



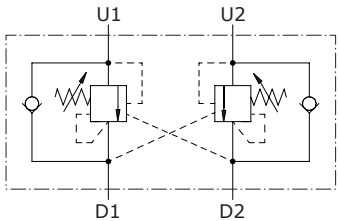
# Type VODL counterbalance valves

- Double acting
- Load sensitive

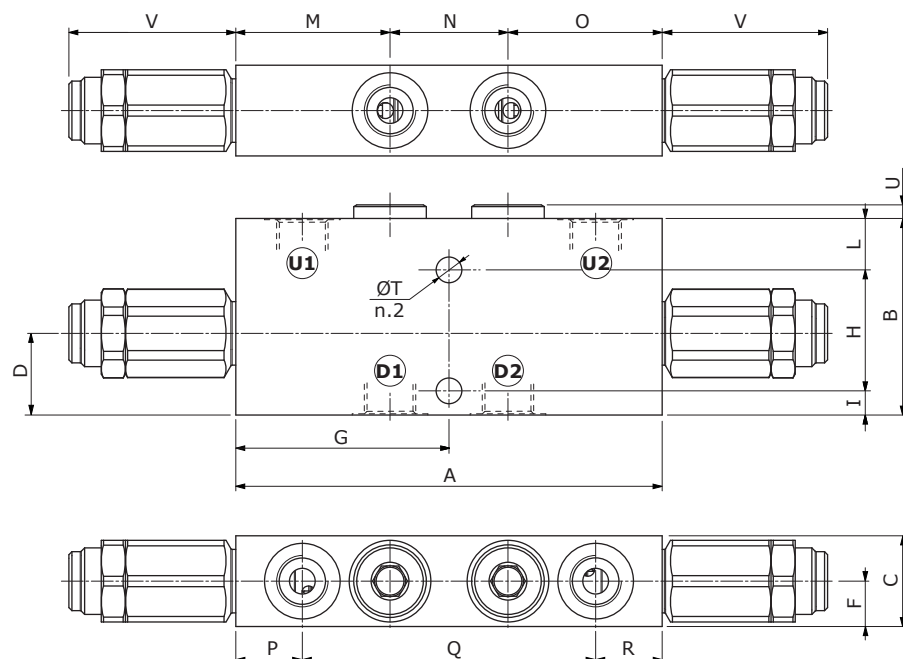
Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

|                                            |           | VODL 38                                                                                  | VODL 12                   | VODL 34                    | VODL 100                   |
|--------------------------------------------|-----------|------------------------------------------------------------------------------------------|---------------------------|----------------------------|----------------------------|
| Nominal flow                               |           | 35 l/min<br>(9.2 US gpm)                                                                 | 70 l/min<br>(18.5 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)                   |                           |                            |                            |
| Oil leakage                                |           | 0.25 cm³/min - 0.015 in³/min. (5 drops) at 210 bar - 3050 psi at 80% of pressure setting |                           |                            |                            |
| 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                                     | aluminium | 1.32 kg (2.91 lb)                                                                        | 1.69 kg (3.73 lb)         | 2.92 kg (6.44 lb)          | 4.75 kg (10.47 lb)         |
|                                            | steel     | 2.39 kg (5.27 lb)                                                                        | 2.95 kg (6.50 lb)         | 5.13 kg (11.31 lb)         | 9.60 kg (21.16 lb)         |

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



## Dimensions



| Valve type | D1   | D2   | U1 | U2 |
|------------|------|------|----|----|
| VODL 38    | G3/8 | G3/8 |    |    |
| VODL 12    | G1/2 | G1/2 |    |    |
| VODL 34    | G3/4 | G3/4 |    |    |
| VODL 100   | G1"  | G1"  |    |    |

Dimensions are in mm-in

| Valve type | A    | B    | C    | F     | G    | H    | I     | L     | M    | N    | O    | P    | Q    | R    | ØT    | U     | V    |
|------------|------|------|------|-------|------|------|-------|-------|------|------|------|------|------|------|-------|-------|------|
| VODL 38    | 141  | 65   | 30   | 15    | 70.5 | 40   | 8     | 17    | 51   | 39   | 51   | 22   | 97   | 22   | 8.5   | 4.5   | 55   |
|            | 5.55 | 2.56 | 1.18 | 0.59  | 2.76 | 1.57 | 0.315 | 0.67  | 2.01 | 1.54 | 2.01 | 0.87 | 3.82 | 0.87 | 0.335 | 0.177 | 2.17 |
| VODL 12    | 149  | 70   | 34.5 | 17.25 | 74.5 | 48   | 8     | 14    | 50.5 | 48   | 50.5 | 21.5 | 106  | 21.5 | 8.5   | 4.5   | 50.5 |
|            | 5.87 | 2.76 | 1.36 | 0.68  | 2.93 | 1.89 | 0.315 | 0.551 | 1.99 | 1.89 | 1.99 | 0.85 | 4.17 | 0.85 | 0.335 | 0.177 | 1.99 |
| VODL 34    | 184  | 90   | 40   | 20    | 92   | 70   | 10    | 10    | 65   | 54   | 65   | 30   | 124  | 30   | 10.5  | 5.5   | 61   |
|            | 7.25 | 3.54 | 1.57 | 0.79  | 3.62 | 2.76 | 0.394 | 0.394 | 2.56 | 2.13 | 2.56 | 1.18 | 4.88 | 1.18 | 0.413 | 0.217 | 2.40 |
| VODL 100   | 218  | 100  | 60   | 30    | 109  | 80   | 10    | 10    | 76   | 66   | 76   | 30   | 158  | 30   | 10.5  | 12.5  | 61   |
|            | 8.58 | 3.94 | 2.36 | 1.18  | 4.29 | 3.15 | 0.394 | 0.394 | 2.99 | 2.60 | 2.99 | 1.18 | 6.22 | 1.18 | 0.413 | 0.492 | 2.40 |

## Ordering codes

### VODL complete valves

TYPE: **VODL 38/TR.S.p4** CODE: 1550021102

DESCRIPTION: Aluminium body, G3/8 ports, pilot ratio 1:4, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VODL 12/TR.S.p7** CODE: 1550031102

DESCRIPTION: Aluminium body, G1/2 ports, pilot ratio 1:7, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

TYPE: **VODL 34/TR.S.p7** CODE: 155041102

DESCRIPTION: Aluminium body, G3/4 ports, pilot ratio 1:7, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

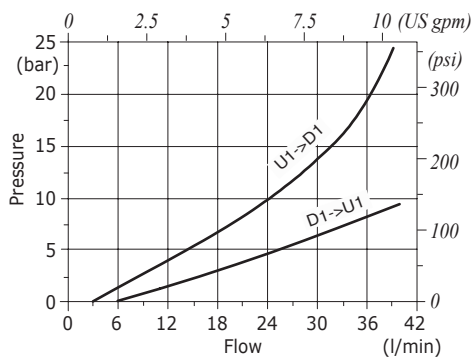
TYPE: **VODL 100/TR.S.p7** CODE: 1550051102

DESCRIPTION: Aluminium body, G1" ports, pilot ratio 1:7, range 50-350 bar (725-5075 psi), std setting 280 bar (4060 psi) @ 5 l/min (1.32 US gpm)

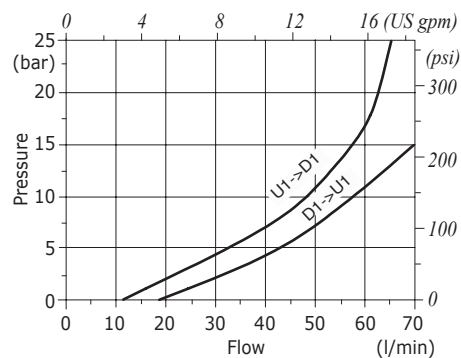
For other configurations, SAE thread and steel body, please contact our Sales Dept.

**Rating diagrams**

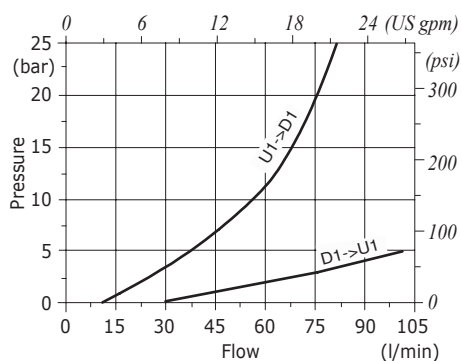
**VODL 38 pressure drop vs. flow  
from D1->U1 and U1->D1**



**VODL 12 pressure drop vs. flow  
from D1->U1 and U1->D1**



**VODL 34 pressure drop vs. flow  
from D1->U1 and U1->D1**



**VODL 100 pressure drop vs. flow  
from D1->U1 and U1->D1**

