



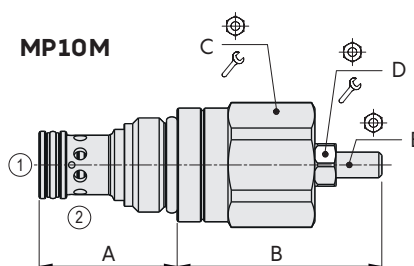
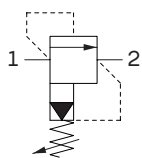
## MP..M type pressure relief valves – 2 way

- Pilot operated
- Spool type
- Mechanical control with screw adjustments
- Different springs available to vary pressure range
- The backpressure values on line 2 must be added to valve nominal setting

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

|                                               | MP10M                                                                  | MP12M                                                                    | MP16M                                                 |
|-----------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------|
| Nominal flow                                  | 120 l/min (31.7 US gpm)                                                | 200 l/min (52.8 US gpm)                                                  | 400 l/min (105.67 US gpm)                             |
| Max. pressure                                 | Port 1= 350 bar (5100 psi)<br>Port 2= 30 bar (435 psi)                 |                                                                          | 350 bar (5100 psi)                                    |
| Oil leakage                                   | at 80% of max.<br>pressure setting                                     | 25 cm <sup>3</sup> /min (1.525 in <sup>3</sup> /min)                     | 100 cm <sup>3</sup> /min (6.102 in <sup>3</sup> /min) |
| Fluid                                         | mineral based or synthetic hydraulic fluid with lubricating properties |                                                                          |                                                       |
| Viscosity                                     | 10–200 cSt                                                             |                                                                          | 12–400 cSt                                            |
| Max level of contamination                    | 18/16/13 ISO4406                                                       |                                                                          | 20/18/14 ISO4406                                      |
| Fluid temperature                             | with NBR seals+Polyurethane<br>with FPM seals                          | from -25°C (-13°F) to 90°C (194°F)<br>from -20°C (-4°F) to 110°C (230°F) |                                                       |
| Environmental temp. for<br>working conditions |                                                                        | from -20°C (-4°F) to 60°C (140°F)                                        |                                                       |
| Cavity                                        | SAE 10/2                                                               | SAE 12/2                                                                 | SAE 16/2                                              |
| Weight                                        | 0.190 kg (0.42 lb)                                                     | 0.300 kg (0.66 lb)                                                       | 0.490 kg (1.080 lb)                                   |

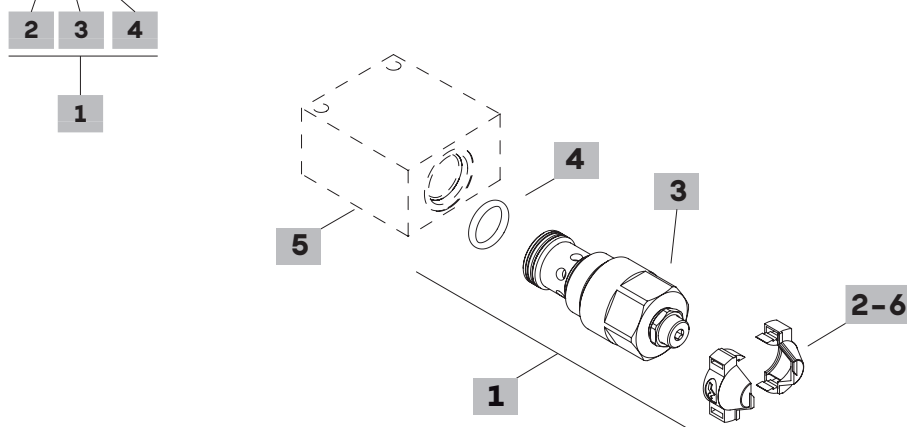
NOTE – For different conditions, please contact Walvoil Sales Dpt.



| Valve type | A    |      | B    |      | C                                                                                     |     |      | D                                                                                     |     | E                                                                                     |   |
|------------|------|------|------|------|---------------------------------------------------------------------------------------|-----|------|---------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------|---|
|            |      |      |      |      |  |     |      |  |     |  |   |
|            | mm   | in   | mm   | in   |                                                                                       | Nm  | lbft |                                                                                       | Nm  | lbft                                                                                  |   |
| MP10M      | 32.6 | 1.28 | 48.3 | 1.90 | 27                                                                                    | 50  | 37   | 10                                                                                    | 6.6 | 4.9                                                                                   | 3 |
| MP12M      | 45   | 1.77 | 46.9 | 1.85 | 32                                                                                    | 80  | 59   | 10                                                                                    | 6.6 | 4.9                                                                                   | 3 |
| MP16M      | 45.2 | 1.78 | 49.8 | 1.96 | 36                                                                                    | 100 | 74   | 19                                                                                    | 20  | 15                                                                                    | 5 |

### Ordering codes and description composition

MP16M/OY2B



#### 1 Cartridges

| TYPE                   | CODE         | DESCRIPTION             |
|------------------------|--------------|-------------------------|
| <b>SAE cavity 10/2</b> |              |                         |
| MP10M/OG1B             | OMP10002091  | Pressure range <b>1</b> |
| MP10M/OG2B             | OMP100020A00 | Pressure range <b>2</b> |
| MP10M/OG3B             | OMP10002093  | Pressure range <b>3</b> |
| <b>SAE cavity 12/2</b> |              |                         |
| MP12M/OG1B             | OMP12002046  | Pressure range <b>1</b> |
| MP12M/OG2B             | OMP12002047  | Pressure range <b>2</b> |
| MP12M/OG3B             | OMP12002048  | Pressure range <b>3</b> |
| <b>SAE cavity 16/2</b> |              |                         |
| MP16M/OY1B             | OMP16002017  | Pressure range <b>1</b> |
| MP16M/OY2B             | OMP16002013  | Pressure range <b>2</b> |
| MP16M/OY3B             | OMP16002014  | Pressure range <b>3</b> |

#### 2 Adjustments

| TYPE | DESCRIPTION                                               |
|------|-----------------------------------------------------------|
| G/Y  | With screw                                                |
| X    | Valve set with antitampering cap (part code: see point 6) |

#### 3 Pressure range

| TYPE | DESCRIPTION                                 |
|------|---------------------------------------------|
| 1    | Pressure range 5÷50 bar (72.5÷725 psi);     |
| 2    | Pressure range 50÷220 bar (725÷3190 psi);   |
| 3    | Pressure range 150÷350 bar (2175÷5100 psi); |

#### 4 Seals

| TYPE | DESCRIPTION                                             |
|------|---------------------------------------------------------|
| B    | NBR (Buna)+Polyurethane o-ring seals, std configuration |
| V    | FPM (Viton) o-ring seals, contact Sales Dept            |

#### 5 Valve body

| TYPE          | CODE       | DESCRIPTION                                          |
|---------------|------------|------------------------------------------------------|
| SAE10/2-G 3/8 | 3CC1020C11 | Aluminium body for cavity 10 valve, G 3/8 std thread |
| SAE12/2-G 1/2 | 3CC1220D11 | Aluminium body for cavity 12 valve, G 1/2 std thread |
| SAE16/2-G 3/4 | 3CC1620E11 | Aluminium body for cavity 16 valve, G 3/4 std thread |

Note: aluminium body can stand up to 210 bar (3050 psi)  
For steel bodies or different threading see from page 208

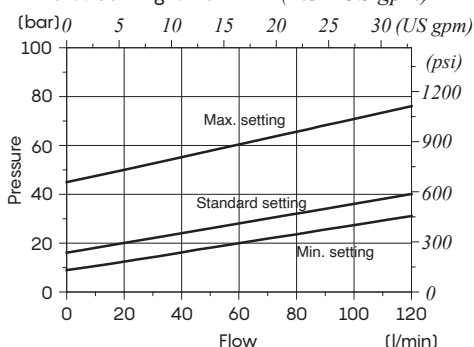
#### 6 Accessories

| TYPE | CODE       | DESCRIPTION                        |
|------|------------|------------------------------------|
| -    | 4COP116420 | Cap (for MP10M / MP12M)            |
| -    | 4COP126300 | Antitampering cap (x2) (for MP16M) |

**Rating diagrams**

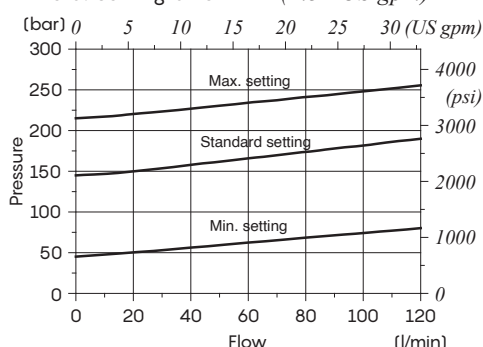
**MP10M pressure vs. flow**

Std. setting at 5 l/min (1.32 US gpm)



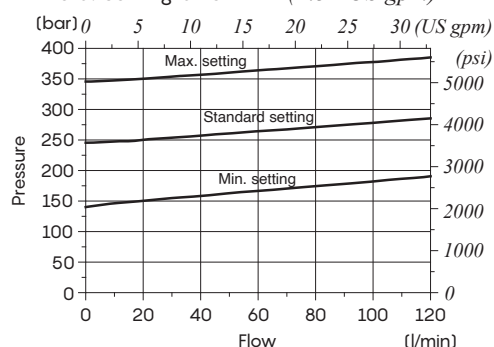
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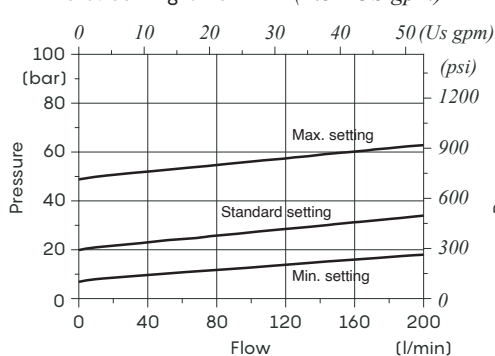
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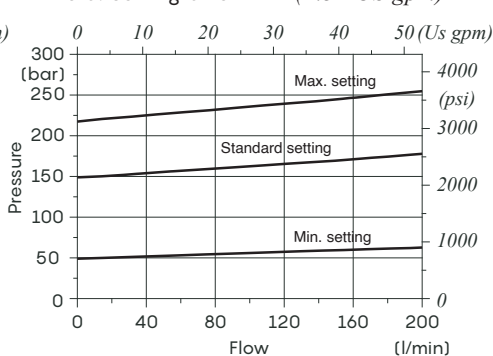
**MP12M pressure vs. flow**

Std. setting at 5 l/min (1.32 US gpm)



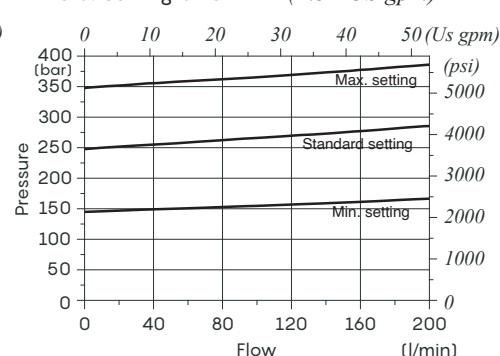
**MP12M pressure vs. flow**

Std. setting at 5 l/min (1.32 US gpm)



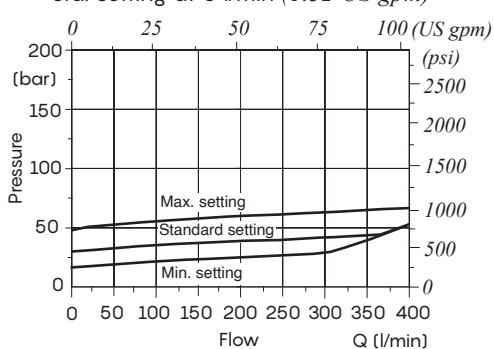
**MP12M pressure vs. flow**

Std. setting at 5 l/min (1.32 US gpm)



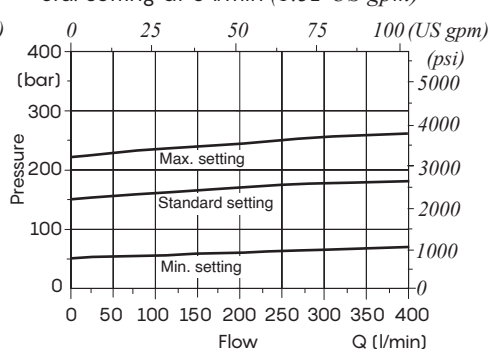
**MP16M pressure vs. flow**

Std. setting at 5 l/min (1.32 US gpm)



**MP16M pressure vs. flow**

Std. setting at 5 l/min (1.32 US gpm)



**MP16M pressure vs. flow**

Std. setting at 5 l/min (1.32 US gpm)

