VXE Series Automated Ball Valves

Product Data Sheet

introduction

< STANDARDS >

ASTM D1784
ASTM D2466
ASTM D2467
ASTM F439
ASTM D2464
ASTM F437
ASTM D1498

ANSI B1.20.1

The IPEX EasyFit VXE Series Automated Ball Valves represent the latest innovation in thermoplastic ball valve manufacturing technology. Developed in collaboration with Giugiaro Design, the VXE Series replaces the well received VX Series with new and cutting edge features and is designed for industrial, general purpose and O.E.M. applications. This valve features an ultra-compact double block design, and full port bi-directional operation. The true union design allows the valve to be easily removed from the piping system and fully serviced. A threaded seat stop carrier provides improved seal integrity under tough service conditions while the EasyFit multifunction handle doubles as a tool for ball seat adjustment, and for tightening union nuts precisely.

VXE Series Automated Ball valves are part of our complete system of IPEX pipe, valves, and fittings, engineered and manufactured to our strict quality, performance, and dimensional standards.

VALVE AVAILABILITY

BODY MATERIAL	PVC, CPVC
SIZE RANGE	1/2" through 2"
Pressure	232 psi
SEATS	Teflon® (PTFE)
SEALS	EPDM or Fluoropolymer (FPM)
END CONNECTIONS	Socket (IPS), Threaded (FNPT)

www.ipexamerica.com
Toll Free: 800 463-9572

IPEX

VXE Series Automated Ball Valves

Sample Specification

1.0 BALL VALVES – VXE

1.1 Material

- The valve body, stem, ball and unions shall be made of PVC compound which shall meet or exceed the requirements of cell classification 12454 according to ASTM D1784.

or The valve body, stem, ball and unions shall be made of Corzan® CPVC compound which shall meet or exceed the requirements of 23447 according to ASTM D1784.

- These compounds shall comply with standards that are equivalent to NSF Standard 61 for potable water.

1.2 Seats

- The ball seats shall be made of Teflon® (PTFE) which shall comply with standards that are equivalent to NSF Standard 61 for potable water.

1.3 Seals

- The o-ring seals shall be made of EPDM which shall comply with standards that are equivalent to NSF Standard 61 for potable water.

or The o-ring seals shall be made of Fluoropolymer (FPM) which shall comply with standards that are equivalent to NSF Standard 61 for potable water.

1.4 All other wetted and non-wetted parts of the valves shall comply with standards that are equivalent to NSF Standard 61 for potable water.

2.0 CONNECTIONS

2.1 Socket style

- The IPS socket PVC end connectors shall conform to the dimensional standards ASTM D2466 and ASTM D2467.

or The IPS socket CPVC end connectors shall conform to the dimensional standard ASTM F439.

2.2 Threaded style

- The female NPT threaded PVC end connectors shall conform to the dimensional standards ASTM D2464, ASTM F1498, and ANSI B1.20.1.

or The female NPT threaded CPVC end connectors shall conform to the dimensional standards ASTM F437, ASTM F1498, and ANSI B1.20.1.

3.0 DESIGN FEATURES

- The valve shall be double blocking with union ends.
- All sizes 1/2" through 2" shall be full port.
- All sizes shall allow for bi-directional flow.

VXE Series Automated Ball Valves

Sample Specification (cont'd)

- The valve body shall be single end entry with a threaded carrier (ball seat support).
- The valve body shall have an expansion and contraction compensating groove on the molded end.
- The valve body, union nuts, and carrier shall have deep square style threads for increased strength.
- The ball shall be machined smooth to minimize wear on valve seats.
- The stem design shall feature a shear point above the o-ring to maintain system integrity in the unlikely event of a stem breakage.
- The handle shall incorporate a tool for adjustment of the threaded carrier.
- The handle shall incorporate a tool for adjustment of union nuts.
- The handle shall be reversible to allow for operation in tight places.
- The handle shall incorporate a transparent PVC plug and tag holder for valve identification.

3.1 Pressure Tested

- All valves shall have been pressure tested in both the open and closed positions by the manufacturer.

3.2 Pressure Rating

- Valve sizes ½" through 2" shall be rated at 232 psi at 73°F.

3.3 Markings

- All valves shall be marked to indicate size, material designation, and manufacturers name or trade mark.

3.4 Color Coding

- All PVC valves shall be color-coded dark gray.

or All CPVC valves shall be color-coded light gray.

4.0 All valves shall be Xirtec® 140 or Corzan® by IPEX or approved equal.

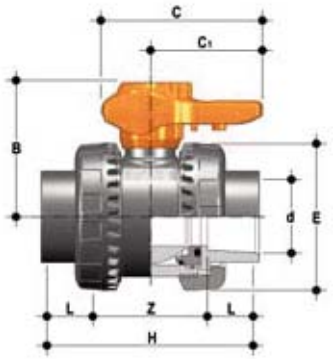
5.0 ACTUATORS

- All actuators shall be factory installed by IPEX.
- Pneumatic actuators shall be dual piston rack and pinion design, sized for 80psi control air pressure.
- Electric actuators shall have 110 VAC reversing motors, torque limiters, thermal protection, and NEMA 4 or equivalent housings.

VXE Series Automated Ball Valves

Technical Data

dimensions

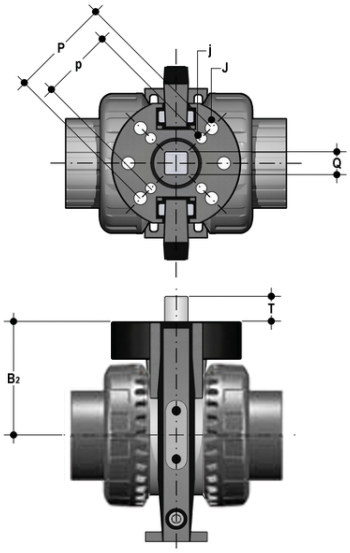


VXE IPS Socket (inches)

Size	d	L	Z	H	E	B	C	C1
1/2	0.84	0.89	2.01	3.78	2.13	1.93	2.52	0.79
3/4	1.05	1.00	2.13	4.13	2.48	2.44	3.07	0.91
1	1.32	1.13	2.34	4.61	2.83	2.80	3.43	1.06
1-1/4	1.66	1.26	2.83	5.35	3.35	3.23	4.02	1.18
1-1/2	1.90	1.38	3.03	5.79	3.94	3.62	4.29	1.30
2	2.38	1.50	3.84	6.85	4.65	4.33	5.24	1.54

VXE NPT Female (inches)

Size	R	L	Z	H	E	B	C	C1
1/2	1/2-NPT	0.70	2.14	3.54	2.13	1.93	2.52	0.79
3/4	3/4-NPT	0.71	2.24	3.66	2.48	2.44	3.07	0.91
1	1-NPT	0.89	2.55	4.33	2.83	2.80	3.43	1.06
1-1/4	1-1/4-NPT	0.99	3.02	5.00	3.35	3.23	4.02	1.18
1-1/2	1-1/2-NPT	0.97	3.21	5.16	3.94	3.62	4.29	1.30
2	2-NPT	1.17	4.01	6.34	4.65	4.33	5.24	1.54



ISO 5211 Mounting Dimensions

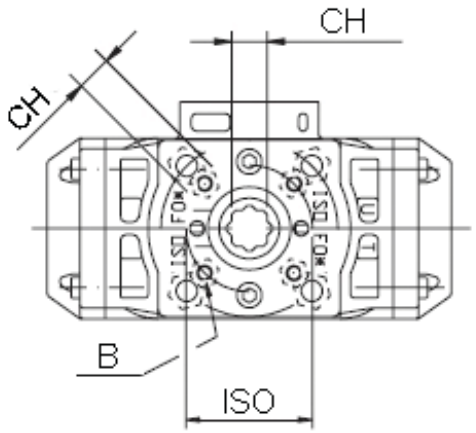
Size	B_2	T	Q	p / P	j / J
1/2	1.86	0.43	0.43	F04/F05	0.22 / 0.26
3/4	2.12	0.43	0.43	F04/F05	0.22 / 0.26
1	2.29	0.43	0.43	F04/F05	0.22 / 0.26
1-1/4	2.69	0.43	0.43	F04/F05	0.22 / 0.26
1-1/2	3.13	0.47 / 0.58	0.43 / 0.55	F05/F07	0.26 / 0.33
2	3.60	0.47 / 0.58	0.43 / 0.55	F05/F07	0.26 / 0.33

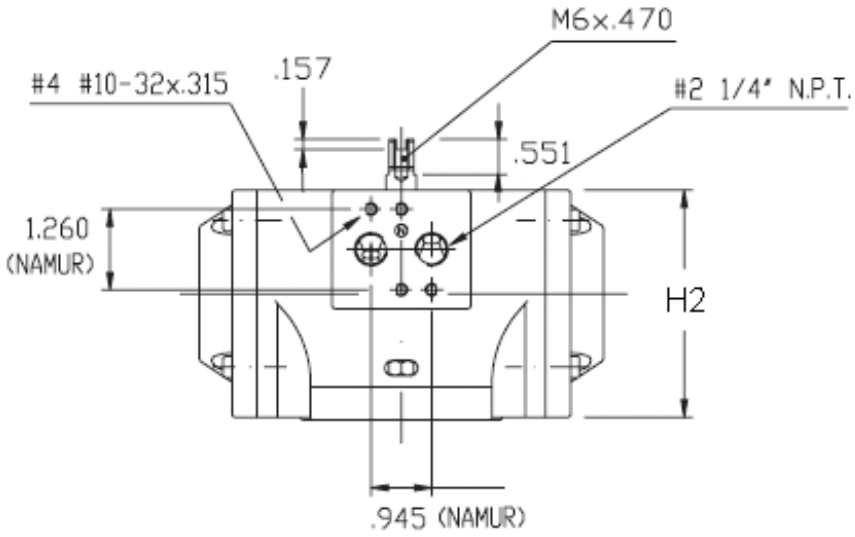
VXE Series Automated Ball Valves

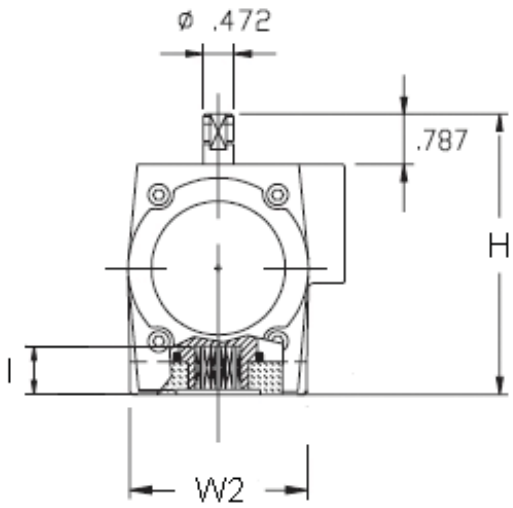
Technical Data (cont'd)

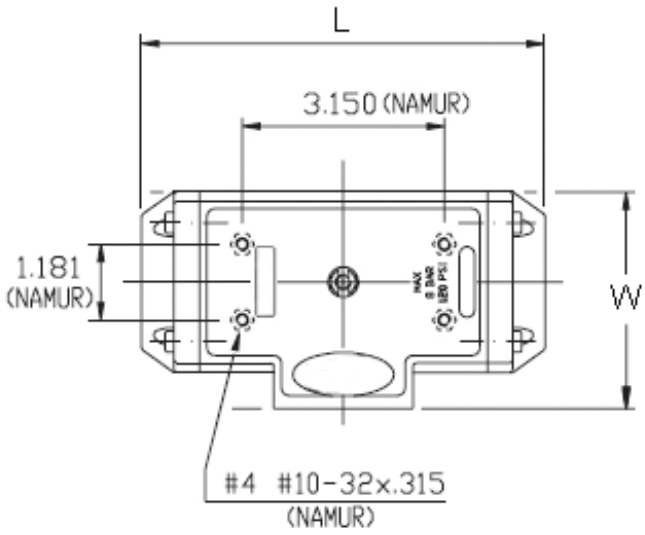
pneumatic actuator dimensions

models UT11, UT14, UT19









VXE Series Automated Ball Valves

Technical Data (cont'd)

pneumatic actuator dimensions (cont'd)

Dimensions (inches)

Valve Size	Double Acting Model	ISO	CH	L	W	W_2	H	H_2	I	B
1/2	UT11DA	F04	0.43	4.69	2.64	2.09	3.58	2.76	0.49	10-32 UNF x 0.40
3/4	UT11DA	F04	0.43	4.69	2.64	2.09	3.58	2.76	0.49	10-32 UNF x 0.40
1	UT11DA	F04	0.43	4.69	2.64	2.09	3.58	2.76	0.49	10-32 UNF x 0.40
1-1/4	UT11DA	F04	0.43	4.69	2.64	2.09	3.58	2.76	0.49	10-32 UNF x 0.40
1-1/2	UT14DA	F05 / F07	0.55	6.30	3.39	2.76	4.37	3.54	0.75	1/4-20 UNC x 0.51
2	UT14DA	F05 / F07	0.55	6.30	3.39	2.76	4.37	3.54	0.75	1/4-20 UNC x 0.51

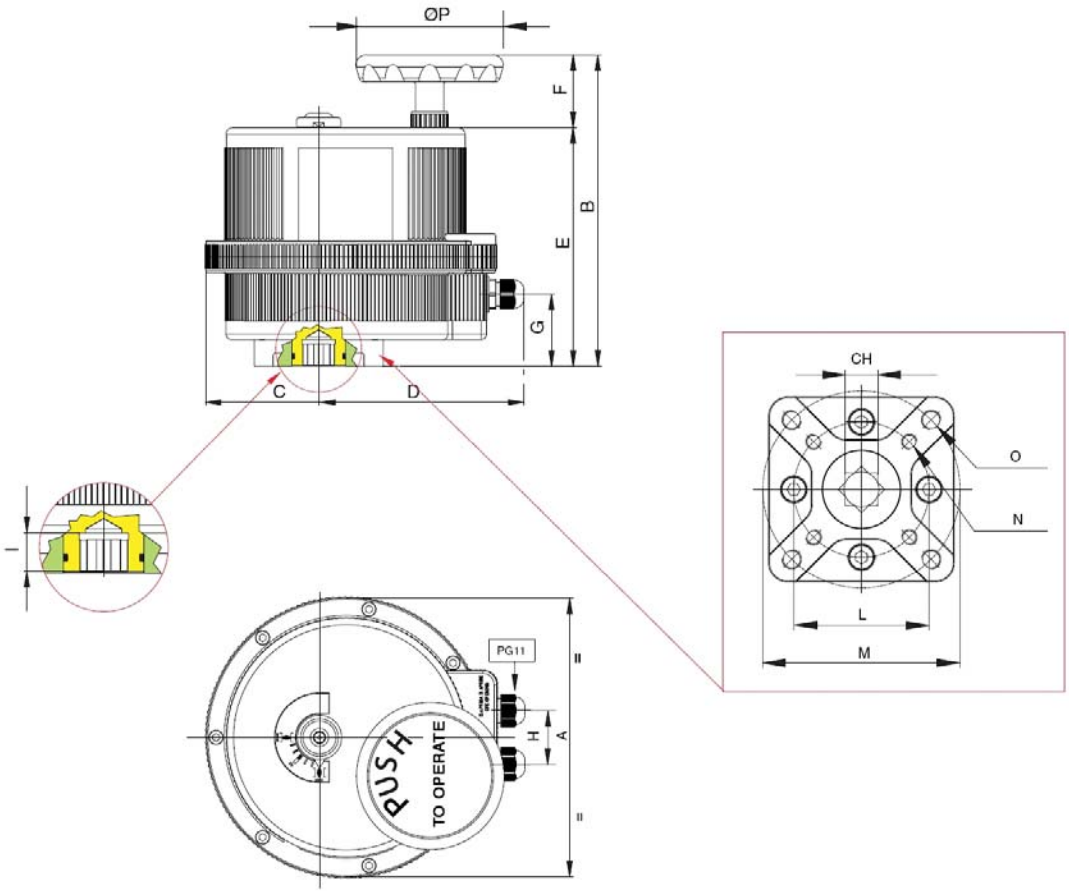
Dimensions (inches)

Valve Size	Spring Return Model	ISO	CH	L	W	W_2	H	H_2	I	B
1/2	UT11S2	F04	0.43	4.69	2.64	2.09	3.58	2.76	0.49	10-32 UNF x 0.40
3/4	UT11S2	F04	0.43	4.69	2.64	2.09	3.58	2.76	0.49	10-32 UNF x 0.40
1	UT14S4	F05 / F07	0.55	6.30	3.39	2.76	4.37	3.54	0.75	1/4-20 UNC x 0.51
1-1/4	UT14S4	F05 / F07	0.55	6.30	3.39	2.76	4.37	3.54	0.75	1/4-20 UNC x 0.51
1-1/2	UT19S5	F05 / F07	0.67	6.89	3.98	2.76	5.22	4.39	0.91	5/16-18 UNC x 0.51
2	UT19S5	F05 / F07	0.67	6.89	3.98	2.76	5.22	4.39	0.91	5/16-18 UNC x 0.51

VXE Series Automated Ball Valves

Technical Data (cont'd)

electric actuator dimensions



Dimensions (inches)

Valve Size	Actuator Model	ISO	CH	A	B	C	D	E	F	G	H	I	L	M	N	O
1/2	VB015	F03 / F05	0.43	4.84	6.28	1.67	4.78	5.67	0.61	4.35	1.26	0.47	1.42	1.97	10-24 UNC x 0.55	1/4-20 UNC x 0.55
3/4	VB015	F03 / F05	0.43	4.84	6.28	1.67	4.78	5.67	0.61	4.35	1.26	0.47	1.42	1.97	10-24 UNC x 0.55	1/4-20 UNC x 0.55
1	VB015	F03 / F05	0.43	4.84	6.28	1.67	4.78	5.67	0.61	4.35	1.26	0.47	1.42	1.97	10-24 UNC x 0.55	1/4-20 UNC x 0.55
1-1/4	VB015	F03 / F05	0.43	4.84	6.28	1.67	4.78	5.67	0.61	4.35	1.26	0.47	1.42	1.97	10-24 UNC x 0.55	1/4-20 UNC x 0.55
1-1/2	VB015	F03 / F05	0.43	4.84	6.28	1.67	4.78	5.67	0.61	4.35	1.26	0.47	1.42	1.97	10-24 UNC x 0.55	1/4-20 UNC x 0.55
2	VB030	F03 / F05	0.43	6.18	7.39	2.38	5.01	5.75	1.64	1.30	1.42	0.47	1.42	1.97	10-24 UNC x 0.55	1/4-20 UNC x 0.55

VXE Series Automated Ball Valves

Technical Data (cont'd)

Actuator Technical Data

Valve Size (inches)	Double Acting Pneumatic	Spring Return Pneumatic	Electric
1/2	UT11DA	UT11S2	VB015
3/4	UT11DA	UT11S2	VB015
1	UT11DA	UT14S4	VB015
1-1/4	UT11DA	UT14S4	VB015
1-1/2	UT14DA	UT19S5	VB015
2	UT14DA	UT19S5	VB030

Pneumatic Actuator Torque Data

Valve Size (inches)	Double Acting		Spring Return					
	Model	Torque (in-lbs)	Model	Spring Set (standard)	Spring Torque (in-lbs) Start	Spring Torque (in-lbs) End	Air Torque (in-lbs) Start	Air Torque (in-lbs) End
1/2	UT11DA	125	UT11S2	S2	66	44	81	59
3/4	UT11DA	125	UT11S2	S2	66	44	81	59
1	UT11DA	125	UT14S4	S4	150	107	168	125
1-1/4	UT11DA	125	UT14S4	S4	150	107	168	125
1-1/2	UT14DA	275	UT19S5	S5	307	230	270	193
2	UT14DA	275	UT19S5	S5	307	230	270	193

Pneumatic Actuator Weights & Air Consumption

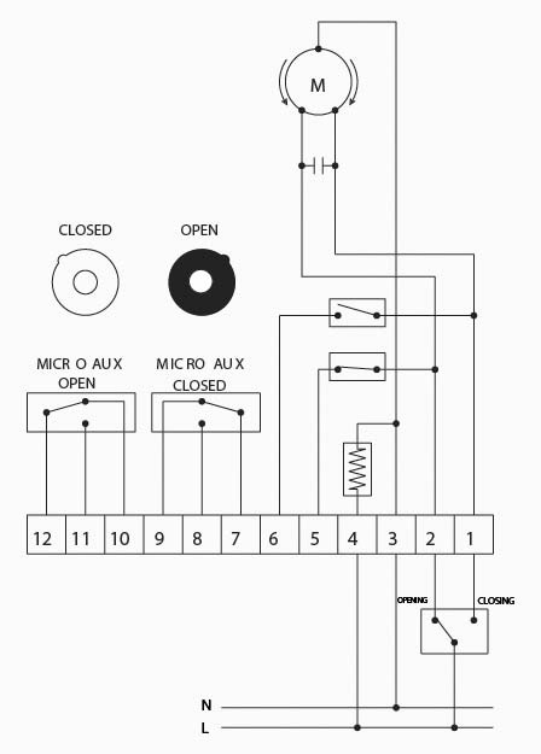
Valve Size (inches)	Double Acting			Spring Return		
	Model	Weight (lbs)	Air Cons. (in^3)	Model	Weight (lbs)	Air Cons. (in^3)
1/2	UT11DA	1.26	13.5	UT11S2	1.44	8.0
3/4	UT11DA	1.26	13.5	UT11S2	1.44	8.0
1	UT11DA	1.26	13.5	UT14S4	3.06	10.8
1-1/4	UT11DA	1.26	13.5	UT14S4	3.06	10.8
1-1/2	UT14DA	2.62	22.0	UT19S5	5.16	17.5
2	UT14DA	2.62	22.0	UT19S5	5.16	17.5

VXE Series Automated Ball Valves

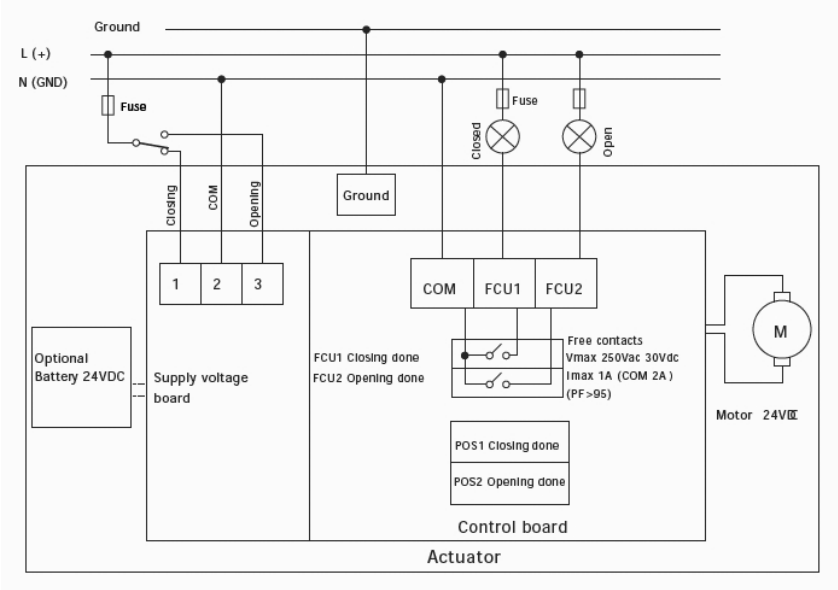
Product Data Sheet

electric actuator wiring diagram

model VB015



models VB030



Electrical Actuator Data

Model		VB015	VB030
Maximum Working Torque (in-lbs)		133	266
1	Voltage	110 VAC	100-240 VAC
2	Absorbed Current	50 mA	0.3-0.2 A
3	Absorbed Power	6.6 VA	30-48 VA
4	Working Time	25 sec	8 sec
5	Torque Limiter	STD	STD
6	Duty Rating	50%	75%
7	Protection	IP 65	IP 67, NEMA 4/4X
8	Rotation	90°	90°
9	Manual Override	STD	STD
10	Position Indicator	STD	STD
11	Working Temperature	-4°F / +131°F	-4°F / +131°F
12	Heater	STD	STD
13	Additional Limit Switches	2 STD	2 STD
14	ISO 5211 Mounting	F03 F05	F03 F05
15	Square (in)	0.43	0.43
16	Electrical Connections	PG11	PG11
17	Weight (lbs)	3.09	5.07

About IPEX

About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- Electrical systems
- Telecommunications and utility piping systems
- PVC, CPVC, PP, ABS, PEX, FR-PVDF and PE pipe and fittings (1/4" to 48")
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- PE Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems

Products manufactured by IPEX Inc. and distributed in the United States by IPEX USA LLC.

www.ipexamerica.com
Toll Free: 800 463-9572