



## Type VMP/VE pressure relief valves

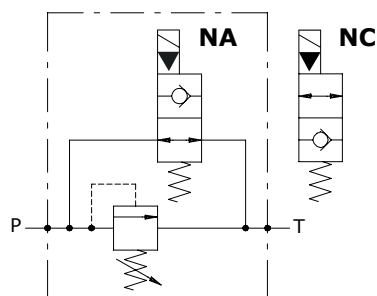
- Piloted operated
- With electric venting

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

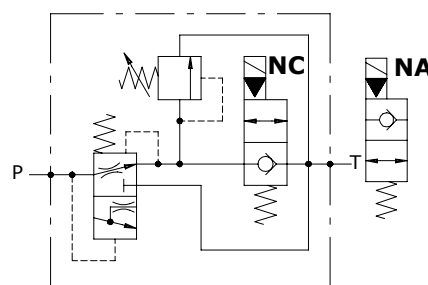
|   | VMP/VE 14  | VMP/VE 38   | VMP/VE 12  | VMP/VE 34  | VMP/VE 100   | VMP/VE 114   |                    |
|---|--|---|--|--|--|--|--------------------|
| Nominal flow                                  | 20 l/min<br>(5.3 US gpm)   | 35 l/min<br>(9.2 US gpm)                              | 90 l/min<br>(23.8 US gpm)                                | 90 l/min<br>(23.8 US gpm)                                | 150 l/min<br>(39.6 US gpm)                               | 250 l/min<br>(66 US gpm)                                 |                    |
| Max. pressure                                 | Aluminium body = 210 bar (3050 psi)<br>Steel body = 350 bar (5100 psi) |   |  |  |  |  |                    |
| Oil leakage at 80%<br>of max. setting         | 3 cm <sup>3</sup> /min<br>(0.18 in <sup>3</sup> /min)                  | 3 cm <sup>3</sup> /min<br>(0.18 in <sup>3</sup> /min) | 200 cm <sup>3</sup> /min<br>(12.20 in <sup>3</sup> /min) | 200 cm <sup>3</sup> /min<br>(12.20 in <sup>3</sup> /min) | 200 cm <sup>3</sup> /min<br>(12.20 in <sup>3</sup> /min) | 200 cm <sup>3</sup> /min<br>(12.20 in <sup>3</sup> /min) |                    |
| Fluid   | mineral based oil  |   |  |  |  |  |                    |
| Viscosity                                     | from 10 to 200 cSt   |   |  |  |  |  |                    |
| Max. level of<br>contamination                | 18/16/13 ISO4406   |   |  |  |  |  |                    |
| Fluid temperature                             | with NBR seals from -20°C (-4°F) to 80°C (176°F)                       |   |  |  |  |  |                    |
| Environmental temp.<br>for working conditions | from -40°C (-40°F) to 100°C (212°F)                                    |   |  |  |  |  |                    |
| Weight  | aluminium  | 0.67 kg (1.48 lb)                                     | 0.66 kg (1.46 lb)  | 1.42 kg (3.13 lb)  | 1.26 kg (2.78 lb)  | 1.92 kg (4.23 lb)  | 3.77 kg (8.31 lb)  |
|   | steel  | 1.13 kg (2.49 lb)                                     | 1.27 kg (2.80 lb)  | 2.58 kg (5.69 lb)  | 2.57 kg (5.67 lb)  | 3.95 kg (8.71 lb)  | 7.73 kg (17.04 lb) |

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

VMP/VE 14-38



VMP/VE 12-34-100-114



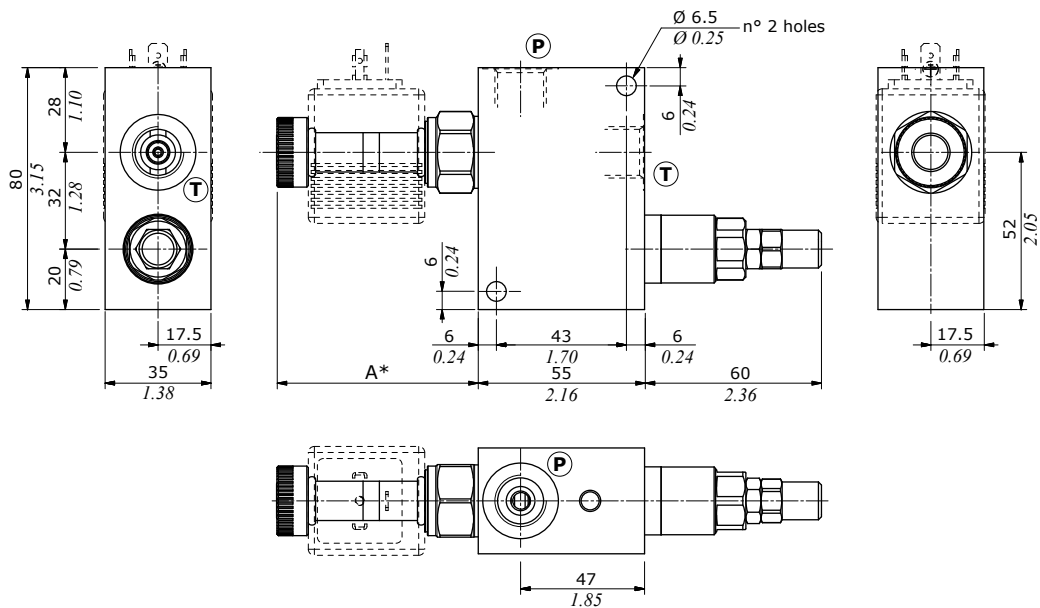
### Dimensions

|                      |                  |
|----------------------|------------------|
| <b>Valve type</b>    | <b>All ports</b> |
| <b>VMP/VE 14</b>     | G1/4             |
| <b>VMP/VE 38</b>     | G3/8             |
| <b>Valve type</b>    | <b>All ports</b> |
| <b>VMP/VE 38/SAE</b> | SAE8             |

Dimensions are in mm-in

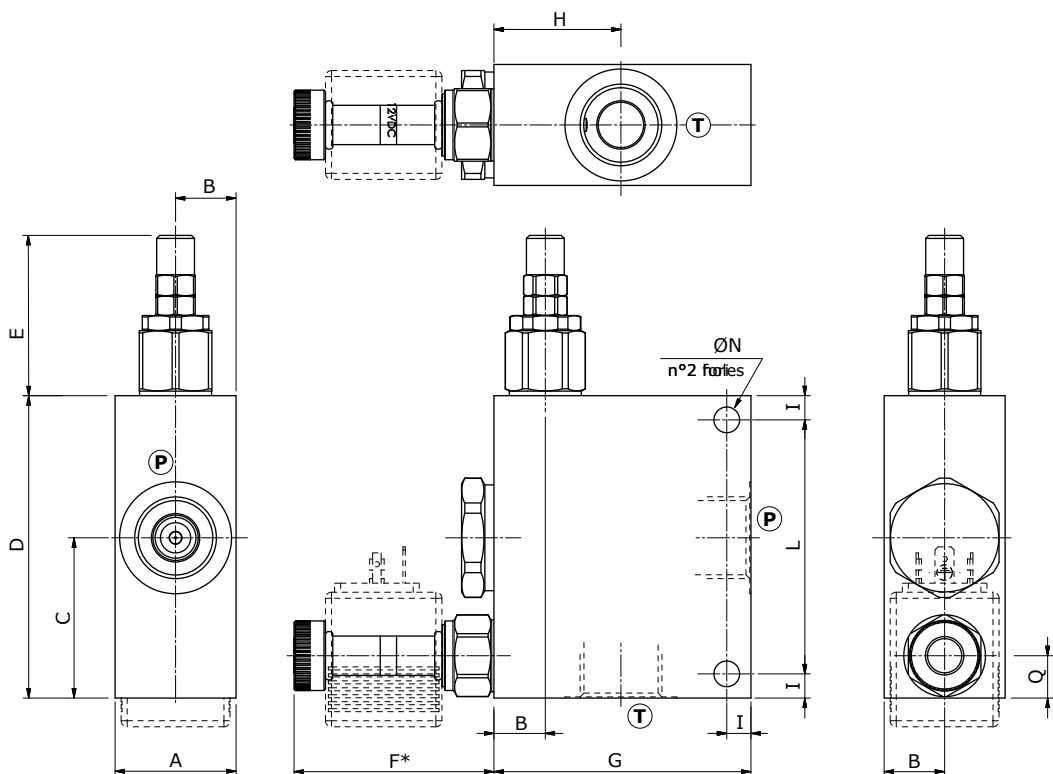
|                      |           |
|----------------------|-----------|
| <b>Valve type</b>    | <b>A*</b> |
| <b>VMP/VE 14</b>     | 66.5-2.62 |
| <b>VMP/VE 38</b>     | 66.5-2.62 |
| <b>VMP/VE 38/SAE</b> | 66.5-2.62 |

(\* ) With normally open valve



|                       |                  |
|-----------------------|------------------|
| <b>Valve type</b>     | <b>All ports</b> |
| <b>VMP/VE 12</b>      | G1/2             |
| <b>VMP/VE 34</b>      | G3/4             |
| <b>VMP/VE 100</b>     | G1"              |
| <b>VMP/VE 114</b>     | G1 1/4"          |
| <b>Valve type</b>     | <b>All ports</b> |
| <b>VMP/VE 12/SAE</b>  | SAE10            |
| <b>VMP/VE 34/SAE</b>  | SAE12            |
| <b>VMP/VE 100/SAE</b> | SAE16            |

Dimensions are in mm-in



| Valve type            | A       | B       | C       | D        | E         | F*        | G        | H       | I       | L        | ØN        | Q       |
|-----------------------|---------|---------|---------|----------|-----------|-----------|----------|---------|---------|----------|-----------|---------|
| <b>VMP/VE 12</b>      | 40-1.57 | 20-0.70 | 53-2.09 | 100-3.93 | 51.5-2.03 | 66.5-2.62 | 85-3.35  | 42-1.65 | 8-0.31  | 84-3.31  | 8.5-0.33  | 14-0.55 |
| <b>VMP/VE 12/SAE</b>  | 40-1.57 | 20-0.70 | 53-2.09 | 100-3.93 | 51.5-2.03 | 66.5-2.62 | 85-3.35  | 42-1.65 | 8-0.31  | 84-3.31  | 8.5-0.33  | 14-0.55 |
| <b>VMP/VE 34</b>      | 40-1.57 | 20-0.70 | 53-2.09 | 100-3.93 | 51.5-2.03 | 66.5-2.62 | 85-3.35  | 42-1.65 | 8-0.31  | 84-3.31  | 8.5-0.33  | 14-0.55 |
| <b>VMP/VE 34/SAE</b>  | 40-1.57 | 20-0.70 | 53-2.09 | 100-3.93 | 51.5-2.03 | 66.5-2.62 | 85-3.35  | 42-1.65 | 8-0.31  | 84-3.31  | 8.5-0.33  | 14-0.55 |
| <b>VMP/VE 100</b>     | 50-1.97 | 25-0.98 | 60-2.36 | 110-4.33 | 53-2.09   | 66.5-2.62 | 100-3.94 | 50-1.97 | 10-0.40 | 90-3.54  | 10.5-0.41 | 17-0.67 |
| <b>VMP/VE 100/SAE</b> | 50-1.97 | 25-0.98 | 60-2.36 | 110-4.33 | 53-2.09   | 66.5-2.62 | 100-3.94 | 50-1.97 | 10-0.40 | 90-3.54  | 10.5-0.41 | 17-0.67 |
| <b>VMP/VE 114</b>     | 70-2.75 | 35-2.75 | 72-2.83 | 130-5.12 | 53-2.09   | 66.5-2.62 | 130-5.12 | 62-2.44 | 12-0.47 | 106-4.17 | 12.5-0.49 | 18-0.71 |

(\* ) With normally open valve

**Ordering codes and description composition**

**VMP/VE complete valves**

*With direct acting valves; standard setting is referred to 5 l/min (1.32 US gpm)*

**Configuration with G1/4 standard thread**

TYPE: **VMP/VE 14/NA/5.TS.S/EC08M** CODE: 1116011104  
DESCRIPTION: Aluminium body, range 50-220 bar (725-3200 psi).  
Std setting 160 bar (2300 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 14/NC/5.TS.S/EC08M** CODE: 1116011105  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve

**Configuration with G3/8 standard thread**

TYPE: **VMP/VE 38/NA/5.TS.S/EC08M** CODE: 1116021104  
DESCRIPTION: Aluminium body, range 50-220 bar (725-3200 psi).  
Std setting 160 bar (2300 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 38/NC/5.TS.S/EC08M** CODE: 1116021105  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve  
TYPE: **VMP/VE 38/NA/5.TR.S/EC08M/ac** CODE: 1116022101  
DESCRIPTION: Steel body, range 180-350 bar (2600-5100 psi).  
Std setting 280 bar (4050 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 38/NC/5.TR.S/EC08M/ac** CODE: 1116022100  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve

**Configuration with G1/2 standard thread**

TYPE: **VMP/VE 12/NA/03.TS.S/EC08M** CODE: 1116031102  
DESCRIPTION: Aluminium body, range 50-200 bar (725-2900 psi).  
Std setting 150 bar (2200 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 12/NC/03.TS.S/EC08M** CODE: 1116031103  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve  
TYPE: **VMP/VE 12/NA/03.TR.S/EC08M/ac** CODE: 1116032100  
DESCRIPTION: Steel body, range 180-350 bar (2600-5100 psi).  
Std setting 250 bar (3600 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 12/NC/03.TR.S/EC08M/ac** CODE: 1116032103  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve

**Configuration with G3/4 standard thread**

TYPE: **VMP/VE 34/NA/03.TS.S/EC08M** CODE: 1116041102  
DESCRIPTION: Aluminium body, range 50-200 bar (725-2900 psi).  
Std setting 150 bar (2200 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 34/NC/03.TS.S/EC08M** CODE: 1116041103  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve  
TYPE: **VMP/VE 34/NA/03.TR.S/EC08M/ac** CODE: 1116042100  
DESCRIPTION: Steel body, range 150-350 bar (2175-5100 psi).  
Std setting 250 bar (3600 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 34/NC/03.TR.S/EC08M/ac** CODE: 1116042101  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve

**Configuration with G1" standard thread**

TYPE: **VMP/VE 100/NA/03.TS.S/EC08M** CODE: 1116051102  
DESCRIPTION: Aluminium body, range 50-200 bar (725-2900 psi).  
Std setting 150 bar (2200 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 100/NC/03.TS.S/EC08M** CODE: 1116051103  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve  
TYPE: **VMP/VE 100/NA/03.TR.S/EC08M/ac** CODE: 1116052100  
DESCRIPTION: Steel body, range 150-350 bar (2175-5100 psi).  
Std setting 250 bar (3600 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 100/NC/03.TR.S/EC08M/ac** CODE: 1116052101  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve

**Configuration with G1"1/4 standard thread**

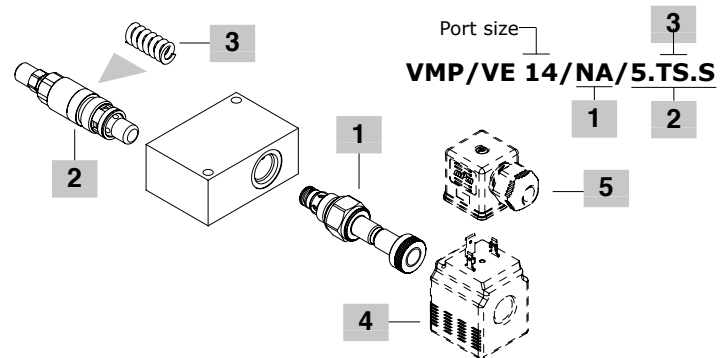
TYPE: **VMP/VE 114/NA/03.TS.S/EC08M** CODE: 1116061102  
DESCRIPTION: Aluminium body, range 50-200 bar (725-2900 psi).  
Std setting 150 bar (2200 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 114/NC/03.TS.S/EC08M** CODE: 1116061103  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve  
TYPE: **VMP/VE 114/NA/03.TR.S/EC08M/ac** CODE: 1116062100  
DESCRIPTION: Steel body, range 150-350 bar (2175-5100 psi).  
Std setting 250 bar (3600 psi), with (NA) normally open solenoid valve  
TYPE: **VMP/VE 114/NC/03.TR.S/EC08M/ac** CODE: 1116062101  
DESCRIPTION: As previous one, with (NC) normally closed solenoid valve

**Configuration with SAE8 standard thread**

TYPE: **VMP/VE 38/NA/5.TS.S/EC08M/SAE** CODE: 1116021200  
DESCRIPTION: Aluminium body, range 50-220 bar (725-3200 psi).  
Std setting 160 bar (2300 psi), with (NA) normally open solenoid valve

**Configuration with SAE10 standard thread**

TYPE: **VMP/VE 12/NA/03.TS.S/EC08M** CODE: 1116031200  
DESCRIPTION: Aluminium body, range 50-200 bar (725-2900 psi).  
Std setting 150 bar (2200 psi), with (NA) normally open solenoid valve



**VMP/VE complete valves**

**Configuration with SAE12 standard thread**

TYPE: **VMP/VE 34/NA/03.TS.S/EC08M/SAE** CODE: 1116041201  
DESCRIPTION: Aluminium body, range 50-200 bar (725-2900 psi).  
Std setting 150 bar (2200 psi), with (NA) normally open solenoid valve

**Configuration with SAE16 standard thread**

TYPE: **VMP/VE 100/NA/03.TS.S/EC08M/SAE** CODE: 1116051200  
DESCRIPTION: Aluminium body, range 50-200 bar (725-2900 psi).  
Std setting 150 bar (2200 psi), with (NA) normally open solenoid valve

**1 Solenoid valves**

| TYPE              | CODE        | DESCRIPTION                            |
|-------------------|-------------|--|
| <b>EC08M/10NB</b> | 0EC08002031 | (NA) normally open, electric venting   |
| <b>EC08M/20NB</b> | 0EC08002032 | (NC) normally closed, electric venting |

Note: BER coils are required

**2 Direct acting pressure relief valves**

*Standard setting is referred to 5 l/min (1.32 US gpm)*

| TYPE  | CODE        | DESCRIPTION  |
|---|-------------|--|
| <b>For G3/8, G1/4 and SAE8 ports configuration</b>        |             |  |
| <b>VMP 5/TS.S</b>   | 1100520400  | Setting range 50-220 bar (725-3200 psi)<br>Standard setting 160 bar (2300 psi)   |
| <b>VMP 5/TR.S</b>   | 1100520401  | Setting range 180-350 bar (2600-5100 psi)<br>Standard setting 280 bar (4050 psi) |
| <b>For G1/2, G3/4, G1" and G1"1/4 ports configuration</b> |             |  |
| <b>MC08A/0S2B</b>   | 0MC08002000 | Setting range 50-200 bar (725-2900 psi)<br>Standard setting 150 bar (2200 psi)   |
| <b>MC08A/0S3B</b>   | 0MC08002002 | Setting range 150-350 bar (2200-5100 psi)<br>Standard setting 250 bar (3600 psi) |

**3 Pressure setting springs**

| TYPE                    | CODE       | DESCRIPTION                               |
|-------------------------|------------|---|
| <b>For VMP 5 valves</b> |            |   |
| <b>TB</b>               | 3MOL314311 | Setting range 5-40 bar (72.5-580 psi)     |
| <b>TV</b>               | 3MOL314330 | Setting range 20-80 bar (290-1160 psi)    |
| <b>TS</b>               | 3MOL315330 | Setting range 50-220 bar (725-3200 psi)   |
| <b>TR</b>               | 3ML1143600 | Setting range 180-350 bar (2600-5100 psi) |
| <b>For MC08A valves</b> |            |   |
| <b>TB</b>               | 3ML1092500 | Setting range 5-50 bar (72.5-725 psi)     |
| <b>TS</b>               | 3ML1092501 | Setting range 50-200 bar (725-2900 psi)   |
| <b>TR</b>               | 3ML1092502 | Setting range 180-350 bar (2600-5100 psi) |

**4 Coils**

| TYPE             | CODE        | DESCRIPTION                  |
|------------------|-------------|------------------------------|
| <b>BER 12VDC</b> | 4SLE001200A | 12VDC-ISO4400, BER type coil |

For complete coil list see from page 437

**5 Connector**

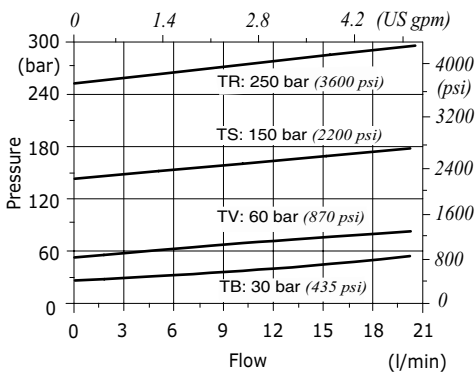
| TYPE           | CODE       | DESCRIPTION |
|----------------|------------|-------------|
| <b>ISO4400</b> | 4CN1009995 | Connector   |

For complete connectors list see from page 437  
For other steel body configurations, other port sizes and configurations with FPM (Viton) seals please contact our Sales Dpt.

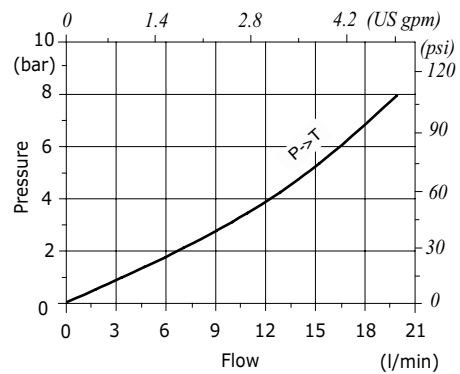
## Rating diagrams

**VMP/VE 14 pressure vs. flow**

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

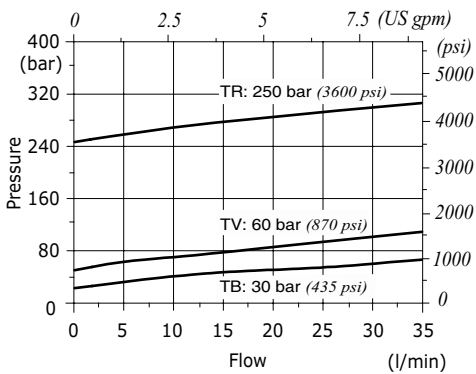


**VMP/VE 14 pressure drop diagram**

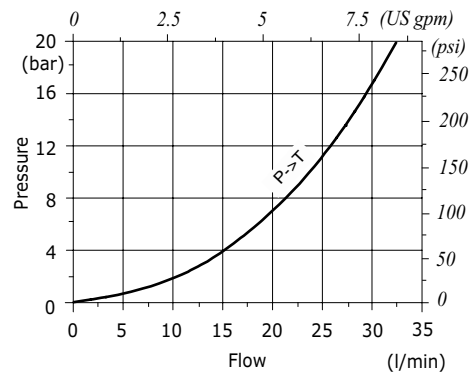


**VMP/VE 38 pressure vs. flow**

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

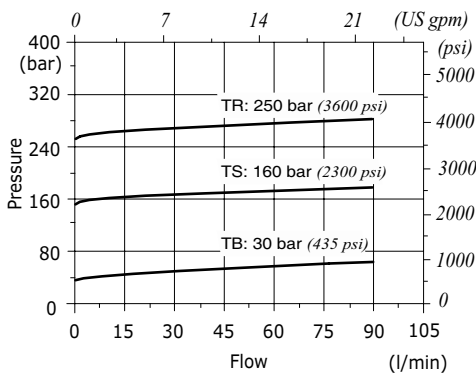


**VMP/VE 38 pressure drop diagram**

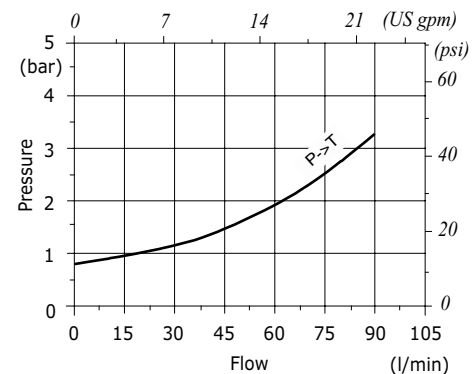


**VMP/VE 12-34 pressure vs. flow**

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

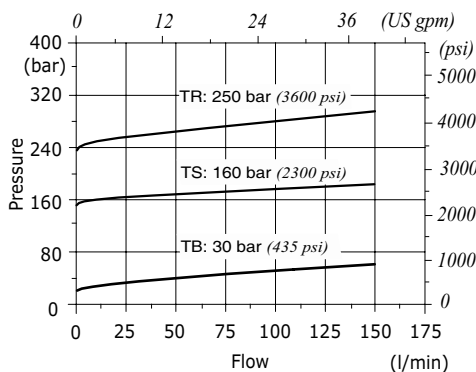


**VMP/VE 12-34 pressure drop diagram**

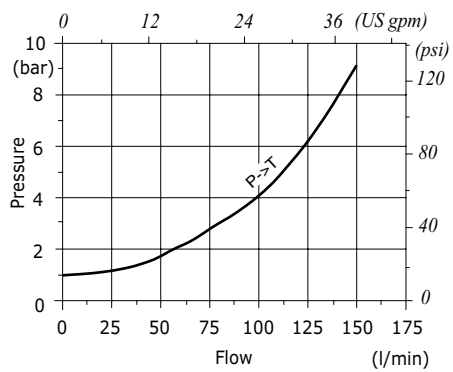


**VMP/VE 100-114 pressure vs. flow**

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



**VMP/VE 100 pressure drop diagram**



**VMP/VE 114 pressure drop diagram**

