

# POLYBALL™ WATER VALVES



**Polyethylene Valves  
for Water and Wastewater.**



*Providing valves and equipment to the  
world's energy markets for over 100 years.*

# Over 100 years of experience in the valve industry.

The Kerotest Polyball™ line of polyethylene ball valves is designed to be the WATER industry standard for high performance polyethylene valving. The product is a “no-compromise” solution. Utility users will enjoy the very best performance with highest flow capacity, maximum pressure capability, compatible fusion materials and reliable, leak free operation.

The Kerotest Polyball™ Water Valve meets or exceeds all industry standards. Some examples are:

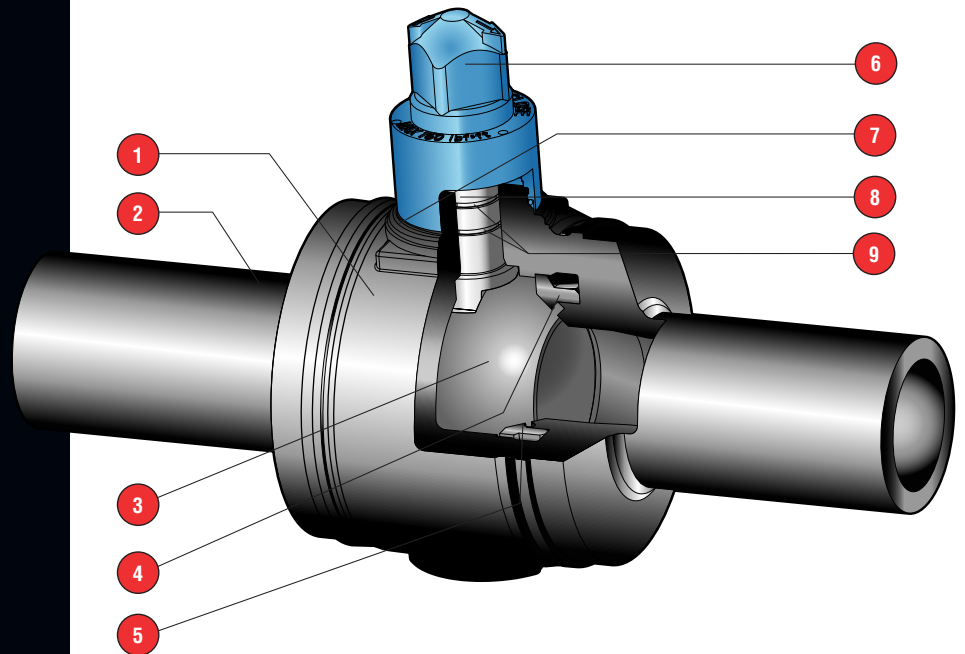
- NSF/ANSI 61 Drinking Water System Components - Health Effects
- AWWA C901 & C906
- IAMPO IGC 151-99
- Manufactured in an ISO 9001 guided facility
- Made in the United States of America
- Drop-tight shut-off
- Maintenance-free, corrosion-free
- Independent third party testing

Count on Polyball to take your water valves to a new level.

## POLYBALL™ WATER VALVES

### GENERAL INFORMATION

| ITEM  | OPERATING FEATURES  |
|---|---|
| MAXIMUM ALLOWABLE SERVICE PRESSURES - PE 4710 | SDR 9 : 160 psi (11 bar); 74°F (23°C)<br>SDR 11 : 160 psi (11 bar); 74°F (23°C)<br>SDR 13.5 : 128 psi (8.8 bar); 74°F (23°C)<br>SDR 17 : 100 psi (6.9 bar); 74°F (23°C) |
| MATERIALS                                     | High Density Polyethylene (PE 4710)   |
| TEMPERATURE                                   | 32°F to 140°F (0°C to 60°C)   |
| PIPE CONNECTION VIA                           | Butt Fusion, Electrofusion or Flanged End   |
| BORE  | Full Port or Reduced Port   |
| SDR   | 17.0, 15.5, 13.5, 11.5, 11.0, 9.3, 9.0, 7.0   |



### MATERIALS OF CONSTRUCTION

| NO. | COMPONENT    | MATERIAL      | FEATURES AND BENEFITS   |
|-----|--------------|---------------|---|
| 1   | Body         | POLYETHYLENE  | PE 4710, flat base, robust design   |
| 2   | Ends         | POLYETHYLENE  | PE 4710, various SDR's  |
| 3   | Ball         | POLYPROPYLENE | High strength, long life and low operating torque                                     |
| 4   | Retainer     | POLYPROPYLENE | Positive restraint under any condition; Retains seat under high differential pressure |
| 5   | Ball Seat    | BUNA-N        | Reliable sealing, 32°F to 140°F   |
| 6   | Actuator     | POLYPROPYLENE | 2" operating square, positive position indication, over-torque protection             |
| 7   | Weather Seal | BUNA-N        | Protects from ground water and dirt   |
| 8   | Stem         | ACETAL        | Excellent durability and strength, blowout proof *                                    |
| 9   | Stem Seals   | BUNA-N        | Redundant sealing with dual o-rings   |

\* Stem is stainless steel on 2" RP, 1 1/2" FP, 1 1/4" FP sizes.



**The Polyball®**  
Full Port Style

**Valve Sizes and Dimensions (Approx. inches)**

**Full Port**

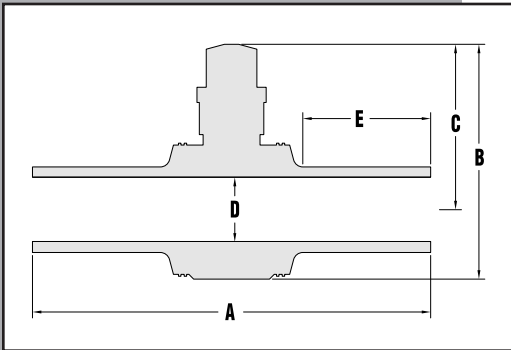
| SIZE     | A    | B    | C    | D    | E   | Cv   | WEIGHT (lbs) |
|----------|------|------|------|------|-----|------|--------------|
| 1/2"     | 11.5 | 5.2  | 3.7  | 1.01 | 3.0 | 21   | 1            |
| 3/4"     | 11.5 | 5.2  | 3.7  | 1.01 | 3.0 | 30   | 1            |
| 1"       | 12   | 5.2  | 3.7  | 1.01 | 3.0 | 42   | 2            |
| * 1 1/4" | 11.8 | 6.9  | 5.2  | 1.38 | 3.2 | 49   | 2            |
| * 1 1/2" | 11.8 | 6.9  | 5.2  | 1.38 | 3.2 | 150  | 2            |
| 2"       | 19   | 9.7  | 7.0  | 1.90 | 6.4 | 180  | 5            |
| 3"       | 21   | 12.2 | 8.7  | 2.70 | 6.4 | 400  | 10           |
| 4"       | 25   | 14.8 | 10.2 | 3.63 | 7.6 | 710  | 20           |
| 6"       | 27   | 19.6 | 13.2 | 5.25 | 7.0 | 1900 | 42           |
| 8"       | 28   | 25.5 | 17.2 | 6.70 | 5.3 | 3750 | 96           |

**Valve Sizes and Dimensions (Approx. inches)**

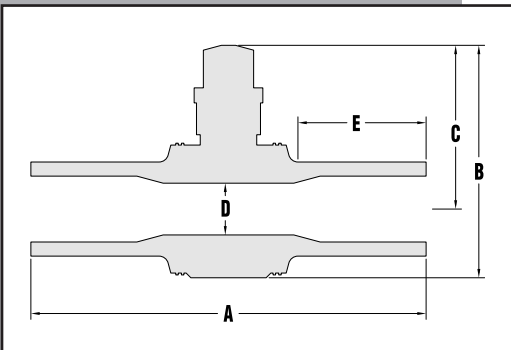
**Reduced Port**

| SIZE | A    | B    | C    | D    | E   | Cv   | WEIGHT (lbs) |
|------|------|------|------|------|-----|------|--------------|
| * 2" | 11.8 | 6.9  | 5.2  | 1.38 | 3.2 | 150  | 2            |
| 4"   | 21   | 12.2 | 8.7  | 2.70 | 6.5 | 450  | 11           |
| 6"   | 25   | 14.8 | 10.2 | 3.63 | 7.3 | 910  | 26           |
| 8"   | 27   | 19.6 | 13.2 | 5.25 | 7.2 | 2200 | 47           |
| 10"  | 28   | 25.5 | 17.2 | 6.70 | 5.5 | 4450 | 102          |
| 12"  | 28   | 25.5 | 17.2 | 6.70 | 5.7 | 4950 | 110          |

**Full Port**



**Reduced Port**



**Metric**

**Valve Sizes and Dimensions (Approx. millimeters)**

**Full Port**

| SIZE   | A   | B   | C   | D   | E   | Cv   | WEIGHT (kgs) |
|--------|-----|-----|-----|-----|-----|------|--------------|
| 20 mm  | 292 | 132 | 94  | 26  | 76  | 16   | 0.5          |
| 25 mm  | 292 | 132 | 94  | 26  | 76  | 22   | 0.5          |
| 32 mm  | 292 | 132 | 94  | 26  | 76  | 30   | 0.5          |
| 40 mm  | 305 | 132 | 94  | 26  | 81  | 40   | 0.5          |
| 50 mm  | 300 | 175 | 132 | 35  | 81  | 150  | 1.0          |
| 63 mm  | 482 | 245 | 180 | 48  | 160 | 180  | 2.3          |
| 90 mm  | 535 | 310 | 220 | 69  | 160 | 400  | 4.6          |
| 110 mm | 635 | 375 | 260 | 92  | 190 | 710  | 9.1          |
| 160 mm | 685 | 500 | 335 | 133 | 175 | 1900 | 19.1         |
| 180 mm | 685 | 500 | 335 | 133 | 175 | 2100 | 19.1         |
| 200 mm | 710 | 650 | 435 | 170 | 135 | 3750 | 43.6         |
| 225 mm | 710 | 650 | 435 | 170 | 135 | 4000 | 45.0         |
| 315 mm | 710 | 650 | 435 | 170 | 135 | 4950 | 50.0         |

# Made in America

The Polyball valve is manufactured in the United States in our state-of-the-art facility in Mansura, Louisiana. Custom, dedicated tooling and equipment have been developed for every valve size to achieve and maintain quality levels during production and minimize variation in all processes.

Kerotest POLYBALL™ WATER Valves protect and preserve safe, healthy, leak-free drinking water distribution systems. All POLYBALL™ WATER Valves are approved for use in potable water systems per NSF 61 requirements.

NSF 61 certificate number C0040958-01.

Refer to [www.nsf.org](http://www.nsf.org) for the official Kerotest POLYBALL™ Water Valve listing.

Furthermore, each valve is manufactured in accordance with AWWA C901 & C906 and IAMPO IGC 151-99 HDPE Plastic Valves for Cold Water Distribution Systems Outside a Building standards. ASME B16.40 was also used for guidance. Certain additional tests were performed by Kerotest based on our years of experience with polyethylene valves and specific customer requirements. These various tests are summarized as follows (specific reports available upon request):

- Shell Test
- Closure Verification
- Flow Test
- Cycle Test
- Freeze Test
- Seat Test
- Temperature Resistance
- Impact Test
- Blowdown Test
- Cv Flow Capacity
- Pressure Boundary Verification
- Operating Test
- Tensile Test
- Overpressure Burst Test
- Torque Summary

**All valves are in compliance with NSF/ANSI 61, AWWA and IAMPO.**

| TEST ITEM                         | TEST METHOD   | HDPE PE-4710  |
|-----------------------------------|---|---|
| SEAT TEST                         | Air seat test under water, both directions  | 4 psi (0.3 bar),<br>240 psi (16.5 bar)                    |
| SHELL TEST                        | Air test under water  | 4 psi (0.3 bar),<br>320 psi (22 bar)                      |
| OPERATIONAL TESTING               | Valve operated 10 times at full differential pressure at 32°F and 140°F (0°C to 60°C) | 160 psi (11 bar)  |
| 1000 HOUR SUSTAINED PRESSURE TEST | Tested at 74°F, 100°F and 176°F (23°C, 38°C and 80°C)                                 | 385 psi (26 bar)<br>320 psi (22 bar)<br>135 psi (9.3 bar) |
| HIGH PRESSURE TEST                | High Pressure Shell Test  | > 800 psi (55 bar)  |
| HIGH PRESSURE TEST                | High Pressure Seat Test   | > 320 psi (22 bar)  |



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