The intelligent alternative for flue gas venting systems

Centrotherm
solutions beyond

FIRST LISTED

InnoFlue® is the first polymeric vent system tested and listed to ULC-S636 and UL-1738 in North America

Intertek

Intelligent for a good reason

Centrotherm manufactures products designed to save time and money.

By putting a specific focus on versatility, **Centrotherm** products offer a comprehensive solution that is an asset on any jobsite.

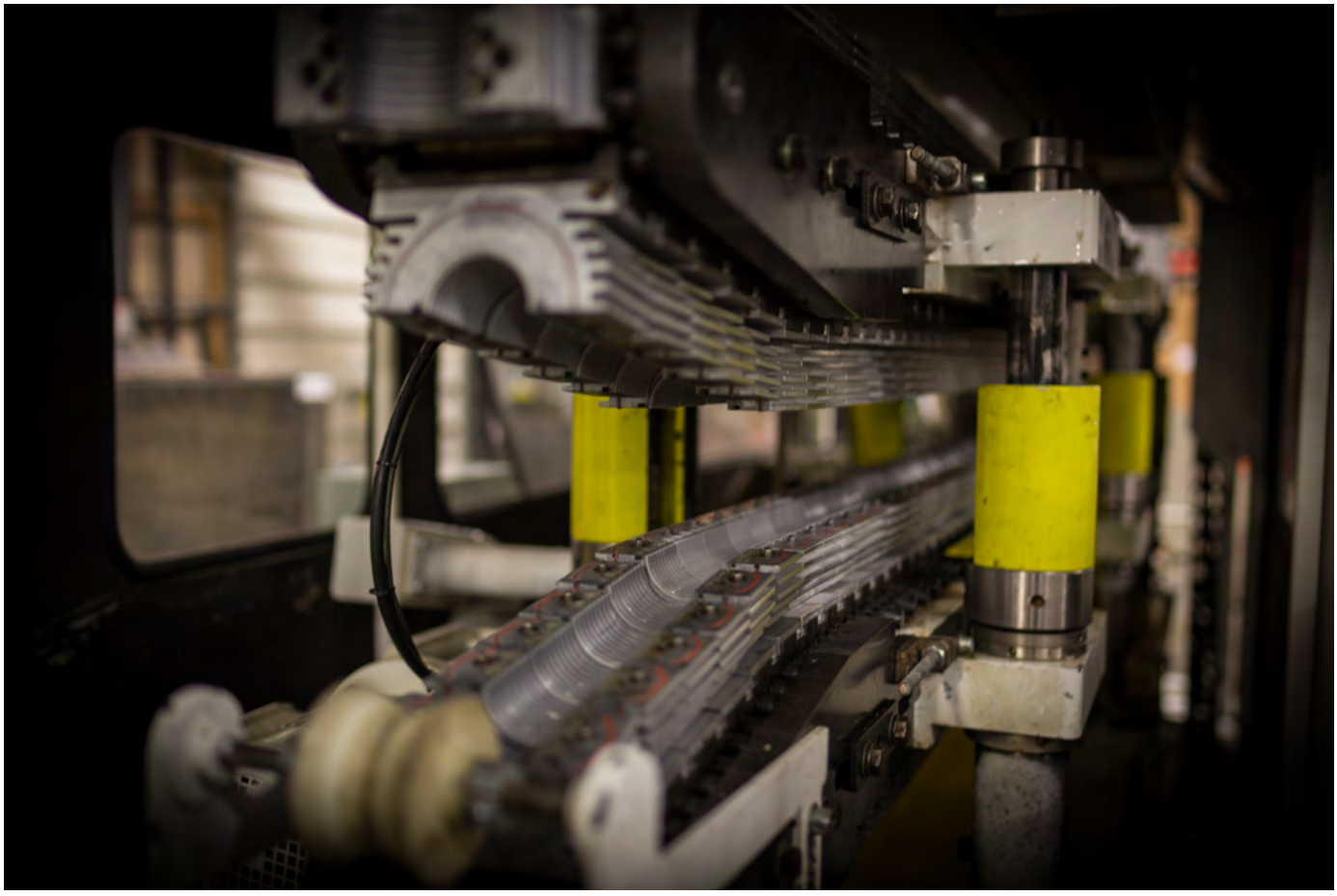
Our vents and accessories are engineered to be lightweight and install rapidly.

Maximize efficiency by quickly changing between product families and be confident you've chosen a safer, easier exhaust and air intake solution.

Centrotherm: Solutions Beyond

Centrotherm
solutions beyond

Made in the USA



InnoFlue® Vent Systems

Applications:

InnoFlue® Single Wall Residential is for use with ANSI Category II and IV appliances, including tankless and direct vent water heaters, high-efficiency water heaters, condensing boilers and 90+ furnaces. **InnoFlue®** Single Wall Residential vent systems can be used with natural gas, propane and oil fueled appliances with maximum flue gas temperatures of 230°F / 110°C.

Materials and Construction:

InnoFlue® Single Wall Residential is constructed with flame resistant polypropylene. Gasketed sockets are integrated into each fitting and vent length, eliminating the need for primers, glues and couplers. Gasketed connections allow for rapid installation and adjustability. Industry leading corrosion resistant Peroxide Cross Linked EPDM Gaskets come standard in every vent length.

Diameters:

2" (60mm), 3" (80mm), 4" (110mm) & 5" (125mm)

InnoFlue® Single Wall (SW) Residential

UL-1738 · ULC-S636

Applications:

InnoFlue® Single Wall Commercial is a vent system for use with ANSI Category II and IV appliances. Designed to efficiently manage condensates, cascade or common vent multiple high-efficiency water heaters, condensing boilers and 90+ furnaces. **InnoFlue®** Single Wall Commercial can be used with natural gas, propane and oil fueled appliances with maximum flue gas temperatures of 230°F / 110°C. Contact Centrotherm for accurate capacity sizing and for assistance with system layout and design.

Materials and Construction:

InnoFlue® Single Wall Commercial is constructed with flame resistant polypropylene. Gasketed sockets are integrated into each fitting and vent length, eliminating the need for primers, glues and couplers. Gasketed connections allow for rapid installation and adjustability. Industry leading corrosion resistant Peroxide Cross Linked EPDM Gaskets come standard in every vent length and fitting.

Diameters:

6" (160mm), 8" (200mm), 10" (250mm) & 12" (315mm)

InnoFlue® Single Wall (SW) Commercial

UL-1738 · ULC-S636

InnoFlue® Flex

UL-1738 · ULC-S636

Applications:

InnoFlue® Flex is for use with ANSI Category II and IV appliances, including tankless and direct vent water heaters, high-efficiency water heaters, condensing boilers and 90+ furnaces. **InnoFlue**® Flex vent systems can be used with natural gas, propane and oil fueled appliances with maximum flue gas temperatures of 230°F / 110°C. **InnoFlue**® Flex is designed for use in a vertical orientation inside a chase. Acceptable chase construction includes masonry chimney, B-Vent and gypsum. **InnoFlue**® Flex is engineered to navigate offsets up to 45 degrees. Multiple offsets and multiple liners can be supported within a single chase.

Materials and Construction:

InnoFlue® Flex is constructed of flexible corrugated flame resistant polypropylene. 2" diameter Flex uses snap fit couplers to transition from InnoFlue® Single Wall Residential at the base of a chase. 3" and 4" diameters have integrated **InnoFlue**® Single Wall sections spaced every 2 to 3 feet allowing the **InnoFlue**® Flex to plug directly into an **InnoFlue**® Base Support.

Diameters:

2" (60mm), 3" (80mm), & 4" (110mm)

InnoFlue® Concentric

UL-1738 · ULC-S636

Applications:

InnoFlue® Concentric is a highly engineered vent system allowing for the movement of combustion air and combustion exhaust through a single vent system. **InnoFlue**® Concentric is engineered for use with ANSI Category II and IV appliances, including tankless and direct vent water heaters, high-efficiency water heaters, condensing boilers and 90+ furnaces. **InnoFlue**® Concentric vent systems can be used with natural gas, propane and oil fueled appliances with maximum flue gas temperatures of 230°F / 110°C. The vent system can be integrated with **InnoFlue**® Single Wall and Flex where applicable.

Materials and Construction:

InnoFlue® Concentric inner is constructed of Centrotherm's industry leading flame resistant polypropylene. **InnoFlue**® Concentric outer is constructed of best in class laser welded metal outers with cast fittings. All metal components receive our proprietary self sealing coating resulting in a durable finish that provides best in class quality and aesthetics.

Diameters:

2"/4" (60/100mm), 3"/5" (80/125mm), 4"/6" (110/160mm)

InnoFlue®
Single Wall Residential

Features & Benefits:

Made of Polypropylene:
- Higher operating temperature than CPVC
- 100% recyclable LEED compliant material
- Superior performance in cold weather conditions
- Zero clearance to combustibles reduces foot print
- Improved resistance to caustic condensates making it suitable for gas, propane and oil fired appliances
- No leaching of appliance-damaging chlorides
- Environmentally friendly manufacturing processes

Quality Workmanship:
- Tighter male to female relationship for consistently tight fit up to 5000 pa pressure rating
- Smoother inner wall for better draft characteristics
- Tested and listed to UL-1738 and ULC-S636 by InterTek for sustained flue gases up to 230°F (110°C)
- Comprehensive list of approved appliance manufacturers
- Warranty – InnoFlue® comes with an unprecedented 10 year limited manufacturer's warranty.

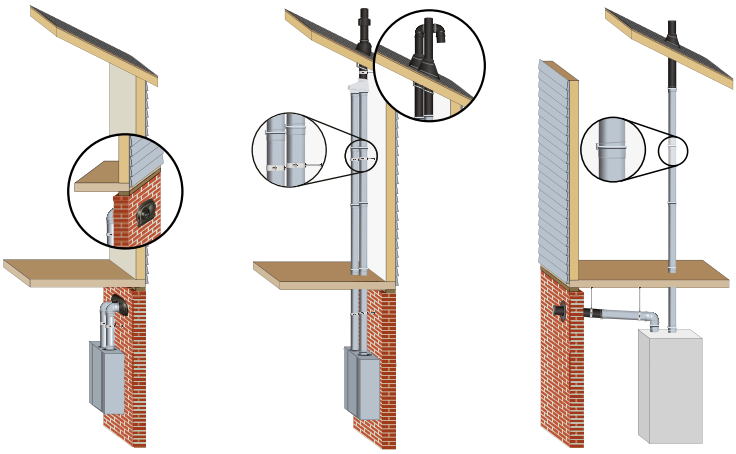
Engineered for Flue Gas Venting:
- EPDM gaskets have superior resistance to condensates
- Long sockets for great system stability and 1/4"/ft pitch
- Eliminates V.O.C. containing primers & glues
- Immediate use of heating system upon installation
- Faster installation
- System adjustability
- Tighter seal rated at 20" water column
- Industry leading 10' effective vent lengths
- No Glues, primers, or solvents ever
- Light weight, eliminating installation fatigue
- Easier to cut and handle

Patented Snap-on Connector Ring:
- Rapid installation
- Allows for post installation adjustability
- Patented design reduces complexity and cost

Solution:

Direct Vent Systems:

The most common method of venting. Direct Vent Systems utilize fresh air drawn from outside of the structure to support combustion. Single Wall Direct Vent Systems can exit through the roof or a wall and are available with numerous termination options.



Terminations

InnoFlue®
Single Wall Commercial

Features & Benefits:

Made of Polypropylene:

- Higher operating temperature than PVC & CPVC
- 100% recyclable LEED compliant material
- Superior performance in cold weather conditions
- Zero clearance to combustibles reduces foot print
- Improved resistance to caustic condensates making it suitable for gas, propane and oil fired appliances
- No leaching of appliance-damaging chlorides
- Environmentally friendly manufacturing processes

Quality Workmanship:

- Tighter male to female relationship for consistently tight fit up
- Smoother inner wall for better draft characteristics
- Tested and listed to UL-1738 and ULC-S636 by InterTek for sustained flue gases up to 230°F (110°C)
- Comprehensive list of approved appliance manufacturers

Engineered for Flue Gas Venting:

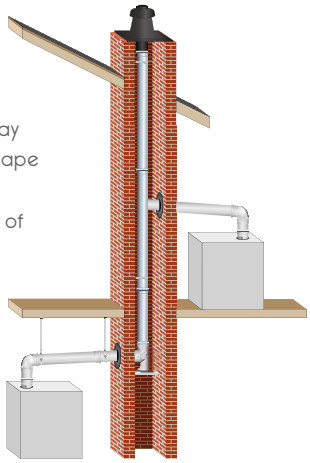
- EPDM gaskets have superior resistance to condensates
- Eliminates V.O.C. containing primers & glues
- Immediate use of heating system upon installation
- Faster installation
- System adjustability
- Tighter seal rated at 20" water column
- Industry leading 10' effective vent lengths
- Lightweight for easy installation
- Easier to cut and handle
- Designed to Manage Condensates
- Kits available

Solution:

Centrotherm's InnoFlue® is proud to offer the largest selection of polypropylene based Single Wall, Common Vent and Cascade Vent System components in North America. With diameters up to 12" (315mm), InnoFlue® can support heating appliances up to 5 million BTUs.

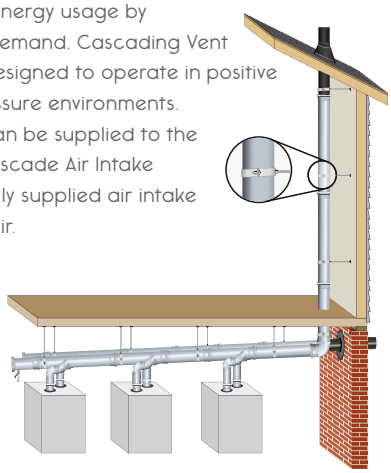
Common Vent Systems:

Utilized in multi-unit residential and commercial buildings, Common Vent Systems have multiple appliances sharing a single vent. In addition to the benefits of decreased labor and increased usable space, Common Venting reduces the number of wall and roof penetrations required. Non-Return Valves may be required to prevent the escape of combustion gases through non-operating appliances.Use of Common Vent Systems require appliance manufacturer approval.



Cascading Vent Systems:

Designed for use in large residences, multi-unit residential and commercial applications, Cascading Vent Systems allow 2 or more appliances to operate in parallel, reducing overall energy usage by modulating with demand. Cascading Vent Systems can be designed to operate in positive and negative pressure environments. Combustion air can be supplied to the appliances via Cascade Air Intake Systems, individually supplied air intake systems or room air.



InnoFlue®
Flex

Features & Benefits:

Made of corrugated polypropylene:
- Higher operating temperatures than CPVC
- 100% recyclable LEED compliant material
- Zero clearance to combustibles reduces required chase size
- Improved resistance to caustic condensates
- No leaching of appliance-damaging chlorides
- Environmentally friendly manufacturing processes

Flexible:
- Navigates offsets up to 45° eliminating the need to break open chases
- Continuous lengths up to 150'

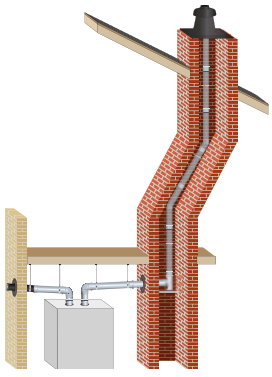
Quality Workmanship:
- Comprehensive list of approved appliance manufacturers
- Warranty – InnoFlue® comes with an unprecedented 10 year limited manufacturer's warranty

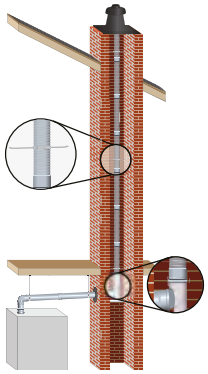
Engineered for Flue Gas Venting:
- Engineered for efficient installation within
- Masonry chimneys, Gypsum chases, B-Vent or L-Vent
- Can be installed from bottom or top of chase
- Advanced technology allows for easy transitioning between single wall and flex
- Custom caps available for single and multiple exhausts within any style chase
- Tested and listed to UL-1738 and ULC-S636 by InterTek for sustained flue gases up to 230°F (110°C)
- Can fit multiple exhausts & air intakes in a single chase
- Lightweight allows for easy handling and transportation
- Single wall construction allows for the most flexible vent line on the market, easily navigating offsets
- Allows for the fastest possible installation
- Immediate use of heating system upon installation

Solution:

1. Masonry Chimney

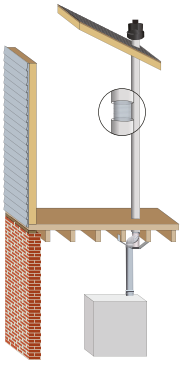
When replacing a low efficiency heating appliance with a high efficiency unit, InnoFlue® Flex can be used to re-line an existing masonry chimney. Use a Base Support at the bottom of the chase where it exits the masonry chimney and transition to InnoFlue® Single Wall Residential.





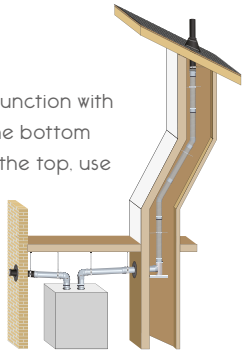
2. B-Vent or L-Vent

When replacing a low efficiency heating appliance with a high efficiency unit, **InnoFlue®** Flex can be used to re-line an existing B-Vent. Support **InnoFlue®** Flex at the floor joists where it exits the B-Vent and transition to **InnoFlue®** Single Wall Residential.



3. Gypsum Chase

Use a new or existing gypsum chase in conjunction with **InnoFlue®** Flex. Install a Base Support at the bottom and transition to **InnoFlue®** Single Wall. At the top, use a Flex to Single Wall Coupler to transition to **InnoFlue®** Single Wall. Terminate with a roof flashing by others and an **InnoFlue®** Single Wall Termination component such as an End Pipe.



InnoFlue®
Concentric

Features & Benefits:

Polypropylene & Metal Construction:

- Laser welded vent lengths and fittings are airtight, eliminating leakage experienced by inferior crimped construction
- Casted elbows and adaptors provide increased impact resistance
- Powder coated exterior creates a beautiful aesthetic, making it suitable for installation in high traffic areas
- Polypropylene interior is highly corrosion resistant, making it suitable for gas, propane and oil fired appliances
- Tested and listed to UL-1738 and ULC-S636 by InterTek for sustained flue gases up to 230°F (110°C)
- 100% recyclable LEED compliant material
- Zero clearance to combustibles
- No leaching of appliance-damaging chlorides

Engineered for Flue Gas Venting:

- Eliminates V.O.C. containing primers & glues
- Immediate use of heating system upon installation
- Faster installation
- System adjustability
- Industry leading gaskets rated at 20" water column

Concentric Design:

- Single component provides air intake and exhaust, reducing installation time
- Single penetration through roof or wall

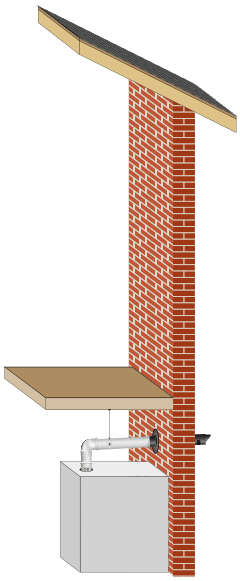
Quality Workmanship:

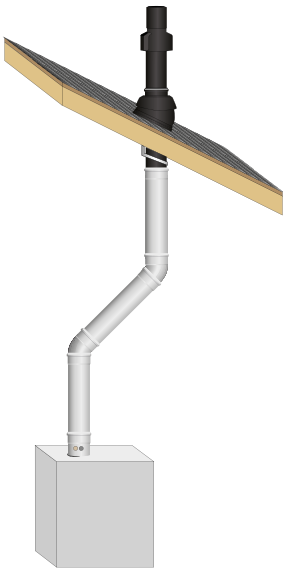
- Smoother inner wall for better draft characteristics
- Comprehensive list of approved appliance manufacturers
- Warranty – InnoFlue® comes with an unprecedented 10 year limited manufacturer's warranty
- Metal outer meets UL-723 (ASTM E84 and ULC-S102.2 25/50 flame and smoke development

Solution:

Side Wall & Vertical

Concentric design for use in areas where the venting is visible. Powder coated welded outers create a durable aesthetically pleasing installation on direct vented appliances.

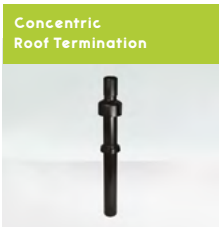




Terminations

Concentric Wall Termination

Concentric Roof Termination



InnoFlue® Vent Systems Details.

InnoFlue® Single Wall (SW) Residential

Performance

Property	Standard	Results
Maximum Flue Gas Temp.	UL-1738 & ULC-S636 CE EN-14471	230°F (110°C) 248°F (120°C)
Clearance to Combustibles	UL-1738 & ULC-S636	0 at 230°F (110°C)
Leakage	UL-1738	Pass
Pressure	UL-1738 / CE EN-14471	12.5 kPa / H1 @ 20 kPa
Pull	UL-1738 & ULC-S636	Min. 101 lb force (.45kg) with Connector Rings
Flame & Smoke with recommended wrap	UL-723, ASTM E-84 & ULC-S102.2	<25 / <50 with recommended wrap
Fire Rating w/ recommended passive fire protection system	ASTM E-814, UL 1479 or ULC S115	2hr with recommended passive fire protection system

Materials & Construction

Low Temperature Handling	UL-1738	Pass at -4°F (-20°C)	
U.V. Stability	ASTM G23-81	Pass	
Water Absorption	UL-1738	.22%	
Diameters	CE EN-14471	2" (60mm), 3" (80mm), 4" (110mm), 5" (125mm)	
Wall Thickness	Internal	Min. Thickness	Max. Thickness
– 2" (60mm)		1.7mm	2.0mm
– 3" (80mm)		1.8mm	2.2mm
– 4" (110mm)		2.7mm	3.0mm
– 5" (125mm)		2.7mm	3.0mm
Deflection Temperature Under Load	ASTM D648-86	302°F (150°C)	

InnoFlue® Single Wall (SW) Commercial

Performance

Property	Standard	Results
Maximum Flue Gas Temp.	UL-1738 & ULC-S636 CE EN-14471	230°F (110°C) 248°F (120°C)
Clearance to Combustibles	UL-1738 & ULC-S636	0 at 230°F (110°C)
Leakage	UL-1738	Pass
Pressure	UL-1738 / CE EN-14471	12.5 kPa / H1 @ 20 kPa
Pull	UL-1738 & ULC-S636	Min. 101 lb force (.45kg) with Connector Rings
Flame & Smoke with recommended wrap	UL-723, ASTM E-84 & ULC-S102	<25 / <50 with recommended wrap
Fire Rating w/ recommended passive fire protection system	ASTM E-814, UL 1479 or ULC S115	2hr with recommended passive fire protection system

Materials & Construction

Low Temperature Handling	UL-1738	Pass at -4°F (-20°C)	
U.V. Stability	ASTM G23-81	Pass	
Water Absorption	UL-1738	.22%	
Diameters	CE EN-14471	6" (160mm), 8" (200mm), 10" (250mm), 12" (315mm)	
Wall Thickness	Internal	Min. Thickness	Max. Thickness
– 6" (160mm)		2.9mm	3.5mm
– 8" (200mm)		3.5mm	4.0mm
– 10" (250mm)		3.5mm	4.0mm
– 12" (315mm)		5.0mm	5.8mm
Deflection Temperature Under Load	ASTM D648-86	302°F (150°C)	

InnoFlue® Flex

Performance		
Property	Standard	Results
Maximum Flue Gas Temp.	UL-1738 & ULC-S636 CE EN-14471	230°F (110°C) 248°F (120°C)
Clearance to Combustibles	UL-1738 & ULC-S636	0 at 230°F (110°C)
Leakage	UL-1738	Pass
Pressure	UL-1738 / CE EN-14471	12.5 kPa / H1 @ 20 kPa
Pull	UL-1738 & ULC-S636	Min. 101 lb force (.45kg)
Materials & Construction		
U.V. Stability	ASTM G23-81	Pass
Water Absorption	UL-1738	.22%
Diameters	CE EN-14471	2" (60mm), 3" (80mm), 4" (1100mm)
Deflection Temperature Under Load	ASTM D648-86	302°F (150°C)

- UL-1738 – **InnoFlue®** is the first polymeric vent system tested and listed to UL-1738, the Safety Standard for Category II, & IV, flue gas venting. Listed for use with sustained flue gas temperatures to 230°F (110°C).
- UL-S636 – **InnoFlue®** is listed to ULC-S636 Type BH Class II C, making it suitable for use where Type BH Class II A, B or C venting is specified in Canada. Listed for use with sustained flue gas temperatures to 230°F (110°C)
- **Massachusetts Plumbers Board** Approval code C3-0817-13

InnoFlue® Concentric

Performance			
Property	Standard	Results	
Maximum Flue Gas Temp.	UL-1738 & ULC-S636 CE EN-14471	230°F (110°C) 248°F (120°C)	
Clearance to Combustibles	UL-1738 & ULC-S636	0 at 230°F (110°C)	
Leakage	UL-1738	Pass	
Pressure	UL-1738 / CE EN-14471	12.5 kPa / H1 @ 20 kPa	
Pull	UL-1738 & ULC-S636	Min. 101 lb force (.45kg) with included screws	
Materials & Construction			
Low Temperature Handling	UL-1738	Pass at -4°F (-20°C)	
U.V. Stability	ASTM G23-81	Pass	
Water Absorption	UL-1738	.22%	
Diameters	CE EN-14471	2"/4" (60/100mm), 3"/5" (80/125mm), 4"/6" (110/160mm)	
PP Wall Thickness	Internal	Min. Thickness	Max. Thickness
– 2" (60mm)		1.7mm	2.0mm
– 3" (80mm)		1.8mm	2.2mm
– 4" (110mm)		2.7mm	3.0mm
Metal Wall Thickness	Internal	Min. Thickness	
– 4" (100mm)		1.9mm	
– 5" (125mm)		1.9mm	
– 6" (160mm)		1.9mm	
Deflection Temperature Under Load	ASTM D648-86	302°F (150°C)	

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FIRST LISTED

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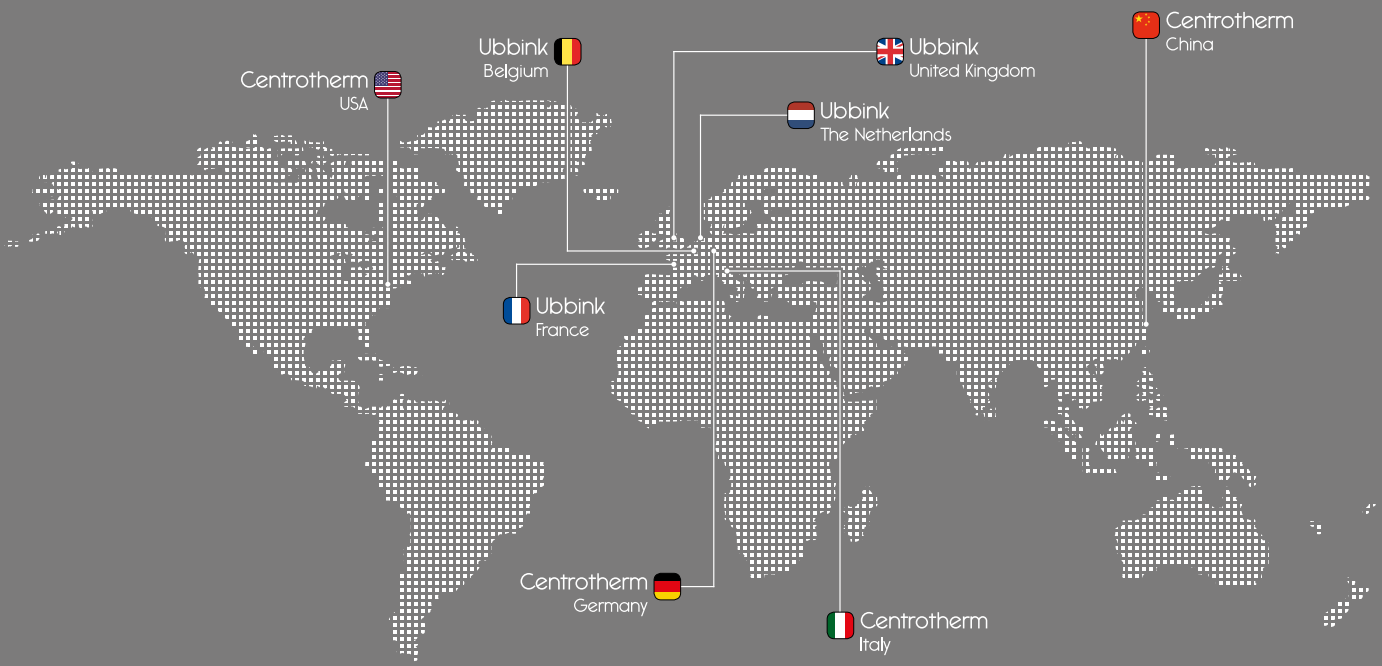

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