

## Type VE/B directional solenoid valves

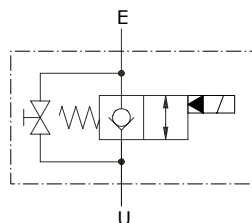
- Two way
- With emergency
- Pilot operated

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

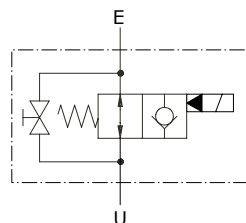
|  | VE/B 14   | VE/B 38                   | VE/B 12                   | VE/B 34                   | VE/B 100                   |                   |
|--|---|---------------------------|---------------------------|---------------------------|----------------------------|-------------------|
| Nominal flow                               | 20 l/min<br>(5.3 US gpm)  | 40 l/min<br>(10.6 US gpm) | 60 l/min<br>(15.8 US gpm) | 75 l/min<br>(19.8 US gpm) | 160 l/min<br>(42.3 US gpm) |                   |
| Max. pressure                              | Aluminium body = 210 bar (3050 psi)<br>Steel body = 350 bar (5100 psi)                  |                           |                           |                           |                            |                   |
| Oil leakage                                | 0.25 cm <sup>3</sup> /min - 0.015 in <sup>3</sup> /min. (2 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. for working conditions | from -40°C (-40°F) to 100°C (212°F)   |                           |                           |                           |                            |                   |
| Weight                                     | <i>aluminium</i>  | 0.39 kg (0.86 lb)         | 0.39 kg (0.86 lb)         | 1.10 kg (2.43 lb)         | 1.08 kg (2.38 lb)          | 1.58 kg (3.48 lb) |
|  | <i>steel</i>  | 0.77 kg (1.70 lb)         | 0.74 kg (1.63 lb)         | 1.93 kg (4.25 lb)         | 1.85 kg (4.08 lb)          | 2.90 kg (6.39 lb) |

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

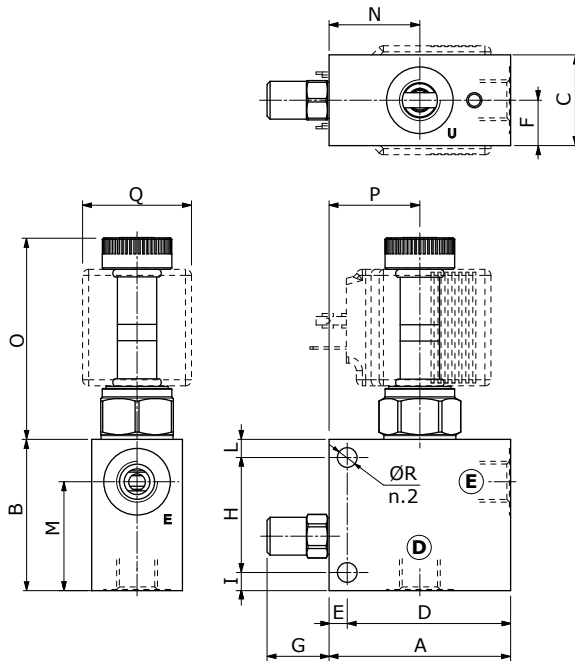
**Normally closed configuration (NC)**



**Normally open configuration (NA)**



## Dimensions



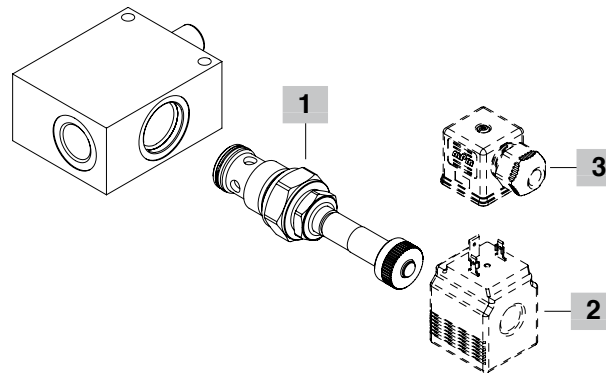
| Valve type | U    | E    |
|------------|------|------|
| VE/B 14    | G1/4 | G1/4 |
| VE/B 38    | G3/8 | G3/8 |
| VE/B 12    | G1/2 | G1/2 |
| VE/B 34    | G3/4 | G3/4 |
| VE/B 100   | G1"  | G1"  |

Dimensions are in mm-in

| Valve type | A    | B    | C    | D    | E     | F    | G    | H    | I     | L     | M    | N    | O    |      | P    | Q    | ØR    |
|------------|------|------|------|------|-------|------|------|------|-------|-------|------|------|------|------|------|------|-------|
|            |      |      |      |      |       |      |      |      |       |       |      |      | (NA) | (NC) |      |      |       |
| VE/B 14    | 60   | 50   | 30   | 54   | 6     | 15   | 20   | 38   | 6     | 6     | 36   | 30   | 66.7 | 62.8 | 30   | 36   | 6.5   |
|            | 2.36 | 1.97 | 1.18 | 2.13 | 0.236 | 0.59 | 0.79 | 1.50 | 0.236 | 0.236 | 1.42 | 1.18 | 2.63 | 2.47 | 1.18 | 1.42 | 0.256 |
| VE/B 38    | 60   | 50   | 30   | 54   | 6     | 15   | 20   | 38   | 6     | 6     | 36   | 30   | 66.7 | 62.8 | 30   | 36   | 6.5   |
|            | 2.36 | 1.97 | 1.18 | 2.13 | 0.236 | 0.59 | 0.79 | 1.50 | 0.236 | 0.236 | 1.42 | 1.18 | 2.63 | 2.47 | 1.18 | 1.42 | 0.256 |
| VE/B 12    | 80   | 65   | 40   | 74   | 6     | 20   | 23   | 53   | 6     | 6     | 43   | 40   | 86.4 | 81   | 40   | 36.5 | 6.5   |
|            | 3.15 | 2.56 | 1.57 | 2.91 | 0.236 | 0.79 | 0.91 | 2.09 | 0.236 | 0.236 | 1.69 | 1.57 | 3.40 | 3.19 | 1.57 | 1.44 | 0.256 |
| VE/B 34    | 80   | 65   | 40   | 74   | 6     | 20   | 23   | 53   | 6     | 6     | 43   | 40   | 86.4 | 81   | 40   | 36.5 | 6.5   |
|            | 3.15 | 2.56 | 1.57 | 2.91 | 0.236 | 0.79 | 0.91 | 2.09 | 0.236 | 0.236 | 1.69 | 1.57 | 3.40 | 3.19 | 1.57 | 1.44 | 0.256 |
| VE/B 100   | 90   | 80   | 50   | 82.5 | 7.5   | 25   | 23   | 65   | 7.5   | 7.5   | 49   | 43   | 79.4 | 74.2 | 43   | 36.5 | 8.5   |
|            | 3.54 | 3.15 | 1.97 | 3.25 | 0.295 | 0.98 | 0.91 | 2.56 | 0.295 | 0.295 | 1.93 | 1.69 | 3.13 | 2.92 | 1.69 | 1.44 | 0.335 |

Ordering codes and description composition

Port size  
**VE/B 14/NA**  
 1



**VE/B complete valves**

| TYPE   | CODE       | DESCRIPTION                |
|--|------------|----------------------------|
| <b>(NA) normally open solenoid valve configuration</b>   |            |                            |
| <b>VE/B 14/NA/EC08M</b>                                  | 1720011101 | Aluminium body, G1/4 ports |
| <b>VE/B 38/NA/EC08M</b>                                  | 1720021106 | Aluminium body, G3/8 ports |
| <b>VE/B 12/NA</b>  | 1720031112 | Aluminium body, G1/2 ports |
| <b>VE/B 34/NA</b>  | 1720041114 | Aluminium body, G3/4 ports |
| <b>VE/B 100/NA</b>                                       | 1720051108 | Aluminium body, G1" ports  |
| <b>VE/B 14/NA/ac</b>                                     | 1720012101 | Steel body, G1/4 ports     |
| <b>VE/B 38/NA/ac</b>                                     | 1720022101 | Steel body, G3/8 ports     |
| <b>VE/B 12/NA/ac</b>                                     | 1720032104 | Steel body, G1/2 ports     |
| <b>VE/B 34/NA/ac</b>                                     | 1720042105 | Steel body, G3/4 ports     |
| <b>VE/B 100/NA/ac</b>                                    | 1720052109 | Steel body, G1" ports      |
| <b>(NC) normally closed solenoid valve configuration</b> |            |                            |
| <b>VE/B 14/NC/EC08M</b>                                  | 1720011100 | Aluminium body, G1/4 ports |
| <b>VE/B 38/NC/EC08M</b>                                  | 1720021105 | Aluminium body, G3/8 ports |
| <b>VE/B 12/NC</b>  | 1720031111 | Aluminium body, G1/2 ports |
| <b>VE/B 34/NC</b>  | 1720041113 | Aluminium body, G3/4 ports |
| <b>VE/B 100/NC</b>                                       | 1720051107 | Aluminium body, G1" ports  |
| <b>VE/B 14/NC/ac</b>                                     | 1720012100 | Steel body, G1/4 ports     |
| <b>VE/B 38/NC/ac</b>                                     | 1720022102 | Steel body, G3/8 ports     |
| <b>VE/B 12/NC/ac</b>                                     | 1720032103 | Steel body, G1/2 ports     |
| <b>VE/B 34/NC/ac</b>                                     | 1720042104 | Steel body, G3/4 ports     |
| <b>VE/B 100/NC/ac</b>                                    | 1720052108 | Steel body, G1" ports      |

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

**1 Solenoid valve**

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

**2 Coils**

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

For complete coils list see from page 433

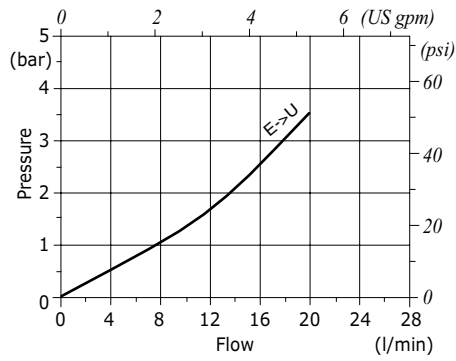
**3 Connector**

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

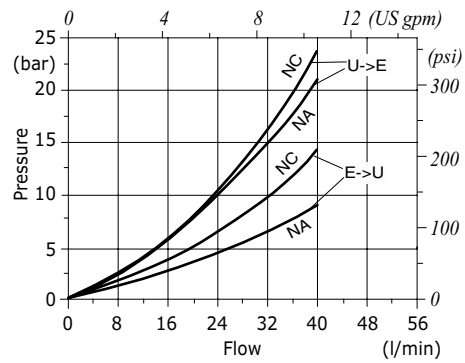
For complete connectors list see from page 433

Rating diagrams

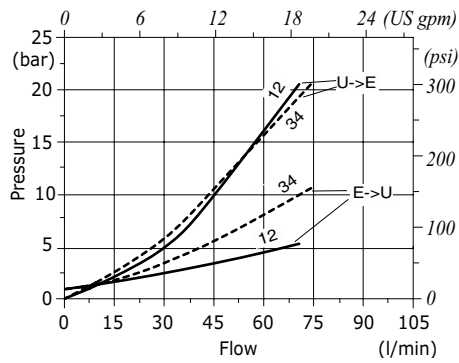
**VE/B 14 pressure drop vs. flow from E→U**



**VE/B 38 pressure drop vs. flow from E→U and U→E**



**VE/B 12-34 pressure drop vs. flow from E→U and U→E**



**VE/B 100 pressure drop vs. flow from E→U and U→E**

