

DHT 2 Series Digital Hydraulic Testers

Measure Flow, Pressure and Temperature

Inputs for remote flow, temperature and speed measurement

• Up to 800 lpm • Up to 480 bar • Bi-Directional

The Webster DHT 2 Series Digital Hydraulic Tester accurately measures flow, pressure, temperature and speed. Webster testers are designed for testing hydraulic pumps, motors, valves and hydrostatic transmissions.

This easy to use diagnostic unit can pin point hydraulic system faults which reduces downtime and helps with preventive maintenance.

The remote flow input can be easily calibrated by the operator for any Webster flow block. The calibration is retained in permanent memory. The remote input feature allows main hydraulic circuits and drain leakage flows to be measured simply at the turn of a switch.

The tester comprises a turbine flow block and large easy to read digital display which indicates both flow and temperature. Speed and remote flow are selected by switch when required. The flow readout is scaled in lpm, gpm, and US gpm, selected by a push button.

Optional accessories for the tester include an infra-red phototachometer and remote flow blocks covering 0.1 - 800 lpm Flow Range.



*DHT 2 Series Digital
Hydraulic Tester*

Manufacturers of hydraulic components and test equipment
for the Mobile, Industrial and Agricultural industries



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Features

- **ACCURATE**
measurement of flow, pressure, temperature and speed.
- **BUILT-IN** loading valve.
- **BI-DIRECTIONAL** for unrestricted connection and simplified testing.
- **SAFE** to use in both directions of flow. Internal oil by-pass protects the tester and system against overpressure.
- **REMOTE INPUTS**
1 - Flow
1 - Temperature
1 - Speed
- **ECONOMICAL** low power consumption from standard battery. Automatic "Power Off" feature.
- **PORTABLE AND LIGHTWEIGHT** with angled case for easier viewing and cleaning.
- **INFRA-RED PHOTOTACHOMETER** with 'On Target' Indicator.

BFPA The British Fluid Power Association



Certificate No.8242

DHT2SER-BU-ENG-1833.pdf 08/09
(Version 2)

Specifications

Model Number	Flow Range (lpm)	Pressure Range (bar)	Fluid Temp. Range (°C)	Speed (rpm)	Inlet/Outlet Ports
DHT302-B-6	8 - 300	0 - 420	0 - 120	300 - 6000	1" BSPP
DHT402-B-6	10 - 400	0 - 420	0 - 120	300 - 6000	1" BSPP
DHT602-F-3*	20 - 600	0 - 210	0 - 120	300 - 6000	1-1/2" SAE Code 61 4-Bolt Flange
DHT602-S-7*	20 - 600	0 - 480	0 - 120	300 - 6000	1-7/8" -12UN #24 SAE ORB
DHT802-F-3*	20 - 800	0 - 210	0 - 120	300 - 6000	1-1/2" SAE Code 61 4-Bolt Flange
DHT802-S-7*	20 - 800	0 - 480	0 - 120	300 - 6000	1-7/8" -12UN #24 SAE ORB

* DHT602/802 have limited pressure control below 86 lpm (23 USgpm). The maximum controllable pressure in this region is calculated by: max pressure (in bar) = 5 x flow (lpm) +30.

Connections

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

Measurement and Indication

Flow

Measured by the electronic count of an axial turbine. The large digital display reads in lpm, gpm or US gpm, selected by push button and indicated by a cursor arrow on the display.

Accuracy ± 1% of indicated reading (over 15 - 100% of range)

Pressure

Glycerine filled dual scale pressure gauge bar / psi connected by capillary tube to a shuttle valve built into the flow block thereby always indicating the high pressure side of the valve regardless of flow direction.

Accuracy ±1.6% of full scale.

Construction

Readout

DHT Testers are microprocessor based instruments providing flexibility and high accuracy. Data presentation is by 8 digit liquid crystal display with 8mm (0.32") high characters. Temperature is permanently displayed and the internal flow or external flow or speed is selected by rotary switch. The panel has a plastic membrane keypad and wipe clean sealed surface. The readout is programmed to refresh the display each second. "Fast" update, (1/3 second), can be selected to show changing flow conditions when testing relief valves etc. Low power micro-circuitry minimises battery consumption.

General

Loading Valve

The integral loading valve gives progressive pressure loading in either flow direction. Replaceable safety discs relieve to **internally by-pass** the oil if the maximum pressure is exceeded by ~ 5%. Safety discs with different pressure ranges up to 480 bar are available. Consult sales office for further information.

Remote Inputs

An additional flow block can be connected into the panel. This input can easily be calibrated by switching to program mode and keying in the calibration value supplied with each block. This calibration value is retained in memory even when the battery is changed. The tachometer input can be programmed for one or more reflective marks.

Seals

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

Adaptors

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

Temperature

Sensed by a thermistor pick-up in the oil flow for fast response. Temperature is displayed in °C or °F for either the internal or external flow block.

Accuracy ± 1 °C, 2 °F.

Speed

Rotational speed of motor shafts etc., can be measured by optional infra-red phototachometer using one or more reflective marks. Range 300 - 6000 rpm

Accuracy ± 1/4% of full scale with one count per revolution.

An automatic switch turns the power off one hour after the last operation. The standard 9 volt battery is available worldwide and gives at least 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 straightener reduces flow turbulence and allows accurate flow measurement in both directions.

Dimensions (Millimetres)

DHT302/402: 240 Wide, 200 Deep, 200 High
Weight: Unpacked 6.5 kg, Shipped 8 kg (Approx)

DHT602/802: 245 Wide, 225 Deep, 225 High
Weight: Unpacked 10 kg, Shipped 12 kg (Approx)

Operators Manual

Full instructions are supplied with each tester

Accessories

DHT Testers can be used with a wide range of accessories. e.g. Remote Flow blocks, Low Pressure Gauge Kit and Infra-red phototachometer. Please refer to the Optional Equipment bulletin.

How to Order

Specify model from table above together with optional equipment and adaptor fitting kit as required e.g. DHT402-B-6 with TH3 and BA20 is a 10 - 400 lpm 420 bar tester with tachometer and magnetic base.



APPROVED