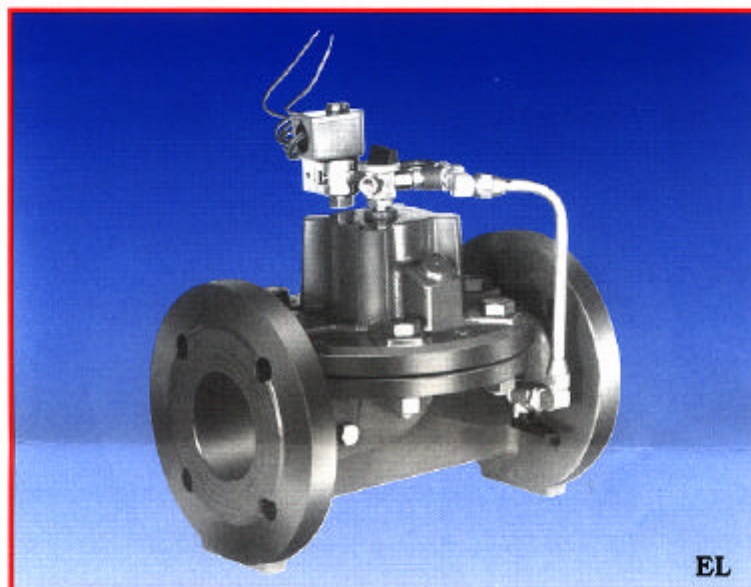


ELECTROVÁLVULA HIDRAULICA MOD. EL**CONTROL VALVES****ELECTRIC VALVE
MODEL EL****DESCRIPTION**

"EL" valves are direct-sealing, diaphragm valves, activated by line pressure and controlled by a 3-Way solenoid valve.

The valve opens on electric command (normally-closed, standard feature) or closes on electric command (normally open).

Large size valves (8" and up) are not controlled by the solenoid directly but by a 3-Way, wide passage Relay.

This ensures fast response and clog-free operation. On opening, the pressure from the control chamber can be released to the atmosphere (standard feature) or to the downstream.

Manual activation of the valve is a standard feature. A self-cleaning filter for the activation water is an integral part of the valve.

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RUA DOS SELÕES

CONDOMÍNIO TERRUGEM PARK II, ARMAZÉM B1

Vila Verde

2706-501 TERRUGEM SNT - PORTUGAL

TELF.: 351 21 9605700 (BUSCA AUT.) FAX.: 351 21 9605709

OPERATION PRINCIPLE

(NORMALLY- CLOSED VALVE)

1. The solenoid (1) is de-energized and the 3-Way valve (2) is on "Auto" position: upstream pressure is exerted on the control chamber through the solenoid N.O. passage and the 3-Way valve. The main valve is closed.

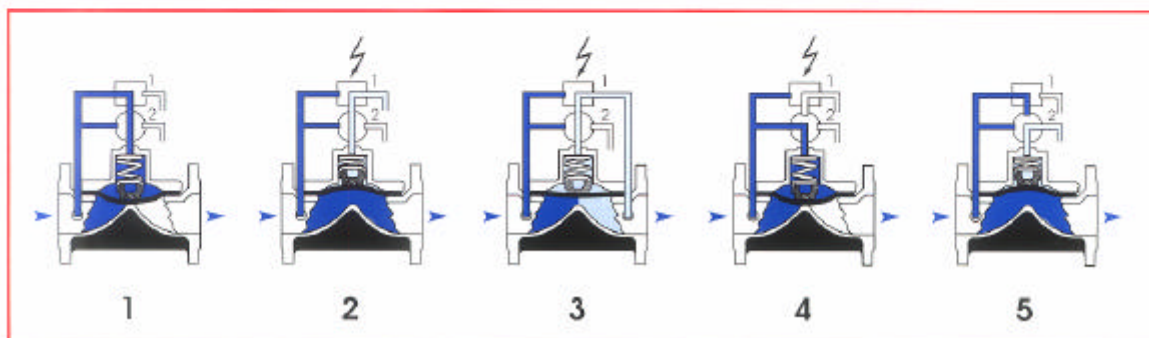
2. The solenoid is energized and the 3-Way valve is on "Auto" position: pressure from the control valve is exhausted through the control devices to the atmosphere. The main valve is now fully open.

3. The solenoid (1) is energized and the 3-Way valve (2) is on "Auto" position: pressure from the control chamber is vented through both control devices into

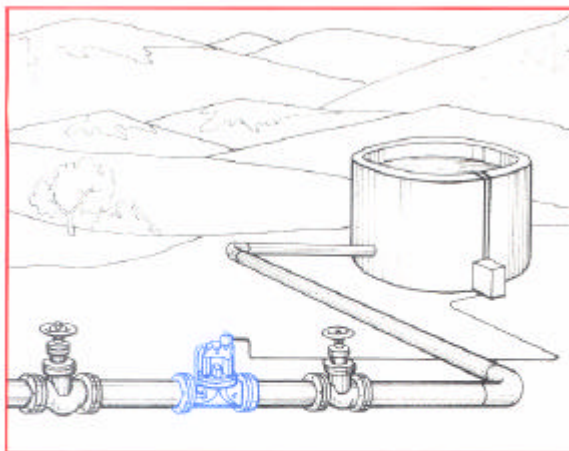
the downstream. The main valve is not fully open, since downstream pressure exists in the control chamber. This structure is non-standard and should be specified on order.

4. Manual override: the solenoid is energized, but the 3-Way valve (2) is in "close" position. Upstream pressure is exerted to the control chamber and the main valve is closed.

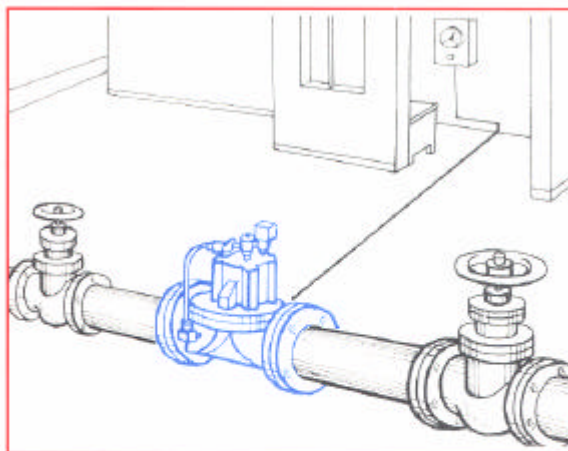
5. The solenoid (1) is de-energized, but the 3-Way valve (2) is in "open" position. The control chamber is vented and the main valve is fully open.



TYPICAL APPLICATION



"EL" VALVE CONTROLLED BY ELECTRIC FLOAT SWITCH



"EL" VALVE CONTROLLED BY A TIMER

DESIGN CONSIDERATIONS

- ▶ Electric Valves can be "normally- closed" (opening on electric command) or "normally-open" (closing on electric command). The term refers to the position of the main valve and not to the solenoid's characteristics.
- ▶ Solenoids should be selected according to the operating pressure and the control media (water or air).

Consult the factory or your local agent for advice on solenoid selection.

- ▶ The use of an accelerator relay (model 66-200) is recommended when fast response is required, or if the controlled liquid could cause clogging of the solenoids.

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BASIC MODELS

DOTS INDICATE AVAILABLE SIZES IN EACH MODEL

MODEL	44	45	47	53	*67	77	82	87	91	*94
PATTERN										
CONNECTION	THREADED	THREADED	FLANGED	VICTAULIC	FLANGED	FLANGED	FLANGED	FLANGED	THREADED	THREADED
MATERIAL	CAST IRON	BRONZE	CAST IRON	CAST IRON	DUCTILE IRON	DUCTILE IRON	CAST IRON	BRONZE	BRONZE	DUCTILE IRON
AVAILABLE SIZES	mm	Inch								
	20	3/4								
	25	1								
	32	1 1/4								
	40	1 1/2								
	50	2								
	65	2 1/2								
	80	3 1/4								
	100	4								
	150	6								
	200	8								
	250	10								
	300	12								
	400	16								

* HIGH PRESSURE MODELS (PN 25)

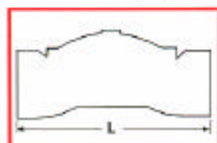
SPECIFICATIONS

End Connection	Flanges Threads	ISO, JIS, ANSI, BS ISO, ANSI
Pressure Rating	High pressure models 67, 94 Medium pressure models	250 m / 350 psi 160 m / 230 psi
Temp. Range		0-80°C / 32-112°F
MATERIALS	BODY AND BONNET Cast Iron Ductile Iron Cast Bronze	ISO 185 Grade 200 / 250 ISO 1083 Grade 450-10 / 500-7 BS 1400 LG2
	DIAPHRAGMS Natural Rubber (NR) (standard) Synthetic Rubbers	Polyisoprene (NR) NBR, EPDM
	SPRING SST	302
	PILOT VALVES Brass Cast Bronze Plastics	ISO 426 BS 1400 LG2 Glass-Reinforced Polyamide
	COATING Electrostatically applied, oven baked Polyester	

NON-STANDARD SPECIFICATIONS AVAILABLE ON REQUEST

FACE-TO-FACE DIMENSIONS (mm)

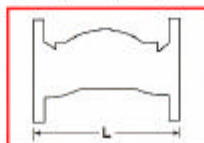
SIZE	mm	20	25	40	50	65	80	80	100	150	200	200	250	300	400
	Inch	3/4	1	1 1/4	2	2 1/2	3 1/4	3	4	6	8 1/4	8	10	12	16
MODEL	44, 45	112	116	150	180	212	215	213							
	53			177	190	286	317	392							
	47, 77, 87				200		200	285	302	390	385	460	535	580	
	67				228		310	310	356	436		530	636		755
	82, 91			75	90		114	174							
	94				251										



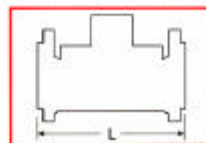
MODELS 44, 45, 94



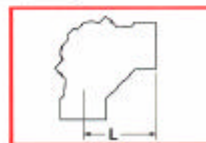
MODEL 53



MODELS 47, 77, 87



MODEL 67



MODELS 82, 91

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RUA DOS SELÕES

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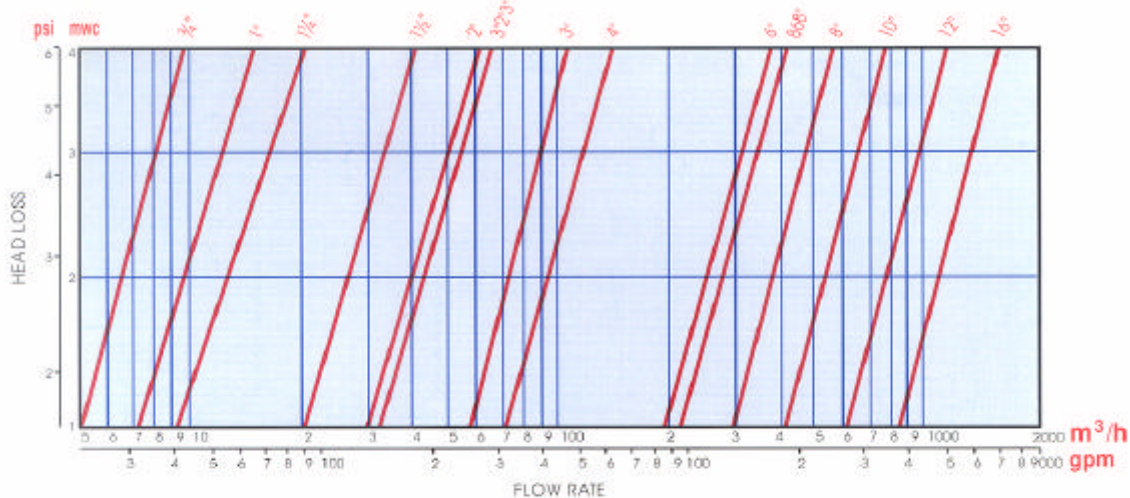
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HEAD LOSS CHART

FULLY-OPEN VALVES



SIZE SELECTION GUIDE

RECOMMENDED FLOW RATES

SIZE		m ³ /h	Gpm	SIZE		m ³ /h	Gpm
DN20	3/8"	5	22	DN100	4"	130	560
DN25	1"	8	35	DN150	6"	290	1260
DN40	1 1/2"	13	57	DN200 LF	8 1/2"	350	1540
DN50	2"	32	140	DN200	8"	510	2240
DN65	2 1/2"	53	240	DN250	10"	800	3500
DN80 LF	3 1/2"	60	270	DN300	12"	1150	5000
DN80	3"	80	360	DN400	16"	2000	9000

PURCHASE SPECIFICATIONS

The valve will be hydraulically (or pneumatically) activated and will be controlled by an electric solenoid. The valve will open (or close) on electric current command, and close (or open) when the command stops. A 3-Way selector valve will allow manual overriding of the solenoid control on both "close" and "open" commands. The main valve will include a self flushing filter for the activating water. The main valve will be of the direct-sealing, flexible diaphragm type which allows in-line maintenance by local technicians. No stem, shaft or guiding bearings will be located within the valve's liquid passage. The valve will be the DOROT model "EL" or similar in all aspects.

PRE-ORDER CHECK LIST

Operation pressure: Max. Min.
 Flow-rate: Max. Normal
 Allowed pressure loss
 Electric data: Voltage Frequency
 Power limitations (VA)
 Special protection: flammable surrounding,
 spilled water, etc.
 Copy, fill and send to the factory or local agent.

ON ORDER PLEASE SPECIFY:

Example: 77 C 2 ANSI CLASS 250 EL 110VAC 60Hz

MODEL ←
 Non Standard Bonnet (L, C, T) ←
 Size in Inches (2"-16") ←
 End Connections (ISO PN..., ANSI Class..., etc.) ←
 Control Function (EL) ←
 Other Instructions-Non Standard Features (Body Materials -Steel/SST), (Coating-Epoxy/Enamel/ECTFE/Rubber etc.) (Diaphragm-Nitrile/EPDM), (Voltage) ←