

DHM Series

Digital Hydraulic Multimeter with QuickCert®+ App available for iPhone® and Android™

The DHM accurately measures flow, pressure and temperature, displaying the results in digital and chart format. The meter is designed to conveniently test the performance of hydraulic pumps, motors, valves, and hydrostatic transmissions. It is also ideal for presetting flow and pressure before fitting attachments to machines.

The advanced features allow power and volumetric efficiency to be displayed which enables quicker fault diagnosis. A TrueFlow® direction indication provides a clear view of the flow direction. Rapid peak pressure capture means very short spikes are not missed. Fast bar charts enable rapid fluctuation to be spotted. Remote display capability on a mobile phone creates the flexibility to also see the DHM readings while working from a different position around the equipment.

The freely available QuickCert®+ App provides record retrieval and report generation for easy emailing to clients. The multilingual app supports both iPhone® and Android™ platforms.

All DHM Digital Hydraulic Multimeters feature Webtec's unique loading valve with built-in Interpass® safety protection, are sealed against dust and water jets, come with a five-year warranty as standard and delivered with a traceable calibration certificate.

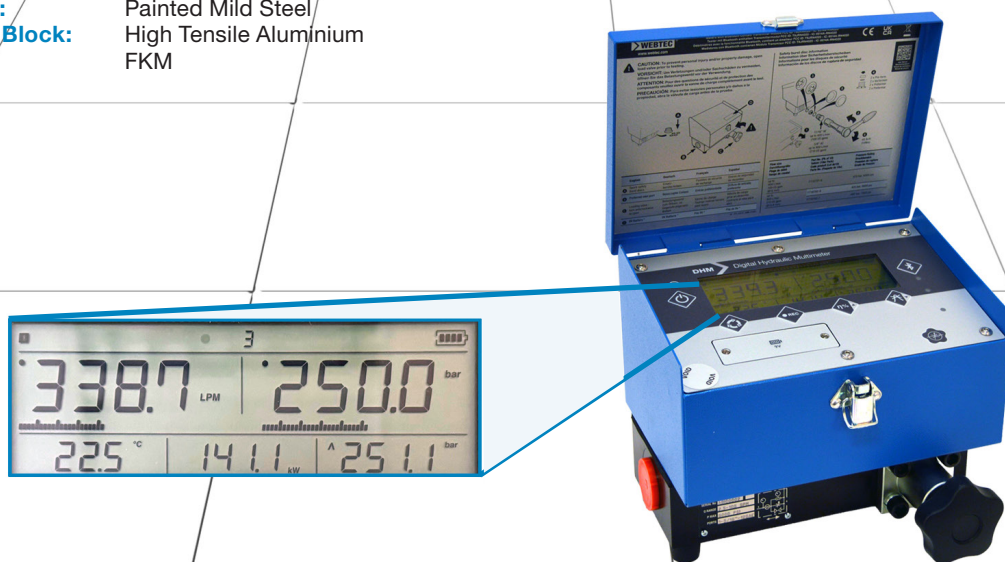
Specifications

Maximum Rated Pressure:	Up to 480 bar, 7000 psi
Maximum Rated Flow:	Up to 800 L/min, 210 US gpm
Fluid Temperature Range:	0 to 120 °C, 32 to 250 °F
Ambient Temperature:	-10 to 50 °C, 14 to 122 °F
Compatible Fluid:	Mineral oils to ISO 11158. Other fluids consult sales office.
Accuracy:	Flow: ± 1 % of indicated reading (15 to 100% of range)
	Pressure: ± 0.5 % full scale
	Temperature: ± 1 °C, ± 2 °F
Porting:	BSPP, SAE
Material:	Case: Painted Mild Steel
	Flow Block: High Tensile Aluminium
	Seal: FKM

Make it **BLUE**®

Features

- QuickCert®+ App available for iPhone and Android
- QuickCert®, enables you to see live readings at a distance
- TrueFlow® See flow direction
- IP65 rated, more testing & less worrying about your equipment getting wet
- Bigger and better screen, see more information at the same time.
- Record up to 99 points in a single test and produce a test certificate.
- Built-in loading valve.
- Interpass® safety protection system, bypasses oil internally in the event of the valve being over pressurised in either flow direction.



Sales Order Code

Please contact our technical sales team to discuss any special order requirements.

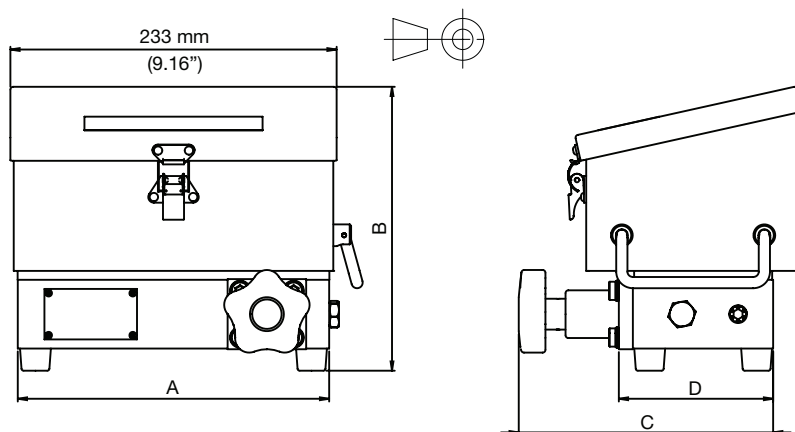
MODEL NUMBER	INLET/OUTLET PORTS	CALIBRATED FLOW RANGE		MAXIMUM RATED PRESSURE
		L/min	US gpm	
DHM04-B	1" BSPP	10 - 400	2.5 - 105	420 bar, 6000 psi
DHM04-S	1-5/16" -12UN #16 SAE ORB	10 - 400	2.5 - 105	420 bar, 6000 psi
DHM08-S*	1-7/8" -12UN #24 SAE ORB	20 - 800	5 - 210	480 bar, 7000 psi
DHM08-S-L*	1-7/8" -12UN #24 SAE ORB	20 - 800	5 - 210	480 bar, 7000 psi

* Limited pressure control below 86 L/min (23 US gpm).

The maximum controllable pressure in this region is calculated by: max pressure (in bar) = 5 x flow (L/min) + 30

Installation Details

MODEL SERIES	A		B		C		D		WEIGHT	
	mm	in	mm	in	mm	in	mm	in	kg	lb
DHM04	222	8.74	202	7.95	181	7.13	110	4.33	6.5	14
DHM08	235	9.26	227	8.94	208	8.19	144	5.67	10	22



Functional Specification

Accuracy: Flow:	Reading 15% to 100% of flow range - 1% of indicated reading. Readings below 15% of full-scale flow - fixed accuracy of 0.15% of full scale.
Pressure:	± 0.5% full scale
Temperature:	± 1 °C (± 2 °F)
Power:	Better than +/-1.5% full scale
Volumetric efficiency:	± 1%
Repeatability:	Better than ± 0.2%
Data Recording:	Up to 99 sets of data points can be saved to internal memory.
Peak Pressure:	Is measured 1000 times/second.
Battery Life:	Up to 6 months normal testing; battery indicator shows charge remaining
Degree of protection:	IP65 internal protection of electrical circuits.

Operation

DHM testers are microprocessor-based instruments providing flexibility and high accuracy. Flow, pressure, peak pressure, temperature, hydraulic power/efficiency and flow direction are continuously displayed on a large liquid crystal display. Flow, pressure, temperature and power units can be changed with the display panel buttons when in the setup screen 4. A multi-function bar chart can be used to display flow and pressure information that updates much faster than the digital displays enabling identification of transient anomalies. Types and resolution can be adjusted from setup screen 4. Low power micro-circuitry and power management minimises battery consumption so a standard 9-volt battery will typically supply up to 6 months normal testing.

The turbine block is made from high tensile aluminium and houses a six-blade turbine rotating on a stainless steel bearing and shaft. Built-in flow straighteners reduce turbulence and allow accurate flow measurement in both directions.

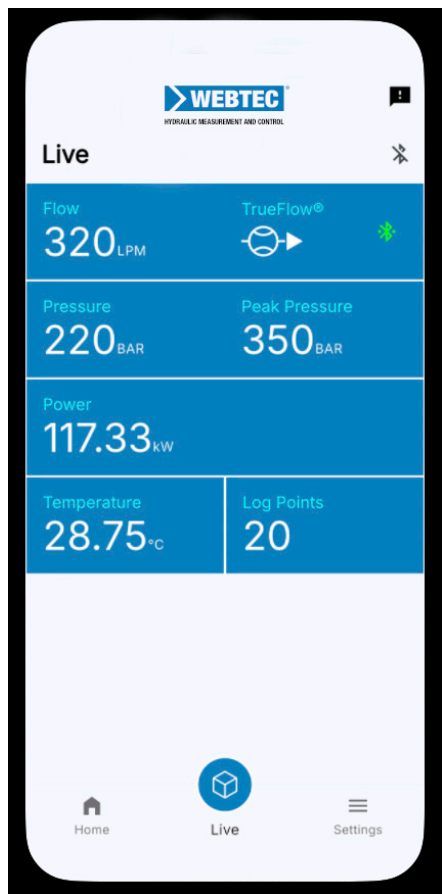
The integrated loading valve gives progressive pressure loading in either flow direction. Replaceable safety burst discs are part of Interpass® safety protection system and operate if maximum pressure is exceeded, relieving flow to the return line. Replacement safety discs are stored in an internal holder machined in the rear of the flow block.

There is an operational warning by a red LED if the electronics exceed maximum working temperature. This provides confidence in readings when measuring fluids up to 125 °C (257 °F).

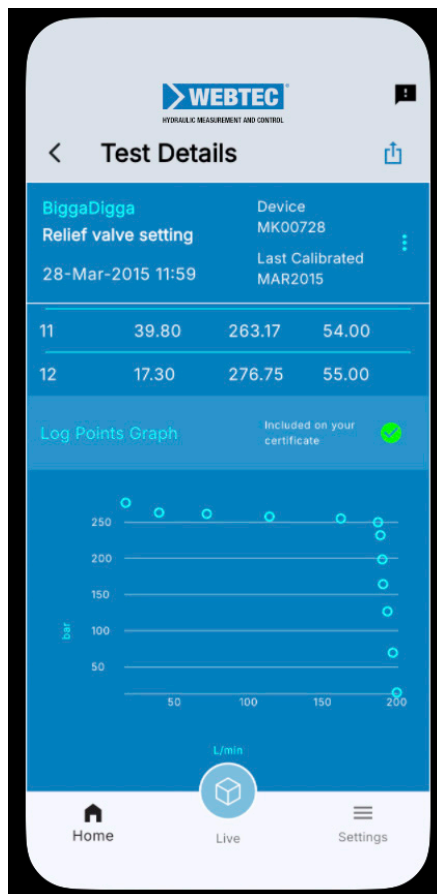
QuickCert®+ App available for iPhone® and Android™



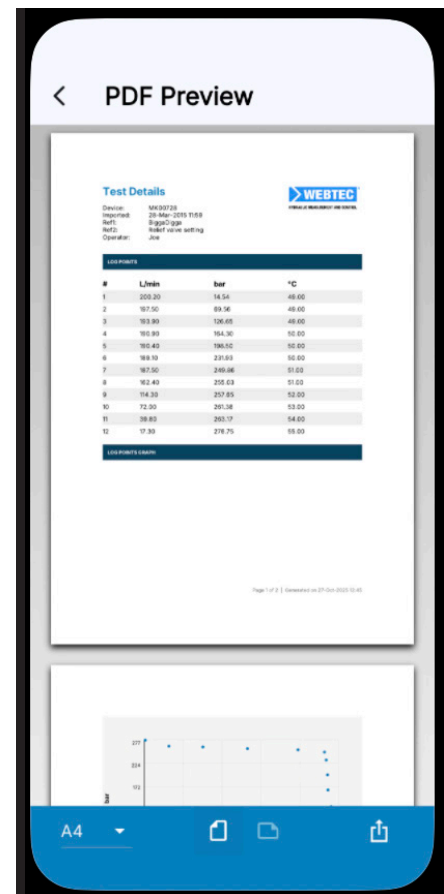
The iPhone® or Android™ app displays the live readings and allows the retrieval of test data from the DHM and the creation of a certificate of test that can be emailed. The screen depictions below show the logged data table prior to creating the certificate and the live data display screens. QuickCert®+ communicates with the DHM via Bluetooth wireless technology.



Live view



Test details



Test certificate

Service and Calibration

All digital hydraulic testers are calibrated at a mean viscosity of 21cSt using ISO32 hydraulic mineral oil to ISO11158 category HM. A calibration certificate is supplied with each meter.

Recommended period between services is 12 months. Maximum period between services is 36 months. Unit accuracy may be affected by operating cycle, fluid condition or extended periods between services. Service reminders are displayed at power ON as a useful tool to help keep the meter safe and working within specification.

The reminder looks like: $SEr \overset{\textcircled{4}}{365}$

Installation

It is recommended to connect the flow block with flexible hoses 1-2 metres (3-6ft) long. Inlet and outlet connections should always be of a similar bore size to that of the flow block to prevent venturi or constriction effects.

Where repetitive pulsation causes lateral pipe movement against the ports, we recommend the hoses are firmly clamped.

Filtration

Must be better than DIN ISO4406: 21/19/16 or NAS 10 (typically achieved with 20-25u filters).

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