Flue Gas Venting Systems







- Fully Certified to ULC S636
- System 636® PVC is rated for flue gas temperatures up to and including 65°C

FLUE GAS VENTING SYSTEMS

• System 636® CPVC is rated for flue gas temperatures up to and including 90°C



We build tough products for tough environments®

The Certified System for FLUE GAS VENTING

The use of plastic venting systems on gas fired water heaters, furnaces and boilers has undergone a significant change. CSA B149.1 Natural Gas and Propane Installation Code now requires all special venting material to be certified to ULC S636 across Canada. IPEX addressed this market need with System 636®, a fully certified flue gas vent system.

Since the inception of System 636, IPEX has made numerous product line additions and extensions to now offer the most complete product offering in the market. Also, System 636 is very professionally represented by IPEX with sales, technical, code issues and training support.

Front and centre to aid installers and inspectors is our System 636 Installation Guide. The contents of this guide are part of the certification process and contain many important aspects of installation to ensure successful, code-compliant installations. Issues addressed in the Guide include support spacing, expansion and contraction, solvent cementing procedures and special installation and terminations.

WHAT CERTIFIED PLASTIC VENT MATERIALS ARE AVAILABLE?

That's where IPEX can help with our certified System 636 flue gas venting systems. IPEX offers complete certified systems of pipes, fittings and cements meeting the stringent demands of the ULC S636 venting standard. All with the quality, performance and support you've come to expect from IPEX.

ONE CODE CHANGE, TWO CERTIFIED SOLUTIONS

We offer System 636 in two distinct materials, each with a unique temperature rating. These venting systems are approved as Type BH vents and are designed for negative or positive pressure venting of gas-fired appliances.

SYSTEM 636 PVC

System 636 PVC is classified as Type BH Class IIA vent, suitable for use on appliances with flue gas temperatures up to and including 65°C (149°F). Sizes include 1-1/2", 2", 2-1/2", 3", 4" and 6". Coloured white with unique blue certification markings, System 636 PVC pipe is made to sturdy Sch. 40 dimensions to provide a strong, rigid pipe for the application. A full range of System 636 PVC vent fittings and accessories are also offered.

SYSTEM 636 CPVC

System 636 CPVC is classified as Type BH Class IIB vent, suitable for use on appliances with flue gas temperatures up to and including 90°C (194°F). CPVC sizes include 1-1/2", 2", 2-1/2", 3", 4", 6" and 8". Coloured grey, System 636 CPVC pipe is also

made to Sch. 40 dimensions to be tough enough for the application's demands.

SYSTEM 636 CEMENTS & PRIMERS

System 636 PVC & CPVC solvent cements are specifically formulated and certified for flue gas venting applications. We also offer a PVC & CPVC Primer for applications where the gas venting system is to be installed in temperatures below 0°C (32°F). A certified Transition Cement is available for connections to ABS appliance connectors.



Only IPEX offers System 636, a complete, fully certified, system of pipe, fittings, termination kits, and cements engineered and manufactured to IPEX's strict quality, performance and dimensional standards.

System 636 PVC and CPVC includes a full range of fitting configurations commonly found in gas venting application for appliances having exhaust temperatures up to and including 90°C (CPVC). IPEX publishes a certifier-approved System 636 Installation Guide to assist installers on critical aspects of installation such as

hanger spacing, expansion/contraction, termination options and solvent cement assembly. The booklet may be obtained from IPEX or may be viewed online at www.ipexinc.com/system636.



Unparalleled sales support, technical assistance and field training are all readily available from IPEX Sales Professionals across North America.

System 636 is backed by IPEX – Canada's leading plastic pipe system supplier.

Visit www.ipexinc.com/system636 for further details.





MATERIAL DESCRIPTION

PVC (POLYVINYL CHLORIDE)

System 636 PVC carries a ULC S636 Class IIA certification and is certified for use up to and including 65° C (149° F).

Ensure the proper System 636 PVC Cement and Primer is to be used for installation.

CPVC (CHLORINATED POLYVINYL CHLORIDE)

System 636 CPVC carries a ULC S636 Class IIB certification and is certified for use up to and including 90°C (194°F).

Ensure the proper System 636 CPVC Cement and Primer is to be used for installation.

MATERIAL IDENTIFICATION

Material type and/or temperature rating is included in the pipe print line as well as on the mandatory orange and black warning label applied to each fitting. All certified IPEX System 636 products carry a Warnock Hersey mark.

Warning labels on pipe and fittings are required by ULC S636 and clearly distinguish a certified gas venting system from every day, non-certified plumbing pipe. Look for the orange and black label and the mark of a recognized certification agency as assurance the system being used is certified.

SPECIAL NOTES

System 636 Pipe, Fittings and Cements are certified as a system and must be installed as such. Different manufacturers have different materials, joining systems and adhesives. Do NOT mix pipe, fittings, solvents, or joining methods from different BH Vent manufacturers, this can result in unsafe conditions.

Exchanging components from various manufacturers violates the conditions of certification in the ULC S636 standard and would void the IPEX product warranty.

IPEX ABS plumbing pipe and fittings do not meet ULC S636 requirements and must not be installed for flue gas venting.

When retrofitting existing water heaters, furnaces or boilers, do not connect System 636 certified vent systems to existing, non-certified appliance vent materials. Replace the entire venting system with listed product to ensure compliance.

Before connecting any piping system to an appliance, ensure the manufacturers' installation instructions are followed, especially with respect to vent material selection.

MARNING



NEVER use compressed air or gas in PVC/CPVC pipe and fittings. NEVER test PVC/CPVC pipe and fittings with compressed air or gas, or air-over-water boosters.

Use of compressed air or gas in PVC/CPVC pipe and fittings can result in explosive failures and cause severe injury or death.

TERMINATION KITS

CONCENTRIC VENT KITS

System 636 Concentric Vent Kits (CVK), are available in a variety of lengths and come in 2", 3" and 4" diameters. These "pipe-in-pipe" kits allow for both exhaust and intake pipes to penetrate the roof or side wall through only one hole. The concentric vent kits are now certified with mechanically fastened rain caps. When installed with the included stainless steel screw/nut, the rain cap can be easily removed for cleaning or maintenance. Vent screens and



round face plates for side wall terminations are also available.

- Screw/bolt assembly for mechanically fastening the cap yet allowing future removal for cleaning or maintenance
- Socket end to the vent pipe portion of the cap which allows attachment of additional pipe and fittings to extend the vent pipe further away from the CVK if required
- The 45° wye component of our CVK is more compact than other available models and thus structurally stronger and more resistant to cracking due to bending stresses during installation
- Allows complete system installation with components from a single manufacturer
- Concentric Vent Kits can be field modified, providing compliance with BOTH the appliance manufacturers' and IPEX's guidelines

WALL TERMINATION KITS

For a traditional vent style, IPEX's PVC Wall Termination Vent Kits are available in convenient 2", 2-1/2" and 3" sizes. These PVC kits require only two small wall penetrations for intake and exhaust. Kits include a white finishing plate with a self sealing foam back that can be screwed to the exterior wall. Vent screens not included.



LOW PROFILE TERMINATION KITS (PVC)

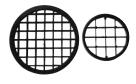
These kits offer a lower profile alternative to the typical two pipe side wall termination kit. They include integrally molded vent screens, and the design neatly disguises both the intake and exhaust. Each kit is molded with a ULC S636 certified beige PVC compound.



ACCESSORIES

VENT SCREENS

IPEX also offers 2", 3", 4", 6" and 8" vent screens (plastic or stainless steel) to prevent debris and rodents from entering and plugging the venting system. These non-certified vent screens can be friction fit into any IPEX termination kit.



ACCESS TEES

The Access Tee allows an inline point for flue monitoring using fully certified System 636 components. The tee is available in PVC and CPVC.



- May be installed in new installations or added to existing lines when monitoring is required
- May be used on vent lines in diameters (1-1/2" 4")
- Certified for use only on IPEX System 636 flue gas vent lines
- Molded tee design with IPEX System 636 removable 1/2"
 MPT plug
- More compact and robust design

ROUND FACE PLATES

These round face plates are the perfect accessory for single wall penetrations like the Concentric Vent



Kits (note the face plate must be one nominal size larger than the nominal size of the CV Kit). The plates may also be helpful in instances where two pipes are too far apart to use a two hole termination kit. The face plates help cover unsightly bore holes created during the pipe installation.

They are available in both white and gray to match the certified vent pipe, and each plate includes a self sealing foam back.

RECTANGULAR 2 HOLE FACE PLATES

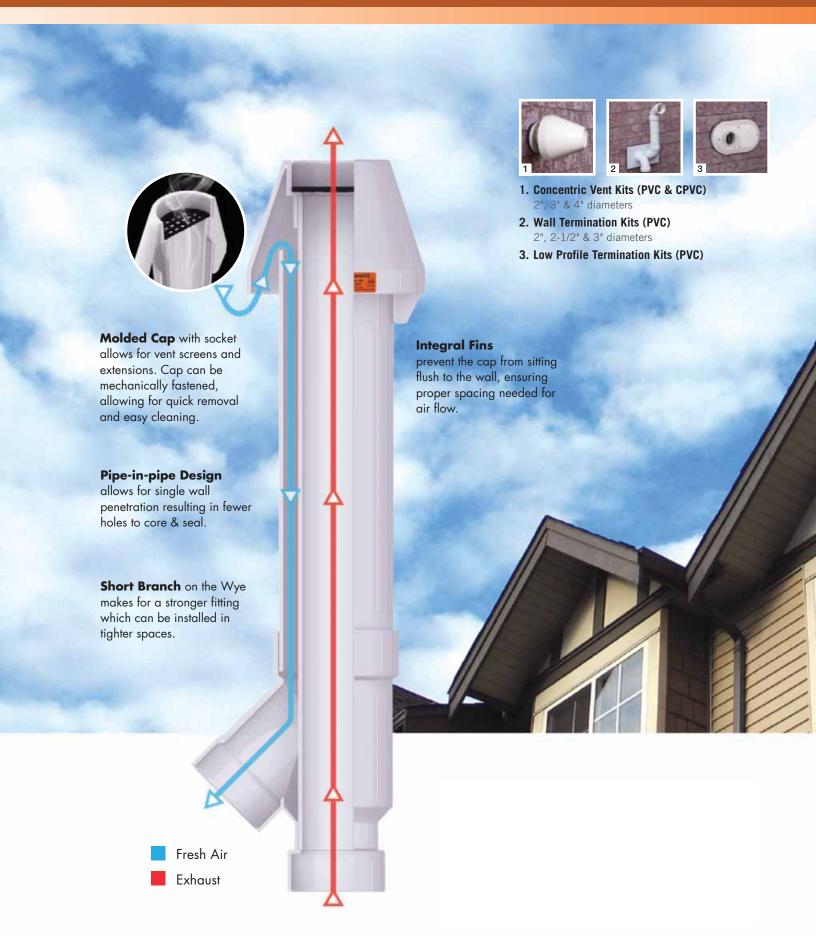
These white PVC finishing plates are available in 3 sizes and include a self sealing foam back.

They are perfect for side wall applications that require terminations that the Side Wall Kits cannot accommodate. The face plates can be used with PVC or CPVC venting as



they do not contact the flue gas, and can be painted to suit the application.





PRODUCT SELECTION CHART

		Dimension		Product	
		inches	mm	Code	
GAS VENT PIPE Plair	end (10 ft l	engths)			
		1-1/2	40	194003	
		2	50	194000	
00	D) (0	2-1/2	65	194004	
	PVC	3	75	194001	
		4	100	194002	
		6	150	194011	
		1-1/2	40	198003	
		2	50	198001	
	CPVC	2-1/2	65	198004	
		3	75	198000	
		4	100	198002	
	CPVC	6	150	198005	
	LG DIA.	8	200	198006	
FGV 22-1/2° ELBOW H x H					
PVC 2 50 196252 FGV 45° ELBOW H x H					
		1-1/2	40	196241	
		2	50	196242	
	PVC	2-1/2	65	196487	
		3	75	196243	
		4	100	196244	
		2	50	197169	
	CPVC	3	75	197171	
		4	100	197172	
	CPVC	6	150	197173	
	LG DIA.	8	200	197174	
FGV 45° LONG ELBOW H x H					
		2	50	196010	
	PVC	3	75	196011	

		Dimer	nsion	Droduet		
		inches	mm	Product Code		
FGV 45° LONG ELB	OW H x SP					
	PVC	2	50	196071		
		3	75	196223		
FGV 90° ELBOW H	x H					
		2	50	196035		
	DVO	2-1/2	65	196525		
	PVC	3	75	196025		
		6	150	196140		
		2	50	197199		
	CPVC	3	75	197201		
		4	100	197202		
	CPVC	6	150	197203		
	LG DIA.	8	200	197204		
FGV 90° LONG ELB	OW H					
	O 11 11 X 11	1-1/2	40	196121		
		2	50	196122		
	PVC	2-1/2	65	196120		
		3	75	196123		
		4	100	196124		
		2	50	197122		
	CPVC	3	75	197123		
		4	100	197124		
	CPVC	6	150	197125		
	LG DIA.	8	200	197126		
FGV 90° EXTRA LONG ELBOW H x H						
	PVC	2	50	196022		
	1 40	3	75	196023		
FGV 90° STREET ELB	BOW SP x H					
	PVC	2	50	196232		
	PVC	3	75	196233		

PVC Note: For use with gas fired appliances producing flue gases 65° C (149°F) or less. CPVC Note: For use with gas fired appliances producing flue gases 90° C (194°F) or less.



Product Code

		Dime	ension	Product
		inches	mm	Code
FGV TEE H x H x H				
		2	50	197486
	CPVC	3	75	197488
		4	100	197489
y -	CPVC	6	150	197490
	LG DIA.	8	200	197491
FOV 6 1 \ U= 1 5 \ Z== :				
FGV SANITARY TEE H	1 x H x H	1 1/0	40	106001
		1-1/2	40	196081
		2	50	196082
	PVC	2-1/2	65	196781
		3	75	196083
		4	100	196084
		6	150	196785
FOW DEDUCED THE L				
FGV REDUCER TEE H	1 X H X H	0 v 1 1/0	50 x 40	106050
		2 x 1-1/2		196056
	PVC	3 x 1-1/2	75 x 40 75 x 50	196061
		3 x 2		196822
		4 x 2 3 x 2	100 x 50 75 x 50	196828 197502
_	CPVC	3 x 2	100 x 50	197502
	CPVC	6 x 6 x 4	150 x 150 x 100	197506
	LG DIA.		200x200x150	197567
		2 0 0		20.00,
FGV ACCESS TEE H	x H x FPT			
		1-1/2	40	196510
	PVC	2	50	196511
	1 00	3	75	196512
		4	100	196513
		1-1/2	40	197510
	CPVC	2	50	197511
	UF VU	3	75	197512
		4	100	197513

PRODUCT SELECTION CHART

		Dimer	Dimension	
		inches	mm	Code
FGV REDUCER BUSHI	NG SP x I	Н		
		1-1/2 x 1/2	40 x 15	196653
		2 x 1-1/2	50 x 40	196282
		2-1/2 x 1-1/2	65 x 40	196666
	PVC	2-1/2 x 2	65 x 50	196667
		3 x 2	75 x 50	196284
		3 x 2-1/2	75 x 65	196673
FGV REDUCER BUSHI	NG SP x H	HOSE BARB		
	PVC	1-1/2 x 1/2	40 x 15	196278
	CPVC	1-1/2 x 1/2	40 x 15	197278

FGV HEX HEAD REDUCER BUSHING SP x H



PVC	3 x 2	75 x 50	196672
	2 x 1/2	50 x 15	197385
	2 x 3/4	50 x 20	197386
CPVC	2 x 1-1/2	50 x 40	197389
CFVC	3 x 2	75 x 50	197394
	3 x 2-1/2	75 x 65	197395
	4 x 2	100 x 50	197396
CPVC	6 x 4	150 x 100	197400
LG DIA.	8 x 6	200 x 150	197401

FGV FEMALE THREAD ADAPTER H x FPT



PVC	2	50	196564
CPVC	2	50	197224

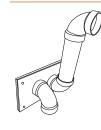
FGV CONDENSATE DRAIN ASSEMBLY SP x FPT



CPVC	4 x 1/2	100 x 15	197002
LG DIA.	6 x 1/2	150 x 15	197003

		Dime	Dimension	
		inches	mm	Code
FGV CONCENTRIC	VENT KIT			
		2 x 16	50 x 400	196005
		2 x 28	50 x 700	196105
-		2 x 40	50 x 1000	196125
1	PVC	3 x 20	75 x 500	196006
Longth		3 x 32	75 x 800	196106
Length		3 x 44	75 x 1100	196116
		4 x 36	100 x 900	196021
		2 x 16	50 x 400	197040
		2 x 28	50 x 700	197033
	CPVC	3 x 20	75 x 500	197009
	CFVC	3 x 32	75 x 800	197107
		3 x 44	75 x 1100	197117
		4 x 36	100 x 900	197021
		Vent Screen n	ot included	

FGV PVC WALL TERMINATION KIT



	2	50	081216
	2-1/2	65	081218
	3	75	081219
Ve	nt Screen not	included	

FGV PVC LOW PROFILE TERMINATION KIT (Beige)



2	50	196984
3	75	196985
4	100	196986

FACEPLATE - ROUND (w/ self sealing foam back)

PVC



2	50	196063
3	75	196064
4	100	196055
2 grey	50	197053
3 grey	75	197054
4 grey	100	197055

grey matches CPVC

PVC Note: For use with gas fired appliances producing flue gases 65° C (149°F) or less. CPVC Note: For use with gas fired appliances producing flue gases 90° C (194°F) or less.

Dimer	Product	
inches	mm	Code

FACEPLATE - RECTANGULAR (white w/ self sealing foam back)



2	50	196216
2-1/2	65	196218
3	75	196219

TERMINATION VENT SCREENS



* 2	50	196050
* 3	75	196051
* 4	100	196052
† 6	150	196090
† 8	200	196091

Vent screens are not ULC S636 Certified. Friction fit vent screens inside termination fitting bells to prevent debris & rodents from entering vent.

* Polyethylene

+ Stainless Steel

DEBURRING TOOL (DEB 4)



1-1/2 to 4 pipe 40 to 100 pipe 196246

To ensure quality solvent cement connections, deburr all pipe ends prior to cementing. For guidance on deburring 6" & 8" (150mm & 200mm) pipe, contact IPEX.

CUTTER



1-1/2 to 3	40 to 75	196247

	Volume		Product	
	imperial	ml	Code	
PVC CEMENT (LOW	VOC)			
5yr System 636	1/4 pint	118	296366	
	1 pint	473	196040	
	1 quart	946	196041	

CPVC CEMENT (LOW VOC)



1 pint	473	196046
1 quart	946	196047

also certified for transitions to PVC

TRANSITION CEMENT



1 pint	473	196044
for transitions to ABS only		

PVC / CPVC PRIMER (LOW VOC)



1/4 pint (purple)	118 (purple)	296367
1 pint (purple)	473 (purple)	196042
1 pint (clear)	473 (clear)	196017
1 quart (purple)	946 (purple)	196043

- Primer shall be used when installing System 636® PVC or CPVC products at temperatures below 0°C (32°F).
- Primer is always required on 6" & 8".
- Primer is required in some jurisdictions regardless of temperature, verify with your local Authority Having Jurisdiction.

Note: Use only System 636 cements and primers. Substituting other cements and primers will void certification and warranty.

All pint and quart cans supplied with dauber (applicator) for use up to 4".

Swab



gallon 3785 074456
For pipe diameters 6" and larger fits 074425 can.

FLAME SPREAD & SMOKE DEVELOPMENT RATINGS

Both System 636 PVC and CPVC pipe exhibit a Flame Spread Rating of 10, while CPVC pipe has the added feature of a Smoke Developed Classification of 50. These properties are listed as per the ULC S102.2 test standard.

SYSTEM 636 PVC MAY BE USED IN:

Noncombustible buildings, as detailed in clause
 3.1.5.16 of the National Building Code (NBC)

SYSTEM 636 CPVC MAY BE USED IN:

- Noncombustible buildings, as detailed in clause
 3.1.5.16 of the National Building Code (NBC)
- Air plenums, as per NBC article 3.6.4.3.(1)
- Buildings deemed to be high-rise, as per NBC article 3.2.6.

ULC S636 STANDARD – PLASTIC VENT PIPE FOR GAS FIRED APPLIANCE

IPEX recommends the use of certified thermoplastics for flue gas venting and offers a fully certified system in both PVC and CPVC, System 636.

Reasons for the implementation of the ULC S636 standard

Appliance standards do not address the flue gas venting system and its acceptability for the application.

Prior to 2007, uncertified flue gas piping failures forced the adoption and enforcement of a national standard for flue gas venting.

Beyond the testing involved in the certification process the standard goes an important step further to ensure safety. ULC S636 stipulates that no mixing of components from different manufactures can occur in the venting system. This would include pipe, fittings, cements and terminations.

The no mixing clause ensures quality and compatibility.

Several appliance manufactures specify certain approved materials for venting in their installation manuals. The ULC S636 standard ensures that these materials meet the testing and specifications, creating a safer flue gas venting system.

ULC S636 has been enforced nationwide in Canada since 2007.

Enforcing the ULC S636 Standard will ensure:

- · Pipe, fittings, and cements compatibility
- Proper use of materials and product for the application
- Long life of the venting system
- Single source liability
- Single source product support

PLUMBING & MECHANICAL PRODUCTS

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 - 51mm) 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.







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



PLUMBING & MECHANICAL PRODUCTS

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.





DWV **SYSTEMS**

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 - 600mm)

System 15: Drain, Waste and Vent piping for low-rise commercial or residential.

System XFR: Drain, Waste and Vent piping for high-rise commercial or residential including air plenum installations.





Cements & Primers

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.





Products manufactured by IPEX Inc.

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Corzan® and BlazeMaster® are registered trademarks of the Lubrizol Corporation.



NOTES:		

SALES AND CUSTOMER SERVICE

Call IPEX Inc.

Toll Free: (866) 473-9462

ipexna.com

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 earned a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- Electrical systems
- · Telecommunications and utility piping systems
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- · Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems
- PVC, CPVC, PP, PVDF, PE, ABS, and PEX pipe and fittings

System 636 $^{\circ}$ is manufactured by IPEX Inc. and is a trademark of IPEX Branding Inc.

This literature is published in good faith and is believed to be reliable. However, it does not represent and/or warrant in any manner the information and suggestions contained in this brochure. Data presented is the result of laboratory tests and field experience.

A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.





