

Saf-T Vent® SC Specifications for Special Gas Vent Applications, Reduced Clearance Installations, and Approved Sealed Combustion Appliances

The Saf-T Vent® SC is a concentric vent system designed for zero clearance installation in residential and light commercial applications. It is approved for use on ANSI Category I, II, III, and IV Gas-Burning Appliances, and Direct Vent or Sealed Combustion Appliances as approved by the appliance manufacturer.

The Saf-T Vent SC factory-built Special Gas Vent and Gas Vent Connector is Tested and Listed by Underwriters Laboratories to UL 1738/ULC S636 and is for use with Listed natural gas or propane burning equipment. The system is to be installed and sealed per the manufacturers' instructions so the flue gas conduit is gas tight, preventing leakage of products of combustion into a building.

Saf-T Vent SC is a double-wall product that consists of a flue-gas conduit fabricated from AL 29-4C®, which is ideal for use with modern gas-burning equipment that may produce excessive amounts of condensation in the vent. The outer jacket of the system is constructed from stainless steel with a space of approximately one inch between the flue-gas conduit and the jacket.

Some appliances are Listed to utilize the space between the flue-gas conduit and the outer jacket for combustion air supply. This design allows exhaust and air intake to occur through a single penetration through the building structure.

All joints in the Saf-T Vent SC system have a "straight-seal" design, and are equipped with a factory-applied seal. The outer jacket is secured with three stainless steel screws. This closure system is tested to be gas tight at two and one-half times the Listed pressure rating of eight (8) inches water column.

When connected to gas-burning appliances with a maximum continuous flue-gas temperature rating of 550°F/288°C, Saf-T Vent SC may be installed unenclosed, or within a non-combustible chase or joist bay, or within a vertical combustible enclosure at zero (0") clearance (maximum 30 degrees offset).

When connected to gas-burning appliances with a maximum continuous flue-gas temperature rating of 330°F/166°C, Saf-T Vent SC may be installed within a combustible horizontal enclosure (joist bay) at zero (0") clearance.

When connected to gas-burning appliances with a maximum continuous flue-gas temperature rating of 400°F/204°C, Saf-T Vent SC may be installed within a combustible horizontal enclosure (joist bay) at one inch (1") clearance.

The Saf-T Vent SC system is to be sized and installed only in accordance with appliance manufacturers' specifications, the most current edition of NFPA 211 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances, the most current edition of NFPA 54 National Fuel Gas Code (ANSI Z223.1) or CSA B 149.1, and any other applicable local, regional, and national codes.

TECHNICAL SPECIFICATION

Product	Saf-T Vent SC Special Gas Vent and Gas Vent Connector
Uses	Vents (Horizontal or Vertical) for Gas-Burning Appliances, suitable for ANSI Category I, II, III, and IV Gas-Burning Appliances, certain Direct Vent Appliances, and approved Sealed Combustion applications.
Fuels	Natural gas or propane fired equipment
Pressure	Positive up to 8" wc, negative, or neutral
Standard	
Diameters	3", 4"
Lengths	12", 24", 36", and Adjustable
Elbows	45° and 90°
Fittings	Complete range of Adapters, Terminations, and Accessories
Flue-Gas Conduit	AL 29-4C® stainless steel
Jacket	Stainless steel

©2003 Heat-fab, Inc. Product Specifications subject to change without Notice. All Rights Reserved. Saf-T Vent is a registered trademark of Heat-fab, Inc. AL 29-4C is a registered trademark of ATI Properties, Inc..

www.heat-fab.com 130 Industrial Blvd., Turners Falls, MA 01376

Pub #11467-110703



Technical and Dimensional Data

Saf-T Vent[®] SC

3"/5" & 4"/7" Concentric Reduced Clearance
Double Wall

for Special Gas Vent and/or
Sealed Combustion Systems

Also For Venting Listed Gas or Oil Fired Appliances
Listed as Suitable For Venting With Type L Systems



Tested and Listed to
UL 1738/ULC S636
UL641 & ULC/ORD-CC441
by Underwriters Laboratories, Inc



130 Industrial Boulevard
Turners Falls, MA 01376

© Copyright 2008 Selkirk Corp.
Saf-T Vent is a registered trademark of Selkirk Corp.
AL 29-4C is a registered trademark of ATI Properties, Inc.
UL and the UL Mark are registered trademarks of
Underwriters Laboratories, Inc.

Call 800 772 0739
Fax 413 863 4803

Pub. #11723-123108

www.heat-fab.com

Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

TABLE OF CONTENTS

CATEGORY	PART DESCRIPTION	PAGE
Introduction		3
Accessories	Vertical / Horizontal In-Line Drain Section	4
	Condensate Drain Tube Kit	4
Adapters	Single Wall Adapter / Appliance Adapter	5
	Air Intake Tee	5
Elbows	45° Elbow	6
	90° Elbow	6
Straight Lengths	6" Length	7
	1' Length	7
	2' Length	7
	3' Length	7
	Adjustable Length	7
Supports & Hanger	Vertical Support Leg	8
	0" Clearance Support Clamp	8
	1" Clearance Support Clamp	8
	Outer Jacket Support Clamp	8
Termination	Firestop / Support / Wall Plate	9
Accessories	Tall Cone Flashing / Support	9
	Storm Collar	9
	Horizontal Termination Adapter	10
	Vertical Termination Adapter	10
Terminations	Tee Termination with Screen	11
	Mitered Termination with Screen	11
	Elbow Termination with Screen	11
	Screen Termination	12
	Rain Cap	12

Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

Introduction:

Saf-T Vent SC is an advanced concentric vent system designed for zero clearance installation in residential and light commercial applications. The inner wall is constructed from superferritic AL 29-4C[®]. The outer wall is stainless steel, providing durability and a lasting finish.

The double-wall construction of Saf-T Vent SC allows the system to be fully enclosed by combustible materials at zero or one-inch clearance depending on layout and flue gas temperature. Saf-T Vent SC is UL and CUL Listed to UL 1738 / ULC S636 (File MH16161). It may be used on negative, neutral, and positive pressure systems up to eight (8) inches w.c.

As a Special Gas Vent system: Saf-T Vent SC is approved for use on ANSI Category I, II, III, and IV Gas-Burning Appliances and certain Direct Vent appliances. Saf-T Vent SC is appropriate for use on appliances that specify an AL 29-4C venting system.

As a Sealed Combustion system: The unique concentric design of Saf-T Vent SC also allows it to function as a pipe-in-a-pipe vent. Products of combustion are exhausted out through the inner wall while combustion air is drawn in through the outer wall. An appliance can be direct-vented with only a single penetration through the building structure. **This application must be approved by the Appliance Manufacturer.**

Note regarding sealant: Saf-T Vent SC includes an integral seal and does not require RTV sealant. However, sealant may be necessary when connecting Saf-T Vent SC components directly to certain appliance flue collars and to the gasket-less Saf-T Vent GC vent system.

For applications up to 550°F/288°C, approved sealants include GE RTV 106 and Dow Corning 736.

For applications up to 300°F/149°C, approved sealants include GE RTV 106 and Dow Corning 732.

Seal weather exposed joints of the outer jacket with foil tape or an exterior grade silicone sealant.

Material Thickness:

Inner Vent Diameter	Wall Thickness – Inner Vent	Outer Jacket Diameter	Wall Thickness – Outer Jacket
3"	0.015" (28 ga)	5"	0.018" (26 ga)
4"		7"	

Saf-T Vent® SC

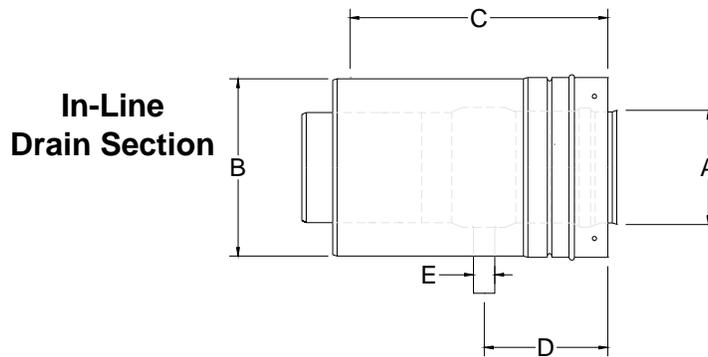
DOUBLE WALL SPECIAL GAS VENT

Accessories:

Vertical/Horizontal In-Line Drain Section — Use to drain away condensate from the vent system.

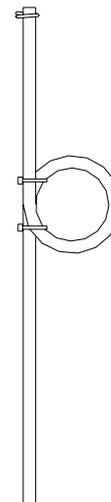
The unique design of this part allows it to be installed in a horizontal, vertical or inclined orientation. Continuous horizontal runs in excess of 30 feet require a condensate drain. Drains may also be required by the manufacturer. High temperature silicone rubber tubing is available separately, see below.

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length	DIM - D Drain Location	DIM - E Drain Diameter (OD)
SC03DRN	3	5	6.7	3.3	0.5
SC04DRN	4	7	6.7	3.3	0.5



Condensate Drain Tube Kit — This kit contains a length of high temperature silicone rubber tubing, a clamp, and two cable ties. The silicone tubing is rated for 500°F, and is translucent to allow inspection of the P-trap. Larger diameter drains can be plumbed directly into a drain system.

Part Number:	7000TUBE	5 feet of 3/8" diameter tubing
	7000TUBE-10	10 feet of 3/8" diameter tubing
	7001TUBE	10 feet of 1/2" diameter tubing



Heatfab

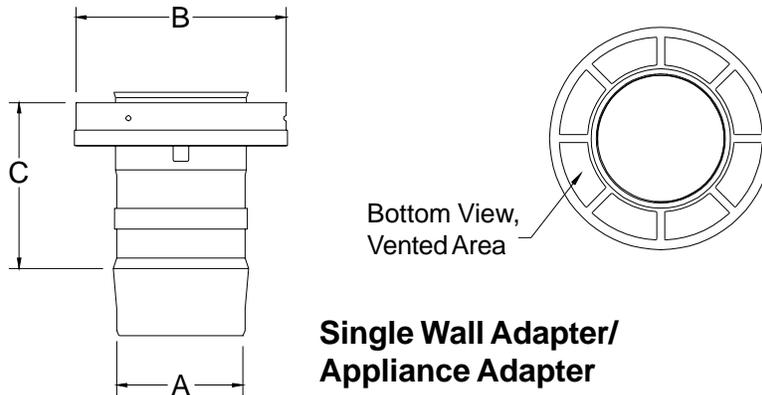
Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

Adapters:

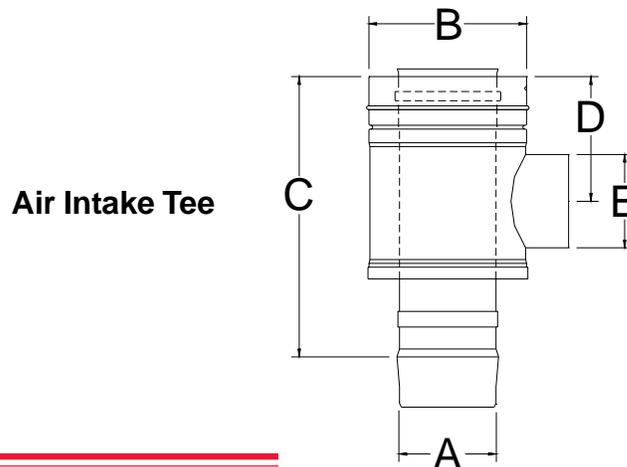
Single Wall Adapter/Appliance Adapter — Use to transition from single-wall to Saf-T Vent SC. The male end connects to Saf-T Vent EZ Seal or Saf-T Vent appliance adapters and flue collars. The outer diameter collar is vented and must not be blocked during installation or operation.

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length
SC03ADEZ	3	5	4
SC04ADEZ	4	7	4



Air Intake Tee — Use to begin a Sealed Combustion system. The male end connects to Saf-T Vent EZ Seal or Saf-T Vent appliance adapters and flue collars. The tap on the outer wall should be connected to the combustion air inlet on the appliance using materials specified by the appliance manufacturer.

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length	DIM - D Centerline of Tap to Outlet	DIM - E Air Intake Connection Diameter
SC03TAD3	3	5	9	4.0	3
SC03TAD4	3	5	10	4.6	4
SC04TAD4	4	7	10	4.6	4
SC04TAD3	4	7	9	4.0	3



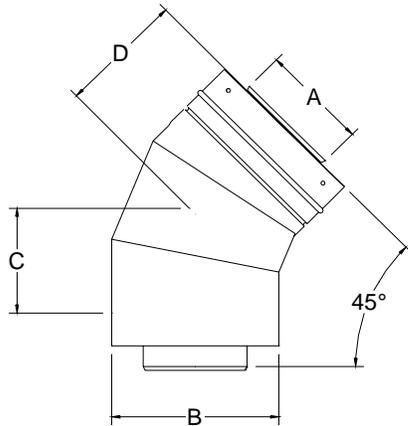
Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

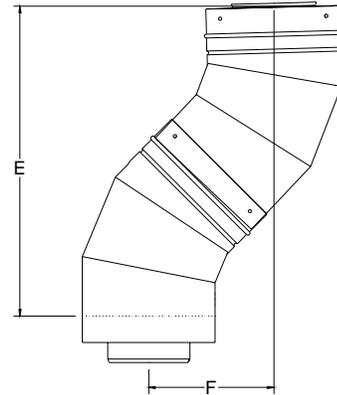
Elbows:

45° Elbow — Use to achieve offsets or changes in the direction of the vent system. The degree of these welded seam elbows is not adjustable.

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Rise	DIM - D Run	DIM - E Combined Installed Height	DIM F Offset
SC03E45	3	5	3.1	3.7	11.60	4.8
SC04E45	4	7	3.3	4.3	13.03	5.3

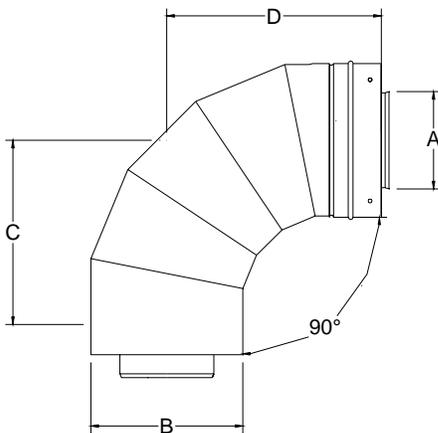


45° Elbow

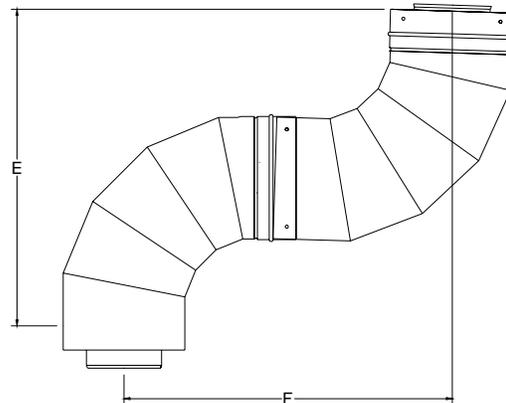


90° Elbow — Use to achieve offsets or changes in the direction of the vent system. The degree of these welded seam elbows is not adjustable.

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Rise	DIM - D Run	DIM - E Combined Installed Height	DIM F Offset
SC03E90	3	5	6.1	7.0	13.1	13.25
SC04E90	4	7	6.8	7.75	14.5	14.50



90° Elbow



Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

Straight Lengths:

Install vent with a continuous pitch of 1/4" per foot, sloping upward toward the termination (unless otherwise specified by the appliance manufacturer). It is important to provide adequate support to a Saf-T Vent SC system. Refer to installation instructions for support specifications.

6" Length

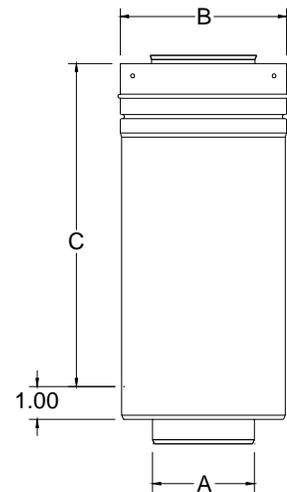
Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length
SC03L6	3	5	3.88
SC04L6	4	7	3.88

1' Length

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length
SC03L12	3	5	9.88
SC04L12	4	7	9.88

2' Length

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length
SC03L24	3	5	21.88
SC04L24	4	7	21.88



3' Length

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length
SC03L36	3	5	35.38
SC04L36	4	7	35.38

Straight Length

Adjustable Length

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length
SC03AJ	3	5	12.5 - 19.5
SC04AJ	4	7	12.5 - 19.5

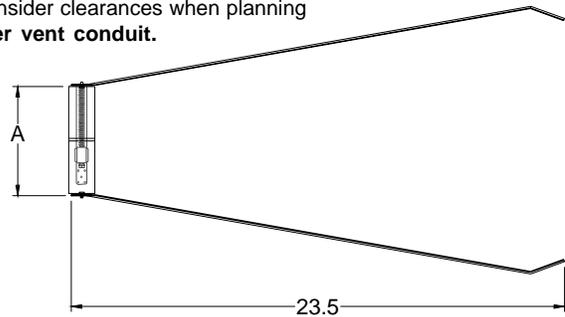
Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

Supports:

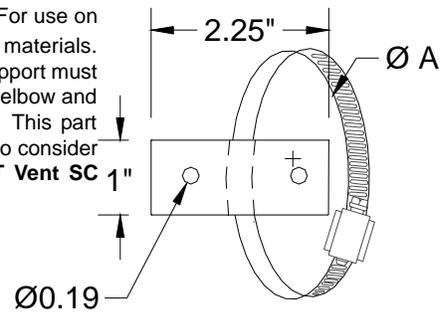
Vertical Support Leg — For use on vertical systems to provide support. The 20-gauge stainless steel support legs can be used below or above the roof, and can be used in pairs for extra stabilization. Hardware to attach the support to the structure is not provided; attach using best construction methods. Be sure to consider clearances when planning the system. **Never drill or screw through the Saf-T Vent SC inner vent conduit.**

Part Number	DIM - A Hose Clamp Diameter
SC03VSL	5.2
SC04VSL	7.2



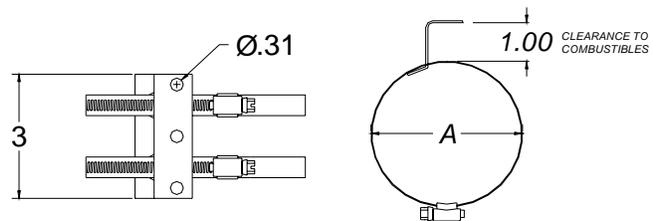
0" Clearance Horizontal / Vertical Support Clamp — For use on horizontal or vertical systems to provide support at zero clearance to combustible materials. When any horizontal run of Saf-T Vent SC extends for more than 6 feet, a horizontal support must be installed. Subsequent supports are required after every additional 6 feet and every elbow and tee. Attach the bracket to the structure using appropriate hardware (not provided). This part consists of a hose clamp and an 18-gauge stainless steel mounting bracket. Be sure to consider proper pitch when planning the system. **Never drill or screw through the Saf-T Vent SC inner vent conduit.**

Part Number	DIM - A Hose Clamp Diameter
SC03SUP	5.5
SC04SUP	7.5



1" Clearance Support Clamp — Provides support to Saf-T Vent SC systems that require 1 inch clearance to combustible materials. When any horizontal run of Saf-T Vent SC extends for more than 6 feet, a horizontal support must be installed. Subsequent supports are required after every additional 6 feet and every elbow and tee. Be sure to consider clearances and proper pitch when planning the system. **Never drill or screw through the Saf-T Vent SC inner vent conduit.**

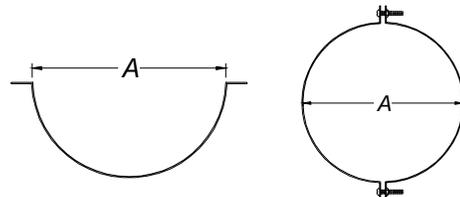
Part Number	DIM - A Hose Clamp Diameter
SC03SUP1	5.5
SC04SUP1	7.5



1" Clearance Support Clamp

Outer Jacket Support Clamp — For use on horizontal systems to provide support at the required 6-foot intervals. May be used singly as a saddle to rest the vent in and hung from two rods or cables. Use in pairs by clamping around the outer jacket and suspend from a single rod or cable. Support clamps by themselves do not maintain the necessary clearances to combustible materials; be sure to consider clearances and proper pitch when planning the system. Support clamps are sold in pairs, with two half-shells and two ¼-20 nuts and bolts. **Never drill or screw through the Saf-T Vent SC inner vent conduit.**

Nominal Vent Diameter	Part Number	DIM - A Nominal Diameter
3	4527SS	5
4	4727SS	7



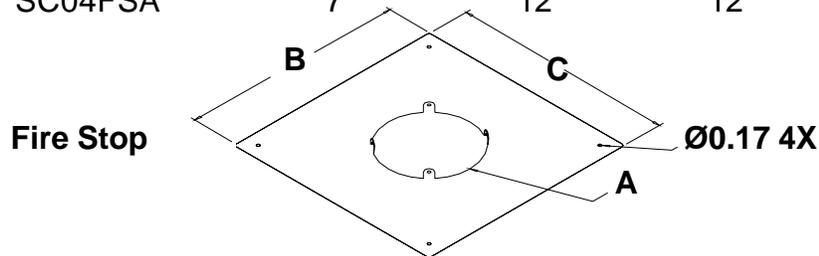
Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

Termination Accessories:

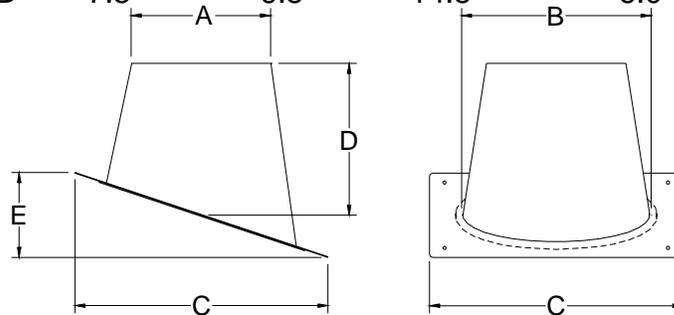
Fire Stop / Support / Wall Plate— A fire stop may be required anytime Saf-T Vent SC penetrates combustible floors, walls, or ceilings. Remove any insulating material from the floor, wall, or ceiling cavity for at least 1 inch around the vent. Review fire codes and consult with local building code officials to determine the necessity for a firestop. This part provides added support when used at the bottom of a vertical chase. Hardware is supplied to attach the firestop to the vent. Mounting hardware is not provided.

Part Number	DIM - A Hole Diameter	DIM - B Length	DIM - C Width
SC03FS	5	8	8
SC03FSA	5	12	12
SC04FS	7	10	10
SC04FSA	7	12	12



Tall Cone Flashing / Support— Use as a vertical roof penetration and support for flat roof installations. This part **must** be installed with a 5 inch diameter storm collar (ordered separately). Hardware is not included with the tall cone flashing; attach to structure using best construction methods. The tall cone flashing may be used with a roof curb if necessary.

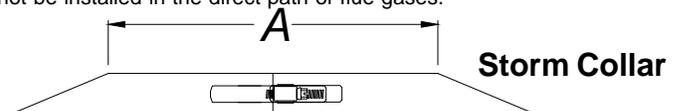
Part Number	DIM - A Top of Cone Opening	DIM - B Bottom of Cone Opening	DIM - C Face Plate (Square)	DIM - D Overall Height	DIM - E Pitch Range
SC03TCF	5.5	7.5	12.5	6.0	FLAT- 2/12
SC03TCFA	5.5	7.5	12.5	6.0	2/12 - 6/12
SC03TCFB	5.5	7.5	12.5	6.0	6/12 -12/12
SC04TCF	7.5	9.5	14.5	6.0	FLAT - 2/12
SC04TCFA	7.5	9.5	14.5	6.0	2/12 - 6/12
SC04TCFB	7.5	9.5	14.5	6.0	6/12 - 12/12



Tall Cone Flashing

Storm Collar —For use with the Tall Cone Flashing (sold separately) or other roof flashings to provide support to vertical installations. The storm collar may be tightened and sealed around the vent to prevent water from entering the building. It may also be used as a decorative shield to cover holes where the vent penetrates interior concrete and masonry walls. This part is made from Type 304 stainless steel and should not be installed in the direct path of flue gases.

Nominal Vent Diameter	Part Number Nominal Diameter	DIM - A
3	4526SS	5
4	4726SS	7



Storm Collar

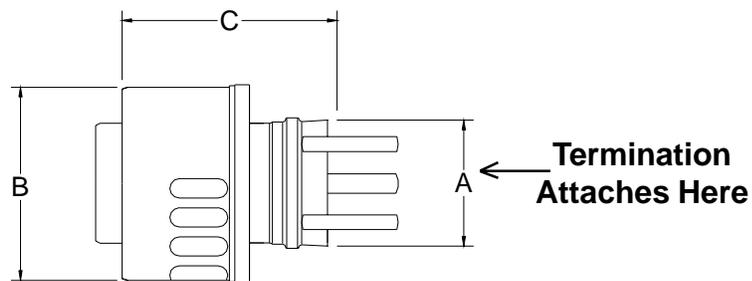
Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

Terminations:

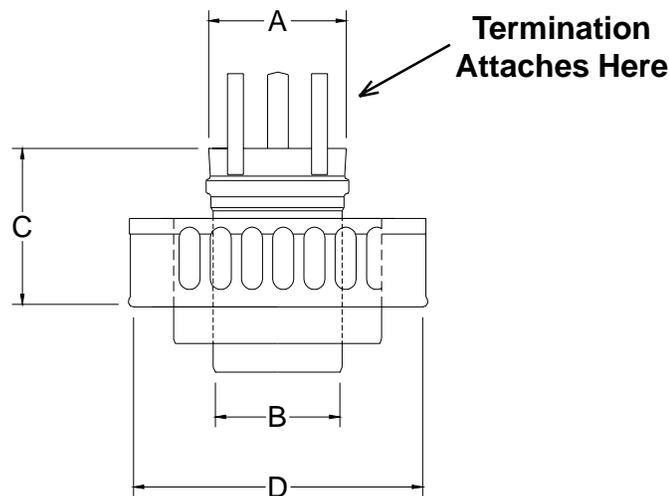
Horizontal Termination Adapter— Use to complete the Saf-T Vent SC system after penetrating an exterior wall. Standard Saf-T Vent terminations connect directly to the adapter. The screened openings release excess heat from the system and must not be blocked. On Sealed Combustion systems the screened openings supply combustion air to the appliance.

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM-C Installed Length
SC03HT	3	5	5.3
SC04HT	4	7	5.6



Vertical Termination Adapter — Use to complete the Saf-T Vent SC system on vertical installations. Standard Saf-T Vent terminations connect directly to the adapter. The screened openings release excess heat from the system and must not be blocked. On Sealed Combustion systems the screened openings supply combustion air to the appliance.

Part Number	DIM - A Nominal Vent Pipe Diameter	DIM - B Nominal Outer Jacket Diameter	DIM - C Installed Length	DIM - D Diameter Protective Band
SC03VT	3	5	3.8	7.1
SC04VT	4	7	3.8	9.1



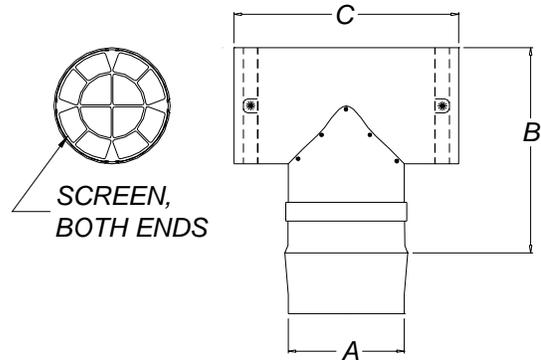
Saf-T Vent® SC

DOUBLE WALL SPECIAL GAS VENT

Terminations:

Tee Termination with Screen — Use as a termination on horizontal or vertical systems, as specified or allowed by the appliance manufacturer.

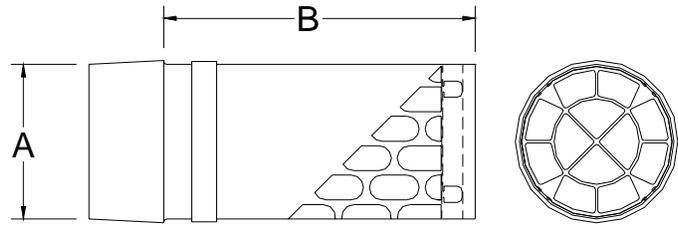
Part Number	DIM - A Nominal Diameter	DIM - B Installed Length	DIM - C Tee Body Width
9390TEE	3	5.5	6
9490TEE	4	6.0	7



Tee Termination with Screen

Mitered Termination with Screen — Use as a termination on horizontal or vertical systems, as specified or allowed by the appliance manufacturer.

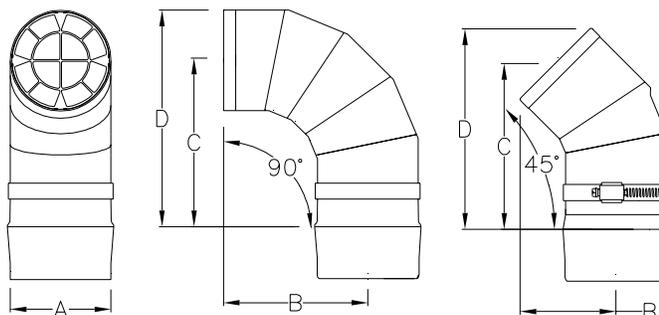
Part Number	DIM - A Nominal Diameter	DIM - B Installed Length
9390	3	6.25
9490	4	7.25



Mitered Termination with Screen

Elbow Termination with Screen — Use as a termination on horizontal or vertical systems, as specified or allowed by the appliance manufacturer.

Part Number	DIM - A Nominal Diameter	DIM - B Center to Edge	DIM - C Centerline Installed Length	DIM - D Overall Installed Length
9314TERM (90°)	3	4.5	5.3	6.8
9414TERM (90°)	4	5.3	6.0	8.0
9311TERM (45°)	3	2.9	5.0	6.2
9411TERM (45°)	4	3.4	5.4	6.8



Elbow Termination with Screen

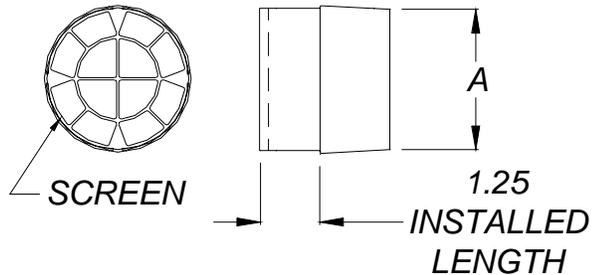
Saf-T Vent[®] SC

DOUBLE WALL SPECIAL GAS VENT

Terminations:

Screen Termination — Use as a termination on horizontal or vertical systems, as specified or allowed by the appliance manufacturer.

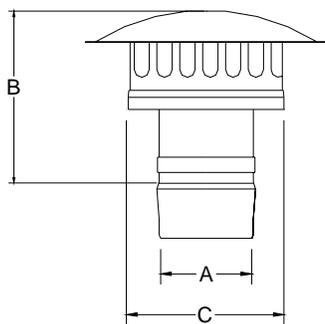
Part Number	DIM - A Nominal Diameter
9392	3
9492	4



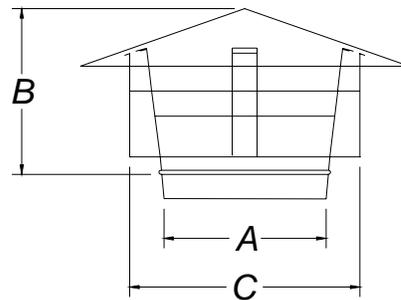
Screen Termination

Rain Cap — Use as a termination on vertical systems. Category I and II appliances require a raincap or other device to prevent rainwater from entering the vent. Vent systems for positive pressure appliances may omit the raincap if there are other provisions for draining rainwater from the system. The raincap may also be used as a horizontal termination.

Part Number	DIM - A Nominal Diameter	DIM - B Cap Height	DIM - C Outer Band	APPLICATION
5300CI	3	8.5	8	All Categories
5400CI	4	8.5	9	All Categories
SC03RC	3	5.5	5	Category III & IV Only , if system has drain.
SC04RC	4	6.3	7	Category III & IV Only , if system has drain.



SC__RC



5_00CI

Rain Cap