BLUE HANDLED BALL VALVES

The Philmac blue handled ball valve has been servicing the Rural, Irrigation and Plumbing industries for over 20 years.

Their distinctive blue easy grip handle is recognised in the market as the industry standard providing users with the confidence of a strong, reliable and robust product.

This Australian made blue handled ball valve is based on a simple on/off action and is quick and easy to install allowing the user full control of water distribution.

With the increasing importance of water management Philmac has expanded their range to include valves with male and female ends plus purple handle recycled water ball valves.

APPLICATIONS

Agriculture: Stock troughs and water tanks.
Irrigation: Master valves, field valves, isolating valves, water tanks
Plumbing: Isolating valves
Municipal: Main stop and curb stop valves

BENEFITS

Fast and Easy Installation

- **Multi-directional Flow:** The blue handled valves have been designed to work in either direction to ensure easy installation and eliminate the need to look for identification marks.
- **BSP Inlet Threads:** The Rural, Irrigation and Plumbing sectors use British Standard Pipe (BSP) threads as a standard. Philmac also uses these thread types across the valve range to ensure compatibility with other threaded fittings and make installation easy.
- **Easy Grip T-handle:** The blue handle has been ergonomically designed to allow it to be gripped easily and avoid slippage.
- **Multi-position Installation:** The blue handled valves can be installed in any orientation to assist with all types of installations.

Complete Security

- **Reliable Operation:** Consistent high quality injection moulded plastic bodies and components plus Nitrile rubber O-rings and a stainless steel screw means years of reliable operation.
- **Corrosion Resistant:** with a plastic body and components, nitrile rubber O-rings and a 316 stainless steel handle screw, the components used all have a high degree of corrosion resistance.
- **Positive Open-Close:** The blue handle only rotates through 90° between fully open and fully closed before resting against a stop to ensure there is no guesswork required as to whether it is open or closed.
- **Visual Indicator:** When in the closed position the blue handle sits at 90° to the body and when in the open position sits in-line with the body clearly indicating whether the valve is open or closed.
- **Approvals:** All blue handled valves comply with Australian/New Zealand Standard 4020 which means the valves are suitable for use with potable (drinking) water.

High Performance

- **Manufactured from advanced thermoplastic materials:** Philmac blue handled ball valves are manufactured from lightweight high performance thermoplastic materials which have excellent impact, UV and corrosion resistance. The material is non-toxic and taint free.
- **High pressure shutoff:** Blue handled ball valves are rated to a pressure of 1600 kPa (232 psi) or 16 bar (static shutoff) at 20° Celsius to meet the requirements of high pressure systems.

Complete Coverage

- **Wide range:** The range of blue handed ball valves is comprehensive and includes sizes from ½" to 2" (DN10 to DN50). In addition the whole range is available with optional purple handles for use with recycled water.

STANDARDS

Philmac's range of blue handled ball valves are designed to comply with the following standards and undertake a range of tests to ensure they comply with these standards.

Standards

AS/NZ 4020: Testing of products for use in contact with drinking water.

AS 1722.1: Pipe threads of Whitworth form part 1: sealing pipe threads.

ISO7: Pipe threads where pressure tight joints are made on the threads.

Standards Mark to

AS5830.2-2012: In line ball valves for use in plumbing water supply systems. Plastic bodied.

BLUE HANDLED BALL VALVES OPERATION & INSTALLATION INSTRUCTIONS

Philmac blue handled ball valves operate by using a handle to turn a ball located in a body through 90°. The ball has a hole through the centre of it which allows water to pass through when in the open position.

To turn the valve on, the blue handle needs to be turned 90° until the blue handle sits in-line with the body of the valve. To turn the valve off rotate the handle through 90° until it is at right angles to the valve body. Care should be taken when closing the valve. It should not be closed too quickly or water hammer may result.

Philmac blue handled ball valves are sold in the open position with the blue handle directly in line with the body. This protects the ball and ensures no scoring has occurred, therefore every valve arrives in excellent condition.

The valves have been designed for water to flow through in either direction and for this reason there is no specific inlet or outlet. In some instances it may be appropriate to mark the direction of water flow where it may not be obvious in which direction the water flows.

Ball (Female Inlet/Outlet)

1. Apply PTFE tape or approved sealant to the male thread the blue handled ball valve is to be screwed in too. Sufficient tape needs to be applied to ensure a watertight seal

2. Screw onto a male thread or screw male thread into the valve by hand until firm

3. Using a pipe wrench or multigrips on the end caps only, further screw the blue handled ball valve into the male thread until tight. Where necessary ensure the male thread is held stationary to avoid it from moving. Do not use pipe wrench or multi-grips on the body of the blue handled ball valve.

SYSTEM DESIGN CONSIDERATIONS

Threads: All threads are BSP (Whitworth form).

Maximum Operating Pressure: 1600 kPa (232 psi) or 16 bar.

Sealing threads: Philmac recommends sealing threads with PTFE tape. Other approved sealants for plastic materials can be used providing the sealant does not enter the valve where it may cause damage.

Operating temperature: Connection is cold water (less than 20^0C) rated.

Weathering: All plastic materials used contain pigments to provide excellent protection against degradation from ultra-violet (UV) radiation. However long-term continuous exposure to UV is not recommended and plastic components should ideally be protected.

Pressure Loss (kPa)

Flow Rate (L/s)	Inlet Size					
	½" (DN15)	¾" (DN20)	1" (DN25)	1 ¼" (DN32)	1 ½" (DN40)	2" (DN50)
1	14	14	10	*	*	*
1.5	27	27	11	*	*	*
2	44	44	13	6	*	*
2.5	64	64	16	8	*	*
3	89	89	20	11	5	*
4	-	-	33	19	8	*
5	-	-	50	28	13	*
6	-	-	72	39	18	6
7	-	-	99	51	23	8
8	-	-	-	65	30	10
9	-	-	-	81	37	12
10	-	-	-	98	45	15
12	-	-	-	-	63	20
14	-	-	-	-	83	26
16	-	-	-	-	-	33
18	-	-	-	-	-	40
20	-	-	-	-	-	49
22	-	-	-	-	-	58
24	-	-	-	-	-	67
26	-	-	-	-	-	78
28	-	-	-	-	-	89

* Denotes pressure loss too small to accurately measure but can be assumed to be 5 kPa or less.

CHEMICAL RESISTANCE

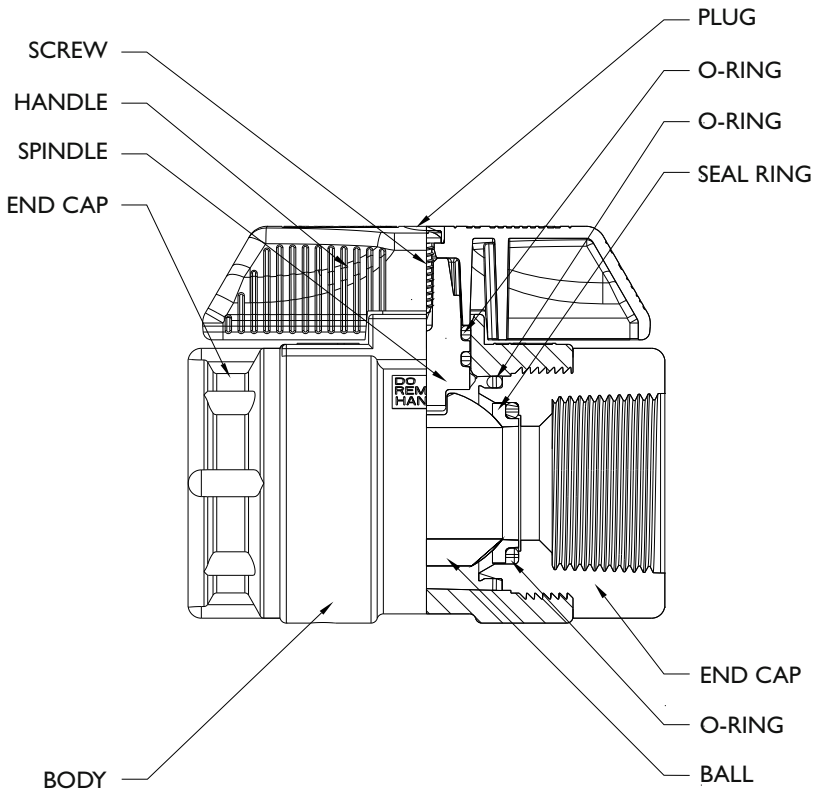
Philmac's blue handled ball valves are primarily designed to convey water. However there may be occasions where the water contains chemicals and/or alternative fluids need to be controlled. The following table is provided as a **guide only** for the compatibility of various chemicals and alternative fluids to Philmac blue handled ball valves. The mixing together of chemicals may affect the compatibility. **Philmac blue handled ball valves are NOT suited for acids.**

Chemical	Compatibility
Acetic acid (10%)	N
Acetic acid (50%)	N
Alcohol (ethanol)	N
Ammonium nitrate	R
Antifreeze	R
Brine	N
Calcium carbonate	R
Calcium chloride	R
Calcium nitrate	R
Calcium sulphate	
Chlorine water	N
Citric Acid	N
Copper Sulphate >5%	N
Diesel (fuel)	N
Ethyl alcohol (ethanol)	N
Hydrochloric acid (10%)	N
Hydrochloric acid (30%)	N
Kerosene	R
Lubricating oils (not synthetic)	R
Magnesium nitrate	R
Magnesium sulphate	R
Mineral oils	R
Nitric acid (10%)	N
Nitric acid (40%)	N
Olive oil	R
Orange juice	
Petrol	R
Phosphoric acid (85%)	N
Drinking water	R
Potassium chloride	R
Potassium nitrate	R
Potassium sulphate	
Sodium bicarbonate	
Sodium hypochlorite (<10%)	N
Sulphuric acid (10%)	N
Sulphuric acid (30%)	N
Urea	R
Zinc nitrate	N
Zinc sulphate	

N = Not Recommended
R = Resistant
Empty Cell = No data available

Note recommendations based on fluids at 20^0 C or less.

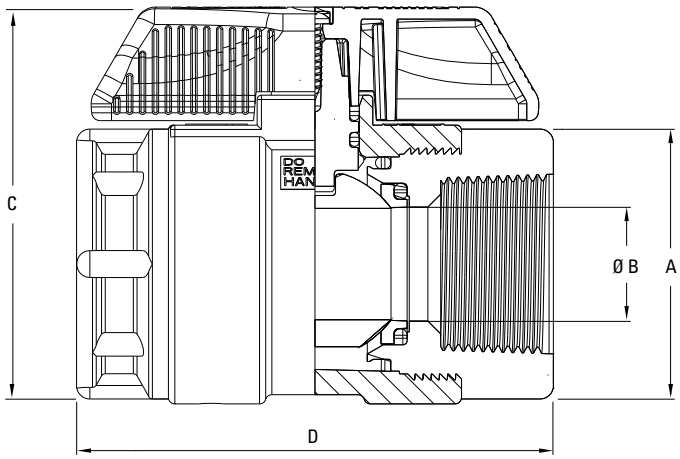
BLUE HANDLED BALL VALVES MATERIAL & COMPONENTS



Blue Handled Ball Valve

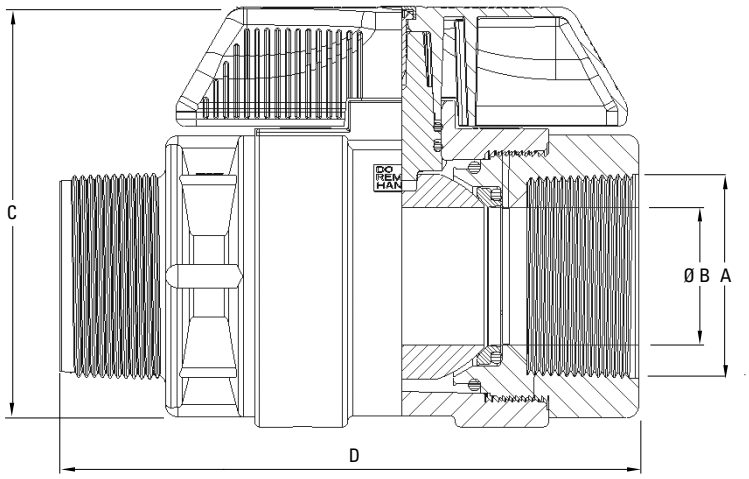
Size	Nominal Size	Part Number	Body	End Cap	Seal Ring	Ball	Spindle	Screw	Handle	O-rings
½"	DN15	95500100 95510100	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 S/S	GF Nylon	Nitrile rubber
¾"	DN20	95500200 95510200	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 S/S	GF Nylon	Nitrile rubber
1"	DN25	95500300 95510300	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 S/S	GF Nylon	Nitrile rubber
1 ¼"	DN32	95500400 95510400	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 S/S	GF Nylon	Nitrile rubber
1 ½"	DN40	95500500 95510500	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 S/S	GF Nylon	Nitrile rubber
2"	DN50	95500600 95510600	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 S/S	GF Nylon	Nitrile rubber

BLUE HANDLED BALL VALVES RANGE & DIMENSIONS



Size (A)	Nominal Size	Part Number	Ø B	C	D
½"	DN15	95500100	16	73	80
¾"	DN20	95500200	16	73	89
1"	DN25	95500300	20	83	99
1 ¼"	DN32	95500400	26	93	111
1 ½"	DN40	95500500	32	105	122
2"	DN50	95500600	40	123	138

All dimensions in millimetres unless otherwise stated



Size (A)	Nominal Size	Part Number	Ø B	C	D
½"	DN15	95510100	16	73	103
¾"	DN20	95510200	16	73	107
1"	DN25	95510300	20	83	123
1 ¼"	DN32	95510400	26	93	137
1 ½"	DN40	95510500	32	105	147
2"	DN50	95510600	40	123	169

All dimensions in millimetres unless otherwise stated