

General imsubs®

Quality
Water Valves

For
Home Appliances

General imsubs® Water Solenoid Valves for Appliances

Features

- ✓ Pilot operated diaphragm water solenoid valves are available in various models and specifications.
- ✓ Available in normally closed, Normally Open and Bistable Latching versions.
- ✓ Water solenoids are available in many standard voltages and option for any specific coil voltage against minimum order.
- ✓ 0.40 mm, removable plastic filter in most models.

Applications

- ✓ Washing machines (for water inlet / feed)
- ✓ Domestic and Industrial water purifiers. (Inlet water control)
- ✓ Dish washers (Water feed / inlet)
- ✓ Feed valve for coffee and hot beverages vending machine.
- ✓ Automatic water taps and faucets.
- ✓ Dental equipments.
- ✓ And other applications where water is need to be controlled by solenoid valve.

[We also manufacture custom designed valves against specific order](#)

Ordering Guide

While ordering please use code as under along with Model code:


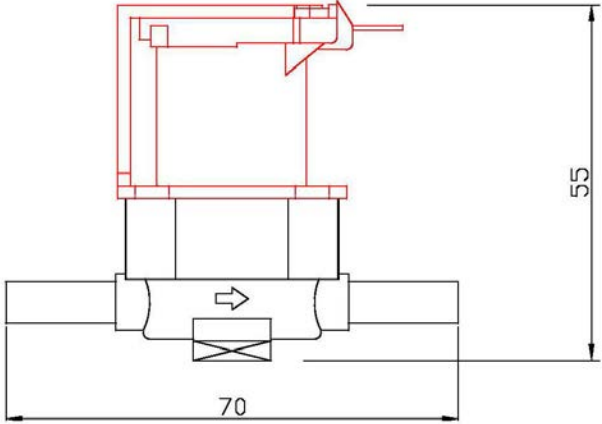
Valve type			
Prefix Series : G	Prefix Series : D	Prefix Series : N	Prefix Series : L
Normally Closed Pilot Operated Op. Pressure 0.2 – 8.0 bar	Normally Closed Direct Acting Op. Pressure 1500 (60”) mm WC	Normally Closed Pilot Operated Op. Pressure 0.2 – 4.0 bar	Bi Stable, Latching Pilot Operated Op. Pressure 0.2 – 6.0 bar

**3711/A, GIDC, Phase-IV, Vatva, Ahmedabad-382 445, Gujarat, India
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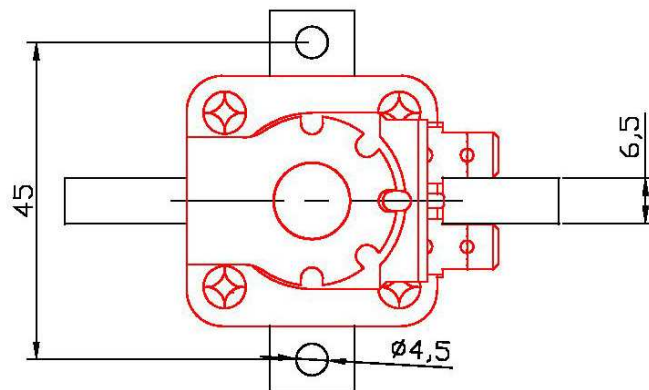
VALVES FOR DOMESTIC RO SYSTEMS

Models:

**Model Code : 1/180 6 mm X 6 mm Tube
NO, NC, Low Pressure NC, Bi Stable Latching Operators**

Appearance	Dimensions
	
<ul style="list-style-type: none"> ✓ Inlet / Outlet : ¼" TUBE FOR QC FITTING ✓ Mounting : Bottom Mounting ✓ Food Contact On request ✓ Flow rate: 3-8 LPM ✓ Inlet Filter: Not Provided ✓ Available Valve Type : Normally Closed (0.2 to 8 bar), Normally Open (0.2 to 4 bar), Low Pressure (1000 mm WC), Magnetically Latching (0.2 to 4 bar) 	<ul style="list-style-type: none"> ✓ Available Versions and Voltages : G series : Normally Closed 6 V DC*, 12, 24, 36, 48 V DC, 110 V*, 230 V AC N Series : Normally Open 12, 24, 36, 48 V DC L Series : Magnetically Latching: 6 – 12 V DC, 60 mS, 9 Ohms. D Series : Low pressure direct acting, 12, 24, 36, 48 V DC, 230 V AC

Mounting Details




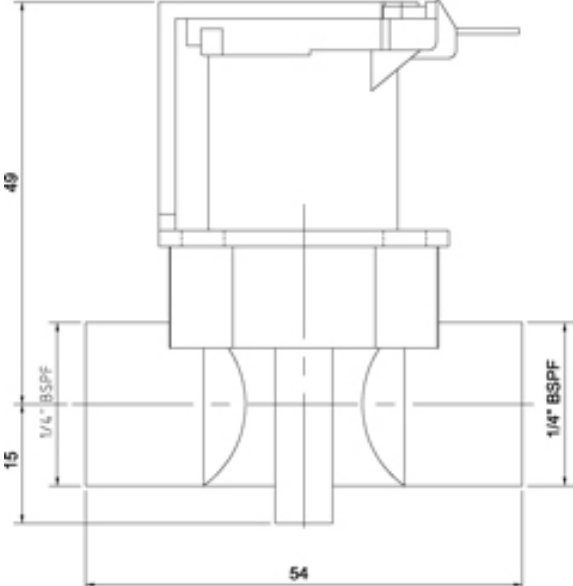
Minimum order of 2000 valves

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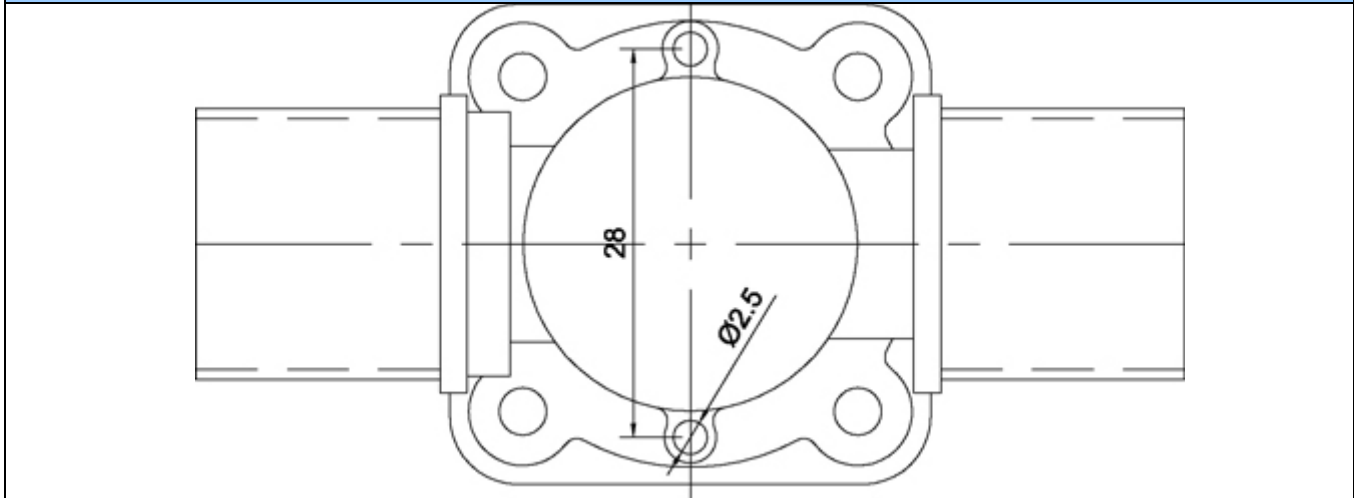
VALVES FOR DOMESTIC RO SYSTEMS

Models:

**Model Code : 1/180 1/4" X 1/4" BSP
NO, NC, Low Pressure NC, Bi Stable Latching Operators**

Appearance	Dimensions
	
<ul style="list-style-type: none"> ✓ Inlet / Outlet : 1/4" BSP Female threads ✓ Mounting : Bottom Mounting ✓ Food Contact On request ✓ Flow rate: 6-8 LPM ✓ Inlet Filter: Not Provided, Optional ✓ Available Valve Type : Normally Closed (0.2 to 8 bar), Normally Open (0.2 to 4 bar), Low Pressure (1000 mm WC), Magnetically Latching (0.2 to 4 bar) 	<ul style="list-style-type: none"> ✓ Available Versions and Voltages : G series : Normally Closed 6 V DC*, 12, 24, 36, 48 V DC, 110 V*, 230 V AC N Series : Normally Open 12, 24, 36, 48 V DC L Series : Magnetically Latching: 6 – 12 V DC, 60 mS, 9 Ohms. D Series : Low pressure direct acting, 12, 24, 36, 48 V DC, 230 V AC

Mounting Details




Minimum order of 2000 valves

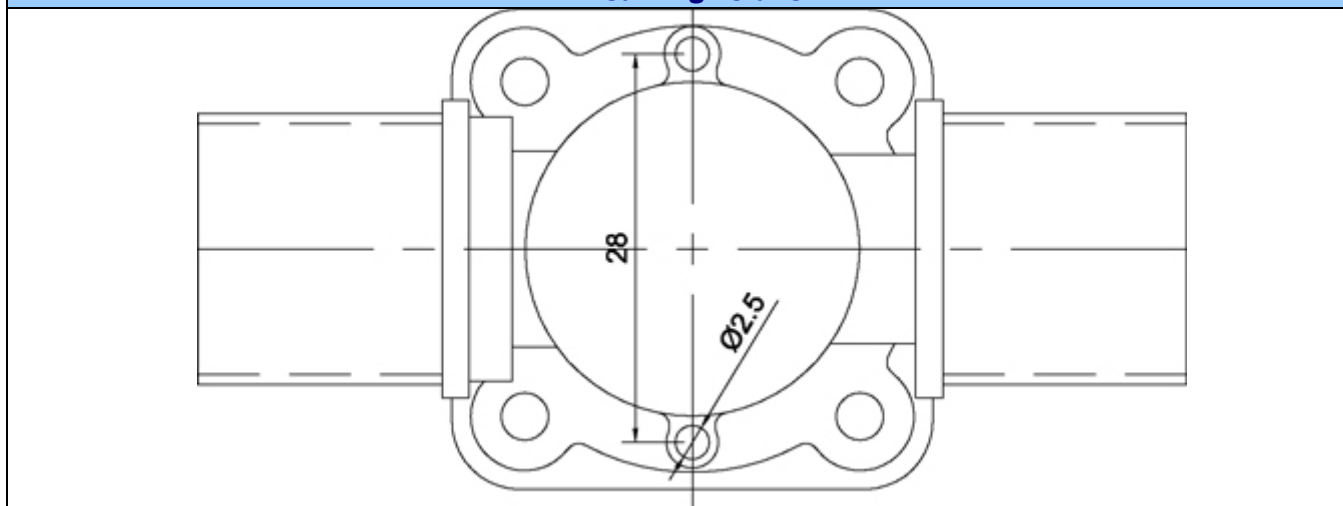
**3 7 1 1 / A , G I D C , P h a s e - I V , V a t v a , A h m e d a b a d - 3 8 2 4 4 5 , G u j a r a t , I n d i a
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Models:

**Model Code : 1/180 1/2"X 1/2" BSP
NO, NC, Low Pressure NC, Bi Stable Latching Operators**

Appearance	Dimensions
	
<ul style="list-style-type: none"> ✓ Inlet / Outlet : 1/2" BSP Male threads ✓ Mounting : Bottom Mounting ✓ Food Contact On request ✓ Flow rate: 30 LPM ✓ Inlet Filter: Encapsulated SS mesh, 0.45 mm ✓ Available Valve Type : Normally Closed (0.2 to 8 bar), Normally Open (0.2 to 4 bar), Low Pressure (1000 mm WC), Magnetically Latching (0.2 to 4 bar) 	<ul style="list-style-type: none"> ✓ Available Versions and Voltages : G series : Normally Closed 6 V DC*, 12, 24, 36, 48 V DC, 110 V*, 230 V AC N Series : Normally Open 12, 24, 36, 48 V DC L Series : Magnetically Latching: 6 – 12 V DC, 60 mS, 9 Ohms. D Series : Low pressure direct acting, 12, 24, 36, 48 V DC, 230 V AC

Mounting Details


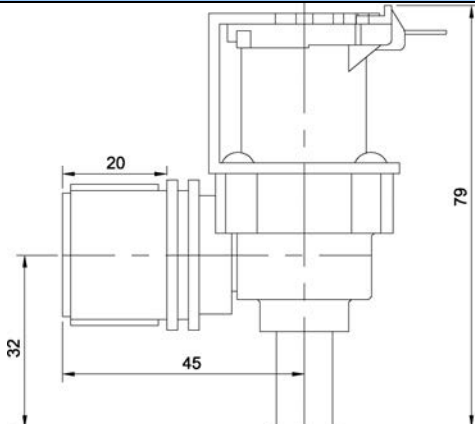


Minimum order of 2000 valves

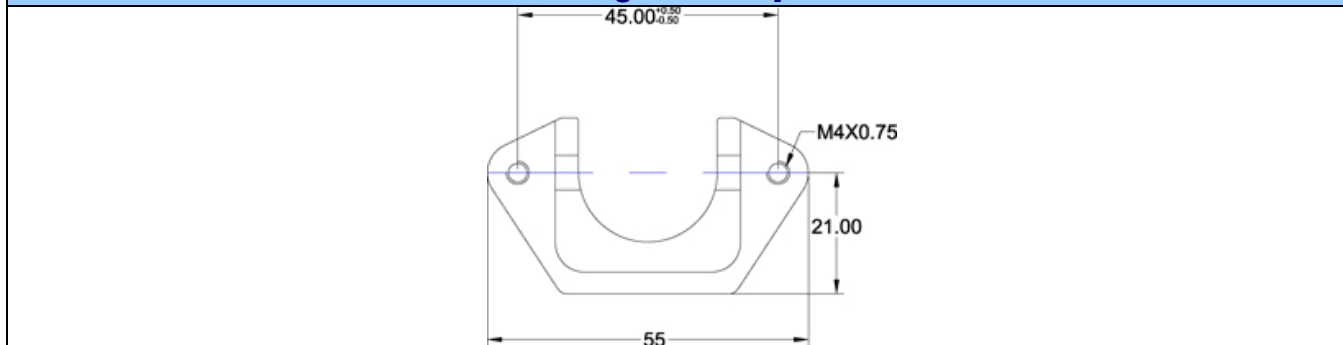
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Models:

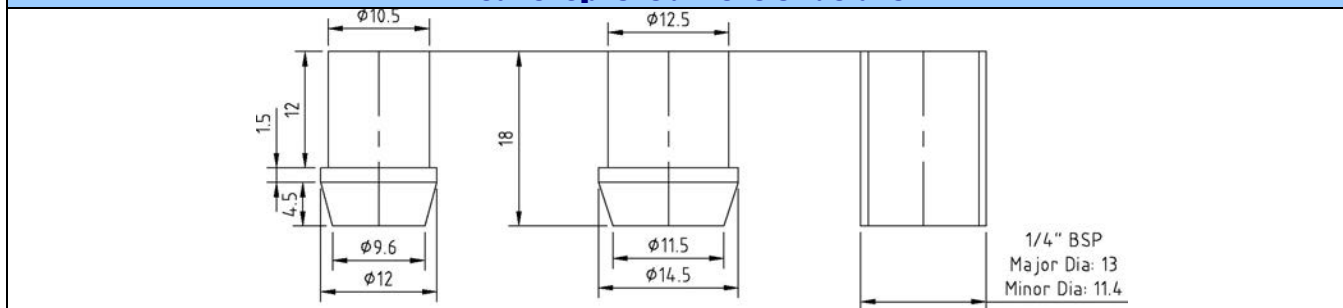
**Model Code : 1/90, 3 different types of outlet
NO, NC, Low Pressure NC, Bi Stable Latching Operators**

Appearance	Dimensions
	
<ul style="list-style-type: none"> ✓ Outlet : 10.5 mm, 12.5 mm, 1/4" BSP Male ✓ Inlet : 3/4" BSP Male threads ✓ Mounting : Mounting Bracket (Optional) ✓ Food Contact : On request ✓ Flow rate: 1.5 / 2.5 / 5 / 10 / 30 LPM ✓ Inlet Filter: Polyacetal, 0.45 mm ✓ Available Valve Type : Normally Closed (0.2 to 8 bar), Normally Open (0.2 to 4 bar), Low Pressure (1000 mm WC), Magnetically Latching (0.2 to 4 bar) 	<ul style="list-style-type: none"> ✓ Available Versions and Voltages : G series : Normally Closed 6 V DC*, 12, 24, 36, 48 V DC, 110 V*, 230 V AC N Series : Normally Open 12, 24, 36, 48 V DC L Series :Magnetically Latching: 6 – 12 V DC, 60 mS, 9 Ohms. D Series : Low pressure direct acting, 12, 24, 36, 48 V DC, 230 V AC

Mounting Bracket (Optional)



Outlet Options dimension details


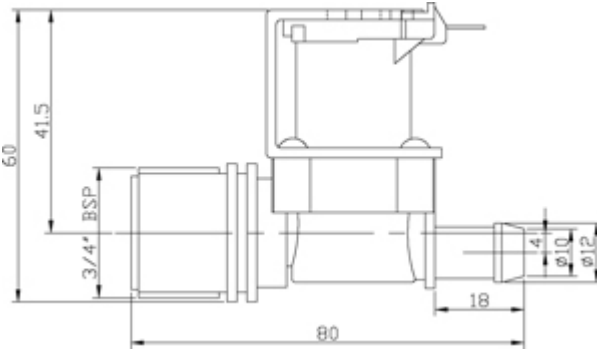


Minimum order of 2000 valves

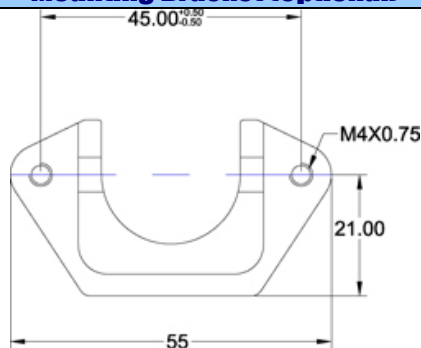
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Models:

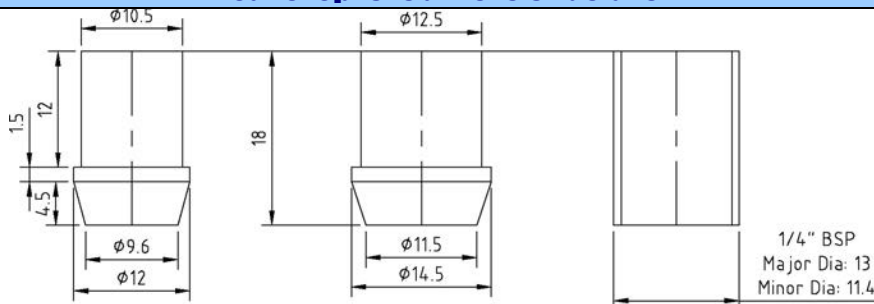
**Model Code : 1/180, 3 different types of outlet
NO, NC, Low Pressure NC, Bi Stable Latching Operators**

Appearance	Dimensions
	
<ul style="list-style-type: none"> ✓ Outlet : 10.5 mm, 12.5 mm, 1/4" BSP Male ✓ Inlet : 3/4" BSP Male threads ✓ Mounting : Mounting Bracket (Optional) ✓ Food Contact On request ✓ Flow rate: 1.5 / 2.5 / 5 / 10 / 30 LPM ✓ Inlet Filter: Polyacetal, 0.45 mm ✓ Available Valve Type : Normally Closed (0.2 to 8 bar), Normally Open (0.2 to 4 bar), Low Pressure (1000 mm WC), Magnetically Latching (0.2 to 4 bar) 	<ul style="list-style-type: none"> ✓ Available Versions and Voltages : G series : Normally Closed 6 V DC*, 12, 24, 36, 48 V DC, 110 V*, 230 V AC N Series : Normally Open 12, 24, 36, 48 V DC L Series : Magnetically Latching: 6 – 12 V DC, 60 mS, 9 Ohms. D Series : Low pressure direct acting, 12, 24, 36, 48 V DC, 230 V AC

Mounting Bracket (Optional)



Outlet Options dimension details


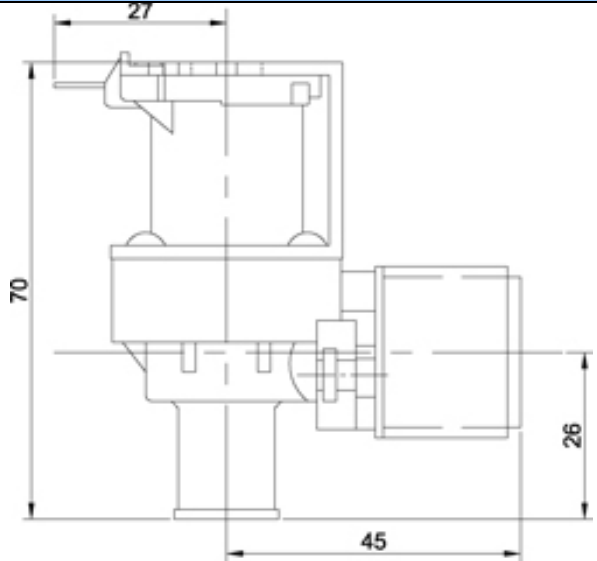


Minimum order of 2000 valves

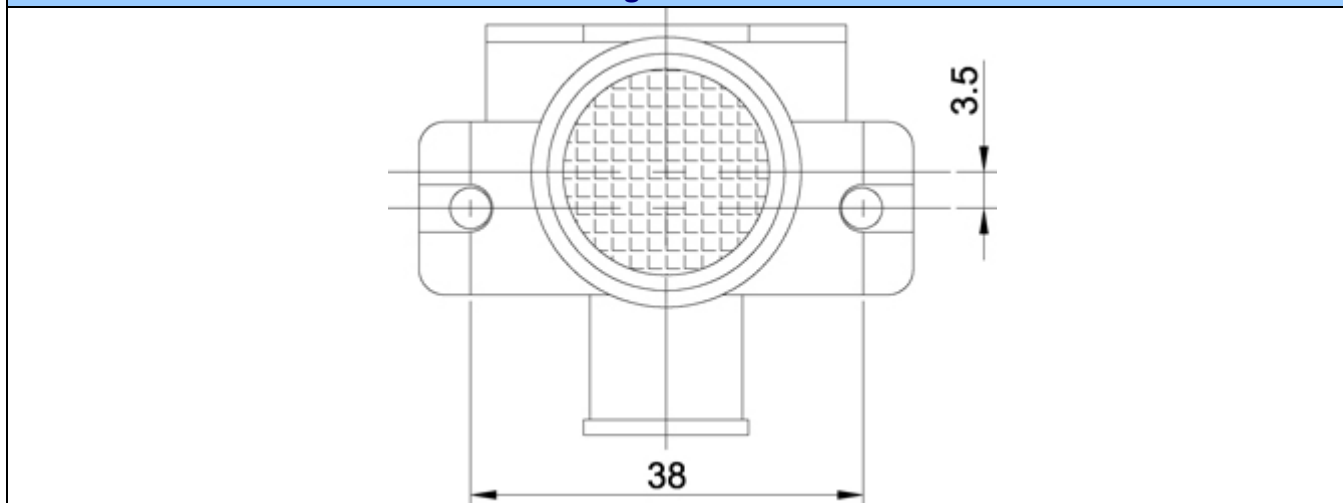
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Models:

Model Code : 1/90BB
NO, NC, Low Pressure NC, Bi Stable Latching Operators

Appearance	Dimensions
	
<ul style="list-style-type: none"> ✓ Outlet : 14 mm Hose Barb ✓ Inlet : 3/4" BSP Male threads ✓ Mounting : Mounting Bracket - Built in ✓ Food Contact On request ✓ Flow rate: 5 / 10 / 30 LPM ✓ Inlet Filter: Polyacetal, 0.45 mm ✓ Available Valve Type : Normally Closed (0.2 to 8 bar), Normally Open (0.2 to 4 bar), Low Pressure (1000 mm WC), Magnetically Latching (0.2 to 4 bar) 	<ul style="list-style-type: none"> ✓ Available Versions and Voltages : G series : Normally Closed 6 V DC*, 12, 24, 36, 48 V DC, 110 V*, 230 V AC N Series : Normally Open 12, 24, 36, 48 V DC L Series :Magnetically Latching: 6 – 12 V DC, 60 mS, 9 Ohms. D Series : Low pressure direct acting, 12, 24, 36, 48 V DC, 230 V AC

Mounting Bracket (Built In)



Minimum order of 2000 valves

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Models:

**Model Code : 1/180, 12mm Tube
NO, NC, Low Pressure NC, Bi Stable Latching Operators**

Appearance

Dimensions



- ✓ **Inlet / Outlet :** 12 mm Tube, Suitable for QC
- ✓ **Mounting :** 2 bottom mounting studs
- ✓ **Food Contact** On request
- ✓ **Flow rate:** 30 LPM
- ✓ **Inlet Filter:** Not Provided
- ✓ **Available Valve Type :** Normally Closed (0.2 to 8 bar), Normally Open (0.2 to 4 bar), Low Pressure (1500 mm WC), Magnetically Latching (0.2 to 6 bar)

- ✓ **Available Versions and Voltages :**
- G series :** Normally Closed 6 V DC*, 12, 24, 36, 48 V DC, 110 V*, 230 V AC
- N Series :** Normally Open 12, 24, 36, 48 V DC
- L Series :** Magnetically Latching: 6 – 12 V DC, 60 mS, 9 Ohms.
- D Series :** Low pressure direct acting, 12, 24, 36, 48 V DC, 230 V AC

Mounting Bracket (Built In)

Minimum order of 2000 valves

**3 7 1 1 / A , G I D C , P h a s e - I V , V a t v a , A h m e d a b a d - 3 8 2 4 4 5 , G u j a r a t , I n d i a
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Technical Specifications:

Sr.No.	PARAMETER	DESCRIPTION
1.	Type	Normally Closed : Pilot operated diaphragm type. Normally Open : Pilot operated diaphragm type. Low Pressure : Direct Acting Latching : Pilot operated diaphragm type
2.	Connector	Normally Closed : Horizontal Spade, 6.3 x 0.8 mm (Faston Tags) Normally Open : Horizontal Spade, 6.3 x 0.8 mm (Faston Tags) Low Pressure : Horizontal Spade, 6.3 x 0.8 mm (Faston Tags) Latching : Flexible Wire 100 mm L
3.	Electric Rating	Normally Closed : 6 V DC*, 1000 mA) / 12 V DC, 500 mA / 24 V DC, 300 mA / 36 V DC, 300 mA / 48 V DC, 300 mA / 110-120 V AC*, 6 VA / 220-240 V AC, 6VA (for AC 50 / 60 Hz.) Normally Open : 12 V DC, 500 mA / 24 V DC, 300 mA / 36 V DC, 300 mA / 48 V DC, 300 mA Low Pressure : 12 V DC, 500 mA / 24 V DC, 300 mA / 36 V DC, 300 mA / 48 V DC, 300 mA Latching : 6 – 12 V DC, 9 ohm coil.
4.	Current	Normally Closed : 6 W Normally Open : 6 W Low Pressure : 8 W Latching : 9 Ohms
5.	Insulation Class	Winding: "F", 155° C. Class-II
6.	Insulation Resistance	Over 500 M Ohms
7.	Insulation Breakdown Voltage	2.5 kV, 1 Sec.
8.	Solenoid Temperature Rise	Under 95° C. at 25° C. ambient.
9.	Suitable Fluid	Water
10.	Ambient Temp.	45° C. max.
11.	Fluid Temp.	60° C max.
12.	Operating Pressure	Please check model and type of valve
13.	Mounting Position	Any (Coil upright preferred)
14.	Life	More than 500,000 cycles.

3 7 1 1 / A , G I D C , P h a s e - I V , V a t v a , A h m e d a b a d - 3 8 2 4 4 5 , G u j a r a t , I n d i a
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Bill of Material:

Sr.	Part Name	Material	Remark
1.	Body	Nylon, Glass filled	Applicable to all model except G 1/90 BB, Food contact compatible
2.	Body	Polypropylene	Applicable to G 1/90 BB, Food contact compatible
3.	Armature Guide	Nylon, Glass Filled	Applicable to all models, Food contact compatible
4.	Armature	SS 410/430	Food contact compatible
5.	Spring	SS 304	Food contact compatible
6.	Diaphragm	Rubber, Nitrile	Food contact compatible
7.	Pilot	Poly Acetal	Food contact compatible
8.	Inlet Flow restrictor	Nylon / Polyacetal	Not provided in ½” and ¼” BSP valves., Food contact compatible
9.	Inlet flow rubber	Rubber, Nitrile	Not provided in ½” and ¼” BSP valves., Food contact compatible
10.	Outlet Flow restrictor	Poly Acetal	For valve having flow rate less than 5 LPM. Not provided in ½” and ¼” BSP valves., Food contact compatible
11.	Outlet flow rubber	Rubber, Nitrile	For valve having flow rate less than 5 LPM. Not provided in ½” and ¼” BSP valves, Food contact compatible
12.	Filter	Polyacetal	SS filter in ½” BSP valve. Not provided in ¼” BSP valve, Food contact compatible
13.	Spool	Nylon, Glass Filled	Fire retardant construction available.
14.	Coil Encapsulation	Nylon	
15.	Winding wire	Copper enameled wire	Insulation class “F”, 155° C
16.	Coil Holding Assembly	Soft Steel	
17.	Lugs	Tin plated Brass	
18.	Screws	Carbon Steel	

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Magnetically Latching Solenoid Valves

Magnetically latching solenoid valves are used in battery operated auto taps, automatic sensor based touchless water dispenser.

Sensor taps use pilot operated version having operating range of pressure from 0.2 to 6 bar

sensor based touchless water dispenser uses direct acting low pressure version, pressure range 0-1500 mm Water Column (WC)

L 1/180 ½" X ½"



- ✓ **Inlet / Outlet :** ½" BSP Male threaded
- ✓ **Mounting:** Bottom mounting studs
- ✓ **Available :** In 2 version, 0.2 to 6 bar, pilot operated for auto taps and 0-1500 mm WC, direct acting for water dispenser

L 1/180 ¼" X ¼"



- ✓ **Inlet / Outlet :** ¼" BSP Female threaded
- ✓ **Mounting:** Bottom mounting studs
- ✓ **Available :** In 2 version, 0.2 to 6 bar, pilot operated for auto taps and 0-1500 mm WC, direct acting for water dispenser

L 1/180 6mm X 6mm Tube




- ✓ **Inlet / Outlet :** ½" BSP Male threaded
- ✓ **Mounting:** Bottom mounting studs
- ✓ **Available :** In 2 version, 0.2 to 6 bar, pilot operated for auto taps and 0-1500 mm WC, direct acting for water dispenser

L 1/90 ¼" X ¼" 3 different types of outlet



- ✓ **Outlet :** 10.5 mm, 12.5 mm, ¼" BSPM
- ✓ **Inlet :** ¾" BSPM
- ✓ **Mounting:** Bracket Optional
- ✓ **Available :** In 2 version, 0.2 to 6 bar, pilot operated for auto taps and 0-1500 mm WC, direct acting for water dispenser

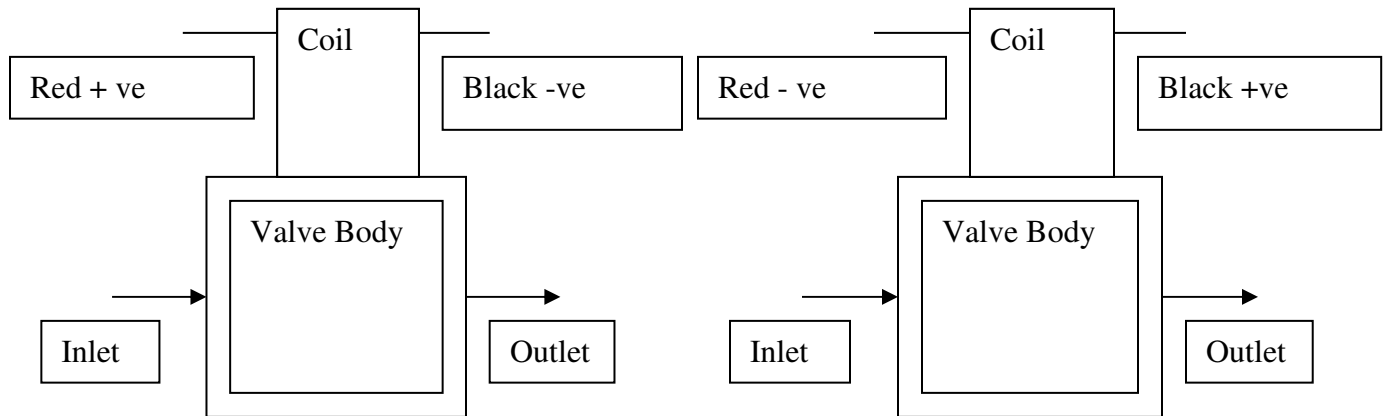
L 1/180, 3 different types of outlet	
	
<ul style="list-style-type: none"> ✓ Outlet : 10.5 mm, 12.5 mm, 1/4" BSPM ✓ Inlet : 3/4" BSPM ✓ Mounting: Bracket Optional ✓ Available : In 2 version, 0.2 to 6 bar, pilot operated for auto taps and 0-1500 mm WC, direct acting for water dispenser 	
Features	
<ul style="list-style-type: none"> ✓ Made in India valve. <i>General imsubs®</i> is the only manufacturer of latching solenoid valves in India since last 15 years. ✓ Used where power supply has limitations to supply continuous power to keep valve ON. ✓ Also places where heat transfer from coil to water is not desirable. ✓ Operates from 4.8 V DC to 12 V DC pulse. ✓ Pulse width required is 60 mS @ 6 VDC, 6 bar pressure. ✓ Food contact compatible construction available. ✓ 0.40 mm, removable plastic filter. 	
Applications	
<ul style="list-style-type: none"> ✓ Automatic sensor taps and faucets. ✓ Automatic sensor urine flushing system. ✓ Battery operated control systems. ✓ Sensor based touchless water dispenser 	

3 7 1 1 / A , G I D C , P h a s e - I V , V a t v a , A h m e d a b a d - 3 8 2 4 4 5 , G u j a r a t , I n d i a
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Technical Specifications Magnetically Latching Solenoid:

Sr.No.	PARAMETER	DESCRIPTION
1.	Type	Pilot operated diaphragm type.
2.	Configuration Type	2/2 magnetically latching, Bi stable
3.	Connector	Wired leads, 100 mm L, Red and Black color.
4.	Resistance of Coil	9 +/- 1 Ω
5.	Operating Range of voltage	4.8-12 V DC, Recommended pulse 60 mS at 4.8 to 6 V DC Recommended Pulse 20 mS for voltage 6 to 12 V DC
6.	Insulation Class	Winding: "F", 155° C. Class-II
7.	Fluid Temp.	60° C max.
8.	Operating Pressure	0.2 bar to 6 bar
9.	Mounting Position	Any (Coil upright preferred)
10.	Burst Pressure	16 bar minimum.
11.	Water Leakage	No leakage from 0.2 bar to 6 bar.
12.	Mechanical Life	More than 500,000 cycles.

Latching Valve operation schematic diagram



Position 1, if valve is in closed condition and coil is supplied voltage pulsed current having pulse width of 60 mS, than valve comes in open position and remains open till supplied current as shown in position 2

Position 2, when valve is opened by supplying current as mention in position 1, it can be closed only by supplying current as mentioned above. Valve remain in off position till power is supplied as mentioned in position 1.

Brief Design Guide:

- ✓ Life of battery (1.5 V DC X 4 Nos. alkaline) is about 200 000 cycles (only valve operations).
- ✓ Latching valve operates upto 5 V DC, 60 mS pulse. Hence circuit should have cut off voltage or battery low / replace battery indication suitably.
- ✓ It is preferred to mount latching valve in coil up right position.
- ✓ As supply voltage goes higher pulse width decreases.
- ✓ 60 mS pulse is optimum pulse width for valve operation from CLOSE to OPEN position for 4.8 - 6 V DC. For OPEN to CLOSE position, pulse width of 30 mS for 4.8 - 6 V DC may be kept. This will maximize battery life.
- ✓ Circuit employed in operation of valve should be of high quality and should have minimum current consumption in stand by mode to maximize battery life.
- ✓ Test figures mentioned in this document is based on 6 V DC obtained using 1.5 V X 4 Nos. alkaline batteries under ideal conditions.

About Us :

General Imsubs® is pioneer manufacturer of water valves in India since 1992. We have been manufacturing wide range of water valves catering to the need of growing appliances industry.

Valve manufactured by General Imsubs complies to stringent international product standards like UL, CE, EN, VDE and JIS.

All valves supplied by *General Imsubs®* are warranted for performance and we offer warranty to all OE customers. Our sophisticated manufacturing and tracking systems can track valves upto its component and raw material level. All valves are custom labeled with customer name to ease tracking even at customer end.

Our manufacturing facilities are equipped with sophisticated CNC coil winding machines, specially designed test rigs to check performance of valves.

All valves goes through 100% tests, as per applicable international standards.