Ball Valve

Philmac
The connection you can trust.

Technical Manual

The original blue handled ball valve

The Philmac blue handled ball valve has been servicing the Rural, Irrigation and Plumbing industries for over 40 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.

Benefits

Fast and Easy Installation

• **Multi-position Installation:** To assist with installation Philmac ball valves can work in any direction and at any angle.

• **BSP Inlet Threads:** The Rural and Irrigation 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.

Complete Security

• **Frost Resistant:** Proven performance in frost conditions.

• **Easy Action:** The handle is not only easy to operate but has a positive on/off action through 90˚. It is ergonomically designed to enable easy gripping.

• **Corrosion Resistant:** with a plastic body and components, nitrile O-rings and all components are made from high quality corrosion resistant materials.

• **Approvals:** All blue handled ball valves carry Standardsmark approval..

High Performance

• **High pressure rating:** Ball valves are rated to a pressure of 1600 kPa (232 psi) (static shutoff) at 20^0 Celsius to meet the requirements of high pressure systems.•

Manufactured from advanced thermoplastic materials: Philmac 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.

Complete Coverage

• **Wide range:** The range of Ball valves is comprehensive and includes sizes from ¾" to 2" (DN10 to DN50).

Certified Product™ Australian Standard

WaterMark

DESIGNED & MADE IN AUSTRALIA

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%)	R
Acetic acid (50%)	N
Alcohol (ethanol)	N
Ammonium nitrate	R
Antifreeze	R
Brine	R
Calcium carbonate	R
Calcium chloride	R
Calcium nitrate	R
Calcium sulphate	
Chlorine water	N
Citric Acid	R
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	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 onfluids at 20° C or less

System Design Considerations

Threads: All threads are BSP (Whitwor th form).

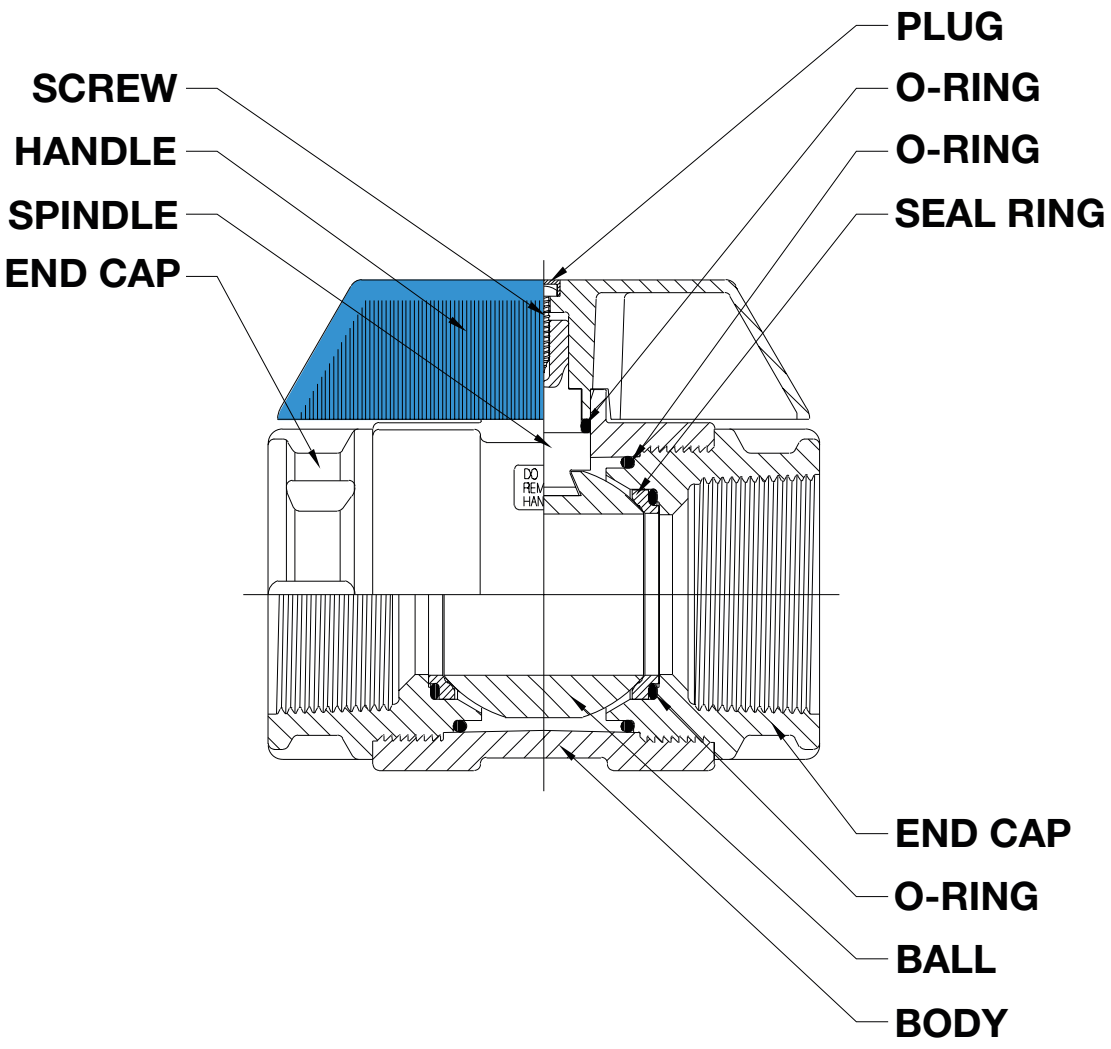
Maximum Operating Pressure: 1600 kPa (232 psi) or 16 bar.

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°C) rated.

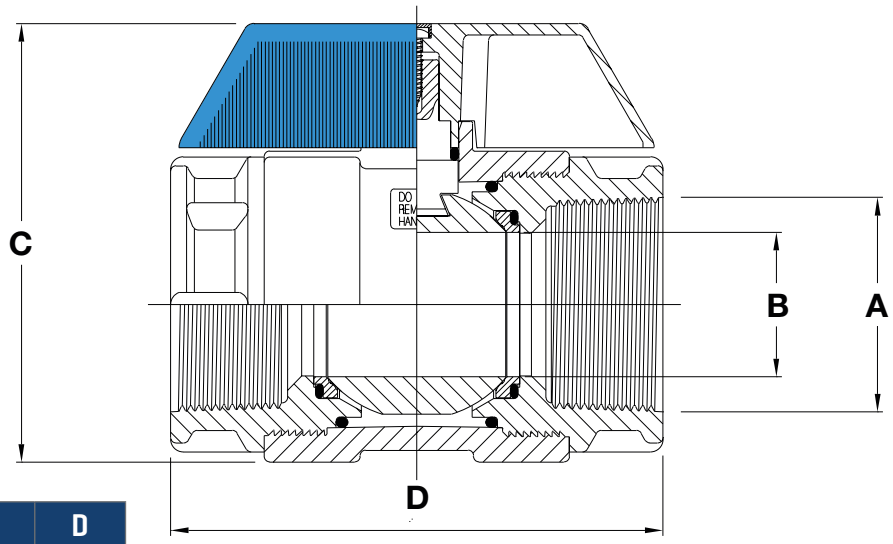
Weathering: All plastic materials used contain pigments to provide excellent protection against degradation from ultra-violet (UV) radiation. However long-term continuous exposure to UV is not recommended and plastic components should ideally be protected.

Blue handled ball valve Materials & Components

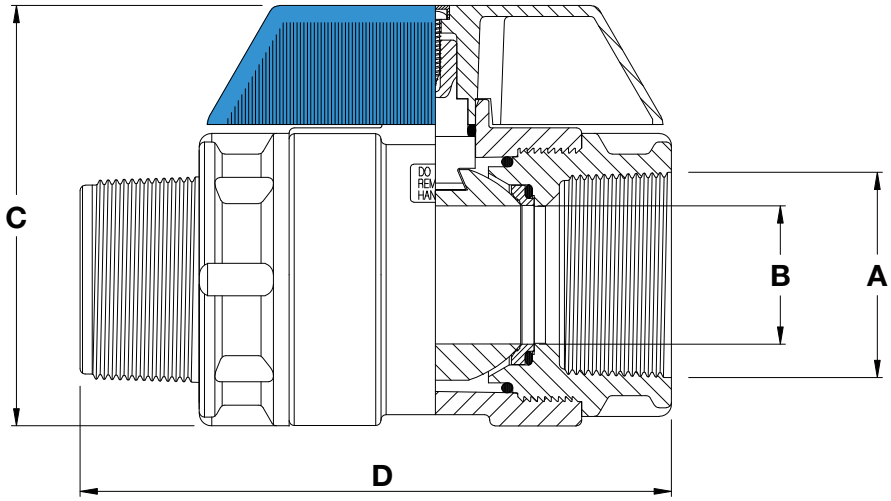


Size	Nominal Size	Part Number	Body	End Cap	Seal Ring	Ball	Spindle	Screw	Handle	O-Rings
½"	DN15	95 5001 00	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 SS	GF Nylon	Nitrile Rubber
		95 5101 00								
¾"	DN20	95 5002 00	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 SS	GF Nylon	Nitrile Rubber
		95 5102 00								
1"	DN25	95 5003 00	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 SS	GF Nylon	Nitrile Rubber
		95 5103 00								
1¼"	DN40	95 5004 00	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 SS	GF Nylon	Nitrile Rubber
		95 5104 00								
1½"	DN50	95 5005 00	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 SS	GF Nylon	Nitrile Rubber
		95 5105 00								
2"	DN50	95 5006 00	GF Nylon	GF Nylon Alloy	Polypropylene	Acetal	Nylon	316 SS	GF Nylon	Nitrile Ruber
		95 5106 00								

Blue handled ball valve Range and components



Size (A)	Nominal Size	Part Number	B	C	D
½"	DN15	95 5001 00	16	73	80
¾"	DN20	95 5002 00	16	73	89
1"	DN25	95 5003 00	20	83	99
1¼"	DN32	95 5004 00	26	93	111
1½"	DN40	95 5005 00	32	105	122
2"	DN50	95 5006 00	40	123	138



Size (A)	Nominal Size	Part Number	B	C	D
½"	DN15	95 5101 00	16	73	103
¾"	DN20	95 5102 00	16	73	107
1"	DN25	95 5103 00	20	83	123
1¼"	DN32	95 5104 00	26	93	137
1½"	DN40	95 5105 00	32	105	147
2"	DN50	95 5106 00	40	123	169

Ball Valve 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.

They 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.

1

Apply PTFE tape or approved sealant to the male thread. Sufficient tape needs to be applied to ensure a watertight seal.

2

Screw on to a male or female thread by hand until firm.

3

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

For more informations

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www.youtube.com/user/PhilmacAustralia

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