

Part number:

**HYDROMA**

HYDRAULICKÉ SYSTÉMY

**HIDROMA  
SISTEMS**

UKŁADY HYDRAULICZNE

**HYDROMA**

ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

## Dual counterbalance relief compensated

VBSO-DE-CC

05.42.05 - X - Y - Z

**RE 18307-68**

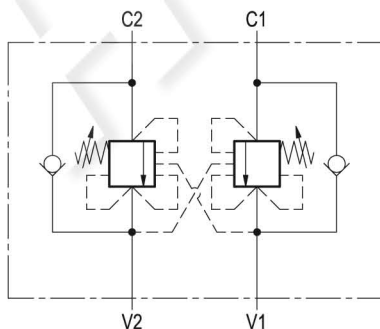
Edition: 03.2016

Replaces: 04.2010



### Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston, pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.

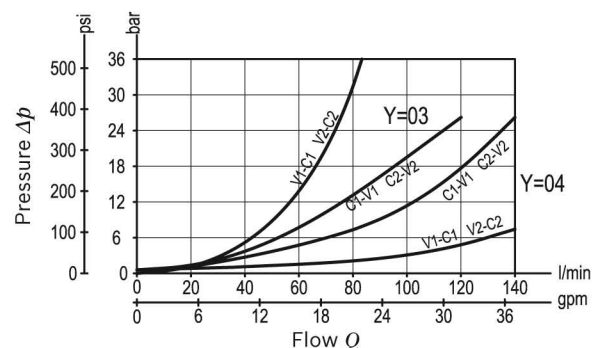


### Technical data

|  |   |
|--|---|
| Operating pressure   | up to 210 bar (3000 psi)                  |
| Max. flow  | see performance graph                     |
| Weight   | see "Dimensions"                          |
| Manifold material  | Aluminium                                 |
| Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network. |   |
| Fluid  | Mineral oil (HL, HLP) according DIN 51524 |
| Fluid temperature range  | -30 °C to 100 (-22 to 212 °F)             |
| Viscosity range  | 5 to 800 mm <sup>2</sup> /s (cSt)         |
| Recommended degree of fluid contamination  | Class 19/17/14 according to ISO 4406      |
| Other technical data   | see data sheet 18350-50                   |

Note: for applications outside these parameters, please consult us.

### Characteristic curve



Ordering code

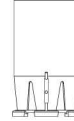
|                 |          |          |          |
|-----------------|----------|----------|----------|
| <b>05.42.05</b> | <b>X</b> | <b>Y</b> | <b>Z</b> |
|-----------------|----------|----------|----------|

|  |         |
|--|---------|
| Dual counterbalance relief compensated |         |
| Pilot ratio                            |         |
| <b>02</b>                              | 8.2 : 1 |
| <b>10</b>                              | 3.2 : 1 |

|            |         |         |  |
|------------|---------|---------|--|
| Port sizes | V1 - V2 | C1 - C2 |  |
| <b>03</b>  | G 1/2   | G 1/2   |  |
| <b>04</b>  | G 3/4   | G 3/4   |  |

|           | SPRINGS                       |                                    |                                    |
|-----------|-------------------------------|------------------------------------|------------------------------------|
|           | Adj. pressure range bar (psi) | Pres. increase bar/turn (psi/turn) | Std. setting Q=5 (l/min) bar (psi) |
| <b>20</b> | 60-210 (900-3000)             | 54 (783)                           | 200 (2900)                         |
| <b>35</b> | 100-350 (1450-5000)           | 95 (1378)                          | 350 (5000)                         |

Tamper resistant cap code ordering code 03.05.01.001  
Mat. no. R930000470

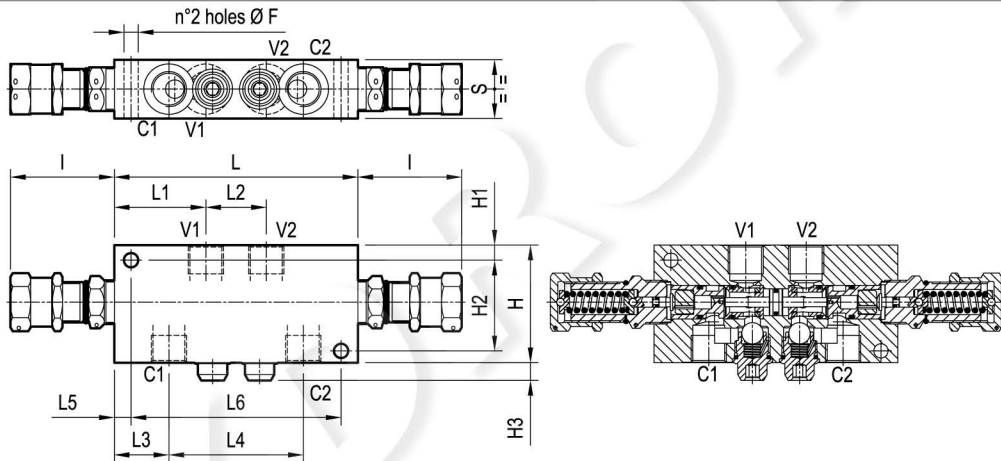


Preferred types

| Type            | Material number |
|-----------------|-----------------|
| 054205020320000 | R930001786      |
| 05420502033500A | R930001787      |
| 054205020420000 | R930001789      |
| 05420502043500B | R930001790      |

| Type            | Material number |
|-----------------|-----------------|
| 054205100320000 | R930001942      |
| 05420510033500A | R930001794      |
| 054205100420000 | R930001943      |
| 05420510043500A | R930001799      |

Dimensions



|              |               |              |               |                |              |                |               |              |              |              |              |              |                |       |                         |
|--------------|---------------|--------------|---------------|----------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|----------------|-------|-------------------------|
| 40<br>(1.58) | 155<br>(6.1)  | 10<br>(0.39) | 107<br>(4.21) | 34<br>(1.34)   | 50<br>(1.97) | 62.5<br>(2.46) | 175<br>(6.89) | 62<br>(2.44) | 11<br>(0.43) | 70<br>(2.76) | 10<br>(0.39) | 90<br>(3.54) | 10.5<br>(0.41) | G 3/4 | 2.2<br>(4.9)            |
| 35<br>(1.38) | 125<br>(4.92) | 10<br>(0.39) | 80<br>(3.15)  | 32.5<br>(1.28) | 36<br>(1.42) | 54.5<br>(2.15) | 145<br>(5.71) | 62<br>(2.44) | 11<br>(0.43) | 54<br>(2.13) | 8<br>(0.32)  | 70<br>(2.76) | 8.5<br>(0.34)  | G 1/2 | 1.45<br>(3.2)           |
| S            | L6            | L5           | L4            | L3             | L2           | L1             | L             | L            | I            | H3           | H2           | H1           | H              | F     | Y<br>Weight<br>kg (lbs) |