

# 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.

The tubular scale is easily read through the clear polycarbonate window and ensures checks can be made to determine pump performance with ease. The unit is fully sealed for weather tight or wash down applications.

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

The WP series flow monitors do not require straight inlet or outlet piping or 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 5% over the entire flow range.



Manufacturers of hydraulic components and test equipment  
for the Mobile, Industrial and Agricultural industries



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## Features

- Low cost solution
- Wide variety of flow ranges, 0.5 - 115 lpm (0.05 - 30 US gpm)
- Accurate within 5% FSD
- Pressure rating up to 70 bar (1000 psi)
- Excellent viscosity stability to a min of 95 cSt
- Port sizes from 1/2" to 1"
- Direct reading, dual calibration, lpm & US gpm
- Aluminium construction
- Advanced stainless steel sharp edge orifice
- Unrestricted mounting in any orientation



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## Specifications

### Measuring accuracy

± 5% of full-scale over the entire scale range

### Repeatability

± 1% of full scale

### Maximum operating pressure

70 bar (1,000 psi)

### Maximum operating temperature

116° C (240 °F)

### Pressure differential

See graphs below

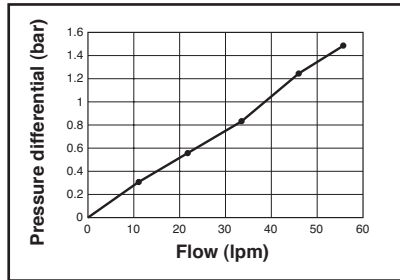
### Standard calibration fluids

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

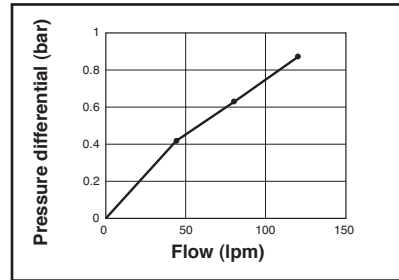
Water monitors: Tap water @ 21°C (1 cSt), 1.0 sg

## Pressure differential graphs categorised by size code

Series 3 Monitors (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: | Aluminium |
|---|-----------|

|        |        |
|--------|--------|
| Seals: | Buna-N |
|--------|--------|

|                  |                       |
|------------------|-----------------------|
| Transfer magnet: | Teflon® coated Alnico |
|------------------|-----------------------|

|                        |                 |
|------------------------|-----------------|
| Floating Orifice disc: | Stainless Steel |
|------------------------|-----------------|

|                           |                 |
|---------------------------|-----------------|
| All other internal parts: | Stainless Steel |
|---------------------------|-----------------|

### Non-wetted components:

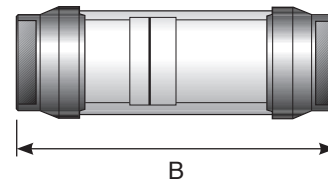
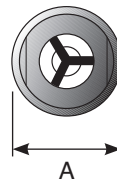
|              |                     |
|--------------|---------------------|
| Window tube: | Polycarbonate (STD) |
|--------------|---------------------|

|               |                          |
|---------------|--------------------------|
| Window seals: | Buna-N (STD),<br>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) |



# 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

|                                 |     |
|---------------------------------|-----|
| <b>Size 3 available threads</b> |     |
| 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 |

|                                 |     |
|---------------------------------|-----|
| <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 |

|                                 |     |
|---------------------------------|-----|
| <b>Size 5 available threads</b> |     |
| 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         | @100 PSIG |      | Size   |
|-----------------------|-----------|------|--------|
| LPM (USgpm)           | 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 |
|-----------|-----|

## 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)

| 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 |