

WPB Series

Hydraulic Flow Monitor

Up to

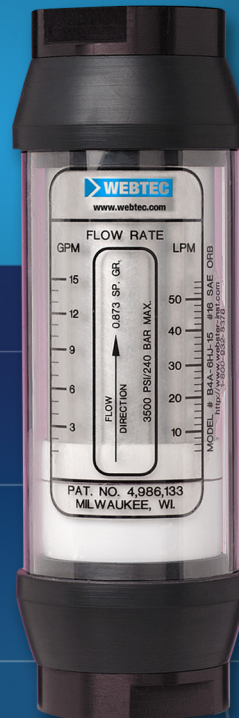
- 550 lpm, 150 US gpm
- 420 bar, 6000 psi

The WPB series in-line flow monitors are designed for continuous monitoring or intermittent use for trouble-shooting or commissioning industrial or mobile hydraulic systems.

The tubular scale is easily read through the clear polycarbonate window and ensures checks can be made to determine pump performance and setting of flow control valves. The unit is fully sealed for weather tight or wash down applications. An optional Pyrex safety glass window is available.

Wetted seals are available in Buna (standard), Viton®, EPR or Kalrez®, so compatibility with hydraulic fluids in mobile, industrial or other applications such as lubrication or coolant systems is not a problem.

The WPB series flow monitors do not require straight inlet or outlet piping or require vertical installation. The advanced design of the sharp edged orifice ensures good reliability over a wide viscosity range and minimises the effect of contamination. Accuracy is 2.5% over the centre third of the scale and 4% over the entire flow range.



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Features

- Low cost solution
- Wide variety of flow ranges
- Accurate within 2.5% over mid-scale, 4% FSD
- Pressure rating up to 420 bar (6000 psi)
- Excellent viscosity stability to a min of 95 cSt
- Port sizes from 3/8" to 2"
- Direct reading, dual calibration, lpm & US gpm
- Aluminium construction
- Advanced stainless steel sharp edge orifice
- Unrestricted mounting in any orientation

Hydraulic measurement and control



Certificate No.8242

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(Issue 4)

Specifications

Measuring accuracy

± 2.5% of full-scale in the centre third of the measuring range
± 4% of full-scale over the entire scale range

Repeatability

± 1% of full scale

Maximum operating pressure

Aluminium and Brass monitors 240 bar (3000 psi),
stainless steel 420 bar (6000 psi).

Maximum operating temperature

115° C (240° F)

Note: For operation to 315° C (600° F), a high temperature range is available

Pressure differential

See graphs below

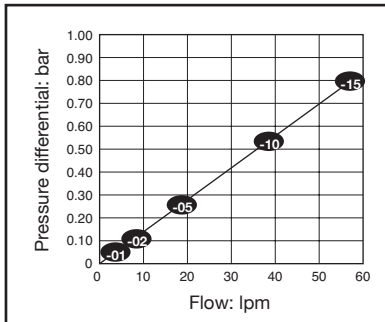
Standard calibration fluids

Oil monitors: DTE 25 @ 43°C (40 cSt), 0.873 sg

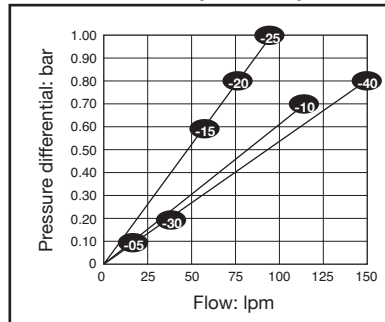
Water monitors: Tap water @ 21°C (1 cSt), 1.0 sg

Pressure differential graphs categorised by size code

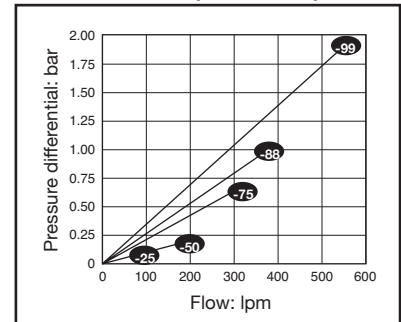
Series 3 (3/8" - 1/2")



Series 4 (3/4" - 1")



Series 5 (1 1/4" - 2")



Model number (see Sales Brochure)

14.5 psi = 1 bar, 1 US gpm = 3.785 lpm

Construction

Wetted components:

High pressure casing, end ports and tapered shafts: *Aluminium, Brass and Stainless Steel*

Seals: *Buna-N (STD), EPR, Viton® or Kalrez®*

Transfer magnet: *Teflon® coated Alnico*

Floating Orifice disc: *Stainless Steel*

All other internal parts: *Stainless Steel*

Non-wetted components:

Window tube: *Polycarbonate (STD), Pyrex*

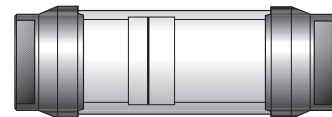
Window seals: *Buna-N (STD), Teflon®*

(Teflon® is a registered trademark of DuPont)

(Viton® & Kalrez® are registered trademarks of Dow DuPont Elastomers)

Dimensions

Size code	3	4
Dim. A mm (inches)	48 (1.9)	60 (2.4)
Dim. B mm (inches)	167 (6.5)	182 (7.2)



Product Selector

Standard Flow Meter Part Number
(For custom units, consult the Sales Office)

Series # WP - - Webtec Part Number

Step 1 - Style

BASIC in line for liquid	= B
Pneumatic for air and gas	= G
High Temp 200 °C (400 °F)	= H
Flow alarm, 1 switch	= M
Flow alarm, 2 switches	= N
Flow transmitter	= R
Phosphate esters	= P

Step 2 - Port / Line Size

1/4" - 1/2"	= 3
3/4" - 1"	= 4
1 1/4" - 2"	= 5

Step 3 - Material

Aluminium	= A
Brass	= B
Stainless Steel	= S

Step 4 - Pressure rating maximum

42 bar (600 psi)	= 4
(Air and gas / Aluminium and brass)	
69 bar (1000 psi)	= 5
(Air and gas / Stainless steel)	
240 bar (3500 psi)	= 6
(Liquids / Aluminium and brass)	
420 bar (6000 psi)	= 7
(Liquids / Stainless steel)	

Step 5 - Fluid:

Air and Gases	= A
Oil and 0.873 specific gravity	= H
Water and 1.0 specific gravity	= W

Step 6 - Thread porting

Size 3 available threads

1/4" NPTF	= S
1/8" NPTF	= A
1/2" NPTF	= B
9/16" -18UN #6 SAE ORB	= E
3/4" -16UN #8 SAE ORB	= F
7/8" -14UN #10 SAE ORB	= G
3/8" BSPP	= R
1/2" BSPP	= T

Size 4 available threads

3/4" NPTF	= C
1" NPTF	= D
1-1/16" -12UN #12 SAE ORB	= H
1-5/16" -12UN #16 SAE ORB	= J
3/4" BSPP	= U
1" BSPP	= V

Size 5 available threads

1-1/4" NPTF	= K
1-1/2" NPTF	= L
2" NPTF	= M
1-5/8" -12UN #20 SAE ORB	= N
1-7/8" -12UN #24 SAE ORB	= P
2" -12UN #32 SAE ORB	= Q
1-1/4" BSPP	= W
1-1/2" BSPP	= Y
2" BSPP	= X

Please note - SAE porting not available in brass

Step 7 - Flow ranges

Oil and Water LPM (USgpm)	@100 PSIG		Size
	SCFM		
0.5-4 (0.05 - 1)	1.5 -12	= 01	3 only
0.5-4 (0.1 - 1) water			
1-8 (0.2-2)	4-23	= 02	3 & 4
2-19 (0.5-5)	5-50	= 05	3 & 4
4-38 (1-10)	10-100	= 10	3 & 4
4-56 (1-15)	25-150	= 15	3 & 4
10-75 (2-20)	20-215	= 20	4 only
10-100 (2-25)	20-250	= 25	4 & 5
10-115 (3-30)	30-330	= 30	4 only
15-150 (4-40)	30-400	= 40	4 only
15-190 (5-50)	40-500	= 50	4 only
15-190 (5-50)	30-470	= 50	5 only
30-280 (8-75)	30-750	= 75	5 only
40-375 (10-100)	150-900	= 88	5 only
75-550 (20-150)	150-1300	= 99	5 only

Step 8 - Optional flow directions

Uni-directional	=
Bi directional	= BI
Reverse flow	= RF

Not all flow ranges are available with Bi and reverse directional options, please consult the sales office.

Case Drain Monitor

Series # WPC - - Webtec Part Number

Port / Line Size

1/2"	= 3
3/4" - 1"	= 4

Material

Aluminium	= A
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Pressure Rating Max.

70 bar (1000 psi)	= 5
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Fluid Media

Oil and 0.873 specific gravity	= H
Water and 1.0 specific gravity	= W

Flow ranges (oil and water)

LPM (USgpm)		Size
0.5-4 (0.05 - 1)	= 01	3 only
0.5-4 (0.1 - 1) water		
1-8 (0.2-2)	= 02	3 & 4
2-19 (0.5-5)	= 05	3 & 4
4-38 (1-10)	= 10	3 & 4
4-56 (1-15)	= 15	3 & 4
10-75 (2-20)	= 20	4 only
10-100 (2-25)	= 25	4 & 5
10-115 (3-30)	= 30	4 only

Thread Type

Porting (All Female)		Size
1/2" BSPP	=T	3 only
3/4" BSPP	=U	4 only
1" BSPP	=V	4 only
1/2" NPTF, dry seal	= B	3 only
3/4" NPTF, dry seal	= C	4 only
1" NPTF, dry seal	= D	4 only