

Digital Hydraulic Testers

Additional Input for Remote Flow, Temperature and Speed Measurement

- Up to 200 gpm
- Up to 7000 psi
- Bi-Directional



The Webster DHT Series Digital 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 cuts preventive maintenance costs.

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 monitoring of two circuits simultaneously such as pump flow and case drain flow, 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 US gpm, lpm & UK gpm, selected by a push button.

Optional accessories for the tester include an infrared phototachometer and remote flow blocks covering 0.03 - 350 gpm Flow Range.

Features

- **ACCURATE** measurement of flow, with automatic linearization giving an accuracy of 1% of reading over a wide range.
- **SAFE** to use in both directions of flow. Internal oil by-pass protects system and operator against over-pressure.
- **BI-DIRECTIONAL** for unrestricted connection and safe, simplified testing.
- **FAST** checks on pumps, motors, valves, cylinders and hydrostatic transmissions.
- **REMOTE INPUTS**
 - 1 - Flow
 - 1 - Temperature
 - 1 - Speed
- **ECONOMICAL** low power CMOS SMC electronics and "Auto-Off" feature conserves battery life.
- **PORTABLE AND LIGHTWEIGHT** angled case for easier viewing and cleaning, DHT402 weighs only 18 lbs.
- **INFRARED PHOTOTACHOMETER** with 'On Target' Indicator.

Another quality product from the Webster Range

Specifications

Model No.	Part No.	Normal Flow Range gpm	Max. Flow Range gpm	Max. Pressure psi (4:1 S.F.)	Temp Range	Port Size (BSP & metric threads available)
DHT302S	FT9338-3	4 - 60	2 - 80	6000	32 - 250 °F	1-5/16"-12 UN #16 O-ring
DHT402S	FT9338-4	5.3 - 100	2.6 - 115	6000	32 - 250 °F	1-5/16"-12 UN #16 O-ring
DHT752F	FT9339-1	6 - 150	5.3 - 185	5000	32 - 250 °F	1-1/2" 4-Bolt Flange
DHT762F	FT9339-2	7 - 200	5.3 - 235	5000	32 - 250 °F	1-1/2" 4-Bolt Flange
DHT502HP	FT9340-1	5 - 120	4 - 135	7000	32 - 250 °F	1 7/8" -12 UN #24 O-ring
DHT802HP	FT9340-3	7 - 200	5.3 - 235	7000	32 - 250 °F	1 7/8" -12 UN #24 O-ring

Connections

Flow block connection by flexible hoses 3 - 6 foot (1 - 2 meters) long.

Measurement and Indication

Flow

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

Accuracy ± 1% of reading over normal flow range.

Pressure

Glycerine filled dual scale pressure gauge psi/bar connected by capillary tube to shuttle valve in the flow block to indicate high pressure side of load valve.

Accuracy ±1.6% of full scale.

Construction

Readout

DHT Testers are microprocessor based instruments providing versatility and high accuracy. Data presentation is by 8 digit LCD with 8mm (0.32") high characters. Temperature is permanently displayed and the internal flow, external flow or speed input is selected by rotary switch. Engineering units and display functions are controlled by a 4 button sealed membrane keypad. 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 CMOS-circuitry minimizes battery consumption.

General

Loading Valve with 'INTERPASS'

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. Safety discs with different pressure ranges up to 7000 psi are available. Consult sales office for further information.

Remote Inputs

A remote flow block can be connected into the front panel. This input can easily be calibrated in the field by switching to program mode and keying in the calibration value supplied with the remote 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 °F or °C for either the internal or remote flow block (switch selected).

Accuracy ± 2 °F, 1 °C.

Speed

Rotational speed of motor shafts etc., can be measured by optional infrared phototachometer using one or more reflective marks. Range 300 - 6000 rpm with 1 pulse per revolution.

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

An automatic off circuit 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 aluminum 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

DHT302S, DHT402S: 9.5" Wide, 8" High, 7.5" Deep, Weight: 17.5 lbs

DHT752F thru DHT802HP 10" Wide, 8.5" High, 8" Deep, Weight: 22 lbs.

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 Infrared 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. DHT402S with TH4IR and BA20 is a 2.5 - 100 gpm 6000 psi tester with infrared tachometer and magnetic base.



APPROVED



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