



## Model PS/IPS

Stainless Steel -Double Wall-Positive Pressure Piping Systems



- *PS/IPS Boiler Breeching*
- *Chimney Stack*
- *Engine Exhaust*
- *PS/IPS Grease Duct*
- *Foodservice Venting Solutions*



Refer to submittal SCISGIPS  
for detailed product specifications.

# THE INDUSTRY STANDARD

## U.S. PATENTS

Selkirk Metalbestos Model PS and IPS are manufactured under one or more of the following U.S. patents: 3902744, 4029343, 4029344

## UNDERWRITERS LABORATORIES LISTINGS

Model PS and IPS in sizes 5" through 48" diameters have been tested and Listed (Safety Certified) by Underwriters Laboratories, Inc. (ULI) and Underwriters' Laboratories of Canada (ULC) under a variety of categories including:

(USA) Grease Duct **ULI**  
 Building Heating Appliance Chimney ULIMH6673  
 Industrial 1400° F Chimney ULIMH6673  
 Type L Vent (Model IPS only) ULIMH6673

(Canada) Grease Duct **ULC**  
 540°C (1000°F) Industrial Chimney ULCCMH1414  
 760°C (1400°F) Industrial Chimney ULCCMH889  
 Building Heating Appliance Chimney ULCCMH1334

## APPLICABLE MODEL PS/IPS REFERENCES

### Building Heating Appliance Chimney

UL103 NFPA211 NFPA31 NFPA37 ULC-S604

### 1400° Chimney

UL103 NFPA211 NFPA37

### Grease Duct

UL103 NFPA96

### Type L Vent

UL641

## ASSOCIATIONS

Selkirk Metalbestos is proud to be an active member of the following associations:



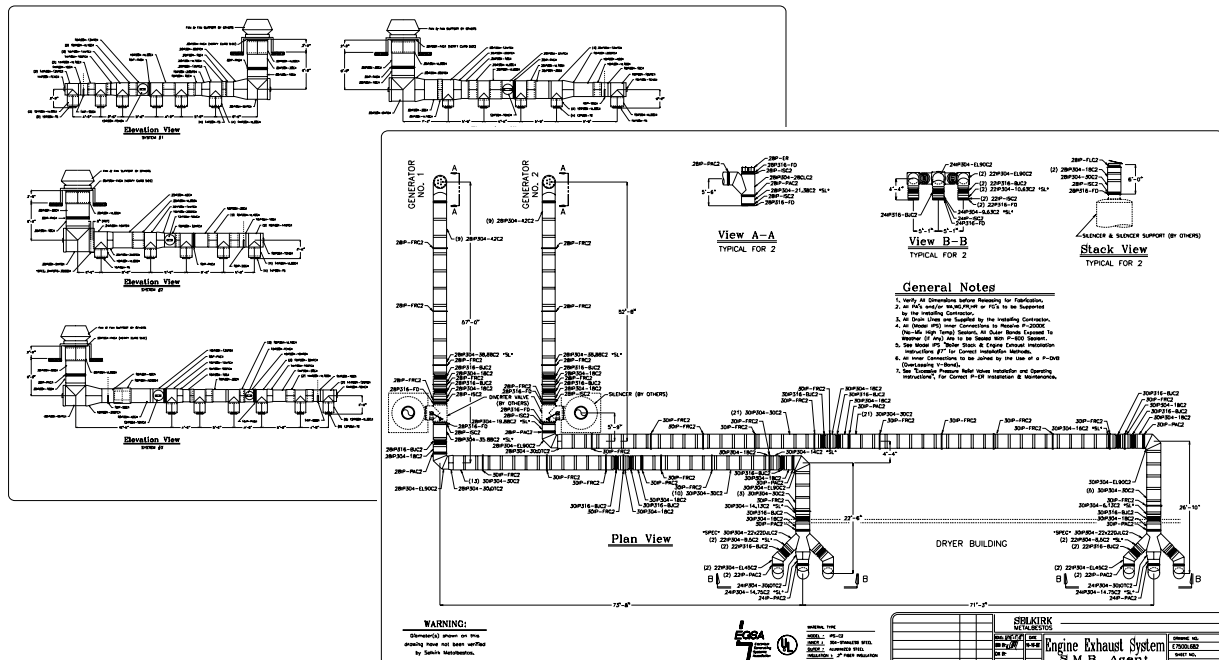
## CODE COMPLIANCE

When installed in accordance with its installation instructions, Model PS and IPS comply with the following codes:

- NFPA (National Fire Protection Association)
- SBCCI (Southern Building Code Congress International)
- ICBO (International Conference of Building Officials)
- BOCA (Building Officials and Code Administrators)

Model PS and IPS have been approved by the City of New York Department of Buildings, Materials and Equipment Acceptance Division under the following MEA numbers:

	Model PS	Model IPS
Building Heating Appliance Chimney	MEA 132-90M	MEA 135-90M
1400° F Chimney	MEA 133-90M	MEA 181-90M
Grease Duct	MEA 134-90M	MEA 134-90M



# SYSTEM CONCEPT

Selkirk Metalbestos Model PS and IPS are modular, prefabricated piping systems which embody flanged joints, designed for both quick assembly and pressure-sealing capabilities. They offer a combination of insulated piping components as well as the structural accessories needed for support and attachment to building structures. Expansion joints are available both in gasket designs and in pressure tight, all-welded bellows designs.

Standard gas-carrying piping parts are usable for a wide variety of applications:

- Chimneys and stacks for all types of building heating equipment.
- Chimneys for industrial ovens, furnaces, and processing equipment.
- Exhaust piping for engines or turbine units.
- Ducting in restaurants for compliance with Type 1 hood requirements.
- Ducting for heated air and combustion products.
- Ducting for light duty pollution control equipment.
- Venting for engine exhaust and other shipboard systems.
- Venting for offshore drilling rigs.

## Complete Line of Fittings

Model PS and IPS are available in eighteen sizes, from 5" I.D. to 48" I.D. Fittings include various elbows, tees, supports and terminations, as well as a variety of accessory fittings designed to make installation simple and quick.

Each component is shipped complete and ready for installation. Each ordered part includes Inner Vee Bands, Outer Channel Bands and all the necessary hardware.

All items included with each order are listed in this catalog under the part description.

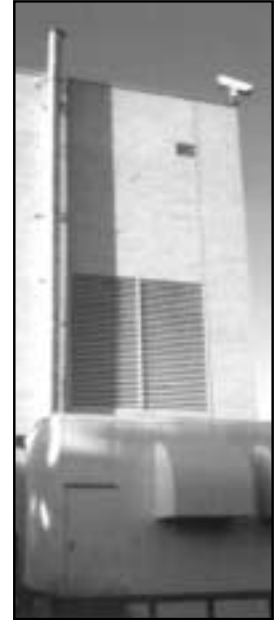


## Exceeding the Requirements

Selkirk Metalbestos, inventors of the positive pressure system concept, far exceeds the requirements of codes and other manufacturers. Results of our testing programs illustrate this fact.

## Leak Tests

Selkirk Metalbestos conducted system pressure testing against leakage in the presence of UL inspectors, and results of these tests are impressive. Using the OSHA occupation standard-of-leakage rate of 50 parts per million over an eight hour period as criterion for acceptance, Selkirk was tested to a leakage rate of only .144 parts per million, or three-tenths of one percent (.3%) of the maximum allowable leakage.



## Seismic Tests

We further demonstrated the superiority of the Model PS and IPS concept by conducting seismic load tests. These tests proved the structural integrity of our products under severe stress by showing that a guyed stack measuring 20 inches in diameter and exceeding 10 feet above the guying location (installed in strict accordance with the UL103 Listing) could withstand the rigors of all Seismic Zones.

## Structural Tests

Selkirk Metalbestos recently tested for greater freestanding limits (termination height above a guide point). These tests, simulating stack performance under 110 mph wind conditions, again demonstrated the superiority of Selkirk Metalbestos products.

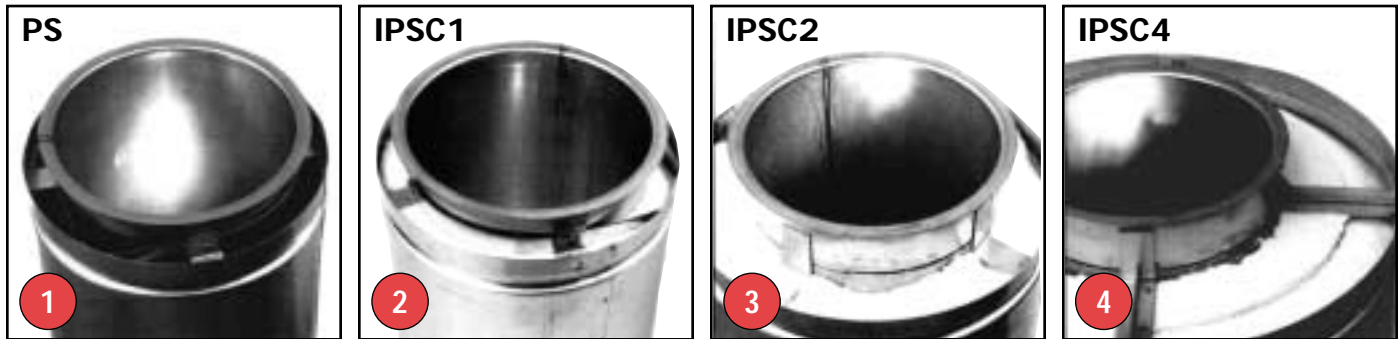


## Skin Temperature Rise Tests

Among other things, UL103 covers the temperature rise limits of the surrounding combustible materials in an unenclosed chimney installation and it defines the test set-up to measure the actual temperature rise of those materials at the OEM recommended clearances. Our published Model IPS skin temperatures were obtained during these tests.

# PRODUCT IDENTIFICATION

## Model PS vs. Model IPS



Fiber insulation increases the diameter of the outer wall on Model IPSC2 and IPSC4 pipe and fittings. Shown in this sequence is the same 8-inch diameter inner pipe. (Photo 1) Without insulation the outside diameter of the pipe is 10-inches. (Photo 2) This is also true of the same pipe with a 1-inch layer of insulation. (Photo 3) However, the same 8-inch pipe with 2-inch insulation results in an outside diameter of 12 inches. (Photo 4) Adding 4 inches of fiber insulation makes the diameter of the outer wall 16 inches.

## Understanding Product Codes and Part Numbers

All parts manufactured by Selkirk Metalbestos are identified by a series of numbers and letters which describe their makeup and function. Here is how to interpret the Part Number designation for Model PS and IPS products.

1. It begins with the pipe or fitting's Internal Diameter (in inches) such as 8, 22, 36, etc.
2. This is followed by the *Model* designation, P for air-insulated (Model PS), or IP for parts that are fiber insulated (Model IPSC1, C2 or C4).
3. Next, is the product's Material designation, such as 316 or 304/304. The first item indicates the makeup of the inner liner, while the second half indicates the material content of the outer wall, if stainless. If aluminized outer, the Part Number indicates inner material only.
4. Then, following a long dash, the product's Code name is listed, such as AG30, JY, or MVT. If the product is air insulated, the product identification ends with this Code.  
*(For Product Code listings, refer to page 2.)*
5. Finally, when a product is fiber insulated, a designation is added at the end to indicate *Insulation Thickness*. C1 means a thickness of 1-inch; C2, 2-inches; and C4, 4-inches.  
*(For comparison, see photos above.)*

Thus, the Ordered Part Number for a 30-inch Adjustable Pipe, with a 6-inch I.D., made of 304 Stainless Steel inner and Aluminized Steel outer, packed with 2-inch fiber insulation, is listed: **6IP304- AG30C2\***

\* **Note:** For products with reduction or increaser parts, the Part Number changes as follows:

### MT and JL

Diameter of Body listed in front of Model P or IP. Diameter of Snout listed in front of Code designation

Example - For a Manifold Tee with a 42" dia. Body and 30" dia. Snout:

**42P304-30MT**

### OT and OS

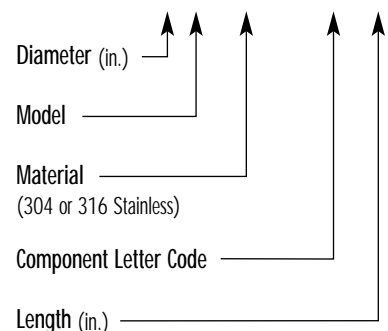
Smaller diameter listed first (before Model designation) Larger diameter listed before Code designation

Example - For a Tapered Increaser with an 8" to 16" dia. Body:

**8P304-16OT**

Part Number Description:

**6P304-VL30**

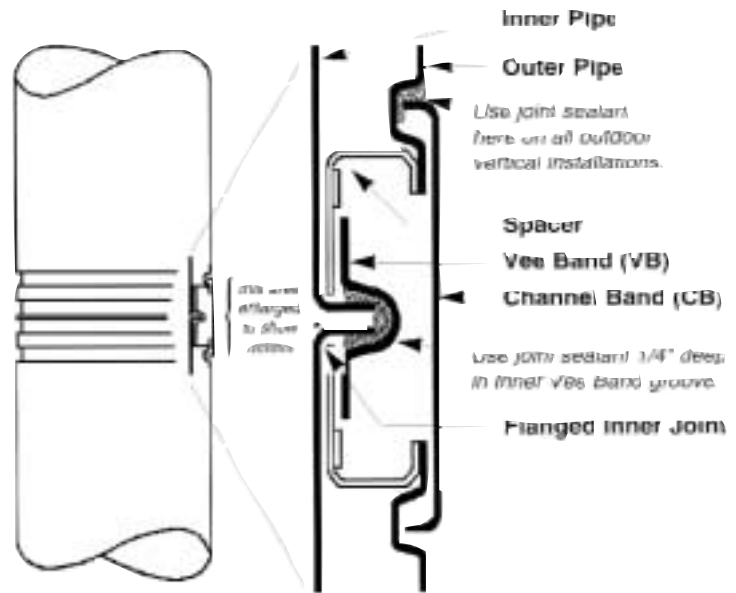


## The Four Easy Steps to Joint Assembly

For all Selkirk Metalbestos pipe and fittings, the flange-to-flange inner pipe joints are identical for each pipe inside diameter.

Temperature of gases carried in the system determines the proper sealant used.\*

As shown in the adjoining illustration and photos, assembly is accomplished in four easy steps, using only standard tools.



\*See Grease Duct, Boiler Stack, or Engine Exhaust instructions for correct sealant usage.



### Step 1

Fill Inner Vee Band (VB) with proper sealant.



### Step 2

Position Inner VB below flange of pipe or fitting.



### Step 3

Mate flanges of two pipes. Position Inner VB over both flanges and tighten.



### Step 4

Position Outer Channel Band around outer casing. Align with pipe grooves and tighten.

## Operating Temperatures and Clearances

Criteria	Type L Vent	Restaurant Grease Duct	Building Heating Appliance Chimney*	1400° F. Factory-Built Chimney
Application	Chimneys and stacks for appliances Listed suitable for venting with Type L or Type B venting systems.	Cooking Appliances Ventilation Hoods Restaurant Grease Ducts Pizza Oven Exhausts	Low and High Pressure Steam Boilers Diesel and Turbine Exhausts Building Heating Equipment	Industrial Furnaces Processing Equipment Kilns and Ovens Diesel and Turbine Exhausts
Maximum Operating Temperatures	550° F Continuous 1700° F. Intermittent	500° F. Continuous 2000° F. Intermittent	1000° F. Continuous 1400° F. Intermittent	1400° F. Continuous 1800° F. Intermittent
Clearances To Combustibles:  Model PS	N.A.	6, 8 & 10" I.D. – 5" 12" I.D. – 6" 14" I.D. – 7" 16" I.D. – 8" 18" I.D. – 9" 20" I.D. – 10" Over 20" I. D. – 18"	6"-36" I.D. – 6" Exterior –10" Interior  42"-48" I.D. – 6" Exterior – 18" Interior	Exterior and Interior  6"-24" I.D. – 15" Over 24" I.D. – 24"
Model IPSC1	5-24" I.D. – 3"	5-6" I.D. – 2" 8-16" I.D. – 3" 18-24" I.D. – 4" 26-32" I.D. – 5" 36" I.D. – 6" 42-48" I.D. – 7"	5-8" I.D. – 1" 10-16" I.D. – 2" 18-24" I.D. – 3" 26-32" I.D. – 4" 36" I.D. – 5" 42-48" I.D. – 6"	5-6" I.D. – 1" 8-16" I.D. – 2" 18-24" I.D. – 3" 26-32" I.D. – 4" 36" I.D. – 5" 42-48" I.D. – 6"
Models IPS C2 & C4	5-24" I.D. – 2"	5-6" I.D. – 1" 8-16" I.D. – 2" 18-24" I.D. – 3" 26-32" I.D. – 4" 36" I.D. – 5" 42-48" I.D. – 6"	5-16" I.D. – 1" 18-24" I.D. – 2" 26-32" I.D. – 3" 36" I.D. – 4" 42-48" I.D. – 5"	5-16" I.D. – 1" 18-24" I.D. – 2" 26-32" I.D. – 3" 36" I.D. – 4" 42-48" I.D. – 5"

\*Under the "Building Heating Appliance Chimney" Listing, 5" through 24" Model IPS have qualified for UL's additional, optional "Type HT" rating for chimneys for certain appliance venting applications; especially solid fuel.

## Models PS and IPS

### Prefabricated Pressure Piping Systems

## Standard 1-Year Warranty

Selkirk Metalbestos warrants the chimney, grease duct and engine exhaust system and components against functional failure due to defects in material and workmanship for a period of one year from date of delivery to the construction site. Functional failure is defined as any failure of the system or component to perform its intended function of exhausting, without adverse leakage, combustion by-products from engine operation or heating equipment. During this period, any system or component supplied by Selkirk Metalbestos failing to perform its intended function will be repaired or replaced at the manufacturer's option, following determination by a factory-authorized inspector that a functional failure has occurred.

This warranty is limited to repair or replacement of the product plus shipping cost to the failure location. This warranty does not cover any labor costs for removal or replacement of the defective product, nor does this warranty cover any system components not furnished by Selkirk Metalbestos and installed as part of the system.

This limited warranty is extended to the purchaser subject to the satisfaction of the following conditions:

- 1) Generally accepted engineering practices have been followed to determine that sizing and material specifications are suitable for the application and environment involved.
- 2) The undamaged components have been correctly installed in accordance with the installation instructions published by Selkirk Metalbestos at the time of shipment.

Selkirk Metalbestos assumes no liability for incidental or consequential damages of any kind or for any damages resulting in whole or in part from misuse, improper installation, or inadequate maintenance of the system or any component part thereof. This warranty is in lieu of all other express warranties or guarantees of any kind. All implied warranties, including merchantability and fitness, are limited to the duration of the express warranty contained herein. Selkirk Metalbestos neither assumes nor does it authorize any other person to assume on its behalf any other liability in connection with the sale of its products.

For prompt warranty service, contact the nearest Selkirk Metalbestos Commercial/Industrial Venting Products Agent, or Selkirk Metalbestos Customer Service Department, State Route 93 & Sutton Road, Logan, Ohio 43138

or

1820 East Fargo, Nampa, Idaho 83687

## Models PS and IPS

### Prefabricated Pressure Piping Systems

## Extended 10-Year Warranty

Selkirk Metalbestos warrants the chimney, grease duct, engine exhaust system and components against functional failure due to defects in material and workmanship for a period of ten years from date of delivery to the construction site. Functional failure is defined as any failure of the system or a component to perform its intended function of exhausting, without adverse leakage, combustion by-products from engine operation or boiler heating equipment. During this period, any system or component supplied by Selkirk Metalbestos failing to perform its intended function will be repaired or replaced at the manufacturer's option, following determination by a factory-authorized inspector that a functional failure has occurred.

This warranty is limited to repair or replacement of the product plus shipping cost to the failure location. This warranty does not cover any labor costs for removal or replacement of the defective product, nor does this warranty cover any system components not furnished by Selkirk Metalbestos and installed as part of the system.

This limited warranty is extended to the purchaser subject to the satisfaction of the following conditions:

- 1) System sizing and design has been performed by Selkirk Metalbestos personnel, and design parameters provided to Selkirk Metalbestos by the responsible engineer were and are accurately representative of the operating conditions.
- 2) The undamaged components have been correctly installed in accordance with system design and sizing as performed by Selkirk Metalbestos and installation instructions published by Selkirk Metalbestos at the time of shipment.
- 3) Proper precautions have been taken to insure that boiler or engine combustion air is free of solvent or refrigerant vapors or any halogenated compound which may cause acid condensates to form within the chimney.
- 4) Selkirk Metalbestos has supplied the entire chimney or exhaust system from boiler/engine outlet to the termination of the stack.
- 5) Prior to start-up and thereafter, exposed aluminized steel surfaces are protected with a minimum of one base coat of primer and one finish coat of heat-resistant and corrosive-resistant paint at all times. Stainless steel surfaces need not be primed or painted.

Selkirk Metalbestos assumes no liability for incidental or consequential damages of any kind or for any damages resulting in whole or in part from misuse, improper installation, or inadequate maintenance of the system or any component part thereof. This warranty is in lieu of all other express warranties or guarantees of any kind. All implied warranties, including merchantability and fitness, are limited to the duration of the express warranty contained herein. Selkirk Metalbestos neither assumes nor does it authorize any other person to assume on its behalf any other liability in connection with the sale of its products.

# COMPLIMENTARY SERVICES FROM SELKIRK...

## FIELD TECHNICAL SERVICES

To assist users of our products, Metalbestos® venting specialists throughout the U.S. conduct field investigations to help solve unusual venting problems. They also give assistance on building code and materials approval questions.

For complicated projects, our technical staff can prepare detailed take-offs from architectural drawings. And, the Selkirk seminars are still another valuable field aid available to contractors, building officials and utility service people.

## FACTORY ENGINEERING SERVICES

The Selkirk venting laboratory is one of the most advanced in the world and has conducted hundreds of tests to solve unusual venting problems.

The Selkirk engineering staff provides design services for special product applications and for installations requiring complex or unusual manifold systems.

## SALES SPECIALISTS

Selkirk Metalbestos® representatives throughout North America are qualified to provide complimentary field service to assist contractors, builders, engineers and architects in designing Boiler Stacks and Breeching, Grease Ducts, Diesel and Turbine Exhausts, Marine Exhausts, and Ducts, Freestanding Stack Systems, and Residential Chimney and Gas Vent Systems. Contact the Selkirk Metalbestos® Regional Office nearest you for assistance.



Selkirk Inc. offers customers a 10 Year Limited Warranty on all Metalbestos Venting Systems, subject to certain warranty conditions. For a copy of the warranty, please contact us or visit our website.



## HEADQUARTERS

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[www.selkirkinc.com](http://www.selkirkinc.com)

SELKIRK, INC. is a leading manufacturer of venting products for residential, commercial and industrial applications. Current operations include locations in the United States, Canada and Mexico. SELKIRK, INC. has been supplying the finest venting products for over 75 years.