



**ROEMHELD**  
HILMA ■ STARK

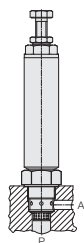
Issue 1-09 E

## C 2.9533

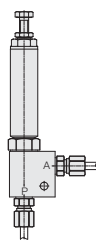
### Pressure Reducing Valve without leakage oil port max. operating pressure 500 bar



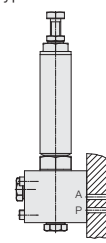
Threaded-body valve



Pipe connection



Flange-mounted type



#### General subjects

Pressure reducing valves maintain the pressure at the cylinder port A (secondary pressure) more or less constant at a variable but always higher input pressure P (primary pressure).

#### Function

Below the adjusted secondary pressure the hydraulic oil flows without any impediments from P to A. In case of pressure increase to the desired closing pressure a hermetically sealed pressure reducing valve shuts off the oil flow. Thereby a further pressure increase is avoided, also in case of further increasing primary pressure P.

In case of a pressure drop, e.g. because of a leakage at a cylinder, the check valve will be opened by a strong spring against the existing primary pressure. Hydraulic oil can continue flowing until the adjusted secondary pressure is obtained.

Increasing secondary pressure, e.g. due to temperature rise cannot be compensated, since there is no leakage oil port (see "Important notes"). Pressure reducing valves with leakage oil port see data sheet C 2.9532.

#### Application

This pressure reducing valve is especially suitable for clamping systems which will be uncoupled from the pressure generator, e.g. pallets, because an additional leakage oil line is not available.

#### Limits of application

The pressure reducing valve can only be used in static clamping systems. The connected clamping elements must be leakage-free.

#### Important notes

Due to the missing leakage oil port an increasing pressure cannot be compensated at the secondary side. Pressure increase is possible because of temperature increase, external forces or damage of the valve seat by swarf.

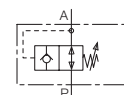
Recommendation: Installation of an additional pressure relief valve at the secondary side as a safety measure against pressure increase. The opening pressure should be adjusted approx. 10% above the secondary pressure, however, should not exceed the admissible operating pressure of the connected elements.

The secondary pressure can be adjusted and controlled by means of a pressure gauge. By this way the required sealing of the system is controlled too.

The sequence shown in the application below should be considered if flow control valves and sequence valves are connected in series.

#### Advantages

- Optimisation of the clamping force of individual cylinders or groups of cylinders
- Pressure limitation to the admissible operating pressure of individual cylinders or groups of cylinders
- Big adjusting range
- Automatic regulation in case of pressure drops at the secondary side
- No leakage oil port required
- Can be used in uncoupled clamping systems e.g. on clamping pallets
- Different installation possibilities
- Mounting body with pressure gauge connection
- Possibility to lead



#### Application example

