



### STANDARD EQUIPMENT

No	Description	Qty	Type
1	MAIN VALVE HYTROL AE/GE/NGE	1	100-01
2	ORIFICE PLATE ASSEMBLY	1	X52-A
3	ISOLATION BALL VALVE	3	RB-117
4	STRAINER WITH INCORPORATED ORIFICE	1	X44-A
5	NEEDLE VALVE	1	6120
6	DIFFERENTIAL PRESSURE CONTROL	1	CDHS-18

### OPTIONAL FEATURES

No	Description	Qty	Type
O	NYLON PIPE Ø 6/3 mm	1	-
P	2-WAY PRESSURE COCK (Rp 3/8")	2	RB-117

### NOTES

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

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

Orifice plate assembly X52-A (2) may be fixed directly to the main valve outlet flange, however, better control is obtained, if it is mounted according to the following recommendation : distance X = 5x pipe diameter, distance Y = 3x pipe diameter.



### ▶ Operating data

#### 1.1 ▶ RATE OF FLOW FEATURE

Differential pressure control (6) is "normally open" and responds to differential pressure changes sensed across orifice plate assembly (2). An increase in differential pressure tends to close control (6) and a decrease in differential pressure tends to open control (6). This causes the main valve cover pressure to vary and the main valve to modulate (opens and closes) maintaining a relatively constant rate of flow.

**Differential pressure control (6) adjustment:** Turn the adjusting screw clockwise to increase the rate of flow.

#### 1.2 ▶ CLOSING / OPENING SPEED CONTROL

A calibrated orifice within the strainer (4) and needle valve (5) control the closing speed of the main valve (1). Needle valve (5) controls the opening speed of the main valve (1).

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

**Note:** Do not close needle valve (5) completely otherwise 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 low speed closing of main valve (1) are required by the operating conditions, it may be necessary to replace the original orifice plug of strainer (4) by **a smaller one**.

#### 1.3 ▶ (E\*) EUROPEAN STANDARDS

ITEM (3) - Isolation ball valve:

The cocks are used to isolate the pilot system from main line pressure. These cocks must be open during normal operation.

ITEM (4) - 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 (O) - Nylon tube:

The nylon tube Ø 6 / 3mm allows the connection between the differential pressure control (6) and the orifice plate (2).

Suffix (P) - 2-Way pressure cock:

These two 2-way pressure cock allow the installation of a differential pressure gauge.



# CLA-VAL 40-01

## Rate of Flow Control Valve

### 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.
- Remote control line properly connected between pilot (6) and orifice plate (2).
- Cocks (3A), (3C) and (3D) open.
- Periodic cleaning of strainer (4) is recommended.
- Needle valve (5) open from ½ to 1 turn.