading in either flow directions. Safety discs relieve at 440 bar to internally by-pass the oil if the maximum pressure is exceeded. Safety discs with different pressure ranges up to 480 bar are available. Consult the sales office for details.

Accessories

low pressure gauge kit BP40, which includes testpoint and micro bore hose is suggested as a useful accessory

Seals

Viton seals compatible with oil, water/oil emulsion are fitted as standard. EP seals for phosphate-ester are available to special order.

Dimensions

DHM: 240mm Wide, 205mm High, 180mm Deep, Mass 8kg.

How to Order

Specify the DHM together with optional equipment and adaptor fitting kit as required e.g. DHM and BP40 is a 10 - 400 lpm tester with low pressure gauge kit.

Operators Manual

Full instructions are supplied with each tester.