Polyvalve®

an ANDRONACO INDUSTRIES company

Applications:

For use in:

- Acids
- Bases
- Dry gas gathering
- Salt water
- Gaseous hydrocarbons
- Liquid hydrocarbon
- Landfill methane and leachate

POLY-CHEM® VALVES

POLYETHYLENE VALVES FOR CHEMICAL SERVICES

www.PolyvalveUSA.com

Made in the USA

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

CERTIFIED ISO 9001:2015 COMPANY

Formerly known as

NORDSTROM®
POLYVALVE®

Nordstrom® is a registered trademark of Flowserve®

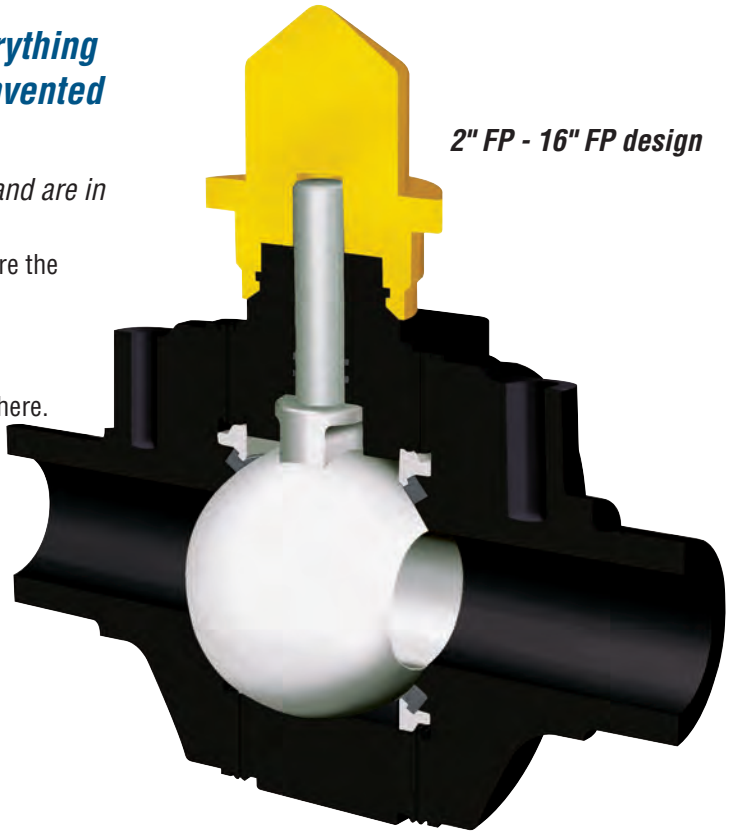
Why use Polyvalve Poly-Chem® valves?

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

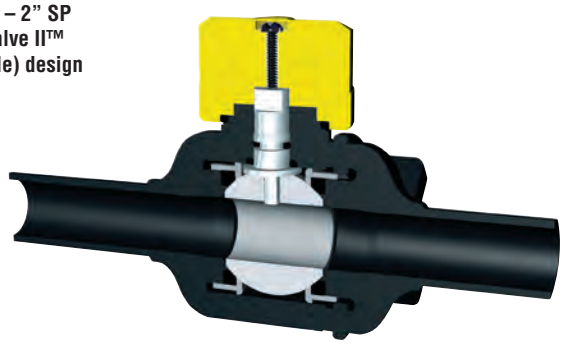
Millions of Polyvalves have been sold since 1976 and are in use throughout the world. Here's why:

- Rugged and reliable Polyvalve Poly-Chem® valves are the strongest part of a polyethylene piping system.
- Drop-tight shutoff from dual elastomeric seats.
- Fused body shell removes leak paths to the atmosphere.
- Multiple elastomeric stem seals.
- No metal internal parts. 2" FP-16" FP
- Corrosion-free due to high-grade polymeric materials.
- Smooth bore gives excellent flow characteristics in both full and reduced port designs.
- Suitable for buried service or above ground service.
- Wide variety of trim for your specific application.
- Flanged end and transition fitting configuration available (butt fusion end configuration is standard).

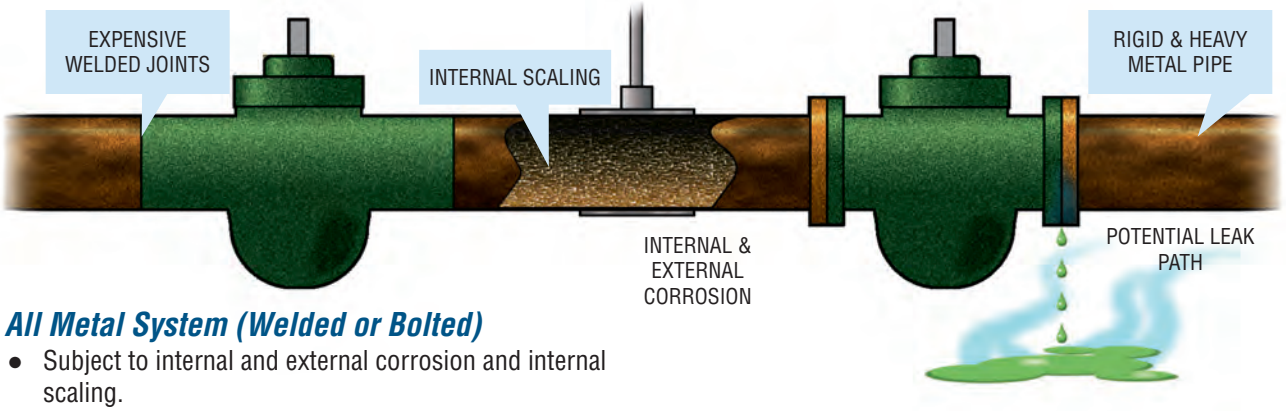
2" FP - 16" FP design



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

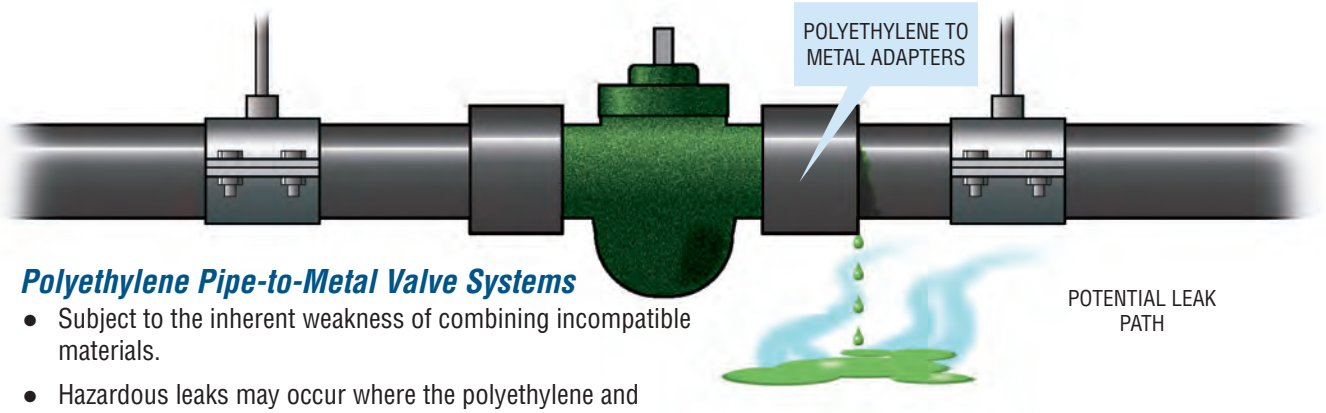


Note: Has high-strength stainless steel stem.
Additional material available for consideration. 2" C-style is reduced bore only.



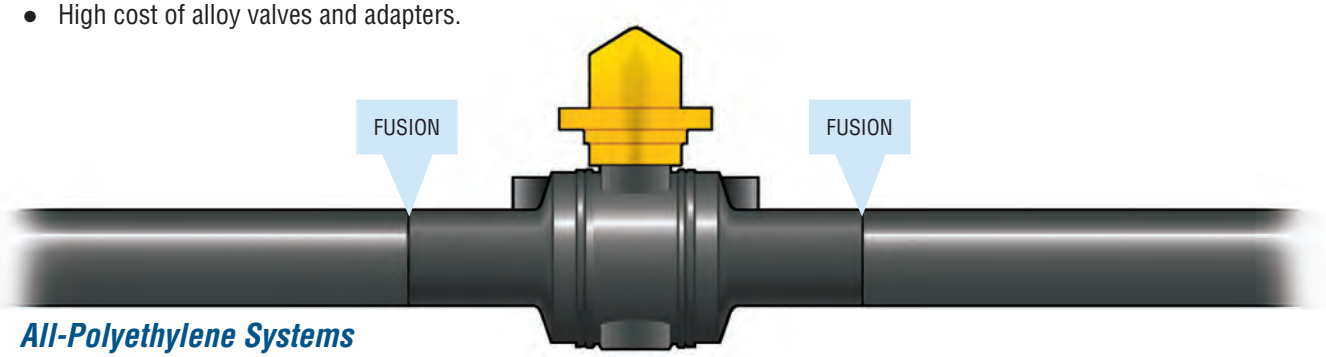
All Metal System (Welded or Bolted)

- Subject to internal and external corrosion and internal scaling.
- Hazardous leaks at pipe connections.
- High cost of alloy pipe, valves, and fittings.
- Rigid metal piping systems expensive to modify.
- Not flexible or adaptable.



Polyethylene Pipe-to-Metal Valve Systems

- Subject to the inherent weakness of combining incompatible materials.
- Hazardous leaks may occur where the polyethylene and metal meet.
- High cost of alloy valves and adapters.



All-Polyethylene Systems

- Intrinsically safe.
- Pipe is fused to the valves so there are no leak points.
- No chance of internal or external corrosion.
- Lightweight and flexible.
- Can rest on ground.

Poly-Chem® Valve Availability

Body Resin

Resin Supplier	Material Description	Color	ASTM Material Designation	Material Density
Dow	DGDA 2490	Black	PE 4710	High

Available with flanged ends. Contact the factory for dimensions and pricing.

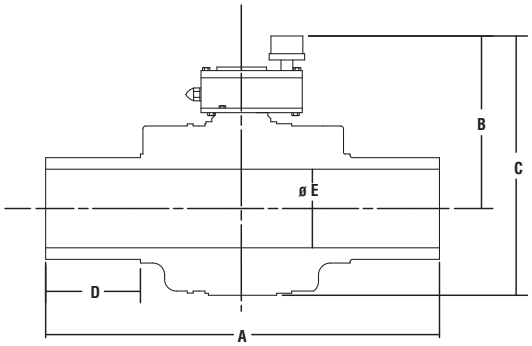
Notes:
- *C_v in US gal/min @ 1 psi Δ P*
- *K_v in litres/min @ 1 bar Δ P*
- *For applications not listed, please contact Polyvalve for valve recommendations.*
- *Flanges, PUPS, T-Handles, etc., available upon request.*

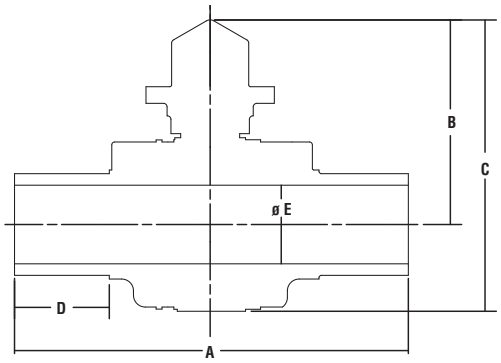
Ball Valves for Chemical Services

Size (inches)	Size (Metric)	Body Pieces	Bore	Cv	Kv	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
	50 - 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

Poly-Chem® Valve Availability

Dimension Data





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 Ope

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-Chem® Valve Availability

Materials of Construction and Trim Selection

Item	Cat A Trim	Cat B Trim	Cat C Trim	Cat D Trim
Body	HDPE	HDPE	HDPE	Special Applications
Ball	Polypropylene	Polypropylene	Polypropylene	
Seat Retainers	Polypropylene	Polypropylene	Polypropylene	
Seats	EPDM	EPDM	Viton A	
Stem	Modified Polyethylene Oxide	Poly-etherimide	Poly-etherimide	
Stem Seals	EPDM	EPDM	Viton A	
Groundwater Seal	Neoprene	Neoprene	Neoprene	
Wrench Adapter	Polypropylene	Polypropylene	Polypropylene	
Primary Applications 2" Full port through 16" full port	Strong bases: Hydroxides, caustics Organic acids: Acetic Ammonia and ammonium salt solutions Nonpotable water Air and inert gases	Alcohols and glycols	Metal salt solutions: Bicarbonates, bromides, carbonates, chlorides, cyanides, ferri-cyanides, fluorides, hypochlorites, nitrates, oxides, phosphates, sulphates, or sulphides, of Aluminum, Barium, Calcium, Copper, Iron, Magnesium, Mercury, Nickel, Potassium, Silver, Sodium, Tin, or Zinc. Other: Crude oil, produced water, carbon dioxide, hydrogen sulphide, landfill methane and leachate, hydrogen peroxide.	

- *Poly-Chem® Valves are not suitable for use on aromatic hydrocarbons, ketones, ethers, gasoline.*
- *Poly-Chem® Valves are not intended for fuel gas services.*
- *Please refer to the PE pipe manufacturers recommendations for additional service compatibility information or send full service details to Polyvalve Valves for our advice.*
- *For applications not listed, please contact Polyvalve for valve recommendations.*
- ***For ½" through 2" standard port consult Polyvalve.***

For inorganic acids such as hydrochloric, nitric, sulphuric, phosphoric, hydrofluoric and boric please contact Polyvalve for valve recommendations.

How to Order

Please provide the following information when you order:

- Valve size
- Valve body material
- Full bore or reduced bore
- Standard Dimension Ratio (SDR) number
- Trim category (A, B, C, or D)
- Wrenches available upon request

Note: Butt fusion ends are standard, flanged ends available as an option.

Poly-Chem® Valve Figure Number System

The Polyvalve PE valve figure number system utilizes a five digit number which describes the valves as shown below.

12 - 9 9 X X X X -X

- **12** — Specifies Pipe Size.
- **9** — Identifies the valve as a Polyvalve Poly-Chem® Valve for chemical services.
- **9** — Material designation: 9. Dow DGDA 2490
- **X** — Defines flow passage (full or reduced) and end connection (ANSI or Metric dimension):
  1. Full opening - IPS ends.
  2. Reduced opening - IPS ends.
  3. Full opening - Metric ends.
  4. Reduced opening - Metric ends.
  5. Full opening - CTS ends.
  6. Reduced opening - CTS ends.
- **X X** — Standard Dimensions Ratio (SDR)(00 = CTS)
- **X** — If CTS = .XXX(min. wall thickness)
- **-X** — Trim category: (A, B, C, D – see trim selection chart)

For Use In:

- Acids
- Bases
- Dry gas gathering
- Salt water
- Gaseous hydrocarbons
- Liquid hydrocarbon

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