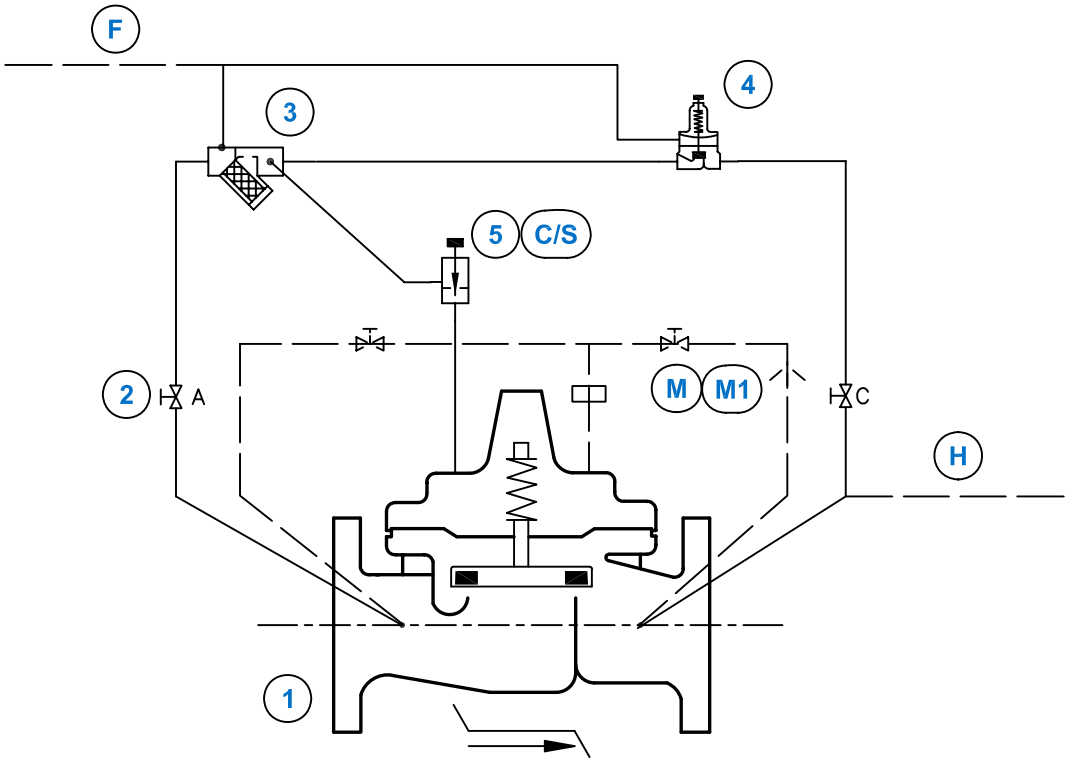
CLA-VAL **50-01**

Pressure Relief - Pressure Sustaining Valve



STANDARD EQUIPMENT			
No	**Description**	**Qty**	**Type**
1	MAIN VALVE HYTROL AE/GE/NGE	1	100-01
2	ISOLATION BALL VALVE	2	RB-117
3	STRAINER WITH INCORPORATED ORIFICE	1	X44-A
4	PRESSURE RELIEF CONTROL	1	CRL
5	NEEDLE VALVE	1	6120

OPTIONAL FEATURES			
No	**Description**	**Qty**	**Type**
C	ONE-WAY FLOW CONTROL (CLOSING SPEED)	1	CV
F	REMOTE SENSING	1	-
H	DRAIN TO ATMOSPHERE	1	-
S	ONE-WAY FLOW CONTROL (OPENING SPEED)	1	CV
M	MANUAL OPERATOR	2	RB-117
M1	MANUAL OPERATOR (DRAIN TO ATMOSPHERE)	2	RB-117

NOTES

AE/GE : DN 32 - DN 400 / NGE : DN 50 - DN 600
The standard pressure relief control type : **CRL** can be replaced by a high precision sustaining valve type : **CRL-HS**

OPTIONAL FEATURES : ——— ——— ——— ———
NOT FURNISHED BY CLA-VAL : ——— – ——— – ———

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Operating data

1.1 PRESSURE RELIEF FEATURE

Pressure relief control (**4**) is a "normally closed" control that responds to main valve (**1**) inlet pressure changes. An increase in inlet pressure tends to open pressure relief control (**4**) and a decrease in inlet pressure tends to close pressure relief control (**4**). This causes main valve cover pressure to vary and the main valve (**1**) to modulate (open and close) maintaining a relatively constant pressure at the main valve inlet. When inlet pressure is lower than chamber and the main valve closes.

Pressure relief control (4) adjustment: Turn the adjusting screw clockwise to increase the setting.

1.2 CLOSING / OPENING SPEED CONTROL

Calibrated orifice of strainer (**3**) and needle valve (**5**) control the closing speed of the main valve (**1**). Needle valve (**5**) controls the closing speed of the main valve (**1**).

Needle valve (5) adjustment: Turn the adjusting stem of needle valve (**5**) clockwise to make the main valve (**1**) close/open more slowly.

Note: Do not close needle valve (**5**) completely or the main valve (**1**) will not close or open (suggested initial setting of needle valve is ½ to 1 turn open).

If high speed opening and slow speed closing of main valve (**1**) are required by the hydraulic service's conditions, it may be necessary to replace the original orifice plug of strainer (**3**) by a smaller one.

1.3 (E*) EUROPEAN STANDARDS

ITEM (**2**) - Isolation ball valve:

The isolation ball valves are used to isolate the pilot system from main line pressure. These isolation ball valves (**2A**) and (**2B**) must be open during normal operation.

ITEM (**3**) - Y-Strainer with incorporated orifice:

The strainer is installed in the pilot supply line to protect the pilot system from foreign particles. The strainer screen must be cleaned periodically.

1.4 OPTIONAL FEATURES

Suffix (**F**) - Remote sensing:

Remote sensing is obtained from a point upstream of the main valve (**1**) inlet, by a pipe size Ø 12 mm (not furnished by CLA-VAL Europe), which must not have any high points and so formation of air pockets and avoid any pulsation of control.

Suffix (**H**) - Drain to atmosphere:

The outlet of isolation ball valve (**2C**) is not connected to outlet of main valve (**1**), but directly to atmosphere.

Suffix (**C**) - Closing speed:

Flow control (**C**) regulates the closing speed of main valve (**1**). Turn the adjusting screw clockwise to make the valve close more slowly.

Suffix (**M**) - manual operator or Suffix (**M1**) - manual operator (discharge to atmosphere):

Needle valve (**5**) closed, but the number of closing turn(s) must be registered.

The opening of cock (**MF**) produces the closing of main valve (**1**); the opening of cock (**MO**) produces a partial [**M**] opening (depending of the rate of flow through the main valve) or a complete [**M1**] opening (regardless the rate of flow through the main valve). The closing of both cocks (**MF**)/ (**MO**) permits to maintain the main valve (**1**) in any partial lift.

In normal service, the needle valve (**5**) must be open at the same number of opening turn(s) as registered in the closing cycle. Two cocks (**MF**)/ (**MO**) must be closed.

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Suffix (**S**) - Opening speed:

Flow control (**S**) regulates the opening speed of main valve (**1**). Turn the adjusting screw clockwise to make the valve open more slowly.

1.5 ▸ CHECK LIST FOR PROPER OPERATION

- ☐ System valves open upstream and downstream.
- ☐ Air removed from the main valve cover and pilot system at all high points.
- ☐ Cocks (**2A**) and (**2C**) open.
- ☐ Periodic cleaning of strainer (**3**) is recommended.
- ☐ Needle valve (**5**) open ½ to 1 turn.
- ☐ Remote control line properly connected [Optional feature (**F**)].
- ☐ Atmospheric drain line properly connected [Optional feature (**H**)].
- ☐ Cocks [Optional feature (**MF**) and (**MO**)] closed (if provided).

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