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M451 Series High Performance Pressure Filter

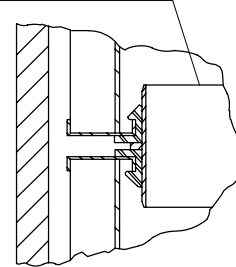
Flows to 568 L/min 310 bar



CAUTION

Before servicing the element, the bleed plug in filter housing must be loosened to relieve hydraulic pressure. This will minimize fluid overflow.

P-227567-01 Element adapter (req'd. when stacking elements)



NOTE: Cylinder kits contain Buna-N seals, to order Viton seals, replace **B** in part number with a **V**.
 Example:
 From: P-235249-03**B**, for Buna.
 To: P-235249-03**V**, for Viton.

Nipple (Non-bypass use with valve option 1)

- ▲◆◆★ P-133494 "O"-Ring
- ◆◆★ P-133519 "O"-Ring

G 3/8" Drain plug

P-227533-01 Indicator port plug

▲● AS568-908 "O"-Ring

▲● AS568-014 "O"-Ring

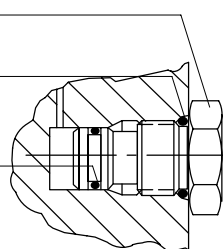
P-126255-01 Warning options decal (use with bypass valve options).
 P-126255-02 Warning decal (use with non-bypass valve option code 1)

▲● AS568-908 "O"-Ring

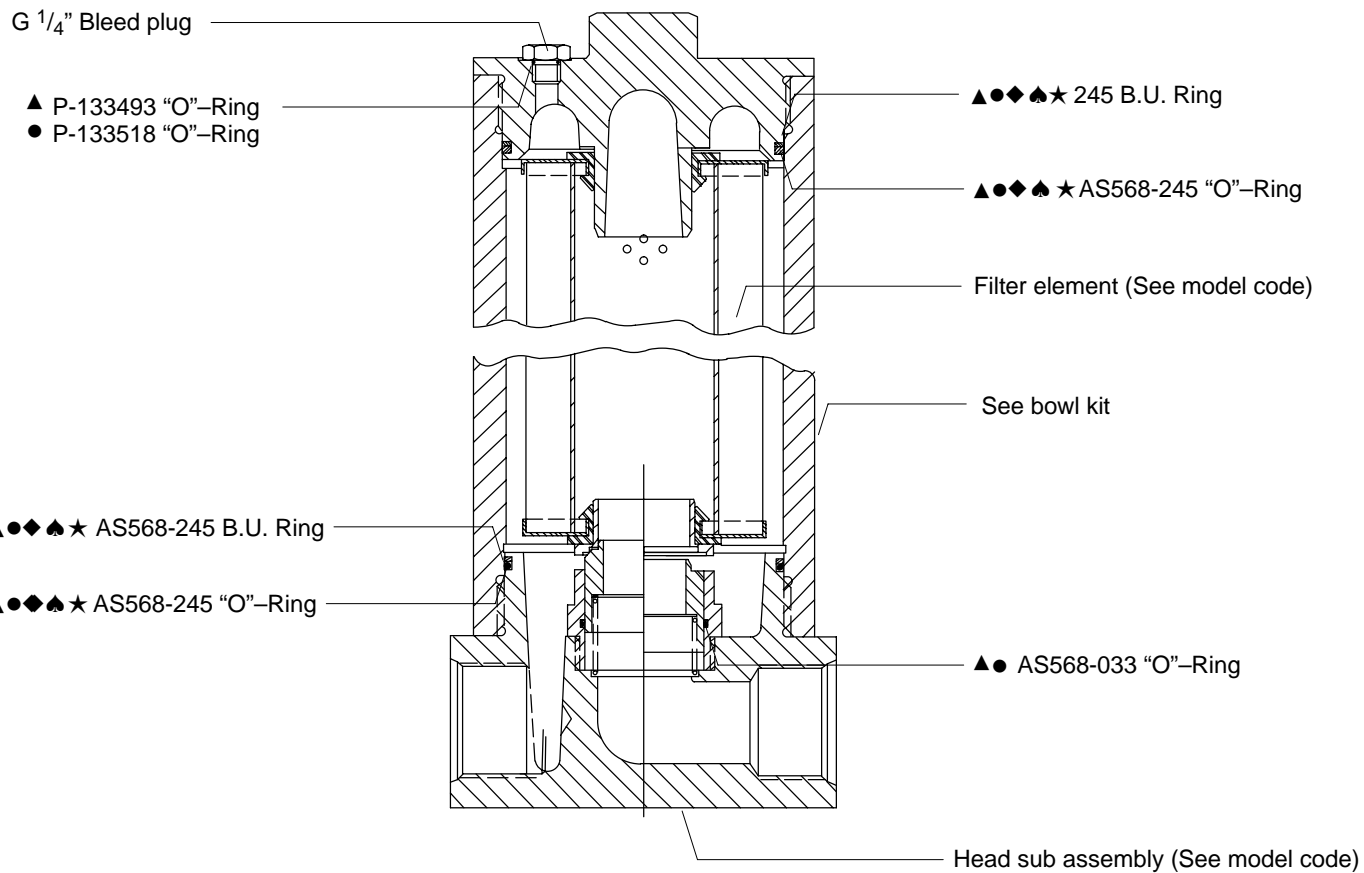
▲● AS568-014 "O"-Ring

ΔP Indicator (See model code)

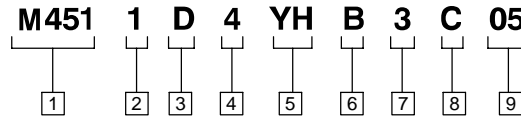
Nameplate & drive screws



- ▲ Included in seal kit P-427466-46 Buna
- Included in seal kit P-427466-48 Viton
- ◆ Included in length 3 cylinder kit P-235249-03B
- ★ Included in length 6 cylinder kit P-235249-06B
- ▲ Included in length 7 cylinder kit P-235249-07B



Head Sub Assembly Model Code



1 Filter series

M451

2 Element collapse rating

1 - 10 bar

4 - 210 bar (H-Pak only)

NOTE: Use 1 only with bypass valve or monitored ΔP indicator.

3 Port options

D - G1 $\frac{1}{2}$ " to ISO 228

E - 1 $\frac{1}{2}$ " SAE 4-bolt split flng. Code 61

R - 1 $\frac{1}{2}$ " SAE 4-bolt split flng. Code 62

S - Subplate mounting

4 Valve options

1 - Non-Bypass

4 - Bypass set at 3,5 \pm 0,35 bar cracking pressure

6 - Bypass set at 6 \pm 0,7 bar cracking pressure

4 Valve options

5 ΔP indicator

Use with \uparrow

1 (Non-Bypass) E, J, O, P, T, W or Z

4 (Bypass 3,5 bar) D, G, J, L, M, R or Y

6 (Bypass 6,2 bar) A, B, I, J, U or V

5 ΔP indicator & receptacle options

First designator (Indicator type)

A - Visual ΔP indicator with 5 \pm 0,5 bar w/surge control

B - Electrical/visual ΔP 5 \pm 0,5 bar w/surge control

D - Electrical/visual ΔP 2,5 \pm 0,35 bar

E - Electrical/visual ΔP 7 \pm 0,85 bar

G - Electrical/visual ΔP 2,5 \pm 0,35 bar thermal lockout (38° C)

I - Visual ΔP indicator w/5 \pm 0,5 bar thermal lockout (38° C)

J - No ΔP indicator

L - Visual ΔP indicator w/2,5 \pm 0,35 bar actuation & thermal lockout (38° C)

M - Visual ΔP indicator w/2,5 \pm 0,35 bar actuation & thermal lockout (38° C) and surge control

O - Visual ΔP indicator w/7 \pm 0,85 bar actuation & thermal lockout (38° C)

P - Visual ΔP indicator w/7 \pm 0,85 bar actuation & thermal lockout (38° C) and surge control

R - Electrical ΔP switch w/ 2,5 \pm 0,35 bar actuation

T - Electrical ΔP switch w/7 \pm 0,85 bar actuation

U - Electrical ΔP switch with 5 \pm 0,5 bar actuation

V - Electrical/visual ΔP indicator w/5 \pm 0,5 bar thermal lockout (38° C)

W - Electrical/visual ΔP 7 \pm 0,85 bar thermal lockout (38° C)

Y - Electrical/visual ΔP 2,5 \pm 0,35 bar thermal lockout (38° C) & surge control

Z - Electrical/visual ΔP 7 \pm 0,85 bar thermal lockout (38° C) & surge control

Second designator (Electrical receptacle)

B - 5 pin Brad Harrison (41512)

H - DIN 43650 or Hirschman receptacle (GSA plug) 3 poles plus ground

N - No receptacle. Use with visual ΔP indicator

6 Seal material

B - Buna-N

V - Viton-A

Viton is a registered trademark of E.I. DuPont

7 Bowl length

Element length

mm mm

3 - 388,7 229

6 - 627,9 457

7 - 863,6 686

All meet HF4 specifications.

S50 -Head sub-assembly only (No element, bowl or indicator)

8 Element construction

C - C-Pak (grade 01, 3, 5, 10, 20)

E - E-Pak (3, 5, 10)

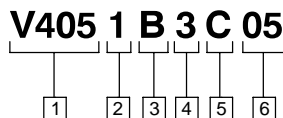
H - H-Pak (grade 3, 10)

9 Fluid cleanliness ratings

| Code | Fluid cleanliness level |
|-----------|-------------------------|
| 01 | Flushing only |
| 03 | 16/14/12 or better |
| 05 | 18/16/14 or better |
| 10 | 20/18/15 or better |
| 20 | 22/19/16 or better |

Note: Order P-227533-01 for replacement aluminum indicator plug.

Element Model Code



1 Filter element

V405 - For use with M451 series filters

2 Element collapse rating

1 - 10 bar

4 - 210 bar (H-pak only)

NOTE: 1 use only with bypass valve or monitored ΔP indicator

3 Seal material

B - Buna-N

V - Viton-A

4 Bowl length mm

Element length mm

3 - 386* 229

6 - 625 457

7 - 1013 686

* Meets HF4 specifications.

5 Element construction

C - C-pak (grade 01, 3, 5, 10, 20)

H - H-pak (grade 3, 10)

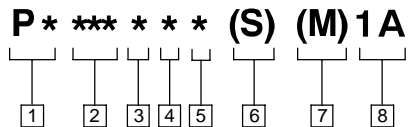
E - E-pak (grade 3, 5, 10)

6 Fluid cleanliness ratings

| Code | Fluid cleanliness level |
|-----------|-------------------------|
| 03 | 16/14/12 or better |
| 05 | 18/16/14 or better |
| 10 | 20/18/15 or better |
| 20 | 22/19/16 or better |

The table above assumes limited ingress and a single pass of pump flow through the element. For more detailed information, please consult Vickers Guide to Systemic Contamination Control or contact your local Vickers Distributor.

Differential Pressure Indicator Model Code



1 Style option

PV – Visual
PE – Electrical
PD – Electrical/Visual

2 Actuation pressure option

015 – $1 \pm 0,3$ bar
035 – $2,4 \pm 0,35$ bar
070 – $4,8 \pm 0,5$ bar
 (not an option with 330/340 filters)
090 – $6,2 \pm 0,7$ bar
 (330/340 filters only)
100 – $6,9 \pm 0,85$ bar

3 Thermal lockout option

N – No thermal lockout
T – Thermal lockout
 standard TLO= $80 \pm 20^\circ$ F
 ($27 \pm 11^\circ$ C)

4 Seal option

1 – Buna-N
2 – Viton

5 Receptacle option

B – 5-pin Brad Harrison (41512)
 (not an option with visual indicator)
H – Hirschman (DIN 43650)
 (not an option with visual indicator)
N – No receptacle (use with visual indicator)

6 Surge control option

None – No surge control
S – Surge control
 (not an option with 330/340 filters)

7 Filter series option

None – Standard
M – 330/340 Filters only

8 Revision level

1A – Original design series (1) and
 revision (A)

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