



Polyvalve®

an ANDRONACO INDUSTRIES company

Applications:

For use in:

- Natural gas distribution
- Natural gas gathering
- Landfill gas (methane)
- Hydrocarbon fuel gases
- Hydrogen
- Air
- Other inert gases

POLY-GAS® VALVES
POLYETHYLENE VALVES FOR NATURAL GAS
www.PolyvalveUSA.com



Made in the USA



The Original Is Still The Best!
Over 3,000,000 Sold!



Formerly known as

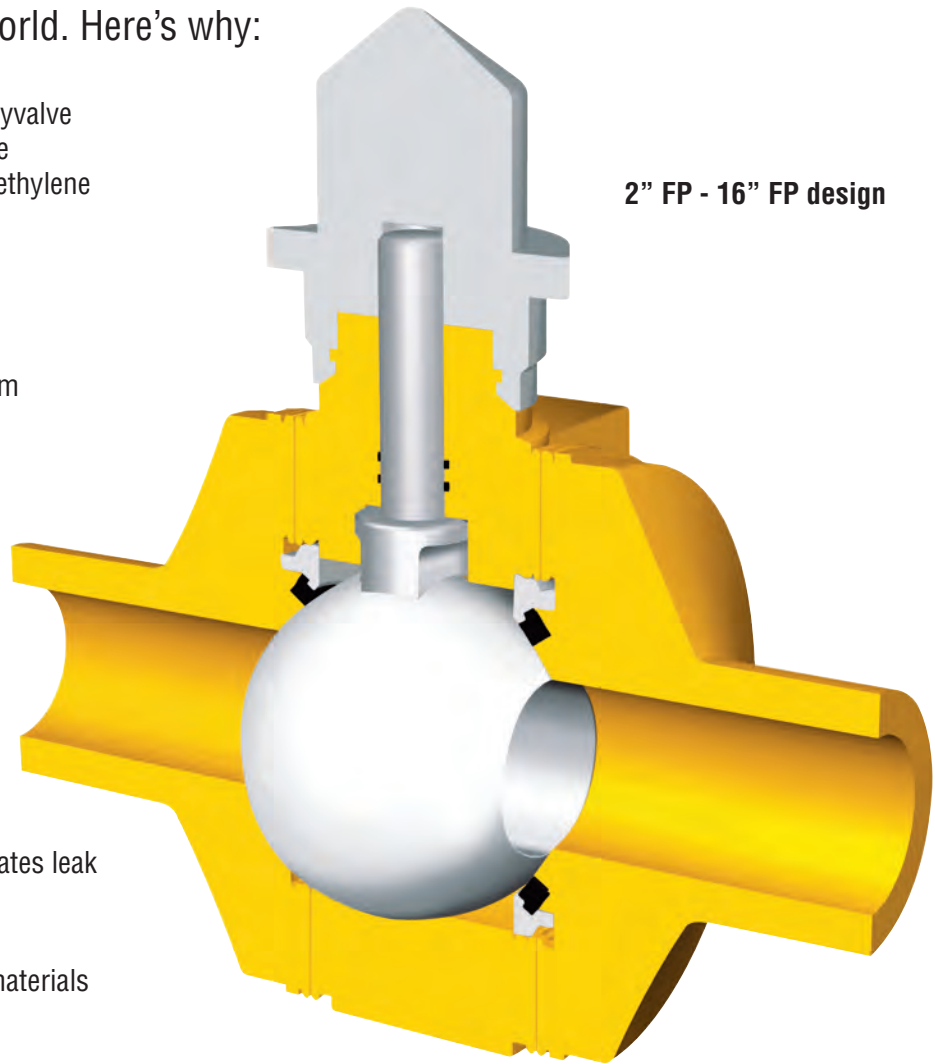
N
NORDSTROM®
POLYVALVE®
Nordstrom® is a registered trademark of Flowserve®

Why use Polyvalve Poly-Gas® Valves?

Polyvalve Poly-Gas® valves are everything you'd expect from the company that invented polyethylene valves.

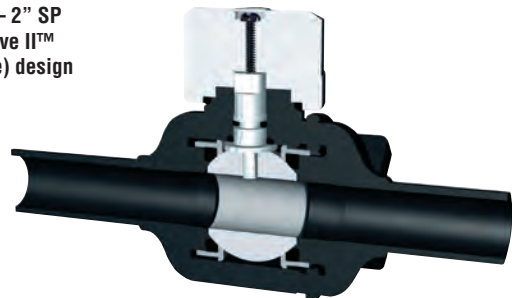
Millions of Polyvalve Poly-Gas® valves have been sold since 1976 and are in use throughout the world. Here's why:

- Rugged and reliable Polyvalve Poly-Gas® valves are the strongest part of a polyethylene piping system.
- No metal internal parts.
- Bubble-tight shutoff from dual elastomeric seats.
- Fused body shell eliminates leak paths to atmosphere.
- High-grade polymeric materials eliminate corrosion.
- Multiple elastomeric stem seals.
- Smooth bore gives excellent flow characteristics in both full and reduced port designs.



2" FP - 16" FP design

**½" FP – 2" SP
Polyvalve II™
(C-style) design**



Note: Has high-strength stainless steel stem. 2" C-style is reduced bore only.

Materials, Codes and Standards, Applications

Materials

item	1/2 - 2" Polyvalve II™ (C-Style)	2" - 16"
Body	Polyethylene	
Ball	Acetal	Polypropylene
Seat Retainer	Acetal	Polypropylene
Seat	Buna N	
Stem	Stainless Steel	Acetal
Stem Seal	Buna N	
Ground Water Seal	Neoprene	
Wrench Adapter	Acetal	Polypropylene*
Adapter Screw	Stainless Steel	
Adapter Button	Acetal	

***Note:** 10" and up has gear box and cast iron 2" square nut adaptor.
10" & 12" = 6:1 ratio.
16" = 18:1 ratio. For lower torque operation.
Available in Copper Tubing Standard Sizes (CTS).

Body Materials Chart

Color	ASTM Material Designation	Material Density
Yellow	PE 2708/2406	Medium
Black	PE 4710/3408	High

***Note:** On 8" full bore and 12" full bore only the main body section is in DGDA 2490 material. Different pipe ends are fused on to suit customer's specific material requirements.

Codes and standards

- Polyvalve Poly-Gas® valves meet or exceed the requirements of:
 - ASME B16.40
 - ASTM D2513
 - ASTM F2897
 - U.S. Department of Transportation 49CFR, Part 192
- In addition, as required by customers, certain sizes and materials of valves meet or exceed the requirements of CSA B137.0 and B137.4.
- Certain Polyvalve Poly-Gas® valves have successfully passed 10,000-hour tests to ISO 4437.
- Polyvalve is an ISO 9001:2015 certified company.

Applications

For use in:

- Natural gas distribution.
- Natural gas gathering.
- Landfill gas (methane).
- Hydrocarbon fuel gases.
- Hydrogen.
- Air.
- Gaseous Propane.

Connections via:

- Butt Fusion.
- Mechanical Fittings.
- Electrofusion.

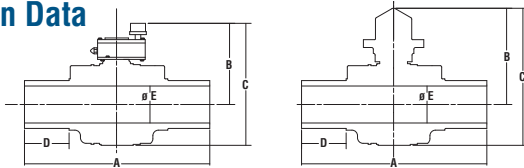
12" Poly-Gas® valve fusion operation



Poly-Gas® Valve Availability Chart (Ball Valves for Natural Gas)

Size (inches)	Size (Metric)	Body Pieces	Bore	C _v	K _v	Equivalent Feet of Pipe	Available SDRs
½	16 - 20	2	full†	18	260	2	9.3, 11
¾	25	2	full†	25	361	3.2	9.3, 10, 11
1	32	2	full†	40	577	3.8	9.3, 11, 13.5
1¼	40	2	full	-	-	-	9.3, 10, 11, 13.5, 17
	40	2	standard†	45	649	9.6	9.3, 10, 11, 13.5
1½	50	2	full	-	-	-	9.3, 11, 13.5, 17
2	55-63	3	full	175	2528	3.8	9.3, 11, 17
	55-63	2	standard†	110	1586	9.6	9.3, 11, 17
3	90	3	full	390	5624	5.3	9.3, 11, 13.5, 17
	90	3	standard	240	3461	14.1	9.3, 11, 13.5, 17
4	100 - 110 - 125	3	full	700	10094	5.8	9.3, 11, 13.5, 17
	100 - 110 - 125	3	standard	400	5768	17.8	9.3, 11, 13.5, 17
6	150 - 160 - 180	3	full	1800	25957	6.1	9.3, 11, 13.5, 17
	160	3	standard	900	12978	24.3	9.3, 11, 13.5, 17
8	200 - 225	3	full	3650	52633	5.5	9.3, 11, 13.5, 17
	200 - 225	3	standard	1350	19467	40.3	9.3, 11, 13.5, 17
10	250 - 280	3	full	-	-	-	9.3, 11, 13.5, 17
12	315	3	full	7000	73542	10.6	9.3, 11, 13.5, 17
14	355	3	full	-	-	-	9.3, 11, 13.5, 17
	355	3	standard	-	-	-	9.3, 11, 13.5, 17
16	400	3	full	-	-	-	9.3, 11, 13.5, 17
	400	3	standard	-	-	-	9.3, 11, 13.5, 17

Dimension Data



Notes:

- C_v in US gal/min @ 1 psi Δ P
- K_v in litres/min @ 1 bar Δ P
- For applications not listed, please contact Polyvalve for valve recommendations.
- Flanges, PUPS, T-Handles, etc., available upon request.

ANSI Valve Dimensions

Size	Port	A	B	C	D	E	Weight (lbs.)
½	full	10.0	3.4	4.8	2.8	0.50	1.2
¾	full	10.0	3.4	4.8	2.8	0.75	1.2
1	full	10.0	3.4	4.8	2.8	0.90	1.2
1¼	full	13.0	4.5	6.5	3.7	1.30	3.1
	standard	10.0	3.4	4.8	2.8	0.90	1.2
1½	full	13.0	4.5	6.5	3.7	1.30	3.1
2	full	14.7	6.4	9.1	4.2	1.82	3.8
	standard	13.0	4.5	6.5	3.7	1.30	3.1
3	full	15.0	8.0	11.4	3.5	2.50	8.9
	standard	12.8	6.4	9.1	3.6	1.95	4.5
4	full	20.0	10.4	15.0	3.1	3.62	19.5
	standard	15.0	8.0	11.4	3.8	2.50	8.9
6	full	21.0	12.6	18.6	3.9	5.20	38.0
	standard	20.0	10.4	15.0	5.3	3.62	23.0
8	full	29.0	12.5	19.9	7.0	6.30	61.0
	standard	20.0	12.6	18.6	4.5	4.78	42.5

Gear Operated

10	full	55.25	17.5	27.7	15.75	10	251
12	full	83.8	17.5	27.7	30.0	10	305
14	full	88.3	20.2	32.6	28.0	11.5	365
	standard	55.25	17.5	27.7	15.75	10.0	261
16	full	88.3	20.2	32.6	28.0	11.5	365
	standard	55.25	17.5	27.7	15.75	10.0	275

Metric Valve Dimensions

Size	Port	A	B	C	D	E	Weight (kg)
16-20	full	254	86	122	71	12.7	0.5
25	full	254	86	122	71	19.1	0.5
32	standard	254	86	122	71	22.9	0.5
40	full	330	115	165	94	33.0	1.4
	standard	254	86	122	71	22.9	0.5
50	full	330	115	165	94	33.0	1.4
55-63	full	373	164	231	106	46.2	1.7
50-63	standard	330	115	165	94	33.0	1.4
90	full	381	203	290	89	63.5	4.0
	standard	325	164	231	91	48.0	2.0
100-110-125	full	508	264	381	77	91.9	8.8
	standard	381	203	290	95	63.5	4.0
150-160 & 180	full	533	320	472	99	132.1	17.2
160	standard	508	263	381	133	91.9	10.4
200-225	full	737	318	504	610	160	44.5
	standard	508	320	472	102	121.4	19.3

Gear Operated

250-280	full	1403	445	704	400	254	113
315	full	2129	443	704	762	251.7	138
355	full	2243	513	828	711	292	165
	standard	1403	445	704	400	254	118
400	full	2243	513	828	711	292	165.6
	standard	1403	445	704	400	254	124.7

Poly-Gas® Valve Pressure Ratings

Maximum Design Pressure rating per 49 CFR §192.121 for Dry Natural Gas Service					
MDPE PE2708 Yellow Pipe (Design Factor 0.40)					
Size	Dimension Ratio (DR) or Wall Thickness (WT)	73°F (23°C) (PSIG)	100°F (38°C) (PSIG)	120°F (48°C) (PSIG)	140°F (60°C) (PSIG)
1/2" CTS	0.090 WT	125†	125†	125†	107
1/2" IPS	0.090 WT	120	96	96	77
3/4" CTS	0.090 WT	115	92	92	74
1" CTS	0.119 WT	100	80	80	64
3/4" IPS - 12" IPS	DR 10.0	111	89	89	71
	DR 11.0	100	80	80	64
	DR 13.5	80	64	64	51
	DR 17.0	63	50	50	40
HDPE PE4710 Black Pipe (Design Factor 0.40)					
Size	Dimension Ratio (DR) or Wall Thickness (WT)	73°F (23°C) (PSIG)	100°F (38°C) (PSIG)	120°F (48°C) (PSIG)	140°F (60°C) (PSIG)
1/2" CTS	0.090 WT	125†	125†	125†	125†
1/2" IPS	0.090 WT	125†	120	96	96
3/4" CTS	0.090 WT	125†	115	92	92
1" CTS	0.119 WT	125†	100	80	80
3/4" IPS - 12" IPS	DR 9.0	125†	125	100	100
	DR 9.3	125†	120	96	96
	DR 10.0	125†	111	89	89
	DR 11.0	125†	100	80	80
	DR 13.5	102	80	64	64
	DR 17.0	80	63	50	50
16" IPS	DR 11.0	100 †*	80*	64*	64*
	DR 17.0	64*	50*	40*	40*
† 49 CFR Part §192.121 limits design pressure to 125 psig for pipe ≤12" IPS and 100 psig for pipe >12" IPS.					
* Uses a Design Factor of 0.32. Exceeds the size inclusion of 49 CFR Part §192.121 for 0.40 design factor.					

How to Order

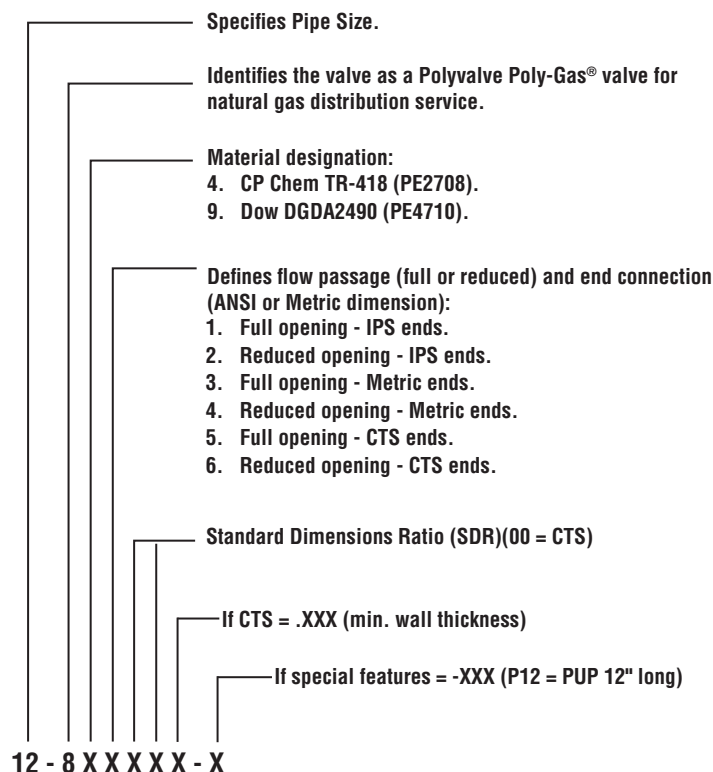
Please provide the following information when you order:

- Valve size
- Valve body material
- Bore type (full or reduced)
- Standard Dimension Ratio (SDR) number or Copper Tubing Standard (CTS)
- Special service conditions or special features



Polyvalve Poly-Gas® Valve Figure Number System

The Poly-Gas® valve figure number system utilizes a five digit number which describes the valves as shown below.





Polyvalve Manufacturing Facility:

4855 Broadmoor Ave

Kentwood, MI. 49512

Ph. 616.656-2260

Fax 616.656-2264

www.PolyvalveUSA.com

solutions@polyvalveusa.com

***To find your local Polyvalve representative,
visit www.PolyvalveUSA.com or call 616-656-2260***

Polyvalve has established industry leadership in the design and manufacture of its products. When properly selected, this Polyvalve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Polyvalve products should be aware that Polyvalve products might be used in numerous applications under a wide variety of industrial service conditions. Although Polyvalve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Polyvalve products.

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