

35
COUNTRIES

2000
PRODUCTS

40000
M² PRODUCTION PLANT

150
EMPLOYEES

Commercial Catalog

 **ASBIR[®]**
Domestic and Foreign Trade Inc.

iClean[®]

Filtration Systems

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FILTRATION .:.

Obstruction of sprinklers and drippers is one of most significant problems encountered in irrigation systems. Most common reason of the obstruction is about minerals, organic and inorganic materials found in the water resource. Process of filtering water in the irrigation system is referred as filtration. Filtration is the best protection method against avoiding entrance/obstruction of dripper, sprinkler, hydrant and other similar equipments used in the irrigation system by sediments. Because, process of finding the obstructed dripper, to clean or replace the dripper is very costly and laborious. Therefore, filtration is most significant control unit of an irrigation system.

filter selection table

Water Source	Type of Filter to be used
Network Water	Screen Filter Hydrocyclone Disc Filter
Well Water	Disc Filter Hydrocyclone Screen Filter
River or Stream Water	Disc Filter Gravel Filter and Disc Filter System Gravel Filter and Screen Filter System Gravel Filter and Hydrocyclone System
Lake or Pool Water	Disc Filter Gravel Filter and Disc Filter System Gravel Filter and Screen Filter System Gravel Filter and Hydrocyclone System
Spring or Artesian Well Water	Screen Filter Hydrocyclone Disc Filter
Water Supply containing Organic Material	Disc Filter Gravel Filter and Disc Filter System Gravel Filter and Hydrocyclone System
Water Supply containing sand	Screen Filter Hydrocyclone Disc Filter

type of filter to be used

1. Sand separators (Hydrocyclones)
2. Screen Filter
3. Disc Filters
4. Media Tanks for Sand-Gravel Filters

mesh and disc numbers based on particulate matter dimension classification

Particle Class	Particle Size (mm)	Screen -Disc Number (mesh)	Screen -Disc Number (micron)
Very Rough Sand	1.0 – 2.0	10 – 18	1500 – 850
Rough Sand	0.50 – 1.0	18 – 35	850 – 420
Intermediary Sand	0.25 – 0.50	35 – 60	420 – 250
Fine Sand	0.10 – 0.25	60 – 160	250 – 100
Very Fine Sand	0.05 – 0.10	160 – 270	100 – 50
Silt	0.002 – 0.05	270 – 400	50 – 30
Clay	< 0.002	> 400	> 30

calculation of approximate mesh and disc diameter

$$\text{mesh} = \frac{15000}{d} \quad d \text{ (Micron)}$$

Sample
 $d = 250 \text{ micron (=0.25 mm)}$ $\text{mesh} = \frac{15000}{250} = 60 \text{ mesh}$
 $d = \frac{15000}{60} = 250 \text{ micron}$

filtration degree conversion table

Micron	25	30	40	50	80	100	130	150	200	400	800	1500	3000
mm	0,025	0,03	0,04	0,05	0,08	0,1	0,13	0,15	0,2	0,4	0,8	1,5	3,0
Mesh	650	550	400	300	200	150	120	100	80	40	20	10	5

iClean®

description

iClean® is the ideal solution for agricultural and municipal filtration due to its large filtration area, reliable operation mechanism and simple structure. iClean® works on differential pressure and cleans itself automatically without any external intervention. iClean® has electronically activated models besides hydraulically controlled models. Due to suction nozzles, cleaning is achieved with little water consumption. Besides the standard 130 micron filter size, different screen sizes are available for different dirt levels.

iClean® series

electric activated automatic screen filter



VE Series



HE Series

hydraulic controlled automatic screen filter



VH Series



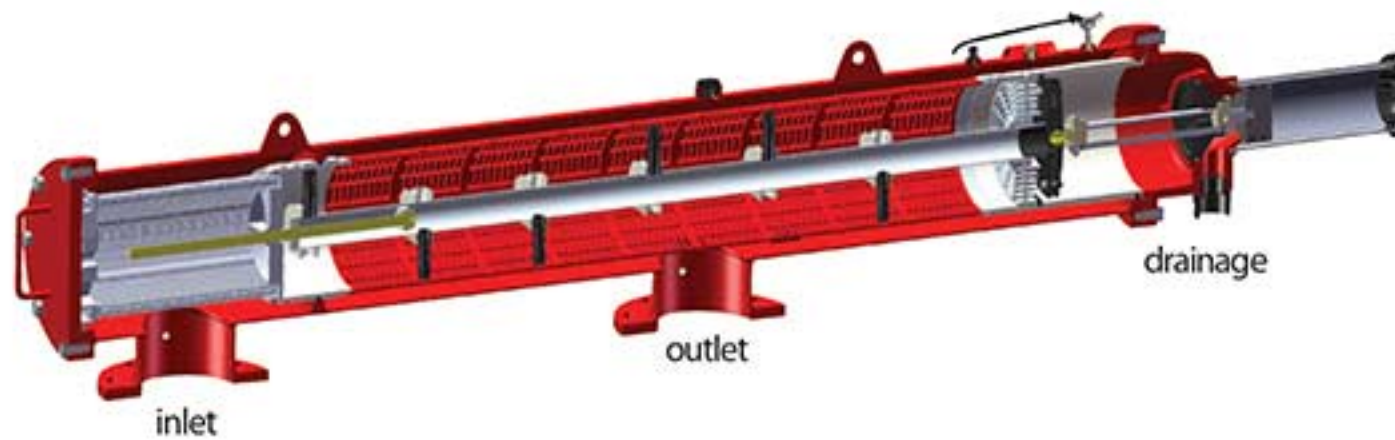
HH Series

iClean®

automatic screen filter

operation principle

iClean® series can do automatic cleaning without any need for external power supply or optionally with electrical activation from a distance. The filter screen can achieve filtration rates from 25 m³/h to 180 m³/h. Standart filter screen size is 130 microns and inlet/exit pipe diameters are available between 2" to 8".



filtration method

Filtration starts as the dirty water enters the coarse screen from the inlet. In order to protect the fine filter, large particles are filtered on the coarse filter. Water then passes through the fine filter, particals are captured by the fine filter, and clean water leaves from the outlet. Particals gradually accumulating on the fine filter, increases the pressure difference. Once the pressure difference exceeds the preset pressure differential value, filter automatically starts to clean itself.

cleaning method

Once the pressure difference exceeds the preset pressure differential value, hydraulic control unit opens the drainage valve and the cleaning cycle starts. Particals accumulated on the fine filter, are sucked by the nozzles and the turbine and discharged from the drainage pipe. Thus cleaning operation is achieved. Filtration is not interrupted and iClean® continues filtration during the cleaning cycle.

features

- Most efficient filtration method
- Reliability: efficient filtration at various flow rates
- Low head loss
- Automatic self-cleaning system
- Uninterrupted filtration during self-cleaning
- Low maintenance cost

applications

- Agricultural applications
- Industrial applications
- Municipal applications
- Water management
- Cooling towers

iClean®

automatic screen filter

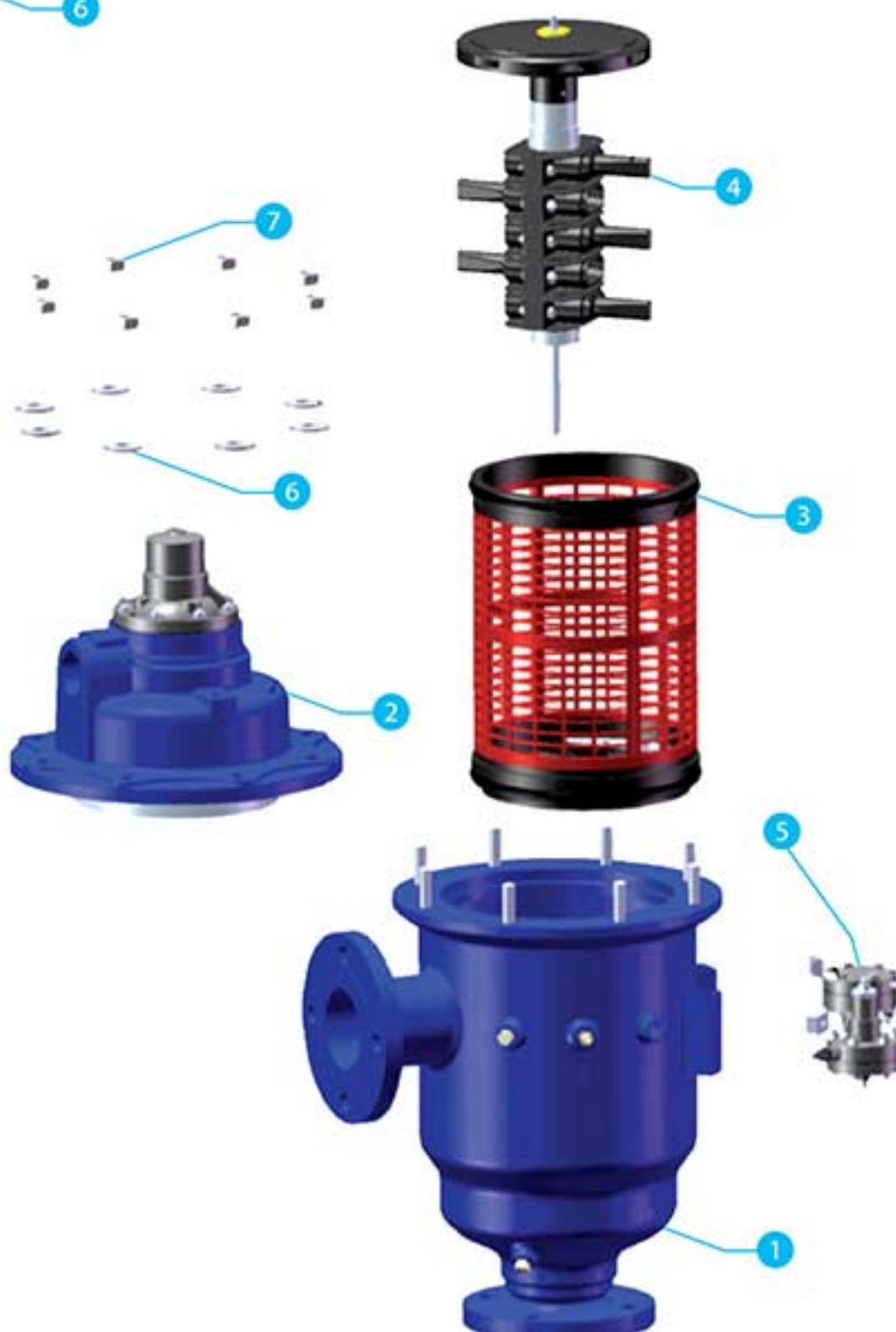
Material List (horizontal)

Part No	Part Name
1	Body
2	Bonnet and piston mechanism
3	Screen and filter group
4	Suction nozzle set
5	Coarse filter
6	Bonnet
7	Hydraulic control unit
8	Stainless steel nut
9	Stainless Steel Bolt



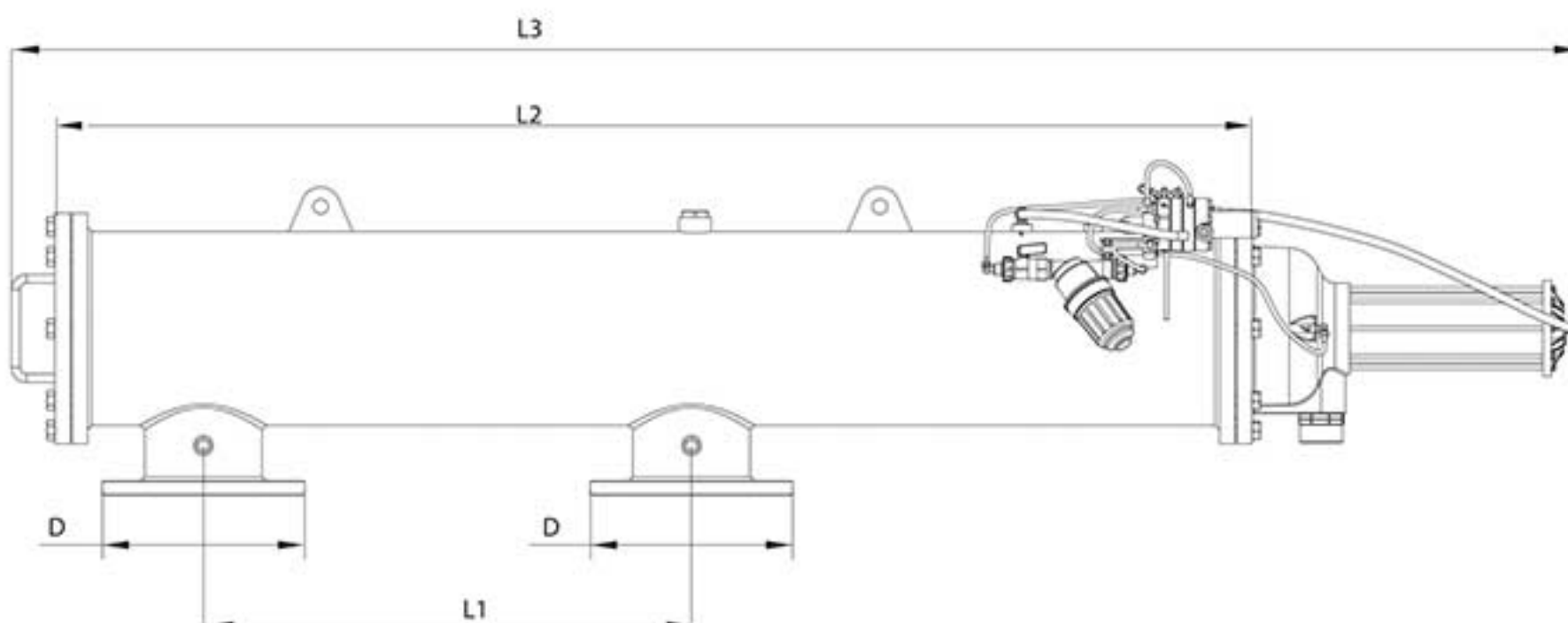
material list (vertical)

Part No	Part Name
1	Body
2	Bonnet and piston mechanism
3	Screen and filter group
4	Suction nozzle set
5	Hydraulic control unit
6	Stainless Steel Nut
7	Stainless Steel Washer



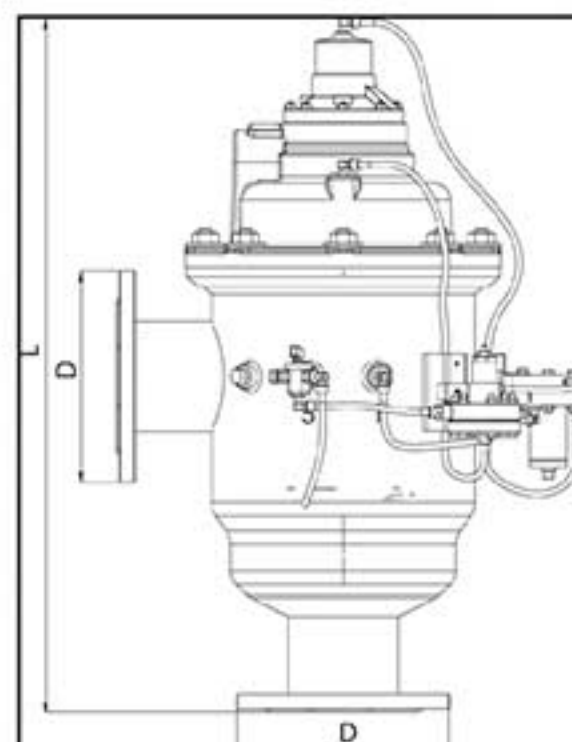
iClean®

automatic screen filter



available model dimensions

Model	D	L	L1	L2	L3
	inch	mm	mm	mm	mm
VH-25	2"	630	-	-	-
VH-40	3"	623	-	-	-
VH-60	3"	727	-	-	-
VH-80	4"	720	-	-	-
HH-100	4"	-	900	1894	2400
HH-120	5"	-	900	1894	2400
HH-160	6"	-	900	1894	2400
HH-180	8"	-	900	1894	2400



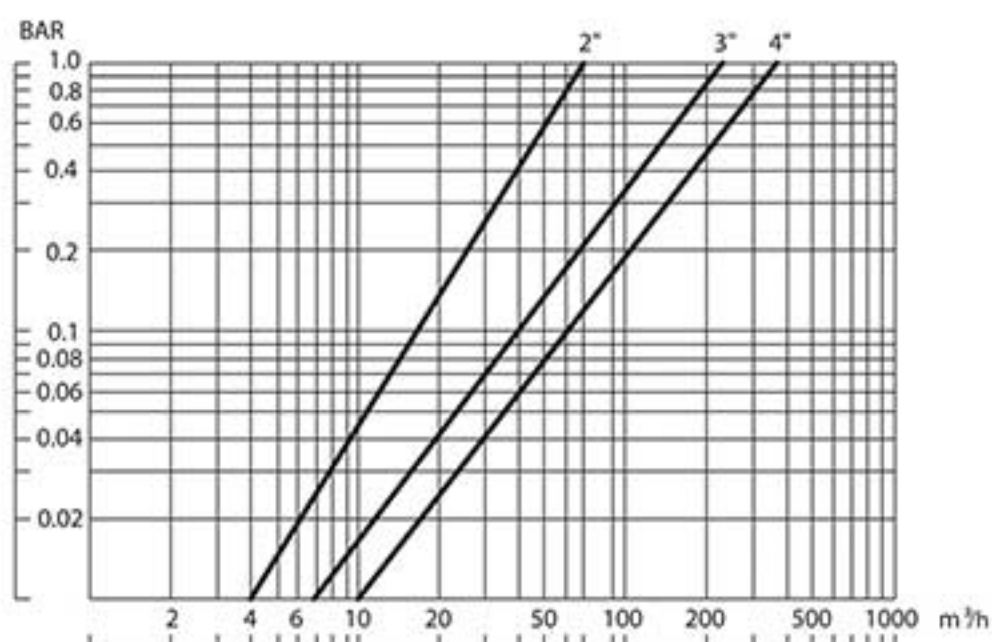
available models

Filter Model Code	VH-25	VH-40	VH-60	VH-80	HH-100	HH-120	HH-160	HH-180
	VE-25	VE-40	VE-60	VE-80	HE-100	HE-120	HE-160	HE-180
Max. Flow Rate	25 m /h	40 m /h	60 m /h	80 m /h	100 m /h	120 m /h	160 m /h	180 m /h
Inlet/Outlet Dimension	2"	3"	3"	4"	4"	5"	6"	8"
Standard Filtration Degree	130 micron	130 micron	130 micron	130 micron	130 micron	130 micron	130 micron	130 micron
Min. Operation Pressure	2,5 bar	2,5 bar	2,5 bar	2,5 bar	2,5 bar	2,5 bar	2,5 bar	2,5 bar
Max. Operation Pressure	8 bar	8 bar	8 bar	8 bar	8 bar	8 bar	8 bar	8 bar
Max. Operation Temperature	60°C	60°C	60°C	60°C	60°C	60°C	60°C	60°C
Cleaning Cycle Time	10-16 sn	10-16 sn	10-16 sn	10-16 sn	15-22 sn	15-22 sn	15-22 sn	15-22 sn
Cleaning Criteria	Differential Pressure (DP) 0.5 bar	Differential Pressure (DP) 0.5 bar	Differential Pressure (DP) 0.5 bar	Differential Pressure (DP) 0.5 bar	Differential Pressure (DP) 0.5 bar	Differential Pressure (DP) 0.5 bar	Differential Pressure (DP) 0.5 bar	Differential Pressure (DP) 0.5 bar
Filtration Area	500 cm ²	500 cm ²	1000 cm ²	1000 cm ²	4500 cm ²	4500 cm ²	4500 cm ²	4500 cm ²

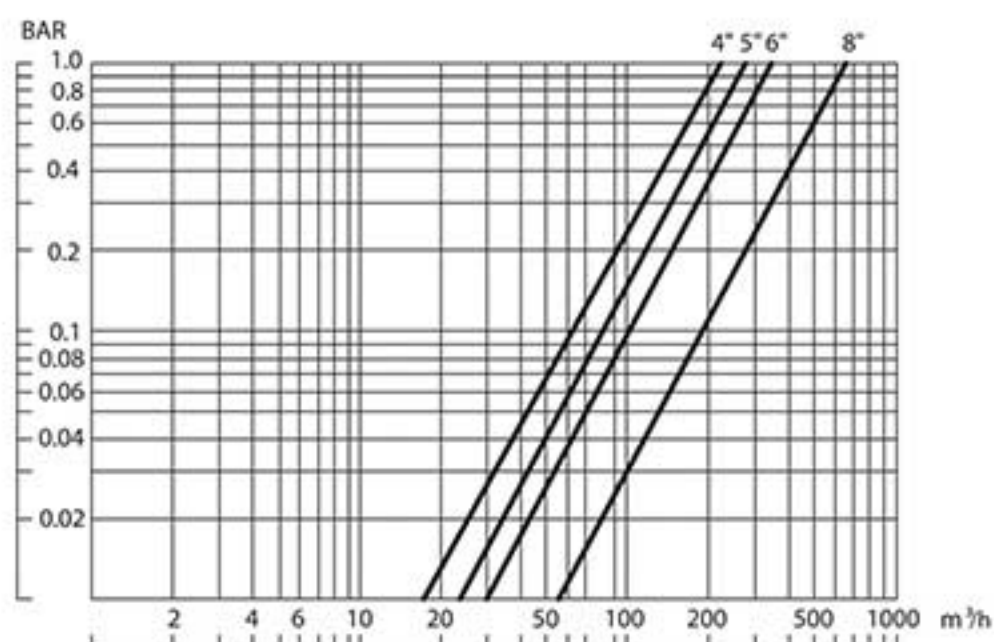
iClean®

automatic screen filter

head loss chart (vertical)



head loss chart (horizontal)



sample application



Model	Connection Size	Connection Type	Control Unit	Screen Degree
VH-80	4"	Flanged (F)	Hydraulic	130 micron
HE-120	6"	Flanged (F)	Electric	130 micron

iClean®

automatic screen filter systems

hydraulic controlled iClean® (vertical)+hydrocyclone+PS+collector



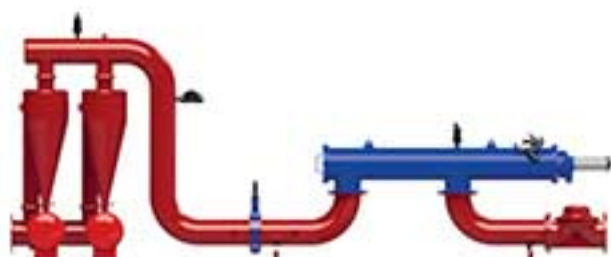
Code	Connection Size (inch)	Hydrocyclone Quantity	Filtration Area (cm ²)	Capacity (m ³ /h)
VH-C-PS-2H-0225	2"	1x2"	500	25
VH-C-PS-3H-0340	3"	1x3"	500	40
VH-C-PS-3H-0350	3"	1x3"	1000	50
VH-C-PS-4H-0475	4"	1x3"	1000	75

Grooved End Clamps, Hydrocyclone, Air Valves, Pressure Gauges, Ball Valves, Connection Equipments, Quick Pressure Relief Valve (QR) and Pressure Sustaining Valve (PS) are included in the system

Fertilizer kit and tank are not included in the system.

Package: Wooden Crate

hydraulic controlled iClean® (horizontal)+hydrocyclone+PS+collector



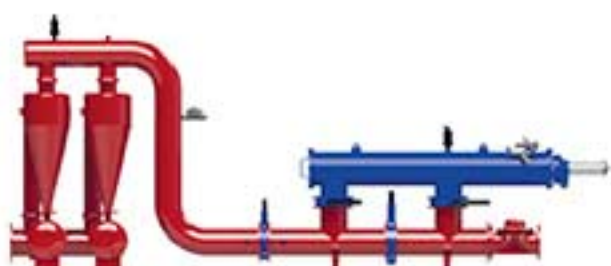
Code	Connection Size (inch)	Hydrocyclone Quantity	Filtration Area (cm ²)	Capacity (m ³ /h)
HH-C-PS-4H-04100	4"	1x4"	4500	100
HH-C-PS-5H-05120	5"	1x5"	4500	120
HH-C-PS-6H-06160	6"	1x6"	4500	160
HH-C-PS-5H-08180	8"	2x5"	4500	180

Grooved End Clamps, Hydrocyclone, Air Valves, Pressure Gauges, Ball Valves, Connection Equipments, Quick Pressure Relief Valve (QR) and Pressure Sustaining Valve (PS) are included in the system.

Fertilizer kit and tank are not included in the system.

Package: Wooden Crate

hydraulic controlled iClean® (horizontal)+hydrocyclone+PS+ By Pass collector



Code	Connection Size (inch)	Hydrocyclone Quantity	Filtration Area (cm ²)	Capacity (m ³ /h)
HH-C-B-PS-4H-04100	4"	1x4"	4500	100
HH-C-B-PS-5H-05120	5"	1x5"	4500	120
HH-C-B-PS-6H-06160	6"	1x6"	4500	160
HH-C-B-PS-5H-08180	8"	2x5"	4500	180

Grooved End Clamps, Hydrocyclone, Air Valves, Pressure Gauges, Ball Valves, Connection Equipments, Quick Pressure Relief Valve (QR) and Pressure Sustaining Valve (PS) are included in the system.

Fertilizer kit and tank are not included in the system.

Package: Wooden Crate

iClean®

automatic screen filter systems

electric activated iClean® (vertical)+hydrocyclone+PS+collector



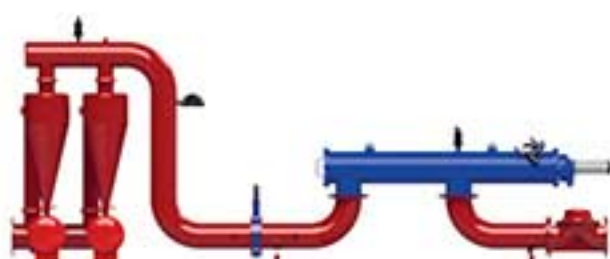
Code	Connection Size (inch)	Hydrocyclone Quantity	Filtration Area (cm ²)	Capacity (m ³ /h)
VE-C-PS-2H-0225	2"	1x2"	500	25
VE-C-PS-3H-0340	3"	1x3"	500	40
VE-C-PS-3H-0350	3"	1x3"	1000	50
VE-C-PS-4H-0475	4"	1x3"	1000	75

Grooved End Clamps, Hydrocyclone, Air Valves, Solenoid Valve, Pressure Gauges, Ball Valves, Connection Equipments, Quick Pressure Relief Valve (QR) and Pressure Sustaining Valve (PS) are included in the system.

Fertilizer kit and tank are not included in the system.

Package: Wooden Crate

electric activated iClean® (horizontal)+hydrocyclone+PS+collector



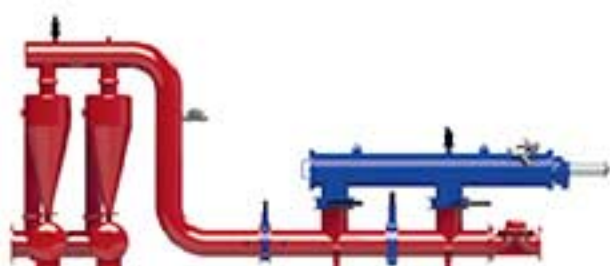
Code	Connection Size (inch)	Hydrocyclone Quantity	Filtration Area (cm ²)	Capacity (m ³ /h)
HE-C-PS-4H-04100	4"	1x4"	4500	100
HE-C-PS-5H-05120	5"	1x5"	4500	120
HE-C-PS-6H-06160	6"	1x6"	4500	160
HE-C-PS-5H-08180	8"	1x8"	4500	180

Grooved End Clamps, Hydrocyclone, Air Valves, Solenoid Valve, Pressure Gauges, Ball Valves, Connection Equipments, Quick Pressure Relief Valve (QR) and Pressure Sustaining Valve (PS) are included in the system.

Fertilizer kit and tank are not included in the system.

Package: Wooden Crate

electric activated iClean® (horizontal)+hydrocyclone+PS+ By Pass collector



Code	Connection Size (inch)	Hydrocyclone Quantity	Filtration Area (cm ²)	Capacity (m ³ /h)
HE-C-B-PS-4H-04100	4"	1x4"	4500	100
HE-C-B-PS-5H-05120	5"	1x5"	4500	120
HE-C-B-PS-6H-06160	6"	1x6"	4500	160
HE-C-B-PS-5H-08180	8"	1x8"	4500	180

Grooved End Clamps, Hydrocyclone, Air Valves, Solenoid Valve, Pressure Gauges, Ball Valves, Connection Equipments, Quick Pressure Relief Valve (QR) and Pressure Sustaining Valve (PS) are included in the system.

Fertilizer kit and tank are not included in the system.

Package: Wooden Crate

iClean®

automatic plastic disc filter



**BACK-FLUSHING
PRESSURE**

1BAR

description

iClean® Automatic Plastic Disc Filter is constructed by assembling many tiny synthetic disc manufactured from polypropylene material on filter body with telescopic structure. When synthetic discs arranged one-on-other are centralized around within telescopic filter body, center of discs forms a hollow disc. They are designed to perform a deep filtration based on desired micron level found on both sides of synthetic discs and inter-sectioning of channels designed in crosswise manner. Most outstanding advantage of iClean® Automatic Plastic Disc filter is that automatically self cleans the filter when it is obstructed.

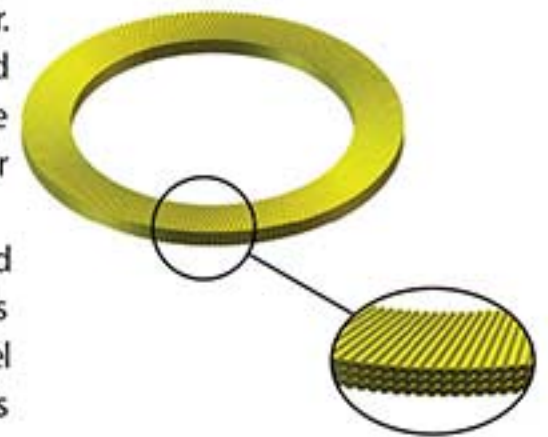
operating principle

iClean® Automatic Plastic Disc Filter operates in two different modes including filtration process and back flushing process. In back flushing process of iClean® Automatic disc filter, internal mechanism of filter, where synthetic discs are assembled, is automatically flushed. During cleaning process, no need for assembly and disassembly cycle of filter's internal mechanism ensures continuous operation.

filtration process



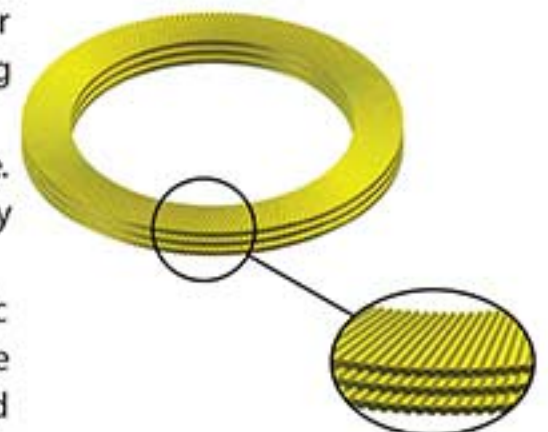
Many synthetic discs assembled on telescopic filter body create a hollow cylinder. Those discs assembled on the filter body are compressed using spring force and water pressure. Due to above mentioned arrangement of discs, many crosswise water channels intersecting each other are formed between two discs. Polluted water supplied from inlet pipe of iClean® Automatic Disc Filter is transferred on discs due to cyclone effect arising from centrifuge wing found on filter body. The polluted water supplied as mentioned above passes from crosswise water channels and it is filtered depending on filtration degree. Particles with diameter larger than channel diameter of the disc attach to exterior surface of discs. Filtered clean water progresses from hollow section of discs and thus, clean water is supplied to the system from clean water pipe of the filter. As pressure resistance of discs involved in iClean® automatic plastic disc filters shall cause no change on filter surface, efficiency to trap solid particles will be very high.



back-flushing process

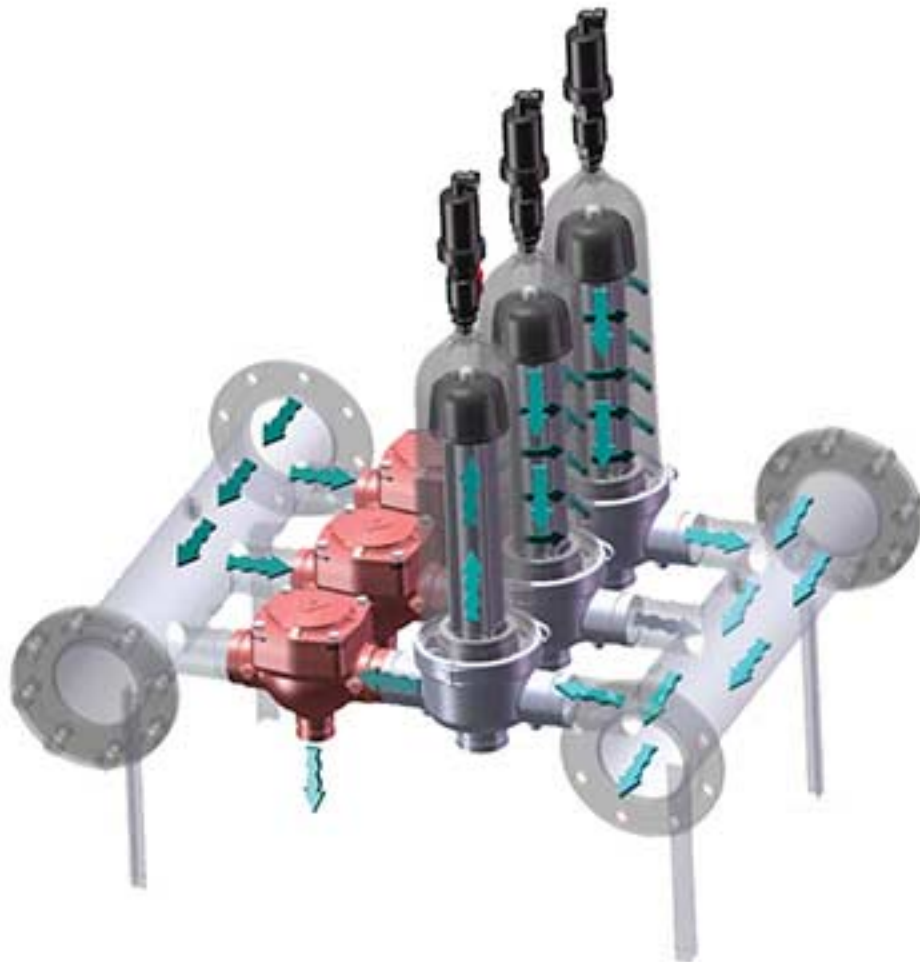


Throughout filtration process, synthetic discs will be obstructed at a particular time due to filtration of polluted water containing particulate matter. Back flushing process of iClean® automatic disc filters connected parallel to the system is time-dependently started using pressure gradient (DP) sensor or a control de- Groovede. The filtered clean water is supplied in reverse manner along telescopic filter body from the clean water pipe of iClain® automatic disc filter. Pressure of back flushing water elongates distance between discs by removing spring force on the synthetic discs. Pressure clean water is sprayed from nozzles on filter body to the crosswise channels of discs. Due to spray of pressure clean water, particles previously attached to the channels of synthetic discs are cleaned and discharged. Back flushing process is completed within short time such as 15-20 seconds. Thus, coupious amount of water is not used for flushing iClean® automatic disc filter, as the case for other filters. At the end of the back flushing process, filter is shifted to filtration position.



iClean®

automatic plastic disc filter



description

Back flushing control valves adjusting filtration and back flushing positions of iClean® automatic disc filters connected parallel to the manifold collector system are programmed by differential pressure sensor (DP) for pressure and by control device for time-dependent parameters.

disc filter degree measures

Mesh No	Micron	Effective Filtering Surface (%)	Disc Color
80	200	%39	Blue
120	130	%39	Red
150	100	%40	Yellow

applications

Filtration of well water
 Filtration of river, lake and reserve water
 Filtration of applications such as process water and cooling water
 Upwards the ultra-filtration systems
 Agricultural drip and micro-irrigation systems
 For recreational irrigation system practices

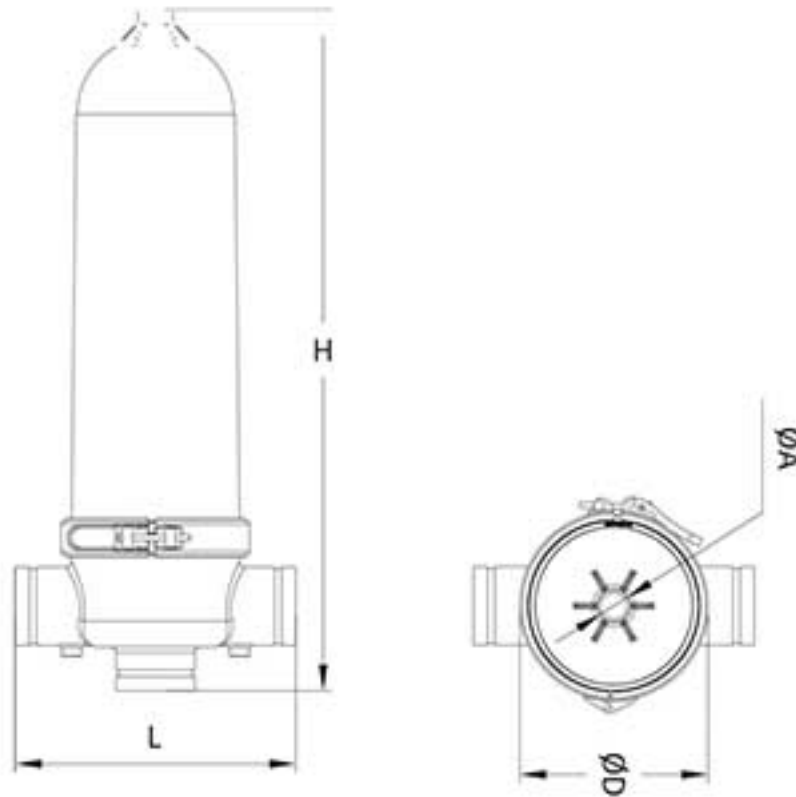
specifications

Back-flushing pressure is 1 bar.
 Back flushing process is completed in automated manner.
 Water supply is not interrupted during back flushing process.
 As it can be cleaned within short time, very low amount of water is used in back flushing process.
 Due to discs with varying dimensions, desired filtration degree is ensured.
 Maintenance during operation is very easy.
 As it is used in modular filter systems, filtration at desired rates can be performed.
 Due to body and framework reinforced against corrosion, it has long operation life.

iClean®

automatic plastic disc filter

dimension and weight



available models and recommended flow rates

Model	ØA	ØD	H	L	ağırlık	Filtration Area (cm ²)	Recommended Flow Rate (m ³ /h)
Auto	1"	214 mm	773 mm	318 mm	9 kg	1520 cm ²	25-35 m ³ /h
Manual	1"	214 mm	773 mm	318 mm	9 kg	1520 cm ²	25-35 m ³ /h

technical specifications

Max. Operating Pressure	Min. Back-Flushing Pressure	Min. Back-Flushing Flow Rate	Temperature	Connection
8 (bar) 120 (psi)	1 (bar) 14 (psi)	9 – 11 m ³ /h	0 °C – 60 °C (32 °F – 132 °F)	3" (80 mm) Grooved End



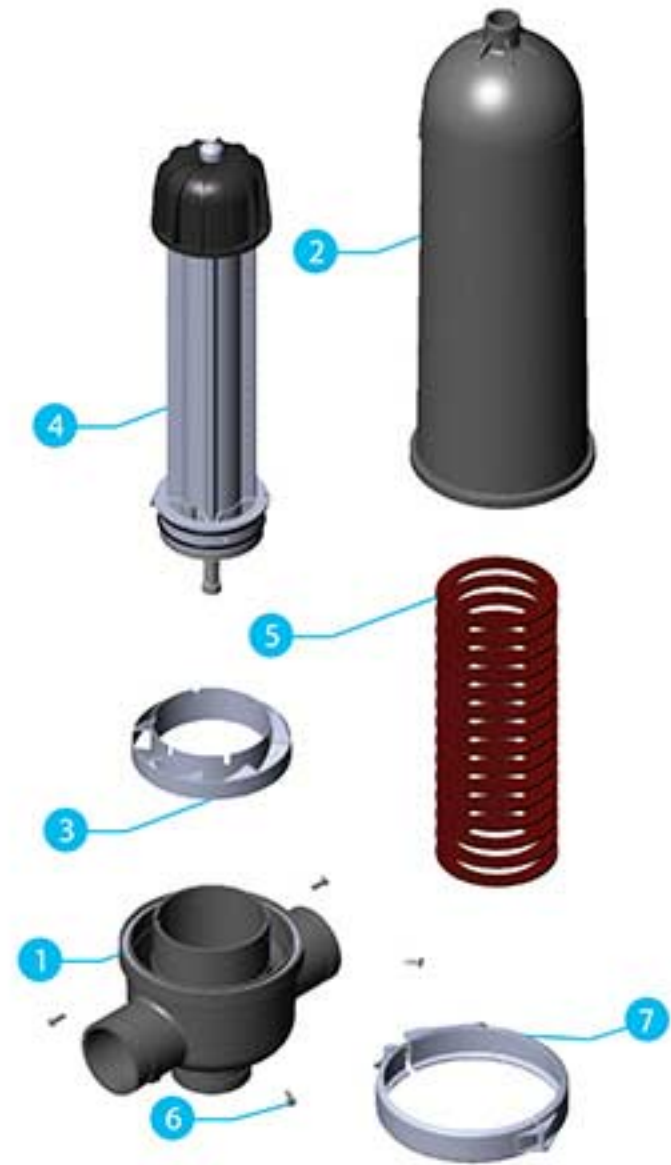
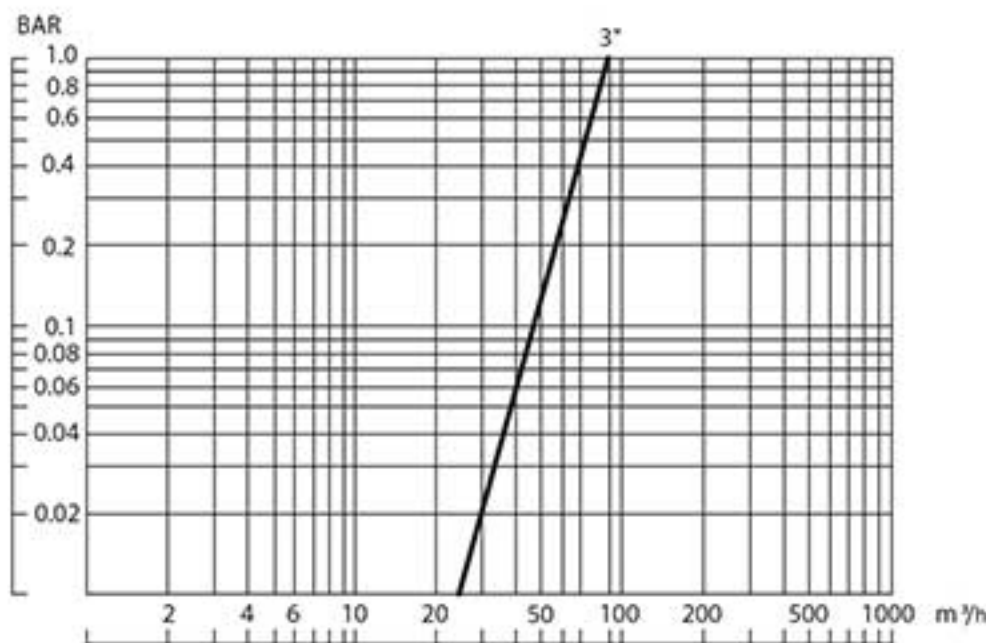
iClean®

automatic plastic disc filter

material list

part no	part name	material
1	Body	Polyamide (PA6.6 %30 GFR)
2	Lid	Polyamide (PA6.6 %30 GFR)
3	Hydrocyclone Wing	PET – P
4	Manual Filter Frame	PET – P
5	Disc	Nylon Reinforced PP
6	Bolt	8.8Js-500 Steel
7	Collar	SST

head loss chart



available models and recommended flow rates

Modules pcs	Recommended Flow (m³/h)	Min. Back-Flushing Flow Rate (m³/h)	Max. Operating Pressure (bar)	Min. Back-Flushing Pressure (1 bar)	Filtering Area (cm²)	Connection
2 modül	60 m³/h	18 m³/h	8 bar	1 bar	3040 cm²	Grooved End
3 modül	90 m³/h	27 m³/h	8 bar	1 bar	4560 cm²	Grooved End
4 modül	120 m³/h	36 m³/h	8 bar	1 bar	6080 cm²	Grooved End
5 modül	150 m³/h	45 m³/h	8 bar	1 bar	7600 cm²	Grooved End
6 modül	180 m³/h	54 m³/h	8 bar	1 bar	9120 cm²	Grooved End

* Please consult us for higher flow rate systems.

iClean®

automatic disc filter systems



**BACK-FLUSHING
PRESSURE**

1BAR

Controller, connection equipments, air valves and pressure gauges are included in the system.

Fertilizer kit and fertilize tank are not included in the system.

Package: Wooden crate

iclean® automatic disc filter system

Code	Collector Size (inch)	Disc Filter Quantity	Connection Type	Recommended Flow Rate (m³/h)
ADF-02	4	2	Grooved End or Flanged	50
ADF-03	4	3	Grooved End or Flanged	75
ADF-04	5	4	Grooved End or Flanged	100
ADF-05	6	5	Grooved End or Flanged	125
ADF-06	6	6	Grooved End or Flanged	150
ADF-07	8	7	Flanged	175
ADF-08	8	8	Flanged	200



**BACK-FLUSHING
PRESSURE**

1BAR

Controller, connection equipments, air valves, pressure gauges, fertilizer tank and quick pressure relief valve(QR) are included in the system.

Package: Wooden crate

hydrocyclone+fertilization+iclean® automatic disc filter system

Code	Collector Size (inch)	Disc Filter Quantity	Hydrocyclone Quantity	Fertilizer Tank Quantity	Connection Type	Recommended Flow Rate (m³/h)
A-4H-100G-P2	4	2	1-4"	100	Grooved End or Flanged	50
A-4H-100G-P3	4	3	1-4"	100	Grooved End or Flanged	75
A-4H-100G-P4	5	4	1-5"	100	Grooved End or Flanged	100
A-4H-100G-P5	6	5	1-6"	200	Grooved End or Flanged	125
A-4H-100G-P6	6	6	1-6"	200	Grooved End or Flanged	150
A-4H-100G-P7	8	7	2-5"	200	Flanged	175
A-4H-100G-P8	8	8	2-5"	340	Flanged	200

iClean®

semi-auto disc filter systems

1BAR

**BACK-FLUSHING
PRESSURE**

Butterfly valves, ball valves, connection equipments, air valves and pressure gauges are included in the system.
Fertilizer kit and fertilize tank are not included in the system.
Package: Wooden crate



idean® semi-auto disc filter system

Code	Collector Size (inch)	Disc Filter Quantity	Connection Type	Recommended Flow Rate (m³/h)
SMDF-02	4	2	Grooved End or Flanged	50
SMDF-03	4	3	Grooved End or Flanged	75
SMDF-04	5	4	Grooved End or Flanged	100
SMDF-05	6	5	Grooved End or Flanged	125
SMDF-06	6	6	Grooved End or Flanged	150
SMDF-07	8	7	Flanged	175
SMDF-08	8	8	Flanged	200

1BAR

**BACK-FLUSHING
PRESSURE**

Butterfly valves, ball valves, connection equipments, air valves, pressure gauges, fertilizer tank and quick pressure relief valve(QR) are included in the system.
Package: Wooden crate

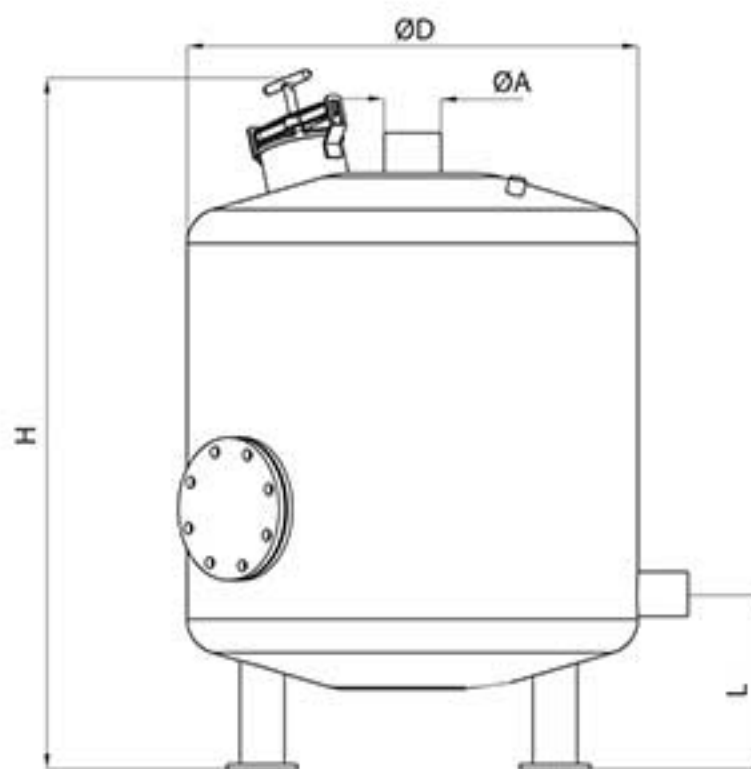


hydrocyclone+fertilization+idean® semi-auto disc filter system

Code	Collector Size (inch)	Disc Filter Quantity	Hydrocyclone Quantity	Fertilizer Tank Quantity	Connection Type	Recommended Flow Rate (m³/h)
SM-4H-100G-P2	4	2	1-4"	100	Grooved End or Flanged	50
SM-4H-100G-P3	4	3	1-4"	100	Grooved End or Flanged	75
SM-4H-100G-P4	5	4	1-5"	100	Grooved End or Flanged	100
SM-4H-100G-P5	6	5	1-6"	200	Grooved End or Flanged	125
SM-4H-100G-P6	6	6	1-6"	200	Grooved End or Flanged	150
SM-4H-100G-P7	8	7	2-5"	200	Flanged	175
SM-4H-100G-P8	8	8	2-5"	340	Flanged	200

gravel (media) filter

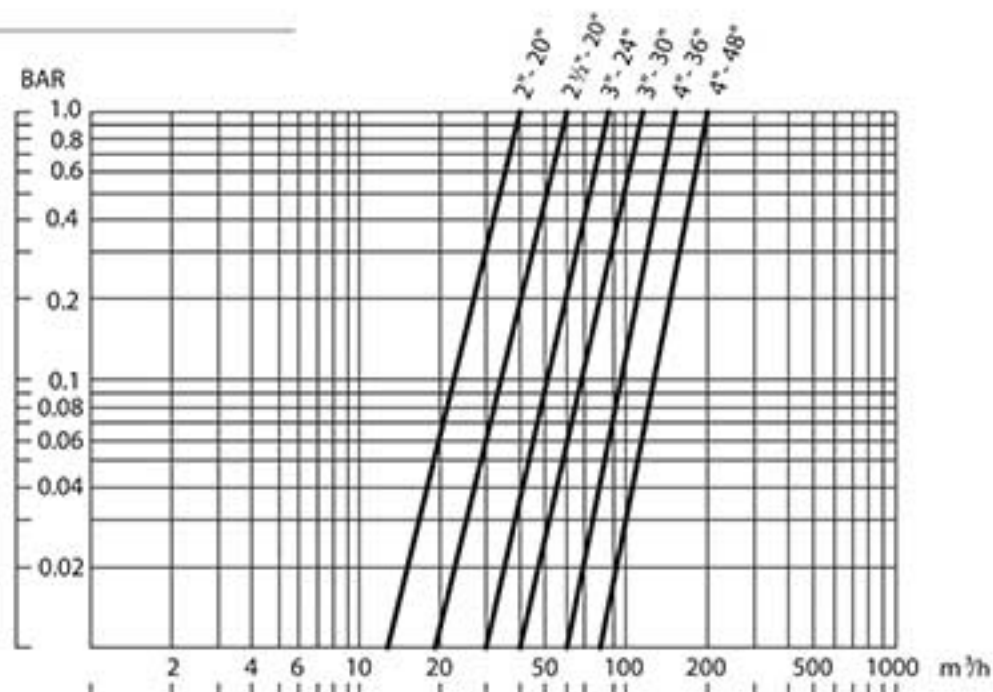
dimension and weight



available models and recommended flow rates

model	ØA		ØD		H		L		Weight		Recommended Flow Rate	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs.	m³/h	l/s
1020	50	2"	450	20"	1200	47"	180	7,1"	72	158	14 - 18	3,9 - 5
1520	65	2½"	450	20"	1200	47"	180	7,1"	74	163	24 - 30	6,6 - 8,3
1024	80	3"	600	24"	1300	51"	260	10,2"	100	220	35 - 40	9,7 - 11,1
1030	80	3"	760	30"	1050	41"	270	10,6"	132	291	40 - 45	11,1 - 12,5
1036	80	3"	910	36"	1110	43"	270	10,6"	186	410	50 - 60	13,9 - 16,6
1536	100	4"	910	36"	1110	43"	270	10,6"	188	414	60 - 70	16,6 - 19,4
1048	100	4"	1220	48"	1110	43"	270	10,6"	240	530	80 - 100	22,2 - 27,7

head loss chart



gravel (media) filter

1000 series



description

Filtration rates of gravel filters designed to be used in filtration of river, lake, pool water and water resources containing organic materials such as lichen and alga is over 15 m/h implicating that they are rapid filters. The outstanding advantage of the gravel filters against other types of filters is about maximum filtration efficiency due to deep filtration. Asbir 1000 series Gravel filters are designed to provide ease of use, maximum filtration efficiency and less maintenance due to simple structure and thus, they are offered to the users.

Asbir 1000 series Gravel filters are manufactured to contain at least two containers. Upper container located within filter vessel is the container of media ensuring the filtration process. In the media container, various materials including but not limited to sand-gravel, quartz sand, Anthracite coal, grinded basalt, silica sand are placed in a particular order based on the filtration degree. Lower container is the clean water tank obtained from filtering process. A rubber diffuser plate separating said two containers is present within the filter. Corks assembled on the plate ensure uniform pressure during back flushing procedure of the media filter and thus, they are designed to provide an efficient back flushing process.

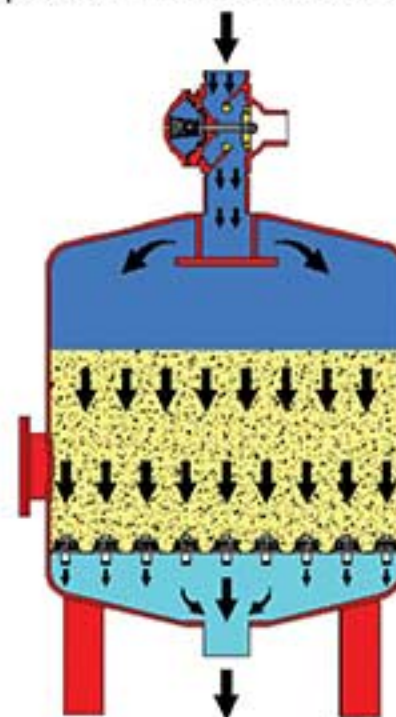
Asbir 1000 series Gravel Filters are projected to operate single or modular and manual or fully automatic back flushing procedure based on the water flow rate to be filtered within scope of the field of use. In order to increase filtration efficiency of gravel filters, it is recommended that modular filter system is selected from a model operating automatic back flushing procedure.

operating principle

Asbir 1000 series Gravel Filters operates in two different modes including filtration process and back flushing process. Asbir media filters are back flushing control gates assembled on the filters to be operated in filtration or back flushing procedures.

filtration process

Polluted water entering from inlet manifold of the filter reaches media filter via back flushing control gate. At this position, inlet port of the back flushing control gate is towards the filter's direction and discharge port is closed. Polluted water reaching the media filter slowly progresses through sand layer placed in the filter depending on the desired filtration degree and thus, it is deeply filtered. Particles found in polluted water are trapped by sand later. Water passing through sand layer and filter corks will supplied to the system via outlet (clean water) manifold.

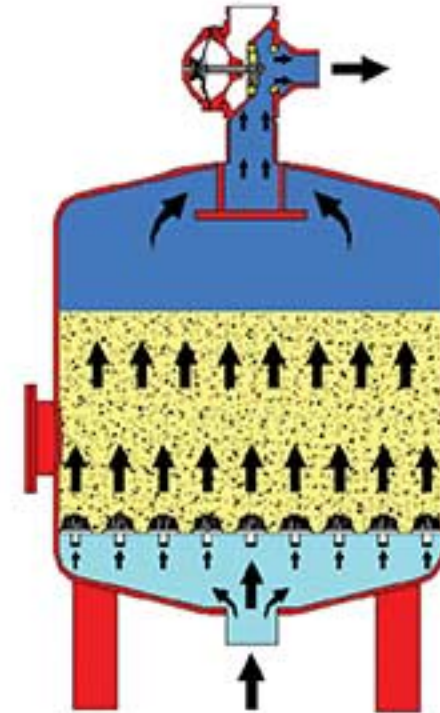


gravel (media) filter

1000 series

back-flushing process

Throughout the filtration process, particles suspended in the sand layer shall later cause obstruction in the filter following a particular operation period. Therefore, pressure loss in the system will increase and media filter is required to be cleaned. Cleaning process of media filters is referred as back flushing. During back flushing process, the issue required to be considered is to wash the filter using clean water. Element ensuring back flushing process is the back flushing control gate assembled on the filter. In this case, inlet port of the back flushing control gate is closed and discharge port is at open position. Pressure clean water supplied from outlet (clean water) manifold progresses to sand layers from filter corks. Particles suspended among sand layers are pushed forward under effect of pressure clean water and they are released to the atmosphere from discharge port of the back flushing control gate. Thus, filter is efficiently cleaned. Duration of back flushing process is adjusted according to obstruction degree of the filter. It is highly recommended that a short-term back flushing process in regular intervals is performed rather than long-term back flushing process.



Filtration Rate in Gravel Filters

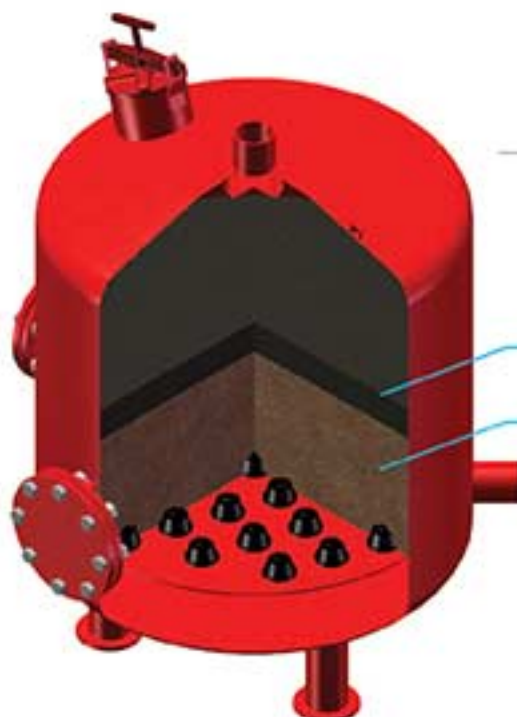
In a filtration process, filtration rate of the filter not only determines efficiency of the filter, but is also directly proportional to the capacity of the filter. Filtration rate defines amount of water passing from unit surface of the filter, or amount of water filtered. If filtration rate of a filter is between 0.5 m/h and 15 m/h, then it will be referred as slow filter and if it is over 15 m/h, it is referred as rapid filter. Filtration rate can be calculated using below equation.

$$V = 1.273 \times 10^{-6} \times \frac{Q}{D^2} \quad V = \text{m/h} \quad Q = \text{m}^3/\text{h} \quad D = \text{mm}$$

filtering degrees of gravel filters

Media Sand Number	Material	Sand Size		Filtration Degree	
		mm	inch	micron	mesh
16	Grinded Silica	0,66	0,026	70 - 100	140 - 200
20	Grinded Silica	0,46	0,018	65 - 80	200- 230
12	Quartz Sand	1,2 - 2,4	0,047 - 0,094	80 - 110	130 - 140
-	Quartz Sand*	0,8 - 1,2	0,047 - 0,031	80 - 120	130 - 200
-	Quartz Sand*	1,2 - 1,5	0,047 - 0,059	100 - 150	100 - 150

* Quartz Sand is typically used in agricultural irrigation systems

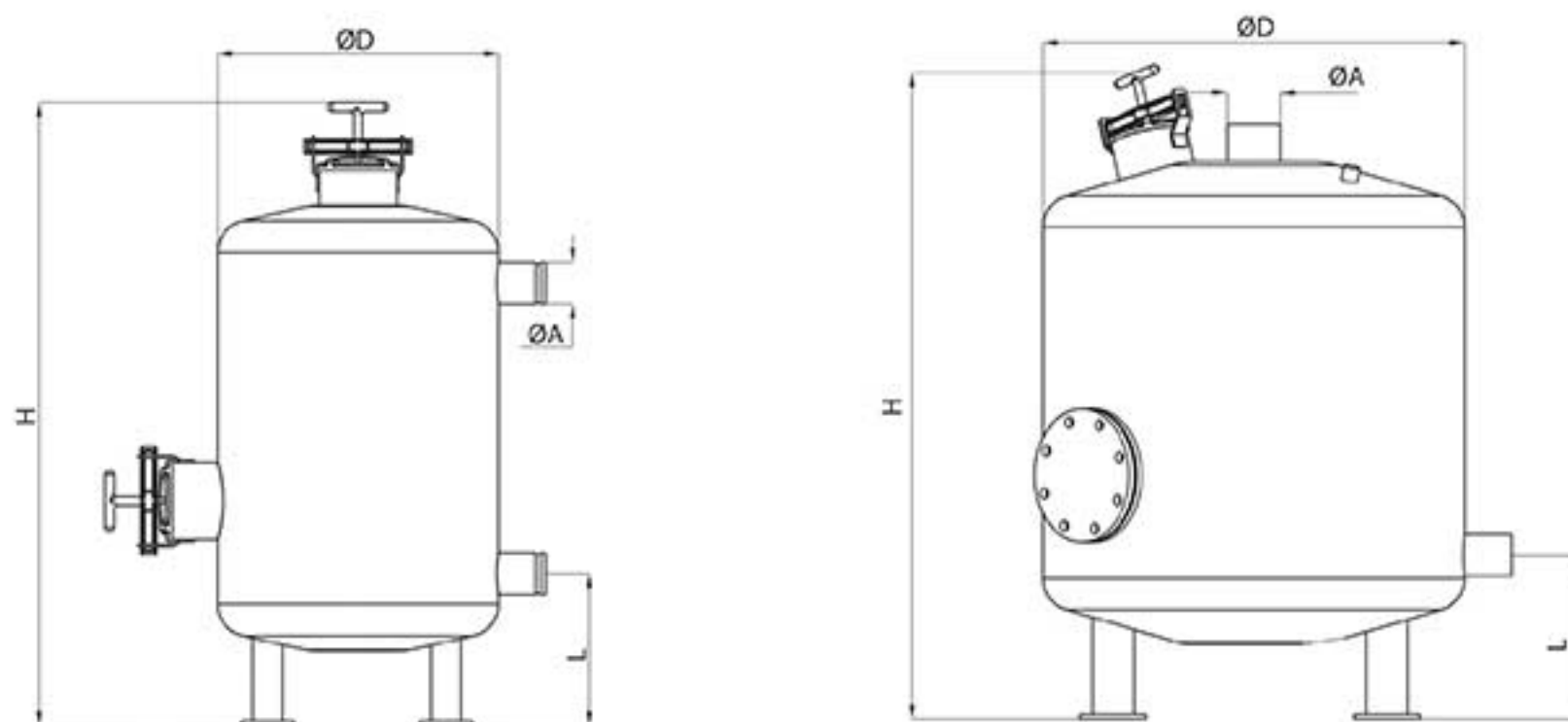


sand distribution diagram of gravel filters

gravel (media) filter

1000 series

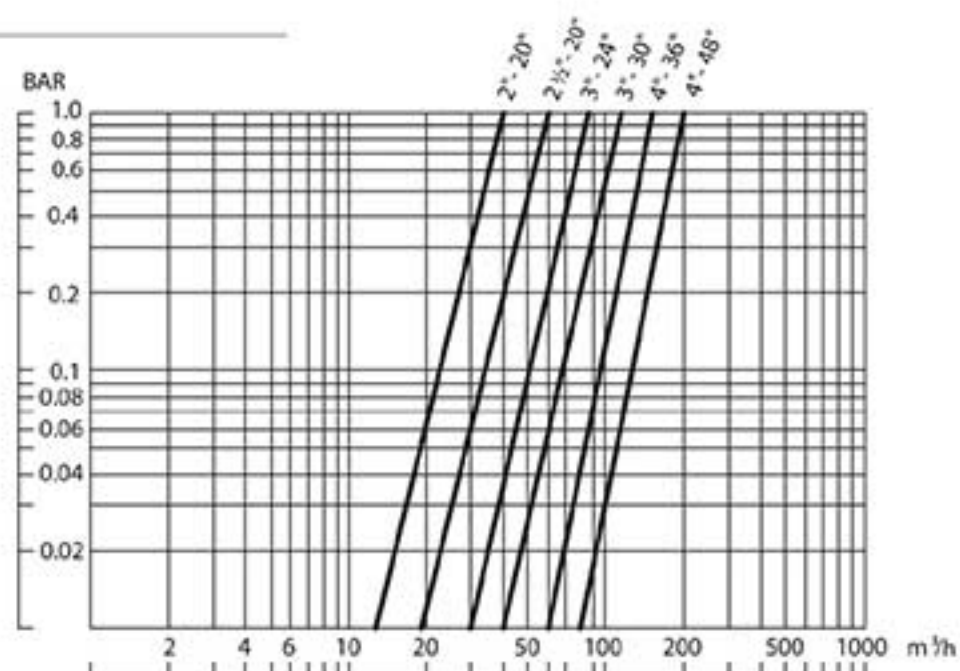
dimension and weight



available models and recommended flow rates

model	ØA		ØD		H		L		Weight		Recommended Flow Rate	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs.	m ³ /h	l/s
1020	50	2"	450	20"	1200	47"	180	7,1"	72	158	14 - 18	3,9 - 5
1520	65	2½"	450	20"	1200	47"	180	7,1"	74	163	24 - 30	6,6 - 8,3
1024	80	3"	600	24"	1300	51"	260	10,2"	100	220	35 - 40	9,7 - 11,1
1030	80	3"	760	30"	1050	41"	270	10,6"	132	291	40 - 45	11,1 - 12,5
1036	80	3"	910	36"	1110	43"	270	10,6"	186	410	50 - 60	13,9 - 16,6
1536	100	4"	910	36"	1110	43"	270	10,6"	188	414	60 - 70	16,6 - 19,4
1048	100	4"	1220	48"	1110	43"	270	10,6"	240	530	80 - 100	22,2 - 27,7

head loss chart



gravel (media) filter

1000 series

specifications

It provides ease of use and of maintenance due to simple structure.
Pre-painting phosphorization is performed for maximum resistance against corrosion.
It has long economic life based on Epoxy – Polyester coating.
It designed for homogenous distribution of raw water and highly efficiency filtration.
It performs efficient back flushing process when minimum pressure loss occurs.
Single or modular systems can be used for various application fields with different diameters.
Options of manual or automatic back flushing are available.

material list

Part No	Part Name	Material
1	Body	ST37-2 (DIN 17100)
2	Mushroom Diffuser	Reinforced Nylon
3	Lid Seal	NBR/EPDM
4	Lid	DIN EN 10131
5	Arm	GGG40
6	Flange O-ring	NBR/EPDM
7	Blind Flange	ISO 7005-2
8	Nut	8.8 JS-500 STEEL
9	Bolt	8.8 JS-500 STEEL



fields of use

Filtration of reserve waters such as river, lake and pool water
Filtration of waters containing organic material
Agricultural drip and micro-irrigation systems
Filtration of industrial cooling water
Preliminary filtration of reverse osmosis systems

technical specifications

Recommended Operating Pressure Range	Max. Operating Pressure	Min. Back-Flushing Pressure	Test Pressure	Temperature	Connection	Coating
1 - 8 (bar) 14 - 120 (psi)	8 (bar) 120 (psi)	2 (bar) 30 (psi)	12 (bar) 175 (psi)	0 °C – 80 °C (32 °F – 176 °F) DIN 2401 /2	Flanged ISO 7005-2, ANSI Threaded BSPT-NPT Grooved End	1. Phase: Phosphorization 2. Phase: Electrostatic Powdering Polyester - Epoxy

sample order form

Model	Inlet Diameter	Tank Diameter	Connection	Control Feature	Additional Features
1020	2"	20"	Grooved End (GRO) Threaded (TH) Flanged (F)	Manual (M) Power Controlled (EL) Battery Controlled (BT)	Pressure Sustaining Valve (PS) Flow Rate Control Valve (FR) Quick Pressure Relief Valve (QR)
1520	2½"	20"			
1024	3"	24"			
1030	3"	30"			
1036	3"	36"			
1536	4"	36"			
1048	4"	48"			

1030	3	30	VIC	EL	PS
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gravel (media) filter systems



Sand, Controller, connection equipments, air valves and pressure gauges are included in the system.

automatic gravel filter system

Code	Collector Size (inch)	Tank Size (inch)	Tank Quantity	Recommended Flow Rate (m ³ /h)
A10-G2-0220	3"	20" - 2"	2	24
A10-G3-0220	4"	20" - 2"	3	36
A10-G4-0220	4"	20" - 2"	4	48
A10-G2-0324	4"	24" - 3"	2	40
A10-G3-0324	4"	24" - 3"	3	60
A10-G4-0324	5"	24" - 3"	4	80
A10-G2-0330	4"	30" - 3"	2	60
A10-G3-0330	5"	30" - 3"	3	90
A10-G4-0330	6"	30" - 3"	4	120
A10-G6-0330	8"	30" - 3"	6	180
A10-G8-0330	10"	30" - 3"	8	240
A10-G2-0336	5"	36" - 3"	2	84
A10-G3-0336	6"	36" - 3"	3	126
A10-G4-0336	8"	36" - 3"	4	168
A10-G6-0336	10"	36" - 3"	6	252
A10-G8-0336	12"	36" - 3"	8	336
A10-G2-0436	15"	36" - 4"	2	120
A10-G3-0436	6"	36" - 4"	3	180
A10-G4-0436	8"	36" - 4"	4	240
A10-G6-0436	10"	36" - 4"	6	360
A10-G8-0436	12"	36" - 4"	8	480
A10-G2-0448	5"	48" - 4"	2	144
A10-G3-0448	6"	48" - 4"	3	216
A10-G4-0448	8"	48" - 4"	4	288
A10-G6-0448	10"	48" - 4"	6	432
A10-G8-0448	12"	48" - 4"	8	576

semi-auto gravel filter systems

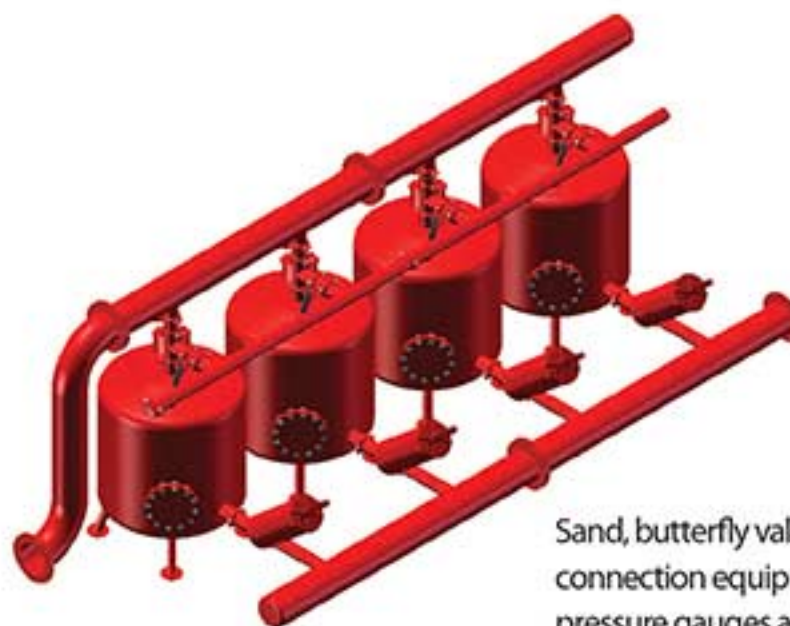


Sand, butterfly valves, ball valves connection equipments, air valves and pressure gauges are included in the system.

semi-auto gravel filter system

Code	Collector Size (inch)	Tank Size (inch)	Tank Quantity	Recommended Flow Rate (m ³ /h)
M10-G2-0220	3"	20" - 2"	2	24
M10-G3-0220	4"	20" - 2"	3	36
M10-G4-0220	4"	20" - 2"	4	48
M10-G2-2520	3"	20" - 2½"	2	28
M10-G3-2520	4"	20" - 2½"	3	42
M10-G4-2520	4"	20" - 2½"	4	56
M10-G2-0324	4"	24" - 3"	2	40
M10-G3-0324	4"	24" - 3"	3	60
M10-G4-0324	5"	24" - 3"	4	80
M10-G2-0330	4"	30" - 3"	2	60
M10-G3-0330	5"	30" - 3"	3	90
M10-G4-0330	6"	30" - 3"	4	120
M10-G6-0330	8"	30" - 3"	6	180
M10-G8-0330	10"	30" - 3"	8	240
M10-G2-0336	5"	36" - 3"	2	84
M10-G3-0336	6"	36" - 3"	3	126
M10-G4-0336	8"	36" - 3"	4	168
M10-G6-0336	10"	36" - 3"	6	252
M10-G8-0336	12"	36" - 3"	8	336
M10-G2-0436	5"	36" - 4"	2	120
M10-G3-0436	6"	36" - 4"	3	180
M10-G4-0436	8"	36" - 4"	4	240
M10-G6-0436	10"	36" - 4"	6	360
M10-G8-0436	12"	36" - 4"	8	480
M10-G2-0448	5"	48" - 4"	2	144
M10-G3-0448	6"	48" - 4"	3	216
M10-G4-0448	8"	48" - 4"	4	288
M10-G6-0448	10"	48" - 4"	6	432
M10-G8-0448	12"	48" - 4"	8	576

semi-auto gravel filter systems



Sand, butterfly valves, ball valves connection equipments, air valves and pressure gauges are included in the system.

semi-auto gravel filter system + metal "Y" type screen-disc filter

Code	Collector Size (inch)	Tank Size (inch)	Tank Quantity	Recommended Flow Rate (m ³ /h)
M10-GY2-0220	3"	20" - 2"	2	24
M10-GY3-0220	4"	20" - 2"	3	36
M10-GY4-0220	4"	20" - 2"	4	48
M10-GY2-2520	3"	20" - 2½"	2	28
M10-GY3-2520	4"	20" - 2½"	3	42
M10-GY4-2520	4"	20" - 2½"	4	56
M10-GY2-0324	4"	24" - 3"	2	40
M10-GY3-0324	4"	24" - 3"	3	60
M10-GY4-0324	5"	24" - 3"	4	80
M10-GY2-0330	4"	30" - 3"	2	60
M10-GY3-0330	5"	30" - 3"	3	90
M10-GY4-0330	6"	30" - 3"	4	120
M10-GY6-0330	8"	30" - 3"	6	180
M10-GY8-0330	10"	30" - 3"	8	240
M10-GY2-0336	5"	36" - 3"	2	84
M10-GY3-0336	6"	36" - 3"	3	126
M10-GY4-0336	8"	36" - 3"	4	168
M10-GY6-0336	10"	36" - 3"	6	252
M10-GY8-0336	12"	36" - 3"	8	336
M10-GY2-0436	5"	36" - 4"	2	120
M10-GY3-0436	6"	36" - 4"	3	180
M10-GY4-0436	8"	36" - 4"	4	240
M10-GY6-0436	10"	36" - 4"	6	360
M10-GY8-0436	12"	36" - 4"	8	480

hydrocyclone (sand separator)

2000 series



description

Asbir 2000 series hydrocyclones are designed in simple structure to be used in the filtration of well water or other water sources containing sand, gravel or particles heavier than the water. Due to simple structure, it is more economic and easy to use relative to other sand separators. Asbir hydrocyclones causes minimum pressure loss in filtration systems and therefore, they operate at maximum efficiency. Asbir 2000 series hydrocyclones, used as primary filtering element in filtration systems, are provided in single or modular forms which ensure manual or fully automatic cleaning process.

operating principle



Asbir 2000 series hydrocyclones is a separator removing particles heavier than the water before they enter into the system. It is consisted of two main parts including the body and collection container. Water containing particles heavier than the water enters into cylindrical wall found on the body of the hydrocyclone in tangential manner. Water reaches a particular speed in the cylindrical wall and thus, it creates centrifugal force. Due to this centrifugal power, solid particles heavier than water fall down from narrowing conic part of the hydrocyclone and trapped in the collection container. While solid particles heavier than water fall down to collection container due to centrifugal force, clean water free from particles is supplied to the system via outlet pipe. Water reaches desired speed on cylindrical wall due to perfect cylindrical wall and conical body design of the Asbir 2000 series hydrocyclone and thus, water increases efficiency of the filtration as it creates a cycloid orbit.

hydrocyclone (sand seperator)

2000 series



In order to get a regular filtration in Asbir 2000 series hydrocyclones, collection container should be regularly monitored and cleaned depending on the water quality. Based on the application type, hydrocyclones are provided in to forms, including manual and automatic, to the users. It is recommended that users prefer automatic model ensuring regular monitoring and cleaning of collection container.

applications

Filtration of reserve water such as deep well
Filtration of water containing sand, gravel or particles heavier than water
Preliminary filtration of gravel, Disc and mesh filters
Agricultural drip and micro-irrigation systems
Separation of solid particles larger than mesh diameter of 200.

specifications

It provides ease of use and of maintenance due to simple structure.
Pre-painting phosphorization is performed for maximum resistance against corrosion.
It has long economic life based on Epoxy – Polyester coating.
It operates completely based on cyclone principle
It performs filtration (separation) process with minimum pressure loss.
Single or modular systems can be used for various application fields with different diameters.
Two different models are available including manual and automatic.
Automatic models can perform self-cleaning process without any disruption in water supply.

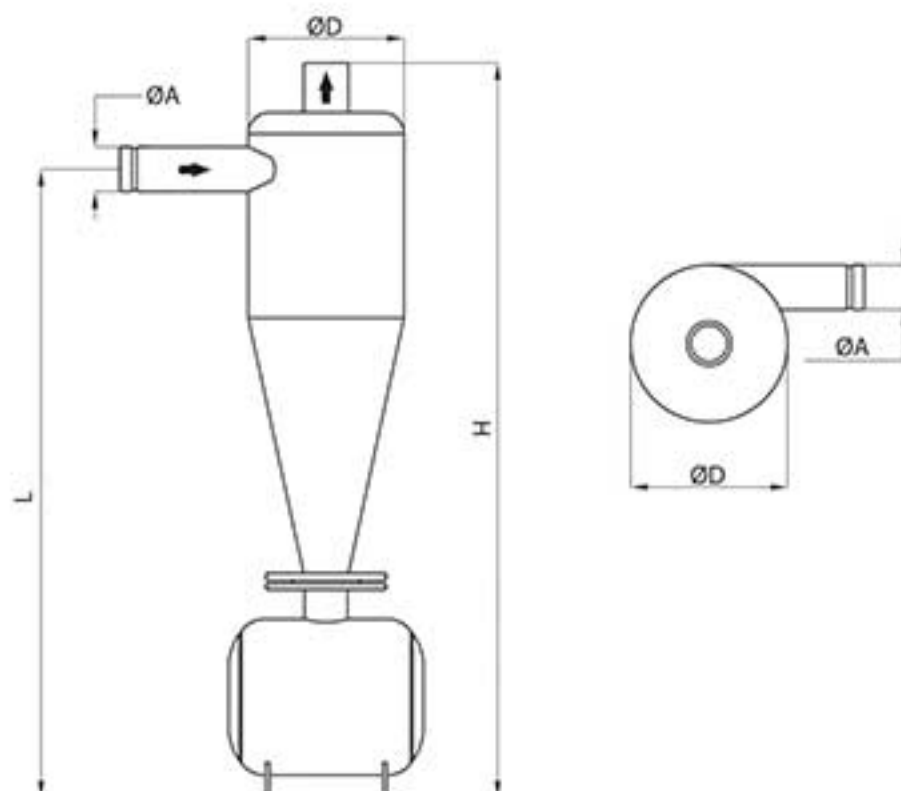
technical specifications

Recommended Operating Pressure Range	Max. Operating Pressure	Test Pressure	Temperature	Connection	Coating
0.3 – 8 (bar) 4 – 120 (psi)	8 (bar) 120 (psi)	12 (bar) 175 (psi)	- 10 °C – 80 °C (14 °F – 176 °F) DIN 2401 /2	Flanged ISO 7005-2, ANSI Threaded BSPT-NPT Grooved End	1. Phase: Phosphorization 2. Phase: Electrostatic Powding Polyester - Epoxy

hydrocyclone (sand separator)

2000 series

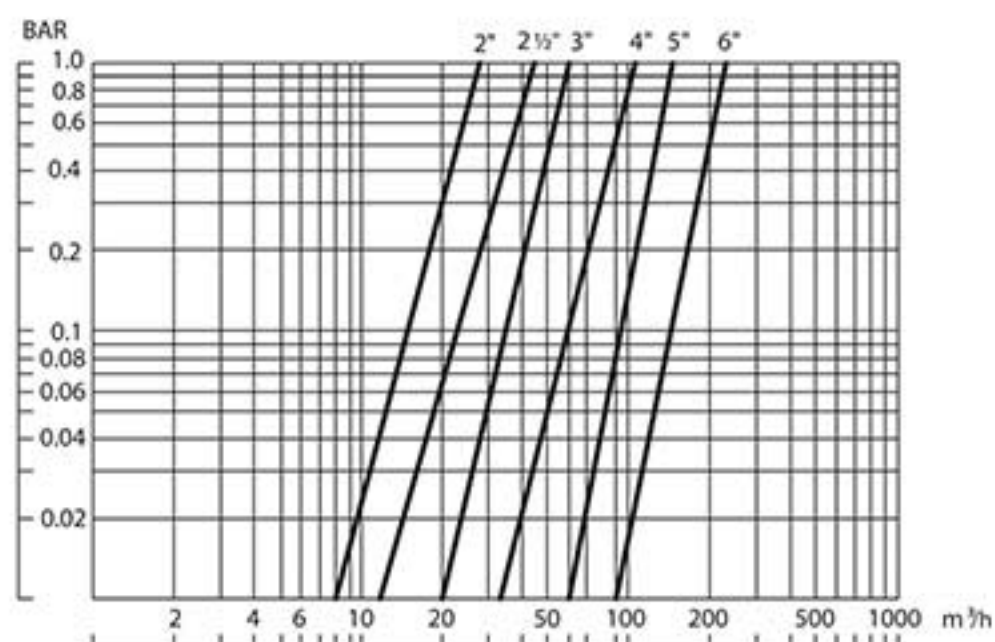
dimension and weight



available models and recommended flow rates

Model	$\varnothing A$		$\varnothing D$		H		L		Weight		Recommended Flow Rate	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	Lbs.	m ³ /h	U.S gpm
2050	50	2"	220	8,6"	1100	43,3"	1000	39,4"	20	44	14-18	3,9-5
2065	65	2½"	220	8,6"	1100	43,3"	1000	39,4"	24	53	24-30	6,6-8,3
2080	80	3"	300	11,8"	1420	56"	1260	49,6"	28	62	45-65	12,5-18
2100	100	4"	300	11,8"	1420	56"	1260	49,6"	60	132	70-95	19,4-26,4
2125	125	5"	400	15,7"	1600	63"	1410	55,5"	80	176	105-145	29,2-40
2150	150	6"	400	15,7"	1650	63"	1440	56,7"	82	180	120-165	33,3-45,8
2200	200	8"	640	25,2"	2100	82,6"	1770	69,7"	240	528	200-250	55,5-69,4

head loss chart

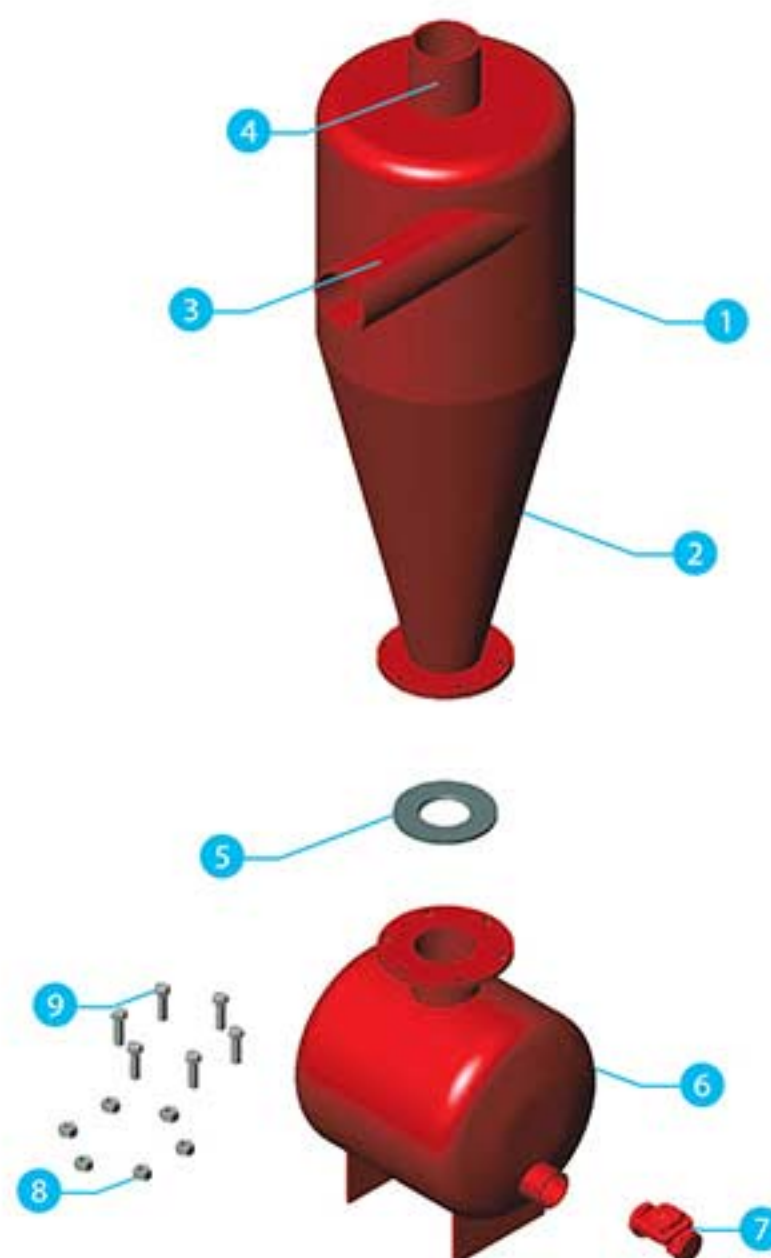


hydrocyclone (sand seperator)

2000 series

material list

Part No	Part Name	Material
1	Cylindrical Wall	ST37-2 (DIN 17100)
2	Conic Body	ST37-2 (DIN 17100)
3	Inlet	ST37-2 (DIN 17100)
4	Outlet	ST37-2 (DIN 17100)
5	Flange O-Ring	NBR/EPDM
6	Collection Container	ST37-2 (DIN 17100)
7	Drainage Valve	GG25 / GGG40
8	Nut	8.8JS-500 STEEL
9	Bolt	8.8JS-500 STEEL



sample order form

Model	Inlet Diameter	Connection	Control Feature
2050	2"	Grooved End (GRO) Threaded (TH) Flanged (F)	Manual (M) Power Controlled (EL) Batter Controlled (BT)
2065	2½"		
2080	3"		
2100	4"		
2125	5"		
2150	6"		
2180	8"		

2150	6	VIC	EL
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suction filter



description

Suction filter is designed to protect the pumps from debris and foreign matters. It is generally used in water sources containing algae, debris, and other heavy wastes. It is connected to pump suction and submerged into water (river, lake, reservoir, etc.)

operation principle

Water is sucked by the pump passes through the strainer and debris is kept outside by the stainless steel screen. Rotating nozzles are fed with water taken from the pump exit. Water jets sprayed from the nozzles blow away the debris collected on the outer surface of the screen and thus the filter is cleaned.

Thus the pump is protected against clogging and failures. Pump efficiency increases and maintenance costs decrease.

Minimum working pressure: 1.5 bar (22 psi)

Suggested working pressure: 3-4 bar

By-pass flow rate : 4 m³/h (3"-4")

Electrostatic coated body

Rotating Nozzles

Flange type Connection

Electrostatic applied and oven-cured zinc-phosphate coating for anti-corrosion protection

Available models: 4", 6", 8"

specifications

Protection of pumps

Low head loss

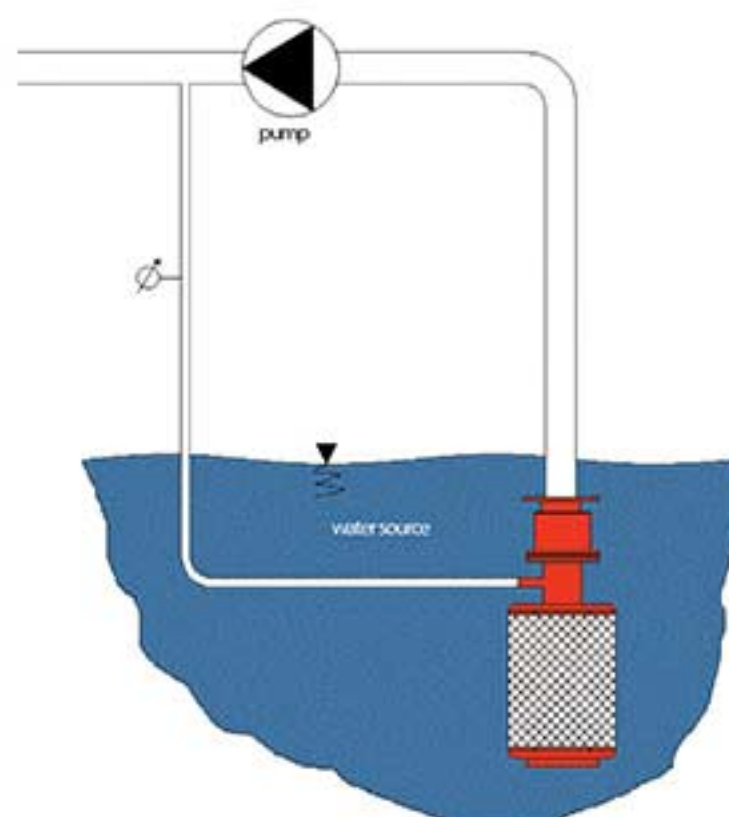
Automatic self-cleaning system

Uninterrupted filtration during automatic self-cleaning

Low maintenance costs

applications

Agricultural applications



suction filter

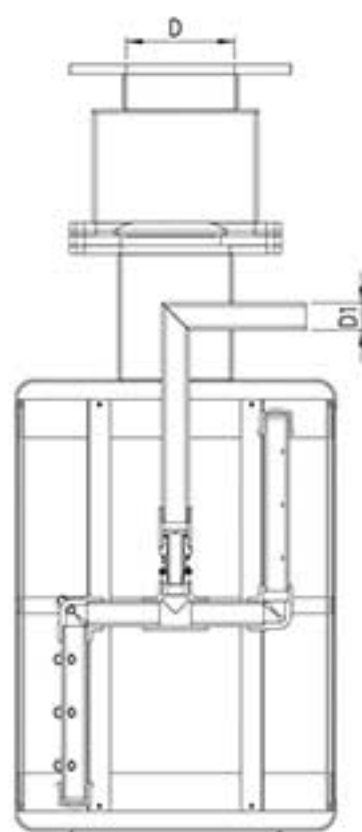


material list

Part No	Part Name
1	Screen and body
2	Nozzle mechanism
3	Upper cover
4	Check valve
5	Connection head
6	Lower cover

available models

Filter Model Code	SF-4	SF-6	SF-8
Max. Flow Rate	75 m ³ /h	120 m ³ /h	160 m ³ /h
Inlet-Outlet Diameter	4"	6"	8"
Standard Filtration Degree	460 micron 40 mesh	460 micron 40 mesh	460 micron 40 mesh
Min. Working Pressure	1,5 bar	1,5 bar	1,5 bar
Max. Working Pressure	10 bar	10 bar	10 bar
Max. Working Temperature	60 °C	60 °C	60 °C
Filtration Area	1400 mm ²	1800 mm ²	2000 mm ²



dimensions

Flow Rate	Inlet Connection Flanged (D)	Return Line Connection (D1)
m ³ /h	inch	inch
75	4"	1"
120	6"	1"
180	8"	1"

sample order form

Model	Connection Size	Connection Type	Screen Degree
SF-4	4"	Flanged (F)	460 Micron
SF-6	6"	Flanged (F)	460 Micron

metal screen-disc filter

3000 series



description

Asbir D-3000 series disc filters are designed to ensure deep filtration as a consequence of one-on-one order of many disc sheets manufactured from nylon reinforced polypropylene material on a filter body.

Having a simpler design Relative to different filter groups, Asbir 3000 series screen filters are really successful in filtration of water well and water resources containing sand. Asbir 3000 series screen filters are manufactured in two body form including angle and horizontal type for meeting needs of different application.



operating principle

Polluted water containing particles heavier than water such as sand and gravel enters into the filter from inlet pipe of the Asbir 3000 series screen and disc filters. The water is filtered from the mesh found in screen-disc filters providing desired filter grade at micron level. Particles with larger diameter than that of diameter of screen-disc are trapped by the mesh. Clean water filtered is supplied to the system via outlet pipe of the filter. Heavy particles failing to pass from pores of the screen-disc are released to the atmosphere via discharge gate found beneath the body of the filter.

applications

- Filtration of well water
- Filtration of water containing sand, gravel or particles heavier than water
- Filtration of river, lake and reserve water
- Preliminary filtration of ultra-filtration systems
- Downwards the hydrocyclone and gravel filter systems
- Agricultural drip and micro-irrigation systems
- For recreational irrigation system practices
- Downwards the fertilization system

specifications

- It provides ease of use and of maintenance due to simple structure.
- Pre-painting phosphorization is performed for maximum resistance against corrosion.
- It has long economic life based on Epoxy – Polyester coating.
- It performs filtration process with minimum pressure loss occurs.
- It can be used in wide range of applications due to varying filtration rates and degrees.
- It has long economic life due to nylon polypropylene discs
- It may be used in single or modular form in the application fields.
- It ensures easy assembly to systems with angle and horizontal type models.

metal screen-disc filter

3000 series

disc-screen filter degree measures

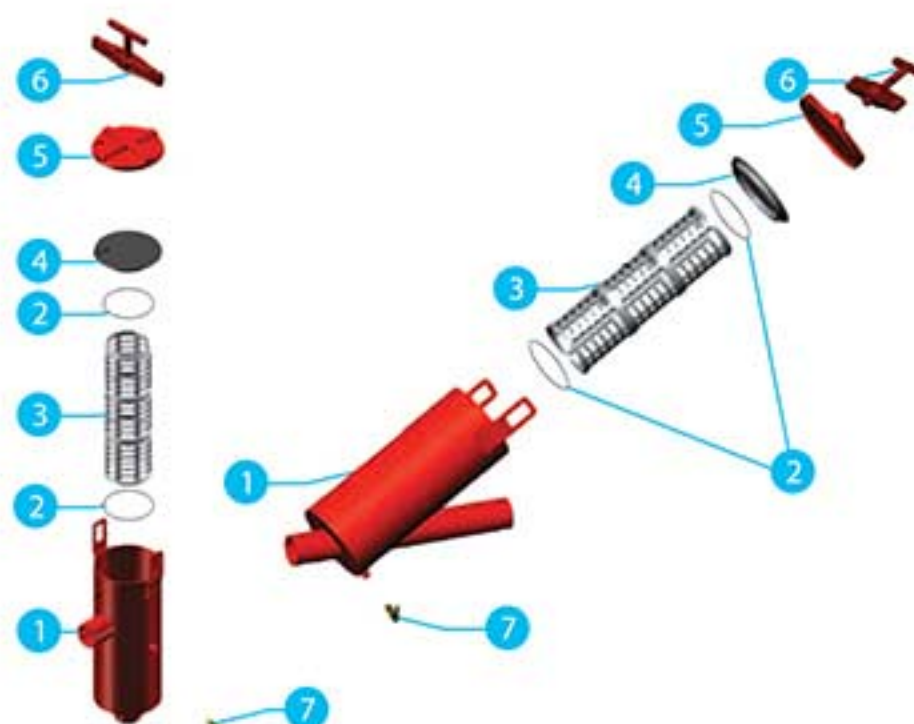
Mesh No	Micron	Number of Pores (cm)	Effective Filtering Surface (%)	Color
**80	200	31	%39	Blue
*120	130	47	%39	Red
*150	100	59	%40	Yellow

*Mesh with size of 100, 120 ve 150 are standard meshes.

**Mesh with size of 60,80 ve 180 are manufactured upon request

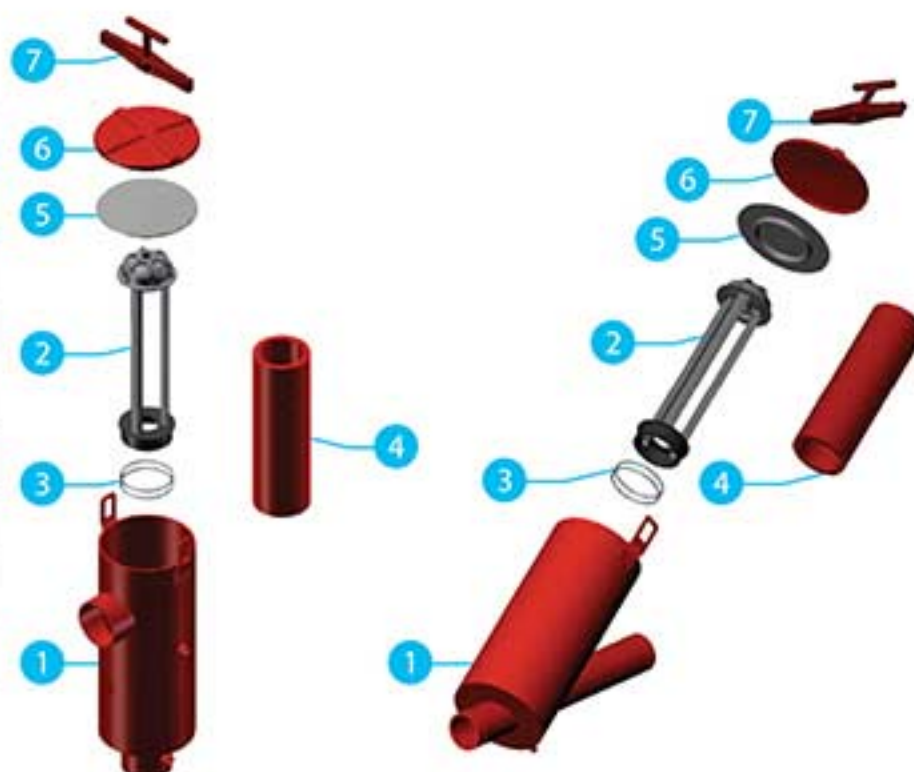
material list (screen filter)

Part No	Part Name	Material
1	Body	ST37-2 (DIN 17100)
2	O-Ring	NBR
3	Screen	AISI 304
4	Lid Seal	NBR / EPDM
5	Lid	DIN EN 10131
6	Arm	GGG40
7	Discharge Valve	GG25/GGG40 - ISO R 426



material list (disc filter)

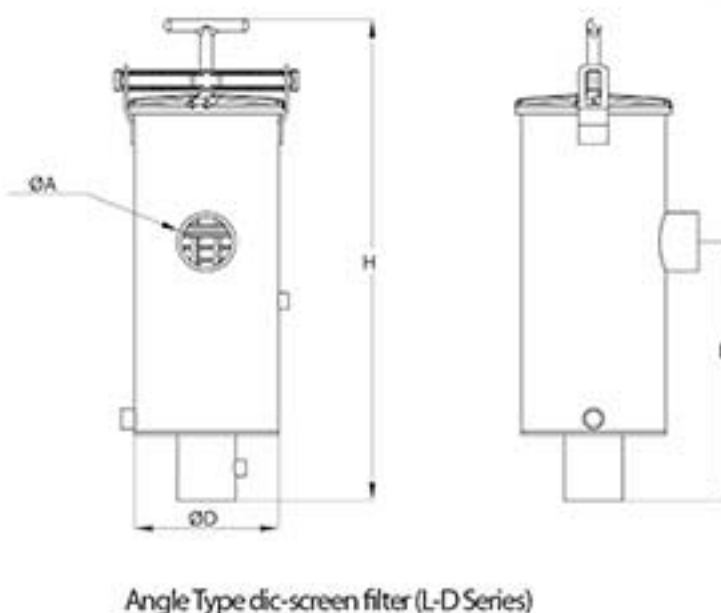
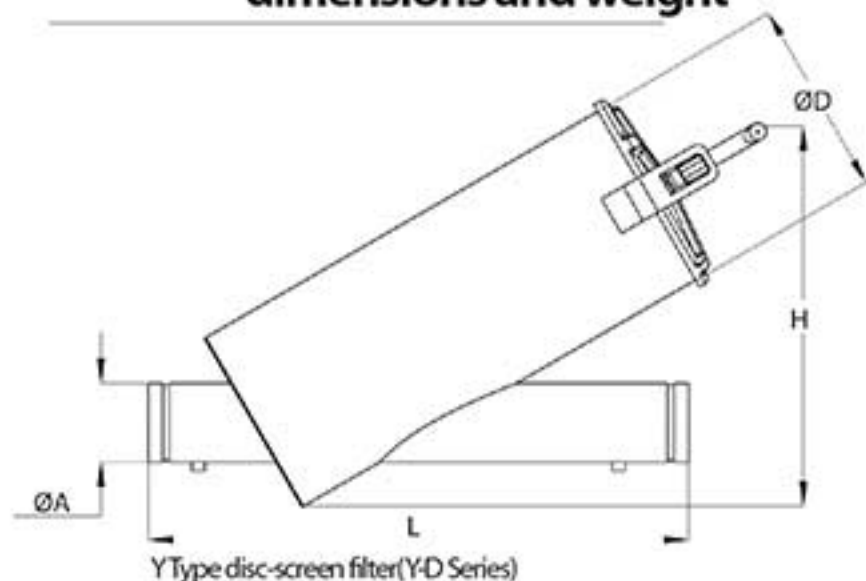
Part No	Part Name	Material
1	Body	ST37-2 (DIN 17100)
2	Disc Frame	PET-P
3	O-Ring	NBR / EPDM
4	Disc	Nylon Reinforced PP
5	Lid O-Ring	NBR / EPDM
6	Lid	ST37-2 (DIN 17100)
7	Arm	GGG40



metal screen-disc filter

3000 series

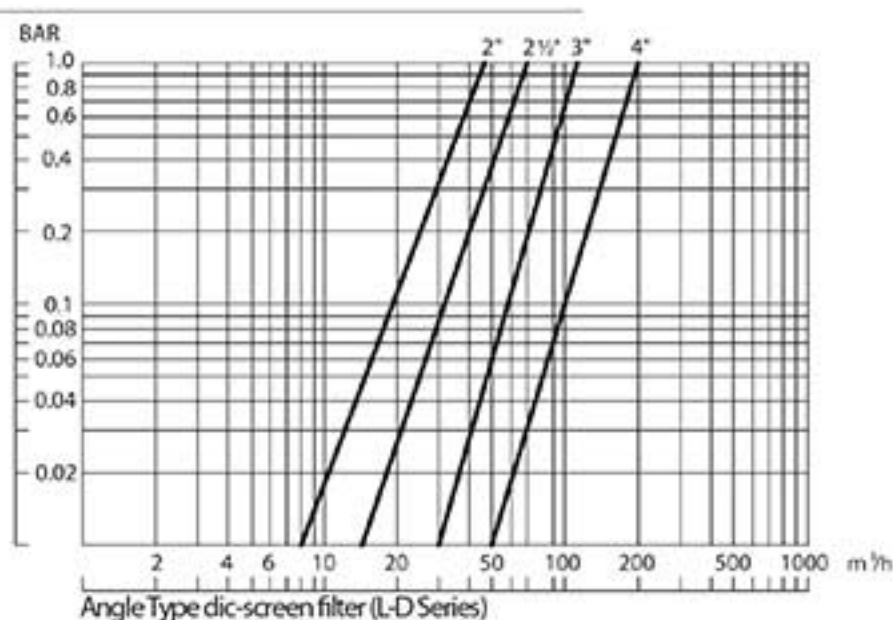
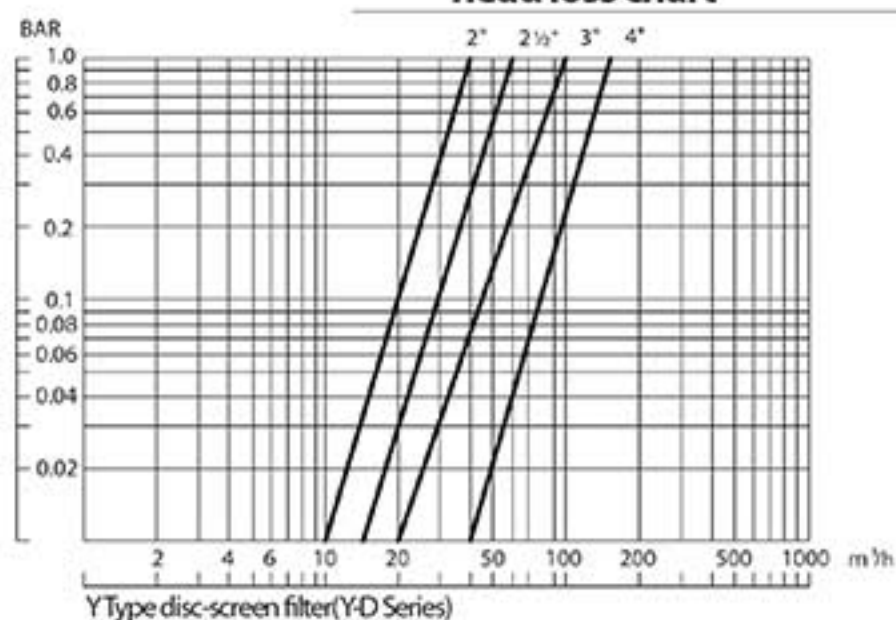
dimensions and weight



available models and recommended flow rates

Model	ØA		ØD		H		L		Weight		Recommended Flow Rate	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	Lbs.	m ³ /h	U.S gpm
Y(D)3050	50	2"	165	6"	350	14	460	18	15	32	26 - 34	88 - 123
Y(D)3060	65	2½"	165	6"	350	14	470	18,5	16	35	30 - 56	140 - 210
Y(D)3080	80	3"	220	8"	450	18	610	24	24	52	48 - 65	154 - 220
Y(D)3100	100	4"	220	8"	450	18	650	25,5	29	63	62 - 90	228 - 352
L(D)3050	50	2"	165	6"	600	24	140	5,5	14	30	18 - 25	80 - 110
L(D)3065	65	2½"	165	6"	600	24	140	5,5	15	33	28 - 42	123 - 185
L(D)3080	80	3"	220	8"	875	35	160	6,3	26	57	38 - 50	168 - 220
L(D)3100	100	4"	220	8"	875	35	160	6,3	27	58	40 - 75	178 - 330

head loss chart



sample order form

Model	Inlet Diameter	Connection Type	Control Feature	Filtration Degree
YD3050 - LD3050	2"	Grooved End (GRO) Threaded (TH) Flanged (F)	Manual (M) Power Controlled (EL) Batter Controlled (BT)	100 Micron 130 Micron 200 Micron
YD3065 - LD3050	2½"			
YD3080 - LD3080	3"			
YD3100 - LD3100	4"			
YD3050	4	VIC	M	120

metal screen-disc filter systems



M-HP Hydrocyclone+Manual Disc Filter System



M-HY Hydrocyclone+ Y Type Screen Filter System



M-HA Hydrocyclone+ Angle Type Screen Filter System

Code	Collector Size (inch)	Hydrocyclone inlet/outlet size (inch)	Manual Disc-Screen Filter inlet/outlet size (inch)	Connection Type	Recommended Flow Rate (m ³ /h)
M20-HP-03	3"	3"	3"	VIC	26
M20-HY-02	2"	2"	2"	VIC	14
M20-HY-25	2½"	2½"	2½"	VIC	21
M20-HY-03	3"	3"	3"	VIC	42
M20-HY-04	4"	4"	4"	VIC	55
M20-HA-02	2"	2"	2"	VIC	14
M20-HA-25	2½"	2½"	2½"	VIC	21
M20-HA-03	3"	3"	3"	VIC	42
M20-HA-04	4"	4"	4"	VIC	55

fertilizer tank

5000 series

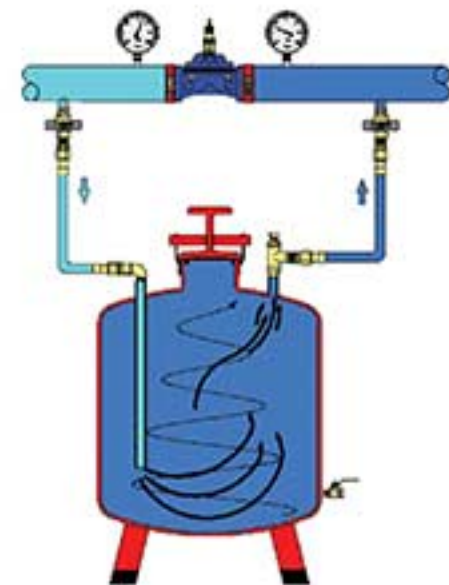


description

Asbir 5000 series fertilizer tanks are developed for chemical fertilizer or pesticide applications directly to root region of the plant using irrigation water of drip or sprinkler irrigation systems. It ensures very practical and convenient fertilizing and pesticide administration in irrigation systems due to simple structure and ease of use. Different models with varying capacities are available including horizontal and vertical types depending on different needs of present irrigation system. Operating based on pressure difference principle in the irrigation systems, Asbir 5000 series fertilizer tanks will operate long years without requiring maintenance due to resistant construction.

operating principle

Asbir 5000 series fertilizing tank is connected parallel to main pipe of irrigation system using elastic hoses via by-pass method. Irrigation water enters into the tank containing soluble chemical from the inlet hose of fertilizer tank connected to the line. Due to pressure gradient created using a valve or pressure reducer assembled on the irrigation line, chemical fertilizer is solved and it is blended within the tank. Solved chemical fertilizer is supplied to the root region of the plant using irrigation water.



applications

Chemical fertilization applications by pressure agricultural irrigation systems
Pesticide administration by pressure agricultural irrigation systems

features

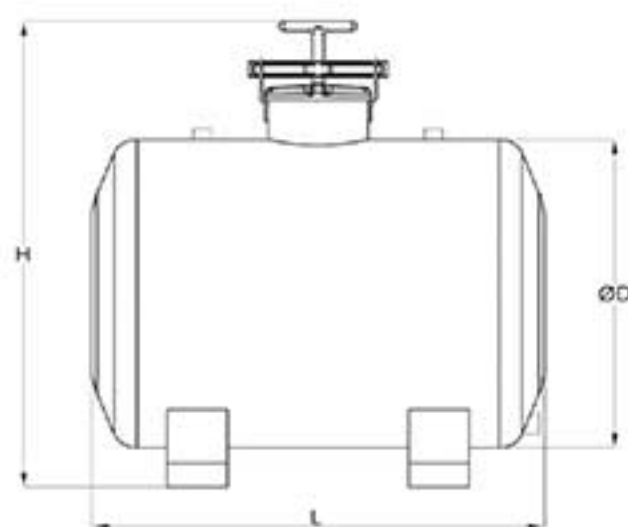
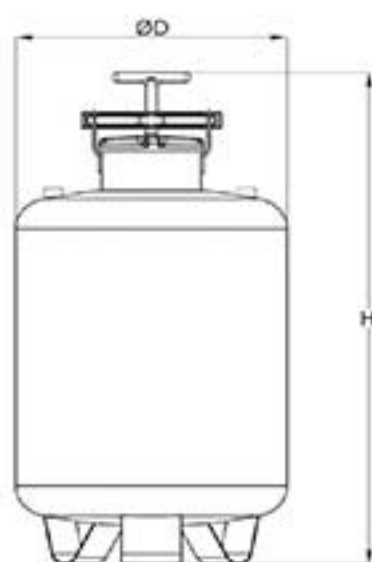
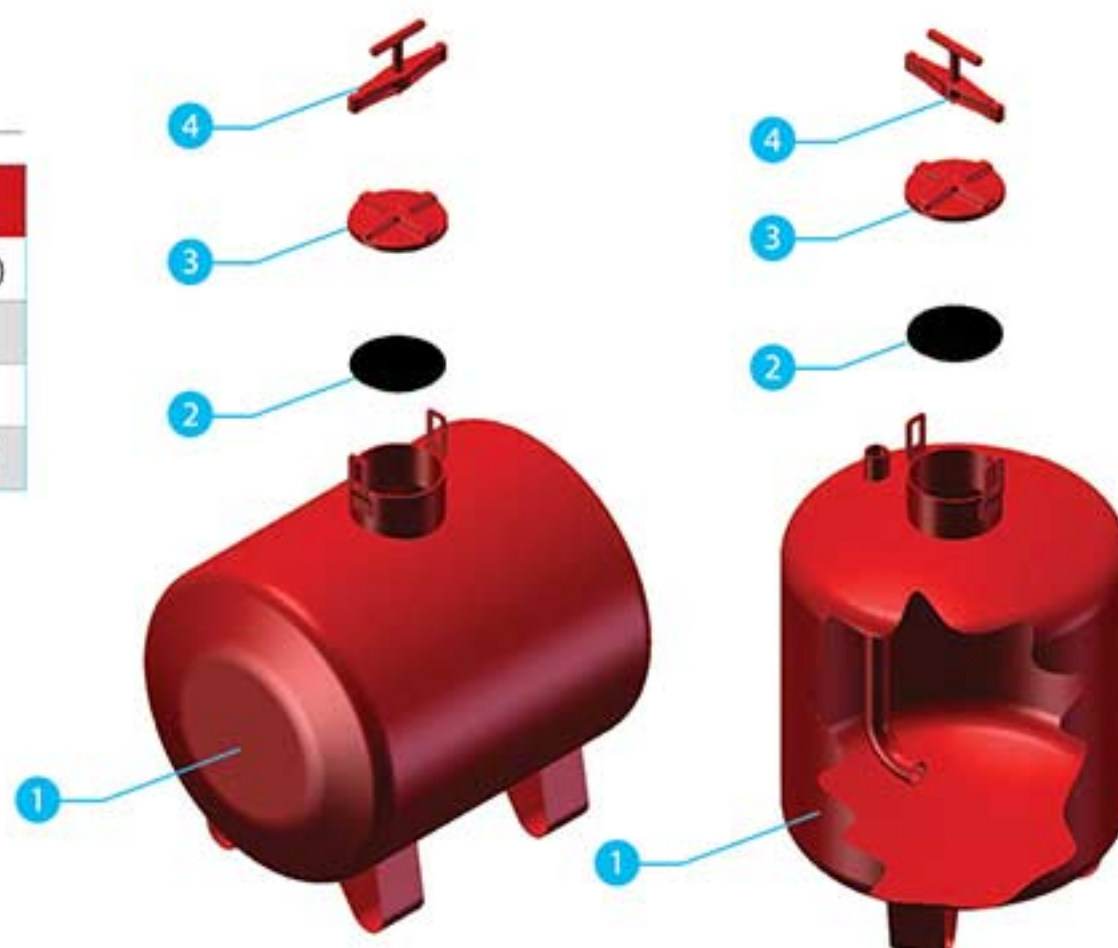
It provides ease of use and of maintenance due to simple structure.
Pre-painting phosphorization is performed for maximum resistance against corrosion and chemical solution.
It has long economic life based on Epoxy – Polyester coating.
It operates based on line pressure of the system.

fertilizer tank

5000 series

material list

Part No	Part Name	Material
1	Body	ST37-2 (DIN 17100)
2	Lid Seal	NBR/EPDM
3	Lid	DIN EN 10131
4	Arm	STEEL (DIN 2458)



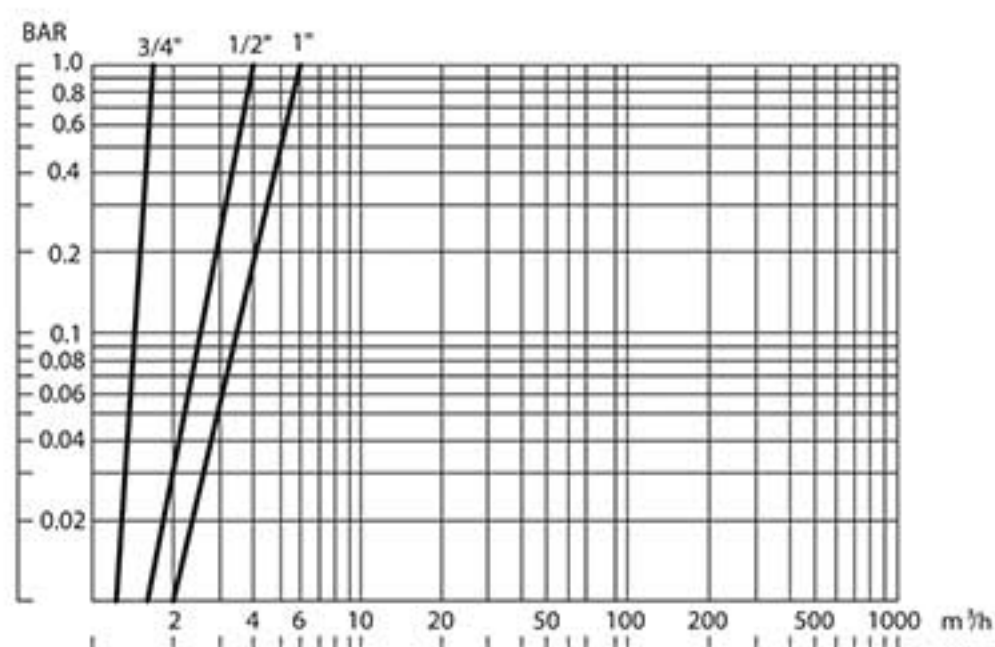
available models and recommended flow rates

Model	Capacity		ØD		H		L		Weight	
	liter	galon	mm	inch	mm	inch	mm	inch	kg	Lbs.
V5060	60	16	380	15"	760	30"	-		24	53
H5120	120	32	450	17,7"	800	31,5"	750	29,5"	40	88
H5200	200	52	640	25,2"	950	37,4"	730	28,7"	52	115
H5300	300	79	640	25,2"	950	37,4"	970	38,2"	68	150
H5400	400	106	640	25,2"	950	37,4"	1230	48,4"	76	168
H5500	500	132	640	25,2"	950	37,4"	1480	58,3"	102	225

fertilizer tank

5000 series

tank injection rate



Pressure Difference	Injection Rate 3/4" inlet - 3/4" outlet	Injection Rate 1/2" inlet- 1/2" outlet	Injection Rate 1" inlet- 1" outlet
0.9 bar	1400 L/h	3980 L/h	5120 L/h
0.8 bar	1340 L/h	3750 L/h	4830 L/h
0.7 bar	1250 L/h	3510 L/h	4520 L/h
0.6 bar	1160 L/h	3250 L/h	4180 L/h
0.5 bar	1050 L/h	2970 L/h	3800 L/h
0.4 bar	940 L/h	2650 L/h	3420 L/h
0.3 bar	820 L/h	2300 L/h	2950 L/h
0.2 bar	670 L/h	1880 L/h	2400 L/h
0.1 bar	450 L/h	1320 L/h	1700 L/h

technical specifications

Maximum Operating Pressure	Test Pressure	Temperature	Connection	Coating
8 (bar) 120 (psi)	12 (bar) 175 (psi)	- 10 °C – 80 °C (14 °F – 176 °F) DIN 2401 /2	Threaded - BSPT /NPT Flanged - ISO / ANSI	1. Phase: Phosphorization 2. Phase: Electrostatic Powdering Polyester - Epoxy

back-flushing control valves



model 37

Model	Size	Connection
model 21	2" x 2"	Inlet: 2" Threaded x Drainage: 2" Threaded
model 27	4" x 3"	Inlet: 4" Flanged x Drainage: 3" Threaded
model 28	4" x 3"	Inlet: 4" Grooved End x Drainage: 3" Grooved End



model 38

Model	Size	Connection
model 37	3" x 2"	Inlet: 3" Flanged x Drainage: 2" Threaded
model 38	3" x 2"	Inlet: 3" Grooved End x Drainage: 2" Threaded

500 Series

Plastic Hydraulic
Control Valves

Landspace Irrigation
Agricultural Irrigation

500 series
hydraulic control valves



500 Series
hydraulic control valves

general description

Asbir 500 series valves are direct diaphragm closing automatic hydraulic control valves which work with line pressure. They ensure easy and smooth flow with minimum pressure losses thanks to excellent design of valve body and diaphragm. No wearable parts such as stem, bearing and seat exist in main valve body, valve life is much longer than other competitor valves. Only movable part of valve is the valve diaphragm. Asbir 500 series hydraulic control valves are designed so that it can be used in potable water force network, agricultural irrigation, filtration, industrial applications by even an unskilled personnel.

general features

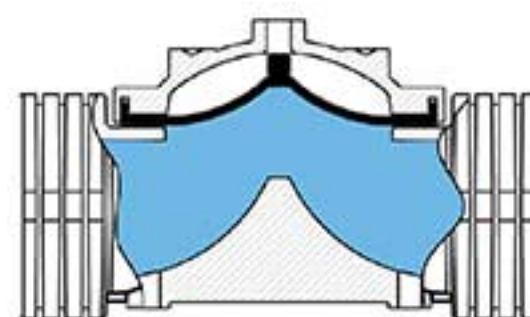
- Easy use and maintenance due to simple design
- Low cost
- Operation in wide pressure range
- Perfect modulation even in lower flow rates
- Anti-surge closing and opening with flexible diaphragm
- Full tightness thanks to reinforced diaphragm and inner spring
- Long life with Glass Reinforced Polyamide material
- Wide control application range by using different pilot valves
- Operation in both horizontal and vertical positions in application areas

operating principals

It is an automatic hydraulic control valve designed to make desired modulation in main valve network line as full hydraulically by means of line pressure without requiring different energy sources such as electric, pneumatic or mechanic energy.

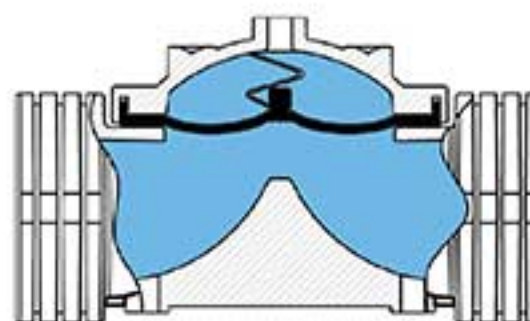
valve opening mode

When pilot valve located on main valve being in closed position is brought into relief position, pressurized water within control chamber on main valve diaphragm is released. When line pressure (P1) reaches to a value which will overcome spring force, water carries valve to fully open position by applying a hydraulic force to valve diaphragm from bottom.



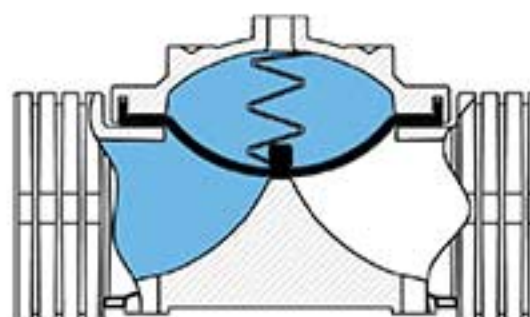
modulation mode

Pilot valves which are connected to main valve actuator ensure that main valve works in modulated mode. According to flow rate or pressure conditions, it ensures that main valve works in modulation mode by controlling pressure of fluid within main valve actuator (control chamber).



valve closing mode

When the pilot valves on the main valve transfers the upstream water pressure to valve actuator (control chamber), water in the control chamber creates a hydraulic force on the valve diaphragm. This pressure force combined with extra force applied by inner spring, ensures that valve will be closed with full tightness.



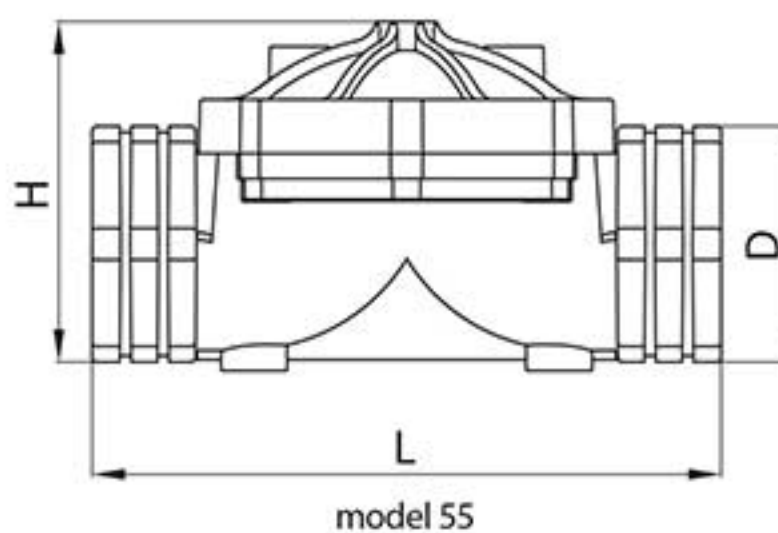
available models

technical specifications

Pressure Range	Standard	0,7 - 10 bar (10 - 160 psi)
Connection	Threaded	BSPT-NPT
Hydraulic Connections	Standard	Reinforced Nylon (Air Brake) Hydraulic Pipe-SAE J 844
Actuator Type	Standard	Diaphragm Closing Type with Single Control Chamber and Diaphragm Actuator

available models

Model	55	
Connection	Threaded	
Material	Glass Reinforced Polyamide	
Body	Globe	
Maximum Working Pressure	10 bar	160 psi
Available Sizes	inch	mm
	1½	40
	2	50
	2½	65
	3	80



dimensions

DN		D		L		H	
inch	mm	inch	mm	inch	mm	inch	mm
1½"	40	2½"	62	7⅞"	200	4⅜"	110
2"	50	3"	75	7⅞"	200	4⅜"	110
2½"	65	3¾"	95	9⅞"	250	5⅜"	138
3"	80	4¼"	109	9⅞"	250	5⅜"	145

hydraulic performance

hydraulic performance chart

valve size	mm	40	50	65	80
	inch	1½"	2"	2½"	3"
Kv	m³/h @ 1 bar	60	70	80	90
Cv	gpm @ 1 psi	70	85	95	105

Kv: Valve Flow Coefficient (fluid passing under 1 bar pressure difference in m³/h @ 1 bar)

Cv: Valve Flow Coefficient (fluid passing under 1 bar pressure difference in gpm @ 1 bar)

Q : Flow Rate (m³/h)

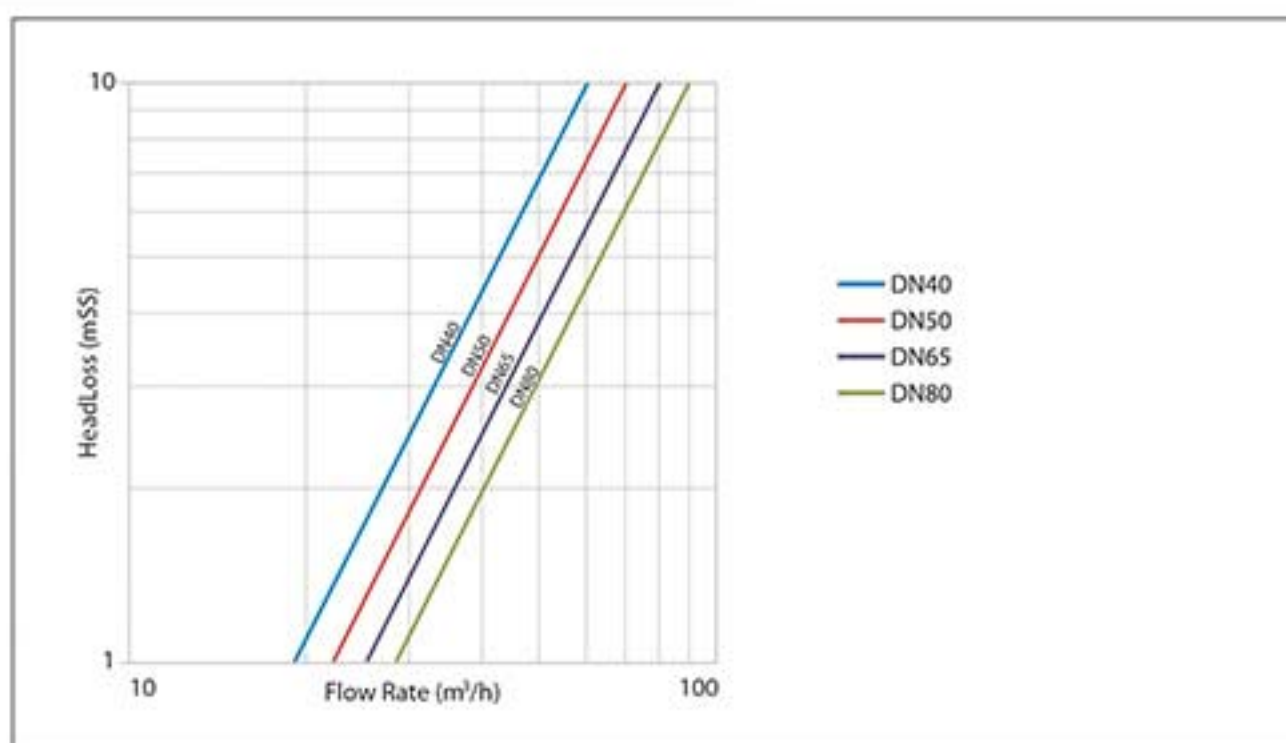
ΔP: Head Loss (bar)

G : Specific weight of water (1.0 for water)

$$Kv, (Cv) = Q \cdot \sqrt{\frac{G}{\Delta P}}$$

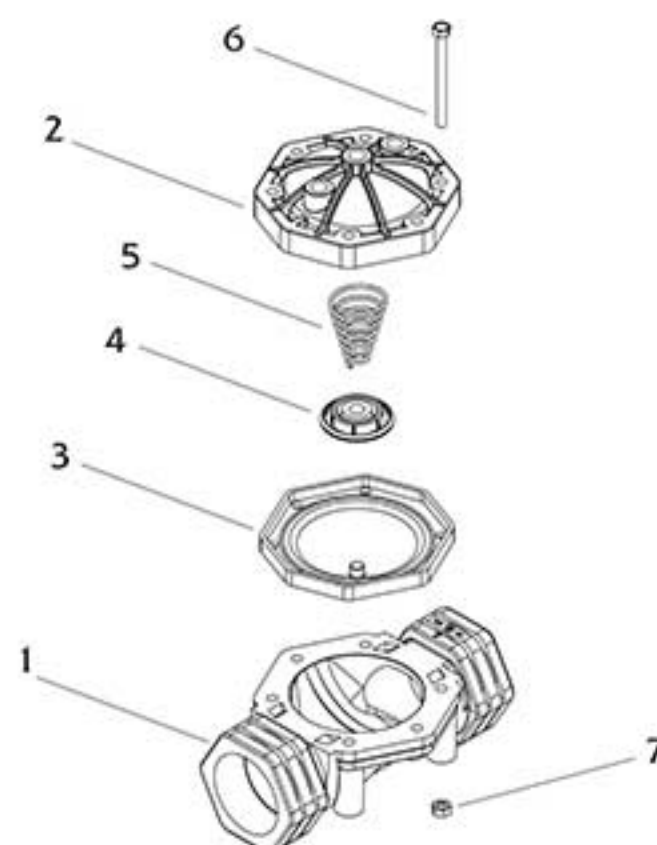
$$Cv = 1,155 Kv$$

head loss chart

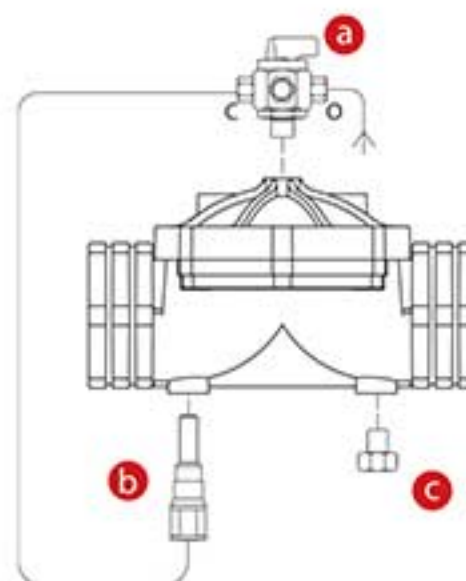


main parts

No	Part Name	Material
1	Body	Glass Reinforced Polyamide
2	Bonnet	Glass Reinforced Polyamide
3	Diaphragm	Natural Rubber
4	Spring Thrust Ring	Glass Reinforced Polyamide
5	Spring	SST302
6	Bolt	SST304
7	Nut	Brass



manual control valve **M**



- a** 3- way selector valve
- b** In-line Finger Filter
- c** Plug

description

Asbir "M" model valve is the hydraulic control valve operated by line pressure and designed to ensure opening/closing process by means of a 3-way selector valve. Minimum opening pressure of valve is 0.7 bar. Thanks to its flexible diaphragm, it makes easy and fast control process in high pressure applications and is closed as fully tight without causing surge. It may be used in different applications by adding different pilot valves on its main body.

applications

Use **55M** for local operation of hydraulic valve by a manual command.
Use **55M** for water distribution and field.

standards

55M manual control valve with 3-way selector valve, polyethylene plastic tubing and nylon fittings.

options

Pressure Gauge

order information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
Maximum network/line pressure _____ bar
Main line size _____ mm
Valve connection type _____

EL solenoid control valve

description

Asbir "EL" model valve is the hydraulic control valve operated by line pressure and designed to ensure opening/closing process by means of built in 3-way solenoid pilot valve controlled remotely with electric signal. Electric signal for solenoid pilot valve is ensured by means of a control device, time relay, main switch and PLC control units etc. Opening/Closing process may be realized easily thanks to manual control on solenoid pilot valve. Depending on requirements. 24V AC 50Hz/60Hz or 12V DC, 9V Latch and 12V DC Latch normally open (N.O.) or normally closed (N.C.) solenoids coils may be used on main valve.

applications

Use **55EL** for remote operation of hydraulic valve by an electric command.
Use **55EL** for water distribution.

standards

55EL/B – 24V AC N.O. Solenoid, polyethylene plastic tubing system and nylon fittings

55EL/B-3W - 24V AC N.O. Solenoid, polyethylene plastic tubing system, nylon fittings and 3-way selector valve.

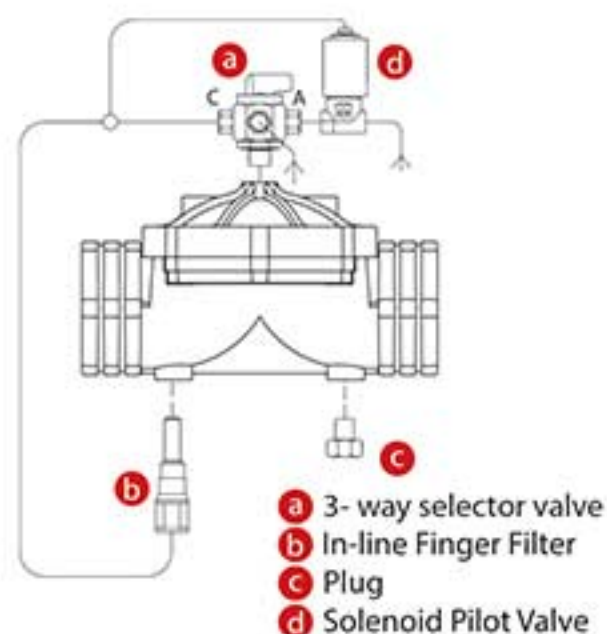
options

Pressure Gauge
9V DC Latch Solenoid
12V DC Latch Solenoid
N.C. Solenoid

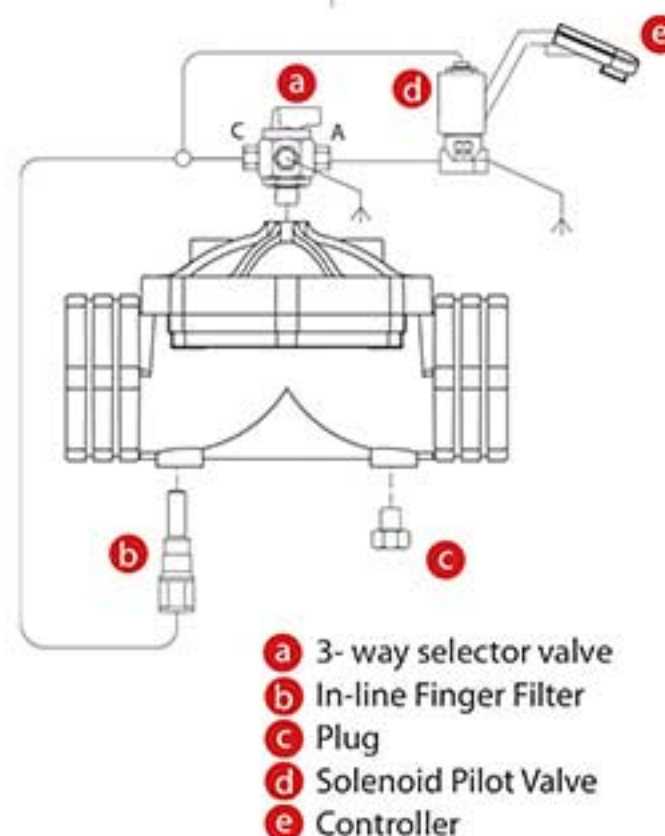
order information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
Maximum network/line pressure _____ bar
Main line size _____ mm
Valve connection type _____
Electric voltage value to be used _____ volt



Electric Control Valve + Control Device (1 Outlet) **EL/C**



description

Asbir "EL/C" model valve is the hydraulic control valve operated by line pressure and designed to ensure opening/closing process by means of built in solenoid pilot valve controlled remotely with electric signal at required time or required duration. Electric signal for solenoid pilot valve is ensured by means of a control device, time relay, main switch and PLC control units etc. Opening/Closing process may be realized easily thanks to manual control on solenoid pilot valve. Depending on requirements. The controller irrigates in cycles, during a window of time according to your needs.

applications

Use **55EL/C** for programmed irrigation.
Use **55EL/C** for water distribution.

standards

55EL/C – 9V DC Latch solenoid, Control Unit (1 Outlet), polyethylene plastic tubing system, nylon fittings and 3-way selector valve.

options

Pressure Gauge

order information

Please submit following information to our sales department while ordering.

Maximum flow rate	_____	m ³ /h
Maximum network/line pressure	_____	bar
Main line size	_____	mm
Valve connection type	_____	
Electric voltage value to be used	_____	volt

PR | pressure reducing control valve

description

Asbir "PR" model pressure reducer control valve is the hydraulic control valve which reduces high upstream pressure value to desired lower pressure value by means of built-in pressure reducing pilot valves. Pressure reducer control valve controls downstream pressure value continuously and maintains it constant without being affected from flow rate and upstream pressure values. When no flow exists in the system, it closes itself automatically. When valve upstream pressure value, it is opened fully by itself. Valve may be used in vertical or horizontal positions in the system.

applications

Use **55PR** for irrigation, water distribution and filtration systems.
Smart designed **55PR** provides high corrosion resistance.

standards

55PR – 3-way plastic pressure reducing pilot, polyethylene plastic tubing system and nylon fittings
55PR-3W - 3-way plastic pressure reducing pilot, polyethylene plastic tubing system, nylon fittings and 3-way selector valve
Standard pressure adjustment from Factory: 2,5 bar.

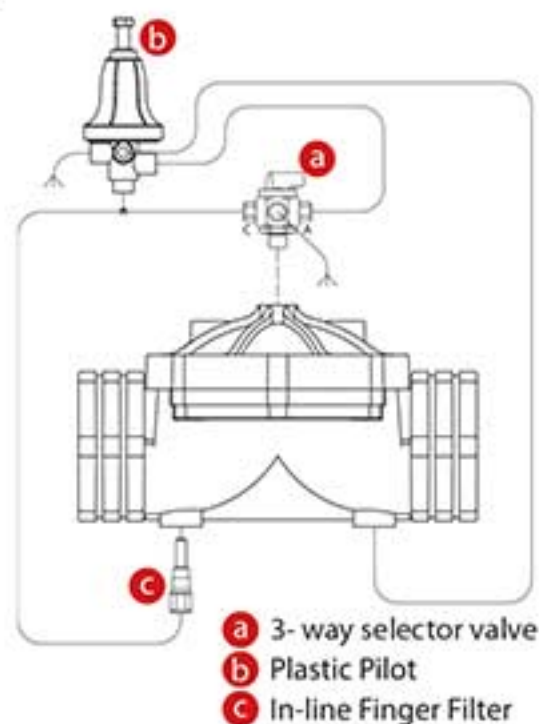
options

Pressure Gauge

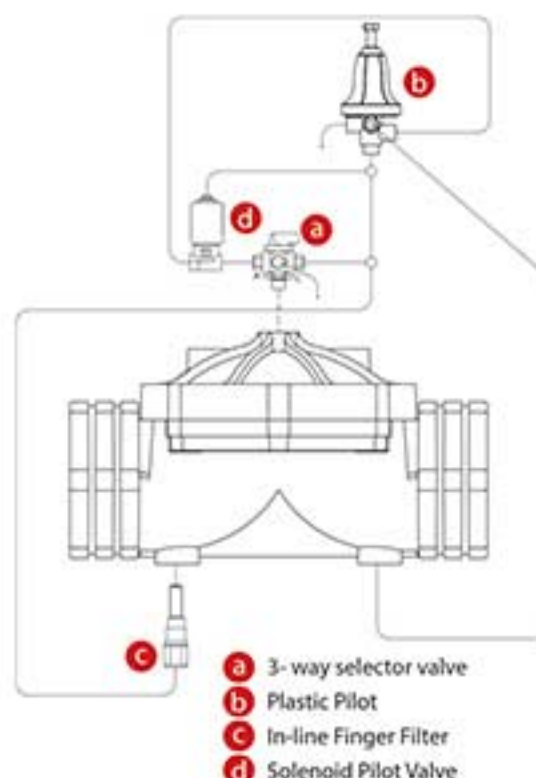
order information

Please submit following information to our sales department while ordering.

Maximum flow rate	_____	m ³ /h
Maximum network/line pressure	_____	bar
Main line size	_____	mm
Valve connection type	_____	
Maximum upstream pressure	_____	bar
Minimum upstream pressure	_____	bar
Desired downstream pressure	_____	bar



solenoid controlled PREL pressure reducing valve



description

Asbir "PREL" model pressure reducing valve is the hydraulic control valve which reduces high upstream pressure value into desired lower pressure value. Control of main valve is achieved by means of built-in solenoid pilot valves. Electric signal for solenoid pilot valves is ensured by means of a control device, time relay, main switch and PLC control units etc. Automated control may be easily ensured by this way in application systems.

applications

Use **55PREL** for water distribution, where downstream pressure should be reduced the valve is the commanded to open.

standards

55PREL/B - 3-way plastic pressure reducing pilot, solenoid 24V AC N.O., polyethylene plastic tubing system and nylon fittings

55PREL/B-3W - 3-way plastic pressure reducing pilot, solenoid 24V AC N.O., polyethylene plastic tubing system, nylon fittings and 3-way selector valve

Standard pressure adjustment from Factory: 2,5 bar.

options

Pressure Gauge

order information

Please submit following information to our sales department while ordering.

Maximum flow rate	_____	m ³ /h
Maximum network/line pressure	_____	bar
Main line size	_____	mm
Valve connection type	_____	
Maximum upstream pressure	_____	bar
Minimum upstream pressure	_____	bar
Desired downstream pressure	_____	bar
Electric voltage value to be used	_____	volt

PRPS | pressure reducing and sustaining control valve

description

Asbir "PRPS" model pressure reducing/sustaining hydraulic control valve reduces valve downstream pressure to desired value by sustaining upstream pressure. Two pilot valves exist on valve. Pilot valve on upstream side is the pressure sustaining pilot valve and sustains upstream pressure. Other pilot valve is pressure reducing pilot valve and keeps downstream pressure constant by reducing it to desired value. Reducing/sustaining control valve pumps fluid downwards; it ensures that system works within normal values by regulating over flow and high pressure in pumping systems. It controls upstream and downstream pressure continuously and keeps them within constant values.

applications

Use 55PRPS for protecting booster pumps and preserve set pressure downstream.

standards

55PRPS – 3-way plastic pressure reducing pilot, 3-way plastic pressure sustaining valve, polyethylene plastic tubing system, nylon fittings and 3-way selector valve

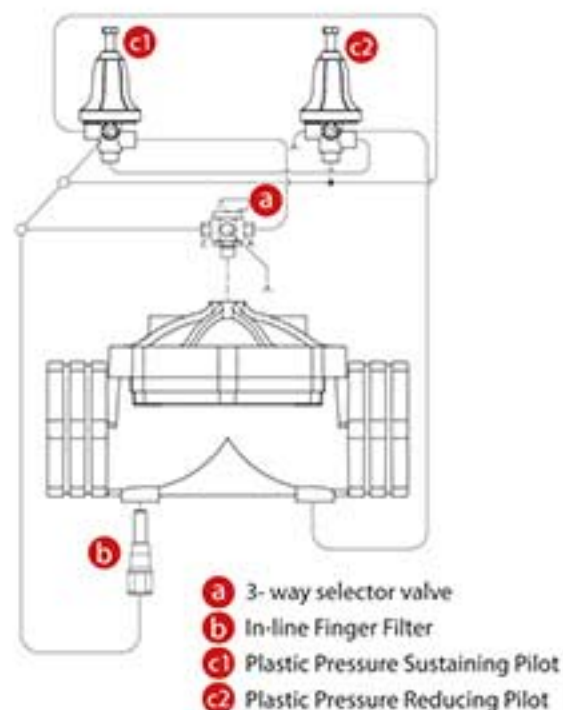
options

Pressure Gauge

order information

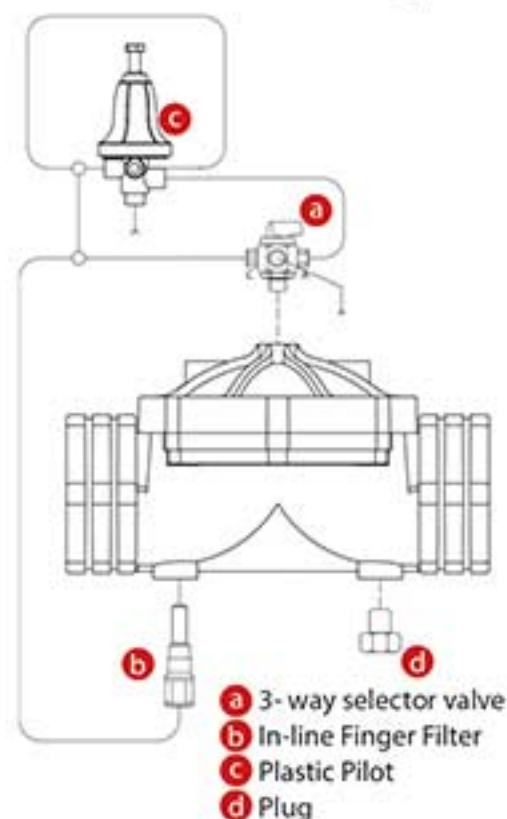
Please submit following information to our sales department while ordering.

Maximum flow rate	_____	m ³ /h
Maximum network/line pressure	_____	bar
Main line size	_____	mm
Valve connection type	_____	
Maximum upstream pressure	_____	bar
Minimum upstream pressure	_____	bar
Desired downstream pressure	_____	bar
Desired upstream pressure	_____	bar



quick pressure relief | QR

control valve



description

Asbir "QR" model quick pressure relief valve is the safety control valve designed to protect system by releasing pressure surges in water network elevation lines to atmosphere quickly, which are caused by sudden changes in water speed due to pumps put into/out of service. When network pressure exceeds set point, valve opens by itself quickly and protects system by releasing over pressure. When line pressure decreases to normal level, it is closed slowly and automatically as fully tight without causing surge.

applications

Use 55QR for avoiding an unwelcome high pressure.

standards

55QR – 3-way plastic pilot, polyethylene plastic tubing system and nylon fittings

options

Pressure Gauge

order information

Please submit following information to our sales department while ordering.

Maximum flow rate	_____	m ³ /h
Maximum network/line pressure	_____	bar
Main line size	_____	mm
Valve connection type	_____	
Maximum upstream pressure	_____	bar
Desired upstream pressure	_____	bar

PS | pressure sustaining control valve

description

Asbir "PS" model pressure sustaining hydraulic control valve maintains valve upstream pressure value constant. Valve is opened when line pressure reaches the preset pressure level. It ensures that pump motor within pumping systems will start without load. It also prevents positive pressure waves caused by pump during start-up. Valve controls upstream pressure value continuously and keeps it at a constant value without being affected from changes in flow rate. When no flow exists, it closed by itself fully tight.

applications

Use **55PS** for maintaining a constant upstream pressure or avoid an unwelcome high pressure.

standards

55PS – 3-ways plastic pressure sustaining pilot, polyethylene plastic tubing system and nylon fittings

55PS-3W - 3-ways plastic pressure sustaining pilot, polyethylene plastic tubing system, nylon fittings and 3-way selector valve

Standard pressure adjustment from Factory: 2,5 bar.

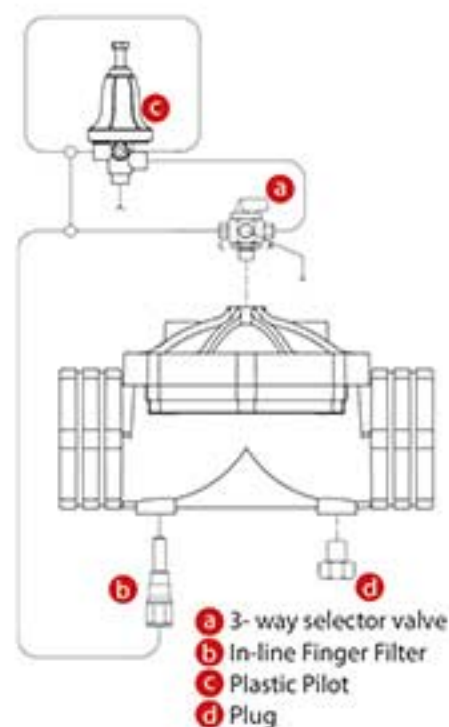
options

Pressure Gauge

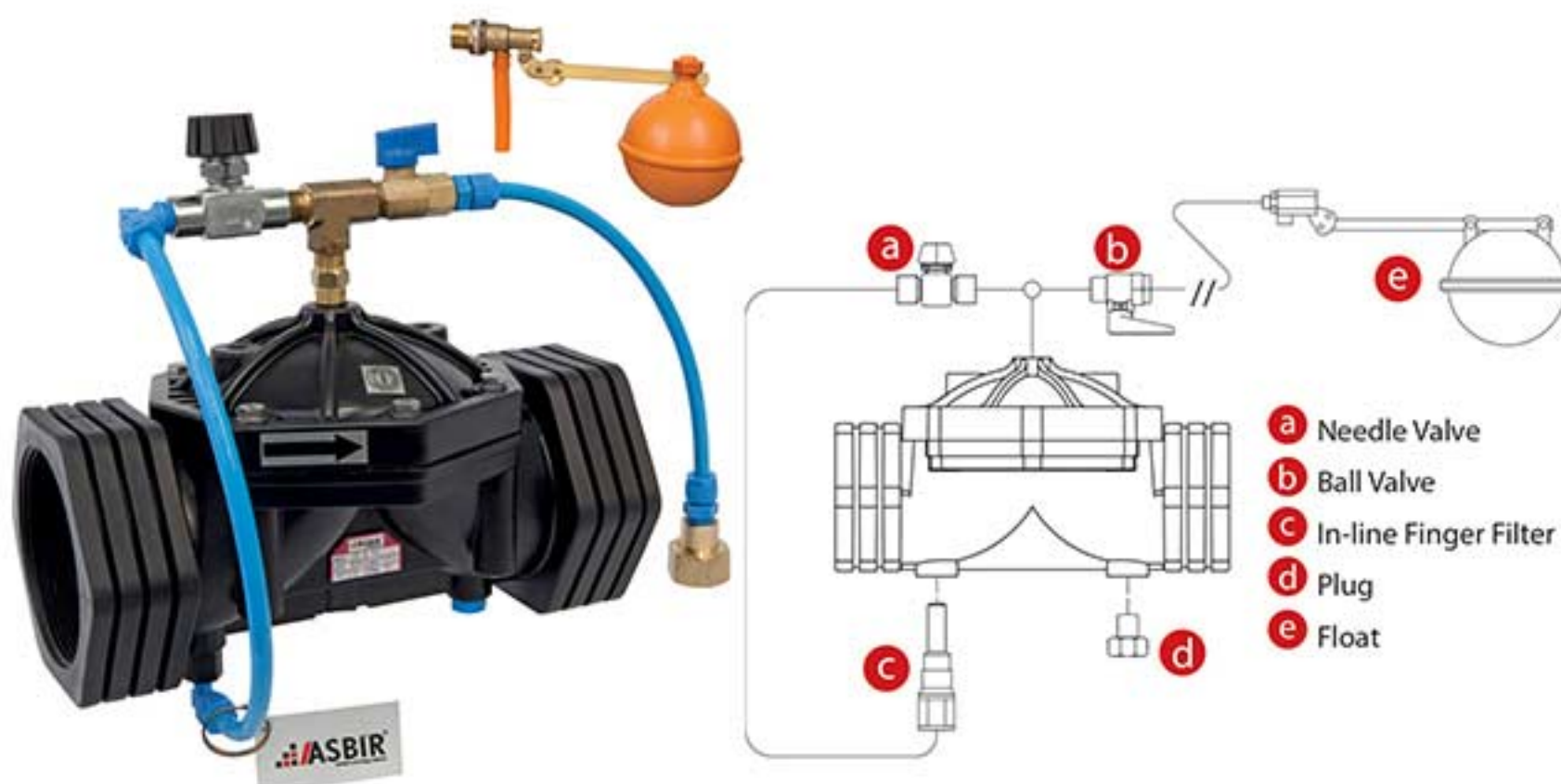
order information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
Maximum network/line pressure _____ bar
Main line size _____ mm
Valve connection type _____
Desired upstream pressure _____ bar



float level control valve **FL**



description

Asbir“FL” model float level control valve is the hydraulic control valve designed to control water level in reservoirs and tanks continuously. Main valve is controlled by 2-way modulating type float pilot valve or manually. Main valve mounted on upstream of a reservoir or tank is closed as fully sealed without causing surge when water level reaches to maximum level. Valve opening/closing speed may be adjusted. It may be used in the system by mounting in horizontal or vertical orientations.

applications

Use **55FL** for when the water level reduce to minimum level, main valve opens fully itself and provides the water level at maximum.

standards

55FL – Plastic float, needle valve, ball valve, polyethylene plastic tubing system and nylon fittings

options

Pressure Gauge

order information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____

FLEL | electric float level control valve

description

Asbir "FLEL" model electrical float level control valve is the hydraulic control valve designed to control water level continuously by means of electrical float placed in reservoirs and tanks. Electrical float sends signal to solenoid coil on main valve when water level decreases below set level. Main valve is opened and ensures that tank or reservoir will be filled permanently. When water reaches maximum level, electrical float sends signal to solenoid coil again and main valve is closed as full sealed. Valve may be used in the system by mounting horizontal or vertical positions.

applications

Use **55FLEL** for when the water level reduce to minimum level, main valve opens fully itself and provides the water level at maximum.

standards

55FLEL – Electrically float level switch, 24V AC N.O. solenoid, needle valve, ball valve, polyethylene plastic tubing system and nylon fittings

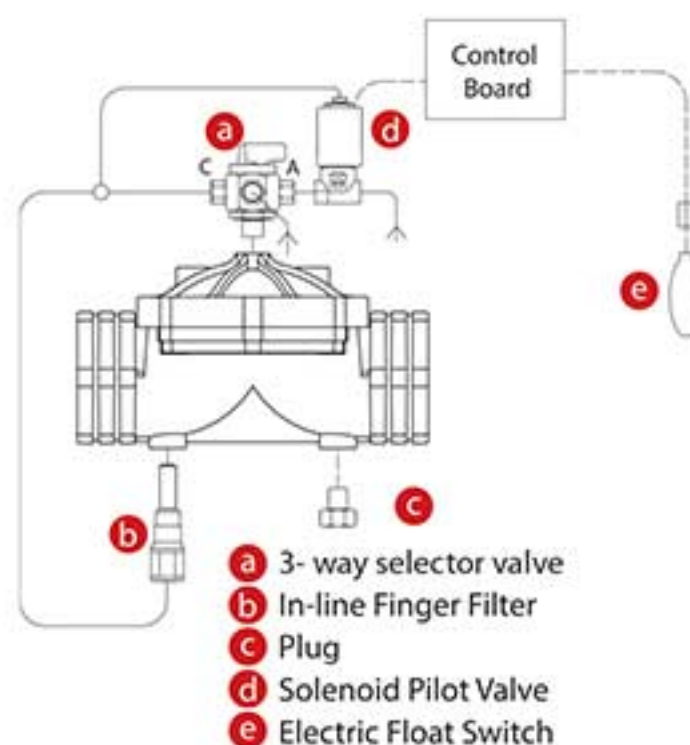
options

Pressure Gauge

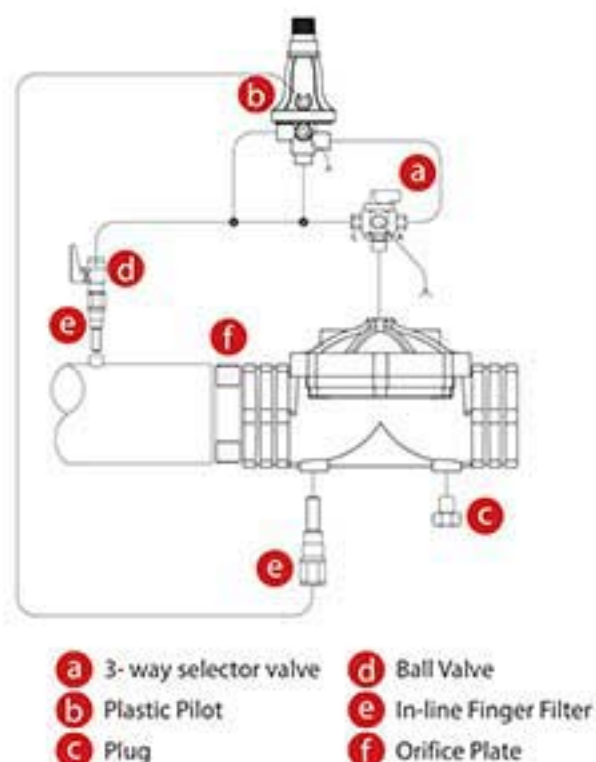
order information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
Maximum network/line pressure _____ bar
Main line size _____ mm
Valve connection type _____
Electric voltage value to be used _____ volt



flow rate control valve **FR**



description

Asbir "FR" model flow rate control valve is designed to limit desired flow rate. The orifice on main valve upstream creates pressure difference and 3/way differential pressure set pilot mounted in control chamber of valve senses this pressure difference and ensures that main valve opens in desired flow rate. Valve thereby limits desired flow rate automatically and keeps it fixed. It eliminates over flow by preventing excessive flow during reverse washing in filtration systems.

applications

Use **55FR** for automatically limiting required flow rate without affecting inlet pressure.

standards

55FR – Plastic flow rate pilot, polyethylene plastic tubing system, nylon fittings and stainless steel orifice

options

Pressure Gauge

order information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum upstream pressure _____ bar
 Desired flow rate _____ m³/h

PAV | plastic air valve



description

Asbir "PAV" model has been designed for an efficient discharge of large air volumes from small water network systems, filters, tanks, and other devices where trapped air may impair the system's operation. The valve is appropriate for:

- Expelling the air at high flow velocity during the initial filling of the systems
- Introducing air when the pipe drains, maintaining atmospheric pressures in the pipe, preventing collapse and cavitation damage to the conduits
- Relieving the entrained air from the water, while the network is pressurized

specifications

The valve, with its unique Y-shaped duct, allows the discharge and the introduction of air. Its aerodynamic performance is superior to competitor valves of the same diameter.

The aerodynamic design of the float provides air flow at a very high velocity.

The valve design contains a very limited number of parts, allowing easy dismantling for maintenance.

The float does not close before the water has reached the valve.

available models & sizes

Automatic Air Valve	: ½" - ¾" - 1" - 2"
Kinetic Air Valve	: ½" - ¾" - 1" - 2"
Available Connections	: Threaded (BSPT-NPT)



600 Series

Hydraulic Control Valves

Waterworks | Irrigation

600 Series Hydraulic Control Valves



600 Series Hydraulic Control Valves

General Description

Asbir 600 series valves are the direct diaphragm closing automatic hydraulic control valves which work with line pressure. It ensures easy and smooth flow with minimum pressure losses thanks to excellent design of valve body and diaphragm. No wearable parts such as stem, bearing and seat exist in main valve body, valve life is much longer than other competitor valves. Only movable part of valve is valve diaphragm. Asbir 600 series hydraulic control valves are designed so that it can be used in potable water force network, agricultural irrigation, fire fighting, filtration, industrial applications by even an unskilled personal.

Features

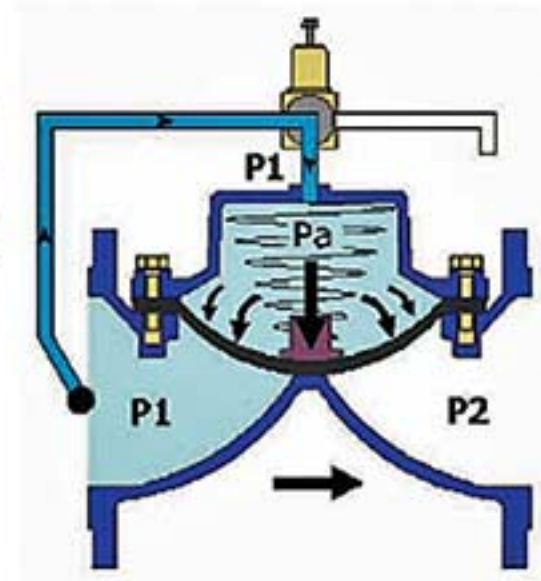
- Easy use and maintenance due to simple design
- Low cost
- Operation in wide pressure range
- Perfect modulation even in lower flow rates
- Anti-surge closing and opening with flexible diaphragm
- Full tightness thanks to reinforced diaphragm and inner spring
- Long life with epoxy-polyester coating
- Wide control application range by using different pilot valves
- Operation in both horizontal and vertical positions in application areas

Working Principals

It is automatic hydraulic control valve designed for make desired modulation processes in main valve network line as full hydraulically by means of line pressure without requiring different energy sources such as electric, pneumatic or mechanic energy.

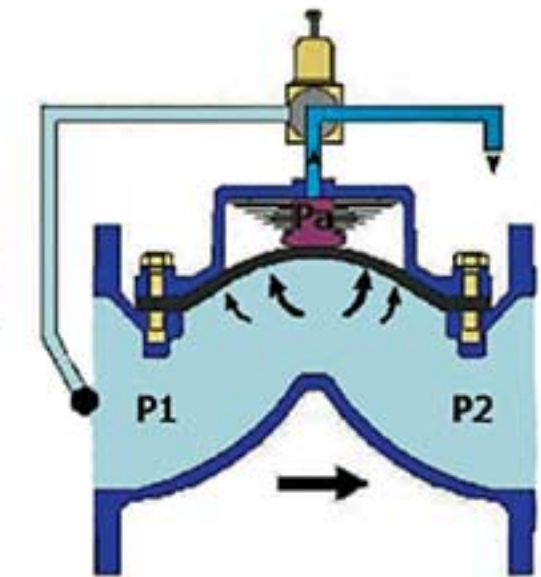
Valve Closing Mode

When pilot valves connected on main valve transport water pressure in valve upstream to valve actuator (control chamber), water creates a hydraulic power on valve diaphragm. This power formed, by combining with extra power applied by inner spring, ensures that valve will be closed as full tightness.



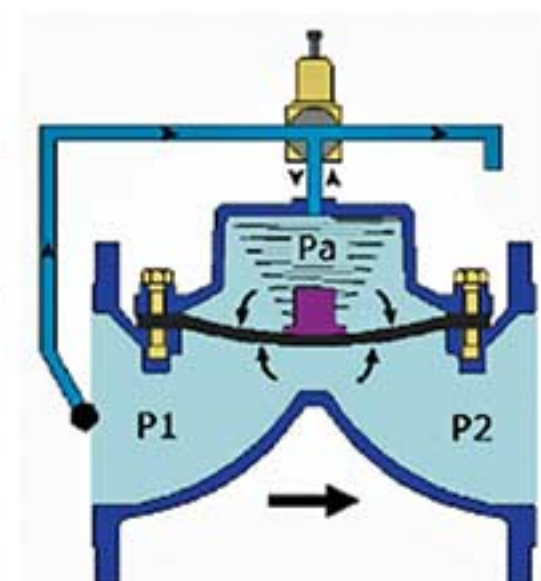
Valve Opening Mode

When way of pilot valve located on main valve being in closed position is brought into relief position, pressurized water within control chamber on main valve diaphragm is released. When line pressure (P1) reaches to the value which will overcome spring power, water carries valve to fully open position by applying a hydraulic power to valve diaphragm from bottom.

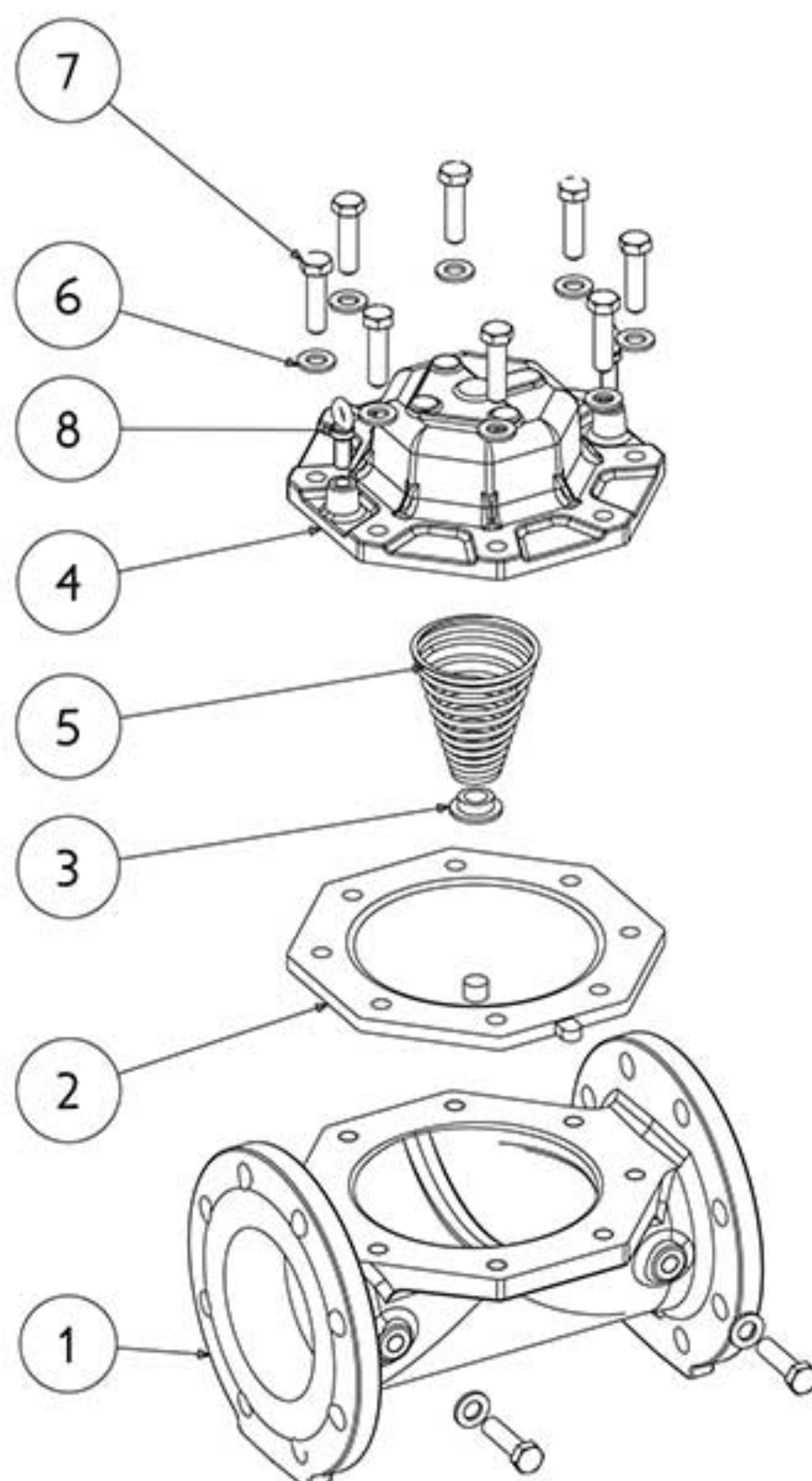


Modulation Mode

Pilot valves which are connected to main valve actuator ensure that main valve works in modulated mode. According to flow rate or pressure conditions, it ensures that main valve works in modulated mode by controlling pressure of fluid within main valve actuator (control chamber).



Main Parts and Technical Specifications



Main Parts

NO	Part Name	Material
1	Body	Standard: GG25 (Cast Iron) Optional: GGG40 (Ductile Iron)
2	Diaphragm	Standard: Nylon reinforced Natural Rubber Optional: EPDM, Nitrile, Neoprene
3	Spring Thrust Ring	Polyamide
4	Cover	Standard: GG25 (Cast Iron) Optional: GGG40 (Ductile Iron)
5	Spring	Standard: SST 302 Optional: SST 316
6	Washer	Coated Steel
7	Bolt	Coated Steel
8	Lifting eye-bolt	Coated Steel

Technical Specifications

Pressure Rating	Standard	0,7-16 bar (10-240 psi)
	Low Pressure Range	0,5-10 bar (7,5-160) psi
	High Pressure Range	0,7-25 bar (10-360 psi)
Temperature	Min. Operating Temperature	- 10 °C (14 °F) DIN 2401/2
	Max. Operating Temperature	80 °C (176 °F) DIN 2401/2
Connection	Flanged	DIN 2501, ISO 7005-2, ANSI
	Threaded	BSPT, NPT
	Grooved End	Victaulic
Coating	Standard	Epoxy
	Optional	Polyester
Hydraulic Connections	Standard	Reinforced Nylon (Air Brake) Hydraulic Pipe SAEJ 844
	Optional	Copper DIN 1057
Actuator Type	Diaphragm Closing Type with Single Control Chamber and Diaphragm Actuator	

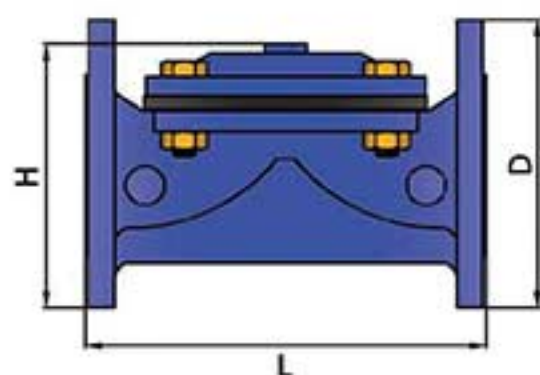
Available Models

Models	67		67D		66		66D		64		63		63D	
														
Connection	Flanged		Flanged		Threaded		Threaded		Threaded		Grooved End		Grooved End	
Material	GG25		GGG40		GG25		GGG40		GG25		GG25		GGG40	
Body	Globe		Globe		Globe		Globe		Angle		Globe		Globe	
Maximum Operating Pressure	16 bar 240 psi		25 bar 360 psi		16 bar 240 psi		25 bar 360 psi		16 bar 240 psi		16 bar 240 psi		25 bar 360 psi	
Available Sizes	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
	2	50	2	50	1½	40	1½	40	2	50	2	50	2	50
	2½	65	2½	65	2	50	2	50	2½	65	2½	65	2½	65
	323	80*50	323	80*50	2½	65	2½	65	3	80	3	80	3	80
	3	80	3	80	323	80*50	323	80*50			4	100	4	100
	4	100	4	100	3	80	80	80						
	5	125	5	125										
	6	150	6	150										
	8	200	8	200										
	10	250	10	250										
	12	300	12	300										
	14	350	14	350										
	16	400	16	400										

Weight and Dimension

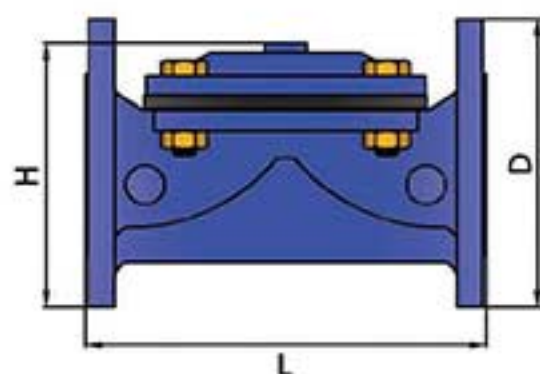
model 67

DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	kg.
2	50	6,49	165	7,87	200	5,9	150	15,4	7
2½	65	7,28	185	8,46	215	6,1	155	21	9,5
323	80*50	7,87	200	8,46	215	6,3	160	22,2	10
3	80	7,87	200	11,4	290	6,7	172	36,3	16,5
4	100	8,66	220	12	305	7	180	40,7	18,5
5	125	9,84	250	14,3	365	7,87	200	52,8	24
6	150	11,2	285	15,7	400	12	305	104,5	47,5
8	200	13,3	340	19,2	490	15	383	177,1	80,5
10	250	15,5	395	21	535	17,5	445	255,2	116
12	300	17,5	445	22,8	580	19,6	495	343,2	156
14	350	20,6	524	25,9	660	20,4	520	423,2	192
16	400	23,4	596	27,1	690	24,6	625	476,1	216

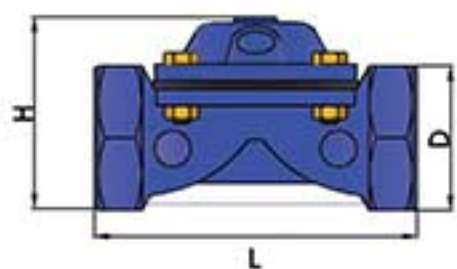


model 67D

DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	kg.
2	50	6,49	165	7,87	200	5,9	150	18,7	8,5
2½	65	7,28	185	8,46	215	6,1	155	22,2	11
323	80*50	7,87	200	8,46	215	6,3	160	27,5	12,5
3	80	7,87	200	11,4	290	6,7	172	46,2	21
4	100	8,66	220	12	305	7	180	51,7	23,5
5	125	9,84	250	14,3	365	7,87	200	61,6	28
6	150	11,2	285	15,7	400	12	305	118,8	54
8	200	13,3	340	19,2	490	15	383	237,6	108
10	250	15,5	395	21	535	17,5	445	290,4	132
12	300	17,5	445	22,8	580	19,6	495	385	175
14	350	20,6	524	25,9	660	20,4	520	462,9	210
16	400	23,4	596	27,1	690	24,6	625	507	230

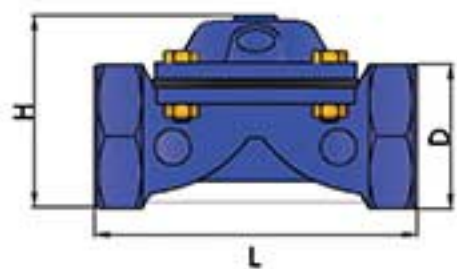


model 66



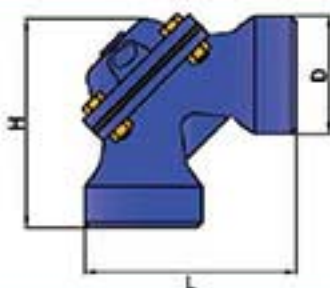
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	kg.
1½	40	2,5	66	6,2	160	3,5	90	6,6	3
2	50	3,3	85	7,1	180	4,1	105	8,8	4
2½	65	3,7	95	8,1	205	4,1	105	9,9	4,5
323	80*50	4,3	110	8,7	220	4,7	120	12,1	5,5
3	80	4,3	110	12,6	320	4,9	125	24,2	11

model 66D



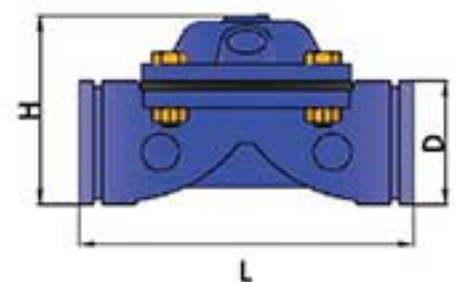
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	kg.
1½	40	2,5	66	6,2	160	3,5	90	8,8	4
2	50	3,3	85	7,1	180	4,1	105	11,4	5,2
2½	65	3,7	95	8,1	205	4,1	105	14,3	6,5
323	80*50	4,3	110	8,7	220	4,7	120	17,6	8
3	80	4,3	110	12,6	320	4,9	125	28,6	13

model 64



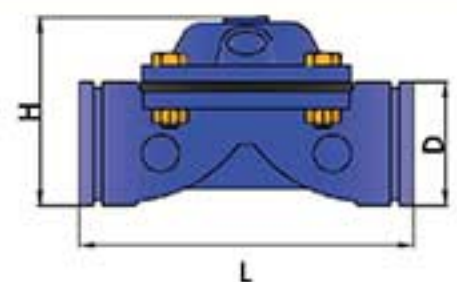
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	kg.
2	50	3	80	5,1	130	5,1	130	6,6	3
2½	65	3,5	90	6,3	160	6,3	160	11	5
3	80	4,3	110	8,3	210	8,3	210	24,2	11

model 63



DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	kg.
2	50	2,4	60	7,1	180	3,7	95	6,6	3
2½	65	2,9	75	8,3	210	3,9	100	8,8	4
3	80	3,5	90	12	305	4,7	120	24,2	11
4	100	4,5	115	12,2	310	4,9	125	28,6	13

model 63D



DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	kg.
2	50	2,4	60	7,1	180	3,7	95	9,4	4,3
2½	65	2,9	75	8,3	210	3,9	100	12,5	5,7
3	80	3,5	90	12	305	4,7	120	28,6	13
4	100	4,5	115	12,2	310	4,9	125	35,6	16,2

Diaphragm Selecting Table

Size		Diaphragm		Pressure Range	
inch	mm	Tipi	No	mSS	psi
1½	40	Standard	# 02	4 - 100	6 - 160
2 323	50 80-50-80	Low Pressure	# 03	4 - 100	6 - 160
		Standard	# 05	7 - 160	10 - 230
		High Pressure	# 07	10 - 250	15 - 360
2½	65	Low Pressure	# 03	4 - 100	6 - 160
		Standard	# 05	7 - 160	10 - 230
		High Pressure	# 07	10 - 250	15 - 360
3	80	Low Pressure	# 13	4 - 100	6 - 160
		Standard	# 15	7 - 160	10 - 230
		High Pressure	# 17	10 - 250	15 - 360
4	100	Low Pressure	# 13	4 - 100	6 - 160
		Standard	# 15	7 - 160	10 - 230
		High Pressure	# 17	10 - 250	15 - 360
5	125	Low Pressure	# 13	4 - 100	6 - 160
		Standard	# 15	7 - 160	10 - 230
		High Pressure	# 17	10 - 250	15 - 360
6	150	Low Pressure	# 23	4 - 100	6 - 160
		Standard	# 25	7 - 160	10 - 230
		High Pressure	# 27	10 - 250	15 - 360
8	200	Low Pressure	# 33	4 - 100	6 - 160
		Standard	# 35	7 - 160	10 - 230
		High Pressure	# 37	10 - 250	15 - 360
10	250	Low Pressure	# 43	4 - 100	6 - 160
		Standard	# 45	7 - 160	10 - 230
		High Pressure	# 47	10 - 250	15 - 360
12	300	Low Pressure	# 33	4 - 100	6 - 160
		Standard	# 35	7 - 160	10 - 230
		High Pressure	# 37	10 - 250	15 - 360

Hydraulic Performance

Valve Size	mm	40	50	65	80-50-80	80	100	125	150	200	250	300
	inch	1½	2	2½	323	3	4	5	6	8	10	12
Kv	m³/h @ 1 bar	35	50	50	50	130	200	200	450	800	1250	1800
Cv	gpm @ 1 psi	45	60	60	60	150	231	231	520	925	1450	2080

Kv : Valve Flow Coefficient (fluid passing in 1 bar pressure lose in m³/h and 1 bar)

Cv : Valve Flow Coefficient (fluid passing in 1 bar pressure lose in gpm and 1 psi)

Q : Flow Rate (m³/h, gpm)

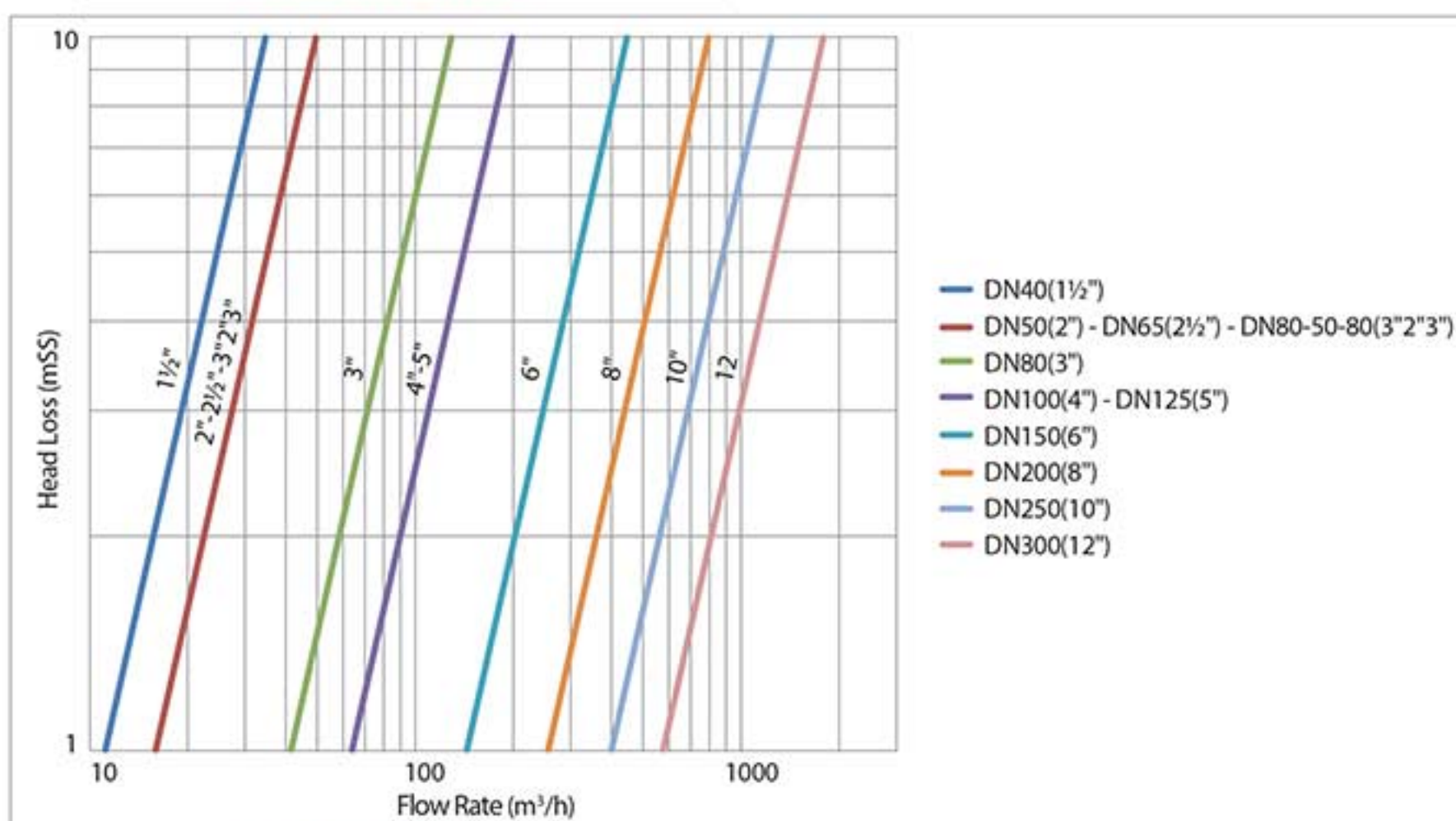
ΔP : Head Loss (bar, psi)

G : Specific weight of water (1.0)

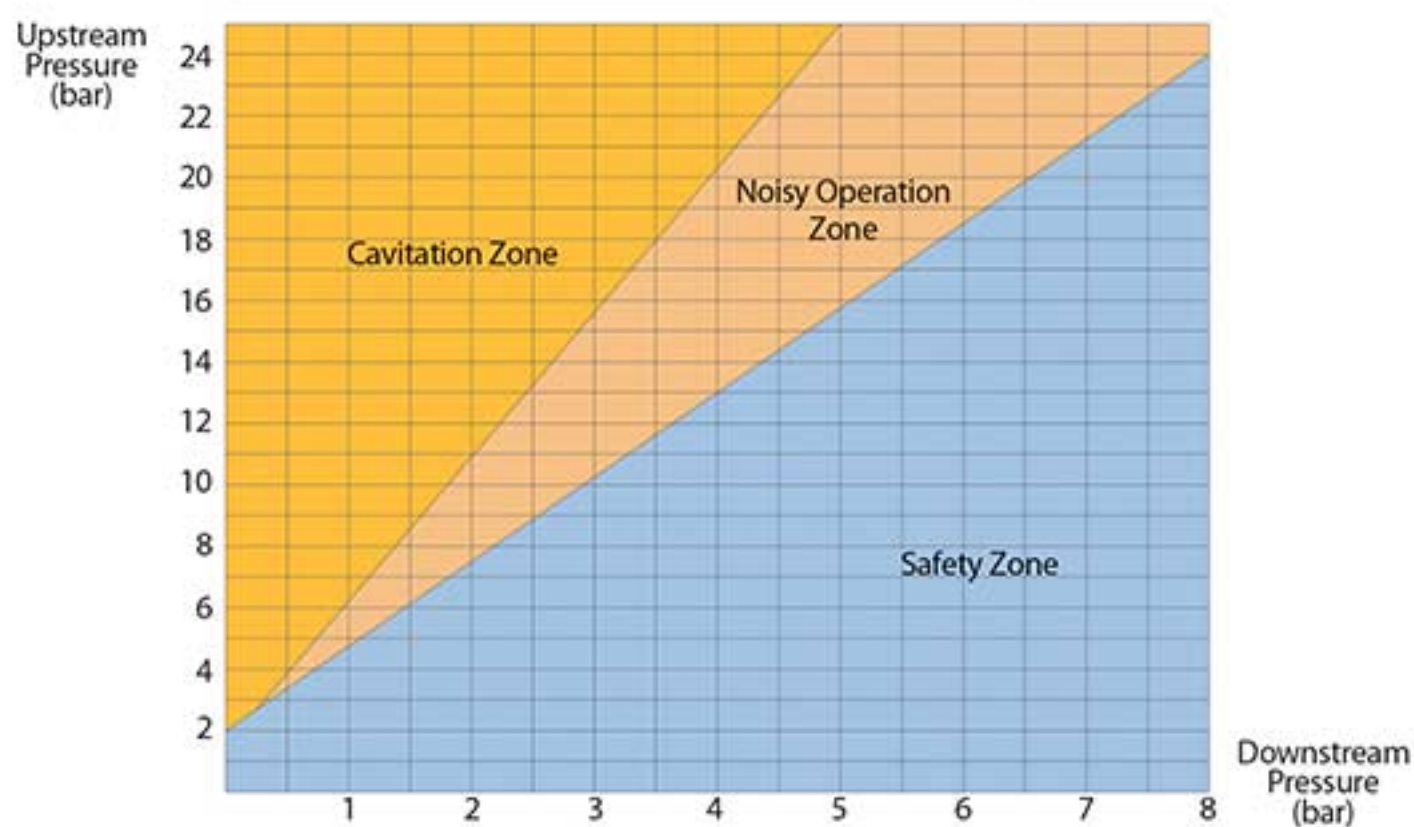
$$Kv, (Cv) = Q \cdot \sqrt{\frac{G}{\Delta P}}$$

$$Cv = 1,155 Kv$$

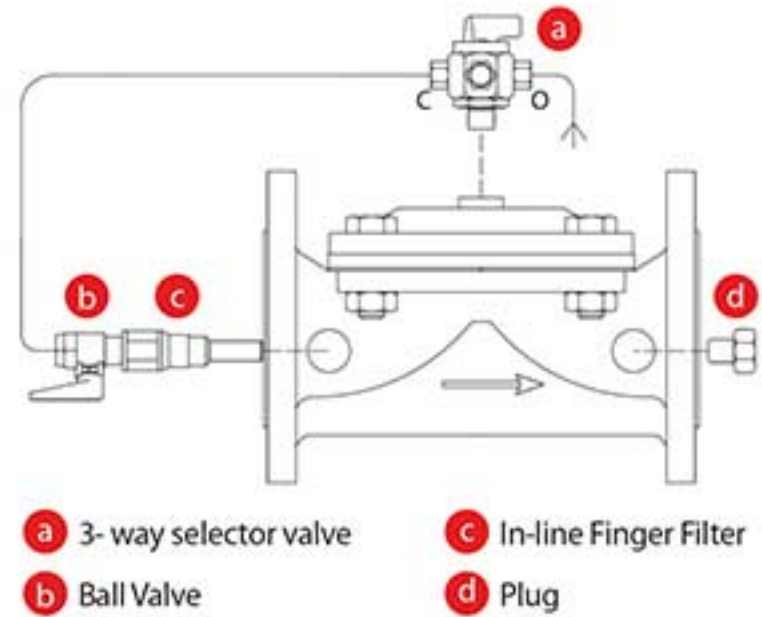
Head Loss Chart



Cavitation Chart



Manual Hydraulic Control Valve **M**



Description

Asbir "M" model valve is the hydraulic control valve operated by line pressure and designed to ensure opening/closing process by means of 3-way selector valve. Minimum opening pressure of valve is 0.7 bar. Thanks to its flexible diaphragm, it makes easy and fast control process in high pressure applications and is closed as full tightness without causing surge. It may be used in different applications by adding different pilot valves on its main body.

Installation

- Make sure that valve is on a level with the pipeline while mounting it.
- Mount valve in direction of arrow indicated on it.
- While connecting valve on pipeline, place gasket between valve flange and pipe flange to ensure sealing and tighten the bolts as crosswise.
- Mount valve body in reservoir or tank upstream and mount float components as fixed in desired level interval.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve

Typical Application



1 Manual Control Valve

Adjustment

- Select adjustment position by means of 3-way selector valve indicated with "a" on main valve.
- Valve is open in "Open" position and closed in "Close" position

Maintenance

- Check finger filter in valve upstream according to water quality.
- Drain water within actuator of valve not used in winter.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Line pressure may be low. • 3-way selector valve may be closed. • 3-way selector valve may be clogged 	<ul style="list-style-type: none"> • Check valve upstream pressure and ensure necessary upstream pressure. • Check 3-way selector valve and bring it into "Open" position. • Check 3-way selector valve and clean it.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • 3-way selector valve may be open. • 3-way selector valve may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check 3-way selector valve and bring it into "Close" position. • Check 3-way selector valve and clean it.

Order Information

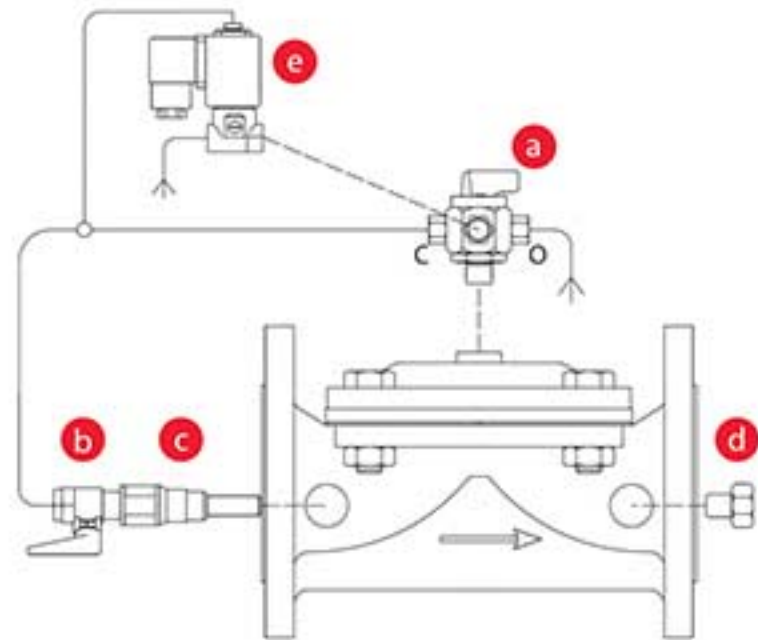
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Manual Control	EL: Electric Control	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		NV: On/Off Speed Adjustment	
63-63D	VIC: Grooved End	2"-4"		PG: Pressure Gauge	
67	F	6"	M	NV	PIR

Solenoid Controlled Valve | **EL**



- | | |
|--------------------------------|-------------------------------|
| a 3- way selector valve | d Plug |
| b Ball Valve | e Solenoid Pilot Valve |
| c In-line Finger Filter | |

Description

Asbir "EL" model valve is the hydraulic control valve operated by line pressure and designed to ensure opening/closing process by means of built-in 3/2-way solenoid pilot valves controlled remotely with electric signal. Electric signal for solenoid pilot valves is ensured by means of a control device, time relay, main switch and PLC control units etc. Opening/Closing process may be realized easily thanks to manual control on solenoid pilot valve. Depending on desire, 24V AC 50Hz/60Hz or 12V DC, 9V DCLATCH and 12V DC latch normally open (N.O.) or normally closed (N.C.) solenoid coils may be used on main valve.

Installation

- Make sure that valve is on a level with the pipeline while mounting it.
- Mount valve in direction of arrow indicated on it.
- While connecting valve on pipeline, place gasket between valve flange and pipe flange to ensure sealing and tighten the bolts as crosswise.
- Mount valve body in reservoir or tank upstream and mount float components as fixed in desired level interval.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve

Adjustment

- Connect solenoid pilot valve cables indicated with "e" in accordance with control device.
- Operate pump. Open main valve on network and deliver water to the system.
- Open "b1" ball valve in valve upstream. Then bring 3-way selector valve indicated with "a" on valve into "Auto" position.

Typical Application



- | |
|---------------------------------|
| 1 Controller |
| 2 Solenoid Control Valve |

Maintenance

- Check finger filter in valve upstream according to water quality.
- Drain water within actuator of valve not used in winter.

Solenoid Pilot Valve Specifications

Body	Function	Voltage	Power	Options
Brass-16 bar	3-way N.O. 3-way N.C.	6,12,24,110,240	AC 8W - 5,5W 50 Hz AC 8W - 5,5W 60 Hz DC 5,5 W	0,8 mm 1,6 mm 2,0 mm
Plastic-12 bar	3-way N.O. 3-way N.C.	6,12,24 9,12	AC,DC Latch	

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • 3-way selector valve may be closed. • Ports of Solenoid or 3-way valves may be clogged. • Line pressure may be low. • Voltage value of Solenoid Pilot valve may be wrong. • Solenoid coil may be burnt. 	<ul style="list-style-type: none"> • Check 3-way selector valve and bring it into "Auto" position. • Check ports and clean them if clogged. • Check valve upstream pressure and ensure necessary upstream pressure. • Measure voltage value and select cable with suitable diameter for coil. • Replace coil.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Manual control screw of Solenoid valve may be in wrong position. • Solenoid valve may be clogged. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check control screw of Solenoid valve and bring it into suitable position if it is wrong. • Replace with new one. • Clean if it is clogged.

Order Information

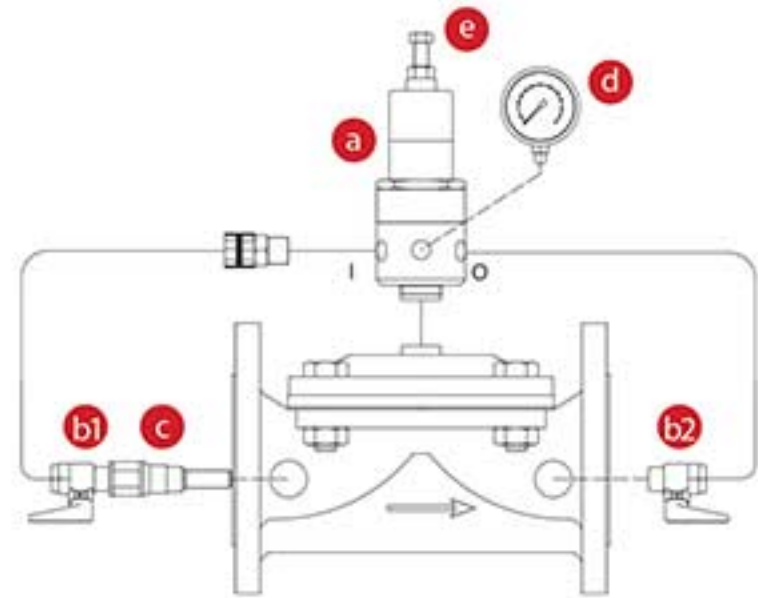
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Electric voltage value to be used _____ volt

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D 66-66D-64 63-63D	F: Flanged (ISO-ANSI) TH: Threaed (BSPT-NPT) VIC: Grooved End	2"-16" 1½"-3" 2"-4"	Electric Control	SV-3: 3-Way Selector Valve NV: On/Off Speed Adjustment PG: Pressure Gauge	Position Indicator
67	F	6"	EL	NV	PIR

Pressure Reducing Control Valve | PR



- | | | | |
|---|-------------------------------|---|-----------------|
| a | Pressure Reducing Pilot Valve | d | Pressure Gauge |
| b | Ball Valves | e | Adjustment Bolt |
| c | In-line Finger Filter | | |

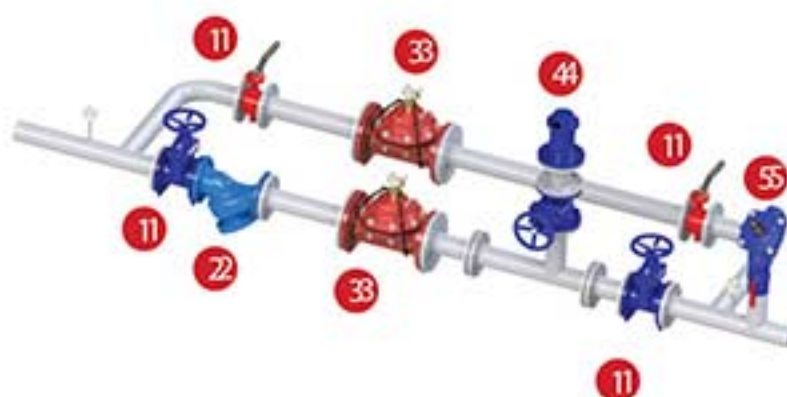
Description

Asbir "PR" model pressure reducer control valve is the hydraulic control valve which reduces high upstream pressure value into desired lower pressure value by means of built-in pressure reducing pilot valves. Pressure reducer control valve controls downstream pressure value continuously and maintains it constant without being affected from flow rate and upstream pressure values. When no flow exists in the system, it is closer by itself automatically. When valve upstream pressure value decreases below adjusted downstream pressure value, it is opened fully by itself. Valve may be user in vertical and horizontal positions in the system.

Installation

- Valve nominal diameter must equal to or one size smaller than line diameter.
- Mount valve in direction of arrow indicated on it.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve
- During pressure decrease, cavitation risk is dangerous for valve body. Adjust downstream pressure value by referring cavitation data or consult our technical service.

Typical Application



- | | |
|---|--|
| 1 | Isolation Valve (Gate, Butterfly Valve etc.) |
| 2 | Strainer |
| 3 | Pressure Reducing Valve |
| 4 | Air Valve |
| 5 | Quick Pressure Relief Valve |

Adjustment

- Operate pump. Open main valve on network and deliver water to the system.
- Open ball valve indicated with "b1" and close ball valve indicated with "b2".
- Wait for a while until water reach valve control chamber. When water reach control chamber, pressure gauge will show a certain pressure value.
- Adjust desired downstream pressure value by means of adjustment bolt with "e" on pilot valve indicated with "a" by referring pressure gauge indicated with "d".
- When you turn adjustment bolt clockwise, downstream pressure value will increase and when you turn adjustment bolt counter-clockwise it will decrease.
- After adjusting desired downstream pressure value, tighten contra nut below adjustment bolt. Open ball valve indicated with "b2" and deliver water into system. Pressure gauge will show zero value after opening "b2" valve.
- Check downstream pressure value continuously. If valve regulating process is not realized, consult our company.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valves in valve upstream and downstream may be close. • Valve upstream pressure may be too low. • Adjustment bolt of pilot valve may be too loosened. 	<ul style="list-style-type: none"> • Check ball valves and open them if they are closed. • Check your system. • Bring adjustment bolt into desired value and tighten contra nut.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valve may be clogged because of foreign substances. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean them. • Clean if it is clogged.
Valve does not regulate	<ul style="list-style-type: none"> • Movable parts of pilot valve may be clogged because of calcification. • Needle valve or orifice in pilot valve upstream may be clogged. • Pressure gauge may be failed. 	<ul style="list-style-type: none"> • Replace with new one. • Clean it. • Replace with new one.

Maintenance

- Check finger filter indicated with "c" according to water quality and clean it. Do not make cleaning more than one within a few months unless water is too dirty.
- Drain water within actuator and pilot valves of valves not used in winter.

Pilot Valve Pressure Adjustment Range

Standard Pressure Range	5 - 160 m	7,5 - 240 psi
Medium Pressure Range	10 - 100 m	15 - 150 psi
High Pressure Range	5 - 240 m	7,5 - 360 psi

Order Information

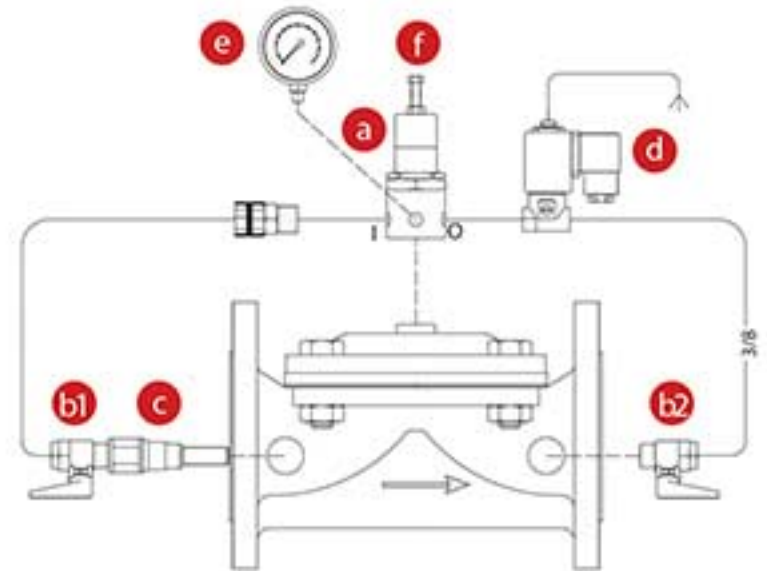
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum upstream pressure _____ bar
 Minimum upstream pressure _____ bar
 Desired downstream pressure _____ bar

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Pressure Reducing	EL: Electric Control	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		NV: On/Off Speed Adjustment	
63-63D	VIC: Grooved End	2"-4"		PG: Pressure Gauge SV-3: 3-Way Selector Valve	
67	F	6"	PR	EL	PIR

PREL | Solenoid Controlled Pressure Reducing Valve



- | | |
|--|-------------------------------|
| a Pressure Reducing Pilot Valve | d Solenoid Pilot Valve |
| b Ball Valves | e Pressure Gauge |
| c In-line Finger Filter | f Adjustment Bolt |

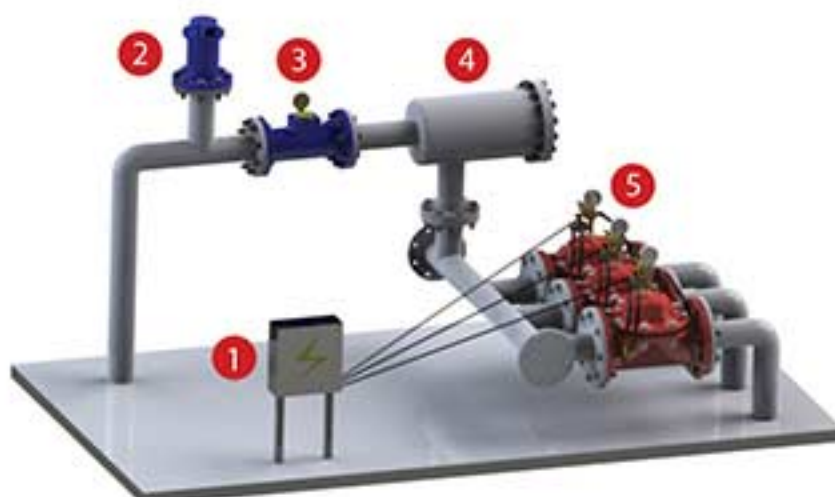
Description

Asbir "PREL" model pressure reducing valve is the hydraulic control valve which reduces high upstream pressure value into desired lower pressure value. Control of main valve is achieved by means of built-in 3/2-way solenoid pilot valves. Electric signal for solenoid pilot valves is ensured by means of a control device, time relay, main switch and PLC control units etc. Automated control may be easily ensured by this way in application systems.

Installation

- Connect cables of solenoid pilot valve in accordance with control device.
- Make sure that is on a level with the pipeline while mounting it.
- Mount valve in direction of arrow indicated on it.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve, quick pressure relief valve (QR), and strainer valves will be used in line-mounting of valve (See sample montage illustration).
- During pressure decrease, cavitation risk is dangerous for valve body. Adjust downstream pressure value by referring cavitation data or consult our technical service.

Typical Application



- | |
|--|
| 1 Controller |
| 2 Air Valve |
| 3 Watermeter |
| 4 Filter |
| 5 Solenoid Controlled Pressure Reducing Valve |

Adjustment

- Operate pump. Open main valve on network and deliver water to the system.
- Open ball valve indicated with "b1".
- Make system active by giving energy to coil of solenoid pilot valve from your control device.
- Adjust desired downstream pressure value by means of adjustment bolt indicated with "f" on pilot valve indicated with "a" by referring pressure gauge indicated with "d".
- When you turn adjustment bolt clockwise, downstream pressure value will increase and when you turn adjustment bolt counter-clockwise it will decrease.
- After adjusting desired downstream pressure value, tighten contra nut below adjustment bolt. Open ball valve indicated with "b2" and deliver water into system. Pressure gauge will show zero value after opening "b2" valve.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valves in valve upstream and downstream may be close. • Valve upstream pressure may be too low. • Adjustment bolt of pilot valve may be too loosened. • Voltage value of solenoid pilot valve may be wrong. • Solenoid coil may be burnt. 	<ul style="list-style-type: none"> • Check ball valves and open them if they are closed. • Check your system. • Bring adjustment bolt into desired value and tighten contra nut. • Measure voltage value and select cable with suitable diameter for coil. • Replace coil.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valve may be clogged because of foreign substances. • Finger filter may be clogged. • Manual control screw of solenoid valve may be in wrong position. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean them. • Clean if it is clogged. • Check manual control screw.
Valve does not regulate	<ul style="list-style-type: none"> • Movable parts of pilot valve may be clogged because of calcification. • Needle valve or orifice in pilot valve upstream may be clogged. • Pressure gauge may be failed. 	<ul style="list-style-type: none"> • Replace with new one. Bring it into correct position if not. • Clean it. • Replace with new one.

Order Information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum upstream pressure _____ bar
 Minimum upstream pressure _____ bar
 Desired downstream pressure _____ bar
 Electric voltage value to be used _____ volt

Solenoid Pilot Valve Specifications

Body	Function	Voltage	Power	Options
Brass-16 bar	3-way N.O. 3-way N.C.	6,12,24,110,240	AC 8W - 5,5W 50 Hz AC 8W - 5,5W 60 Hz DC 5,5 W	0,8 mm 1,6 mm 2,0 mm
Plastic-12 bar	3-way N.O. 3-way N.C.	6,12,24 9,12	AC,DC Latch	

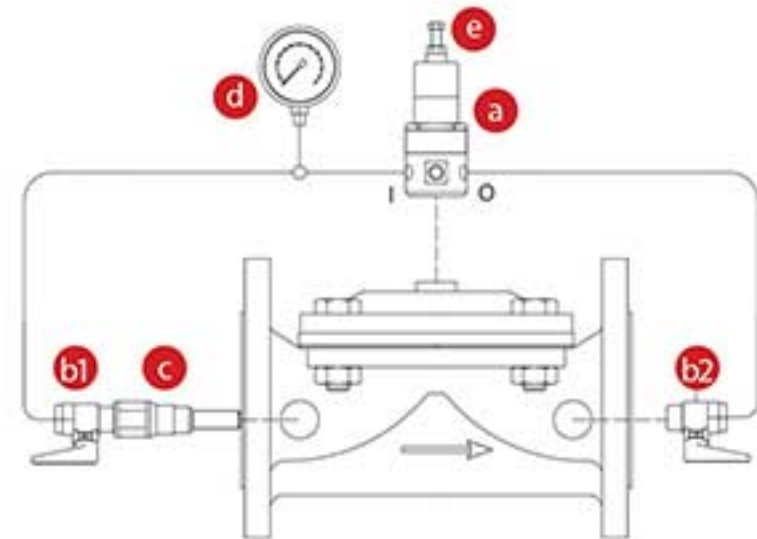
Pilot Valve Pressure Adjustment Range

Standard Pressure Range	5 - 160 m	7,5 - 240 psi
Medium Pressure Range	10 - 100 m	15 - 150 psi
High Pressure Range	5 - 240 m	7,5 - 360 psi

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Solenoid Controlled Pressure Reducing	NV: On/Off Speed Adjustment	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		PG: Pressure Gauge	
63-63D	VIC: Grooved End	2"-4"		SV-3: 3-Way Selector Valve	
67	F	6"	PREL	NV	PIR

Pressure Sustaining Control Valve | PS



- a Pressure Sustaining Pilot Valve
- b Ball Valves
- c In-line Finger Filter
- d Pressure Gauge
- e Adjustment Bolt

Description

Asbir "PS" model pressure sustaining hydraulic control valve maintains valve upstream pressure value constant. Valve is opened when line pressure reaches adjusted valve pressure level. It ensures that pump motor within pumping systems will start without load. It also prevents positive pressure waves caused by pump during start-up. Valve controls upstream pressure value continuously and keeps it in a constant value without being affected from changes in flow rates. When no flow exists, it is closed by itself as fully tightness.

Adjustment

- Operate pump. Open main valve on network and deliver water to the system.
- Open ball valve indicated with "b1" and "b2".
- Wait for a while until water reach valve control chamber. When water reach control chamber, pressure gauge will show a certain pressure value.
- Adjust desired downstream pressure value by means of adjustment bolt indicated with "e" on pilot valve indicated with "a" by referring pressure gauge indicated.
- After adjusting desired downstream pressure value, tighten contra nut below adjustment bolt. Pressure gauge will show upstream pressure value. Check finger filter indicated with "c" according to water quality and clean it. Do not make cleaning more than one within a few months unless water is too dirty.
- Drain water within actuator and pilot valves of valves not used in winter.

Typical Application



- 1 Pressure Sustaining Valve
- 2 Air Valve
- 3 Pump
- 4 Isolation Valve (Gate, Butterfly Valve etc.)

Pilot Valve Pressure Adjustment Range

Standard Pressure Range	5 - 160 m	7,5 - 240 psi
Medium Pressure Range	10 - 100 m	15 - 150 psi
High Pressure Range	5 - 240 m	7,5 - 360 psi

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valve downstream may be closed. • Valve upstream pressure may be too low. • Adjustment pressure of pilot valve may be too high. • Needle valve on pilot valve may be closed. 	<ul style="list-style-type: none"> • Check ball valves and open them if they are closed. • Check your system. • Bring pressure value into adjusting value by means of adjustment bolt. • Open needle valve one or two turns according to system adjustment.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valve may be clogged because of foreign substances. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean them. • Clean if it is clogged.
Valve does not regulate	<ul style="list-style-type: none"> • Movable parts of pilot valve may be clogged because of calcification. • Needle valve or orifice in pilot valve upstream may be clogged. • Pressure gauge may be failed. 	<ul style="list-style-type: none"> • Replace with new one. Bring it into correct position if not. • Clean it. • Replace with new one.

Order Information

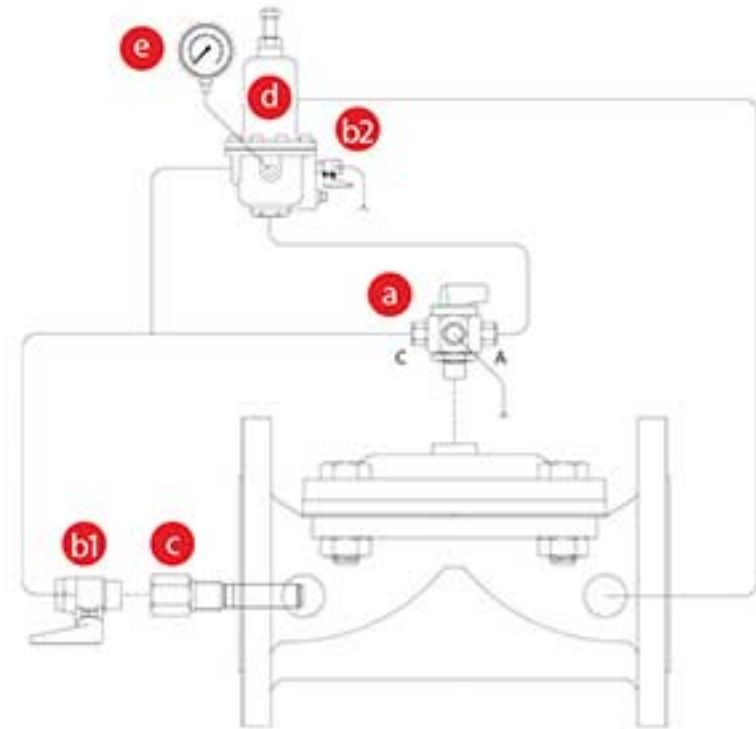
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Desired upstream pressure _____ bar

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Pressure Sustaining	SV-3: 3-Way Selector Valve	Position Indicator
66-66D-64	TH: Threaded (BSPT-NPT)	1½"-3"		NV: On/Off Speed Adjustment	
63-63D	VIC: Grooved End	2"-4"		EL: Electric Control	
67	F	6"	PS	EL	PIR

Differential Pressure Sustaining Control Valve | DIF



- a 3- way selector valve
- b Ball Valves
- c In-line Finger Filter
- d Differential Pressure Sustaining Pilot
- e Pressure Gauge

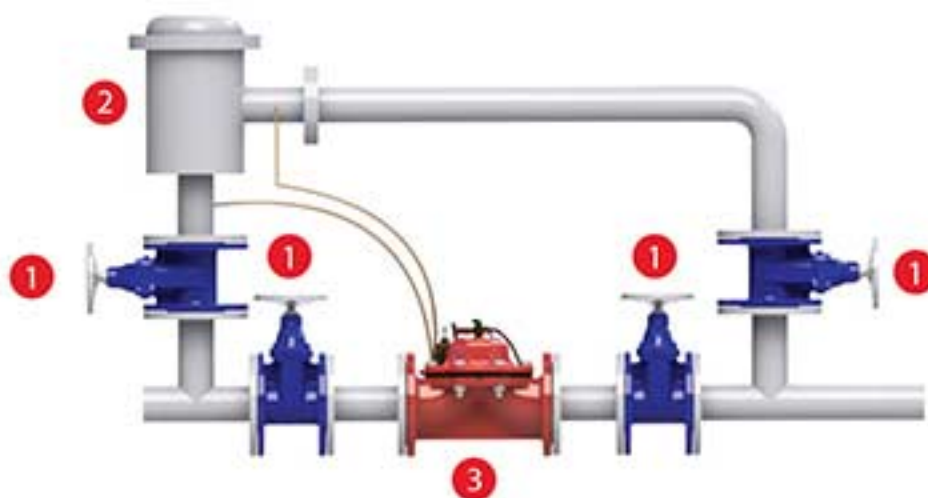
Description

Asbir "DIF" model Differential Pressure Sustaining Valve is the hydraulic control valve which maintains a preset pressure differential between its upstream and downstream sides. Required upstream pressure can be adjusted by the pilot easily. The valve can control heating and cooling systems, booster pump discharge, bypass lines, filters and other similar systems.

Installation

- When connect the valve to the pipeline, please make sure that it should be same position with the pipeline.
- Mount valve in direction of arrow indicated on it.
- When connect the valve to the pipeline, please add a gasket for providing leak proofing between valve's flange and pipe's flange and tighten the bolts cross.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve, quick pressure relief valve (QR) and strainer valves will be used in line-mounting of valve.

Typical Application



- 1 Isolation Valve (Gate, Butterfly Valve etc.)
- 2 Strainer
- 3 Differential Pressure Sustaining Valve
- 4 Pump
- 5 Check Valve

Adjustment

- Open ball valves (b1) and (b2) which are located on the valve.
- Operate pump, open main valve on network and deliver water to the system.
- Turn the adjustment bolt which is located on the pilot valve (d) to anticlockwise. Upstream and downstream pressure will be equal.
- Make sure that the air inside of the system has discharged.
- Adjust upstream and downstream pressure difference by use adjustment bolt which is located on the pilot valve.
- When adjustment bolt is tighten to clockwise, upstream and downstream pressure difference is increased. If the bolt is tighten to anticlockwise, upstream and downstream pressure difference is decreased.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valves in valve upstream and downstream may be closed. • Valve upstream pressure may be too low. • Adjustment pressure of the pilot valve can be higher than line pressure. • Needle valve which is located on the pilot valve can be closed. 	<ul style="list-style-type: none"> • Check ball valves and open them if they are closed. • Check your system. • Bring pressure value into adjusting value by means of adjustment bolt. • Open needle valve one or two tours according to system adjustment.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valve may be clogged because of foreign substances. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean them. • Clean if it is clogged.
Valve does not regulate	<ul style="list-style-type: none"> • Movable parts of pilot valve may be clogged because of calcification. • Needle valve adjusting point may be wrong. • Pressure gauge may be failed. 	<ul style="list-style-type: none"> • Replace with new one. • Close needle valve fully and open it one to two tours. • Replace with new one.

Order Information

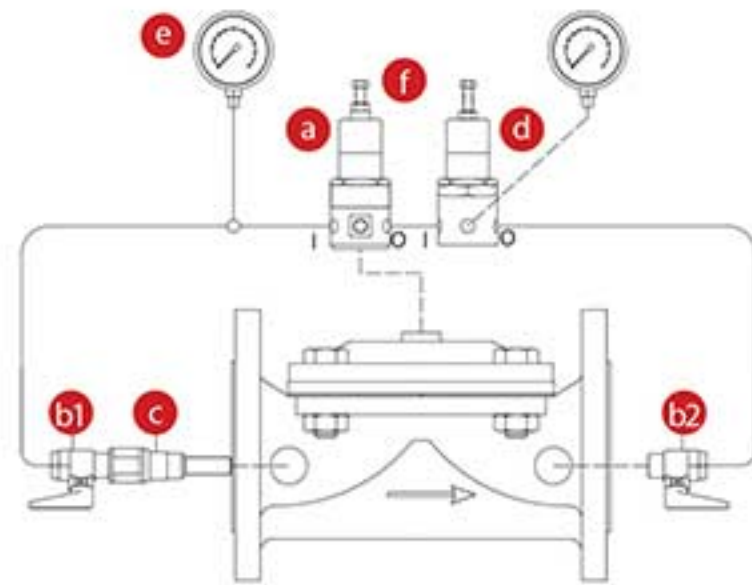
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum upstream pressure _____ bar
 Minimum upstream pressure _____ bar
 Desired pressure difference value _____ bar

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Differential Pressure Sustaining	SV-3: 3-Way Selector Valve	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		NV: On/Off Speed Adjustment	
63-63D	VIC: Grooved End	2"-4"		EL: Electric Control	
67	F	6"	DIF	EL	PIR

Pressure Reducing and Sustaining Control Valve | **PRPS**



- | | |
|--|--|
| a Pressure Sustaining Pilot Valve | d Pressure Reducing Pilot Valve |
| b Ball Valves | e Pressure Gauge |
| c In-line Finger Filter | f Adjustment Bolt |

Description

Asbir "PRPS" model pressure reducing/sustaining hydraulic control valve reduces valve downstream pressure to desired value by sustaining upstream pressure. Two pilot valves exist on valve. Pilot valve on upstream side is the pressure sustaining pilot valve and sustains upstream pressure. Other pilot valve is pressure reducing pilot valve and keeps downstream pressure constant by reducing it to desired value. Reducing/sustaining control valve pumps fluid downwards; it ensures that system works within normal values by regulating over flow and high pressure in pumping systems. It controls upstream and downstream pressure continuously and keeps them within constant values.

Adjustment

- Operate pump, open main valve on network and deliver water to the system.
- Open ball valves indicated with "b1" and close ball valve indicated with "b2".
- Adjust desired upstream pressure value by means of adjustment bolt indicated with "e" on pressure sustaining pilot valve indicated with "a" by referring pressure gauge. Tighten contra nut after determining set point.
- Adjust pressure reducing pilot valve indicated with "d" by means of adjustment bolt indicated with "f" on it by referring pressure gauge. Pressure gauge indicated with "e" on pressure reducing pilot valve will show valve downstream pressure value.
- When you turn adjustment bolt of both pilot valves clockwise, downstream pressure value will increase and when you turn adjustment bolt counter-clockwise it will decrease.
- After adjusting desired pressure set point on both pilot valves, open spherical valve indicated with "b2" and deliver water to system. During normal operation of valve, upstream pressure gauge will show valve upstream pressure value and downstream pressure gauge will show zero value. Close spherical valve indicated with "b2" to see downstream pressure value.

Typical Application



- | |
|---|
| 1 Pressure Reducing and Sustaining Valve |
| 2 Strainer |
| 3 Air Valve |

Maintenance

- Check finger filter indicated with "c" according to water quality and clean it. Do not make cleaning more than one within a few months unless water is too dirty.
- Drain water within actuator and pilot valves of valves not used in winter.
- Check downstream pressure value continuously.
- Consult our company if valve does not perform regulation and control functions

Pilot Valve Pressure Adjustment Range

Standard Pressure Range	5 - 160 m	7,5 - 240 psi
Medium Pressure Range	10 - 100 m	15 - 150 psi
High Pressure Range	5 - 240 m	7,5 - 360 psi

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valves in valve downstream may be closed. • Valve upstream pressure may be too low. • Adjustment pressure of the pilot valve may be too high. • Needle valve on pilot valve may be closed. • Adjustment bolt of pilot valve may be too loose. 	<ul style="list-style-type: none"> • Check ball valves and open them if they are closed. • Check your system. • Bring pressure value into adjusting value by means of set screw. • Open needle valve one or two tours according to system adjustment. • Bring adjustment bolt into desired value tighten contra nut.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valve may be clogged because of foreign substances. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean them. • Clean if it is clogged.
Valve does not regulate Valve does not regulate	<ul style="list-style-type: none"> • Movable parts of pilot valve may be clogged because of calcification. • Needle valve adjusting point on Pressure Sustaining Pilot Valve may be wrong. • Pressure gauge may be failed. 	<ul style="list-style-type: none"> • Replace with new one. • Close needle valve fully and open it one to two tours. • Replace with new one.

Order Information

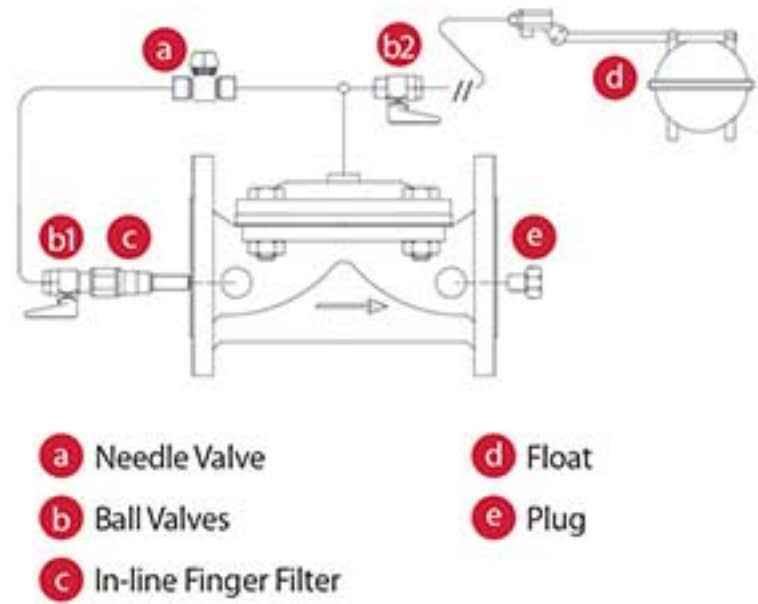
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum upstream pressure _____ bar
 Minimum upstream pressure _____ bar
 Desired downstream pressure _____ bar
 Desired upstream pressure _____ bar

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Pressure Reducing and Sustaining	SV-3: 3-Way Selector Valve	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		NV: On/Off Speed Adjustment	
63-63D	VIC: Grooved End	2"-4"		EL: Electric Control	
67	F	6"	PRPS	EL	PIR

Float Level Control Valve | FL



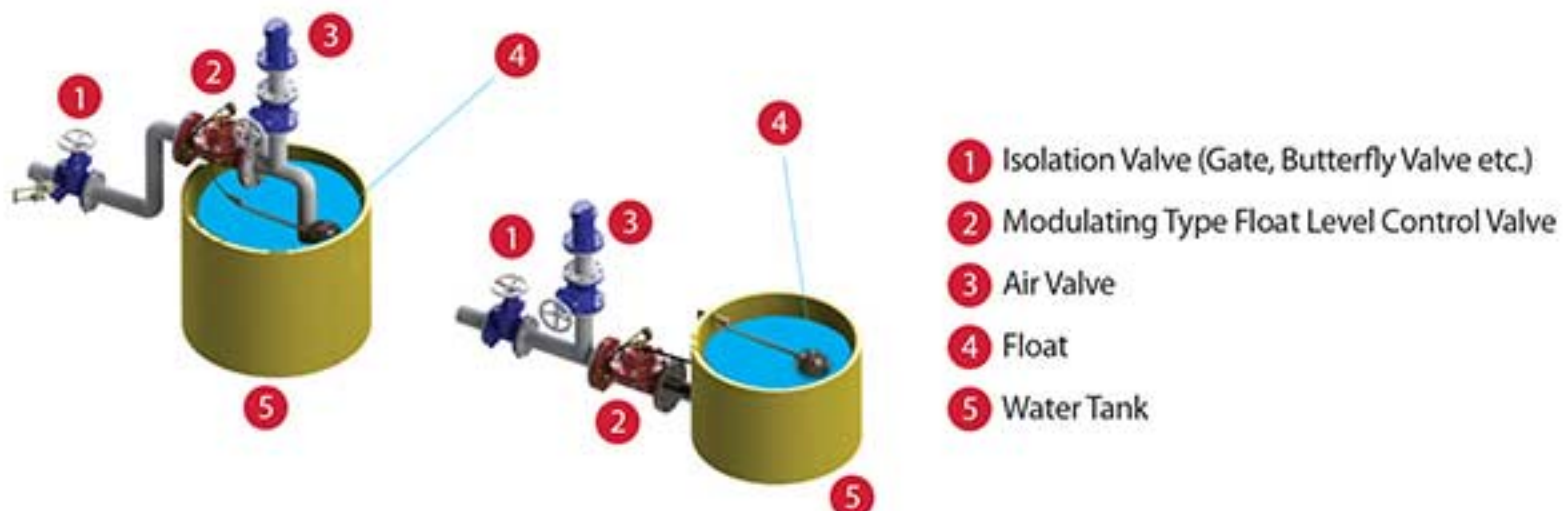
Description

Asbir "FL" model float level control valve is the hydraulic control valve designed to control water level in reservoirs and tanks continuously. Main valve is controlled by 2-way modulating type float pilot valve manually. Main valve mounted on reservoir and tank upstream is closed as fully sealed without causing surge when water level reaches to maximum level. Valve opening/closing speed may be adjusted in set value. It may be used in the system by mounting horizontal or vertical positions.

Installation

- Make sure that valve is on a level with the pipeline while mounting it.
- Mount valve in direction of arrow indicated on it.
- While mounting valve on pipeline, place gasket between valve flange and pipe flange to ensure sealing and tighten the bolts as crosswise.
- Mount main valve body on tank or reservoir upstream and mount float components in tank or reservoir as fixed in desired level interval.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve (see sample montage illustration).

Typical Application



Adjustment

- Mount float pilot valve indicated with "d" as fixed according to water level in tank or reservoir.
- Connect one end of hydraulic pressure signal tube supplied with valve to ball valve indicated with "b2" and other end to float pilot valve.
- Open ball valves indicated with "b1" and "b2".
- Needle valve indicated with "a" is used for adjusting opening/closing speed adjustment of main valve.

Maintenance

- Check finger filter indicated with "c" according to water quality and clean it. Do not make cleaning more than one within a few months unless water is too dirty.
- Drain water within actuator and pilot valves of valves not used in winter.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • "b2" ball valve maybe closed. • Line pressure may be low. • Level of float pilot valve is not fixed. • Float Pilot valve may be clogged. 	<ul style="list-style-type: none"> • Check "b2" ball valve and open if it is closed. • Check valve upstream pressure and ensure necessary upstream pressure. • Fix lever of float pilot valve to desired level. • Clean it.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Needle valve may be closed. • Float Pilot Valve may be failed. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check needle valve and open it by one or two turns if it is closed. • Replace with the new one.

Order Information

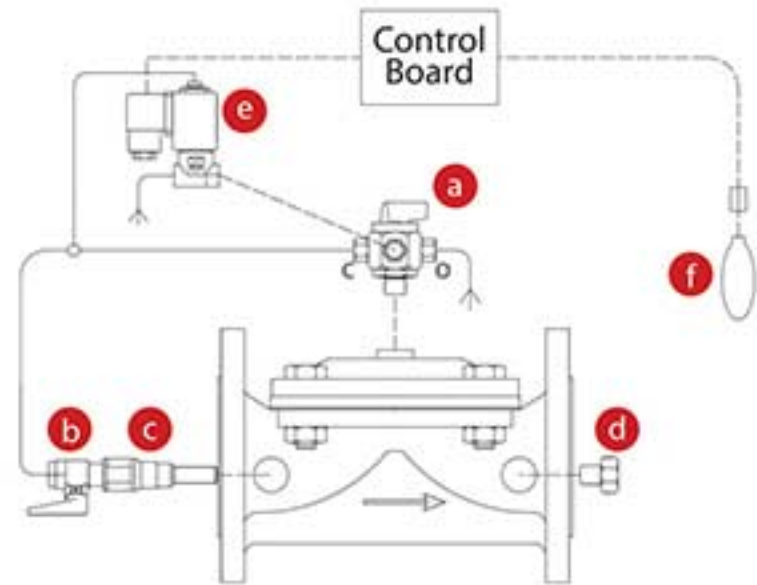
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
Maximum network/line pressure _____ bar
Main line size _____ mm
Valve connection type _____

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Modulating Control	EL: Electric Control	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		NV: On/Off Speed Adjustment	
63-63D	VIC: Grooved End	2"-4"		PG: Pressure Gauge SV-3: 3-Way Selector Valve	
67	F	6"	FL	EL	PIR

Electric Float Level Control Valve | FLEL



- | | |
|--------------------------------|--------------------------------|
| a 3- way selector valve | d Plug |
| b Ball Valve | e Solenoid Pilot Valve |
| c In-line Finger Filter | f Electric Float Switch |

Description

Asbir "FLEL" model electrical float level control valve is the hydraulic control valve designed to control water level continuously by means of electrical float placed in reservoirs and tanks. Electrical float sends signal to solenoid coil on main valve when water level decreases below set level. Main valve is opened and ensures that tank or reservoir will be filled permanently. When water reaches maximum level, electrical float sends signal to solenoid coil again and main valve is closed as full sealed. Valve may be used in the system by mounting horizontal or vertical positions.

Installation

- Install cables of electrical float and solenoid pilot valve in accordance with control device to be used.
- Mount valve in direction of arrow indicated on it.
- While mounting valve on pipeline, place gasket between valve flange and pipe flange to ensure sealing and tighten the bolts as crosswise.
- Mount main valve body on tank or reservoir upstream and mount float components in tank or reservoir as fixed in desired level interval.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve

Typical Application



- | |
|---|
| 1 Controller |
| 2 Electric Float Level Control Valve |
| 3 Air Valve |
| 4 Isolation Valve (Gate, Butterfly Valve etc.) |
| 5 Water Tank |

Adjustment

- Mount electrical float switch indicated with "f" as fixed according to water level in tank or reservoir and connect cables to control panel.
- Connect cables of solenoid pilot valve indicated with "e" to control panel conveniently.
- Bring 3-way selector valve on main valve indicated with "a" into "auto" position.
- Open ball valve indicated with "b1".

Maintenance

- Check finger filter indicated with "c" according to water quality and clean it. Do not make cleaning more than one within a few months unless water is too dirty.
- Drain water within actuator and pilot valves of valves not used in winter.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • 3-Way selector valve may be closed. • Ports of solenoid or 3-way valve may be clogged. • Voltage value of solenoid pilot valve may be wrong. • Solenoid coil may be burnt. • Electrical float switch may be failed. • Line pressure may be low. 	<ul style="list-style-type: none"> • Check 3-Way selector valve and bring it into "Auto" position. • Check ports and clean them if clogged. • Measure voltage value and select cable with diameter suitable for coil. • Replace coil. • Replace with the new one. • Check valve upstream pressure and ensure necessary upstream pressure.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Electrical float may be failed. • Finger filter may be clogged. • Control panel may be failed. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check control screw, Bring it into correct position if it is wrong. • Clean if it is clogged. • Replace with the new one.

Order Information

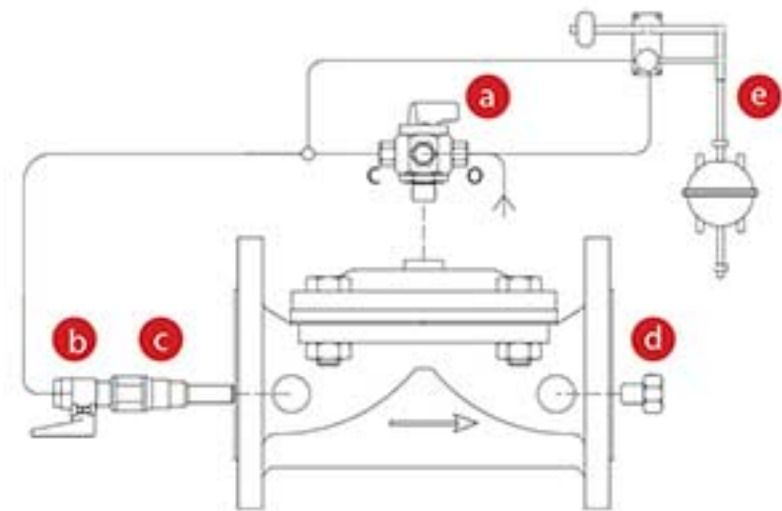
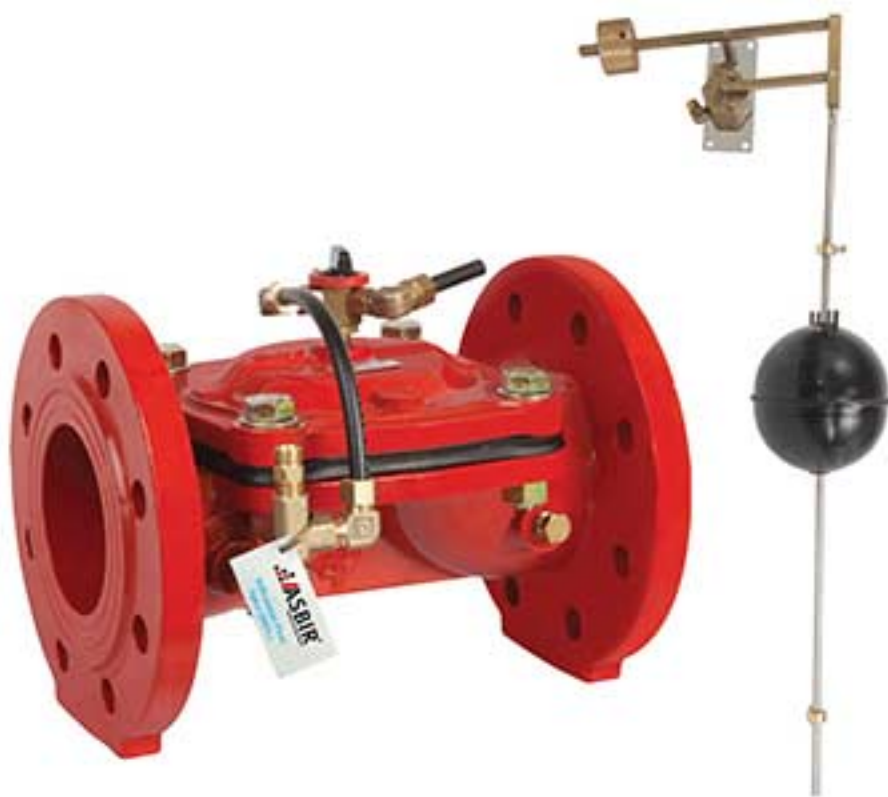
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Electric voltage value to be used _____ volt

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Electrical Float Switch	NV: On/Off Speed Adjustment	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		PG: Pressure Gauge	
63-63D	VIC: Grooved End	2"-4"		SV-3: 3-Way Selector Valve	
67	FL	6"	FLEL	NV	PIR

Differential Float Level Control Valve | DIFL



- a** 3- way selector valve
- b** Ball Valves
- c** In-line Finger Filter
- d** Plug
- e** Differential Level Control Pilot Valve

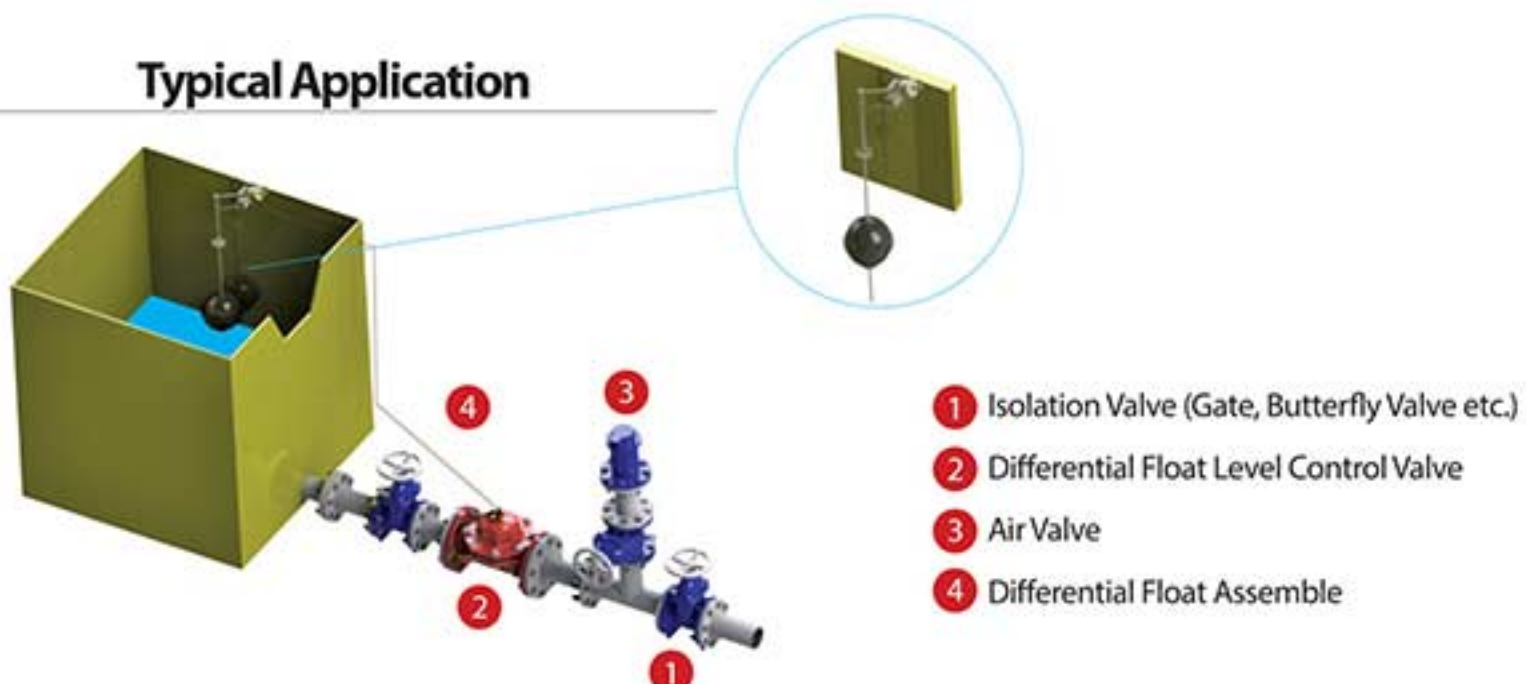
Description

Asbir "DIFL" model float control valve is the hydraulic control valve designed to control water level in reservoirs and tanks in desired ranges. Main valve is closed as wholly sealed without surge when water reach desired level thanks to 4/3 way differential control pilot. Max. and min. water level in reservoir may be adjusted to desired value in a wide range. Thanks to this feature, pump does not put into/out of service frequently during level control of reservoir fed by pump. Valve controls water level and keeps it in desired range without being affected from flow rate and pressure changes. It may be used easily in reservoirs and tanks fed from both top and bottom.

Installation

- Make sure that valve is on a level with the pipeline while mounting it.
- Mount valve in direction of arrow indicated on it.
- While connecting valve on pipeline, place gasket between valve flange and pipe flange to ensure sealing and tighten the bolts as crosswise.
- Mount valve body in reservoir upstream and float components as fixed in desired level interval.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve.

Typical Application



Adjustment

- Mount differential float pilot valve indicated with "e" as fixed according to water level in reservoir or tank.
- Mount hydraulic pressure signal pipe on 3-way selector valve as described below;

Auto → T Close → P Relief → V

- Open spherical valve indicated with "b1".

Pilot Valve Differential Level Range

Standard Pressure Range	5 - 120 cm	2" - 48"
Medium Pressure Range	5 - 180 cm	2" - 70"
High Pressure Range	10 - 240 cm	4" - 95"

Pilot Valve Pressure Range

Minimum Working Pressure	0,5 bar - 7 psi
Standard	16 bar - 230 psi
Maximum Working Pressure	25 bar - 360 psi

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • 3-Way selector valve may be closed. • Montage of differential float pilot valve may be loose. • 3-way selector valve connection of differential pilot valve may be wrong. • Line pressure may be low. 	<ul style="list-style-type: none"> • Check 3-Way selector valve and bring it into "Auto" position. • Mount differential float pilot valve as fixed. • Check hydraulic connections and correct them. • Check valve upstream pressure and ensure necessary upstream pressure.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Movable parts of differential float pilot valve may be clogged due to calcification. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Replace differential float pilot valve. • Clean if it is clogged.

Order Information

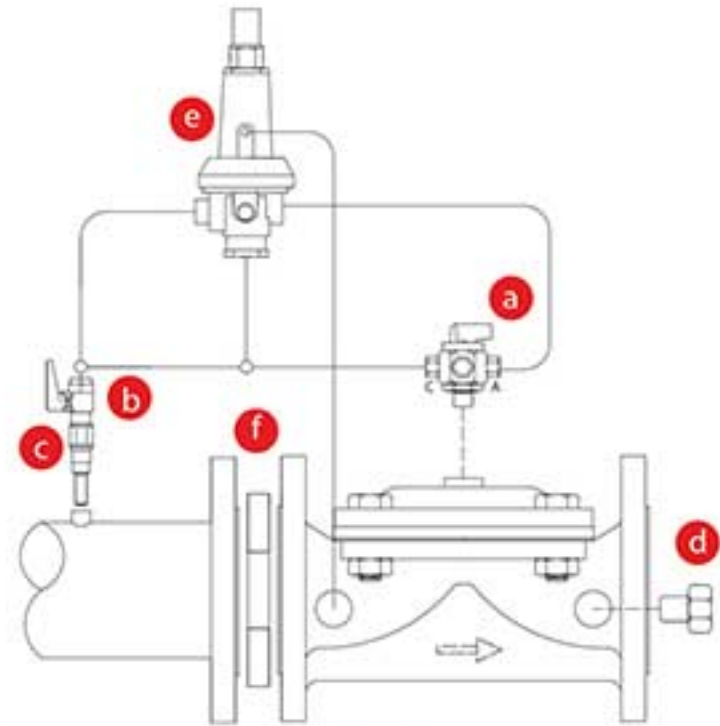
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Desired level control range _____ m

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Differential Level Control	NV: On/Off Speed Adjustment	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		PG: Pressure Gauge	
63-63D	VIC: Grooved End	2"-4"		PS: Pressure Sustaining EL: Electric Control	
67	F	6"	DIFL	NV	PIR

Flow Rate Control Valve | **FR**



- | | |
|--------------------------------|--|
| a 3- way selector valve | d Plug |
| b Ball Valve | e Flow Rate Control Pilot Valve |
| c In-line Finger Filter | f Orifice Plate |

Description

Asbir "FR" model flow rate control valve is designed to limit desired flow rate. The orifice on main valve upstream creates pressure difference and 3/way differential pressure set pilot mounted in control chamber of valve senses this pressure difference and ensures that main valve opens in desired flow rate. Valve thereby limits desired flow rate automatically and keeps it fixed. It eliminates over flow by preventing excessive flow during reverse washing in filtration systems.

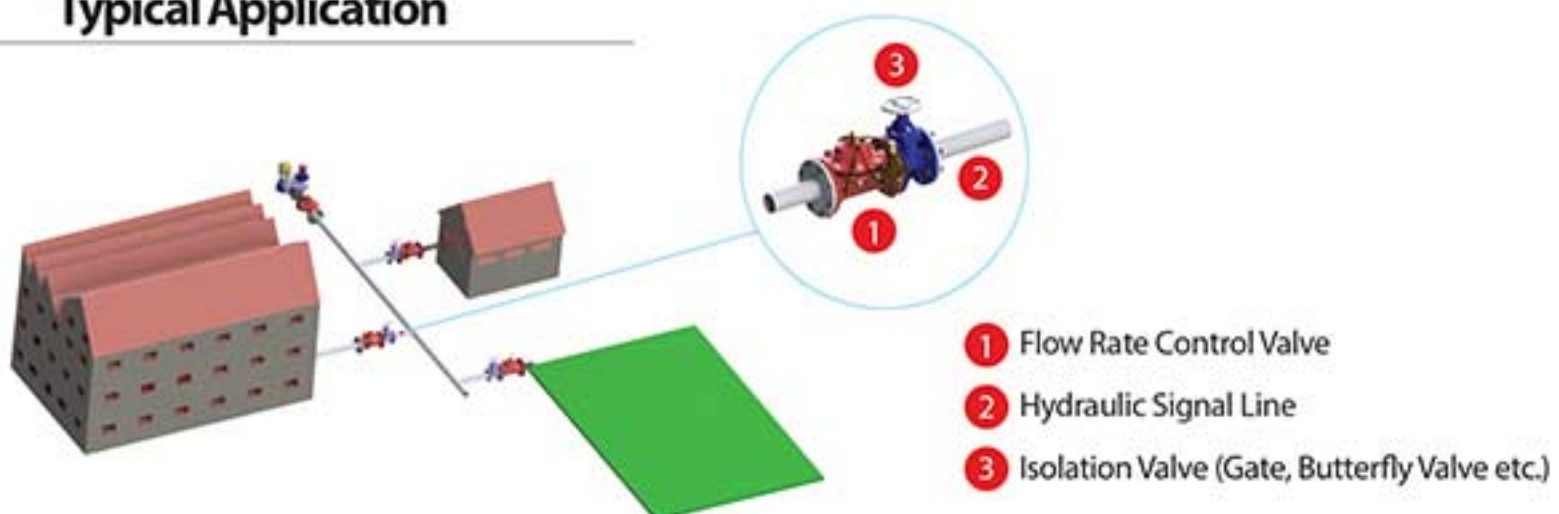
Features

- Valve adjusts by itself automatically even in changing flow rates.
- Valve is closed by itself as fully sealed in case no flow exists in the system.
- Valve is opened fully when nominal flow rate decreases below limited flow rate.
- Valve may be used in the system by mounting it vertical or horizontal positions

Installation

- Make sure that valve is on a level with the pipeline while mounting it.
- Mount valve in direction of arrow indicated on it.
- When orifice is connected to pipeline, mount in such a way that tightness between upstream flange and pipe flange will be ensured.
- Mount hydraulic control lever of pilot valve before valve and orifice conveniently.
- It is recommended that insulation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve (see sample montage illustration).

Typical Application



Adjustment

- Start pump or open main valve of network and deliver water to system.
- Open ball valve indicated with "b1".
- Bring 3-way selector on valve into "auto" position.
- Adjustment bolt of pilot valve is factory adjusted. Do not make any processes with it. Consult us if valve does not perform regulation function

Maintenance

- Check finger filter indicated with "c" according to water quality and clean it. Do not make cleaning more than one within a few months unless water is too dirty.
- Drain water within actuator and pilot valves of valves not used in winter.
- Check downstream pressure value continuously.
- Consult us if valve does not perform regulation function.

Pilot Valve Pressure Adjustment Range

Standard Differential Pressure Range	3 - 8 m	2 - 12 psi
Medium Differential Pressure Range	10 - 40 m	14 - 56 psi
High Differential Pressure Range	14 - 100 m	10 - 140 psi

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • 3-Way selector valve may be closed. • Line pressure may be low. • Upstream ball valve may be closed. 	<ul style="list-style-type: none"> • Check 3-Way selector valve and bring it into "Auto" position. • Check valve upstream pressure and ensure necessary upstream pressure. • Open ball valve.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valves may be clogged because of foreign substances • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean. • Clean if it is clogged.
Valve does not regulate	<ul style="list-style-type: none"> • Movable parts of differential float pilot valve may be clogged due to calcification. • Orifice plate used before valve may be mounted wrongly. 	<ul style="list-style-type: none"> • Replace it with the new one. • Ensure sealing between flanges and plate by mounting orifice plate according to sample mountage illustration.

Order Information

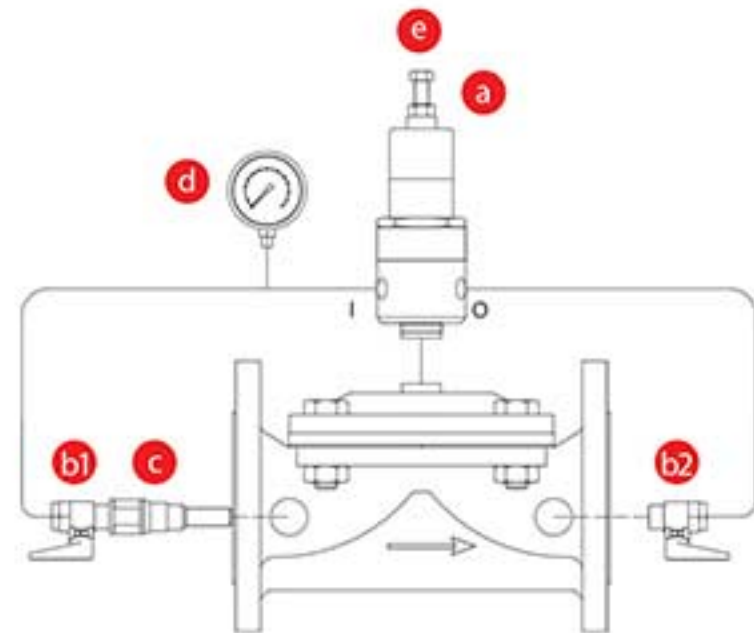
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum upstream pressure _____ bar
 Desired flow rate _____ m³/h

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Flow Rate Control	NV: On/Off Speed Adjustment	Position Indicator
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		PG: Pressure Gauge	
63-63D	VIC: Grooved End	2"-4"		EL: Electric Control	
67	F	6"	FR	NV	PIR

Quick Pressure Relief Control Valve QR



- a Quick Pressure Relief Pilot Valve
- b Ball Valves
- c In-line Finger Filter
- d Pressure Gauge
- e Adjustment Bolt

Description

Asbir "QR" model quick relief control valve is the safety control valve designed to protect system by releasing pressure surges to atmosphere quickly caused from sudden changes in water speed because pumps put into/out of service frequently in water network elevation lines. When network pressure goes beyond set point, valve opens by itself quickly and protects system by releasing over pressure. When line pressure decreases to normal level, it is closed slowly and automatically as wholly sealed without causing surge.

Installation

- Quick Pressure control valve is mounted on network in TE configuration.
- Since valve's function is to release pressure, valve diameter may be selected as equal to or in closest smaller size than main pipe diameter. Valve diameter should be selected as smaller than main pipe diameter. Following empirical formula may be used in determining diameter of quick pressure relief control valve. Where;

$$D = \sqrt{\frac{250 \times Q}{H_m}}$$

D = Diameter of quick pressure relief control valve in (mm)
 Q = System Flow Rate in (m³/h)
 Hm = System Operating Pressure (meter → 1 bar ≈ 10 meter)

- Valve closing time is proportional with pipe length. As system pipe length increases, valve closing time should be increased.

Typical Application



- 1 Pump
- 2 Quick Pressure Relief Valve
- 3 Check Valve
- 4 Isolation Valve (Gate, Butterfly Valve etc.)

Adjustment

- Operate pump, open main valve on network and deliver water to the system.
- Open ball valves indicated with "b1" and "b2".
- Wait for a while until water reach valve control chamber. When water reach control chamber, pressure gauge will show a certain pressure value.
- Adjust desired upstream pressure value by means of adjustment bolt indicated with "e" on pilot valve indicated with "a" by referring pressure gauge.
- When you turn adjustment bolt clockwise, upstream pressure value will increase and when you turn adjustment bolt counter-clockwise it will decrease.
- After adjusting desired downstream pressure value, tighten contra nut below set screw. Pressure gauge will show upstream pressure value.

Pilot Valve Pressure Adjustment Range

Standard Pressure Range	5 - 160 m	7,5 - 240 psi
Medium Pressure Range	10 - 100 m	15 - 150 psi
High Pressure Range	5 - 240 m	7,5 - 360 psi

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valves in valve downstream may be closed. • Valve upstream pressure may be too low. • Adjustment pressure of pilot valve may be higher than line pressure. • Needle valve on pilot valve may be closed. 	<ul style="list-style-type: none"> • Check ball valves and open them if they are closed. • Check your system. • Decrease adjustment pressure in accordance with adjusting instruction by means of adjustment bolt. • Open needle valve one or two tours according to system adjustment
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valves may be clogged because of foreign substances • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean. • Clean if it is clogged.
Valve does not regulate	<ul style="list-style-type: none"> • Movable parts of differential float pilot valve may be clogged due to calcification. • Set point of needle valve on pilot valve may be wrong. • Pressure gauge may be failed. 	<ul style="list-style-type: none"> • Replace it with the new one. • Close needle valve fully and open it by 1 - 2 tours. • Replace with new one.

Order Information

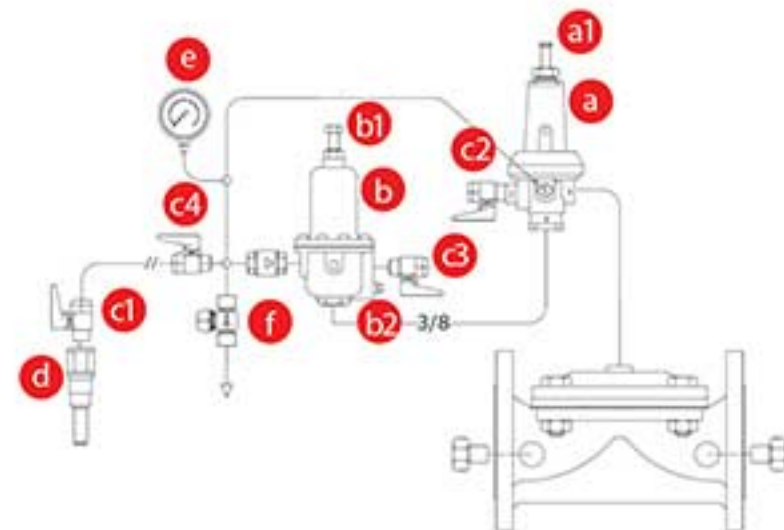
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum upstream pressure _____ bar
 Desired upstream pressure _____ bar

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Quick Pressure Relief	EL: Electric Control	Position
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		SV-3: 3-Way Selector Valve	Indicator
63-63D	VIC: Grooved End	2"-4"			
67	F	6"	QR	NV	PIR

Surge Anticipating Control Valve | **SA**



- | | |
|--|---|
| <p>a Low Pressure Pilot Valve</p> <p>b High Pressure Pilot Valve</p> <p>c Ball Valves</p> | <p>d In-line Finger Filter</p> <p>e Pressure Gauge</p> <p>f Needle Valve</p> |
|--|---|

Description

Asbir "SA" model surge anticipating control valve is the safety control valve designed to protect system in relatively longer water supply network elevating line by damping energy waves formed by energy interruptions in pumping systems and by releasing water-hammers which are caused from sudden changes in water flow rate to atmosphere automatically and quickly. Valve is opened quickly by sensing diminished pressure wave previously by means of pressure signal tube it owned. When line pressure reached normal level, it is closed slowly and automatically as wholly sealed.

Valve Sizing

- Surge Anticipating valve is mounted on network in TE configuration.
- Since valve's function is to release pressure, valve diameter may be selected as equal to or in closest smaller size than main pipe diameter. Valve diameter should be selected as smaller than main pipe diameter. Following empirical formula may be used in determining diameter of quick pressure relief control valve. Where;

$$D = \sqrt{\frac{250 \times Q}{H_m}}$$

D = Diameter of surge anticipating valve in (mm)
Q = System Flow Rate (m³/h)
H_m = System Operating Pressure (meter → 1 bar ≈ 10 meter)

- Valve closing time is proportional with pipe length. As system pipe length increases, valve closing time should be increased.

Typical Application



Installation

- Mount valve in "TE" configuration.
- Mount valve signal tube on main line.
- Mount valve in direction of arrow indicated on it.
- While connecting valve on line, place gasket between valve flange and pipe flange to ensure sealing and tighten the bolts as crosswise.
- It is recommended that isolation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in mounting valve on line (See the sample montage picture).

Pilot Valve Pressure Adjustment Range

Standard Pressure Range	5 - 160 m	7,5 - 240 psi
Medium Pressure Range	10 - 100 m	15 - 150 psi
High Pressure Range	5 - 240 m	7,5 - 360 psi

Surge Anticipating Control Valve | SA

Adjustment

Adjusting High Pressure Pilot Valve

- Loosen adjusting bolt (a1) of low pressure pilot valve indicated with "a" and tighten adjusting bolt (b1) of high pressure pilot valve indicated with "b". Start pump by closing ball valves indicated with c2 and c3.
- When system pressure reached to operating pressure, open the valve indicated with "c3" and loosen "b1" adjusting bolt until water will drop from ball valve. After dropping water, turn the adjusting bolt as one turn in opposite direction and tighten the contra nut below it. In general, adjusting point of high pressure pilot valve is adjusted 1 bar above system pressure.
- Open "c2" ball valve and adjust low pressure pilot valve indicated with "a".

Adjusting Low Pressure Pilot Valve

- Close ball valve indicated with "c4".
- Open needle valve indicated with "f" slowly.
- Check the pressure by means of "e" pressure gauge. Pressure will decrease.
- While decreasing pressure, water will drop from "c2" spherical valve.
- After dropping water, close needle valve indicated with "f" and open "c4" ball valve.
- If opening pressure of low pressure pilot valve indicated with "a" is not in desired value, adjust it to desired value by means of "a1" adjusting bolt. If low pressure wave (valve opening pressure) is too high, loosen "a1" adjusting screw as 1/2 turn. If low pressure wave is too low, tighten "a1" adjusting bolt as 1/2 turn. While adjusting each low pressure pilot valve, follow instructions given above.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • "c" ball valves on valve may be closed. • Low pressure pilot valve in not in the setting point. • Movable parts of pilot valves may be clogged due to calcification. • Needle valve of high pressure pilot valve may be closed. 	<ul style="list-style-type: none"> • Check ball valves and open if they are closed. • Set low pressure pilot valve in accordance with adjusting instructions. • Replace with the new one. • Open needle valve between 1 - 1/2 turn according to your system setting.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of pilot valves may be clogged because of foreign substances • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and clean. • Clean if it is clogged.
Valve opens but does not close	<ul style="list-style-type: none"> • Low pressure pilot valve is not in desired setting. 	<ul style="list-style-type: none"> • Readjust it in accordance with the instructions.

Order Information

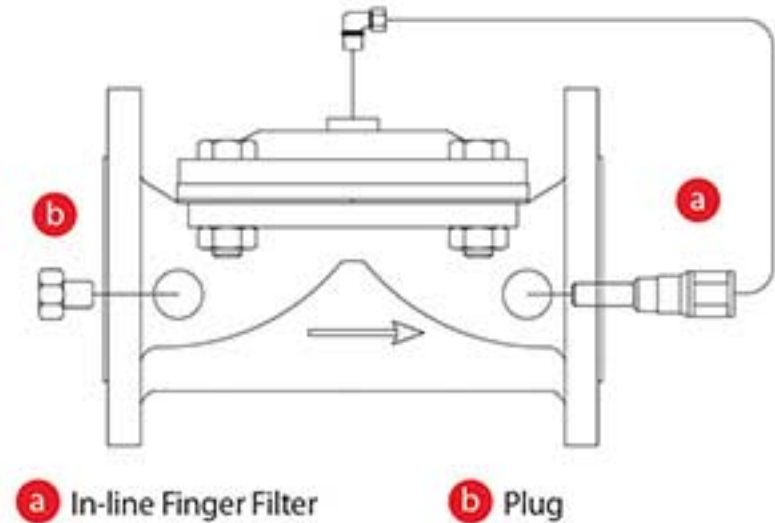
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Maximum network/line pressure _____ bar
 Main line size _____ mm
 Valve connection type _____
 Maximum pump pressure _____ bar
 Length of main pipe line _____ m

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Surge Anticipating Control	EL: Electric Control	Position Indicator
66-66D-64	TH: Threaded (BSPT-NPT)	1½"-3"			
63-63D	VIC: Grooved End	2"-4"			
67	F	6"	SA	EL	PIR

Hydraulic Check | HCV



Description

Asbir "HCV" model valve is hydraulically controlled check valve which operates with line pressure and prevents back-flow in system. When downstream pressure value exceeds upstream pressure value, valve is closed as wholly sealed without causing surge. When upstream pressure value exceeds downstream pressure value, check valve is opened by itself slowly. So it damps pressure surges formed during start-up.

Features

- Opening-closing speed of check valve may easily be adjusted.
- Valve may be operated by mounting it in vertical or horizontal position in system
- Minimum opening pressure of valve is 0.7bar.

Adjustment

- Operate pump, open main valve on network and deliver water to the system.

Typical Application



- 1 Pump
- 2 Air Valve
- 3 Hydraulic Check Valve

Working Pressure Range	bar (kg/cm ²)	psi (pound/inch ²)
Standard	0,5-16 bar	7,5-240 psi
High Pressure (Optional)	0,5-25 bar	7,5-360 psi

Hydraulic Check Valve Sizing Table*

Valve Diameter	Proposed Ideal Flow Rate	Valve Diameter	Proposed Ideal Flow Rate
2" - 50 mm	15 m ³ /h	5" - 125 mm	100 m ³ /h
2 1/2" - 65 mm	24 m ³ /h	6" - 150 mm	130 m ³ /h
3" - 80 mm	36 m ³ /h	8" - 200 mm	225 m ³ /h
4" - 100 mm	56 m ³ /h	10" - 250 mm	350 m ³ /h
		12" - 300 mm	510 m ³ /h

* Recommended flow rate values for minimum head loss.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	• Line pressure may be low.	• Check upstream pressure and ensure required upstream pressure.
Valve not closing	• Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Finger filter may be clogged.	• Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Clean if it is clogged.

Order Information

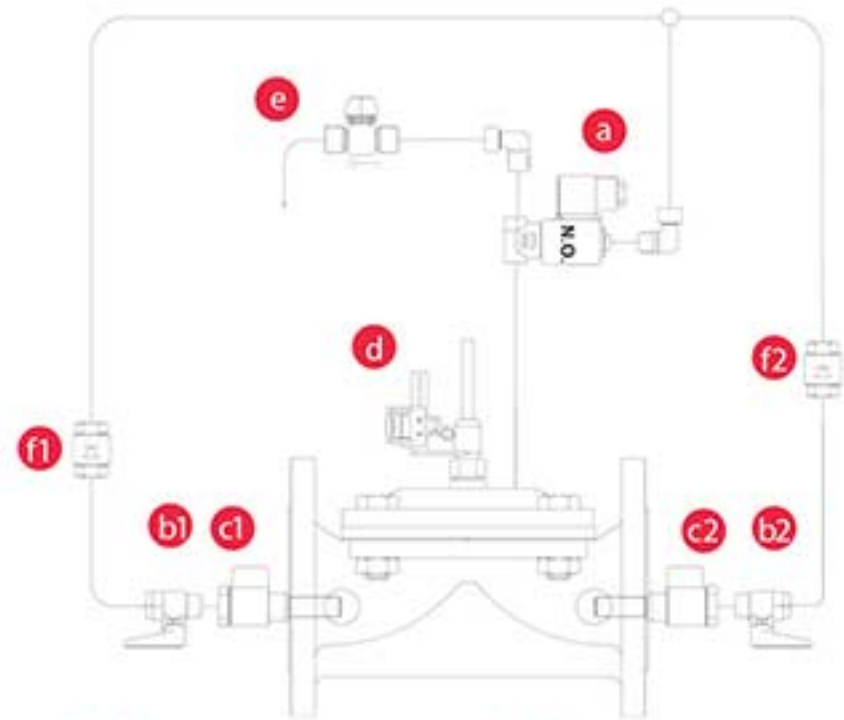
Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
Maximum network/line pressure _____ bar
Main line size _____ mm
Valve connection type _____
Maximum upstream pressure _____ bar

Sample order form

Model	Connection	Size	Control Feature	Additional Features	Options
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Hydraulic Check Valve	PG: Pressure Gauge	Position
66-66D-64	TH: Threaded (BSPT-NPT)	1½"-3"		SV-3: 3-Way Selector Valve	Indicator
63-63D	VIC: Grooved End	2"-4"			
67	F	6"	HCV	PG	PIR

Pump (Booster) | PC Control Valve



- | | |
|--------------------------------|--------------------------------|
| a Solenoid Pilot Valve | d Limit Switch Assemble |
| b Ball Valves | e Needle Valve |
| c In-line Finger Filter | f Check Valve |

Description

Asbir "PC" model pump control valve is a control valve designed for putting booster type pumps into/out of service automatically which is used water network elevating lines. When start button is pressed, pump control valve is opened by itself slowly in comparison with booster pump until pump rotation will reach working rotation. When "stop" button is pressed, control valve is closed slowly without causing surge in the first plan. When pump control valve was closed as fully sealed, it is disengaged from system by means of "Limit Switch" on it. In situations like energy interruption, works as a check valve to prevent back-flow to pump and eliminates use of an extra check valve in the system.

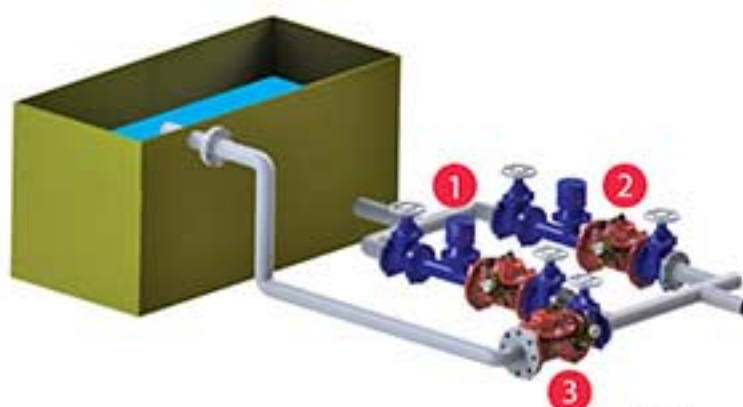
Features

- Pump control valve works synchronously with booster pump.
- Control panel of pump control valve controls valve and pump together.
- Opening-closing speed of valve may be adjusted easily.
- Valve may be operated in mounting in horizontal and vertical positions in the system

Installation

- Make sure that valve is on a level with the pipeline while mounting it.
- Mount valve in direction of arrow indicated on it.
- While connecting valve on pipeline, place gasket between valve flange and pipe flange to ensure sealing and tighten the bolts as crosswise.
- It is recommended that isolation valves (butterfly or gate valves etc.), air relief valve and strainer valves will be used in line-mounting of valve (see sample montage illustration).

Typical Application



- | |
|-----------------------------------|
| 1 Pump |
| 2 Pump Control Valve |
| 3 Surge Anticipating Valve |

Adjustment

- Connect pump control valve to pump panel according to electric schema of electric panel.
- Open ball valve indicated with "b1" and "b2".
- Valve will be opened slowly. When valve came to full open position, fixate the position of limit switch indicated with "d" according to full closed position of valve. Knob at the end of valve indicator should contact with Limit Switch.
- Adjust valve opening speed by means of needle valve indicated with "e2" and valve closing speed by means of needle valve indicated with "e1".

Pump Control Valve Sizing Table*

Valve Diameter	Proposed Ideal Flow Rate	Vana Çapı	Tavsiye Edilen İdeal Akış Miktarı
2" - 50 mm	15 m ³ /h	5" - 125 mm	100 m ³ /h
2 1/2" 65 mm	24 m ³ /h	6" - 150 mm	130 m ³ /h
3" - 80 mm	36 m ³ /h	8" - 200 mm	225 m ³ /h
4" - 100 mm	56 m ³ /h	10" - 250 mm	350 m ³ /h
		12" - 300mm	510 m ³ /h

* Recommended flow rate values for minimum head loss.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valve indicated with "c" on valve may be closed. • Solenoid Pilot valve coil may be burnt. • Needle valve may be closed. 	<ul style="list-style-type: none"> • Check the ball valves and open them if they are closed. • Replace it with the new one. • Open needle valve according to valve opening speed.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Connections of valve control panel may be wrong. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and correct them according to electric schema.. • Clean if it is clogged.
Valve is closed but Pump does not stop	<ul style="list-style-type: none"> • Position of Limit Switch may be wrong. • Connections of Limit Switch to control panel may be wrong. 	<ul style="list-style-type: none"> • Readjust it according to instruction. • Check it and correct its connections

Order Information

Please submit following information to our sales department while ordering.

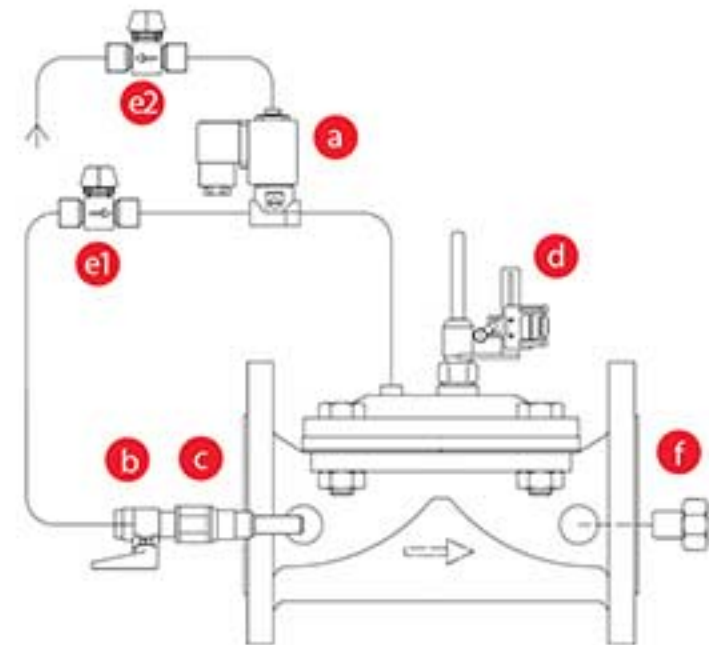
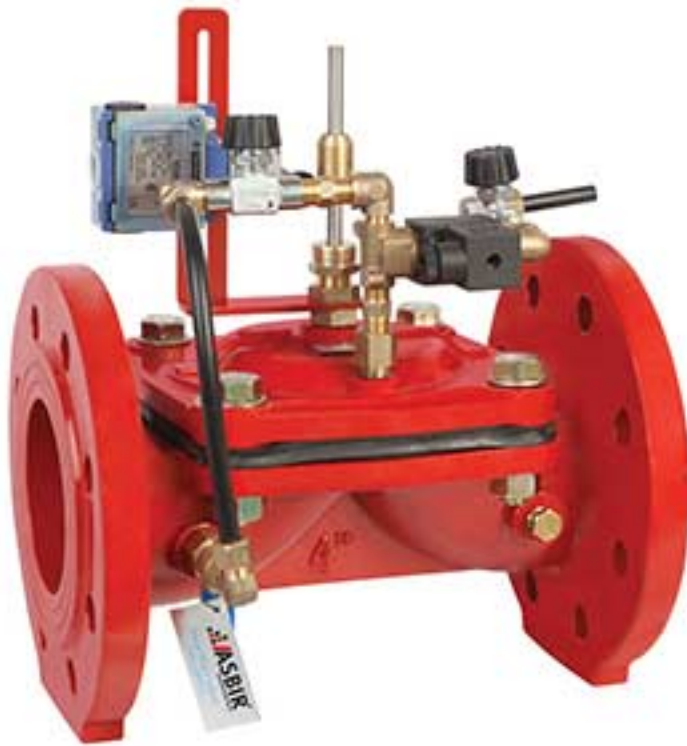
Maximum flow rate _____ m³/h
Maximum network/line pressure _____ bar
Main line size _____ mm
Valve connection type _____

Sample order form

Model	Connection	Size	Control Feature	Additional Features
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Pump Control	PS: Pressure Sustaining
66-66D-64	TH: Threaed (BSPT-NPT)	1 1/2"-3"		FR: Flow Rate Control
63-63D	VIC: Grooved End	2"-4"		PG: Pressure Gauge
67	F	6"	PC	PG

Deep Well (Submersible) Pump | DPC

Control Valve



- a Solenoid Pilot Valve
- b Ball Valves
- c In-line Finger Filter
- d Limit Switch Assemble
- e Needle Valve
- f Plug

Description

Asbir "DPC" model deep-well pump control valve is a relief control valve designed for putting deep-well type pumps into/out of service automatically. Valve is connected on main line with a "TE" piece. Valve is in open position before pump operates. When pump starts up, valve is closed by itself slowly without causing surge and increases system pressure gradually. Before pump stops, valve opens by itself slowly and automatically and decreases system pressure gradually.

Valve Sizing

•Deep-well Pump control valve is mounted on network in TE configuration since it is a electric activated release valve.

•Since valve's function is to release, valve diameter may be selected as equal to or in closest smaller size than main pipe diameter. Valve diameter should be selected as smaller than main pipe diameter. Following empirical formula may be used in determining diameter of deep-well pump control valve. Where;

$$D = \sqrt{\frac{250 \times Q}{H_m}}$$

D = Diameter of deep-well pump control valve in (mm)
 Q = System Flow Rate in (m³/h)
 H_m = System Operating Pressure (meter → 1 bar ≈ 10 meter)

Typical Application



- 1 Submersible Pump
- 2 Air Valve
- 3 Deep Well (Submersible) Pump Control Valve
- 4 Check Valve
- 5 Surge Anticipating Valve
- 6 Isolation Valve (Gate, Butterfly Valve etc.)

Adjustment

- Connect pump control valve to pump panel according to electric schema of electric panel.
- Open ball valve indicated with "b".
- Valve will be opened slowly. When valve came to full open position, fixate the position of limit switch indicated with "d" according to full closed position of valve. Knob at the end of valve indicator should contact with Limit Switch.
- Adjust valve opening speed by means of needle valve indicated with "e2" and valve closing speed by means of needle valve indicated with "e1".

Maintenance

- Check finger filter indicated with "c" according to water quality and clean it. Do not make cleaning more than one within a few months unless water is too dirty.
- Drain water within actuator and pilot valves of valves not used in winter.
- Check downstream pressure value continuously.
- Consult us if valve does not perform its regulating function.

Troubleshooting

Failure	Causes	Correcting/Repair
Valve not opening	<ul style="list-style-type: none"> • Ball valve indicated with "b" on valve may be closed. • Solenoid Pilot valve coil may be burnt. • Needle valve may be closed. 	<ul style="list-style-type: none"> • Check the ball valves and open them if they are closed. • Replace it with the new one. • Open needle valve according to valve opening speed.
Valve not closing	<ul style="list-style-type: none"> • Diaphragm may be punctured. • Foreign substances may exist in diaphragm seat. • Valve's Control panel may be connected incorrect. • Finger filter may be clogged. 	<ul style="list-style-type: none"> • Check diaphragm and replace with the new one if it is punctured. • Check diaphragm seat and remove foreign substances if any. • Check connections and correct them according to electric schema.. • Clean if it is clogged.
Valve is closed but Pump does not stop	<ul style="list-style-type: none"> • Position of Limit Switch may be wrong. • Connections of Limit Switch to control panel may be wrong. 	<ul style="list-style-type: none"> • Readjust it according to instruction. • Check it and correct its connections

Order Information

Please submit following information to our sales department while ordering.

Maximum flow rate _____ m³/h
 Valve connection type _____
 Maximum network/line pressure _____ bar
 Maksimum pump pressure _____ bar
 Depth of the well _____ m

Sample order form

Model	Connection	Size	Control Feature	Additional Features
67-67D	F: Flanged (ISO-ANSI)	2"-16"	Deep Well Pump Control	QR: Quick Pressure Relief
66-66D-64	TH: Threaed (BSPT-NPT)	1½"-3"		PG: Pressure Gauge
63-63D	VIC: Grooved End	2"-4"		
67	F	6"	DPC	QR

Back Flushing Control Valve **BF**



Model 38

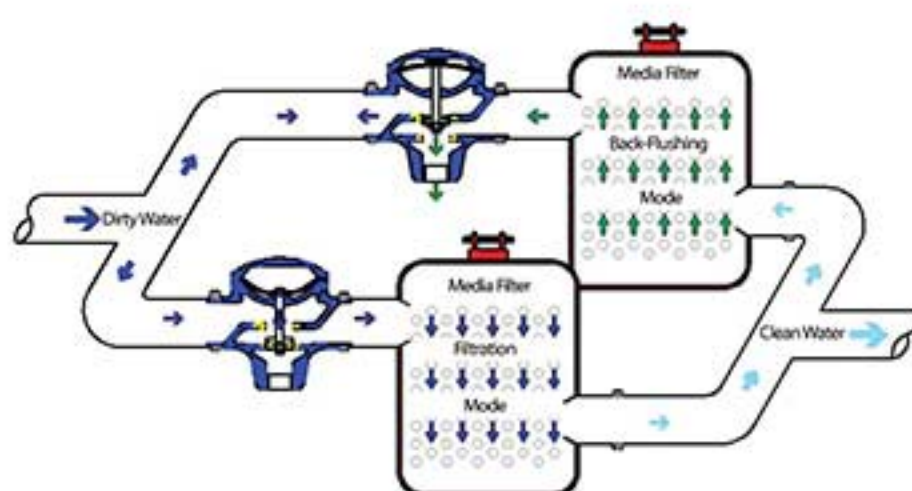


Model 37

Description

Backflushing control valves are the 3-way control valves which are operated by line pressure or an external pneumatic pressure. Valve works in filtration and back flushing mode as coordinated with filter elements in the system. Diaphragm-pilot valve assembly of valve works as bidirectional. While valve is switching into backflushing mode in filtration mode, pilot valve changes its way and opens relief way. It thereby prevents that fresh water is mixed with waste water and cleans filter elements in the best manner.

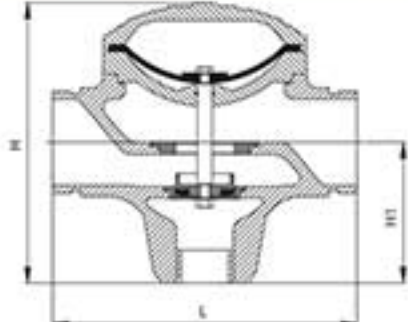
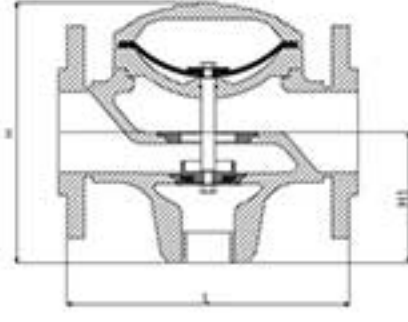
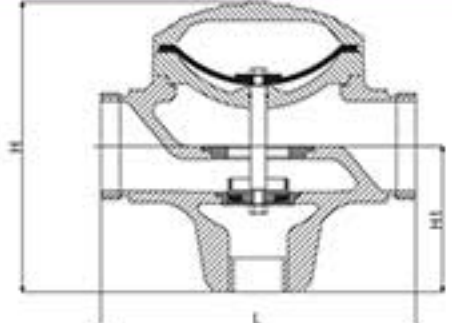
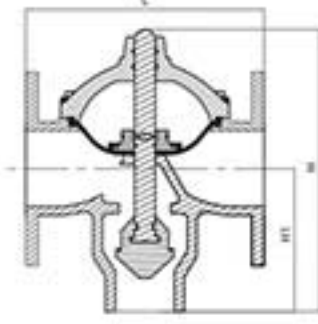
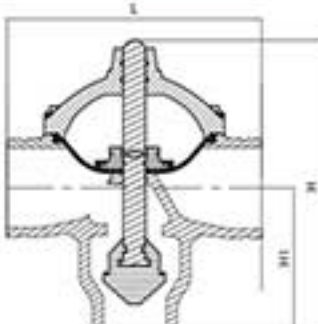
Working Principals



Technical Features

Working Pressure	Standard	0,7 - 10 bar (10-145 psi)
Temperature	Min. Operation Temperature	-10 °C (14 °F) DIN 2401/2
	Max. Operation Temperature	80 °C (176 °F) DIN 2401/2
Connection	Flanged	DIN 2501, ISO 7005 - 2
	Threaded	ISO (BSP), ANSI (NPT)
	Grooved End	Victaulic
Coating	Standard	Polyester
	Optional	Epoxy

Available Models

Model 21	Diameter	Connection	Dimensions		
	2"x2"	Filter: 2" Threaded		mm	inch
			L	195	7,8
		Drainage: 2" Threaded	H	190	7,6
			H1	100	4
Model 27	Diameter	Connection	Dimensions		
	4"x3"	Filter: 4" Flanged		mm	inch
			L	295	11,6
		Drainage: 3" Threaded	H	240	9,4
			H1	125	5
Model 28	Diameter	Connection	Dimensions		
	4"x3"	Filter: 4" Grooved End		mm	inch
			L	270	10,6
		Drainage: 3" Grooved End	H	240	9,4
			H1	125	5
Model 37	Diameter	Connection	Dimensions		
	3"x2"	Filter: 3" Flanged		mm	inch
			L	230	9
		Drainage: 2" Threaded	H	138	5,4
			H1	272,5	10,7
Model 38	Diameter	Connection	Dimensions		
	3"x2"	Filter: 3" Grooved End		mm	inch
			L	230	9
		Drainage: 2" Threaded	H	138	5,4
			H1	272,5	10,7

Back Flushing | BF Control Valve

Main Parts

Part Name	Material	
Body	Cast Iron	GG 25
Cover	Cast Iron	GG 25
Diaphragm	Nylon Reinforced Natural Rubber	
Stem	Stainless Steel	SST 304
Spring Thrust Ring	Polyamide	
Spring	Stainless Steel	SST 302
Bolt, Nut	Coated Steel	SST
Sealing Seat	Bronze	
Sealing Gaskets	EPDM, Natural Rubber	

Typical Application

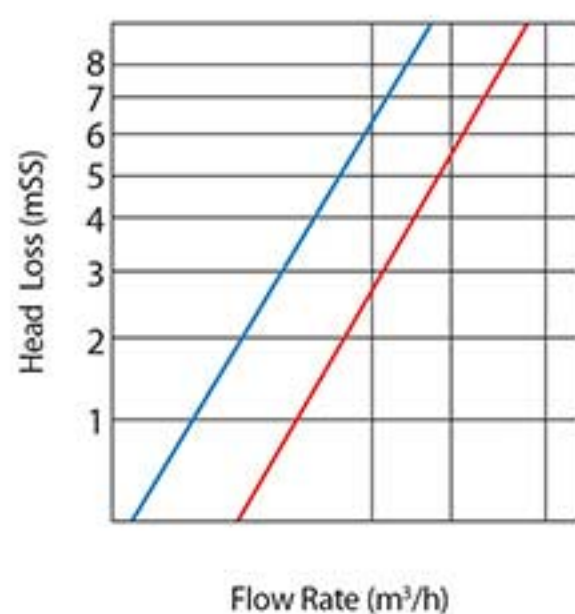


- 1 Controller
- 2 Back-Flushing Valve
- 3 Disc Filter
- 4 Kinetic Air Valve

Head Loss Charts

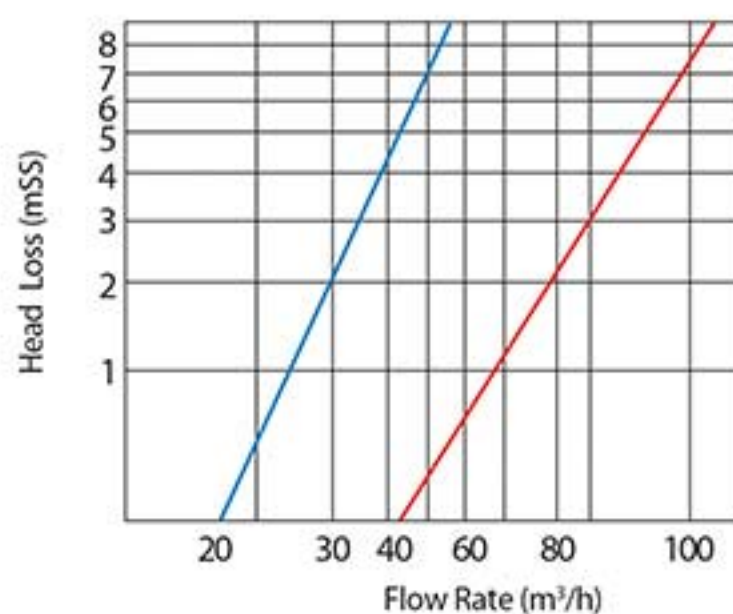
2"x2" Head Loss Chart

Backflushing Mode **Filtration Mode**



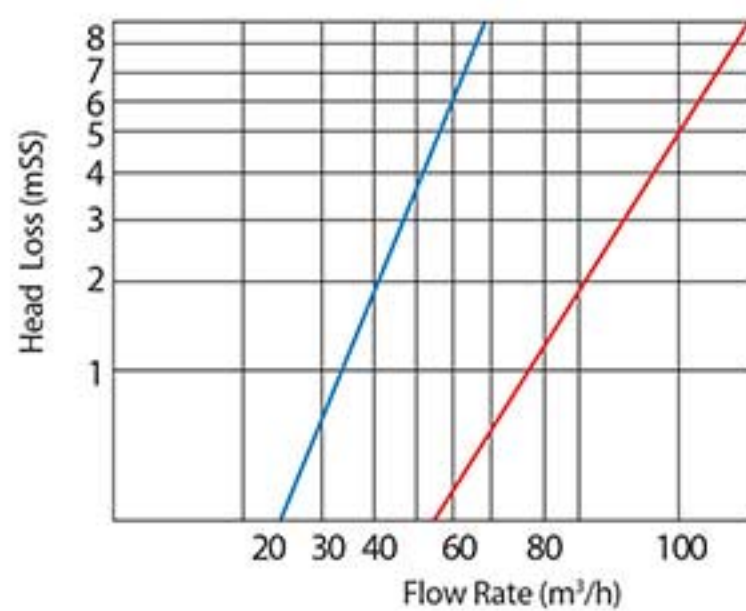
3"x2" Head Loss Chart

Backflushing Mode **Filtration Mode**



4"x3" Head Loss Chart

Backflushing Mode **Filtration Mode**





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Turkey

Discover
the potential