## DIRECT ACTING OVERCENTER VALVES



## HYDRAULIC SYMBOL



Fluid used: mineral based oil with viscosity $32 \mathrm{~mm}^{2} / \mathrm{s}$ at $40^{\circ} \mathrm{C}$.

Counterbalance valves direct acting control the movement and the hold of an hydraulic actuator, for example a cylinder or a motor.
During the movement upward of the load the flow moves free in direction $2 \rightarrow 1$ through the check valve, and when the flow from the pump stop, the valve permits the stop of the movement (flow direction $1 \rightarrow 2$ ) limiting shocks generated by system inertia (antishock function).
The controlled movement downward of the load is obtained when the valves are both supplied with flow $1 \rightarrow 2$, (coming from the actuator) and on pilot port 3 (coming from the pump), that is also connected to the other port of the actuator restoring the costant filling to avoid cavitation. The valves are sensibles to pressure on port 2.
The valves are equipped with a mechanical end stroke that avoids the compression of the spring till solid block. The body is made of steel zinc coated, and the tapered spool is made of steel tempered and grinded.

## HYDRAULIC FEATURES

| Max. pressure | 350 bar |
| :--- | :--- |
| Setting range: <br> Spring 2 (neutral) <br> Spring 3 (red) | $\max 180$ bar <br> $\operatorname{max~} 350 \mathrm{bar}$ |
| Pressure one-way check valve $2 \rightarrow 1$ | 3 bar |
| Valve leakage at $70 \%$ of pressure <br> setting (0 $\div 10$ drops/min) | $0 \div 0.5 \mathrm{~cm}^{3} / \mathrm{min}$ |
| Max. Flow | $20 \mathrm{I} / \mathrm{min}$ |
| Hydraulic fluid | DIN 51524 Mineral oils |
| Fluid viscosity | $10 \div 500 \mathrm{~mm}^{2} / \mathrm{s}$ |
| Fluid temperature | $-25^{\circ} \mathrm{C} \div 75^{\circ} \mathrm{C}$ |
| Ambient temperature | $-25^{\circ} \mathrm{C} \div 60^{\circ} \mathrm{C}$ |
| Max. contamin. level class with filter | $\mathrm{ISO} 4406: 1999-$ class $19 / 17 / 14$ |
| Weight | 0.14 kg |
| Tightening torque | $25 \div 30 \mathrm{Nm}$ |
| Cavity (3/4" 16UNF) | $\mathrm{CO18003} \mathrm{(See} \mathrm{section} 17$ ) |

## ORDERING CODE



