

# CATALOGUE



# INTRODUCTION

DOROT AUTOMATIC CONTROL VALVES is pleased to present the latest edition of their catalogue.

This new catalogue includes new models as well as modifications of previous products.

The updated information in this edition invalidates the data of the previous edition. This catalogue does not replace other technical publications such as the design manual which is available from DOROT. We are confident that you will be able to use this catalogue as a convenient guide for choosing among the wide range of DOROT products.

## The aims of the catalogue are:

- 1 To enable the user to easily select the valve model which best suits his/her requirements, being fully aware of the hydraulic conditions of his/her network and the required performance of the control valves.
- 2 To create a "common language" between the customer and the factory in order to avoid confusion caused by the wide range of products, structural versions, control modes, materials etc.

The catalogue is divided into sections, each one dedicated to a group of products. The information included in each section is the essential data required for designs and valve selections, made by consulting engineers, dealers, and users of water control networks.

## Sections A,B,C,D and E include:

- 1 A **general description** of the specific group of valves, with pictures of the various models.
- 2 The **hydraulic characteristics** of the valves in each section.
- 3 A **model selection table**, listing all the standard models and sizes available in the group.  
*Note that although production in DOROT is according to the metric system, the valve size code is in imperial (inches) dimensions and the relevant metric dimensions are also included.*
- 4 A schematic diagram featuring all the various components of the valve (including optional units). All the components are numbered, to facilitate the ordering of spare parts, or the valve's conversion into an optional version.
- 5 An **"ordering guide"** which explains how to specify the chosen model.

- The **control functions** are listed in section F. Basic explanations of each function, a list of valve models which may perform the specified function, and the pilot valve used, are found in this section.

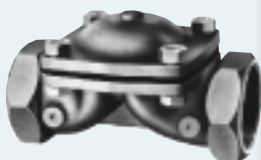
- Please note that the **standard features** of each model will be supplied with the product, *unless specified otherwise* in the confirmed order.

- The **pilot valves and accessories** are listed in section G. Information on the operating conditions and spare parts is found in this section.

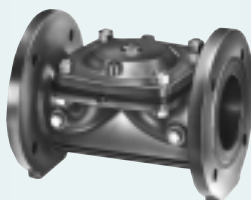
- The **"General Data"**, (section H) at the end of the catalogue, supplies details regarding conditions that are not standard, to assist the user.



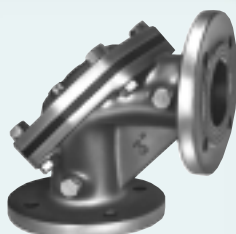
## BASIC gal<sup>®</sup> METAL VALVES



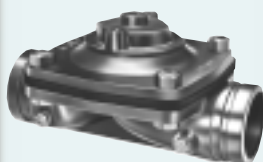
MODELS 44, 45, 94



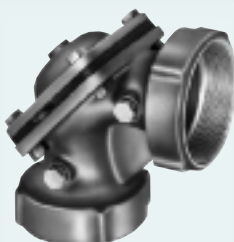
MODELS 47, 67, 77, 87



MODEL 82



MODEL 53



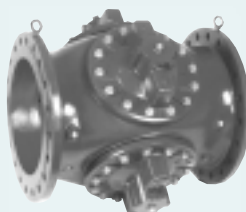
MODEL 91



MODEL 84



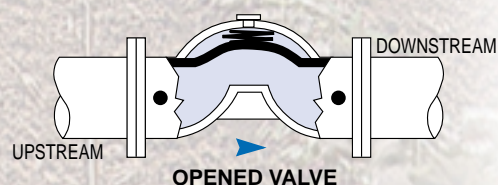
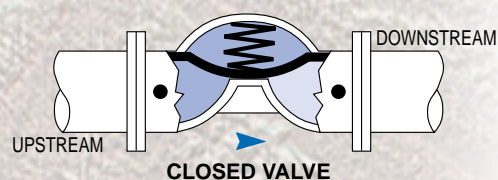
MODEL 77-16"



MODEL 77-20"

### DESCRIPTION

The direct-sealing diaphragm Valves are operated by pipeline pressure or by air pressure: (which is equal to the pipeline pressure). The reinforced rubber diaphragm seals the water passage when the line pressure reaches the valve's control chamber. Relieving the pressure from the control chamber causes the valve to open. The valve's only moving part is its diaphragm: no shaft, seals, or bearings are located within the water passage. A spring above the diaphragm ensures "valve closure" regardless of pressure level or flow conditions.

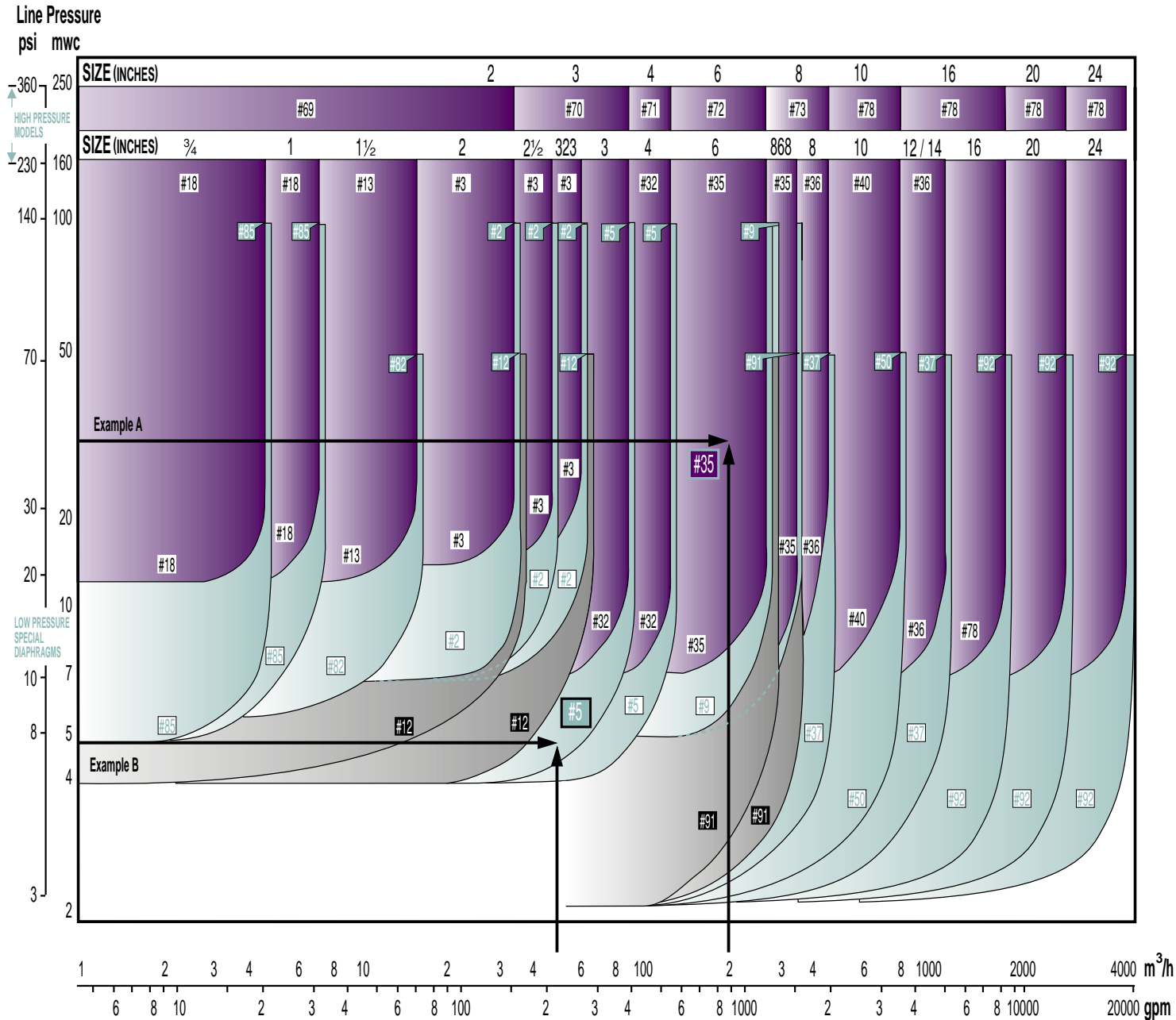


### ADVANTAGES

- Structural simplicity
- Superb hydraulic performance
- Reliable control of abrasive liquids and slurries
- Cost-efficient control and regulation for a wide range of flow rates
- Minimum maintenance-maximum dependability

## SIZE & DIAPHRAGM SELECTION GUIDE

This graph provides a guide (based on flow rate and line pressure factors) for selecting the proper valve, pressure rating, size, and diaphragm type.



LOCATE THE **FLOW RATE** ON THE HORIZONTAL AXIS AND DRAW A LINE UPWARDS.  
LOCATE THE **LINE PRESSURE** ON THE VERTICAL AXIS AND DRAW A LINE TO THE RIGHT.

The point of intersection of the two lines (see examples A+B) defines the size of the valve (horizontal white section on top). A suitable diaphragm is represented by the **BLUE** area (standard diaphragm). **GREEN** and **GREY** areas represent special low-pressure diaphragms.

Serial numbers of the respective diaphragms are marked in squares on the upper and lower limit lines of each size area.












### EXAMPLE A

FLOW RATE 200 m³/h (900 gpm), LINE PRESSURE 30m (45 psi): **6" VALVE, STANDARD DIAPHRAGM.**

### EXAMPLE B

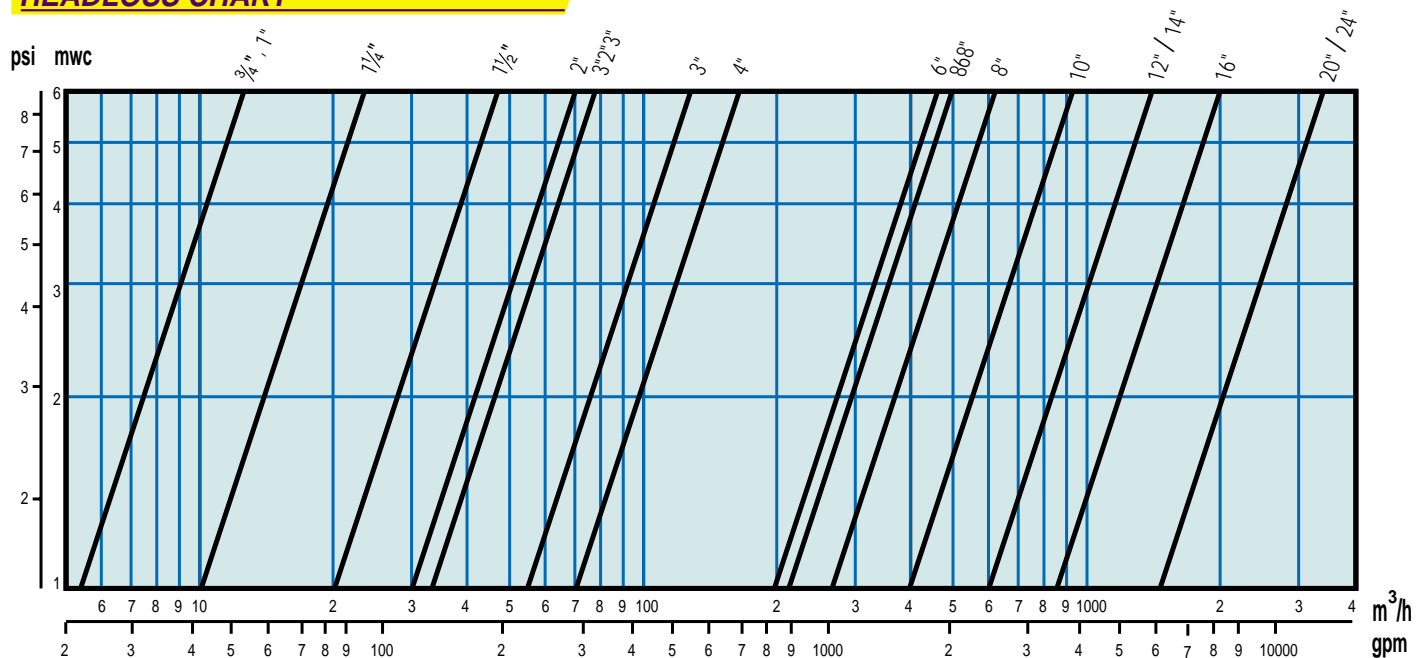
FLOW RATE 50 m³/h (220 gpm), LINE PRESSURE 5 m (8 psi): **3" VALVE, SPECIAL DIAPHRAGM NO.5.**

## MODEL SELECTION TABLE

MODEL	44	45	47	53	*67	77	82	84	87	91	*94
PATTERN											
CONNECTION	THREADED	THREADED	FLANGED	VICTAULIC	FLANGED	FLANGED	FLANGED	THREADED	FLANGED	THREADED	THREADED
MATERIAL	CAST IRON	BRONZE	CAST IRON	CAST IRON	DUCTILE IRON	DUCTILE IRON	CAST IRON	CAST IRON	BRONZE	BRONZE	DUCTILE IRON
AVAILABLE SIZES	Inch	mm									
	3/4	20									
	1	25									
	1 1/4	32									
	1 1/2	40									
	2	50									
	2 1/2	65									
	3	80									
	4	100									
	6	150									
	8	200									
	10	250									
	12	300									
	14	350									
	16	400									
	20	500									
	24	600									

\* HIGH PRESSURE MODELS (PN 25)

## HEADLOSS CHART



## FLOW FACTOR

SIZE		MODELS 44, 45, 47, 53, 77 82, 84, 87, 91		MODELS 67, 94		SIZE		MODELS 44, 45, 47, 53, 77 82, 84, 87, 91		MODELS 67, 94	
		Kv	Cv	Kv	Cv			Kv	Cv	Kv	Cv
20	¾	17	20	—	—	200 L.F.	868	670	780	—	—
25	1	17	20	—	—	200	8	800	930	800	930
32	1¼	31	36	—	—	250	10	1250	1460	1300	1520
40	1½	64	75	—	—	300	12	1900	2220	—	—
50	2	95	110	78	91	350	14	1900	2220	—	—
80 L.F.	323	100	117	—	—	400	16	2600	3030	2600	3030
80	3	170	200	120	140	500	20	4600	5370	4600	5370
100	4	220	260	200	230	600	24	4600	5370	4600	5370
150	6	600	700	550	640						

## DIMENSIONS

MODEL 44	SIZE		MM		INCH	
	Inch	mm	L	H	L	H
	1½	40	170	93	6 ⅝	3 ⅝
	2	50	188	113	7 ⅜	4 ½
	2½	65	219	118	8	4 ⅝
	323	80	225	126	8 ⅞	5
	3	80	316	130	15 ⅜	5 ⅝

MODEL 45	Inch	mm	L	H	L	H
	¾	20	112	43	4 ½	2
	1	25	119	52	4 ¾	2
	1½	40	149	86	5 ⅝	3 ⅜
	2	50	184	101	7 ¼	4
	2½	65	212	109	8 ⅜	4 ⅝
	323	80	200	116	7 ⅞	4 ½
	3	80	316	130	15 ⅜	5 ⅝

MODEL 53	1½	40	177	81	7	3 ⅝
	2	50	190	103	7 ½	4
	3	80	286	124	11 ¼	4 ⅞
	4	100	317	138	12 ½	5 ½
	6	150	392	250	15 ⅜	9 ⅞

THE FACTORY RESERVES THE RIGHT TO MODIFY SPECIFICATIONS WITHOUT PRIOR NOTICE.

## PRESSURE RATING

The pressure rating of the "gal" valves is determined by the body strength and the diaphragm type.

**Models:** 44, 45, 47, 53, 77, 82, 84, 87, 91 are rated PN16 (maximal operating pressure of 160 mwc, 230 psi).

**Models:** 67, 94 are rated PN25 (maximal operating pressure of 250 mwc, 360 psi).

In case a low-pressure diaphragm (see graph, page 2 in this catalogue) is assembled in the valve, and the specific diaphragm should not be used at the standard pressure limits, the valve will be rated and its tag marked according to the diaphragm operating pressure limitation.

Valve Connection Standard is marked on the tag. The user should consider the pressure rating of the specified standard while designing and operating the valve.

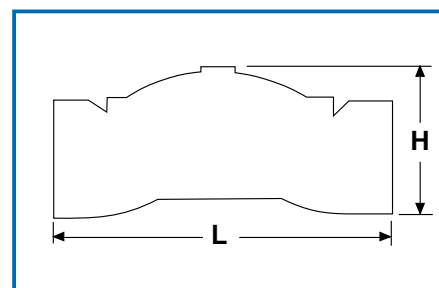
## SPECIFICATIONS

### MATERIALS

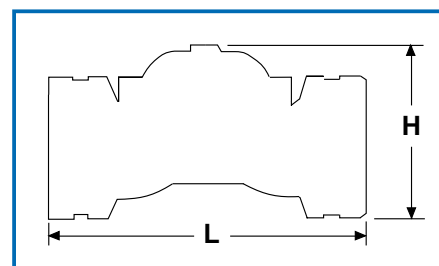
BODY AND BONNET --- CAST IRON, CAST BRONZE, DUCTILE IRON  
DIAPHRAGM ----- NATURAL RUBBER, OTHERS ON REQUEST  
SPRING ----- SST 302  
SPRING SEAT ----- BRASS  
NUTS AND BOLTS ----- COATED STEEL  
COATING ----- POLYESTER

### CONNECTIONS

FLANGES ----- ISO PN 16, PN 25  
AS 2129, BS 10 TABLE D, E  
ANSI CLASS 125, 150  
OTHERS ON REQUEST  
THREADS ----- FEMALE ISO (BSP)  
ANSI (NPT)  
CONTROL BORES --- ⅛", ¼", ½" NPT

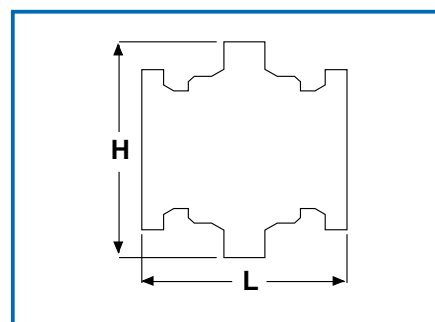


MODELS 44, 45, 94



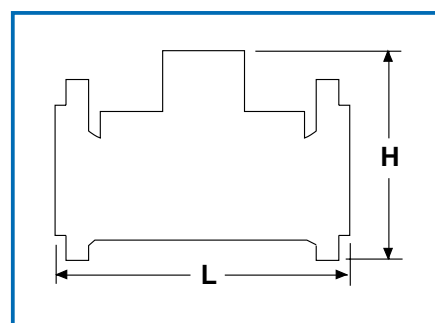
MODEL 53

MODEL	SIZE		MM		INCH	
	Inch	mm	L	H	L	H
<b>MODELS 47, 77, 87</b>	2	50	203	169	8	6 <sup>5</sup> / <sub>8</sub>
	2 ½	65	214	188	8 ½	7 <sup>3</sup> / <sub>8</sub>
	323	80	200	202	7 <sup>7</sup> / <sub>8</sub>	8
	3	80	285	203	11 ¼	8
	4	100	307	232	12 ½	9 ½
	6	150	390	360	15 ¾	14 ¼
	868	200	389	352	12 ½	13 <sup>7</sup> / <sub>8</sub>
	8	200	462	381	18 ¼	15
	10	250	540	458	21 ¼	18 ½
	12	300	587	495	23 ½	19 ½
	14	350	580	495	22 <sup>7</sup> / <sub>8</sub>	19 ½
	16	400	755	830	29 ¾	32 <sup>3</sup> / <sub>8</sub>
	20	500	900	970	36	38 <sup>3</sup> / <sub>4</sub>
	24	600	900	970	36	38 <sup>3</sup> / <sub>4</sub>



MODELS 67, 77-12" TO 24"

<b>MODEL 67</b>	2	50	233	175	9 ¼	6 <sup>7</sup> / <sub>8</sub>
	3	80	310	237	12 ¼	9 <sup>3</sup> / <sub>8</sub>
	4	100	356	265	14	10 ½
	6	150	436	378	17 ½	14 <sup>7</sup> / <sub>8</sub>
	8	200	530	481	20 <sup>7</sup> / <sub>8</sub>	19
	10	250	636	546	25	21 ½
	16	400	755	830	29 ¾	32 <sup>5</sup> / <sub>8</sub>
	20	500	900	970	36	38 <sup>3</sup> / <sub>4</sub>
	24	600	900	970	36	38 <sup>3</sup> / <sub>4</sub>

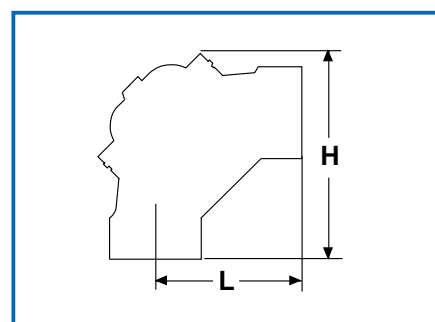


MODEL 47, 67, 77, 87

<b>MODELS 82, 91</b>	1	32	73	110	2 <sup>7</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>8</sub>
	1 ½	40	73	110	2 <sup>7</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>8</sub>
	2	50	93	131	3 ¾	5 ¼
	323	80	116	165	4 <sup>5</sup> / <sub>8</sub>	6 ½
	3	80	177	278	7	11
	4	100	183	293	7 ½	11 ½
	6	150	230	380	9 ½	15

<b>MODEL 84</b>	3	80	145	239	6 <sup>7</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>
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<b>MODEL 94</b>	2	50	251	121	9 <sup>7</sup> / <sub>8</sub>	4 ¾
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MODELS 82, 84, 91

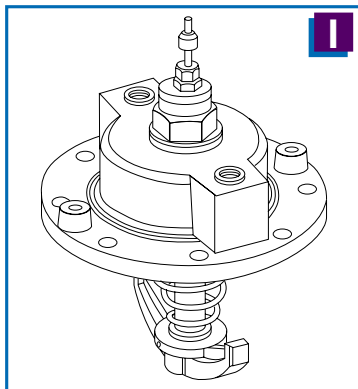
THE FACTORY RESERVES THE RIGHT TO MODIFY SPECIFICATIONS WITHOUT PRIOR NOTICE.

The standard valve can be converted into a special model by replacing the standard bonnet with one of the special kits described below.

A standard body and diaphragm are used in the optional valves.

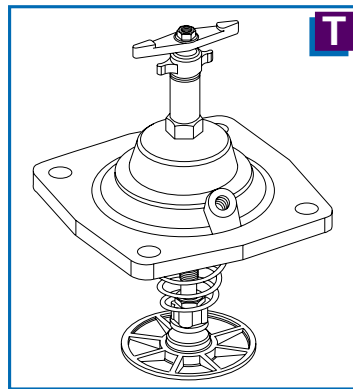
The conversion can be carried out on site, or supplied as a "special bonnet" model by the factory.

The code letter for each special bonnet model is indicated below (I, T.)



#### POSITION INDICATING BONNET

Offers visual and electric indication of the valve's position.  
Available in sizes 2" - 24".



#### THROTTLING BONNET

For the reduction of pressure and flow rates.  
Available in sizes 2" - 4", on all models.

### COMPONENTS

Please specify **model code** and **size** when ordering spare parts. Example: **Part no. 6 for 53-2**

1 LONG BOLT

2 SHORT BOLT \*

3 LIFTING HOOK \*

4 BONNET

5 SPRING

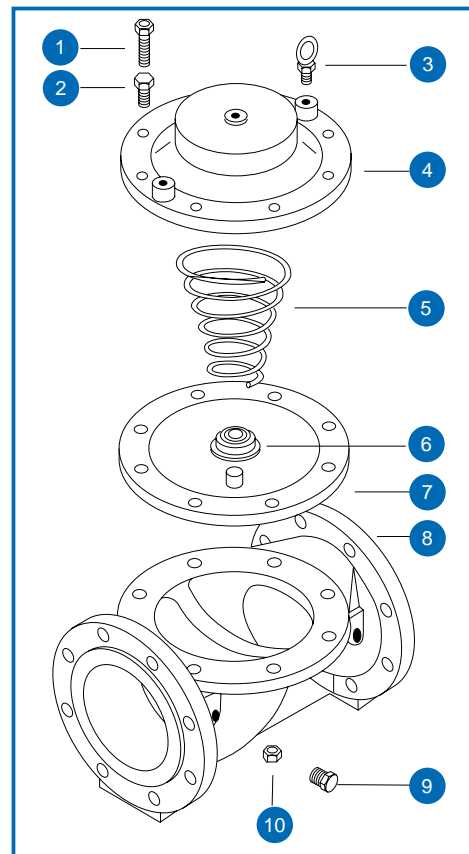
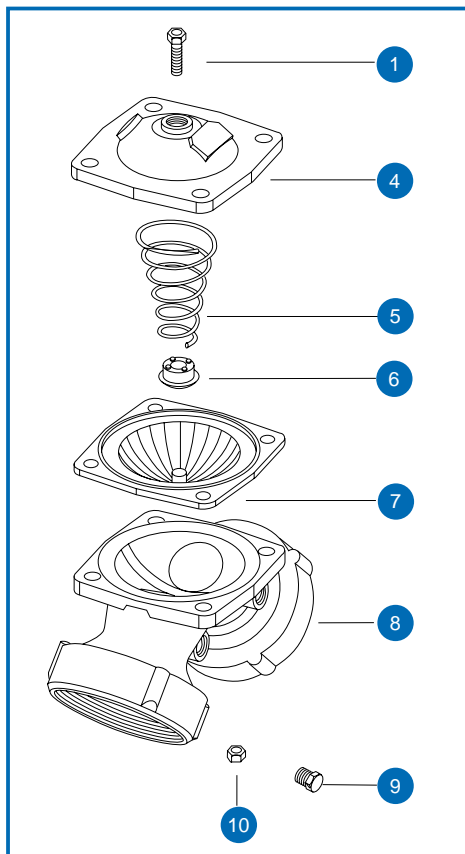
6 SPRING SEAT

7 DIAPHRAGM

8 BODY

9 PLUG

10 NUT



\* SIZES 6" - 24"



## ORDERING GUIDE

**Example:** Selected is a 6" valve, flanged, cast iron, with position indicator and special low-pressure diaphragm. Connection standard is BS10 table D.

### SPECIFY:

47 I - 6 - BS 10/D - DIAP.NO.9

#### MODEL

(SEE PAGE 3) 44, 45, 47, 53, 67, 77, 82, 84, 87, 91, 94

#### SPECIAL BONNET

(IF REQUIRED)



THROTTLING BONNET



POSITION INDICATING BONNET

#### SIZE

$\frac{3}{4}$ " - 24"

#### CONNECTION STANDARD

ISO PN16, ANSI CLASS 125, BS 10/D, OR OTHER

#### SPECIAL DIAPHRAGM (IF REQUIRED)

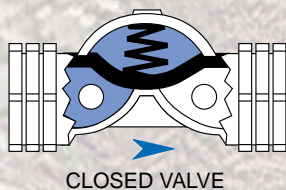
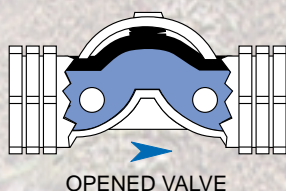
SEE GRAPH A (PAGE 2) FOR DIAPHRAGM SERIAL NUMBERS

FOR CONTROL FUNCTIONS SEE SECTION F.

## gal<sup>®</sup> PLASTIC VALVES

### DESCRIPTION

The direct-sealing diaphragm valves are operated by line pressure . The reinforced rubber diaphragm seals the water passage when line pressure reaches the valve's control chamber. Relieving the pressure from the control chamber, to the atmosphere or to downstream, causes the valve to open. The valve's only moving component is its diaphragm; no shaft, seals, or bearings are located within the water passage. The valve is made of sturdy, high-quality materials. It is produced in a number of structurally different versions (throttling, built-in solenoid operator, etc), with a wide range of control functions (manual activation, pressure control, etc).



### ADVANTAGES

- Structural simplicity
- Superb hydraulic performance
- Reliable control of corrosive liquids
- Light-weight, cost-saving
- Minimum maintenance - maximum dependability



MODEL 95



MODEL 96



MODEL 96-6



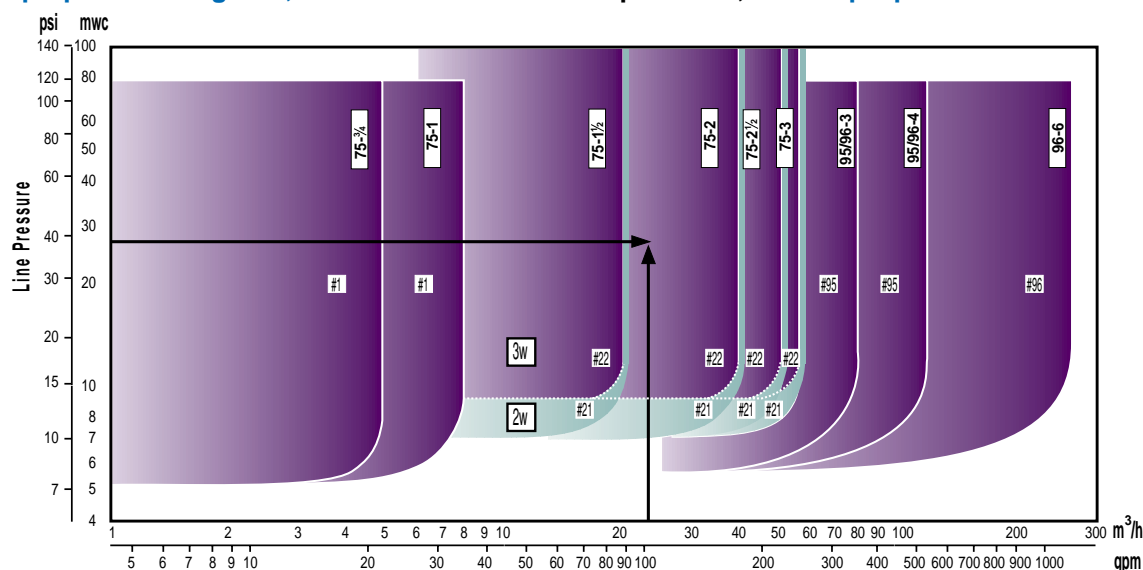
MODEL 75-1-E/D2



MODEL 75-2-T-E/D2

## SIZE SELECTION GUIDE

This graph provides a guide, based on flow rate and pressure, for the proper selection of valve size.



Locate the **flow rate** on the horizontal axis and draw a line upwards.

Locate the **line pressure** on the vertical axis and draw a line to the right.

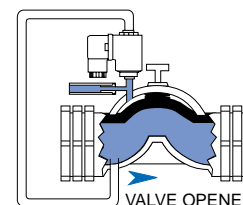
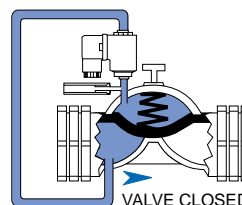
The intersection point of the two lines marks the appropriate valve size.

**Example:** line pressure 28m (40 psi), flow rate 23 m<sup>3</sup>/h (100 gpm), appropriate valve = model 75-2"

## PRINCIPLE OF OPERATION

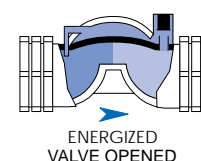
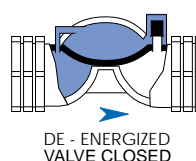
### 1 3-WAY CONTROL

This control device admits pressure into the control chamber, closing the valve, or relieves pressure to the atmosphere, fully opens the valve.



### 2 2-WAY ELECTRIC CONTROL

A solenoid operator plugs the control chamber outlet. A permanent connection from the upstream to the control chamber ensures line pressure in the chamber and thus valve closure. Energizing the solenoid operator causes the control chamber to drain to downstream, opening the valve.



## MODEL SELECTION TABLE

MODEL	75							95	96		
MATERIAL	GRP							uPVC	uPVC		
CONNECTION	TH							TH	SW		
SIZE	Inch mm	¾ 20	1 25	1½ 40	2 50	2½ 65	3 80	3 80	3 90	4 110	6 160
STRUCTURAL VERSION	CODE										
BASIC	—			●	●	●	●	●	●	●	●
THROTTLING	T			●	●	●	●				
INTEGRAL 2-WAY ELECTRIC CONTROL (DOROT SOLENOID)	E/D2	●	●	●	●	●	●				
INTEGRAL 3-WAY ELECTRIC CONTROL (GEMSOL SOLENOID)	E/B3			●	●	●	●				
THROTTLING + 2-WAY ELECTRIC CONTROL DOROT SOL.	T-E/D2	●	●	●	●	●	●				
THROTTLING + 3-WAY ELECTRIC CONTROL GEMSOL	T-E/B3			●	●	●	●				

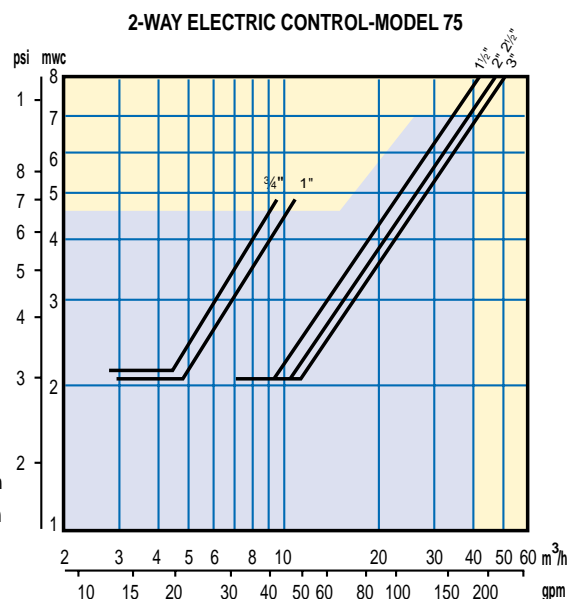
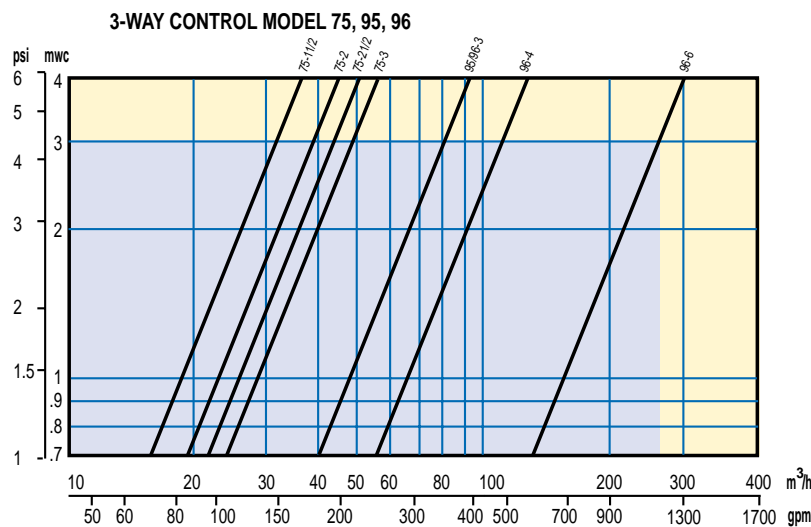
\* Non - Integral Solenoid

**ABBREVIATIONS:** ● GRP = GLASS - REINFORCED POLYAMIDE ● uPVC = UNPLASTICIZED POLYVINYL CHLORIDE ● TH = THREADED ● SW = SOLVENT WELDED

\* FOR NON-RETURN FEATURE, PLEASE ADD "N" - E/D2-N

## HEADLOSS CHART

(BLUE AREA INDICATES RECCONENDED OPERATING RANGE)



## PRESSURE RATING

MODEL 75 SIZES 3/4", 1" - 80 m (115 psi)  
 MODEL 75 SIZES 1 1/2" - 3" - 100 m (145 psi)  
 MODEL 95/96 SIZES 3", 4" - 80 m (115 psi)  
 MODEL 96 SIZE 6" - 100 m (145 psi)

## SPECIFICATIONS

### MATERIALS

VALVE: BODY ..... MODEL 75: 30% GLASS REINFORCED POLYAMIDE MODELS 95, 96: uPVC  
 BONNET ..... 30% GLASS REINFORCED POLYAMIDE  
 DIAPHRAGM ..... NATURAL RUBBER  
 SPRING ..... SST 302  
 SPRING SEAT ..... POLYAMIDE  
 NUTS AND BOLTS -- COATED STEEL OR SST 304

### SOLENOID OPERATOR:

COIL ..... POLYESTER-COATED STEEL  
 PLUNGER ..... SST  
 SEAL ..... BUNA-N OR NR

### ELECTRICAL DATA

8 WATT OPERATOR: VOLTAGE 24VAC 50HZ, OTHERS ON REQUEST  
 INRUSH CURRENT 1.1A, HOLDING 0.66A

3 WATT OPERATOR: VOLTAGE 24VAC, 50HZ/60HZ, OTHERS ON REQUEST  
 INRUSH CURRENT 0.3 A, HOLDING 0.15A

NOTE: THE STANDARD COIL IS 24 VAC, 50HZ. OTHERS ON REQUEST

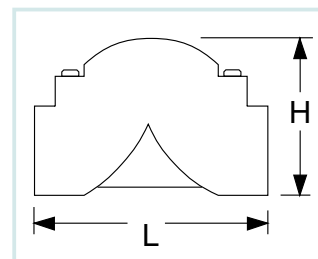
THE FACTORY RESERVES THE RIGHT TO MODIFY SPECIFICATIONS WITHOUT PRIOR NOTICE.

### CONNECTIONS

THREAD:  
 FEMALE ISO (BSP), ANSI (NPT)  
 SOLVENT WELDING:  
 BS 4346.1/ASTM D2467/AS 1477  
 ISO 727, DIN 8063.

### DIMENSIONS

MODEL	SIZE		L		H	
	Inch	mm	mm	Inch	mm	Inch
75	3/4	20	113	4 1/2	70	2 3/4
75	1	25	124	4 7/8	73	2 7/8
75	1 1/2	40	188	7 3/8	110	4 3/8
75	2	50	199	7 1/2	110	4 3/8
75	2 1/2	65	228	9	119	4 3/8
75	3	80	236	9 1/4	120	4 3/4
95/96	3	80	258	10 1/8	195	7 3/8
96	4	110	278	11	202	8
96	6	160	360	14	380	15



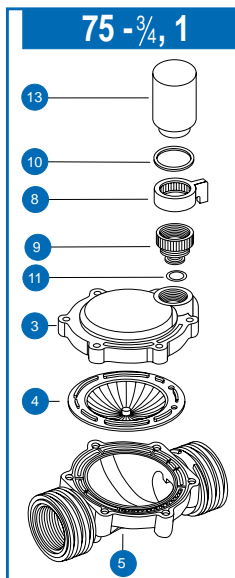
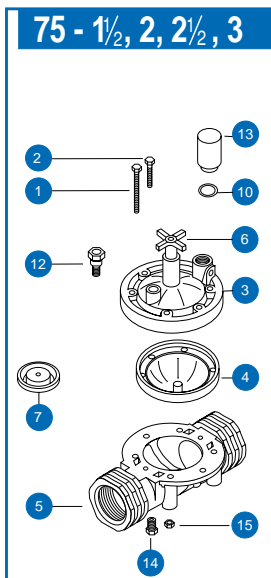


## COMPONENTS

Specify **model code** and **size** when ordering spare parts. Example: **Part no. 4** for **75 - 2 - E/D2**

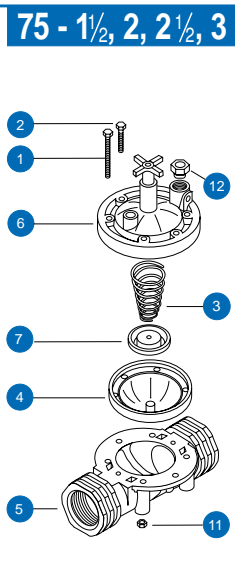
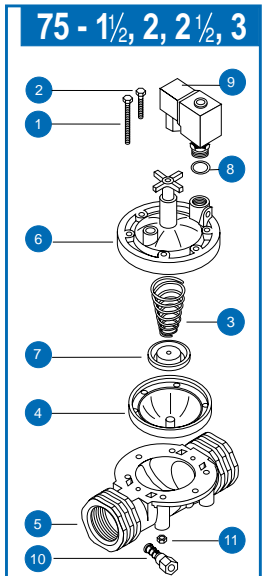
### DESCRIPTION 75-2WAY

- 1 LONG BOLT
- 2 SHORT BOLT
- 3 2-WAY BONNET
- 4 2-WAY DIAPHRAGM
- 5 BODY
- 6 2-WAY OPTIONAL THROTTLING
- 7 THROTTLING DISC
- 8 MANUAL ACTIVATION RING
- 9 ADAPTOR
- 10 O-RING
- 11 O-RING
- 12 INLET FILTER
- 13 2 Watt OPERATOR (2-WAY)
- 14 PLUG
- 15 NUT



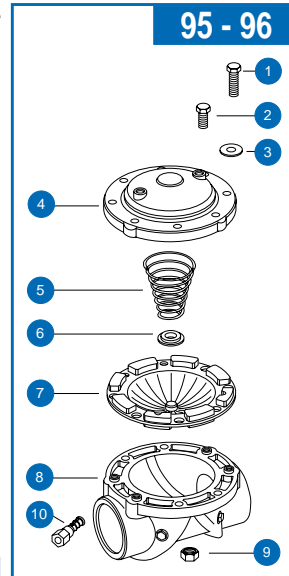
### DESCRIPTION 75-3WAY

- 1 LONG BOLT
- 2 SHORT BOLT
- 3 SPRING
- 4 3-WAY DIAPHRAGM
- 5 BODY
- 6 3-WAY OPTIONAL THROTTLING
- 7 THROTTLING DISC
- 8 O-RING
- 9 8 Watt OPERATOR (3-WAY)
- 10 FINGER FILTER
- 11 NUT
- 12 3-WAY CONTROL VALVE ADAPTOR



### DESCRIPTION 95, 96

- 1 LONG BOLT
- 2 SHORT BOLT
- 3 WASHER
- 4 BONNET
- 5 SPRING
- 6 SPRING SEAT
- 7 DIAPHRAGM
- 8 BODY
- 9 NUT
- 10 FINGER FILTER



## ORDERING GUIDE

- 1 Select valve size, using the "size selection" graph located on page 9.
- 2 Select valve model, using table on page 10.

Example: selected, is a 2" valve, made of glass-reinforced polyamide, controlled by a 2-way solenoid operator.

### SPECIFY:

- **MODEL**  
75,95,96
- **SIZE**  
1/4", 1", 1 1/2", 2", 2 1/2", 3", 4", 6"  
80mm, 90mm, 110mm, 160mm
- **CONNECTION STANDARD**  
(THREADED MODELS ONLY) NPT, BSP
- **STRUCTURAL VERSION (WHEN APPLICABLE)**  
T, E/D2, E/B3, T-E/D2, T-E/B3

75 - 2 - BSP - E/D2

FOR OTHER CONTROL FUNCTIONS REFER TO SECTION F.



## FLUSHGAL™ FILTER BACKFLUSHING CONTROL VALVES MODELS 51, 52, 57, 58, 58P

### DESCRIPTION

The selector valve, is activated by pipeline pressure. The valve can be set in one of two positions:

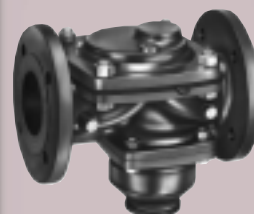
1. **Filtration Mode**-allowing flow from the inlet manifold into the filter.
2. **Flushing Mode**-closing the filter inlet and opening the flush outlet, thus causing reverse flow in the filter.

The valve is activated by a large rubber diaphragm, requiring minimum activation pressure.

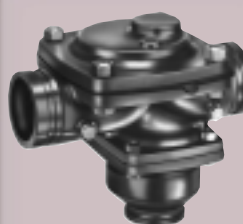
The valve can be operated automatically (using solenoid valve activation) or manually, (using a 3-way selector valve).



MODEL 51/52



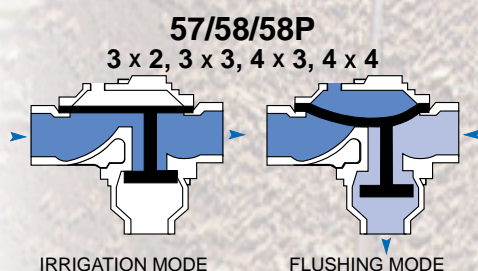
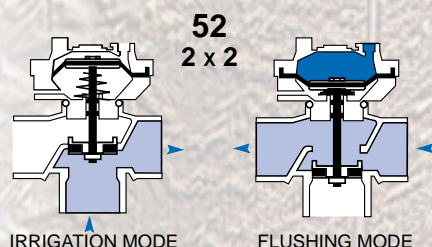
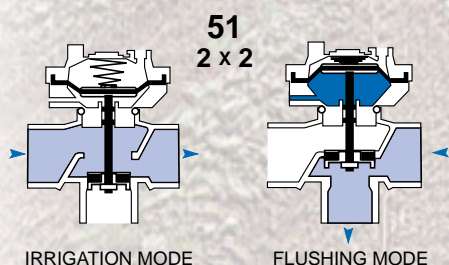
MODEL 57



MODEL 58



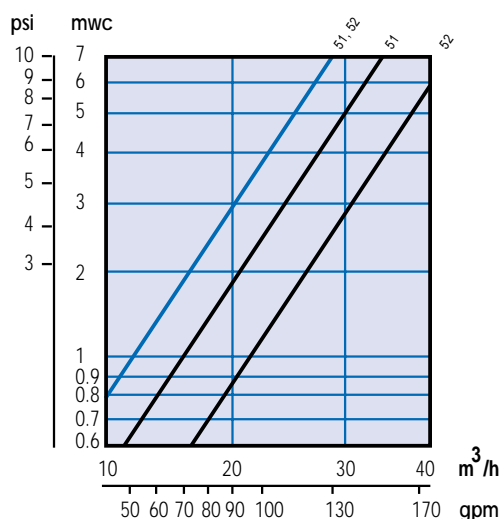
MODEL 58-P (PLASLITE)



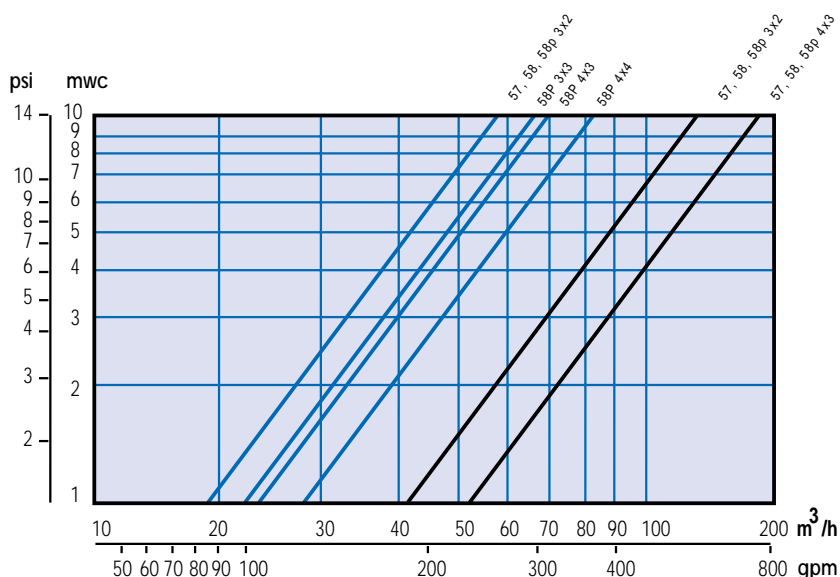
## ADVANTAGES

- Structural simplicity - Easy installation
- Superb hydraulic performance
- Frictionless position exchange
- High reliability
- Corrosion-resistant materials
- Fast alteration of flow direction

## HEADLOSS CHART



IRRIGATION MODE \_\_\_\_\_



FLUSHING MODE \_\_\_\_\_

### PRESSURE RATING

MODELS 51, 52, 57, 58 Max. 100 mwc (150 psi). Min. 7 mwc (10 psi)

MODEL 58 PLASLITE STANDARD Max. 60 mwc (90 psi). Min. 2 mwc (3 psi)

MODEL 58 PLASLITE HIGH PRESSURE Max. 80 mwc (120 psi). Min. 5 mwc (8 psi)

## SPECIFICATIONS

### MATERIALS

#### For Models 51,52,57,58

BODY	3x2, 4x3-CAST IRON	2x2 - BRASS
BONNET	3x2, 4x3-CAST IRON	2x2 - PLASTIC
SHAFT	SST	
DIAPHRAGM	NATURAL RUBBER	
SPRING	SST	
SEAL	NATURAL RUBBER	
NUT	SST	
SEAL HOUSING, DISC	BRASS	

### CONNECTIONS

FLANGES	ISO PN 16, ANSI CLASS 125 (OTHERS ON REQUEST)
THREADS	FEMALE ISO (BSP), ANSI (NPT)
VICTAULIC	
CONTROL BORES	1/4" NPT

### MATERIALS

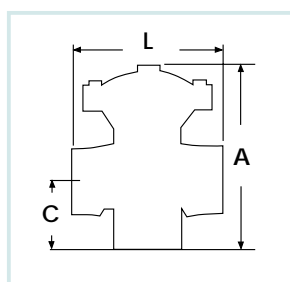
#### For Model 58-P (PLASLITE)

BODY	REINFORCED POLYAMIDE
BONNET	REINFORCED POLYAMIDE
SHAFT	SST
DIAPHRAGM	NATURAL RUBBER
SPRING	SST
SEAL	NATURAL RUBBER
NUT	BRASS
BOLT	SST
O-RING	E.P.D.M RUBBER

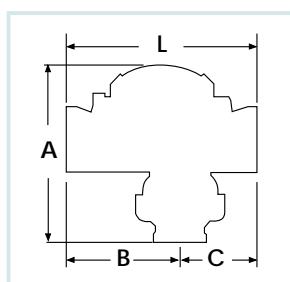
THE FACTORY RESERVES THE RIGHT TO MODIFY SPECIFICATIONS WITHOUT PRIOR NOTICE.

## DIMENSIONS

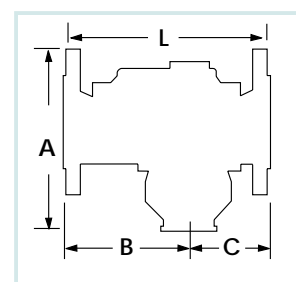
MODEL	A		B		C		L	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch
51-2x2	185	7 <sup>3</sup> / <sub>8</sub>	-	-	74	3	155	6 <sup>1</sup> / <sub>8</sub>
52-2x2	185	7 <sup>3</sup> / <sub>8</sub>	-	-	74	3	155	6 <sup>1</sup> / <sub>8</sub>
57-3x2 <sup>1</sup> / <sub>2</sub>	256	10 <sup>1</sup> / <sub>8</sub>	175	6 <sup>7</sup> / <sub>8</sub>	112	4 <sup>3</sup> / <sub>8</sub>	287	11 <sup>1</sup> / <sub>4</sub>
57-4x3 <sup>1</sup> / <sub>2</sub>	280	11	184	7 <sup>1</sup> / <sub>4</sub>	121	4 <sup>3</sup> / <sub>4</sub>	305	12
58-3x2	235	9 <sup>1</sup> / <sub>4</sub>	175	6 <sup>7</sup> / <sub>8</sub>	112	4 <sup>3</sup> / <sub>8</sub>	287	11 <sup>1</sup> / <sub>4</sub>
58-4x3	255	10 <sup>1</sup> / <sub>8</sub>	190	7 <sup>1</sup> / <sub>2</sub>	127	5	317	12 <sup>1</sup> / <sub>2</sub>
58P-3x2 / 3x3	292	11 <sup>1</sup> / <sub>2</sub>	175	6 <sup>7</sup> / <sub>8</sub>	112	4 <sup>3</sup> / <sub>8</sub>	287	11 <sup>1</sup> / <sub>4</sub>
58P-4x3 / 4x4	303	11 <sup>7</sup> / <sub>8</sub>	190	7 <sup>1</sup> / <sub>2</sub>	127	5	317	12 <sup>1</sup> / <sub>2</sub>



51, 52



58-p



57, 58

## MODEL SELECTION TABLE

MODEL	INLET/FILTER CONNECTION	FLUSHING OUTLET
51-2x2 (*1)	2" (50 mm) FEMALE THREAD	2" (50 mm) FEMALE THREAD (*2)
52-2x2N (*2)	2" (50 mm) FEMALE THREAD	2" (50 mm) FEMALE THREAD (*2)
57-3x2	3" (80 mm) FLANGES	2" (50 mm) FEMALE THREAD
57-3x3	3" (80 mm) VICTAULIC	3" (80 mm) VICTAULIC (*3)
57-4x3	4" (100 mm) FLANGES	3" (80 mm) FEMALE THREAD (*3)
58-3x2	3" (80 mm) VICTAULIC	2" (50 mm) FEMALE THREAD (*3)
58-3x3	3" (80 mm) VICTAULIC	3" (80 mm) VICTAULIC (*3)
58-4x3	4" (100 mm) VICTAULIC	3" (80 mm) FEMALE THREAD (*3)
58-4x4	4" (100 mm) VICTAULIC	4" (100 mm) VICTAULIC
58P-3x2 (*2)	3" (80 mm) VICTAULIC	2" (50 mm) FEMALE THREAD (*3)
58P-3x3 (*2)	3" (80 mm) VICTAULIC	3" (80 mm) FEMALE THREAD (*3)
58P-3x3 (*2)	3" (80 mm) VICTAULIC	3" (80 mm) VICTAULIC
58P-4x3 (*2)	4" (100 mm) VICTAULIC	3" (80 mm) FEMALE THREAD (*3)
58P-4x4 (*2)	4" (100 mm) VICTAULIC	4" (100 mm) VICTAULIC

(\*1) Victaulic adapter available on request.

(\*2) High pressure model (5-80m), add "H"

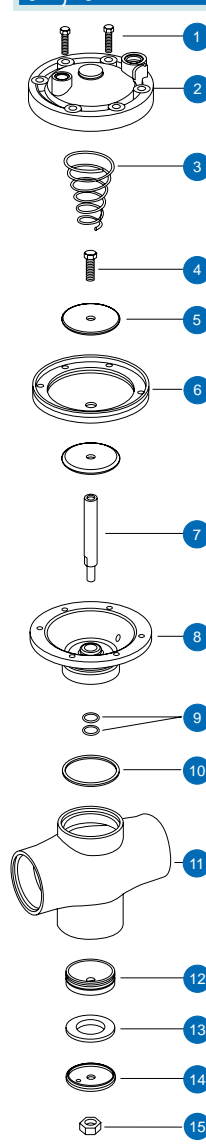
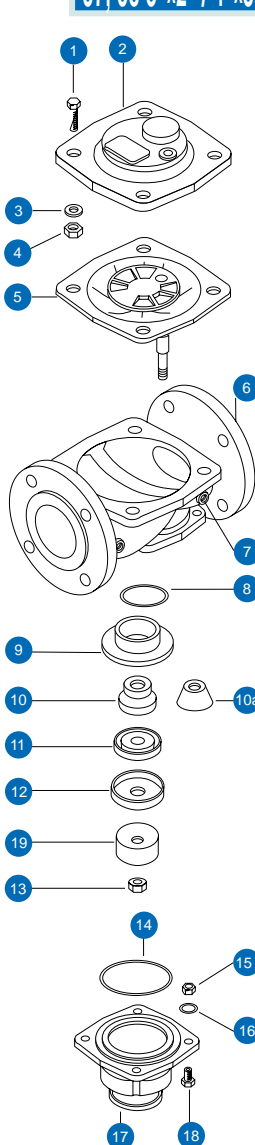
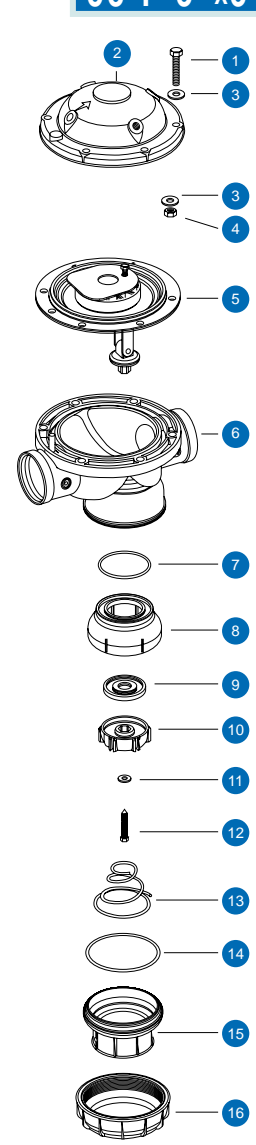
(\*3) Specify BSP or NPT



## COMPONENTS

Specify the **model code** and **size** when ordering spare parts.

Example: **Part no. 10** for **57 - 2x1½**

<ul style="list-style-type: none"> <li>1 BOLT</li> <li>2 BONNET</li> <li>3 SPRING</li> <li>4 BOLT</li> <li>5 DIAPHRAGM DISC</li> <li>6 DIAPHRAGM</li> <li>7 STEM</li> <li>8 OPERATOR BODY</li> <li>9 O-RING</li> <li>10 O-RING</li> <li>11 BODY</li> <li>12 SEAL BOWL</li> <li>13 SEAL</li> <li>14 DISC</li> <li>15 NUT</li> </ul>	<p><b>51, 52 2"x2"</b></p> 	<ul style="list-style-type: none"> <li>1 BOLT</li> <li>2 BONNET</li> <li>3 WASHER</li> <li>4 NUT</li> <li>5 DIAPHRAGM KIT</li> <li>6 BODY (3")</li> <li>7 PLUG</li> <li>8 O-RING</li> <li>9 SEAT (3")</li> <li>10 GUIDE CONE (3")</li> <li>10a GUIDE CONE (3") *</li> <li>11 SEAL</li> <li>12 SEAL BOWL</li> <li>13 LOCKING NUT</li> <li>14 O-RING</li> <li>15 NUT</li> <li>16 WASHER</li> <li>17 ADAPTER (3")</li> <li>18 BOLT</li> <li>19 SPACER *</li> </ul>	<p><b>57, 58 3"x2" / 4"x3"</b></p> 	<ul style="list-style-type: none"> <li>1 BOLT</li> <li>2 BONNET</li> <li>3 WASHER</li> <li>4 NUT</li> <li>5 DIAPHRAGM KIT</li> <li>6 BODY</li> <li>7 O-RING</li> <li>8 SEAT</li> <li>9 SEAL</li> <li>10 SEAL BOWL</li> <li>11 WASHER</li> <li>12 BOLT</li> <li>13 SPRING</li> <li>14 O-RING</li> <li>15 ADAPTER</li> <li>16 LOCKING NUT</li> </ul>	<p><b>58-P 3"x3"</b></p> 
--	---	---	--	--	---

Please specify "standard" or "SK" version.

\* SK version component

## ORDERING GUIDE

Please specify the required model and connection standard.

### SPECIFY:

#### MODEL

51-2x2, 52-2x2, 57-3x2, 57-3x3, 57-4x3, 58-3x2, 58-3x3, 58-4x3, 58-4x4, 58P-3x2, 58P-3x3, 58P-4x3, 58P-4x4

#### CONNECTION

(ISO, ANSI)

**57- 3x2 - ISO**

## RISER VALVES

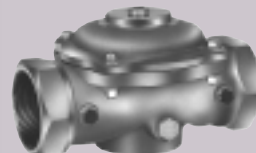
### MODELS 37, 38, 39, 46, 86

#### DESCRIPTION

The direct-sealing diaphragm valves, are activated by line pressure. The valves are designed to be installed on a 3" riser, branching from the main pipe and supplying irrigation systems on both sides of it. Models 37 and 38 control both sides simultaneously. Models 46 and 86 allow for independent control of each side (twin valves). The inlet and outlet threads for all models are 80 mm (3"), BSP or NPT Standard. Control accessories, such as solenoids or pilot valves, can be added on request.



MODEL 37



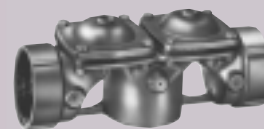
MODEL 38



MODEL 39

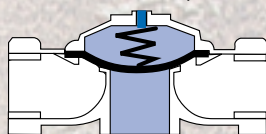


MODEL 46

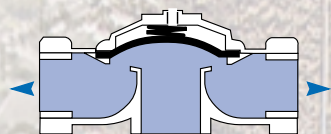


MODEL 86

MODELS 37, 38

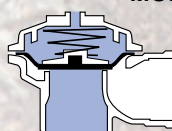


VALVE CLOSED



VALVE OPENED

MODELS 39

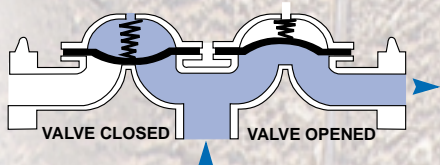


VALVE CLOSED



VALVE OPENED

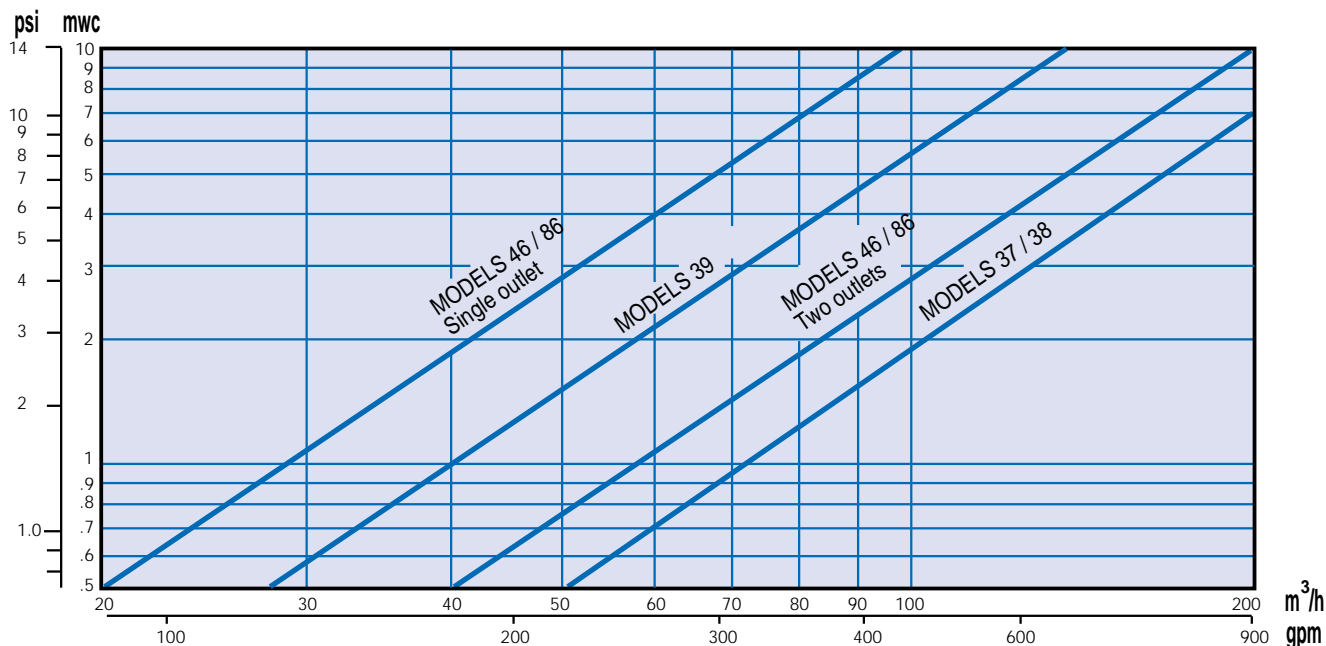
MODELS 46, 86 (TWIN VALVE)



VALVE CLOSED

VALVE OPENED

## HEADLOSS CHART



## OPERATING PRESSURE RANGE

MODEL 37, 38, 39 ..... 10 - 160 m (14 - 230 psi)  
 MODEL 46, 86 ..... STANDARD ..... 15 - 160 m (22 - 230 psi)  
 LOW PRESSURE ..... 7 - 100 m (10 - 140 psi)

## FLOW FACTOR

MODEL	Kv	Cv
37 / 38	220	257
39	130	151
46 / 86 Single outlet	87	101
46 / 86 Two outlets	180	210

## MODEL SELECTION TABLE

MODEL	BODY MATERIAL	OUTLET CONNECTIONS
37	CAST IRON	LATCH (FAST CONNECTOR FOR ALUMINUM PIPES)
38	CAST IRON	FEMALE THREADS
39	CAST IRON	FEMALE THREADS
46	CAST BRONZE	LATCH (FAST CONNECTOR FOR ALUMINUM PIPES)
86	CAST BRONZE	FEMALE THREADS

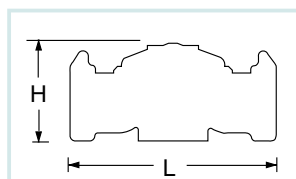
A throttling handle is optional for all of the above models. Add "T" to the model code, for this option.

## SPECIFICATIONS

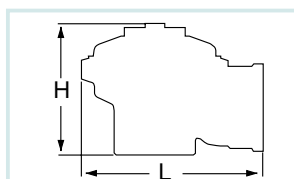
### DIMENSIONS

MODEL	L		H	
	mm	Inch	mm	Inch
37	305	12	160	6¼
38	270	10 5/8	160	6¼
39	219	8	160	6¼
46	350	13¾	141	5½
86	320	12 5/8	141	5½

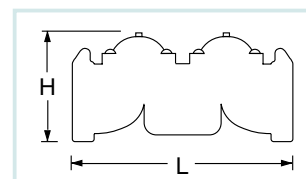
MODELS 37, 38



MODELS 39



MODELS 46, 86



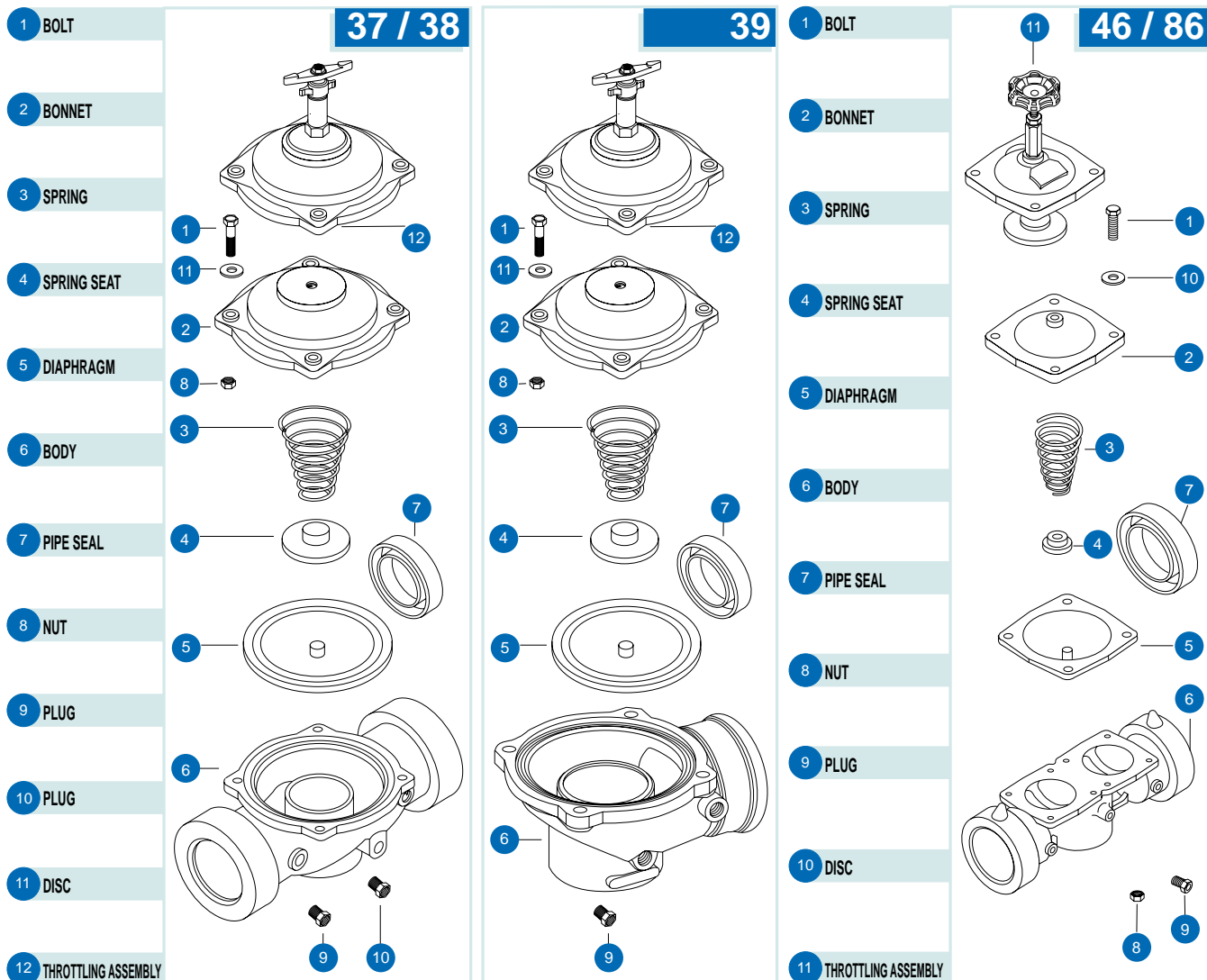
THE FACTORY RESERVES THE RIGHT TO MODIFY SPECIFICATIONS WITHOUT PRIOR NOTICE.

## MATERIALS

COMPONENTS	MODELS 37, 38, 39	MODELS 46, 86
BODY AND BONNET	CAST IRON / CAST BRONZE	CAST BRONZE
DIAPHRAGM	NR RUBBER	NR RUBBER
SPRING	SST 302	SST 302
SPRING DISC	BRASS	PLASTIC
BOLTS AND NUTS	COATED STEEL	SST 304

## COMPONENTS

Specify **model code** when ordering spare parts. Example: **Part no. 7 for model 37**



## ORDERING GUIDE

**Example:** Selected, is a bronze twin valve, threaded, equipped with throttling handles.

### SPECIFY:

- MODEL**  
(37, 38, 39, 46, 86)
- THROTTLING**  
(WHEN REQUIRED)
- CONNECTION STANDARD**  
(ISO, ANSI)

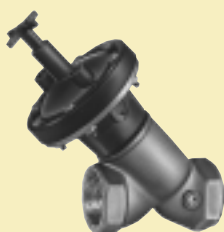
4 6 - T - I S O



## "GALIL" RIGID-SEAL HYDRAULIC VALVES MODELS 09, 09-AN, 09-T, 09-AN-T



**MODEL 09**



**MODEL 09-T**



**MODEL 09-AN**

### DESCRIPTION

The diaphragm actuated, rigid-seal, hydraulic valve is produced in two patterns:

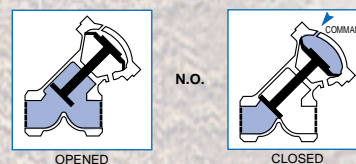
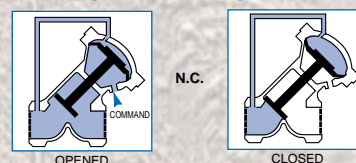
1. Oblique Pattern (standard)
2. Angle Pattern (marked "AN").

The same actuator is used for both patterns.

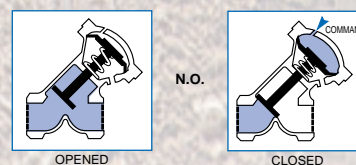
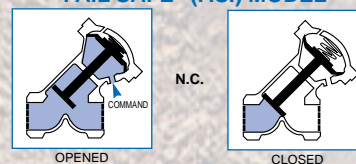
"Normally open", "Normally closed", "Fail-safe" and "Throttling" versions are available.

- An external pipe connection converts the basic valve to the N.C. version.
- A spring, installed inside the actuator, creates a "fail-safe", version N.O. or N.C.
- A throttling device, limiting valve opening, is optional for all versions.

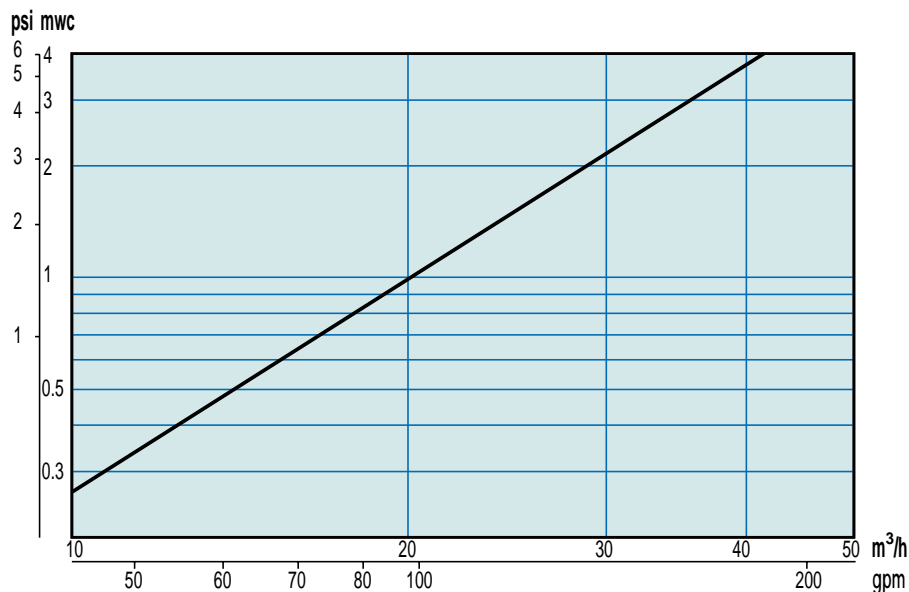
### STANDARD MODEL



### "FAIL SAFE" (F.S.) MODEL



## HEADLOSS CHART



## SPECIFICATIONS

### MATERIALS

BODY .....	BRASS
ACTUATOR HOUSING .....	CAST BRONZE
BONNET .....	GLASS REINFORCED POLYAMIDE
DISCS .....	BRASS
STEM .....	SST
O-RINGS .....	NBR RUBBER
SEAL .....	NR RUBBER
DIAPHRAGM .....	NR RUBBER
SPRING .....	SST

## FLOW FACTOR

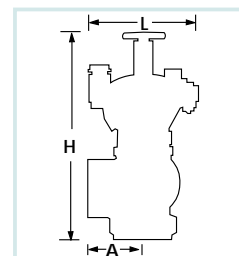
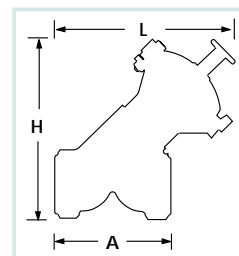
MODEL	Kv	Cv
09, 09-AN, 09-T, 09-AN-T	63	73

## CONNECTIONS

THREADS .....	FEMALE 50 mm ISO (BSP)
	2" ANSI (NPT)
BODY CONTROL BORE .....	1/4" NPT

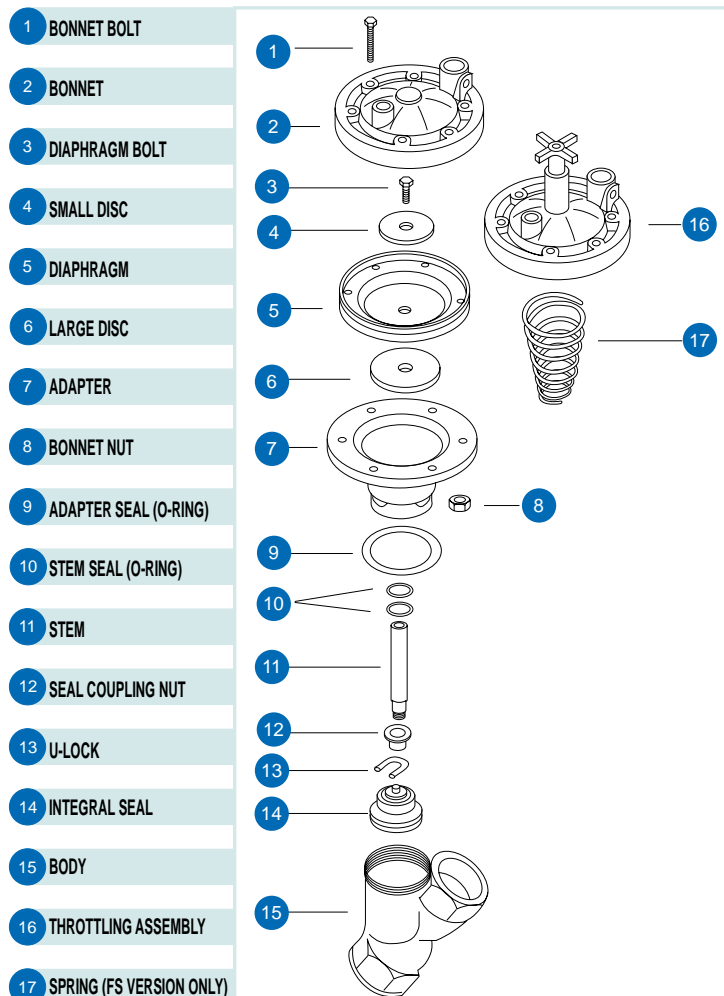
## DIMENSIONS

MODEL	A		L		H	
	mm	Inch	mm	Inch	mm	Inch
09	125	5	193	7 5/8	196	7 3/4
09-AN	66	2 5/8	130	5 1/8	192	7 5/8
09-T	132	5 1/4	219	8 5/8	235	9 1/4
09-AN-T	67	2 5/8	131	5 1/8	260	10 1/4



THE FACTORY RESERVES THE RIGHT TO MODIFY SPECIFICATIONS WITHOUT PRIOR NOTICE.

## COMPONENTS



## ORDERING GUIDE

**Example:** Selected, is the angle patterned valve, "normally-closed" (hydraulic), allowing for flow control. The threads meet the American Standard.

### SPECIFY:

#### MODEL

09, 09-T, 09-AN, 09-AN-T

#### PATTERN (NOT REQUIRED FOR OBLIQUE MODEL) (AN)

#### VERSION

(N.C., N.O., FS/NC, FS/NO, T)

#### THREAD STANDARD

(BSP, NPT)

09 - AN - T/NC - NPT



## AUTOMATIC CONTROL VALVES

### DESCRIPTION

A combination of:

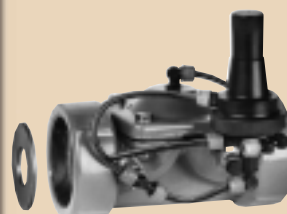
- A basic valve (refer to sections A,B,D).
- A pilot valve, one or more.
- A solenoid pilot valve (on electrically activated valves).
- Control tubes and fittings.
- A filter for activation water.
- Other accessories (relays, check valves, needle valves, etc.).

Each one of the listed control valves was designed to perform a special hydraulic control function.

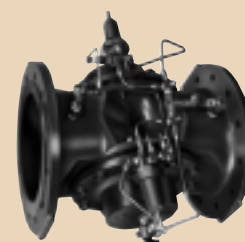
The pilot valve and other devices are selected to serve this function.

Dorot valves, are self-contained and include all the components needed for accurate, dependable, long-life operation.

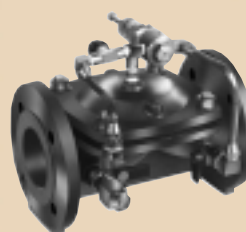
Unlisted combinations of control functions are supplied on request.



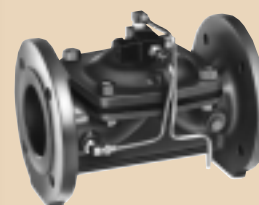
MODEL 44-323-FR



MODEL 47-12- PR/PS



MODEL 47-3-PR (2-W)

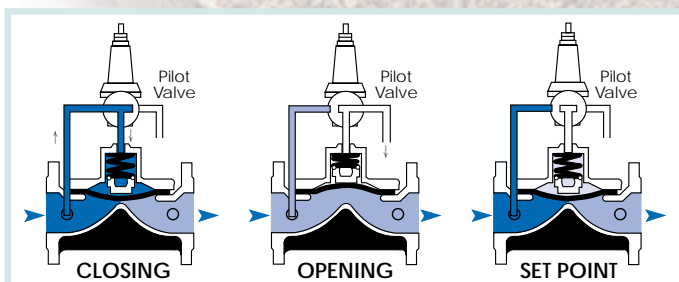


MODEL 87-4-EL

### TWO CONTROL MODES ARE SUPPLIED:

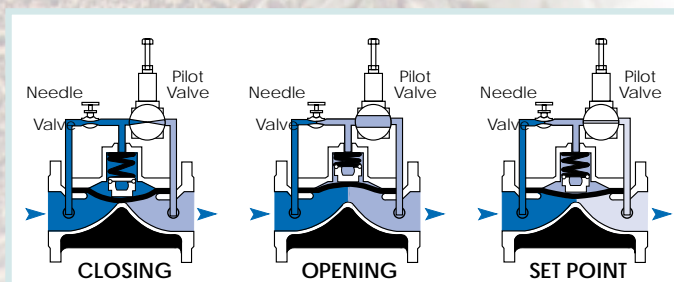
#### 1. Three-Way Mode (marked "3-way" in the catalogue):

The pilot valve is a selector, activated manually, electrically, or hydraulically. It vents the main valve control chamber to the atmosphere, permitting full opening.



#### 2. Two-Way Mode (marked "2-way " in the catalogue):

The pilot valve is a modulating, hydraulically-operated type, venting the main valve control chamber to downstream, allowing only partial opening. This control model is selected when permanent pressure loss is tolerated.





## CONTROL FUNCTIONS

### MANUAL ON-OFF VALVE (M)

Equipped with a 3-way manual selector valve, it permits the selection of the "open" or "closed" position of the main valve.

**AVAILABLE:** On all 3-way controlled valves.



### ELECTRIC CONTROL VALVES (EL)

A 3-way solenoid valve, activated by an electric current or electric pulse, opening or closing the main valve. "Normally closed" position of the main valve is standard.

*"Normally open" position is optional.*

Electric activation can be added to most control valves on request.

**AVAILABLE:** On all models.



### PRESSURE REDUCING VALVE (PR)

The valve maintains a preset downstream pressure, regardless of upstream pressure or flow rate fluctuation. The main valve is controlled by a 3-way pilot valve (permitting full opening when downstream pressure drops below the set-point) or by a 2-way pilot valve (creating a pressure differential in any condition).

**AVAILABLE:** On all models.

Model 77 - WRC Approved



### PRESSURE SUSTAINING / RELIEF VALVE (PS)

The valve maintains upstream (inlet) pressure, regardless of flow rate variations.

The valve will be in the "closed" position if the inlet pressure drops below the set-point. It fully opens when upstream pressure exceeds the set-point.

**AVAILABLE:** On all models.

Model 77 - WRC Approved



### QUICK RELIEF SAFETY VALVE (QR)

The valve opens instantly when the pressure in the pipeline exceeds the safe level, thus relieving excess pressure in the network.

When pressure returns to normal, the valve closes slowly, at an adjustable pace.

**AVAILABLE:** On models: 45, 47, 53, 67, 77, 82, 87, 91, 94.

Model 67, 77 - WRC Approved



### HYDRAULIC REMOTE CONTROL VALVE (RC)

A hydraulic relay opens or closes the valve (on which it is assembled), in response to a pressure command, carried by a control tube from a remote control center.

The relay permits:

- Quick response to the "open" and "closed" command.
- The conversion of a valve from "normally-open" to "normally-closed".
- Overcoming elevation differences.

**AVAILABLE:** On all models, excluding electric valves.



## FLOW RATE CONTROL VALVE (FR)

The valve limits the flow rate in the network to a preset level, regardless of inlet pressure variations. The valve fully opens when the flow rate drops below the set-point.

**AVAILABLE:** On models: 44, 45, 47, 53, 67, 77, 87, 94, 95, 96.

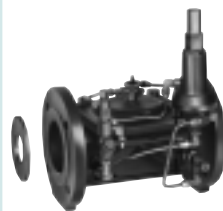


## EXCESSIVE FLOW SHUT-OFF VALVE (FE)

(A variation of the flow rate control).

The valve closes drip-tight when the flow rate exceeds the preset maximum (due, for example, to pipe rupture).

**AVAILABLE:** On models: 47, 53, 67, 77, 87, 94.

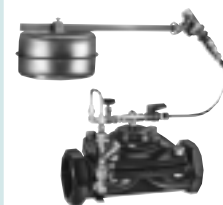


## MODULATING FLOAT CONTROL VALVE (FL)

The main valve is controlled by a 1/2" float valve, located in the tank or reservoir at the required maximum water level.

The valve maintains a constant maximum level.

**AVAILABLE:** On all models.

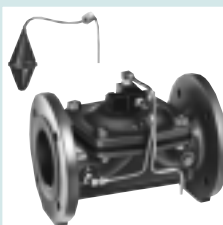


## ELECTRIC FLOAT VALVE (FLEL)

The valve is activated by an Electric Float, that alter its position following the rise or descent of water level in the tank.

Differential of Max. / Min. water level is adjustable.

**AVAILABLE:** On all models.



## DIFFERENTIAL FLOAT CONTROL VALVE (FLDI)

A float valve controls the main valve, closing it when the water reaches the maximum level, and opening it when the water drops to its preset minimum level.

The differential between maximum and minimum levels is adjustable.

**AVAILABLE:** On models: 44, 45, 47, 53, 67, 77, 87, 94, 95, 96.

Model 77 - WRC Approved



## ALTITUDE CONTROL VALVE (AL)

The main valve is controlled by a highly-sensitive pilot which is located outside the tank.

The pilot opens or closes the valve in response to the static pressure of the water.

The difference between maximum and minimum levels, may be adjusted on the pilot.

**AVAILABLE:** On all models.

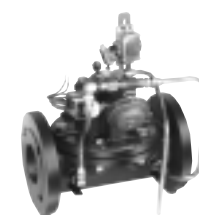


## CONTROL FUNCTIONS

### PUMP CONTROL VALVE (BC)

The valve eliminates damaging surges caused by pump "start-up" and "shut-off".  
The electrically activated valve opens gradually on pump "start-up", and closes slowly before the pump is switched off.  
The valve operates as a non-slam check valve, preventing reverse flow.

**AVAILABLE:** On models: 47, 53, 67, 77, 87, 94.



### TWO-STAGE OPENING VALVE (TO)

The valve prevents surges, caused by the fast filling of drained pipeline. It restricts the flow rate until the network is full.  
The valve fully opens when downstream pressure reaches the duty point.

**AVAILABLE:** On all models.



### DEEP WELL CONTROL VALVE (DW)

The valve eliminates surges caused by "start-up" and "shut-off" of vertical or submersible pumps. It is a relief valve, assembled on the T-junction of the main pipeline.  
When the pump starts, the valve closes slowly, increasing the network pressure gradually.  
Before pump "shut-off" the valve opens slowly, reducing network pressure gradually.

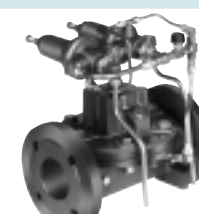
**AVAILABLE:** On models: 47, 53, 67, 77, 87, 94.



### SURGE-ANTICIPATING VALVE (RE)

The valve protects the pumping system from water hammer, caused by sudden pump halting (due, for example, to power failure). The valve is a relief valve, assembled on the T-junction of the main pipeline.  
The valve opens instantly when the pump stops, relieving the returning high pressure wave. The valve closes slowly, once the pressure returns to static level.  
It functions also as a quick-relief safety valve.

**AVAILABLE:** On models: 47, 53, 67, 77, 87, 94.



### HYDRAULIC HYDRANT VALVE (HY)

A quick-activated fire extinguishing valve.  
A two-position manual selector allows for quick, effortless operation of the valve.  
*A remote controlled valve is optional.*

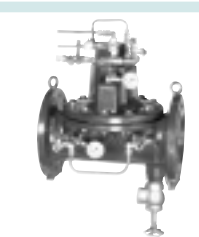
**AVAILABLE:** On models: 44, 77, 82, 91.



### DELUGE VALVE (DE)

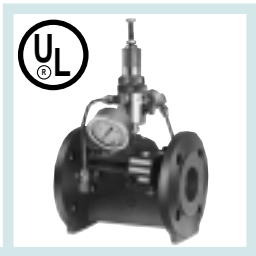
A control valve for "Dry" sprinkler lines in fire-extinguishing systems.  
The valve opens on the command of a pilot sensor line ("RC" version) or electric solenoid ("EL" version).

**AVAILABLE:** On models: 67, 77.



FIRE PUMP RELIEF VALVE (PS/UL)

The valve relieves excess pressure in fire-extinguishing systems. The valve is mounted on a T-junction at the pump discharge side. It opens when the pressure exceeds the required level.

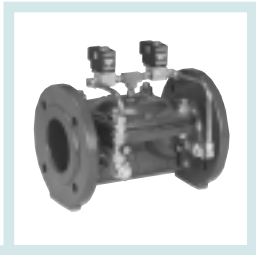


AVAILABLE: On models 44, 77.

ELECTRONICALLY- CONTROLLED VALVE (EC)

The main valve is controlled by DOROT "CNODOR" controller through 2 x 12VDC solenoids.

The controller can be configured to execute any control function or combination of functions, enabling remote modification of setpoints, automatic change of the setpoint, remote start / stop of operation and many other unique performances.



AVAILABLE: On all models

STANDARD CONTROL DEVICES

This table lists pilot valves and other fittings assembled on the standard PN16 control valve. Non-standard devices may be assembled on request.

CONTROL DEVICE	VALVE SIZES		
	¾ "-323	3 "-4 "	6 "-24 "
"SAGIV" CONTROL VALVE	SY3	SY3	SY6
SOLENOID VALVE	3 WATT	8 WATT	8 WATT
PRESSURE REDUCING (3 - WAY) PILOT	29-100	29-100	31-300
PRESSURE REDUCING (2 - WAY) PILOT	68-400 / 68-410	68-400 / 68-410	68-600
PRESSURE SUSTAINING (3 - WAY) PILOT	29-200	29-200	31-300
PRESSURE SUSTAINING (2 - WAY) PILOT		68-500	68-500 / 68-700
QUICK RELIEF PILOT	68-200	66-300	66-300
FLOW RATE / EXCESSIVE FLOW PILOT	29-300	29-300	76-200
MODULATING FLOAT CONTROL PILOT	70-300	70-300	70-400
TUBING & FITTINGS	PLASTIC	PLASTIC	COPPER / PLASTIC

NOTE: High-pressure models 67,94 are fitted with metal pilot valves and copper tubing regardless of size. 2-way controlled valves, high-pressure, are equipped with the 68-400 pilot valve.

ORDERING GUIDE

Example: Required valve - 6" Cast Iron, flanged to European Standard, pressure reducing, electrically activated by 220 VAC current.

SPECIFY:

MODEL

(SEE PAGES 3,6,10,18)

SIZE

¾ " - 24"

CONNECTION STANDARD

ISO PN16, ANSI 125 ETC.

CONTROL FUNCTION CODE/S

(PR, PS, EL, CV, QR, ETC.)

NON-STANDARD FEATURES

(CURRENT, DIAPHRAGM, LINING, ETC.)

47 - 6 - ISO PN16 - PR/EL - 220VAC

THE FACTORY RESERVES THE RIGHT TO MODIFY SPECIFICATIONS WITHOUT PRIOR NOTICE.



## PILOT VALVES AND ACCESSORIES

### 29-100 PILOT VALVE (BLACK, 3-WAY)

USED FOR:  
PRESSURE REDUCING VALVES (PR) SIZES:  $\frac{3}{4}$ " - 4"

#### ADJUSTMENT RANGE

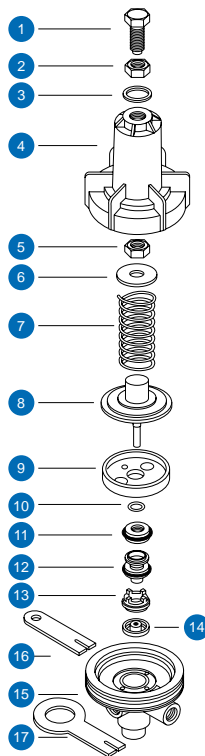
SPRING NO.	COLOR	RANGE
54 (STANDARD)	GREEN	10 - 45 m 14 - 65 psi
72	YELLOW	5 - 25 m 8 - 35 psi
65	RED	20 - 60 m 30 - 90 psi

MAX. LINE PRESSURE: 100 m (140 psi)

#### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 5, 6	BRASS
3, 4, 9, 11, 12, 13, 15	PLASTIC
10	NITRILE RUBBER
2, 7, 16, 17	SST
8	SST, NATURAL RUBBER, PLASTIC
14	NATURAL RUBBER

### 29-100



#### COMPONENTS

1 ADJUSTING BOLT -	10 O-RING
2 LOCKING NUT -	11 SEALING DISC KIT -
3 SPRING IDENTIFICATION RING	12 PORTS SELECTION BODY -
4 BONNET -	13 PLUG SEAT -
5 BONNET NUT -	14 PLUG -
6 SPRING DISC -	15 BODY -
7 SPRING -	16 BRACKET $\frac{3}{8}$ " -
8 DIAPHRAGM ASSEMBLY -	17 BRACKET $\frac{5}{8}$ " -
9 DIAPHRAGM BOWL -	

### 29-110 PILOT VALVE (3-WAY)

USED FOR:  
PRESSURE REDUCING VALVE (PR) SIZES:  $\frac{3}{4}$ " - 6"

#### ADJUSTMENT RANGE

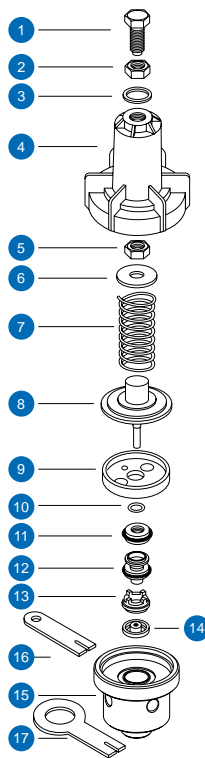
SPRING NO.	COLOR	RANGE
54 (STANDARD)	GREEN	10 - 45 m 14 - 65 psi
65	RED	20 - 60 m 30 - 90 psi
29	-	30 - 130 m 45 - 190 psi

HIGH INLET PRESSURE: 160 m (230 psi)

#### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 5, 6, 15	BRASS
3, 4, 9, 11, 12, 13	PLASTIC
10	NITRILE RUBBER
2, 7, 16, 17	SST
8	SST, NATURAL RUBBER, PLASTIC
14	NATURAL RUBBER

### 29-110



#### COMPONENTS

1 ADJUSTING BOLT -	10 O-RING
2 LOCKING NUT -	11 SEALING DISC KIT -
3 SPRING IDENTIFICATION RING	12 PORTS SELECTION BODY -
4 BONNET -	13 PLUG SEAT -
5 BONNET NUT -	14 PLUG -
6 SPRING DISC -	15 BODY -
7 SPRING -	16 BRACKET $\frac{3}{8}$ " -
8 DIAPHRAGM ASSEMBLY -	17 BRACKET $\frac{5}{8}$ " -
9 DIAPHRAGM BOWL -	

## 29-200 PILOT VALVE (BLUE, 3-WAY)

### USED FOR:

PRESSURE REDUCING VALVE (PR)  
PRESSURE SUSTAINING/RELIEF VALVE (PS)  
TWO-STAGE OPENING VALVE (TO)  
REMOTE CONTROL VALVE (RC)

SIZES: 3/4" - 4"  
SIZES: 3/4" - 4"  
SIZES: 3/4" - 4"  
SIZES: 3/4" - 4"

### ADJUSTMENT RANGE

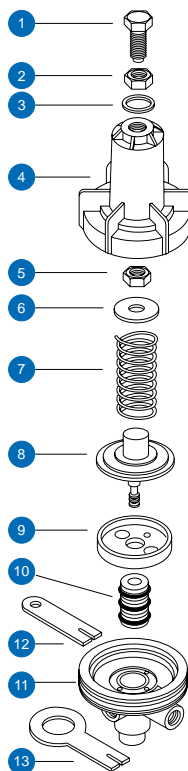
SPRING NO.	COLOUR	RANGE
54 (STANDARD)	GREEN	10 - 45 m 14 - 65 psi
72	YELLOW	5 - 25 m 8 - 35 psi
65	RED	20 - 60 m 30 - 90 psi

MAX. LINE PRESSURE: 100 m (140 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 5, 6	BRASS
3, 4, 9, 11	PLASTIC
2, 7	SST
8	BRASS, RUBBER, PLASTIC
10	TEFLON
12, 13	SST

## 29-200



### COMPONENTS

1 ADJUSTING BOLT	8 DIAPHRAGM ASSEMBLY
2 LOCKING NUT	9 DIAPHRAGM BOWL
3 SPRING IDENTIFICATION RING	10 PORTS SELECTION BODY
4 BONNET	11 BODY
5 BONNET NUT	12 BRACKET- 3/8"
6 SPRING DISC	13 BRACKET- 5/8"
7 SPRING	

## 29-300 DIFFERENTIAL PILOT VALVE (3-WAY)

### USED FOR:

FLOW RATE CONTROL VALVE (FR)  
EXCESSIVE FLOW SHUT-OFF VALVE (FE)  
DIFFERENTIAL CONTROL VALVE (DI)

SIZES: 2" - 4"  
SIZES: 2" - 4"  
SIZES: 2" - 4"

### ADJUSTMENT RANGE

### (PRESSURE DIFFERENTIAL)

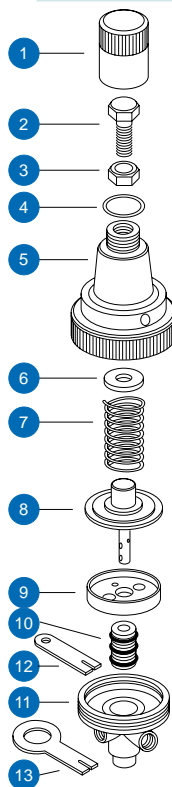
SPRING NO.	COLOUR	RANGE
82 (STANDARD)	—	2 - 5 m 3 - 7 psi
72	YELLOW	6 - 20 m 8 - 30 psi

MAX. LINE PRESSURE: 100 m (140 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 5, 9, 11	PLASTIC
2, 6	BRASS
4	NITRILE RUBBER
3, 7, 12, 13	SST
8	SST, NATURAL RUBBER, PLASTIC
10	BRASS, NITRILE RUBBER

## 29-300



### COMPONENTS

1 COVER	8 DIAPHRAGM ASSEMBLY
2 ADJUSTING BOLT	9 DIAPHRAGM BOWL
3 LOCKING NUT	10 PORTS SELECTION BODY KIT
4 COVER SEAL (O-RING 6-360)	11 BODY
5 BONNET	12 BRACKET- 3/8"
6 SPRING DISC	13 BRACKET- 5/8"
7 SPRING	

## 31-300 PILOT VALVE (3-WAY)

### USED FOR:

PRESSURE REDUCING VALVE (PR) SIZES: 6" - 16"

PRESSURE SUSTAINING/RELIEF VALVE (PS) SIZES: 6" - 16"

TWO STAGE OPENING VALVE (TO) SIZES: 6" - 16"

### ADJUSTMENT RANGE

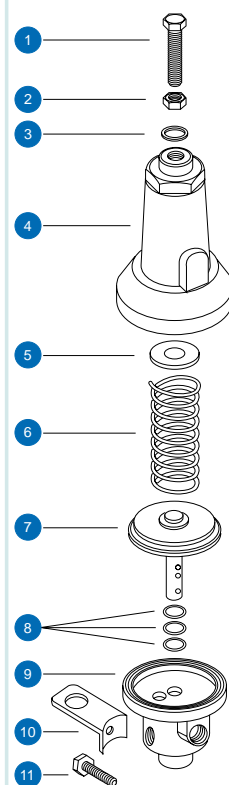
SPRING NO.	COLOUR	RANGE
47 (STANDARD)	GREEN	10 - 60 m 14 - 90 psi
42	YELLOW	5 - 30 m 8 - 45 psi
50	RED	20 - 86 m 30 - 130 psi
76	BLACK	70 - 190 m 100 - 285 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 9	BRASS
3	PLASTIC
6, 10, 11	SST
7	SST, NATURAL RUBBER, BRASS
8	NITRILE RUBBER

## 31-300



### COMPONENTS

1 ADJUSTING BOLT	7 DIAPHRAGM ASSEMBLY
2 LOCKING NUT	8 BODY O-RING
3 SPRING IDENTIFICATION RING	9 BODY
4 BONNET	10 BRACKET
5 SPRING DISC	11 BRACKET BOLT
6 SPRING	

## 66-200 HYDRAULIC ACCELERATOR RELAY (3-WAY)

### USED FOR:

ELECTRICALLY CONTROLLED VALVE (EL) SIZES: 6" - 24"

ALTITUDE CONTROL VALVE (AL) SIZES: 6" - 24"

PUMP CONTROL VALVE (BC) SIZES: 3" - 16"

REMOTE CONTROL VALVE (RC) SIZES: 6" - 16"

### OPERATING CONDITIONS

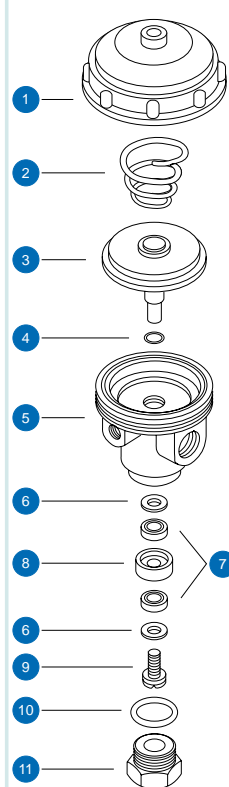
SPRING NO.	RANGE
73 (STANDARD)	15 - 100 m 20 - 140 psi
86	2 - 100 m 3 - 140 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 5, 6, 8, 11	BRASS
2, 9	SST
3	SST, NATURAL RUBBER, BRASS
4	NITRILE RUBBER
7, 10	NATURAL RUBBER

## 66-200



### COMPONENTS

1 BONNET	7 SEAL
2 SPRING	8 SEALS HOUSING
3 DIAPHRAGM ASSEMBLY	9 SEAL BOLT
4 BODY O-RING	10 SEAT WASHER
5 BODY	11 SEAT
6 SEAL DISC	

## 66-300 FAST REACTING PILOT VALVE (3-WAY)

USED FOR:

QUICK RELIEF VALVE (QR) SIZES: 3" - 24"

SURGE ANTICIPATING VALVE (RE) SIZES: 3" - 24"

SUSTAINING / RELIEF VALVE (PS) SIZES: 6" - 24"

### ADJUSTMENT RANGE

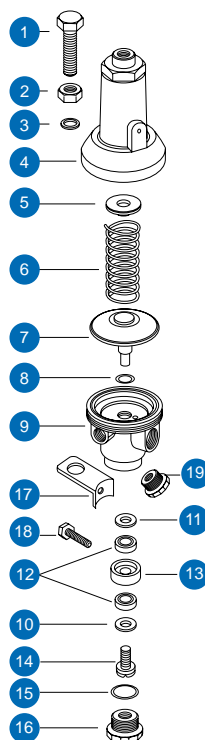
SPRING NO.	COLOUR	RANGE
47 (STANDARD)	GREEN	10 - 60 m 14 - 90 psi
42	YELLOW	5 - 30 m 8 - 45 psi
50	RED	20 - 90 m 30 - 130 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 9, 10, 12	BRASS
3	PLASTIC
6, 13, 15, 16, 17	SST
7	SST, NATURAL RUBBER, BRASS
8, 14	NITRILE RUBBER
11	NATURAL RUBBER

## 66-300



### COMPONENTS

1 ADJUSTING BOLT	11 SEAL DISC
2 LOCKING NUT	12 SEAL
3 SPRING IDENTIFICATION RING	13 SEAL HOUSING
4 BONNET	14 SEAL BOLT
5 SPRING DISC	15 SEAT WASHER
6 SPRING	16 SEAT
7 DIAPHRAGM ASSEMBLY	17 BRACKET
8 BODY O-RING	18 BRACKET BOLT
9 BODY	19 PLUG
10 SEAL DISC	

## 68-200 PILOT VALVE (2-WAY)

USED FOR:

QUICK-RELIEF VALVE (QR) SIZE: 2"

### ADJUSTMENT RANGE

(PRESSURE DIFFERENTIAL):

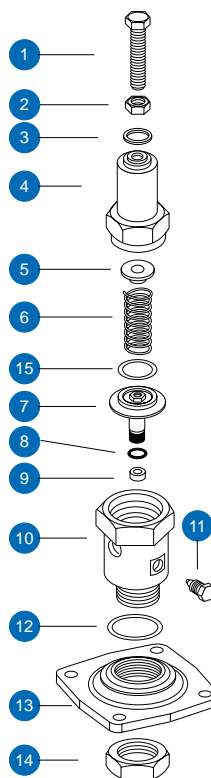
SPRING NO.	COLOUR	RANGE
58 (STANDARD)	GREEN	10 - 90 m 14 - 130 psi
78	YELLOW	5 - 20 m 8 - 30 psi
63	RED	80 - 140 m 115 - 200 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 10, 11, 13, 14	BRASS
3	PLASTIC
6, 9	SST
7	SST, NATURAL RUBBER, BRASS
8, 12	NITRILE RUBBER

## 68-200



### COMPONENTS

1 ADJUSTING BOLT	9 SST SEAT
2 LOCKING NUT	10 BODY
3 SPRING IDENTIFICATION RING	11 NOZZLE BOLT
4 BONNET	12 O-RING
5 SPRING DISC	13 2"-QR BONNET
6 SPRING	14 PILOT LOCKING NUT
7 DIAPHRAGM ASSEMBLY	15 SLIDING WASHER
8 BODY O-RING	



## 68-410 PILOT VALVE (2-WAY)

USED FOR:  
PRESSURE REDUCING VALVE (PR) SIZES: 2" - 6"  
HIGH PRESSURE

### ADJUSTMENT RANGE

SPRING NO.	COLOUR	RANGE
58 (STANDARD)	GREEN	10 - 110 m 15 - 160 psi
78	YELLOW	5 - 30 m 8 - 45 psi
63	RED	20 - 200 m 30 - 300 psi

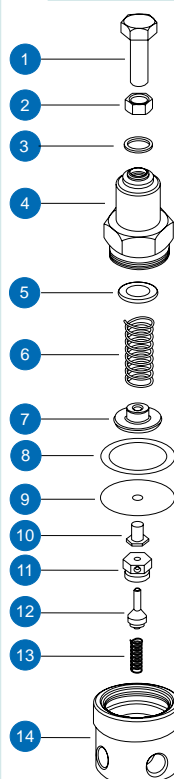
MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 8, 14	BRASS
3	PLASTIC
6, 10, 13	SST
7, 9	SST, NATURAL RUBBER, BRASS
11, 12	NITRILE RUBBER

**NEW**

## 68-410



### COMPONENTS

1 ADJUSTING BOLT	8 BONNET WASHER
2 LOCKING NUT	9 DIAPHRAGM
3 SPRING IDENTIFICATION RING	10 DIAPHRAGM BOTTOM LOCK
4 BONNET	11 NOZZLE
5 SPRING DISC	12 SEAL ASSEMBLY
6 SPRING	13 BALANCING SPRING
7 DIAPHRAGM TOP DISK	14 BODY

## 68-420 PILOT VALVE (2-WAY)

USED FOR:  
PRESSURE REDUCING VALVE (PR) SIZES: ¾" - 6"

### ADJUSTMENT RANGE

SPRING NO.	RANGE
20	4 - 120 m 6 - 175 psi

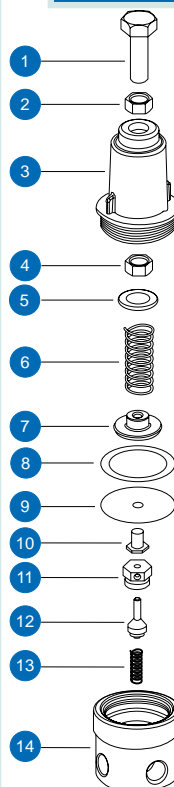
MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 8, 10	BRASS
3, 7, 14	PLASTIC
6, 11, 13	SST
12	SST, NATURAL RUBBER, BRASS
9	NITRILE RUBBER

**NEW**

## 68-420



### COMPONENTS

1 ADJUSTING BOLT	8 BONNET WASHER
2 LOCKING NUT	9 DIAPHRAGM
3 BONNET	10 DIAPHRAGM BOTTOM LOCK
4 BONNET NUT	11 NOZZLE
5 SPRING DISC	12 SEAL ASSEMBLY
6 SPRING	13 BALANCING SPRING
7 DIAPHRAGM TOP DISK	14 BODY

## 68-500 PILOT VALVE (2-WAY)

USED FOR:

PRESSURE SUSTAINING VALVE (PS) SIZES: 2" - 6"

### ADJUSTMENT RANGE

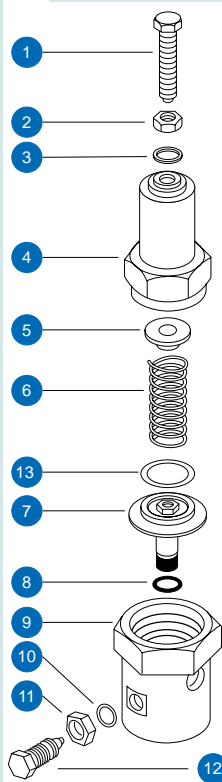
SPRING NO.	COLOUR	RANGE
58 (STANDARD)	GREEN	10 - 90 m 14 - 130 psi
78	YELLOW	5 - 20 psi 8 - 30 psi
63	RED	80 - 140 m 115 - 200 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 9, 11	BRASS
3	PLASTIC
6, 12	SST
7	SST, NATURAL RUBBER, BRASS
8, 10	NITRILE RUBBER

## 68-500



### COMPONENTS

1 ADJUSTING BOLT	8 BODY O-RING
2 LOCKING NUT	9 BODY
3 SPRING IDENTIFICATION RING	10 O-RING
4 BONNET	11 LOCKING NUT
5 SPRING DISC	12 NEEDLE BOLT
6 SPRING	13 SLIDING WASHER
7 DIAPHRAGM ASSEMBLY	

## 68-600 PILOT VALVE (2-WAY)

USED FOR:

PRESSURE REDUCING VALVES (PR) SIZES: 8" - 24"

### ADJUSTMENT RANGE

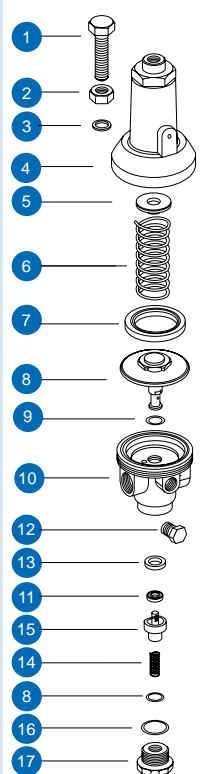
SPRING NO.	COLOUR	RANGE
47 (STANDARD)	GREEN	10 - 150 m 15 - 220 psi
42	YELLOW	5 - 80 m 8 - 110 psi
50	RED	20 - 250 m 30 - 360 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 9, 10, 12, 13	BRASS
3	PLASTIC
6, 14, 15, 16, 18, 19	SST
7	SST, NATURAL RUBBER, BRASS
8, 11	NITRILE RUBBER

## 68-600



### COMPONENTS

1 ADJUSTING BOLT	10 BODY
2 LOCKING NUT	11 SEAL
3 SPRING IDENTIFICATION RING	12 PLUG
4 BONNET	13 SEAL
5 SPRING DISC	14 BALANCING SPRING
6 SPRING	15 SEAL HOUSING
7 BODY ADAPTER	16 PLUG O-RING
8 DIAPHRAGM ASSEMBLY	17 PLUG
9 O-RING	

## 68-700 PILOT VALVE (2-WAY)

USED FOR:  
PRESSURE SUSTAINING VALVES (PS) SIZES: 8" - 24"  
HIGH PRESSURE APPLICATIONS

### ADJUSTMENT RANGE

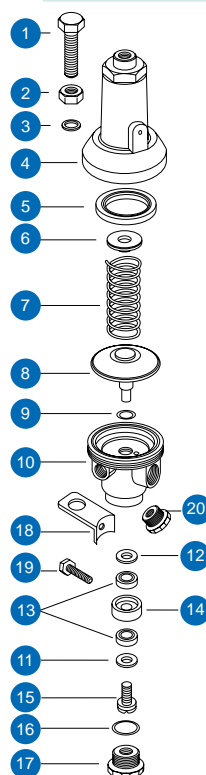
SPRING NO.	COLOUR	RANGE
50	RED	20 - 250 m 30 - 360 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 9, 10, 12, 14, 18	BRASS
3	PLASTIC
6, 13, 15, 16, 17	SST
7	SST, NATURAL RUBBER, BRASS
8, 14	NITRILE RUBBER
11	NATURAL RUBBER

### 68-700



### COMPONENTS

1 ADJUSTING BOLT	11 SEAL DISC
2 LOCKING NUT	12 SEAL DISC
3 SPRING IDENTIFICATION RING	13 SEAL
4 BONNET	14 SEAL HOUSING
5 BODY ADAPTER	15 SEAL BOLT
6 SPRING DISC	16 SEAT WASHER
7 SPRING	17 SEAT
8 DIAPHRAGM ASSEMBLY	18 BRACKET
9 BODY O-RING	19 BRACKET BOLT
10 BODY	20 PLUG

## 70-110 ALTITUDE CONTROL PILOT VALVE (3-WAY)

USED FOR:  
ALTITUDE CONTROL (AL) VALVE SIZES 2" - 24"

### ADJUSTMENT RANGE

(ELEVATION BELOW WATER LEVEL)

SPRING NO.	COLOUR	RANGE
50 (STANDARD)	RED	3 - 12 m 9 - 36 ft
47	GREEN	1.5 - 5 m 5 - 15 ft
76	BLACK	10 - 50 m 30 - 150 ft

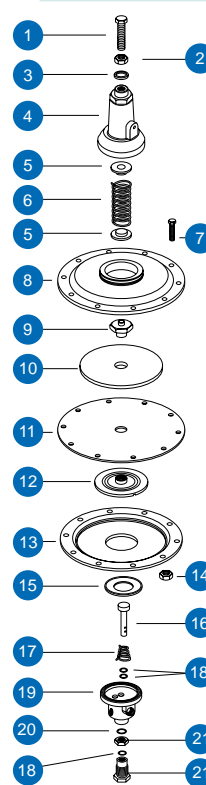
MAX. LINE PRESSURE: 250 m (360 psi)

HIGH-LOW LEVEL DIFFERENTIAL 0.3 - 4 m ( 1 - 12 feet )

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 4, 5, 9, 10, 12, 14, 19, 21, 22	BRASS
3	PLASTIC
6, 7, 16, 17	SST
8, 13	BRONZE
11, 15	NATURAL RUBBER
18, 20	NITRILE RUBBER

### 70-110



### COMPONENTS

1 ADJUSTING BOLT	12 DIAPHRAGM LOWER DISC
2 LOCKING NUT	13 LOWER BOWL
3 SPRING IDENTIFICATION RING	14 BOWL'S NUT
4 BONNET	15 BOWL'S SEAL
5 SPRING DISC	16 PLUNGER
6 SPRING	17 PLUNGER SPRING
7 BOWLS BOLT	18 BODY O-RING
8 UPPER BOWL	19 BODY
9 DIAPHRAGM BOLT	20 SEAT O-RING
10 DIAPHRAGM UPPER DISC	21 SEAT LOCKING NUT
11 DIAPHRAGM	22 SEAT

## DIFFERENTIAL FLOAT PILOTS

### 70-200 ELECTRIC FLOAT

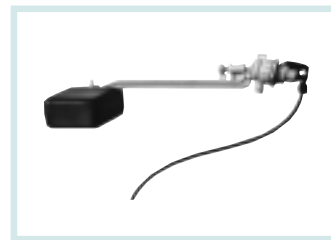
USED FOR:  
ELECTRICALLY-ACTIVATED VALVES, ALL SIZES



## MODULATING FLOAT PILOTS

### 70-300 FLOAT PILOT VALVE (PLASTIC, 2-WAY)

USED FOR:  
FLOAT CONTROL VALVES (FL), LOW PRESSURE (80 m, 115 psi), ALL SIZES



## MODULATING FLOAT PILOTS

### 70-400 FLOAT PILOT VALVE (METAL, 2-WAY)

USED FOR:  
FLOAT CONTROL VALVES (FL), HIGH PRESSURE (UP TO 250 m, 360 psi), ALL SIZES



## 70-550 DIFFERENTIAL FLOAT PILOT VALVE (3-WAY, 4-WAY)

USED FOR:  
DIFFERENTIAL LEVEL CONTROL VALVES (DIFL1)  
ALL SIZES

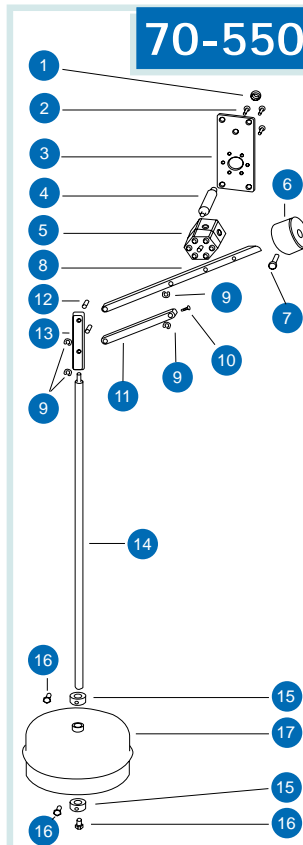
MAX. LINE PRESSURE: 250 m (360 psi)  
HIGH-LOW LEVEL DIFFERENTIAL: 5 - 40 cm (ONE ROD)  
5 - 100 cm (TWO RODS)  
5 - 160 cm (THREE RODS)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 3, 4, 7, 10, 12, 14, 16, 17	SST
6, 8, 11, 13, 15	BRASS
5	BRASS, SST, RUBBER
9	BRONZE

### COMPONENTS

- 1 HUB NUT
- 2 VALVE BOLT
- 3 SUSPENSION PLATE
- 4 HUB
- 5 VALVE
- 6 BALANCING WEIGHT
- 7 WEIGHT BOLT
- 8 WEIGHT ARM
- 9 LOCKING RING
- 10 VALVE SHAFT BOLT
- 11 VALVE ARM
- 12 PIN
- 13 ROD CONNECTOR
- 14 ROD
- 15 STOPPER
- 16 STOPPER BOLT
- 17 FLOAT

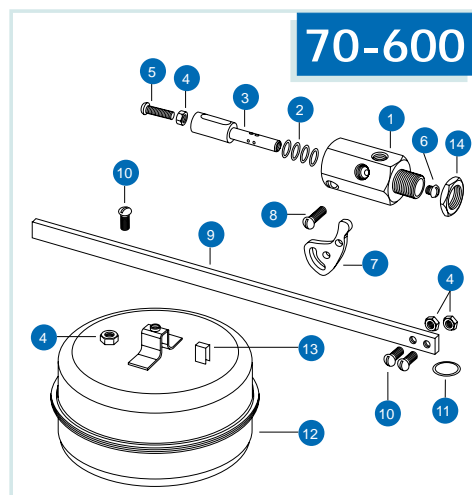




## 70-600 DIFFERENTIAL FLOAT PILOT VALVE (3-WAY)

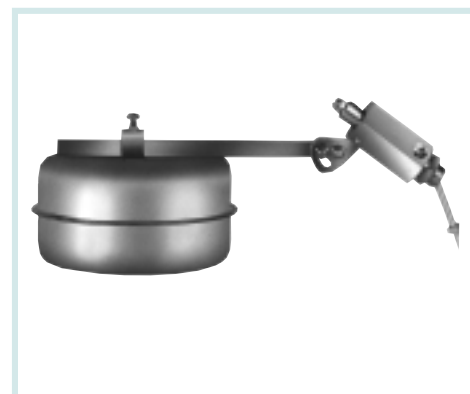
USED FOR:

DIFFERENTIAL LEVEL CONTROL (DIFL 2) VALVES, ALL SIZES



### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 14	BRASS
3, 4, 5, 6, 7, 8, 9, 10, 11, 12	SST
13	PLASTIC
2	NITRILE RUBBER



### COMPONENTS

1 BODY	8 BOLT
2 O-RING	9 ARM
3 SHAFT	10 BOLT
4 NUT	11 SPRING WASHER
5 BOLT	12 FLOAT
6 BOLT	13 FIXING INSERT
7 CAM	14 NUT

## 76-200 DIFFERENTIAL PILOT VALVE (3-WAY)

USED FOR:

FLOW RATE CONTROL VALVE (FR) SIZES 6" - 24"  
 EXCESSIVE FLOW SHUT-OFF VALVE (FE) SIZES 6" - 24"  
 DIFFERENTIAL CONTROL VALVE (DI) SIZES 6" - 24"

### ADJUSTMENT RANGE

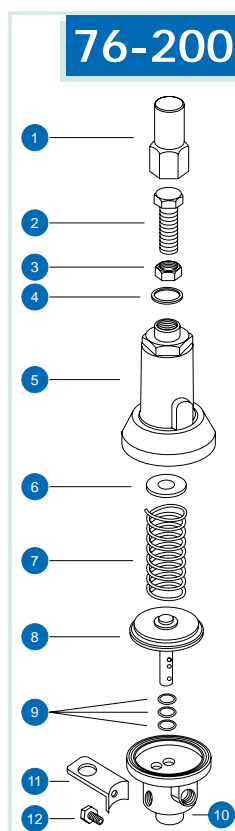
### (PRESSURE DIFFERENTIAL)

SPRING NO.	COLOUR	RANGE
70 (STANDARD)	—	2 - 5 m 3 - 8 psi
69	—	6 - 8 m 9 - 12 psi
47	GREEN	9 - 60 m 13 - 85 psi

MAX. LINE PRESSURE: 250 m (360 psi)

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 5, 6, 10	BRASS
4	SYNTHETIC RUBBER
3, 7, 11, 12	SST
8	SST, NATURAL RUBBER, BRASS
9	NITRILE RUBBER



### COMPONENTS

1 COVER	7 SPRING
2 ADJUSTING BOLT	8 DIAPHRAGM ASSEMBLY
3 LOCKING NUT	9 BODY O-RING
4 COVER SEAL	10 BODY
5 BONNET	11 BRACKET
6 SPRING DISC	12 BRACKET BOLT

## 76-600 PILOT VALVE (2-WAY)

### USED FOR:

ALTITUDE CONTROL (AL) VALVE SIZES 3" - 24"

FLOW RATE CONTROL (FR) VALVE SIZES 3" - 24"

### OPERATING CONDITIONS

#### ALTITUDE CONTROL

SPRING NO.	COLOUR	RANGE
47	GREEN	0.5 - 5 m 1.5 - 16 ft
50 (STANDARD)	RED	2 - 7 m 6 - 23 ft
76	BLACK	2 - 30 m 6 - 98 ft

MAX. UPSTRAEM PRESSURE: 100 m

#### FLOW RATE CONTROL

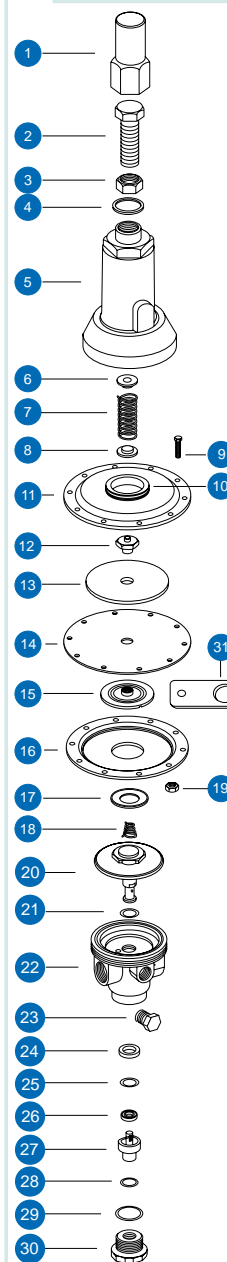
SPRING NO.	COLOUR	RANGE
47	GREEN	0.5 - 5 m 0.8 - 8 psi

MAX. UPSTRAEM PRESSURE: 160 m

### SPECIFICATIONS

COMPONENT NO.	MATERIAL
1, 2, 5, 6, 8, 12, 15, 20, 22, 23	BRASS
3, 7, 9, 18, 19, 24, 25, 27, 30, 31	SST
4	SYNTHETIC RUBBER
10, 21, 28, 29	NBR RUBBER
11, 13, 16	BRONZE
14, 17, 26	NR RUBBER

## 76-600



### COMPONENTS

1 Cover	17 Bowl's seal
2 Adjusting bolt	18 Plunger spring
3 Locking Nut	19 Nut
4 Cover seal	20 Diaphragm assembly
5 Bonnet	21 O-Ring
6 Spring disk	22 Body
7 Spring	23 Plug
8 Spring disk	24 Sealing insert
9 Bowls bolt	25 Washer
10 O-Ring	26 Seal
11 Upper bowl	27 Seal housing
12 Diaphragm bolt	28 O-Ring
13 Diaphragm upper disk	29 O-Ring
14 Diaphragm	30 Plug
15 Diaphragm lower disk	31 Suspension Bracket
16 Lower bowl	

## "DOROT" SOLENOID VALVE

3-WAY SOLENOID INCLUDES BASE, 2-WAY OPERATOR EXCLUDES BASE

### USED FOR:

ELECTRIC VALVES (EL) SIZES: 3/4" - 32"

MAX. OPERATING PRESSURE - 100 m (150 psi)

### ELECTRIC DATA

STANDARD COIL - 24 V AC, 50 HZ, INRUSH CURRENT 0.29 A, HOLDING 0.14 A

OTHERS ON REQUEST

ALLOWED VOLTAGE VARIATION ±10%

MODEL NO. 71-NO ..... STANDARD NORMALLY-OPEN, 3-WAY SOLENOID  
MODEL NO. 71-BP ..... STANDARD OPERATOR 2-WAY



71-NO



71-BP

## "BACCARA" SOLENOID VALVE N.O. OR N.C. (3-WAY)

### USED FOR:

ELECTRIC VALVES (EL) SIZES: 3" - 24"

PUMP CONTROL VALVES (BC) SIZES: 3" - 24"

### OPERATING CONDITIONS

ORIFICE DIAMETER (mm)	MAX. PRESSURE
1.6 (STANDARD) .....	150 m / 220 psi
0.8 .....	250 m / 360 psi
2.4 .....	60 m / 90 psi
3.0 .....	40 m / 60 psi

### ELECTRIC DATA

STANDARD COIL - 24 VAC, 50 HZ, INRUSH CURRENT 1.08 A, HOLDING 0.6 A

OTHERS ON REQUEST

ALLOWED VOLTAGE VARIATION +/-10%

MODEL NO. 30-NO..... STANDARD NORMALLY-OPEN, 3-WAY SOLENOID VALVE

MODEL NO. 30-NC..... STANDARD NORMALLY-CLOSED, 3-WAY SOLENOID VALVE

MODEL NO. 30-BP..... STANDARD OPERATOR 3-WAY (24 VAC, 50 HZ, 1,6 mm ORIFICE)

MODEL NO. 30-CO..... COIL (SPECIFY VOLTAGE, FREQUENCY)



## ACCESSORIES

### 3-WAY CONTROL VALVE

#### USED FOR:

Manual activation of hydraulic valves.

MODEL NO. 35-1/8"-3 ..... "SAGIV" SY 3 (1/8" CONNECTION)

MODEL NO. 35-1/4"-3 ..... "SAGIV" SY 3 (1/4" CONNECTION)

MODEL NO. 35-1/4"-6 ..... "SAGIV" SY 6 (LARGE PASSAGES)



### 2-WAY BALL VALVE

#### USED FOR:

Temporary isolation of control devices from pressure line.

Cancellation of pilot valve controls.

MODEL NO. 34-1/8" .....

MODEL NO. 34-1/4" .....

MODEL NO. 34-1/2" .....



### PRESSURE SELECTOR TEE

#### ("SHUTTLE VALVE")

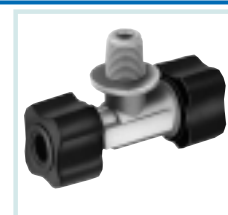
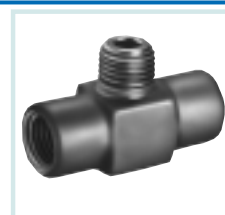
#### USED FOR:

Activation of main valve by two (or more) control devices.

MODEL NO. 12-6-05 ..... (PLASTIC, 6 mm CONNECTIONS)

MODEL NO. 12-8-05 ..... (PLASTIC, 8 mm CONNECTIONS)

MODEL NO. 12-1/4-01 ..... (BRASS, 1/4" CONNECTIONS)



### NEEDLE VALVE

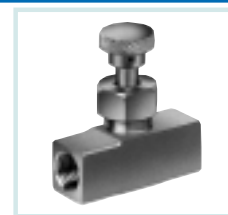
#### USED FOR:

Restriction of flow in 2-way control systems.

Restriction of response time in 3-way control systems.

MODEL NO. 34-1/4-NE ..... (BRASS 1/4" CONNECTIONS)

MODEL NO. 34-1/4-NE-1 ..... (SST 1/4" CONNECTIONS)



## HYDRAULIC RELAY 28-200

### USED FOR:

Electric Control (EL).

sizes: 6" - 24"

Remote hydraulic control (RC).

sizes: 3" - 24"



## SELF-FLUSHING ("FINGER") FILTER

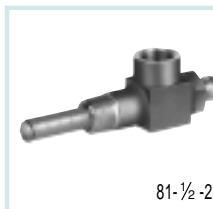
### USED FOR:

Filtration of activation water

MODEL NO. 81-1/2-2 ... 1/2" MALE, 1/2" FEMALE, BRASS

MODEL NO. 81-1/4-24 ... 1/4" MALE, 1/4" FEMALE, BRASS

MODEL NO. 81-1/4-58 ... 1/4" MALE, 1/8" FEMALE, PLASTIC



81-1/2-2



81-1/4-24

81-1/4-58

## LIMIT SWITCH

### USED FOR:

Electric indication of valve position.

all sizes.

Pump Control valve (BC).

sizes: 2" - 24"

Deep Well Control valve (DW).

sizes: 2" - 24"

MODEL NO. 40-LS ..... LIMIT SWITCH

MODEL NO. 48-LB ..... BRACKET + BOLTS, NUTS



## HYDRAULIC RELAY (3-WAY)

### USED FOR:

Remote Controlled Valve (RC).

sizes 3/4" - 4"

MODEL NO. 33-1/8 ... "GALIT"



## P.E CONTROL TUBE CONNECTORS

### USED FOR:

Assembly of control valve.

sizes: 3/4" - 4"

AVAILABLE: 6mm OR 8mm O.D. TUBE FITTINGS 1/8" OR 1/4" BSP MALE THREADS

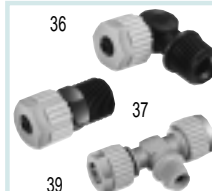
MODEL NO. 36 ..... ELBOW CONNECTOR

MODEL NO. 37 ..... STRAIGHT CONNECTOR

MODEL NO. 39 ..... BRANCH T-SHAPE

SPECIFY REQUIRED FITTING BY CAT. NO. - PIPE SIZE - THREAD

EXAMPLE: 36-6-1/8 IS AN ELBOW CONNECTOR FOR A 6mm PIPE, 1/8" THREAD



36

37

39

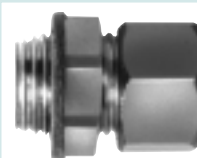
## PRESSURE CHECK POINT

### USED FOR:

Pressure testing valve.

sizes: 1 1/2" - 4"

MODEL NO. 32 - 1/4



32 - 1/4

## CHECK VALVE

### USED FOR:

Assembly of two control sources on the valve.

Pump Control Valve (BC).

MODEL NO. 21 - 1/2

MODEL NO. 31 - 1/8



21 - 1/2



31 - 1/8



## GENERAL DATA

### DIAPHRAGMS LIST

The DOROT valve can be equipped with various types of special diaphragms besides the standard one. These allow for the adaptation of unusual operating conditions, such as very low pressure, extreme regulation requirements, or corrosive liquids.

Note: The standard diaphragm will be assembled in the valve unless ordered otherwise.

#### GAL METAL VALVES

MODEL	SIZE (INCH)	DIAPHRAGM DEFINITION	SERIAL NUMBER	OPERATING RANGE	
				m	psi
45	¾", 1"	STANDARD	18	12-160	17-230
		NITRILE	19	12-160	17-230
		E.P.D.M	51	12-160	17-230
		LOW PRESSURE	85	5-100	7-140
44, 45, 53, 91	1½"	STANDARD	13	12-160	17-230
		EXTREME REGULATION	17	20-160	28-230
		LOW PRESSURE	82	5-50	7- 70
		NITRILE	80	12-160	17-230
		NITRILE	46	20-160	28-230
		E.P.D.M	55	12-160	17-230
44, 45, 47, 77	2", 2½", 323"	STANDARD	3	15-160	21-230
		LOW PRESSURE	2	7-100	10-140
		EXTREME REGULATION	60	20-160	28-230
		LOW PRESSURE E.P.D.M	53	7-100	10-140
		NITRILE	42	15-160	21-230
		E.P.D.M	54	15-160	21-230
		NEOPRENE (UL)	64	15-160	21-230
67, 94	2"	HIGH PRESSURE	69	10-250	15-350
44, 45, 47, 53, 77, 82, 84, 87	3", 4"	STANDARD	32	7-160	10-230
		LOW PRESSURE	5	4-100	6-140
		EXTREME REGULATION	61	20-160	28-230
		E.P.D.M	56	7-160	10-230
		NITRILE	66	4-100	6-140
		NITRILE	43	12-160	17-230
		NEOPRENE	65	7-160	10-230
67	3"	HIGH PRESSURE	70	10-250	14-360
67	4"	HIGH PRESSURE	71	10-250	14-360
47, 53, 77, 87	6", 868"	Cancelled	35	7-160	10-230
		LOW PRESSURE	9	5-100	7-140
		Standard	62	20-160	30-230
		LOW PRESSURE (SP)	91	2- 60	3-85
		E.P.D.M	38	7-160	10-230
		NITRILE	44	7-160	10-230
		NITRILE	93	10-250	14-360
		NEOPRENE	75	10-250	14-360
67	6"	HIGH PRESSURE	72	10-250	14-360
		NITRILE	68	10-250	14-360
		NEOPRENE	76	10-250	14-360
47, 77, 87	8", 12", 14"	STANDARD	36	7-160	10-230
		LOW PRESSURE	37	2-100	3-140
		EXTREME REGULATION	67	20-160	28-230
		NITRILE	45	7-160	10-230
67	8"	HIGH PRESSURE	73	10-250	14-360
47, 77, 87	10"	STANDARD	40	7-160	14-360
		LOW PRESSURE	50	2-100	10-230
67	10"	HIGH PRESSURE	78	10-250	14-360
		LOW PRESSURE	92	2-100	3-140
67, 77	16", 20", 24"	HIGH PRESSURE	78	7-250	10-360
		LOW PRESSURE	92	2-100	3-140

#### BACKFLUSHING VALVES

SIZE (INCH)	DIAPHRAGM DEFINITION	SERIAL NUMBER	OPERATING RANGE	
			m	psi
(57, 58)	STANDARD	5M	4-100	6-140
3"x2"/3"x3"/4"x3"/4"x4"	HIGH PRESSURE	89M	15-160	22-230
(51, 52)	STANDARD	6	5-100	7-140
(58P)	STANDARD	97	10-60	14-85
3"x2"/3"x3"/4"x3"/4"x4"	HIGH PRESSURE	98	20-100	28-140

#### PLASTIC VALVES MODEL 75

SIZE (INCH)	DIAPHRAGM DEFINITION	SERIAL NUMBER	OPERATING RANGE	
			m	psi
¾", 1"	VERSION "E"	1	5-80	7-110
	VERSION "TE"	25	5-80	7-110
1½", 2", 2½", 3"	STANDARD	21	10-100	15-140
	VERSION "E"	22	8-100	11-140
	VERSION "T"	21	8-100	11-140
	VERSION "TE"	22	10-100	15-140

## DIAPHRAGMS LIST (CONT.)

### PLASTIC VALVES MODEL 95/96

SIZE (INCH)	DIAPHRAGM DEFINITION	SERIAL NUMBER	OPERATING RANGE	
			m	psi
3", 4"	STANDARD	95	6-80	8-110
6"	STANDARD	52	5-100	8-145

### RISER VALVES

MODEL	DIAPHRAGM DEFINITION	SERIAL NUMBER	OPERATING RANGE	
			m	psi
37, 38, 39	STANDARD	41	15-160	22-230
46, 86	STANDARD	3	15-160	22-230
	LOW PRESSURE	2	7-100	10-140
	LOW PRESSURE (SP.)	12	4-50	6-70

### MODEL 09

SIZE (INCH)	DIAPHRAGM DEFINITION	SERIAL NUMBER	OPERATING RANGE	
			m	psi
2	STANDARD	8	5-100	7-140

### WEIGHTS (ROUNDED VALUES)

SIZE	20	¾	25	1	32	1¼	40	1½	50	2	65	2½	80 LF	323	80	3	100	4
MODEL	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs
<b>GAL METAL VALVES</b>																		
44							2.2	4.9	3.2	7	3.6	7.9	4.5	9.9	11	24		
45	0.9	2	1	2.2			1.8	4	2.6	5.7	3.4	7.5	3.9	8.5				
47									7.2	16			11	24	17	38	22	48
53							1.8	4	2.6	5.7			3.7	8.1	11	24	11	24
67									10	22					30	66	38	84
77									7.7	17			11.8	27	18.2	41	23.5	51
82															18	40		
84															10.8	24		
87									8	18					19	43	24	53
91					1.7	3.7	1.7	3.7	2.4	5.3			3.6	7.9				
94									6	13								
<b>PLASTIC VALVES</b>																		
75	0.2	0.4	0.2	0.4			0.9	2	1	2.2	1.3	2.7			1.4	3.1		
95/96															4.2	9.3	4.2	9.3
<b>RISER VALVES</b>																		
37, 38															9.2	20		
39															7.9	17.4		
46															8.1	18		
86															7.6	17		
<b>BACKFLUSHING CONTROL VALVES</b>																		
57-3x2															22	48		
57-3x3															22	48		
57-4x3																	25	56
58-3x2															15	33		
58-3x3															15	33		
58-4x3																	16	35
58-4x4																	16	35
58P 3x2															4.1	9		
58P 3x3															4.1	9		
58P 4x3																	4.3	9.5
58P 4x4																	4.3	9.5
<b>MODEL 09</b>																		
									3.2	7								

## WEIGHTS (ROUNDED VALUES)

SIZE	150	6	200	868	200	8	250	10	300	12	350	14	400	16	500	20	600	24
MODEL	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs
<b>GAL METAL VALVES</b>																		
47	46	100	50	110	80	176	117	257	156	344								
53	31	68																
67	75	165			123	271	190	419					433	954				
77	49	107	54	117	86	188	125	275	167	368	172	379	405	892	674	1484	696	1532
82	45	99																
87	51	112			89	196	131	288	174	383	180	396						

## STANDARD VALVE

### MATERIAL SPECIFICATIONS

CAST IRON .....	ISO 185 (ASTM A126)
DUCTILE IRON (SGI) .....	ISO 1083
CAST BRONZE .....	BS 1400 LG2, SAE 40
BRASS .....	ISO 426, DIN 17660
SST: SPRINGS .....	SST 302
BOLTS, NUTS .....	SST 304
PILOT COMPONENTS .....	SST 303/304/316
STEEL BOLTS .....	ZINC PLATED CARBON STEEL
RUBBER: DIAPHRAGMS .....	NYLON REINFORCED POLYISOPRENE (NR)
O-RINGS .....	NITRILE (NBR)
PLASTIC .....	GLASS REINFORCED POLYAMIDE (NYLON) OR uPVC
COATING .....	ELECTROSTATICALLY APPLIED, OVEN BAKED POLYESTER

## PRESSURE RATING OF STANDARD CONNECTIONS

STANDARD	VALID FOR	PRESSURE RATING		TAG MARKING
		mwc	psi	
ISO PN 10	C.I., SGI, C.B.	100	140	PN 10
ISO PN 16	C.I., SGI, C.B.	160	230	PN 16
ISO PN 25	C.I., SGI, C.B.	250	360	PN 25
ANSI 125	C. I.	140	200	AN 125
ANSI 150	C.I., SGI, C.B.	170	250	AN 150
AS 2129, BS 10 / D	C.I., C.B.	100	140	BS D
AS 2129, BS 10 / E	C.I., C.B.	160	230	BS E
JIS 5K	C.I., SGI.	50	70	JIS 5
JIS 10K	C.I., SGI.	100	140	JIS 10
JIS 16K	C.I., SGI.	160	230	JIS 16
JIS 20K	C.I., SGI.	200	280	JIS 20

ABBREVIATIONS: C.I.= CAST IRON, SGI = DUCTILE IRON, C.B.=CAST BRONZE

## CAPACITY OF CONTROL CHAMBERS

### GAL VALVES MODELS 44, 45, 47, 53, 77, 82, 84, 87, 91

SIZE	METRIC	USIS
3/4"	30 cm <sup>3</sup>	1.8 in <sup>3</sup>
1"	30 cm <sup>3</sup>	1.8 in <sup>3</sup>
1 1/2"	70 cm <sup>3</sup>	4.2 in <sup>3</sup>
2", 2 1/2", 323"	160 cm <sup>3</sup>	10 in <sup>3</sup>
3", 4"	0.6 LIT.	37 in <sup>3</sup>
6", 868"	1.8 LIT.	0.5 GAL.
8"	4.7 LIT.	1.2 GAL.
10"	6.5 LIT.	1.7 GAL.
12"	9.4 LIT.	2.5 GAL.
14"	9.4 LIT.	2.5 GAL.
16"	12.5 LIT.	3.3 GAL.
20"	25 LIT.	6.6 GAL.
24"	25 LIT.	6.6 GAL.

## CAPACITY OF CONTROL CHAMBERS (CONTINUED)

### HIGH PRESSURE VALVES MODELS 67, 94

SIZE	METRIC	USIS
2"	180 cm <sup>3</sup>	11 in <sup>3</sup>
3"	300 cm <sup>3</sup>	18 in <sup>3</sup>
4"	0.5 LIT.	30 in <sup>3</sup>
6"	2 LIT.	0.5 GAL.
8"	4.8 LIT.	1.3 GAL.
10"	6.2 LIT.	1.6 GAL.
16"	12.5 LIT.	3.3 GAL.

### PLASTIC VALVES MODELS 75

SIZE	METRIC	USIS
3/4", 1"	36 cm <sup>3</sup>	2.2 in <sup>3</sup>
1 1/2", 2", 3"	180 cm <sup>3</sup>	11 in <sup>3</sup>

### PLASTIC VALVES MODELS 95, 96

SIZE	METRIC	USIS
3", 4"	0.7 LIT.	0.2 GAL.
6"	2.6 LIT.	0.7 GAL.

## ORDER FORM

The customer is requested to order the valve in the following format, to prevent possible misunderstandings.

The GREY parts of the order form are mandatory and the factory cannot accept an order which excludes them.

