



## Type VE/B/VMP/VUI/SR directional solenoid valves

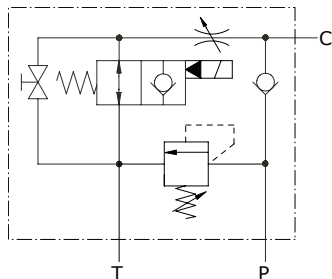
- Single acting cylinder

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

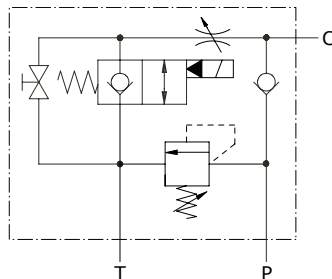
|                                               | VE/B/VMP/<br>VUI/SR 14                                                 | VE/B/VMP/<br>VUI/SR 38   | VE/B/VMP/<br>VUI/SR 12    | VE/B/VMP/<br>VUI/SR 34    | VE/B/VMP/<br>VUI/SR 100    |                     |
|-----------------------------------------------|------------------------------------------------------------------------|--------------------------|---------------------------|---------------------------|----------------------------|---------------------|
| Nominal flow                                  | 20 l/min<br>(5.3 US gpm)                                               | 35 l/min<br>(9.2 US gpm) | 65 l/min<br>(17.2 US gpm) | 70 l/min<br>(18.5 US gpm) | 150 l/min<br>(39.6 US gpm) |                     |
| Max. pressure                                 | Aluminium body = 210 bar (3050 psi)<br>Steel body = 350 bar (5100 psi) |                          |                           |                           |                            |                     |
| Oil leakage                                   | 0.25 cm³/min. - 0.015 in³/min. (5 drops) at 210 bar - 3050 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)                       |                          |                           |                           |                            |                     |
| Environmental temp.<br>for working conditions | from -40°C (-40°F) to 100°C (212°F)                                    |                          |                           |                           |                            |                     |
| Weight                                        | aluminium                                                              | 1.32 kg (2.91 lb)        | 1.32 kg (2.91 lb)         | 3.01 kg (6.64 lb)         | 3.01 kg (6.64 lb)          | 5.00 kg (11.02 lb)  |
|                                               | steel                                                                  | 2.65 kg (5.84 lb)        | 2.65 kg (5.84 lb)         | 3.19 kg (7.03 lb)         | 3.19 kg (7.03 lb)          | 10.03 kg (22.11 lb) |

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

**Normally open  
configuration (NA)**

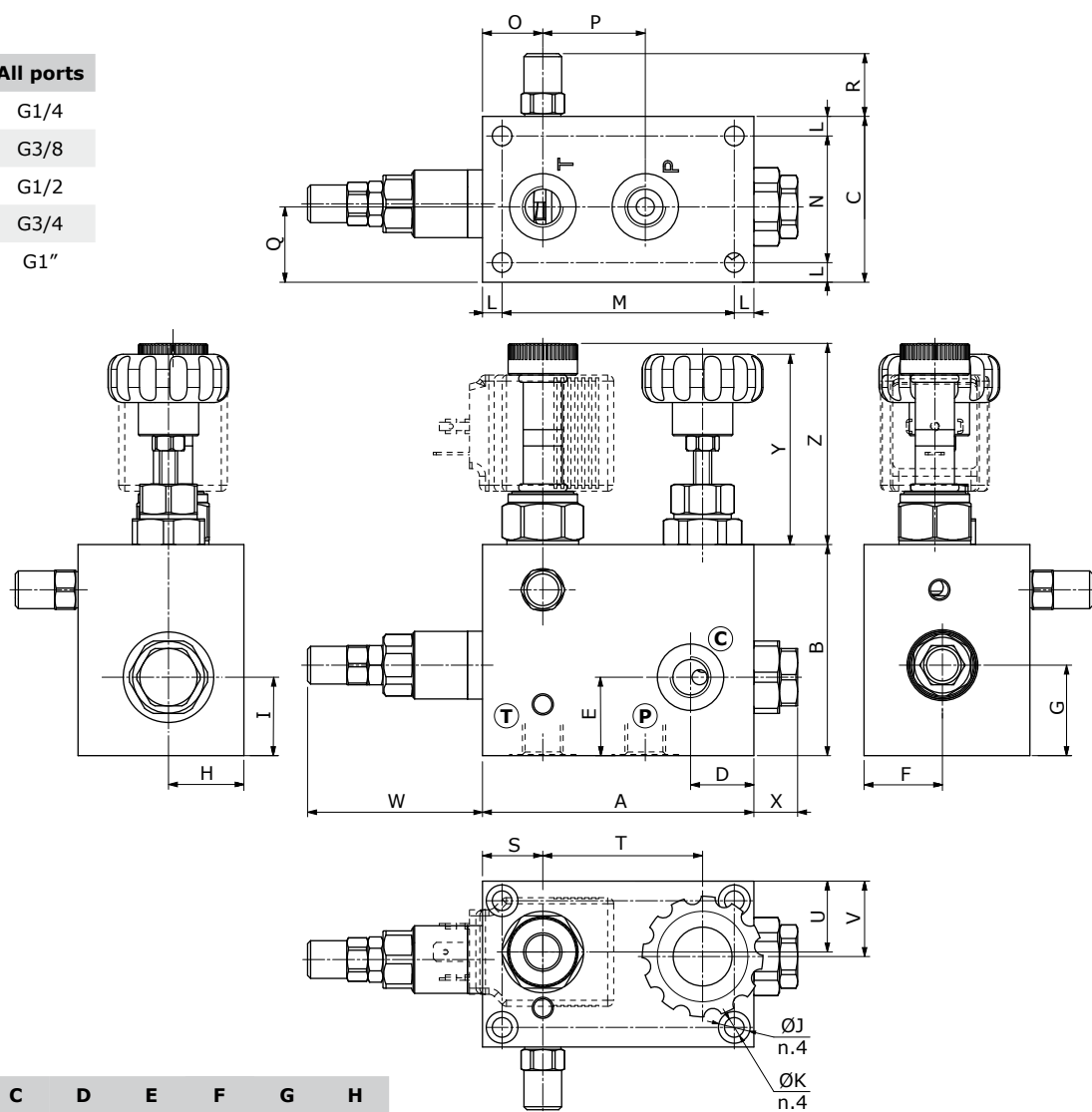


**Normally closed  
configuration (NC)**



## Dimensions

| Valve type          | All ports |
|---------------------|-----------|
| VE/B/VMP/VUI/SR 14  | G1/4      |
| VE/B/VMP/VUI/SR 38  | G3/8      |
| VE/B/VMP/VUI/SR 12  | G1/2      |
| VE/B/VMP/VUI/SR 34  | G3/4      |
| VE/B/VMP/VUI/SR 100 | G1"       |

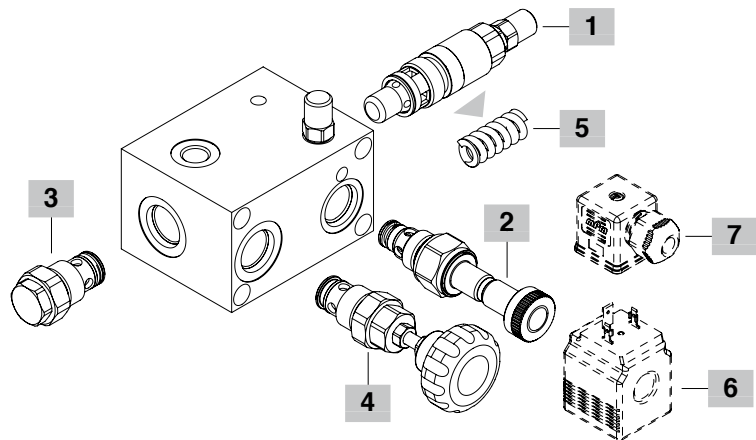
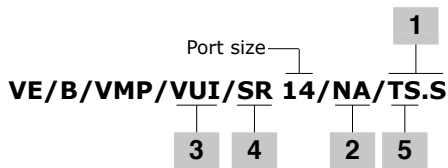


Dimensions are in mm-in

| Valve type          | A           | B           | C          | D          | E            | F          | G            | H          |
|---------------------|-------------|-------------|------------|------------|--------------|------------|--------------|------------|
| VE/B/VMP/VUI/SR 14  | 90<br>3.54  | 70<br>2.76  | 55<br>2.17 | 21<br>0.83 | 26<br>1.02   | 26<br>1.02 | 30<br>1.18   | 25<br>0.98 |
| VE/B/VMP/VUI/SR 38  | 90<br>3.54  | 70<br>2.76  | 55<br>2.17 | 22<br>0.87 | 26<br>1.02   | 26<br>1.02 | 30<br>1.18   | 25<br>0.98 |
| VE/B/VMP/VUI/SR 12  | 115<br>4.53 | 100<br>3.94 | 70<br>2.76 | 28<br>1.10 | 38.5<br>1.53 | 32<br>1.26 | 38.5<br>1.53 | 32<br>1.26 |
| VE/B/VMP/VUI/SR 34  | 115<br>4.53 | 100<br>3.94 | 70<br>2.76 | 30<br>1.18 | 38.5<br>1.53 | 32<br>1.26 | 38.5<br>1.53 | 32<br>1.26 |
| VE/B/VMP/VUI/SR 100 | 150<br>5.91 | 120<br>4.72 | 80<br>3.15 | 37<br>1.46 | 45<br>1.77   | 36<br>1.42 | 45<br>1.77   | 36<br>1.42 |

| Valve type          | I            | J             | K             | L            | M           | N          | O          | P          | Q          | R            | S          | T          | U            | V          | W            | X             | Y            | Z<br>(NA) (NC) |              |
|---------------------|--------------|---------------|---------------|--------------|-------------|------------|------------|------------|------------|--------------|------------|------------|--------------|------------|--------------|---------------|--------------|----------------|--------------|
| VE/B/VMP/VUI/SR 14  | 26<br>1.02   | 10.5<br>0.413 | 6.5<br>0.256  | 6.5<br>0.256 | 77<br>3.03  | 42<br>1.65 | 20<br>0.79 | 34<br>1.34 | 25<br>0.98 | 20.8<br>0.82 | 20<br>0.79 | 53<br>2.09 | 23.5<br>0.93 | 25<br>0.98 | 58<br>2.28   | 14.5<br>0.571 | 63<br>2.48   | 66.7<br>2.63   | 62.8<br>2.47 |
| VE/B/VMP/VUI/SR 38  | 26<br>1.02   | 10.5<br>0.413 | 6.5<br>0.256  | 6.5<br>0.256 | 77<br>3.03  | 42<br>1.65 | 20<br>0.79 | 34<br>1.34 | 25<br>0.98 | 20.8<br>0.82 | 20<br>0.79 | 53<br>2.09 | 23.5<br>0.93 | 25<br>0.98 | 58<br>2.28   | 14.5<br>0.571 | 63<br>2.48   | 66.7<br>2.63   | 62.8<br>2.47 |
| VE/B/VMP/VUI/SR 12  | 38.5<br>1.53 | 13.5<br>0.531 | 8.5<br>0.335  | 8.5<br>0.335 | 98<br>3.86  | 53<br>2.09 | 29<br>1.14 | 37<br>1.46 | 29<br>1.14 | 23.8<br>0.94 | 29<br>1.14 | 61<br>2.40 | 29<br>1.14   | 29<br>1.14 | 56.5<br>2.22 | 11<br>0.433   | 72.5<br>2.85 | 86.4<br>3.40   | 81<br>3.19   |
| VE/B/VMP/VUI/SR 34  | 38.5<br>1.53 | 13.5<br>0.531 | 8.5<br>0.335  | 8.5<br>0.335 | 98<br>3.86  | 53<br>2.09 | 29<br>1.14 | 41<br>1.61 | 29<br>1.14 | 23.5<br>0.93 | 29<br>1.14 | 61<br>2.40 | 29<br>1.14   | 29<br>1.14 | 56.5<br>2.22 | 11<br>0.433   | 72.5<br>2.85 | 86.4<br>3.40   | 81<br>3.19   |
| VE/B/VMP/VUI/SR 100 | 45<br>1.77   | 16.5<br>0.65  | 10.5<br>0.413 | 10<br>0.394  | 130<br>5.12 | 60<br>2.36 | 27<br>1.06 | 60<br>2.36 | 36<br>1.42 | 23.5<br>0.93 | 27<br>1.06 | 91<br>3.58 | 36<br>1.42   | 36<br>1.42 | 71<br>2.80   | 16.5<br>0.65  | 83<br>3.27   | 79.4<br>3.13   | 74.2<br>2.92 |

## Ordering codes and description composition



## VE/B/VMP/VUI/SR complete valves

Aluminium body and VMP direct type valve configuration  
 Standard setting 160 bar at 5 l/min (2320 psi at 1.32 US gpm)  
 Setting range: 50-220 bar (725-3200 psi)

| TYPE                                                     | CODE       | DESCRIPTION |
|----------------------------------------------------------|------------|-------------|
| <b>(NA) normally open solenoid valve configuration</b>   |            |             |
| VE/B/VMP/VUI/SR 14/NA/TS.S                               | 1900511101 | G1/4 ports  |
| VE/B/VMP/VUI/SR 38/NA/TS.S                               | 1900521103 | G3/8 ports  |
| VE/B/VMP/VUI/SR 12/NA/TS.S                               | 1900531110 | G1/2 ports  |
| VE/B/VMP/VUI/SR 34/NA/TS.S                               | 1900541106 | G3/4 ports  |
| VE/B/VMP/VUI/SR 100/NA/TS.S                              | 1900551110 | G1" ports   |
| <b>(NC) normally closed solenoid valve configuration</b> |            |             |
| VE/B/VMP/VUI/SR 14/NC/TS.S                               | 1900511100 | G1/4 ports  |
| VE/B/VMP/VUI/SR 38/NC/TS.S                               | 1900521102 | G3/8 ports  |
| VE/B/VMP/VUI/SR 12/NC/TS.S                               | 1900531109 | G1/2 ports  |
| VE/B/VMP/VUI/SR 34/NC/TS.S                               | 1900541105 | G3/4 ports  |
| VE/B/VMP/VUI/SR 100/NC/TS.S                              | 1900551109 | G1" ports   |
| VE/B/VMP/VUI/SR 38/NC/TS.S/SAE                           | 1900521200 | SAE8 ports  |
| VE/B/VMP/VUI/SR 12/NC/TS.S/SAE                           | 1900531200 | SAE10 ports |

For other steel body configurations, SAE thread, other port sizes and configurations with FPM (Viton) seals, please contact our Sales Dpt.

## 1 Pressure relief valve

| TYPE                                        | CODE       | DESCRIPTION                             |
|---------------------------------------------|------------|-----------------------------------------|
| <b>For VE/B/VMP/VUI/SR 14 and 38 valves</b> |            |                                         |
| VMP 5/TS.S                                  | 1100520400 | Setting range 50-220 bar (725-3200 psi) |
| <b>For VE/B/VMP/VUI/SR 12 and 34 valves</b> |            |                                         |
| VMP 10/TS.S                                 | 1100530400 | Setting range 50-220 bar (725-3200 psi) |
| <b>For VE/B/VMP/VUI/SR 100 valve</b>        |            |                                         |
| VMP 20/TS.S                                 | 1100540400 | Setting range 50-220 bar (725-3200 psi) |

## 2 Solenoid valve

| TYPE                                                            | CODE        | DESCRIPTION                        |
|-----------------------------------------------------------------|-------------|------------------------------------|
| <b>For VE/B/VMP/VUI/SR 14 and 38 valves: BER coils required</b> |             |                                    |
| EC08M/10NB                                                      | 0EC08002031 | (NA) normally open configuration   |
| EC08M/20NB                                                      | 0EC08002032 | (NC) normally closed configuration |
| <b>For VE/B/VMP/VUI/SR 12 and 34 valves: BER coils required</b> |             |                                    |
| EC10M/10NB                                                      | 0EC10002012 | (NA) normally open configuration   |
| EC10M/20NB                                                      | 0EC10002013 | (NC) normally closed configuration |
| <b>For VE/B/VMP/VUI/SR 100 valve: BER coils required</b>        |             |                                    |
| EC16M/10NB                                                      | 0EC16002020 | (NA) normally open configuration   |
| EC16M/20NB                                                      | 0EC16002021 | (NC) normally closed configuration |

## 3 Check valve

| TYPE                                        | CODE       | DESCRIPTION                         |
|---------------------------------------------|------------|-------------------------------------|
| <b>For VE/B/VMP/VUI/SR 14 and 38 valves</b> |            |                                     |
| VUI 38/Pa0,5                                | 1300020400 | Opening pressure 0.5 bar (7.25 psi) |
| <b>For VE/B/VMP/VUI/SR 12 and 34 valves</b> |            |                                     |
| VUI 12/Pa0,5                                | 1300030400 | Opening pressure 0.5 bar (7.25 psi) |
| <b>For VE/B/VMP/VUI/SR 100 valve</b>        |            |                                     |
| VUI 34/Pa0,5 pasmag                         | 1300020400 | Opening pressure 0.5 bar (7.25 psi) |

## 4 Needle valve

| TYPE                                        | CODE       | DESCRIPTION        |
|---------------------------------------------|------------|--------------------|
| <b>For VE/B/VMP/VUI/SR 14 and 38 valves</b> |            |                    |
| VUI/SR 38/V                                 | 1305020400 | Handknob actuation |
| <b>For VE/B/VMP/VUI/SR 12 and 34 valves</b> |            |                    |
| VUI/SR 12/V                                 | 1305030400 | Handknob actuation |
| <b>For VE/B/VMP/VUI/SR 100 valve</b>        |            |                    |
| VUI/SR 34/V                                 | 1305040400 | Handknob actuation |

## 5 Pressure setting springs

| TYPE                                        | CODE       | DESCRIPTION                               |
|---------------------------------------------|------------|-------------------------------------------|
| <b>For VE/B/VMP/VUI/SR 14 and 38 valves</b> |            |                                           |
| TB                                          | 3MOL314311 | Setting range 5-40 bar (72.5-580 psi)     |
| TV                                          | 3MOL314330 | Setting range 20-80 bar (290-1150 psi)    |
| TS                                          | 3MOL315330 | Setting range 50-220 bar (725-3200 psi)   |
| TR                                          | 3ML1143600 | Setting range 180-350 bar (2600-5075 psi) |
| <b>For VE/B/VMP/VUI/SR 12 and 34 valves</b> |            |                                           |
| TB                                          | 3MOL316410 | Setting range 5-40 bar (72.5-580 psi)     |
| TV                                          | 3ML1154300 | Setting range 20-80 bar (290-1150 psi)    |
| TS                                          | 3MOL317420 | Setting range 50-220 bar (725-3200 psi)   |
| TR                                          | 3MOL317440 | Setting range 180-350 bar (2600-5075 psi) |
| <b>For VE/B/VMP/VUI/SR 100 valve</b>        |            |                                           |
| TB                                          | 3ML1184300 | Setting range 5-40 bar (72.5-580 psi)     |
| TV                                          | 3ML1174500 | Setting range 20-80 bar (290-1150 psi)    |
| TS                                          | 3ML1204200 | Setting range 50-220 bar (725-3200 psi)   |
| TR                                          | 3ML1214500 | Setting range 180-350 bar (2600-5075 psi) |

## 6 Coils

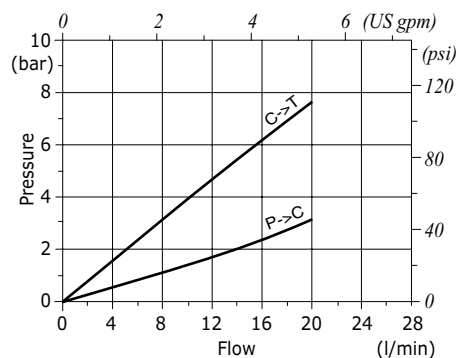
| TYPE                                      | CODE        | DESCRIPTION                               |
|-------------------------------------------|-------------|-------------------------------------------|
| BER 12VDC                                 | 4SLE001200A | 12VDC-ISO4400 for EC08M                   |
| BT 12VDC                                  | 4SL3000120  | 12VDC-ISO4400 for VSE/P/2 and VSE/P/2-150 |
| For complete coils list see from page 433 |             |                                           |

## 7 Connector

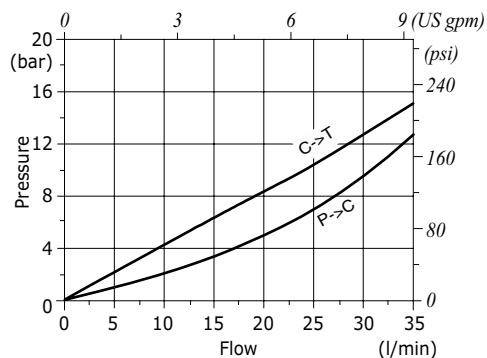
| TYPE                                           | CODE       | DESCRIPTION |
|------------------------------------------------|------------|-------------|
| ISO4400                                        | 4CN1009995 | Connector   |
| For complete connectors list see from page 433 |            |             |

## Rating diagrams

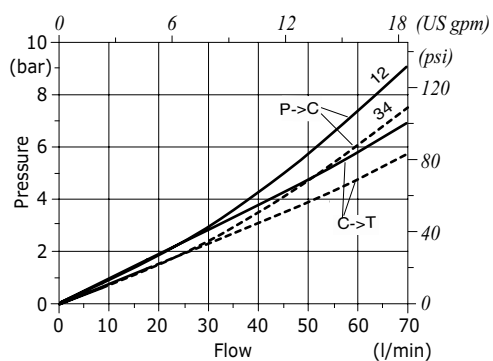
VE/B/VMP/VUI/SR 14 pressure drop vs. flow from P→C - C→T



VE/B/VMP/VUI/SR 38 pressure drop vs. flow from P→C - C→T



VE/B/VMP/VUI/SR (12-34) pressure drop vs. flow from P→C - C→T



VE/B/VMP/VUI/SR 100 pressure drop vs. flow from P→C - C→T

