



# ZeroClear®

Zero Clearance Grease Duct  
& Integral Fire Rated Chase



# TABLE OF CONTENTS

## UNDERWRITERS LABORATORIES LISTINGS

Models IPS ZC and ZC+ in sizes 5" through 36" diameters have been tested and Listed (Safety Certified) by Underwriters Laboratories, Inc. (UL) and/or Underwriters Laboratories of Canada (ULC) under a variety of categories including:

Grease Duct: UL1978, 2221, & ASTM E-2336

CERTIFICATIONS			
Model	UL1978	UL2221	ASTM-E2336*
Z3/ZC	Yes	Yes: 2 Hr	Yes: 1 Hr
Z4/ZC+	Yes	Yes: 2 Hr	Yes: 2 Hr

\*ASTM E2336 is only code required for field applied grease duct enclosures (i.e. grease duct insulation wraps applied to field fabricated grease duct)

## CODE COMPLIANCE

When installed in accordance with its installation instructions, Models ZC and ZC+ comply with the following codes:

- NFPA (National Fire Protection Association)
- ICC (International Code Council)
- UMC (Uniform Mechanical Code)
- NYC Fire Dept Approved

## ASSOCIATION/COMMITTEE PARTICIPATION



- System Concept ..... 3
- Guide to Component Parts ..... 4
- Product Identification ..... 6
- Joint Assembly ..... 7
- Product Listings
  - Joint Assembly Parts ..... 8
  - Sealants ..... 8
  - Double Wall Pipe ..... 9
  - Adjustable/Variable Pipe ..... 9
  - Double Wall Fittings ..... 10
  - Support/Guide Accessories ..... 17
  - Connection Accessories ..... 18
  - Roof Penetrations ..... 21
  - Terminations ..... 24
  - Miscellaneous ..... 27
  - Special Parts ..... 30
- Contact Directory ..... 31



# SYSTEM CONCEPT

## ZERO CLEARANCE GREASE DUCT AND INTEGRAL FIRE-RATED CHASE

ZeroClear® is the most innovative factory-built kitchen grease duct in the industry. With a zero clearance rating, our integrated chase construction sets the standard for design.

Available in both stainless and aluminized steel exteriors, ZeroClear® can be customized to your unique application requirements. ZeroClear® is the clear choice for new restaurant construction or retrofitting future expansions or modifications.

### INTEGRAL CHASE

No longer will architects or contractors need to design and install a fire-rated chase to provide protection as required for welded steel or other grease duct designs. The ZeroClear system helps reduce floor space requirements (fig.1) and additional time and costs associated with constructing an on-site fire chase (fig.2).

### SETTING THE STANDARD

ZeroClear meets the following stringent codes and standards:

- UL1978 – Standard for Grease Ducts - including 30 minute, 2000°F test
- UL2221 – Fire Rating referenced in NFPA96, IMC and UMC
- NFPA96 – Installation standard

### PERFORMANCE

Energy efficiency and overall performance are greatly improved with round grease duct designs due to less flow resistance. In addition, round systems have no corners where grease can build up, so they are easier to clean and less susceptible to fire than rectangular systems.



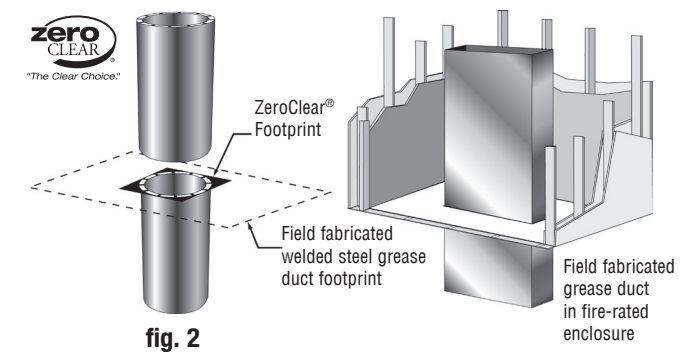
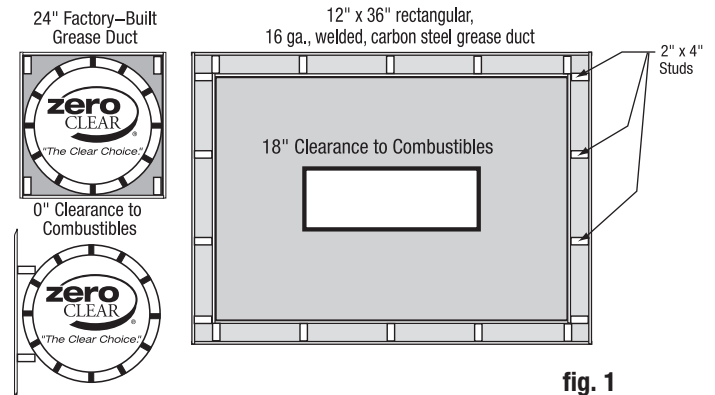
### SIMPLICITY

Almost no slope is required on horizontal runs of ZeroClear. Carbon steel duct systems require a 1/4" drop per 1' of ducting for proper contaminant drainage. Example: A 40' horizontal run of Selkirk's Grease Duct would require 10" less headroom than a typical field fabricated system.

### DESIGN SERVICES

The modular concept of factory-built grease duct provides for maximum design flexibility and ease of installation. Just ask for ZeroClear when utilizing your design services engineer for a complete system layout. The Selkirk engineering staff provides design services for special product applications and for installations requiring complex routing or unusual manifold systems.

### Grease Duct "Footprint" – 24" I.D. ZeroClear® vs. 12" x 36" Fabricated Welded Steel



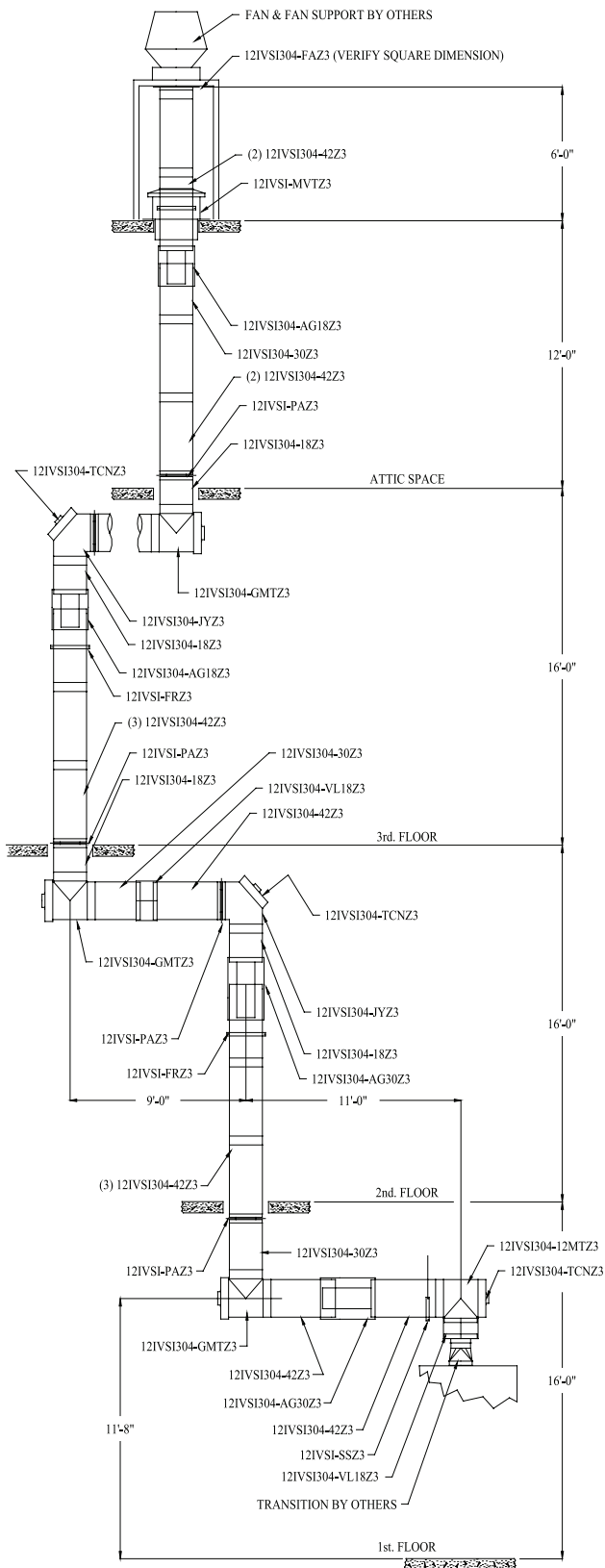
### Comparison of wrapped, welded steel and ZClear™ after 2000°F (simulated grease fire) for 30 minutes.



ZeroClear® after 2000°F (simulated grease fire) for 30 minutes.

12" x 36" rectangular, 16 Ga., welded, carbon steel duct with generic "wrap" insulation – after 2000°F (simulated grease fire) for 30 minutes.

# GUIDE TO COMPONENT PARTS



Product	Code	Page
<b>Joint Assembly Parts</b>		
Vee Band	VB	8
Channel Band	CB	8
Half Channel Band	HCB	8
Low Temperature Sealant	P600	8
<b>Double Wall Pipe</b>		
60" Pipe Length	60	9
42" Pipe Length	42	9
30" Pipe Length	30	9
18" Pipe Length	18	9
<b>Adjustable/Variable Pipe</b>		
30" Adjustable Pipe	AG30	9
18" Adjustable Pipe	AG18	9
30" Variable Pipe	VL30	10
18" Variable Pipe	VL18	10
<b>Double Wall Fittings</b>		
90° Tee	MT	10
90° Tee - Grease	GMT	11
45° Tee - Lateral	JL	11
90° Wye	JY	12

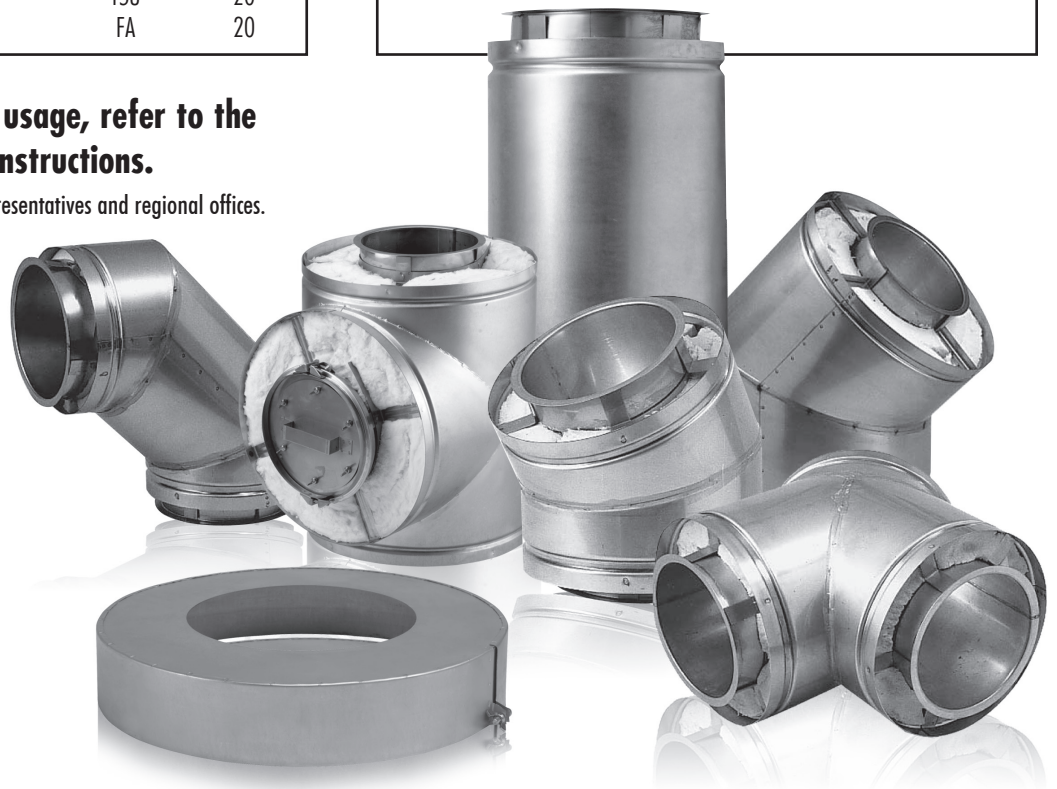
# GUIDE TO COMPONENT PARTS

Product	Code	Page
<b>Double Wall Fittings (cont)</b>		
Drain Tee Cap	TC	12
Clean Out Tee Cap	TCN	12
No Tool Access Cap	NTAC	13
15° Elbow	EL15	13
30° Elbow	EL30	14
45° Elbow	EL45	14
90° Elbow	EL90	15
Tapered Increaser	OT	15
Step Increaser	OS	16
Drain Section	DS	16
<b>Support/Guide Accessories</b>		
Half Angle Ring	HR	17
Full Angle Ring	FR	17
Plate Support Assembly	PA	17
Wall Support Assembly	WA	17
<b>Connection Accessories</b>		
Wall Guide Assembly	WG	18
Floor Guide Assembly	FG	18
Boiler Kit	BK	18
Seal Ring	SR	19
Flange Adapter	FD	19
Clamp Flange	CF	19
Flanged Hood Transition	TS	20
Unflanged Hood Transition	TSU	20
Fan Adapter	FA	20

Product	Code	Page
<b>Roof Penetrations</b>		
Storm Collar	SC	21
Tall Flashing	TF	21
Pitched Tall Flashing	PTF	21
Ventilated Thimble	THB	22
Ventilated Tall Flashing	VTF	22
Ventilated Storm Collar	VSC	22
Ventilated Roof Thimble Assembly	MVT	22
Ventilated Roof Support Assembly	MRS	23
Pitched Ventilated Roof Thimble	PVT	23
<b>Terminations</b>		
Closure Ring	CR	24
Stack Cap	SK	24
Exit Cone	EC	25
Miter Cut	MC	26
<b>Miscellaneous</b>		
Fan Adapter Termination	FAT	26
Inline Access Door	IAD	27
Guy Section	GS	27
Guy Tensioner	GT	28
Slope Transition	ST	28
Nozzle Tee Section	NTS	29
Through-Penetration Firestop	TPF	29

**Note: For details on parts usage, refer to the Selkirk installation instructions.**

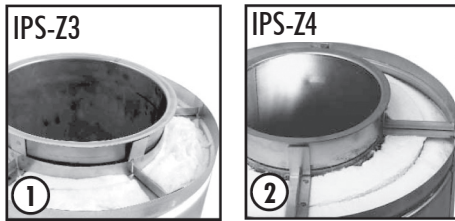
Copies are available from field service representatives and regional offices.



# PRODUCT IDENTIFICATION

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## Models IPS-Z3 and IPS-Z4



(Photo 1) Adding 3" of ceramic fiber insulation to 8" pipe makes the diameter of the outer wall 14". (Photo 2) Adding 4" of ceramic fiber insulation to the same 8" pipe makes the diameter of the outer wall 16".

## Understanding Product Codes and Part Numbers

All parts manufactured by Selkirk 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's or fitting's Internal Diameter (in inches) such as **8**, **22**, **36**, etc.
2. This is followed by the *Model* designation or **IP** for parts that are fiber insulated (Model Z3 or Z4).
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 ceramic fiber insulated, a designation is added at the end to indicate *Insulation Thickness*. **Z3**, 3"; and **Z4**, 4".  
*(For comparison, see photos above.)*

Thus, the Ordered Part Number for a 30" Adjustable Pipe, with a 6" I.D., made of 304 Stainless Steel inner and Aluminized Steel outer, packed with 3" ceramic fiber insulation, is listed:

**6IP304- AG30Z3\***

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\* **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 36" dia. Body and 30" dia. Snout:*

**36IP304-30MTZ3**

**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:*

**8IP304-16OTZ3**

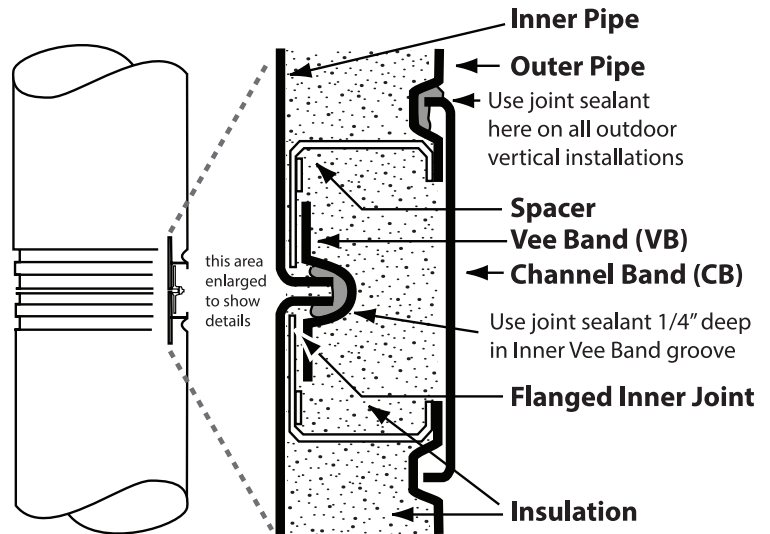
# JOINT ASSEMBLY

## The Four Easy Steps to Joint Assembly

For all Selkirk 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 Overlapping Vee Band (VB) with proper sealant.



### Step 2

Position VB below flange of pipe or fitting.



### Step 3

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



### Step 4

Wrap joint with insulation, then position Channel Band around outer casing. Align with pipe grooves and tighten.

# JOINT ASSEMBLY PARTS

## Overlapping Vee Band

Code: VB

Vee Band for connecting the inner 1/2" rolled flanges. Capable of holding 60" w.c. of pressure when properly installed.



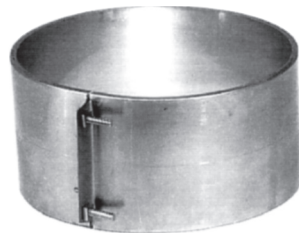
Materials Available:

All Stainless Construction

## Channel Band

Code: CB

Used to seal the Outer Jackets of two adjoining components.



(CB height is 4 3/4")

Materials Available:

Aluminized Steel/316

## Half Channel Band

Code: HCB

Used to seal the Outer Jackets of two adjoining components when the VB must remain open (such as PAs).



(HCB height is 2 1/16")

Materials Available:

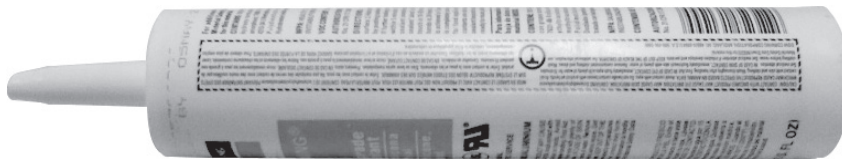
Aluminized Steel/316

### Notes:

VB's are a one-piece or two-piece design. Included w/ pipe sections

## Low Temperature Sealant Code: P600

P600 Sealant is for 600 F maximum flue gas temperatures, and also for exterior weathering.



Sealant Coverage	
Expected Number of Joints Sealed Per Tube	
Inner Dia. (inches)	P600
5/6	10
8/10	9
12	8
14/16	7
18/20	6
22/24	5
26/28	4
30/32	3
36	2
42/48	1



## Straight Pipe Lengths

Codes: 60, 42, 30, 18

Standard pipe lengths for all AMPCO exhaust systems.



\*Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
60" lengths available in aluminized outers only.			

- 60" lengths available in 8" to 14" dia, all models, ALZ outer only
- 42" lengths available in:
  - 6" dia. through 28" dia., Z3
  - 6" dia. through 24" dia., Z4
- 18" & 30" lengths available in all diameters (5" - 36") of all products (IVSI-Z3 and IVSI-Z4).

### Ordered Part Includes:

Pipe, plus one VB and one CB.

### Notes:

1. Special pipe lengths from 5" to 60" available upon request.
2. K Factors (Where L = pipe length in feet and D = pipe diameter in inches)
  - a. For Boiler Stacks and Chimneys:
 
$$K = 0.30 \frac{L}{D}$$
  - b. For Diesel and Turbine Exhausts and Grease Ducts:
 
$$K = 0.25 \frac{L}{D}$$

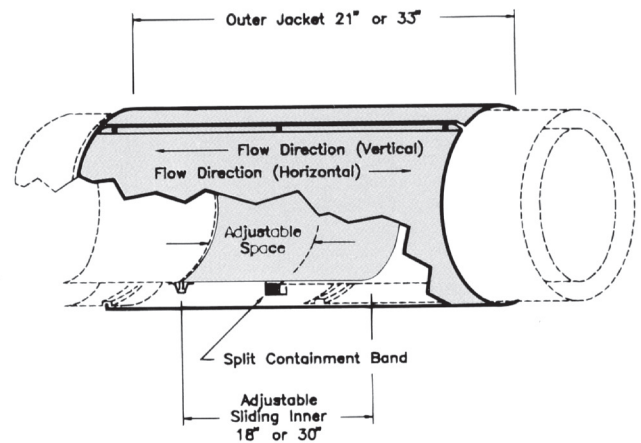
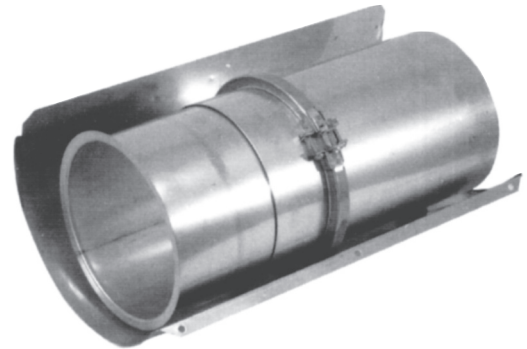
e.g. for 50' of 10" diameter pipe

$$K = 0.25 \frac{50}{10} = 1.25$$

## Adjustable Pipe Lengths

Codes: AG30, AG18

Fills odd dimensions and compensates for expansion between two fixed points on low pressure applications.



\*Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

Pipe, plus one 30" or 18" inner Slip Section, one TSU, one Packing Seal, one two-piece Compression Band, one two-piece Containment Ring, one two-piece Outer Jacket, and one VB.  
Field applied ceramic insulation provided.

### Notes:

1. Minimum installed length is 4".
2. AG18 not available for 28" diameter and above.
3. Maximum installed space is when the inner slip section protrudes at least 1/2 pipe diameter into the adjacent pipe.
4. Flow Resistance Factor (K) is the same as insulated pipe lengths.

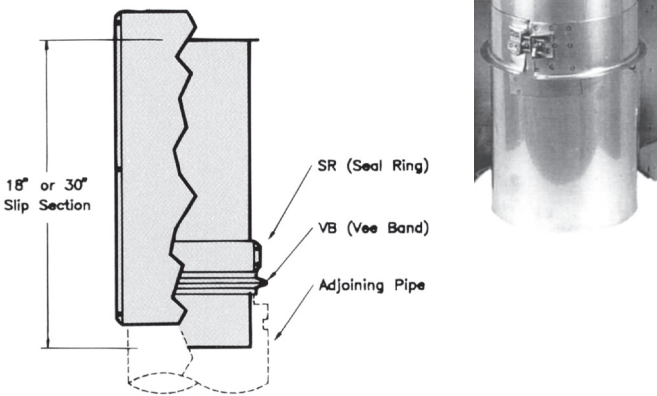
# DOUBLE WALL FITTINGS

## Variable Pipe Lengths

Codes: VL30, VL18

Fills odd dimensions between standard lengths. (Not used to compensate for thermal expansion.)

- VL30 fills 4" - 26" space.
- VL18 fills 4" - 14" space.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

VL30 or VL18, plus one 30" or 18" Inner Slip Section, one two-piece Outer Jacket, one SR, and one VB.

Field applied ceramic insulation provided.

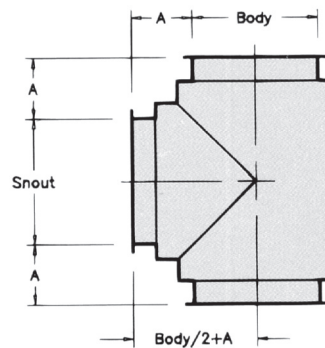
### Notes:

1. The SR is sealed with supplied sealant, not allowing the VL to compensate for expansion.
2. Flow Resistance Factor (K) is the same as insulated pipe.

## 90° Manifold Tee

Code: MT

Joins vertical and horizontal sections to affect a change of direction. Also provides for connection of drain or inspection fittings.



Dimension A	
IPS-Z3	IPS-Z4
6"	7"

Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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MT, plus one VB for the body diameter, one VB for the snout diameter, and one CB for the body diameter.

### Notes:

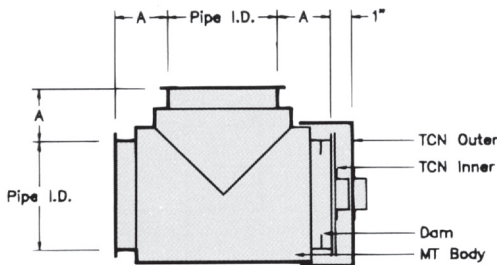
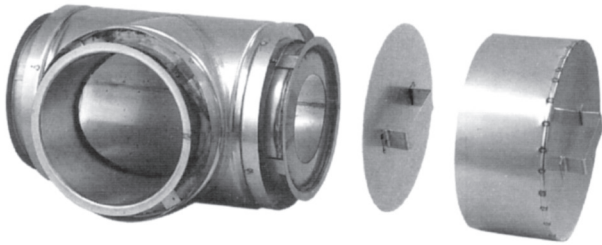
1. Use TCN or NTAC for clean out or inspection, or TC for drain at base of vertical stack.
2. Snout available in any standard diameter equal to or smaller than the body diameter.
3.  $K = 1.25$  Flow Resistance Factor

# DOUBLE WALL FITTINGS

## 90° Grease Duct Tee

Code: GMT

Part MT with dam added for protection against fluids running out while cleaning.



Dimension A	
IPS-Z3	IPS-Z4
6"	7"

Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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Ordered Part Includes:

GMT, plus one TCN, two VBs and one CB.

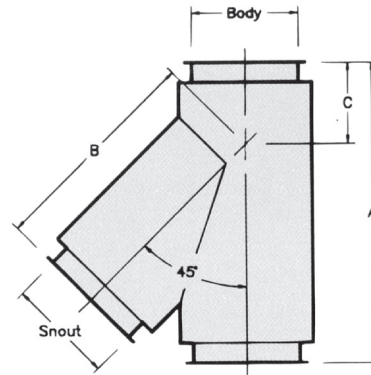
Notes:

1.  $K = 1.25$  Flow Resistance Factor

## 45° Lateral Tee

Code:

Provides a low resistance entry into  
Combine with EL45 for low resistance  
change.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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Ordered Part Includes:

JL, plus one VB for the body diameter, one VB for the snout diameter, and one CB for the body diameter.

Notes:

1. Snout available in any standard diameter equal to or smaller than the body diameter.
2.  $K = 0.4$  Flow Resistance Factor

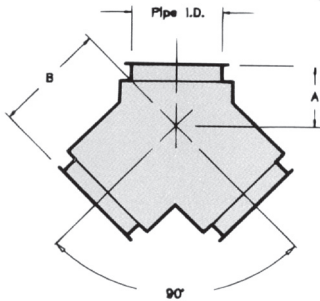
Product (pipe I. D.)			Dimensions (inches)		
IPS-Z3	IPS-Z4	(O. D.)	A	B	C
5	—	11	23 <sup>3</sup> / <sub>16</sub>	17 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>4</sub>
6	—	12	24 <sup>1</sup> / <sub>16</sub>	19	5 <sup>5</sup> / <sub>16</sub>
—	5	13	26 <sup>1</sup> / <sub>16</sub>	21 <sup>1</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>2</sub>
8	6	14	26 <sup>1</sup> / <sub>16</sub>	21 <sup>1</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>2</sub>
10	8	16	29 <sup>3</sup> / <sub>4</sub>	23 <sup>3</sup> / <sub>8</sub>	5 <sup>7</sup> / <sub>8</sub>
12	10	18	32 <sup>3</sup> / <sub>16</sub>	26 <sup>3</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>16</sub>
14	12	20	35 <sup>3</sup> / <sub>8</sub>	28 <sup>3</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>4</sub>
16	14	22	38 <sup>7</sup> / <sub>16</sub>	31 <sup>1</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>8</sub>
18	16	24	43 <sup>3</sup> / <sub>8</sub>	35 <sup>3</sup> / <sub>8</sub>	8
20	18	26	43 <sup>3</sup> / <sub>8</sub>	35 <sup>3</sup> / <sub>8</sub>	8
22	20	28	49 <sup>1</sup> / <sub>16</sub>	40 <sup>3</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>16</sub>
24	22	30	49 <sup>1</sup> / <sub>16</sub>	40 <sup>3</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>16</sub>
26	24	32	55 <sup>1</sup> / <sub>16</sub>	45 <sup>1</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>8</sub>
28	26	34	55 <sup>1</sup> / <sub>16</sub>	45 <sup>1</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>8</sub>
30	28	36	60 <sup>3</sup> / <sub>16</sub>	50 <sup>3</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>16</sub>
32	30	38	60 <sup>3</sup> / <sub>16</sub>	50 <sup>3</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>16</sub>
—	32	40	69 <sup>1</sup> / <sub>16</sub>	58 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>4</sub>
36	—	42	69 <sup>1</sup> / <sub>16</sub>	58 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>4</sub>
—	36	44	69 <sup>1</sup> / <sub>16</sub>	58 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>4</sub>
—	—	46	79 <sup>1</sup> / <sub>16</sub>	66 <sup>1</sup> / <sub>8</sub>	13
—	42	50	79 <sup>1</sup> / <sub>16</sub>	66 <sup>1</sup> / <sub>8</sub>	13
—	—	52	88 <sup>3</sup> / <sub>8</sub>	74 <sup>1</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>16</sub>
—	48	56	88 <sup>3</sup> / <sub>8</sub>	74 <sup>1</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>16</sub>

# DOUBLE WALL FITTINGS

## 90° WYE

Code: JY

Provides low pressure drop appliances in the position.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

JY, plus two VBs and one CB.

#### Notes:

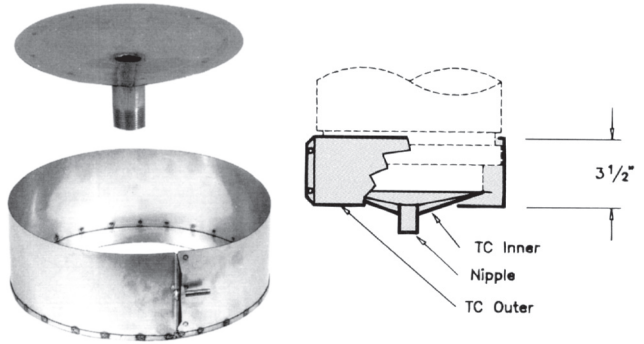
1. All openings are the same diameter.
2. Can be used with TCN to provide a single clean out toward each 90° direction change.
3. Use OT or OS as needed for smaller branch connections.
4. K = 0.6 Flow Resistance Factor

Product (pipe I. D.)			Dimensions (inches)	
IPS-Z3	IPS-Z4	(O. D.)	A	B
5	—	11	5	11
6	—	12	5	11
—	5	13	5½	12
8	6	14	5½	12
10	8	16	5½	13
12	10	18	6¾	14
14	12	20	6¾	15
16	14	22	7¾	17
18	16	24	8	19
20	18	26	8	19
22	20	28	8¾	22
24	22	30	8¾	22
26	24	32	9¾	24
28	26	34	9¾	24
30	28	36	10½	27
32	30	38	10½	27
—	32	40	11¾	31
36	—	42	11¾	31
—	36	44	11¾	31
—	—	46	13	34
—	42	50	13	34
—	—	52	14¼	38
—	48	56	14¼	38

## Drain Tee Cap

Code: TC

Provides a drain at the base of a vertical chimney when connected to the MT or JL.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

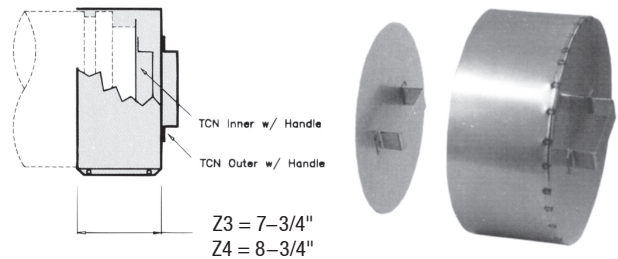
TC, plus one 1" N.P.T. Nipple (5" – 20" sizes), or 2" N.P.T. Nipple (22" – 48" sizes), one Inner Section, one Outer Jacket, and one VB.

Fiber insulation provided for IVSI-Z3/IVSI-Z4 models

## Cleanout Tee Cap

Code: TCN

Provides for cleanout at end of manifold when connected to MT or JL.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

TCN, plus one Inner Section (with handle), one Outer Jacket (with handle), and one VB.

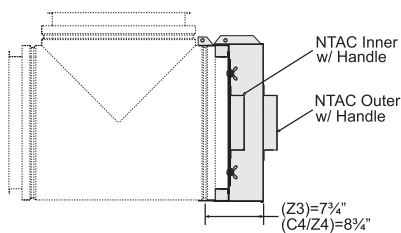
Fiber insulation provided for IVSI-Z3/IVSI-Z4 models.

# DOUBLE WALL FITTINGS

## No Tool Access Cap

Code: NTAC

Provides for toolless cleanout at end of manifold when connected to MT or JL.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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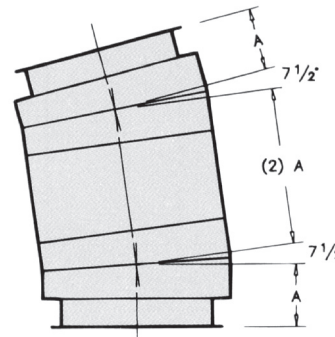
### Ordered Part Includes:

NTAC, plus one dam, insulation shield, outer cover, and one VB.  
Field applied ceramic insulation provided.

## 15° Elbow

Code: EL 15

Two-piece Elbow can establish many different degrees when combined with other standard Elbows.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

Two 7 1/2° Elbows, plus two CBs, and two VBs.

Notes:

1. K = 0.06 Flow Resistance Factor

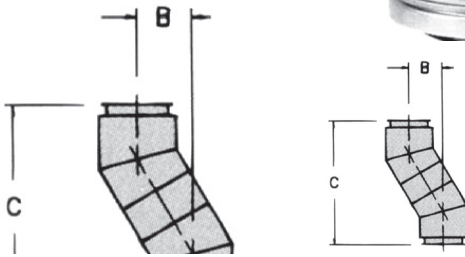
Product (pipe I. D.)		(O. D.)	Dimensions (inches)
IPS-Z3	IPS-Z4		A
5	—	11	4 <sup>3</sup> / <sub>16</sub>
6	—	12	4 <sup>3</sup> / <sub>16</sub>
—	5	13	4 <sup>7</sup> / <sub>16</sub>
8	6	14	4 <sup>7</sup> / <sub>16</sub>
10	8	16	4 <sup>1</sup> / <sub>2</sub>
12	10	18	4 <sup>7</sup> / <sub>16</sub>
14	12	20	4 <sup>7</sup> / <sub>16</sub>
16	14	22	4 <sup>1</sup> / <sub>16</sub>
18	16	24	4 <sup>3</sup> / <sub>4</sub>
20	18	26	4 <sup>13</sup> / <sub>16</sub>
22	20	28	4 <sup>7</sup> / <sub>8</sub>
24	22	30	4 <sup>15</sup> / <sub>16</sub>
26	24	32	5
28	26	34	5 <sup>1</sup> / <sub>16</sub>
30	28	36	5 <sup>1</sup> / <sub>8</sub>
32	30	38	5 <sup>1</sup> / <sub>16</sub>
—	32	40	5 <sup>5</sup> / <sub>16</sub>
36	—	42	5 <sup>5</sup> / <sub>8</sub>
—	36	44	5 <sup>5</sup> / <sub>8</sub>
—	—	46	5 <sup>1</sup> / <sub>24</sub>
—	42	50	5 <sup>1</sup> / <sub>16</sub>
—	—	52	5 <sup>1</sup> / <sub>16</sub>
—	48	56	5 <sup>1</sup> / <sub>16</sub>

# DOUBLE WALL FITTINGS

## 30° Elbow

Code: EL30

Used for a vertical or horizontal direction change of 30°.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

EL 30, plus one CB and one VB.

#### Notes:

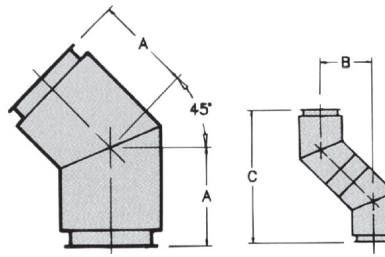
1.  $K = 0.12$  Flow Resistance Factor

Product (pipe I. D.)			Dimensions (inches)		
IPS-Z3	IPS-Z4	(O. D.)	A	B	C
5	—	11	6 <sup>1</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	24 <sup>3</sup> / <sub>8</sub>
6	—	12	6 <sup>1</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	24 <sup>1</sup> / <sub>8</sub>
—	5	13	7 <sup>1</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>16</sub>	27 <sup>1</sup> / <sub>4</sub>
8	6	14	7 <sup>1</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>16</sub>	27 <sup>1</sup> / <sub>4</sub>
10	8	16	7 <sup>7</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	29 <sup>5</sup> / <sub>8</sub>
12	10	18	8 <sup>1</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>4</sub>	30 <sup>5</sup> / <sub>8</sub>
14	12	20	8 <sup>3</sup> / <sub>8</sub>	8 <sup>3</sup> / <sub>8</sub>	31 <sup>5</sup> / <sub>8</sub>
16	14	22	9 <sup>1</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>8</sub>	34 <sup>1</sup> / <sub>8</sub>
18	16	24	9 <sup>3</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>	35
20	18	26	10 <sup>1</sup> / <sub>16</sub>	10 <sup>1</sup> / <sub>16</sub>	37 <sup>1</sup> / <sub>22</sub>
22	20	28	10 <sup>5</sup> / <sub>16</sub>	10 <sup>5</sup> / <sub>16</sub>	38 <sup>1</sup> / <sub>22</sub>
24	22	30	11	11	40 <sup>1</sup> / <sub>8</sub>
26	24	32	11 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>4</sub>	41 <sup>7</sup> / <sub>8</sub>
28	26	34	11 <sup>3</sup> / <sub>8</sub>	11 <sup>3</sup> / <sub>8</sub>	44 <sup>3</sup> / <sub>8</sub>
30	28	36	12 <sup>3</sup> / <sub>16</sub>	12 <sup>3</sup> / <sub>16</sub>	45 <sup>3</sup> / <sub>8</sub>
32	30	38	12 <sup>7</sup> / <sub>8</sub>	12 <sup>7</sup> / <sub>8</sub>	47 <sup>3</sup> / <sub>4</sub>
—	32	40	13 <sup>3</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>8</sub>	48 <sup>3</sup> / <sub>8</sub>
36	—	42	13 <sup>7</sup> / <sub>16</sub>	13 <sup>7</sup> / <sub>16</sub>	50 <sup>3</sup> / <sub>8</sub>
—	36	44	14	14	52 <sup>1</sup> / <sub>2</sub>

## 45° Elbow

Code: EL45

Used for a vertical or horizontal direction change of 45°.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part Includes:

EL45, plus One CB and one VB.

#### Notes:

1.  $K = 0.15$  Flow Resistance Factor

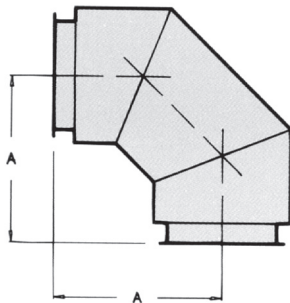
Product (pipe I. D.)			Dimensions (inches)		
IPS-Z3	IPS-Z4	(O. D.)	A	B	C
5	—	11	9 <sup>1</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>8</sub>	31 <sup>1</sup> / <sub>8</sub>
6	—	12	9 <sup>1</sup> / <sub>8</sub>	13 <sup>1</sup> / <sub>8</sub>	31 <sup>1</sup> / <sub>8</sub>
—	5	13	10 <sup>1</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>2</sub>	35
8	6	14	10 <sup>1</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>2</sub>	35
10	8	16	10 <sup>1</sup> / <sub>16</sub>	15 <sup>1</sup> / <sub>8</sub>	36 <sup>1</sup> / <sub>2</sub>
12	10	18	11 <sup>3</sup> / <sub>8</sub>	16 <sup>1</sup> / <sub>16</sub>	39 <sup>3</sup> / <sub>8</sub>
14	12	20	12 <sup>1</sup> / <sub>16</sub>	17 <sup>1</sup> / <sub>16</sub>	41 <sup>1</sup> / <sub>8</sub>
16	14	22	13	18 <sup>3</sup> / <sub>8</sub>	44 <sup>1</sup> / <sub>4</sub>
18	16	24	13 <sup>3</sup> / <sub>16</sub>	18 <sup>3</sup> / <sub>16</sub>	45 <sup>1</sup> / <sub>2</sub>
20	18	26	14 <sup>1</sup> / <sub>16</sub>	20 <sup>1</sup> / <sub>4</sub>	48 <sup>1</sup> / <sub>8</sub>
22	20	28	14 <sup>7</sup> / <sub>8</sub>	21 <sup>1</sup> / <sub>16</sub>	50 <sup>1</sup> / <sub>8</sub>
24	22	30	15 <sup>1</sup> / <sub>16</sub>	22 <sup>1</sup> / <sub>16</sub>	53 <sup>1</sup> / <sub>2</sub>
26	24	32	16 <sup>1</sup> / <sub>4</sub>	22 <sup>3</sup> / <sub>16</sub>	53 <sup>3</sup> / <sub>8</sub>
28	26	34	17	24	58
30	28	36	17 <sup>1</sup> / <sub>16</sub>	24 <sup>3</sup> / <sub>4</sub>	59 <sup>3</sup> / <sub>8</sub>
32	30	38	18 <sup>3</sup> / <sub>8</sub>	25 <sup>1</sup> / <sub>16</sub>	62 <sup>3</sup> / <sub>8</sub>
—	32	40	18 <sup>7</sup> / <sub>8</sub>	26 <sup>1</sup> / <sub>16</sub>	64 <sup>1</sup> / <sub>2</sub>
36	—	42	19 <sup>9</sup> / <sub>16</sub>	27 <sup>3</sup> / <sub>16</sub>	65 <sup>1</sup> / <sub>16</sub>
—	36	44	19 <sup>1</sup> / <sub>16</sub>	27 <sup>7</sup> / <sub>8</sub>	67

# DOUBLE WALL FITTINGS

## 90° Elbow

Code: EL90

Used for a vertical or horizontal direction change of 90°.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Ordered Part

#### Includes:

EL90, plus one CB and one VB.

#### Notes:

1. K = 0.30 Flow Resistance Factor

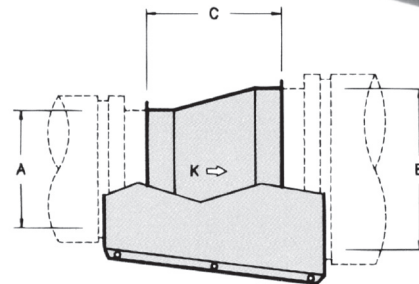
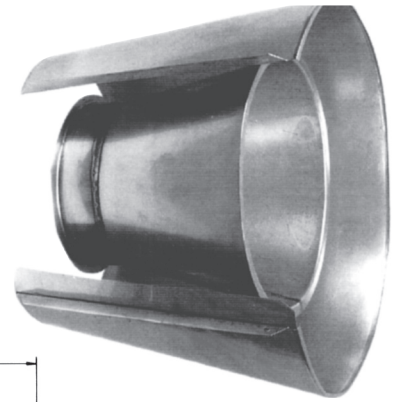
Small access door on middle gore available as special order

Product (pipe I. D.)		Dimensions (inches)	
IPS-Z3	IPS-Z4	(O. D.)	A
5	—	11	13½
6	—	12	13½
—	5	13	14½
8	6	14	14½
10	8	16	15½
12	10	18	16½
14	12	20	17½
16	14	22	18½
18	16	24	19½
20	18	26	20½
22	20	28	21½
24	22	30	22½
26	24	32	23½
28	26	34	24½
30	28	36	25½
32	30	38	26½
—	32	40	27½
36	—	42	28½
—	36	44	29½

## Tapered Increaser/Reducer

Code: OT

Used when a pipe diameter change is required.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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### Dimensions:

A = Smaller Diameter

B = Larger Diameter

C = Installed Length = [(B-A) 2] + 2 (see Note 1 below)

### Example:

Installed Length for 12IVSI304-180T equals [(18-12)2] + 2 = 14".

### Ordered Part Includes:

OT, plus one two-piece Outer Jacket, and one VB for smaller diameter. Field applied ceramic insulation provided.

### Notes:

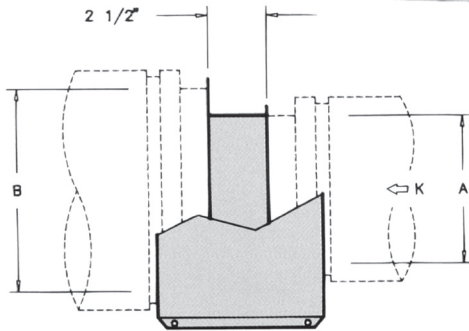
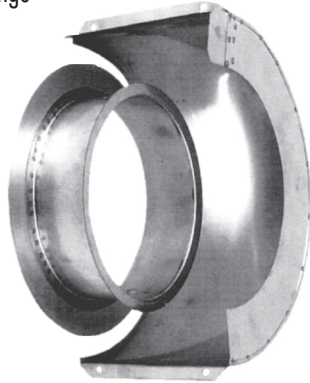
1. Installed length shall not be greater than longest available straight pipe length (see page 6) for each diameter.
2.  $K = N [1 - (A/B)^2]^2$  where N = 0.47 for one step OT  
N = 0.53 for two step OT
3. Special Eccentric Increaser (flat bottom) available w/ same length rules. Part code is EOT

# DOUBLE WALL FITTINGS

## Step Increaser/Reducer

Code: OS

Used when pipe diameter change is required in a small space.



### Materials Available:

316/Alum

316/316

### Ordered Part Includes:

OS (Inner Stepped Pipe), plus one two-piece Outer Jacket, and one VB for the smaller diameter.

Field applied ceramic insulation provided.

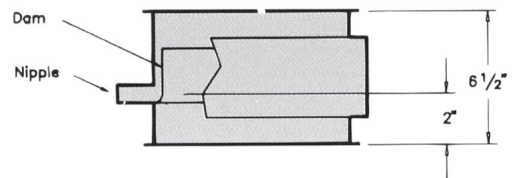
### Notes:

1. This is a non-structural part; use only if OT will not fit within the allowable space.
2.  $K = N [1 - (A/B)^2]^2$

## Drain Section

Code: DS

Used with open stack terminations for draining off rain water from inside vertical or horizontal flue.



### Materials Available (shaded areas):

304/Alum

316/Alum

304/304

316/316

### Ordered Part Includes:

DS, plus one Drain Dam within the pipe length, one 1" Nipple, one CB, and one VB.

### Notes:

1.  $K = 0.25$  Flow Resistance Factor



# SUPPORT / GUIDE ACCESSORIES

## Angle Rings

Codes: HR & FR

Used for guiding and/or supporting horizontal installations.



Materials Available:

Painted Steel

Product		Dimensions (inches) - HR				
(pipe I. D.)		Bolt Hole Circle	I.D. of Ring	No of Holes (HR)	Size of Angles	Angle of Holes
IPS-Z3	IPS-Z4					
5	—	13	11 $\frac{1}{8}$	6	(1)	45
6	—	14	12 $\frac{1}{8}$	6	(1)	45
—	5	15	13 $\frac{1}{8}$	6	(1)	45
8	6	16	14 $\frac{1}{8}$	6	(1)	45
10	8	18	16 $\frac{1}{8}$	6	(1)	45
12	10	20	18 $\frac{1}{8}$	6	(1)	45
14	12	22	20 $\frac{1}{8}$	6	(1)	45
16	14	24	22 $\frac{1}{8}$	6	(1)	45
18	16	26	24 $\frac{1}{8}$	10	(2)	22.5
20	18	28	26 $\frac{1}{8}$	10	(2)	22.5
22	20	30	28 $\frac{1}{8}$	10	(2)	22.5
24	22	32	30 $\frac{1}{8}$	10	(2)	22.5
26	24	34	32 $\frac{1}{8}$	10	(2)	22.5
28	26	36	34 $\frac{1}{8}$	10	(2)	22.5
30	28	38	36 $\frac{1}{8}$	10	(2)	22.5
32	30	40	38 $\frac{1}{8}$	10	(2)	22.5
—	32	42	40 $\frac{1}{8}$	10	(2)	22.5
36	—	44	42 $\frac{1}{8}$	10	(2)	22.5
—	36	46	44 $\frac{1}{8}$	10	(2)	22.5

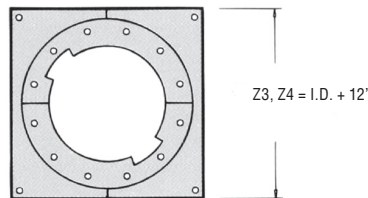
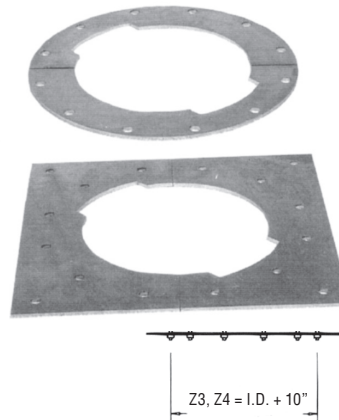
(1) Size of Angles = 1 $\frac{1}{2}$  x 1 $\frac{1}{2}$  x  $\frac{3}{16}$

(2) Size of Angles = 2 x 2 x  $\frac{3}{16}$

## Plate Support Assembly

Code: PA

Used for supporting the load of the stack, and as a fixed point anchor near fittings.



Materials Available:

Painted Steel

### Ordered Part Includes:

Split (square) plate, one CF, two HCBs and hardware.

### Plate Thickness:

0.188" for sizes 6" through 20" diameters  
0.250" for sizes 22" through 36" diameters

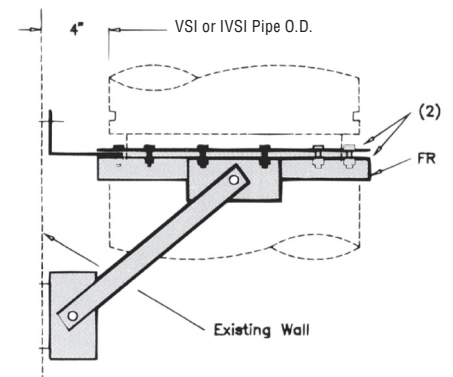
### Notes:

- Two 316 Stainless Steel HCBs should be ordered separately for stainless steel outer projects.
- PA fabricated from 304 Stainless Steel is available upon request and is non-returnable. Allow extra manufacturing time.

## Wall Support Assembly

Code: WA

"Limited" support assembly with factory-supplied bracing.



Materials Available:

Painted Steel

### Ordered Part Includes:

One FR, two CFs, two HCBs, five brackets, two struts, and all hardware except connection at wall.

### Notes:

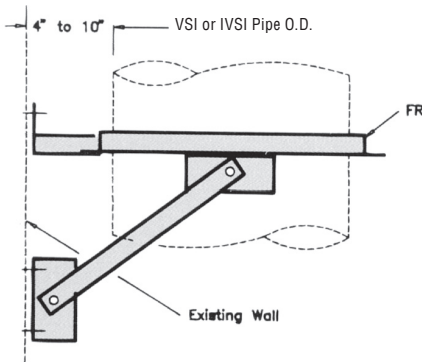
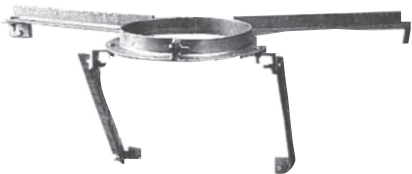
- Assembly will maintain a 4" clearance between pipe O.D. and supporting structure.

# CONNECTION ACCESSORIES

## Wall Guide Assembly

Code: WG

Same use as FR, but with factory-supplied bracing.



Materials Available:

Painted Steel

### Ordered Part Includes:

One FR, four struts, and six brackets.

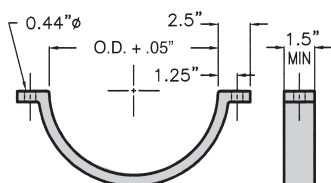
### Notes:

1. Assembly will maintain a 4" to 10" clearance between pipe O.D. and supporting structure.

## Support Strap

Code: SS

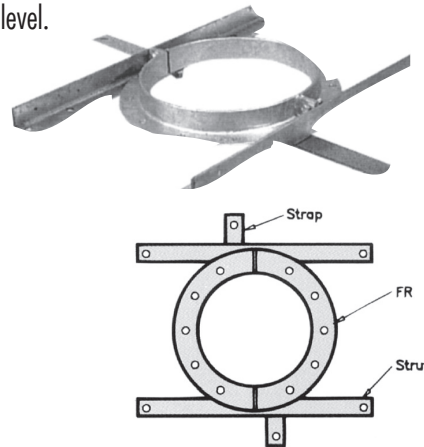
Available up to 28" OD pipe only. 0.188" thick painted steel.



## Floor Guide Assembly

Code: FG

Same use as FR, but with factory-supplied bracing for use at floor level.



Materials Available:

Painted Steel

### Ordered Part

### Includes:

One FR, two struts, and two straps.

### Notes:

1. Maximum hole through floor should not exceed the pipe O.D. plus 8".

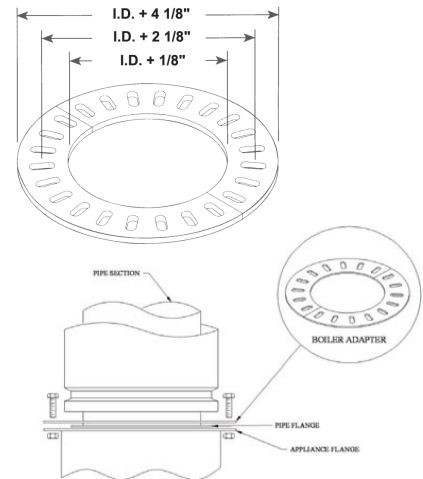
Pipe I.D. (inches)		Material (inches)	
IPS-Z3	IPS-Z4	Strut Length	Strut Size
—	—	21	(1)
5	—	21½	(1)
—	5	22½	(1)
6	—	24	(1)
8	6	27	(1)
10	8	29	(2)
12	10	30	(2)
14	12	32	(2)
16	14	33	(2)
18	16	34½	(3)
20	18	36	(3)
22	20	37	(3)
24	22	38	(3)
26	24	39½	(3)
28	26	41	(3)
30	28	42½	(3)
32	30	44	(3)
—	32	46	(3)
36	—	47	(3)
—	—	48	(3)
—	36	50	(3)

- (1) Steel Angle, 1½" x 1½" x ⅜"
- (2) Steel Angle, 1¾" x 1¾" x ⅜"
- (3) Steel Angle, 2" x 2" x ⅜"

## Flanged Boiler Kit

Code: BK

Used to transition to a flanged appliance. Features 24 connection slots to mate 4, 6, 8 or 12 bolt hole patterns.



24 Holes .375 x 1.0 at 15 degrees. Constructed of 1/4" hot-rolled steel"

Materials Available:

Painted Steel

### Ordered Part Includes:

Two Half Boiler Adapter Flange Plates

### Notes:

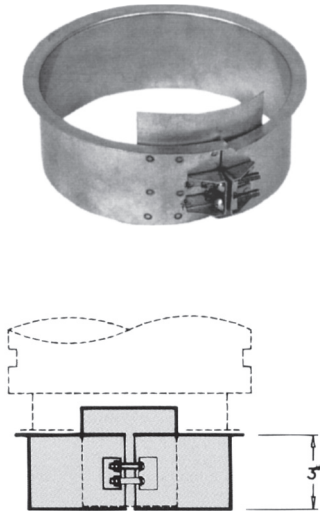
1. Order HCB's separately if needed

# CONNECTION ACCESSORIES

## Seal Ring

Code: SR

Used for non-welded attachment to appliances having an unflanged or collar outlet.



Materials Available (shaded areas):

304/Alum 316/Alum 304/304 316/316

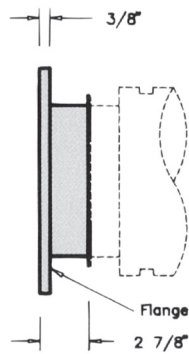
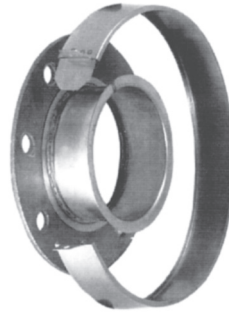
**Ordered Part Includes:**

SR, plus one VB and hardware.

## Flange Adapter

Code: FD

Provides a rigid connection to a 125 lb. or 150 lb ANSI flange.



Materials Available (shaded areas):

316/Alum 316/316

**Ordered Part Includes:**

Flange welded to TS, one CB, and one VB.

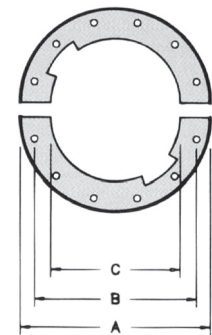
Field applied ceramic insulation provided.

Product	Dimensions (inches)			
Pipe I.D.	No. of Bolts	Bolt Hole Dia.	Flange O.D.	Bolt Circle
5	8	7/8	10	8 1/2
6	8	7/8	11	9 1/2
8	8	7/8	13 1/2	11 1/4
10	12	1	16	14 1/4
12	12	1	19	17
14	12	1 1/8	21	18 3/4
16	16	1 1/8	23 1/2	21 1/4
18	16	1 1/4	25	22 3/4
20	20	1 1/4	27 1/2	25
22	20	1 3/8	29 1/2	27 1/4
24	20	1 3/8	32	29 1/2
28	28	1 3/8	36 1/2	34
30	28	1 3/8	38 1/2	36
32	28	1 3/8	41 1/4	38 1/2
36	32	1 3/8	46	42 1/4

## Clamp Flange

Code: CF

Can be used as an attachment to flanged equipment (also part of PA and WA).



A = Flange O.D.
Z3 = I.D. + 11"
Z4 = I.D. + 11"
B = Bolt Hole Circle
Z3 = I.D. + 10"
Z4 = I.D. + 10"
C = Flange I.D.
Z3, Z4 = I.D. + 1/2"

Materials Available:

Painted Steel

**Ordered Part Includes:**

Two half clamp flange plates.

**Notes:**

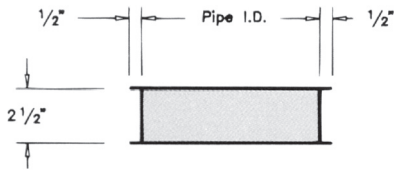
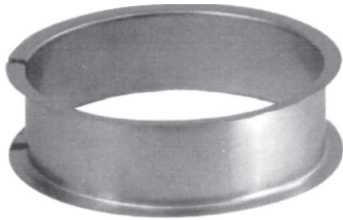
- 0.129" minimum thickness for sizes 5" to 8" diameters.
- 0.188" minimum thickness for sizes 10" through 36" diameters.
- Order HCB's separately, if needed.

# CONNECTION ACCESSORIES

## Flanged Hood Transition

Code: TS

Used on standard appliances such as kitchen hood exhausts. Flanged at both ends.



Materials Available (shaded areas):

304/Alum 316/Alum 304/304 316/316

### Ordered Part Includes:

TS, plus one CB and one VB.

Field applied ceramic insulation provided.

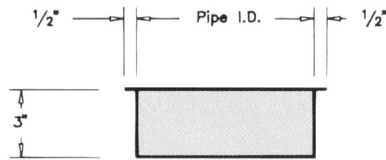
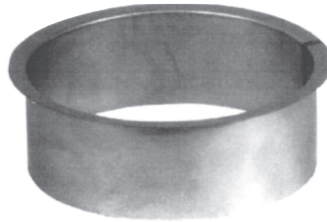
### Notes:

1. Can be used for welding to equipment or transitions fabricated in the field.

## Unflanged Hood Transition

Code: TSU

Used on standard appliances such as kitchen hood exhausts. Flanged at one end.



Materials Available (shaded areas):

304/Alum 316/Alum 304/304 316/316

### Ordered Part Includes:

TSU, plus one CB and one VB.

Field applied ceramic insulation provided.

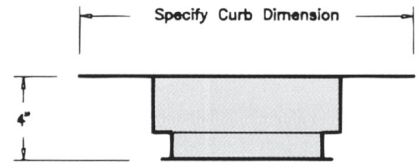
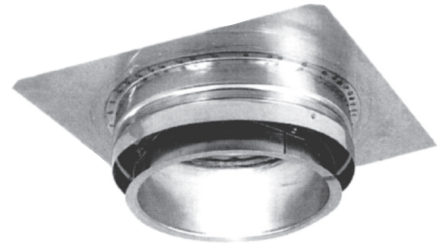
### Notes:

1. Can be used for welding to equipment or transitions fabricated in the field.

## Fan Adapter

Code: FA

Used for connection to an "up-blast" kitchen exhaust fan.



Materials Available (shaded areas):

304/Alum 316/Alum 304/304 316/316

### Ordered Part Includes:

FA, plus one VB and one CB.

### Notes:

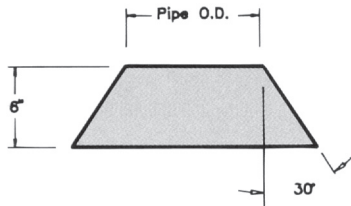
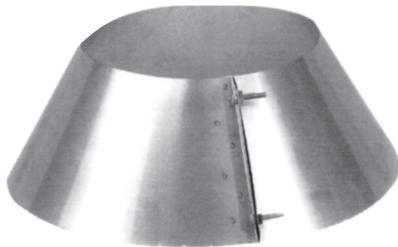
1. Dimension of square plate (which is sandwiched between curb and fan housing) must be specified when ordering.

# ROOF PENETRATIONS

## Storm Collar

Code: SC

Used above the TF and PTF for complete weatherization above the roof.



Materials Available (shaded areas):

Aluminized or Galvanized Steel	304	316
--------------------------------	-----	-----

**Ordered Part Includes:**

SC, plus hardware.

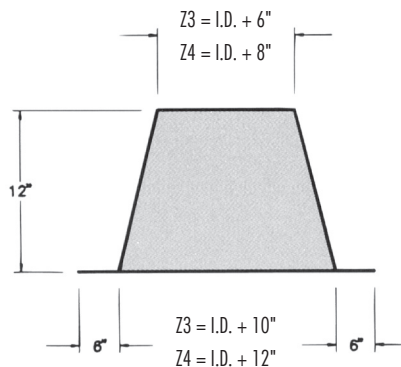
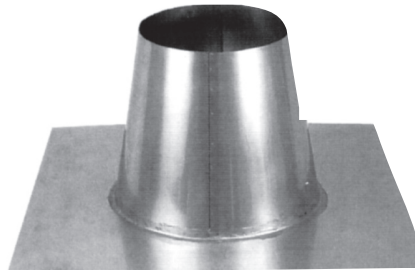
**Notes:**

1. Requires P600 sealant when installing.

## Tall Flashing

Code: TF

Used in conjunction with SC for weatherization at the roof.



Materials Available (shaded areas):

Aluminized or Galvanized Steel	304	316
--------------------------------	-----	-----

**Ordered Part Includes:**

TF only.

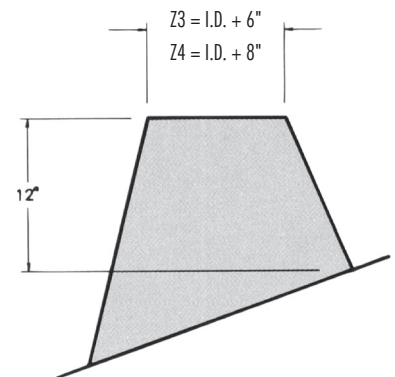
**Notes:**

1. Use limited to installations where complete roof penetration is non-combustible.

## Pitched Tall Flashing

Code: PTF

Same function as TF, except for use on a pitched roof.



Materials Available (shaded areas):

Aluminized or Galvanized Steel	304	316
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**Ordered Part Includes:**

PTF only (specify pitch when ordering).

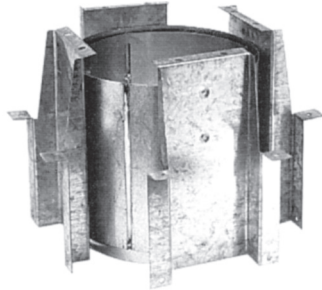
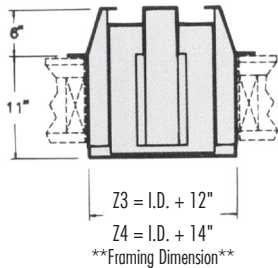
**Notes:**

1. Part is non-returnable and may require extra manufacturing time.
2. Use limited to installations where complete roof penetration is non-combustible.

# ROOF PENETRATIONS

## Ventilated Thimble Code: THB

Body part of MVT, MRS, and PVT.  
Also can be used by itself for a wall penetration.



Materials Available:

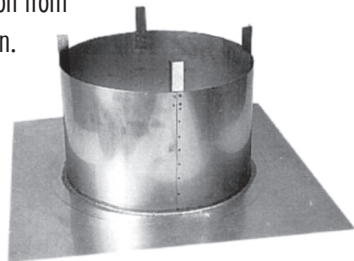
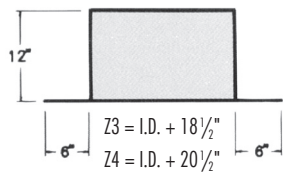
Galvanized Steel

Notes:

1. Model PS part used for IPS applications.

## Ventilated Tall Flashing Code: VTF

Encloses the THB, offers protection from weather and moisture penetration.



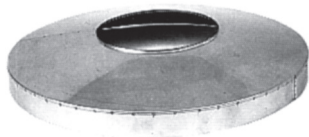
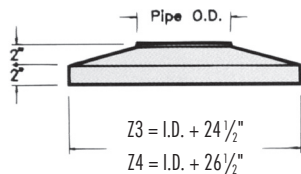
Materials Available (shaded areas):

Aluminized or Galvanized Steel    304    316

Notes: 1. Model VSI part used for IVSI applications.

## Ventilated Storm Collar Code: VSC

Protects the VTF from weather and moisture penetration.

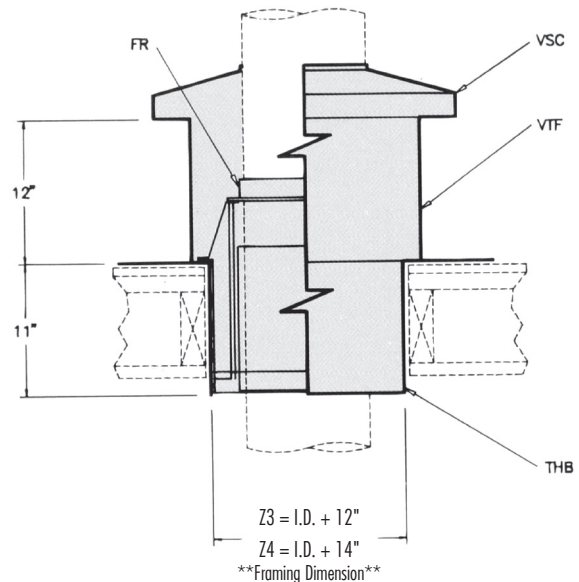
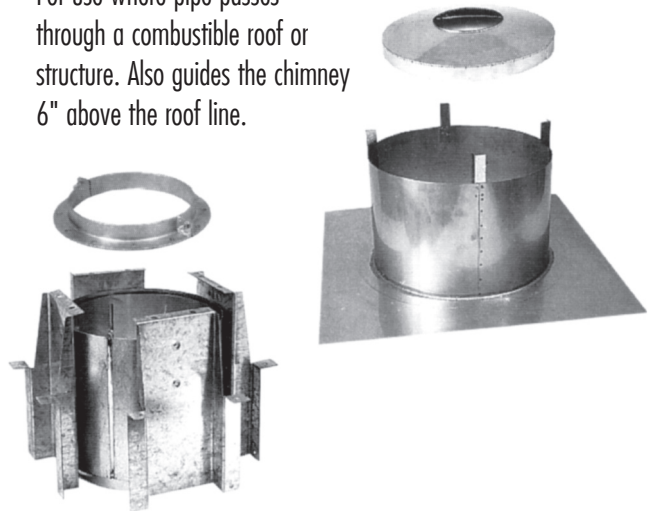


Materials Available (shaded areas):

Aluminized or Galvanized Steel    304    316

## Ventilated Roof Thimble Assembly Code: MVT

For use where pipe passes through a combustible roof or structure. Also guides the chimney 6" above the roof line.



Materials Available (shaded areas):

Aluminized or Galvanized Steel    304    316

Ordered Part Includes:

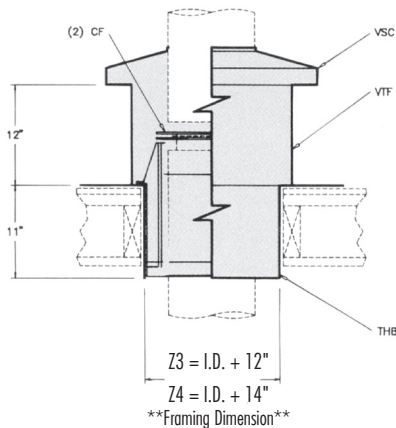
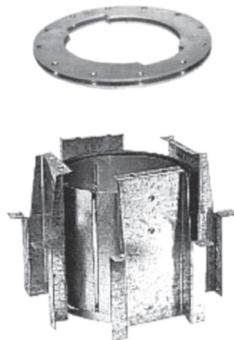
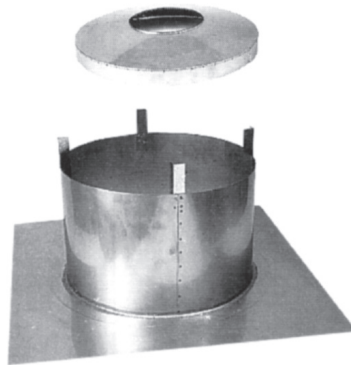
One THB, one FR, one VTF, and one VSC.

# ROOF PENETRATIONS

## Ventilated Roof Support Assembly

Code: MRS

For use where pipe passes through a combustible roof or structure. Supports the chimney 6" above the roof line which may require an expansion joint (AG or BJ) below the roof.



Materials Available (shaded areas):

Aluminized or Galvanized Steel	304	316
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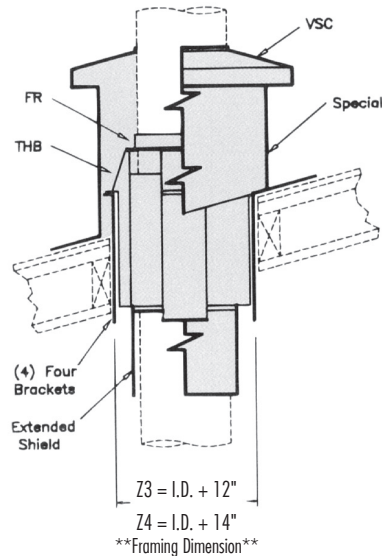
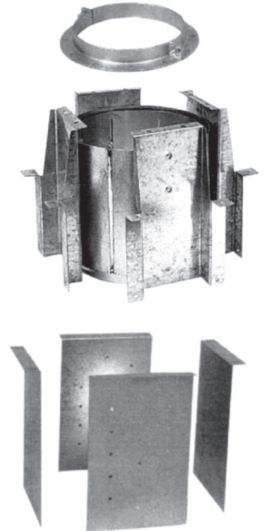
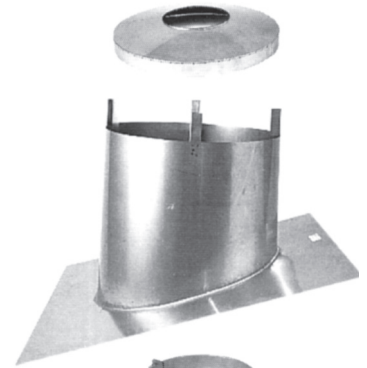
### Ordered Part Includes:

One THB, two CFs, one VTF, and one VSC.

## Pitched Ventilated Roof Thimble

Code: PVT

For use where pipe passes through a combustible pitched roof or structure. Above 24" sizes and steep pitches are not available.



Materials Available (shaded areas):

Aluminized or Galvanized Steel	304	316
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### Ordered Part Includes:

One THB, 4 brackets, extended shield, special VTF, one FR, and one VSC.

### Notes:

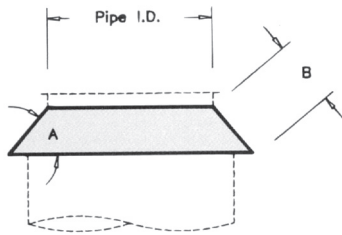
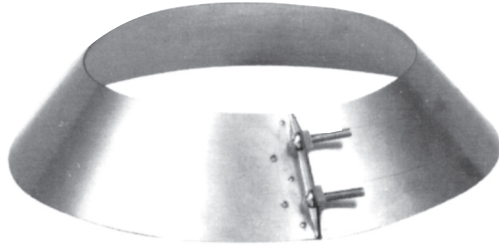
1. Does not provide lateral support. An additional FR is required below the roof.
2. May require extra manufacturing time and is non-returnable.

# TERMINATIONS

## Open Stack Closure Ring

Code: CR

Protects the insulated space between standard pipe inner and outer. Requires a drain at base of stack.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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Ordered Part Includes:

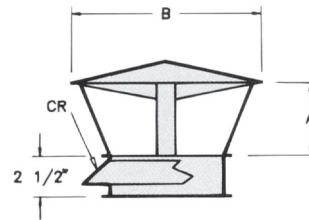
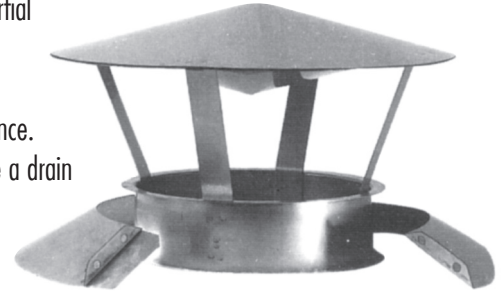
CR, plus hardware.

Product	Dimensions	
	A	B
Z3	25°	4½"
Z4	17°	5¼"

## Stack Cap

Code: SK

Provides partial protection with low flow resistance. May require a drain at base of stack.



Materials Available (shaded areas):

304/Alum	316/Alum	304/304	316/316
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Ordered Part Includes:

SK, plus one CR and one VB.

Notes:

1. K = 0.5 Flow Resistance Factor

Product (pipe I. D.)	Dimensions (inches)	
	A	B
Z3		
Z4		
5	2½	10¼
6	3	10¼
8	4	13¾
10	5	17
12	6	20½
14	7	24
16	8	27¾
18	9	30¾
20	10	34¾
22	11	37¾
24	12	41
26	13	44¾
28	14	47¾
30	15	51¼
32	16	54¾
36	18	61½
42	21	71¼
48	24	82

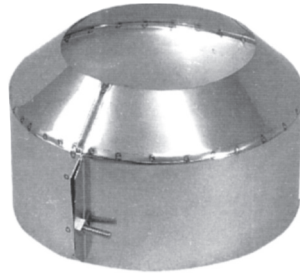
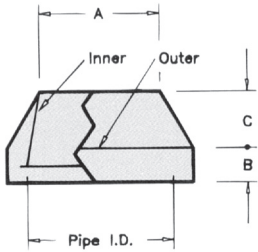


# TERMINATIONS

## Insulated Exit Cone

Code: EC

Will increase stack exit velocity 1 1/2 times. Requires a drain at bottom of stack.



Materials Available (shaded areas):

304/Alum

316/Alum

304/304

316/316

### Ordered Part Includes:

One inner cone, one outer finish collar, and one VB.

### Notes:

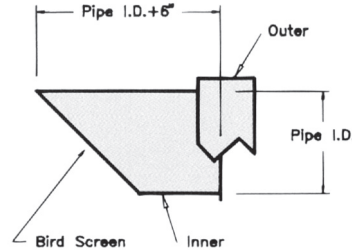
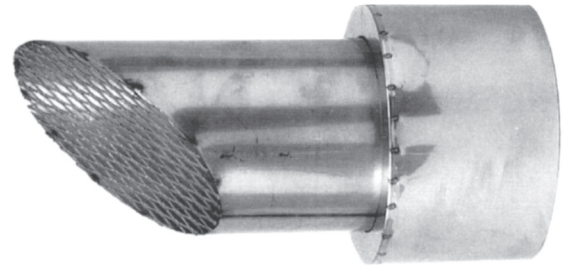
1. K = 1.25 Flow Resistance Factors

Product (pipe I. D.)			Dimensions (inches)		
Z3	Z4	(O. D.)	A	B	C
—	—	7	4 <sup>7</sup> / <sub>8</sub>	4	1 <sup>3</sup> / <sub>8</sub>
—	—	8/9	4 <sup>7</sup> / <sub>8</sub>	4	1 <sup>1</sup> / <sub>2</sub>
—	—	10	6 <sup>5</sup> / <sub>16</sub>	4	1 <sup>3</sup> / <sub>4</sub>
5	—	11	7 <sup>3</sup> / <sub>8</sub>	4	2 <sup>1</sup> / <sub>16</sub>
6	—	12	8 <sup>9</sup> / <sub>16</sub>	4	3 <sup>3</sup> / <sub>8</sub>
—	5	13	9 <sup>1</sup> / <sub>16</sub>	4	3 <sup>1</sup> / <sub>16</sub>
8	6	14	9 <sup>7</sup> / <sub>8</sub>	4	3 <sup>3</sup> / <sub>4</sub>
10	8	16	11 <sup>1</sup> / <sub>2</sub>	4	4
12	10	18	13 <sup>1</sup> / <sub>16</sub>	6	<sup>5</sup> / <sub>8</sub>
14	12	20	14 <sup>3</sup> / <sub>4</sub>	6	4 <sup>3</sup> / <sub>8</sub>
16	14	22	16 <sup>5</sup> / <sub>16</sub>	6	5
18	16	24	18	6	5 <sup>1</sup> / <sub>4</sub>
20	18	26	19 <sup>3</sup> / <sub>8</sub>	6	5 <sup>5</sup> / <sub>8</sub>
22	20	28	21 <sup>1</sup> / <sub>4</sub>	6	6
24	22	30	22 <sup>7</sup> / <sub>8</sub>	8	6 <sup>1</sup> / <sub>4</sub>
26	24	32	24 <sup>1</sup> / <sub>2</sub>	8	6 <sup>5</sup> / <sub>8</sub>
28	26	34	26 <sup>3</sup> / <sub>8</sub>	8	6 <sup>7</sup> / <sub>8</sub>
30	28	36	27 <sup>3</sup> / <sub>4</sub>	10	7 <sup>1</sup> / <sub>4</sub>
32	30	38	29 <sup>3</sup> / <sub>8</sub>	10	7 <sup>1</sup> / <sub>2</sub>
—	32	40	31	10	7 <sup>7</sup> / <sub>8</sub>
36	—	42	32 <sup>3</sup> / <sub>4</sub>	12	8 <sup>9</sup> / <sub>16</sub>
—	36	44	34 <sup>5</sup> / <sub>16</sub>	12	8 <sup>1</sup> / <sub>2</sub>
—	—	46	36	12	8 <sup>7</sup> / <sub>8</sub>
—	42	50	39 <sup>3</sup> / <sub>16</sub>	12	9 <sup>1</sup> / <sub>2</sub>
—	—	52	—	12	—
—	48	56	—	12	—

## Miter Cut

Code: MC

Used for horizontal engine exhaust termination.



Materials Available (shaded areas):

304/Alum

316/Alum

304/304

316/316

### Ordered Part Includes:

One inner with bird screen, one outer finish collar, and one VB.

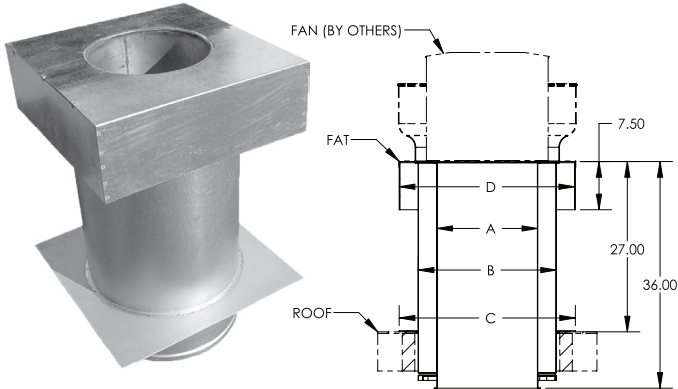
### Notes:

1. The 1/2" mesh-pattern bird screen has a 60% open area.
2. K = 1.25 Flow Resistance Factor

## Fan Adapter Termination

**Code: FAT**

Provides provides a surface for mounting and installing an upblast discharge fan.



Materials Available (shaded areas):

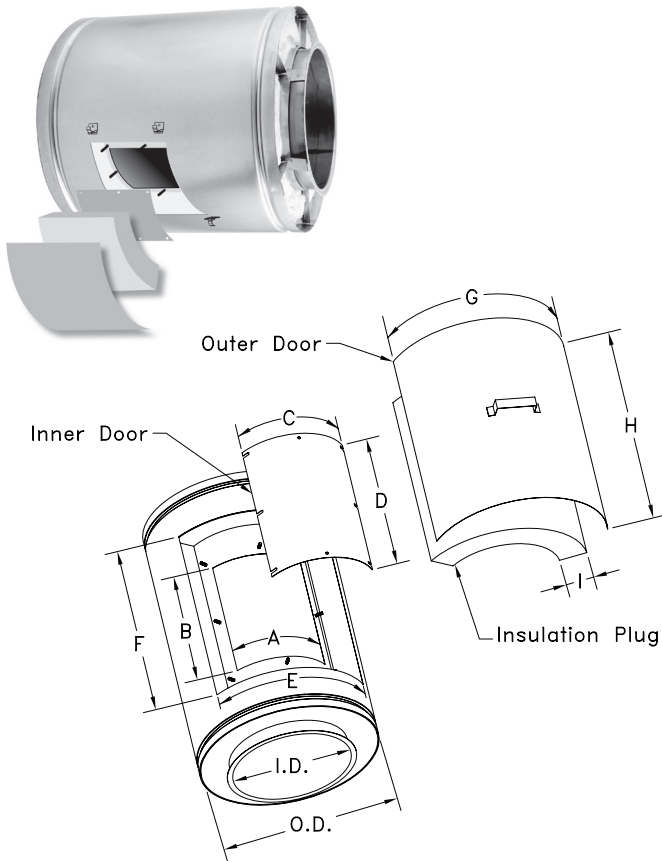
304/Alum	316/Alum	304/304	316/316
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	"A" Pipe I.D.	"B" Pipe O.D.	"C" Roof Plate	"D" Curb Size
8IP304-FAT195Z3	08	14	20	19.5
8IP304-FAT220Z3	08	14	20	22.0
10IP304-FAT195Z3	10	16	22	19.5
10IP304-FAT230Z3	10	16	22	23.0
12IP304-FAT180Z3	12	18	24	18.0
12IP304-FAT195Z3	12	18	24	19.5
12IP304-FAT220Z3	12	18	24	22.0
12IP304-FAT230Z3	12	18	24	23.0
14IP304-FAT220Z3	14	20	26	22.0
14IP304-FAT230Z3	14	20	26	23.0
14IP304-FAT265Z3	14	20	26	26.5
16IP304-FAT230Z3	16	22	28	23.0
16IP304-FAT265Z3	16	22	28	26.5
16IP304-FAT280Z3	16	22	28	28.0
18IP304-FAT265Z3	18	24	30	26.5
18IP304-FAT280Z3	18	24	30	28.0
20IP304-FAT280Z3	20	26	32	28.0
08IP304-FAT195Z4	08	14	20	19.5
08IP304-FAT220Z4	08	14	20	22.0
10IP304-FAT195Z4	10	16	22	19.5
10IP304-FAT230Z4	10	16	22	23.0
12IP304-FAT220Z4	12	18	24	22.0
12IP304-FAT230Z4	12	18	24	23.0
14IP304-FAT230Z4	14	20	26	23.0
14IP304-FAT265Z4	14	20	26	26.5
16IP304-FAT265Z4	16	22	28	26.5
16IP304-FAT280Z4	16	22	28	28.0
18IP304-FAT280Z4	18	24	30	28.0

# MISCELLANEOUS

## Inline Access Door

Code: IAD



### Notes:

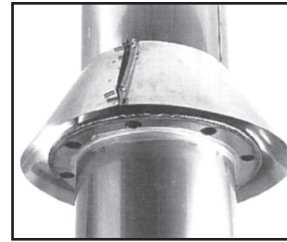
1. IAD available on 30" Pipe Lengths only.
2. Inner door is secured in place with wing nuts.
3. Outer door is secured in place with snap-down latches.

Product	Inner Hole Size (inches)		Inner Door Size (inches)		Outer Hole Size (inches)			Outer Door Size (inches)	
	A	B	C	D	E	F	G	H	
Pipe I.D.									
5 & 6	3½	12	6	14½	9½	18½	12	21	
8 & 10	6	12	8½	14½	12	18½	14½	21	
12 - 16	9	12	11½	14½	15	18½	17½	21	
18 - 22	13	12	15½	14½	19	18½	21½	21	
24 - 30	18	12	20½	14½	24	18½	26½	21	
32 & 36	24	12	26½	14½	30	18½	32½	21	

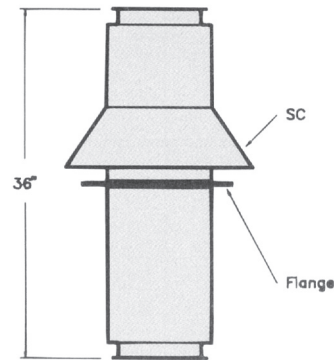
## Guy Section

Code: GS

A rigid, factory-welded section for attaching guys to chimney stack.



(insert photo shows storm collar)



Materials Available (shaded areas):

304/Alum

316/Alum

304/304

316/316

### Ordered Part Includes:

Welded pipe section with flange and storm collar, one CB, and one VB.

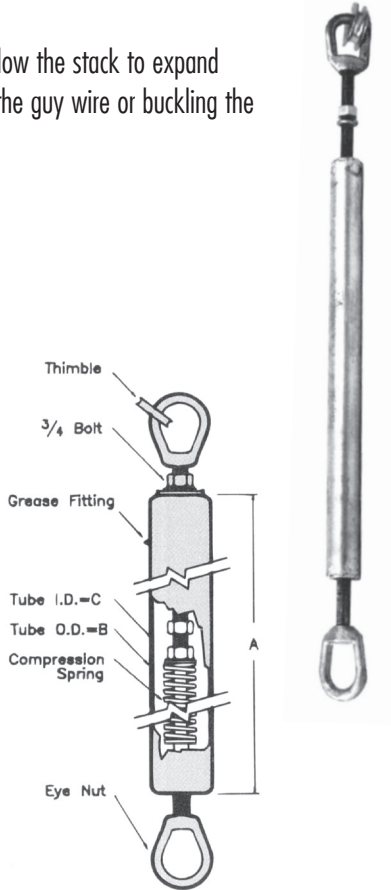
### Notes:

1. Flange has  $13/16$ " diameter holes, 30° apart.
2. Flow Resistance Factor (K) is the same as insulated pipe.

## Guy Tensioner

Code: GT

Used with GS to allow the stack to expand without stretching the guy wire or buckling the stack.



### Notes:

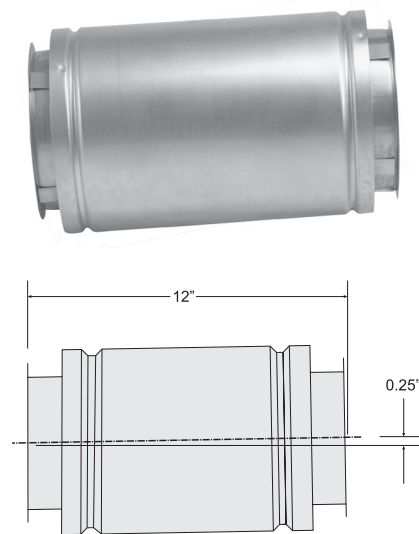
1. Available in four tension capacities as shown below.
2. Guy calculations available upon request.

Dimensions (inches)				
Tension Capacity (lb.)	1050	1350	2100	2700
Tube Length - A	24	38	24	38
Tube O. D.	1 $\frac{1}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{1}{8}$ "	2 $\frac{3}{8}$ "
Tube I. D.	1 $\frac{3}{16}$ "	2 $\frac{1}{16}$ "	1 $\frac{3}{16}$ "	2 $\frac{1}{16}$ "
Maximum Compression Travel	3	3	3	3
Weight (lb.)	15	25	22	37

## Slope Transition

Code: ST

Used to create immediate  $\frac{1}{4}$ " on 12" slope on horizontal runs when required by local code. Typically used in pairs (one at lower (inlet) end, other at upper (outlet) end of sloped [ $\frac{1}{4}$  on 12] horizontal run). Not required by UL certification or SELKIRK, but may be required in some jurisdictional areas.



### Materials Available (shaded areas):

304/Alum

316/Alum

304/304

316/316

### Ordered Part Includes:

Slope Transition, plus one VB and one CB.

### Notes:

1. K Factors =  
(use same formula as Straight Pipe Lengths for approximate K factor)

# MISCELLANEOUS

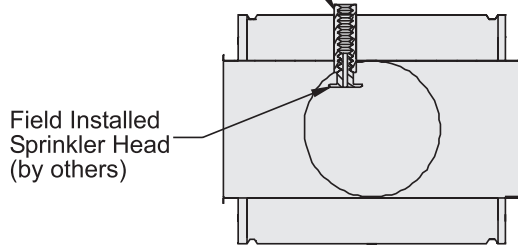
## Nozzle Tee Section

Code: NTS

Provides access for installation/inspection of sprinkler head.



Factory Installed  
Threaded Coupler  
for 1/2" or 3/4" NPT  
as required.



Materials Available (shaded areas):

304/Alum

316/Alum

304/304

316/316

### Ordered Part Includes:

NTS, plus one VB for the body diameter, one VB for the snout diameter, and one CB for the body diameter.

### Notes:

1. Use TCN or NTAC for access cover
2. Snout available in any standard diameter equal to or smaller than the body diameter.
3. For dimension see 90° Manifold Tee in this booklet.
4.  $K=1.25$  plus an unknown for the sprinkler head. Contact sprinkler head manufacturer.

## Through-Penetration Firestop

Code: TPF

Use when penetrating a 2 hour fire-rated floor or wall with IPS-Z3 or IPS-Z4 grease duct.



Materials Available (shaded areas):

Aluminized Steel

304 or 316 Stainless Steel

### Ordered Part Includes:

One closure band, two cover plate halves, 12" wide insulation strip and one 4" insulation strip.

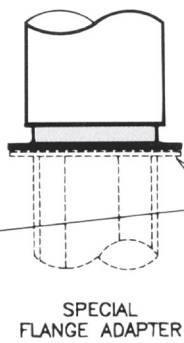
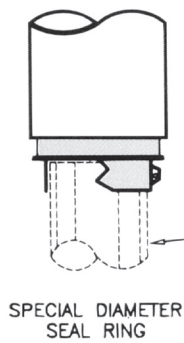
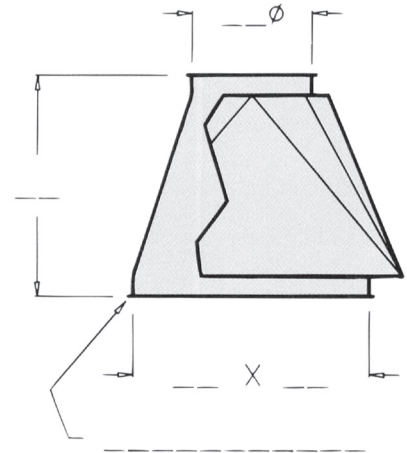
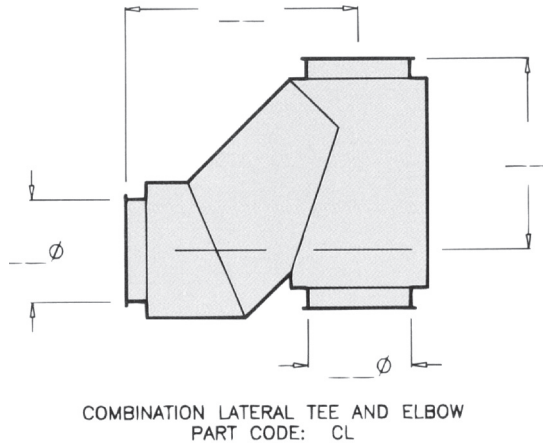
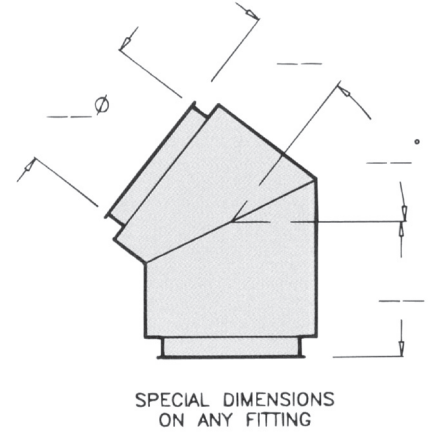
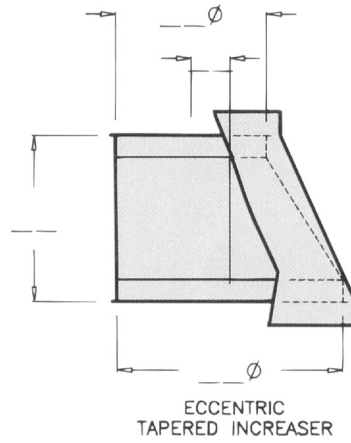
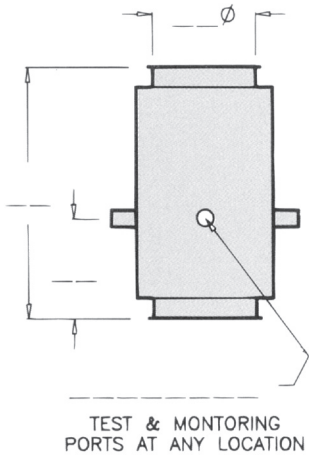
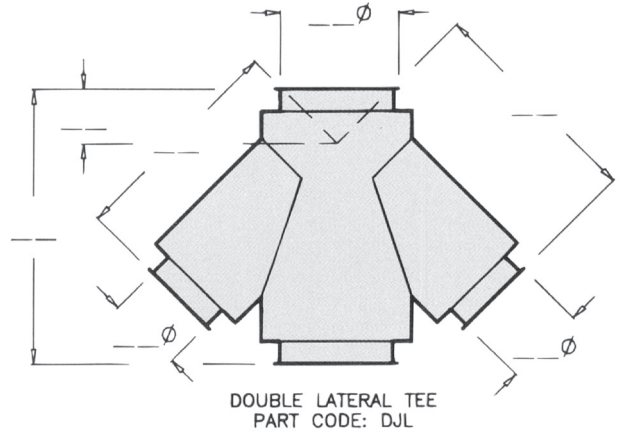
### Notes:

1. For use with IPS-Z3 and IPS-Z4 grease duct only.
2. One kit required for a floor penetration and two kits required for wall penetrations. Reference installation instructions.

# SPECIAL PARTS

Several special parts, such as those shown here, are available upon request.

Please provide detail of the required part if not already designed by Selkirk, and allow extra manufacturing time. Special parts are non-returnable.



PROVIDE PRECISE DETAIL  
OF EXISTING PIPE OR  
FLANGE FOR ATTACHMENT

SINGLE WALL PART CODE:   x  SWA

DOUBLE WALL PART CODE:   x  DWA



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Hart & Cooley ..... 800.433.6341  
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Corporate Headquarters:

Duravent Group  
28 W. Adams, Suite 1810  
Detroit, MI 48226  
Tel: 800.835.4429  
Email: [info@duraventgroup.com](mailto:info@duraventgroup.com)  
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