# Industrial Product Catalogue

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- Process Piping Systems
- Double Containment Systems
- Acid Waste Piping Systems
- Compressed Air Systems
- Thermoplastic Valves
- Specialty Products

We build tough products for tough environments.®

Clear-Gu@rd"

**PLENUMLINE** 

enpure"

Guørdian" Encøse"

Xirtec.4

CORZA

FLOWAY"

CustomGu@rd°

Duraplus"





# to **EXCELLENCE**

As one of the world's leading manufacturer's of thermoplastic pipe, valves, fittings and related products for plumbing and mechanical applications, IPEX offers a comprehensive range of integrated solutions to meet the needs of engineers and contractors in commercial, institutional, industrial and residential construction.











# Contents

#### PROCESS PIPING SYSTEMS

Xirtec PVC & Corzan CPVC
Clear-Guard High Pressure Clear PVC Pipe
Enpure High Purity
Duraplus ABS Industrial

# 45 DOUBLE CONTAINMENT SYSTEMS

Encase Acid Waste PP Double Containment Guardian Vinyl Double Containment CustomGuard Clear-Guard Centra-Guard

#### ACID WASTE PIPING SYSTEMS

Enfield Electrofusion Acid Waste System
Labline Mechanical Joint Acid Waste System
Floway Polypropylene Floor Drains
Plenumline Mechanical Joint Acid Waste System
Neutratank Neutralization Tanks

## 87 COMPRESSED AIR SYSTEMS

Duraplus Airline Duratec Airline

## 99 THERMOPLASTIC VALVES

Ball Valves
Butterfly Valves
Diaphragm Valves
Check & Vent Valves
Specialty Valves
Quarter Turn Automation

# 129 SPECIALTY PRODUCTS

Ventilation Duct Grooved PVC Pipe Well Casings

MUNICIPAL PRODUCT LINE SHEET

MECHANICAL PRODUCT LINE SHEET

# PHYSICAL PROPERTIES

PVC (POLYVINYL CHLORIDE) CPVC (CHLORINATED POLYVINYL CHLORIDE)

		MATE	RIALS	
PROPERTIES	PVC	CPVC (STANDARD)	CORZAN CPVC (HIGH IMPACT)	STANDARDS
Cell classification	12454	23447	24448	ASTM D1784
Specific gravity	1.42	1.50	1.51	ASTM D792
Tensile strength, psi at 73°F	7,000	7,500	7,320	ASTM D638
Modulus of elasticity tensile, psi at 73°F	400,000	380,000	423,000	ASTM D638
Flexural strength, psi	14,500	11,400	13,200	ASTM D790
Izod impact, ft.lbs./in. at 73°F, notched	0.65	2.0	10.0	ASTM D256
Compressive strength, psi	9,000	10,100	10,100	ASTM D695
Poisson's ratio	0.38	0.33	0.33	
Working stress, psi at 73°F	2,000	2,000	2,000	
Coefficient of thermal expansion in./in./°F (x 10-5)	3.0	3.8	3.4	ASTM D696
Linear expansion, in./10°F per 100' of pipe	0.36	0.44 - 0.46	0.41	
Maximum operating temperature under pressure	140°F (60°C)	200°F (93°C)	200°F (93°C)	
Deflection temperature under load, °F at 66 psi	173	n/a	n/a	ASTM D648
Deflection temperature under load, °F at 264 psi	160	212	239	ASTM D648
Thermal conductivity, BTU.in./hr.ft².°F	1.2	0.95	0.95	ASTM C177
Burning rate	Self extinguish	Self extinguish	Self extinguish	ASTM D635
Burning class	V-0	V-0	V-0	UL-94
Flash ignition, °F	730	900	900	
Limited oxygen index (%)	43	60	60	ASTM D2863-70
Water absorption, %, (24 hrs. at 73°F)	0.05	0.03	0.03	ASTM D570

 $<sup>^{*}</sup>$  The properties listed in this table represent general material properties and should be used as a guideline only.

IPEX offers a comprehensive range of integrated process piping systems – pipe, fittings, flanges, strainers and valves in PVC, CPVC, polypropylene and ABS – designed to meet the temperature, pressure and size requirements of a wide range of chemical processing and similar industrial applications.

In addition to costing less than common and exotic metal systems, IPEX thermoplastic process piping systems are lightweight, as well as easy to handle, store, cut and join, so transportation and installation cost are substantially lower.

When you specify a high-performance process piping system from IPEX, you get the added benefits of a complete piping solution that is engineered for total integration, and backed by comprehensive, coast-to-coast support – all from one reliable source.

# Process Piping Systems









Xirtec PVC & Corzan CPVC

Clear-Guard Clear PVC Pipe

inpure High Purity

Duraplus ABS Industrial

2





# XIRTEC PVC & CORZAN CPVC

PVC Sch 40 - 1/2" - 24" (12mm - 600mm) PVC Sch 80 - 1/4" - 24" (6mm - 600mm) CPVC Sch 40 & 80 - 1/4" - 16" (6mm - 400mm)

# Xirtec 140 CORZAN

#### THE IPEX SYSTEM ADVANTAGE

IPEX vinyl process piping systems; a complete line of pipe, fittings, flanges, strainers and valves to meet all your process system requirements.

IPEX developed the Xirtec®140 (PVC) and Corzan® (CPVC) systems to meet industry demands for a complete Pipe, Valves and Fittings (PVF) package that is designed, produced and backed by a single manufacturer. These systems are engineered and manufactured to IPEX's strict quality, performance and dimensional standards, and therefore eliminate the problems inherent in purchasing and installing piping system components manufactured by several different companies.

IPEX high-performance vinyl systems are designed to meet the temperature, pressure and size requirements of piping systems used in chemical processes and other industrial applications. They feature outstanding resistance to photodegradation, creep stress and immunity to oxidation, and are exceptionally suited for use with a wide range of acids, alcohols, salts and halogens. The perfect extended service, low maintenance alternative to common and exotic metal systems.

Xirtec140 pipe and fittings and Corzan pipe are available in Schedule 40 and 80, IPS. Corzan fittings are available in Schedule 80. All pipe and fittings are also available in cast iron sizes for underground applications.

#### **APPLICATIONS**

- Plant chemical distribution lines
- · Water and wastewater
- Acid systems for refineries, pickling lines and plating shops
- Chlorine injection, chlorine dioxide and chloralkali plant piping
- · Steel wire plants
- Battery manufacturing
- Bleach lines in textile and paper mills
- · Alum and caustic handling systems
- · Circuit board manufacturing
- Semiconductor
- Pharmaceutical
- Cooling water and cooling tower systems
- Tailing and slurry lines
- Washwater recovery systems
- Plant water supply
- Brine and seawater systems
- Fish farming
- Waterworks
- Aquariums and swimming pools
- Irrigation systems in golf courses, greenhouses, etc.

#### STANDARDS

#### XIRTEC140

#### **CORZAN**



45 ASTM D1785









NSF 14



ULC-102.2

#### **ADVANTAGES**

1 Lower Installation Costs, Easy Handling

In addition to a lower material cost, Xirtec & Corzan pipe can significantly reduce labour and transportation costs on a typical installation. The reason? They are lightweight, easily handled, stored, cut and joined.

2 Extended Life

Xirtec PVC and Corzan CPVC provide years of maintenance free service. Our materials will not rust, pit, scale or corrode on either interior or exterior surfaces. Thermoplastic piping systems in a variety of demanding industrial applications have operated successfully for over 45 years.

(3) Superior Underground Performance

Xirtec and Corzan CPVC are immune to damage from naturally corrosive soil conditions as well as electrochemical and galvanic corrosion. This is particularly advantageous in underground installations where galvanic reaction often causes damage to metal piping products.

4 Exceptional Chemical Resistance

The IPEX vinyl systems, including pipe, valves and fittings, provide outstanding resistance to a wide range of chemicals such as most acids, alcohols, alkalies, salt solutions, halogens and more.

5 Improved Flow

Xirtec and Corzan have a substantially lower Roughness Factor than metal and other materials, and since they do not rust, pit, scale or corrode, the interior walls remain smooth in virtually any service.

6 Potable Water Approved

Xirtec140 polyvinyl chloride (PVC) and Corzan chlorinated polyvinyl chloride (CPVC) are suitable for use with potable water as listed with the National Sanitation Foundation (NSF) and CSA International.

7 Exceptional Temperature Range

IPEX vinyl systems are designed to meet a broad range of service temperatures. Xirtec has a recommended maximum service temperature of 140°F (60°C) in pressure, with a higher limit of 180°F (82°C) for intermittent gravity flow.

Lower Thermal Conductivity

With a low thermal conductivity factor, IPEX vinyl systems have less heat loss or gain, thus sustaining service temperature more efficiently than metal piping. As a result, pipe insulation needs may be reduced.

Environmentally Responsible

With energy conservation a prime concern, you can rely on the fact that IPEX's manufacturing process for Xirtec and Corzan piping materials requires less than half the energy needed to produce the equivalent size of carbon steel or steel alloy materials.



DID YOU KNOW?

One of the outstanding characteristics of PVC is its resistance to ignition. This is demonstrated by its flash point of 730°F (388°C), compared to 400°F (204°C) for wood chips.

CPVC offers an even greater fire safety profile than PVC. CPVC's ignition resistance is demonstrated by its flash point of 900°F (482°C), with a low flame spread as well.

#### PRODUCT SELECTION CHART

#### PIPE PRESSURE RATINGS - XIRTEC140 PVC AND CORZAN CPVC

Siz	Sizes		PEX schedule 40	0	II	PEX Schedule 8	0
Diameter	0.D.	Wall Thickness	I.D.	*Max. Pressure 73°F	Wall Thickness	I.D.	*Max. Pressure 73°F
(in.)	(in.)	(in.)	(in.)	(psi)	(in.)	(in.)	(psi)
1/4	.540	-	-	-	.119	.302	1,130
3/8	.675	-	-	-	.126	.423	920
1/2	.840	.109	.602	600	.147	.526	850
3/4	1.050	.113	.804	480	.154	.722	690
1	1.315	.133	1.029	450	.179	.936	630
1-1/4	1.660	.141	1.360	370	.191	1.255	520
1-1/2	1.900	.145	1.590	330	.200	1.476	470
2	2.375	.154	2.047	280	.218	1.913	400
2-1/2	2.875	.203	2.445	300	.276	2.290	420
3	3.500	.216	3.042	260	.300	2.864	370
4	4.500	.237	3.998	220	.337	3.786	320
6	6.625	.280	6.031	180	.432	5.709	280
8	8.625	.322	7.941	160	.500	7.565	250
10	10.750	.365	9.976	140	.593	9.493	230
12	12.750	.406	11.888	130	.687	11.294	230
14	14.000	.438	13.072	130	.750	12.412	220
16	16.000	.500	14.936	130	.843	14.224	220
18	18.000	.562	16.809	130	.937	16.014	220
20	20.000	.593	18.743	120	1.031	17.814	220
24	24.000	.687	22.544	120	1.218	21.418	210

#### XIRTEC 140 PRESSURE PIPE

Dime	nsion				PRODUC	CT CODE			
inches	mm	PVC Sch 40 White Plain End	PVC Sch 40 White Bell End	PVC Sch 40 Grey Bell End	PVC Sch 80 Grey Plain End	PVC Sch 80 Grey Bell End	CPVC Sch 40 Plain End	CPVC Sch 80 Plain End	CPVC Sch 80 Solvent Bell End
1/2 x 10'	12 x 3m	022600	022603	022004	-	085106	-	-	-
3/4 x 10'	20 x 3m	022633	022604	022011	-	085111	-	-	-
1 x 10'	25 x 3m	022612	022611	022016	-	085114	-	-	-
1-1/4 x 10'	32 x 3m	022608	022674	022027	-	085119	-	-	-
1-1/2 x 10'	40 x 3m	022614	022616	022032	-	-	-	-	-
2 x 10'	50 x 3m	022618	022619	022037	-	-	-	-	-
2-1/2 x 10'	65 x 3m	022621	-	022042	-	-	-	-	-
3 x 10'	75 x 3m	022637	022624	022046	-	-	-	-	-
4 x 10'	100 x 3m	022626	022628	-	085138	_	-	-	-
6 x 10'	150 x 3m	022666	022659	-	085143	_	-	-	-
1/4 x 20'	6 x 6m	-	-	-	085103	-	-	-	-
3/8 x 20'	10 x 6m	-	_	_	085104	_	-	-	_
1/2 x 20'	12 x 6m	022602	022601	-	085101	085108	019300	019203	-
3/4 x 20'	20 x 6m	022677	022607	-	085107	085112	019301	019205	-
1 x 20'	25 x 6m	022606	022610	-	085110	085116	019302	019207	-
1-1/4 x 20'	32 x 6m	022678	022617	_	085117	085122	019303	019209	_
1-1/2 x 20'	40 x 6m	022675	022615	-	085115	085127	019304	019211	019031
2 x 20'	50 x 6m	022679	022620	_	085120	085132	019305	019213	019032
2-1/2 x 20'	65 x 6m	022646	022625	_	085125	085134	019306	019216	-
3 x 20'	75 x 6m	022623	022630	-	085130	085137	019307	019217	019033
4 x 20'	100 x 6m	022627	022640	022040	085140	085139	019308	019219	019256
5 x 20'	125 x 6m	022651	022650	-	085150	_	-	-	-
6 x 20'	150 x 6m	022665	022660	022060	085160	085162	019309	019220	019218
8 x 20'	200 x 6m	022681	022680	022058	085180	085147	019310	019221	019255
10 x 20'	250 x 6m	022691	222690	022061	085190	085192	019013	019222	_
12 x 20'	300 x 6m	022693	022692	022064	085195	085151	019016	019223	_
14 x 20'	350 x 6m	022682	022694	_	085158	085152	-	019228	-
16 x 20'	400 x 6m	022683	022696	_	085153	085155	019226	019229	_
18 x 20'	450 x 6m	022687	022697	-	085159	-	-	-	-
20 x 20'	500 x 6m	022702	022698	_	-	085170	-	-	_
24 x 20'	600 x 6m	022704	022699	_	_	085171	-	-	-
2 20	000 X 0111	022701	0220//			000171			

#### FOR XIRTEC 140 PVC SCHEDULE 40 WHITE

† Fabricated fittings

■ Molded fittings: 150 psi max. working pressure, non-shock @ 23°F (73°F)

#### FOR XIRTEC 140 PVC SCHEDULE 40 GREY

- † Indicates fabricated and fiberglass reinforced pipe fittings
- ▶ Indicates Series 160 Fabricated and Fiberglass reinforced pipe fittings. The maximum continuous working pressure of fittings is 160 psi @ 23°C (73°F) under ideal conditions. no provisions have been made for pressure surges, water hammer, or other conditions which should be considered.

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimensio	on	Sch 40 White	-		Dimensi	ion	Sch 40 White	
	inches	mm	Product Code	Product Cod	е	inches	mm	Product Code	Product Cod
Tee	Soc x Soc x Soc	:			R	educing Tee Soc	x Soc x Soc		
	1/2	12	035775	035290		1/2 x 1/2 x 3/4	12 x 12 x 20	035789	-
	3/4	20	035776	035291		1/2 x 1/2 x 1	12 x 12 x 25	035354	-
1	1	25	035777	035292		3/4 x 1/2 x 1/2	20 x 12 x 12	035790	-
	1-1/4	32	035778	035293		3/4 x 1/2 x 3/4	20 x 12 x 20	235007	-
	1-1/2	40	035779	035294		3/4 x 3/4 x 1/2	20 x 20 x 12	035792	035305
	2	50	035780	035295		3/4 x 3/4 x 1	20 x 20 x 25	035791	-
	2-1/2	65	035781	035296		1 x 1/2 x 1	25 x 12 x 25	235008	-
	3	75	035782	035297		1 x 3/4 x 1/2	25 x 20 x 12	235009	-
	4	100	035783	035298		1 x 3/4 x 3/4	25 x 20 x 20		-
	5	125	035784	035299		1 x 3/4 x 1	25 x 20 x 25	035962	-
	6	150	035785	035300		1 x 1 x 1/2	25 x 25 x 12		035307
	8	200	035786	035301		1 x 1 x 3/4	25 x 25 x 20	035795	035308
	10	250	035930			1 x 1 x 1-1/4	25 x 25 x 32	035989	-
	12	300		-		1 x 1 x 1-1/2	25x 25 x 40	035793	-
	10	250		t 035302	t	1-1/4 x 1 x 1/2	32 x 25 x 12	235010	-
	12	300	035787		†	1-1/4 x 1 x 3/4	32 x 25 x 20	035796	-
	14	350		t 035304	†	1-1/4 x 1 x 1	32 x 25 x 25	235011	-
	16	400		t -	†	1-1/4 x 1-1/4 x 1/2		035797	035311
	18	450		t -	•	1-1/4 x 1-1/4 x 3/4		035798	035312
	20	500		t -	•	1-1/4 x 1-1/4 x 1		035799	035313
	24	600		t -	•	1-1/4 x 1-1/4 x 1-1/2		235012	-
						1-1/2 x 1-1/4 x 1/2		235014	-
Tee	Soc x Soc x Fpt					1-1/2 x 1-1/4 x 3/4		235015	-
100	1/2	12	035851		_	1-1/2 x 1-1/4 x 1		035959	-
	3/4	20	035852	-		1-1/2 x 1-1/2 x 1/2			035315
	1	25	035852	-		1-1/2 x 1-1/2 x 3/4		035801	035316
	1-1/4	32	035854	-		1-1/2 x 1-1/2 x 1		035802	035317
	1-1/4	40	035855	-		1-1/2 x 1-1/2 x 1-1/4		035803	035318
	2	50	035856	-		1-1/2 x 1-1/2 x 2 1-1/2 x 1-1/2 x 2-1/2		035082	-
	2-1/2	65	035857	-		2 x 1-1/2 x 3/4	50 x 40 x 20	235016	-
		75	035858	-		2 x 1-1/2 x 3/4	50 x 40 x 20 50 x 40 x 25	235017 035804	-
	3 4	100	035859	-		2 x 1-1/2 x 1-1/2		035805	-
	3/4 x 3/4 x 1/2	20 x 20 x 12		035348		2 x 2 x 1/2	50 x 50 x 12		035319
	1 x 1 x 1/2					2 x 2 x 3/4	50 x 50 x 20		035319
		25 x 25 x 12		- 025240		2 x 2 x 1	50 x 50 x 25		035320
	1 x 1 x 3/4 1-1/4 x 1-1/4 x 1/2	25 x 25 x 20		035349		2 x 2 x 1-1/4	50 x 50 x 32		-
				035350		2 x 2 x 1-1/2	50 x 50 x 40		035322
	1-1/4 x 1-1/4 x 3/4			035977		2-1/2 x 2-1/2 x 1/2			-
	1-1/4 x 1-1/4 x 1			- 025251		2-1/2 x 2-1/2 x 3/4			_
	1-1/2 x 1-1/2 x 1/2			035351		2-1/2 x 2-1/2 x 1			_
	1-1/2 x 1-1/2 x 3/4			035352		2-1/2 x 2-1/2 x 1-1/4			-
	1-1/2 x 1-1/2 x 1			035353		2-1/2 x 2-1/2 x 1-1/2			_
	2 x 2 x 3/4	50 x 50 x 20		035355		2-1/2 x 2-1/2 x 2			_
	2 x 2 x 1	50 x 50 x 25		035356		3 x 3 x 1/2	75 x 75 x 12		-
	2 x 2 x 1-1/2	50 x 50 x 40	-	-		3 x 3 x 3/4	75 x 75 x 20		-
						3 x 3 x 1	75 x 75 x 25		035326
Tee	Fpt x Fpt x Fpt					3 x 3 x 1-1/4	75 x 75 x 32		-
	1/2	12	035844	-		3 x 3 x 1-1/2	75 x 75 x 40		035327
	3/4	20	035845	-		3 x 3 x 2	75 x 75 x 50	035822	035328
(	1	25	035846	-		3 x 3 x 2-1/2	75 x 75 x 65	035823	035329
	1-1/4	32	035847	-		3 x 3 x 4	75 x 75 x 100		-
	1-1/2	40	035848	-		4 x 4 x 3/4	100 x 100 x 20		-
	2								

	Dimens inches	ion mm	Sch 40 White Product Code		-		Dimensi inches	on mm	Sch 40 White Product Code	Sch 40 Grey Product Code
Redi	ucing Tee Soc	x Soc x Soc	(cont'd)			Red	ducing Tee Soc	x Soc x Fpt		
	4 x 4 x 1-1/4	100 x 100 x 32	035826	-			1/2 x 1/2 x 3/4	12 x 12 x 20	035860	-
	4 x 4 x 1-1/2	100 x 100 x 40	035827	-			3/4 x 1/2 x 1/2	20 x 12 x 12	035862	-
	4 x 4 x 2	100 x 100 x 50		035331		(	3/4 x 1/2 x 3/4	20 x 12 x 20	235019	-
	<b>4 x 4 x 3</b>	100 x 100 x 75		035332			3/4 x 3/4 x 1/2	20 x 20 x 12	035863	-
	5 x 5 x 2	125 x 125 x 50		-			1 x 3/4 x 1/2	25 x 20 x 12	035867	-
	5 x 5 x 3	125 x 125 x 75		-			1 x 1 x 1/2	25 x 25 x 12	035865	-
	5 x 5 x 4	125 x 125 x 100	035831	-			1 x 1 x 3/4	25 x 25 x 20	035866	-
	6 x 6 x 2	150 x 150 x 50	035832	-				32 x 25 x 12	035868	-
	6 x 6 x 3	150 x 150 x 75		035334			1-1/4 x 1 x 1	32 x 25 x 25	235020	-
	6 x 6 x 4	150 x 150 x 100		035335			1-1/4 x 1-1/4 x 1/2	32 x 32 x 12	035869	-
	8 x 8 x 3	200 x 200 x 75		-	t		1-1/4 x 1-1/4 x 3/4			-
	8 x 8 x 4	200 x 200 x 100		035336	†		1-1/4 x 1-1/4 x 1			-
	8 x 8 x 6	200 x 200 x 150		035337			1-1/2 x 1-1/4 x 1/2			-
	10 x 10 x 4	250 x 250 x 100		+ 035339	·		1-1/2 x 1-1/4 x 3/4	40 x 32 x 20		-
	10 x 10 x 6	250 x 250 x 150		t 035340			1-1/2 x 1-1/4 x 1		235022	-
	10 x 10 x 8	250 x 250 x 200		t 035341			1-1/2 x 1-1/2 x 1/2		035873	-
	12 x 12 x 4	300 x 300 x 100		t 035341			1-1/2 x 1-1/2 x 3/4		035874	-
	12 x 12 x 4	300 x 300 x 150		t 035342			1-1/2 x 1-1/2 x 1		035875	-
	12 x 12 x 8	300 x 300 x 200		t 035344			1-1/2 x 1-1/2 x 1-1/4			_
	12 x 12 x 10	300 x 300 x 250		t 035344 t 035345			2 x 1-1/2 x 3/4	50 x 40 x 20		-
	14 x 14 x 6	350 x 350 x 150		† -			2 x 1-1/2 x 3/4	50 x 40 x 25		_
	14 x 14 x 8	350 x 350 x 200					2 x 2 x 1/2	50 x 50 x 12		_
				† -			2 x 2 x 1/2 2 x 2 x 3/4	50 x 50 x 20		-
	14 x 14 x 10	350 x 350 x 250		† -				50 x 50 x 25		-
	14 x 14 x 12	350 x 350 x 300		† -	†		2 x 2 x 1 2 x 2 x 1-1/4	50 x 50 x 25		-
	16 x 16 x 8	400 x 400 x 200		† -	†			50 x 50 x 40		-
	16 x 16 x 10	400 x 400 x 250		† -			2 x 2 x 1-1/2			-
	16 x 16 x 12	400 x 400 x 300		† -	†		2-1/2 x 2-1/2 x 1/2			-
	16 x 16 x 14	400 x 400 x 350		† -	†		2-1/2 x 2-1/2 x 3/4			-
	18 x 18 x 8	450 x 450 x 200		† -			2-1/2 x 2-1/2 x 1			-
	18 x 18 x 10	450 x 450 x 250		† -	•		2-1/2 x 2-1/2 x 1-1/4			-
	18 x 18 x 12	450 x 450 x 300		† -	•		2-1/2 x 2-1/2 x 1-1/2			-
	18 x 18 x 14	450 x 450 x 350		† -	•		3 x 3 x 1/2	75 x 75 x 12	035885	-
	18 x 18 x 16	450 x 450 x 400		† -	•		3 x 3 x 3/4	75 x 75 x 20		-
	20 x 20 x 12	500 x 500 x 300		† -	•		3 x 3 x 1	75 x 75 x 25		-
	20 x 20 x 14	500 x 500 x 350		† -			3 x 3 x 1-1/4	75 x 75 x 32		-
	20 x 20 x 16	500 x 500 x 400		† -	•		3 x 3 x 1-1/2	75 x 75 x 40		-
	20 x 20 x 18	500 x 500 x 450		† -	•		3 x 3 x 2	75 x 75 x 50		-
	24 x 24 x 14	600 x 600 x 350		† -	•		4 x 4 x 1	100 x 100 x 25		-
	24 x 24 x 16	600 x 600 x 400		† -	•		4 x 4 x 1-1/2	100 x 100 x 40		-
	24 x 24 x 18	600 x 600 x 450		† -			4 x 4 x 2	100 x 100 x 50		-
	24 x 24 x 20	600 x 600 x 500	-	† -			4 x 4 x 3	100 x 100 x 75		-
							5 x 5 x 4	125 x 125 x 100		-
							6 x 6 x 2	150 x 150 x 50		-
							6 x 6 x 3	150 x 150 x 75		-
							6 x 6 x 4	150 x 150 x 100		-
							8 x 8 x 3	200 x 200 x 75	235028	-

8 x 8 x 4

200 x 200 x 100 035898

Dimension

 $\operatorname{mm}$ 

inches

Sch 40 White Sch 40 Grey Product Code Product Code

90	Elbow Soc x	Soc				
	3/8	9	-		035108	
	1/2	12	035519		035109	
(-(	3/4	20	035520		035110	
	1	25	035521		035111	
	1-1/4	32	035522		035112	
	1-1/2	40	035523		035113	
	2	50	035524		035114	
	2-1/2	65	035525		035115	
	3	75	035526		035116	
	4	100	035527		035117	
	5	125	035528		035118	
	6	150	035529		035119	
	8	200	035530		035120	
	10	250	035928	ı	-	
	12	300	035929	ı	-	
	10	250	035531	t	035121	†
	12	300	035532	t	035122	†
	14	350	035533	t	035123	†
	16	400	035534	t	035124	†
	18	450	-	t	-	
	20	500	-	t	-	
	24	600	-	t	-	Þ
90	Elbow Soc x	Fpt				
	1/2	12	035506		035101	
	3/4	20	035507		035102	
	1	25	035508		035103	
	1-1/4	32	035509		035104	
	1-1/2	40	035510		035105	
,	2	50	035511		035106	
>	2-1/2	65	035512		-	
) T	3	75	035589		-	
	4	100	035513		-	
Z A						
909	Elbow Fpt x F					
	1/2	12	035538		035125	
<u> </u>	3/4	20	035539		035126	
	1	25	035540		035127	
	1-1/4	32	035541		-	
>	1-1/2	40	035542		-	
ı	2	50	035543		-	
ے - 90°	° Street Elbow	Mt x Soc				
<u> </u>	Stroot LIDOW	WIL A 300				

VC SCH	I. 40 WHITE	& SCH. 4	O GREY FI	TTINGS
	Dimens inches	sion mm	Sch 40 White Product Code	•
90°	Street Elbow	Spig x Soc		
	1/2	12	035544	-
	3/4	20	035545	-
	1	25	035546	035128
	1-1/4	32	035547	-
	1-1/2	40	035548	035129
	2	50	035549	-
90°	Street Elbow	Mpt x Fpt		
	1/2	12	035552	035132
	3/4	20	035553	035133
	1	25	035554	035134
	1-1/4	32	035555	-
	1-1/2	40	035556	035135
	2	50	035557	-
90°	Reducing Elbo 3/4 x 1/2 1 x 1/2 1 x 3/4 1-1/4 x 1/2 1-1/4 x 3/4 1-1/4 x 1 1-1/2 x 1/2 1-1/2 x 1	20 x 12 25 x 12 25 x 20 32 x 12 32 x 20 32 x 25 40 x 12 40 x 25 50 x 40	035535 035536 035978 235029 235030 035991 235031 235032 035537	
90°	Reducing Elbo	w Socx Fpt		
	1/2 x 3/4	12 x 20	035514	-
	3/4 x 1/2	20 x 12	035515	-
	1 x 1/2	25 x 12	035516	-
	1 x 3/4	25 x 20	035517	-
	1-1/4 x 1	32 x 25	051007	-
	1-1/2 x 1	40 x 25	035594	-
	2 x 1-1/2	50 x 40	035518	-
Side	Outlet Elbow	Soc x Soc x	Soc	
	1/2	12	035498	-
Side	e Outlet Elbow	Soc x Soc x	Fpt	
	1/2	12	235033	-
$J_{\chi} \sim J_{\chi}$	3/4	20	235034	-

3/4 x 3/4 x 1/2

1 x 1 x 1/2

20 x 20 x 12

25 x 25 x 12

235035

235036

1/2

3/4

1

1-1/4

1-1/2

12

20

25

32

40

50

035500

035501

035502

035503

035504

	Dimension		Sch 40 White	Sch 40 Grey
	inches	mm	Product Code	Product Code
45°	Elbow Soc x Soc			
	1/2	12	035481	035083
	3/4	20	035482	035084
	1	25	035483	035085
	1-1/4	32	035484	035086
	1-1/2	40	035485	035087
	2	50	035486	035088
	2-1/2	65	035487	035089
	3	75	035488	035090
	4	100	035489	035091
	5	125	035490	035092
	6	150	035491	035093
	8	200	035492	035094
	10	250	035926	-
	12	300	035927	-
	10	250	035493 <b>t</b>	035095 +
	12	300	035494 <b>t</b>	035096 †
	14	350	- t	035097 +
	16	400	035495 <b>t</b>	035098 +
	18	450	- t	
	20	500	035496 t	
	24	600	035497 <b>t</b>	
90°	Radius Bends - 60	) Sp x Sp	)	
_	1/2	12	- t	035932 <b>†</b>

1/2	12	-	†	035932	t
3/4	20	035396	†	035009	†
1	25	035397	†	035010	t
1-1/4	32	035398	†	035011	t
1-1/2	40	035399	†	035012	†
2	50	035400	†	035013	†
2-1/2	65	035401	†	035957	t
3	75	035402	†	035014	†
4	100	035403	†	035015	†
6	150	035404	†	035016	†
8	200	-	†	n/a	t
10	250	-	†	n/a	†
12	300	_	+	_	+

#### 45° Radius Bends - 6D Sp x Sp

45	Raulus Dellus - OD	Sh x Sh				
_	1/2	12	-	t	-	†
	3/4	20	035391	t	-	t
( (	1	25	-	t	-	t
0	1-1/4	32	-	t	-	†
	1-1/2	40	035392	t	035004	†
	2	50	035939	t	035005	†
	2-1/2	65	-	t	-	t
	3	75	035393	t	035006	†
	4	100	035394	t	035007	†
	6	150	035395	t	035008	†
	8	200	-	t	-	t
	10	250	-	t	-	†
	12	300	-	t	_	t

Dimension		Sch 40 White	Sch 40 Grey
inches	mm	Product Code	<b>Product Code</b>

#### 22-1/2° Radius Bends - 6D Sp x Sp

1/2	12	n/a	t	-	t
3/4	20	n/a	†	035000	†
1	25	035383	†	-	†
1-1/4	32	035384	†	-	†
1-1/2	40	035385	†	035970	†
2	50	035386	t	035001	t
2-1/2	65	035387	t	-	t
3	75	035388	t	035002	t
4	100	035389	†	035003	†
6	150	035390	†	-	t
8	200	-	t	-	t
10	250	-	t	057502	†
12	300	-	t	-	†

#### Hose Adapter Insert x IPS Soc

	1/2	12	035596	-
	3/4	20	035597	-
	1	25	035598	-
3	1-1/4	32	035599	-
	1-1/2	40	035600	-
	2	50	035601	-
	3	75	235037	-
	4	100	235038	-

#### Hose Adapter Insert x Mt

	1/2	12	-	035157
	3/4	20	-	035158
	1	25	-	035159
1	1-1/4	32	-	035160
1	1-1/2	40	-	035161
	2	50	-	035162
	2-1/2	65	-	035163
	3	75	-	035164
	4	100	-	035165

 $\label{eq:astmodel} \textit{ASTM D2609} \cdot \textit{Plastic Insert fitting for polyethylene}$ 

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimensior inches	n mm		Sch 40 Gre Product Cod	-	Dimensior inches	n mm	Sch 40 White Product Code	-
Cross	Soc x Soc x So	с х Ѕос			Cou	pling Soc x Soc			
$\overline{}$	1/2	12	035469	035068		3/8	9	035447	-
$\langle \ \rangle$	3/4	20	035470	035069		1/2	12	035448	035052
	) 1	25	035471	035070	_	3/4	20	035449	035053
	1-1/4	32	035472	035071		1	25	035450	035054
	1-1/2	40	035473	035072		1-1/4	32	035451	035055
	2	50	035474	035073		1-1/2	40	035452	035056
	2-1/2	65	035475	035074		2	50	035453	035057
	3	75	035476	035075		2-1/2	65	035454	035058
	4	100	035477	035076		3	75	035455	035059
	6	150	035478	t 035077	t	4	100	035456	035060
	8	200	-	t -	t	5	125	035457	035061
	10	250	-	† -	†	6	150	035458	035062
	12	300	-	† -	†	8	200	035459	035063
	14	350		, † -	t	10	250	035460 <b>†</b>	035064
	16	400		† -	t	12	300	035461 <b>†</b>	
	18	450		† -	ė l	14	350	035462 <b>†</b>	035066
	20	500		t -		16	400	035463 <b>†</b>	
	24	600		† -		18	450	- †	
	24	000	-	-	•	20	500	035464 <b>†</b>	
oduc	ing Cross Soc	. v Soc v S	20 V S00			24	600	035465 <b>†</b>	-
euuc	8 x 4	200 x 100		† -	 Fem	<b>ale Adapter</b> Soc	x Ent		
	8 x 6	200 x 150	-	t -		1/2	12	035559	035136
$\overline{}$	10 x 6	250 x 150	-	t -		3/4	20	035560	035137
	10 x 8	250 x 200	-	t -		1	25	035561	035137
	12 x 8	300 x 200	-	t -		1-1/4	32	035562	035130
	12 x 10	300 x 250		† -		1-1/2	40	035563	035137
	14 x 10	350 x 250		† -		1-1/2	40	033303	033140
						2	50	025564	025141
	14 x 12	350 x 300	_			2 2 1/2	50 65	035564	035141
	14 x 12 16 x 12	350 x 300 400 x 300	-	† -		2-1/2	65	035565	035142
	16 x 12	400 x 300	-	† - † -		2-1/2 3	65 75	035565 035566	035142 035143
	16 x 12 16 x 14	400 x 300 400 x 350	-	† - † - † -		2-1/2 3 4	65 75 100	035565 035566 035567	035142 035143 035144
	16 x 12 16 x 14 18 x 14	400 x 300 400 x 350 450 x 350	- - -	† - † - † -		2-1/2 3 4 5	65 75 100 125	035565 035566 035567 035568	035142 035143 035144 035145
	16 x 12 16 x 14 18 x 14 18 x 16	400 x 300 400 x 350 450 x 350 450 x 400	- - - -	† - † - † - † -		2-1/2 3 4 5 6	65 75 100 125 150	035565 035566 035567 035568 035569	035142 035143 035144
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400	- - - -	† - † - † - † - † -		2-1/2 3 4 5	65 75 100 125	035565 035566 035567 035568	035142 035143 035144 035145
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 500 x 450	- - - -	† - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8	65 75 100 125 150 200	035565 035566 035567 035568 035569	035142 035143 035144 035145
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 500 x 450 600 x 450	- - - - -	† - † - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8 <b>ale Adapter</b> Spig	65 75 100 125 150 200 x Fpt	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 500 x 450	- - - - -	† - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8 ale Adapter Spig	65 75 100 125 150 200 3 x Fpt 12	035565 035566 035567 035568 035569	035142 035143 035144 035145 035146 -
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 500 x 450 600 x 450	- - - - -	† - † - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4	65 75 100 125 150 200 9 x Fpt 12 20	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146 - 035148 035149
Coupli	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 500 x 450 600 x 450	- - - - -	† - † - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1	65 75 100 125 150 200 g x Fpt 12 20 25	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146 - 035148 035149 035150
Coupli	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 500 x 450 600 x 500	- - - - - -	† - † - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4	65 75 100 125 150 200 3 x Fpt 12 20 25 32	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146 - 035148 035149 035150 035151
Coupli	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt 1/2	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 600 x 450 600 x 500	- - - - - - -	† - † - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152
Coupli	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt 1/2 3/4	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 600 x 450 600 x 500	- - - - - - - - 035466 035467	† - † - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40 50	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153
Coupli	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt 1/2	400 x 300 400 x 350 450 x 350 450 x 400 500 x 400 600 x 450 600 x 500	- - - - - - -	† - † - † - † - † - † - † - † - † -	Fem	2-1/2 3 4 5 6 8  ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2 3	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40 50 75	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153 035155
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt 1/2 3/4 1	400 x 300 400 x 350 450 x 350 450 x 400 500 x 450 600 x 450 600 x 500	- - - - - - - - 035466 035467	† - † - † - † - † - † - † - † - † -		2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2 3 4	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40 50 75 100	035565 035566 035567 035568 035569 035570	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 The state of the state o	400 x 300 400 x 350 450 x 400 500 x 450 600 x 450 600 x 500 12 20 25 Soc x Soc	- - - - - - 035466 035467 035468	† - † - † - † - † - † - † - † - † -		2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2 3 4 ucing Female Ada	65 75 100 125 150 200 9 x Fpt 12 20 25 32 40 50 75 100 apter So	035565 035566 035568 035569 035570 	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153 035155 035156
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 The state of the state o	400 x 300 400 x 350 450 x 400 500 x 400 500 x 450 600 x 500 12 20 25 Soc x Soc 20 x 12	- - - - - - - - 035466 035467 035468	† - † - † - † - † - † - † - † - † -		2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2 3 4 ucing Female Ada 1/2 x 1/4	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40 50 75 100 apter So	035565 035566 035568 035569 035570 - - - - - - - - - - - - -	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153 035155
	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt 1/2 3/4 1 ing Coupling 3/4 x 1/2 1 x 3/4	12 20 25 Soc x Soc 25 x 20	- - - - - - - - - 035466 035467 035468	† - † - † - † - † - † - † - † - † -		2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2 3 4 ucing Female Ada 1/2 x 1/4 1/2 x 3/8	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40 50 75 100 apter So 12 x 6 12 x 9	035565 035566 035567 035568 035569 035570 - - - - - - - - - - - - -	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153 035155 035156
Reduc	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt 1/2 3/4 1 ing Coupling 3/4 x 1/2 1 x 3/4 1-1/4 x 1	400 x 300 400 x 350 450 x 400 500 x 400 500 x 450 600 x 500 12 20 25 Soc x Soc 20 x 12 25 x 20 32 x 25	- - - - - - - - - 035466 035467 035468	† - † - † - † - † - † - † - † - † -		2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2 3 4 ucing Female Ada 1/2 x 1/4 1/2 x 3/8 1/2 x 3/4	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40 50 75 100 apter So 12 x 6 12 x 9 12 x 20	035565 035566 035568 035569 035570          -	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153 035155 035156
Reduc	16 x 12 16 x 14 18 x 14 18 x 16 20 x 16 20 x 18 24 x 18 24 x 20 ng Fpt x Fpt 1/2 3/4 1 ing Coupling 3/4 x 1/2 1 x 3/4	12 20 25 Soc x Soc 25 x 20	- - - - - - - - - 035466 035467 035468	† - † - † - † - † - † - † - † - † -		2-1/2 3 4 5 6 8 ale Adapter Spig 1/2 3/4 1 1-1/4 1-1/2 2 3 4 ucing Female Ada 1/2 x 1/4 1/2 x 3/8	65 75 100 125 150 200 3 x Fpt 12 20 25 32 40 50 75 100 apter So 12 x 6 12 x 9	035565 035566 035567 035568 035569 035570 - - - - - - - - - - - - -	035142 035143 035144 035145 035146 - 035148 035149 035150 035151 035152 035153 035155 035156

	Dimens	sion		Sch 40 Grey	
	inches	mm	Product Code	Product Code	9
Con	icentric Coupli	ng Soc x So	2		
	8 x 3	200 x 75		t -	†
	8 x 4	200 x 100		t 035042	†
	8 x 6	200 x 150		t 035043	†
	10 x 4	250 x 100		t 035044	†
	10 x 6	250 x 150		t 035045	†
	10 x 8	250 x 200		t 035046	†
	12 x 4	300 x 100			†
	12 x 6	300 x 150		t - t 035047	†
	12 x 8				
		300 x 200		t 035048	†
	12 x 10	300 x 250		t 035049	†
	14 x 6	350 x 150		t -	†
	14 x 8	350 x 200		t -	†
	14 x 10	350 x 250		t -	t
	14 x 12	350 x 300		t -	†
	16 x 8	400 x 200	035446	t -	†
	16 x 10	400 x 250		t -	†
	16 x 12	400 x 300	-	t 035051	t
	16 x 14	400 x 350		t -	†
	18 x 8	450 x 200		t -	•
	18 x 10	450 x 250		t -	
	18 x 12	450 x 300		t -	•
	18 x 14	450 x 350		t -	
	18 x 16	450 x 400		t -	•
	20 x 12	500 x 300		t -	D
	20 x 14	500 x 350		t -	b
	20 x 16	500 x 400		t -	•
	20 x 18	500 x 450		† -	
	24 x 14	600 x 350		t -	•
	24 x 16	600 x 400		t -	
	24 x 18	600 x 450		t -	
	24 x 18	600 x 430		r - t -	•
Ma	l <b>e Adapter</b> Soc				
	3/8	9	035934	-	
	1/2	12	035602	-	
	3/4	20	035603	-	
$\overline{}$	1	25	035604	-	
	1-1/4	32	035605	-	
	1-1/2	40	035606	-	
	2	50	035607	-	
	2-1/2	65	035608	-	
	3	75	035609	-	
	4	100	035610	-	
	5	125	035611	-	
	6	150	035612	-	
	8	200	035613	-	
IPS	to PIP Adapte	r Spig x Soc			
	6	150	235045	_	_
(	8	200	235046	<u>-</u>	
	0	200	2000-10		

Dimension

Sch 40 White Sch 40 Grey

	Dimensio	n	Sch 40 White	e Sch 40 (	Grey
	inches	mm	Product Code	e Product	Code
			•		
Ecc	entric Coupling	Soc x Soc			
	8 x 4	200 x 100	-	t 03507	8 <b>t</b>
	8 x 6	200x150	-	t 03507	9 t
7	10 x 4	250 x 100	035479	t -	t
	10 x 6	250 x 150	-	t 03508	t C
	10 x 8	250 x 200	-	t 03508	1 +
	12 x 4	300 x 100	-	† -	†
	12 x 6	300 x 150	035480	† -	†
	12 x 8	300 x 200	-	† -	t
	12 x 10	300 x 250	-	† -	†
	14 x 6	350 x 150	-	† -	t
	14 x 8	350 x 200	-	† -	t
	14 x 10	350 x 250	-	t -	†
	14 x 12	350 x 300	-	† -	†
	16 x 8	400 x 200	-	† -	†
	16 x 10	400 x 250	-	† -	†
	16 x 12	400 x 300	-	† -	t
	16 x 14	400 x 350	-	† -	t
	18 x 8	450 x 200	-	† -	•
	18 x 10	450 x 250	-	† -	D
	18 x 12	450 x 300	-	† -	•
	18 x 14	450 x 350	-	† -	•
	18 x 16	450 x 400	-	† -	•
	20 x 12	500 x 300	-	† -	•
	20 x 14	500 x 350	-	† -	•
	20 x 16	500 x 400	-	† -	Þ
	20 x 18	500 x 450	-	† -	•
	24 x 14	600 x 350	-	† -	•
	24 x 16	600 x 400		† -	D
	24 x 18	600 x 450		† -	•
	24 x 20	600 x 500	-	† -	D

#### Red

90	ducing Male Ada	<b>pter</b> MtxS	OC	
	1/2	12	-	035167
	1/2 x 3/4	12 x 20	035614	-
	3/4	20	-	035168
	3/4 x 1/2	20 x 12	035615	-
	3/4 x 1	20 x 25	035616	-
	1	25	-	035169
	1 x 3/4	25 x 20	035617	-
	1 x 1-1/4	25 x 32	035618	-
	1 1/4	32	-	035170
	1-1/4 x 1	32 x 25	035380	-
	1-1/4 x 1-1/2	32 x 40	035593	-
	1-1/2	40	-	035171
	1-1/2 x 1-1/4	40 x 32	035619	-
	1-1/2 x 2	40 x 50	035620	-
	2	50	-	035172
	2 x 1-1/2	50 x 40	035973	-
	2 x 2-1/2	50 x 65	235041	-
	2-1/2	65	-	035173
	2-1/2 x 3	65 x 75	235042	-
	2-1/2 x 4	65 x 100	235043	-
	3	75	-	035174
	3 x 4	75 x 100	235044	-
	4	100	-	035175
	5	125	-	035176
	6	150	-	035177

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimensi inches	on mm	Sch 40 White Product Code	-		Dimen inches	nsion mm		Sch 40 Grey Product Code
Rise	er Extension Fp	ot x Mpt			Reduc	er Bushing	Spig x Soc	(con't)	
	1/2	12	035591	-		6 x 2	150 x 50	035683	-
	3/4	20	035944	-		6 x 3	150 x 75	035684	-
	1	25	035947	-		6 x 4	150 x 100	035685	035244
						6 x 5	150 x 125	035686	-
Snic	jot x Female Ac	lantor Spic	v Ent			8 x 4	200 x 100	035687	035245 <b>t</b>
Spig	1/2	• • •			-	8 x 6	200 x 150	035688	035246
	3/4	12 20	035578 035579	-		10 x 4	250 x 100	035689 <b>†</b>	
	1	25	035580	-		10 x 6	250 x 150	035690 <b>†</b>	
	1-1/4	32	035581	-		10 x 8	250 x 200	035691 +	
	1-1/4	40		-		12 x 4	300 x 100	035041 +	
	2	50	035582	-		12 x 6	300 x 150	035692 +	
			035583	-		12 x 8	300 x 200	035693 + 035694 +	
	2-1/2 3	65 75	035584 035585	-		12 x 10 14 x 6	300 x 250 350 x 150	035694 +	
		100		-		14 x 8	350 x 150	- †	
	4	100	035586	-		14 x 10	350 x 250	- +	
						14 x 12	350 x 300	035695 +	
Red	ucer Bushing	Spig x Soc				16 x 8	400 x 200	- †	
	1/2 x 1/4	12 x 6	035643	-		16 x 10	400 x 250	- +	
	1/2 x 3/8	20 x 9	035644	-		16 x 12	400 x 300	- †	
	3/4 x 1/2	20 x 12	035646	035209		16 x 14	400 x 350	- +	
	1 x 1/2	25 x 12	035648	035211		18 x 10	450 x 250	- †	- )
	1 x 3/4	25 x 20	035649	035212		18 x 12	450 x 300	- †	- )
	1-1/4 x 1/2	32 x 12	035650	035213		18 x 14	450 x 350	- +	- )
	1-1/4 x 3/4	32 x 20	035651	035214		18 x 16	450 x 400	- †	- 1
	1-1/4 x 1	32 x 25	035652	035215		20 x 12	500 x 300	- †	
	1-1/2 x 1/2	40 x 12	035653	035216		20 x 14	500 x 350	- †	
	1-1/2 x 3/4	40 x 20	035654	035217		20 x 16	500 x 400	- †	
	1-1/2 x 1	40 x 25	035655	035218		20 x 18	500 x 450	- †	
	1-1/2 x 1-1/4	40 x 32	035656	035219		24 x 14 24 x 16	600 x 350 600 x 400	- †	
	2 x 1/2	50 x 12	035657	035220		24 x 18	600 x 450	- +	
	2 x 3/4	50 x 20	035658	035221		24 x 20	600 x 500	- +	
	2 x 1	50 x 25	035659	035222		2.7.20	000 % 000		•
	2 x 1-1/4	50 x 32	035660	035223	T.T. Bu	shing Mpt	x FPT		
	2 x 1-1/2	50 x 40	035661	035224		3/8 x 1/4	9 x 6	035696	-
	2-1/2 x 1/2	65 x 12	035662	-		1/2 x 1/4	12 x 6	035697	-
	2-1/2 x 3/4	65 x 20	035663	-		1/2 x 3/8	12 x 9	035698	-
	2-1/2 x 1	65 x 25	035664	-		3/4 x 1/4	20 x 6	035699	-
	2-1/2 x 1-1/4	65 x 32	035665	035227		3/4 x 3/8	20 x 9	035968	-
	2-1/2 x 1-1/2	65 x 40	035666	035228		3/4 x 1/2	20 x 12	035700	-
	2-1/2 x 2	65 x 50	035667	035229		1 x 1/2	25 x 12	035701	-
	3 x 3/4	75 x 20	035668	-		1 x 3/4	25 x 20	035702	-
	3 x 1	75 x 25	035669	035231		1-1/4 x 1/2	32 x 12	035703	-
	3 x 1-1/4	75 x 32	035670	035232		1-1/4 x 3/4	32 x 20	035704	-
	3 x 1-1/2	75 x 40	035671	035233		1-1/4 x 1 1-1/2 x 1/2	32 x 25 40 x 12	035705 035706	-
	3 x 2	75 x 50	035672	035234		1-1/2 x 1/2 1-1/2 x 3/4	40 x 12	035700	-
	3 x 2-1/2	75 x 65	035673	035235		1-1/2 x 3/4	40 x 25	035707	-
	4 x 2	100 x 50	035677	035238		1-1/2 x 1-1/4	40 x 32	035709	-
	4 x 2-1/2	100 x 65	035678	035239		2 x 1	50 x 25	035711	-
	4 x 3	100 x 75	035679	035240		2 x 1-1/4	50 x 32	035712	-
	5 x 2	125 x 50	035680	-		2 x 1-1/2	50 x 40	035713	-
	5 x 3	125 x 75	035681	-		2-1/2 x 2	65 x 50	035714	-
	5 x 4	125 x 100	035682	035241		3 x 2	75 x 50	035715	-

3 x 2-1/2

75 x 65

	Dimens	sion	Sch 40 White	Sch 40 Grey
	inches	mm	Product Code	Product Code
du	cer Bushing	Spig x Fpt		
	1/2 x 1/8	12 x 3	035717	-



d	lucer Bushing	Spig x Fpt			
	1/2 x 1/8	12 x 3	035717	-	
	1/2 x 1/4	12 x 6	035718	035258	
	1/2 x 3/8	12 x 9	035719	035259	
	3/4 x 1/4	20 x 6	035720	-	
	3/4 x 1/2	20 x 12	035722	035260	
	1 x 3/8	25 x 9	035723	-	
	1 x 1/2	25 x 12	035724	035262	
	1 x 3/4	25 x 20	035725	035263	
	1-1/4 x 1/2	32 x 12	035726	035264	
	1-1/4 x 3/4	32 x 20	035727	035265	
	1-1/4 x 1	32 x 25	035728	035266	
	1-1/2 x 1/2	40 x 12	035729	035267	
	1-1/2 x 3/4	40 x 20	035730	035268	
	1-1/2 x 1	40 x 25	035731	035269	
	1-1/2 x 1-1/4	40 x 32	035732	035270	
	2 x 1/2	50 x 12	035733	035271	
	2 x 3/4	50 x 20	035734	035272	
	2 x 1	50 x 25	035735	035273	
	2 x 1-1/4	50 x 32	035736	035274	
	2 x 1-1/2	50 x 40	035737	035275	
	2-1/2 x 1/2	65 x 12	035738	-	
	2-1/2 x 3/4	65 x 20	035739	-	
	2-1/2 x 1	65 x 25	035740	-	
	2-1/2 x 1-1/4	65 x 32	035741	-	
	2-1/2 x 1-1/2	65 x 40	035742	035277	
	2-1/2 x 2	65 x 50	035743	035278	
	3 x 3/4	75 x 20	035744	-	
	3 x 1	75 x 25	035745	-	
	3 x 1-1/4	75 x 32	035746	-	
	3 x 1-1/2	75 x 40	035747	035282	†
	3 x 2	75 x 50	035748	035283	
	3 x 2-1/2	75 x 65	035749	-	
	4 x 2	100 x 50	035750	035285	
	4 x 2-1/2	100 x 65	035751	-	
	4 x 3	100 x 75	035752	035286	
	5 x 3	125 x 75	035753	-	
	5 x 4	125 x 100	035754	235062	
	6 x 2	150 x 50	035755	-	
	6 x 3	150 x 75	035756	-	
	6 x 4	150 x 100	035757	035287	
	6 x 5	150 x 125	035758	-	

#### 45° Wye Soc x Soc x Soc



	1-1/2	40	035912	1	-
)	2	50	035913	1	-
,	3	75	035915	1	-
	4	100	035916	1	-
	6	150	035917	1	-
	6 x 6 x 4	150 x 150 x 100	035922		-

1/2" - 2" - 235 psi maximum internal pressure rating @ 73°F (12 - 50mm - 1 620 kPa maximum internal pressure rating @ 23°C)

3" - 6" - 150 psi maximum internal pressure rating @ 73°F (75 - 150mm - 1 034 kPa maximum internal pressure rating @ 23°C)

Dimension		Sch 40 White	Sch 40 Grey
inches	mm	Product Code	<b>Product Code</b>

#### 15° Wye Soc x Soc x Soc (50 psi / 345 kPa max)

	,	, ,		,	
	1/2	12	-	035357	†
0	3/4	20	-	035358	†
/	1-1/2	40	-	035359	†
	2	50	-	035360	†
	2-1/2	65	-	035361	†
	3	75	-	-	t
	4	100	-	035363	t
	6	150	-	035364	†
	8	200	-	035365	†
	10	250	-	035366	†
	12	300	-	035367	†
	14	350	-	-	†
	16	400	-	-	†
	18	450	-	-	D
	20	500	-	-	Þ

5⁰	Reducing W	ye Soc	x Soc	x Soc	(50 psi /	′ 345 kPa max)	)
	8 x 8 x 4	200 x 20	00 x 10	00	-	035372	†
	8 x 8 x 6	200 x 20	OO x 15	50	-	035373	†
	10 x 10 x 4	250 x 25	50 x 10	00	-	-	†
	10 x 10 x 6	250 x 25	50 x 15	50	-	035374	†
	10 x 10 x 8	250 x 25	50 x 20	00	-	-	†
	12 x 12 x 4	300 x 30	00 x 10	00	-	-	†
	12 x 12 x 6	300 x 30	OO x 15	50	-	035935	†
	12 x 12 x 8	300 x 30	00 x 20	00	-	-	†
	12 x 12 x 10	300 x 30	00 x 25	50	-	-	†
	14 x 14 x 6	350 x 35	50 x 15	50	-	-	†
	14 x 14 x 8	350 x 35	50 x 20	00	-	-	†
	14 x 14 x 10	350 x 35	50 x 25	50	-	-	†
	14 x 14 x 12	350 x 35	50 x 30	00	-	-	†
	16 x 16 x 8	400 x 40	00 x 20	00	-	035375	†
	16 x 16 x 10	400 x 40	00 x 25	50	-	-	†
	16 x 16 x 12	400 x 40	00 x 30	00	-	-	†
	16 x 16 x 14	400 x 40	00 x 35	50	-	-	†
	18 x 18 x 8	450 x 45	50 x 20	00	-	-	
	18 x 18 x 10	450 x 45	50 x 25	50	-	-	
	18 x 18 x 12	450 x 45	50 x 30	00	-	-	
	18 x 18 x 14	450 x 45	50 x 35	50	-	-	
	18 x 18 x 16	450 x 45	50 x 40	00	-	-	
	20 x 20 x 12	500 x 50	00 x 30	00	-	-	•
	20 x 20 x 14	500 x 50			-	-	
	20 x 20 x 16	500 x 50	00 x 40	00	-	-	•
	20 x 20 x 18	500 x 50	OO x 45	50	-	-	
	24 x 24 x 14	600 x 60	00 x 35	50	-	-	•
	24 x 24 x 16	600 x 60	00 x 40	00	-	-	D
	24 x 24 x 18				-	-	•
	24 x 24 x 20	600 x 60	00 x 50	00	-	-	

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimer	nsion	Sch 40 White	Sch 40 Grey		Dimen	sion	Sch 40 White	Sch 40 Grev
	inches	mm		Product Code		inches	mm		Product Code
Cap S	200				Dlu	a Mot			
Сар	3/8	9	035406	035590	- Fiu	g Mpt 3/8	9	035621	
						1/2	12	035621	035188
	1/2	12	035407	035017		3/4	20	035622	035189
	3/4	20	035408	035018		1	25	035624	035189
	1	25	035409	035019		1-1/4	32	035625	035170
	1-1/4	32	035410	035020		1-1/2	40	035626	035171
	1-1/2	40	035411	035021		2	50	035627	035193
	2	50	035412	035022		2-1/2	65	035628	035194
	2-1/2	65	035413	035023		3	75	035629	035195
	3	75	035414	035024		4	100	035630	035196
	4	100	035415	035025		6	150	235047	-
	5	125	035416	035026					
	6	150	035417	035027	Plu	<b>g</b> Spig			
	8	200	035418	035028	_	3/8	9	035946	-
	10	250	035419 1	· 035029 <b>t</b>		1/2	12	035631	035197
	12	300	035420 <b>1</b>	· 035030 <b>t</b>		3/4	20	035632	035198
	14	350	035421 <del>1</del>	· 035031 <b>t</b>	$\cdot$	1	25	035633	035199
	16	400	- 1			1-1/4	32	035634	035200
	18	450	035422			1-1/2	40	035635	035201
	20	500	035940 1			2	50	035636	035202
	24	600	- 1			2-1/2	65	035637	035203 -
	24	000	-			3	75	035638	035204
Con						4	100	035639	-
Cap F	-		005040		_				
	3/8	9	035948	-	Sac	<b>Idles</b> Pipe OD x	Soc (Rated for	80 psi / 552 kF	a Open-Ended
	1/2	12	035423	035032		2-1/2 x 3/4	65 x 20	235048	-
ANTINIA	3/4	20	035424	035033		• 3 x 1-1/4	75 x 32	035996	-
	1	25	035425	035034		3 x 1-1/2	75 x 40	235049	-
	1-1/4	32	035426	035035	Those	• 3 x 2	75 x 50	035995	-
	1-1/2	40	035427	035036	These sizes are	• 4 x 1-1/4	100 x 32	035767	-
	2	50	035428	035037	bushed.	4 x 1-1/2	100 x 40	035768	-
	2-1/2	65	035429	035038		• 4 x 2	100 x 50	035769	-
	3	75	035430	035039		• 5 x 1-1/2	125 x 40	235050	-
	4	100	035431	-		5 x 2	125 x 50	035955	-
	5	125	035432	-		• 6 x 1-1/4	150 x 32	235051	-
	6	150	035433	-		6 x 1-1/2	150 x 40	035588	-
						• 6 x 2	150 x 50	035942	-
llnion	Soc x Soc	Buna O-rin	n Seal			6 x 4	150 x 100	035770	-
Omon					_	• 8 x 1-1/4	200 x 32	235052	-
	1/2	12	035900	-		8 x 1-1/2	200 x 40	235053	-
	3/4	20	035901	-		• 8 x 2	200 x 50	235054	-
	1	25	035902	-		8 x 4	200 x 100	035976	-
	1-1/4	32	035903	-		10 x 4	250 x 100	035771	-
	1-1/2	40	035904	-	Coo	Idlaa Dii OD	Ed /Data to	00 / 550 / 5	
	2	50	035905	-	Sac	Idles Pipe OD x	* *	<u> </u>	a Open-Ended
						2-1/2 x 3/4	65 x 20	235055	-
Union	Fpt x Fpt	Buna O-ring	Seal			3 x 1-1/2	75 x 40	035993	-
	1/2	12	035906	-		4 x 1-1/2	100 x 40	035772	-
	3/4	20	035907	-		5 x 2	125 x 50	035943	-
	1	25	035908	-		6 x 1-1/2	150 x 40	035587	-
	1-1/4	32	035909			6 x 4	150 x 100	235056	-
	1-1/4	40	035909	-		8 x 1-1/2	200 x 40	235057	-
				-		8 x 4	200 x 100	035774	-
	2	50	035911	-		10 x 4	250 x 100	235058	-

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dimension	n	PVC Sch 80	) (	CPVC Sch 80	0_			<u>Dime</u>	nsion	PVC Sch 80	)	CPVC Sch 80
	inches	mm	Product Code	e F	Product Cod	е		inches	5	mm	Product Cod	le	Product Code
Tee							Dod	ucing Te	•		2		
ree	Soc x Soc x Soc		036768		050470		Keu			Soc x Soc x Soc 20 x 20 x 12	036786		059492
	3/8	6 9	036768		059479 059480			1 x 3/4 x		25 x 20 x 20	036790		-
6	1/2	12	036779		059481			1 x 3/4 x		25 x 20 x 25	036790		059493
	3/4	20	036770		059481			1 x 1 x 1		25 x 25 x 12	036788		059494
	1	25	036771		059483			1 x 1 x 3		25 x 25 x 20	036789		-
	1-1/4	32	036772		059484			1-1/4 x 1 x		32 x 25 x 20	036792		-
	1-1/2	40	036774		059485			1-1/4 x 1 x	1-1/4	32 x 32 x 25	-		059495
	2	50	036774		059486			1-1/4 x 1-1/4	x 3/4	32 x 32 x 20	036793		-
	2-1/2	65	036776		059487			1-1/4 x 1-1/	4 x 1	32 x 32 x 25	036794		-
	3	75	036777		059487			1-1/2 x 1-1/2	2 x 3/4	40 x 40 x 20	036795		059496
	4	100	036777		059489			1-1/2 x 1-1/	2 x 1	40 x 40 x 25	036796		059497
	6	150	036780		059490			2 x 2 x 1		50 x 50 x 12	036797		059498
	8	200	036780		059490			2 x 2 x 3		50 x 50 x 20	036798		059499
	10	250	036866		059062	÷		2 x 2 x		50 x 50 x 25	036799		059500
	12	300	036876		059084	1		2 x 2 x 1-		50 x 50 x 40	036800		059501
	10	250	036782	+	-	•		3 x 3 x		75 x 75 x 50	036802		059502
	12	300	036783	†	_			3 x 3 x 2-		75 x 75 x 65	036803		059504
	14	350	036784	†				4 x 4 x		100 x 100 x 50	036804		059505
	16	400	036785	†	_			4 x 4 x 6 x 6 x		150 x 100 x 75 150 x 150 x 75	036805 036807		-
	18	450		†	-			6 x 6 x		150 x 150 x 75	036807	†	059506
	10	430	030120	1				8 x 8 x		200 x 200 x 100	036809	'	-
Tee	Soc x Soc x Fpt							8 x 8 x		200 x 200 x 150	036810	t	059567
100	1/2	12	036828		059942	_		10 x 10		250 x 250 x 100	036919	+	-
	3/4	20	036829		059943			10 x 10		250 x 250 x 150	036812	+	-
6	1	25	036830		059518			10 x 10		250 x 250 x 200	036813	t	-
	2	50	036832		-			12 x 12	x 8	300 x 300 x 200	036814	t	-
	2	00	000002					12 x 12 x	10	300 x 300 x 250	036815	t	-
Tee	Fpt x Fpt x Fpt							14 x 14 x	10	350 x 350 x 250	036816	t	-
	1/4	6	036817		059507	_		14 x 14 x	12	350 x 350 x 300	-	†	-
	3/8	9	036818		059508			16 x 16 x		400 x 400 x 300	-	†	-
	1/2	12	036819		059509			16 x 16 x	14	400 x 400 x 350	-		-
	3/4	20	036820		059510								
	1	25	036821		059511		90°	Elbow	Soc	x Soc			
	1-1/4	32	036822		059512			1/4		6	036179		059192
	1-1/2	40	036823		059513			3/8		9	036180		059193
	2	50	036824		059514			1/2		12	036181		059194
	2-1/2	65	036825		059515		$\bigcup$	3/4		20	036182		059195
	3	75	036826		059516			1		25	036183		059196
	4	100	036827		059517			1-1/4		32	036184		059197
								1-1/2		40	036185		059198
90°	Elbow Fpt x Fpt	t						2		50	036186		059199
$\overline{}$	1/4	6	036197		059206			2-1/2		65 75	036187		059200
	3/8	9	036198		059207			3 4		75 100	036188 036189		059201 059202
	1/2	12	036199		059208			6		150	036189		059202
$\bigcup$	3/4	20	036200		059209			8		200	036191		059203
	1	25	036201		059210			10		250	036864	ī	059085
	1-1/4	32	036202		059211			12		300	036865	i.	057005
	1-1/2	40	036203		059212			10		250	036193	+	-
	2	50	036204		059213			12		300	036194	†	-
	2-1/2	65	036205		059214			14		350	036195	†	-
	3	75	036206		059215			16		400	036196	t	-

■,+, See page 5 for descriptions

100

036207

059216

18

450

036132 +

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dimen	ision	PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	Product Code
90°	<b>Elbow</b> Soc x	Fpt		
	1/2	12	036172	059187
	3/4	20	036173	059941
1	1	25	036174	059188
	1-1/4	32	036175	059189
	1-1/2	40	036176	059190
	2	50	036177	059191

	νim	ension	PAC 2CU 80	CPVC Sch 80
	inches	mm	Product Code	Product Code
22-	1/2° Elbow	Soc x Soc		
_	2	50	036134	059614
	3	75	036135	059615
<b></b> フ	4	100	036136	059616
	6	150	036137 <b>t</b>	-
	8	200	036138 <b>t</b>	-
	10	250	036139 <b>t</b>	-
	12	300	036140 <b>t</b>	-

45°	Elbow Soc	x Soc				
$\overline{}$	1/4	6	036142		059162	
. 7	3/8	9	036143		059163	
$\geq$	1/2	12	036144		059164	
	3/4	20	036145		059165	
	1	25	036146		059166	
	1-1/4	32	036147		059167	
	1-1/2	40	036148		059168	
	2	50	036149		059169	
	2-1/2	65	036150		059170	
	3	75	036151		059171	
	4	100	036152		059172	
	6	150	036154		059173	
	8	200	036155		059174	
	10	250	036862	1	059087	•
	12	300	036863	•	059088	
	10	250	036156	t	-	
	12	300	036157	†	-	
	14	350	036158	†	-	
	16	400	036159	t	-	

	_1				
		4	100	-	059619
	Cros	s Soc x Soc	c x Soc x Soc		
	7	1/4	6	-	059620
$\int_{\mathcal{L}}$	<b>)</b>	1/2	12	036116	059154
	Υ -	3/4	20	036117	059155
		1	25	036118	059156
		1-1/4	32	036119	059157
		1-1/2	40	036120	059158
		2	50	036121	059159
		2-1/2	65	036122	059018
		3	75	036123	059160
		4	100	036124	059161

150

036125 +

50

75

059617

059618

11-1/4° Elbow Soc x Soc 2

3

	16	400	036159	† -
45°	<b>Elbow</b> Fpt x	Fpt		
^	1/4	6	036160	059176
	3/8	9	036161	059177
=9	1/2	12	036162	059178
	3/4	20	036163	059179
	1	25	036164	059180
	1-1/4	32	036165	059181
	1-1/2	40	036166	059182
	2	50	036167	059183
	2-1/2	65	036168	059184
	3	75	036169	059185
	4	100	036170	059186
30°	Elbow Soc	x Soc		
	6	150	236003	059022

Cou	pling Soc x	Soc				
	1/4	6	036088		059130	
	3/8	9	036089		059131	
	1/2	12	036090		059132	
	3/4	20	036091		059133	
	1	25	036092		059134	
	1-1/4	32	036093		059135	
	1-1/2	40	036094		059136	
	2	50	036095		059137	
	2-1/2	65	036096		059138	
	3	75	036097		059139	
	4	100	036098		059140	
	6	150	036099		059141	
	8	200	036100		059142	
	10	250	036101	t	059033	†
	12	300	036102	t	059043	†
	14	350	036103	†	-	
	16	400	036889	t	-	

	Dimension		PVC Sch 80	CPVC Sch 80	
	inches	mm	Product Code	Product Code	
Cou	pling Fpt x Fpt				
<b></b>	1/4	6	036104	059143	
	3/8	9	036105	059144	
	1/2	12	036106	059145	(
	3/4	20	036107	059146	
	1	25	036108	059147	
	1-1/4	32	036109	059148	
	1-1/2	40	036110	059149	
	2	50	036111	059150	
	2-1/2	65	036112	059151	
	3	75	036113	059152	

036114

059153

Dimen	sion	PVC Sch 80	CPVC Sch 80
inches	mm	Product Code	Product Code

45°	Wye	Soc x Soc x Soc	
$\overline{}$	1-	1/2 40	



1/2" - 2" - 235 psi maximum internal pressure rating @  $73^{\circ}F$ (12 - 50mm - 1 620 kPa maximum internal pressure rating @ 23°C)

3" - 6" - 150 psi maximum internal pressure rating @  $73^{\circ}F$ (75 - 150mm - 1 034 kPa maximum internal pressure rating @ 23°C)

Red	ucer Coupling	Soc x Soc		
	3/4 x 1/2	20 x 12	036719	059460
	1 x 1/2	25 x 12	036720	059461
	1 x 3/4	25 x 20	036721	059462
	1-1/4 x 3/4	32 x 20	036723	-
	1-1/4 x 1	32 x 25	036724	059463
	1-1/2 x 1/2	40 x 12	036725	-
	1-1/2 x 3/4	40 x 20	036726	059464
	1-1/2 x 1	40 x 25	036727	059465
	1-1/2 x 1-1/4	40 x 32	036728	059466
	2 x 1/2	50 x 12	036897	-
	2 x 1	50 x 25	036729	059467
	2 x 1-1/2	50 x 40	036731	059458
	3 x 2	75 x 50	036735	059470
	4 x 2	100 x 50	036736	059459
	4 x 3	100 x 75	036738	059472
	6 x 4	150 x 100	036740	059471
	8 x 6	200 x 150	036743	059473

100

Re	ducer Coupling	Fpt x Fpt		
	1/2 x 1/4	12 x 6	036746	-
	3/4 x 1/2	20 x 12	036748	-
	1 x 1/2	25 x 12	036749	-
	1 x 3/4	25 x 20	036750	-
	1-1/4 x 3/4	32 x 20	036751	-
	1-1/2 x 1	40 x 25	036754	-
	2 x 1-1/2	50 x 40	036758	-

Red	lucer Bushing	Spig x Soc	(flushstyle)	)
	3/8 x 1/4	9 x 6	036599	-
	1/2 x 1/4	12 x 6	036600	059373
	1/2 x 3/8	12 x 9	036601	059374
	3/4 x 1/2	20 x 12	036604	059375
	1 x 1/2	25 x 12	036605	059376
	1 x 3/4	25 x 20	036606	059377
	1-1/4 x 1/2	32 x 12	036607	059378
	1-1/4 x 3/4	32 x 20	036608	059379
	1-1/4 x 1	32 x 25	036609	059380
	1- 1/2 x 1/2	40 x 12	036610	059381
	1- 1/2 x 3/4	40 x 20	036611	059382
	1-1/2 x 1	40 x 25	036612	059383
	1-1/2 x 1-1/4	40 x 32	036613	059384
	2 x 1/2	50 x 12	036614	059385
	2 x 3/4	50 x 20	036615	059386
	2 x 1	50 x 25	036616	059387
	2 x 1-1/4	50 x 32	036617	059388
	2 x 1-1/2	50 x 40	036618	059389
	2 -1/2 x 1-1/4	65 x 32	036620	-
	2-1/2 x 1-1/2	65 x 40	036621	-
	2-1/2 x 2	65 x 50	036622	059392
	3 x 1	75 x 25	036623	-
	3 x 1-1/2	75 x 40	036624	059393
	3 x 2	75 x 50	036625	059394
	3 x 2-1/2	75 x 65	036626	059395
	4 x 2	100 x 50	036628	059396
	4 x 3	100 x 75	036630	059397
	6 x 2	150 x 50	036632	059398
	6 x 3	150 x 75	036633	059399
	6 x 4	150 x 100	036634	059400
	8 x 6	200 x 150	036638	059401
	10 x 6	250 x 150	036922	t -
	10 x 8	250 x 200	036270	t -
	12 x 10	300 x 250	036208	t -
	12 x 6	300 x 150	036908	-
	12 x 8	300 x 200	036645	-

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dimension		PVC Sch 80	CPVC Sch 80	
	inches	mm	Product Code	Product Code	
Red	ucer Bushing	Spig x Fpt	(flushstyle)		
	3/8 x 1/4	9 x 6	036679	-	
	1/2 x 1/4	12 x 6	036681	059428	(
	1/2 x 3/8	12 x 9	036682	059429	
	3/4 x 1/4	20 x 6	036683	059430	
	3/4 x 1/2	20 x 12	036684	059431	
	1 x 3/8	25 x 9	036685	-	
	1 x 1/2	25 x 12	036686	059432	
	1 x 3/4	25 x 20	036687	059433	
	1-1/4 x 1/2	32 x 12	036688	059434	
	1-1/4 x 3/4	32 x 20	036689	059435	
	1-1/4 x 1	32 x 25	036690	059436	
	1-1/2 x 1/2	40 x 12	036691	059437	
	1-1/2 x 3/4	40 x 20	036692	059438	
	1-1/2 x 1	40 x 25	036693	059439	
	1-1/2 x 1-1/4	40 x 32	036694	059440	
	2 x 1/2	50 x 12	036695	059441	
	2 x 3/4	50 x 20	036696	059442	
	2 x 1	50 x 25	036697	059443	
	2 x 1-1/4	50 x 32	036698	059444	
	2 x 1-1/2	50 x 40	036699	059445	
	2-1/2 x 3/4	65 x 20	036700	059446	
	2-1/2 x 1	65 x 25	036701	059447	
	2-1/2 x 1-1/4	65 x 32	036702	059448	
	2-1/2 x 1-1/2	65 x 40	036703	059449	
	2-1/2 x 2	65 x 50	036704	059450	
	3 x 3/4	75 x 20	036705	-	
	3 x 1	75 x 25	036706	059547	
	3 x 1-1/4	75 x 32	036707	-	
	3 x 1-1/2	75 x 40	036708	059451	
	3 x 2	75 x 50	036709	059452	
	3 x 2-1/2	75 x 65	036710	059453	
	4 x 2	100 x 50	036711	059454	
	4 x 2-1/2	100 x 65	036712	059640	,
	4 x 3	100 x 75	036713	059455	Ì
	6 x 2	150 x 50	036714	-	Ì
	6 x 3	150 x 75	036715	059641	,
	6 x 4	150 x 100	036716	059456	
	. Adams				
Wal	<u> </u>	c x Mpt	0044		
	1/2	12	036420	059286	
	3/4	20	036421	059287	
	1	25	036422	059288	
	1-1/4	32	036423	059289	
	1-1/2	40	036424	059290	
	2	50	026425	050201	

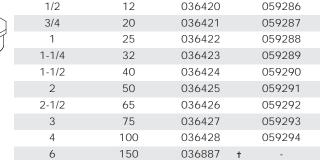
	Dime	ension	PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	<b>Product Code</b>
ΤT	Bushing M	ot x Fpt (flus	hstyle)	
$\overline{}$	3/8 x 1/4	9 x 6	036647	059402
	1/2 x 1/4	12 x 6	036648	059403
	1/2 x 3/8	12 x 9	036649	059404
	3/4 x 1/4	20 x 6	036651	059405
	3/4 x 3/8	20 x 9	036652	059406
	3/4 x 1/2	20 x 12	036653	059407
	1 x 1/4	25 x 6	036654	059643
	1 x 3/8	25 x 9	036655	-
	1 x 1/2	25 x 12	036656	059408
	1 x 3/4	25 x 20	036657	059409
	1-1/4 x 1/2	32 x 12	036658	059410
	1-1/4 x 3/4	32 x 20	036659	059411
	1-1/4 x 1	32 x 25	036660	059412
	1-1/2 x 1/2	40 x 12	036661	059413
	1-1/2 x 3/4	40 x 20	036662	059414
	1-1/2 x 1	40 x 25	036663	059415
	1-1/2 x 1-1/4	40 x 32	036664	059416
	2 x 1/2	50 x 12	036665	059417
	2 x 3/4	50 x 20	036666	059418
	2 x 1	50 x 25	036667	059419
	2 x 1-1/4	50 x 32	036668	059420
	2 x 1-1/2	50 x 40	036669	059421
	2-1/2 x 2	65 x 50	036672	059422
	3 x 1-1/2	75 x 40	036673	059423
	3 x 2	75 x 50	036674	059424
	3 x 2-1/2	75 x 65	036675	059425
	4 x 2	100 x 50	036676	059426
	4 x 3	100 x 75	036677	059427
Eom	nalo Adantor	Soo y Ent		
ren	nale Adapter		024200	050217
$\supset$	1/4 3/8	6	036209	059217
	1/2	12	036210 036211	059218 059219
	3/4			
		20	036212	059220 059221
	1 1/4	25	036213	
	1-1/4	32	036214 036215	059222
	1-1/2 2	40		059223
	2-1/2	50	036216 036217	059224 059225
	3	65 75		059225
	4		036218	
	4	100	036219	059227

6

150

036221 t





	<b>Dim</b> e	nsion	PVC Sch 80	CPVC Sch 80		<b>Dim</b> e	nsion	PVC Sch 80	CPVC Sch 80
	inches	mm		Product Code		inches	mm	Product Code	
Fem	nale Adapter		(SS reinforced)		Сар	Fpt			
	1/2	12	036971	059951		1/4	6	036072	059119
	3/4	20	036972	059952		3/8	9	036073	059120
	1	25	036973	059953		1/2	12	036074	059121
	1-1/4	32	036974	059954		3/4	20	036075	059122
	1-1/2	40	036975	059955		1	25	036076	059123
	2	50	036976	059956		1-1/4	32	036077	059124
	2-1/2	65	036977	059646		1-1/2	40	036078	059125
	3	75	036978	059957		2	50	036079	059126
	4	100	036979	059958		2-1/2	65	036080	059127
						3	75	036081	059128
Fem	nale Adapter	Spig x Fpt	(SS reinforced	)	_	4	100	036082	059129
	1/2	12	036965	059945					
	3/4	20	036966	059946					
	1	25	036967	059947					
	1-1/4	32	036968	059948	Plug	Mpt			
	1-1/2	40	036969	059949		1/4	6	036568	059361
	2	50	036970	059950		3/8	9	036569	059362
	3	75	236000	059647		1/2	12	036570	059363
	4	100	236001	059648		3/4	20	036571	059364
						1	25	036572	059365
Hos	e Adapter ⊢	lose x Mpt				1-1/4	32	036573	059366
	1/4	6	036394 †	-		1-1/2	40	036574	059367
	3/8	9	036395 +	-		2	50	036575	059368
	1/2	12	036396 +	-		2-1/2	65	036576	059369
$\prod$	3/4	20	036397 +	-		3	75	036577	059370
$\Theta$	1	25	036398 +	-		4	100	036578	059371
	1 1/4	32	036399 †	-		6	150	036579	-
	1 1/2	40	036400 <b>†</b>	-					
	2	50	036401 +	-					
	2 1/2	65	036402 †	-					
	3	75	036403 †	-	Plug	Spig			
	4	100	036404 <b>†</b>	-		2	50	036585	-
0									
Cap			00/25/	050107					
	1/4	6	036056	059107					
$\neg$	3/8	9	.036057	059108					
	1/2	12	036058	059109	90° I	Radius Bend	s - 6D Spig	ух Spig	
	3/4	20	036059	059110		1/2	12	- †	-
	1	25	036060	059111		3/4	20	036027 <b>+</b>	
	1-1/4	32	036061	059112		1	25	036028 <b>†</b>	
	1-1/2	40	036062	059113	Ы	1-1/4	32	036029 <b>†</b>	
	2	50	036063	059114		1-1/2	40	036030 +	
	2-1/2	65	036064	059115		2	50	036031 <b>†</b>	
	3	75	036065	059116		2-1/2	65	036032 <b>†</b>	
	1	100	024044	OEO117					

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#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dime inches	nsion mm	PVC Sch 80 Product Cod		CPVC Sch 80 Product Code		D inches	imension mm	PVC Sch 80 Product Code		CPVC Sch 80 Product Code
45° Ra	adius Bend	s - 6D Spig	ух Spig			Union	Soc x F	pt (Viton® O-r	ing Seal)		
_	1/2	12	-	†			1/2	12	036410		-
	3/4	20	036020	t			3/4	20	036411		-
( -	1	25	036021	t			1	25	036412		-
0	1-1/4	32	-	t			1-1/4	32	036413		-
	1-1/2	40	036022	†			1-1/2	40	036414		-
	2	50	036023	t			2	50	036415		_
	2-1/2	65	036867	†			3	75	236010		-
	3	75	036024	t			4	100	236011		_
	4	100	036025	t							
	6	150	036026	t							
	8	200	-	t		Tank A	dapter	Soc x Fpt			
	10	250		t			1/2	12	036038		059100
	12	300	-	t			3/4	20	036039		059101
							1	25	036040		059102
22 1/	2º Dadius I	Bends - 6D	Spig v Spig				1-1/4	32	036041		-
22-1/2							1-1/2	40	036042		059103
/7	1/2	12	036012	†	-		2	50	036043		059104
	3/4	20	-	†	-		3	75	036045		059105
	1	25	036013	†	-		4	100	036046		059106
	1-1/4	32	-	†	-		6	150		†	-
	1-1/2	40	-	†	-		Ü	.00			
	2	50	036014	†	-						
	2-1/2	65	036015	†	-	Tank A	dapter	Fpt x Fpt			
	3	75	036016	†	-		1/2	12	036047		-
	4	100	036017	†	-		3/4	20	036048		-
	6	150	036018	†	-		1	25	036049		-
	8	200	036019	†	-		1-1/4	32	036050		-
	10	250	-	†	-		1-1/2	40	036051		-
	12	300	-	†	-		2	50	036052		-
							3	75	036054		-
Union	Soc x Soc	(Viton® O-r	ing Seal)				4	100	036055		-
	1/4	6	036833		059519		6	150		†	-
	3/8	9	036834		-		Ü	.00		•	
	1/2	12	036835		059520						
	3/4	20	036836		059521	Flange	Soc	(solid style)			
	1	25	036837		059522		1/2	12	036223		059228
	1-1/4	32	036838		059523	(90)	3/4	20	036224		059229
	1-1/2	40	036839		059524		1	25	036225		059230
	2	50	036840		059525		1-1/4	32	036226		059231
	3	75	036842		059526		1-1/2	40	036227		059232
	4	100	036843		059550		2	50	036228		059233
							2-1/2	65	036229		059234
Union	F-4 F-4	() (; t = ® O;	CI)				3	75	036230		059235
OHION	Fpt x Fpt				050505		4	100	036231		059236
	1/4	6	036844		059527		5	125	036232		-
	3/8	9	036845		-		6	150	036233		059238
ШШ	1/2	12	036846		059529		8	200	036234		059239
	3/4	20	036847		059530		10	250		t	-
	1	25	036848		059531		12	300		†	-
	1-1/4	32	036849		059532		14	350		t t	-
	1-1/2	40	036850		059533		16	400		†	-
	2	50	036851		059534		18	450		†	_
	3	75	036852		059535		20	500			-
	4	100	036853		059651		20			†	-
							74	600	036239	†	-

24

600

036239 +

	Dimension		DVC C-L-00	CDVC Cab 00		
			PVC Sch 80	CPVC Sch 80		
	inches	mm	Product Code	Product Code		
Flar		olid style)				
	1/2	12	036240	059240		
	3/4	20	036241	059241		
	1	25	036242	059242		
	1-1/4	32	036243	059243		
	1-1/2	40	036244	059244		
	2	50	036245	059245		
	2-1/2	65	036246	059246		
	3	75	036247	059247		
	4	100	036248	059248		
	6	150	036249	059249		
Flai	•					
(99)	1/2	12	036250	059250		
	3/4	20	036251	059251		
	1	25	036252	059252		
	1-1/4	32	036253	059253		
	1-1/2	40	036254	059254		
	2	50	036255	059255		
	2-1/2	65	036256	059256		
	3	75	036257	059257		
	4	100	036258	059258		
	6	150	036259	059259		
	8	200	036260	059260		
	10	250	036261 <b>†</b>	-		
	12	300	036262 <b>†</b>	-		
	14	350	036263 +	<b>•</b> -		
	16	400	036264 t	<b>•</b> -		
	18	450	036265 t	<b>•</b> -		
	20	500	- +	<b>•</b> -		
	24	600	036266 +	<b>•</b> -		

◆ Domed flange

No-Leak	Flange	Spig x Spi
	1/2	12



-	Leak Flange	Spig x Spig				
	1/2	12	036331	t	-	
	3/4	20	036332	t	-	
	1	25	036923	t	-	
	1-1/4	32	036333	t	-	
	1-1/2	40	036334	+	-	
	2	50	036335	t	-	
	2-1/2	65	036336	t	-	
	3	75	036337	†	-	
	4	100	036338	†	-	
	6	150	036339	t	-	
	8	200	036340	t	-	
	10	250	036341	t	-	
	12	300	036342	t	-	
	14	350	036915	t	-	
	16	400	036343	t	-	
	18	450	036871	†	-	
	20	500	-	t	-	
	24	600	036924	t	-	

Dimen	sion	PVC Sch 80	CPVC Sch 80
inches	mm	Product Code	<b>Product Code</b>

Hea	vy Duty Vans	tone Flange	Soc w Fib	re-Lo	c Ring
	1/2	12	-		059262
	3/4	20	-		059263
	1	25	-		059264
	1-1/4	32	-		059265
	1-1/2	40	036323		059266
	2	50	036324		059267
	2-1/2	65	-		059268
	3	75	036326		059269
	4	100	036416		059270
	6	150	036417		059271
	8	200	036418		059272
	10	250	036419	t	059273
	12	300	036429	t	059569
	14	350	036358	† ▼	-
	16	400	036359	† ▼	-

▼ Molded hub, c/w coated metal rings

#### Vanstone Flange Soc w PVC Ring



•••	otomo i lango	000 W 1 V 0	, iting		
	1/2	12	036344	-	
	3/4	20	036345	-	
	1	25	036346	-	
	1-1/4	32	036347	-	
	1-1/2	40	036348	-	
	2	50	036349	-	
	2-1/2	65	036350	-	
	3	75	036351	-	
	4	100	036352	-	
	5	125	036353	-	
	6	150	036354	-	
	8	200	036355	-	
	10	250	036356 ▼	-	
	12	300	036357 ▼	-	

▼ Molded hub, c/w coated metal rings

Vanstone Flange Soc w Steel Ring

	18	450	036947	†	-
<b>(9</b> )	20	500	036913	†	-
	24	600	036914	t	-

Note: these flanges are rated at 50 psi (345 kPa) maximum operating

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dimension		PVC Sch 80	CPVC Sch 80	
	inches	mm	Product Code	Product Code	
Van	stone Flange	Spig			
-0-	1/2	12	036374	059274	
	3/4	20	036375	059275	
	1	25	036376	059276	
	1-1/4	32	036377	059277	
	1-1/2	40	036378	059278	
	2	50	036379	059279	(
	2-1/2	65	036380	059280	
	3	75	036381	059281	
	4	100	036382	059282	
	6	150	036383	059283	
	8	200	036384	059570	
	10	250	036321 +	-	
	12	300	036406 †	-	

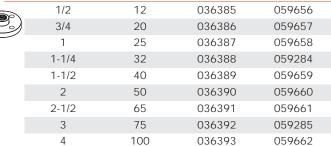
Dimension		PVC Sch 80	CPVC Sch 80	
inches	mm	Product Code	Product Code	

#### **Nipples**



	1/4" (6mm) diame	ter			
۸	7/8 close	22	036434	059296	
y	1-1/2	40	036445	059306	
	2	50	036456	059316	
	2-1/2	65	036457	-	
	3	75	036458	059317	
	3 1/2	90	036459	-	
	4	100	036460	059318	
	4-1/2	115	036461	-	
	5	125	036462	059319	
	6	150	036463	059320	
	8	200	036464	-	
	10	250	236012	-	
	12	300	236013	-	

#### Vanstone Flange Fpt



#### 3/8" (9mm) diameter

1 close	25	036435	059551	
1-1/2	40	036446	059307	
2	50	036466	059552	
2-1/2	65	036467	-	
3	75	036468	059939	
3-1/2	90	036469	-	
4	100	036470	059554	
4-1/2	115	036471	-	
5	125	036472	-	
6	150	036473	-	
8	200	036474	-	



/8	" Flange Gasket	Neoprene		
	1/2	12	036296	-
)	3/4	20	036297	-
	1	25	036298	-
	1-1/4	32	036299	-
	1-1/2	40	036300	-
	2	50	036301	-
	2-1/2	65	036302	-
	3	75	036303	-
	4	100	036304	-
	5	125	036305	-
	6	150	036306	-
	8	200	036307	-
	10	250	036308	-
	12	300	036309	-
	14	350	036310	-
	16	400	036311	-
	18	450	036312	-
	20	500	036313	-
	24	600	036314	-

#### 1/2" (12mm) diameter

1-1/8 close	28	036436	059297
1-1/2	40	036447	059308
2	50	036475	059322
2-1/2	65	036476	-
3	75	036477	059321
3-1/2	90	036478	-
4	100	036479	059324
4-1/2	115	036480	-
5	125	036481	059325
5-1/2	140	036482	-
6	150	036483	059326
8	200	036484	-
10	250	036485	-
12	300	036486	-

	Dimens	sion	PVC Sch 80	CPVC Sch 80		Dimen	sion	PVC Sch 80	CPVC Sch 80
	inches	mm		Product Code		inches	mm	Product Code	
aiN	ples				Nip	ples			
- 1*	3/4" (20mm) diar	neter				1-1/2" (40mm) d	iameter		
_	1-3/8 close	35	036437	059298		1-3/4 close	45	036440	059301
						2	50	036451	059312
	1-1/2	40	036448	059309		2-1/2	65	036526	-
	2	50	036490	059327		3	75	036527	059342
	2-1/2	65	036491	-		3-1/2	90	036528	-
	3	75	036492	059328		4	100	036529	059343
	3-1/2	90	036493	-		4-1/2	115	036530	-
	4	100	036494	059329		5	125	036531	059344
	4-1/2	115	036495	-		5-1/2	140	036532	-
	5	125	036496	059331		6	150	036533	059345
	5-1/2	140	036497	-		8	200	036534	-
	6	150	036498	059332		10	250 300	036535	-
	8	200	036500	-		12	300	036536	-
	10	250	036501	-		011 (50)			
	12	300	036502	-		2" (50mm) diame			
						2 close	50	036441	059302
	1" (2Emm) diama	tor				2-1/2	65	036452	-
	1" (25mm) diame	eter				3	75	036539	059346
	1-1/2 close	40	036438	059299		3-1/2	90	036540	-
	2	50	036449	059310		4 1/2	100	036541	059347
	2-1/2	65	036504	-		4-1/2 5	115 125	036542 036543	059348
	3	75	036505	059333		5-1/2	140	036544	
	3-1/2	90	036506	-		6	150	036545	059349
	4	100	036507	059334		8	200	036546	-
	4-1/2	115	036508	-		10	250	036547	_
	5	125	036509	059335		12	300	036548	-
	5-1/2	140	036510	-					
	6	150	036511	059336		2-1/2" (65mm) d	iameter		
	8	200	036512	-		2-1/2 close	65	036442	059303
	10	250	036514	-		3	75	036549	-
	12	300	036515	-		4	100	036550	059351
	12	300	030515	-		6	150	036551	059352
						8	200	036552	-
	1-1/4" (32mm) di	ameter				12	300	036553	-
	1-5/8 close	41	036439	059300					
	2	50	036450	059311		3" (75mm) diame	eter		
	2-1/2	65	036516	-		2-5/8 close	67	036443	059304
	3	75	036517	059338		3	75	036554	059353
	3-1/2	90	036518	-		4	100	036555	059354
	4	100	036519	059339		5	125	036556	059355
	4-1/2	115	036520	-		6	150	036557	059356
		125				8	200	036558	-
	5		036521	059340		10	250	036559	-
	6	150	036522	059341		12	300	036560	-
	8	200	036523	-					
	10	250	036524	-		4" (100mm) dian	neter		
	12	300	036525	-		2-7/8 close	72	036444	059305
						4	100	036562	-
						5	125	036563	-
						6	150	036564	059357
						8	200	036565	-
						10	250	036566	-
						12	300	036567	-

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

PVC Sch 80 CPVC Sch 80

	inches	mm	Product Code	Product Code
Ехр	ansion Joint	6" (150mm)	Travel EPDM	
	1/2	12	136115	059973
	3/4	20	136117	059975
	1	25	136119	059977
$\Box$	1-1/2	40	136121	059979
Ħ	2	50	136123	059981
П	3	75	136125	059983
	4	100	136127	059985

	Dimension		PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	Product Code
oly	ypropylene Pi	pe Clamps		
_	1/2	12	035180	-
	3/4	20	035181	-
5	1	25	035182	-
	1-1/4	32	035183	-
	1-1/2	40	035184	-
	2	50	035185	-

## Expansion Joint 12" (1300mm) Travel EPDM

Dimension

	1/2	12	136116	059959
	3/4	20	136118	059961
	1	25	136120	059963
	1-1/2	40	136122	059965
T	2	50	136124	059967
	3	75	136126	059969
	4	100	136128	059971

#### Strut Base



required to create one Strut Base Unit.

Example: If you require 10 complete Strut Base Units you must

#### Expansion Joint 6" (150mm) Travel Viton®

-				
	1/2	12	136101	059974
	3/4	20	136103	059976
	1	25	136105	059978
	1-1/2	40	136107	059980
	2	50	136109	059982
	3	75	136111	059984
	4	100	136113	059986

#### Pipe Straps 2 holes

order 20 strut bases.

6		1/2	12	036000	
	')	3/4	20	036001	
Į		1	25	036002	
	9	1-1/4	32	036003	
		1-1/2	40	036004	
		2	50	036005	

#### Expansion Joint 12" (1300mm) Travel Viton®

1/2	12	136102	059960
3/4	20	136104	059962
1	25	136106	059964
1-1/2	40	136108	059966
2	50	136110	059968
3	75	136112	059970
4	100	136114	059972

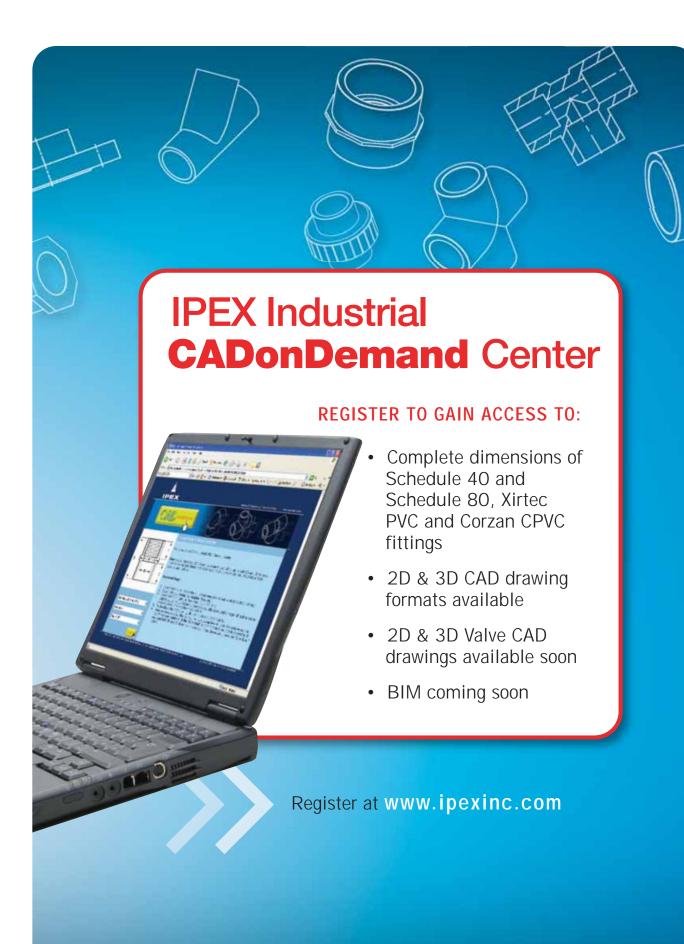
#### Pipe Straps PVC Coated Steel 2 holes

	2-1/2	65	036006	
//	3	75	036007	
U	3-1/2	90	036008	
9	4	100	036009	
	5	125	036010	
	6	150	036011	

#### "U" Bend 4" (100mm) O.C. for Ice Rink Piping

(10)	1	25	059019 Barbed end	
	1	25	- Plain End (Spigot)	

Fits 1" (25mm) ID Poly Pipe



# HIGH PRESSURE CLEAR-GUARD CLEAR PVC PIPE

1/2" - 8" (12mm - 200mm)

### Clear-Gu@rd™

IPEX Clear-Guard™ Clear PVC pipe provides a cost-effective multipurpose solution for many different piping applications. The benefits of rigid Xirtec®140 PVC piping are well documented including light weight, flexibility, durability and exceptional corrosion resistance. These benefits with the addition of clarity, are now available in our Clear-Guard Clear PVC pipe product. Our clarity provides 360° visibility for several applications including dual-containment, clean room and site glass applications.

With IPEX's new high pressure clear PVC pipe you can specify Schedule 40 clear pipe for applications where previously only Schedule 80 clear pipe would suffice. Our high pressure formulation, with a long-term hydrostatic design basis of 3,150 psi allows for better clarity and more versatility for various applications.

#### **APPLICATIONS**

- Clear-Guard Dual-Containment **Systems**
- Dual-Containment for High Purity Tubing
- Leak Detection Systems
- Agricultural & Aguacultural Applications
- Chemical Processing/Blending
- Healthcare/Hospital Use
- Laboratory Applications
- Environmental Applications
- · Sight Gauge Assemblies
- Displays/Exhibits
- · Food & Beverage Processing
- and more ...

#### **ADVANTAGES**

- 1 Sizes range from 1/2" to 8" Schedule 40 pipe
- Standard 10 foot lengths
- 20 foot lengths available by special order
- Certified to NSF-61
- 3,150 psi HDB tested in accordance with
- **ASTM D2837**

Pressure and Vacuum service

#### STANDARDS









#### **COMPATIBILITY & PRESSURE RATING**

IPEX Clear-Guard Clear PVC pipe is produced from a rigid, virgin Polyvinyl Chloride (PVC) compound with a Cell Classification of 15334 per ASTM D1784. This material also enables Clear-Guard Clear PVC piping to carry a maximum service temperature of 140°F when appropriate temperature/pressure de-rating factors are applied.

As with our Xirtec140 PVC piping system our pressure ratings are dependent on the pipe diameter and the operating temperature of the system. As temperatures increase, the pressure rating of the system decreases. Refer to the table for de-rating factors on our Clear-Guard pressure ratings.

This material is compatible with Xirtec140 PVC pipe, fittings and valves, and can be joined into existing PVC systems using the appropriate solvent cement joining process.

#### JOINING TECHNIQUES

IPEX Clear-Guard Clear PVC pipe is easily joined by the solvent cementing process, providing a quick, strong, leak-tight seal for pressure applications.

To maintain the system's clarity, IPEX recommends the use of a clear, mediumbodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. As an added advantage due to the product's transparency, joint integrity is readily identified during the solvent cement joining process.

Details on proper solvent cementing techniques are available and must be reviewed for proper assembly and joint integrity.

Operating Temperature (°F)	Operating Pressure De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22





Clear-Guard™ has a higher Pressure Rating when compared to the competition

	1		
		1	

IDEV O	0 10100450 110	D.t HOOF
	r-Guard PVC 3150 = HD	
Size	Product Code	Sch 40 Pressure Rating
1/2"	22003	480
3/4"	22009	390
1"	22014	360
1-1/4"	22026	290
1-1/2"	22031	260
2"	22036	220
3"	22045	210
4"	22053	180
6"	22057	140
8"	22198	120

<sup>\*</sup> HDB = Hydrostatic Design Basis – the established stress value for a compound at a specific temperatuere

# enpure<sup>™</sup>

Enpure® proves itself as the superior high purity system manufacturing industries and research facilities are increasingly requiring high purity water systems that will meet the stringent requirements of their operations. Whether the application is for ultra pure water or for transporting chemically pure agents of foodstuffs, water purification technologies such as distillation, de-ionization, reverse osmosis and filtration eliminate a variety of impurities such as bacteria, particulates and both organic and inorganic contaminants.

The purity of a system depends on the leach ability of the material and joining method used to assemble the system.

Traditional materials used for handling high purity water have been metal and glass piping. The issue is that metals can exhibit problems with trace metal contamination; and elements such as sodium, boron, silica, lead and arsenic can be leached out of glass piping.

Over the past twenty years, advances in thermoplastic technology have enabled the effective use of plastics for high-purity water distribution systems, even in aggressive ultra high purity applications.

**DID YOU KNOW?** 

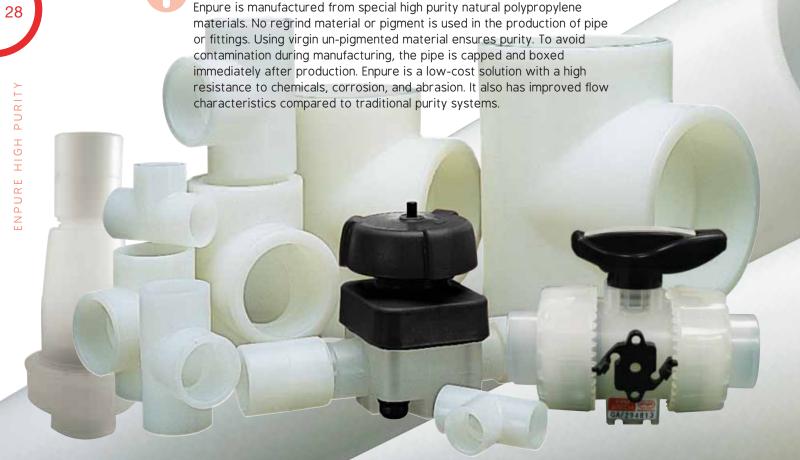
#### APPLICATIONS

- Food processing
- Laboratories
- Hospitals
- Universities
- Research facilities
- Biotechnology
- Chemical manufacturing
- Photographic chemical processing
- Effluent treatment plants
- Water treatment plants
- · Pharmaceutical manufacturing

#### STANDARDS



FDA Code of Federal Regulations CFR Title 21-177.1520 2002



#### **ADVANTAGES**

1 Virgin Material

Enpure is manufactured from special high purity virgin polypropylene materials. No regrind material is used in the manufacturing process, thereby avoiding contamination by colorants or other materials and potential loss of physical properties due to the incorporation of heat stressed materials.

Abrasion Resistance

The inherent abrasion resistance of natural PP allows substantial increases in life expectancy compared to other materials. In many applications, natural polypropylene outperforms other materials such as metals.

(3) Improved Flow

IPEX piping is smooth and has a substantially lower roughness factor than metal and other materials, and since thermoplastics do not rust, pit, scale or corrode, the interior walls remain smooth in virtually any service.

4 Biological Resistance

Enpure natural PP piping is resistant to fungi and bacterial growth. The smoothness of the interior walls inhibits bacterial growth by eliminating sites where bacteria can adhere.

5 Chemical Resistance

Enpure natural PP offers a complete high purity system including pipe, fittings and valves with outstanding resistance to most organic and inorganic chemicals in common use. It is potentially vulnerable to strong oxidizing acids, certain organic solvents and chlorinated hydrocarbons.

6 Corrosion Resistance

Our thermoplastic materials are immune to damage from naturally corrosive soil conditions as well as electrochemical or galvanic corrosion. These noncorroding properties extend service life and lower maintenance costs even in below-grade applications

7 Extended Life

Once properly selected for the application and correctly installed, Enpure products provide years of maintenance free service

8 Lower Costs

IPEX Enpure natural PP has lower material and installation costs than other comparable materials such as stainless steel or PVDF.

9 Service Temperature

IPEX Enpure line of pipe, fittings and valves are designed to meet the highest purity standards. It is because of this that there are no additives in the virgin polypropylene material. Additives such as antioxidants and UV stabilizers help thermoplastic materials with oxidation resistance. Since Enpure does not contain these additives, it is pressure rated at 73°F (23°C) and will experience lower pressure capabilities and a shortened service life if operated at elevated temperatures.

10) Standards and Approvals

IPEX manufactures the widest range of thermoplastic piping systems available. All products are produced to the strictest internal quality control specifications and meet or exceed applicable regulatory standards.

#### **VALVE SELECTION**

As is the case with other thermoplastic components in a processing system, a valve must be selected based on the characteristics of the fluid medium, the system's operating parameters, and its intended function for a particular application. Certain valve types are more suitable than others for on/off service, throttling or modulating, automation, back flow prevention, etc. The following table summarizes the valves offered as part of the Enpure system.

Some other considerations that may be important when selecting a valve include: physical space requirements or constraints, connection style, manual or remote operation, as well as position indication or feedback.

#### **AUTOMATED VALVES**

IPEX can provide quarter turn pneumatic or electric actuators and mounting assemblies for Enpure ball valves. Pneumatic actuator bonnets are also available for Enpure diaphragm valves. A wide selection of accessories such as pilot solenoid valves, position indicators, and microswitches, allow various control and feedback options. Please refer to the Thermoplastic Valves and Quarter Turn Automation literature or contact IPEX for further details regarding availability.

#### **ENPURE NATURAL PP VALVES**

Valve Type	Sizes	Materials	Connections/ Style	Pressure Rating (psi) at 73°F
VKD Series Ball Valves	1/2 - 2	Natural PP	Socket, Flange	150
VM Series Diaphragm Valves	1/2 - 2	Natural PP	Socket, Flange	150
SR Series Ball Check Valves	1/2 - 2	Natural PP	Socket, Flange	150

#### SHORT FORM SPECIFICATIONS

#### **SCOPE**

All high-purity water piping as shown on drawings shall be socket-fused, virgin natural polypropylene (containing no regrind material) as manufactured by IPEX. The complete system of piping, valves, fittings, faucets, pipe supports and fusion equipment shall be supplied and warranted by a single manufacturer.

#### **DIMENSIONS**

Physical dimensions of Enpure PP pipe and fittings shall meet or exceed Schedule 40 and Schedule 80 requirements.

#### **PIPING**

Piping shall be manufactured in 10' or 20' (3 m or 6.1 m) lengths to Schedule 40 and Schedule 80 dimensions from virgin, unpigmented, Type 2 high-impact copolymer polypropylene conforming to ASTM D 4101, using no antioxidants or plasticizers. Piping shall be capped at each end and boxed for protection and cleanliness at the point of manufacturing.

#### **FITTINGS**

Fittings shall be manufactured from virgin, unpigmented, Type 2 high-impact copolymer polypropylene conforming to ASTM D 4101, using no antioxidants or plasticizers.

Fittings shall be designed for socket fusion utilizing IPEX socket fusion tools and shall have a working design pressure of 150 psi at 73°F (1,000 kPa @ 23°C). All fittings shall be packaged in polybags at the point of manufacturing to preserve fitting cleanliness.

#### **FAUCETS**

All metal faucets shall be polyster powered lacquer coated and have non-pigmented polypropylene wetted parts. Faucets shall be recirculating- style to ensure the elimination of static water pockets and shall be rated at 150 psi @ 73°F (1,000 kPa @ 23°C). All faucets shall be fully compatible with all other natural polypropylene piping components in terms of dimensions, quality and purity.

#### VALVES

All valves shall be manufactured from virgin, unpigmented type 1
Homopolymer polypropylene conforming to ASTM D 4101, using no antioxidants or plasticizers that could compromise water quality. Valves shall be designed for socket fusion utilizing IPEX socket fusion tools and shall have a working design pressure of 150 psi @ 73°F (1,000 kPa @ 23°C).

- All ball valves shall be double-blocking type with o-ring cushions under the PTFE seats, in-line micro adjustment capability and incorporate a spanner wrench in the handle.
- All diaphragm valves shall be weir-style featuring smooth (non-drilled) GRF bonnets with integrated fasteners (for cleanliness) and rising position indicator.
- All valves with EPDM diaphragms shall feature concentric ridges on valve body and smooth diaphragms.
- All valves with PTFE diaphragm shall feature machined (smooth) bodies and rigid PTFE diaphragms for positive seal and longer cycle life.
- All ball check valves shall be single union design with micro adjustable locking seat carrier.

#### **SUPPORTS**

All piping supports shall incorporate IPEX Cobra clips manufactured from U.V. stabilized polypropylene and designed to allow free axial pipe movement during expansion and contraction of a pipe system. Support spacings shall be to the manufacturer's recommendations for the design temperature of the system.

#### **INSTALLATION**

Installation shall be in accordance with the contract drawings, the manufacturer's recommendations and the local building codes. The entire system shall be installed stress-free and in proper alignment, with due allowance for expansion and contraction.

#### **TESTING**

The water-testing requirements on any complete piping system vary dramatically depending on the operating pressure, temperature, installation conditions, jointing method and the proposed service medium. If the testing is not determined by the engineer or governed by regulatory code, the manufacturer should be contacted.

Air or compressed gas shall never be used for pressure testing rigid thermoplastic piping systems.

#### JOINING METHODS

Joining methods should also be considered when reviewing sources of potential contamination. Not all joining methods are equal. Some joining methods can introduce contaminants into the system that are not introduced by the pipe material itself.

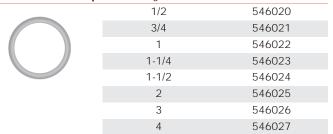
Below is a breakdown of the most common joining methods and their potential affects on purity. To ensure a contamination-free system, Enpure utilizes a socket fusion joining method.

Purity Level	Joining Methods	Description
•	Threaded Metal Joints	Threaded metal components may cause leaching of contained metals, local stagnation of fluid flow and may produce potential sites for bacterial growth when used with high purity water.
• •	Soldered Metal Joints	Oxidation at welded, braised or soldered metal joints can cause contamination when exposed to the high purity water.
		Solvent welded plastic joints, unless carefully made and cured, can contribute contamination to high purity water.
• • • • Socket Fusion homogeneous join		Socket fusion is a simple process of melting and fusing components together resulting in a clean homogeneous joint. As no compounds are used in the process, sources of material contamination are eliminated. For these types of applications, socket fusion is the joining method of choice.

#### PRODUCT SELECTION CHART

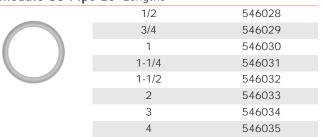
	Dimension	Product		Dimension	Product
	inches	Code		inches	Code
Schedule 40 Pip	<b>e</b> 10' Lengths		Schedule 80 Pipe	10' Lengths	
	1/2	546000		1/2	546008
	3/4	546001		3/4	546009
( )	1	546002	(( ))	1	546010
	1-1/4	546003		1-1/4	546011
	1-1/2	546004		1-1/2	546012
	2	546005		2	546013
	3	546006		3	546014
	4	546007		4	546015

#### Schedule 40 Pipe 20' Lengths



Note: 20' Enpure pipe lengths are non-stock items available upon special request.

#### Schedule 80 Pipe 20' Lengths



Note: 20' Enpure pipe lengths are non-stock items available upon special request.

#### **Dimension** Product Code inches Coupling Soc 1/2 537122 3/4 537123 1 537124 1-1/4 537125 1-1/2 537126 2 537127 3 537128 4 537129

	Dimension inches	Product Code
Cap Soc		
	1/2	537182
$(\bigcirc)$	3/4	537183
	1	537184
	1-1/4	537185
	1-1/2	537186
	2	537187
	3	537188

#### 90° Elbow Soc 1/2 537142 3/4 537143 537144 1-1/4 537145 1-1/2 537146 2 537147 3 537148 4 537149

Stub Flange Soc		
	1/2	537192
	3/4	537193
	1	537194
	1-1/4	537195
	1-1/2	537196
	2	537197
	3	537198
	4	537099

flange are required for complete flange system.

# 45° Elbow Soc

1/2	537152
3/4	537153
1	537154
1-1/4	537155
1-1/2	537156
2	537157
3	537158
4	537159

Steel Backing Flange - ASA 150 Drilling				
	1/2	537222		
	3/4	537223		
	1	537224		
	1-1/4	537225		
	1-1/2	537226		
	2	537227		
	3	537228		
	4	537229		

Note: One stub flange and one steel backing flange are required for complete flange system.

Note: One stub flange and one steel backing

#### Tee Soc



1/2	537162
3/4	537163
1	537164
1-1/4	537165
1-1/2	537166
2	537167
3	537168
4	537169

#### Union w/ Viton® Seals Soc



1/2	537172
3/4	537173
1	537174
1-1/4	537175
1-1/2	537176
2	537177

#### Blind Flange - ASA 150 Drilling



J	
1/2	537212
3/4	537213
1	537214
1-1/4	537215
1-1/2	537216
2	537217
3	537218
4	537219

IPEX components are dimensionally matched; do not install Enpure system components with components of other brands.

Dimension inches	Product Code

#### Reducer Bushing Soc



300	
3/4 x 1/2	537241
1 x 1/2	537242
1 x 3/4	537243
1-1/4 x 1	537244
1-1/2 x 1	537245
1-1/2 x 1-1/4	537246
2 x 1	537247
2 x 1-1/4	537248
2 x 1-1/2	537249
3 X 1-1/2	537250
3 x 2	537251
4 x 2	537252
4 x 3	537253

#### 90° Bend Soc



1/2	537272
3/4	537273
1	537304
1-1/4	537305
1-1/2	537306
2	537307
3	537308
4	537309

#### Nipple - 6" Long Sp x MPT



1/2	537322
3/4	537323
1	537324
1-1/4	537325
1-1/2	537326
2	537327
3	537328
4	537329

#### Cobra Pipe Clip - PP



1.1	
1/2	437341
3/4	437342
1	437343
1-1/4	437344
1-1/2	437345
2	437346
3	437348
4	437349

Note: \* 1/2" and 3/4" pipe clips are supplied without retaining bands.

inches Code	Dimension inches	Product Code
-------------	------------------	-----------------

#### Female Adapter Soc x FPT



1/2 x 1/2	537362
1/2 x 1/4	537370
1/2 x 3/8	537371
3/4 x 3/4	537363
1 x 1	537364
1-1/4 x 1-1/4	537365

#### VKD True Union Ball Valve w/ Viton® Seals Soc



537031
537032
537033
537034
537035
537036

#### End Connectors for True Union Ball Valves Soc



1/2	537014
3/4	537015
1	537016
1-1/4	537017
1-1/2	537018
2	537019

#### UPP Diaphragm Valve - PTFE Diaphragm Soc



1/2	537451
3/4	537453
1	537455
1-1/4	537456
1-1/2	537457
2	537458

#### PRODUCT SELECTION CHART

Dimension	Product
inches	Code

Dimension	Product
inches	Code

#### Dimension Product Code inches

#### UPP Diaphragm Valve - EPDM Diaphragm Soc



1/2 53	37469
3/4 53	37470
1 5:	37471
1-1/4 53	37472
1-1/2 53	37473
2 53	37474

Heater Bushing	Set-	PTFE	Coated	(1	x Soc,	1	x Sp	၃)
----------------	------	------	--------	----	--------	---	------	----

ct THE oddica (	1 x 300, 1 x 3p)
1/2	537382
3/4	537383
1	537384
1-1/4	537385
1-1/2	537386
2	537387
3	537388
4	537389

#### Single Union Ball Check Valve w/ Viton® Seats & Seals Soc



1/2	537784
3/4	537785
1	537786
1-1/4	537787
1-1/2	537788
2	537189

#### Recirculating Faucet Sp



537480

#### Socket Fusion Joining Kit c/w Full Set of Heater Bushings

1/2 to 2	537401
1/2 to 4	537404

#### **Tempilstiks**

537406
537407

#### Socket Fusion Joining Tool - Paddle Only



J	<b>.</b>	
	1/2 to 2	537403
	1/2 to 4	537400

#### Bench Fusion Joining Kit c/w Full Set of Heater Bushings

1/2 to 4

537410

# IPEX TECHNICAL MANUALS available at www.ipexinc.com

Obtaining the most up-to-date technical information has never been easier with our innovative ON-LINE DIGITAL MANUALS



#### WHAT YOU CAN DO



## DURAPLUS ABS INDUSTRIAL

## **Duraplus**

The Duraplus® Industrial Piping System by IPEX offers a complete range of ABS pressure pipe, valves and fittings that are ideal for demanding applications ranging from abrasive slurries and separation reagents to caustic processes and low temperature glycol systems. These rugged Duraplus components operate over a wide range of temperatures while delivering excellent material properties including:

- Exceptional Toughness
- Non-Toxicity
- Corrosion Resistance

This design and installation manual provides the most up-to-date comprehensive information about IPEX's Duraplus ABS Industrial Piping System. By combining IPEX's laboratory test results with over 50 years of field experience, we have produced a manual suited to engineers, contractors and distributors alike. All aspects of Duraplus are described here – from basic raw material properties through to installation procedures of the finished product.

IPEX offers matched Duraplus pipes, fittings and valves in IPS sizes ranging from 3/8" to 12" nominal diameter, suitable for pressures up to 230 psi at 73°F (23°C) (depending on the size).

#### DURAPLUS® FEATURES:

- · High impact strength
- Outstanding ductility
- Wide chemical resistance
- Competitive installed cost
- Operating range from -40°F to +176°F
- Long term UV resistance
- Multiple proven and easy joining methods

#### **APPLICATIONS**

#### Chilled water / HVAC

Chilled Water Lines Cooling Tower Pipes
Condensate Drain Humidification Supply

#### Off Shore Applications

"Mud" Systems
Topside (low pressure)
Operations
Vacuum Systems (Drill
Cuttings Transport)
Deck Wash System –
Supply & Drainage
Beluge Systems
(Emergency Showers/Eye
Baths)
Chilled Water (Air
Conditioning)
Potable Water
Black Water Drainage
Compressed Air

#### Mining

Slurries Chemical Treatment
Water Lines Tailing Lines
Vent Piping

• Secondary Loop Refrigeration
Glycol Chilled Lines

## STANDARDS

The ABS compound used in the manufacturing of Duraplus ABS Industrial Pipe complies with the material requirements of ASTM D3965, "Standard Specification for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings". The ABS material has an IZOD impact resistance of not less than 5ft.lb/in at -22°F per ASTM D256.

#### **ADVANTAGES**

1 Lightweight

Duraplus Industrial ABS material is 1/8 the weight of steel and 1/5 the weight of copper.

Simple, reliable joining method
Solvent cemented joints can be made quickly and easily without expensive equipment or certifications.
Flanging and threaded joints are also possible.

Grooved joints

Allow quick assembly and disassembly, pipe rotation for even wear and cleaning of individual pipe sections.

Wide range of pressure and temperature capabilities

Operating pressures from drainage up to 230 psi and temperature range from -40°F to 176° F (-40°C to 80°C) make this product suitable for the harshest environments.

**(5)** Lower installation costs

Duraplus Industrial ABS is less expensive to install because of its simple joining methods – its lightweight and ease of handling.

6 Lower maintenance costs

Duraplus Industrial ABS has excellent chemical resistance, corrosion resistance and impact resistance resulting in a piping system that lasts longer.

No heat, no sparks, no open flames

Pipe can be joined to fitting without the necessity of heat.

8 Abrasion resistance

The rubber-like poly-butadiene phase gives Duraplus Industrial ABS exceptionally good abrasion resistance to slurries and other abrasive media.

#### DID YOU KNOW?

Duraplus Industrial ABS is an extremely versatile process piping system that combines ruggedness, chemical resistance, light weight and ease of installation.

The most common applications for Duraplus Industrial ABS utilizes its outstanding impact resistance, ductility and abrasion resistance at both low and high temperatures.



#### SHORT FORM SPECIFICATIONS

#### GENERAL

Duraplus ABS is designed for industrial pressure pipe applications where the extremely high-impact resistance and ductility of the material offers some insurance against internal and external shock loadings and site abuse conditions. It's unique combination of ABS properties – non-toxicity, purity, corrosion- and chemical-resistance, toughness, low-hydraulic resistance, and the ability to perform over a wide temperature range (-40°F to +176°F) ensures excellent in-service performance and system life.

#### MATERIAL SPECIFICATION

Pipe and fittings shall be manufactured from a copolymeric material – Acrylonitrile Butadiene Styrene (ABS) – conforming to a 43232 cell classification in accordance with ASTM D3965.

Material for both pipe and fittings shall have a design stress of not less than 2,000 psi, and shall be designed with a 2 to 1 safety factor for a 50 year lifespan when operated under continuous pressure.

The material shall have an izod impact resistance value of not less than 6 ft./lb. at  $73^{\circ}$ F and 3 ft./lb. at  $-22^{\circ}$ F, when tested in accordance with ASTM D256, method 'A'.

#### PIPE

Pipes shall be manufactured by IPEX and designed on a Standard Dimension Ratio (SDR) basis to give various pressure ratings as described below:

Pipe Class	SDR	Continuous Pressure Rating at 73°F (23°C)	Size Range
Class 90 psi	SDR 24.0	90 psi (6 bar)	10" & 12"
Class 115 psi	SDR 19.0	115 psi (8 bar)	6" & 8"
Class 145 psi	SDR 15.5	145 psi (10 bar)	1" to 8"
Class 180 psi	SDR 12.5	180 psi (12 bar)	1" to 6"
Class 230 psi	SDR 10.0	230 psi (16 bar)	3/8" to 4"

#### FITTINGS

Fittings shall be of the socket type, designed for solvent welding as supplied by IPEX.

Fittings shall be designed and manufactured so that they withstand the continuous pressures applicable to the maximum pressure native of the pipe.

#### SOLVENT CEMENT

All joints shall be made with Gray Duraplus ABS solvent cement as supplied by IPEX.

The solvent cement shall be designed to withstand continuous applied pressures up to 230 psi at 73°F.

#### DESIGN AND INSTALLATION

The design and installation of ABS pressure systems shall be performed in accordance with the recommendations detailed in the Handling and Installation section of this manual, local and national regulations where applicable.

To ensure the full integrity of the completed system, all components shall be supplied by IPEX.

Dimension
hes

Pipe - 90 psi at 73° F



10	346034
12	346035

Standard length of pipe is 20 feet.

Pipe - 145 psi at 73° F



1	346003
1-1/2	346004
2	346005
3	346007
4	346008
6	346009
8	346010

Standard length of pipe is 20 feet.

Pipe - 180 psi at 73° F



1	346013
1-1/4	346014
1-1/2	346015
2	346011
3	346016
4	346017
6	346012

Standard length of pipe is 20 feet.

Note: 180 psi pipe is a non-stock item available upon special request.

Minimum runs are required.

#### Pipe - 230 psi at 73° F



3/8	346018
1/2	346019
3/4	346020
1	346021
1-1/4	346022
1-1/2	346023
2	346024
3	346025
4	346026

The standard pipe length for 3/8" and 1/2" pipe is 10 feet. The standard length for all other sizes is 20 feet.

Dimension	Product
inches	Code
inches	Code

Class "T" - Suitabl

b	le for Threading	
	3/8	346033
	1/2	346027
	3/4	346028
	1	346029
	1-1/4	346030
	1-1/2	346031
	2	346032

#### Saddle Clip - Polypropylene



,, , ,	
3/8	337453
1/2	337454
3/4	337455
1	337456
1-1/4	337457
1-1/2	337458
2	337459
3	337460
4	337461

#### Cobra Pipe Clip - Polypropylene



. 11 1. 1	
3/8	437340
1/2	437341
3/4	437342
1	437343
1-1/4	437344
1-1/2	437345
2	437346
2-1/2	437347
3	437348
4	437349

Note: \* 3/8" 1/2" and 3/4" pipe clips are supplied without retaining bands.

Coupling Soc		
	3/8	337021
	1/2	337022
	3/4	337023
	1	337024
	1-1/4	337025
	1-1/2	337026
	2	337027
	3	337028
	4	337029
	6	337030
	8	337031
	10	337032

12

Dimension

inches

Product Code

337033

## Dimension Product inches Code

#### Gasket - Full Face, Drilled ASA 150, Neoprene



1/2     337439       3/4     337440       1     337441       1-1/4     337442       1-1/2     337443       2     337444       3     337445       4     337446       6     337447	•	, ,
1 337441 1-1/4 337442 1-1/2 337443 2 337444 3 337445 4 337446	1/2	337439
1-1/4 337442 1-1/2 337443 2 337444 3 337445 4 337446	3/4	337440
1-1/2 337443 2 337444 3 337445 4 337446	1	337441
2 337444 3 337445 4 337446	1-1/4	337442
3 337445 4 337446	1-1/2	337443
4 337446	2	337444
	3	337445
6 337447	4	337446
	6	337447

#### Flange - Stub Soc

_
/
=

2	337235
3	337236
4	337237
6	337238
8	337239
10	337243
12	337244

Note: A metal backing ring must be used with this flange.

#### Flange - Full Face, Drilled ASA 150 Soc



•	
1/2	337353
3/4	337354
1	337355
1-1/4	337356
1-1/2	337357
2	337358
3	337359
4	337360
6	337361

Note: A metal backing ring must be used with this flange.

#### Gasket - Stub Flange, Neoprene



_	g.,	
	2	337448
	3	337449
	4	337450
	6	337451
	8	337452
	10	337422
	12	337423

Note: It is essential that steel backing rings are used with all types of stub, full face and blind flanges.

#### Flange - Full Face, Undrilled Soc



, ,	e, Ullullilleu 300	
	1/2	337226
	3/4	337227
	1	337228
	1-1/4	337229
	1-1/2	337230
	2	337231
	3	337232
	4	337233
	6	337234

Note: A metal backing ring must be used with this flange.

Dimension	Product
inches	Code
inches	0000

#### Backing Ring - Galv, M.S. Drilled ASA 150



1/2	337426
3/4	337427
1	337428
1-1/4	337429
1-1/2	337430
2	337431
3	337433
4	337434
6	337435
8	337436
10	337437
12	337438

Note: For use with flanges.

#### Blind Flange - Drilled ASA 150



3	337364
4	337365
6	337366
8	337367
10	337368
12	337383
12	33/383

Note: A metal backing ring must be used with this flange.

Undrilled flanges are available at the same price as drilled. Order code 131.

#### Cap Soc



3/8	337245
1/2	337246
3/4	337247
1	337248
1-1/4	337249
1-1/2	337250
2	337251
3	337252
4	337253

#### Union - EPDM Seal Soc



3/8	337270
1/2	337271
3/4	337272
1	337273
1-1/4	337274
1-1/2	337275
2	337276
3	337277
4	337278

Dimension	Product
inches	Code

#### Union ABS Soc x Brass Female Thread



*3/8	337279
1/2	337280
3/4	337281
1	337282
1-1/4	337000
1-1/2	337283
2	337284

<sup>\*</sup> Discontinued when stock is depleted

#### 90° Elbow Soc



3/8	337132
1/2	337133
3/4	337134
1	337135
1-1/4	337136
1-1/2	337137
2	337138
3	337139
4	337140
6	337141
8	337142
*10	337011
*12	337012

<sup>\*</sup>Only available in spigot x spigot.

#### 45° Elbow Soc



3/8	337156
1/2	337157
3/4	337158
1	337159
1-1/4	337160
1-1/2	337161
2	337162
3	337163
4	337164
6	337165
8	337166
*10	337013
*12	337014

<sup>\*</sup>Only available in spigot x spigot.

Only the correct Duraplus® cement will provide a compatible joint. All warranties void if other cement used.

	Dimension inches	Product Code	
90° Bend - Short Radius Soc			
	1/2	337148	
	3/4	337149	
	1	337150	

1-1/4

1-1/2

2

3

4

\*\*\* All Threads are BSP tapered unless otherwise noted \*\*\*

337151

337152

337153

337154

337155

#### 90° Bend - Long Radius Sp (Center Line Radius = 4xD)



3	337320
4	337321
6	337322
8	337323
*10	337324
*12	337325

\* Please note center line radius of 10" & 12" varies from 4xD

#### 45° Bend - Long Radius Sp (Center Line Radius = 4xD)



3	337330
4	337331
6	337332
8	337333
*10	337334
*12	337335

\* Please note center line radius of 10" & 12" varies from 4xD

#### Tee Soc



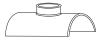
3/8	337170
1/2	337171
3/4	337172
1	337173
1-1/4	337174
1-1/2	337175
2	337176
3	337177
4	337178
6	337179
8	337180
*10	337015
*12	337016

\* Only available in spigot tees.

## Product Code inches

**Dimension** 

#### Saddle Soc



2 x 1-1/4	337205
3 x 1	337207
3 x 1-1/2	337208
4 x 1	337209
4 x 2	337210
6 x 1	337211
6 x 1-1/2	337212
6 x 2	337213

#### 45° Wye Soc



1/2	337214
3/4	337215
1	337216
1-1/4	337217
1-1/2	337218
2	337219

#### 45° Wye - Fabricated Sp x Sp



3	337220
4	337221
6	337222
8	337223
10	337224
12	337225

#### Reducer Bushing S



Sp x Soc	
1/2 x 3/8	337050
3/4 x 1/2	337051
1 x 1/2	337052
1 x 3/4	337053
1 1/4 x 1/2	337045
1 1/4 x 3/4	337046
1 1/4 x 1	337054
1 1/2 x 1/2	337047
1 1/2 x 3/4	337048
1 1/2 x 1	337055
1 1/2 x 1 1/4	337056
2 x 3/4	337049
2 x 1	337057
2 x 1 1/4	337058
2 x 1 1/2	337059
3 x 1 1/2	337061
3 x 2	337062
4 x 3	337064
6 x 4	337065
8 x 6	337066
10 x 8	337067
12 x 10	337068

Dimension inches	Product Code

#### Reducer Bushing Male Thread x Female Thread



**1/2 x 3/8	337075
**3/4 x 1/2	337076
**1 x 3/4	337077

\*\* Discontinued when stock is depleted All Threads are BSP tapered unless otherwise noted

nsion hes	Product Code

#### Female Adapter Sp x Female Thread



1/2	337257
3/4	337258
1	337259
1-1/4	337260
1-1/2	337261
2	337262

#### Reducer Bushing Sp x Female Thread



**1/2 x 3/8	337072
**3/4 x 1/2	337073
**1 x 3/4	337074

\*\* Discontinued when stock is depleted All Threads are BSP tapered unless otherwise noted

#### Nipple Sp x NPT



3/8	337340
1/2	337341
3/4	337342
1	337343
1-1/4	337344
1-1/2	337345
2	337346
3	337347
4	337348

Note: Systems using plastic threaded components are restricted to 180 psi. The use of PTFE sealing tape is recommended.

All Threads are BSP tapered unless otherwise

#### Reducer Coupler Soc



1/2 x 3/8	337120
3/4 x 1/2	337121
1 x 3/4	337122
1-1/4 x 1	337123
1-1/2 x 1-1/4	337124
2 x 1-1/2	337125
3 x 2	337126
4 x 3	337127
6 x 4	337128
8 x 6	337129
10 x 8	337130
12 x 10	337131

#### Plug Male Thread



1/2	337264
3/4	337265
1	337266
1-1/4	337267
1-1/2	337268
2	337269

#### Adapter Coupling Soc x Female Thread



1/2	337037
3/4	337038
1	337039
1-1/4	337040
1-1/2	337041
2	337042

#### VM Manual Diaphragm Valve - EPDM Diaphragm Sp



1/2	337643
3/4	337644
1	337645
1-1/4	337646
1-1/2	337647
2	337648
3	337649

Note: Other diaphragm materials are available upon request

Dimension	Product
inches	Code

#### VKD True Union Ball Valve - EPDM Seals Soc



3/8	337801
1/2	337802
3/4	337803
1	337804
1-1/4	337805
1-1/2	337806
2	337807
3	337808
4	337809

## Dimension Product inches Code

#### FK, Viton® Seals - Glass filled PP body



2	337656
3	337657
4	337658
6	337659
8	337660

Chemical duty (CD) - incorporating more chemically resistant components, this valve can be used with a wide range of organic or inorganic chemicals even at elevated temperatures.

#### Single Union Ball Check Valve - EPDM Soc



3/8	337727
1/2	337728
3/4	337729
1	337730
1-1/4	337731
1-1/2	337732
2	337733
3	337734
_	

#### RV Y-Strainer EPDM Seals Soc



1/2	337739
3/4	337740
1	337741
1 1/4	337742
1 1/2	337743
2	337744

#### L Port Ball Valve - EPDM Soc



**1/2	337720
**3/4	337721
**1	337722
**1 1/4	337723
**1 1/2	337724
**2	337725

<sup>\*\*</sup> Discontinued when stock is depleted Note: T Port valves are available upon Request All Threads are BSP tapered unless otherwise noted

#### Solvent Cement



1 pint	337466
1 quart	337467

**Product** 

Code

#### Solvent Cement



1 pint	337468
1 quart	337469

#### FK, EPDM Seals - Glass filled PP Body



2	337651
3	337652
4	337653
6	337654
8	337655

General service (GS) - offered primarily for use with water, but suitable for a wide range of diluted chemicals, swimming pools, irrigation, potable water, etc. The GS valve is also suitable for compressed air and gases.

#### Joints

An indication of the number of joints likely to be made per quart of Duraplus® cement is as follows (it is recommended that MEK Cleaner order equals one-half the quantity of solvent cement required):

Liquid

Quantity

Pipe Size inches	Number of Joints
3/8 - 1	290
1-1/4 - 2	144
3	48
4	32
6	16
8	10
10	4
12	4

# A Safe Place to Grow

## **IPEX Protects Your Investment**

Certain environments demand fail-safe systems. No leaks. No risk. IPEX understands the complexity of design and installation for demanding **DOUBLE CONTAINMENT** 

APPLICATIONS. And, unlike of manufacturers, our specialists are part of a division of IPEX dedicated solely to the design, production and installation of state-of-the-art double containment systems. With more than 20 years of experience and success, we are the proven experts.

The IPEX family of double containment systems includes: Guardian™ PVC and CPVC, and Clear-Guard™ PVC pressure and drainage systems, Encase™ PolyPro drainage systems,

CustomGuard® FRP and metal pressure systems and Centra-Guard™ leak detection systems.

Safety and environmental concerns are top priorities on today's industrial agenda.

Reduction of emissions, energy conservation and prevention of ground water contamination are some of the areas where regulations are increasingly defining an important line between utilization and exploitation of our planet's resources.

For most common chemical-waste or process applications, IPEX offers systems that are both simple yet highly advanced technologies.

Guardian" Clear-Guard" Encase" CustomGuard" Centra-Guard



**Double Containment Systems** 

We build tough products for tough environments®

Call 1-866-473-9462 or visit www.ipexinc.com

Safety and environmental concerns are top priorities on today's industrial agenda. Reduction of emissions, energy conservation and prevention of ground water contamination are some of the areas where regulations are increasingly defining an important line between utilization and exploitation of our planet's resources.

For most common chemical-waste or process applications, IPEX offers systems that are both simple yet highly advanced state-of-the-art technologies. These systems utilize pre-assembled components that guarantee reliability, ease of installation, fewer joints (up to 40% less) and quick delivery.

Certain environments demand fail-safe systems. No leaks. No risk. The professionals at IPEX understand the complexity of design and installation for demanding double containment applications.

# Double Containment Systems









ncase

Guardian 52

46

ustomguard 53

lear-Guard 54

Centra-Guard 55

## **Encose**™

At the heart of our patented Encase polypro system is its electrofusion fitting with a groundbreaking heavy-gauge resistance wire molded into the socket. The result is a premier system that offers considerable reduction of installation time and the highest quality bubble-tight joints available.

## **DID YOU KNOW?**

Encase is a polypropylene piping system that uses proven Enfusion joining methods to provide an easyto-install, safe, reliable and costeffective method to convey chemical waste under gravity-flow conditions.

#### **ADVANTAGES**

#### Polypropylene Material

- Thirty years of success in chemical waste applications
- High corrosion resistance
- Wide temperature range
- Excellent chemical resistance

#### Same Material Inside and Out

- Eliminates differential expansion problems
- Chemical resistance is the same for the entire piping system
- System integrity is maintained in the event of a primary pipe leak

#### **Restrained System**

- Expansion anchor plates are installed on each fitting to control expansion
- No expansion loops necessary

#### **Full Product Range**

- 1-1/2" to 8" primary sizes available
- Manufactured in both non-flame retardant as well as flame retardant material for above ground installation (

#### **Drainage Pattern Fittings**

- Ensures smooth chemical flow.
- Enfield piping has been used for chemical waste for over 25 years

#### Modular Design

- Components are factory fabricated. The only site joining necessary is the fusion of couplings to pipes and fittings
- Reduces labor costs

#### **Fast Joining Method**

- All site joints are made by electrofusion using an Enfusion Hand Held Unit.
- Quick and simple to make without the need for costly and cumbersome butt fusion machines
- Proven technology
- Narrower trench widths than for butt fusion, resulting in quicker and cheaper installation
- Joints can be made in the trench which reduces installation time
- Automatic microprocessor-controlled Enfusion unit ensures joint repeatability

#### Easy System Testing

- The primary pipe can be inspected and tested prior to closing the secondary joint (impossible with buttwelded systems)
- Any suspect primary joints can be re-fused prior to final closure of the secondary pipe

#### **Leak Detection Compatible**

- Encase is compatible with all common types of leak detection systems
- Upon request, pipe is furnished with knot-free twine to allow insertion of a pull rope for leak detection cable installation minimizing installation time.

#### **Full Product Backup**

- Expert personnel are available to assist in every facet of the Encase product

Material	Carrier	Containment
PP	1-1/2" - 8"	4" - 12"



#### SHORT FORM SPECIFICATIONS

#### GENERAL

Acid waste double containment drain lines shall be Encase, manufactured by IPEX, with no substitutions. Pipe and fittings shall be manufactured from Schedule 40 polypropylene and joined by the Enfusion method.

#### MATERIAL

Pipe, fittings, internal pipe supports and anchor plates shall be manufactured from Type 1 homopolymer or Type 2 copolymer polypropylene material as described in ASTM D4101.

#### PIPE AND FITTINGS - CONSTRUCTION

All pipe fittings shall be factory assembled and of unitized construction, with the primary and secondary components integrally anchored together to prevent movement of the primary pipe/fitting with in the containment pipe/fitting. All piping components shall be manufactured to Schedule 40 dimensions. The primary pipe shall be adequately supported by means of support plates welded to the primary pipe. Anchor plates shall be provided at each end of the pipe/fitting section to restrain pipe expansion. All anchor plates must be mechanically located in a machined recess on the inside of each secondary pipe/fitting and welded to both the primary and secondary pipe/fitting sections.

#### FACTORY WELDED JOINTS

All factory joints shall be made either by butt fusion or Enfusion. Joining by means of fillet welding is expressly forbidden.

#### SITE JOINTS

All site joints shall be made using Enfusion couplings, manufactured from polypropylene with a nickel/chrome resistance wire, molded in place. Components with copper wire elements are prohibited. Solvent, buttwelded or fillet-welded site joints are also prohibited.

#### INSTALLATION

Installation shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing code. The entire installation shall be installed in proper alignment and free of stress.

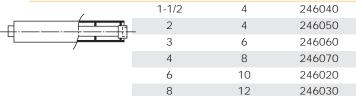
#### TESTING

The system shall be tested in accordance with the manufacturer's recommendations and the local plumbing code. The primary pipe shall be tested prior to making the secondary joints. If Secondary pipe cannot be hydro-tested, as determined by the engineer or authority having jurisdiction, then the use of nitrogen or air at a MAXIMUM 5 psi (gauge) shall be allowed. It is imperative that a working-pressure regulator be used during the pneumatic test to ensure that over-pressurization of the PVC, beyond 5 psi, cannot occur. The following must also be noted: Air or nitrogen under pressure is compressed and therefore poses a potential hazard. If a failure of the pipe or fitting occurs during such test, the air exits at the failure point and expands rapidly. This increase in velocity can cause the system to fail in a catastrophic mode. Therefore during such air test all personnel involved in the test or present in the test surrounding area must be aware of such a possibility and take all necessary precautions. Precautions include, but are not limited to, taking extreme care not to impact or damage the system in any way. Such procedure is a limited exception to IPEX standard policy which forbids the use of its rigid systems with any compressed gases.

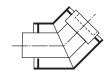
Dimension	inches	Product
Primary	secondary	Code

Dimensio	on inches	Product
Primary	secondary	Code

#### Schedule 40 Pipe Soc x Sp (20' Nominal Lengths)







1-1/2	4	231141
2	4	231142
3	6	231143
4	8	231144
6	10	231139
8	12	231140

#### Schedule 40 Pipe Spool Soc x Soc (5' Nominal Lengths)



1-1/2	4	231313
2	4	231314
3	6	231315
4	8	231316
6	10	231311
8	12	231312

#### 1/4 Bend Soc x Sp



1-1/2	4	231134
2	4	231135
3	6	231136
4	8	231137
6	10	231132
8	12	231133

#### Secondary Coupling Soc



-	4	231114
-	6	231116
-	8	231118
-	10	231110
-	12	231112

#### 45° Wye Soc x Sp x Soc



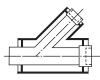
1-1/2	4	231153
2	4	231154
3	6	231155
4	8	231156
6	10	231151
8	12	231152

#### Primary Coupling Soc



1-1/2	-	257141
2	-	257147
3	-	257150
4	-	257154
6	-	257158
8	-	257161

#### Reducing Wye Soc x Sp x Soc



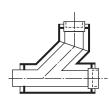
•	к эр х эос		
	2 x 1-1/2	4 x 4	231187
	3 x 1-1/2	6 x 4	231188
	3 x 2	6 x 4	231189
	4 x 2	8 x 4	231190
	4 x 3	8 x 6	231191
	6 x 2	10 x 4	231181
	6 x 3	10 x 6	231182
	6 x 4	10 x 8	231183
	8 x 3	12 x 6	231184
	8 x 4	12 x 8	231185
	8 x 6	12 x 10	231186

#### Secondary Repair Coupling Soc



-	4	231004
-	6	231006
-	8	231008
-	10	231010
_	12	231009

#### Combination Wye & 1/8 Bend Soc x Sp x Soc



1-1/2	4	231203
2	4	231204
3	6	231205
4	8	231206
6	10	231201
8	12	231202

Encase components should only be joined using IPEX Control Units. NFRPP is the standard material of construction for all Encase components. FRPP is available on request.

Dimension inches		Product
Primary	secondary	Code

Reducing Combination Wye & 1/8 Bend Soc x Sp x Soc

#### P-Trap Soc x Sp

F	

2 x 1-1/2	4 x 4	231227
3 x 1-1/2	6 x 4	231228
3 x 2	6 x 4	231229
4 x 2	8 x 4	231230
4 x 3	8 x 6	231231
6 x 2	10 x 4	231221
6 x 3	10 x 6	231222
6 x 4	10 x 8	231223
8 x 3	12 x 6	231224
8 x 4	12 x 8	231225
8 x 6	12 x 10	231226

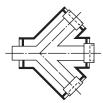
	3	6	231373
	4	8	231374
	6	10	231371
	8	12	231375
\\\\-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			

#### Floor Drain Sp



1-1/2	4	231400
2	4	231402
3	6	231403
4	8	231404
6	10	231401

#### Double Wye Soc x Sp



1-1/2	4	231243
2	4	231244
3	6	231245
4	8	231246
6	10	231241
8	12	231242

#### End Cap Soc



1-1/2	-	231462
2	-	231463
3	-	231464
4	-	231465
6	-	231466
8	-	231467
10	-	231832
12	-	231833

#### Reducing Coupling Soc x Sp



2 x 1-1/2	4 x 4	231347
3 x 1-1/2	6 x 4	231348
3 x 2	6 x 4	231349
4 x 1-1/2	8 x 4	231324
4 x 2	8 x 4	231350
4 x 3	8 x 6	231351
6 x 1-1/2	10 x 4	231352
6 x 2	10 x 4	231341
6 x 3	10 x 6	231342
6 x 4	10 x 8	231343
8 x 3	12 x 6	231344
8 x 4	12 x 8	231345
8 x 6	12 x 10	231346

#### End Seal Soc x Sp



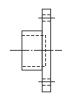
1-1/2	4	231483
2	4	231484
3	6	231485
4	8	231486
6	10	231481
8	12	231482

#### P-Trap Soc x Sp



1-1/2	4	231361
2	4	231372

#### Flange - ASA 150 Soc



·	900					
	1-1/2	-	257361			
	2	-	257365			
	3	-	257366			
	4	-	257367			
	6	-	257368			
	8	-	257369			
	10	-	257362			
	12	-	257363			

Encase components should only be joined using IPEX Control Units. NFRPP is the standard material of construction for all Encase components. FRPP is available on request

#### PRODUCT SELECTION CHART

	Dimension inches		Product
	Primary	secondary	Code
Blind Flange - AS	A 150		
	1-1/2	-	231453
村	2	-	231454
	3	-	231455
-++	4	-	231456
	6	-	231457
苷	8	-	231458
	10	-	231451
	12	-	231452

1-1/2

2

3

6

8

Dimensi	on inches	Product
Primary	secondary	Code

#### Secondary Hub Clamp



-	4	257258
-	6	231444
-	8	231445
-	10	231441
_	12	231442

#### IPEX Control Unit (Current Style)



231425

231426

231421

231422

231423

231424

Kit includes hub clamps, 1 1/2" thru 6",

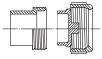


connector cable & 5' link cable.

#### Connector Cable Old Style Machine



Cleanout Sp



1-1/2	-	257232
2	-	257235
3	-	257238
4	-	257241
6	-	257244

4 4

6 x 4

8 x 4

10 x 4

12 x 4

#### Connector Cable Current Style Machine



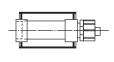
231301

257279

231302

#### Cleanout Assembly Soc

Access Tee Soc x Sp x Sp



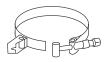
1-1/2	4	231383
2	4	231384
3	6	231385
4	8	231386
6	10	231381
8	12	231382

#### Link Cable c/w EZ Connector



2 ft. EZ	4	257268
5 ft. EZ	6	257269
10 ft. EZ	8	257270
15 ft. EZ	10	257271

#### Primary Hub Clamp c/w Brass Nut



1-1/2	-	231741
2	-	231742
*3	-	231411
4	-	231743
6	-	231744
8	-	231745

<sup>\*</sup> Designed to be left on.

#### Encase Link Cable c/w Link Lead

5 ft. 257124

50

Dimension	inches	Product
Primary	secondary	Code

Dimensi	on inches	Product
Primary	secondary	Code

#### Above Ground Leak Detection Station with Sensor

Below Ground Leak Detection Station with Sensor

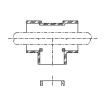


4	-	231834
6	-	231835
8	-	231836
10	-	231837

#### 5 Zone Panel



#### 10 Zone Panel



	4	-	231838
	6	-	231839
	8	-	231840
200	10	-	231841
Table of the last	12	-	231842
of the same			



#### Leak Detection Jumper Cable

631186

631188

# GUARDIAN VINYL DOUBLE CONTAINMENT SYSTEMS

## Gu@rdian™

For more than 15 years, Guardian systems have been the benchmark in pressure and drainage double containment. Guardian systems are available in tough industrial grade PVC and even tougher high temperature CPVC. For instant leak detection of overhead piping, Clear-Guard clear PVC containment pipe is also available. Guardian's patented Centra-Lock design reduces the required joints by 40 - 60%.

#### **SPECIFICATIONS**

#### **Material Selection**

Xirtec\*140 PVC and Corzan\* CPVC are the chosen materials for the Guardian systems. IPEX controls not only the design and fabrication of the systems, but also the blending of the PVC resin, the extrusion and injection molding of most components. This unparalleled consistency of quality and resin as well as dimensional compatibility results in superior systems that are unmatched in the industry. Clear-Guard utilizes a fail-safe, fully pressure rated clear PVC that uses a solvent cement jointing method identical to traditional vinyl pressure pipe. This eliminates the need for expensive caulking guns and epoxy adhesive for assembly. Clear-Guard can be used in conjunction with both Schedule 40 and 80 Xirtec140 PVC or Corzan CPVC primary pipe.

#### Design

Guardian and Clear-Guard systems offer a complete selection of pretested modular components which are extremely easy to install. Our Centra-lok™ patented design allows IPEX to offer vinyl systems which average up to 60% fewer overall joints and up to 10% fewer field joints. Since joints are always the most common source of premature failures and leaks, it is easy to realize the immense impact the Centra-lok design has on maintenance, repair and installation costs. The patented ingenuity and simplicity of the Centra-lok design also reduces the purchase cost of IPEX systems, making Guardian and Clear-Guard the industry's most cost-effective vinyl system. As with all our containment systems, the IPEX patented Centra-Guard™ point-of-collection or cable leak detection systems are also available.

#### General

Each contained piping system shall consist of Xirtec®140 PVC primary piping system supported within a Xirtec®140 PVC secondary containment housing. Carrier fitting sizes 1/2" through 4" will use Centra-Lok [U.S. Patent No. 5,398,973] molded supports minimizing the number of field (factory assembled) fitting joints. Carrier sizes 6" and larger will use IPEX standard polypropylene fitting discs to support and centralize. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment may be readily drained and manually checked for leaks.

Material	Carrier	Containment
Xirtec140 PVC	1/2" - 12"	2" - 18"
Corzan CPVC	1/2" - 12"	2" - 18"
Clear-Guard PVC	n/a	2" - 8"

Larger sizes are available from IPEX.

## FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

## DID YOU KNOW?

Made from PVC and Corzan® CPVC, these systems offer a complete selection of pre-tested modular components that are considered unmatched in the industry.



# THE CUSTOMGUARD OPTION

## **CustomGuard®**

Custom-designed and fabricated double containment systems including dissimilar material systems, CustomGuard is unlike other systems that try to run everything through the same material. Our specialists will recommend and provide the absolute best system for each individual application, looking not only at chemical compatibility but also at cost (material and installation), life expectancy and turn around time.

For applications with more demanding mechanical, chemical and/or thermal requirements, IPEX has developed our CustomGuard offering. CustomGuard includes a variety of different system choices ranging from Fluoropolymers (e.g. PVDF), Thermosets (FRP); and carbon and stainless steel to hybrid combinations. Applications that require such materials are obviously complex, each demanding expertise and specialized knowledge to design an effective system. The CustomGuard option includes material selection, design, specification support (if needed) and fabrication of preassembled spooled pieces to

DID YOU KNOW?

Together with Encase and Guardian,
Custom Guard sets IPEX apart from any
other double containment system.
Custom Guard is available in several
different materials. Unlike other
manufacturers, IPEX is not constrained
by a limited material selection. This
variety enables IPEX to provide
customers with the best solution for
their double containment needs.

Material Carrier Containment
FRP/Metals/Dissimilar 1/2" - 20" 2" - 26"

FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

#### **SPECIFICATIONS**

minimize installation time and

#### **Material Selection**

Carbon and stainless steel, copper, fiberglass (polyester and vinylester resins), PVDF, PP and dissimilar materials, are all available in CustomGuard® systems. This comprehensive offering, unmatched by any one company, gives IPEX the unique ability to examine just about any double containment requirement and truly offer the best suited, most cost-effective system. While other manufacturers have vested interests in recommending their one and only material/system, IPEX isn't confined by that limitation.

#### Design

field joints.

Drawing on more than 15 years of experience in double containment, IPEX has developed a variety of product-specific designs to maximize efficiency and reduce installation costs. As with all our containment systems, our own patented Centra-Guard $^{TM}$  point-of-collection or cable leak detection systems are also available.

#### Genera

Each contained piping system shall consist of Schedule 40 A-53 Carbon Steel primary piping system supported within a UL FRP secondary containment housing. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment may be readily drained and manually checked for leaks.

# THE CLEAR-GUARD OPTION

## Clear-Gu⊗rd™

Clear-Guard's fail-safe, fully pressure rated clear containment system allows for easy detection of leaks and eliminates the risks associated with piping aggressive chemicals overhead. Clear-Guard utilizes Guardian's patented Centra-Lok fitting design, which reduces the required joints by 40-60%. Fittings are available in clear or opaque containment fittings.

Material	Carrier	Containment
PVC	-	1/2" - 8"

FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

#### **SPECIFICATIONS**

#### General

Each contained piping system shall consist of Xirtec 140 PVC or Corzan CPVC primary piping system supported within a Clear-Guard Schedule 40 clear PVC secondary containment housing. Carrier fitting sizes 1/2" through 4" will use Centra-Lok [U.S.Patent No. 5,398,973] molded supports minimizing the number of field (factory assembled) fitting joints. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment maybe readily drained and manually checked for leaks.



## CENTRA-GUARD LEAK DETECTION

## Centra-Gu⊲rd™

In many situations, as for example in buried systems, double containment protection by itself may not be enough. In these applications it is critical that a leak is immediately detected and located.

Although many different leak detection systems are available on the market today, only one offers a combination of advanced features, reliability, reusability and cost-effectiveness: Centra-Guard, an innovative and patented leak-detection system.

No cables to string during installation, no false alarms due to condensation and always re-usable, this patented system features self-contained capacitive proximity sensors (with sensing point adjustment) connected to a NEMA4 enclosed control panel with both audible and visual signals. Part of this ingenious system are its two different sensor housing designs; one specifically for over-head applications and one for below-grade applications.

The initial cost of the Centra-Guard system is offset tenfold by the savings realized in avoiding the much higher costs of an environmental cleanup or lost production.

## FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

#### APPLICATIONS

 above-ground suspended pipeline applications, with sensors housed in a saddle-type clamp, as well as underground pipeline systems with drip leg assembly.

#### **OVERVIEW**

The basic concept behind cable leak detection is that a monitor detects any changes in the electrical properties of the cable caused by contact with a liquid. The monitor then raises an alarm in the plant to warn operators that a leak has been detected. Usually the detection system will pinpoint the leak and report its location. This allows operators to quickly rectify the situation.

Centra-Guard is the only non-intrusive leak detection system available. The sensor never comes in contact with the media.



#### CHOOSE FROM A WIDE RANGE OF SYSTEM OPTIONS

IPEX offers an extremely wide array of materials and sizes. You can specify virtually any piping material to create a system that contains whatever corrosive or hazardous substance your application handles. If you don't see what you need listed here, call us! Other systems or sizes may be available, or we may have suggestions for substitutions.

SYSTE		Carrier SIZE
Carrier	Containment	inches
PVC 80	PVC 80	1/2 - 12
PVC 80	PVC 40	1/2 - 12
PVC 40	PVC 40	1/2 - 12
PVC DWV	PVC DWV	1-1/2 - 12
PVC 80	CS SCH 10	1/2 - 12
CPVC 80	CPVC 80	1/2 - 8
CPVC 80	PVC 80	1/2 - 12
CPVC 80	PVC 40	1/2 - 12
CPVC 80	CS SCH 10	1/2 - 12
NAT PP 80	PVC 80	1/2 - 2
NAT PP 80	PVC 40	1/2 - 2
RED PVDF 80	CPVC 80	1/2 - 2
RED PVDF 80	PVC 80	1/2 - 2
NAT PVDF 80	PVC 80	1/2 - 2
ENFUSION PP	PVC DWV	1/2 - 6
S40 A53B CS BW	PVC 80	1/2 - 8
S40 A106B CS BW	PVC 80	1/2 - 8
S80 A106B CS SW	PVC 80	1/2 - 8
S40 A53B CS BW	FRP	1/2 - 12
S40 A106B CS BW	FRP	1/2 - 12
S80 A106B CS SW	FRP	1/2 - 2
S40 A53B THRD	PVC 40	1/2 - 2
S40 A106 SMLS BW	PVC 40	1/2 - 8
S40 A53 BLK BS	PVC 40	1/2 - 8
S80 A53 BLK SW	PVC 80	1/2 - 2
S80 A53 BLK SW	FRP	1/2 - 2
S40 A53 BLK SW	S40 A53 BLK	1/2 - 2
S40 A106B CS SW	PVC 80	1/2 - 8
S80 A53B CS BW	PVC 80	1/2 - 8
S80 A106B CS SW	PVC 80	1/2 - 8
S40 A106 CS SW	FRP	1/2 - 2
S80 A53B CS BW	FRP	1/2 - 12
S80 A106B CS BW	FRP	1/2 - 2
S40 A53B THRD	FRP	1/2 - 2
S40 A53 BLK CS	S40 A53 BLK CS	1/2 - 12
S40 A53 BLK SW	PVC 40	1/2 - 2

SYSTE		Carrier SIZE
Carrier	Containment	inches
S40 A53 BLK SW	FRP	1/2 - 2
S40 A53 BLK SW	PVC 80	1/2 - 2
S80 A53B CS SW	PVC 80	1/2 - 2
S10 T304L SS BW	PVC 80	1/2 - 8
S10 T304L SS BW	PVC 40	1/2 - 8
S10 T0304L SS BW	CPVC 80	1/2 - 8
S10 T304L SS BW	FRP	1/2 - 12
S10 T304L SS BW	S10 T304L	1/2 - 12
S40 T316L SS BW	PVC 80	1/2 - 8
S40 T316L SS BW	CPVC 80	1/2 - 8
S40 T316L SS BW	FRP	1/2 - 12
S40 T304L SS SW	PVC 80	1/2 - 2
S40 T304L SS SW	PVC 40	1/2 - 2
S40 T304L SS SW	CPVC 80	1/2 - 2
S40 T304L SS SW	FRP	1/2 - 2
S10 T316L SS SW	PVC 80	1/2 - 2
S10 T316L SS SW	CPVC 80	1/2 - 2
S10 T316L SS SW	FRP	1/2 - 2
S40 T304L SS BW	PVC 80	1/2 - 8
S40 T304L SS BW	PVC 80	1/2 - 8
S40 T304L SS BW	CPVC 80	1/2 - 8
S40 T304L SS BW	FRP	1/2 - 12
S10 T316L SS BW	PVC 80	1/2 - 8
S10 T316L SS BW	CPVC 80	1/2 - 8
S10 T316L SS BW	FRP	1/2 - 12
S10 T304L SS SW	PVC 80	1/2 - 2
S10 T304L SS SW	PVC 40	1/2 - 2
S10 T304L SS SW	CPVC 80	1/2 - 2
S10 T304L SS SW	FRP	1/2 - 2
S10 T304L SS SW	S10 T304L	1/2 - 2
S40 T316L SS SW	PVC 80	1/2 - 2
S40 T316L SS SW	CPVC 80	1/2 - 2
S40 T316L SS SW	FRP	1/2 - 2
HARD COPPER	PVC 40	1/2 - 4
HARD COPPER	3000 FRP	1/2 - 4
IND GOLLEN	3000 1 101	112. T

# Acid Waste Piping Systems









<del>enneia e</del> lectroiu	sion Acid Waste	
Systems FRPP &	NRPP	

Labline Mechanical-Joint Acid Waste

Plenumline Mechanical Joint Acid Waste System FR-PVDF

Neutratank Neutralization Tanks HDPE & PP

58

70











# ENFIELD ELECTROFUSION ACID WASTE SYSTEMS

#### **ENFIELD**

Enfield electrofusion fittings are molded with an integral resistance wire in the socket, with jointing completed by energizing the resistance wire via a microprocessor controlled Enfusion Control Unit. The result of these innovations is an unparalleled level of joint reliability and repeatability. Enfield has proven over time that it produces the optimum level of performance where it matters most - at the joint interface. It offers unprecedented control of jointing - controlled fit, controlled temperature and controlled time.

## ADVANTAGES

- Positive reliable joints made in 2 minutes installation time is reduced
- Several joints can be made at one time
- Proven reliability for over a decade
- Enfield is manufactured from polypropylene which has an operating temperature range from -10°F (-23°C) to 212°F (100°C).\* This allows systems to be flushed with boiling water
- Heavy gauge resistance wire molded into sockets no loose components, controlled fusion of joints
- 6 Easy connecting heavy duty socket terminal posts complete with protection ears
- Microprocessor controlled Enfusion unit ensures secure joints and joint repeatability
- 8 Matched system high quality pipe and fittings are matched to give ease of installation and long term reliability
- 9 Easy to install even in difficult areas
- 10 Installed cost 50% less than glass
- (11) Breakage factor eliminated
- 12 Maintenance free

#### **STANDARDS**









NSF-approved IAPMO-listed & CSA-certified Meets ASTM F1412, D4101 and CSA B181.3

#### DID YOU KNOW?

Enfield® offers polypro fittings, constructed with a heavy gauge resistance wire that is integrally molded into the socket. These are considered to be the premier fittings on the market.



#### SHORT FORM SPECIFICATIONS

#### **GENERAL**

Acid waste drain and vent system, as shown on drawings, shall be NSF listed and CSA certified Schedule 40, polypropylene as manufactured by IPEX. System to include pipe supplied in 10 ft. lengths (or 20 ft lengths if NFRPP is specified), fittings, traps and neutralization tanks from the same manufacturer. It shall also include recommended adapters to connect to other piping materials, where applicable.

#### **MATERIAL**

Pipe shall be made from NSF listed Type 1, flame retardant polypropylene conforming to ASTM D4101, with a maximum average flame spread of zero seconds and a maximum extent of burning of 13 mm, in accordance with ASTM D635. Matched fittings shall be made from NSF listed flame retardant polypropylene with average maximum burn time of 80 seconds and maximum extent of burning of 20 mm in accordance with ASTM D635.

If NFRPP pipe is specified, it shall be made from NSF 14 listed and CSA certified Schedule 40 PP as manufactured by IPEX. Pipe shall comply with ASTM F1412 and material used shall comply with the material requirements of ASTM D4101.

#### **FITTINGS**

Fittings shall be NSF listed and have an integral heavy gauge, nickel/chrome electrical resistance wire molded in place in the fitting body. Copper wire elements, loose wire or other loose joint components, are prohibited. Fittings shall be Enfield or approved equal.

#### **JOINTS**

Connections between polypropylene pipe and fittings shall be made using the Enfield joint. All joints shall have a fusion cycle controlled by a microprocessor operated, waterproof, Enfusion control unit equipped with input and output voltage sensors, ambient temperature sensors to automatically adjust fusion time and audible alarms to indicate cycle interruptions and completion of the joining process. The unit shall be capable of fusing multiple joints and with a minimum capability of eight 2" joints with the same fusion time as a single joint.

Connections between polypropylene and other piping materials shall be made using Enfield adapters according to manufacturer's (IPEX) recommendations. All electrofusion machines shall be third party certified by UL and CSA.

#### INSTALLATION AND TESTING

Installation and testing shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing codes. Testing with compressed air is prohibited. The entire system shall be installed free of stress and in proper alignment. Horizontal supports shall provide a wide bearing area and be free of burrs or sharp edges. Support spacings shall be in accordance with the manufacturer's recommendations and local plumbing codes. Vertical piping shall have riser clamps at each floor. Pipe supports should be installed so that horizontal piping is in uniform alignment and with a uniform slope of at least 1/8".



Dimension	Product
inches	Code

#### AW Polypropylene Pipe Flame Retardant Sch 40

1-1/2	146001
2	146002
3	146003
4	146004
6	146006
8	146008
10	146010
12	146012

10' Lengths

Dimension	Product
inches	Code

#### AW Polypropylene Pipe Flame Retardant Sch 40



1-1/2	146031
2	146032
3	146033
4	146034
6	146036
8	146038
10	146040
12	146042

20' Lengths

Note: 20' Schedule 40 FR pipe is a non-stock item available upon special order.

#### AW Polypropylene Pipe Flame Retardant Sch 80



1-1/2	146013
2	146014
3	146015
4	146016

10' Lengths

Note: 20' Schedule 80 FR pipe is a non-stock item available upon special order.

#### AW Polypropylene Pipe Flame Retardant Sch 80



1-1/2	146022
2	146023
3	146024
4	146025

20' Lengths

Note: 20' Schedule 80 FR pipe is a non-stock item available upon special order.

#### AW Polypropylene Pipe Black Non-Flame Retardant Sch 40



1-1/2	146101
2	146102
3	146103
4	146104
6	146106
8	146108
10	146110
12	146212

20' Lengths

#### AW Polypropylene Pipe Black Non-Flame Retardant Sch 80



1-1/2	146201
2	146202
3	146203
4	146204
6	146206
8	146208
10	146210
12	146211

20' Lengths

Dimension	Product
inches	Code

#### Black Non-Flame Retardant Enfield Coupling

2	257147
3	257150
4	257154
6	257158
8	257161
10	257143
12	257145

#### 90° Sweep Soc



1-1/2	257171
2	257172
3	257173
4	257174
6	257175

Product Code

Dimension

#### Coupling Soc



1-1/2	257141
2	257146
3	257149
4	257153
6	257157
8	257160
10	257142
12	257144

#### 90° Sweep Soc x Sp



1-1/2	257281
2	257282
3	257283
4	257284
6	257286

#### Fabricated Repair Coupling Soc



ooupring 500	
2	257148
3	257152
4	257156
6	257159
8	257295

#### 1/8 Bend Soc



1-1/2	257191
2	257194
3	257195
4	257196
6	257197

#### 1/8 Bend Soc x Sp



1-1/2	257221
2	257222
3	257223
4	257224
6	257225

#### Fabricated 1/8 Bend Soc



8	257198
10	257192
12	257193

1/4	Bena	(9
	5	\
	16.4	

Dimension	Product
inches	Code

#### 1/4 Bend (90°) Soc



1-1/2	257181
2	257184

#### Fabricated Sanitary Tee Soc



 ily icc 30c	
6	257214
8	257217
10	257202
12	257205

Product Code

Dimension

#### 1/4 Bend (90°) Soc x Sp



1-1/2	257291
2	257293

#### Reducing Sanitary Tee Soc



2 x 1-1/2	257207
3 x 1-1/2	257209
3 x 2	257210
4 x 2	257212
*4 x 3	257213

#### \* Fabricated

#### 1/4 Bend Soc x Loose Nut



1-1/2 257292

#### Fabricated 1/4 Bend (90°) Soc



57185
57182
57183

#### Fabricated Reducing Sanitary Tee Soc



 ,	
6 x 2	257215
6 x 4	257216
8 x 3	257163
8 x 4	257218
8 x 6	257219
10 x 3	257164
10 x 4	257203
10 x 6	257204
10 x 8	257165
12 x 4	257166
12 x 6	257167
12 x 8	257168
12 x 10	257169

#### Sanitary Tee Soc



1-1/2	257201
2	257206
3	257208
4	257211

#### Double Sanitary Tee Soc



*1-1/2	257351
2	257352
3	257354
4	257357
* Fabricated	

Dimension	Product
inches	Code

## Product Code

Dimension

#### Reducing Double Sanitary Tee Soc



2 x 1-1/2	257353
3 x 1-1/2	257355
4 x 2	257358
4 x 3	257359

#### Fabricated Reducing Wye Soc



·	ing wyc soc	
	8 x 2	257427
	8 x 3	257415
	8 x 4	257416
	8 x 6	257421
	10 x 3	257428
	10 x 4	257373
	10 x 6	257379
	10 x 8	257380
	12 x 3	257429
	12 x 4	257383
	12 x 6	257387
	12 x 8	257388
	12 x 10	257430

#### 45° Wye Soc



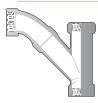
1-1/2	257371
2	257390
3	257394
4	257400
6	257406

#### Fabricated 45° Wye Soc



8	257414
10	257372
12	257381

#### Combination Wye & 1/8 Bend (Long Turn Wye) Soc



1-1/2	257389
2	257392
3	257397
4	257403
6	257410

#### Reducing Wye Soc



i C		
	2 x 1-1/2	257391
	3 x 1-1/2	257395
	3 x 2	257396
	4 x 1-1/2	257425
	4 x 2	257401
	4 x 3	257402
	6 x 1-1/2	257426
	6 x 2	257407
	6 x 3	257408
	6 x 4	257409

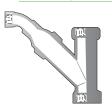
#### Fabricated Combination Wye & 1/8 Bend Soc



8	257417
10	257374
12	257384

Dimension	Product
inches	Code

#### Reducing Combination Wye & 1/8 Bend Soc



2 x 1-1/2	257393
3 x 1-1/2	257398
3 x 2	257399
4 x 1-1/2	257431
4 x 2	257404
4 x 3	257405
6 x 1-1/2	257432
6 x 2	257411
6 x 3	257412
6 x 4	257413

#### Reducing Double 45° Wye Soc



*2 x 1-1/2	257446
6 x 4	257458
* Fabricated	

Product Code

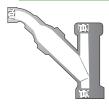
Dimension

#### Fabricated Reducing Double 45° Wye Soc



ilg bouble 45	wye soc
3 x 2	257449
4 x 2	257453
4 x 3	257454
8 x 6	257461
10 x 4	257443
10 x 6	257463
10 x 8	257444
12 x 4	257464
12 x 6	257465
12 x 8	257466
12 x 10	257467

#### Fabricated Reducing Combination Wye & 1/8 Bend Soc



J	J
8 x 4	257419
8 x 6	257420
10 x 3	257375
10 x 4	257376
10 x 6	257377
10 x 8	257378
12 x 3	257433
12 x 4	257434
12 x 6	257435
12 x 8	257386
12 x 10	257385

#### Fabricated Double Combination Wye & 1/8 Bend Soc



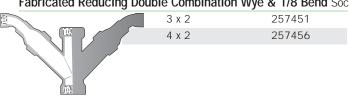
2	257447
3	257450
4	257455
6	257459

#### Fabricated Double 45° Wye Soc



• . •	,0 000	
	2	257445
	3	257448
	4	257452
	6	257457
	8	257460
	10	257442
	12	257462

#### Fabricated Reducing Double Combination Wye & 1/8 Bend Soc



Dimension	Product
inches	Code

Dimension inches	Product Code

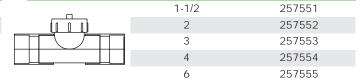
257176

#### True Wye Soc



1-1/2	257341
1-1/2	237341
2	257342

#### Fabricated Cleanout Tee Sp



#### Reducing True Wye Soc



2 x 1-1/2	257343
3 x 2	257344

#### Molded Cleanout Tee Sp



#### **Cleanout** Sp



1-1/2	257232
2	257235
3	257238
4	257241
*6	257244

\*Fabricated

#### Fabricated Cap Soc



1-1/2	257541
2	257543
3	257544
4	257545
6	257546
8	257547
10	257542
12	257548

#### Cleanout Plug Male Thread



1-1/2	257233
2	257236
3	257239
4	257242

#### Flange - ASA 150 Soc

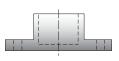
	1-1/2	257361
	2	257365
	3	257366
	4	257367
	6	257368

#### Cleanout w/ Brass Plug Sp



1-1/2	257246
2	257231
3	257247
4	257248

#### Fabricated Flange - ASA 150 Soc



8	257369
10	257362
12	257363

Dimension inches	Product Code

231452

#### Blind Flange - ASA 150

	1-1/2	231453
	2	231454
	3	231455
	4	231456
	6	231457
	8	231458
	10	231451

12

#### Adapter Female Thread x Loose Nut



1-1/2 257101

#### Adapter Soc x Loose Nut



1-1/2 257111

#### Fabricated Blind Flange - ASA 150

8	257370
10	257360
12	257364

#### Male Adapter Soc x Male Thread



1-1/2	257121
2	257122

#### Reducing Bushing Soc x Sp



2 x 1-1/2	257472
** 3 x 1-1/2	257473
3 x 2	257476
** 4 x 1-1/2	257474
4 x 2	257477
4 x 3	257479
6 x 1-1/2	257475
6 x 2	257478
6 x 3	257480
6 x 4	257483
8 x 3	257481
8 x 4	257484
8 x 6	257486
10 x 4	257482
10 x 6	257485
10 x 8	257487
12 x 4	257489
12 x 6	257490
12 x 8	257488
12 x 10	257471

<sup>\*\*</sup> Discontinued when stock is depleted

#### Female Adapter Soc x Female Thread



1-1/2	257131	
2	257132	

#### Glass Adapter Soc x Bead



1-1/2	257501
2	257502
3	257503
4	257504

#### No Hub Adapter Soc x MJ Sp



1-1/2	257511
2	257512
3	257513
4	257514

Dimension	Product
inches	Code

Dimension	Product
inches	Code

#### 3"/12" FRPP Tail Piece Adapter



1-1/2 x 3	257133
1-1/2 x 12	257134
c/w Spig x Brass Comp	pression Ring

#### P Trap - 3 piece Soc



3	257563
4	257564
6	257565
Shipped as 3 pieces	

## 1-1/2" x 12" FRPP Swivel Sink Strainer Adapter Sp x Female Thread Pipe Clip 1-1/2 x 12 257090



c/w Viton® Gasket



1-1/2	156251
2	156252

#### FRPP Swivel Sink Strainer Adapter Sp x Female Thread



•	•
1-1/2	257093
*1-1/2	156450

c/w Viton® Gasket

#### **Universal Trap** - Solid Base, P Type Soc x Female Thread



1-1/2	257521
1-1/2	257522

#### P Trap - 2 piece Soc



3	1-1/2	257104
	2	257105

Shipped as 2 pieces

#### Universal Trap - Clear Base, P Type Soc x Female Thread



1-1/2	257531
1-1/2	257532

#### Fabricated P Trap - 2 piece Soc



8	257566
10	257562

Shipped as 2 pieces

#### Universal Trap - Solid Base, S Type Soc



-1/2	257523

#### Universal Trap - Clear Base, S Type Soc



1-1/2 257533

<sup>\*</sup>Pregrooved for Labline. Nut and Olive are extra.

#### PRODUCT SELECTION CHART

Dimension inches	Product Code

Description	Product Code

#### **Compensator Joint**



٠		
	3	257107
	4	257108
	6	257109

257279

257778

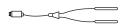
Connector Cable - N	EW Style Machine	
	-	257278

#### Enfusion Control Unit - Complete Kit



Kit includes hub clamps, 1 1/2" thru 6", connector cable & 5' link cable.

#### Connector Cable - Old Style Machine



257263

#### **Extension Pins**



Priced per extension pin.

#### Connector Cable - EZ Connector Cable



257294

#### Enfusion Hub Clamp - New T Bar Handle & Bushing



	1-1/2	257254
	2	257256
2	3	257257
1	4	257258
	8 6	257259
	8	257260
	10	257255
	12	257262

#### Link Cable c/w EZ Connector

 2 ft. EZ	257268
5 ft. EZ	257269
10 ft. EZ	257270
15 ft F7	257271

#### Stainless Steel T Handle for Hub Clamps



257125

Link Cable c/w Link Lead				
	5 ft.	257265		
	10 ft.	257266		
	15 ft.	257267		

#### Oil Impregnated Brass Bushings for Clamps



1-1/2 to 12 257094

# Fuses 16 AMP 257801 100 MILAMP 257276 500 MILAMP 257277



### At IPEX you get more than products. You get our knowledge.

You get more than just purity with Enpure™. You get peace of mind. Enpure is one of the most complete and dependable pure-water thermoplastic piping systems available today. From the manufacturing of cosmetics to solutions for medical use, from pure-water lab applications to dialysis machines, Enpure is designed to meet all challenges. Manufactured with FDA approved materials, Enpure natural polypropylene pipe, valves and fittings eliminate the potential of contamination to your

And, unlike conventional systems, Enpure is designed as a socket fusion system. No hazardous chemicals are used for joining. Connections are as "clean" as any other components in the system.

For more than 20 years IPEX has provided laboratories throughout North America with complete acid waste systems designed to take a variety of chemicals. Pour it, flush it or dump it –

from school labs to industrial labs, Labline™ polypro, and Plenumline™ FR-PVDF acid waste systems are built to handle it.

Since their introduction, Labline and Plenumline mechanical joints have revolutionized the industry – and they continue to be regarded as state-of-the-art. Labline and Plenumline also feature a new no-heat Elastolive for quicker installation and higher performance.

Backed by IPEX's 50 years of experience, Enpure, Labline and Plenumline are built to our strict quality, performance and dimensional standards.



pure process.



**PLENUMLINE** 



# LABLINE MECHANICAL JOINT ACID WASTE SYSTEMS

## **LABLINE®**

Labline (Mechanical Joint) has displaced the more expensive and difficult to install glass and metal systems. Gone is the need for fusing, caulking or welding of joints. Joining of the Labline System is complete in just 30 seconds and once the nut is locked into place, the end-user is assured of many years of trouble-free service. Yet, because it is a mechanical joint, the system can be easily dismantled and re-used, making it ideal for modular designs and for systems that may require re-modeling in the future.

#### **STANDARDS**









NSF-approved IAPMO-listed & CSA-certified Meets ASTM F1412, D4101 and CSA B181.3

#### **ADVANTAGES**

- 1 30 second jointing save on installation time
- 2 Proven reliability for over 30 years
- 3 Labline is manufactured from polypropylene which has an operating temperature range from -10°F (-23°C) to 212°F (100°C).\* This allows systems to be flushed with boiling water
- All plastic construction no galvanic action, electrolysis or corrosion in the joint
- 5 Simple, inexpensive, non-temperamental tools
- 6 Easy to install, even in difficult areas
- Mastered by plumbers in minutes. No pre-heating required to install olive
- 8 System changes during installation can be done without spoiling fittings
- 9 Can be disassembled and re-used
- (10) Ideal for modular systems
- 11 Ideal for remodeling
- Matched system high quality pipe and fittings are matched to give ease of installation and long term reliability





Both Labline® and Plenumline<sup>TM</sup> contain no-heat Elastolives<sup>TM</sup> for quick installation and high performance.

#### SHORT FORM SPECIFICATIONS

#### **GENERAL**

Acid waste drain and vent system, as shown on drawings, shall be NSF listed, Schedule 40, polypropylene as manufactured by IPEX to include pipe supplied in 10 ft. lengths (or 20 ft lengths if NFRPP is specified), and matched fittings, traps and neutralization tanks from the same manufacturer. It shall also include recommended adapters to connect to other piping materials, where applicable.

#### MATERIAL

Pipe shall be made from NSF listed Type 1, flame retardant polypropylene conforming to ASTM D4101, with a maximum average flame spread of zero seconds and a maximum extent of burning of 13 mm, in accordance with ASTM D635. Matched fittings shall be made from NSF listed flame retardant polypropylene with average maximum burn time of 80 seconds and maximum extent of burning of 20 mm in accordance with ASTM D635.

If NFRPP pipe is specified, it shall be made from NSF 14 listed and CSA certified Schedule 40 PP as manufactured by IPEX. Pipe shall comply with ASTM F1412 and material used shall comply with the material requirements of ASTM D4101.

#### **FITTINGS**

Fittings shall be NSF listed, be of all plastic construction and be designed to lock into a machined groove on the mating piping. All fittings shall have integrally molded union connections. No metallic grab rings or clamps shall be allowed. Fittings containing EVA (ethylene vinyl acetate) are strictly prohibited. Couplings shall not be added to make mechanical joint fittings. Fittings shall be Labline or approved equivalent.

#### **JOINTS**

Connections between polypropylene pipe and matched fittings shall be made using the Labline Joint.

#### INSTALLATION AND TESTING

Installation and testing shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing codes. Testing with compressed air is prohibited. The entire system shall be installed free of stress and in proper alignment. Horizontal supports shall provide a wide bearing area and be free of burrs or sharp edges. Support spacings shall be in accordance with the manufacturer's recommendations and local plumbing codes. Vertical piping shall have riser clamps at each floor. Pipe supports shall be installed so that horizontal piping is in uniform alignment and with a uniform slope of at least 1/8" per foot, or in accordance with the local plumbing codes.



	Dimension inches	Product Code
Coupling		
	1-1/2	156161
	2	156162
	3	156163
	4	156164

Dimension inches	Product Code
ry Taa	

#### **Reducing Sanitary Tee**



2 x 1-1/2	156204
3 x 1-1/2	156207
3 x 2	156208
4 x 1-1/2	156211
4 x 2	156212
4 x 3	156213

#### 1/8 Bend (45°)



1-1/2	156191
2	156192
3	156193
4	156194

#### Cleanout Tee



1-1/2	156202
2	156205
3	156209
4	156214

#### Loose Nut 1/8 Bend (45°) MJ x Loose Nut



1-1/2	156216
2	156217
3	156218
4	156219

#### 45° Wye



1-1/2	156361
2	156363
3	156367
4	156373

#### 1/4 Bend (90°)



156181
156182
156183
156184

#### Reducing 45° Wye



2 x 1-1/2	156364
3 x 1-1/2	156368
3 x 2	156369
4 x 1-1/2	156374
4 x 2	156375
4 x 3	156376

#### Loose Nut 1/4 Bend MJ x Loose Nut



1-1/2	156291
2	156292
3	156293
4	156294

#### Combination Wye & 1/8 Bend



1-1/2	156362
2	156365
3	156370
4	156377

#### Sanitary Tee



1-1/2	156201
2	156203
3	156206
4	156210

Dimension	Product
inches	Code

#### Reducing Combination Wye & 1/8 Bend



2 x 1-1/2	156366
3 x 1-1/2	156371
3 x 2	156372
4 x 1-1/2	156380
4 x 2	156378
4 x 3	156379

Dimension inches	Product Code	
---------------------	-----------------	--

#### Reducing Coupling Loose Nut x MJ



2 x 1-1/2	156397
3 x 1-1/2	156398*
3 x 2	156400*
4 x 1-1/2	156399*
4 x 2	156401*
4 x 3	156402

<sup>\*</sup> Loose nut not furnished

#### Double Wye



1-1/2	156381
2	156383
3	156387
4	156392

#### Threaded Adapter Male Thread x Female Thread



1-1/2 x 1-1/4	156121
1-1/2 x 1-1/2	156131

#### Reducing Double Wye



2 x 1-1/2	156384
3 x 1-1/2	156388
3 x 2	156389
4 x 1-1/2	156405
4 x 2	156393
4 x 3	156394

#### Male Adapter MJ x Male Thread



1-1/2	156141
2	156142
3	156143
4	156144

#### Double Wye & 1/8 Bend



1-1/2	156382
2	156385
3	156390
4	156395

#### Female Adapter MJ x Female Thread



 no x i ciliaro i ili cad	
1-1/2	156151
2	156152

#### Reducing Double Wye & 1/8 Bend



2 x 1-1/2	156386
3 x 1-1/2	156406
3 x 2	156391
4 x 1-1/2	156407
4 x 2	156396
4 x 3	156408

#### Glass Adapter MJ x Bead



1-1/2	156451
2	156452
3	156453
4	156454

#### No Hub Adapter MJ x Spigot



1-1/2	156461
2	156462
3	156463
4	156464

	Dimension inches	Product Code
out Plua		

#### Cleanout Plug



1-1/2	156241
2	156242
3	156243
4	156244

#### Vent Loop U Bend



1-1/2	156101
2	156102

# Product Code

Dimension

#### Universal Trap Female Thread x MJ



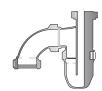
emale inread x MJ		
1-1/2	156501	
1-1/2	156511	
Transparent Base		
-	156512	
PP Base Only		
-	156513	
Clear Base Only		
-	156514	
O-ring Gasket Only		
-	156516	
Top Assembly For W501	& W511	

#### P Trap - 2 Piece



1-1/2	156103
2	156104

#### Universal Trap, S-Type Female Thread x MJ



1-1/2	156502
*1-1/2	156515
* Transparent Base	

#### P Trap - 3 piece Long Radius



1-1/2	156711
2	156712
3	156713
4	156714

#### Sink Outlet w/ Plug



1-1/2 - 3-3/8	156303
1-1/2 - 3-3/8	156304
1-1/2 - 2-7/8	156311
1-1/2 - 2-7/8	156312
_	156302

#### S Trap - 3 Piece



1-1/2	156105
2	156106

#### Sink Outlet Plug

-	156301
-	156305

#### Running Trap - 3 Piece



1-1/2	156107
2	156108

#### Sink Overflow

11011		
	1-1/2	156321
	1-1/2	156322

All Labline fittings are furnished assembled with Olives and Union Nuts. IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent.

Dimension	Product
inches	Code

### Dimension Product inches Code

#### Cup Sink Round



6 x 4 Deep	156403
4 x 4 Deep	156404
-	156409

#### No Heat Elastolive Yellow





1-1/2	156222
2	156113
3	156114
4	156115

#### Cup Sink Oval



6 x 3	156491
9 x 3	156493
-	156492

#### **Grooving Tool**



1-1/2	156109
2	156110
3	156111
4	156112

#### **Dilution Trap**



1-1/2	156601
*1-1/2	156611
* Transparent Base	

#### **Spanner**



1-1/2	156264
2	156266
3	156268
4	156270

#### Pipe Clip



1-1/2	156251
2	156252

#### **Grooving Tool & Spanner Combination Set**



1-1/2	156263
2	156265
3	156267
4	156269

#### **Union Nut**



1-1/2	156231
2	156232
3	156233
4	156234

- 1 Rated for pedestrian traffic and available in sizes from 2" to 6".
- Floway<sup>™</sup> drains can be optionally configured with adjustable strainers, round funnels, sediment baskets and plain end or threaded outlets.
- 3 Adjustable feature allows easy leveling after pouring of finished floors



#### PRODUCT SELECTION CHART

Dimension	Product
Inches	Code

#### F1000 Series Adjustable Floor Drain



Enfield 2	237001
Labline 2	237075
3	237011
4	237021
6	237031

#### F1000 Series Adjustable Floor Drain



•		
	Enfield 2	237003
	Labline 2	237077
	3	237013
	4	237023
	6	237034

w/ Sediment Basket and 6" Round Funnel

#### F1000 Series Adjustable Floor Drain



Enfield 2	237002
Labline 2	237076
3	237012
4	237022
6	237033

w/ Sediment Basket

#### F1000 Series Adjustable Floor Drain



,	
Enfield 2	237004
Labline 2	237078
3	237014
4	237024
6	237032

w/ 6" Round Funnel Only

#### PRODUCT SELECTION CHART

Dimension	Product
Inches	Code

#### F4000 Series Non-Adjustable Floor Drain



Enfield 2	237041
Labline 2	237079
3	237051
4	237061
6	237071

#### Gas Tight Plug



3	237815
4	237816
6	237817

Product Code

#### Allenhead Vandalproof Screws



Set of 3 screws 237045

#### F4000 Series Non-Adjustable Floor Drain



Enrieia 2	237042
Labline 2	237080
3	237052
4	237062
6	237072

w/ Sediment Basket

#### Blank Cover for F Series Drains

F1000 Series	237814
F4000 Series	237813

#### F4000 Series Non-Adjustable Floor Drain



Enfield 2	237044
Labline 2	237081
3	237053
4	237063
6	237073

w/ Sediment Basket & 6" Round Funnel

#### **Round Funnel**

6 237810

#### Sediment Basket Strainer for F Series Drains

F1000	Serie	es	23	37809	
F4000	Serie	es	23	37808	

#### F4000 Series Non-Adjustable Floor Drain



Enfield 2	237043
Labline 2	237082
3	237054
4	237064
6	237074

w/ 6" Round Funnel Only

#### **Grid Strainers for F Series Drains**

•			
	F1000	Series	237807
	F4000	Series	237806

#### Floor Cleanout with Brass Cover (adjustable Cleanout) Sp



2	237173
3	237174
4	237175
6	237177

#### Male Iron Pipe Threaded Outlet



3	257091
4	257092

#### FPT Tap for Priming Drain Assembly

9	- · · · · · · · · · · · · · · · · · · ·	
	3/8	237430
	1/2	237429

# PLENUMLINE MECHANICAL JOINT ACID WASTE SYSTEM

# **PLENUMLINE**

Plenumline mechanical joint acid waste systems easily displace costly and difficult-to-install glass and metal systems. With Plenumline, time-consuming methods associated with conventional heavy and brittle systems are replaced by a time proven mechanical joint that takes only 30 seconds to complete. Once the Plenumline nut is locked in place, the end-user is assured of many years of trouble-free service. In addition, mechanical joint systems can easily be dismantled and re-used, making Plenumline ideal for modular designs and future expansions.

#### **STANDARDS**







IAPMO-listed
Meets ASTM F1673
Standard specification for Polyvinylidene Fluoride
(PVDF) Corrosive Waste Drainage Systems.

#### **ADVANTAGES**

- 1 Ideally suited to plenum applications
- 2 30-second joints shorten installation time
- Manufactured from Flame Retardant PVDF, which has an operating temperature range from -40°F (-40°C) to 285°F (140°C). With this high upper limit, Plenumline systems can be flushed with boiling water.
- 4 All-plastic construction eliminates galvanic action, electrolysis and corrosion in the joint.
- Easy to install, even in tight areas, by using simple, inexpensive tools. Mechanical joints are mastered by plumbers in minutes; no pre-heating is required to install the new blue elastolive.
- Modularized design means Plenumline components can be disassembled and re-used. In addition, system modifications during installation can be performed without damaging fittings.
- High-quality pipe and fittings are matched to simplify installation and extend long-term reliability.
- (8) Flame Retardant PVDF material exhibits a flame spread index of 5 and smoke development index of 35 as tested in accordance with ASTM E84 and UL 723, and also meets 25/50 Flame/Smoke limits of ULC S102.2.



# DID YOU KNOW?

IPEX Plenumline is a robust acid waste system, made from flame-retardant PVDF thermoplastic, designed for challenging conditions, including highly restrictive return air plenum applications and high-temperature corrosive chemical waste situations.



#### SHORT FORM SPECIFICATIONS

#### **GENERAL**

Acid waste drain and vent system, as shown on drawings, shall be IAPMO listed, Schedule 40, FR-PVDF as manufactured by IPEX to include pipe supplied in 10 ft. lengths and matched fittings, traps and neutralization tanks from the same manufacturer. It shall also include recommended adapters to connect to other piping materials, where applicable.

#### MATERIAL

Pipe and fittings shall be made from Kynar 740-02, flame retardant PVDF conforming to ASTM F 1673, with a limiting oxygen index (LOI) of 60, Resin must have a vertical burn rating of 94 V-0. Kynar 740-02 resin based on testing to ASTM E84 (UL 723) must have surface burning characteristics greater than or equal to a flame spread 5 and smoke development 35.

#### **FITTINGS**

Fittings shall be third party certified to ASTM F 1673 and ASTM E84, and IAPMO approved, be of all plastic construction and a tapered elastic retaining ring shall be designed to lock into a machined groove on the mating piping. All fittings shall have integrally molded union connections. No metallic grab rings or clamps shall be allowed. Fittings shall be Plenumline™ or approved equal.

#### INSTALLATION AND TESTING

Installation and testing shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing codes. Testing with compressed air including air booster over water is prohibited. The entire system shall be installed free of stress and in proper alignment. Horizontal supports shall provide a wide bearing area and be free of burrs or sharp edges. Support spacings shall be in accordance with the manufacturer's recommendations and local plumbing codes. Vertical piping shall have riser clamps at each floor. Pipe supports shall be installed so that horizontal piping is in uniform alignment and with a uniform slope of at least 1/8" per foot, or in accordance with the local plumbing code requirements.

	Dimension Inches	Product Code	
Pipe			
	1-1/2	147045	
	2	147046	
	3	147047	
	4	147048	
Coupling		457007	
( <del></del>	1-1/2	157006	
	2	157007	
	3	157008	
	4	157009	
/8 Bend	1-1/2	157014	
	2	157014	
	3	157016	
	4	157017	
Loose Nut 1/8 Bend			
	1-1/2	157024	
	2	157025	
	3	157026	
	4	157027	
I/4 Bend			
	1-1/2	157010	
	2	157011	
	3	157012	
	4	157013	
Loose Nut 1/4 Bend Loose Nut x MJ			
	1-1/2	157032	
	2	157033	
	3	157034	
	4	157035	
Sanitary Tee			
	1-1/2	157018	
	2	157019	
	3	157020	
	4	157021	

2 x 1-1/2 3 x 1/12

3 x 2

4 x 2

4 x 3

	Dimension	Product	
	Inches	Code	
Cleanout Tee			
	1-1/2	157061	
	2	157062	
	3	157063	
	4	157064	
45° Wye			
	1-1/2	157036	
	2	157037	
	3	157038	
	4	157039	
Reducing 45° Wy	re		
	2 x 1-1/2	157069	
	3 x 1/12	157073	
	3 x 2	157070	
	4 x 2	157071	
(( <u> </u>	4 x 3	157072	
Combination Wye & 1/8 Bend			
	1-1/2	157074	
	2	157075	
	3	157076	

# Reducing combination Wye & 1/8 Bend



2 x 1-1/2	157078
3 x 1/12	157079
3 x 2	157080
4 x 2	157081
4 x 3	157082

157077

#### Double 45° Wye (Fabricated)



1-1/2	157049
2	157050
3	157051
4	157052

#### Reducing Double Wye



2 x 1-1/2	157096
3 x 1/12	157104
3 x 2	157097
4 x 1-1/2	157091
4 x 2	157098
4 x 3	157099

All fittings are furnished assembled with Olives and Union Nuts. IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent.

157022

157065

157023

157067

157068

	Inches	Product Code		
Double Wye & 1/	1-1/2	157100		
	2	157101		
	3	157102		
	4	157103		
<b>Male Adapter</b> MJ	x Male Thread			
	1-1/2	157002		
	2	157003		
Female Adapter N	MJ x Female Thread			
	1-1/2	157004		
	2	157005		
Cleanout Plug				
	1-1/2	157028		
	2	157029		
	3	157030		
	4	157031		
U Bend for P-Tra	0			
	1-1/2	157000		
	2	157001		
P-Trap 2 piece		457000		
	1-1/2	157083		
	2	157084		
P-Trap Long Radius 3 piece				
	1-1/2	157085		
	2	157086		
	3	157087		
	4	157088		
Running Trap				
	1-1/2	157089		
	2	157090		
Fabricated Cap	1 1/0	157052		
5	1-1/2 2	157053		
الأليا	3	157054 157055		
	4	157056		
	-	137030		

Dimension	Product
Inches	Code

#### Loose Nut - Reducing Coupling Loose Nut x MJ



**Product** 

2 x 1-1/2	157040
3 x 1/12	157041
3 x 2	157042
4 x 2	157043
4 x 3	157044

Note: Loose Nut and Olive not furnished.

#### Flange (Fabricated)



1-1/2	157057
2	157058
*3	157059
4	157060

\*While quantities last, Obsolete when stock depleted

#### Tail Piece Adapter Sp x Brass Compression Ring



1-1/2 x 12	157105

#### No Heat Elastolive Blue



1-1/2	157066
2	157106
3	157107
4	157108

Note: Blue olive nut is not interchangeable with the FRPP Yellow olive nut.

#### **Union Nut**



1-1/2	157109
2	157110
3	157111
4	157112

#### **Grooving Tool & Spanner Combination Set**



1-1/2	156263
2	156265
3	156267
4	156269

#### **Spanner**



1-1/2	156264
2	156266
3	156268
4	156270

#### **Grooving Tool**



1-1/2	156109
2	156110
3	156111
4	156270

# HDPE & POLYPROPYLENE NEUTRALIZATION TANKS

# **NEUTRATANK®**

IPEX offers a complete range of Neutratank® neutralization tanks as well as dilution, sampling and pH tanks for managing concentrations and pH levels in acid waste systems.

Neutratanks are made of high-density polyethylene or polypropylene material with a one-piece rotationally molded, seamless construction, a bolt-down flanged top and combination EZ Access cover. Neutratanks are available in sizes from 5 gallons to 2,000 gallons to suit most potential design conditions.

# DID YOU KNOW?

Neutratank®s are used for limestone neutralization of chemical waste prior to discharge into the sewer.

#### **ADVANTAGES**

- 1 Cylindrical and rectangular limestone neutralization tanks from 5 to 2000 gallons are available.
- A variety of lids, inlets, outlets and accessories are offered.
- 3 Dilution tanks are available in 1, 2 and 5-gallon sizes.

#### SHORT FORM SPECIFICATIONS

Contractor shall furnish and install HDPE (Polypropylene)
Neutralization Tank. Tank shall be rotationally molded, seamless construction with flanged top and welded or bolt down cover, as supplied by IPEX. Tank shall be Neutratank No. CTO100, having 100-gallon capacity complete with 3" inlet and outlet, and 11/2" vent connection. Tank to be 32" diameter x 42" high. Tank shall be installed in accordance with manufacturer's recommendations.

Contractor shall furnish and fill the tank prior to installation with limestone chips, as supplied by IPEX, to a level just below the tank outlet. Water should be added to the tank prior to placement of the limestone chips.



#### PRODUCT SELECTION CHART

	Gallons	Inlet/Outlet Inches	Product Code		Gallons	Inlet/Outlet Inches	Product Code
IDPE EZ Plain	End			HDPE HD Bolted	<b>Flat</b> Plain En	d	
	5	1-1/2	237111		5	1-1/2	237183
	5	2	237112		5	2	237184
	15	2	237122		15	2	237185
	15	3	237123		15	3	237186
	30	2	237132		30	2	237187
	30	3	237133		30	3	237188
	30	4	237134		30	4	237189
	55	3	237143		55	3	237190
	55	4	237144		55	4	237191
	100	3	237152		100	3	237192
	100	4	237153		100	4	237193
	150	3	237241		150	3	237194
	150	4	237242		150	4	237195
	200	3	237271		200	3	237196
	200	4	237272		200	4	237197
	275	3	237128		275	3	237198
	275	4	237129		275	4	237199
	*Obsolete when	stock is depleted	d		360	3	237200
					360	4	237201
					360	6	237202
HDPE Standa	rd Domed Plai	in End			500	3	237203
	5	1-1/2	237211		500	4	237204
	5	2	237212		500	6	237205
	15	2	237222				
	15	3	237223	LIDDE CLAST DATE	atalan Biri		
	30	2	237232	HDPE Steel Pede			
	30	3	237233		5	1-1/2	237501
	30	4	237234		5	2	237502
	55	3	237243		15	2	237503
	55	4	237244		15	3	237504
	100	3	237252		30	2	237505
	100	4	237253		30	3	237506
	150	3	237281		30	4	237507
	150	4	237282		55	3	237508
	200	3	237411		55	4	237509
	200	4	237412		100	3	237510
	275	3	237130		100	4	237511
	275	4	237124		150	3	237512
	360	3	237125		150	4	237513
	360	4	237126		200	3	237514
	360	6	237497		200	4	237515
	500	3	237135		275	3	237516
	500	4	237136		275	4	237517
	500	6	237498		360	3	237518
					360	4	237519
					360	6	237520
					500	3	237521
					500	4	237522
					500	6	237526

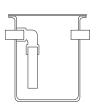
Polypro Standard Domed Plain End

Gallons	Inlet/Outlet	Product
	Inches	Code



Inlet/Outlet

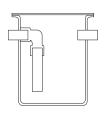
Product Code



<b>2011100</b> 1 1011	. =	
7	1-1/2	237059
7	2	237065
15	2	237066
15	3	237067
30	2	237068
30	3	237069
30	4	237070
55	3	237093
55	4	237094
100	3	237095
100	4	237096
150	3	237097
150	4	237098
200	3	237099
200	4	237100
275	3	237101
275	4	237102
360	3	237103
360	4	237104
360	6	237105
500	3	237106
500	4	237107
500	6	237108

	7	1 1/2
	7	2
	15	2
	15	3
	30	2
	30	3
	30	4
	55	3
	55	4
	100	3
	100	4
	150	3
	150	4
	200	3
	200	4
	275	3
	275	4

#### Polypro HD Bolted Flat Plain End



<b>i Fial</b> Plain Ei	na	
7	1-1/2	237206
7	2	237207
15	2	237208
15	3	237209
30	2	237210
30	3	237213
30	4	237214
55	3	237215
55	4	237216
100	3	237218
100	4	237220
150	3	237224
150	4	237225
200	3	237226
200	4	237228
275	3	237230
275	4	237235
360	3	237236
360	4	237238
360	6	237239
500	3	237240
500	4	237245
500	6	237246

Inlet / Outlet	Tank Size	
miet / Outlet	Talik Size	

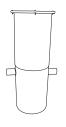
#### Inlet / Outlet Tank Sizes & Connection Options

	<u>'</u>
1-1/2" Plain End, MPT, FPT, Flanged	5 gal to 55 gal
2" Plain End, MPT, FPT, Flanged	5 gal to 150 gal
3" Plain End, MPT, FPT, Flanged	15 gal to 500 gal
3" Flanged	30 gal to 500 gal
4" Plain End, MPT, FPT, Flanged	30 gal to 2000 gal
6" Flanged	360 gal to 2000 gal

EZ Standard Domed & HD Flat covers are not suitable for pedestrian traffic. Always use steel pedestrian covers. Neutratanks are not rated for H-20 Live Loading. In areas requiring H-20 loading, position the tank below a Department of Transportation approved manhole cover. Regular tanks and 700 to 2000 gallon cylindrical tanks are available on request.

Ext Length Product Gallons Inches Code
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# HDPE Non-Adjustable Extension



١	abic Extensit	/11	
	5	6 to 9	237462
	15	6 to 14	237463
	30	6 to 24	237464
	55	6 to 31	237465
	100	6 to 35	237466
	150	6 to 43	237467
	200	6 to 43	237468
	275	6 to 42	237469
	360	6 to 42	237470
	500	6 to 54	237471

Polypro Non-Adjustable extensions are available upon request.

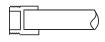
Inlet/Outlet	Product
Inches	Code

#### **HDPE Plain End Vent**



1-1/2	237401
2	237402
3	237403
4	237404

#### **HDPE MPT Connection**



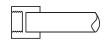
1-1/2	237421
2	237422
3	237423
4	237424

#### Variable Extension (2"of Vertical Adjustment)



5/7	6 to 36	237454
15	6 to 36	237455
30	6 to 36	237456
55	6 to 36	237457
100	6 to 36	237458
150	6 to 36	237459
200	6 to 36	237460
275	6 to 36	237461
360	6 to 36	-
500	6 to 36	-

#### **HDPE FPT Connection**



1-1/2	237431
2	237432
3	237433
4	237434

#### **HDPE Flange Connection**



1-1/2	237121
2	237131
3	237141
4	237142
6	237500

#### FRP Overwrap



5/7	-	237440
15	-	237441
30	-	237442
55	-	237443
100	-	237444
150	-	237445
200	-	237446
275	-	237447
360	-	237448
500	-	237449

FRP Overwrap is for tanks without extensions Please contact IPEX for FRP overwrap pricing on tanks with non-adjustable extensions .

#### PolyPro Plain End Vent



1-1/2	237109
2	237110
3	237113
4	237114

#### PolyPro MPT Connection

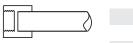


	1-1/2	237156
	2	237157
	3	237158
	4	237159

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Inlet/Outlet	Product	
Inches	Code	

#### PolyPro FPT Connection



1-1/2	237139
2	237140
3	237148
4	237149

Inches Code

#### Threaded Manway



,	
8	237450
16	237451
22	237452

#### PolyPro Flange Connection



1-1/2	237116
2	237118
3	237120
4	237138

#### **Neutralizing Agent** Limestone Bags

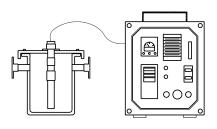
50 lbs 237321 TC50

NOTE: F.O.B.- Shipping Location

Diameter Inches	Product Code

#### Neutrasystem pH Monitoring & Recording System

pH Monitor w/ Tank & Alarm	237371
pH Monitor w/ Tank & Alarm & Chart	237331
pH Monitor w/ Alarm	237341
pH Monitor w/ Alarm & Chart	237351



Tank Size	Loading (lbs.)

#### Limestone Loading Guide for Neutralization

5	50
15	125
30	250
55	500
100	1000
150	1500
200	2000
275	2500
360	3500
500	5250
700	8000
1000	10000
1250	12000
2000	18000

IPEX offers two compressed air systems designed to meet the requirements of a wide range of applications.

When you specify a high-performance piping systems from IPEX, you get the added benefits of a complete piping solution that is engineered for total integration, and backed by comprehensive, coast-to-coast support – all from one reliable source.

# Compressed Air Systems















Compressed air, a major source of industrial energy, is being used increasingly in both the manufacturing and processing industries. There, its distinct advantages of cleanliness, flexibility, safety and economy of use (compared with other energy sources) are fully exploited.

Modern process equipment, pneumatic controls and instrumentation demand a supply of clean, uncontaminated air and this has prompted the development in recent years of more advanced designs of compressors and ancillary equipment.

Duraplus Air-Line is manufactured from a specially formulated Acrylonitrile Butadiene Styrene (ABS) blend that has a high performance co-extruded liner which greatly enhances its mechanical and chemical properties. Duraplus fittings are manufactured using an alloy blend of ABS and the liner material, ensuring high performance of the whole system.

#### **APPLICATIONS**

- · Plant air
- Ventilation
- Valve actuation
- Food and beverage CO<sub>2</sub> delivery

#### STANDARDS



ASTM D2282

#### **ADVANTAGES**

1 Safety

The Butadiene component of Duraplus Air-Line contributes resistance to accidental damage and prevents material fracture should the pipe be subjected to severe impact. Duraplus has been designed and tested to withstand impact for a large range of temperatures and has a design life of 30 years with a factor of safety of 2:1.

(2) Wide Range of Applications

The advanced liner and ABS material combination protects against stray chemicals which may sometimes cause problems for ordinary systems. Duraplus Air-Line is now compatible with even more compressor lubricants.

3 Low Installation Costs

Duraplus Air-Line pipe reduces costs on a typical installation not only for materials but also for labor and transportation costs when compared to traditional materials. The reason? Its lightweight construction and simple assembly procedures. Like all thermoplastics, Duraplus is easily handled, stored,cut, joined and installed. As a result, project costs for installed Duraplus systems are significantly lower. Requirements for heavy installation equipment are also eliminated.

4 Clean

Duraplus products are packaged to protect the surface finish of the pipe and fittings and to prevent contamination before use. The smooth liner of Duraplus Air-Line cannot rust, corrode or form loose scale, ensuring air remains clean throughout the life of the system.

5 Smooth Interior

Less friction means lower pressure drops and higher flow rates allowing for smaller pipe diameters to be used in some cases. (6) Ease of Use

Duraplus Air-Line is one sixth the weight of steel and can be joined by solvent welding for easy on-site modifications and repairs without requiring special training or equipment.

7 Leak Free System

Correctly made solvent welded joints are leak free and can greatly reduce running costs.

8 Metric Sized & Colour Coded

Duraplus Air-Line is metric sized to prevent mixing with I.P.S. sized PVC and CPVC pipe. Also the Duraplus Airline is colour coded blue to comply with the ISO standards for compressed air products.

9 Proven

From manufacturing to the marketplace, Duraplus Air-Line is supported by the technical experience gained through over 30 years of thermoplastic pressure piping production. Both raw material and finished Air-Line products are subjected to rigorous tests, including aging, weathering and stressed environmental tests, to ensure complete system integrity over the designed operating life.

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URAPLUS AIR-LINE SYSTE



Duraplus Air-Line is corrosion-resistant and features metal-to-ABS special adapter fittings, single and multi-port wall brackets, high-efficiency dropper bends and blue color-coding for easy identification.

#### SHORT FORM SPECIFICATIONS

#### **GENERAL**

Duraplus ABS Air-Line is designed for industrial compressed air pipe applications where the extremely high-impact resistance and ductility of the material offers some insurance against internal and external shock loadings and site abuse conditions. Its unique combination of ABS properties –non-toxicity, purity, corrosion- and chemical-resistance, toughness, low-hydraulic resistance, and the ability to perform over a wide temperature range 40°F – 120°F (4°C – 49°C), ensures excellent in-service performance and system life.

#### MATERIAL SPECIFICATIONS

Pipe shall be manufactured from an Acrylonitrile Butadiene Styrene (ABS) blend, with a co-extruded liner. Fitting shall be manufactured from an ABS blend.

Material for both pipe and fittings shall be designed with a 2 to 1 safety factor for a 30 year lifespan when operated under continuous pressure. Pipe and fittings are capable of withstanding a continuous working pressure of 185 psi at 73°F (1275 kPa at 23°C) in accordance with ASTM D2282 and carry a DIN 4102-B2 fire rating.

The material shall have an izod impact resistance value of no less than 8.5 ft.lb/in at 73°F when tested in accordance with ASTM D256, method 'A'. Pipe bore contains a co-extruded liner and fittings are manufactured using an alloy blend of ABS and the liner material.

#### **PIPE**

Pipes shall be manufactured by IPEX and designed in metric sizes that comply with the dimensional requirements of DIN 8062,

#### **FITTINGS**

Fittings shall be of the socket type, designed for solvent welding as supplied by IPEX.

Fittings shall be designed and manufactured to withstand the continuous pressures applicable to the maximum pressure rating of the pipe. The sockets and fittings shall have a 0°30 taper, the diameter decreasing from the mouth to the root.

#### **BALL VALVES - VKD**

The valve body, stem, ball and unions shall be made of Duraplus® ABS compound which shall meet or exceed the requirements of cell classification 43234 according to ASTM D3965.

Ball valves shall be double-blocking type with 0-ring cushions under the PTFE seats, in-line micro adjustment capability and incorporate a spanner wrench in the handle.

#### **BUTTERFLY VALVES - FK**

The valve body shall also be made of glass reinforced polypropylene (GRPP) obtained from homopolymer polypropylene (PPH).

The valve disc shall also be made of ABS compound. All butterfly valves shall have non wetted stainless steel shafts and a wafer or lug design with ANSI 150 flange connections. The liner shall completely isolate the valve body from the process flow and act as a flange gasket on both sides of the valve.

#### SOLVENT CEMENT

All joints shall be made with Blue Duraplus Air-Line ABS solvent cement as supplied by IPEX. The solvent cement shall be designed to withstand continuous applied pressures up to 185 psi at 73°F.

#### **DESIGN AND INSTALLATION**

The design and installation of ABS pressure systems shall be performed in accordance with the recommendations detailed in the Handling and Installation section of this manual and in local and national regulations where applicable. To ensure the full integrity of the completed system, all components shall be supplied by IPEX.



	Dimension		Product
	Inches	mm	Code
Pipe			
	1/2	20	446000
	3/4	25	446001
( )	1	32	446002
	1-1/2	50	446003
	2	63	446004
	3	90	446005
	4	110	446006
	6	-	346012
	8	-	346010

in 20 ft. lengths Priced per foot

	Inches	mm	Code
90° Elbow Soc			
	1/2	20	437111
	3/4	25	437112
	1	32	437113
	1-1/2	50	437114
	2	63	437115
	3	90	437117
	4	110	437118
	6	-	337141
	8	-	337142

Dimension

**Product** 

#### **Dropper Bend** Sp



1/2	20	437259
3/4	25	437260
1	32	437261

20-110mm pipe in 19 ft. lengths. 6" & 8" pipe

#### 45° Elbow Soc



1/2	20	437128
3/4	25	437129
1	32	437130
1-1/2	50	437131
2	63	437132
3	90	437134
4	110	437135
6	-	337165
8	-	337166

#### Cobra Pipe Clip



1/2	20	437341
3/4	25	437342
1	32	437343
1-1/2	50	437345
2	63	437346
3	90	437348
4	110	437349

Note: \* 1/2" and 3/4" pipe clips are supplied without retaining bands

#### 90° Bend Soc



1/2	20	437120
3/4	25	437121
1	32	437122
1-1/2	50	437123
2	63	437125
3	90	437126
4	110	337166

#### Coupling Soc



1/2	20	437026
3/4	25	437027
1	32	437028
1-1/2	50	437029
2	63	437030
3	90	437032
4	110	437033
6	-	337030
8	-	337031

#### Cap Soc



1/2	20	437192
3/4	25	437193
1	32	437194
1-1/2	50	437195
2	63	437196
3	90	437198
4	110	337001

Dimension		Product
Inches	mm	Code

#### Tee - Equal Soc



1/2	20	437151
3/4	25	437152
1	32	437153
1-1/2	50	437154
2	63	437155
3	90	437157
4	110	437158
6	-	337179
8	-	337180

#### Tee - Reducer Soc



יי	<b>.</b>		
	3/4 x 1/2	25 x 20	437161
	1 x 1/2	32 x 20	437163
	1 x 3/4	32 x 25	437164
	1-1/2 x 1/2	50 x 20	437166
	1-1/2 x 3/4	50 x 25	437167
	1-1/2 x 1	50 x 32	437168
	2 x 3/4	63 x 25	437169
	2 x 1	63 x 32	437170
	2 x 1-1/2	63 x 50	437171

#### Reducer Bushing Soc



3/4 x 1/2	25 x 20	437051
1 x 3/4	32 x 20	437053
1-1/2 x 1/2	50 x 20	437055
1-1/2 x 3/4	50 x 25	437056
1-1/2 x 1	50 x 32	437057
2 x 3/4	63 x 25	437059
2 x 1	63 x 32	437060
2 x 1-1/2	63 x 50	437061
3 x 1-1/2	90 x 50	437062
3 x 2	90 x 63	437063
4 x 2	110 x 63	437065
4 x 3	110 x 90	437066
8 x 6	-	337066

#### **Socket Union**



1/2	20	437234
3/4	25	437235
1	32	437236
1-1/2	50	437237
2	63	437238

Dimen	sion	Product
Inches	mm	Code

#### Reducer Coupling Sp/ Soc x Soc



1 x 3/4 x 1/2	32 x 25 x 20	437103
1-1/2 x 1-1/4 x 1	50 x 40 x 32	437105
3 x 2-1/2 x 2	90 x 75 x 63	437108
8 x 6	-	337129

#### Flange Stub Soc



1	32	437181
1-1/2	50	437182
2	63	437183
3	90	437185
4	110	437186
6	-	337238
8	-	337239

Note: A metal backing ring must be used with this flange.

#### Gasket Soc (flat neoprene)



•	.oop. oo,			
	1	32	437325	
	1-1/2	50	437326	
	2	63	437327	
	3	90	437329	
	4	110	437330	
	6	-	337451	
	8	-	337452	

#### Backing Ring (Galv. M.S.)



1	32	437331
1-1/2	50	337430
2	63	337431
3	90	337433
4	110	337434
6	-	337435
8	-	337436

Note: For use with flanges

#### Flange - Blind (gray ABS)



ji a	y AD3)		
	3	90	337364
	4	110	337365
	6	-	337366
	8	-	337367

Note: A backing ring must be used with this flange.

#### PRODUCT SELECTION CHART

Dimen	sion	Product
Inches	mm	Code

#### Female Adapter Soc x Female Thread



1/2 x 1/2	20 x 1/2	437034
3/4 x 3/4	25 x 3/4	437035
1 x 1	32 x 1	437036

#### Female Adapter Sp x Female Thread



1-1/2 x 1-1/2	50 x 1-1/2	437231
2 x 2	63 x 2	437232

#### Plug Male Thread



1/2	-	337264
3/4	-	337265

#### Wall Bracket Soc x Female Thread (Brass body)



1/2 x 1/2	20 x 1/2	437335
3/4 x 1/2	25 x 1/2	437336
3/4 x 3/4	25 x 3/4	437337

#### Wall Bracket Multiport



1/2 x 1/2	20 x 1/2	43/335

Inlet - 3/4" male thread. Outlet - 1/2" female

#### Butterfly Valve - FK Manual, Viton Seals - Glass filled PP Body



2	63	33/000
3	90	337657
4	110	337658
6	-	337659
8	-	337660

#### **Composite Union** Soc x Male Thread (Air-line to Brass)



1	/2 x 1/2	20 x 1/2	437247
3	3/4 x 3/4	25 x 3/4	437248
	1 x 1	32 x 1	437249
1-1	1/2 x 1-1/2	50 x 1-1/2	437250
	2 x 2	63 x 2	437251

Dimension		Product
Inches	mm	Code

#### True Union Ball Valve Soc 230psi at 73°F Viton Seals



*1/2	20	437451
*3/4	25	437452
*1	32	437453
*1-1/2	50	437454
*2	63	437455

<sup>\*</sup>Grey Duraplus ABS valves may be substituted at time of order.

#### **End Connectors**



1/2	20	437446
3/4	25	437447
1	32	437448
1-1/2	50	437449
2	63	437450

<sup>\*</sup>Grey Duraplus ABS valves may be substituted at time of order.

Quantity	Product Code	Significant Number
Quantity		

#### Air-Line Solvent Cement



1 pint	437354
1 quart	437355

#### **MEK Cleaner**



1 pint	337468
1 quart	337469

#### Joints

An indication of the number of joints likely to be made per quart of Duraplus® cement is as follows (it is recommended that MEK cleaner orders equals one-half the quantity of solvent cement required).

Pipe Size		Number of Joints
inches	mm	Number of Johns
3/8 - 1	20 - 32	290
1-1/4 - 2	50 - 63	144
3	75 - 90	48
4	110	32
6	-	16
8	-	10



## Your Compressed Air System for the 21st Century

When your plant's compressed air system leaks, more than just air is getting out. You're losing money in the form of wasted energy, wear and tear on your compressors and increased operating and maintenance costs. Duratec® Airline, a unique time and moneysaving piping system, is designed to reduce leaks and costs.

A tough piping system that meets
ASME codes and OSHA safety
requirements, Duratec Airline requires less
time, labor and money to install and maintain than

traditional systems. Its long, lightweight coils cut down on the number of potential leak points in your system.

Duratec fittings are quick and easy to install and feature double O-ring seals that ensure maximum joint integrity.

Duratec requires no special tools or installation training and eliminates the need for soldering and threading. And because Duratec is so quickly and easily installed, modified, and adapted to existing metal systems, it can reduce your plant's

downtime. So stop your compressed air system's problems before they become big news — Install Duratec.





# **DURATEC AIRLINE SYSTEMS**

# Duratec

Duratec is an innovative compressed air and inert gas distribution system designed to be absolutely leak-proof, installed quickly and easily, and maintained cost-effectively. As a result, Duratec saves you time and money.

Traditional metallic compressed air systems are a main cause of unnecessary energy use, excessive wear and tear on compressors and high consumption of compressor oils and filters. The culprits? Corrosion and leakage at pipe joints and fitting connections which often go undetected until they're discovered during a detailed compressed air system audit.

Duratec pipe comes in long 100 foot or 300 foot coils, which significantly reduces the number of joints in your system. Duratec fittings feature unique double o-ring seals to ensure long-term joint integrity. And the entire Duratec system can be easily and quickly installed, modified or expanded without the need for specialized equipment.

### **DID YOU KNOW?**

To make designing, sizing and installing a Duratec compressed air system easy, IPEX offers comprehensive reference tools, such as our Duratec Technical Manual. To download this manual visit our website at www.ipexinc.com.

#### **APPLICATIONS**

- · Plant air
- Inert gas distribution
- Manufacturing hand tool operation
- Manual and automated welding operations
- · Semi-conductor tool hook up
- · Valve actuation control systems
- Microbulk inert gas delivery systems
- Robotic installations

#### STANDARDS







CSA B51, B137.9 **ASTM F1974** ASME B31.3, B31.9 FDA Compliant NSI / ASTM F1282

National CRN 0A02020.2C

Certified to OSHA Safety Regulations

#### **OUICK INSTALLATION**

Cutting and joining Duratec is fast and simple.

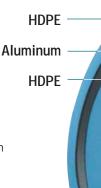
- 1. Cut pipe square using plastic pipe cutter.
- 2. Slide nut and split ring over pipe and bevel the inside of the pipe by inserting then rotating the beveling tool.
- 3. Push the fitting into the pipe.
- 4. Turn the nut finger tight plus one full turn with a wrench.













#### **ADVANTAGES**

1 Low Installation Costs

Duratec reduces costs on a typical installation not only for materials but also for labour and transportation costs when compared to traditional materials. How? Duratec's lightweight construction and simple assembly procedures.

Ease of Handling

Duratec is 75% lighter than the equivalent diameter of copper and SCH 40 carbon steel.

Quick Removable Connections

Threading is not required. All joints have double o-ring seals and can be quickly assembled or disassembled. Easy on-site modifications and repairs can be made.

4 Quick Installation

No special training or equipment is required to complete a Duratec system.

5 Clean

All Duratec pipe is packaged in cardboard boxes preventing contamination before use. The smooth HDPE inner layer cannot rust, corrode or form loose scale. Clean air remains clean throughout the life of the system.

(6) Flexible Yet Rigid

Due to its composite structure, Duratec pipe can be easily bent by hand and will maintain its desired shape. This unique feature allows for straight, professional looking installation and eliminates sagging.

7 Lower Operating Costs

Due to Duratec's advantages over metal systems, it costs you less time, labour and money to keep a Duratec system in optimal condition.

8 Pressure loss means money loss

Metal systems can lose pressure due to pin-hole leaks and leakage at connections, all of which result in increased energy costs. Duratec's high-quality construction, on the other hand, guarantees consistent pressure for years to come.

9 Smooth Interior

Less friction means lower pressure drops and higher flow rates. This may allow for smaller pipe sizes to be used.

(10) Extended Life

Duratec is designed not to rust, scale or pit. Once properly selected for the application and correctly installed, Duratec Airline Systems will provide years of maintenance-free service.

(11) Corrosion Resistant

Duratec's tough outer HDPE layer protects it against corrosion and deterioration and ensures long service life even in the most aggressive manufacturing environments. Its inner HDPE layer is unaffected by inert gases and commonly-used compressor oils. Combined with its industrial nickel-plated Duratec fittings, the system provides long-term performance superior to metal piping systems.

12) Fewer Fittings

Duratec pipe comes in convenient 100 ft. and 300 ft. coils eliminating several joints and the need for threading, or soldering.

13) Safe

Duratec's unique composite construction means that accidental impact or puncture of the pipe results in a safe, ductile mode of failure. Duratec pipe has been third-party tested and certified to stringent OSHA safety requirements for compressed air systems, standards that guarantee safety comes first.

(14) Performance

IPEX engineered Duratec pipe and fittings to provide top-notch performance. Rated for long term continuous operating pressures of 200psi at 73°F and 160psi at 140°F, Duratec pipe and fitting assemblies are also capable of sustaining quick burst pressures in excess of 800psi. This built-in safety factor ensures system performance and provides peace of mind for designers and facility managers.

#### SHORT FORM SPECIFICATIONS

All compressed air and inert gas pipe in sizes 1" and smaller shall be PE-AL-PE composite pipe made with high density polyethylene and aluminum conforming to ASTM F1282 and CSA B137.9. PE-AL-PE pipe shall meet the health and safety requirements of OSHA.

All compressed air and inert gas fittings in sizes 1" and smaller shall be nickel plated brass or 316 stainless steel and shall conform to the dimensional and physical requirements of ASTM F1974 and CSA B137.9. Fittings shall also be CRN registered.

All pipe, fittings and accessories shall be Duratec Air-Line as manufactured by IPEX.

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Dimension inches	Product Code	Coil Length feet

### HDPE-AL-HDPE 200 psi @ 73°F, 160 psi @ 2140° F, ASTM F1282

3/8	446024	100
3/8	446025	300
1/2	446026	100
1/2	446027	300
3/4	446030	100
3/4	446031	300
1	446032	100
1	446033	300

	Dimension inches	Product Code	
--	------------------	-----------------	--

#### Duratec x Male Thread Adapter



•	
3/8 D1 x 1/4 MPT	438081
3/8 D1 x 3/8 MPT	438000
3/8 D1 x 1/2 MPT	438001
1/2 D1 x 1/2 MPT	438002
3/4 D1 x 3/4 MPT	438003
1 D1 x 1 MPT	438004

#### Duratec x Female Thread Adapter



3/8 D1 x 1/2 FP1	438005
1/2 D1 x 1/2 FPT	438006
3/4 D1 x 3/4 FPT	438007
1 D1 x 1 FPT	438008

#### Duratec x Duratec 90° Elbow



3/8 D1 x 3/8 D1	438079
1/2 D1 x 1/2 D1	438080
3/4 D1 x 3/4 D1	438067
1 D1 x 1 D1	438068

#### Wall Bracket Multiport



3/4 x 1/2	437338
Inlet - 3/4	I MPT
Outlet - 1/	2 FPT

#### Dimension **Product** inches Code

#### Duratec x Male Thread Adapter Stainless Steel



3/8 D1 x 3/8 MPT SS	438029	
1/2 D1 x 1/2 MPT SS	438030	
3/4 D1 x 3/4 MPT SS	438031	
1 D1 x 1 MPT SS	438032	

#### **Duratec Airline x Tubing Adapter**



	, ,		
3/8 D	1 x 1/4	MPT	438041
3/8 D	1 x 3/8	MPT	438042
1/2 D	1 x 1/2	MPT	438043
3/4 D	1 x 3/4	MPT	438044
1 D	1 x 1 M	IPT	438045

#### Duratec x Female Thread Wing Back (or Drop-Ear) 90° Elbow



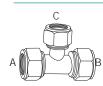
1/2 D1 x 1/2 FPT 438009

#### Duratec x Duratec x Duratec Tee



3/8	438033
1/2	438010
3/4	438011
1	438012

#### Duratec x Duratec x Duratec Reducing Tee



	J
1/2 x 1/2 x 3/8	438034
3/4 x 1/2 x 1/2	438013
3/4 x 3/4 x 1/2	438014
3/4 x 1/2 x 3/4	438015
1 x 1 x 1/2	438016
1 x 3/4 x 3/4	438017
1 x 1 x 3/4	438018
AxBxC	

Dimension inches

Duratec	Coupling
	_

•	,	
	3/8	438020
	1/2	438021
	3/4	438022
	1	438023

Product Code

#### Duratec x Cap



3/8	438036
1/2	438026
3/4	438027
1	438028

#### 5-in-1 Bevelling Tool



3/8" to 1" Beveling Tool	438050

#### Duratec x Duratec x Female Thread Tee



1/2 D1 x 1/2 D1 x 1/2 FPT	438019
3/4 D1 x 3/4 D1 x 1/2 FPT	438078

#### **Duratec Reducing Coupling**



1/2 x 3/8	438035
3/4 x 1/2	438024
1 x 3/4	438025

#### **Duratec Airline Ball Valve**



3/8	438037
1/2	438038
3/4	438039
1	438040

#### Plastic Pipe Cutter



3/8" to	1"	Pipe Cutter	438051

Dimension inches	Product Code
------------------	-----------------

#### Plastic Pipe Cutter Replacement SS Blade

- 438052

#### **Duratec Pipe Clip**



3/8	438063
1/2	438064
3/4	438065
1	438066

#### Replacement Split Ring



3/8 Split Ring D1	438046
1/2 Split Ring D1	438047
3/4 Split Ring D1	438048
1 Split Ring D1	438049

#### **Duratec Airline Replacement O-Ring**



3/8	438053
1/2	438054
3/4	438055
1	438056

#### Protective Heat Shrink Sleeve



4" Heatshrink Sleeve for 3/4", 1" Fittings	438061
4" Heatshrink Sleeve for 1/2", 3/8" Fittings	438062

#### Composite Pipe Bending Tool Kit up to 1"



1/2", 3/4", 1" Bending Tool Kit	438057

#### Composite Pipe Bending Spring

|--|

1/2	438058
3/4	438059
1	438060



**Join the IPEX Winning Tradition** 

#### **Our Strength:**

An all-star line-up of thermoplastic pipe, valves and fittings, designed and built to work together in any process piping application.

#### The IPEX Advantage:

Only IPEX offers a complete system of pipe, valves and fittings engineered and manufactured to IPEX's strict quality, performance and dimensional standards. With Xirtec®140 (industrial grade PVC) and Corzan® (CPVC), you can be confident that all the material you need is designed, manufactured and backed by the same company.



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IPEX offers one of the most comprehensive ranges of high quality, high performance thermoplastic valves and actuation products available today. With more than 50 years of design and manufacturing experience, our lightweight, long life, maintenance free valves will save you time and money. Our high-tech automated manufacturing and testing facility ensures unparalleled reliability for each and every valve.

# Thermoplastic Valves









Ball Valves

**Butterfly Valves** 

Diaphragm Valves

Check and Vent Valves

Specialty Valves

Quarter Turn Automation

102











# **THERMOPLASTIC VALVES**

# **Manual & Actuated Thermoplastic Valves**

IPEX offers one of the most comprehensive ranges of high quality, high performance thermoplastic valves and actuation products available today. With more than 50 years of design and manufacturing experience, our lightweight, long life, maintenance free valves will save you time and money.

Material options such as PVC, CPVC, PP, PVDF, and ABS make our corrosion resistant valves ideal for use in a wide variety of applications. Quarter turn pneumatic and electric actuation, pneumatically actuated diaphragm valves, and many options and accessories allow for fully automated control. Whether a valve is required for isolation, diversion, control, or throttling, IPEX has a solution to meet your needs.

#### **APPLICATIONS**

- Industrial Processes
   Irrigation
- Chemical Production Aquatic Life
- Water Treatment
- Pool and Spa
- · General Plumbing
- Water and Waste



100

	Ball Valves	Butterfly Valves	Diaphragm Valves	Check & Vent Valves	Specialty Valves
On/Off Service	✓	✓			
High Capacity	✓	✓			
Throttling		✓	✓		✓
Quick & Frequent Cycling	✓				✓
Slurries/Dirty Fluids		✓	✓		
Filtering					✓
Back Flow Prevention				✓	
Air & Gas Release				✓	
Electro-Mechanical Control					1
Actuation	✓	✓	✓		



#### VKD SERIES BALL VALVES - TRUE UNION

The next generation industrial valve features the patented Dual Block® system which allows locking of the union nuts in a preset position, assuring seal integrity under severe service conditions. A patented seat stop carrier, high quality stem and ball support system, integral mounting flange and bracketing, and a multifunctional locking handle (standard on sizes 2-1/2" to 4") set this valve apart from the rest. The VKD is available in PVC, CPVC, PP, and ABS with PTFE seats and either EPDM or Viton® seals.

Pressure: up to 232 psi at  $73^{\circ}\text{F}$  depending on the material

Sizes: 3/8" - 4"



End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC, w/ PTFE	Seats		
S/T	3/8	253067	253068
S/T	1/2	053461	053467
S/T	3/4	053462	053468
S/T	1	053463	053469
S/T	1-1/4	053464	053470
S/T	1-1/2	053465	053471
S/T	2	053466	053472
Socket	2-1/2	053539	053542
Socket	3	053540	053543
Socket	4	053541	053544

#### Corzan® CPVC, w/ PTFE Seats

S/T	3/8	253069	253070
S/T	1/2	053473	253008
S/T	3/4	053474	253009
S/T	1	053475	253010
S/T	1-1/4	053476	253011
S/T	1-1/2	053477	253012
S/T	2	053478	253013
Socket	2-1/2	053545	053548
Socket	3	053546	053549
Socket	4	053547	053550

#### PP, w/ PTFE Seats

Threaded	1/2	053525	253002
Threaded	3/4	053526	253003
Threaded	1	053527	253004
Threaded	1-1/4	053528	253005
Threaded	1-1/2	053529	253006
Threaded	2	053530	253007

#### PP, w/ PTFE Seats

•			
Socket	20mm	053513	053519
Socket	25mm	053514	053520
Socket	32mm	053515	053521
Socket	40mm	053516	053522
Socket	50mm	053517	053523
Socket	63mm	053518	053524

#### TKD SERIES 3-WAY BALL VALVES - TRUE UNION

The TKD offers a host of advanced features that set it apart from other multi-port valves. The patented seat stop carrier allows for in-line micro-adjustment of the ball seating, and features o-ring cushioning to minimize wear and prevent seizing. Integral mounting flange and bracketing allows for direct actuation and simple support, while a locking handle can prevent improper positioning. The TKD is available in PVC with PTFE seats and either EPDM or Viton® seals. Other materials are available upon request.

Pressure: 232 psi at 73°F

Sizes: 1/2" - 2"



End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC, w/ PTFE	Seats , L-F	Port	
S/T	1/2	253844	253856
S/T	3/4	253845	253857
S/T	1	253846	253858
S/T	1-1/4	253847	253859
S/T	1-1/2	253848	253860
S/T	2	253849	253861

PVC, w/ PTFE S	eats , T-Port
----------------	---------------

•	•		
S/T	1/2	253850	253862
S/T	3/4	253851	253863
S/T	1	253852	253864
S/T	1-1/4	253853	253865
S/T	1-1/2	253854	253866
S/T	2	253855	253867

Ball valves are generally used for on/off service, but can range from simple molded-in-place construction to high-end industrial designs with many features and benefits. Multi-port ball valves allow for mixing, diverting, and bypassing flow. Extensive material options provide for complete chemical compatibility in highly corrosive processes. Many ball valves feature full port flow, blocking true union ends, and compact ergonomic designs allowing for simple installation and maintenance.

#### VKD AND TKD BALL VALVE ACCESSORIES











Size inches	Product Code
Locking Handle Kit - VKD &	ΓKD
3/8 & 1/2	253014
3/4 & 1	253015
1-1/4 & 1-1/2	253016
2	253017

Note: The locking attachment fits on the standard handle

Size	Dime	nsions	Product
inches	Α	B (min)	Code
Stem Extension	ı Kit - VKD 8	ι TKD	
3/8 & 1/2	25mm	2"	154062
3/4	25mm	2"	154063
1	25mm	2"	154064
1-1/4	32mm	2"	154065
1-1/2	32mm	2"	154066
2	32mm	2"	154067

Note: The kit includes top and bottom PVC components, as well as a 6" length of extension pipe that must be solvent welded together to achieve the desired extension length. The minimum length to which the extension pipe can be cut is shown in the adjacent table. For longer extensions, contact IPEX Customer Service.

Size inches	Product Code
Wall / Panel Mounting Kit	- VKD only
3/8 thru 1	154322

Note: The kit includes the mounting plate, 2 brass inserts and 2 screws  $\,$ 

Size

inches	Product Code	Product Code
ANSI 150 Flanging	g Kit - VKD & TKD	
3/8 & 1/2	154324	154330
3/4	154325	154331
1	154326	154332
1-1/4	154327	154333
1-1/2	154328	154334
2	154329	154335

**PVC Kit** 

**CPVC Kit** 

 $\mbox{PVC}$  Kit includes: 1 PVC Flange & Nut, 1 PVDF locking ring and 1 True union nut.

 $\mbox{\sc CPVC Kit}$  includes: 1 CPVC Flange & Nut, 1 PVDF locking ring and 1 True union nut.

This is a NON-STOCKING item. For OEM business, please contact Customer Service for pricing and stocking options.

### VXE/VX SERIES BALL VALVES - TRUE UNION

These ultra-compact valves feature a full-port, bi-directional double block design. The true union style 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 removable handle also functions as a tool for ball seat adjustment.

The EasyFit VXE Series True Union Ball Valves represent the lastest innovation in thermoplastic ball valve manufacturing technology. The VXE Series 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.



Pressure: up to 232 psi at 73°F depending on the size Sizes 1/2" - 2"



Pressure: up to 150 psi at 73°F depending on the size Sizes: 2-1/2" - 6

The VX series is designed for industrial, general purpose and O.E.M. applications. The VX series is ideal for use in light industrial and water applications. These valves feature an ultra-compact double block design, and full port bidirectional 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 removable handle also functions as a tool for ball seat adjustment.

VXE & VX Series ball valves are part of our complete system of pipe, valves, and fittings, engineered and manufactured to our strict quality, performance, and dimensional standards.

### **EXAMPLE APPLICATIONS**

- ✓ Plant water supply and distribution
- ✓ Wash-water and recovery systems
- ✓ Acid Products Handling for Refineries, Metal Works, etc.
- ✓ Alum and Ferric Chloride Handling
- ✓ Pulp and Chemical Recovery Systems ✓ Irrigation
- ✓ Deionized Water

- ✓ Water treatment
- ✓ Swimming pools
- ✓ Chlorine Injection Systems Bleach, Dye and Acid Lines
- ✓ Aquariums
- \* Note: The 6" valve is a 4" with Venturied ends.

2-1/2

3

6

Flanged

Flanged

Flanged

\* Flanged

VX

053657

053658

053659

053660

053667

053668

053669

053670

Model	End Conn.	Size inches	EPDM Product Code	Viton® Product Code
PVC, w/	PTFE Sea	ts		
	S/T	1/2	053001	053002
	S/T	3/4	053003	053004
VXE	S/T	1	053005	053006
VAL	S/T	1-1/4	053007	053008
	S/T	1-1/2	053009	053010
	S/T	2	053011	053012
	Socket	2-1/2	053623	053624
	Socket	3	053013	053014
\/\/	Socket	4	053015	053016
VX	Threaded	3	053017	053018
	Threaded	4	053019	053020
	* Socket	6	053625	053626
PVC, w/	PTFE Sea	ts		
	Flanged	1/2	053627	053637
	Flanged	3/4	053628	053638
	Flanged	1	053629	053639
VXE	Flanged	1-1/4	053630	053640
	Flanged	1-1/2	053631	053641
	Flanged	2	053632	053642
	Flanged	2-1/2	053633	053643
	Flanged	3	053634	053644
VX	Flanged	4	053635	053645
	* Flanged	6	053636	053646
Corzan® CPVC, w/ PTFE Seats				
	S/T	1/2	053041	053042
	S/T	3/4	053043	053044
	S/T	1	053045	053046
VXE	S/T	1-1/4	053047	053048
	S/T	1-1/2	053049	053050
	S/T	2	053051	053052
	Socket	2-1/2	053647	053648
	Socket	3	053053	053054
	Socket	4	053055	053056
VX	Threaded	3	053057	053058
	Threaded	4	053059	053060
	* Socket	6	053649	053650
Corzan®	CPVC, w/			
30.2411	Flanged	1/2	053651	053661
	Flanged	3/4	053651	053662
	_			053663
VXE	Flanged	1 1/4	053653	
	Flanged	1-1/4	053654	053664
	Flanged	1-1/2	053655	053665
	Flanged	2 1/2	053656	053666

### VEE SERIES BALL VALVES - TRUE UNION

The VEE is ideal for light industrial and water applications. The VEE shares many features with the VXE such as the ultracompact double block design, and full port bi-directional operation. A threaded seat stop carrier provides improved seal integrity under tough service conditions while the removable handle also functions as a tool for ball seat adjustment. The VEE also features the EASYFIT multifunction handle which doubles as a tool for ball seat adjustment and for tightening union nuts precisely. The VEE is also available exclusively in PVC with EPDM seals and either socket or threaded end connections.



End Connection	Size inches	VEE Product Code
PVC, EPDM w/ PTF	E-HDPE Seats	
Socket	1/2	353373
Socket	3/4	353124
Socket	1	353125
Socket	1-1/4	353126
Socket	1-1/2	353127
Socket	2	353128
Threaded	1/2	353374
Threaded	3/4	353215
Threaded	1	353217
Threaded	1-1/4	353219
Threaded	1-1/2	353220
Threaded	2	353221

### **EXAMPLE APPLICATIONS**

- ✓ Swimming pools
- ✓ Aquariums
- ✓ Light dury industrial

### MP SERIES COMPACT BALL VALVES

Available in both Schedule 80 grey PVC and Schedule 40 white PVC, with either socket or threaded connections. EPDM seals and PTFE seats make this valve ideally suited to all kinds of plumbing and industrial applications where a compact, inexpensive on/off valve is required.

Pressure: 150 psi at 73°F

Sizes: 1/2" - 2"



End Connection	Size inches	Sch 80 Grey Product Code	Sch 40 White Product Code
PVC, EPDM w	/ PTFE		
Socket	1/2	052000	052277
Socket	3/4	052006	052278
Socket	1	052007	052279
Socket	1-1/4	052009	052280
Socket	1-1/2	052019	052281
Socket	2	052024	052282

### PVC, EPDM w/ PTFE

Threaded	1/2	052026	052283
Threaded	3/4	052029	052284
Threaded	1	052107	052285
Threaded	1-1/4	052108	052286
Threaded	1-1/2	052109	052287
Threaded	2	052144	052288

### FK SERIES BUTTERFLY VALVES

The FK offers superior strength as well as excellent chemical resistance needed to operate in the corrosive environments often found near flanged connections. The special trapezoid shape of the liner and a serrated body cavity guarantee a bubble tight seal while keeping break-away torque at an absolute minimum. Double self-lubricating seals (available in either EPDM or Viton®), direct actuator mount capability, and choice of a lever handle or mounted gear box are just a few more features of this technologically advanced valve. The body is made of standard glass-filled PP while discs are available in PP, PVC, CPVC, PVDF, and ABS.

Pressure: up to 150 psi at 73°F depending on the size

Sizes: 1-1/2" - 12"

inches	Product Code	Viton® Product Code		
PP Disc, Wafer Style				
1-1/2	053198	053200		
2	053199	053201		
2-1/2	052145	052147		
3	053105	053153		
4	053106	053154		
5	052146	052148		
6	053107	053155		
8	053108	053156		
Note: Available with stainless steel shaft.				

LEVER HANDLE

WITH MOUNTED GEAR BOX
-----------------------

Size inches	Product Code
Infinite Adjustable Handle	Kit
1-1/2 & 2	154173
2-1/2	153968
3 & 4	153969
5 & 6	153970
8	153971

Note: Available with stainless steel shaft.

	Size inches	EPDM Product Code	Viton® Product Code	
P	PP Disc, Wafer Style, Gear Box			
	2-1/2	253145	253147	
	3	253105	253153	
	4	253106	253154	
	5	253146	253148	
	6	253107	253155	
	8	253108	253156	
	10	153014	153016	
	12	153015	153017	

Note: Available with stainless steel shaft.

### FK SERIES LUGGED BUTTERFLY VALVES

This FK version features the world's first integral lug design. Unlike other plastic butterfly valves, these valves feature stainless steel lugs permanently anchored in the body of the valve. This unique design provides for full bi-directional operation, and allows disassembly and assembly of the downstream flange connection without weakening the integrity of the upstream connection to the pressurized line. The same body, disc, and seal material options as the normal FK are available for the lugged version.

Pressure: up to 150 psi at 73°F depending on the size

Sizes: 2-1/2" - 12"

Size inches	EPDM Product Code	Viton® Product Code
PP Disc, SS Lugs		
2-1/2	053133	053139
3	053134	053140
4	053135	053141
5	053105	053142
6	053136	053143
8	053138	053144

Note: PVC, CPVC, ABS, and PVDF discs are available on request.

Note: Available with stainless steel shaft.



### PP Disc, SS Lugs, Gear Box

	•	
2-1/2	253133	253139
3	253134	253140
4	253135	253141
5	253136	253142
6	253137	253143
8	253138	253144
10	053328	053330
12	053329	053331

Note: PVC, CPVC, ABS, and PVDF discs are available upon request. 14" – 24" butterfly valves are available on request.

Note: Available with stainless steel shaft. Gear operated valves are made-to-order.



WITH MOUNTED GEAR BOX

### FE SERIES BUTTERFLY VALVES

The FE incorporates many of the features and benefits of our industrial FK valve yet is one of the most competitively priced thermoplastic butterfly valves available today. The all PVC construction with EPDM liner makes this valve the perfect choice for applications ranging from swimming pools to chemical processes. The FE can be operated by either a lever handle or mounted gear box.

Pressure: up to 150 psi at 73°F depending on the size

Sizes: 1-1/2" – 12"



Size	EPDM
inches	Product Code
PVC Rody & Disc Wafer S	Style

PVC Body & Disc, Wafer Style				
1-1/2	053202			
2	053203			
2-1/2	053842			
3	053081			
4	053082			
5	053843			
6	053083			
8	053084			

NBR and Viton® lined valves are available upon request.

<b>PVC</b>	Body	ጼ	Disc.	Wafer	Style.	Gear	Box
1 0 0	Doug	α	$DISC_{I}$	waici	JUJIC,	ocai	DUA

2-1/2	253842
3	253081
4	253082
5	253843
6	253083
8	253084
10	052264
12	052265

NBR and Viton® lined valves are available upon request.

These highly versatile valves can be used for simple on/off service but also for processes requiring precise throttling. End-of-line installation of a lugged version allows for downstream piping disassembly with the upstream system still under pressure. The extensive size range and material availability make them suitable for a wide range of applications. With simple, direct mounting for actuation, automated process control can be easily achieved.

### VM SERIES DIAPHRAGM VALVES - MANUAL HAND WHEEL

The VM series weir-style diaphragm valves are available in PVC, CPVC, PP, or PVDF, four body styles, and three choices of diaphragms (EPDM, Viton®, or PTFE). Able to be mounted in any position, the VM is ideal for either very clean or abrasive slurry applications. A unique and proprietary PTFE diaphragm design, available automation, and multiple accessories make this one of the most advanced and versatile lines in the industry.

Pressure: up to 150 psi at 73°F depending on the size

Size: 1/2" - 4"



End	Size	EPDM	Viton®	PTFE
Connection	inches	Product Code	Product Code	Product Code

### Corzan® CPVC Body

Spigot	1/2	054247	054256	054265
Spigot	3/4	054248	054257	054266
Spigot	1	054249	054258	054267
Spigot	1-1/4	054250	054259	054268
Spigot	1-1/2	054251	054260	054269
Spigot	2	054252	054261	054270
Spigot	2-1/2	054253	054262	054271
Spigot	3	054254	054263	054272
Spigot	4	054255	054264	054273

### Corzan® CPVC Body

T/U	1/2	054274	054280	054286
T/U	3/4	054275	054281	054287
T/U	1	054276	054282	054288
T/U	1-1/4	054277	054283	054289
T/U	1-1/2	054278	054284	054290
T/U	2	054279	054285	054291

### Corzan® CPVC Body

Flanged	1/2	054292	054301	054310
Flanged	3/4	054293	054302	054311
Flanged	1	054294	054303	054312
Flanged	1-1/4	054295	054304	054313
Flanged	1-1/2	054296	054305	054314
Flanged	2	054297	054306	054315
Flanged	2-1/2	054298	054307	054316
Flanged	3	054299	054308	054317
Flanged	4	054300	054309	054318

ND WHE				
End Connection	Size inches	EPDM Product Code	Viton® Product Code	PTFE Product Code
PVC Body				
Spigot	1/2	054175	054184	054193
Spigot	3/4	054176	054185	054194
Spigot	1	054177	054186	054195
Spigot	1-1/4	054178	054187	054196
Spigot	1-1/2	054179	054188	054197
Spigot	2	054180	054189	054198
Spigot	2-1/2	054181	054190	054199
Spigot	3	054182	054191	054200
Spigot	4	054183	054192	054201
PVC Body				
T/U	1/2	054202	054214	054208
T/U	3/4	054203	054215	054209
T/U	1	054204	054216	054210
T/U	1-1/4	054205	054217	054211
T/U	1-1/2	054206	054218	054212
T/U	2	054207	054219	054213
PVC Body				
Flanged	1/2	054220	054229	054238
Flanged	3/4	054221	054230	054239
Flanged	1	054222	054231	054240
Flanged	1-1/4	054223	054232	054241
Flanged	1-1/2	054224	054233	054242
Flanged	2	054225	054234	054243
Flanged	2-1/2	054226	054235	054244
Flanged	3	054227	054236	054245
Flanged	4	054228	054237	054246
End	Size	EPDM	Viton®	PTFE
Connection	mm	Product Code	Product Code	Product Code
PP Body				
Spigot	20mm	054319	054328	054337
Spigot	25mm	054320	054329	054338
Spigot	32mm	054321	054330	054339
Spigot	40mm	054322	054331	054340
Spigot	50mm	054323	054332	054341
Spigot	63mm	054324	054333	054342
Spigot	75mm	054325	054334	054343

Spigot	20mm	054319	054328	054337
Spigot	25mm	054320	054329	054338
Spigot	32mm	054321	054330	054339
Spigot	40mm	054322	054331	054340
Spigot	50mm	054323	054332	054341
Spigot	63mm	054324	054333	054342
Spigot	75mm	054325	054334	054343
Spigot	90mm	054326	054335	054344
Spigot	110mm	054327	054336	054345
1 0	110mm	054327	054336	054345
PP Body				
PP Body	20mm	054346	054352	054358
PP Body				
PP Body	20mm	054346	054352	054358
PP Body T/U T/U	20mm 25mm	054346 054347	054352 054353	054358 054359

054351

054357

054363

T/U

63mm

Note: EPDM diaphragms have EPDM o-rings, Viton® and PTFE diaphragms have Viton® o-rings. For ABS and u-PP VM diaphragm valves, please refer to the Duraplus ABS Industrial and Enpure. Other options are available on request. VM Series Diaphragm valves are made-to-order.

### VM SERIES PNEUMATIC DIAPHRAGM VALVES - NORMALLY OPEN (AIR TO AIR) PNEUMATIC

Pressure: up to 150 psi at 73°F depending on the size

Size: 1/2" - 4"



End Connection	Size inches	EPDM Product Code	Viton® Product Code	PTFE Product Code
Corzan® C	PVC Bo	ody		
Spigot	1/2	054482	054491	054500
Spigot	3/4	054483	054492	054501
Spigot	1	054484	054493	054502
Spigot	1-1/4	054485	054494	054503
Spigot	1-1/2	054486	054495	054504
Spigot	2	054487	054496	054505
Spigot	2-1/2	054488	054497	054506
Spigot	3	054489	054498	054507
Spigot	4	054490	054499	054508
Corzan® C	1/2	054509	054515	054521
T/U	3/4	054509	054516	054521
T/U	1	054510	054517	054523
T/U	1-1/4	054512	054517	054524
T/U	1-1/2	054513	054519	054525
T/U	2	054514	054520	054526
Corzan® C	PVC Bo	ody		
Flanged	1/2	054527	054536	054545
Flanged	3/4	054528	054537	054546
Flanged	1	054529	054538	054547
Flanged	1-1/4	054530	054539	054548
Flanged	1-1/2	054531	054540	054549
Flanged	2	054532	054541	054550
Flanged	2-1/2	054533	054542	054551
Flanged	3	054534	054543	054552
Flanged	4	054535	054544	054553

End Connection	Size inches	EPDM Product Code	Viton® Product Code	PTFE Product Code
PVC Body				
Spigot	1/2	054410	054419	054428
Spigot	3/4	054411	054420	054429
Spigot	1	054412	054421	054430
Spigot	1-1/4	054413	054422	054431
Spigot	1-1/2	054414	054423	054432
Spigot	2	054415	054424	054433
Spigot	2-1/2	054416	054425	054434
Spigot	3	054417	054426	054435
Spigot	4	054418	054427	054436
PVC Body				
T/U	1/2	054437	054443	054449
T/U	3/4	054438	054444	054450
T/U	1	054439	054445	054451
T/U	1-1/4	054440	054446	054452
T/U	1-1/2	054441	054447	054453
T/U	2	054442	054448	054454
PVC Body				
Flanged	1/2	054455	054464	054473
Flanged	3/4	054456	054465	054474
Flanged	1	054457	054466	054475
Flanged	1-1/4	054458	054467	054476
Flanged	1-1/2	054459	054468	054477
Flanged	2	054460	054469	054478
Flanged	2-1/2	054461	054470	054479
Flanged	3	054462	054471	054480
Flanged	4	054463	054472	054481
End Connection	Size mm	EPDM Product Code	Viton® Product Code	PTFE Product Code
PP Body				
Spigot	20mm	054554	054563	054572
Spigot	25mm	054555	054564	054573
Spigot	32mm	054556	054565	054574
Spigot	40mm	054557	054566	054575
Spigot	50mm	054558	054567	054576
Spigot	63mm	054559	054568	054577
Spigot	75mm	054560	054569	054578
Spigot	90mm	054561	054570	054579
Spigot	110mm	054562	054571	054580
PP Body				

Note: EPDM diaphragms have EPDM o-rings, Viton® and PTFE diaphragms have Viton® o-rings. For ABS and u-PP VM diaphragm valves, please refer to the Duraplus ABS Industrial and Enpure. Other options are available on request. VM Series Diaphragm valves are made-to-order.

T/U

T/U

T/U

T/U

T/U

T/U

20mm

25mm

32mm

40mm

50mm

63mm

054581

054582

054583

054584

054585

054586

054587

054588

054589

054590

054591

054592

054593

054594

054595

054596

054597

054598

Flanged

### VM SERIES PNEUMATIC DIAPHRAGM VALVES - NORMALLY CLOSED PNEUMATIC

Pressure: up to 150 psi at 73°F depending on the size

Size: 1/2" - 4"



End Connection	Size inches	EPDM Product Code	Viton® Product Code	PTFE Product Code
Corzan® C	PVC Bo	ody		
Spigot	1/2	054716	054725	054734
Spigot	3/4	054717	054726	054735
Spigot	1	054718	054727	054736
Spigot	1-1/4	054719	054728	054737
Spigot	1-1/2	054720	054729	054738
Spigot	2	054721	054730	054739
Spigot	2-1/2	054722	054731	054740
Spigot	3	054723	054732	054741
Spigot	4	054724	054733	054742
Corzan® C	PVC Bo	ody		
T/U	1/2	054743	054749	054755
T/U	3/4	054744	054750	054756
T/U	1	054745	054751	054757
T/U	1-1/4	054746	054752	054758
T/U	1-1/2	054747	054753	054759
T/U	2	054748	054754	054760
Corzan® C	PVC Bo	ody		
Flanged	1/2	054761	054770	054780
Flanged	3/4	054762	054771	054781
Flanged	1	054763	054772	054782
Flanged	1-1/4	054764	054773	054783
Flanged	1-1/2	054765	054774	054784
Flanged	2	054766	054775	054785
Flanged	2-1/2	054767	054776	054786
Flanged	3	054768	054778	054787

054769

End Connection	Size inches	EPDM Product Code	Viton® Product Code	PTFE Product Code
PVC Body				
Spigot	1/2	054644	054653	054662
Spigot	3/4	054645	054654	054663
Spigot	1	054646	054655	054664
Spigot	1-1/4	054647	054656	054665
Spigot	1-1/2	054648	054657	054666
Spigot	2	054649	054658	054667
Spigot	2-1/2	054650	054659	054668
Spigot	3	054651	054660	054669
Spigot	4	054652	054661	054670
PVC Body				
T/U	1/2	054671	054677	054683
T/U	3/4	054672	054678	054684
T/U	1	054673	054679	054685
T/U	1-1/4	054674	054680	054686
T/U	1-1/2	054675	054681	054687
T/U	2	054676	054682	054688
PVC Body				
Flanged	1/2	054689	054698	054707
Flanged	3/4	054690	054699	054708
Flanged	1	054691	054700	054709
Flanged	1-1/4	054692	054701	054710
Flanged	1-1/2	054693	054702	054711
Flanged	2	054694	054703	054712
Flanged	2-1/2	054695	054704	054713
Flanged	3	054696	054705	054714
Flanged	4	054697	054706	054715
End	Size	EPDM	Viton®	PTFE
Connection	mm	Product Code	Product Code	Product Code
PP Body				
Spigot	20mm	054789	054798	054807
Spigot	25mm	054790	054799	054808
Spigot	32mm	054791	054800	054809
Spigot	40mm	054792	054801	054810
Spigot	50mm	054793	054802	054811
Spigot	63mm	054794	054803	054812
Spigot	75mm	054795	054804	054813
Spigot	90mm	054796	054805	054814
Spigot	110mm	054797	054806	054815
PP Body				
T/U	20mm	054816	054824	054830
T/U	25mm	054819	054825	054831
T/U	32mm	054820	054826	054832

Note: EPDM diaphragms have EPDM o-rings, Viton® and PTFE diaphragms have Viton® o-rings. Other options are available on request. VM Series Diaphragm valves are made-to-order.

054788

054779

T/U

T/U

T/U

40mm

50mm

63mm

054821

054822

054823

054827

054828

054829

054833

054834

054835

### DV SERIES DIAPHRAGM VALVES - MANUAL HANDWHEEL

The DV is a rugged industrial product ideal for throttling or use in abrasive slurry lines. The raising position indicator also functions as an adjustable travel stop. This feature can be used to avoid over-compression of the EPDM or PTFE diaphragm, or as a travel limiter allowing different settings for the "closed" position. The molded flanged body eliminates potentially leaky joints while featuring end-to-end dimensions identical to most plastic lined metal diaphragm valves, allowing for direct replacement.

Pressure: up to 150 psi at 73°F depending on the size

Sizes: 1/2" - 6"



End Connection	Size inches	EPDM Product Code
PVC Body		
Flanged	1/2	052196
Flanged	3/4	052197
Flanged	1	052198
Flanged	1-1/2	052207
Flanged	2	052208
Flanged	3	052209
Flanged	4	052217
Flanged	6	052218

End Connection	Size inches	PTFE Product Code
PVC Body		
Flanged	1/2	052296
Flanged	3/4	052297
Flanged	1	052298
Flanged	1-1/2	052299
Flanged	2	052354
Flanged	3	052355
Flanged	4	052356
Flanged	6	052357

### CM SERIES COMPACT DIAPHRAGM VALVES

The CM is a compact design with true union ends, available in PVC, CPVC, PP, or PVDF. With three diaphragm options (EPDM, Viton®, or PTFE), these manually operated or pneumatically actuated valves are ideal for OEMs. A standard position indicator and integrated mounting bushings complete the long list of features.

Pressure: up to 90 psi at 73°F

Size: 1/2" in PVC and CPVC, 16 mm – 20 mm in PP and PVDF



End	Size	EPDM	Viton®	PTFE
Connection	inches	Product Code	Product Code	Product Code

### **PVC Body**

T/U S/T	3/8	253071	-	253072
T/U S/T	1/2	253073	-	253074
T/U Socket	1/2	054127	054129	054131

### Corzan® CPVC Body

T/U Socket 1/2	054128	054130	054132
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End Connection	Size mm	EPDM Product Code	Viton® Product Code	PTFE Product Code
PP Body				
Socket	16mm	054133	054136	054139
Spigot	20mm	054134	054137	054140
T/U Socket	20mm	054135	054138	054141
DVDE Body				

### PVDF Body

Socket	16mm	054142	054145	054148
Spigot	20mm	054143	054146	054149
T/U Socket	20mm	054144	054147	054150

### CM SERIES COMPACT DIAPHRAGM VALVES - NORMALLY CLOSED PNEUMATIC

Pressure: up to 90 psi at 73°F

Size: 1/2" in PVC and CPVC, 16 mm - 20 mm in PP and PVDF



End Connection	Size inches	EPDM Product Code	Viton® Product Code	PTFE Product Code		
PVC Body						
T/U Socket	1/2	054151	054152	054153		
Corzan® CPVC Body						
T/U Socket	1/2	054154	054155	054156		
Fnd	Size	EPDM	Viton®	PTFE		
Connection	mm					
Oomineemon		Flouuci Coue	Product Code	Product Code		
PP Body		Froduct Code	Product Code	Product Code		
	16mm	054157	054160	054163		
PP Body						
PP Body Socket	16mm	054157	054160	054163		
PP Body Socket Spigot	16mm 20mm 20mm	054157 054158	054160 054161	054163 054164		
PP Body Socket Spigot T/U Socket	16mm 20mm 20mm	054157 054158	054160 054161	054163 054164		
PP Body Socket Spigot T/U Socket	16mm 20mm 20mm	054157 054158 054159	054160 054161 054162	054163 054164 054165		

Note: EPDM diaphragms have EPDM o-rings Viton® and PTFE diaphragms have Viton® o-rings.

### DM SERIES DIAPHRAGM VALVES - DIRECT ACTING PNEUMATIC

Available in both PVC and CPVC, and with either an EPDM or Viton® diaphragm, its rugged construction allows the ultracompact DM to handle even extremely aggressive media. The direct operation of the diaphragm does not require a closing spring, which makes the small DM particularly suitable when space is at a premium.

Pressure: up to 115 psi at 73°F depending upon the

available control pressure

Sizes: 1/2" - 2"



End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC Body			
Spigot	1/2	054880	054886
Spigot	3/4	054881	054887
Spigot	1	054882	054888
Spigot	1-1/4	054883	054889
Spigot	1-1/2	054884	054890
Spigot	2	054885	054891
VC Body			
True Union	1/2	054892	054898
True Union	3/4	054893	054899
True Union	1	054894	054900
True Union	1-1/4	054895	054901
True Union	1-1/2	054896	054902
True Union	2	054897	054903
VC Body			
Flanged	1/2	054904	054910
Flanged	3/4	054905	054911
Flanged	1	054906	054912
Flanged	1-1/4	054907	054913
Flanged	1-1/2	054908	054914
Flanged	2	054909	054915

# DM SERIES DIAPHRAGM VALVES - DIRECT ACTING PNEUMATIC W/STROKE LIMITER & POSITION INDICATOR

Pressure: up to 115 psi at 73°F depending upon the

available control pressure

Sizes: 1/2" - 2"



Diaphragm valves are the perfect solution when precise flow throttling is required. The weir style design - no dead space in the valve - is extremely good for abrasive slurries. These valves are widely used in high purity applications because their design prevents friction and subsequent particle creation when cycling. Many body and diaphragm material options are available as well as simple pneumatic actuation.

End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC Body			
Spigot	1/2	054916	054922
Spigot	3/4	054917	054923
Spigot	1	054918	054924
Spigot	1-1/4	054919	054925
Spigot	1-1/2	054920	054926
Spigot	2	054921	054927

PVC Body			
True Union	1/2	054928	054934
True Union	3/4	054929	054935
True Union	1	054930	054936
True Union	1-1/4	054931	054937
True Union	1-1/2	054932	054938
True Union	2	054933	054939

PVC Body			
Flanged	1/2	054940	054946
Flanged	3/4	054941	054947
Flanged	1	054942	054948
Flanged	1-1/4	054943	054949
Flanged	1-1/2	054944	054950
Flanged	2	054945	054951

Note: EPDM diaphragms have EPDM o-rings Viton  $^{\! \circ}$  and PTFE diaphragms have Viton  $^{\! \circ}$  o-rings.

### DIAPHRAGM VALVES - AUTOMATION & ACCESSORIES

IPEX diaphragm valves can be pneumatically actuated providing precise control of critical applications. The normally closed (fail close), normally open (fail open), and double acting VM valves make up of one of the most extensive ranges in the industry. The actuated CM provides a compact solution to automated needs while the DM employs an efficient direct acting design. All pneumatic diaphragm valves can be outfitted with many options and accessories such as: stroke limiters, optical and electric position indicators, electro-pneumatic positioners, pilot valves, and various combinations thereof.

Valve Series	Size	Product

# Pilot Solenoid Valve - Direct Mount, NBR Seals, 110 VAC



IIVC - DITECT IND	unt, NDN 36	ais, i io vac
VM	1/4	053074
CM	1/8	053075

# Pilot Solenoid Valve - Remote Mount, NBR Seals, 110 VAC N/A 1/4 053076



Note: Other voltages are available upon request.

### **Optical Position Indicator**



VM / NC - NO - DA	1/2 - 2	054997
VM / NC - NO - DA	2-1/2 - 4	054998
Protection can inc	cluded see ass	emhly

Protection cap included, see assembly instructions.

### Stroke Limiter



VM / NC	1/2 - 1-1/2	054991
VM / NC	2	054992
*VM / NC	2-1/2 - 4	054993
VM / NO - DA	1/2 - 2	054994
VM / NO - DA	2-1/2 - 4	054995

Protection cap included for VM. \*Actuator must have the metal cap.

### Stroke Limiter w/ Optical Position Indicator



VM / NC	1/2 - 1	054999
VM / NC	1-1/4 - 1-1/2	053063
VM / NC	2	053064
*VM / NC	2-1/2 - 4	053065
VM / NO - DA	1/2 - 2	053066
VM / NO - DA	2-1/2 - 4	053067

Protection cap included for VM.
\*Actuator must have the metal cap.

Valve Series Size inches	Product Code
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### Stroke Limiter w/ Optical Position Indicator & Manual Override



VM / NC	1/2 - 1	053069
VM / NC	1-1/4 - 2	053071
VM / NO - DA	1/2 - 1	053072
VM / NO - DA	1-1/4 - 2	053073

Protection cap included for VM.

### Electrical Position Indicator - 1 Mechanical Switch



•	marcator	i iviccitatiicat s	JWILCII	
	CM / NC	1/2	054952	
	VM / NC	1/2 - 1	054953	
	VM / NC	1-1/4 - 1-1/2	054954	
	VM / NC	2	054955	
	VM / NC	2-1/2 - 4	054956	
	VM Manual*	1/2 - 1	054962	
	VM Manual*	1-1/4 - 1-1/2	054963	
	VM Manual*	2	054964	
	VM Manual*	2-1/2 - 3	054965	
	VM Manual*	4	054966	

<sup>\*</sup> Special machining needed for the valve bonnet and compressor.

### Microswitch Box - 2 Electromechanical Switches



VM / NC	1/2 - 1-1/2	054967
VM / NC	2 - 4	054968
VM / NO	1/2 - 4	054969

### Microswitch Box - 2 Inductive Switches

VM /	' NC 1	/2 - 1-1/2	054970
VM /	NC NC	2 - 4	054971
VM /	NO NO	1/2 - 4	054972

### Compact Microswitch Box

- 2 Electromechanical Switches

VM / NC	1/2 - 1	054973
VM / NC	1-1/4 - 1-1/2	054974
VM / NC	2	054975
VM / NO	1/2 - 1	054976
VM / NO	1-1/4 - 1-1/2	054977
VM / NO	2	054978
CM / NC - NO	1/2	054979

### **Compact Microswitch Box**

- 2 Inductive Switches

VM / NC	1/2 - 1	054980
VM / NC	1-1/4 - 1-1/2	054981
VM / NC	2	054982
VM / NO	1/2 - 1	054983
VM / NO	1-1/4 - 1-1/2	054984
VM / NO	2	054985
CM / NC - NO	1/2	054986

### SXE SERIES BALL CHECK VALVES - TRUE UNION

The IPEX EASYFIT SXE Series True Union Ball Check Valves represent the latest innovation in thermoplastic valve manufacturing technology. The SXE is a complement to the VXE and VEE ball valve product lines, with many of the same features. SXE introduces an advanced method of installation, providing trouble free service for industrial, OEM and water service applications.

It is designed to work with just a few psi of back pressure for positive shutoff in both vertical and horizontal installations.

Pressure: 232 psi at 73°F

Sizes: 1/2" - 2"



With optimized fluid dynamics design the SXE has an improved Cv value. The seat stop carrier is a threaded design for safe disconnection upstream. The ball is machined smooth for optimal service and prolonged life. The SXE also utilizes the EASYFIT torque wrench to tighten union nuts with defined torque and the EASYFIT LCE labelling system for custom identification.

End Connection	Size inches	EPDM Product Code	FPM Product Code
PVC			
S/T	1/2	052013	052022
S/T	3/4	052014	052023
S/T	1	052015	052027
S/T	1-1/4	052016	052028
S/T	1-1/2	052017	052030
S/T	2	052018	052120

### **CPVC**

S/T	1/2	052121	052127
S/T	3/4	052122	052128
S/T	1	052123	052133
S/T	1-1/4	052124	052134
S/T	1-1/2	052125	052135
S/T	2	052126	052136

Check valves should be used whenever there is a need to prevent back-flow of process media. This may be when two incompatible fluids cannot be allowed to mix, or when reverse flow would cause undesirable drainage of a system line or tank. Many styles exist including: simple ball checks, heavy duty swing checks, and highly efficient piston checks. These valves are typically gravity operated and require very little back pressure to seal. Air release valves safely allow any entrapped air or gas to escape, avoiding damage to the piping system.

### VR SERIES PISTON CHECK VALVES - TRUE UNION, Y-PATTERN

The VR features an all PVC construction of high performance components. This Y-pattern valve will perform equally as well in both vertical and horizontal orientations. With an increased flow rate yet low-return pressure positive seal, and top-entry maintenance, our VR piston check valve far exceeds the limited performance of other popular check valves. Both EPDM and Viton® seals are available.

Pressure: up to 232 psi depending on the size

Sizes: 1/2" - 4"



End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC			
S/T	1/2	053346	053289
S/T	3/4	053347	053290
S/T	1	053348	053291
S/T	1-1/4	053349	053292
S/T	1-1/2	053350	053293
S/T	2	053351	053294

### PVC

Flanged	1/2	053879	053885
Flanged	3/4	053880	053886
Flanged	1	053881	053887
Flanged	1-1/4	053882	053888
Flanged	1-1/2	053883	053889
Flanged	2	053884	053890

Connection	inches	Product Code
PVC, NOT True Uni	on	
Threaded	3	053352
Threaded	4	053353
Socket	3	053295
Socket	4	053296
Flanged	3	053925
Flanged	4	053926

### SC SERIES SWING CHECK VALVES

The SC combines superior flow rate with maximum versatility. With stainless wetted parts and hardware, top entry design, and extremely low back pressure requirements, these flanged valves are the perfect choice for back-flow prevention in large diameter lines, both vertical and horizontal. The SC is available in PVC with either EPDM or Viton® seals.

up to 100 psi at 73°F depending on the size

3" - 8" Sizes:

End Connection	Size inches	EPDM Product	Viton® Product Code
PVC			
Flanged	3	052289	053875
Flanged	4	052290	053876
Flanged	6	052291	053877
Flanged	8	052292	053878



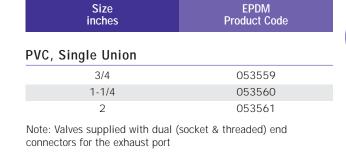
### VA SERIES AIR RELEASE VALVES - SINGLE UNION

The VA is one of only two such plastic valves in the industry, and the only one controlled by media and not pressure. Designed for tanks, slurries, or start-ups, the VA valve will economically and efficiently eliminate air or gas pockets as well as break potentially dangerous vacuums. This no-spill valve is offered in PVC with EPDM seals. Viton® sealing kits are also available.

Pressure: 232 psi 3/4", 1-1/4" and 2"

Sizes:





Size inches	Product Code	
Viton® 0-ring Set		
3/4	153845	
1-1/4	153846	
2	153847	

### RV SERIES SEDIMENT STRAINERS - TRUE UNION - Y PATTERN

The RV Y-pattern strainer protects critical pipeline components by removing solids and suspended impurities. Clear PVC construction allows for inspection of the screen while in service, whereas the bottom-entry design permits maintenance on the valve while in-line. The RV is available with either EPDM or Viton® seals, as well as in Corzan® CPVC.

up to 150 psi depending on the size

1/2" – 4" Sizes:



### **RV Series Sediment Strainer Replacement Screens**

Size Inches	Product Code	Size Inches	Product Code
PVC 18 Mesh - 3/32"		PVC 30 Mesh - 5/64"	
1/2	053947	1/2	053955
3/4	053948	3/4	053956
1	053949	1	053957
1-1/4	053950	1-1/4	053958
1-1/2	053951	1-1/2	053959
2	053952	2	053960
3	053953	3	053961
4	053954	4	053962
PVC 35 Mes	sh - 1/32"	PVC 50 Mes	sh - 3/64"
1/2	053963	1/2	053971
3/4	053964	3/4	053972
1	053965	1	053973
1-1/4	053966	1-1/4	053974
1-1/2	053967	1-1/2	053975
2	053968	2	053976
3	053969	3	053977
4	053970	4	053978
SS 35 Mesh	ı - 1/32"	PP 30 Mesh	n - 1/16"
1/2	053979	1/2	053332
3/4	053980	3/4	053340
1	053981	1	053341
1-1/4	053982	1-1/4	053342
1-1/2	053983	1-1/2	053343
2	053984	2	053344
3	053985	3	-
4	053986	4	-

End	Size	EPDM	Viton®
Connection	inches	Product Code	Product Code

### Clear PVC True Union, w/PVC 35 Mesh Screen

S/T	1/2	053261	053233
S/T	3/4	053262	053234
S/T	1	053263	053235
S/T	1-1/4	053264	053236
S/T	1-1/2	053265	053237
S/T	2	053266	053238

### Clear PVC True Union, w/PVC 35 Mesh Screen

Flanged	1/2	053935	053941
Flanged	3/4	053936	053942
Flanged	1	053937	053943
Flanged	1-1/4	053938	053944
Flanged	1-1/2	053939	053945
Flanged	2	053940	053946

End	Size	Viton®
Connection	inches	Product Code
Connection	IIICIIC3	1 Todact Code

### CPVC True Union, w/PP 30 Mesh Screen

S/T	1/2	053334
S/T	3/4	053335
S/T	1	053336
S/T	1-1/4	053337
S/T	1-1/2	053338
S/T	2	053339

End	Size	EPDM	Viton®
Connection	inches	Product Code	Product Code
Clear PVC NOT	True Unior	n. w/PVC 35 ľ	

Threaded	3	053267	053239
Threaded	4	053268	053240
Socket	3	053211	054012
Socket	4	053212	054013
Flanged	3	054020	054028
Flanged	4	054021	054029

Sizes	0.200		Availability	/
ASTM Mesh	inches	PVC	SS	PP
18 Mesh	3/32	Χ	-	-
30 Mesh	1/16	-	-	Χ
30 Mesh	5/64	Χ	-	-
35 Mesh	1/32	Χ	Χ	-
50 Mesh	3/64	Χ	-	-

### SF SERIES 2-WAY SOLENOID VALVES - TRUE UNION, NORMALLY CLOSED, 110 VAC

The SF is a 100% duty cycle solenoid valve, and is available in PVC with EPDM or Viton® seals. Remote operation and a quick cycle time allow for precise control of media in automated applications. With their "shutter" design, standard manual override, and position indicator, these valves will outlast and outperform more conventional diaphragm-style solenoid valves.

Pressure: up to 60 psi depending on the size

Sizes: 1/4" and 1/2"



Orifice	Size	EPDM	Viton®
Size	inches	Product Code	Product Code

### ${\bf PVC,\ True\ Union,\ Normally\ Closed,\ FNPT\ Threaded}$

0.23	1/4	053615	053616
0.31	1/4	053617	053618
0.39	1/2	053619	053620

Note: 3-way valves and other voltages are available on request.

### VV ANGLE SEAT VALVE - TRUE UNION, Y-PATTERN

Sizes: 1/2 - 2""



End	Size	EPDM
Connection	inches	Product Code
Connection	inches	Product code

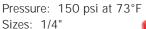
### PVC, True Union w/ PTFE Gland Packing

S/T	1/2	253869
S/T	3/4	253870
S/T	1	253871
S/T	1-1/4	253872
S/T	1-1/2	253873
S/T	2	253874

Note: Viton® sealing sets are available on request, please contact customer service.

### LV SERIES LAB VALVES WITH FNPT, MNPT AND HOSE CONNECTORS

The LV is an ingenious PVC quarter turn product supplied with an assortment of connections that match up with many kinds of pipe or hose.





Size	Product
inches	Code

### LV Series Lab Valve w FNPT, MNPT & Hose Connectors

1/4 052308

# QUARTER TURN AUTOMATION

# **Quarter Turn Automation - Pneumatic / Electric**

Automation is an ideal solution for precise control of many valves in a system, when valves are remotely located, or when the process requires constant monitoring and adjustment. Pneumatic and electric actuators can be easily fitted on our ball, multi-port, and butterfly valves. Some features and functions include normally closed, normally open, or double-acting operation; corrosion resistant aluminum bodies, pre-loaded springs, and adjustable cams. Many accessories such as visual position indicators, limit switches, 3 and 4-way solenoids, and positioners are also available. For further information, please refer to the IPEX *Industrial Technical Manual Volume IX entitled*, "Quarter Turn Automation".

### PNEUMATIC ACTUATORS OVERVIEW

Pneumatic actuators are the most common choice for quarter turn plastic valves in process applications. Compressed air systems are readily available in any plant, and the cost of the actuator itself is generally lower than that of an electric unit with a comparable torque output. Typical quarter turn automation seldom requires positioning (something achieved more easily with an electric

actuator), therefore the cycle life of a pneumatic unit will be substantially greater, and will be intrinsically safer than an electric actuator in volatile environments. While there are many different kinds of pneumatic actuators, a rack and pinion style is the preferred choice within the plastic piping industry. This type of actuator is quite tough and rugged, and has a high cycle life. They generally have a compact, simple construction, and certain models can be quite light in weight. The design also allows the same basic actuator to be used as a double acting or (with minor additions) a spring return unit.

# DID YOU KNOW?

The three basic control functions available through quarter turn automation are:

- 1. Double Acting— This requires external power for each stroke. For example, power to open the valve, then power to close the valve.
- **2. Normally Open** Also referred to as 'fail safe open', the default position is open and the actuator requires power to close the valve.
- **3. Normally Closed** Also referred to as 'fail safe closed', the default position is closed and the actuator requires power to open the valve.

### **ELECTRICAL ACTUATORS OVERVIEW**

Although slightly more expensive than pneumatics, electric actuators have certain desirable benefits. They are the preferred choice when cycle time is an issue, as a quick closing pneumatically actuated valve could cause a damaging pressure surge condition (water hammer). The use of an electric actuator may also be preferred when the distance from the power source is considerable. The friction losses in long runs of compressed air line may result in reduced efficiency and/or additional compressor stations. In addition, electric actuators are the preferred (if not the only) choice when a quarterturn valve like a multi-port is used. In this case, it is possible that the travel required is not just 0° to 90° but 0° to 90° to 180°. A rack and pinion actuator would need four separate pistons and a multiplicity of related air chambers, whereas this is easily accomplished with an electric unit. Most electric actuators have a cam/limit switch arrangement which allows the unit to be set up for a variety of rotations. The two standard limit switches can be used to provide a remote location with an open or closed signal. A multitude of voltages both for AC and DC current are also typically available.

### VKD SERIES BALL VALVE - TRUE UNION, PNEUMATIC - DOUBLE ACTING



End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC w PTFE	Seats		
S/T	1/2	253296	253305
S/T	3/4	253297	253306
S/T	1	253298	253307
S/T	1-1/4	253299	253308
S/T	1-1/2	253300	253309
S/T	2	253301	253310
Socket	2-1/2	253302	253311
Socket	3	253303	253312
Socket	4	253304	253313

End Connection	Size inches	EPDM Product Code	Viton® Product Code
Corzan® CP	VC w PTF	E Seats	
S/T	1/2	253314	253323
S/T	3/4	253315	253324
S/T	1	253316	253325
S/T	1-1/4	253317	253326
S/T	1-1/2	253318	253327
S/T	2	253319	253328
Socket	2-1/2	253320	253329
Socket	3	253321	253330
Socket	4	253322	253331

### Pneumatic - Spring Return, Normally Open

	ocuts		
S/T	1/2	253368	253377
S/T	3/4	253369	253378
S/T	1	253370	253379
S/T	1-1/4	253371	253380
S/T	1-1/2	253372	253381
S/T	2	253373	253382
Socket	2-1/2	253374	253383
Socket	3	253375	253384
Socket	4	253376	253385

Pneumatic -	Spring	Doturn	Mormally	Onon
Pneumatic -	Spring	- Return.	wormany	upen

Corzan® CPVC w PTFE Seats

·	orzan	CPVC W FIFE	Seats	
	S/T	1/2	253386	253395
	S/T	3/4	253387	253396
	S/T	1	253388	253397
	S/T	1-1/4	253389	253398
	S/T	1-1/2	253390	253399
	S/T	2	253391	253400
	Socket	2-1/2	253392	253401
	Socket	3	253393	253402
	Socket	4	253394	253403

### Pneumatic - Spring Return, Normally Closed

**PVC w PTFE Seats** 

S/T	1/2	253332	253341
S/T	3/4	253333	253342
S/T	1	253334	253343
S/T	1-1/4	253335	253344
S/T	1-1/2	253336	253345
S/T	2	253337	253346
Socket	2-1/2	253338	253347
Socket	3	253339	253348
Socket	4	253340	253349

### Pneumatic - Spring Return, Normally Closed

### Corzan® CPVC w PTFE Seats

CUIZAII	CFVC W FIFE	Seats	
S/T	1/2	253350	253359
S/T	3/4	253351	253360
S/T	1	253352	253361
S/T	1-1/4	253353	253362
S/T	1-1/2	253354	253363
S/T	2	253355	253364
Socket	2-1/2	253356	253365
Socket	3	253357	253366
Socket	4	253358	253367

### VKD SERIES BALL VALVE - ELECTRIC - DOUBLE ACTING, 110 VAC



Connection	inches		
PVC w PTFE Seats			
S/T	1/2		
S/T	3/4		
S/T	1		
S/T	1-1/4		
S/T	1-1/2		
S/T	2		
Socket	2-1/2		
Socket	3		
Socket	4		

Connection	inches
Corzan® CPVC	w PTFE Seats
S/T	1/2
S/T	3/4
S/T	1
S/T	1-1/4
S/T	1-1/2
S/T	2
Socket	2-1/2
Socket	3
Socket	4

For electric valve actuation, you must order three separate components.

Contact IPEX Sales for assistance.

### TKD SERIES 3-WAY BALL VALVE - TRUE UNION, PNEUMATIC - DOUBLE ACTING

Size FPDM Viton®



Connection	inches	Product Code	Product Code
PVC w PTFE	Seats, L	Port	
S/T	1/2	253791	253797
S/T	3/4	253792	253798
S/T	1	253793	253799
S/T	1-1/4	253794	253800
S/T	1-1/2	253795	253801
S/T	2	253796	253802

Connection	
PVC w PTFE	PTFE S
S/T	

End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC w PTFE	Seats, T	-Port	
S/T	1/2	253803	253809
S/T	3/4	253804	253810
S/T	1	253805	253811
S/T	1-1/4	253806	253812
S/T	1-1/2	253807	253813
S/T	2	253808	253814

P	Pneumatic - Spring Return, Normally Open				
P	PVC w PTFE Seats, L-Port				
	S/T	1/2	253744	253750	
	S/T	3/4	253745	253751	
	S/T	1	253746	253752	
	S/T	1-1/4	253747	253753	
	S/T	1-1/2	253748	253754	
	S/T	2	253740	252755	

PVC w PTFE Seats, T-Port				
S/T	1/2	253756	253762	
S/T	3/4	253757	253763	
S/T	1	253758	253764	
S/T	1-1/4	253759	253765	
S/T	1-1/2	253760	253766	
S/T	2	253761	253815	

Pneumatic - Spring Return, Normally Open

F	Pneumatic - Spring Return, Normally Closed				
F	PVC w PTFE Seats, L-Port				
	S/T	1/2	253767	253773	
	S/T	3/4	253768	253774	
	S/T	1	253769	253775	
	S/T	1-1/4	253770	253776	
	S/T	1-1/2	253771	253777	
	S/T	2	253772	253778	

Pneumatic - Spring Return, Normally Closed			
PVC w PTFE Seats, T-Port			
S/T	1/2	253779	253785
S/T	3/4	253780	253786
S/T	1	253781	253787
S/T	1-1/4	253782	253788
S/T	1-1/2	253783	253789
S/T	2	253784	253790

### TKD SERIES 3-WAY BALL VALVE - ELECTRIC - DOUBLE ACTING, 110 VAC



Connection	inches
PVC w PTFE Se	eats, L-Port
S/T	1/2
S/T	3/4
S/T	1
S/T	1-1/4
S/T	1-1/2
S/T	2

Connection	inches
PVC w PTFE Se	ats, T-Port
S/T	1/2
S/T	3/4
S/T	1
S/T	1-1/4
S/T	1-1/2
S/T	2

For electric valve actuation, you must order three separate components.

**Contact IPEX Sales for** assistance.

Note: Customer must specify 'open' and 'closed' positions for 3-way actuated valves. See technical manual for details. Electric actuators can be configured for either 90° or 180° operation.

### FK SERIES BUTTERFLY VALVE - DOUBLE ACTING



Size inches	EPDM Product Code	Viton® Product Code			
PP Disc, Wafer Style					
1-1/2	253536	253546			
2	253537	253547			
2-1/2	253538	253548			
3	253539	253549			
4	253540	253550			
5	253541	253551			
6	253542	253552			
8	253543	253553			
10	253544	253554			
12	253545	253555			

Size inches	EPDM Product Code	Viton® Product Code		
PP Disc, SS Lugs				
2-1/2	253556	253564		
3	253557	253565		
4	253558	253566		
5	253559	253567		
6	253560	253568		
8	253561	253569		
10	253562	253570		
12	253563	253571		

### Pneumatic - Spring Return, Normally Open

PP Disc, Wafer Sty	le
--------------------	----

	•	
1-1/2	253608	253618
2	253609	253619
2-1/2	253610	253620
3	253611	253621
4	253612	253622
5	253613	253623
6	253614	253624
8	253615	253625
10	253616	253626
12	253617	253627

### Pneumatic - Spring Return, Normally Open

PP Disc, SS Lugs

Diso, oo Lu	95	
2-1/2	253628	253636
3	253629	253637
4	253630	253638
5	253631	253639
6	253632	253640
8	253633	253641
10	253634	253642
12	253635	253643

### Pneumatic - Spring Return, Normally Closed

PP Disc, Wafer Style

1-1/2	253572	253582
2	253573	253583
2-1/2	253574	253584
3	253575	253585
4	253576	253586
5	253577	253587
6	253578	253588
8	253579	253589
10	253580	253590
12	253581	253591

### Pneumatic - Spring Return, Normally Closed

### PP Disc, SS Lugs

11 DI30, 33 Eu	93	
2-1/2	253592	253600
3	253593	253601
4	253594	253602
5	253595	253603
6	253596	253604
8	253597	253605
10	253598	253606
12	253599	253607

### FK SERIES BUTTERFLY VALVES - ELECTRIC - DOUBLE ACTING, 110 VAC



inches	
PP Disc, Wafer Style	
1-1/2	
2	
2-1/2	
3	
4	
5	
6	
8	
Note: DVC CDVC ADC and	

Size

PP Disc, SS Lugs		
2-1/2		
3		
4		
5		
6		
8		

Size

inches

For electric valve actuation, you must order three separate components.

Contact IPEX Sales for assistance.

Note: PVC, CPVC, ABS, and PVDF discs are available on request 10" and 12" electrically actuated butterfly valves are available on request.

### FE SERIES BUTTERFLY VALVE PNEUMATIC - DOUBLE ACTING

EPDM

253689

Size

12



inches	Product Code	
PVC Body & Disc, Wafer Style		
1-1/2	253680	
2	253681	
2-1/2	253682	
3	253683	
4	253684	
5	253685	
6	253686	
8	253687	
10	253688	

Size	EPDM
inches	Product Code

### Pneumatic - Spring Return, Normally Open

### PVC Body & Disc, Wafer Style

, , ,	,	
1-1/2		253700
2		253701
2-1/2		253702
3		253703
4		253704
5		253705
6		253706
8		253707
10		253708
12		253709

Note: NBR and Viton® lined valves are available on request

### Pneumatic - Spring Return, Normally Closed

### PVC Body & Disc, Wafer Style

I VO Dody a Diso, Water	Otylo
1-1/2	253690
2	253691
2-1/2	253692
3	253693
4	253694
5	253695
6	253696
8	253697
10	253698
12	253699

### FE SERIES BUTTERFLY VALVE ELECTRIC - DOUBLE ACTING, 110 VAC



Size inches	

### PVC Body & Disc, Wafer Style

1-1/2
2
2-1/2
3
4
5
6
8

For electric valve actuation, you must order three separate components.

Contact IPEX Sales for assistance.

10" and 12" electrically actuated butterfly valves are available upon request.

### PNEUMATIC ACTUATOR ACCESSORIES

Component	Product
Style	Code

### Pilot Solenoids - 110 VAC, 3/4-Way



NEMA 4/4X	253055
NEMA 7/9	253056

Note: Pilot solenoids meet NAMUR mounting specifications. Other voltages available.

### Limit Switches - NEMA 4/4X



Mechanical	253057
Proximity	253058

Note: Limit switches include universal mounting brackets (ISO 5211)

### **Positioners**



3-15 psi	253061
4 - 20 mA	253059
4 - 20 mA, w/ limit switch (LS)	253816
4 - 20 mA, w/ position transmitter (PT)	253817
4 - 20 mA, w/ LS & PT	253818
4 - 20 mA, I-safe	253062

Note: All positioners include universal mounting brackets (ISO 5211) and gages.

Several other positioners available, including Intrinsically Safe, Explosion proof, Smart, Stainless Steel and High Vibration models, with limit switch and position transmitter options. Please contact IPEX for more information.

**Other** 



Sandwich Declutch. Gearbox ISO 5211	253819
Muffler - Brass/Bronze	253065
Speed Control - Brass/Bronze	253066



Note: Declutchable gearbox has MAXIMUM torque rating of 2600 in-lbs. For higher torque values, please contact IPEX for larger size gearbox models.

### MOUNTING ACCESSORIES

Mounting	Product
Detail	Code

### VKD & TKD Series Ball Valve Mounting Kit



1	· - a · a		
	1/2	F03 / F04 / 11mm	154048
	3/4	F04 / 11mm	154049
	3/4	F03 / F05 / 11mm	154050
	1	F04 / 11mm	154051
	1	F03 / F05 / 11mm	154052
	1-1/4	F05 / F07 / 11mm	154182
	1-1/4	F05 / F07 / 14mm	154053
	1-1/2	F05 / F07 / 11mm	154183
	1-1/2	F05 / F07 / 14mm	154054
	2	F05 / F07 / 11mm	154174
	2	F05 / F07 / 14mm	154055
	2-1/2 - 4 (VKD)	F05 / F07	153001

### VX Series Ball Valve Mounting Kit



1/2	F04 / F05 / 11mm	154042
3/4	F04 / F05 / 11mm	154043
1	F04 / F05 / 11mm	154044
1-1/4	F04 / F05 / 11mm	154045
1-1/2	F05 / F07 / 14mm	154046
2	F05 / F07 / 14mm	154047
1-1/2	F05 / F07 / 14mm	154046

### Spacer Plate for FK Series Butterfly Valves

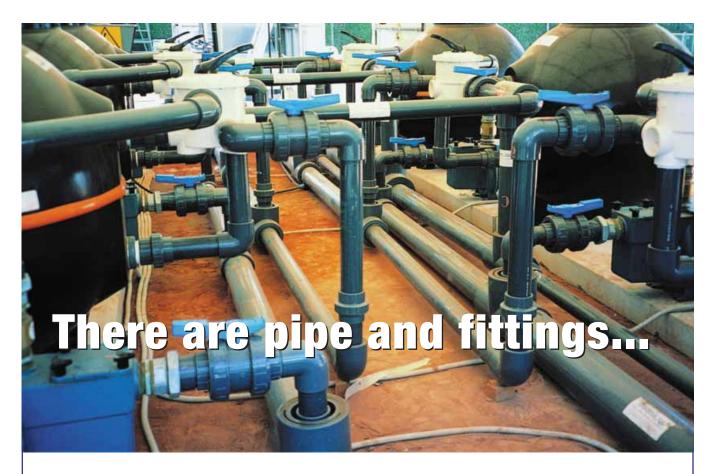


1-1/2 - 6	F05 / F07	153001
8	F10	153002

### Square Stem Adapter



0.43 x 0.35	11mm x 9mm	253048
0.55 x 0.43	14mm x 11mm	253049
0.67 x 0.43	17mm x 11mm	253050
0.67 x 0.55	17mm x 14mm	253051
0.87 x 0.67	22mm x 17mm	253052
1.06 x 0.87	27mm x 22mm	253053
1.42 x 1.06	36mm x 27mm	253054



# and then there are valves

IPEX offers one of the most comprehensive ranges of high quality, high performance thermoplastic valves and actuation products available today. With more than

65 years of design and manufacturing experience, our lightweight, long life, maintenance free valves will save you time and money.

IDEV thormonia

IPEX thermoplastic valves are part of our complete systems of pipe, fittings and valves engineered and

manufactured to IPEX's strict quality,
performance and dimensional standards. With
Xirtec®140 (industrial grade PVC) and Corzan® (CPVC),

you can be confident that all the material you need is designed, manufactured and backed by the same company.

Xirtec®140 and Corzan® high-performance systems feature outstanding resistance to photodegradation, creep stress and

immunity to oxidation and are exceptionally suited for use with a wide range of acids, alcohols, salts and halogens. The perfect long service/low maintenance alternative to common and exotic

metal systems.

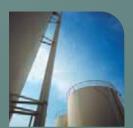
Also, our network of manufacturing and customer service facilities across North America ensures fast, reliable service and expert technical support.



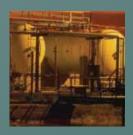
- 1) IPEX's highly chemically resistant PVC ventilation duct systems feature seamless pipe for greater flow rates. Their light weight allows for easier handling on the job, which means lower installation costs.
- 2) For applications where quick assembly is required under adverse conditions, IPEX offers factory-grooved PVC pipe designed to mate easily with mechanical grooved couplings.
- 3) And, IPEX well casings offer corrosion-resistant, maintenance-free protection for well-drop-pipe and submersible pumps.

# Specialty Products









Ventilation Duct

Well Casings

Grooved PVC Pipe







IPEX PVC & CPVC exhaust system ducting provides effective solutions for industrial ventilation systems, protecting workers and the environment from contaminated air.

### STANDARDS





ASTM D1784 CAN/ULC S102.2

### **PVC ADVANTAGES**

- 1 PVC cell class 12454 as per ASTM D1784
- 2 Extruded seamless PVC duct in all standard diameters 6" through 24"
- For use in industrial and institutional fume handling systems requiring high resistance to corrosive vapors
- 4 Ideal for plating, metal finishing and laboratory installations

- 5 Low installed cost as compared to noncorrosive metallics
- 6 Light weight allows longer runs and speeds installation with simple tools and piping techniques
- 7 Low maintenance requirements over extended service periods
- 8 Low flame spread rating of 10 as per CAN/ULC S102.2

### CPVC ADVANTAGES

- 1 Extruded seamless CPVC duct in all standard diameters 6" through 16"
- CPVC withstands exhaust temperatures up to 200°F
- (3) CPVC cell class 23447 as per ASTM 1784
- 4 CPVC is inert to most mineral acids, bases, salts, and aliphatic hydrocarbons, and compares favorably to other non-metals in corrosive chemical environments.
- 5 Ideal for chemical processing, semiconductor fabrication, metal plating & finishing, pulp & paper, waste water treatment plants, and laboratory installations

- 6 Low installed cost as compared to noncorrosive exotic metal systems and PVDF
- 7 Light weight allows for ease of handling and installation and reduces transportation and labor costs
- 8 Low maintenance requirements over extended service periods
- Q Low flame spread rating of 10 and smoke development classification of 25 as per CAN/ULC \$102.2
- Corzan® CPVC compound meets and is listed FM 4910 "Clean Room Materials Flammability Test Protocol" approval standard

### **Duct Dimensions**

Duct Size Diameter (in x ft)	Product Code	Average O.D. (in.)	Average I.D. (in.)	Average Wall Thickness (in.)	PVC Weight (lbs/ft)	CPVC Weight (lbs/ft)
6 x 20	046700	6.625	6.251	0.187	2.319	2.519
8 x 20	046702	8.625	8.251	0.187	3.040	3.301
10 x 20	046704	10.750	10.376	0.187	3.805	4.133
12 x 20	046706	12.750	12.376	0.187	4.528	4.916
14 x 20	046707	14.000	13.626	0.187	4.978	5.405
16 x 20	046708	16.000	15.626	0.187	5.697	6.188
18 x 20	046709	18.000	17.626	0.187	6.420	-
20 x 20	046711	20.000	19.500	0.250	9.515	-
24 x 20	046713	24.000	23.500	0.250	11.442	-
177		Se I		Do not u	cts are for atmosp se in pressurized	able upon request. heric venting only. air or gas systems. p to 16" diameter.



N 40 ASTM D2665

NSF-dwv ASTM F 480-91 NSF-wc Well Casing IC-0

# **PVC Well Casing**

IPEX bell end PVC well casing provides corrosion-resistant, maintenance-free protection for well drop-pipe and submersible pumps. Its light weight facilitates installation with conventional tools and piping techniques. It is manufactured to ASTM standards and is available throughout North America from IPEX's fully stocked service centers.





ASTM D1784, ASTM D1785, ASTM F480 ASTM D2665 - Sch 40 pipe only

### **ADVANTAGES**

- Meets ASTM D1784, D1785, D2665 (Sch 40 pipe only) and F480 specifications.
- Third-party certified by NSF.
- Solvent weld joints are strong and water tight.
- Installation can be accomplished with lighter setting equipment than is required for metallic piping.
- (5) Electrically non-conductive which reduces job site work hazards.
- (6)Non-toxic and non-leaching with excellent chemical resistance.
- (7)Available in bell end 2" - 16" or plain end for threading 2" - 12".

### Dimensions for Xirtec140 PVC Well Casing Pipe - ASTM F480

Pipe Size	Product	Outside Diameter (in.)		Minimum Wall Thickness (in.)			Bell Length
(in.)	Code	Average	Tolerance on Avg	SDR21	Sch 40	Sch 80	(in.)
2	022620	2.375	±0.006	0.113	0.154	0.218	4.000
2-1/2	022625	2.875	±0.007	0.137	0.203	0.276	5.000
3	022630	3.500	±0.008	0.167	0.216	0.300	5.500
4	022640	4.500	±0.009	0.214	0.237	0.337	6.500
5	022650	5.563	±0.010	0.265	0.258	0.375	6.000
6	022660	6.625	±0.011	0.316	0.280	0.432	8.000
8	022680	8.625	±0.015	0.410	0.322	0.500	7.000
10	022690	10.750	±0.015	0.511	0.365	0.593	7.500
12	022692	12.750	±0.015	0.606	0.406	0.687	8.500
14	022694	14.000	±0.020	0.667	0.437	0.750	9.000
16	022696	16.000	±0.020	0.762	0.500	0.843	10.000

WELL CASING

IPEX PVC pipe can be roll or cut-grooved at each end for quick connection using mechanical couplings specifically designed for PVC pipe. This method can be used in any application where PVC pipe is acceptable and where it is desirable to have a means for quick assembly under adverse conditions.

### **ADVANTAGES**

- 1 Completely re-usable pressure system that does not require threading, solvent welding, or flanging.
- Joints are mechanically locked to produce a secure, leak-tight connection under pressure or vacuum.

  (See coupling manufacturer's product information for details on pressure capabilities.)
- 3 A union at every joint allows for speed and ease of assembly and field maintenance.
- In abrasive applications, pipe can easily be rotated to distribute wear evenly.
- 5 Flexible system permits laying on rough or uneven terrain.
- When using a gasket-type coupler, each joint will absorb some expansion and contraction due to temperature changes.
- Grooved systems facilitate fast add-ons, modifications or re-location of the pipe.

20 SCH 80 370 PSI @ 73°F

# DID YOU KNOW?

For more information on our Specialty



Products, you can download our Vinyl Process Piping Systems Technical Manual quickly and easily. Just go to our website: www.ipexinc.com.

# Recommended Piping for Roll Grooved Joints

Piping Material PVC Sch 40	Pipe Size (inches)	Piping Material PVC Sch 80
22686	2	85194
22688	3	85200
22706	4	85201
22712	6	85202
22714	8	85203
22730	10	85204
22716	12	85205

Consult an IPEX representative for detailed design considerations

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GROOVED PVC PIPE

# NOTES

# **MUNICIPAL** PRODUCT OVERVIEW

**BIONAX®** 

### Blue Brute® CIOD

4" - 12" (100mm - 300mm)

AWWA C900 pressure pipe and fittings.





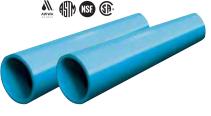


### Cycle Tough® 1/2" - 24" (12mm - 600mm)

IPSOD PVC pressure pipe and fittings for irrigation and force main applications.







4" - 18" (100mm - 450mm)

AWWA C909 molecularlyenhanced PVC pipe designed for watermains, sewage forcemains,

irrigation lines and industrial

process piping. Made from biaxially-oriented PVC.

### IPEX Fusible<sup>™</sup>

**NEW SIZES** 

14", 16 & 18"

4" - 36" (100mm - 900mm)

Fusible Brute™ (CIOD) and Fusible Series<sup>™</sup> (IPS) pipes are monolithic, fully restrained PVC pipe systems for trenchless or direct bury applications.



**PRESSURE** PIPING SYSTEMS

### TerraBrute® CR

4" - 12" (100mm - 300mm)

Nonmetallic AWWA C900 PVC pressure pipe system for HDD applications which withstands up to 120,000 lbs of pull force.









IPEX Centurion®

14" - 48" (350mm - 1200mm)

AWWA C905 large diameter pressure pipe and fittings.











Q-Line®

3/4" & 1" (20mm & 25mm)

AWWA C903-02 composite water service tubing.







Philmac® 3G™ Valves & Fittings 1/2" - 2" (12mm - 50mm)

Water line compression fittings in CTS OD and ID Series.



### Gold901™

3/4" - 2" (20mm - 50mm)

Polyethylene water service line made to CTS OD.





3/4" - 2" (19mm - 51mm)

PEX water service tubing made to CTS OD (SDR 9).















Enviro-Tite® 4" - 15" (100mm - 375mm) SDR35 and SDR28 sewer pipes

made from 50% recycled material.

Ring-Tite® 4" - 42" (100mm - 1050mm)

SDR35 and SDR28 sewer pipe and fittings.





# SEWER PIPING **SYSTEMS**





Perma-Loc™ 21" - 36" (525mm - 900mm) Spiral-wound PVC profile sewer

pipe with fusion welded seams.

(I) (II)



Ultra-Rib® 8" - 24" (200mm - 600mm) PVC open-profile sewer pipe and fittings.







Ultra-X2® 30" - 3**6**" (7**5**0mm - 900mm) Dual wall PVC profile sewer pipe and fittings up to 900mm.



### LifeSaver®

High impact HDPE adjustment units designed to bring manhole and catchbasin castings up to the exact height of the roadway, and prevents road damage caused by infiltration.



# **SPECIALTY PRODUCTS**



### TEMPEST® Storm Sewer **Inlet Controls**

6" sewer outlet pipe and larger

Cost-effective Inlet Control Devices that work together across a series of catch basins to limit the amount of storm water runoff that can enter a combined sewer system during a storm event.



# **Vortex Flow™ Insert**

Custom designed, the Vortex Flow Insert eliminates odorous emissions and minimizes corrosion in vertical sewer drops.

Blue Brute\*, BloNAX\*, IPEX Centurion\*, IPEX Fusible™, TerraBrute\* CR, Cycle Tough\*, Blue904™, O-Line\*, Gold901™, Philmac\* 3G™, Ultra-Rib\*, Ultra-X2™, PermalLoc™, Ring-Tite\*, Enviro-Tite\*, Vortex Flow™, and Life Saver\* are trademarks of IPEX Branding Inc.

# PLUMBING & MECHANICAL PRODUCT OVERVIEW

### AquaRise®

1/2" - 4" (12mm - 100mm)

IPS SDR11 CPVC pipe, valves and fittings for hot and cold water distribution.





### Pipe-with-the-Stripe®

1/2" - 2" (12mm - 50mm)

Pipe with the Stripe is available in standard and CSA-certified Polyethylene, with a permanent coloured stripe ID system.



# **POTABLE WATER**





3/4" - 2" (19mm - 50mm)

PEX water service tubing made to CTS OD (SDR 9).





### **Q**-Line® 3/4" & 1" (20mm & 25mm)

AWWA C903 composite water service tubing.





# Philmac® 3G™ **Compression Fittings**

3/4" - 2" (20mm - 50mm)

Water line compression fittings in CTS OD and ID Series sizes.







# System 636® Flue Gas Venting

1-1/2" - 8" (40mm - 200mm)

PVC-FGV Type BH Class II A vent pipe and fittings and CPVC-FGV Type BH Class II B vent



# GAS **VENTING**

# XIRTEC & **CORZAN**

### Xirtec 140® PVC - Corzan® CPVC

1/2" - 24" (12mm - 600mm)

XIRTEC 140®: PVC Schedule 40 & 80 pipe and fittings systems.

CORZAN®: CPVC Schedule 80 pipe and fittings systems cell classification 24448 & 23447





**SYSTEMS** 

### Drainway® ABS DWV **Systems**

1-1/4" - 6" (32mm - 150mm) ABS DWV pipe and fittings. Also available in cell core.



### Solvent Weld Sewer & Drain Piping Systems

3" - 6" (75mm - 150mm)

PVC Building Drain Sewer for sanitary, storm or septic drainage. Perforated pipe for perimeter drainage or septic fields.









### **Backwater Valves**

1-1/2" - 6" (40mm - 150mm)

Available in both PVC and ABS lightweight, corrosionresistant plastic.







### DWV System 15® & System XFR®

1-1/2" - 24" (40mm - **6**00mm)

System 15: Drain, Waste and Vent piping for low-rise commercial or residential installation.

System XFR: Drain, Waste and Vent piping for high-rise commercial or residential including air plenum installations.





A complete range of cements, primers and applicators specially formulated for your pipe, valves and fittings.

# **CEMENTS** & PRIMERS

# **FIRE PROTECTION**



# Blazemaster® Fire Sprinkler Systems

3/4" - 3" (20mm - 75mm)

CPVC Pipe & Fittings for Fire Sprinkler Systems.









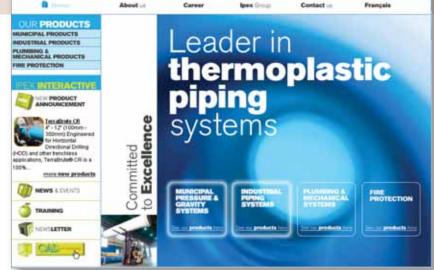


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### About the IPEX Group of Companies

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:

- Industrial process piping systems
- Double containment systems
- Acid waste systems
- High purity systems
- Compressed air and inert gas piping system
- Manual and actuated thermoplastic valves
- Industrial, plumbing and electrical cements
- Electrical systems
- Telecommunications and utility piping systems
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- PE Electrofusion systems for gas and water
- Irrigation systems
- PVC, CPVC, PP, PVCO, ABS, PEX, FR-PVDF, NFRPP, FRPP, HDPE, PVDF and PE pipe and fittings (1./2" – 48")

Products are manufactured by IPEX Inc.

Valves are manufactured by FIP S.P.A. and distributed in Canada by IPEX Inc.

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A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.



