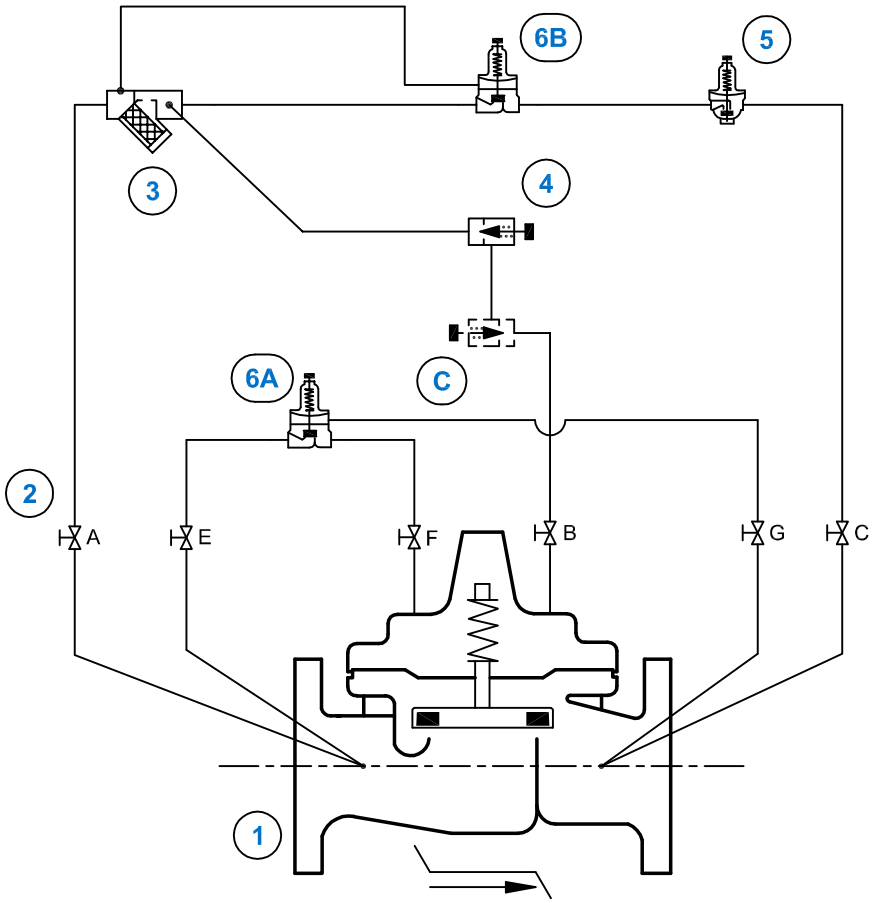
CLA-VAL 94-16

Pressure Reducing Valve
Upstream and Downstream Surge Control



STANDARD EQUIPMENT			
No	**Description**	**Qty**	**Type**
1	MAIN VALVE HYTROL AE/GE/NGE	1	100-01
2	ISOLATION BALL VALVE	6	RB-117
3	STRAINER WITH INCORPORATED ORIFICE	1	X44-A
4	ONE-WAY FLOW CONTROL	1	CV
5	PRESSURE REDUCING CONTROL	1	CRD
6	PRESSURE RELIEF CONTROL	2	CRL / CRL-60

OPTIONAL FEATURES			
No	**Description**	**Qty**	**Type**
C	ONE-WAY FLOW CONTROL (CLOSING SPEED)	1	CV

NOTES

AE/GE : DN 32 - DN 400 / NGE : DN 50 - DN 600

OPTIONAL FEATURES : —— —— —— ——

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

Operating data

1.1 PRESSURE REDUCING FEATURE

Pressure reducing control CRD (**5**) is a "normally open" control, that senses main valve outlet pressure changes. An increase in outlet pressure tends to close control (**5**) and a decrease in outlet pressure tends to open control (**5**). This causes main valve cover pressure to vary and the main valve modulates (opens and closes) maintaining a relatively constant pressure at its outlet.

Pressure reducing control (5) adjustment: Turn the adjusting screw clockwise to increase the setting.

1.2 PRESSURE SUSTAINING FEATURE

Pressure relief control CRL (**6B**) is a "normally closed" control that senses main valve inlet pressure changes. Control (**6B**) is open if inlet pressure is higher than the set point of control (**6B**). This places pressure reducing control (**4**) in commande of the main valve (**1**). If inlet pressure lowers to the set point of control (**6B**), control (**6B**) closes. This pressurizes the main valve cover and the main valve (**1**) closes, sustaining the desired minimum pressure at the main valve inlet.

Pressure relief control (6B) adjustment: Turn the adjusting screw clockwise to increase the setting.

1.3 SURGE CONTROL FEATURE

Pressure relief control CRL (**6A**) is normally closed control that reacts to pressure changes sensed downstream. When downstream pressure increases to the set point of control (**6A**), this last one opens and directs inlet pressure into the main valve cover, which closes the main valve (**1**) until normal downstream pressure is resored. Then the pressure surge control (**6A**) closes.

Pressure surge control (6A) adjustment: Turn the adjusting screw clockwise to increase the setting.

1.4 OPENING SPEED CONTROL

Flow control CV (**4**) regulates the opening speed of the main valve (**1**).

Flow control (4) adjustment: Turn the adjusting screw clockwise to make the main valve (**1**) open more slowly.

1.5 (E*) EUROPEAN STANDARDS

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

The isolation ball valves RB-117 (**2**) are used to isolate the pilot system from main line pressure. These isolation ball valves must be open during normal operation.

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

The strainer X44-A (**3**) is installed in the pilot supply line to protect the pilot system from foreign particles. The strainer screen must be cleaned periodically.

1.6 OPTIONAL FEATURES

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

Flow control CV (**C**) regulates the closing speed of main valve (**1**).

Flow control (C) adjustment: Turn the adjusting screw clockwise to make the valve close more slowly.

1.7 ▸ 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.
- ☐ Robinets de barrage (**2**) ouverts.
- ☐ Periodic cleaning of the strainer screen (**3**) is recommended.
- ☐ Flow control valve (**4**) and/or [optional feature (**C**)] open at least 1 turn.