

DuraVent®


SUBMITTAL RECORD

Single Wall or Double Wall AL29-4C® or 316L.
Special Gas Vent for Category I, II, III and IV.
TYPE L VENT Low temperature venting system

3" to 24" Diameter Vent For use on Positive, Neutral and
Negative Pressures up to 35" W.C.

Also for venting listed gas or oil fired appliances listed for
venting with TYPE L low temperature venting system
(DSD / DSID ONLY)

MODEL DuraSeal® DS/DSD/DSID

	Listed to standards:
	UL-1738
	ULC-S636
	UL-641
	ULC-S609 } DSD / DSID ONLY
Report # G100215896MTL-006	



MODEL DS



MODEL DSD



MODEL DSID

Reference to the installation instructions will enable you to obtain a safe, efficient and dependable installation of this vent system. Please read and understand these instructions before beginning your installation.

Do not alter or modify the components of this chimney system under any circumstances. Any modification or alteration of the vent system or approved accessories, including but not limited to the appliance it is connected to, may void the warranty, listings and approvals of this system and could result in an unsafe and potentially dangerous installation.

- A. Examine all components for possible shipping damage prior to installation;
- B. Proper joint assembly is essential for a safe installation. Follow these instructions exactly as written: Check severeness of joints upon completion of assembly;
- C. This venting system must be free to expand and contract. This venting system must be supported in accordance with these instructions;
- D. Check for unrestricted vent movement through walls, ceilings, and roof penetrations;
- E. Different manufacturers have different joint systems and adhesives. Do not mix pipe, fittings, or joining methods from different manufacturers.

SUBMITTAL RECORD	
PREPARED FOR:	
REFERENCE:	
LOCATION:	
CONTACT:	
TELEPHONE:	FAX:
EMAIL:	
PREPARED BY:	

Material Selection
FLUE (INNER WALL)
AL29-4C
316L

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INTRODUCTION

DuraSeal® single wall (DS) or double wall (DSD) or double wall insulated (DSID) is a special stainless steel vent system for gas fired appliances listed as Category I, II, III, and IV or in Canada as Type BH Gas Venting as noted in ULC-636, with a maximum operating temperature of 550 Degrees F (288 Degrees C), and a maximum rated positive pressure of 35" Water Column. It can also vent listed gas or oil fired appliance rated to be vent with TYPE L low temperature venting system (DSD & DSID only). DuraSeal must be installed by an experienced professional familiar with the operation and maintenance of heating appliances and venting. Before installing this product, examine all components for possible shipping damage and read the complete installation manual. Failure to follow proper installation procedures, including vent pitch and improper appliance connections, may cause unsafe conditions. DuraVent recommends the system to be inspected once a year by a qualified service technician

TESTING / LISTING INFORMATION

DuraVent DuraSeal model DS, DSD and DSID venting system is listed with Intertek Testing Services (ETL) to UL/ULC standards:

U.S.A.

- UL-1738
Special Gas Vent for Category I, II, III and IV appliances
- UL-641 (DSD & DSID only)
TYPE L VENT venting listed gas or oil burning appliances



CANADA

- ULC-S636
Type BH Gas Vent Class I/II
- ULC-S609 (DSD & DSID only)
TYPE L VENT venting of flue gases with temperature not exceeding 300°C from oil or gas burning appliances

This product must be installed in accordance with local building code requirements as well as National codes: USA - National Fuel Gas code ANSI-Z223.1 or NFPA Standard 54, or NFPA 211. In CANADA - CAN/CGA-B149.1 or CAN/CGA-B149.2 Propane Installation Code as applicable.

CLEARANCES TO COMBUSTIBLES

Table 1 shows the required MINIMUM AIRSPACE CLEARANCE TO COMBUSTIBLES. “Combustibles” include framing lumber, drywall, plywood, paneling, insulation, wiring and other building materials.

Minimum Clearance to Combustibles Single Wall DS						
Diameter	Rated operating temperature	Max. operating temperature	Enclosed (4 sides)		Unenclosed (2 sides Max.)	
			Horiz.	Vert.	Horiz.	Vert.
3” to 12”	480° F (250° C)	550° F (288° C)	N/A	N/A	2”	2”
14” to 24”	480° F (250° C)	550° F (288° C)	N/A	N/A	4”	4”
Minimum Clearance to Combustibles Double Wall DSD / DSID						
Diameter	Rated operating temperature	Max. operating temperature	Enclosed (4 sides)		Unenclosed (2 sides Max.)	
			Horiz.	Vert.	Horiz.	Vert.
3” to 12”	480° F (250° C)	550° F (288° C)	N/A	1”	1”	1”
14” to 24”	480° F (250° C)	550° F (288° C)	N/A	1”	3”	1”
3” to 12” L-VENT	480° F (250° C)	550° F (288° C)	N/A	2”	2”	2”
14” to 24” L-VENT	480° F (250° C)	550° F (288° C)	N/A	2”	3”	2”

Table 1 - Minimum Clearances for DuraSeal®

Auxiliary parts such as combination Roof Supports, Roof Thimble, Flashings and Wall Thimble outer shields are intended to be attached directly to the framing or to ceilings, floors, or walls in accordance with their respective instructions. These parts, which are installed in contact with wood or other combustibles, are designed and tested to assure that they do not overheat at points of contact.

Notes:

- Unenclosed requires at least two sides open.
- Single Wall (DS) may be enclosed only in non-combustible enclosure.
- Reduced clearances may be attained by using non-combustible enclosures.
- Combustible Material is any material made of or surfaced with wood, compressed paper, plant fibers or other materials that are capable of being ignited or burned. Such material shall be considered combustible even though it is flame-proofed, fire-retardant treated, or plastered. (Source: NFPA 54/ANSI Z223.1)
- Design any enclosure to permit inspection of the system.
- Do not place insulation in any required clearance spaces surrounding the vent system unless these instructions suggest otherwise and the insulation is specified or supplied.
- When using Viton caulking, follow the manufactures required drying times.

Material Thickness

*all seams are laser welded

DuraSeal DS		DuraSeal DSD / DSID		
Diameter	Flue	Diameter	Flue	Casing
3” to 9”	AL29-4C - .015” 316L - .015”	3” to 9”	AL29-4C - .015” 316L - .015”	441 stainless - .015”
10” to 16”	AL29-4C - .020” 316L - .019”	10” to 16”	AL29-4C - .020” 316L - .019”	441 stainless - .020”
18” to 24”	AL29-4C - .024” 316L - .024”	18” to 24”	AL29-4C - .024” 316L - .024”	441 stainless - .024”

GENERAL INSTALLATION REQUIREMENTS

When venting Category I, II, III, or IV appliances or TYPE L vented appliance, DuraSeal **must** be used for the entire length of the system. Do not mix pipe, fittings, or joining methods from different manufacturers. **See the DuraSeal catalog for a complete list of parts and products.** Every vent system must be planned and installed for optimum performance and safety. The venting system must be free to expand and contract and must be supported in accordance with these instructions. (Check for unrestricted vent movement through walls, ceilings, and roof penetrations). Refer to the gas appliance manufacturer’s instructions to determine venting requirements and limitations with respect to installation and use of the appliance. **It is the responsibility of the installer to contact local building and fire officials concerning any installation restrictions and/or inspection requirements that may apply.** Permits may be required before starting an installation.

- If required by the appliance manufacturer, a Drain Tee Cap must be located as close as possible to the appliance flue outlet. Depending on the arrangement of the vent, **more than one drain may be required.** Unless a Drain Tee Cap is supplied with the appliance, install a DuraSeal Drain Tee Cap.
- More than one Category II, III or IV appliance may not be connected into the same vent system, unless the appliance manufacturer specifically approved such a system and the appliance are designed for multiple venting. Cat. II, III or IV appliances MAY NOT be common vented with Cat. I, natural draft appliances. This limitation can be removed if an engineering analysis demonstrates normal and safe operation of appliances.
- DuraSeal must not come in contact with plumbing or electrical systems.
- Maintain rated clearances to combustibles over the entire length of the vent system.
- DuraSeal shall not be routed into, through, or within any vent, such as an existing masonry or factory-built chimney, that is **connected to another appliance.**

PART NUMBERS

These instructions identify major model DS-DSD-DSID parts by name and part number.

Material Code Designations	
B	Type 316 Stainless Steel
H	Type 430 Stainless Steel
K	Type 441 Stainless Steel
P	Type 439 Stainless Steel
U	Type AL29-4C Stainless Steel

Example:

DSD 36” length with inside diameter 14” made of AL29-4C inner flue and SS441 outer casting.

DSD	14	L36	UK
Model	Dia.	Part	Material

DS 30° elbow with inside diameter 22” made of 316L.

DS	22	E30	B
Model	Dia.	Part	Material

DSD wall support for 8” diameter chimney made of stainless 439.

DSD	8	WSHD	P
Model	Dia.	Part	Material

TYPICAL INSTALLATION

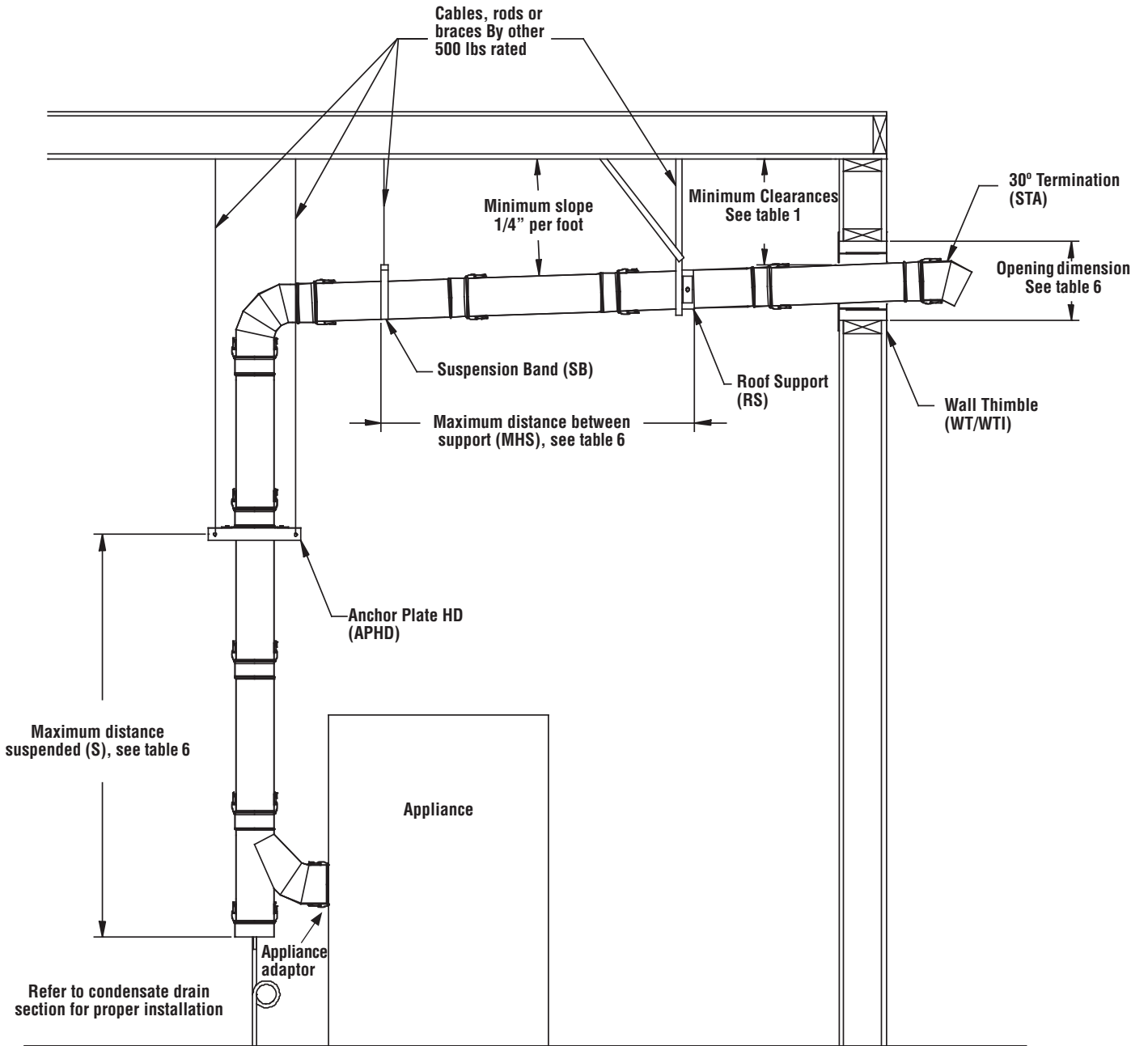


Figure 1 - Horizontal

TYPICAL INSTALLATION

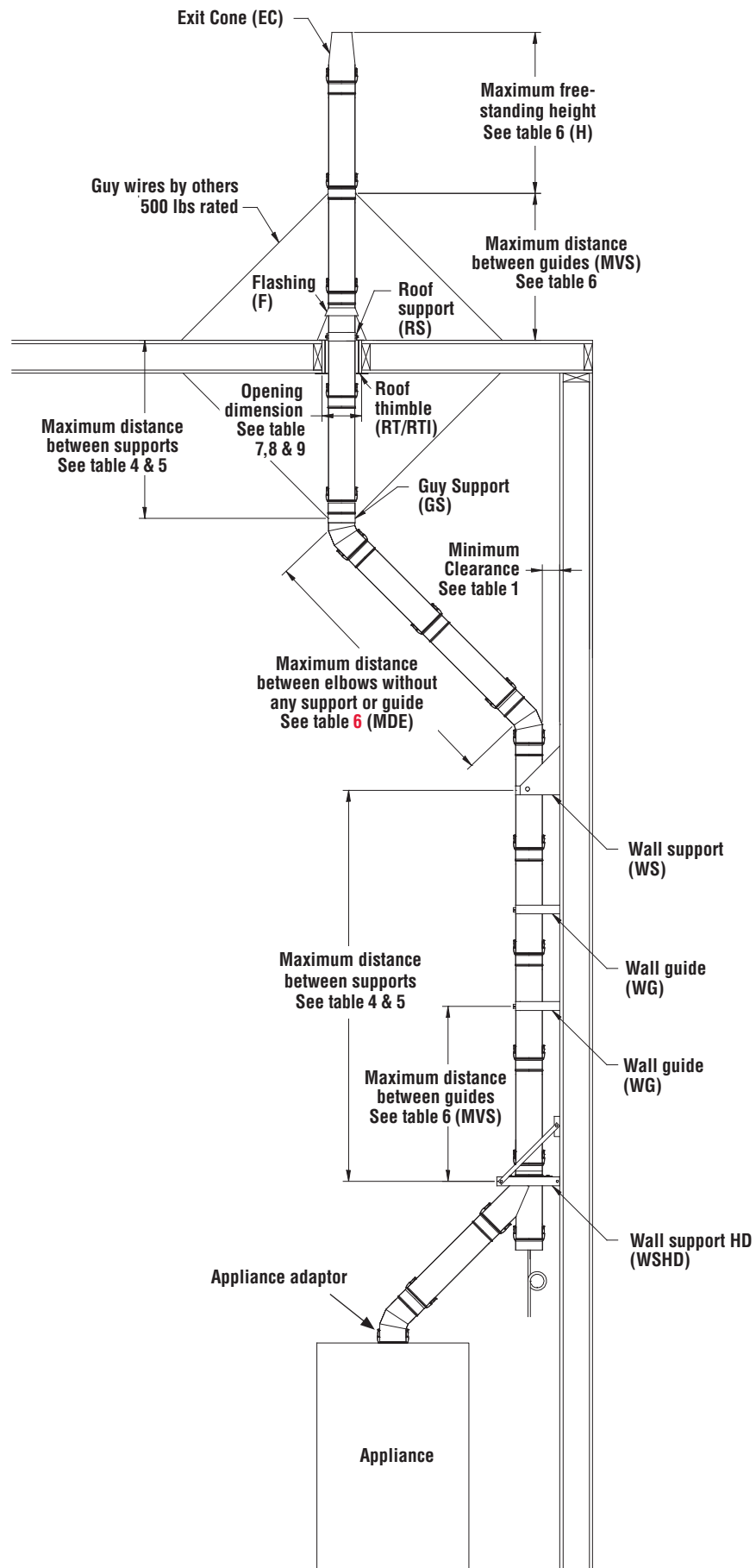
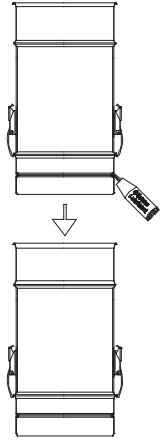


Figure 2 - Vertical

CHIMNEY AND FITTING JOINT ASSEMBLY

All components have a male and female end, the male end has the gasket. The installation orientation is indicated on the labeling of each chimney section with an arrow. The arrow indicated the direction of the flow.

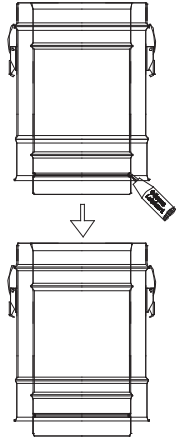
DuraSeal® DS



1. Add a thin film of silicone lubricant on the o-ring.

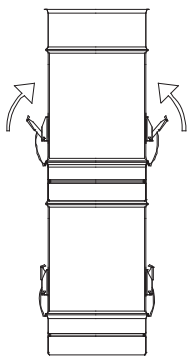
2. Insert the male end into the female end.

DuraSeal DSD / DSID



1. Add a thin film of silicone lubricant on the o-ring.

2. Insert the male end into the female end.



3. Close the clips to secure the joint.

NOTE:
Clips are self-locking

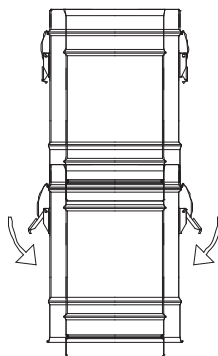


Figure 3 - Joint assembly steps

To open clips, push the secondary catch while pulling up the lever

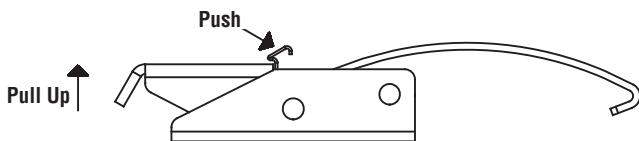


Figure 4 - Opening clips

ASSEMBLY JOINT DS/DSD/DSID LUBE REQUIREMENT

Inside diameter	Qty (oz)
3"	0.1
4"	0.1
5"	0.1
6"	0.1
7"	0.1
8"	0.2
9"	0.2
10"	0.2
12"	0.3
14"	0.3
16"	0.3
18"	0.4
20"	0.4
22"	0.5
24"	0.5

Table 2

CHIMNEY WEIGHT

Chimney weight is given in pounds per foot of each diameter. It is important to know the weight of the chimney section for chimney support or guiding. Chimney weight (**table 3**) along with the maximum chimney height (**table 4**) is necessary to calculate the proper anchor strength needed with supports.

CHIMNEY WEIGHT IN LB/FT

INSIDE DIAMETER	DS	DSD	DSID
3"	0.7	1.7	2.1
4"	0.9	2.1	2.6
5"	1.1	2.6	3.0
6"	1.3	3.0	3.4
7"	1.5	3.4	3.9
8"	1.7	3.8	4.3
9"	1.9	4.3	N/A
10"	2.1	4.7	5.5
12"	2.6	6.2	7.0
14"	3.6	7.7	8.2
16"	4.1	8.7	9.3
18"	4.6	9.8	10.3
20"	5.1	10.8	11.3
22"	5.7	11.8	12.4
24"	6.2	12.8	N/A

Table 3 - Chimney weight

Example: Model DuraSeal DSD 6" diameter section of 25 feet in length from **table 3**, weight in lb/ft = 3. Total length 3 x 25 = 75lbs.

SUPPORT METHODS AND HEIGHT

1. Several support and guiding methods are used to anchor a chimney against upward, downward and angular placement.
2. These supports and guides prevent bending stresses on the chimney elbows and joints.
3. Certain limitations apply for proper installation of supports and guides. See **tables 4 and 5**.
4. See **figure 1 and 2** for typical installations.

MAXIMUM CHIMNEY HEIGHTS AND SUPPORT METHOD FOR MODEL DS							
Inside dia.	Anchor Plate (AP)	Anchor Plate HD (APHD)	Anchor Plate Length (APL)	Wall Support (WS)	Wall Support HD (WSHD)	Roof support (RS)	Guy support (GS)
3"	200	200	200	100	200	100	250
4"	200	200	200	100	200	100	250
5"	195	195	195	97.5	195	97.5	225
6"	190	190	190	95	190	95	190
7"	185	185	185	92.5	185	92.5	160
8"	180	180	180	90	180	90	140
9"	175	175	175	87.5	175	87.5	130
10"	170	170	170	85	170	85	115
12"	160	160	160	80	160	80	90
14"	150	150	150	75	150	75	65
16"	140	140	140	70	140	70	60
18"	130	130	130	65	130	65	55
20"	120	120	120	60	120	60	50
22"	110	110	110	55	110	55	45
24"	100	100	100	50	100	50	40
MAXIMUM CHIMNEY HEIGHTS AND SUPPORT METHOD FOR MODEL DSD							
Inside dia.	Anchor Plate (AP)	Anchor Plate HD (APHD)	Anchor Plate Length (APL)	Wall Support (WS)	Wall Support HD (WSHD)	Roof support (RS)	Guy support (GS)
3"	100	100	100	50	100	50	115
4"	100	100	100	50	100	50	115
5"	97.5	97.5	97.5	48.75	97.5	48.75	95
6"	95	95	95	47.5	95	47.5	80
7"	92.5	92.5	92.5	46.25	92.5	46.25	70
8"	90	90	90	45	90	45	65
9"	87.5	87.5	87.5	43.75	87.5	43.75	55
10"	85	85	85	42.5	85	42.5	50
12"	80	80	80	40	80	40	40
14"	75	75	75	37.5	75	37.5	30
16"	70	70	70	35	70	35	27
18"	65	65	65	32.5	65	32.5	25
20"	60	60	60	30	60	30	22
22"	55	55	55	27.5	55	27.5	21
24"	50	50	50	25	50	25	20

Table 4 - Dimensions are in feet

MAXIMUM CHIMNEY HEIGHTS AND SUPPORT METHOD FOR MODEL DSD							
Inside dia.	Anchor Plate (AP)	Anchor Plate HD (APHD)	Anchor Plate Length (APL)	Wall Support (WS)	Wall Support HD (WSHD)	Roof support (RS)	Guy support (GS)
3"	95	95	95	47.5	95	47.5	80
4"	95	95	95	47.5	95	47.5	80
5"	92.5	92.5	92.5	46.25	92.5	46.25	70
6"	90	90	90	45	90	45	65
7"	87.5	87.5	87.5	43.75	87.5	43.75	55
8"	85	85	85	42.5	85	42.5	50
9"	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10"	80	85	85	42.5	85	42.5	40
12"	75	75	75	37.5	75	37.5	30
14"	70	70	70	35	70	35	27
16"	65	65	65	32.5	65	32.5	25
18"	60	60	60	30	60	30	22
20"	55	55	55	27.5	55	27.5	21
22"	50	50	50	25	50	25	20
24"	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 5 - Dimensions are in feet

SUPPORT AND GUIDE SPACING FOR MODEL DS						
Inside diameter	MVS		MHS	MDE	H	S
	Interior	Exterior				
3"	10	8	12	12	10	50
4"	10	8	12	12	10	100
5"	10	8	12	12	10	100
6"	10	8	12	12	10	100
7"	10	8	12	12	10	100
8"	10	8	12	12	10	100
9"	10	8	12	12	10	100
10"	10	8	12	12	10	100
12"	10	8	12	12	10	100
14"	10	8	12	12	10	100
16"	10	8	12	12	10	100
18"	10	8	12	12	10	100
20"	10	8	12	12	10	100
22"	10	8	12	12	10	100
24"	10	8	12	12	10	100

SUPPORT AND GUIDE SPACING FOR MODEL DSD & DSID						
Inside diameter	MVS		MHS	MDE	H	S
	Interior	Exterior				
3"	10	8	12	12	10	50
4"	10	8	12	12	10	50
5"	10	8	12	12	10	50
6"	10	8	12	12	10	50
7"	10	8	12	12	10	50
8"	10	8	12	12	10	50
9"	10	8	12	12	10	50
10"	10	8	12	12	10	50
12"	10	8	12	12	10	50
14"	10	8	12	12	10	50
16"	10	8	12	12	10	50
18"	10	8	12	12	10	50
20"	10	8	12	12	10	50
22"	10	8	12	12	10	50
24"	10	8	12	12	10	50

Table 6 - Dimensions are in feet

MVS : Maximum Vertical Spacing between Guides/Supports
MHS: Maximum Horizontal Spacing between Guides/Supports
MDE: Maximum Distance between Elbows
H: Maximum Freestanding Height above the Roof
S: Maximum Suspended Length

***Important Notes:**

1. For Anchor Plate (AP) / Anchor Plate Heavy Duty (APHD) / Wall Support Heavy Duty (WSHD), the support must be installed below a bead. See **figure 5**.
2. For Wall Support (WS) / Roof Support (RS) , the support can be installed anywhere on the part.
3. For Anchor plate length, the support is already integrated to a length. Directly attached to the building structure or supported by non combustible structural elements (not included). No other installation is required than the standard installation for a regular length.

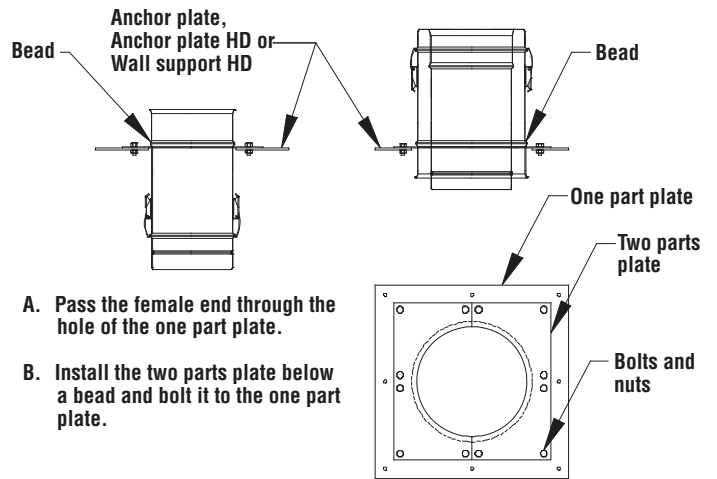


Figure 5 - Position of support

HORIZONTAL INSTALLATION REQUIREMENTS

- When venting through a sidewall, terminate the system not less than 12" (.3m) above the ground and above the snow line in geographical areas where snow accumulates. The termination area must be kept clear of snow and ice at all times.
- Terminate the system at least 7' (2.1m) above a public walkway or driveway, no less than 6' (1.8m) from the combustion air intake of any appliance or 3' (.9m) from any other building opening, gas utility meter, service regulator or the like. Less distance is permitted if specified in the appliance's installation instructions. It also shall terminate at least 3' (.9m) above any forced air inlet within 10' (3.1m) and shall terminate at least 4' (1.2m) below, 4' horizontally from, or 1' (.3m) above any door, window, or gravity air inlet into any building as provided in the National Fuel Gas Code ANSI Z223.1 and NFPA 54. See **figure 6**. Proper judgment may require greater distances depending on the side of the equipment installed or to allow for snow drifting or falling from falling from overhead roofs or trees. The termination should be far enough away from trees, shrubs, or decorative items to prevent damage.
- The total horizontal vent length from the appliance flue collar to the outside termination shall be in accordance with the appliance manufacturer's instructions.

MAINTAIN PROPER SLOPE

- Install with a continuous 1/4" per foot (minimum) slope, as is required by the National Fuel Gas Code for all gas-fired appliances.
- Vent systems for condensing appliances must have a continuous 1/4" per foot (minimum) slope toward the appliance or a condensate drain. Always check the appliance manufacturer's instructions for proper drain requirements.
- DuraSeal® offers a range of tees and elbows that are built incorporating a 2 degree slope, we recommend that you use these to generate your slope.
- Some appliances require the venting system to be sloped toward the horizontal termination.
- Remember, if you raise the appliance or lower the ceiling you must adjust the slope of the vent to maintain the 1/4" per foot minimum.

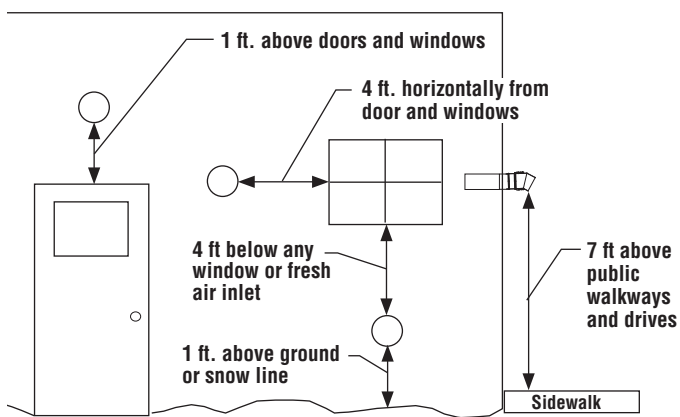


Figure 6 - Horizontal termination requirements

VERTICAL INSTALLATION REQUIREMENTS

1. The vent system must terminate at least 3 feet above the roof line and at least 2 feet higher than any portion of the building within 10 feet. See **figure 7**. This limitation can be removed if an engineering analysis demonstrates normal and safe operation of appliance.
2. When terminated at a height of more than 10 feet, the stack must be supported by a Guy Section.
3. The vent system must terminate with one of the DuraSeal® terminations.

Except;

- a) Category I appliances (natural draft) must use a Rain Cap. It is optional on Category II. This limitation can be removed if an engineering analysis demonstrates normal and safe operation of appliance.
 - b) Vent systems without provisions for draining rain water must use a Rain Cap.
 - c) Terminations or approved mechanical vent devices specified or provided by the appliance manufacturer are permitted.
4. The total continuous distance of the vent system from the appliance flue collar to the termination shall not exceed that specified in the appliance manufacturer's installation instructions. When venting natural draft appliances the termination must be at least 5 feet above the topmost draft hood. Otherwise a listed mechanical draft inducing device is required. This limitation can be removed if an engineering analysis demonstrates normal and safe operation of appliance.
 5. In general, systems installed in cold climates perform best, and condensation is reduced, when the system is fully enclosed by some part of the building structure or by using insulated SSID venting system.
 6. In cold climates do not install a condensate drain on the exterior of the building. Doing so may result in dangerous icy conditions on surfaces near the drain and may cause damage to the vent system and/or the building exterior. Security Chimneys will NOT be held liable for any personal injury or property damage due to any formation of ice.
 7. Vertical supports are required after every transition to vertical. Vertical supports are also required after every offset elbow.
 8. Unless DuraSeal is installed in a fire rated shaft, a roof thimble and support is required when penetration fire rated floors, walls or ceilings.

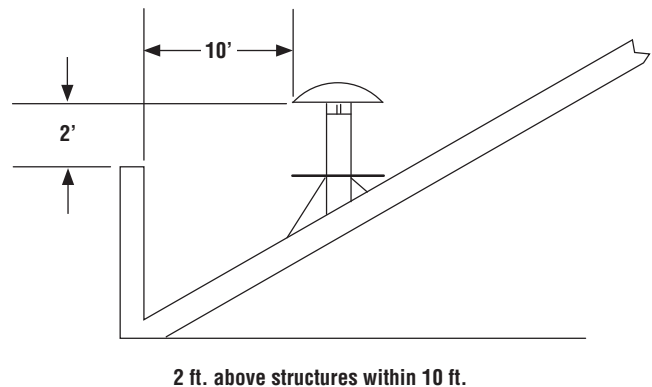


Figure 7 - Vertical installation requirements

WALL PENETRATION

1. Prior to installation, determine proper location of wall thimble (WT) or wall thimble insulated (WTI) so that a minimum slope of 1/4" (6mm) per foot is maintained in the horizontal section of vent to ensure proper flow of condensation.
2. Prepare the wall by cutting a square opening. See **table 6** for opening dimension.
3. Install the wall thimble by inserting the larger of the two parts on the appliance (interior side). See **figure 8**.
4. Next, apply a bead of sealant around the edges of the exterior (smaller of the two parts) wall thimble component. Then install this part of the wall thimble by inserting the smaller collar into the other component from the previous step.

NOTE: The two horizontal cylinders of the thimble must engage a minimum of two inches.

5. Fasten both sides of the wall thimble using screws or nails.
6. Once the thimble is installed, DuraSeal® vent pipe can be inserted into the thimble.
7. Close the gap between the thimble and the vent by installing the two half plate and fasten it using screws or nails.
8. Install horizontal termination to complete the assembly.
9. Once assembly is completed, apply a bead of high-temp sealant around the pipe and the exterior two half plates of the thimble to protect against weather.
10. The air gap is filled with insulation when using the insulated wall thimble (WTI).

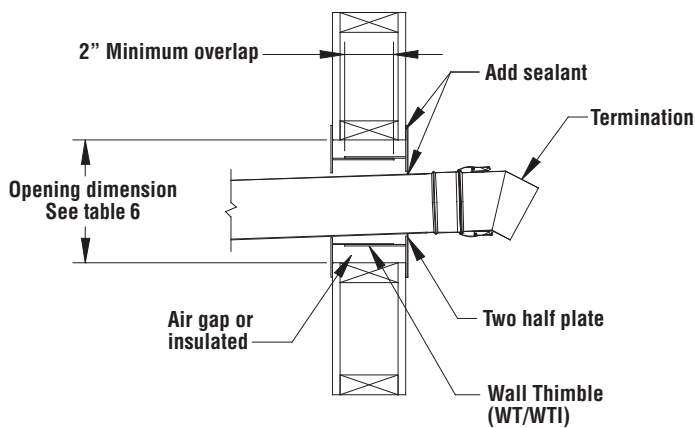


Figure 8 - Wall penetration

ROOF / FLOOR PENETRATION

1. A roof thimble (RT) or roof thimble insulated (RTI) for cold climate must be installed every time the vent system passes through a floor or roof.
2. Prepare the roof / floor by cutting a square opening. See **table 6**.
3. Install the roof thimble. You may cut the radiation sleeve if it is too long. See **figure 9**.
4. For roof installation, install a flashing.

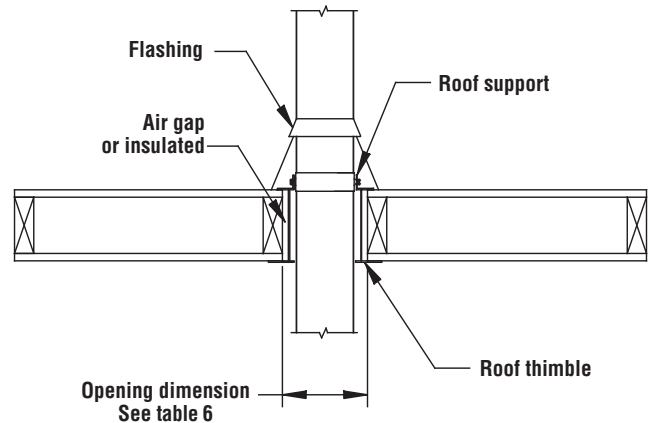


Figure 9 - Roof penetration

CONDENSATE DRAINS

When an internal condensate drain is NOT part of the appliance:

1. A Drain length (DL) or a Tee with a drain tee cap (DTC) is strongly recommended. Install this drain as close as possible to the appliance flue collar.
2. A condensate drain is required for every 30 feet of horizontal vent and at the bottom of a vertical stack.
3. Use the Drain length for a straight horizontal run. Rotate the fitting so that the drain tube is as vertical as possible.
4. Use a Tee at a transition from horizontal to vertical, and attach the Drain Tee Cap to the appropriate branch of the tee.
5. A condensate drain tube kit is available to direct the condensate to an appropriate location. A trap loop must be formed into the drain hose and must be a diameter that is at least four times the appliance's rated stack pressure in inches of water column or minimum 3 inches. Secure the loop with a cable tie.
6. Flue gas condensate can have a low (3 to 5) PH level, follow all local and national codes and regulations for the draining of acidic condensate.
7. In cold climate, do not install a condensate drain on the exterior of the building. Doing so may result in dangerous icy conditions on surfaces near the drain and may cause damage to the vent system and the building exterior. DuraVent will NOT be held liable for any injury or property damage due to formation of ice.

OPENING DIMENSIONS FOR WALL/ROOF PENETRATION FOR MODEL DS				
Inside diameter	Wall Thimble (WT)	Wall Thimble Insulated (WTI)	Roof Thimble (RT)	Roof Thimble Insulated (RTI)
3"	8x8	9x9	7x7	11x11
4"	9x9	10x10	8x8	12x12
5"	10x10	11x11	9x9	13x13
6"	11x11	12x12	10x10	14x14
7"	12x12	13x13	11x11	15x15
8"	13x13	14x14	12x12	16x16
9"	14x14	15x15	13x13	17x17
10"	15x15	16x16	14x14	18x18
12"	17x17	18x18	16x16	20x20
14"	22x22	22x22	22x22	22x22
16"	24x24	24x24	24x24	24x24
18"	26x26	26x26	26x26	26x26
20"	28x28	28x28	28x28	28x28
22"	30x30	30x30	30x30	30x30
24"	32x32	32x32	32x32	32x32

Table 7 - Dimensions are in inches

OPENING DIMENSIONS FOR WALL/ROOF PENETRATION FOR MODEL DSID				
Inside diameter	Wall Thimble (WT)	Wall Thimble Insulated (WTI)	Roof Thimble (RT)	Roof Thimble Insulated (RTI)
3"	10x10	11x11	7x7	11x11
4"	13x13	14x14	10x10	14x14
5"	14x14	15x15	11x11	15x15
6"	15x15	16x16	12x12	16x16
7"	16x16	17x17	13x13	17x17
8"	17x17	18x18	14x14	18x18
9"	N/A	N/A	N/A	N/A
10"	19x19	20x20	16x16	20x20
12"	22x22	22x22	18x18	22x22
14"	24x24	24x24	20x20	24x24
16"	26x26	26x26	22x22	26x26
18"	28x28	28x28	24x24	28x28
20"	30x30	30x30	26x26	30x30
22"	32x32	32x32	28x28	32x32
24"	N/A	N/A	N/A	N/A

Table 9 - Dimensions are in inches

OPENING DIMENSIONS FOR WALL/ROOF PENETRATION FOR MODEL DSD				
Inside diameter	Wall Thimble (WT)	Wall Thimble Insulated (WTI)	Roof Thimble (RT)	Roof Thimble Insulated (RTI)
3"	12x12	13x13	9x9	13x13
4"	11x11	12x12	8x8	12x12
5"	12x12	13x13	9x9	13x13
6"	13x13	14x14	10x10	14x14
7"	14x14	15x15	11x11	15x15
8"	15x15	16x16	12x12	16x16
9"	16x16	17x17	13x13	17x17
10"	17x17	18x18	14x14	18x18
12"	19x19	20x20	16x16	20x20
14"	22x22	22x22	18x18	22x22
16"	24x24	24x24	20x20	24x24
18"	26x26	26x26	22x22	26x26
20"	28x28	28x28	24x24	28x28
22"	30x30	30x30	26x26	30x30
24"	32x32	32x32	28x28	32x32

Table 8 - Dimensions are in inches

INSTALLING DURASEAL® AS A LINER IN A MASONRY CHIMNEY OR AS A LINER IN AN EXISTING VENT

* Stainless Steel Wire Rope (by others) is to be used to hang the vent system from the top of the masonry chimney or from the top of the existing vent.

- The stainless wire rope is attached to the Guy Support Band and is secured with cable clamps (by others).
- The Stainless Steel Wire Rope is secured in a similar manner to the top platform of the masonry chimney or existing vent.
- Use the appropriate size of Stainless Steel Wire Rope to accommodate the required total loads of the vent system.

It may be necessary to fabricate a platform (at top of chimney / vent - by others).

Consult DuraVent for guidelines.

DO NOT USE GALVANIZED WIRE ROPE.

Note: When installed as a liner in a masonry chimney or to reline an existing vent no other appliance can be vented into the same chimney or vent.

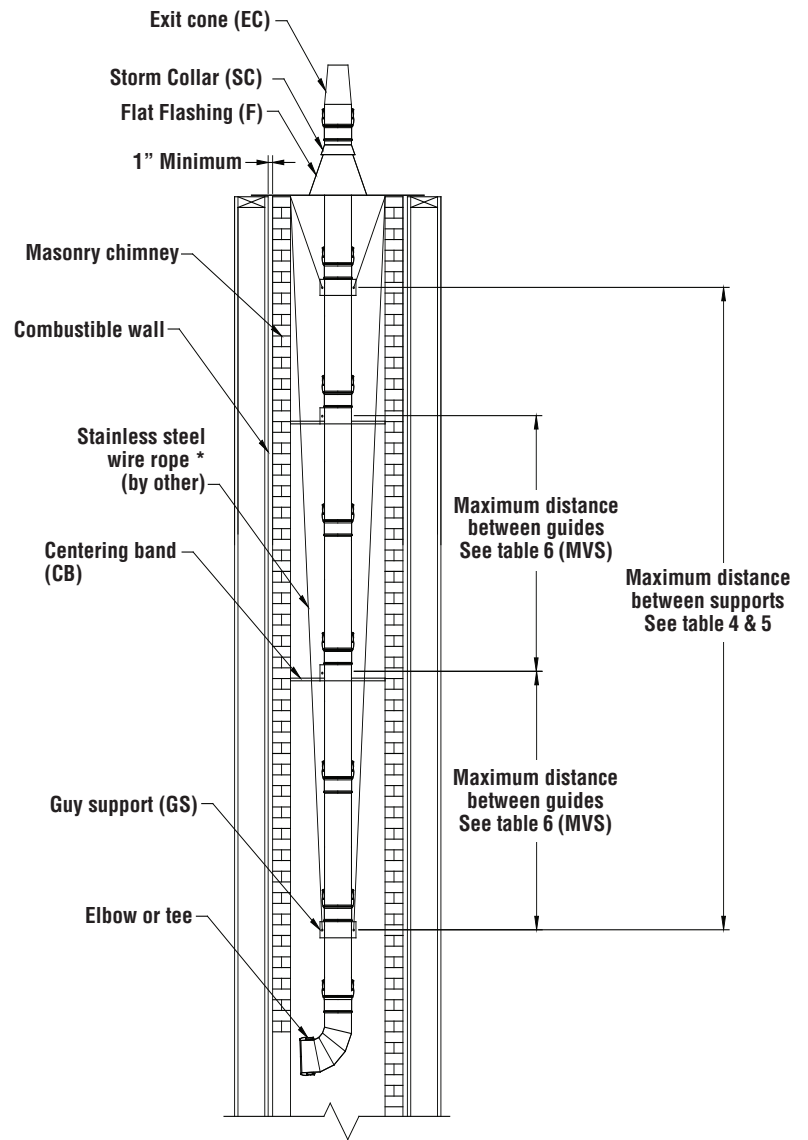


Figure 10 - Installing DuraSeal as a liner

ADJUSTABLE LENGTH

For installations that requires non-standard vent lengths, DuraSeal® Adjustable Length (AL) should be used.

The part consists of an inner conduit that slips into the downstream part and over the upstream part, a collar holds the conduit in place and an outer shell (for double wall only). See **figure 11** for installation steps.

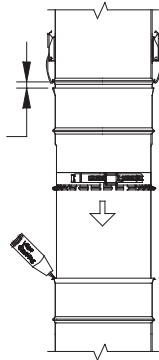
Note: The inner conduit may be cut to desired length to limit interference with downstream part.

ADJUSTABLE LENGTH DS/DSD CAULKING REQUIREMENT	
Inside diameter	Qty (oz)
3"	0.2
4"	0.3
5"	0.4
6"	0.5
7"	0.6
8"	0.7
9"	0.8
10"	0.9
12"	1.0
14"	1.2
16"	1.4
18"	1.5
20"	1.7
22"	1.9
24"	2.1

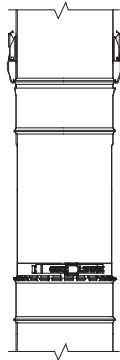
Table 10

DuraSeal DS

1. Keep a play about 1/8" to 1/4" to allow thermal expansion
2. Apply a 1/8" to 1/4" bead (may vary) of Viton caulking to fill the gap between the adjustable length inner wall and the female end of the standard part. Please allow 24-36 hours for Viton to cure."

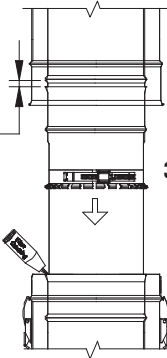


3. Slide the collar down over the female end of the downstream part and tighten the collar

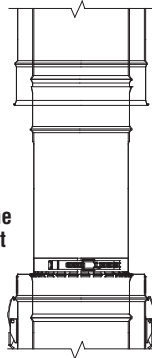


DuraSeal DSD

1. Keep a play about 1/8" to 1/4" to allow thermal expansion
2. Apply a 1/8" to 1/4" bead (may vary) of Viton caulking to fill the gap between the adjustable length inner wall and the female end of the standard part. Please allow 24-36 hours for Viton to cure.



3. Slide the collar down over the female end of the downstream part and tighten the clamp



4. Install the outer shell over end of downstream part and under the end of upstream part and tighten the clamps. Need to cut outer shell to correct length.

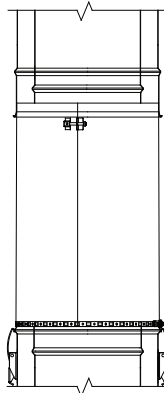


Figure 11 - Adjustable length installation steps

DURASEAL FLEX

***IMPORTANT NOTE**

When installing DuraSeal Flex, the direction of exhaust flow is always from the appliance. There is an arrow printed on each section of liner and component that will point in the direction of the exhaust gas. If the inner liner is installed correctly the proper direction can be determined by running your fingernails up the inside wall of the liner. If the direction is correct, your nails will catch at the seams of the inner wall. If it is incorrect, your nails will slide smoothly across the inner surface.

Attaching adapters to DURASEAL FLEX liner

- 1- The adapter without the latches is the Female Flex Adapter and designed for the top of the flex liner. The Adapter with the latches and the black Viton O-ring is the Male Flex Adapter and is designed for the bottom of the flex liner. If cutting the liner on the field is required, make sure the cut is square.
- 2- Make a mark on both ends of liner at 1 5/8" from each end. (Figure 12a) That mark will act as a reference point when the adapters are fully seated onto the flex liner. (Figure 12b)
- 3- To be sure everything is right before putting the sealant between both tubes, do a dry fit test by pushing the liner into the adapter until it reach the bottom between the inner tube and the outer tube, then remove it. (Figure 13)
- 4- Add the sealant S-650 in the channel of the Male Flex Adapter. Put enough sealant so the channel gap is evenly covered all around. (Figure 14)
- 5- Push the adapter on the liner (the inner tube fits inside the liner and the outer tube fits outside the liner) all the way in. (Figure 15)
- 6- Push the little natches. (Figure 16)
- 7- Repeat steps 3 through 6 for the other end with the female flex adapter or the flex to flex adapter.
- 8- Before installation, cure for a minimum of 24 hours or follow the cure time called out by the silicone manufacturer.

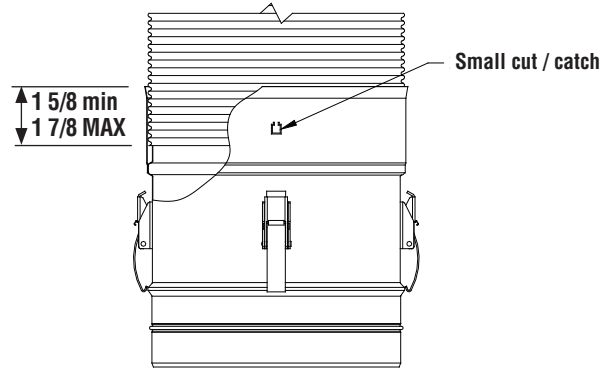


Figure 12b - Flex Adapter small cut / catch

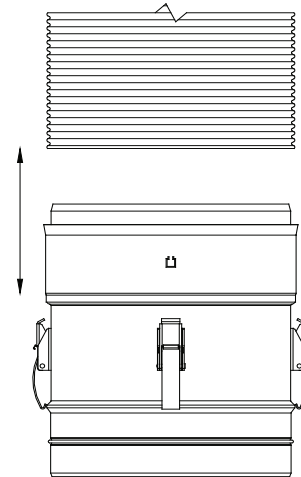


Figure 13 - Flex Adapter dry fit test

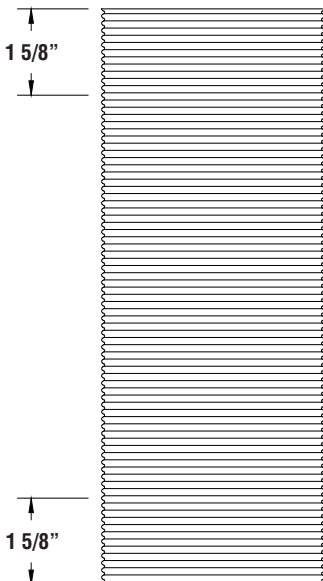


Figure 12a - DuraSeal Flex liner

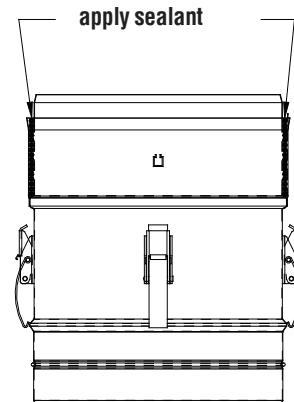


Figure 14 - Flex Adapter apply sealant

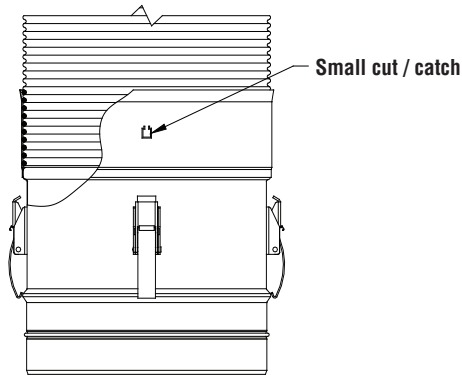


Figure 15 - Flex Adapter, seating flex

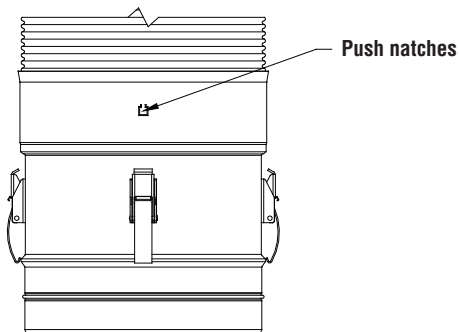


Figure 16 - Flex Adapter push notch to lock

BASIC DURASEAL FLEX LINER INSTALLATION

- 1- Determine the required location and opening in the masonry chimney. For a basic DuraSeal Flex installation the opening must be large enough for the mortar sleeve and Male Flex Adapter and the DuraSeal Flex to easily pass through. If a Tee application is necessary, a larger hole may be required.
- 2- Make sure the DuraSeal Flex is supported at the bottom of the chimney. Refer to **Figure 10** for guiding and support installation in the masonry chimney.
- 3- The DuraSeal Flex liner must be installed from the top of the masonry chimney. To prevent damage, one person should feed the liner through the chimney and another person should pull the liner from the bottom. To ease the installation, you can attach a rope to the DuraSeal Flex liner above the Male Flex Adapter. Doing this will reduce the chance of breaking the seal between the DuraSeal Flex and the Male Flex Adapter.
- 4- The DuraSeal Flex must stay within the masonry chimney; however the Elbow or other DuraSeal components will extend beyond the masonry chimney. (**Figure 16**)
- 5- It is strongly recommended to use a drain between the Male Flex Adapter and the appliance (refer to **Condensate Drains** section).

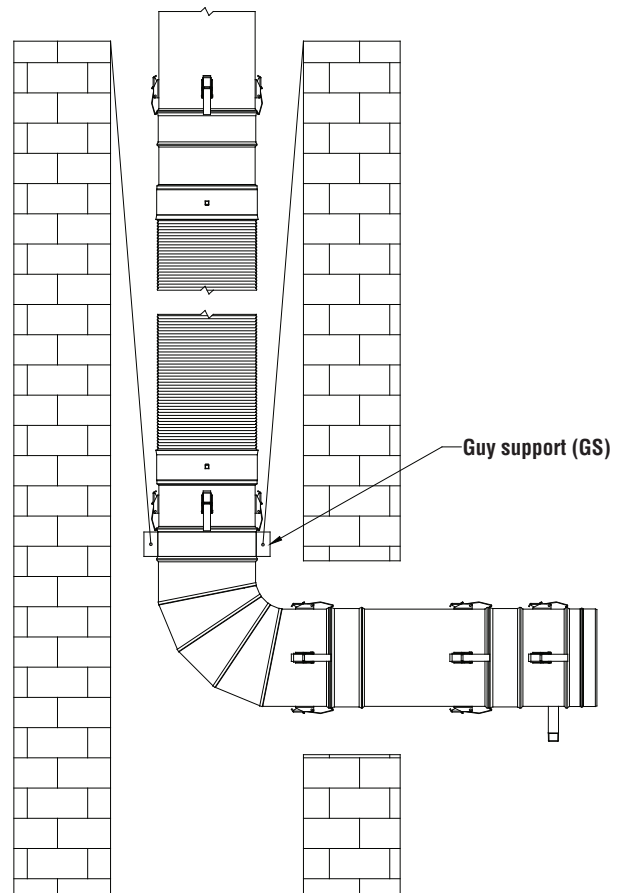


Figure 17 - Flex Adapter Elbow in masonry

MAINTENANCE INSTRUCTIONS

As with all vents, the DuraSeal vent system should be inspected at least annually for the presence of deposits or debris and any accumulation should be removed. The vent system should also be inspected at regular periods for signs of leakage of condensate or combustion products at any joints.


If the vent system incorporates a drain hose from either a Drain length or a Drain tee cap, the hose must be inspected periodically to ensure that water is in the trap loop. If a proper trap loop is not maintained, exhaust from the connected appliances may accumulate in the building area.

DS, DSD / DSID DURASEAL® CHIMNEY LABELS

The labels supplied for product identification are shown here and indicates the flow of the flue gases in the venting system.

SPECIAL GAS VENT FOR CATEGORY I, II, III, IV AND TYPE BH CLASS I, II
 CONDUIT D'ÉVACUATION POUR CATÉGORIE I, II, III, IV ET TYPE BH CLASS I, II
AL29-4C material, Ø3" TO Ø24" / Ø3" À Ø24"
 MAX TEMP 550°F / 288°C OR 570°F/300°C (L-VENT application)
 FOR INTERIOR AND EXTERIOR USE
 MAXIMUM 35 INCH WATER COLUMN INTERNAL PRESSURE WHEN USED IN POSITIVE PRESSURE APPLICATION
 CLASSÉ POUR UNE UTILISATION A PRESSION POSITIVE INTERNE MAXIMALE DE 35 POUCE DE COLONNE D'EAU
TYPE L LOW-TEMPERATURE OIL OR GAS VENTING SYSTEM (DSD/DSID ONLY)

LISTED/HOMOLOGUÉ
UL-1738
ULC-S636
UL-641 (DSD/DSID)
ULC-S609 (DSD/DSID)




Intertek
4002244

WARNING
 RISK OF CARBON MONOXIDE (CO) POISONING AND RISK OF FIRE IF IMPROPERLY INSTALLED. FOLLOW ALL CAUTIONS, WARNINGS AND INSTRUCTIONS REGARDING INSTALLATION OF VENT PIPE SYSTEM.
AVERTISSEMENT
 RISQUE D'EMPOISONNEMENT AU MONOXIDE DE CARBONE (CO) SI MAL INSTALLÉ. LIRE ATTENTIVEMENT LES INSTRUCTIONS D'INSTALLATION FOURNIES AVEC CE PRODUIT.

MODEL DuraSeal® DS/DSD/DSID

MINIMUM CLEARANCE TO COMBUSTIBLE - SINGLE WALL DS							
DÉGAGEMENT MINIMAL AUX MATÉRIEAUX COMBUSTIBLES - PAROI SIMPLE DS							
Dia.	Rated Operating Temperature	Maximum Temperature	Enclosed / Fermé		Unenclosed / Ouvert		
			(4 sides/côtés)		(2 sides/côtés)		
			Horizontal	Vertical	Horizontal	Vertical	
3" - 12"	480°F (249°C)	550°F (288°C)	N/A	N/A	2"	2"	
14" - 24"	480°F (249°C)	550°F (288°C)	N/A	N/A	4"	4"	

MINIMUM CLEARANCE TO COMBUSTIBLE - DOUBLE WALL DSD / DSID							
DÉGAGEMENT MINIMAL AUX MATÉRIEAUX COMBUSTIBLES - PAROI DOUBLE DSD / DSID							
Dia.	Rated Operating Temperature	Maximum Temperature	Enclosed / Fermé		Unenclosed / Ouvert		
			(4 sides/côtés)		(2 sides/côtés)		
			Horizontal	Vertical	Horizontal	Vertical	
3" - 12"	480°F (249°C)	550°F (288°C)	N/A	1"	1"	1"	
14" - 24"	480°F (249°C)	550°F (288°C)	N/A	1"	3"	1"	
3" - 12" (L-Vent)	480°F (249°C)	550°F (288°C)	N/A	2"	2"	2"	
14" - 24" (L-Vent)	480°F (249°C)	550°F (288°C)	N/A	2"	3"	2"	



DuraVent®

LAVAL, QC, CANADA
 NP341 REV.1

SPECIAL GAS VENT FOR
 CATEGORY I, II, III, IV
 AND TYPE BH CLASS I, II
 CONDUIT D'ÉVACUATION POUR
 CATÉGORIE I, II, III, IV
 ET TYPE BH CLASS I, II
 TYPE L (DSD/DSID)

LISTED/HOMOLOGUÉ
UL-1738
ULC-S636
UL-641 (DSD/DSID)
ULC-S609 (DSD/DSID)



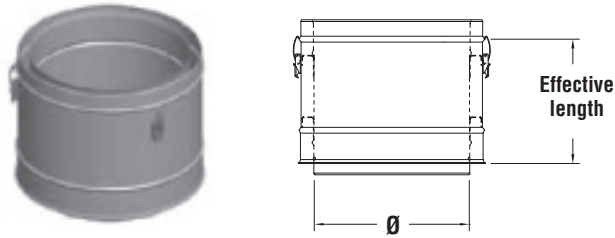
Intertek
4002244

MODEL DuraSeal® DS/DSD/DSID
Accessories / Accessoires

DuraVent
 Member of M&G Group

LAVAL, QC,
 CANADA
 NP342 REV.0

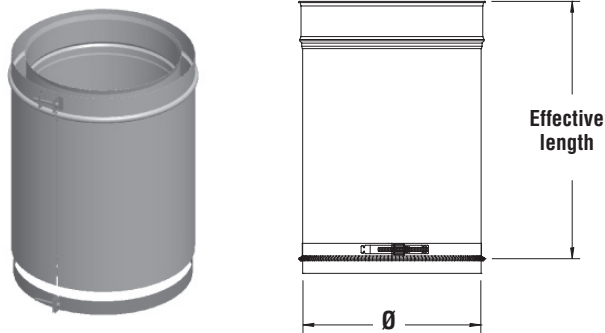
DSD / DSID VENT LENGTHS



DSD & DSID Lengths			
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID
3 to 24	6-5/8	DSDØL9	DSIDØL9
3 to 24	9-5/8	DSDØL12	DSIDØL12
3 to 24	15-5/8	DSDØL18	DSIDØL18
3 to 24	21-5/8	DSDØL24	DSIDØL24
3 to 24	33-5/8	DSDØL36	DSIDØL36

NOTE: DSID 9" and 24" not available.

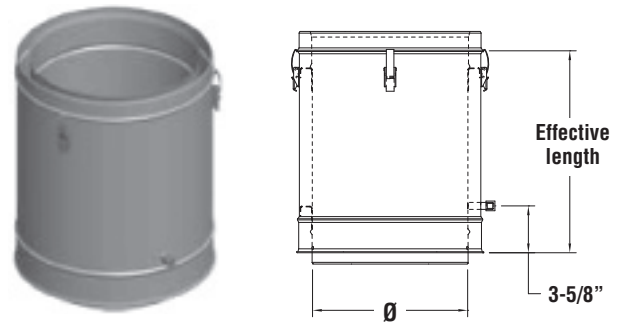
Figure 18



DSD & DSID Adjustable Lengths			
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID
3 to 24	3 to 5	DSDØAL9	DSIDØAL9
3 to 24	3 to 14	DSDØAL18	DSIDØAL18

NOTE: DSID 9" and 24" not available.

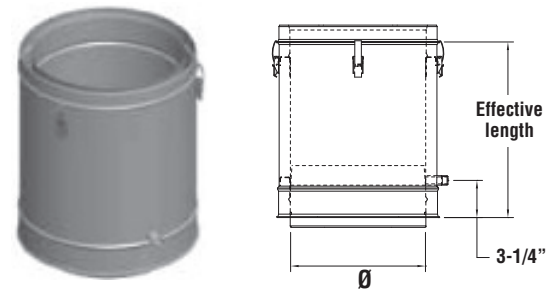
Figure 19



DSD & DSID Test Port Lengths			
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID
3 to 24	6-5/8	DSDØTPL	DSIDØTPL
Drain Ø4-Ø24, 1/4 NPT, 1/2 O.D.			

NOTE: DSID 9" and 24" not available.

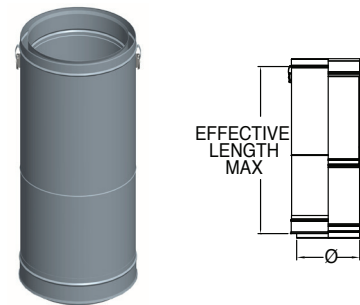
Figure 20



DSD & DSID Drain Lengths				
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	6-5/8	DSDØDL	DSIDØDL	0.25
Drain Ø4-Ø10, 1/4 NPT, 1/2 O.D. Drain 12-Ø24, 1/2 NPT, 5/8 O.D.				

NOTE: DSID 9" and 24" not available.

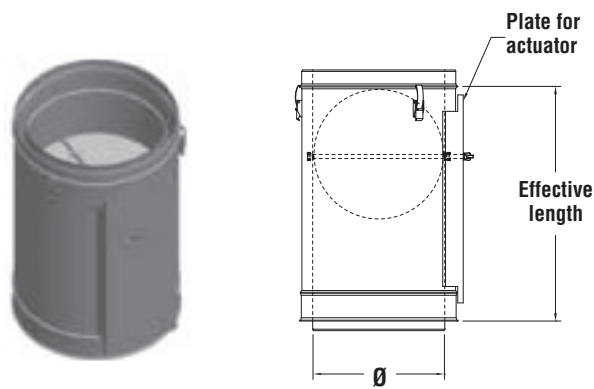
Figure 21



DSD Telescopic Lengths		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	14 to 20	DSDØLAT20
3 to 24	20 to 32	DSDØLAT32

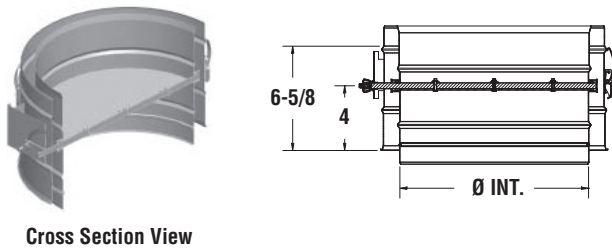
NOTE: Not available for DSID.

Figure 21a



DSD & DSID Damper Lengths				
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	15-5/8	DSDØDAMP	DSIDØDAMP	0.60-9999

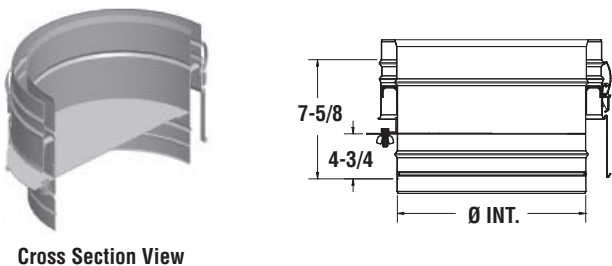
Figure 22 NOTE: DSID 9" and 24" not available.



Cross Section View

DSD & DSID Damper Length Short Manual				
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	6-5/8	DSDØDAMPS	DSIDØDAMPS	0 to 9999

Figure 23 NOTE: DSID 9" and 24" not available.

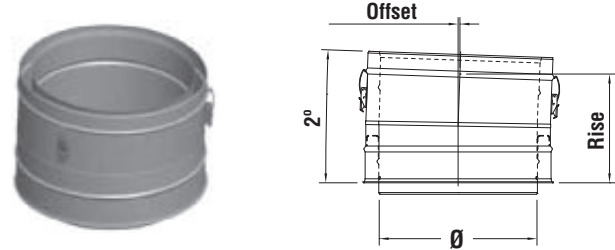


Cross Section View

DSD & DSID Vent Flow Regulator				
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	5-7/8	DSDØVFR	DSIDØVFR	0 to 9999

Figure 24 NOTE: DSID 9" and 24" not available.

DSD & DSID VENTING ELBOWS

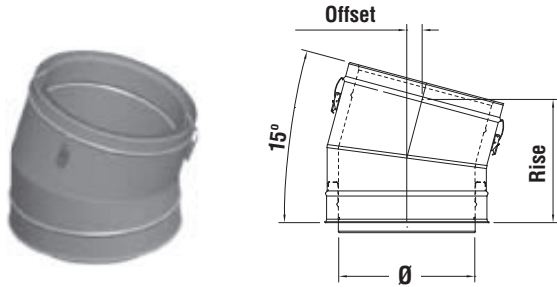


DSD 2-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSD	K Factor
3	1/8	7-3/4	DSD3E2	.04
4	1/8	7-3/4	DSD4E2	.04
5	1/8	7-3/4	DSD5E2	.04
6	1/8	7-7/8	DSD6E2	.04
7	1/8	7-7/8	DSD7E2	.04
8	1/8	7-7/8	DSD8E2	.04
9	1/8	8	DSD9E2	.04
10	1/8	8	DSD10E2	.04
12	1/8	8	DSD12E2	.04
14	1/8	8-1/8	DSD14E2	.03
16	1/8	8-1/4	DSD16E2	.03
18	1/8	8-1/4	DSD18E2	.03
20	1/8	8-3/8	DSD20E2	.03
22	1/8	8-3/8	DSD22E2	.03
24	1/8	8-1/2	DSD24E2	.03

Figure 25

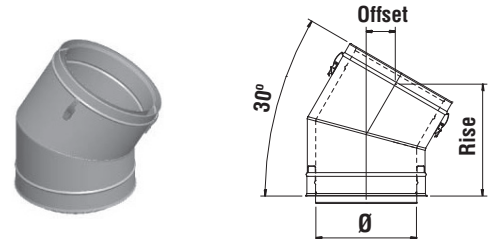
DSID 2-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSID	K Factor
3	1/8	7-3/4	DSID3E2	.04
4	1/8	7-3/4	DSID4E2	.04
5	1/8	7-3/4	DSID5E2	.04
6	1/8	7-7/8	DSID6E2	.04
7	1/8	7-7/8	DSID7E2	.04
8	1/8	7-7/8	DSID8E2	.04
9	N/A	N/A	N/A	N/A
10	1/8	8	DSID10E2	.04
12	1/8	8	DSID12E2	.04
14	1/8	8-1/8	DSID14E2	.03
16	1/8	8-1/4	DSID16E2	.03
18	1/8	8-1/4	DSID18E2	.03
20	1/8	8-3/8	DSID20E2	.03
22	1-3/4	8-3/8	DSID22E2	.03
24	N/A	N/A	N/A	N/A

Figure 26 NOTE: DSID 9" and 24" not available.



DSD 15-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSD	K Factor
3	1	8-3/4	DSD3E15	.31
4	1	8-3/4	DSD4E15	.31
5	1	8-3/4	DSD5E15	.30
6	1-1/8	9	DSD6E15	.30
7	1-1/8	9-3/8	DSD7E15	.29
8	1-1/4	9-5/8	DSD8E15	.29
9	1-1/4	9-7/8	DSD9E15	.28
10	1-1/4	10-1/8	DSD10E15	.28
12	1-3/8	10-5/8	DSD12E15	.27
14	1-3/8	11-1/8	DSD14E15	.27
16	1-1/2	11-5/8	DSD16E15	.26
18	1-1/2	12-1/8	DSD18E15	.26
20	1-5/8	12-5/8	DSD20E15	.26
22	1-5/8	13-1/4	DSD22E15	.26
24	1-3/4	13-3/4	DSD24E15UK	.26

Figure 27



DSD 30-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSD	K Factor
3	2-3/8	9-5/8	DSD3E30	.61
4	2-3/8	9-5/8	DSD4E30	.61
5	2-3/8	9-5/8	DSD5E30	.60
6	2-5/8	10-1/8	DSD6E30	.59
7	2-3/4	10-5/8	DSD7E30	.58
8	2-7/8	11-1/8	DSD8E30	.57
9	3	11-5/8	DSD9E30	.56
10	3-1/8	12-1/8	DSD10E30	.55
12	3-3/8	13-1/8	DSD12E30	.54
14	3-5/8	14-1/8	DSD14E30	.54
16	3-7/8	15-1/8	DSD16E30	.53
18	4-1/8	16-1/8	DSD18E30	.52
20	4-1/2	17-1/8	DSD20E30	.52
22	4-3/4	18-1/8	DSD22E30	.51
24	5	19-1/8	DSD24E30UK	.51

Figure 29

DSID 15-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSID	K Factor
3	1-1/8	9	DSID3E15UK	.31
4	1-1/8	9	DSID4E15UK	.31
5	1-1/8	9-3/8	DSID5E15UK	.30
6	1-1/4	9-5/8	DSID6E15UK	.30
7	1-1/4	9-7/8	DSID7E15UK	.29
8	1-1/4	10-1/8	DSID8E15UK	.29
9	N/A	N/A	N/A	N/A
10	1-3/8	10-5/8	DSID10E15UK	.28
12	1-3/8	11-1/8	DSID12E15UK	.27
14	1-1/2	11-5/8	DSID14E15UK	.27
16	1-1/2	12-1/8	DSID16E15UK	.26
18	1-5/8	12-5/8	DSID18E15UK	.26
20	1-5/8	13-1/4	DSID20E15UK	.26
22	1-3/4	13-3/4	DSID22E15UK	.26
24	N/A	N/A	N/A	N/A

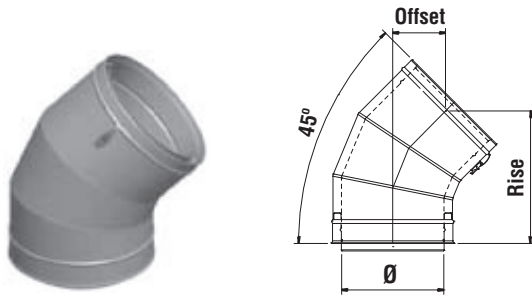
Figure 28

NOTE: DSID 9" and 24" not available.

DSID 30-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSID	K Factor
3	2-5/8	10-1/8	DSID3E30UK	0.61
4	2-5/8	10-1/8	DSID4E30UK	0.61
5	2-3/4	10-5/8	DSID5E30UK	0.60
6	2-7/8	11-1/8	DSID6E30UK	0.59
7	3	11-5/8	DSID7E30UK	0.58
8	3-1/8	12-1/8	DSID8E30UK	0.57
9	N/A	N/A	N/A	N/A
10	3-3/8	13-1/8	DSID10E30UK	0.55
12	3-5/8	14-1/8	DSID12E30UK	0.54
14	3-7/8	15-1/8	DSID14E30UK	0.54
16	4-1/8	16-1/8	DSID16E30UK	0.53
18	4-1/2	17-1/8	DSID18E30UK	0.52
20	4-3/4	18-1/8	DSID20E30UK	0.52
22	5	19-1/8	DSID22E30UK	0.51
24	N/A	N/A	N/A	N/A

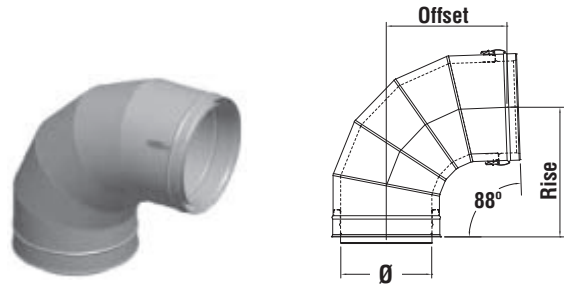
Figure 30

NOTE: DSID 9" and 24" not available.



DSD 45-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSD	K Factor
3	3-7/8	10-1/8	DSD3E45	.26
4	3-7/8	10-1/8	DSD4E45	.26
5	3-7/8	10-1/8	DSD5E45	.22
6	4-1/4	10-7/8	DSD6E45	.17
7	4-1/2	11-1/2	DSD7E45	.16
8	4-7/8	12-1/4	DSD8E45	.14
9	5-1/8	13	DSD9E45	.13
10	5-3/8	13-5/8	DSD10E45	.12
12	6	15-1/8	DSD12E45	.11
14	6-5/8	16-1/2	DSD14E45	.11
16	7-1/8	17-7/8	DSD16E45	.10
18	7-3/4	19-3/8	DSD18E45	.09
20	8-3/8	20-3/4	DSD20E45	.08
22	8-7/8	22-1/8	DSD22E45	.08
24	9-1/2	23-5/8	DSD24E45	.08

Figure 31



DSD 88-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSD	K Factor
3	8-3/8	9-1/4	DSD3E88	.54
4	8-3/8	9-1/4	DSD4E88	.54
5	8-3/8	9-1/4	DSD5E88	.48
6	9-1/4	10-1/4	DSD6E88	.42
7	10-1/4	11-1/4	DSD7E88	.39
8	11-1/4	12-1/4	DSD8E88	.37
9	12-1/4	13-1/4	DSD9E88	.34
10	13-1/8	14-1/4	DSD10E88	.32
12	15-1/8	16-1/4	DSD12E88	.29
14	17	18-1/4	DSD14E88	.27
16	19	20-1/4	DSD16E88	.25
18	20-7/8	22-1/4	DSD18E88	.24
20	22-7/8	24-1/4	DSD20E88	.23
22	24-3/4	26-1/4	DSD22E88	.21
24	26-5/8	28-1/4	DSD24E88	.20

Figure 33

DSID 45-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSID	K Factor
3	4-1/4	10-7/8	DSID3E45	0.26
4	4-1/4	10-7/8	DSID4E45	0.26
5	4-1/2	11-1/2	DSID5E45	0.22
6	4-7/8	12-1/4	DSID6E45	0.17
7	5-1/8	13	DSID7E45	0.16
8	5-3/8	13-5/8	DSID8E45	0.14
9	N/A	N/A	N/A	N/A
10	6	15-1/8	DSID10E45	0.12
12	6-5/8	16-1/2	DSID12E45	0.11
14	7-1/8	17-7/8	DSID14E45	0.11
16	7-3/4	19-3/8	DSID16E45	0.1
18	8-3/8	20-3/4	DSID18E45	0.09
20	8-7/8	22-1/8	DSID20E45	0.08
22	9-1/2	23-5/8	DSID22E45	0.08
24	N/A	N/A	N/A	N/A

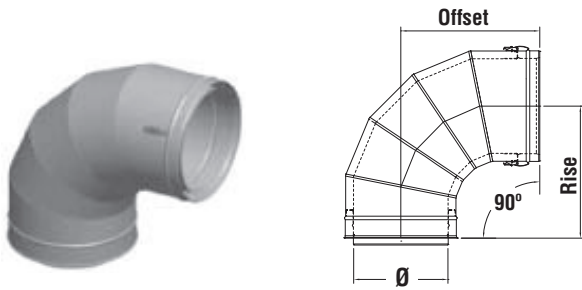
Figure 32

NOTE: DSID 9" and 24" not available.

DSID 88-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSID	K Factor
3	9-1/4	10-1/4	DSID3E88	0.54
4	9-1/4	10-1/4	DSID4E88	0.54
5	10-1/4	11-1/4	DSID5E88	0.48
6	11-1/4	12-1/4	DSID6E88	0.42
7	12-1/4	13-1/4	DSID7E88	0.39
8	13-1/8	14-1/4	DSID8E88	0.37
9	N/A	N/A	N/A	N/A
10	15-1/8	16-1/4	DSID10E88	0.32
12	17	18-1/4	DSID12E88	0.29
14	19	20-1/4	DSID14E88	0.27
16	20-7/8	22-1/4	DSID16E88	0.25
18	22-7/8	24-1/4	DSID18E88	0.24
20	24-3/4	26-1/4	DSID20E88	0.23
22	26-5/8	28-1/4	DSID22E88	0.21
24	N/A	N/A	N/A	N/A

Figure 34

NOTE: DSID 9" and 24" not available.



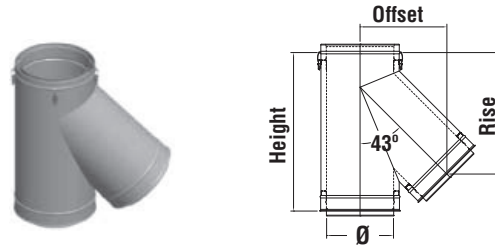
DSD 90-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSD	K Factor
3	8-1/2	9-1/8	DSD3E90	.54
4	8-1/2	9-1/8	DSD4E90	.54
5	8-1/2	9-1/8	DSD5E90	.48
6	9-1/2	10-1/8	DSD6E90	.42
7	10-1/2	11-1/8	DSD7E90	.39
8	11-1/2	12-1/8	DSD8E90	.37
9	12-1/2	13-1/8	DSD9E90	.34
10	13-1/2	14-1/8	DSD10E90	.32
12	15-1/2	16-1/8	DSD12E90	.29
14	17-1/2	18-1/8	DSD14E90	.27
16	19-1/2	20-1/8	DSD16E90	.25
18	21-1/2	22-1/8	DSD18E90	.24
20	23-1/2	24-1/8	DSD20E90	.23
22	25-1/2	26-1/8	DSD22E90	.21
24	27-1/2	28-1/8	DSD24E90	.20

Figure 35

DSID 90-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code SSID	K Factor
3	9-1/2	10-1/8	DSID3E90	.54
4	9-1/2	10-1/8	DSID4E90	.54
5	10-1/2	11-1/8	DSID5E90	.48
6	11-1/2	12-1/8	DSID6E90	.42
7	12-1/2	13-1/8	DSID7E90	.39
8	13-1/2	14-1/8	DSID8E90	.37
9	N/A	N/A	N/A	N/A
10	15-1/2	16-1/8	DSID10E90	.32
12	17-1/2	18-1/8	DSID12E90	.29
14	19-1/2	20-1/8	DSID14E90	.27
16	21-1/2	22-1/8	DSID16E90	.25
18	23-1/2	24-1/8	DSID18E90	.24
20	25-1/2	26-1/8	DSID20E90	.23
22	27-1/2	28-1/8	DSID22E90	.21
24	N/A	N/A	N/A	N/A

Figure 36 NOTE: DSID 9" and 24" not available.

DSD & DSID VENTING TEES



DSD 43-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	16-1/2	8-1/4	13-3/8	DSD3T43	0.4
4	16-1/2	8-1/4	13-3/8	DSD4T43	0.4
5	18-1/2	8-7/8	14-3/8	DSD5T43	0.4
6	19-1/2	9-5/8	15-3/8	DSD6T43	0.4
7	20-1/2	10-1/4	16-1/4	DSD7T43	0.4
8	22-1/2	11-5/8	18	DSD8T43	0.4
9	23-1/2	12-1/4	18-7/8	DSD9T43	0.4
10	25-1/2	13	19-3/4	DSD10T43	0.4
12	28-1/2	15	22-3/8	DSD12T43	0.4
14	31-1/2	16-3/8	24-1/4	DSD14T43	0.4
16	33-1/2	18-1/2	26-1/4	DSD16T43	0.4
18	38-1/4	20-1/2	29-3/8	DSD18T43	0.4
20	42-1/4	23-7/8	33-1/2	DSD20T43	0.4
22	45-1/4	23-7/8	33-7/8	DSD22T43	0.4
24	51-1/4	27-7/8	38-1/2	DSD24T43	0.4

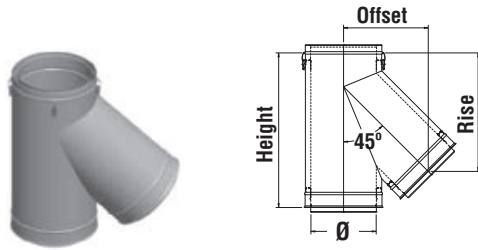
Available with smaller snout and custom height.

Figure 37

DSID 43-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	19-1/2	9-5/8	15-3/8	DSID3T43	0.4
4	19-1/2	9-5/8	15-3/8	DSID4T43	0.4
5	20-1/2	10-1/4	16-1/4	DSID5T43	0.4
6	22-1/2	11-5/8	18	DSID6T43	0.4
7	23-1/2	12-1/4	18-7/8	DSID7T43	0.4
8	25-1/2	13	19-3/4	DSID8T43	0.4
9	N/A	N/A	N/A	N/A	N/A
10	28-1/2	15	22-3/8	DSID10T43	0.4
12	31-1/2	16-3/8	24-1/4	DSID12T43	0.4
14	33-1/2	18-1/2	26-1/4	DSID14T43	0.4
16	38-1/4	20-1/2	29-3/8	DSID16T43	0.4
18	42-1/4	23-7/8	33-1/2	DSID18T43	0.4
20	45-1/4	23-7/8	33-7/8	DSID20T43	0.4
22	51-1/4	27-7/8	38-1/2	DSID22T43	0.4
24	N/A	N/A	N/A	N/A	N/A

Available with smaller snout and custom height.

Figure 38 NOTE: DSID 9" and 24" not available.



DSD 45-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	16-1/2	8-1/4	13-1/4	DSD3T45	.04
4	16-1/2	8-1/4	13-1/4	DSD4T45	.04
5	18-1/2	9-1/4	14-1/8	DSD5T45	.04
6	19-1/2	9-7/8	15-1/8	DSD6T45	.04
7	20-1/2	10-5/8	16	DSD7T45	.04
8	22-1/2	12	17-5/8	DSD8T45	.04
9	23-1/2	12-3/4	18-1/2	DSD9T45	.04
10	25-1/2	13-1/2	19-1/2	DSD10T45	.04
12	28-1/2	15-5/8	22	DSD12T45	.04
14	31-1/2	17	23-7/8	DSD14T45	.04
16	33-1/2	19-1/8	26-3/8	DSD16T45	.04
18	38-1/4	21-1/4	28-7/8	DSD18T45	.04
20	42-1/4	24-3/4	32-7/8	DSD20T45	.04
22	45-1/4	24-3/4	33-1/4	DSD22T45	.04
24	51-1/4	28-7/8	37-3/4	DSD24T45	.04

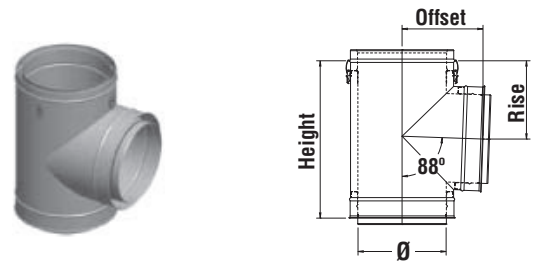
Available with smaller snout and custom height.

Figure 39

DSID 45-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	19-1/2	9-7/8	15-1/8	DSID3T45	.04
4	19-1/2	9-7/8	15-1/8	DSID4T45	.04
5	20-1/2	10-5/8	16	DSID5T45	.04
6	22-1/2	12	17-5/8	DSID6T45	.04
7	23-1/2	12-3/4	18-1/2	DSID7T45	.04
8	25-1/2	13-1/2	19-1/2	DSID8T45	.04
9	N/A	N/A	N/A	N/A	N/A
10	28-1/2	15-5/8	22	DSID10T45	.04
12	31-1/2	17	23-7/8	DSID12T45	.04
14	33-1/2	19-1/8	26-3/8	DSID14T45	.04
16	38-1/4	21-1/4	28-7/8	DSID16T45	.04
18	42-1/4	24-3/4	32-7/8	DSID18T45	.04
20	45-1/4	24-3/4	33-1/4	DSID20T45	.04
22	51-1/4	28-7/8	37-3/4	DSID22T45	.04
24	N/A	N/A	N/A	N/A	N/A

Available with smaller snout and custom height.

Figure 40 NOTE: DSID 9" and 24" not available.



DSD 88-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	13-1/2	7	6-5/8	DSD3T88	1.21
4	13-1/2	7	6-5/8	DSD4T88	1.21
5	14-1/2	8	7-1/4	DSD5T88	1.21
6	15-1/2	8	7-5/8	DSD6T88	1.21
7	16-1/2	9	8-1/4	DSD7T88	1.21
8	17-1/2	9	8-5/8	DSD8T88	1.21
9	18-1/2	10	9-1/4	DSD9T88	1.21
10	19-1/2	10	9-5/8	DSD10T88	1.21
12	21-1/2	11	10-5/8	DSD12T88	1.21
14	23-1/2	12	11-5/8	DSD14T88	1.21
16	25-1/2	13	12-5/8	DSD16T88	1.21
18	27-1/2	14	13-5/8	DSD18T88	1.21
20	29-1/2	15	14-5/8	DSD20T88	1.21
22	31-1/2	16	15-5/8	DSD22T88	1.21
24	33-1/2	17	16-5/8	DSD24T88	1.21

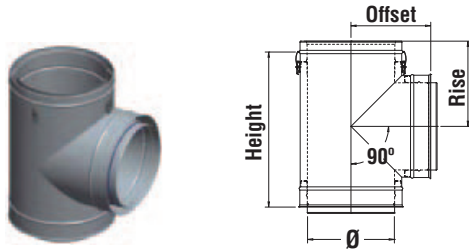
Available with smaller snout and custom height.

Figure 41

DSID 88-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	15-1/2	8	7-5/8	DSID3T88	1.21
4	15-1/2	8	7-5/8	DSID4T88	1.21
5	16-1/2	9	8-1/4	DSID5T88	1.21
6	17-1/2	9	8-5/8	DSID6T88	1.21
7	18-1/2	10	9-1/4	DSID7T88	1.21
8	19-1/2	10	9-5/8	DSID8T88	1.21
9	N/A	N/A	N/A	N/A	N/A
10	21-1/2	11	10-5/8	DSID10T88	1.21
12	23-1/2	12	11-5/8	DSID12T88	1.21
14	25-1/2	13	12-5/8	DSID14T88	1.21
16	27-1/2	14	13-5/8	DSID16T88	1.21
18	29-1/2	15	14-5/8	DSID18T88	1.21
20	31-1/2	16	15-5/8	DSID20T88	1.21
22	33-1/2	17	16-5/8	DSID22T88	1.21
24	N/A	N/A	N/A	N/A	N/A

Available with smaller snout and custom height.

Figure 42 NOTE: DSID 9" and 24" not available.



DSD 90-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	13-1/2	7	6-1/2	DSD3T90	1.21
4	13-1/2	7	6-1/2	DSD4T90	1.21
5	14-1/2	8	7	DSD5T90	1.21
6	15-1/2	8	7-1/2	DSD6T90	1.21
7	16-1/2	9	8	DSD7T90	1.21
8	17-1/2	9	8-1/2	DSD8T90	1.21
9	18-1/2	10	9	DSD9T90	1.21
10	19-1/2	10	9-1/2	DSD10T90	1.21
12	21-1/2	11	10-1/2	DSD12T90	1.21
14	23-1/2	12	11-1/2	DSD14T90	1.21
16	25-1/2	13	12-1/2	DSD16T90	1.21
18	27-1/2	14	13-1/2	DSD18T90	1.21
20	29-1/2	15	14-1/2	DSD20T90	1.21
22	31-1/2	16	15-1/2	DSD22T90	1.21
24	33-1/2	17	16-1/2	DSD24T90	1.21

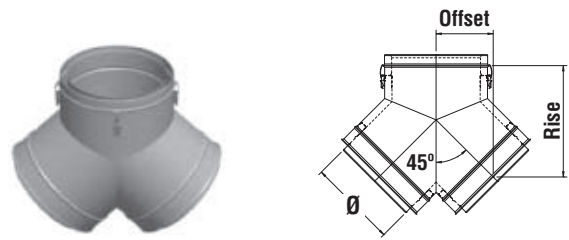
Available with smaller snout and custom height.

Figure 43

DSID 90-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	15-1/2	8	7-1/2	DSID3T90	1.21
4	15-1/2	8	7-1/2	DSID4T90	1.21
5	16-1/2	9	8	DSID5T90	1.21
6	17-1/2	9	8-1/2	DSID6T90	1.21
7	18-1/2	10	9	DSID7T90	1.21
8	19-1/2	10	9-1/2	DSID8T90	1.21
9	N/A	N/A	N/A	N/A	N/A
10	21-1/2	11	10-1/2	DSID10T90	1.21
12	23-1/2	12	11-1/2	DSID12T90	1.21
14	25-1/2	13	12-1/2	DSID14T90	1.21
16	27-1/2	14	13-1/2	DSID16T90	1.21
18	29-1/2	15	14-1/2	DSID18T90	1.21
20	31-1/2	16	15-1/2	DSID20T90	1.21
22	33-1/2	17	16-1/2	DSID22T90	1.21
24	N/A	N/A	N/A	N/A	N/A

Available with smaller snout and custom height.

Figure 44 NOTE: DSID 9" and 24" not available.



SSD 90-Degree Tee Y				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	5	10-3/8	DSD3TY90	0.6
4	5	10-3/8	DSD4TY90	0.6
5	5-5/8	11-1/8	DSD5TY90	0.6
6	5-5/8	11-1/8	DSD6TY90	0.6
7	6-3/8	11-3/4	DSD7TY90	0.6
8	6-3/8	11-3/4	DSD8TY90	0.6
9	7-1/8	13-1/2	DSD9TY90	0.6
10	7-1/8	13-1/2	DSD10TY90	0.6
12	7-3/4	14-1/4	DSD12TY90	0.6
14	8-1/2	15-7/8	DSD14TY90	0.6
16	9-1/4	17-5/8	DSD16TY90	0.6
18	9-7/8	18-3/8	DSD18TY90	0.6
20	10-5/8	21	DSD20TY90	0.6
22	11-3/8	21-3/4	DSD22TY90	0.6
24	12	22-1/2	DSD24TY90	0.6

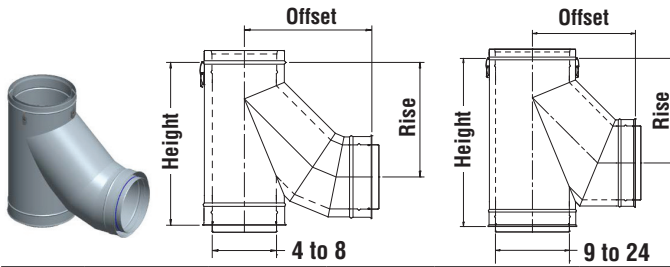
Available with smaller snout.

Figure 45

DSID 90-Degree Tee Y				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	5-5/8	11-1/8	DSID3TY90	0.6
4	5-5/8	11-1/8	DSID4TY90	0.6
5	6-3/8	11-3/4	DSID5TY90	0.6
6	6-3/8	11-3/4	DSID6TY90	0.6
7	7-1/8	13-1/2	DSID7TY90	0.6
8	7-1/8	13-1/2	DSID8TY90	0.6
9	N/A	N/A	N/A	N/A
10	7-3/4	14-1/4	DSID10TY90	0.6
12	8-1/2	15-7/8	DSID12TY90	0.6
14	9-1/4	17-5/8	DSID14TY90	0.6
16	9-7/8	18-3/8	DSID16TY90	0.6
18	10-5/8	21	DSID18TY90	0.6
20	11-3/8	21-3/4	DSID20TY90	0.6
22	12	22-1/2	DSID22TY90	0.6
24	N/A	N/A	N/A	N/A

Available with smaller snout.

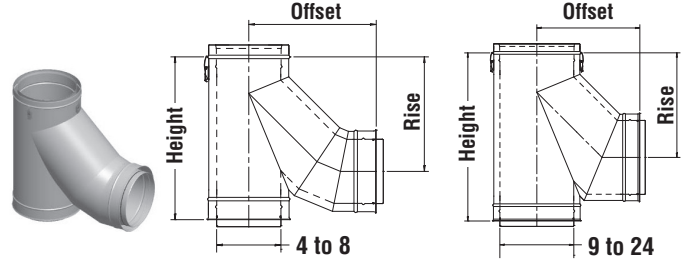
Figure 46 NOTE: DSID 9" and 24" not available.



DSD Lateral Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	14-3/8	11-5/8	10	DSD3BT	0.55
4	14-3/8	11-5/8	10	DSD4BT	0.55
5	16-3/8	12-1/4	11	DSD5BT	0.55
6	17-3/8	13-3/4	12-1/4	DSD6BT	0.55
7	19-3/8	14-3/4	13-1/4	DSD7BT	0.55
8	20-3/8	16	14-3/8	DSD8BT	0.55
9	23-3/8	14-1/4	14-1/4	DSD9BT	0.55
10	25-3/8	15-1/4	15-1/4	DSD10BT	0.55
12	27-3/8	16-7/8	17	DSD12BT	0.55
14	30-3/8	18-7/8	18-7/8	DSD14BT	0.55
16	33-3/8	20-3/4	20-3/4	DSD16BT	0.55
18	38-1/8	22-1/2	22-1/2	DSD18BT	0.55
20	42-1/8	24-3/8	24-3/8	DSD20BT	0.55
22	45-1/8	26-1/4	26-1/4	DSD22BT	0.55
24	51-1/8	28	28-1/8	DSD24BT	0.55

Available with smaller snout and custom height.

Figure 47



DSD Lateral Tee 88-Degree					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	14-3/8	11-5/8	10-1/4	DSD3BT88	0.55
4	14-3/8	11-5/8	10-1/4	DSD4BT88	0.55
5	16-3/8	12-1/4	11-3/8	DSD5BT88	0.55
6	17-1/2	13-3/4	12-3/4	DSD6BT88	0.55
7	19-3/8	14-7/8	13-3/4	DSD7BT88	0.55
8	20-3/8	16-1/8	15	DSD8BT88	0.55
9	23-3/8	14-1/2	15-1/4	DSD9BT88	0.55
10	25-3/8	15-3/8	16-1/8	DSD10BT88	0.55
12	28-3/8	17	17-7/8	DSD12BT88	0.55
14	31-3/8	19-1/8	20-1/8	DSD14BT88	0.55
16	33-3/8	21	22	DSD16BT88	0.55
18	38-3/8	22-7/8	24	DSD18BT88	0.55
20	42-1/8	24-3/4	26	DSD20BT88	0.55
22	45-1/8	26-5/8	28	DSD22BT88	0.55
24	51-1/8	28-1/2	29-7/8	DSD24BT88	0.55

Available with smaller snout and custom height.

Figure 49

DSID Lateral Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	17-3/8	13-3/4	12-1/4	DSID3BT	0.55
4	17-3/8	13-3/4	12-1/4	DSID4BT	0.55
5	19-3/8	14-3/4	13-1/4	DSID5BT	0.55
6	20-3/8	16	14-3/8	DSID6BT	0.55
7	23-3/8	14-1/4	14-1/4	DSID7BT	0.55
8	25-3/8	15-1/4	15-1/4	DSID8BT	0.55
9	N/A	N/A	N/A	N/A	N/A
10	27-3/8	16-7/8	17	DSID10BT	0.55
12	30-3/8	18-7/8	18-7/8	DSID12BT	0.55
14	33-3/8	20-3/4	20-3/4	DSID14BT	0.55
16	38-1/8	22-1/2	22-1/2	DSID16BT	0.55
18	42-1/8	24-3/4	24-3/8	DSID18BT	0.55
20	45-1/8	26-1/4	26-1/4	DSID20BT	0.55
22	51-1/8	28	28-1/8	DSID22BT	0.55
24	N/A	N/A	N/A	N/A	N/A

Available with smaller snout and custom height.

Figure 48

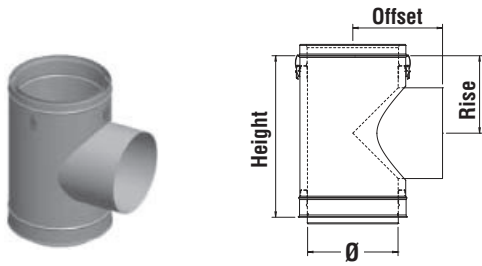
NOTE: DSID 9" and 24" not available.

DSID Lateral Tee 88-Degree					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	17-1/2	13-3/4	12-3/4	DSID3BT88	0.55
4	17-1/2	13-3/4	12-3/4	DSID4BT88	0.55
5	19-3/8	14-7/8	13-3/4	DSID5BT88	0.55
6	20-3/8	16-1/8	15	DSID6BT88	0.55
7	23-3/8	14-1/2	15-1/4	DSID7BT88	0.55
8	25-3/8	15-3/8	16-1/8	DSID8BT88	0.55
9	N/A	N/A	N/A	N/A	N/A
10	28-3/8	17	17-7/8	DSID10BT88	0.55
12	31-3/8	19-1/8	20-1/8	DSID12BT88	0.55
14	33-3/8	21	22	DSID14BT88	0.55
16	38-3/8	22-7/8	24	DSID16BT88	0.55
18	42-1/8	24-3/4	26	DSID18BT88	0.55
20	45-1/8	26-5/8	28	DSID20BT88	0.55
22	51-1/8	28-1/2	29-7/8	DSID22BT88	0.55
24	N/A	N/A	N/A	N/A	N/A

Available with smaller snout and custom height.

Figure 50

NOTE: DSID 9" and 24" not available.



DSD Barometric Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	13-1/2	5	6-1/2	DSD3BMT	0.2
4	13-1/2	5	6-1/2	DSD4BMT	0.2
5	14-1/2	5	7	DSD5BMT	0.2
6	15-1/2	6	7-1/2	DSD6BMT	0.2
7	16-1/2	7	8	DSD7BMT	0.2
8	17-1/2	8	8-1/2	DSD8BMT	0.2
9	18-1/2	9	9	DSD9BMT	0.2
10	19-1/2	10	9-1/2	DSD10BMT	0.2
12	21-1/2	12	10-1/2	DSD12BMT	0.2
14	23-1/2	14	11-1/2	DSD14BMT	0.2
16	25-1/2	16	12-1/2	DSD16BMT	0.2
18	27-1/2	18	13-1/2	DSD18BMT	0.2
20	29-1/2	20	14-1/2	DSD20BMT	0.2
22	31-1/2	22	15-1/2	DSD22BMT	0.2
24	33-1/2	24	16-1/2	DSD24BMT	0.2

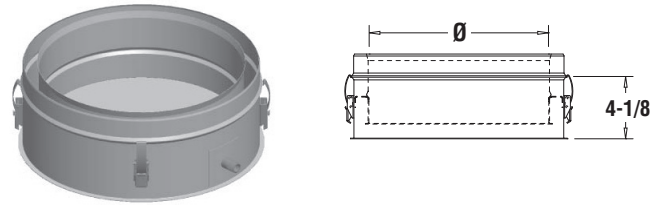
Available with smaller snout and custom height.

Figure 51

DSID Barometric Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	15-1/2	6	7-1/2	DSID3BMT	0.2
4	15-1/2	6	7-1/2	DSID4BMT	0.2
5	16-1/2	7	8	DSID5BMT	0.2
6	17-1/2	8	8-1/2	DSID6BMT	0.2
7	18-1/2	9	9	DSID7BMT	0.2
8	19-1/2	10	9-1/2	DSID8BMT	0.2
9	N/A	N/A	N/A	N/A	N/A
10	21-1/2	12	10-1/2	DSID10BMT	0.2
12	23-1/2	14	11-1/2	DSID12BMT	0.2
14	25-1/2	16	12-1/2	DSID14BMT	0.2
16	27-1/2	18	13-1/2	DSID16BMT	0.2
18	29-1/2	20	14-1/2	DSID18BMT	0.2
20	31-1/2	22	15-1/2	DSID20BMT	0.2
22	33-1/2	24	16-1/2	DSID22BMT	0.2
24	N/A	N/A	N/A	N/A	N/A

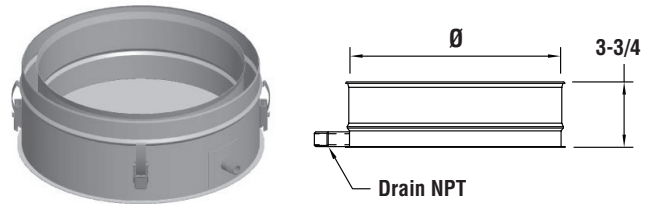
Available with smaller snout and custom height.

Figure 52 NOTE: DSID 9" and 24" not available.



DSD & DSID Tee Cap			
Ø (in.)	Height (in.)	Product Code DSD	Product Code DSID
3 to 24	4-1/8	DSDØTC	DSIDØTC

Figure 53

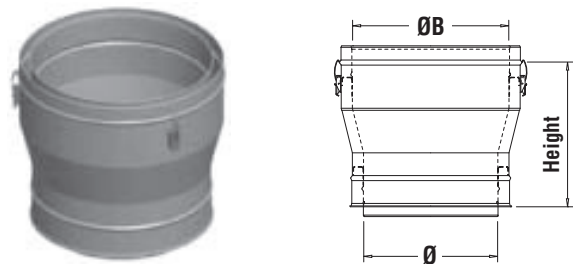


DSD & DSID Drain Tee Cap			
Ø (in.)	Height (in.)	Product Code DSD	Product Code DSID
3 to 24	4-1/8	DSDØDTC	DSIDØDTC

Drain Ø4 – Ø10, 1/4 NPT, 1/2 O.D
Drain Ø12 – Ø24, 3/8 NPT, 5/8 O.D

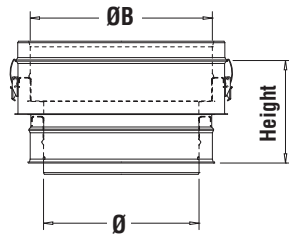
Figure 54

SSD & SSID VENTING ACCESSORIES



DSD & DSID Tapered Increaser					
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 9	Ø+1	12-1/8	DSDØTIN(ØB)	DSIDØTIN(ØB)	0.05
3 to 22	Ø+2	13-1/8	DSDØTIN(ØB)	DSIDØTIN(ØB)	0.10
3 to 9	Ø+3	14-1/8	DSDØTIN(ØB)	DSIDØTIN(ØB)	0.15
3 to 20	Ø+4	15-1/8	DSDØTIN(ØB)	DSIDØTIN(ØB)	0.20
3 to 7	Ø+5	16-1/8	DSDØTIN(ØB)	DSIDØTIN(ØB)	0.25
3 to 18	Ø+6	17-1/8	DSDØTIN(ØB)	DSIDØTIN(ØB)	0.30

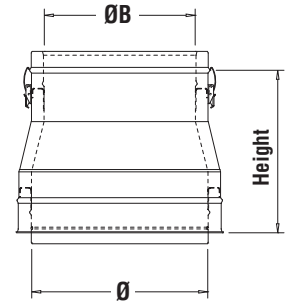
Figure 55 NOTE: DSID 9" and 24" not available.



DSD & DSID Step Increaser					
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 22	5 to 24	8	DSDØSIN(ØB)	DSIDØSIN(ØB)	$KØ = (1-\beta^2)^2$ $KØB = KØ/\beta^4$ $\beta = Ø/ØB$

Figure 56

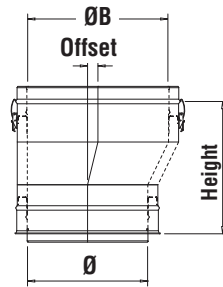
NOTE: DSID 9" and 24" not available.



DSD & DSID Tapered Reducer					
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code DSD	Product Code DSID	K Factor
5 to 10	Ø-1	12-7/16	DSDØTRD(ØB)	DSIDØTRD(ØB)	0.07
6 to 24	Ø-2	13-7/16	DSDØTRD(ØB)	DSIDØTRD(ØB)	0.09
6 to 12	Ø-3	14-7/16	DSDØTRD(ØB)	DSIDØTRD(ØB)	0.11
8 to 24	Ø-4	15-7/16	DSDØTRD(ØB)	DSIDØTRD(ØB)	0.13
9 to 24	Ø-5	16-7/16	DSDØTRD(ØB)	DSIDØTRD(ØB)	0.15
10 to 24	Ø-6	17-7/16	DSDØTRD(ØB)	DSIDØTRD(ØB)	0.17

Figure 59

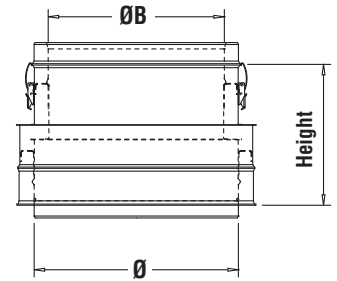
NOTE: DSID 9" and 24" not available.



DSD & DSID Eccentric Tapered Increaser						
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 9	Ø+1	12-1/2	1/2	DSDØETIN(ØB)	DSIDØETIN(ØB)	0.05
3 to 22	Ø+2	13-1/2	1	DSDØETIN(ØB)	DSIDØETIN(ØB)	0.10
3 to 9	Ø+3	14-1/2	1-1/2	DSDØETIN(ØB)	DSIDØETIN(ØB)	0.15
3 to 20	Ø+4	15-1/2	2	DSDØETIN(ØB)	DSIDØETIN(ØB)	0.20
3 to 7	Ø+5	16-1/2	2-1/2	DSDØETIN(ØB)	DSIDØETIN(ØB)	0.25
3 to 18	Ø+6	17-1/2	3	DSDØETIN(ØB)	DSIDØETIN(ØB)	0.30

Figure 57

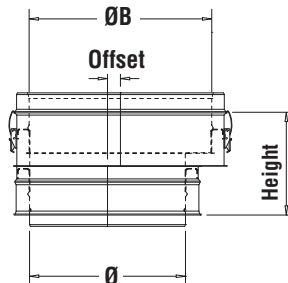
NOTE: DSID 9" and 24" not available.



DSD & DSID Step Reducer					
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code DSD	Product Code DSID	K Factor
5 to 24	3 to 22	8	DSDØSRD(ØB)	DSIDØSRD(ØB)	$KØB = 0.5 (1-\beta^2)$ $KØ = KØB/\beta^4$ $\beta = ØB/Ø$

Figure 60

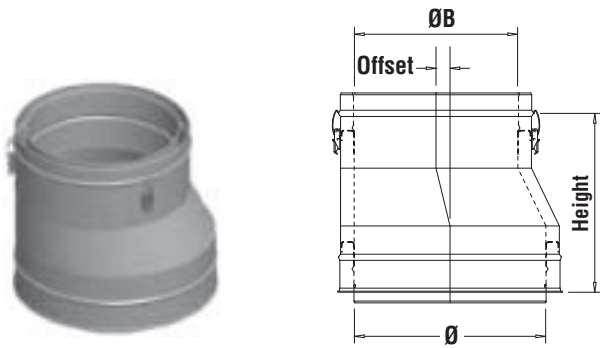
NOTE: DSID 9" and 24" not available.



DSD & DSID Eccentric Step Increaser						
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 22	5 to 24	8	(ØB-ØA)/2	DSDØESIN(ØB)	DSIDØESIN(ØB)	$KØ = (1-\beta^2)^2$ $KØB = KØ/\beta^4$ $\beta = Ø/ØB$

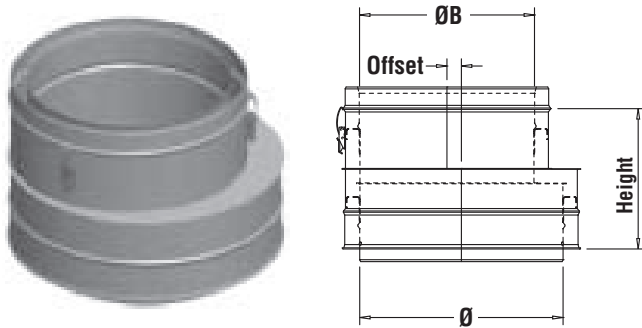
Figure 58

NOTE: DSID 9" and 24" not available.



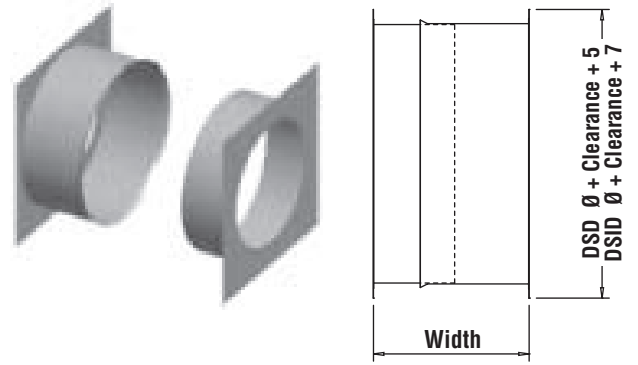
DSD & DSID Eccentric Tapered Reducer						
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)	Product Code DSD	Product Code DSID	K Factor
5 to 10	Ø-1	12-1/2	1/2	DSDØETRD(ØB)	DSIDØETRD(ØB)	0.07
6 to 24	Ø-2	13-1/2	1	DSDØETRD(ØB)	DSIDØETRD(ØB)	0.09
6 to 12	Ø-3	14-1/2	1-1/2	DSDØETRD(ØB)	DSIDØETRD(ØB)	0.11
8 to 24	Ø-4	15-1/2	2	DSDØETRD(ØB)	DSIDØETRD(ØB)	0.13
9 to 24	Ø-5	16-1/2	2-1/2	DSDØETRD(ØB)	DSIDØETRD(ØB)	0.15
10 to 24	Ø-6	17-1/2	3	DSDØETRD(ØB)	DSIDØETRD(ØB)	0.17

Figure 61 NOTE: DSID 9" and 24" not available.



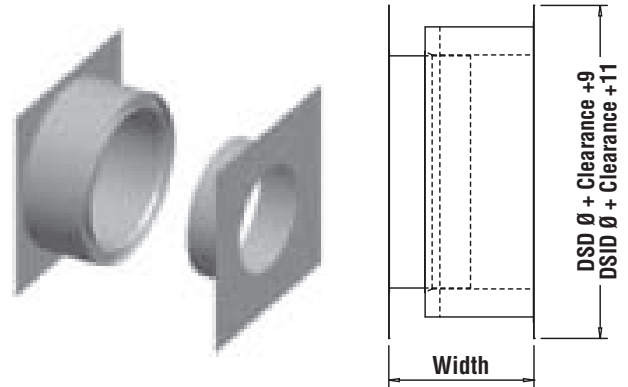
DSD & DSID Eccentric Step Reducer			
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)
5 to 24	3 to 22	8	$(\text{ØA} - \text{ØB})/2$
Product Code DSD		Product Code DSID	
DSDØESRD(ØB)		DSIDØESRD(ØB)	
K Factor			
$K\text{ØB} = 0.5 (1 - \text{ }^2)$ $K\text{Ø} = K\text{ØB}/^4 = \text{ØB}/\text{Ø}$			

Figure 62 NOTE: DSID 9" and 24" not available.



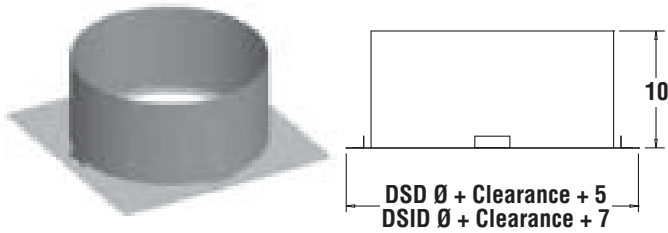
DSD & DSID Wall Thimble			
Ø (in.)	Width (in.)	Product Code DSD	Product Code DSID
3 to 24	9 to 17	DSDØWT	DSIDØWT

Figure 63 NOTE: DSID 9" and 24" not available.



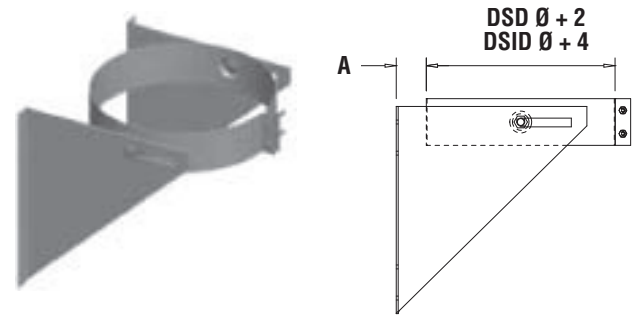
DSD & DSID Wall Thimble Insulated			
Ø (in.)	Width (in.)	Product Code DSD	Product Code DSID
3 to 24	9 to 17	DSDØWTI	DSIDØWTI

Figure 64 NOTE: DSID 9" and 24" not available.



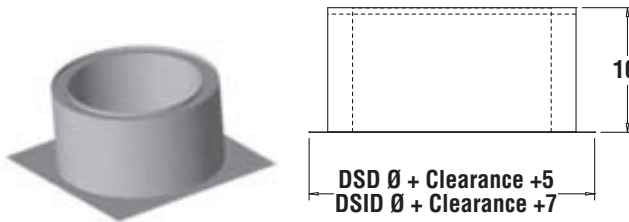
DSD & DSID Roof Thimble			
Ø (in.)	Width (in.)	Product Code DSD	Product Code DSID
3 to 24	10	DSDØRT	DSIDØRT

Figure 65 NOTE: DSID 9" and 24" not available.



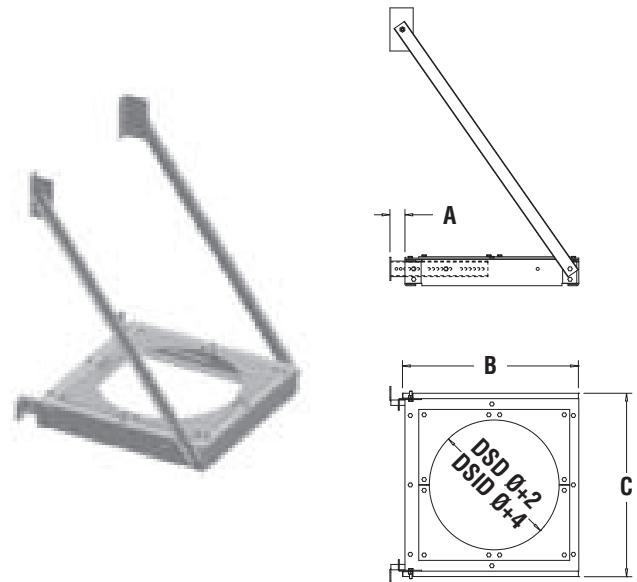
DSD & DSID Wall Support			
Ø (in.)	A (in.)	Product Code DSD	Product Code DSID
3 to 24	1 to 3	DSDØWS	DSIDØWS

Figure 69 NOTE: DSID 9" and 24" not available.



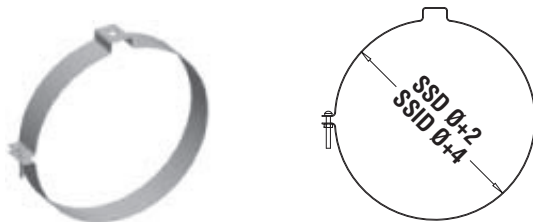
DSD & DSID Roof Thimble Insulated			
Ø (in.)	Width (in.)	Product Code DSD	Product Code DSID
3 to 24	10	DSDØRTI	DSIDØRTI

Figure 66 NOTE: DSID 9" and 24" not available.



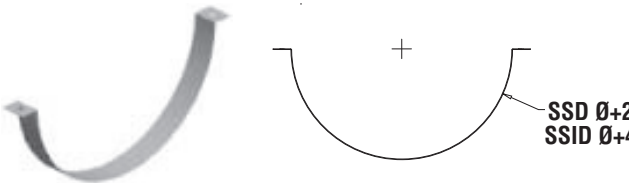
DSD Wall Suort HD				
Ø (in.)	A (in.)	B (in.)	C (in.)	Product Code
3	1-1/2 to 6-1/2	9	12	DSD3WSHD
4	1-1/2 to 6-1/2	9	12	DSD4WSHD
5	1-1/2 to 6-1/2	10	12	DSD5WSHD
6	1-1/2 to 6-1/2	11	12	DSD6WSHD
7	1-1/2 to 6-1/2	12	14	DSD7WSHD
8	1-1/2 to 6-1/2	13	14	DSD8WSHD
9	1-1/2 to 6-1/2	14	14	DSD9WSHD
10	1-1/2 to 6-1/2	15	16	DSD10WSHD
12	1-1/2 to 6-1/2	17	16	DSD12WSHD
14	1-1/2 to 6-1/2	19	22	DSD14WSHD
16	1-1/2 to 6-1/2	21	22	DSD16WSHD
18	1-1/2 to 6-1/2	23	26	DSD18WSHD
20	1-1/2 to 6-1/2	25	30	DSD20WSHD
22	1-1/2 to 6-1/2	27	30	DSD22WSHD
24	1-1/2 to 6-1/2	29	30	DSD24WSHD

Figure 70



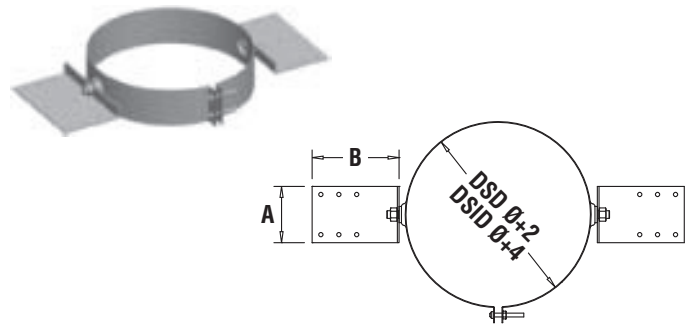
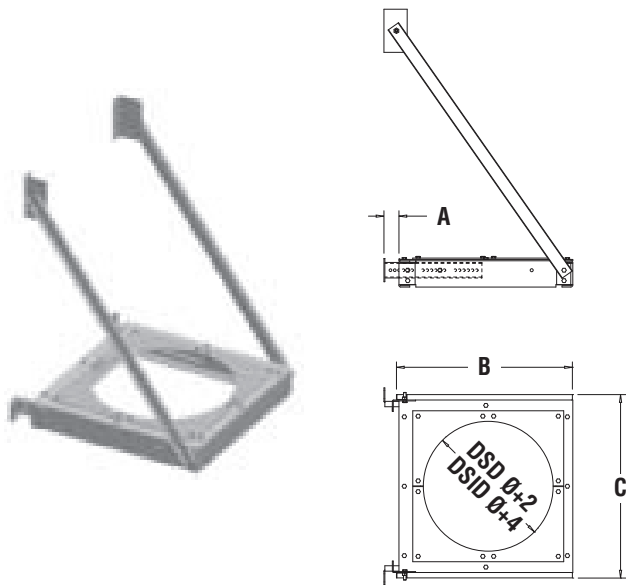
DSD & DSID Suspension Band		
Ø (in.)	Product Code DSD	Product Code DSID
3 to 24	DSDØSB	DSIDØSB

Figure 67 NOTE: DSID 9" and 24" not available.



DSD & DSID Cradle Support		
Ø (in.)	Product Code DSD	Product Code DSID
3 to 24	DSDØCS	DSIDØCS

Figure 68 NOTE: DSID 9" and 24" not available.

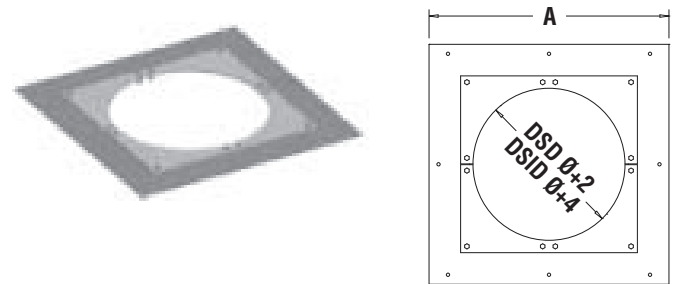


DSD & DSID Roof Support				
Ø (in.)	A (in.)	B (in.)	Product Code DSD	Product Code DSID
3 to 24	6-1/2	7-5/8	DSDØRS	DSIDØRS

Figure 73 NOTE: DSID 9" and 24" not available.

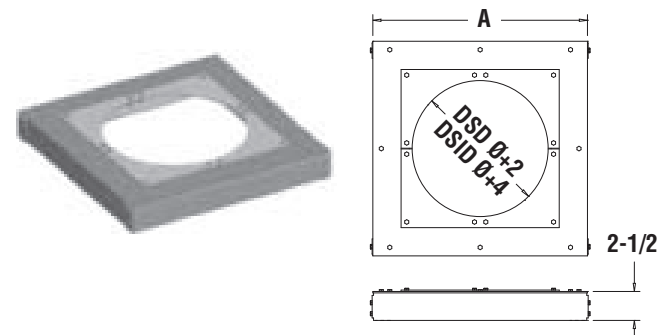
DSID Wall Support HD				
Ø (in.)	A (in.)	B (in.)	C (in.)	Product Code
3	1-1/2 to 6-1/2	11	12	DSID3WSHD
4	1-1/2 to 6-1/2	11	12	DSID4WSHD
5	1-1/2 to 6-1/2	12	14	DSID5WSHD
6	1-1/2 to 6-1/2	13	14	DSID6WSHD
7	1-1/2 to 6-1/2	14	14	DSID7WSHD
8	1-1/2 to 6-1/2	15	16	DSID8WSHD
9	N/A	N/A	N/A	N/A
10	1-1/2 to 6-1/2	17	16	DSID10WSHD
12	1-1/2 to 6-1/2	19	22	DSID12WSHD
14	1-1/2 to 6-1/2	21	22	DSID14WSHD
16	1-1/2 to 6-1/2	23	26	DSID16WSHD
18	1-1/2 to 6-1/2	25	30	DSID18WSHD
20	1-1/2 to 6-1/2	27	30	DSID20WSHD
22	1-1/2 to 6-1/2	29	30	DSID22WSHD
24	N/A	N/A	N/A	N/A

Figure 71 NOTE: DSID 9" and 24" not available.



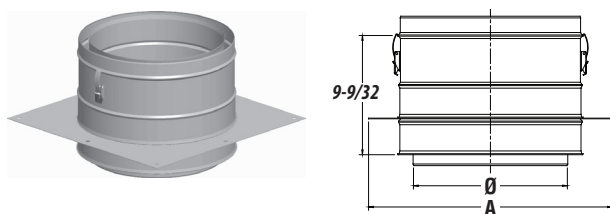
DSD & DSID Anchor Plate			
Ø (in.)	A (in.)	Product Code DSD	Product Code DSID
3 to 24	Ø+7	DSDØAP	DSIDØAP

Figure 74 NOTE: DSID 9" and 24" not available.



DSD & DSID Anchor Plate HD			
Ø (in.)	A (in.)	Product Code DSD	Product Code DSID
3 to 24	Ø+7	DSDØAPHD	DSIDØAPHD

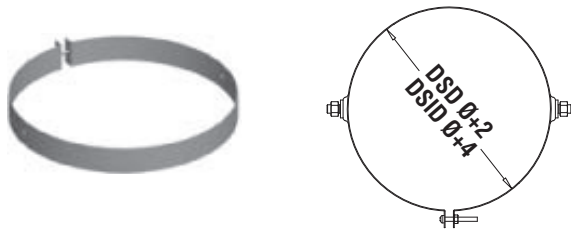
Figure 75 NOTE: DSID 9" and 24" not available.



DSD Anchor Plate Length (APL)		
Ø (in.)	A (in.)	Product Code
3 to 24	Ø + 7	DSDØAPL

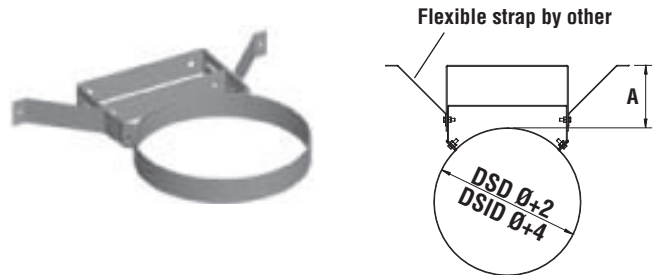
DSID Anchor Plate Length (APL)		
Ø (in.)	A (in.)	Product Code
3 to 22	Ø + 9	DSIDØAPL

Figure 72 NOTE: DSID 9" and 24" not available.



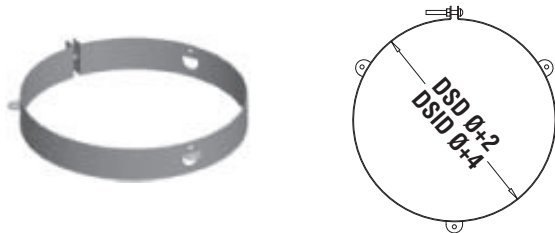
DSD & DSID Roof Brace		
Ø (in.)	Product Code DSD	Product Code DSID
3 to 24	DSDØRB	DSIDØRB

Figure 76 NOTE: DSID 9" and 24" not available.



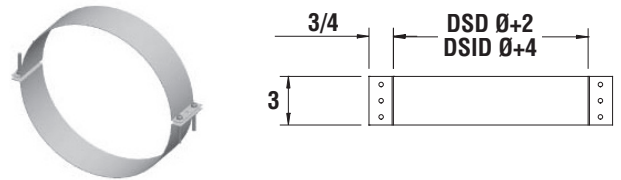
DSD & DSID Wall Guide			
Ø (in.)	A (in.)	Product Code DSD	Product Code DSID
3 to 24	1 to 4-1/2	DSDØWG	DSIDØWG

Figure 79 NOTE: DSID 9" and 24" not available.



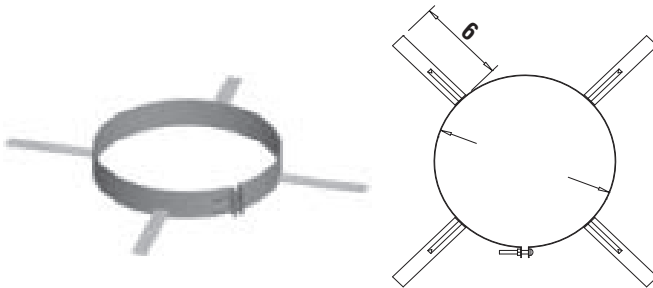
DSD & DSID Guy Wire Band		
Ø (in.)	Product Code DSD	Product Code DSID
3 to 24	DSDØGWB	DSIDØGWB

Figure 77 NOTE: DSID 9" and 24" not available.



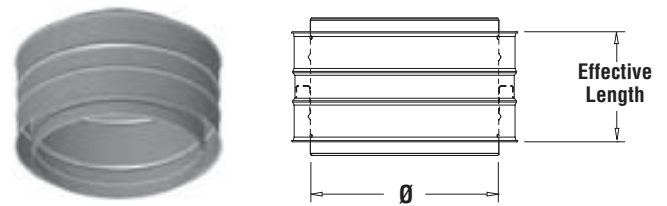
DSD & DSID Guy Support		
Ø (in.)	Product Code DSD	Product Code DSID
3 to 24	DSDØGS	DSIDØGS

Figure 80 NOTE: DSID 9" and 24" not available.



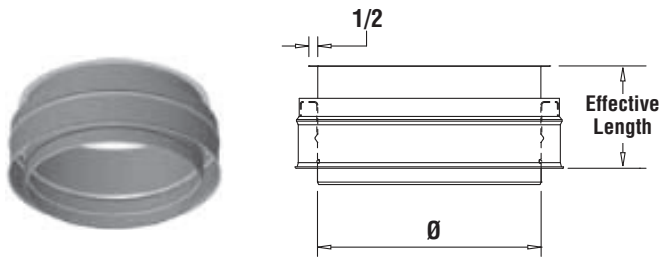
DSD & DSID Centering Band		
Ø (in.)	Product Code DSD	Product Code DSID
3 to 24	DSDØCB	DSIDØCB

Figure 78 NOTE: DSID 9" and 24" not available.



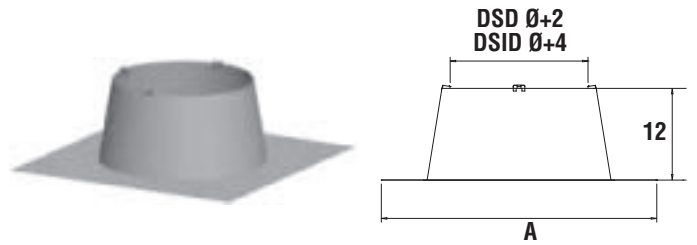
DSD & DSID Double Male Adaptor			
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID
3 to 24	7-1/8	DSDØDMAU	DSIDØDMAU

Figure 81 NOTE: DSID 9" and 24" not available.



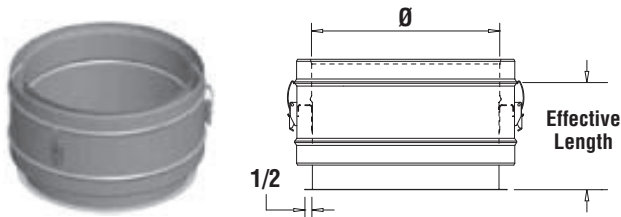
DSD & DSID Male Flange Adaptor			
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID
3 to 24	5-1/2	DSDØMFA	DSIDØMFA

Figure 82 NOTE: DSID 9" and 24" not available.



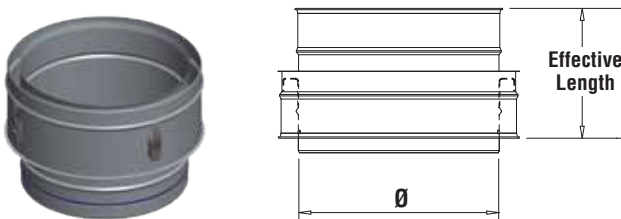
DSD Flat Flashing		
Ø (in.)	A (in.)	Product Code
3	16	DSD3F
4	16	DSD4F
5	18	DSD5F
6	26	DSD6F
7	26	DSD7F
8	28	DSD8F
9	30	DSD9F
10	30	DSD10F
12	31	DSD12F
14	34	DSD14F
16	36	DSD16F
18	38	DSD18F
20	40	DSD20F
22	42	DSD22F
24	44	DSD24F

Figure 85



DSD & DSID Female Flange Adaptor			
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID
3 to 24	6-7/8	DSDØFFA	DSIDØFFA

Figure 83 NOTE: DSID 9" and 24" not available.

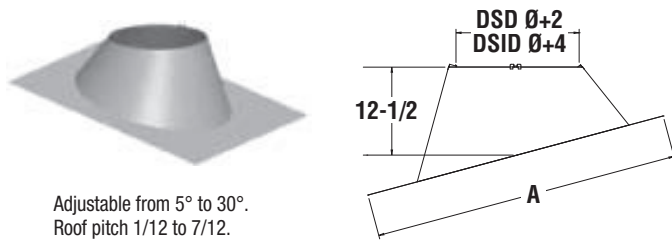


DSD & DSID to DS Adaptor			
Ø (in.)	Effective Length (in.)	Product Code DSD	Product Code DSID
3 to 24	7-7/8	DSDØDSA	DSIDØDSA

Figure 84 NOTE: DSID 9" and 24" not available.

DSID Flat Flashing		
Ø (in.)	A (in.)	Product Code
3	26	DSID3F
4	26	DSID4F
5	26	DSID5F
6	28	DSID6F
7	30	DSID7F
8	30	DSID8F
9	N/A	N/A
10	31	DSID10F
12	34	DSID12F
14	36	DSID14F
16	38	DSID16F
18	40	DSID18F
20	42	DSID20F
22	44	DSID22F
24	N/A	N/A

Figure 86 NOTE: DSID 9" and 24" not available.



Adjustable from 5° to 30°.
Roof pitch 1/12 to 7/12.

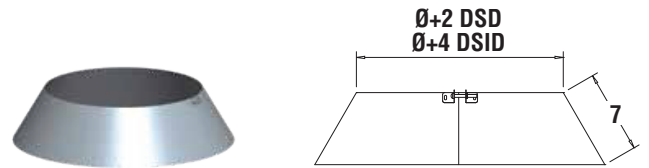
DSD Adjustable Flashing			
Ø (in.)	A (in.)	Height (in.)	Product Code
3	32	12-1/2	DSD3FA
4	32	12-1/2	DSD4FA
5	32	12-1/2	DSD5FA
6	34	12-1/2	DSD6FA
7	35-3/8	12-1/2	DSD7FA
8	36-1/2	12-1/2	DSD8FA
9	38	12-1/2	DSD9FA
10	38-1/2	12-1/2	DSD10FA
12	41	12-1/2	DSD12FA
14	43	12-1/2	DSD14FA
16	45	12-1/2	DSD16FA
18	47-1/4	12-1/2	DSD18FA
20	49-1/2	12-1/2	DSD20FA
22	51-1/2	12-1/2	DSD22FA
24	53-1/2	12-1/2	DSD24FA

Figure 87

DSID Adjustable Flashing			
Ø (in.)	A (in.)	Height (in.)	Product Code
3	34	12-1/2	DSID3FA
4	34	12-1/2	DSID4FA
5	35-3/8	12-1/2	DSID5FA
6	36-1/2	12-1/2	DSID6FA
7	38	12-1/2	DSID7FA
8	38-1/2	12-1/2	DSID8FA
9	N/A	N/A	N/A
10	41	12-1/2	DSID10FA
12	43	12-1/2	DSID12FA
14	45	12-1/2	DSID14FA
16	47-1/4	12-1/2	DSID16FA
18	49-1/2	12-1/2	DSID18FA
20	51-1/2	12-1/2	DSID20FA
22	53-1/2	12-1/2	DSID22FA
24	N/A	N/A	N/A

Figure 88

NOTE: DSID 9" and 24" not available.

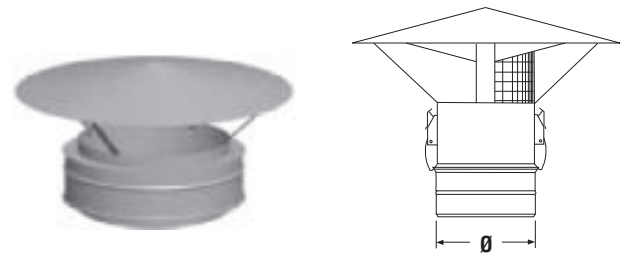


DSD & DSID Storm Collar		
Ø (in.)	Product Code DSD	Product Code DSID
3 to 24	DSDØSC	DSIDØSC

Figure 89

NOTE: DSID 9" and 24" not available.

DSD & DSID VENTING TERMINATIONS

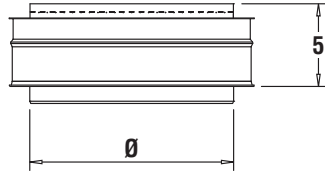


DSD Rain Cap			
Ø (in.)	Product Code DSD	Product Code with Bird Screen DSD	K Factor
3 to 24	DSDØRC	DSDØRCB	.50

DSID Rain Cap			
Ø (in.)	Product Code DSID	Product Code with Bird Screen DSID	K Factor
3 to 24	DSIDØRC	DSIDØRCB	.50

Figure 90

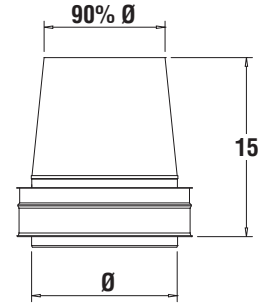
NOTE: DSID 9" and 24" not available.



DSD & DSID Screened Termination			
Ø (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	DSDØSTU	DSIDØST	.14

Figure 91

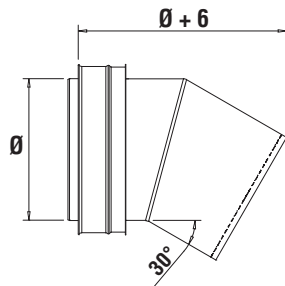
NOTE: DSID 9" and 24" not available.



DSD & DSID Exit Cone			
Ø (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	DSDØEC	DSIDØEC	.60

Figure 93

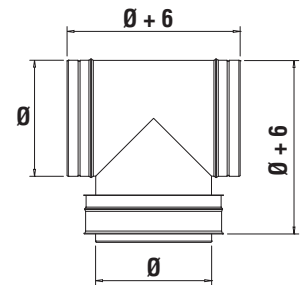
NOTE: DSID 9" and 24" not available.



DSD & DSID 30° Screen Termination			
Ø (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	DSDØSTAU	DSIDØSTA	.70

Figure 92

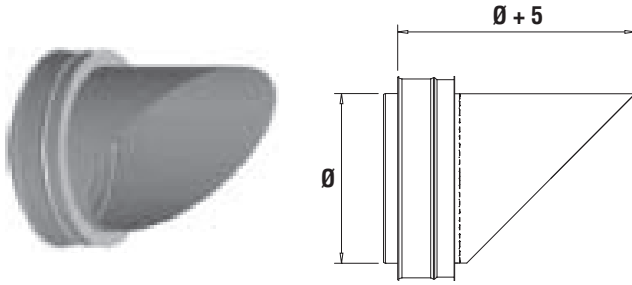
NOTE: DSID 9" and 24" not available.



DSD & DSID Termination Tee			
Ø (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	DSDØTT	DSIDØTT	.35

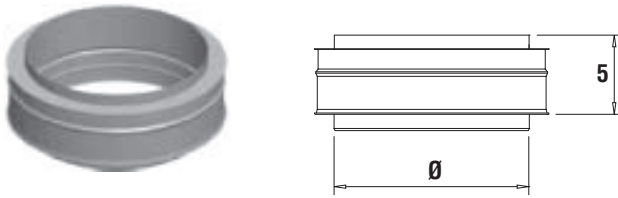
Figure 94

NOTE: DSID 9" and 24" not available.



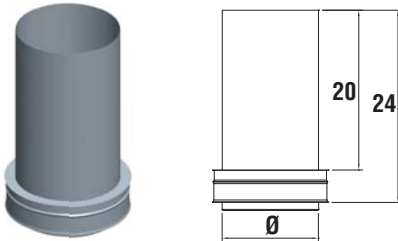
DSD & DSID Mitre Cut			
Ø (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	DSDØMCU	DSIDØMCU	.14

Figure 95 NOTE: DSID 9" and 24" not available.



DSD & DSID Closer Termination			
Ø (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	DSDØCTU	DSIDØCTU	0

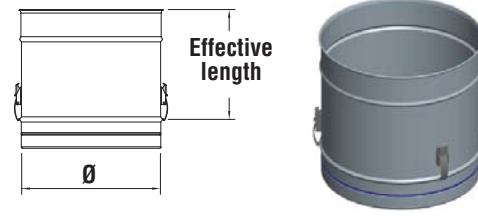
Figure 96 NOTE: DSID 9" and 24" not available.



DSD & DSID OEM Termination			
Ø (in.)	Product Code DSD	Product Code DSID	K Factor
3 to 24	DSDØEMTAU	DSIDØEMTAU	0

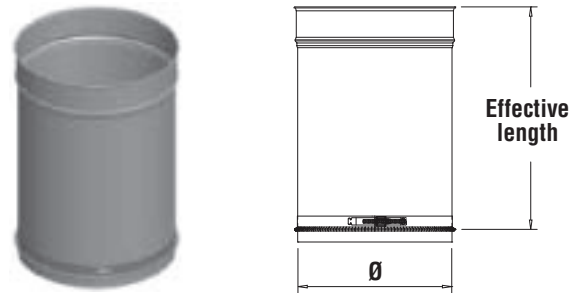
Figure 97 NOTE: DSID 9" and 24" not available.

DS VENTING LENGTHS



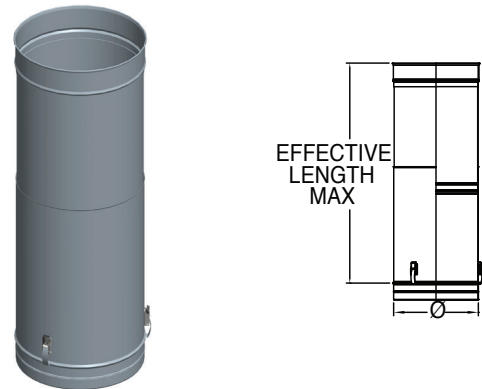
DS Lengths		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	6-1/2	DSØL9
3 to 24	9-1/2	DSØL12
3 to 24	15-1/2	DSØL18
3 to 24	21-1/2	DSØL24
3 to 24	33-1/2	DSØL36

Figure 98



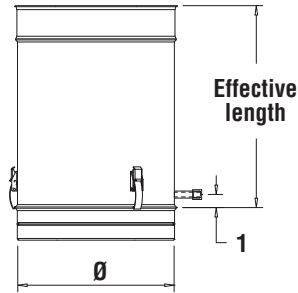
DS Adjustable Lengths		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	4 to 5	DSØAL9
3 to 24	4 to 14	DSØAL18

Figure 99



DS Telescopic Lengths			
Ø (in.)	Effective Length (in.)	Product Code 32"	Product Code 20"
3 to 24	14 to 20	DSØLAT32	DSØLAT20
3 to 24	20 to 32	DSØLAT32	DSØLAT20

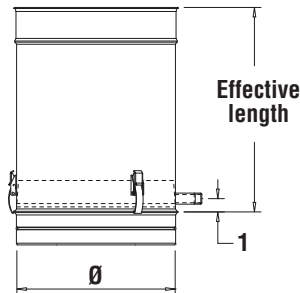
Figure 99a



DS Test Port Lengths		
\emptyset (in.)	Effective Length (in.)	Product Code
3 to 24	6-1/2	DSØTPL

Drain Ø4 – Ø24, 1/4 NPT, 1/2 O.D

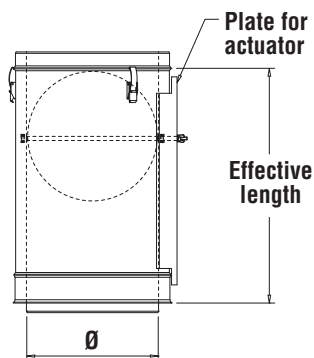
Figure 100



DS Drain Length			
\emptyset (in.)	Effective Length (in.)	Product Code	K Factor
3 to 24	6-1/2	DSØDL	0.25

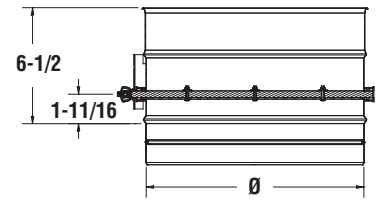
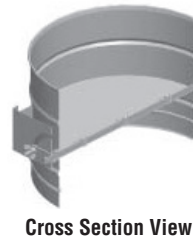
Drain Ø4 – Ø10, 1/4 NPT, 1/2 O.D
Drain Ø12 – Ø24, 1/2 NPT, 5/8 O.D

Figure 101



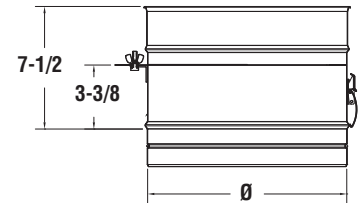
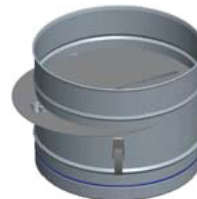
DS Damper Lengths			
\emptyset (in.)	Effective Length (in.)	Product Code	K Factor
3 to 24	15-1/2	DSØDAMP	0.60 to 9999

Figure 102



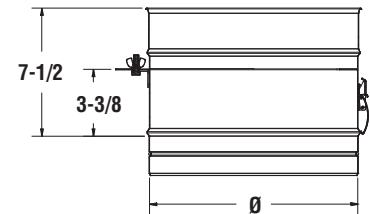
DS Damper Length Short Manual			
\emptyset (in.)	Effective Length (in.)	Product Code	K Factor
3 to 24	6-1/2	DSØDAMPS	0 to 9999

Figure 103



DS Damper Length Short			
\emptyset (in.)	Effective Length (in.)	Product Code	K Factor
3 to 24	7-1/8	DSØVFR	0 to 9999

Figure 104

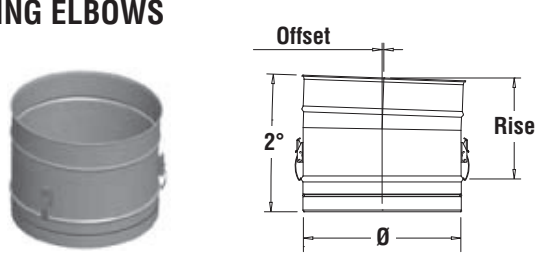


DS Vent Flow Regulator Damper Blade	
\emptyset (in.)	Product Code
3 to 24	DSØVFN

For use on Cat. I and II boilers only

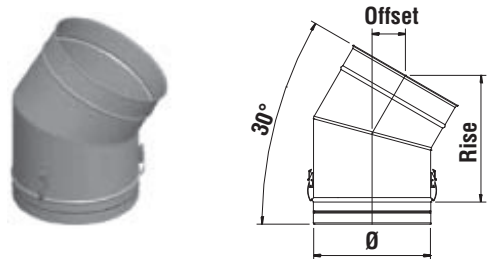
Figure 105

DS VENTING ELBOWS



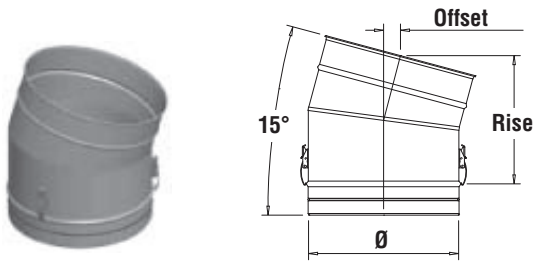
DS 2-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	1/8	7-1/8	DS3E2	0.04
4	1/8	7-1/8	DS4E2	0.04
5	1/8	7-1/4	DS5E2	0.04
6	1/8	7-1/4	DS6E2	0.04
7	1/8	7-1/4	DS7E2	0.04
8	1/8	7-1/4	DS8E2	0.04
9	1/8	7-3/8	DS9E2	0.04
10	1/8	7-3/8	DS10E2	0.04
12	1/8	7-3/8	DS12E2	0.04
14	1/8	7-1/2	DS14E2	0.03
16	1/8	7-5/8	DS16E2	0.03
18	1/8	7-5/8	DS18E2	0.03
20	1/8	7-3/4	DS20E2	0.03
22	1/8	7-3/4	DS22E2	0.03
24	1/8	7-7/8	DS24E2	0.03

Figure 106



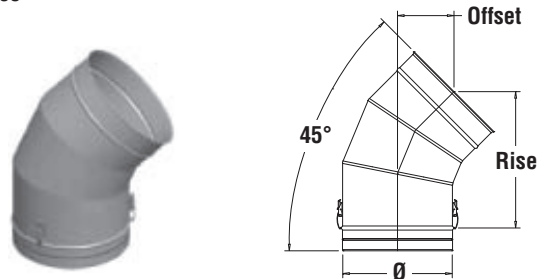
DS 30-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	2-1/8	8	DS3E30	0.61
4	2-1/4	8-1/2	DS4E30	0.61
5	2-3/8	9	DS5E30	0.60
6	2-5/8	9-1/2	DS6E30	0.59
7	2-3/4	10	DS7E30	0.58
8	2-7/8	10-1/2	DS8E30	0.57
9	3	11	DS9E30	0.56
10	3-1/8	11-1/2	DS10E30	0.55
12	3-3/8	12-1/2	DS12E30	0.54
14	3-5/8	13-1/2	DS14E30	0.54
16	3-7/8	14-1/2	DS16E30	0.53
18	4-1/8	15-1/2	DS18E30	0.52
20	4-1/2	16-1/2	DS20E30	0.52
22	4-3/4	17-1/2	DS22E30	0.51
24	5	18-1/2	DS24E30	0.51

Figure 108



DS 15-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	1	7-5/8	DS3E15	0.31
4	1	7-7/8	DS4E15	0.31
5	1-1/8	8-1/4	DS5E15	0.30
6	1-1/8	8-1/2	DS6E15	0.30
7	1-1/8	8-3/4	DS7E15	0.29
8	1-1/4	9	DS8E15	0.29
9	1-1/4	9-1/4	DS9E15	0.28
10	1-1/4	9-1/2	DS10E15	0.28
12	1-3/8	10	DS12E15	0.27
14	1-3/8	10-1/2	DS14E15	0.27
16	1-1/2	11	DS16E15	0.26
18	1-1/2	11-1/2	DS18E15	0.26
20	1-5/8	12-1/8	DS20E15	0.26
22	1-5/8	12-5/8	DS22E15	0.26
24	1-3/4	13-1/8	DS24E15U	0.26

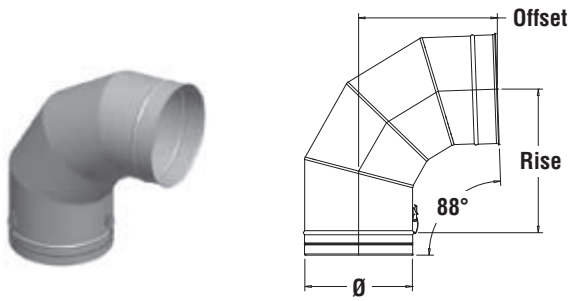
Figure 107



DS 45-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	3-3/8	8-1/8	DS3E45	0.26
4	4-1/4	10-1/4	DS4E45	0.26
5	4	9-1/2	DS5E45	0.22
6	4-1/4	10-1/2	DS6E45	0.17
7	4-1/2	10-7/8	DS7E45	0.16
8	4-7/8	11-5/8	DS8E45	0.14
9	5-1/8	12-3/8	DS9E45	0.13
10	5-3/8	13	DS10E45	0.12
12	6	14-1/2	DS12E45	0.11
14	6-5/8	15-7/8	DS14E45	0.11
16	7-1/8	17-1/4	DS16E45	0.10
18	7-3/4	18-3/4	DS18E45	0.09
20	8-3/8	20-1/8	DS20E45	0.08
22	8-7/8	21-1/2	DS22E45	0.08
24	9-1/2	23	DS24E45	0.08

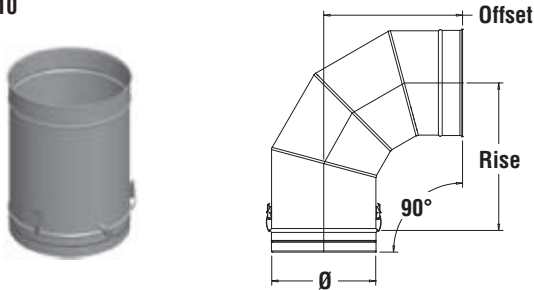
Figure 109

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.



DS 88-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	6-3/8	6-5/8	DS3E88	0.60
4	7-3/8	7-5/8	DS4E88	0.54
5	8-3/8	8-5/8	DS5E88	0.48
6	9-1/4	9-5/8	DS6E88	0.42
7	10-1/4	10-5/8	DS7E88	0.39
8	11-1/4	11-5/8	DS8E88	0.37
9	12-1/4	12-5/8	DS9E88	0.34
10	13-1/8	13-5/8	DS10E88	0.32
12	15-1/8	15-5/8	DS12E88	0.29
14	17	17-5/8	DS14E88	0.27
16	19	19-5/8	DS16E88	0.25
18	20-7/8	21-5/8	DS18E88	0.24
20	22-7/8	23-5/8	DS20E88	0.23
22	24-3/4	25-5/8	DS22E88	0.21
24	26-5/8	27-5/8	DS24E88	0.20

Figure 110

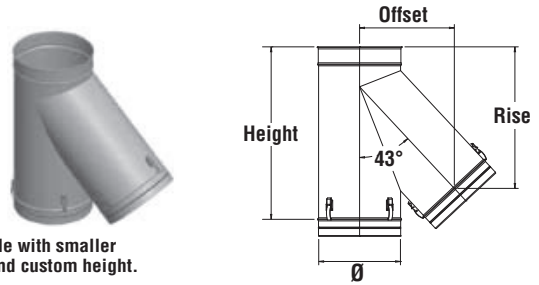


DS 90-Degree Elbow				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	6-1/2	6-1/2	DS3E90	0.54
4	7-1/2	7-1/2	DS4E90	0.54
5	8-1/2	8-1/2	DS5E90	0.48
6	9-1/2	9-1/2	DS6E90	0.42
7	10-1/2	10-1/2	DS7E90	0.39
8	11-1/2	11-1/2	DS8E90	0.37
9	12-1/2	12-1/2	DS9E90	0.34
10	13-1/2	13-1/2	DS10E90	0.32
12	15-1/2	15-1/2	DS12E90	0.29
14	17-1/2	17-1/2	DS14E90	0.27
16	19-1/2	19-1/2	DS16E90	0.25
18	21-1/2	21-1/2	DS18E90	0.24
20	23-1/2	23-1/2	DS20E90	0.23
22	25-1/2	25-1/2	DS22E90	0.21
24	27-1/2	27-1/2	DS24E90	0.20

Figure 111

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

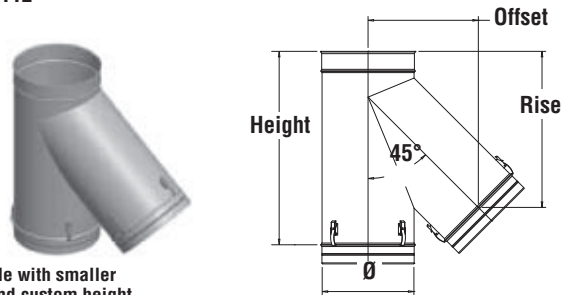
DS VENTING TEES



Available with smaller snout and custom height.

DS 43-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	14-1/4	6-3/8	11-1/8	DS3T43	0.4
4	14-1/4	6-3/8	11-1/8	DS4T43	0.4
5	15-1/4	7-3/4	12-7/8	DS5T43	0.4
6	17-1/4	8-1/2	13-3/4	DS6T43	0.4
7	18-1/4	9-1/8	14-3/4	DS7T43	0.4
8	20-1/4	10-1/2	16-3/8	DS8T43	0.4
9	21-1/4	11-1/4	17-1/4	DS9T43	0.4
10	22-1/4	12-5/8	19	DS10T43	0.4
12	25-1/4	13-7/8	20-3/4	DS12T43	0.4
14	29-1/4	16	23-3/8	DS14T43	0.4
16	32-1/4	17-3/8	25-1/4	DS16T43	0.4
18	35	19-3/8	27-7/8	DS18T43	0.4
20	38	21-3/8	30-3/8	DS20T43	0.4
22	41	22-3/4	32-1/4	DS22T43	0.4
24	44	24-5/8	34-5/8	DS24T43	0.4

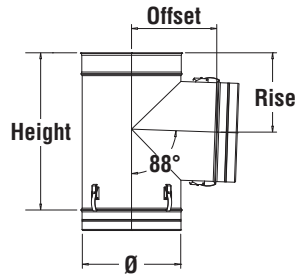
Figure 112



Available with smaller snout and custom height.

DS 45-Degree Tee				
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code
3	14-1/4	6-5/8	11	DS3T45
4	14-1/4	6-5/8	11	DS4T45
5	15-1/4	8-1/8	12-5/8	DS5T45
6	17-1/4	8-3/4	13-1/2	DS6T45
7	18-1/4	9-1/2	14-3/8	DS7T45
8	20-1/4	10-7/8	16	DS8T45
9	21-1/4	11-5/8	17	DS9T45
10	22-1/4	13	17-5/8	DS10T45
12	25-1/4	14-1/2	20-3/8	DS12T45
14	29-1/4	15-7/8	22-1/4	DS14T45
16	32-1/4	18-1/8	24-7/8	DS16T45
18	35	20-1/4	27-1/2	DS18T45
20	38	22-1/4	29-7/8	DS20T45
22	41	23-5/8	31-5/8	DS22T45
24	44	25-1/2	34	DS24T45

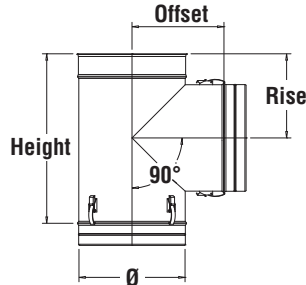
Figure 113



Available with smaller snout and custom height.

DS 88-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	11-1/4	6-3/8	5-5/8	DS3T88	1.21
4	11-1/4	6-3/8	5-5/8	DS4T88	1.21
5	12-1/4	7-3/8	6-1/4	DS5T88	1.21
6	13-1/4	7-3/8	6-5/8	DS6T88	1.21
7	14-1/4	8-3/8	7-1/4	DS7T88	1.21
8	15-1/4	8-3/8	7-5/8	DS8T88	1.21
9	16-1/4	9-3/8	8-1/4	DS9T88	1.21
10	17-1/4	9-3/8	8-5/8	DS10T88	1.21
12	19-1/4	10-3/8	9-3/4	DS12T88	1.21
14	21-1/4	11-3/8	10-3/4	DS14T88	1.21
16	23-1/4	12-3/8	11-3/4	DS16T88	1.21
18	25-1/4	13-3/8	12-3/4	DS18T88	1.21
20	27-1/4	14-3/8	13-3/4	DS20T88	1.21
22	29-1/4	15-3/8	14-3/4	DS22T88	1.21
24	31-1/4	16-3/8	15-3/4	DS24T88	1.21

Figure 114

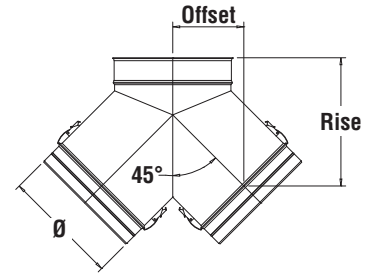


Available with smaller snout and custom height.

DS 90-Degree Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	11-1/4	6-3/8	5-1/2	DS3T90	1.21
4	11-1/4	6-3/8	5-1/2	DS4T90	1.21
5	12-1/4	7-3/8	6	DS5T90	1.21
6	13-1/4	7-3/8	6-1/2	DS6T90	1.21
7	14-1/4	8-3/8	7	DS7T90	1.21
8	15-1/4	8-3/8	7-1/2	DS8T90	1.21
9	16-1/4	9-3/8	8	DS9T90	1.21
10	17-1/4	9-3/8	8-1/2	DS10T90	1.21
12	19-1/4	10-3/8	9-1/2	DS12T90	1.21
14	21-1/4	11-3/8	10-1/2	DS14T90	1.21
16	23-1/4	12-3/8	11-1/2	DS16T90	1.21
18	25-1/4	13-3/8	12-1/2	DS18T90	1.21
20	27-1/4	14-3/8	13-1/2	DS20T90	1.21
22	29-1/4	15-3/8	14-1/2	DS22T90	1.21
24	31-1/4	16-3/8	15-1/2	DS24T90	1.21

Figure 115

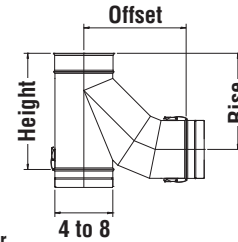
NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.



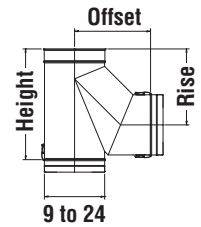
Available with smaller snout and custom height.

DS 90-Degree Tee Y				
Ø (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	4-1/2	8-1/2	DS3TY90	0.6
4	4-1/2	8-1/2	DS4TY90	0.6
5	5-1/4	10-1/8	DS5TY90	0.6
6	5-1/4	10-1/8	DS6TY90	0.6
7	6	10-7/8	DS7TY90	0.6
8	6	10-7/8	DS8TY90	0.6
9	6-5/8	12-5/8	DS9TY90	0.6
10	6-5/8	12-5/8	DS10TY90	0.6
12	7-3/8	13-1/4	DS12TY90	0.6
14	8-1/8	15	DS14TY90	0.6
16	8-3/4	16-3/4	DS16TY90	0.6
18	9-1/2	17-3/8	DS18TY90	0.6
20	10-1/4	18-1/8	DS20TY90	0.6
22	10-7/8	18-7/8	DS22TY90	0.6
24	11-5/8	20-1/2	DS24TY90	0.6

Figure 116

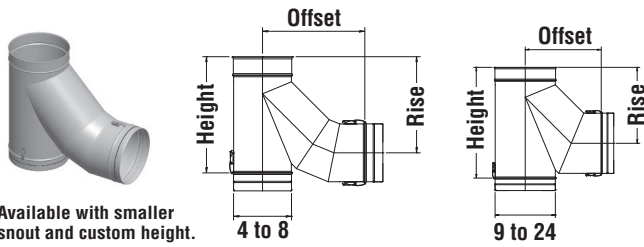


Available with smaller snout and custom height.



DS Lateral Secret Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	10-1/8	9-1/4	8-7/8	DS3BT	0.55
4	10-1/8	9-1/4	8-7/8	DS4BT	0.55
5	12-1/8	10-1/2	10	DS5BT	0.55
6	13-1/8	11-3/4	11-1/8	DS6BT	0.55
7	15-1/8	13	12-1/4	DS7BT	0.55
8	16-1/8	14-1/4	13-3/8	DS8BT	0.55
9	18-1/8	12-1/2	12-1/2	DS9BT	0.55
10	19-1/8	13-3/8	13-3/8	DS10BT	0.55
12	22-1/8	15-1/4	15-1/4	DS12BT	0.55
14	25-1/8	17	17	DS14BT	0.55
16	28-1/8	18-7/8	18-7/8	DS16BT	0.55
18	30-7/8	20-3/4	20-3/4	DS18BT	0.55
20	33-7/8	22-1/2	22-1/2	DS20BT	0.55
22	36-7/8	24-3/8	24-3/8	DS22BT	0.55
24	39-7/8	26-1/8	26-1/4	DS24BT	0.55

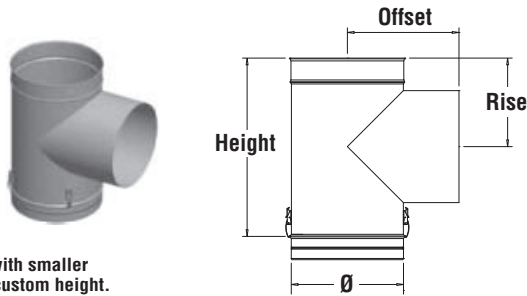
Figure 117



Available with smaller snout and custom height.

DS Lateral Tee 88-Degree					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	11-1/8	9-1/4	9-1/4	DS3BT88	0.55
4	11-1/8	9-1/4	9-1/4	DS4BT88	0.55
5	12-1/8	10-1/2	10-1/2	DS5BT88	0.55
6	14-1/8	11-3/4	11-3/4	DS6BT88	0.55
7	16-1/8	13	13	DS7BT88	0.55
8	17-1/8	14-1/4	14-1/8	DS8BT88	0.55
9	19-1/8	12-5/8	13-1/4	DS9BT88	0.55
10	20-1/8	13-1/2	14-1/4	DS10BT88	0.55
12	23-1/8	15-3/8	16-1/8	DS12BT88	0.55
14	26-1/8	17-3/8	18-1/8	DS14BT88	0.55
16	29-1/8	19-1/8	20-1/8	DS16BT88	0.55
18	31-7/8	21	22	DS18BT88	0.55
20	34-7/8	22-7/8	24	DS20BT88	0.55
22	37-7/8	24-3/4	26	DS22BT88	0.55
24	40-7/8	26-5/8	28	DS24BT88	0.55

Figure 118

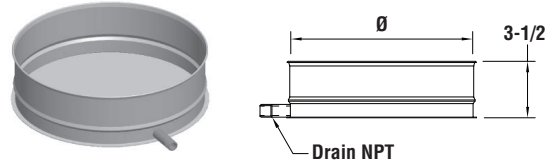


Available with smaller snout and custom height.

DS Barometric Tee					
Ø (in.)	Height (in.)	Offset (in.)	Rise (in.)	Product Code	K Factor
3	11-1/4	5	5-1/2	DS3BMT	0.2
4	11-1/4	5	5-1/2	DS4BMT	0.2
5	12-1/4	5	6	DS5BMT	0.2
6	13-1/4	6	6-1/2	DS6BMT	0.2
7	14-1/4	7	7	DS7BMT	0.2
8	15-1/4	8	7-1/2	DS8BMT	0.2
9	16-1/4	9	8	DS9BMT	0.2
10	17-1/4	10	8-1/2	DS10BMT	0.2
12	19-1/4	12	9-1/2	DS12BMT	0.2
14	21-1/4	14	10-1/2	DS14BMT	0.2
16	23-1/4	16	11-1/2	DS16BMT	0.2
18	25-1/4	18	12-1/2	DS18BMT	0.2
20	27-1/4	20	13-1/2	DS20BMT	0.2
22	29-1/4	22	14-1/2	DS22BMT	0.2
24	31-1/4	24	15-1/2	DS24BMT	0.2

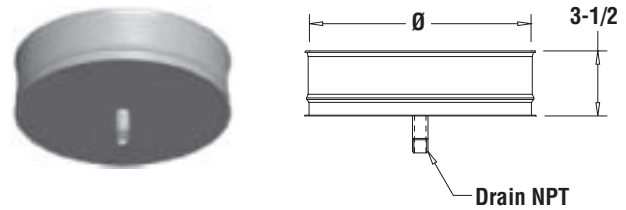
Figure 119

DS VENTING ACCESSORIES



DS Tee Cap		
Ø (in.)	Height (in.)	Product Code
3 to 24	3-1/2	DSØTC

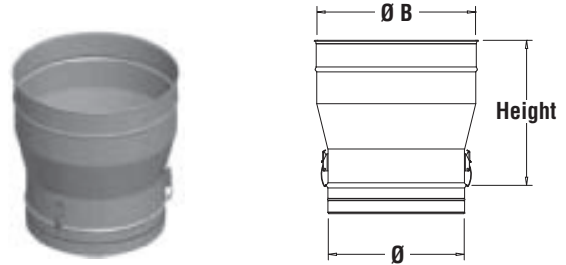
Figure 120



DS Drain Tee Cap		
Ø (in.)	Height (in.)	Product Code
3 to 24	3-1/2	DSØDTC

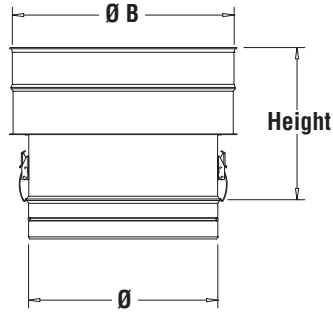
Drain Ø4 – Ø10, 1/4 NPT, 1/2 O.D
Drain Ø12 – Ø24, 3/8 NPT, 5/8 O.D

Figure 121



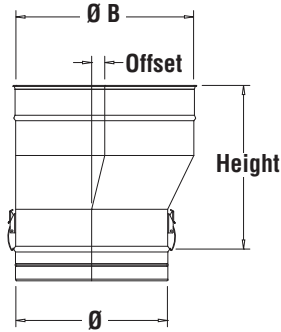
DS Tapered Increaser				
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code	K Factor
3 to 9	Ø+1	11-7/8	DSØTIN(ØB)	0.05
3 to 22	Ø+2	12-7/8	DSØTIN(ØB)	0.10
3 to 9	Ø+3	13-7/8	DSØTIN(ØB)	0.15
3 to 20	Ø+4	14-7/8	DSØTIN(ØB)	0.20
3 to 7	Ø+5	15-7/8	DSØTIN(ØB)	0.25
3 to 18	Ø+6	16-7/8	DSØTIN(ØB)	0.30

Figure 122



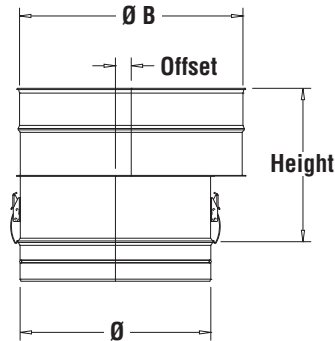
DS Step Increase				
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code	K Factor
3 to 22	5 to 24	10	DSØSIN(ØB)	$KØ = (1-B^2)^2$ $KØB = KØ/B^4$

Figure 123



DS Eccentric Tapered Increase					
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)	Product Code	K Factor
3 to 9	Ø+1	12-1/4	1/2	DSØETIN(ØB)	0.05
3 to 22	Ø+2	13-1/4	1	DSØETIN(ØB)	0.10
3 to 9	Ø+3	14-1/4	1-1/2	DSØETIN(ØB)	0.15
3 to 20	Ø+4	15-1/4	2	DSØETIN(ØB)	0.20
3 to 7	Ø+5	16-1/4	2-1/2	DSØETIN(ØB)	0.25
3 to 18	Ø+6	17-1/4	3	DSØETIN(ØB)	0.30

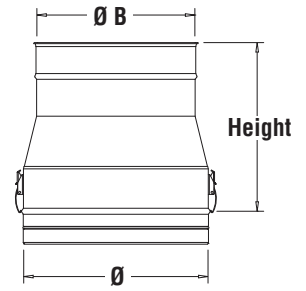
Figure 124



$B = Ø/ØB$

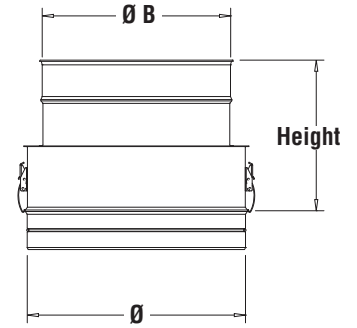
DS Eccentric Step Increase					
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)	Product Code	K Factor
3 to 22	5 to 24	10	$(ØB-ØA)/2$	DSØESIN(ØB)	$KØ = (1-B^2)^2$ $KØB = KØ/B^4$

Figure 125



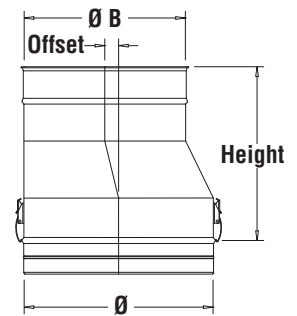
DS Tapered Reducer				
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code	K Factor
5 to 10	Ø-1	11-7/8	DSØTRD(ØB)	0.07
6 to 24	Ø-2	12-7/8	DSØTRD(ØB)	0.09
6 to 12	Ø-3	13-7/8	DSØTRD(ØB)	0.11
8 to 24	Ø-4	14-7/8	DSØTRD(ØB)	0.13
9 to 24	Ø-5	15-7/8	DSØTRD(ØB)	0.15
10 to 24	Ø-6	16-7/8	DSØTRD(ØB)	0.17

Figure 126



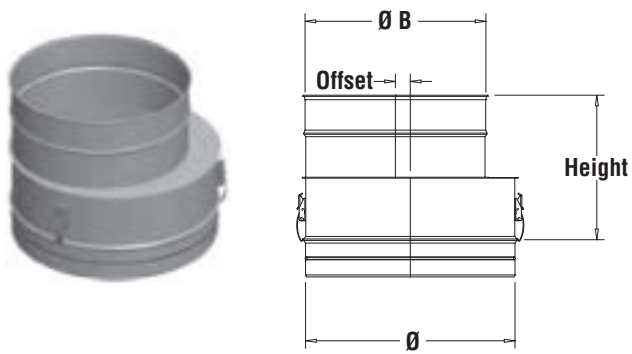
DS Step Reducer				
Ø (in.)	ØB Available (in.)	Height (in.)	Product Code	K Factor
5 to 24	4 to 22	10	DSØSRD(ØB)	$KØ = (1-B^2)^2$ $KØB = KØ/B^4$

Figure 127



DS Eccentric Tapered Reducer					
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)	Product Code	K Factor
5 to 10	Ø+1	12-1/4	1/2	DSØETRD(ØB)	0.07
6 to 24	Ø+2	13-1/4	1	DSØETRD(ØB)	0.09
6 to 12	Ø+3	14-1/4	1-1/2	DSØETRD(ØB)	0.11
8 to 24	Ø+4	15-1/4	2	DSØETRD(ØB)	0.13
9 to 24	Ø+5	16-1/4	2-1/2	DSØETRD(ØB)	0.15
10 to 24	Ø+6	17-1/4	3	DSØETRD(ØB)	0.17

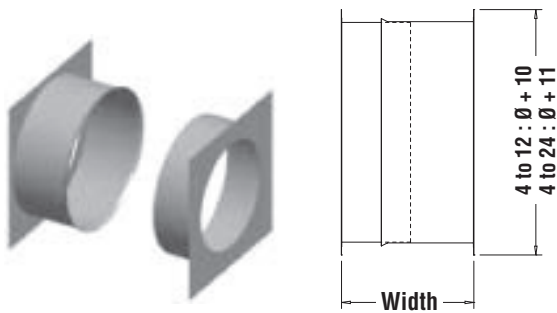
Figure 128



$B = \delta/\delta B$

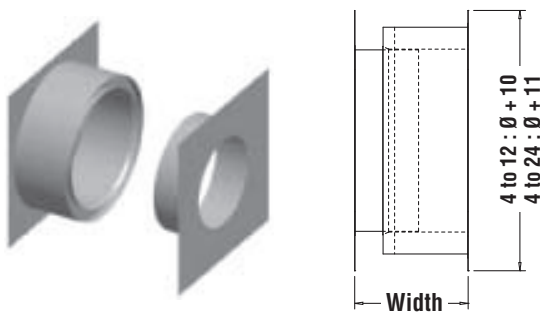
DS Eccentric Step Reducer					
Ø (in.)	ØB Available (in.)	Height (in.)	Offset (in.)	Product Code	K Factor
5 to 10	4 to 22	10	$(\delta A - \delta B)/2$	DSØESRD(ØB)	$K\delta = (1 - B^2)^2$ $K\delta B = K\delta/B^4$

Figure 129



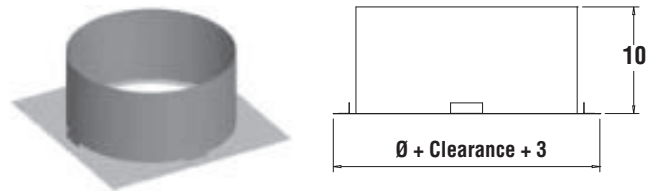
DS Wall Thimble		
Ø (in.)	Height (in.)	Product Code
3 to 24	9 to 17	DSØWT

Figure 130



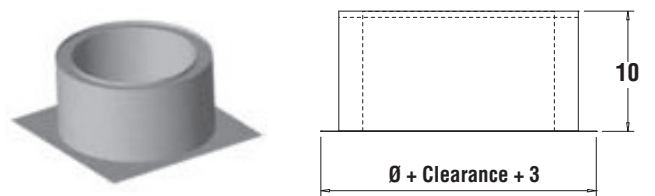
DS Wall Thimble Insulated		
Ø (in.)	Height (in.)	Product Code
3 to 24	9 to 17	DSØWTI

Figure 131



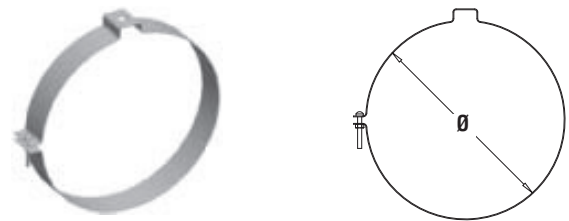
DS Roof Thimble		
Ø (in.)	Height (in.)	Product Code
3 to 24	10	DSØRT

Figure 132



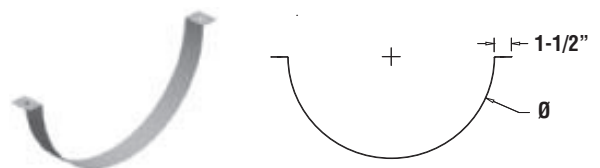
DS Roof Thimble Insulated		
Ø (in.)	Height (in.)	Product Code
3 to 24	10	DSØRTI

Figure 133



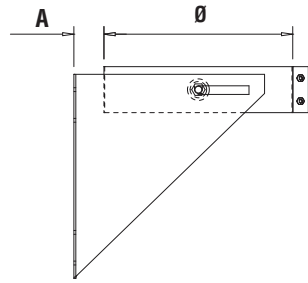
DS Suspension Band	
Ø (in.)	Product Code
3 to 24	DSØSB

Figure 134



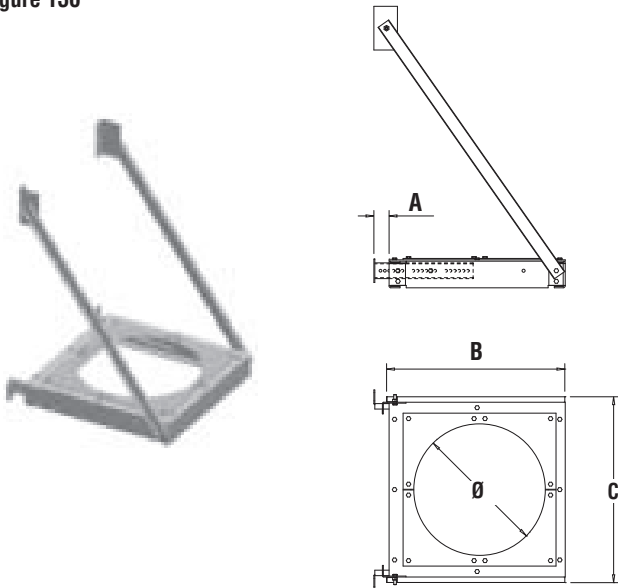
DS Cradle Support	
Ø (in.)	Product Code
3 to 24	DSØCS

Figure 135



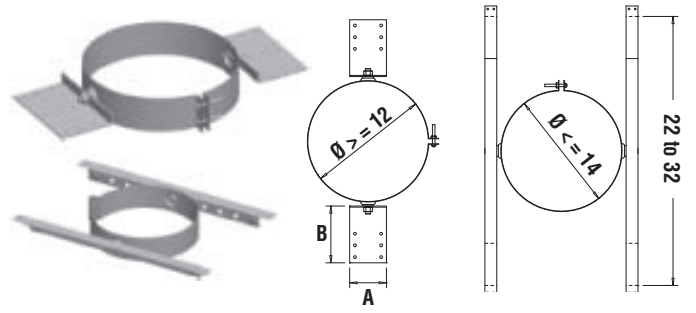
DS Wall Support		
Ø (in.)	Height (in.)	Product Code
3 to 12	2 to 5	DSØWS
14 to 24	4 to 7	DSØWS

Figure 136



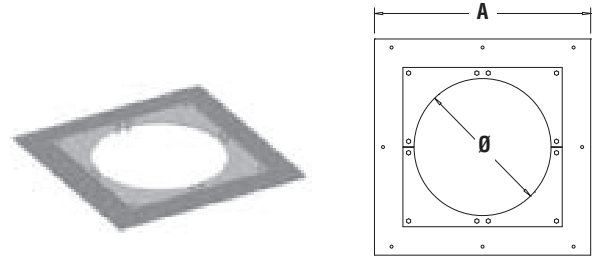
DS Wall Support HD				
Ø (in.)	A (in.)	B (in.)	C (in.)	Product Code
3	2 to 7	7	8	DS3WSHD
4	2 to 7	7	8	DS4WSHD
5	2 to 7	9	9	DS5WSHD
6	2 to 7	12	10	DS6WSHD
7	2 to 7	12	11	DS7WSHD
8	2 to 7	12	12	DS8WSHD
9	2 to 7	14	13	DS9WSHD
10	2 to 7	14	14	DS10WSHD
12	2 to 7	16	16	DS12WSHD
14	4 to 9	22	20	DS14WSHD
16	4 to 9	22	22	DS16WSHD
18	4 to 9	26	24	DS18WSHD
20	4 to 9	26	26	DS20WSHD
22	4 to 9	30	28	DS22WSHD
24	4 to 9	30	30	DS24WSHD

Figure 137



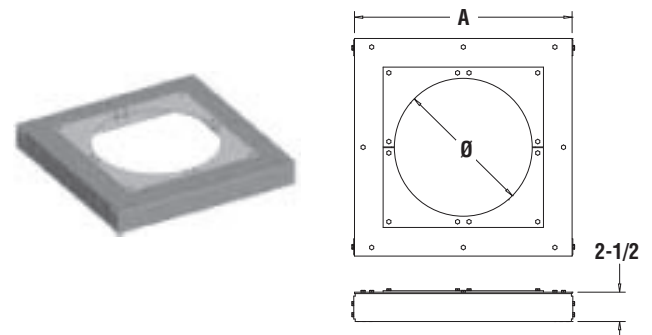
DS Roof Support			
Ø (in.)	A (in.)	B (in.)	Product Code
3 to 12	6-1/2	7-5/8	DSØRS
14 to 24	22 to 32	1-1/2	DSØRS

Figure 138



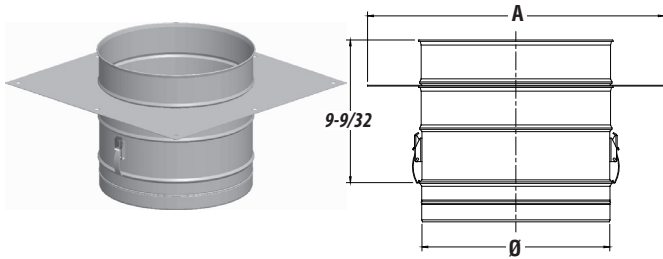
DS Anchor Plate		
Ø (in.)	A (in.)	Product Code
3 to 12	Ø+7	DSØAP
14 to 24	Ø+11	DSØAP

Figure 139



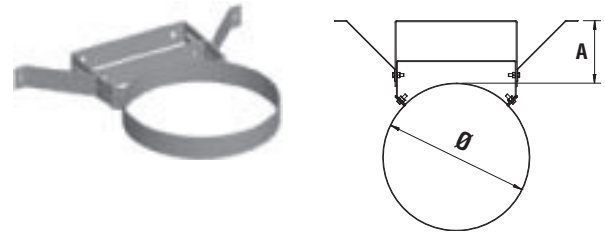
DS Anchor Plate HD		
Ø (in.)	A (in.)	Product Code
3 to 12	Ø+7	DSØAPHD
14 to 24	Ø+11	DSØAPHD

Figure 140



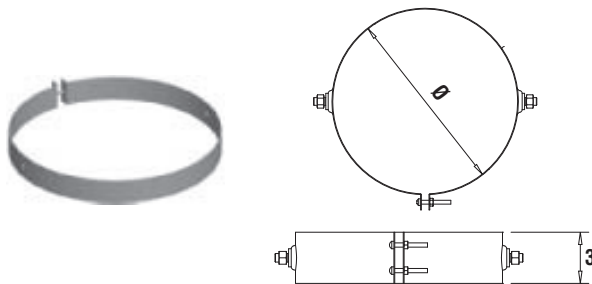
DS Anchor Plate Length (APL)		
Ø (in.)	A (in.)	Product Code
3 to 12	Ø + 7	DSØAPL
14 to 24	Ø + 11	DSØAPL

Figure 141



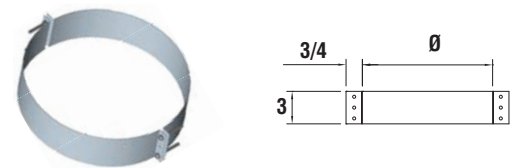
DS Wall Guide		
Ø (in.)	A (in.)	Product Code
3 to 24	2 to 5-1/2	DSØWG
14 to 24	4 to 7-1/2	DSØWG

Figure 145



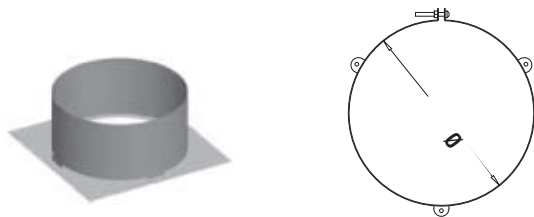
DS Roof Brace	
Ø (in.)	Product Code
3 to 24	DSØRB

Figure 142



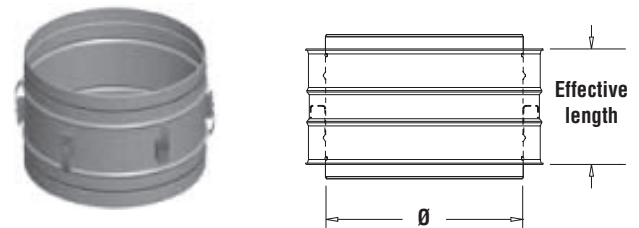
DS Guy Support	
Ø (in.)	Product Code
3 to 24	DSØGS

Figure 146



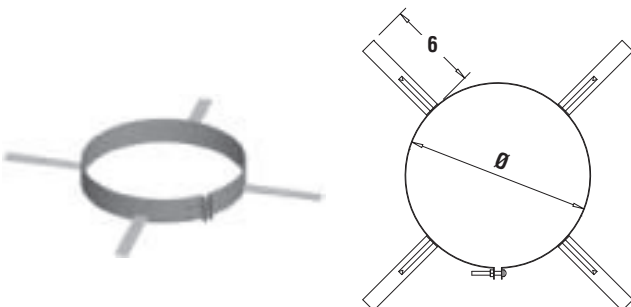
DS Guy Wire Band	
Ø (in.)	Product Code
3 to 24	DSØGWB

Figure 143



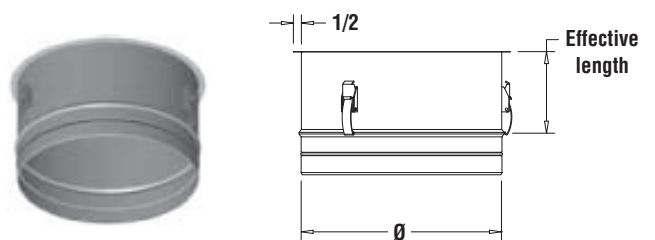
DS Double Male Adaptor		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	3-7/8	DSØDMA

Figure 147



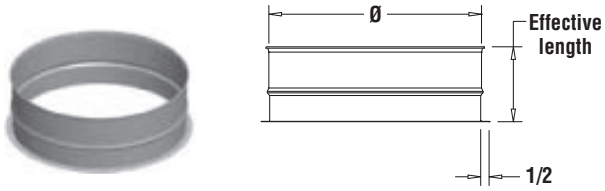
DS Centering Band	
Ø (in.)	Product Code
3 to 24	DSØCB

Figure 144



DS Male Flange Adaptor		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	4-7/8	DSØMFA

Figure 148



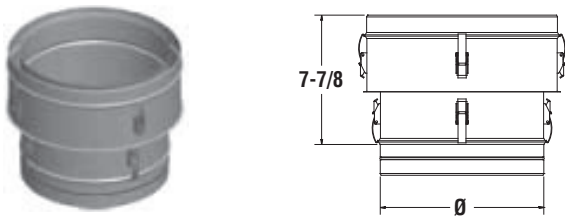
DS Female Flange Adaptor		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	4-1/4	DSØFFA

Figure 149



DuraSeal-Flex Female Adapter		
Ø (in.)	Effective Length (in.)	Product Code
3 to 12	9-11/32	DSØAFF

Figure 152



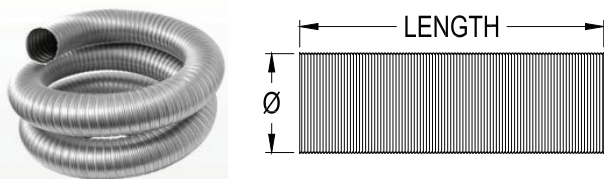
DS to DSD Adaptor		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	7-7/8	DSØDSDA

Figure 150



DuraSeal-Flex Male Adapter		
Ø (in.)	Effective Length (in.)	Product Code
3 to 12	7	DSØAMF

Figure 153



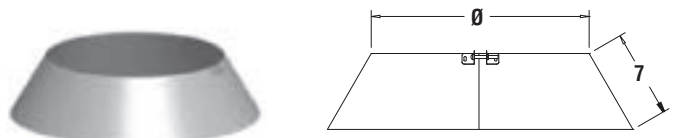
DuraSeal-Flex		
Ø (in.)	Flex Length (ft.)	Product Code
3 to 9	20	DSØFLX-20
	25	DSØFLX-25
	30	DSØFLX-30
	35	DSØFLX-35
4	200	DS4FLX-200
5	125	DS5FLX-125
6 & 7	100	DSØFLX-100
8	50	DS8FLX-50
3 to 12	CUSTOM	DSØFLX-XX

Figure 151



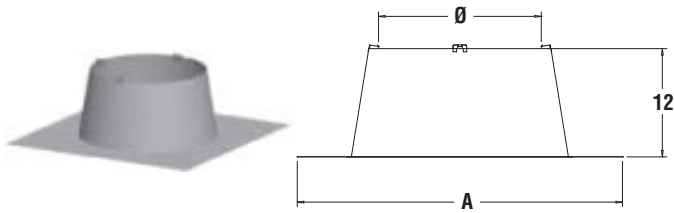
DuraSeal-Flex to DuraSeal-Flex		
Ø (in.)	Effective Length (in.)	Product Code
3 to 12	—	DSØAF

Figure 154



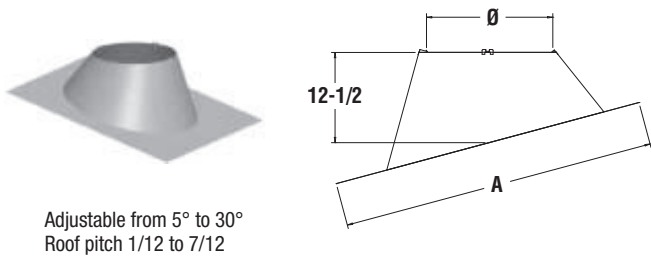
DS Storm Collar		
Ø (in.)	Effective Length (in.)	Product Code
3 to 24	6-1/4	DSØSC

Figure 155



DS Flat Flashing		
Ø (in.)	A (in.)	Product Code
3	16	DS3FH
4	16	DS4FH
5	16	DS5FH
6	16	DS6FH
7	18	DS7FH
8	26	DS8FH
9	26	DS9FH
10	28	DS10FH
12	30	DS12FH
14	31	DS14FH
16	34	DS16FH
18	36	DS18FH
20	38	DS20FH
22	40	DS22FH
24	42	DS24FH

Figure 156



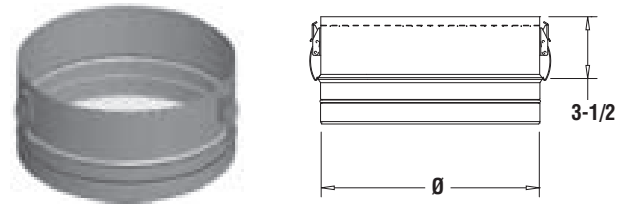
DS Adjustable Flashing			
Ø (in.)	A (in.)	Height (in.)	Product Code
3	30	12-1/2	DS3FAH
4	30	12-1/2	DS4FAH
5	30	12-1/2	DS5FAH
6	32	12-1/2	DS6FAH
7	32	12-1/2	DS7FAH
8	34	12-1/2	DS8FAH
9	35-3/8	12-1/2	DS9FAH
10	36-1/2	12-1/2	DS10FAH
12	38-1/2	12-1/2	DS12FAH
14	41	12-1/2	DS14FAH
16	43	12-1/2	DS16FAH
18	45	12-1/2	DS18FAH
20	47-1/4	12-1/2	DS20FAH
22	49-1/2	12-1/2	DS22FAH
24	51-1/2	12-1/2	DS24FAH

Figure 157



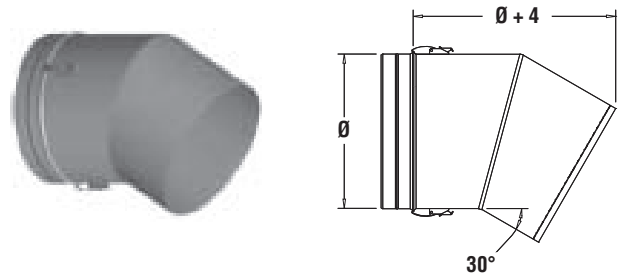
DS Rain Cap			
Ø (in.)	Product Code	Product Code with Bird Screen	K Factor
3 to 24	DS3RC	DSØRCB	.50

Figure 158



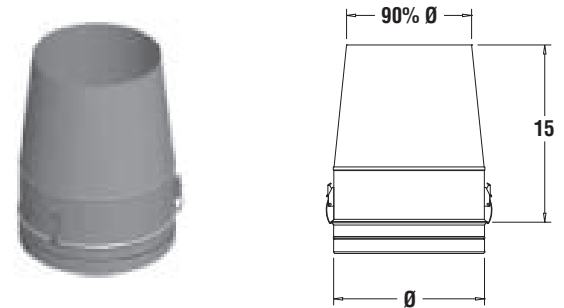
DS Screened Termination		
Ø (in.)	Product Code	K Factor
3 to 24	DSØST	.14

Figure 159



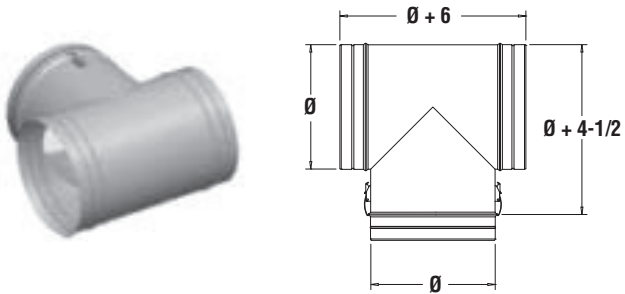
DS 30° Screen Termination		
Ø (in.)	Product Code	K Factor
3 to 24	DSØSTA	.70

Figure 160



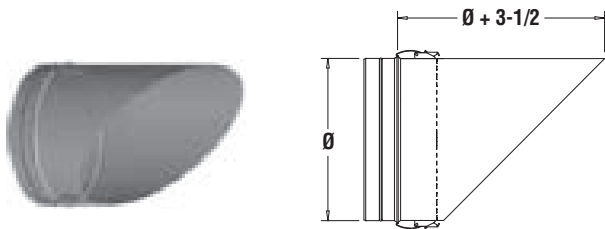
DS Exit Cone		
Ø (in.)	Product Code	K Factor
3 to 24	DSØEC	.60

Figure 161



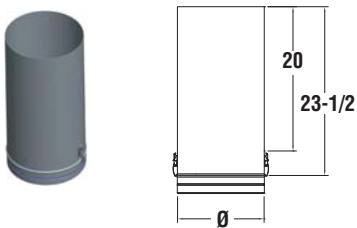
DS Termination Tee		
\varnothing (in.)	Product Code	K Factor
3 to 24	DSØTT	.35

Figure 162



DS Mitre Cut		
\varnothing (in.)	Product Code	K Factor
3 to 24	DSØMC	.14

Figure 163



DS OEM Termination		
\varnothing (in.)	Product Code	K Factor
3 to 24	DSØEMTAU	0

Figure 164

DuraVent Limited Lifetime Warranty

M&G DuraVent, Inc. (“DuraVent”) provides this limited lifetime warranty for all of its products with the exception of Ventinox® (lifetime), and PolyPro® (ten years). Subject to the limitations set forth below, DuraVent warrants that its products will be free from defects in material or manufacturing, if properly installed, maintained and used. DuraVent products are fully warranted if installed only by a professional installer. This Warranty is transferable from the original homeowner to the buyer of the home. This warranty does not cover normal wear and tear, smoke damage or damage caused by chimney fires, acts of God, or any product that was: (1) purchased other than from an authorized DuraVent dealer, retailer or distributor; (2) modified or altered; (3) improperly serviced, inspected or cleaned; or (4) subject to negligence or any use not in accordance with the installation instructions included with the product as determined by DuraVent. Installation instructions are available online at www.duravent.com under Support/Literature and through our Customer Service Department 800-835-4429 or customerservice@duravent.com. This limited lifetime warranty applies only to parts manufactured by DuraVent.

DuraVent provides the following warranties for its products: One Hundred Percent (100%) MSRP 15 years from the date of purchase, and Fifty Percent (50%) thereafter, except for the following limitations on: all Termination Caps and DuraBlack® are warranted at One Hundred Percent (100%) for five years.

All warranty obligations of DuraVent shall be limited to repair or replacement of the defective product pursuant to the terms and conditions applicable to each product line. These remedies shall constitute DuraVent’s sole obligation and sole remedy under this warranty. This warranty provides no cash surrender value. The terms and conditions of this warranty may not be modified, altered or waived by any action, inaction or representation, whether oral or in writing, except upon the express, written authority of an executive officer of DuraVent.

Corn, bio-fuels, driftwood or other wood containing salt, preservative-treated lumber, plastic and household trash or garbage, or wood pellets containing such materials must not be burned in the appliance or fireplace. In case of a chimney fire, the chimney must be inspected and approved by a certified Chimney Sweep before reuse. After each annual inspection, maintenance, and cleaning, the certified Chimney Sweep must fill out and date the appropriate section of the warranty card provided with the chimney liner.

LIMITATIONS ON INTERNET SALES: Notwithstanding any other terms or conditions of this Limited Lifetime Warranty, DuraVent provides no warranty for the following specific products if such products are not installed by a qualified professional installer: DuraTech®, DuraTech® DTC, DuraPlus HTC®, DuraChimney® II, PelletVent Pro®, DirectVent Pro®, FasNSeal®, FasNSeal® W2, FasNSeal® Flex, and PolyPro®, and DuraVent’s relining products including DuraLiner®, DuraFlex® (SW, Pro, 316, 304), and Ventinox®. For purposes of this warranty, a trained professional installer is defined as one of the following: licensed contractors with prior chimney installation experience, CSIA Certified Chimney Sweeps, NFI Certified Specialists, or WETT Certified Professionals.

DuraVent must be notified and given the opportunity to inspect defective product prior to replacement under the terms of this limited lifetime warranty. All warranty claims must be submitted with proof of purchase. Labor and installation costs are not covered under this warranty. To obtain warranty service contact: DuraVent Warranty Service, 877 Cotting Ct., Vacaville CA 95688, or call 800-835-4429.

WHERE LAWFUL, DURAVENT DISCLAIMS ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL DURAVENT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR SPECIAL DAMAGES OR DIRECT OR INDIRECT LOSS OF ANY KIND, INCLUDING BUT NOT LIMITED TO PROPERTY DAMAGE AND PERSONAL INJURY. DURAVENT’S ENTIRE LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

For the most up-to-date installation instructions, see www.duravent.com

REV 2.27.2013

Manufactured in Vacaville CA and Albany NY

WARRANTY

This product has a 15 year limited warranty. Please read the warranty to be familiar with its coverage.

Retain this manual. File it with your other documents for future reference.

PRODUCT REFERENCE INFORMATION

Please contact DuraVent for the phone number of your nearest DuraVent dealer who will answer your questions or address your concerns.

Normally, all parts should be ordered through your DuraVent distributor or dealer. Parts will be shipped at prevailing prices at time of order.

When ordering repair parts, always give the following information:

1. The model number of the vent system.
2. The part number.
3. The description of the part.
4. The quantity required.
5. The installation date of the chimney system.

If you encounter any problems or have any questions concerning the installation or application of this system, please contact your dealer.

DuraVent®

877 Cotting Court • Vacaville, CA • 95688
800-835-4429; www.DuraVent.com

DuraVent reserves the right to make changes at any time, without notice, in design, materials, specifications, prices.
Consult your local distributor for chimney system code information.