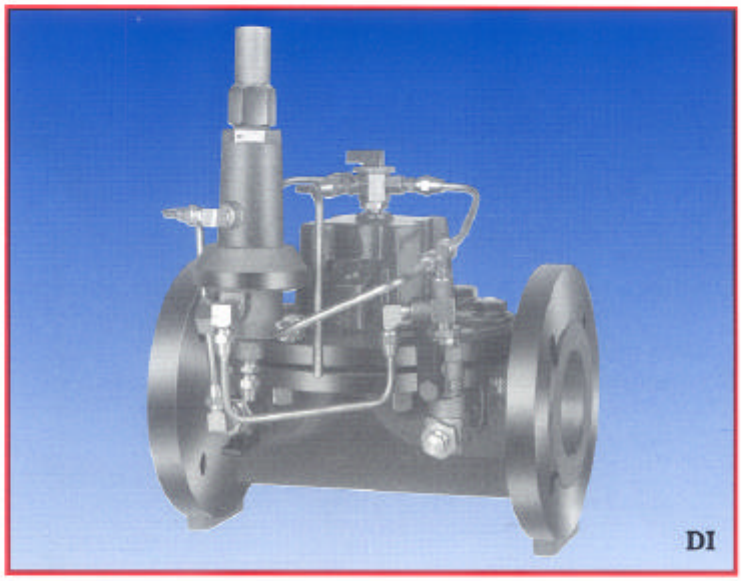
VÁLVULAS DE CONTROL DE PRESSÃO DIFERENCIAL

CONTROL VALVES

DIFFERENTIAL PRESSURE SUSTAINING VALVE MODEL DI



DESCRIPTION

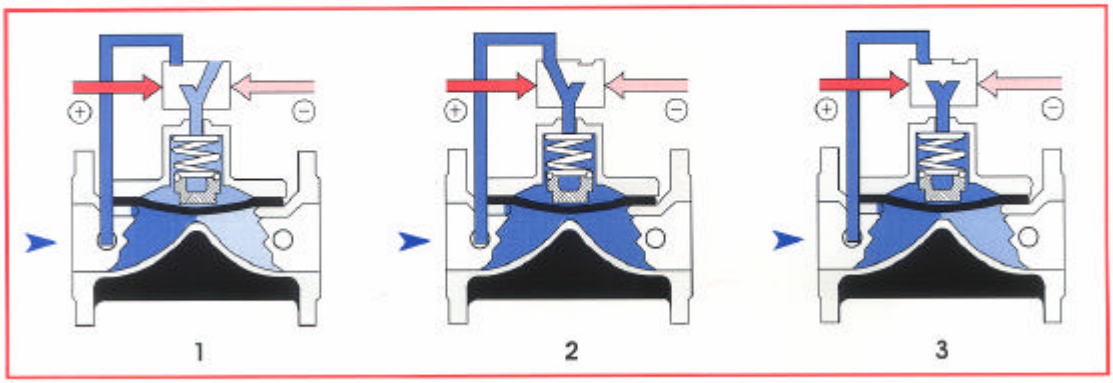
"DI" valve is a direct-sealing, flexible diaphragm valve, activated automatically by a 3-Way, diaphragm operated pilot valve.
The valve modulates to maintain the pre-set difference in pressure between the high and low pressure areas, regardless of the absolute pressure of the areas.
It closes when the differential is too low and opens when the differential is too high.

The activating pilot valve senses the pressure levels of both areas simultaneously, and controls the main valve's position to give accurate retention of the preset level.
The sensing points may be on the valve itself or at any other location that suits the control requirements.
Manual over-ride of the automatic control and a self-flushing filter for the activating water are integral components of the assembly.

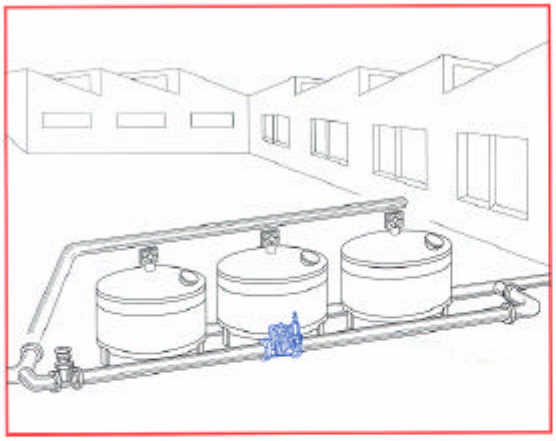
ecoterme – Equipamentos e Instalações Térmicas, Lda.
RUA DOS SELÕES
CONDOMINIO TERRUGEM PARK II, ARMAZÉM B1
Vila Verde
2706-501 TERRUGEM SNT - PORTUGAL
TELF.: 351 21 9605700 (BUSCA AUT.) **FAX.: 351 21 9605709**

OPERATION PRINCIPLE

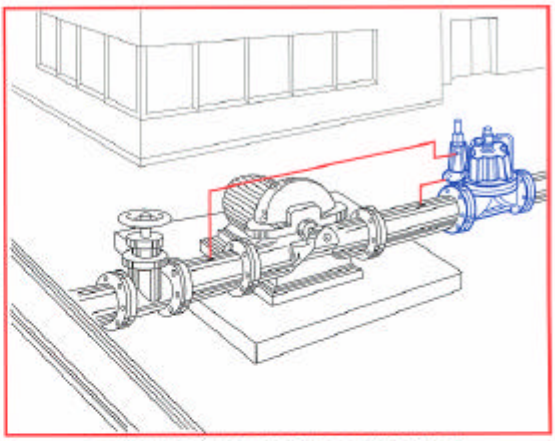
1. Pressure differential too high: the high pressure sensor (+) overcomes the low pressure sensor (-). The pilot allows venting of the main valve control chamber, and the valve opens, reducing the differential.
2. Pressure differential too low: the low pressure sensor (-) overcomes the high pressure sensor (+). The pilot allows water from the upstream to enter the control chamber, forcing the valve to close and increasing the pressure differential.
3. Both areas at required pressure differential: the pilot closes all passages, locking the valve into its present position.



TYPICAL APPLICATION



"DI" VALVE ON A BYPASS OF A FILTRATION BATTERY, ENSURES CONTINUOUS FLOW IF FILTERS CLOG.



"DI" VALVE CONTROLS THE FLOW RATE OF A BOOSTER PUMP WHOSE SUCTION PRESSURE VARIES.

DESIGN CONSIDERATIONS

- The valve should be sized according to the maximum possible flow-rate that it will be required to handle. Consideration must be given to the pump performance curve and to the lowest network demand for a "by pass" valve configuration.
- A very high pressure differential may cause cavitation damage. Bronze valves must be used if the differential is to exceed 1:3 ratio. Do not exceed 1:5 ratio.
- The connection points of the sensing tubes must be selected carefully. They must be in good, representative locations in both the high and low pressure areas.

ecoterme – Equipamentos e Instalações Térmicas, Lda.
RUA DOS SELÕES
CONDOMINIO TERRUGEM PARK II, ARMAZÉM B1
Vila Verde
2706-501 TERRUGEM SNT - PORTUGAL
TELF.: 351 21 9605700 (BUSCA AUT.) **FAX.: 351 21 9605709**

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	¾		●							
	25	1		●							
	32	1 ¼								●	
	40	1 ½	●	●		●				●	
	50	2	●	●	●	●	●	●		●	●
	65	2 ½	●	●							
	80	323	●	●		●				●	
	80	3	●	●	●	●	●	●	●	●	
	100	4			●	●	●		●		
	150	6			●	●	●		●		
	200	868			●		●				
	200	8			●	●	●		●		
	250	10			●	●	●		●		
	300	12			●		●		●		
	400	16				●					

* HIGH PRESSURE MODELS (PN 25)

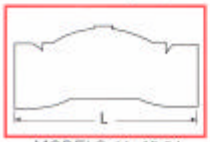
SPECIFICATIONS

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	

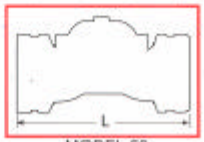
NON-STANDARD SPECIFICATIONS AVAILABLE ON REQUEST

FACE-TO-FACE DIMENSIONS (mm)

SIZE	mm	20	25	40	50	65	80	80	100	150	200	200	250	300	400
	inch	¾	1	1½	2	2½	323	3	4	6	868	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	356	436		530	636		755
	82, 91			75	90		114	174							
	94				251										

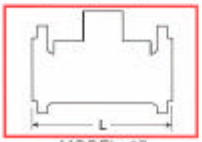


MODELS 44, 45,94

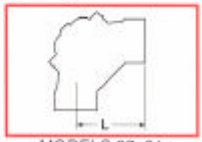


MODEL 53

MODELS 47, 77, 87



MODEL 67

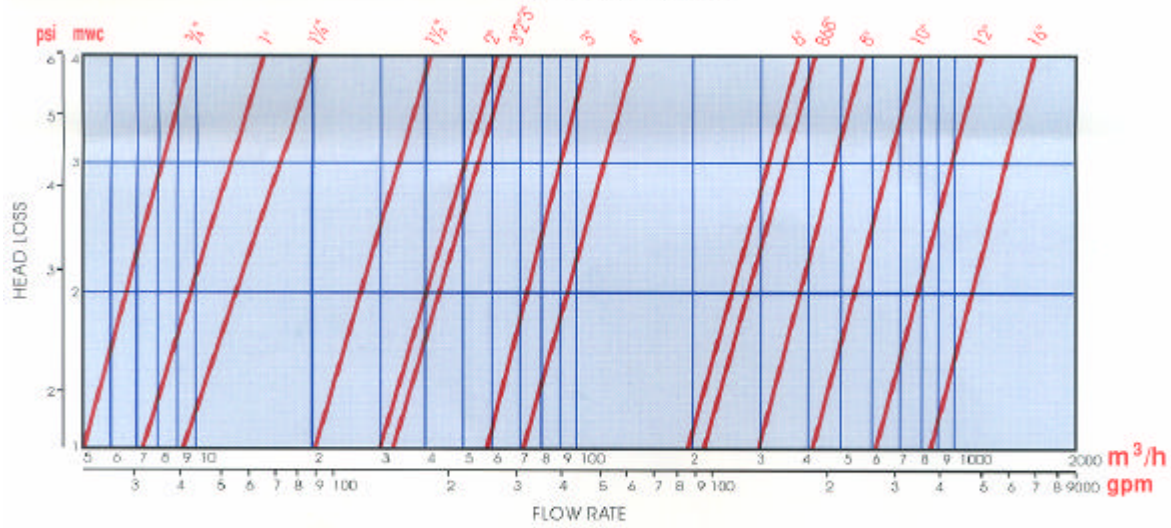


MODELS 82, 91

ecoterme – Equipamentos e Instalações Térmicas, Lda.
RUA DOS SELÕES
CONDOMINIO TERRUGEM PARK II, ARMAZÉM B1
Vila Verde
2706-501 TERRUGEM SNT - PORTUGAL
TELF.: 351 21 9605700 (BUSCA AUT.) **FAX.: 351 21 9605709**

HEAD LOSS CHART

FULLY-OPEN VALVES



SIZE SELECTION GUIDE

RECOMMENDED FLOW RATES

SIZE		m³/h	Gpm	SIZE		m³/h	Gpm
DN20	¾	5	22	DN100	4	130	560
DN25	1	8	35	DN150	6	290	1260
DN40	1½	13	57	DN200 LF	868	350	1540
DN50	2	32	140	DN200	8	510	2240
DN65	2½	53	240	DN250	10	800	3500
DN80 LF	323	60	270	DN300	12	1150	5000
DN80	3	80	360	DN400	16	2000	9000

PURCHASE SPECIFICATIONS

The valve will maintain a constant pressure differential at the required level between the high and low pressure areas, regardless of absolute pressure variations. It will be controlled by an adjustable, differential 3-Way pilot valve. The main valve will be of the direct-sealing, flexible diaphragm type, allowing in-line maintenance by local technicians. No shaft, stem, seal and guiding bearing will be located within the liquid passage. The valve will be the model "DI", or similar in all aspects.

PRE-ORDER CHECK LIST

High Pressure: Max..... Min. .....

Required Pressure Differential: .....

Flow-Rate: Max..... Min. .....

Copy, fill and send to the factory or local agent.

ON ORDER PLEASE SPECIFY:

Example: 77 C - 3" - ISO PN 16 - DI - EPOXY

- Model
- Non-standard bonnet (I.C.T)
- Size in Inches (¾"-16")
- End Connections (ISO PN ....., ANSI class... etc.)
- Control Function (DI)
- Special Instructions/Non-Standard Features (Body Material, Coatings, Diaphragms, etc.)

ecoterme – Equipamentos e Instalações Térmicas, Lda.
RUA DOS SELÕES
CONDOMINIO TERRUGEM PARK II, ARMAZÉM B1
Vila Verde
2706-501 TERRUGEM SNT - PORTUGAL
TELF.: 351 21 9605700 (BUSCA AUT.) **FAX.: 351 21 9605709**