

P**LYBALL**[®] **NATURAL GAS VALVES**



**Polyethylene Valves
for Natural Gas.**



SINCE

1909

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

POLYBALL® NATURAL GAS VALVES

Polyethylene Valves

Made in the U.S.A.

Kerotest Manufacturing Corp. has over a 100 year commitment to the gas distribution industry. So Polyball will always be American made, supported and distributed. With ample inventory at all times.

Made to perform and comply.

- 49 CFR Part 192
- ASTM D2513
- ASTM F2897
- ASME B16.40
- CSA standard B137.4 - 02
- CSA International certified (Canadian Standard Association)

Made to meet your needs in these applications:

- Natural Gas Distribution
- Natural Gas Gathering
- Landfill Gas (Methane)
- Air
- Inert Gases (Argon, Helium, Neon)



Full port and reduced port sizes from 1/2" to 12" IPS.



Metric Sizes form 20mm to 315mm.



Available with High Head Extensions in varying heights to meet specific installation requirements. These valves meet the same strict standards of all Polyball valves.

GENERAL INFORMATION

ITEM	OPERATING FEATURES
OPERATING	PE 2406/PE 2708 : 80 psig (5.5 bar), SDR 11 PE 3408/PE 4710 : 100 psig (6.9 bar), SDR 11 PE 3408/PE 4710 : 125 psig (8.6 bar), SDR 7.0, 9.0, 9.3
MATERIALS	Medium Density Polyethylene (PE 2406/PE 2708) High Density Polyethylene (PE 3408/PE 4710)
TEMPERATURE	From -20°F to 140°F (-29°C to 60°C)
PIPE CONNECTION VIA	Butt Fusion, Mechanical Fittings, Electrofusion
BORE	Full Port or Reduced Port
STEM TYPE	Standard or High Head Extended Stem, length as required
SDR	SDR'S available – 7.0, 9.0, 9.3, 11, 11.5, 12.5, 13.5, 15.5, 17, 21



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

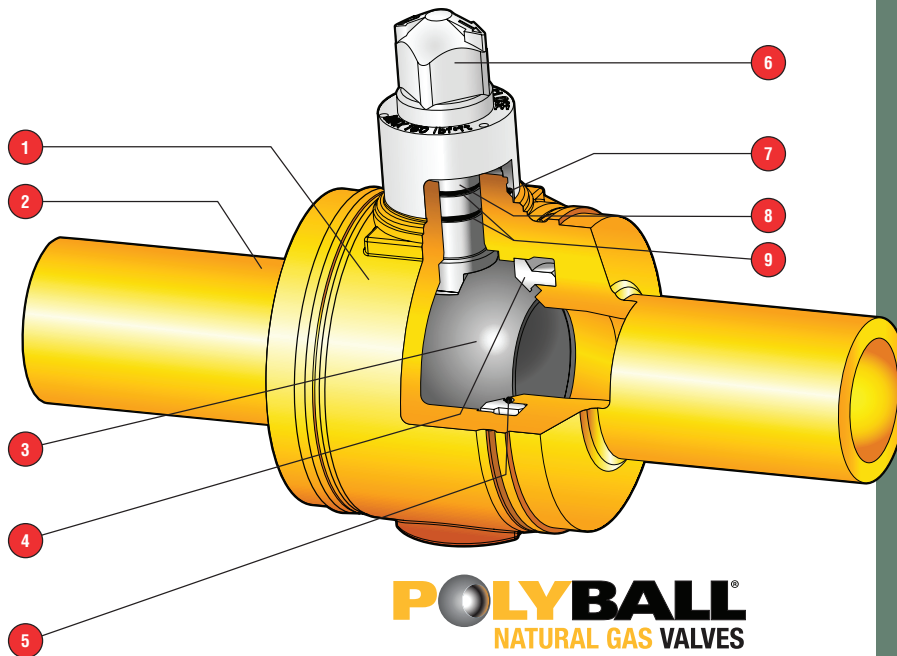
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Polyethylene Valves Made in the U.S.A.

The Polyball valve is manufactured at our Mansura, Louisiana facility. 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.

At assembly, each valve is assigned a unique serial number that provides complete traceability for critical components. The serial number allows complete traceability from the customer's installation back to the raw material.

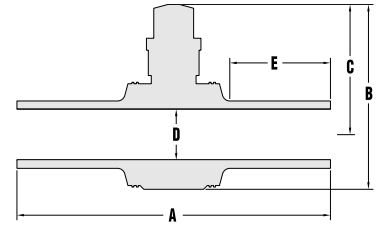
All POLYBALL valves now feature the new industry standard tracking and traceability code per ASTM F2897 that allows instant access to individual valve specifications. With decoding software, simply scan the barcode to see the production date, size, material and valve type, lot code and more.



MATERIALS OF CONSTRUCTION

NO.	COMPONENT	MATERIAL	FEATURES AND BENEFITS
1	Body	POLYETHYLENE	PE 2406/PE 2708, medium density PE 3408/PE 4710, high density
2	Ends	POLYETHYLENE	PE 2406/PE 2708, various SDR's PE 3408/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 from -20°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.



Polyball®
Full Port

Valve Sizes and Dimensions (Approx. inches) Full Port

SIZE	A	B	C	D	E	Cv	WEIGHT (lbs)
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	1290	42
8"	28	25.5	17.2	6.70	5.3	2170	96
12"	93	31.3	19.4	10.10	35	5400	440

12" POLYBALL Full Port features a 10.1" port opening.



Polyball®
Full Port

Body is high density PE 3408/
PE 4710 polyethylene.

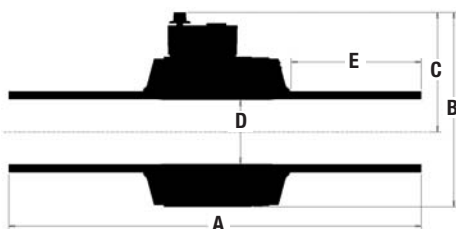
Nipple extensions available in
PE 3408/PE 4710 or PE 2406/PE 2708.

The gear box features a 6:1 ratio and is also sealed against outside contaminants making it virtually waterproof.

12" Full Port also available with bypass option.

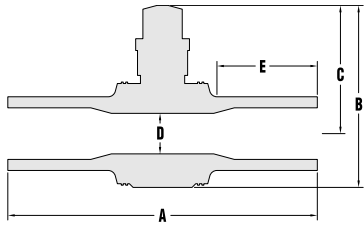


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12" FULL PORT DIMENSIONS (Approx. Inches)

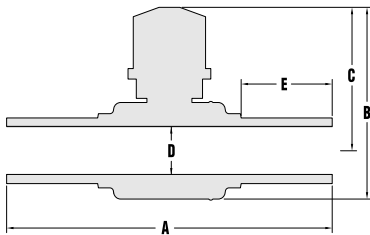
A	B	C	D	E	Weight (lbs)	SDR
93	31.3	19.4	10.10	35	440	9 to 21



Polyball®
Reduced Port

Valve Sizes and Dimensions (Approx. inches) Reduced Port

SIZE	A	B	C	D	E	Cv	WEIGHT (lbs)
3"	19	9.6	6.9	1.90	6.8	180	5.3
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

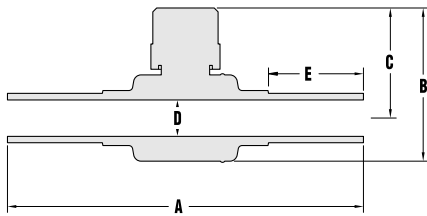


Polyball®

Valve Sizes and Dimensions (Approx. inches)

SIZE	A	B	C	D	E	Cv	WEIGHT (lbs)
F 1.25"	11.8	6.9	5.2	1.38	3.2	100	2
F 1.5"	11.8	6.9	5.2	1.38	3.2	150	2
R 2"	11.8	6.9	5.2	1.38	3.2	150	2

(F) Full Port (R) Reduced Port



Polyball®
Service Valve

Valve Sizes and Dimensions (Approx. inches) Service Port

SIZE	A	B	C	D	E	Cv	WEIGHT (lbs)
1/2" CTS	11.5	5.2	3.7	1.01	3.0	7	1
1/2" IPS	11.5	5.2	3.7	1.01	3.0	21	1
3/4" CTS	11.5	5.2	3.7	1.01	3.0	22	1
3/4" IPS	11.5	5.2	3.7	1.01	3.0	30	1
1" CTS	11.5	5.2	3.7	1.01	3.0	33	1
1" IPS	12	5.2	3.7	1.01	3.2	42	2
1.25" CTS	12	5.2	3.7	1.01	3.2	45	2
1.25" IPS	12	5.2	3.7	1.01	3.2	49	2

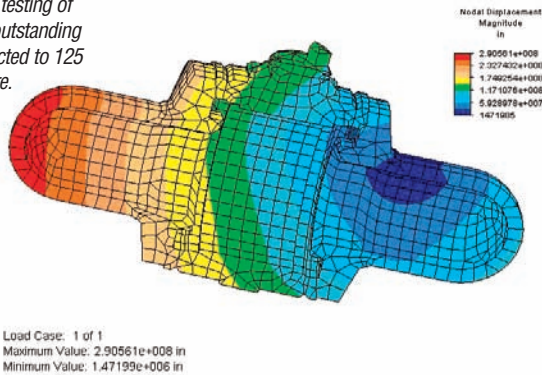
All dimensions are approximate and subject to change. Consult Factory for certified dimensions.

Pass With Flying Colors

Kerotest Polyball Polyethylene Ball Valves meet the requirements of ASME B16.40: Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems.

Independent third party evaluation. A complete report, demonstrating compliance with ASME B16.40 is available upon request. All qualification and production tests were successfully completed. Additional tests performed by Kerotest beyond the B16.40 requirements include: Burst Test, Cycle Test, Impact Test, Bend Test and Tensile Test.

Linear static stress testing of Polyball delivered outstanding results when subjected to 125 psi internal pressure.



Test conditions for ASME B16.40 and additional tests.

TEST ITEM	TEST METHOD	SDR 11 HIGH DENSITY PE 3408/4710 SDR 9 MEDIUM DENSITY PE 2406/2708	SDR 9 HIGH DENSITY PE 3408/4710
SEAT TEST	Air seat test under water, both directions	4 psi (0.3 bar) 150 psi (10.4 bar)	4 psi (0.3 bar), 190 psi (13 bar)
SHELL TEST	Air test under water	4 psi (0.3 bar) 150 psi (10.4 bar)	4 psi (0.3 bar) 190 psi (13 bar)
OPERATIONAL TESTING	Valve operated 10 times at full differential pressure	100 psi (6.9 bar)	125 psi (8.6 bar)
BEND TEST	20 pipe diameters bend radius at differential pressure operation, seat leakage checked	10 psi (0.7 bar) 100 psi (6.9 bar)	10 psi (0.7 bar) 125 psi (8.6 bar)
TORQUE TEST	Operating torque at -20°F (-29°C) and 100°F (38°C)	100 psi (6.9 bar)	125 psi (8.6 bar)
SUSTAINED PRESSURE TEST	Tested at 176°F (80°C)	134 psi (9.2 bar) 170 hours min	148 psi (10.2 bar) 170 hours min
IMPACT RESISTANCE	Valve impacted with 20 lb. weight from 3 ft. at 0°F (-18°C) and 100°F (38°C)	5 times	5 times
HIGH PRESSURE TEST	High pressure Shell Test	> 600 psi (41 bar)	> 700 psi (48 bar)



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