



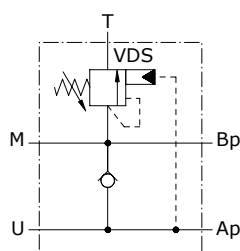
## Type VEP/FC two pump "high-low" unloading valves

- Single acting
- Flanged solution

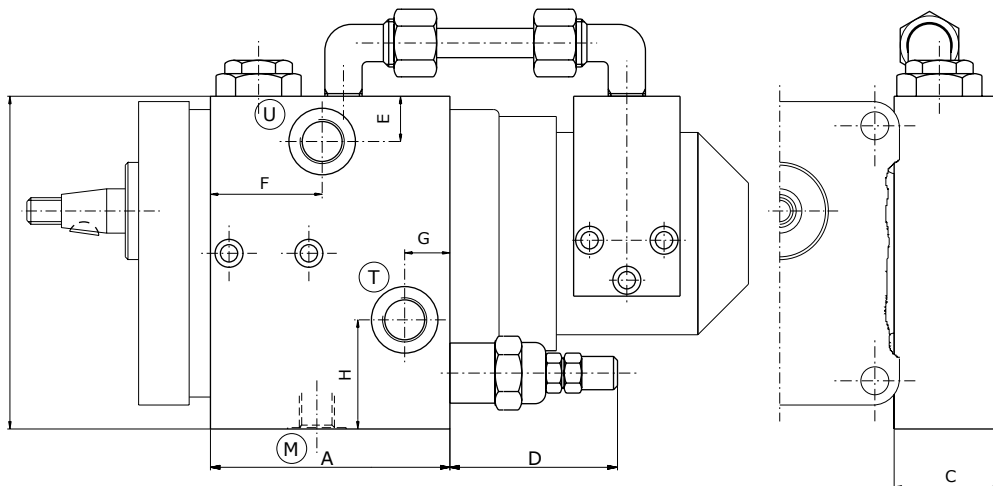
Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

| Line                                       | VEP/FC 38   | VEP/FC 12                | VEP/FC 34                 | VEP/FC 100                 |                            |
|--|---|--------------------------|---------------------------|----------------------------|----------------------------|
| Nominal flow                               | <b>Ap</b> (high pressure inlet port)  | 10 l/min<br>(2.6 US gpm) | 20 l/min<br>(5.3 US gpm)  | 30 l/min<br>(7.9 US gpm)   | 50 l/min<br>(13.2 US gpm)  |
|  | <b>Bp</b> (low pressure inlet port)   | 25 l/min<br>(6.6 US gpm) | 45 l/min<br>(11.9 US gpm) | 80 l/min<br>(21.1 US gpm)  | 150 l/min<br>(39.6 US gpm) |
|  | <b>U</b> (work port)  | 30 l/min<br>(7.9 US gpm) | 55 l/min<br>(14.5 US gpm) | 100 l/min<br>(26.4 US gpm) | 180 l/min<br>(47.6 US gpm) |
| Max. pressure                              | Aluminium body = 210 bar (3050 psi)<br>Steel body = 350 bar (5100 psi)                                |                          |                           |                            |                            |
| Fluid                                      | mineral based oil   |                          |                           |                            |                            |
| Viscosity                                  | from 10 to 200 cSt  |                          |                           |                            |                            |
| Max. level of contamination                | 18/16/13 ISO4406  |                          |                           |                            |                            |
| Fluid temperature                          | with NBR seals from -20°C (-4°F) to 80°C (176°F)<br>with FPM seals from -20°C (-4°F) to 100°C (212°F) |                          |                           |                            |                            |
| Environmental temp. for working conditions | from -40°C (-40°F) to 100°C (212°F)   |                          |                           |                            |                            |
| Weight                                     | aluminium   | 1.36 kg (3.05 lb)        | 2.50 kg (5.51 lb)         | 3.50 kg (7.72 lb)          | 6.21 kg (13.69 lb)         |
|  | steel   | 2.48 kg (5.47 lb)        | 4.22 kg (9.30 lb)         | 7.91 kg (17.44 lb)         | -                          |

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



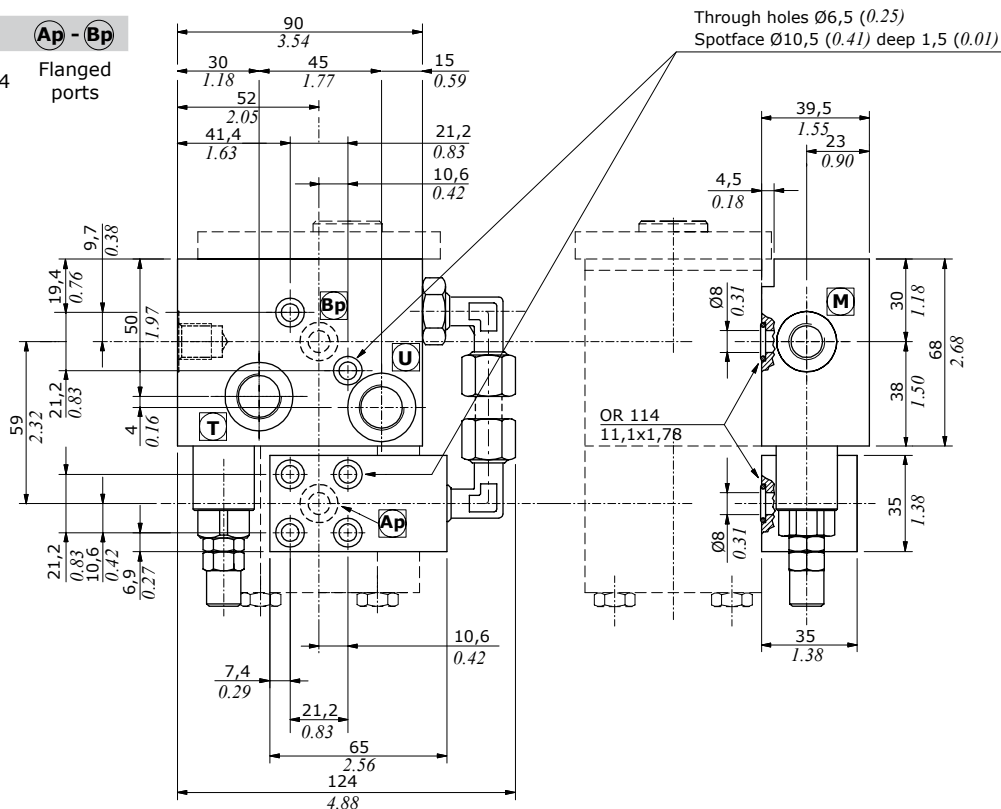
| Valve type          | (M)  | (T-U) |
|---------------------|------|-------|
| VEP/FC 38 Gr 1+1    | G1/4 | G3/8  |
| VEP/FC 12 Gr 2+1    | G1/4 | G1/2  |
| VEP/FC 12 Gr 2+2    | G1/4 | G1/2  |
| VEP/FC 34 Gr 3+1    | G1/4 | G3/4  |
| VEP/FC 34 Gr 3+1    | G1/4 | G3/4  |
| VEP/FC 34 Gr 3+2    | G1/4 | G3/4  |
| VEP/FC 50 Gr 3+3    | G1/4 | G1"   |
| VEP/FC 100 Gr 3,5+3 | G1/4 | G1"   |



Dimensions are in mm-in

| Valve type          | A           | B           | C          | D          | E          | F          | G          | H          | Ap         | Bp          |
|---------------------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| VEP/FC 38 Gr 1+1    | 80<br>3.15  | 90<br>3.54  | 40<br>1.57 | 60<br>2.36 | 15<br>0.59 | 46<br>1.81 | 18<br>0.7  | 30<br>1.18 | 10<br>0.39 | 25<br>0.98  |
| VEP/FC 12 Gr 2+1    | 90<br>3.54  | 125<br>4.92 | 40<br>1.57 | 65<br>2.56 | 17<br>0.67 | 43<br>1.69 | 17<br>0.67 | 41<br>1.61 | 15<br>0.59 | 45<br>1.77  |
| VEP/FC 12 Gr 2+2    | 90<br>3.54  | 125<br>4.92 | 40<br>1.57 | 65<br>2.56 | 17<br>0.67 | 43<br>1.69 | 17<br>0.67 | 41<br>1.61 | 25<br>0.98 | 45<br>1.77  |
| VEP/FC 34 Gr 3+1    | 120<br>4.72 | 130<br>5.11 | 60<br>2.36 | 72<br>2.83 | 30<br>1.18 | 64<br>2.52 | 22<br>0.86 | 51<br>2    | 20<br>0.79 | 80<br>3.15  |
| VEP/FC 34 Gr 3+1    | 120<br>4.72 | 130<br>5.11 | 60<br>2.36 | 72<br>2.83 | 30<br>1.18 | 64<br>2.52 | 22<br>0.86 | 51<br>2    | 35<br>1.38 | 80<br>3.15  |
| VEP/FC 34 Gr 3+2    | 120<br>4.72 | 130<br>5.11 | 60<br>2.36 | 72<br>2.83 | 30<br>1.18 | 64<br>2.52 | 22<br>0.86 | 51<br>2    | 45<br>1.77 | 80<br>3.15  |
| VEP/FC 50 Gr 3+3    | 140<br>5.51 | 160<br>6.3  | 75<br>2.95 | 90<br>3.54 | 31<br>1.22 | 84<br>3.3  | 32<br>1.26 | 66<br>2.6  | 60<br>2.36 | 120<br>4.72 |
| VEP/FC 100 Gr 3,5+3 | 140<br>5.51 | 160<br>6.3  | 75<br>2.95 | 90<br>3.54 | 31<br>1.22 | 84<br>3.3  | 32<br>1.26 | 66<br>2.6  | 80<br>3.15 | 150<br>5.9  |

| Valve type           | (U)  | (T)  | (M)  | (Ap - Bp)     |
|----------------------|------|------|------|---------------|
| VEP/FC 38 Gr 1+1 PLP | G3/8 | G3/8 | G1/4 | Flanged ports |



## Logic valves

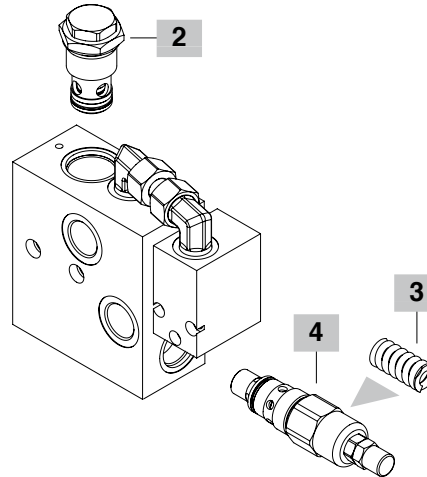
Two pump "hi-low" unloading-valves

VEP/FC

## Ordering codes and description composition

Port size  
**VEP/FC 38/Gr1+1/TV.S**

3



### VEP/FC complete valves

*Single type valve configuration; standard setting is referred to 5 l/min (1.32 US gpm)*

#### Configuration with G3/8 standard thread

TYPE: **VEP/FC 38/Gr1+1/TV.S** CODE: 1222021100  
 DESCRIPTION: Aluminium body, range 20-80 bar (290-1160 psi), standard setting 60 bar (870 psi)

TYPE: **VEP/FC 38/Gr1+1/TV.S/ac** CODE: 1222022100  
 DESCRIPTION: Steel body, as previous one

TYPE: **VEP/FC 38/Gr1+1/PLP/TV.S** CODE: 1222021107  
 DESCRIPTION: Aluminium body, range 20-80 bar (290-1160 psi), standard setting 60 bar (870 psi), with "PLP" special flange

#### Configuration with G1/2 standard thread

TYPE: **VEP/FC 12/Gr2+1/TV.S** CODE: 1222031100  
 DESCRIPTION: Aluminium body, range 5-80 bar (72.5-1160 psi), standard setting 40 bar (580 psi)

TYPE: **VEP/FC 12/Gr2+1/TV.S/ac** CODE: 1222032105  
 DESCRIPTION: Steel body, as previous one

TYPE: **VEP/FC 12/Gr2+2/TV.S** CODE: 1222031101  
 DESCRIPTION: Aluminium body, range 5-80 bar (72.5-1160 psi), standard setting 40 bar (580 psi)

TYPE: **VEP/FC 12/Gr2+2/TV.S/ac** CODE: 1222032100  
 DESCRIPTION: Steel body, as previous one

#### Configuration with G3/4 standard thread

TYPE: **VEP/FC 34/Gr3+1/TV.S** CODE: 1222041100  
 DESCRIPTION: Aluminium body, range 10-50 bar (145-725 psi), standard setting 50 bar (725 psi)

TYPE: **VEP/FC 34/Gr3+2/TV.S** CODE: 1222041101  
 DESCRIPTION: Aluminium body, range 10-80 bar (145-1160 psi), standard setting 50 bar (725 psi)

TYPE: **VEP/FC 34/Gr3+2/TV.S/ac** CODE: 1222042101  
 DESCRIPTION: Steel body, as previous one

TYPE: **VEP/FC 34/Gr3+3/TV.S** CODE: 1222041102  
 DESCRIPTION: Aluminium body, range 10-80 bar (145-1160 psi), standard setting 50 bar (725 psi)

#### Configuration with G 1" standard thread

TYPE: **VEP/FC 100/Gr3,5+3/TV.S** CODE: 1222051100  
 DESCRIPTION: Aluminium body, range 20-80 bar (290-1160 psi), standard setting 60 bar (870 psi)

For not listed steel body configurations, different flanging, SAE thread, or configurations with FPM (Viton) seals, please contact our Sales Dpt.

### 1 Sequence valve

*Setting range 20-80 bar (290-1150 psi) (Lp)*

*Standard setting 160 bar at 5 l/min (2320 psi at 1.32 US gpm)*

| TYPE                    | CODE       | DESCRIPTION                 |
|-------------------------|------------|-----------------------------|
| <b>VDS/VEP 38/TV.S</b>  | 1205020400 | For G3/8 port configuration |
| <b>VDS/VEP 12/TV.S</b>  | 1205030400 | For G1/2 port configuration |
| <b>VDS/VEP 34/TV.S</b>  | 1205040405 | For G3/4 port configuration |
| <b>VDS/VEP 100/TV.S</b> | 1205050400 | For G1" port configuration  |

### 2 Check valve

*Opening pressure 0.5 bar (7.25 psi)*

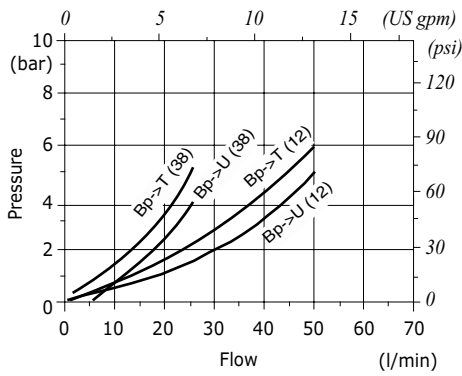
| TYPE                          | CODE       | DESCRIPTION                         |
|-------------------------------|------------|-------------------------------------|
| <b>VUI 38/Pa0,5</b>           | 1300020400 | For G3/8 port configuration         |
| <b>VUI 12/Pa0,5 pass.magg</b> | 1300030401 | For G1/2 port configuration         |
| <b>VUI 34/Pa0,5 pass.magg</b> | 1300040401 | For G3/4 and G1" port configuration |

### 3 Pressure setting springs

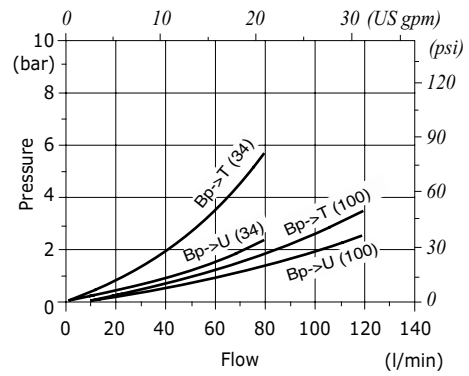
| TYPE  | CODE       | DESCRIPTION                            |
|---|------------|--|
| <b>For VDS/VEP 38 valve on VEP/FC 38 complete valve</b>   |            |  |
| <b>TB</b>   | 3MOL314311 | Setting range 5-40 bar (72.5-580 psi)  |
| <b>TV</b>   | 3MOL314330 | Setting range 20-80 bar (290-1150 psi) |
| <b>For VDS/VEP 12 valve on VEP/FC 12 complete valve</b>   |            |  |
| <b>TV</b>   | 3MOL317420 | Setting range 5-80 bar (72.5-1150 psi) |
| <b>For VDS/VEP 34 valve on VEP/FC 34 complete valve</b>   |            |  |
| <b>TB</b>   | 3ML1174500 | Setting range 10-50 bar (145-725 psi)  |
| <b>TV</b>   | 3ML1204200 | Setting range 10-80 bar (145-1150 psi) |
| <b>For VDS/VEP 100 valve on VEP/FC 100 complete valve</b> |            |  |
| <b>TB</b>   | 3MOL314311 | Setting range 5-40 bar (72.5-580 psi)  |
| <b>TV</b>   | 3MOL314330 | Setting range 20-80 bar (290-1150 psi) |

Rating diagrams

VEP/FC 38-12 pressure drop vs. flow from Bp→T and Bp→U



VEP/FC 34-100 pressure drop vs. flow from Bp→T and Bp→U



VEP/FC 38 PLP pressure drop vs. flow from Bp→T and Bp→U

