

ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ
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Diaphragm valves

диaphragm valves

A SWITCHING VALVE FOR LIQUIDS AND GASES.

Can be actuated with either air
or water as control fluid.

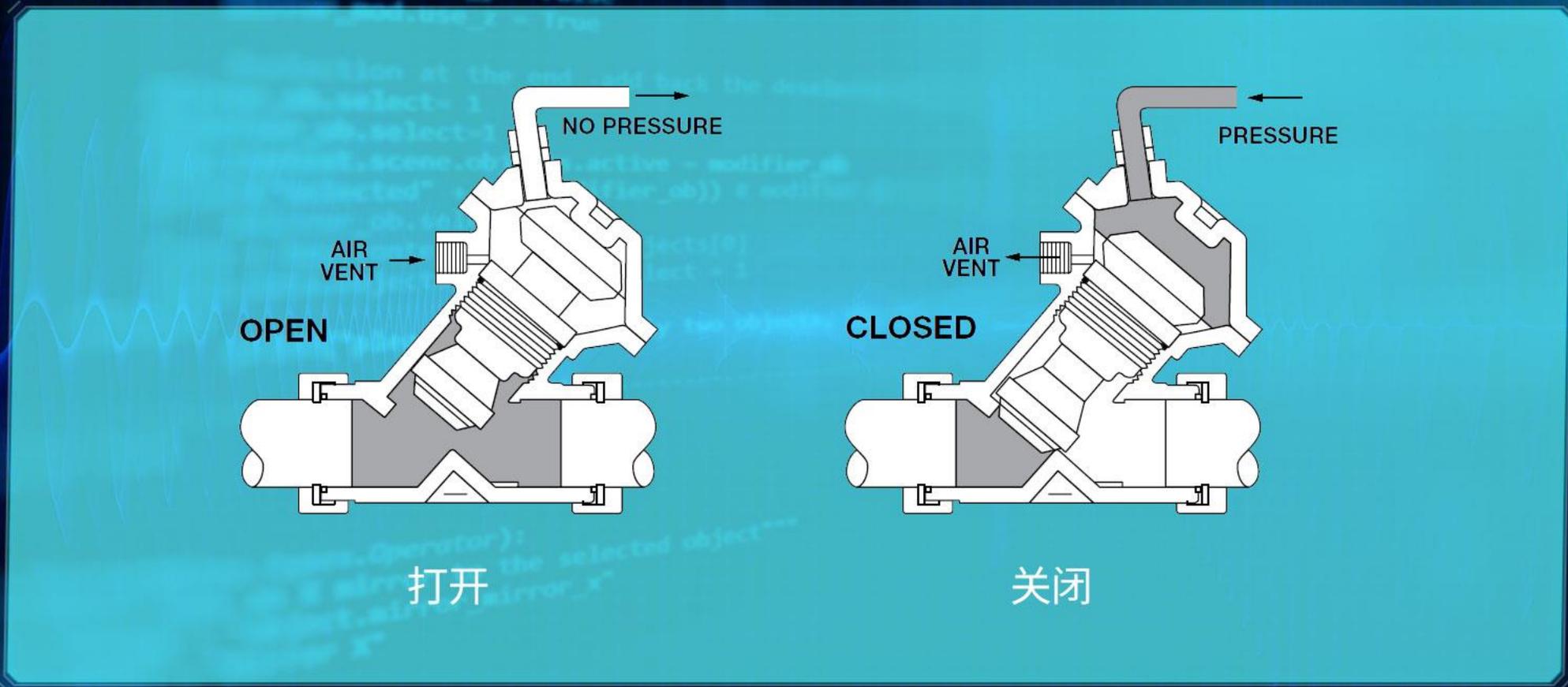
Diaphragm Valve



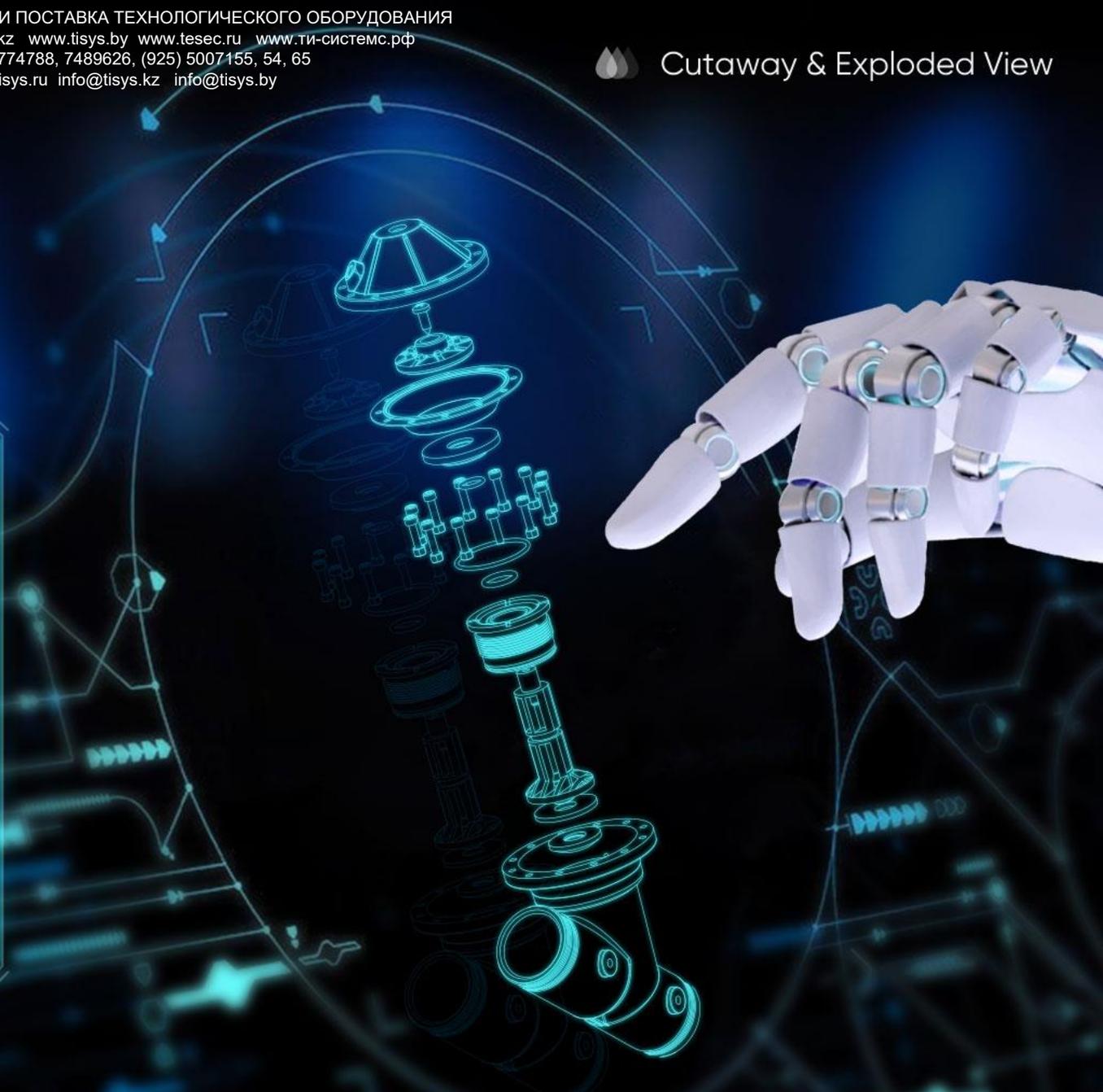
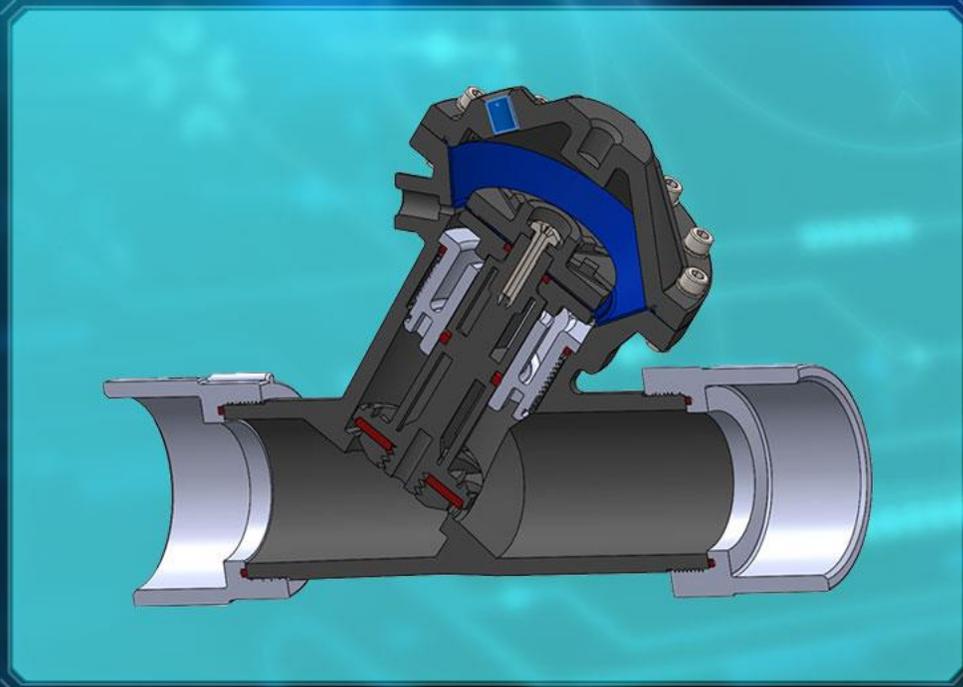
Temperature: 4-50°C
Control: hydraulic or pneumatic
Designed pressure: 0.1-1.0Mpa
Bursting pressure: ≥ 3.2 Mpa
Cyclic test: $\geq 100,000$ cycles
Material: reinforced PA,PP,Noryl

Diaphragm valve – original valve

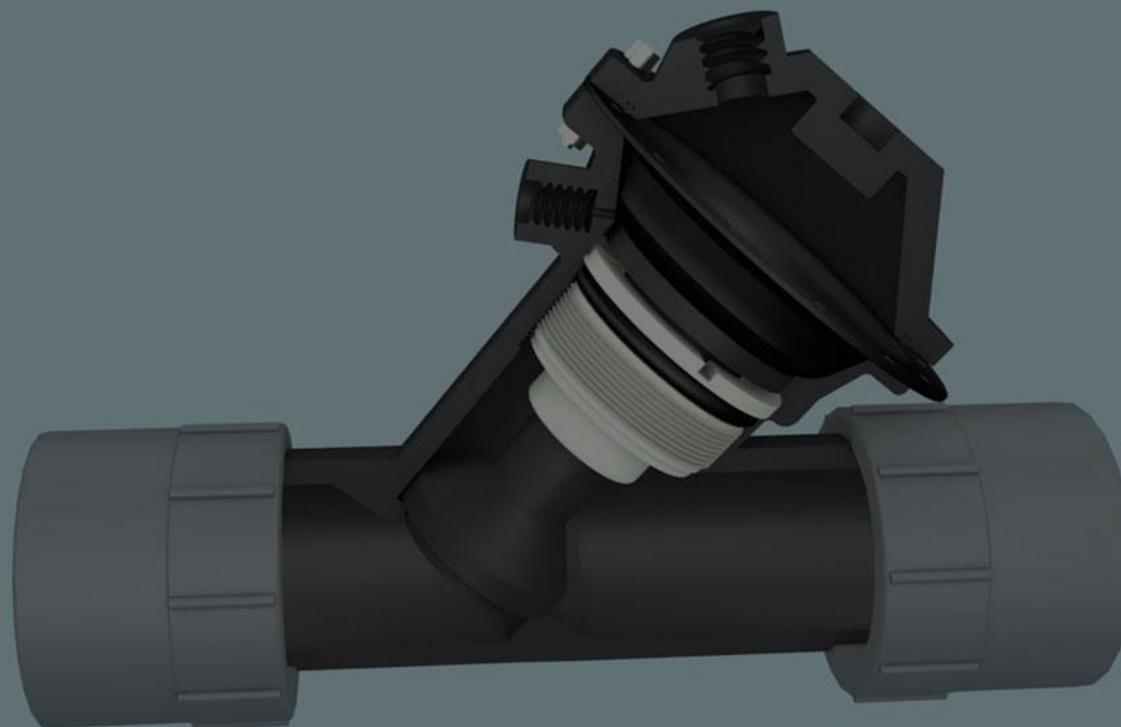
Actuated by water or air as control source



Smart structure design
Stable operation
Cost-effective solution



Diaphragm valve operating principle video





Technical Advantages

Corrosion resistant, easy to automate



Dual chambers control provide flexibility and reliability



Valve body and diaphragm part is made of special material, anti-corrosion, anti-fatigue and long service life.



Y-pattern feature permits high flow with low pressure drop.



Independent flow chamber Separates media from control fluid.

Industrial, Civil, Commercial wide applications, With multiple flow

1"(Y521)

Pipe size

1" / 1.25"



2"(Y524)

Pipe size

1.5" / 2"



3"(Y526)

Pipe size

2.5" / 3"



4"(Y528)

Pipe size

Flanged end



Filter Backwash Valve

(3-Way Valve)



Filter Backwash Valve

(3-Way Valve)





REINFORCED PA

HIGH STRENGTH AND LONG
LIFE SPAN

(APPLY TO NEUTRAL MEDIUM)



REINFORCED PP

APPLY TO CORROSION RESISTANT
ENVIRONMENT

SUCH AS DI SYSTEM
(APPLY TO LOW CONCENTRATION
ACID-BASE MEDIUM)



NORYL

APPLY TO OCCASIONS WITH
HIGH HYGIENE REQUIREMENTS

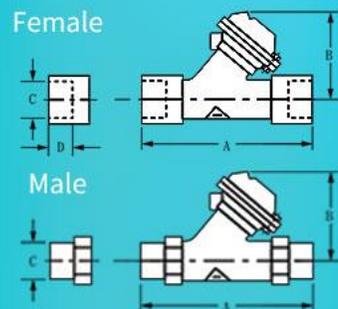
Y type diaphragm valve



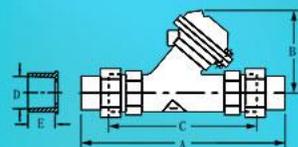
Y521	1"	PA6+	5211001
		PP+	5211002
		NORYL+	5211003
Y524	2"	PA6+	5241001
		PP+	5241002
		NORYL+	5241003
Y526	3"	PA6+	5261001
		PP+	5261002
		NORYL+	5261003
Y528	4"	PA6+	5281001
		NORYL+	5281002

Multiple end connections, Easy to install

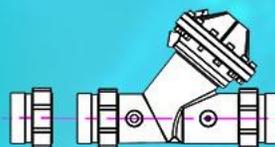
Socket weld end



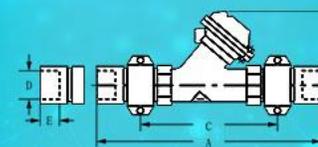
Union end



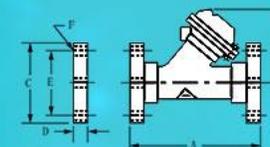
Grooved adaptor



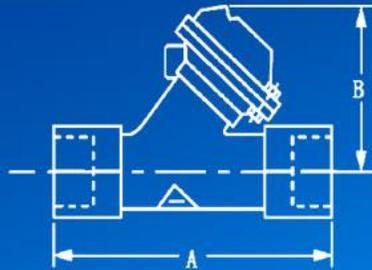
Grooved with coupling



Flanged



Socket weld end



Valve specification	Connector dimension		Installation dimension			
	ISO(PN number)	ANSI(PN number)	A		B	
			Inches	mm	Inches	mm
Y521	DN25 (5212008)	1" (5212002)	6.3	160	3.43	87
Y524	DN40 (5242001)	1.5" (5242003)	8.35	212	5.35	136
	DN50 (5242002)	2" (5242004)	10.24	260	5.23	136

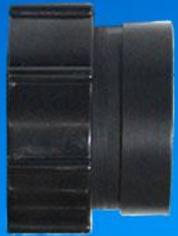
Union end



Valve specification	Connector dimension			Installation dimension					
				A		B		C	
				Inches	mm	Inches	mm	Inches	mm
Y521	Female Socket weld Connector dimension	ISO (PN number)	DN25 (5212008)	9.06	230	4.06	103.1	/	/
		ANSI (PN number)	1" (5212009)						
Y524	Female Socket weld Connector dimension	ISO (PN number)	DN50 (5242009)	12.32	313	5.06	128.5	8.78	223
		ANSI (PN number)	2 inch Socket weld (5242010)						
	Female thread Connector dimension	ISO (PN number)	2"BSP (5242012)						
		ANSI (PN number)	2"NPT (5242011)						



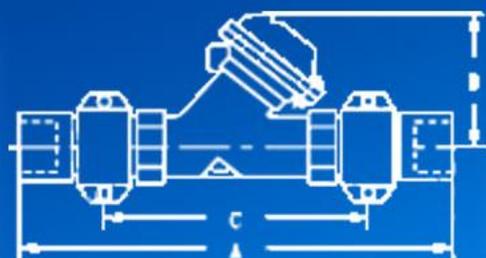
Grooved adaptor



Valve specification	Connector dimension	Installation dimension		
		A	B	
		Inches	Inches	mm
Y524	2" (5242013)	7.87	5.06	128.5
Y526	3" (5262001)	12.6	8.69	220.7

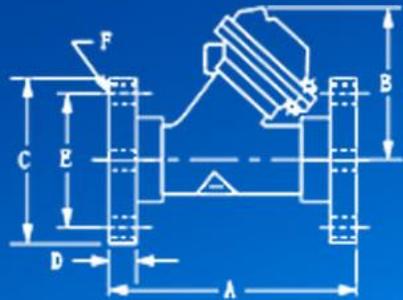


Grooved with coupling



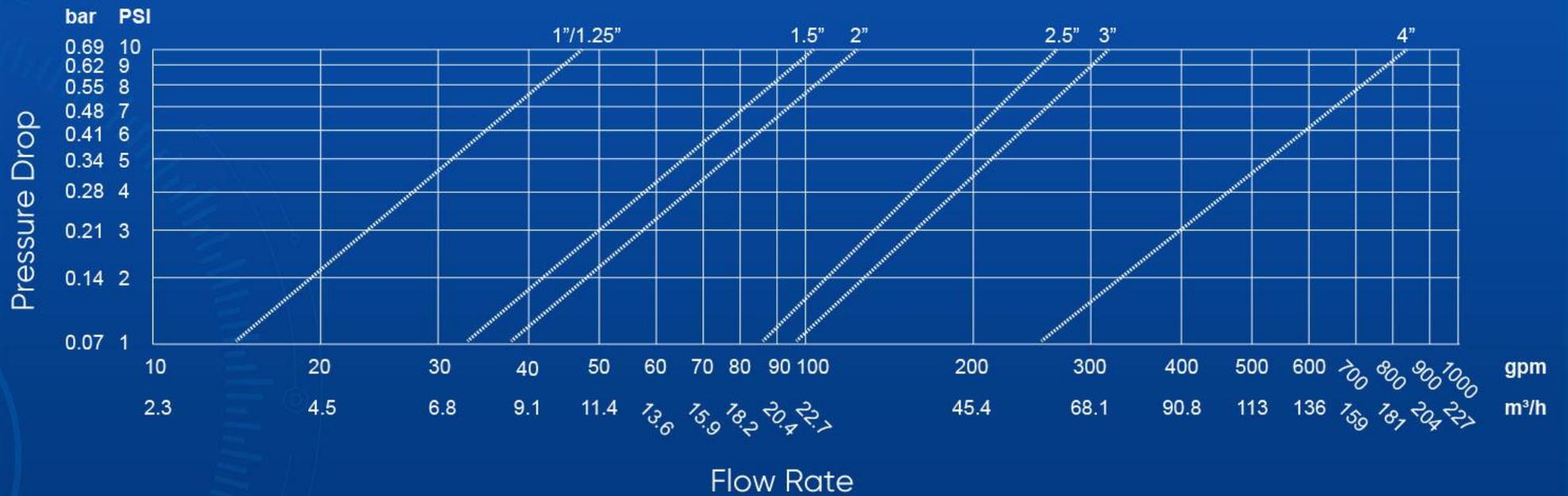
Valve specification	Connector dimension ISO(PN number)	Installation dimension				
		A	B		C	
	Inches	Inches	mm	Inches	mm	
Y524	DN40 (5242014)	12.83	5.06	128.5	7.87	200
	DN50 (5242015)	13.23	5.06	128.5	7.87	200
Y526	DN65 (5262002)	18.5	8.69	220.7	12.6	320
	DN80 (5262003)	19.3	8.69	220.7	12.6	320

Flanged



Valve specification	Connector dimension	Standard	Installation dimension											
			A		B		C		D		E		F	
			mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	
Y526	2.5"/DN65(5262006)	ISO/ANSI	285	8.69	220.7	7.28	185	0.87	22	5.71	145	71	18	
		ANSI								5.49	139.5			
	3"/DN80(5262007)	ISO	318	8.69	220.7	7.87	200	0.87	23	6.3	160	71	18	
		ANSI	318	8.69	220.7	7.87	200	0.87	23	6	152.5			
Y528	4"/DN100(/)	ISO	310	9.37	238	8.66	220	91	23	7.09	180	71	18	
		ANSI								7.5	190.5			

Y52 Diaphragm valve performance Data



**End connections and
 extended function options
 permit mutiple technologies**



**Normally open
 (NO)**



**Normally closed
 (NC)**



**Spring assist
 open (SAO)**



**Spring assist
 closed (SAC)**



**Position Indicator
 (PI)**



Solenoid valve



**Signal switch
 (SS)**



**Limit stop
 (LS)**



**Liquid level
 control (LLC)**



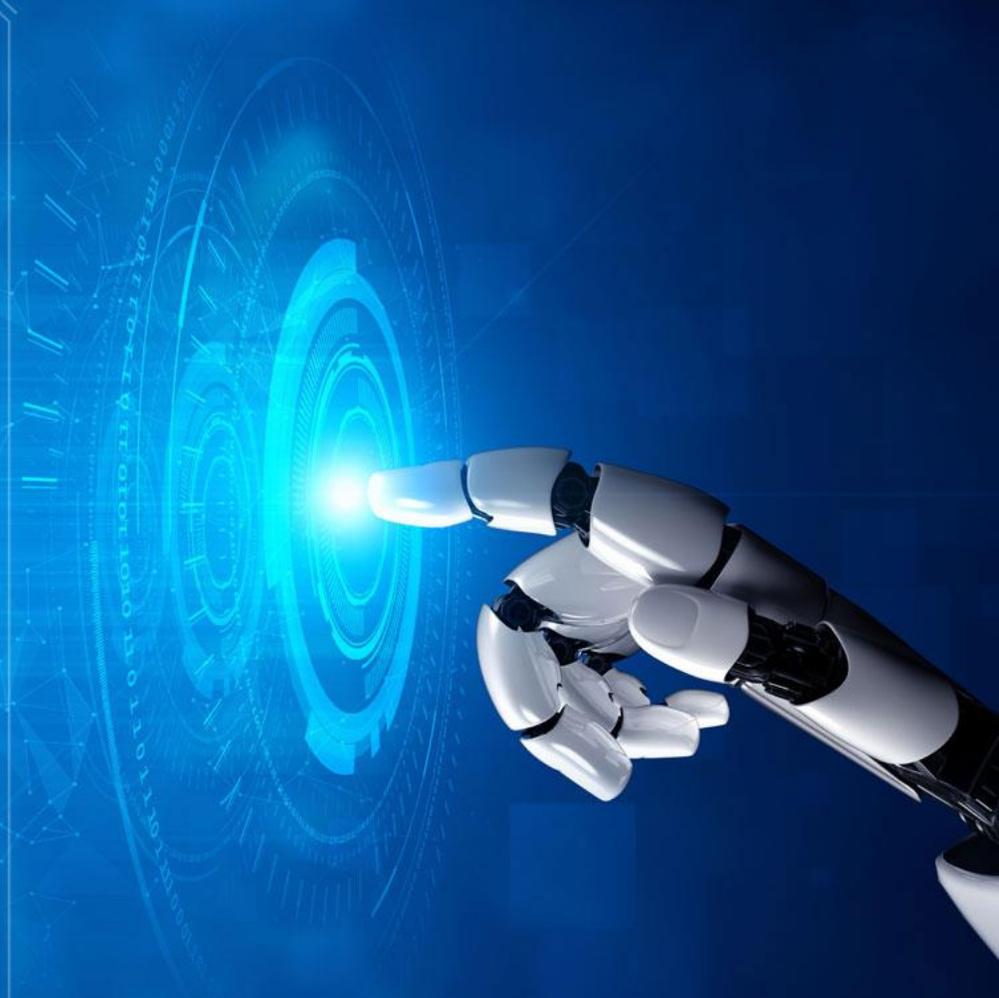
**Pressure
 sustaining (PS)**



**Pressure
 reducing (PR)**

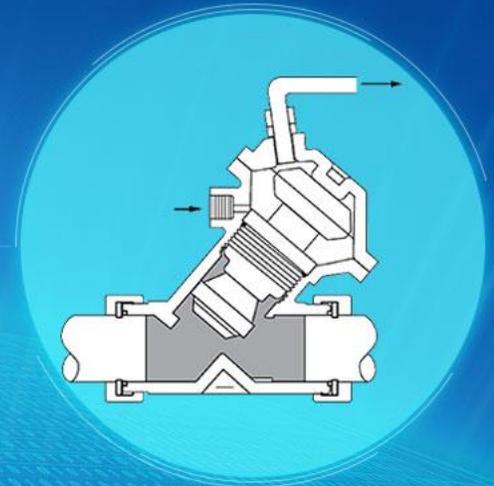


**Filter Backwash Valve
 (3-Way Valve)**



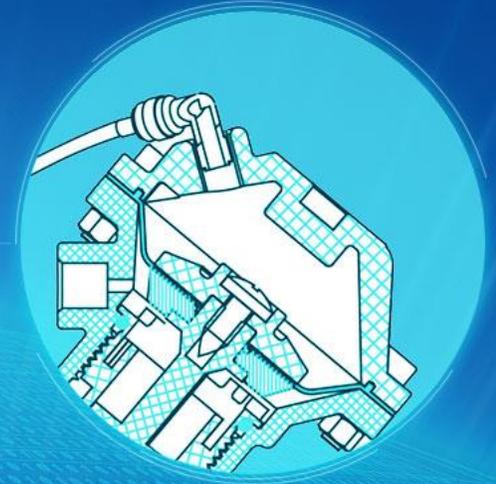
Normally Open Diaphragm Valve

Valve is open while no control pressure (by water or air)



Normally Closed Diaphragm Valve

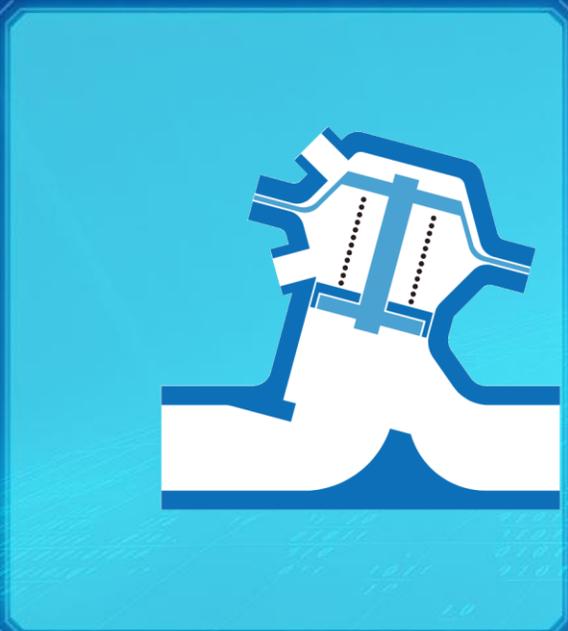
Valve is closed while no control pressure (by water or air)



Spring Assist Open Diaphragm Valve

Spring from lower chamber assists to open while pressure is insufficient

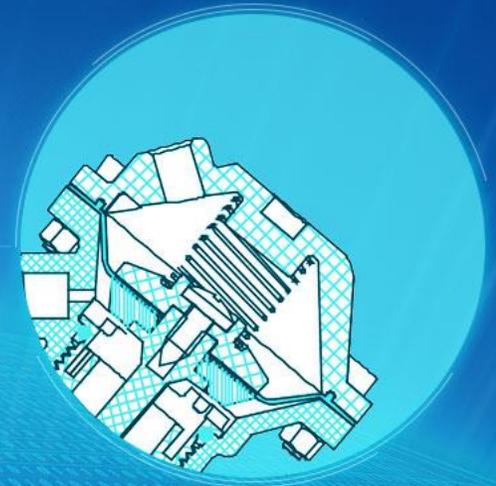
working pressure : 0.2-0.8Map



Spring Assist Closed Diaphragm Valve

Spring from upper chamber assists to close while control pressure is insufficient

working pressure : 0.2-0.8Map



Pressure Sustaining Diaphragm Valve

Constant valve inlet pressure after adjustment

working pressure : 0.35-1Map

Setting range : 0.1-0.7Map

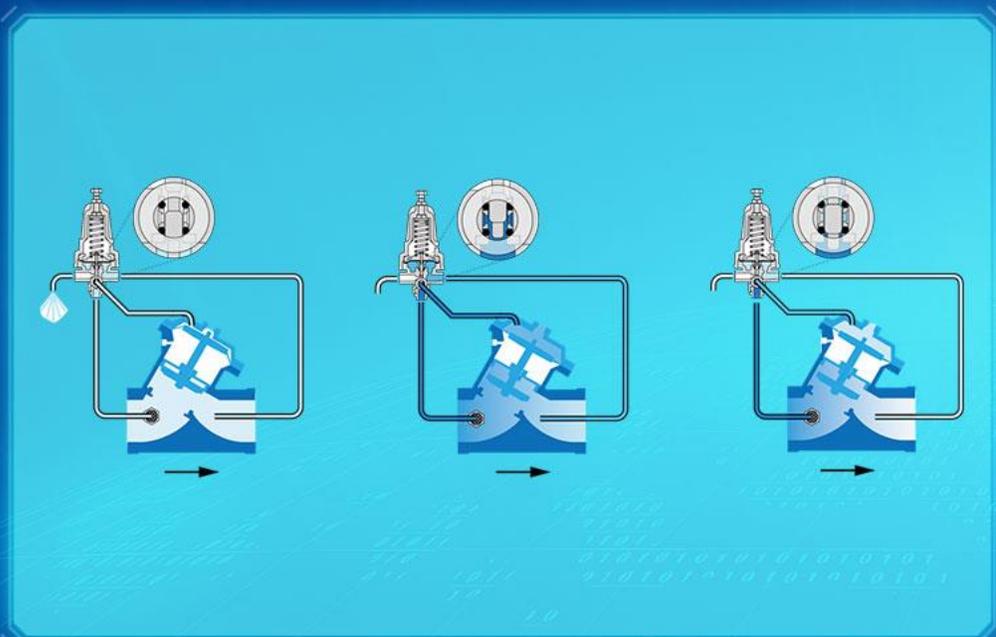


Pressure Reducing Diaphragm Valve

Constant valve outlet pressure after adjustment

working pressure : 0.35-1Map

Setting range : 0.1-0.7Map



Signal Switch Diaphragm Valve

Assist to output dry contact signal while valve is closed.

(Normally open, dry contact switch signal)

working pressure : 0.2-0.8Map



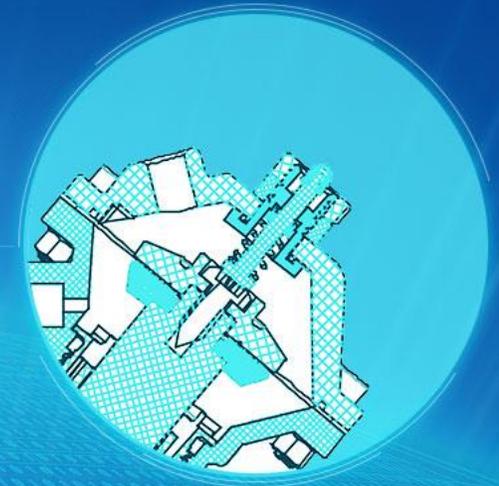
Limit Stop Diaphragm Valve

Adjustable lever to adjust water flow



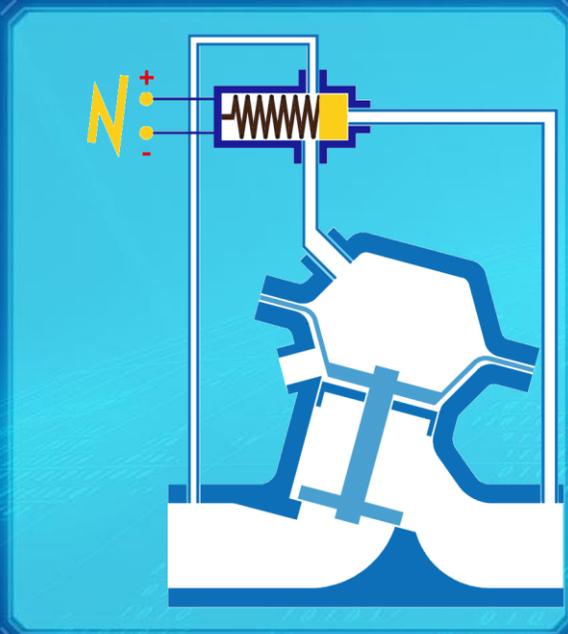
Position Indicator Diaphragm Valve

Indicating stem to indicate valve switching position



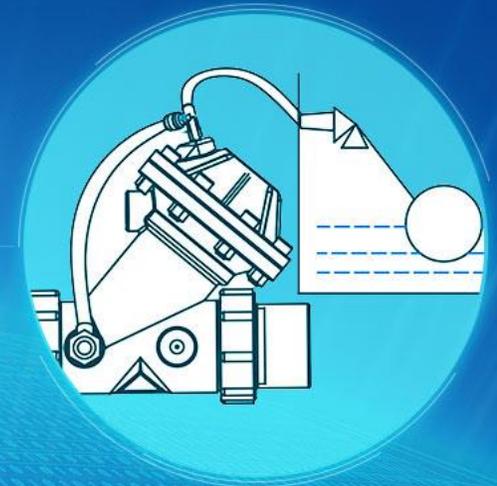
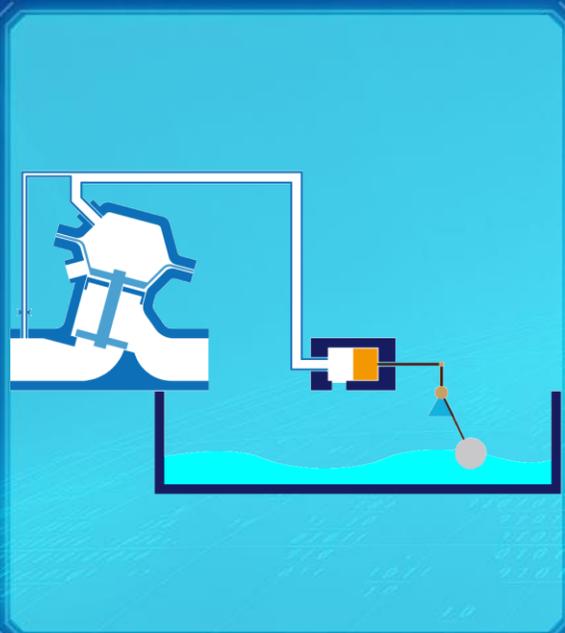
Solenoid Diaphragm Valve

Install solenoid pilot valve to control valve switching



Liquid Level Control Diaphragm Valve

External liquid level to control valve switching



***Backwash valve ,
adopts dual control chambers design,
separate flow chamber permits
independent filtration and backwash.***

Temperature:4-50 °C

Control:hydraulic or pneumatic

Material:reinforced PA

Designed pressure:0.1-1.0Mpa

Bursting pressure:3.2Mpa

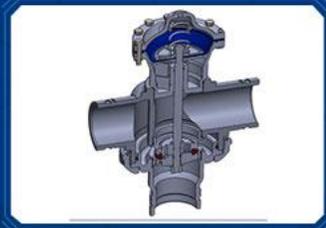
Cyclic test:100,000 cycles



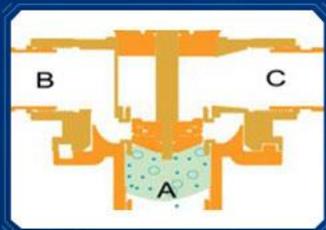


Technical Advantages

Corrosion resistant, easy to automate



Diaphragm fully supported design for long service life



Short active stroke of valve piston
Smooth flow switching eliminates the instantaneous mixing defect exist in other valves, Better sealing



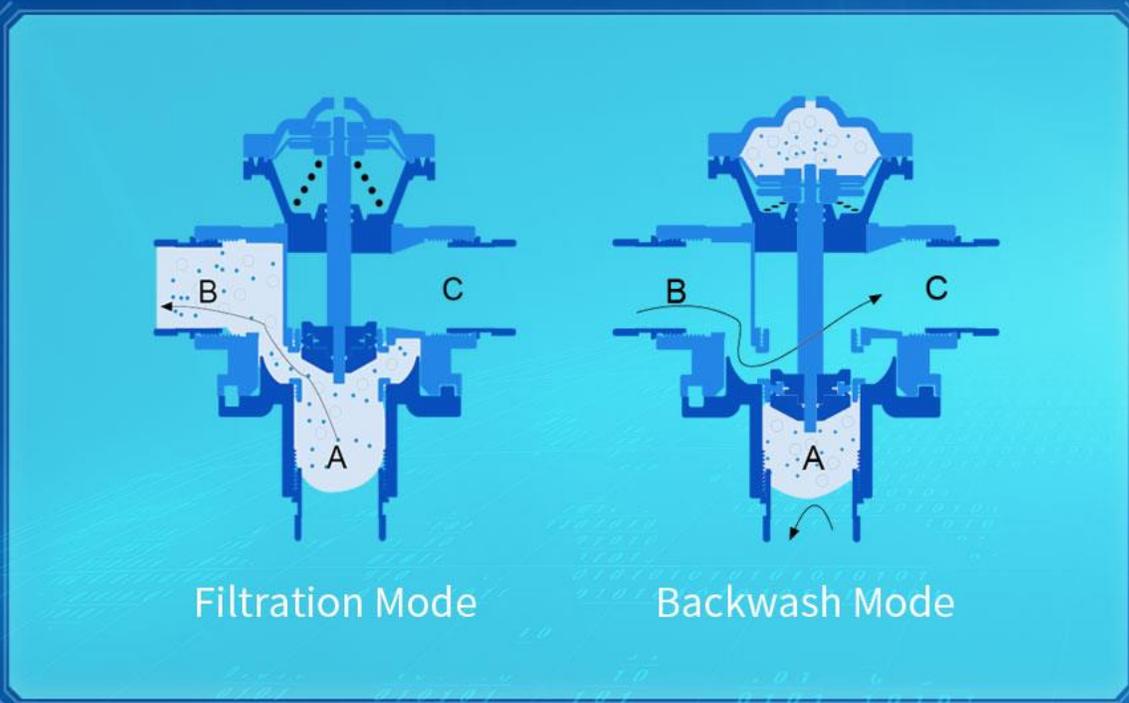
Can be maintained online without disassemble the system.



Each Interface adopts grooved adaptor connection, easy for installation and disassembly.

Filter Backwash Valve (3-Way Valve)

Angle (A) Flow



3-way, 2-Position,
double chambered design,
hydraulic and pneumatic operated,
and diaphragm actuated.

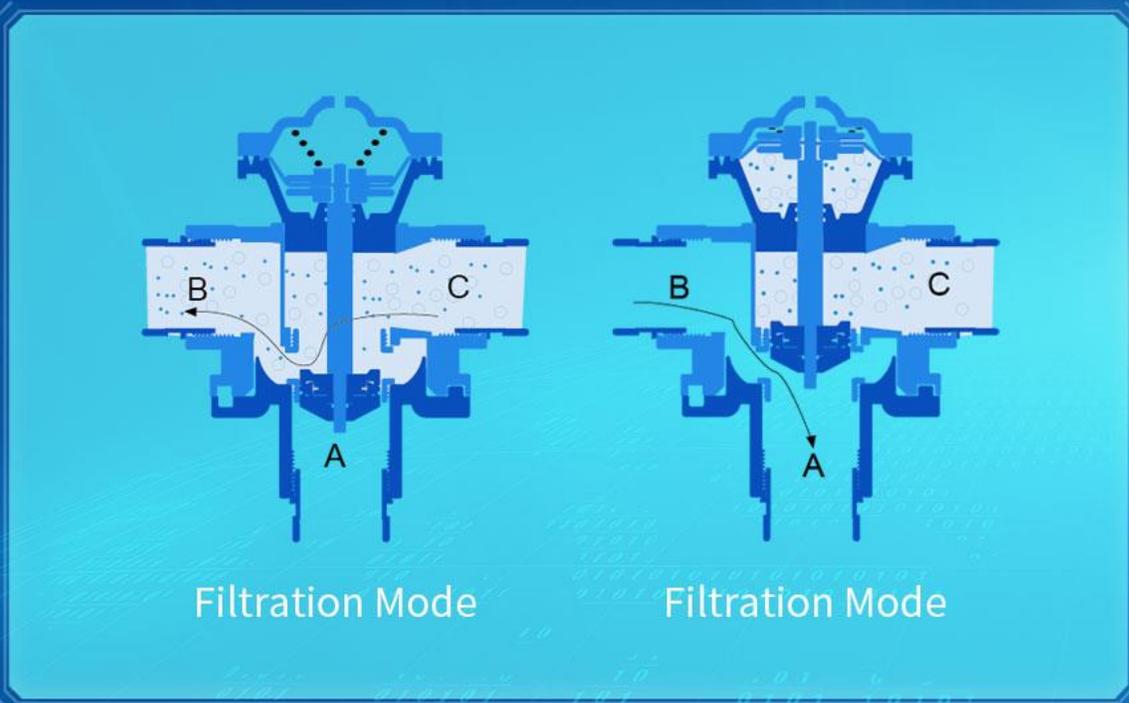
Separate flow chamber permits
independent flow for filtration and
backwash.

Typical Applications:

- Gravel Filters
- Disc Filters
- Screen Filters

Filter Backwash Valve (3-Way Valve)

Straight (S) Flow



3-way, 2-Position,
double chambered design,
hydraulic and pneumatic operated,
and diaphragm actuated.

Separate flow chamber permits
independent flow for filtration and
backwash.

Typical Applications:

- Gravel Filters
- Disc Filters
- Screen Filters

Backwash Valve Specification



Model	Material	Connector Type (grooved adaptor)	G.W (kg)	Installation dimension L×H×W(mm)
B220A / B220S	Reinforced PA	2"×2"×2"	2.9	239×276×160
B330A / B330S		3"×3"×3"	4.9	288×380×194
B440A / B440S		4"×4"×4"	4.57	330×300×240.5

Solenoid backwash valve

**Activated by solenoid pilot valve
to perform backwash valve's
filtration and backwash state**

Voltage: 230VAC / 110VAC / 24VAC

Hz: 50 / 60Hz

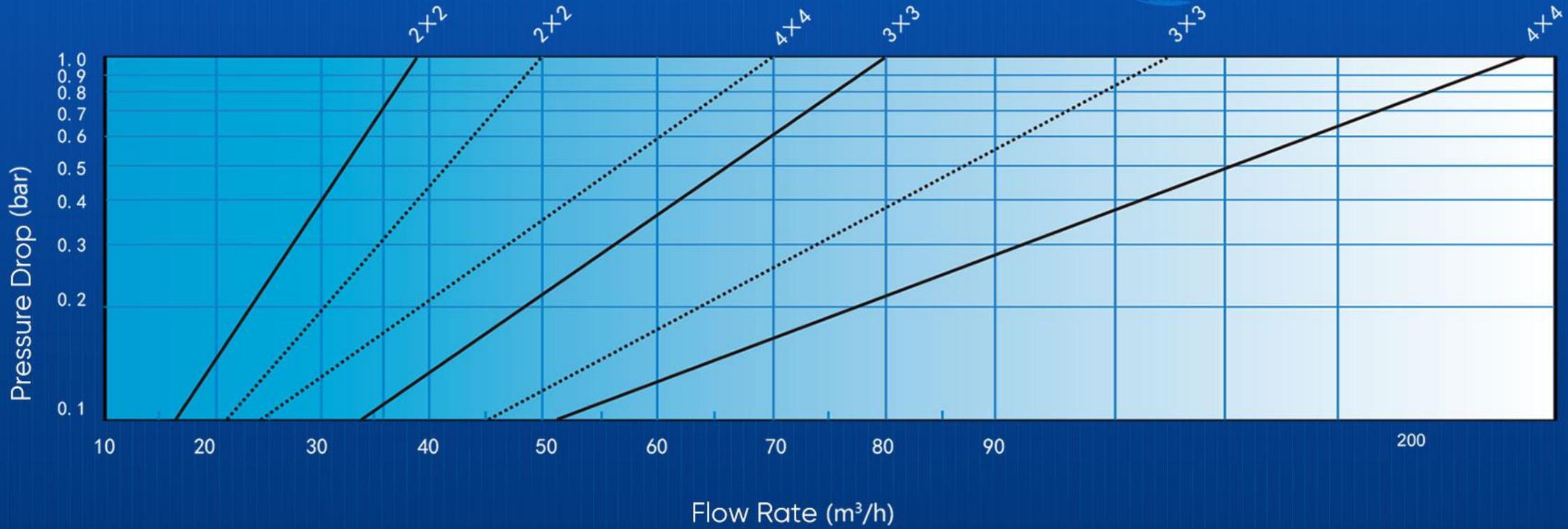
Power: 8W



Backwash valve performance data



Filtering Mode —
 Backwashing Mode ·····





Application Fields

- Printing & dyeing
- heating station
- Paper mill
- Textile
- Mine
- Chemical
- Aquaculture
- Brewery industry
- Electronic industry
- Agricultural irrigation
- Desalination
- Metal recovery systems
- Spray systems
- Water treatment systems



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THANK YOU