



HYDRAULIC MEASUREMENT AND CONTROL

Product Overview



See our range of hydraulic control valves
and test equipment



www.webtec.com



HYDRAULIC MEASUREMENT AND CONTROL

We are specialist manufacturers of hydraulic measurement and control products helping to improve the productivity of heavy machinery.

For more than 50 years we have been helping customers worldwide in the industrial, mobile, and agricultural sectors to diagnose hydraulic faults, verify hydraulic conditions and achieve repeatable hydraulic control.

Using our Make it BLUE® manufacturing process we help customers maximise the potential of their hydraulic machinery but without the complexity of costly consultancy.

The infographic is divided into five vertical panels, each representing a step in the BLUE process:

- BEGIN**: Free-to-access educational material. Includes images of a book titled "HYDRAULIC SYSTEMS MAINTENANCE" and a hydraulic component.
- LISTEN**: To understand your challenge. Includes icons for "Component design", "Customer focus", "Hydraulic system", and "Blue scorecard".
- UPGRADE**: 3D CAD, rapid prototype and working sample. Includes images of a 3D printer, a blue hydraulic cylinder, and a target icon.
- ENGINEER**: A 'functionally superior' product with a touch of Blue. Includes an image of a factory floor, an "ISO 9001" certification logo, and a bar chart.
- SUPPORT**: Training, advice, repair, recalibration. Includes a photo of a woman and an icon of two people with arrows.



Hydraulic Control Valves

Flow Control Two-Port

Fixed Flow Pressure Compensated Control Valve



ILFC Series



- Maximum Pressure: 210 bar, 3000 psi
- Maximum Flow: 16 L/min, 4 US gpm
- Pressure compensated to ensure a constant flow rate under varying pressures.
- Uncontrolled flow is permitted in reverse direction.
- Cartridge insert version available, without steel body.

Variable Flow Pressure Compensated Control Valve



VFC Series



- Maximum Pressure: 210 bar, 3000 psi
- Maximum Flow: 55 L/min, 15 US gpm
- Pressure compensated to ensure a constant flow rate under varying pressures.
- Knurled knob can be locked in position by a grub (set) screw and provides weatherproof sealing to prevent the adjusting screw from corroding or seizing.
- Free (uncontrolled) flow is permitted in reverse direction.

Flow Control Three-Port

Variable Priority Flow Dividers



VFD50 Series



- Working pressures up to 420 bar, 6000 psi
- Maximum flow: 50 L/min, 13 US gpm
- Clearly marked hand dial permits fast visual adjustments to pre-determined 'Priority' flow and fast easy adjustment of 'Priority' circuit to meet varying requirements.
- Pressure compensated permitting both 'Priority' and 'By-Pass' flows to be used simultaneously at varying pressures without effecting the Priority flow rate.



VFD120 Series



- Max Pressure: Up to 420 bar, 6000 psi
- Total flow capacity: 120 L/min, 32 US gpm
- Clearly marked single-turn hand dial permits fast visual adjustments to pre-determined 'Priority' flow.
- Pressure compensated permitting both 'Priority' and 'By-Pass' to be used simultaneously at varying pressures without affecting the 'Priority' flow rate.



VFD190 Series



- Working Pressure (Max): Up to 420 bar, 6000 psi
- Total flow capacity: 190 L/min, 50 US gpm
- Clearly marked single-turn hand dial permits fast visual adjustments to pre-determined 'Priority' flow and fast easy adjustments of 'Priority' circuit to meet varying requirements.
- Pressure compensated permitting both 'Priority' and 'By-Pass' to be used simultaneously at varying pressures without affecting the 'Priority' flow rate.

Hydraulic Control Valves

Flow Control Three-Port

Variable Priority Flow Divider with Remote Proportional Control



VFD120MD Series



- Maximum (working) Pressure: Up to 420 bar, 6000 psi
- Total Flow capacity: 120 L/min, 32 US gpm
- Minimum to maximum priority flow in less than 10 seconds (at full pressure)
- 11 – 28 Vdc supply enables unit to be powered from a vehicle supply
- Choice of remote control options: Potentiometer, 0.5 - 5 Vdc, 4 - 20 mA loop

Flow Control Three-Port

Flow Divider Combiner



FDC60 Series



- Working pressures up to 310 bar, 4500 psi
- Maximum flow 70 L/min, 18.5 US gpm
- Pressure compensated to keep the two divided flow rates at the same ratio regardless of pressure variations between them.
- Flow ratios are pre-set at factory from 50% - 50% up to 10% - 90%.

Variable Priority Flow Dividers with Electric Motor Drive



VFD120-E Series



- Maximum Working Pressure: 420 bar, 6000 psi
- Total flow capacity: 120 L/min, 32 US gpm
- Remotely controlled by a toggle or rocker switch (Not supplied).
- No external control box needed. All Electronics are self-contained inside the canister.
- Pressure compensated permitting both 'Priority' and 'By-Pass' to be used simultaneously at varying pressures without affecting the 'Priority' flow rate.

High-Flow Divider Combiner



FDC140 Series



- Maximum Rated Pressure: 420 bar, 6000 psi
- Maximum Total Flow: Up to 140 L/min, 37 US gpm
- Pressure compensated to keep the two split flows at the same ratio regardless of pressure variations between them.
- Pressure compensation in both forward (divide) and reverse (combine) flows.
- +/-1.5% accuracy between the two split flows, based on valve rated maximum flow

Hydraulic Control Valves

Monoblock

Combination Valve - Variable Priority Flow Divider with Directional Control



CV120 Series



- Maximum Operating Pressure: 250 bar, 3600 psi
- Total Flow Capacity: 120 L/min, 32 US gpm
- Clearly marked single-turn hand dial permits fast visual adjustments to pre-determined 'Priority' flow
- Pressure compensated permitting both 'Priority' and 'By-Pass' to be used simultaneously at varying pressures without affecting the 'Priority' flow rate
- Easy installation allowing side or top connections

Directional zero-leak

Rotary Shear Directional Control Valve



180 Series



- Maximum Pressure: Up to 700 bar, 10,000 psi
- Maximum Flow: Up to 38 L/min, 10 US gpm
- Spring to centre or detent action
- Position lock version available. Constructed from zinc plated & stainless steels with technopolymer button or removable key
- Pressurised tank port with additional drain available
- Zero leakage

Directional spool type

Diverter Valve



SV80 Series



- Working pressures up to 210 bar, 3000 psi
- Maximum flow: 80 L/min, 21 US gpm
- Flow may be directed by mechanically pushing the spool with spring offset or by a mechanical push pull operation in which case the valve stem is threaded or fitted with a moulded knob.
- Customer can select from one of two spool types allowing flow to be diverted from one line to another or from system to tank.
- A choice of port threads are available.

Stainless Steel Rotary Direction Control Valve



280 Series



- Maximum Pressure: Up to 700 bar, 10,000 psi
- Maximum Flow: Up to 38 L/min, 10 US gpm
- Pressurised tank port with additional drain available
- Over 4000 possible configurations
- BS EN13463-1:2009 (ATEX) rating of 'II 3G TX'
- BS ISO 4401-03, NFPA T3.5.1-D03 (CETOP3/NG06/D03) mounting adapter

Condition Monitoring

Flow and Temperature

Automotive Ready Hydraulic System Flow Monitor with J1939 Interface



- Flows from 8 - 300 L/min, 2 - 80 USgpm
- Pressure: up to 420 bar, 6000 psi
- Output: J1939 reporting flow and temperature
- Calibration: 21cSt as standard, other viscosities possible
- Deutsch automotive connector
- Ingress protection: IP69K
- Tested to SAE J1455, ISO 11451, CISPR 25 and SAE J1113-13



FlowHUB Digital Monitoring Solution



- Maximum Rated Pressure: 420 bar, 6000 psi
- Maximum Rated Flow: 360 L/min, 95 US gpm
- Easy to operate, 4 digit LED display, 3 large keys
- Temperature measurement built-in.
- Wide range of options: Choice of outputs. Two programmable switches. Complete with adaptors fitted. Engineering units L/min or US gpm (°C or °F).

FlowHUB Series



Hydraulic Flow Monitors



- Flows up to 550 L/min, 145 US gpm)
- Pressures up to 240 bar, 3500 psi
- Accuracy 4% of full scale
- No batteries required
- Range of porting options
- Low pressure drop

WP Series



Hydraulic Flow Indicators



- Flow: 2 - 180 L/min, 0.5 - 48 US gpm
- Pressure: 420 bar, 6000 psi
- Accuracy 4% of full scale
- Optional thermometer

FI750 Series



- Flows up to 400 L/min, 100 US gpm
- Pressures up to 350 bar, 5000 psi
- Accuracy 4% of full scale
- Optional thermometer

FI1500 Series



Hydraulic Usage

Flow Hours Counter



- Flow: 200 L/min, 52 US gpm
- Pressure: Up to 420 bar, 6000 psi
- Trigger point factory set at 10 L/min, 2.6 US gpm
- Anti-tamper design for security
- IP66 sealing of sensitive components
- Temperature range: -20 to +100 °C, -4 to 212 °F

RFS200



Portable Test Equipment

Dataloggers

Digital Pressure Gauges



HPM110 Series

- Maximum Rated Pressure: Up to 600 bar, 8700 psi
- Digital pressure gauge with peak capture
- Accuracy of $\pm 0.5\%$ Full Scale
- Backlit display
- Optional data logger version with real time clock records both current measured values min and max values



Sensors for Dataloggers

Flow Meters (SR & ID)



CT/CTR Series

- Precision turbine flow meters (1% IR)
- 12 models cover range 0.1 - 750 L/min, up to 480 bar
- Additional top ports
- With or without built-in loading valve



Hydraulic Data Loggers (SR & ID)



HPM4000 Series

- Two models - choose between SR and ID
- Choose between 2 or 3 input version
- USB connectivity, Nano-USB up to 4GB
- Supplied with HPMComm software



Sensors (SR & ID)



Pressure / temperature sensors

- Pressure transducers rated up to 1000 bar
- Temperature sensor
- Speed sensor
- Current & voltage input converters for custom sensors



Hydraulic Data Loggers (SR & ID)



HPM7000 Series

- Complete range of sensors - pressure, flow, temperature, RPM, contamination.
- Webtec CAN sensors for plug and play functionality
- Third Party CAN sensors (External CAN) can be displayed and logged. A CAN Monitor assists during installation of CAN channels and analysis of the CAN bus.
- Illuminated and anti-glare, 7 inch touch screen colour display.



Portable Test Equipment

All-In-One Testers

Mechanical Testers



RFIK Series

- Maximum Rated Pressure: Up to 420 bar, 6090 psi
- Maximum Flow: Up to 200 L/min, 53 US gpm
- Measure flow (reversible), pressure and temperature
- Built-in loading valve, INTERPASS[®] protected
- No batteries required



Simplified Digital Testers



DHT '1' Series

- Flows up to 400 L/min, 100 US gpm
- Pressures up to 420 bar, 6000 psi
- Measure flow (1% FS), pressure and temperature
- Simple 'On / Off' control
- Simulate machine performance using loading valve
- INTERPASS[®] protected



Digital Hydraulic Multimeter



DHM '4' Series

- Flow: 400 L/min, 100 US gpm
- Pressure: 420 bar, 6000 psi
- Measure flow (1% IR), pressure, peak, power and temperature
- Log results and email a test certificate instantly via QuickCert[™] App for iPhone[®]
- Measure hydraulic pump efficiency with P-Q test
- Simulate machine performance using loading valve
- INTERPASS[®] protected



OEM Custom Kits



OEMS Worldwide

- Custom test kits built to your specification
- Ideal tool kits for service engineers
- OEM branding and marketing solutions available
- Used by major mobile machinery OEMs worldwide



Pressure Gauges and Kits

Pressure test kits



PT100 Series

- Complete kits for pressure testing
- Assembled to customer specification
- Fit test points wherever required in the circuit
- Kit includes gauges, hoses and test points



Test Stand Instrumentation

Hydraulic Data Acquisition Systems

C2000 Hydraulic Data-Acquisition System



C2000 Series

- Complete hydraulic test stand solution
- Includes sensors, hardware, software and training (optional)
- Up to 64 inputs. Choice of mA and frequency
- Display, datalog and produce test certificates



Pressure, Temperature and Speed Sensors

Advanced Panel Meters



APM Series

- Combined digital and bar graph display
- USB port for custom user settings
- 0.1% accuracy for voltage inputs and 0.01% accuracy for current inputs
- Less than 53mm deep



WIKA-A-10 Type



Pressure transducers

- Maximum Rated Pressure: Up to 600 bar, 10,000 psi
- Accurate ($\leq \pm 1\%$ of Full Scale)
- Rugged design
- Output: 4 - 20mA
- Connector: Male 4 pin M12 x1.0
- Two nominal thread forms available - BSPP & SAE



Speed Sensors



SP-TTL Series

- Speed sensor with TTL output
- 0 - 2 kHz magnetic pickup
- Ideal for measuring pump/motor speed
- Connects directly into C2000



Test Stand Instrumentation

Turbine Flow Meters & Loading Valves

CT Flow Meters



CT-mA Series

- Precision turbine flow meters (1% IR)
- 8 models cover range 1 - 1500 L/min, 1 - 400 US gpm & up to 480 bar, 7000 psi
- Additional top ports for pressure and temperature
- Other outputs available (mA, V, pulse)



Separate Loading Valve



HV Series

- Simulate machine performance (Bidirectional)
- Five models: up to 1500 L/min, 400 US gpm
- Safe and clean to use, INTERPASS[®] protected
- Use separately or with LT / CT flow meters



Gear Flow Meters

Flow Meters - Special Applications



GF Series

- Precision gear type flow meters (0.5% IR)
- 3 models cover flow range 0.1 - 150 L/min, 1 - 400 US gpm & up to 420 bar, 6000 psi
- Bidirectional
- 4-20 mA as standard



Applications and Industry Sectors

Aerospace ground support	Materials handling
Agricultural	Military
Automotive	Mining and Quarrying
CNC machining	Municipal vehicles
Construction	Oil and Gas
Forestry	Power plants
Hydraulic repair and rebuild	Steel and paper mills
Marine	Truck and Bus





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Webtec reserve the right to make improvements and changes to the specification without notice



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