

# ENERVEX POWERSTACK CHIMNEY SYSTEM

Models EPS, EPSA, EPS1, EPS2 & EPS4

020.8010.0920 09.20

Product Information

## Use

The PowerStack EPS system is a state-of-the-art multi-application single or twin-walled exhaust product designed to convey gases, particles, fumes, smoke, grease and products of combustion from a wide range of engineering combustion and process equipment under negative, positive or neutral pressure:

- Condensing and non-condensing Boiler Exhaust
- Diesel engine and Gas Turbine Exhaust
- Restaurant and Kitchen Grease Exhaust
- Coffee Roaster Exhaust
- Industrial Oven and Dryer Exhaust
- And much more

## Description

The PowerStack EPS is a one-type-fits-all pre-fabricated stainless steel exhaust chimney, available in single or double-wall configuration with four available insulation configurations to meet the most demanding applications. Available in twenty two internal diameters ranging from 4 inch (100mm) to 48 inch (1200mm). The fully welded inner wall/liner is manufactured from corrosion resistant bespoke 316L-PCM stainless steel and the outer jacket of 304 polished stainless steel. The double-wall EPS is available with 1 inch (25mm) airgap, 1 inch (25mm), 2 inch (50mm) and 4 inch (100mm) insulation.

All components are designed to be installed without the need for modification, welding or cutting of the product. PowerStack offers a full range of components including set lengths, elbows, tees, appliance adaptors, terminals, clean-outs, expansion sections and supports as well as special angled components, such as 87° elbows/Tees, Duct Drains, Condensate Collectors and Drain Sections to facilitate drainage of condensate when used with condensing appliances.

The PowerStack incorporates a patent pending flanged male/female jointing system. One end of a component has a collar that facilitates easy alignment of the flanges to aid installation of the product.

Gas and liquid tightness is guaranteed by a graphite gasket which is bonded to the flange and eliminates the need for a sealant. The gasket is designed for extremely high temperatures and pressures and immune to breakdown by acidic condensate.

An easy-to-install overlapping U-Band compresses the gasket and secures the joint. An insulation blanket (when applicable) and a finishing band with snap-locks to cover the joint connection.

## Material

The fully welded inner wall is manufactured from corrosion resistant bespoke 316L-PCM stainless steel ("PCM" for "Purified Cr and Mo" content).

Thickness 4"– 24": 0.024 inch (0.6mm)

Thickness 26"– 38": 0.048 inch (1.0mm)

Thickness 44"– 48": 0.048 inch (1.2mm)

The fully welded outer wall is manufactured from 0.024 inch (0.6mm) polished 304 stainless steel.

The double-wall EPS is available with 1 inch (25mm) air-gap, 1 inch (25mm), 2 inch (50mm) and 4 inch (100mm) insulation.

Specifications are subject to change without notice.



## Listings

The ENERVEX PowerStack EPS venting systems are Listed by Underwriters Laboratories, Inc. (UL) under UL File MH49940 in the following product categories and diameters indicated:



	EPS	EPSA	EPS1	EPS2	EPS4
UL 103 Building Heating Appliance Chimney	x	x	x	x	x
UL 1738 Special Gas Vent	x	x	x	x	x
UL 1777 Chimney Liners	x				
UL 1978 Grease Duct for Restaurant Cooking Appliances	x		x	x	x
UL 2561 1400°F Chimney	x	x	x	x	x
ULC 635 Chimney Liner	x				
ULC S636 Type BH Gas Vent	x				
ULC S636-08 Type BH Gas Vent		x	x	x	x
ULC S662 Grease Duct	x		x	x	x
ULC/ORD C959 540°C Chimney	x	x	x	x	x
ULC/ORD C959 760°F Industrial Chimney	x	x	x	x	x

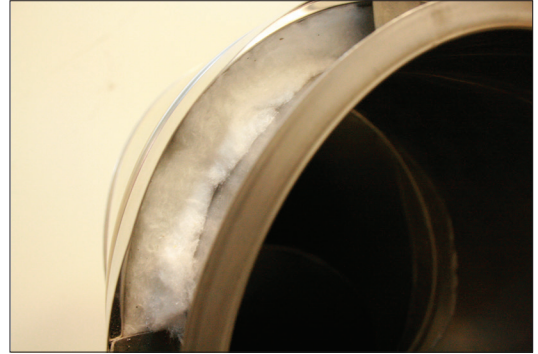
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### Flat Flange For a Perfect Seal

The perfectly flat 1/2" flange seals so well that moisture build-up in the joint is prevented.

The inserted stainless steel collar that represents the male connection is spot-welded to the inner wall and leaves enough clearance to allow condensate to flow freely between inner wall and collar.

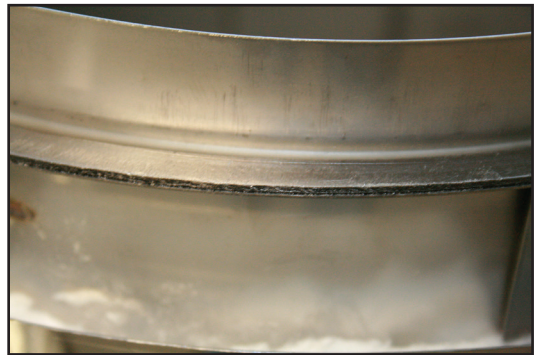
The male/female self-aligning connection with the U-Band makes assembly a "single-person" job.



### Graphite Gasket

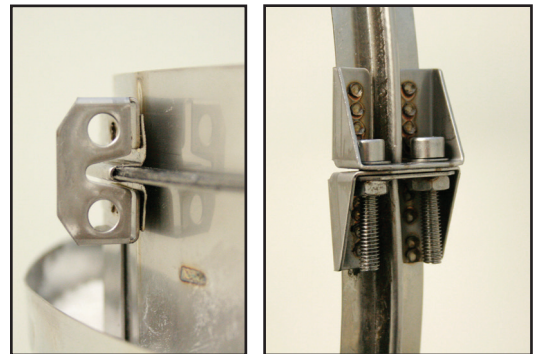
The graphite gasket is permanently secured to the flange of the male connection. With a properly installed U-Band, a perfect pressure and liquid-tight seal is created that doesn't require any sealant.

The joint can be disassembled and reassembled, and there is no need for cleaning or removal of sealant and no need for cutting or modifying — just remove the U-Band and take the chimney apart.



### U-Band

The U-Band is designed so it does not put pressure on the outer edge of the flange. This prevents the flanges from gaping when assembled (common with overlapping V-Bands) and helps the graphite gasket create a perfect seal. The double-nut flange makes assembly easy and a "single-person" job.



### Snap-locks

The one-piece channel bands can be installed without the use of tools. The channel band wraps around the outer wall, overlaps and is secured with snap-locks.



**Codes and Standards**

PowerStack when installed per their Installation Instructions, are code compliant with:

- NFPA 211
- NFPA 54
- NFPA 31
- NFPA 37
- CSA-B149

All models comply with the following codes and standards related agencies or associations:

- NFPA (National Fire Protection Association)
- ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers)
- ICC (International Code Congress)
- UL (Underwriters Laboratories, Inc.)
- ULC (Underwriters' Laboratories of Canada)
- CSA (Canadian Standards Association)
- IAPMO (International Association of Plumbing and Mechanical Officials)

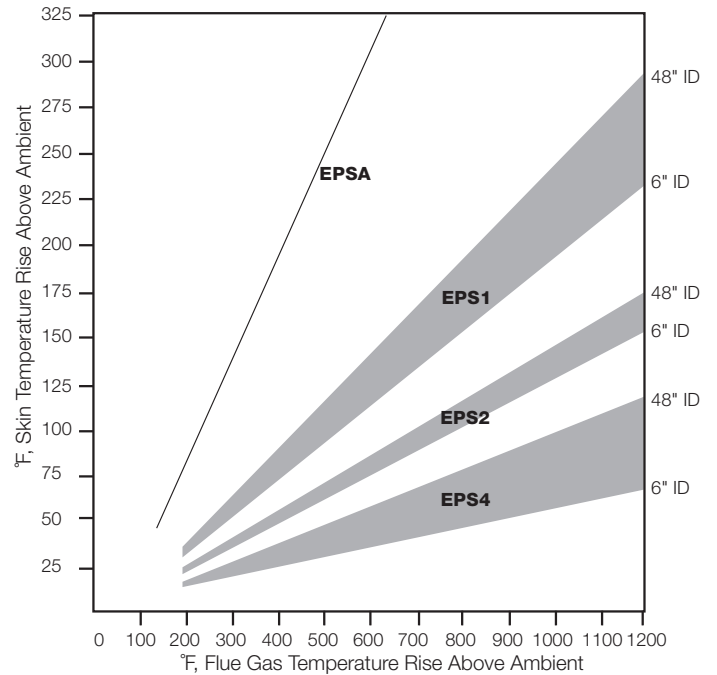
**Clearances to Combustible**

For Special Gas Vent / Type BH Application. Max 480°F Appliance Flue Gas Temperature

**EPS**

SIZE Inch (mm)	EPS - MIN. CLEARANCE-TO-COMBUSTIBLE	
	VERTICAL Unenclosed	HORIZONTAL Unenclosed
4-8 (100-200)	2 (50)	3 (75)
10-14 (250-350)	3 (75)	3 (75)
16 (400)	4 (100)	4 (100)
18-24 (450-600)	5 (125)	5 (125)
26-30 (650-750)	6 (150)	6 (150)
32-34 (800-850)	7 (175)	7 (175)
36-40 (900-1000)	8 (200)	8 (200)
44 (1100)	9 (225)	9 (225)
48 (1200)	10 (250)	10 (250)

**Outer Jacket Temperature Rise (estimated)**



NOTE: The Outer Jacket Temperature Rise chart is intended to be a guide only. It is indicative of the likely outer jacket temperatures for any particular PowerStack application, but cannot be exact as each situation requires a calculation and knowledge of mass flow, velocity of the gases, and the location and situation of the chimney, i.e.: enclosed non-ventilated, enclosed ventilated, not enclosed, external, etc.

**EPSA**

SIZE Inch (mm)	MIN. CLEARANCE-TO-COMBUSTIBLES		NON-COMBUSTIBLES
	VERTICAL Unenclosed / Enclosed	HORIZONTAL Unenclosed	HORIZ. / VERT Unenclosed / Enclosed
4-7 (100-175)	1 (25)	1 (25)	0 (0)
8-12 (200-300)	1 (25)	2 (50)	0 (0)
14-18 (350-400)	1 (25)	3 (76)	0 (0)
20-24 (500-600)	1 (25)	4 (101)	0 (0)
26-28 (650-700)	1 (25)	5 (127)	0 (0)
30-34 (750-850)	1 (25)	6 (152)	0 (0)
36-38 (900-950)	1 (25)	7 (178)	0 (0)
40-44 (1000-1100)	1 (25)	8 (203)	0 (0)
46-48 (1150-1200)	1 (25)	9 (229)	0 (0)

**EPS1**

SIZE Inch (mm)	EPS1 - MIN. CLEARANCE-TO-COMBUSTIBLE		
	VERTICAL Enclosed	Unenclosed	Enclosed
4-14 (100-350)	0.5 (13)	1 (25)	NA
16-48 (400-1200)	1 (25)	1 (25)	NA

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## Clearances to Combustible

Building Heating Appliance/Industrial Type 540°C Chimney Part for venting gas, and liquid-red appliances  
Listed to 1400°C/Industrial Type 760°C Chimney Part for venting gas, liquid, and solid-fuel-red appliances

## Clearances to Combustible

Grease Duct

SIZE Inch (mm)	MIN. CLEARANCE-TO-COMBUSTIBLE (UNENCLOSED)				
	EPS	EPSA	EPS1	EPS2	EPS4
4 (100)	18 (457)	4 (101)	1 (25)	0.5 (13)	0.5 (13)
6 (150)	18 (457)	5 (127)	1 (25)	0.5 (13)	0.5 (13)
8 (200)	18 (457)	5 (127)	1 (25)	0.5 (13)	0.5 (13)
10 (250)	18 (457)	5 (127)	1 (25)	0.5 (13)	0.5 (13)
12 (300)	18 (457)	6 (152)	2 (51)	1 (25)	0.5 (13)
14 (350)	18 (457)	6 (152)	2 (51)	1 (25)	0.5 (13)
16 (400)	18 (457)	7 (178)	3 (76)	2 (51)	1 (25)
18 (450)	18 (457)	7 (178)	3 (76)	2 (51)	1 (25)
20 (500)	18 (457)	7 (178)	3 (76)	2 (51)	1 (25)
22 (550)	18 (457)	8 (203)	3 (76)	2 (51)	1 (25)
24 (600)	18 (457)	8 (305)	4 (102)	2 (51)	1 (25)
26 (650)	18 (457)	8 (203)	4 (102)	2 (51)	1 (25)
28 (700)	18 (457)	9 (229)	4 (102)	2 (51)	1 (25)
30 (750)	18 (457)	9 (229)	4 (102)	2 (51)	1 (25)
32 (800)	18 (457)	10 (254)	5 (127)	3 (76)	2 (51)
34 (850)	18 (457)	10 (254)	5 (127)	3 (76)	2 (51)
36 (900)	18 (457)	10 (254)	5 (127)	3 (76)	2 (51)
38 (950)	18 (457)	11 (279)	5 (127)	3 (76)	2 (51)
40 (1000)	18 (457)	11 (279)	6 (152)	3 (76)	2 (51)
44 (1100)	18 (457)	12 (305)	6 (152)	3 (76)	2 (51)
48 (1200)	18 (457)	13 (330)	6 (152)	3 (76)	2 (51)

SIZE Inch (mm)	MIN. AIRSPACE CLEARANCE-TO-COMBUSTIBLE (UNENCLOSED)			
	EPS	EPS1	EPS2	EPS4
4 (100)	18 (457)	4 (102)	2 (51)	0 (0)
6 (150)	18 (457)	4 (102)	2 (51)	0 (0)
8 (200)	18 (457)	4 (102)	2 (51)	0 (0)
10 (250)	18 (457)	5 (127)	3 (76)	0 (0)
12 (300)	18 (457)	5 (127)	3 (76)	0 (0)
14 (350)	18 (457)	5 (127)	3 (76)	0 (0)
16 (400)	18 (457)	5 (127)	3 (76)	1 (25)
18 (450)	18 (457)	5 (127)	3 (76)	1 (25)
20 (500)	18 (457)	5 (127)	3 (76)	1 (25)
22 (550)	18 (457)	5 (127)	3 (76)	1 (25)
24 (600)	18 (457)	5 (127)	3 (76)	1 (25)
26 (650)	18 (457)	6 (152)	4 (102)	1 (25)
28 (700)	18 (457)	6 (152)	4 (102)	1 (25)
30 (750)	18 (457)	6 (152)	4 (102)	1 (25)
32 (800)	18 (457)	6 (152)	4 (102)	1 (25)
34 (850)	18 (457)	6 (152)	4 (102)	1 (25)
36 (900)	18 (457)	6 (152)	4 (102)	1 (25)
38 (950)	18 (457)	6 (152)	4 (102)	1 (25)
40 (1000)	18 (457)	6 (152)	4 (102)	1 (25)
44 (1100)	18 (457)	7 (178)	5 (127)	2 (51)
48 (1200)	18 (457)	7 (178)	5 (127)	2 (51)