

# WPC Series

## Hydraulic Case Drain Monitor

Up to

- 115 lpm, 30 US gpm
- 70 bar, 1000 psi

The WPC series in-line case drain monitors are designed as a low cost alternative to using a high pressure flow meter for case drain applications.

It is ideal for monitoring pump performance and identifying required maintenance.

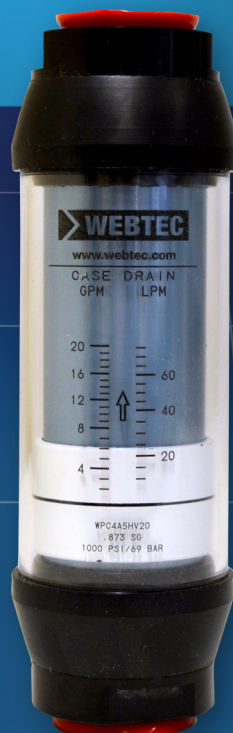
The flow rate is easily read in either US GPM or LPM from the laser engraved scale.

A varied choice of materials and seals can make it suitable for a wide range of fluids.

Due to the sharp edge orifice technology the units have excellent viscosity stability which means it is suitable for a wide operating temperature range.

Installation is made easy with a choice of threaded ports, no need for straight lengths of pipe on inlet or outlet and no restriction to orientation. This combined with the unit being sealed means that it can nearly be installed anywhere.

Symbol



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### Features

- **FLOW:** 0.5 - 150 lpm, 0.1 - 150 US gpm
- **PRESSURE** rating up to 70 bar (1000 psi)
- **ACCURACY**  $\pm 5\%$  of full scale
- **DIRECT** reading,
- **DUAL SCALE** lpm & US gpm
- **EXCELLENT** viscosity stability to a min of 95 cSt
- **CHOICE** of BSPP, NPTF or SAE Port threads
- **ALUMINIUM** Construction
- **ADVANCED** stainless steel sharp edge orifice
- **UNRESTRICTED** mounting in any orientation



Certificate No.8242

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(Issue 6)

Hydraulic measurement and control

## Specifications

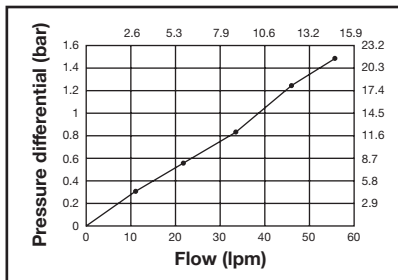
<b>Measuring accuracy</b>	± 5.0 % of full scale
<b>Repeatability</b>	± 1% of full scale
<b>Max. operating pressure</b>	70 bar (1,000 psi)
<b>Max. operating temperature</b>	116° C (240 °F)
<b>Pressure differential</b>	See graphs below

## Calibration

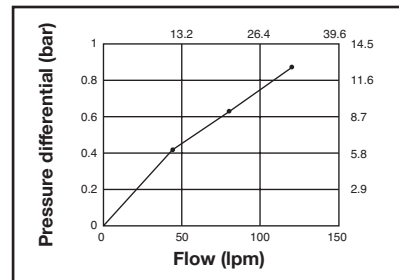
Oil monitors: DTE 25 @ 43°C (40 cSt), 0.873 sg  
 Water monitors: Tap water @ 21°C (1 cSt), 1.0 sg  
 Flow calibration certificates are available on request, this is a chargeable option.  
 Note: Must be requested at time of order & cannot be retrospectively requested.

### Pressure differential graphs categorised by size code

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



**Series 4 Monitors (3/4" - 1")**



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

## Construction

### Wetted components:

High pressure casing, end ports and tapered shafts:	2014 Aluminium
Seals:	Buna-N
Transfer magnet:	Teflon® coated Alnico
Floating Orifice disc:	Stainless Steel
All other internal parts:	Stainless Steel

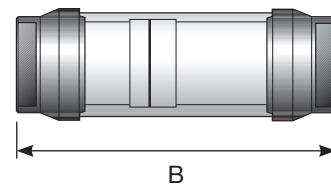
### Non-wetted components:

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

*(Teflon® is a registered trademark of DuPont)*

## 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)



## Operation

The flow monitor consists of tapered center shaft, encircled by a sharp edged floating orifice disk, transfer magnet and return spring.

As flow moves through the monitor, a pressure differential occurs across the floating orifice disk, forcing the disk & transfer magnet against the return spring. As flow increases, the pressure differential increases, forcing the disk & transfer magnet along the tapered shaft. As flow decreases, the biased spring forces the disk & transfer magnet down the tapered shaft, returning to the "no flow" position.

In metal casing monitors, where the disk & transfer magnet are sealed in the body casing, there is a magnetically coupled magnet follower which displays the reading on the outside scale.

The flow monitor has a linear relationship between flow rate, pressure differential and piston displacement which is displayed on the calibrated scale.

# Product Selector

Standard Flow Meter Part Number  
(For custom units, 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

Pressure Rating Max.	
70 bar (1000 psi)	= 5

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

Flow ranges (oil and water)		
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 only
15-115 (4-30)		= 30 4 only
15-150 (4-40)		= 40 4 only

Thread Type	
<b>Size 3 available threads</b>	
1/4" NPTF	= S
3/8" 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
<b>Size 4 available threads</b>	
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

### Other Series available

WPB Series Hydraulic Flow Monitor  
WPG Series Pneumatic Flow Monitor  
WPH Series High Temperature Flow Monitor

WPP Series Phosphate Ester Flow Monitor  
WPR Series Flow Monitor with Flow Rate Transmitters  
WPM Series Flow Monitor with Flow Rate Alarm