

# FLUE GAS VENTING SYSTEM



**System 636<sup>®</sup>**  
FLUE GAS VENTING

## FLUE GAS VENTING SYSTEMS

### SYSTEM 636<sup>®</sup>

- Fully Certified to ULC S636
- System 636<sup>®</sup> CPVC is rated for flue gas temperatures up to and including 194°F (90°C)

  
**IPEX**  
by aliaxis

We build tough products for tough environments<sup>®</sup>

# The Certified System for FLUE GAS VENTING

IPEX offers a complete certified system of pipe, 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.



### THE CERTIFIED SOLUTION

System 636® CPVC is approved as a Type BH Class 11B vent and is designed for negative or positive pressure venting of gas-fired appliances with Flue Gas temperatures up to 194°F (90°C).

### SYSTEM 636 CPVC

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



# SYSTEM 636® FLUE GAS VENTING

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 CPVC includes a full range of fitting configurations commonly found in gas venting application for appliances having exhaust temperatures up to and including 194°F (90°C). IPEX publishes a certified-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 [ipexna.com](http://ipexna.com).



## ADVANTAGES

### FULLY CERTIFIED

as a complete pipe, fittings and cement system

### THE SYSTEM OPTION

is rated for flue gas temperatures up to 194°F (90°C)

### MANUFACTURED AND SUPPORTED

by CPVC piping system experts

### INSTALLER TRAINING AVAILABLE

Contact IPEX for details

**i** 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 – a leading plastic pipe system supplier.

Visit [ipexna.com](http://ipexna.com) for further details.





## MATERIAL DESCRIPTION

### CPVC (CHLORINATED POLYVINYL CHLORIDE)

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

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.



## WARNING



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.

# SYSTEM 636® FLUE GAS VENTING

## TERMINATION KITS

### UNIVERSAL CONCENTRIC VENT KITS (UCVK™)

System 636 CPVC Universal Concentric Vent kits (UCVK™) offer horizontal coaxial termination specifically for venting tank-less water heaters installed on an exterior wall. An engineered air intake hub, pivots to accommodate the spacing requirements between the fresh air and exhaust collars for the majority of tankless water heaters offered on the market today. Designed utilizing the fundamentals of the Concentric Vent kits, the UCVK is made to optimize productivity through ease of installation.



### 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.

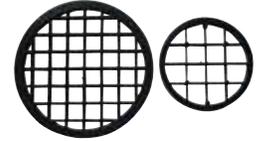


- Screw/bolt assembly for mechanically fastening the cap yet allowing future removal for cleaning or maintenance
- Socket end to the vent pipe portion of the cap which allows attachment of additional pipe and fittings to extend the vent pipe further away from the CVK if required
- The 45° wye component 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

## 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.



- 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.



These face plates are gray in color to match the certified vent pipe, and each plate includes a self sealing foam back.



Concentric Vent Kits  
2", 3" & 4" diameters

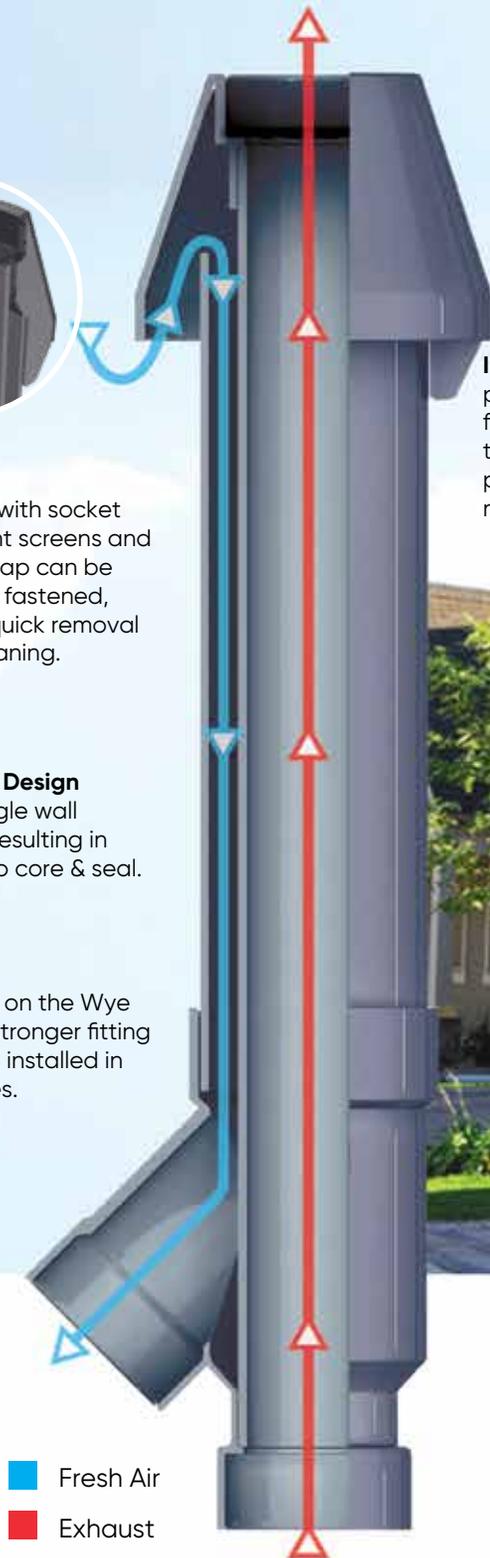


**Molded Cap** with socket allows for vent screens and extensions. Cap can be mechanically fastened, allowing for quick removal and easy cleaning.

**Pipe-in-pipe Design** allows for single wall penetration resulting in fewer holes to core & seal.

**Short Branch** on the Wye makes for a stronger fitting which can be installed in tighter spaces.

**Integral Fins** prevent the cap from sitting flush to the wall, ensuring proper spacing needed for air flow.



■ Fresh Air  
■ Exhaust

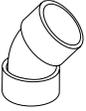


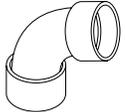
# The System 636 Concentric Vent

# SYSTEM 636® FLUE GAS VENTING

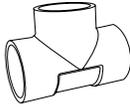
## PRODUCT SELECTION CHART

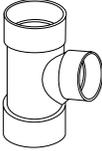
	Dimension		Product Code	
	inches	mm		
<b>GAS VENT PIPE Plain end (10 ft lengths)</b>				
	CPVC	1-1/2	40	198003
		2	50	198001
		2-1/2	65	198004
		3	75	198000
	CPVC LG DIA.	4	100	198002
		6	150	198005
		8	200	198006

	Dimension		Product Code	
	inches	mm		
<b>FGV 45° ELBOW H x H</b>				
	CPVC	2	50	197169
		3	75	197171
		4	100	197172
	CPVC LG DIA.	6	150	197173
		8	200	197174

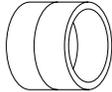
	Dimension		Product Code	
	inches	mm		
<b>FGV 90° ELBOW H x H</b>				
	CPVC	2	50	197199
		3	75	197201
		4	100	197202
	CPVC LG DIA.	6	150	197203
		8	200	197204

	Dimension		Product Code	
	inches	mm		
<b>FGV 90° LONG ELBOW H x H</b>				
	CPVC	2	50	197122
		3	75	197123
		4	100	197124
	CPVC LG DIA.	6	150	197125
		8	200	197126

	Dimension		Product Code	
	inches	mm		
<b>FGV TEE H x H x H</b>				
	CPVC	2	50	197486
		3	75	197488
	CPVC LG DIA.	4	100	197489
		6	150	197490
		8	200	197491

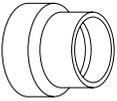
	Dimension		Product Code	
	inches	mm		
<b>FGV REDUCER TEE H x H x H</b>				
	CPVC	3 x 2	75 x 50	197502
		4 x 2	100 x 50	197504
	CPVC LG DIA.	6 x 6 x 4	150 x 150 x 100	197506
		8 x 8 x 6	200 x 200 x 150	197567

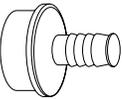
	Dimension		Product Code	
	inches	mm		
<b>FGV ACCESS TEE H x H x FPT</b>				
	CPVC	1-1/2	40	197510
		2	50	197511
		3	75	197512
		4	100	197513

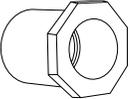
	Dimension		Product Code	
	inches	mm		
<b>FGV COUPLING H x H</b>				
	CPVC	2	50	197026
		3	75	197027
		4	100	197023
	CPVC LG DIA.	6	150	197141
8		200	197142	

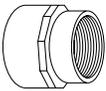
	Dimension		Product Code	
	inches	mm		
<b>FGV DEEP SOCKET COUPLING H x H</b>				
	CPVC	2	50	197137
		2-1/2	65	197138
		3	75	197139
		4	100	197140

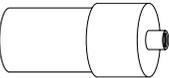
Note: For use with gas fired appliances producing flue gases 194°F (90°C) or less.

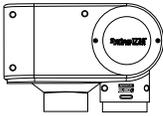
		Dimension		Product Code
		inches	mm	
	CPVC	3 x 2	75 x 50	197470
		4 x 3	100 x 50	197472

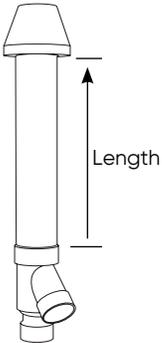
FGV REDUCER BUSHING SP x HOSE BARB				
	CPVC	1-1/2 x 1/2	40 x 15	197278

FGV HEX HEAD REDUCER BUSHING SP x H				
	CPVC	2 x 1/2	50 x 15	197385
		2 x 3/4	50 x 20	197386
		2 x 1-1/2	50 x 40	197389
		3 x 2	75 x 50	197394
		3 x 2-1/2	75 x 65	197395
	4 x 2	100 x 50	197396	
CPVC LG DIA.	6 x 4	150 x 100	197400	
	8 x 6	200 x 150	197401	

FGV FEMALE THREAD ADAPTER H x FPT				
	CPVC	2	50	197224

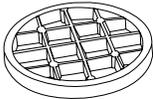
FGV CONDENSATE DRAIN ASSEMBLY SP x FPT				
	CPVC	4 x 1/2	100 x 15	197002
	LG DIA.	6 x 1/2	150 x 15	197003

		Dimension		Product Code
		inches	mm	
	CPVC	2 x 24	75 x 600	197256

FGV CONCENTRIC VENT KIT				
	CPVC	2 x 16	50 x 400	197040
		2 x 28	50 x 700	197033
		3 x 20	75 x 500	197009
		3 x 32	75 x 800	197107
		3 x 44	75 x 1100	197117
		4 x 36	100 x 900	197021

Vent Screen not included

FACEPLATE – ROUND GREY (w/ self sealing foam back)			
	2	50	197053
	3	75	197054
	4	100	197055

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.

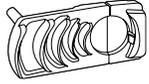
\* Polyethylene † Stainless Steel

# SYSTEM 636® FLUE GAS VENTING

## PRODUCT SELECTION CHART

	Dimension		Product Code
	inches	mm	

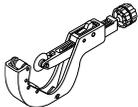
### DEBURRING TOOL (DEB 4)



1-1/2 to 4 pipe	40 to 100 pipe	196246
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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
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	Volume		Product Code
	imperial	ml	

### CPVC CEMENT



1 pint	473	196046
1 quart	946	196047
1 gallon	3785	196015

#### Low VOC

also certified for transitions to PVC

### TRANSITION CEMENT



1 pint	473	196044
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for transitions to ABS only

### PVC / CPVC PRIMER



1 pint (purple)	473 (purple)	196042
1 pint (clear)	473 (clear)	196017
1 quart (purple)	946 (purple)	196043

#### Low VOC

- Primer shall be used when installing System 636® CPVC products at temperatures below 32°F (0°C).
- Primer is always required on 6" & 8" CPVC.
- 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
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For pipe diameters 6" and larger fits 196015 can.

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

## FLAME SPREAD & SMOKE DEVELOPMENT RATINGS

System 636 CPVC pipe exhibits a Flame Spread Rating of 10. CPVC pipe also features a Smoke Developed Classification of 50. These properties are listed as per the ULC S102.2 test standard.

### 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 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.
- ❖ Beyond the testing required by the appliance certification process the ULC S636 standard goes an important step further to ensure safety. The ULC S636 standard ensures that the vent materials meet the testing and specifications, creating a safer flue gas venting system.
- ❖ 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.

### ❖ 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

## SALES AND CUSTOMER SERVICE

Call IPEX USA LLC

Toll Free: (800) 463-9572

[ipexna.com](http://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

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



**IPEX**  
by **alixis**

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