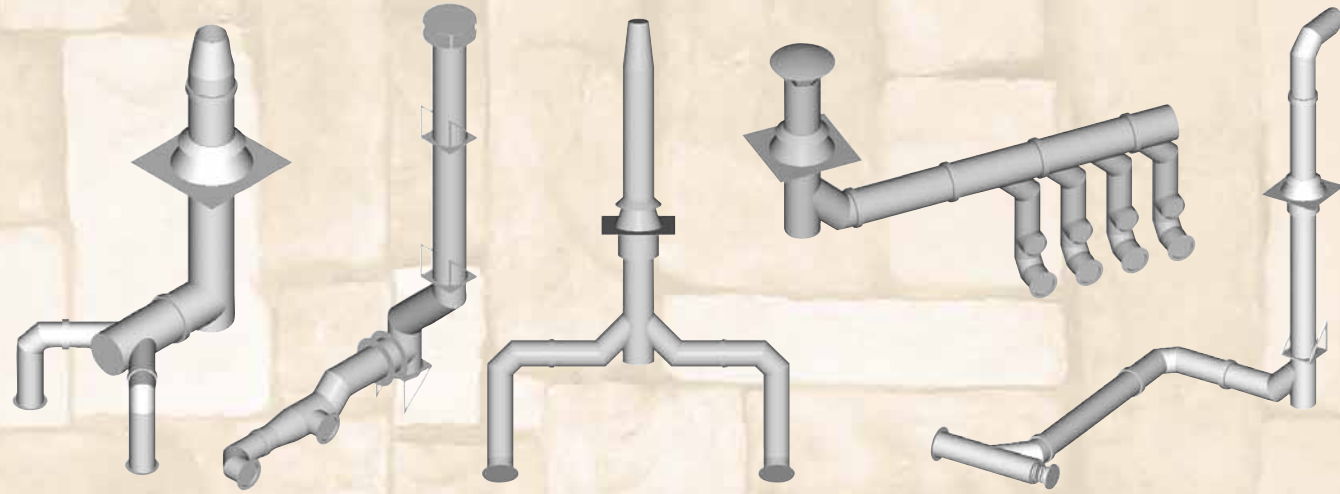


Other products

VIP / IS

ICC Chimney engineers a wide range of commercial/industrial chimney systems. We make insulated pressure stacks for applications ranging from forced draft boilers and industrial ovens to diesel engine exhaust systems. ICC can provide complete engineering and design services from preliminary chimney sizing and material specifications to detailed 3D AutoCAD assembly drawings.



RSF

RSF Woodburning Fireplaces, a division of ICC, is one of North America's largest manufacturers of clean burning, high efficiency fireplaces. RSF has been designing leading edge woodburning products for over twenty years and manufactures the broadest range of environmentally friendly fireplaces on the market today.



Industrial Chimney Company

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Phone: (450) 565-6336 • Fax: (450) 565-6519 • email: info@icc-rsf.com • web site: www.icc-rsf.com

XL-CAT_01-06

Excel

Insulated stainless steel chimney
5", 6", 7" & 8" diameter



ULTRABlack

Double wall stove pipe
6", 7" & 8" diameter



EXCELiner

Rigid chimney liner
5", 6", 7" & 8" diameter



Model RIS

Insulated stainless steel chimney
10" through 24" diameter



EXCELPellet

Setting a new standard for Pellet Vent
3" & 4" diameter



Manufacturers of Premium chimney systems for professional installers

Table of Contents

General Information.....3

Excel Chimney

Technical Information.....	4
Certification.....	4
Applications.....	4
Allowable Flue Gas Temperatures.....	4
Clearance to Combustibles.....	4
Construction.....	4
Design Considerations.....	5
Component Descriptions & Dimensions.....	6 - 10
Canadian Components.....	11
Offset Tables.....	12
Warranty.....	13

ULTRABlack Double Wall Stove Pipe

Technical Information.....	14
Certification.....	14
Applications.....	14
Allowable Flue Gas Temperatures.....	14
Clearance to Combustibles.....	14
Construction.....	14
Engineering & Design Considerations.....	14
Component descriptions & dimensions.....	15 - 17
Offset Tables.....	17 - 18
Warranty.....	19

EXCELiner Rigid Chimney Liner

Technical Information.....	20
Certification.....	20
Applications.....	20
Allowable Flue Gas Temperatures.....	20
Clearance to Combustibles.....	20
Construction.....	20
Engineering & Design Considerations.....	20
Component descriptions & dimensions.....	21 - 23
Warranty.....	24

Model RIS Large Diameter

Technical Information.....	25
Certification.....	25
Applications.....	25
Allowable Flue Gas Temperatures.....	25
Clearance to Combustibles.....	25
Construction.....	25
Component descriptions & dimensions.....	26 - 28
Offset Tables.....	29
Warranty.....	29

EXCELPellet

Technical Information.....	30
Certification.....	30
Applications.....	30
Allowable Flue Gas Temperatures.....	30
Clearance to Combustibles.....	30
Construction.....	30
Design Considerations.....	30
Typical Installation.....	31
Component Descriptions & Dimensions.....	32 - 35
Technical Specifications.....	36
Warranty.....	37

Open Fireplace Chimney Design Considerations.....	38
Fireplace Chimney Sizing.....	38
Chimney Height Design Considerations.....	39
Recommended Flue Height.....	39
Other Products.....	40

General Information

Industrial Chimney Company was established in 1991 by a small group of partners with over 75 years combined experience in the chimney industry. Our experience convinced us that the needs of our ultimate customers (the people who live in a house with one of our chimneys) are served best when our products are sold by retailers who specialize in chimney and fireplaces. Specialty dealers understand the unique nature of our industry and are qualified to provide both technical support and installation. One of the cornerstones of our business is the conviction that hearth dealers are our essential partners in delivering the highest quality, safest chimney systems available.

From the beginning our objective has been to engineer products which enable better, faster installations while using fewer parts; improving installation efficiency. This is the best way we know of to insure that consumers benefit from safer installations and competitive pricing. Our goal is to do everything possible to help our business partners do the best installation possible for the homeowner.

We believe that our long term accomplishments are tied to our commitment to people, both inside and outside our company. While we are continuously investing in our plant and processes, the most gratifying returns come from investments in people. Our greatest sense of accomplishment comes when we see an employee or customer achieve their personal or business goals. That's why we continue to make major commitments in promotion and funding of hearth industry education.

We focus our efforts in three areas. We manufacture residential venting, specifically insulated chimneys, double walled stove pipe and chimney liner for woodburning applications. We also manufacture the most complete line of high efficiency, clean burning fireplaces on the market. In addition we manufacture commercial/industrial venting - everything from chimney liners to 48" diameter pressure stacks, which we sell through specialty reps in that market. Over the last twelve years our residential, commercial, and industrial venting products have secured leadership roles in each segment of the industry.



Thanks to the strong support we have received from our distributors and dealers our strategy is working. We have grown dramatically over the last dozen years. Our 65,000 ft² factory runs 24 hours a day, twelve months a year. It is situated on over 20 acres of prime industrial property and is filled with state of the art machinery. We rent an additional 15,000 ft² warehouse just down the road and now employ about 200 people.

This catalog contains information on our residential venting products and we have done our best to insure it is complete and up to date. If you have any questions or concerns regarding any of our products please feel free to contact us directly. We will be pleased to assist you.

The ICC team

Excel Technical Information

Certification

Excel is tested and listed by Warnock Hersey - Intertek Testing Services to two safety standards:

UL 103HT - The standard for solid and liquid fuel chimneys installed in the USA. Along with many other tests the UL 103HT Standard requires the chimney to withstand three 10 minute chimney fires at 2100°F. Listing #50195-C7-703403

ULC S-629 - The standard for solid and liquid fuel chimneys installed in Canada. Along with many other tests the ULC S-629 Standard requires the chimney to withstand three 30 minute chimney fires at 2100°F. Listing #195-7110, 7113, 7156

Applications

Excel chimney is suitable for use on appliances that burn:

- Wood
- Oil
- Coal
- Gas
- Charcoal

It is specifically engineered for wood burning stoves, fireplaces and residential furnaces.

Allowable Flue Gas Temperatures

Max Continuous 650°C (1200°F)
Brief Forced Firing 925°C (1700°F)
Tested To 1150°C (2100°F)

Clearance to Combustible Materials

2" clearance except in areas protected by factory-built supports certified for reduced clearance. Excel round and square supports permit the chimney to be installed with approximately 1 inch of clearance - in the area shielded by the support.

Construction

Flue :
Type 304 stainless steel, .016" thickness

Casing :
Type 434 stainless steel, .016 thickness

Seam :
Interior and exterior seams are continuous seam welded

Insulation :
Thermoplus continuous blanket

Wall thickness : 1"

Paint :
All black Excel components are painted with Forrest "Stove Bright" flat black paint

Excel dimensions and support capacities

Chimney size	5"	6"	7"	8"
Rough opening required	(INCHES)			
Round support (ERDS)	10 x 10	10 x 10	11 x 11	12 x 12
Square support (ESS)	10 x 10	10 x 10	11 x 12	12 x 12
Roof support (ESR)	11 x 11	12 x 12	13 x 13	14 x 14
Offset support (EOS)	11 x 11	12 x 12	13 x 13	14 x 14
Radiation shield (ERS & ERSA)	11 x 11	12 x 12	13 x 13	14 x 14
Wall radiation shield (EWS)	10 x 10	10 x 10	11 x 11	12 x 12
Maximum height per support	(FEET)			
Round support (ERDS)	65	55	50	45
Square support (ESS)	65	55	50	45
Roof support (ESR)	65	55	50	45
Wall support (EWS)	50	44	37	35
Offset support (EOS)	35	30	27	25

Radiation shields must be used at all floor joist and ceiling areas

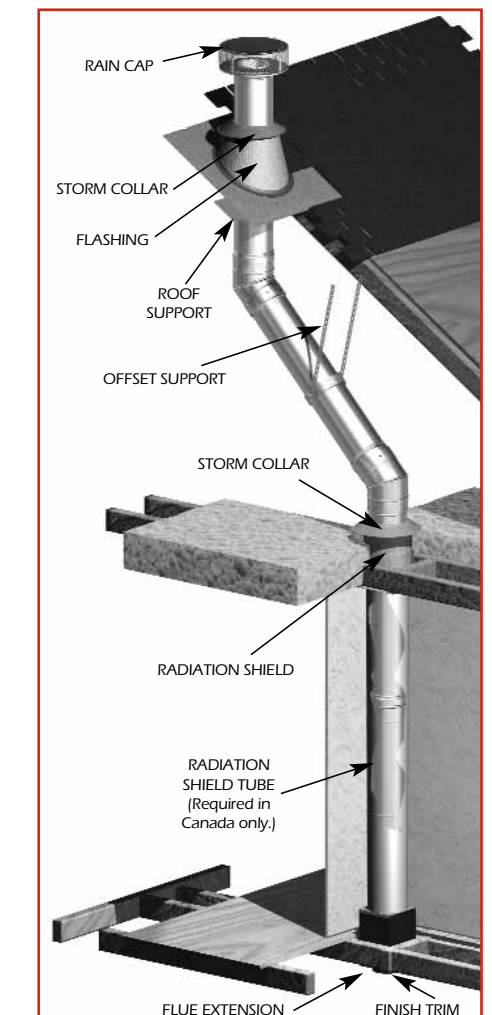
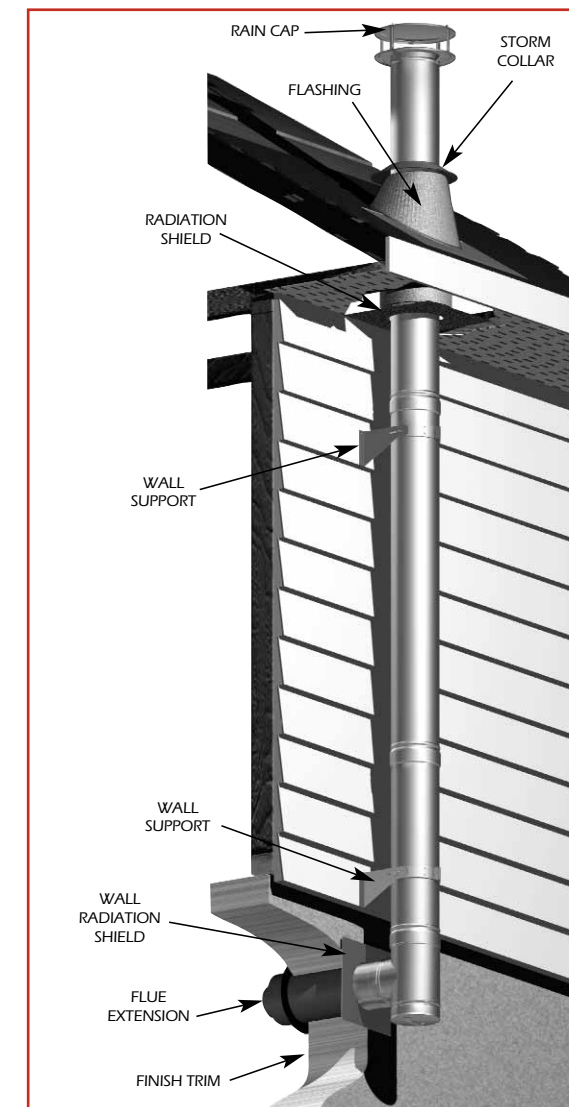
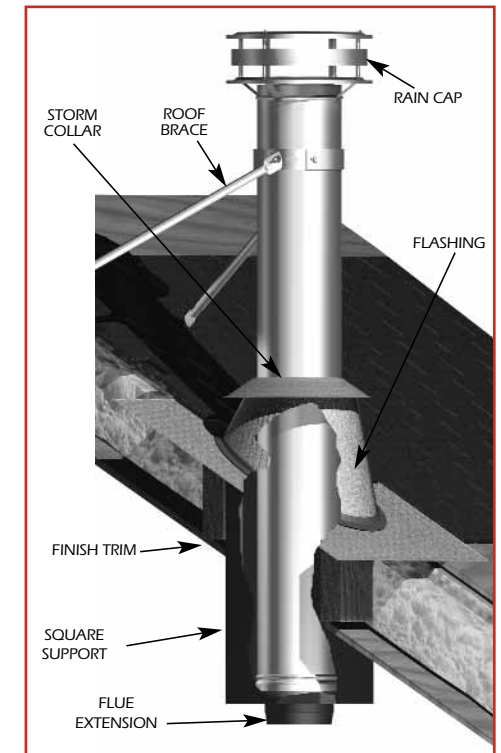
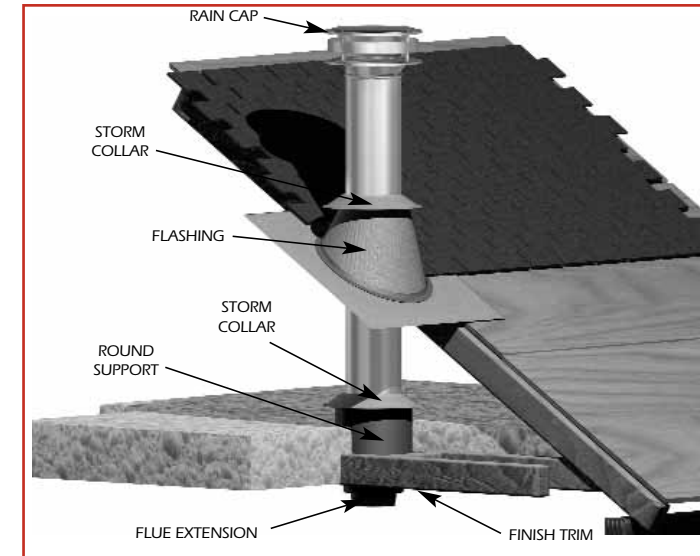


Excel has been tested and listed to the UL 103HT and ULC S-629 chimney standards by Intertek Testing Services.

Listing# 50195-C7-703403
Listing# 195-7110, 7113, 7156

Excel Design Considerations

NOTE: The following information is provided to assist you in selecting the chimney components required for your installation. It is intended to be a guideline only. These are not the installation instructions.



Excel Product Descriptions

Insulated Chimneys (EL) Excel chimney sections are available in 48", 24", 18", 12" & 6" lengths. To determine the installed length deduct 1 1/2" from the overall length.



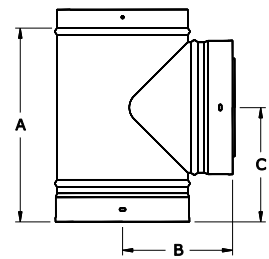
Insulated Lengths					
Inside diameter	INCHES				
	5	6	7	8	
Outside diameter	Nominal	7	8	9	10
	Outside of Bead	7 1/4	8 1/4	9 1/4	10 1/4
Weight - lbs/foot		3.6	4.2	4.9	5.3
Nominal length	48	24	18	12	6
Installed length	46 1/4	22 1/4	16 1/4	10 1/4	4 1/4

Insulated Adjustable Length (ELA) This unique part enables an installer to adjust the system to the exact overall length required for any installation. The most common applications for the adjustable length are: - Between elbows so that any required centre-to-centre offset can be achieved. - When it is necessary to balance the chimney height so that the caps line up for functional or aesthetic reasons. - When a specific horizontal offset is required. The adjustable length must be installed above a straight chimney section. It will not adjust into an elbow or tee. - Adjustable lengths must be installed above a fixed length or they will not be adjustable. If they are installed immediately above a support, tee or elbow they will not adjust. To determine the installed length deduct 1 1/2" from the overall length.



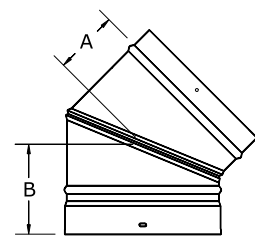
Insulated Adjustable Lengths	
Nominal length	18 adjustable
Installed length	9 1/2 - 16 1/4

Insulated Tee (ETI) The insulated tee can be used on the interior or exterior of the building. The tee is designed to be used in combination with a wall support assembly. The Excel tee cap has a handle on the bottom to simplify removal for cleaning.



Insulated Tee Dimensions			
Code	A	B	C
5ETI	11 1/4	6 3/4	6 1/4
6ETI	12 1/4	7 1/4	6 3/4
7ETI	13 1/4	7 3/4	7 1/4
8ETI	14 1/4	8 1/4	7 3/4

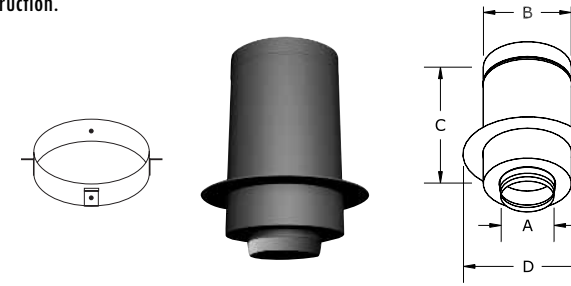
Elbows (EE15, EE30 & EE45) Excel 15° and 30° elbows are tested and listed to the UL 103HT and ULC S629 Standards. Excel 45° elbows are certified to ULC S629 only.



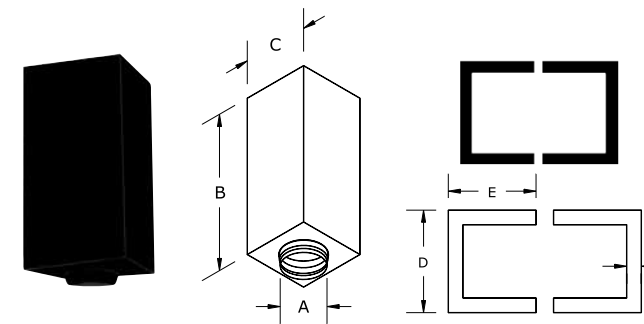
Elbow Dimensions		
Code	A	B
5EE15	1 7/8	2 7/8
6EE15	1 7/8	2 7/8
7EE15	2	3
8EE15	2	3
5EE30	2 3/8	3 3/8
6EE30	2 1/2	3 1/2
7EE30	2 5/8	3 5/8
8EE30	2 3/4	3 3/4
Canada only		
5EE45	2 7/8	3 7/8
6EE45	3	4
7EE45	3 1/4	4 1/4
8EE45	3 1/2	4 1/2

Excel Product Descriptions

Round & Square Supports (ERDS, ERDSI & ESS) Excel's ceiling supports are suitable for use on flat or sloping ceilings. They must project into the room a minimum of 3 inches on a flat ceiling. For sloping ceilings, see the table below. These supports are designed to act as a combination of support and attic radiation shield. To use either support as an attic radiation shield, simply close the open area at the top of the support (in the attic) with a storm collar. The trim collars are separate from the supports, allowing for easy installation before or after the ceiling finish is applied. If you are installing a round support on a sloping ceiling, you will require a pitched collar. Use the following table to determine the correct collar for your installation. Pitched collars are not available in 5" Ø. The trim collar which comes with the square support, is adjustable for any ceiling pitch from flat to 24/12. Not available in 5" Ø. Both the round and square support are packaged complete with the flue extension and trim collar. The Insulated Round Support (ERDSI) is designed for installations in energy efficient houses which have tightly sealed vapour barriers. The RDSI is fully insulated and has a flange to permit an air tight seal to the vapour barrier. It can be installed into an existing home but since it must be installed under the drywall it is most often used for new construction.

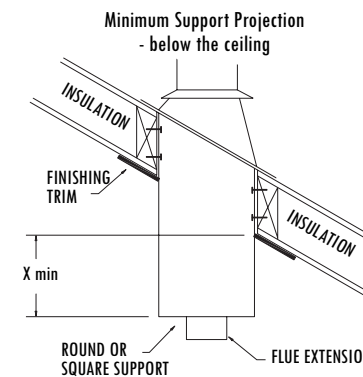


Round Support Dimensions				
Code	A	B	C	D
5ERDS	5	10	15 3/4	14 1/4
6ERDS	6	10	15 3/4	14 1/4
7ERDS	7	11	15 3/4	15 3/4
8ERDS	8	12	15 3/4	17



Square Support Dimensions					
Code	A	B	C	D	E
6ESS	6	24	10	14	12
7ESS	7	24	11	15	12
8ESS	8	24	12	16	12

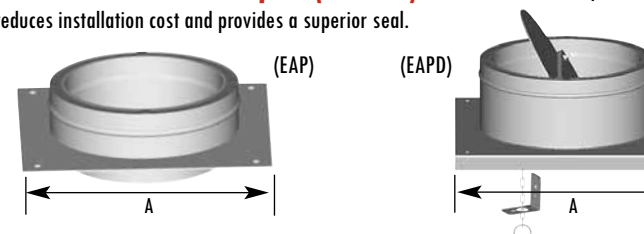
Slope		X
0/12		3
2/12		5 1/2
7/12		6 3/4
12/12		7 1/2
24/12		12 1/2



Pitched Trim Ring Dimensions				
Code	A	B	C	Fits pitch range
6ERTA	10 1/4	10 5/8	18 1/2	0/12 - 4/12
7ERTA	11 1/4	11 5/8	18 1/2	0/12 - 4/12
8ERTA	12 1/4	12 5/8	18 1/2	0/12 - 4/12
6ERTB	10 1/4	11 3/4	18 1/2	4/12 - 8/12
7ERTB	11 1/4	13 3/4	18 1/2	4/12 - 8/12
8ERTB	12 1/4	14 1/8	18 1/2	4/12 - 8/12
6ERTC	10 1/4	14 3/8	18 1/2	8/12 - 12/12
7ERTC	11 1/4	17 1/4	21 1/4	8/12 - 12/12
8ERTC	12 1/4	17 1/4	21 1/4	8/12 - 12/12
6ECTA	8 1/4	8 3/8	16 3/8	0/12 - 4/12
7ECTA	9 1/4	9 3/8	17 3/8	0/12 - 4/12
8ECTA	10 1/4	10 1/2	18 1/2	0/12 - 4/12
6ECTB	8 1/4	9 3/8	17 3/8	4/12 - 8/12
7ECTB	9 1/4	10 1/2	18 1/2	4/12 - 8/12
8ECTB	10 1/4	11 5/8	19 5/8	4/12 - 8/12
6ECTC	8 1/4	11 3/8	19 3/8	8/12 - 12/12
7ECTC	9 1/4	12 7/8	20 7/8	8/12 - 12/12
8ECTC	10 1/4	14 1/4	22 1/4	8/12 - 12/12

Anchor Plate (EAP) Is used to connect an appliance (such as a masonry fireplace or heater) to an Excel chimney.

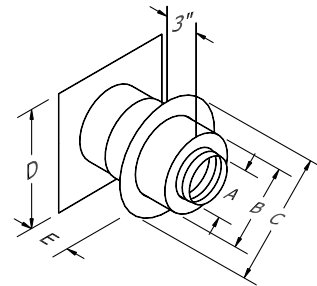
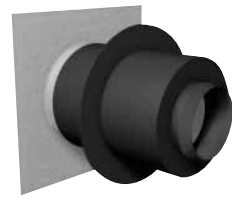
Anchor Plate Damper (EAPD) Combines the anchor plate with a heavy gauge stainless steel damper. The EAPD simplifies masonry fireplace construction, reduces installation cost and provides a superior seal.



Code	Diameter	A
EAP	5"	12" X 12"
EAP - EAPD	6"	12" X 12"
EAP - EAPD	7"	13" X 13"
EAP - EAPD	8"	14" X 14"

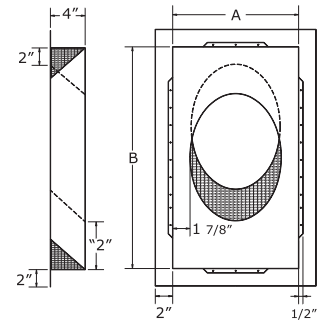
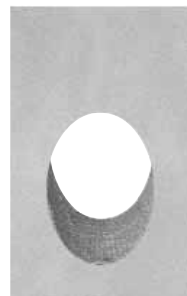
Excel Product Descriptions

Wall Radiation Shields (EWRS & EWRSI) The wall radiation shield is used when the chimney passes horizontally through a combustible wall. The EWRS telescopes to adjust for wall thickness, so no painting is required. The inside trim collar is separate from the EWRS, allowing for easy installation before or after the wall finish is applied. The Insulated Wall Radiation Shield (WRSI) is designed for installations in energy efficient houses which have tightly sealed vapour barriers. The EWRSI is fully insulated and has a flange to permit an air tight seal to the vapour barrier. It can be installed into an existing home but since it must be installed under the drywall it is most often used for new construction.



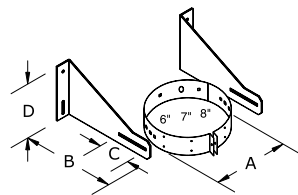
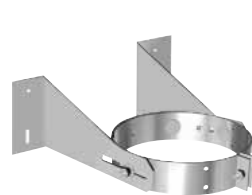
Wall Radiation Shield Dimensions					
Code	A	B	C	D	E
5EWRS/EWRSI	5	10	14 1/4	16X16	6-12
6EWRS/EWRSI	6	10	14 1/4	16X16	6-12
7EWRS/EWRSI	7	11	15 3/4	16X16	6-12
8EWRS/EWRSI	8	12	17	16X16	6-12

Insulated Angled Wall Radiation Shield (EWRSI30 & EWRSI45) The insulated angled wall radiation shield is used when the chimney goes through a combustible exterior wall, with a 30 or 45 degree angle. A firestop is installed on the exterior side of the wall to complete the installation. This part is used for fireplace installations only. *Note: 45° are approved for use in Canada only.*

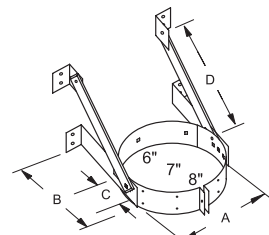


Required Opening Dimensions				
Angle	30°		45°	
#	A	B	A	B
6"	11 3/4	38	11 3/4	27 7/16
7"	12 3/4	40	12 3/4	28 7/8
8"	13 3/4	42	13 3/4	30 1/4

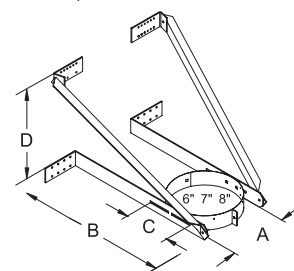
Wall support - Wall Band (EWS) and Extended Wall Support (EWSE) The Wall Support (EWS) is used to support a vertical chimney on a through-the-wall installation. The Excel Wall Support installs on the first section of chimney above the tee, (not below the tee, thus making it easier to fasten the support to framing, instead of into concrete). The Wall Support utilizes the universal band to fit 6, 7, & 8 inch chimneys. It is designed to slide in and out to fit a variety of wall profiles. The Wall Support is also used as a lateral support every 8 feet in height. The Extended Wall Support (EWSE) will allow the chimney to pass by up to a 12" overhang. It often eliminates the need to either offset a chimney around the overhang or cut and finish the soffit and fascia. One support is required every 8', minimum of two per system. The Old Style Wall Support (EWS-R) is generally more complicated to install than the EWS. However it simplifies installations on irregular surfaces like vinyl siding.



Dimensions (Fits 5", 6", 7" & 8" chimney)				
Code	A	B	C	D
EWS	7, 8, 9 or 10	9	3 1/2	6
EWS-R	8, 9 or 10	9	3 1/2	16



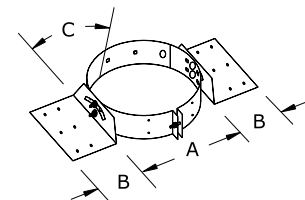
Old Style Wall support (EWS-R)



Extended Wall support (EWSE)

(EWSE) Dimensions (Fits 6", 7" & 8" chimney)				
Code	A	B	C	D
EWSE	8, 9 or 10	21 1/2	7 1/2	13

Roof Support (ESR) The roof support is primarily used when it is difficult to use a round or square support in a cathedral ceiling. It can also be used above an offset, or to provide additional support when the chimney height exceeds the capacity of the primary support. The roof support utilizes a universal band, so that the same support fits 6, 7, & 8 inch chimneys. It is made with adjustable brackets, which allow it to adjust easily to any roof pitch.

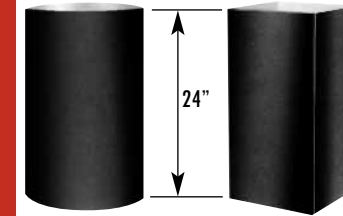


Dimensions (Fits 5", 6", 7" & 8" chimney)			
Code	A	B	C
ESR	7, 8, 9 or 10	6	Fits flat - 24 / 12

Excel Product Descriptions

Support Extensions (ERDSE & ESSE)

Support extensions are available to facilitate installations on very steep pitched ceilings, or where the chimney must project unusually far into the room. Both the round and square support extensions are 24" long.



Flue Extension (EX)

The flue extension fastens to the bottom of the first chimney section with three screws. It makes it possible to connect a stove pipe, or other type of connector, to the chimney. It is sometimes used to connect an Excel chimney directly to an appliance. The flue extension is designed to fit a variety of stove pipes. However, due to variations from one manufacturer to another, some modification may be required in the field.



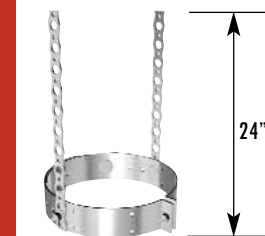
Locking Band (ELB)

Excel insulated components are designed to be fastened together with the stainless steel screws provided with each part. In some cases, it may be desirable to install a locking band for aesthetic purposes. The locking band is designed to overlap the two beads immediately above and below the chimney joint and fastens with a 1/4" bolt. All three screws are required even when the ELB is installed.



Offset Support (EOS)

The offset support is primarily used to re-support the chimney above an offset. However it can also be used to provide additional support when the chimney height exceeds the capacity of the primary support. The offset support straps are 24 inches long.



Roof Brace (ERB)

The roof brace is used to provide lateral support for a chimney which extends more than 5 feet above a roof. The roof brace utilizes a universal band to fit 6, 7 and 8 inch chimneys. The arms on the roof brace telescope from 5 ft. to 9 ft.



Wall Channel (EWC)

The wall channel enables a wall support or wall band to be fastened solidly to the framing when the framing centres do not line up with the chimney opening. The wall channel is 24" long.



All Excel chimneys must be installed with an Excel rain cap (any model) to prevent water from entering the chimney.

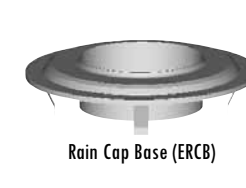
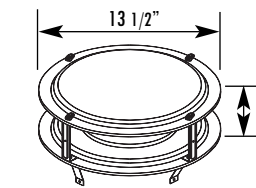
ERC: The regular rain cap is made from .016" thick type 304 stainless steel and carries a one year warranty. **EDRC:** The deluxe cap is made from .025" thick type 304 stainless steel and carries a lifetime 100% full replacement warranty. **ERCS:** An optional stainless steel spark screen is available for installations where sparks can pose a safety problem. **ERCS:** The optional wind and rain shield improves draft by up to 40% in windy conditions and is very effective at preventing wind driven rain from entering the chimney. It bolts to the existing holes in either the regular or deluxe cap. **ERCB:** The rain cap base is designed to cover the end of the chimney in applications where a rain cap is not practical but it does not keep rain from entering the chimney. **ERRC:** The revolving rain cap helps to prevent the entry of wind driven rain and helps to prevent wind induced downdrafts. **EDCR & EDCS:** The decorative caps are designed to simulate terracotta chimney pots for superior aesthetics when terminating a site fabricated chase. They can also be used to terminate a chimney liner in a masonry chimney. *Note: The installation requirements for these caps are quite specific and should be reviewed before constructing the chase.*



Regular Rain Cap (ERC)



Rain Cap Deluxe (EDRC)



Rain Cap Base (ERCB)



Rain Shield (ERCW)



Revolving Rain Cap (ERRC)



Decorative Cap - Round (EDCR)



Decorative Cap - Square (EDCS)

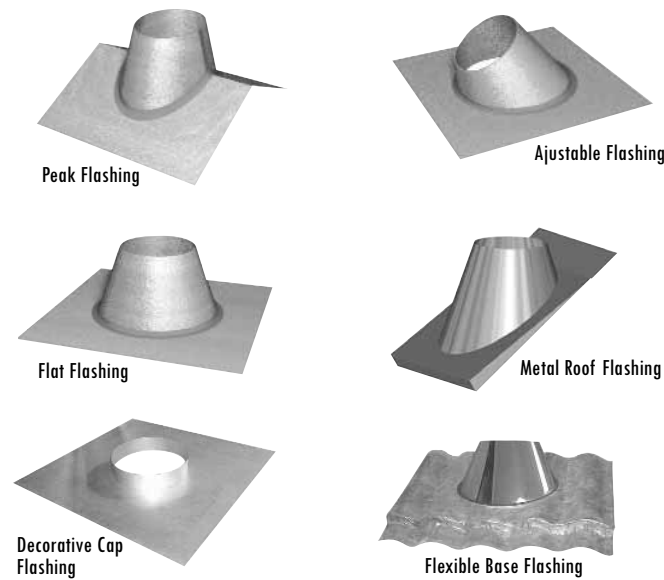


Decorative Cap Example

Excel Product Descriptions

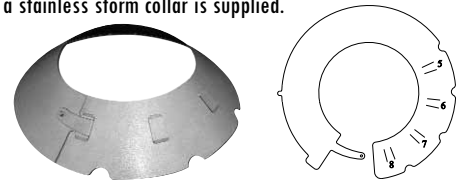
EF, EFA, EFB, EFC, ESF, ESFA & ESFC: These flashings are made from either galvalume steel, which is considerably more corrosion resistant than galvanized, or from stainless steel for applications where maximum corrosion resistance is desired. They are made to cover the entire range of roof pitches; plus a galvalume 4/12 peak roof flashing. **EMFA, EMFB & EMFC:** These flashings are specifically designed for metal roofs and greatly simplify metal roof installations. They are made from galvalume steel only. **ELFA, ELFB & ELFC:** The flexible base flashing combines a stainless steel cone with a flexible lead base which can be easily formed on site to match virtually any roof profile. It was designed for masonry tile roofs but can be used wherever a flexible base is required. **EDCF:** The decorative cap flashing is made from galvalume steel only and is required with the decorative cap.

INCHES

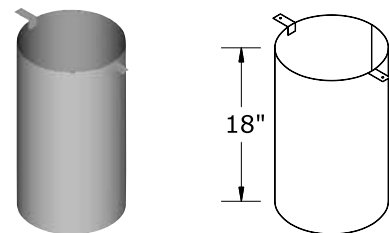


Flashing Dimensions		
Code	A	Fits Pitch Range
5, 6, 7 & 8 EF	not ventilated	From Flat to 2/12
5, 6, 7 & 8 EFA	not ventilated	1/12 - 7/12
5, 6, 7 & 8 EFB	not ventilated	8/12 - 12/12
5, 6, 7 & 8 EFC	not ventilated	12/12 - 21/12
5, 6, 7 & 8 EFP	not ventilated	Peak 4/12 only
5, 6, 7 & 8 EVF	ventilated	Flat 2/12
5, 6, 7 & 8 EVFA	ventilated	1/12 - 7/12
5, 6, 7 & 8 EVFB	ventilated	8/12 - 12/12
5, 6, 7 & 8 EVFC	ventilated	12/12 - 21/12
5, 6, 7 & 8 EVFP	ventilated	Peak 4/12 only
5, 6, 7 & 8 EMFA	not ventilated	1/12 - 7/12
5, 6, 7 & 8 EMFB	not ventilated	8/12 - 12/12
5, 6, 7 & 8 EMFC	not ventilated	12/12 - 21/12
6, 7 & 8 ELFA	not ventilated	1/12 - 7/12
6, 7 & 8 ELFB	not ventilated	8/12 - 12/12
6, 7 & 8 ELFC	not ventilated	12/12 - 21/12
6, 7 & 8 EDCF	ventilated	Flat

Universal Storm Collar (ESC) The universal storm collar fits 5, 6, 7 and 8 inch Excel chimneys and it must be used with regular flashings. It is required to be used in combination with the Round Support, Square Support, ERS and ERSA radiation shields to form an attic insulation shield assembly when these components are installed into an insulated space. When a stainless steel flashing is ordered a stainless storm collar is supplied.

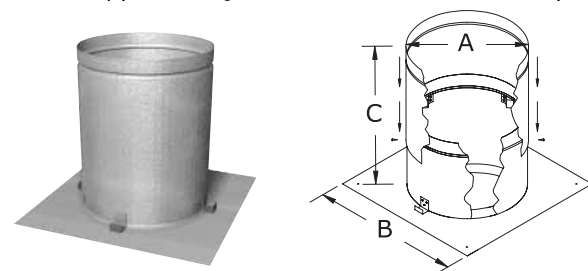


Roof Radiation Shield (ERRS) The roof radiation shield is required with some roof support and outside chase installations.



Radiation Shield (ERS) The radiation shield protects combustible framing in the floor or ceiling adjacent to the chimney and also acts as a firestop spacer. When the chimney passes through the radiation shield into an insulated space a universal storm collar must also be installed to prevent the entry of insulation.

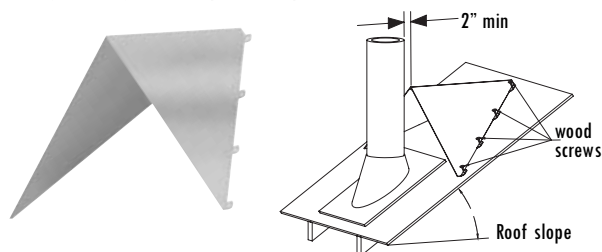
INCHES



Radiation Shield Dimensions			
Code	A	B	C
5ERS	10 1/2	16 X 16	12 - 22
6ERS	10 1/2	16 X 16	12 - 22
7ERS	11 1/2	16 X 16	12 - 22
8ERS	12 1/2	16 X 16	12 - 22

Snow-Wedge (ESW) The snow wedge is a pre-fabricated, adjustable chimney cricket designed to divert ice and snow around a chimney. It adjusts to fit pitches from 4/12 to 12/12 and is particularly well suited to metal roofs.

INCHES

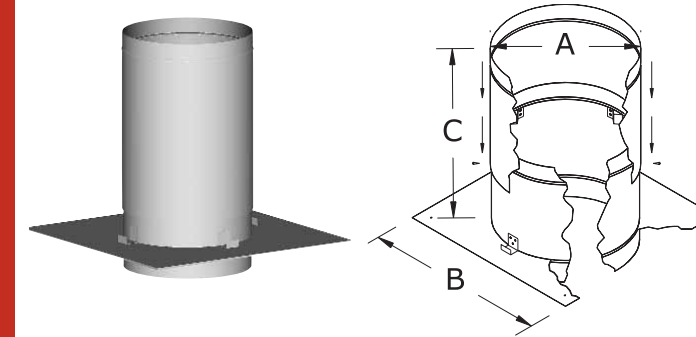


Roof slope	Locking tabs' bend
4/12	136°
7/12	130°
9/12	125°
12/12	112°

Canadian Components

The components on this page are required for Canadian installations only.

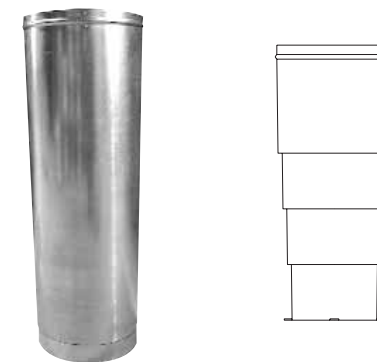
Attic Radiation Shield (ERSA) The radiation shield protects combustible framing in the floor or ceiling adjacent to the chimney and also acts as a firestop spacer. When the chimney passes through the radiation shield into an insulated space a universal storm collar must be installed on top of the ERSA to prevent the entry of insulation. The ERSA has a flange on the bottom to fasten the radiation shield tube.



INCHES

Radiation Shield Dimensions			
Code	A	B	C
5ERSA	Ø 10 1/2	16 X 16	10 - 20
6ERSA	Ø 10 1/2	16 X 16	10 - 20
7ERSA	Ø 11 1/2	16 X 16	10 - 20
8ERSA	Ø 12 1/2	16 X 16	10 - 20

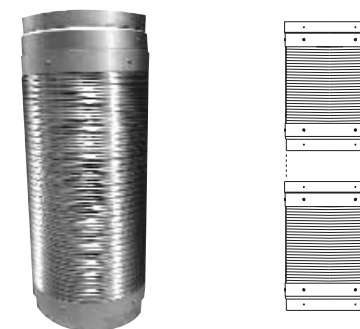
Radiation Shield Tube (ERST) The radiation shield tube is only used where the chimney is enclosed in the interior of the building (E.g.: between the basement ceiling and the attic). It is not required in the attic or on outside chase installations. It is not required when Excel is installed on a fireplace, gas or oil appliance.



INCHES

	Diameter		Length	
	min.	max.	min.	max.
6" Ø	9 3/4	10 3/4	32 1/4	98 1/4
7" Ø	10 3/4	11 3/4	32 1/4	98 1/4
8" Ø	11 3/4	12 3/4	32 1/4	98 1/4

Flexible Radiation Shield Tube (ERSF) The ERSF is used in the same manner as the ERST but is designed to shield an enclosed offset chimney. It can also be used instead of an ERST.



INCHES

	ERSF Adjustable Length Dimensions		
	Inside diameter	Min. Length	Max. Length
6" Ø	9 3/4	45	137 1/2
7" Ø	10 3/4	45	137 1/2
8" Ø	11 3/4	45	137 1/2

Excel Offset Tables

Use this table if you are not installing an adjustable length between the elbows.

LENGTH BETWEEN OFFSETS	15° Elbows		30° Elbows		45° Elbows	
	RISE	OFFSET	RISE	OFFSET	RISE	OFFSET
5 INCH Ø						
NO LENGTH	9 1/4	1 1/4	10 1/2	2 3/4	11 1/4	4 3/4
6" Length	13 1/4	2 1/4	14 1/4	5	14 1/4	7 3/4
12" Length	19	3 3/4	19 1/4	8	18 1/2	12
18" Length	25	5 1/2	24 1/2	11	22 3/4	16 1/4
24" Length	30 3/4	7	29 3/4	14	27	20 1/2
48" Length	53 3/4	13 1/4	50 1/2	26	44	37 1/2
24" + 12"	40 1/2	9 1/2	38 3/4	19	34 1/4	27 3/4
48" + 12"	63 3/4	15 3/4	59 1/2	31	51 1/4	44 3/4
48" + 18"	69 1/2	17 1/2	64 1/2	34	55 1/2	49
48" + 24"	75 1/4	19	69 3/4	37	59 3/4	53 1/4
48" + 24" + 12"	85 1/4	21 1/2	78 3/4	42 1/4	67	60 1/2
48" + 48"	98 1/2	25 1/4	90 1/2	49	76 3/4	70
6 INCH Ø						
NO LENGTH	9 1/2	1 1/4	11	3	12	5
6" Length	13 1/2	2 1/4	14 3/4	5	15	8
12" Length	19 1/4	4	19 3/4	8	19 1/4	12 1/4
18" Length	25 1/4	5 1/2	25	11	23 1/2	16 1/2
24" Length	31	7	30 1/4	14	27 3/4	20 3/4
48" Length	54	13 1/4	51	26	44 3/4	37 3/4
24" + 12"	40 3/4	9 3/4	39 1/4	19 1/4	35	28
48" + 12"	64	15 3/4	60	31 1/4	52	45
48" + 18"	69 3/4	17 1/2	65	34 1/4	56 1/4	49 1/4
48" + 24"	75 1/2	19	70 1/4	37 1/4	60 1/2	53 1/2
48" + 24" + 12"	85 1/2	21 3/4	79 1/4	42 1/4	67 3/4	60 3/4
48" + 48"	98 3/4	25 1/4	91	49 1/4	77 1/2	70 1/2
7 INCH Ø						
NO LENGTH	9 3/4	1 1/4	11 1/2	3	12 3/4	5 1/4
6" Length	13 3/4	2 1/2	15 1/4	5 1/4	15 3/4	8 1/4
12" Length	19 1/2	4	20 1/4	8 1/4	20	12 1/2
18" Length	25 1/2	5 1/2	25 1/2	11 1/4	24 1/4	16 3/4
24" Length	31 1/4	7	30 3/4	14 1/4	28 1/2	21
48" Length	54 1/2	13 1/4	51 1/2	26 1/4	45 1/2	38
24" + 12"	41	9 3/4	39 3/4	19 1/4	35 3/4	28 1/4
48" + 12"	64 1/4	16	60 1/2	31 1/4	52 3/4	45 1/4
48" + 18"	70	17 1/2	65 1/2	34 1/4	57	49 1/2
48" + 24"	75 3/4	19	70 3/4	37 1/4	61 1/4	53 3/4
48" + 24" + 12"	85 3/4	21 3/4	79 3/4	42 1/2	68 1/2	61
48" + 48"	99	25 1/4	91 1/2	49 1/4	78 1/4	70 3/4
8 INCH Ø						
NO LENGTH	10	1 1/4	12	3 1/4	13 1/2	5 1/2
6" Length	14	2 1/2	15 3/4	5 1/4	16 1/2	8 1/2
12" Length	19 3/4	4	20 3/4	8 1/4	20 3/4	12 3/4
18" Length	25 3/4	5 1/2	26	11 1/4	25	17
24" Length	31 1/2	7	31 1/4	14 1/4	29 1/4	21 1/4
48" Length	54 3/4	13 1/4	52	26 1/4	46 1/4	38 1/4
24" + 12"	41 1/4	9 3/4	40 1/4	19 1/2	36 1/2	28 1/2
48" + 12"	64 1/2	16	61	31 1/2	53 1/2	45 1/2
48" + 18"	70 1/4	17 1/2	66	34 1/2	57 3/4	49 3/4
48" + 24"	76 1/4	19	71 1/4	37 1/2	62	54
48" + 24" + 12"	86	21 3/4	80 1/4	42 1/2	69 1/4	61 1/4
48" + 48"	99 1/4	25 1/4	92	49 1/2	79	71

All measurements are in inches

Use this table when an 18 inch adjustable length is required.

LENGTH BETWEEN OFFSETS	15° Elbows		30° Elbows		45° Elbows	
	RISE	OFFSET	RISE	OFFSET	RISE	OFFSET
5 INCH Ø						
6" Length	23 - 28 3/4	5 - 6 1/2	22 3/4 - 28	10 - 13	21 1/2 - 25 3/4	14 3/4 - 19
12" Length	28 3/4 - 34 1/2	6 1/2 - 8	28 - 33 1/4	13 - 16	25 3/4 - 30	19 - 23 1/4
18" Length	34 1/2 - 40 1/4	8 - 9 1/2	33 1/4 - 38 1/2	16 - 19	30 - 34 1/4	23 1/4 - 27 1/2
24" Length	40 1/4 - 46 1/4	9 1/2 - 11	38 1/2 - 43 1/2	19 - 22	34 1/4 - 38 1/2	27 1/2 - 31 3/4
48" Length	63 1/2 - 69 1/4	15 3/4 - 17 1/4	59 1/4 - 64 1/2	31 - 34	51 1/4 - 55 1/4	44 1/2 - 48 3/4
24" + 12"	50 1/4 - 56	12 1/4 - 13 3/4	47 1/4 - 52 1/2	24 - 27	41 1/2 - 45 3/4	34 1/4 - 39
48" + 12"	73 1/2 - 79 1/4	18 1/2 - 20	68 - 73 1/4	36 - 39	58 1/4 - 62 1/2	51 3/4 - 56
48" + 18"	79 1/4 - 85	20 - 21 1/2	73 1/4 - 78 1/2	39 - 42	62 1/2 - 66 3/4	56 - 60 1/4
48" + 24"	85 - 90 3/4	21 1/2 - 23	78 1/2 - 83 3/4	42 - 45	66 3/4 - 71	60 1/4 - 64 1/2
48" + 24" + 12"	95 - 100 3/4	24 1/4 - 25 3/4	87 1/4 - 92 1/2	47 1/4 - 50 1/4	74 - 78 1/4	67 1/2 - 71 3/4
48" + 48"	108 1/4 - 114	27 3/4 - 29 1/4	99 1/4 - 104 1/2	54 - 57	83 3/4 - 88	77 1/4 - 81 1/2
6 INCH Ø						
6" Length	23 1/4 - 29	5 - 6 1/2	23 1/4 - 28 1/2	10 - 13	22 1/4 - 26 1/2	15 - 19 1/4
12" Length	29 - 34 3/4	6 1/2 - 8	28 1/2 - 33 3/4	13 - 16	26 1/2 - 30 1/2	19 1/4 - 23 1/2
18" Length	34 3/4 - 40 1/2	8 - 9 1/2	33 3/4 - 39	16 - 19	30 1/2 - 34 3/4	23 1/2 - 27 3/4
24" Length	40 1/2 - 46 1/2	9 1/2 - 11 1/4	39 - 44	19 - 22	34 3/4 - 39	27 3/4 - 32
48" Length	63 3/4 - 69 1/2	15 3/4 - 17 1/4	59 3/4 - 65	31 - 34	51 3/4 - 56	44 3/4 - 49
24" + 12"	50 1/2 - 56 1/4	12 1/4 - 13 3/4	47 3/4 - 53	24 1/4 - 27 1/4	42 - 46 1/4	35 - 39 1/4
48" + 12"	73 3/4 - 79 1/2	18 1/2 - 20	68 1/2 - 73 3/4	36 1/4 - 39 1/4	59 - 63 1/4	52 - 56 1/4
48" + 18"	79 1/2 - 85 1/4	20 - 21 1/2	73 3/4 - 79	39 1/4 - 42 1/4	63 1/4 - 67 1/2	56 1/4 - 60 1/2
48" + 24"	85 1/4 - 91	21 1/2 - 23	79 - 84 1/4	42 1/4 - 45 1/4	67 1/2 - 71 3/4	60 1/2 - 64 3/4
48" + 24" + 12"	95 1/4 - 101	24 1/4 - 25 3/4	87 3/4 - 93	47 1/4 - 50 1/4	74 3/4 - 79	67 3/4 - 72
48" + 48"	108 1/2 - 114 1/4	27 3/4 - 29 1/4	99 3/4 - 105	54 1/4 - 57 1/4	84 1/2 - 88 3/4	77 1/2 - 81 3/4
7 INCH Ø						
6" Length	23 1/2 - 29 1/4	5 - 6 1/2	23 3/4 - 29	10 1/4 - 13 1/4	22 3/4 - 27	15 1/4 - 19 1/2
12" Length	29 1/4 - 35	6 1/2 - 8	29 - 34 1/4	13 1/4 - 16 1/4	27 - 31 1/4	19 1/2 - 23 3/4
18" Length	35 - 40 3/4	8 - 9 1/2	34 1/4 - 39 1/2	16 1/4 - 19 1/4	31 1/4 - 35 1/2	23 3/4 - 28
24" Length	40 3/4 - 46 3/4	9 1/2 - 11 1/4	39 1/2 - 44 1/2	19 1/4 - 22 1/4	35 1/2 - 39 3/4	28 - 32 1/4
48" Length	64 - 69 3/4	15 3/4 - 17 1/2	60 1/4 - 65 1/2	31 - 34	52 1/2 - 56 3/4	45 - 49 1/4
24" + 12"	50 3/4 - 56 1/2	12 1/4 - 13 3/4	48 1/4 - 53 1/2	25 1/4 - 28 1/4	42 3/4 - 47	35 1/4 - 39 1/2
48" + 12"	74 - 79 3/4	18 1/2 - 20	69 - 74 1/4	36 1/4 - 39 1/4	59 3/4 - 64	52 1/4 - 56 1/2
48" + 18"	79 3/4 - 85 1/2	20 - 21 1/2	74 1/4 - 79 1/2	39 1/4 - 42 1/4	64 - 68 1/4	56 1/2 - 60 3/4
48" + 24"	85 1/2 - 91 1/4	21 1/2 - 23 1/4	79 1/2 - 84 3/4	42 1/4 - 45 1/4	68 1/4 - 72 1/2	60 3/4 - 65
48" + 24" + 12"	95 1/2 - 101 1/4	24 1/4 - 25 3/4	88 1/4 - 93 1/2	47 1/2 - 50 1/2	75 1/2 - 79 3/4	68 - 72 1/4
48" + 48"	108 3/4 - 114 1/2	27 3/4 - 29 1/4	100 1/4 - 105 1/2	54 1/4 - 57 1/4	85 1/4 - 89 1/2	77 3/4 - 82
8 INCH Ø						
6" Length	23 3/4 - 29 1/2	5 - 6 1/2	24 1/4 - 29 1/2	10 1/4 - 13 1/4	23 1/2 - 27 3/4	15 3/4 - 20
12" Length	29 1/2 - 35 1/4	6 1/2 - 8	29 1/2 - 34 3/4	13 1/4 - 16 1/4	27 3/4 - 32	20 - 24 1/4
18" Length	35 1/4 - 41	8 - 9 3/4	34 3/4 - 40	16 1/4 - 19 1/4	32 - 36 1/4	24 1/4 - 28 1/2
24" Length	41 - 47	9 3/4 - 11 1/4	40 - 45	19 1/4 - 22 1/4	36 1/4 - 40 1/2	28 1/2 - 32 3/4
48" Length	64 1/4 - 70	15 3/4 - 17 1/2	60 3/4 - 66	31 1/4 - 34 1/4	53 1/4 - 57 1/2	45 1/4 - 49 1/2
24" + 12"	51 - 56 3/4	12 1/4 - 13 3/4	48 3/4 - 54	24 1/2 - 27 1/2	43 1/2 - 47 3/4	35 3/4 - 40
48" + 12"	74 1/4 - 80	18 1/2 - 20	69 1/2 - 74 3/4	36 1/2 - 39 1/2	60 1/2 - 64 3/4	52 1/2 - 56 3/4
48" + 18"	80 - 85 3/4	20 - 21 3/4	74 3/4 - 80	39 1/2 - 42 1/2	64 3/4 - 69	56 3/4 - 61
48" + 24"	85 3/4 - 91 1/2	21 3/4 - 23 1/4	80 - 85 1/4	42 1/2 - 45 1/2	69 - 73 1/4	61 - 65 1/4
48" + 24" + 12"	95 3/4 - 101 1/2	24 1/4 - 25 3/4	88 3/4 - 94	47 1/2 - 50 1/2	76 1/4 - 80 1/2	68 1/4 - 72 1/2
48" + 48"	109 - 114 3/4	27 3/4 - 29 1/2	100 3/4 - 106	54 1/2 - 57 1/2	86 - 90 1/4	78 - 82 1/4

All measurements are in inches

Excel and RIS Warranty

EXCEL AND RIS CHIMNEY LIMITED LIFETIME WARRANTY

Industrial Chimney Company (ICC) warrants its Excel and RIS chimney systems to be free from functional failure due to defects in material or workmanship for as long as the original consumer owns the chimney system. This warranty provides for replacement of any components which fail as a result of normal use on a residential fireplace, wood burning stove, furnace or boiler and includes replacement of any components damaged as a result of a chimney fire. (Note: chimney fires are dangerous and preventable. We strongly encourage you to have your chimney cleaned regularly.) ICC warrants all stainless steel chimney components against perforation as a result of corrosion. This warranty does not cover damage caused to the building by chimney fires or misuse of the product.

No claims under this warranty will be honored unless ICC is notified of the potential claim and is given the opportunity to have one of its agents examine the chimney prior to replacement.

ICC will only be responsible for repair or replacement of any components found to be defective under this warranty. In no event shall ICC be responsible for any incidental or consequential damage caused by defects in the Excel or RIS chimney system.

During the first ten years of the warranty ICC will provide replacement chimney components at no charge. During the balance of the warranty ICC will provide replacement chimney components at 50% of the current retail price at the time of the warranty claim.

ICC will not be responsible for labor of any kind required in the removal or replacement of an Excel or RIS system replaced under this warranty.

These chimneys are designed to vent residential heating oil, untreated wood, low sulphur coal, and natural or LP gas. They are designed to operate at a continuous temperature of 650°C (1200°F) or less. They are not designed to vent condensing oil or gas appliances. This warranty is void if the chimney is used in an application for which it is not designed.

The Excel and RIS systems must be installed according to the Installation Instructions included with every system at the time of purchase. If you do not have a set of installation instructions, they are available free upon request. This warranty is void if the chimney is not installed according to the installation instructions.

This warranty may not be extended or modified by our agents or representatives. This warranty is in lieu of all other express warranties or guarantees, of any kind.

This warranty is effective as of January 1, 2001.

ULTRABlack Technical Information

Certification

ULTRABlack has been tested and listed by Intertek Testing Services. Listing #192-5096

Applications

ULTRABlack is designed to be used as a connector between a freestanding oil, wood or coal burning stove and a masonry or metal chimney. There are four primary advantages to ULTRABlack over single wall connector pipes:

- It offers reduced clearance to combustible materials.
- It is designed to last the lifetime of the stove and/or chimney system.
- It offers reduced creosote formation.
- It is certified for use with mobile home stoves.

Allowable Flue Gas

Temperatures

Max Continuous 650°C (1200°F)
Brief Forced Firing 925°C (1700°F)
Tested To 1150°C (2100°F)

Clearance to Combustible Materials

ULTRABlack is certified for 6" clearance with the following exception. When ULTRABlack is used as the connector on a mobile home certified stove the clearance is determined by the installation instructions for the specific stove model being installed.

Construction

Flue : Type 304 stainless steel, .016" thickness.

Casing : Satin coat steel, .016 thickness. Satin coat is specifically designed to be painted.

Seam : Interior and exterior seams are seam welded.

Wall thickness : Approximately 3/8"

Paint: Forrest "Stove Bright" flat black

ULTRABlack Engineering and Design Considerations

Maximum allowable overall height :

There is no maximum requirement however, as a general guideline we recommend that the length of ULTRABlack not exceed 20 feet.

ULTRABlack assembles like a regular single wall stove pipe - no complicated, unsightly twist lock connectors or spot welds. There is no cutting required and all the screw holes are predrilled. Just put one piece on top of the other and screw together using the black oxide screws provided. Easily fits most stoves, including cast iron stoves and stoves with oval collars. ULTRABlack is approved for mobile home installation on most major stove brands, when installed with Excel insulated chimney. For mobile home installations follow the stove manufacturer's installation instructions.

Excel ULTRABlack

Fully Shielded Stove pipe with smooth, clean lines

- Requires just 6" clearance to combustibles in all diameters - even when installed in a corner, or parallel with a ceiling*
- Has a smooth, clean appearance to compliment any stove installation
- Maximizes flue gas temperature, insuring good draft.
- Minimizes creosote buildup.

*Some stoves may require greater clearances.



ULTRABlack has been tested and listed by Intertek Testing Services.

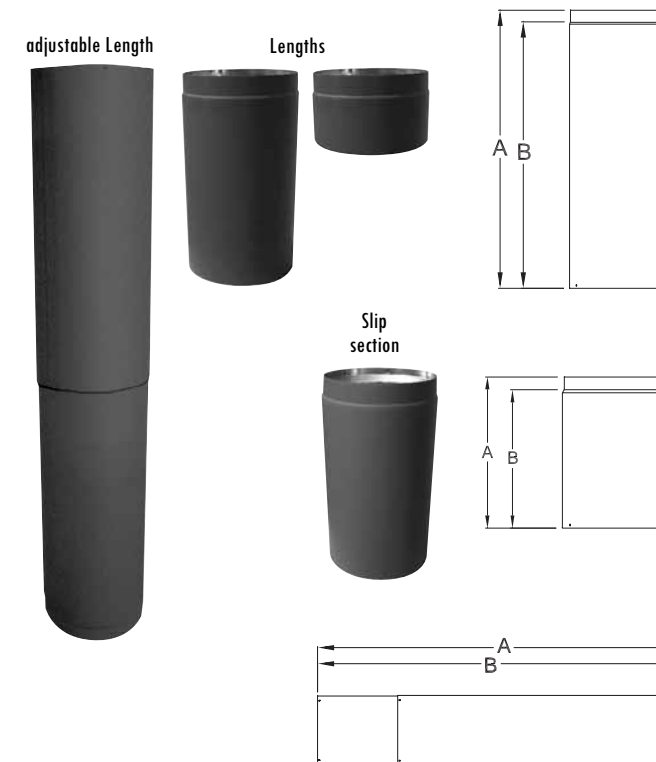
Listing # 192-5096

ULTRABlack Product Descriptions

Lengths (UB5F, UB1F, UB18F, UB2F & UB3F) Are available in 5", 12", 18", 24" and 36".

Adjustable Length (UBAF) Combines a 36" length and a 36" slip section in one box. The UBAF fits all brands of insulated chimney and most brands of wood burning stoves without a stove or chimney adapter. A UBTC trim collar is included with the UBAF.

Slip Sections (UB6S, UB12S & UB18S) These sections slide over a regular straight length allowing you to adjust the overall length of a straight run without cutting. The minimum adjustment can be reached only if the length used below the slip section is long enough to accept it.

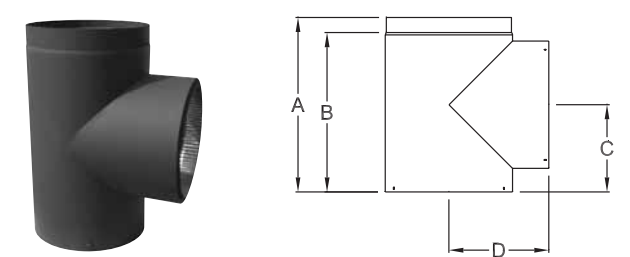


Length Dimensions (6-7-8")		
Code	A	B
6-7-8 UB5F	5	4
6-7-8 UB1F	12	11
6-7-8 UB18F	18	17
6-7-8 UB2F	24	23
6-7-8 UB3F	36	35

Slip Section Dimensions				
Code	A MIN.	A MAX.	B MIN.	B MAX.
UB6S	2	6	1	5
UB12S	2	12	1	11
UB18S	2	18	1	17

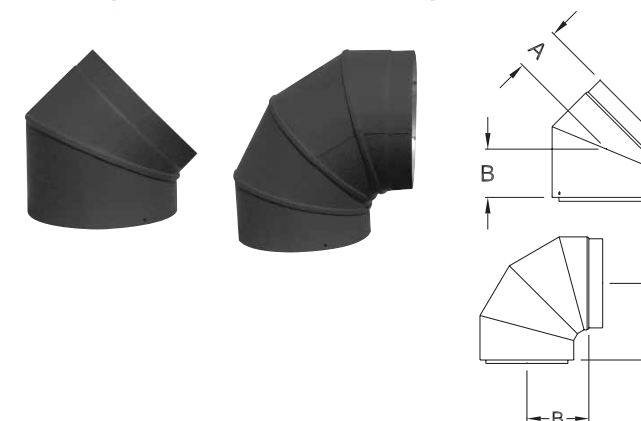
Adjustable Length Dimensions				
Code	A MIN.	A MAX.	B MIN.	B MAX.
6UBAF	40	68	39	67
7UBAF	40	68	39	67
8UBAF	40	68	39	67

Tees (UBT) Combines a 90° transition with a clean out. A UBTC trim collar is included with the UBT.



Tee Dimensions				
Code	A	B	C	D
6UBT	12	11	6	5 7/8
7UBT	12	11	6	6 3/8
8UBT	12	11	6	6 7/8

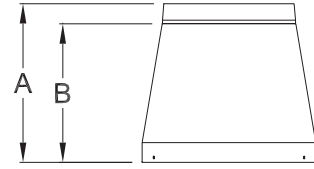
Elbows (UB30, UB45 & UB90) Are available in 30°, 45° and 90°.



Elbow dimensions (30°, 45°, 90°)		
Code	A	B
6UB30	2 5/16	2 9/16
7UB30	2 7/16	2 11/16
8UB30	3 9/16	2 13/16
6UB45	2 3/4	3
7UB45	2 15/16	3 3/16
8UB45	3 1/8	3 3/8
6UB90	5 9/16	4 1/2
7UB90	6 1/16	5
8UB90	6 9/16	5 1/2

ULTRABlack Product Descriptions

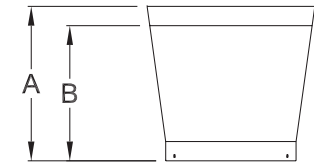
Reducers (UBR) Designed to reduce the diameter of a system to accommodate a range of flue sizes, appliances and installations. *Note: Decreasing chimney diameter even 1" can have a serious negative impact of chimney performance. Be careful to use these components only when appropriate.*



Reducer Dimensions		
Code	A	B
UBR 7-6	8	7
UBR 8-6	8	7
UBR 8-7	8	7

INCHES

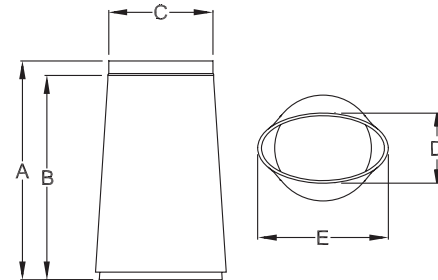
Increasesers (UBI) Designed to increase the diameter of a system to accommodate a range of flue sizes, appliances and installations. *Note: Increasing chimney diameter can reduce draft and increase creosote formation. Be careful to use these components only when appropriate.*



Increaser Dimensions		
Code	A	B
UBI 5-6	8	7
UBI 6-7	8	7
UBI 6-8	8	7
UBI 7-8	8	7

INCHES

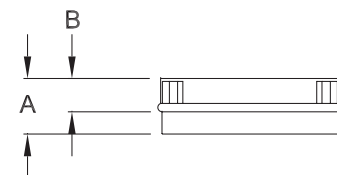
Oval to Round (UBORF) Adapters are designed to connect ULTRABlack to stoves with oval flue collars - such as a Vermont Castings Defiant Encore. Available in 8" only.



Oval to Round Dimensions (8" only)					
Code	A	B	C	D	E
8UBORF	18	17	8	5 3/4	10 3/4

INCHES

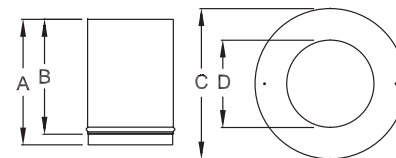
Stove Extensions (UBSE) Connect ULTRABlack to stoves with flue collars that do not project above the top of the stove. It can also be used to connect to stoves with irregular shaped or sized flue collars.



Stove Extension Dimensions		
Code	A	B
6UBSE	2 1/2	1 1/2
7UBSE	2 1/2	1 1/2
8UBSE	2 1/2	1 1/2

INCHES

Masonry Adapters (UBM) Connect ULTRABlack to a masonry chimney. *Note: ULTRABlack is not certified to pass through a combustible wall. An EXCELiner Insulated Thimble (ITH, page 23) must be used where there is a combustible wall between the stove and the masonry chimney.*

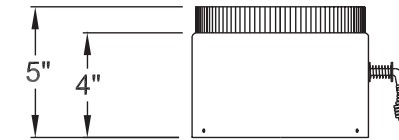


Masonry Adapter Dimensions				
Code	A	B	C	D
6UBM	11 11/16	10 11/16	12	6 1/8
7UBM	11 11/16	10 11/16	13	7 1/8
8UBM	11 11/16	10 11/16	14	8 1/8

INCHES

ULTRABlack Product Descriptions

Damper Section (UBD) Are butterfly type in line dampers. They are recommended by some stove manufacturers to help control draft.



Trim Collars (UBTC) Covers the crimped (top) end of ULTRABlack where it connects to the insulated chimney. A UBTC is included with every UBAF and UBT so they rarely need to be purchased separately.

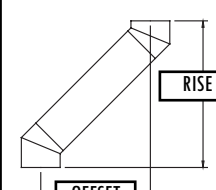
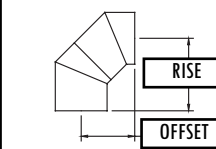


Trim Collar Dimensions	
Code	
6UBTC	22 x 2
7UBTC	25 3/8 x 2
8UBTC	28 1/2 x 2

INCHES

ULTRABlack Offset Tables

45° ELBOWS			
UB OFFSET TABLE- Use this table if you are not installing an adjustable length between the elbows.			
LENGTH BETWEEN ELBOWS	45° ELBOWS		90° ELBOWS
	RISE	OFFSET	
6 INCH Ø			
NO LENGTH	7 3/8	2 5/8	
5" Length	10 15/16	6 3/16	
6sf" Length	11 5/8	6 7/8	
12" Length	15 7/8	11 1/8	
18" Length	20 1/8	15 3/8	
24" Length	24 3/8	19 5/8	
36" Length	32 7/8	28 1/8	
UBAF min	35 11/16	30 15/16	
UBAF max	55 1/2	50 3/4	
7 INCH Ø			
NO LENGTH	8 1/16	2 15/16	
5" Length	11 9/16	6 7/16	
6sf" Length	12 5/16	7 3/16	
12" Length	16 1/2	11 3/8	
18" Length	20 3/4	15 5/8	
24" Length	25	19 7/8	
36" Length	33 1/2	28 3/8	
UBAF min	36 5/16	31 3/16	
UBAF max	56 1/8	51	
8 INCH Ø			
NO LENGTH	8 11/16	3 3/16	
5" Length	12 3/16	6 11/16	
6sf" Length	12 15/16	7 7/16	
12" Length	17 3/16	11 11/16	
18" Length	21 7/16	15 15/16	
24" Length	25 5/8	20 1/8	
36" Length	34 1/8	28 5/8	
UBAF min	36 15/16	31 7/16	
UBAF max	56 3/4	51	



All measurements are in inches

45° ELBOWS			
UB OFFSET TABLE- Use this table when an adjustable length (UBS) is installed between the elbows.			
LENGTH BETWEEN ELBOWS	45° ELBOWS		90° ELBOWS
	RISE	OFFSET	
6 INCH Ø			
NO LENGTH	+ UB6FS	10 15/16 - 10 15/16	6 3/16 - 6 3/16
5" Length	+ UB6FS	10 15/16 - 14 1/2	6 3/16 - 9 3/4
5" Length	+ UB12FS	15 3/16 - 18 11/16	10 7/16 - 13 15/16
12" Length	+ UB12FS	15 7/8 - 23 11/16	11 1/8 - 18 15/16
18" Length	+ UB12FS	20 1/8 - 27 15/16	15 3/8 - 23 3/16
24" Length	+ UB18FS	24 3/8 - 36 3/8	19 5/8 - 31 5/8
UBAF min	+ UB12FS	35 11/16 - 47 11/16	30 15/16 - 42 15/16
UBAF min	+ UB18FS	49 13/16 - 61 7/8	45 1/16 - 57 1/8
UBAF max	+ UB18FS	55 1/2 - 67 1/2	50 3/4 - 62 3/4
36+36+12	+ UB18FS	66 13/16 - 78 13/16	62 1/16 - 74 1/16
36+36+24	+ UB18FS	75 5/16 - 87 5/16	70 9/16 - 82 9/16
36+36+36	+ UB18FS	83 3/4 - 95 13/16	79 - 91 1/16
7 INCH Ø			
NO LENGTH	+ UB6FS	11 9/16 - 11 9/16	6 7/16 - 6 7/16
5" Length	+ UB6FS	11 9/16 - 15 1/8	6 7/16 - 10
5" Length	+ UB12FS	15 13/16 - 19 3/8	10 11/16 - 14
12" Length	+ UB12FS	16 1/2 - 24 5/16	11 3/8 - 19 3/16
18" Length	+ UB12FS	20 3/4 - 28 9/16	15 5/8 - 23 7/16
24" Length	+ UB18FS	25 - 37 1/16	19 7/8 - 31 15/16
UBAF min	+ UB12FS	36 5/16 - 48 3/8	31 3/16 - 43
UBAF min	+ UB18FS	50 7/16 - 62 1/2	45 5/16 - 57 3/8
UBAF max	+ UB18FS	56 1/8 - 68 1/8	51 - 63
36+36+12	+ UB18FS	67 7/16 - 79 7/16	62 5/16 - 74 5/16
36+36+24	+ UB18FS	78 15/16 - 87 15/16	70 13/16 - 82 13/16
36+36+36	+ UB18FS	84 7/16 - 96 7/16	79 5/16 - 91 5/16
8 INCH Ø			
NO LENGTH	+ UB6FS	12 3/16 - 12 3/16	6 11/16 - 6 11/16
5" Length	+ UB6FS	12 3/16 - 15 3/4	6 11/16 - 10
5" Length	+ UB12FS	16 7/16 - 20	10 15/16 - 14 1/2
12" Length	+ UB12FS	17 3/16 - 24 15/16	11 11/16 - 19 7/16
18" Length	+ UB12FS	21 7/16 - 29 3/16	15 15/16 - 23 11/16
24" Length	+ UB18FS	25 5/8 - 37 11/16	20 1/8 - 32 3/16
UBAF min	+ UB12FS	36 15/16 - 49	31 7/16 - 43 1/2
UBAF min	+ UB18FS	51 1/8 - 63 1/8	45 5/8 - 57 5/8
UBAF max	+ UB18FS	56 3/4 - 68 13/16	51 - 63 5/16
36+36+12	+ UB18FS	68 1/16 - 80 1/8	62 9/16 - 74 5/8
36+36+24	+ UB18FS	76 9/16 - 88 9/16	71 1/16 - 83 1/16
36+36+36	+ UB18FS	85 1/16 - 97 1/16	79 9/16 - 91 9/16

LIFETIME WARRANTY ULTRABlack Chimney Connector

ICC warrants its ULTRABlack chimney connector lengths to be free from functional failure due to defects in material or workmanship for as long as the original consumer owns the connector system. This warranty provides for replacement of any connector lengths which fail as a result of normal use on a residential freestanding fireplace, wood burning stove, furnace or boiler. This warranty does not cover damage caused to the building by chimney fires or misuse of the product.

ICC will only be responsible for repair or replacement of any connector lengths found to be defective under this warranty. In no event shall ICC be responsible for any incidental or consequential damage caused by defects in the ULTRABlack chimney system.

To obtain service under this warranty, the defective connector should be returned to the dealer from whom it was purchased. If you are unable to return the connector to the original dealer contact ICC for the name of the closest dealer who can assist you. ICC will not be responsible for shipping charges related to warranty replacements. ICC will repair or replace any lengths which, upon examination by an authorized agent of ICC, prove to be defective.

ICC will not be responsible for labor of any kind required in the removal or replacement of an ULTRABlack system replaced under this warranty.

This connector is designed to vent residential heating oil, untreated wood, low sulphur coal, and natural or LP gas. It is designed to operate at a continuous temperature of 1200°F or less. This warranty is void if the connector is used in an application for which it is not designed.

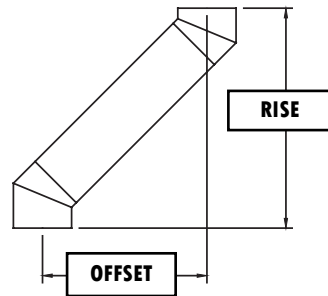
The ULTRABlack system must be installed according to the Installation Instructions included with every system at the time of purchase. If you do not have a set of installation instructions, they are available free upon request. This warranty is void if the connector is not installed according to the installation instructions.

This warranty may not be extended or modified by our agents or representatives. This warranty is in lieu of all other express warranties or guarantees, of any kind.

**30° ELBOWS
UB OFFSET TABLE**
Use this table if you are not installing an adjustable length between the elbows.

LENGTH BETWEEN OFFSETS	30° ELBOWS	
	RISE	OFFSET
6 INCH Ø		
NO LENGTH	6 3/8	1 7/16
5" Length	10 11/16	3 15/16
6sf" Length	11 9/16	4 7/16
12" Length	16 3/4	7 7/16
18" Length	21 15/16	10 7/16
24" Length	27	13 7/16
36" Length	37 9/16	19 7/16
UBAF min	41	21 7/16
UBAF MAX	65	35 7/16
7 INCH Ø		
NO LENGTH	6 13/16	1 9/16
5" Length	11 3/16	4 1/16
6sf" Length	12	4 9/16
12" Length	17	7 9/16
18" Length	22 7/16	10 9/16
24" Length	27 5/8	13 9/16
36" Length	38	19 9/16
UBAF min	41 1/2	21 9/16
UBAF MAX	65 3/4	35 9/16
8 INCH Ø		
NO LENGTH	7 5/16	1 11/16
5" Length	11 5/8	4 3/16
6sf" Length	12 1/2	4 11/16
12" Length	17 11/16	7 11/16
18" Length	22 7/8	10 11/16
24" Length	28 1/16	13 11/16
36" Length	38 1/2	19 11/16
UBAF min	41 15/16	21 11/16
UBAF MAX	66 3/16	35 11/16

All measurements are in inches



**30° ELBOWS
UB OFFSET TABLE**
Use this table when an adjustable length (UBS) is installed between the elbows.

LENGTH BETWEEN OFFSETS	30° ELBOWS	
	RISE	OFFSET
6 INCH Ø		
NO LENGTH + UB6FS	12 5/16 - 12 5/16	4 3/8 - 4 3/8
5" LENGTH + UB6FS	12 5/16 - 16 11/16	4 3/8 - 6 7/8
5" LENGTH + UB12FS	17 1/2 - 21 7/8	7 3/8 - 9 7/8
12" LENGTH + UB12FS	18 3/8 - 27 15/16	7 7/8 - 13 3/8
18" LENGTH + UB12FS	23 9/16 - 33 1/8	10 7/8 - 16 3/8
24" LENGTH + UB18FS	28 13/16 - 43 1/2	13 7/8 - 22 3/8
UBAF min + UB12FS	42 5/8 - 57 3/8	21 7/8 - 30 3/8
UBAF min + UB18FS	59 15/16 - 74 11/16	31 7/8 - 40 3/8
UBAF max + UB18FS	66 7/8 - 81 5/8	35 7/8 - 44 3/8
36+36+12 + UB18FS	80 3/4 - 95 7/16	43 7/8 - 52 3/8
36+36+24 + UB18FS	80 3/4 - 95 7/16	49 7/8 - 58 3/8
36+36+36 + UB18FS	101 1/2 - 116	55 7/8 - 64 3/8
7 INCH Ø		
NO LENGTH + UB6FS	13 - 13	4 9/16 - 4 9/16
5" LENGTH + UB6FS	13 - 17 3/8	4 9/16 - 7 1/16
5" LENGTH + UB12FS	18 - 22 9/16	7 9/16 - 10 1/16
12" LENGTH + UB12FS	19 1/16 - 28 5/8	8 1/16 - 13 9/16
18" LENGTH + UB12FS	24 5/16 - 33 13/16	11 1/16 - 16 9/16
24" LENGTH + UB18FS	29 1/2 - 44 3/16	14 1/16 - 22 9/16
UBAF min + UB12FS	43 5/16 - 58 1/16	22 1/16 - 30 9/16
UBAF min + UB18FS	60 11/16 - 75 3/8	32 1/16 - 40 9/16
UBAF max + UB18FS	67 9/16 - 82 5/16	36 1/16 - 44 9/16
36+36+12 + UB18FS	81 7/16 - 96 3/16	44 1/16 - 52 9/16
36+36+24 + UB18FS	91 13/16 - 106 9/16	50 1/16 - 58 9/16
36+36+36 + UB18FS	102 - 116 15/16	56 1/16 - 64 9/16
8 INCH Ø		
NO LENGTH + UB6FS	13 3/4 - 13 3/4	4 3/4 - 4 3/4
5" LENGTH + UB6FS	13 3/4 - 18 1/16	4 3/4 - 7
5" LENGTH + UB12FS	18 15/16 - 23	7 3/4 - 10
12" LENGTH + UB12FS	19 13/16 - 29 5/16	8 - 13 3/4
18" LENGTH + UB12FS	25 - 34 1/2	11 - 16 3/4
24" LENGTH + UB18FS	30 3/16 - 44 7/8	14 - 22 3/4
UBAF min + UB12FS	44 1/16 - 58 3/4	22 - 30 3/4
UBAF min + UB18FS	61 3/8 - 76 1/16	32 - 40 3/4
UBAF max + UB18FS	68 5/16 - 83	36 - 44 3/4
36+36+12 + UB18FS	82 - 96 7/8	44 - 52 3/4
36+36+24 + UB18FS	92 9/16 - 107	50 - 58 3/4
36+36+36 + UB18FS	102 15/16 - 117 5/8	56 - 64 3/4

All measurements are in inches

EXCEliner Technical Information

Certification

EXCEliner is tested and listed by Warnock Hersey - Intertek Testing Services to the following standards:

ULC S-635 - Standard for relining existing masonry chimneys in Canada.

ULC S-640 - Standard for liners for new masonry chimneys in Canada.

UL 1777 - Standard for liners in new and existing masonry chimneys in the USA.

The installation requirements vary depending on which Standard your installation must meet, particularly with respect to the requirements for insulation and clearance from the liner. You must insure that your EXCEliner is installed in accordance with your local building codes.

EXCEliner is available in 5", 6", 7" and 8" diameters

EXCEliner is certified for installation in combination with all certified brands of flexible chimney liner.

Applications

EXCEliner is certified as a chimney liner for use on appliances that burn:

- Wood
- Oil
- Natural or LP Gas

Allowable Flue Gas Temperatures

Max Continuous 650°C (1200°F)
Brief Forced Firing 925°C (1700°F)
Tested To 1150°C (2100°F)

Clearance to Combustible Materials

The clearance between EXCEliner and surrounding combustible and non-combustible materials varies with the type of installation. Please refer to the installation instructions for specific details for your application.

Construction

Single wall :

Type 304 stainless steel either .016" thickness or .025" thickness.

Seam :

Continuous seam welded.

Insulation :

Optional (required for some applications)
Foil backed ceramic liner.

EXCEliner Engineering and Design Considerations

EXCEliner is a fast, cost effective solution to the following chimney situations:


To repair cracked or damaged clay tile liners. EXCEliner is designed and approved to replace clay tile liners which have become cracked from age, misuse, or chimney fires. EXCEliner can be used to reline structurally sound masonry chimneys where the liners have deteriorated due to chimney fires, spalled tiles, moisture damage or eroded mortar joints.

To improve the safety, performance and efficiency of wood or gas burning stoves and fireplace inserts. By reducing the chimney to the correct size for the appliance EXCEliner improves draft, reduces fuel consumption, and helps insure consistent operation. There is less creosote formation in a properly sized flue which decreases the probability of a chimney fire.

EXCEliner is listed to UL and ULC standards by Warnock Hersey - Intertek Testing Services to be used as stainless steel liner in a new chimney, instead of a clay tile liner. Unlike clay tile liners, EXCEliner can withstand chimney fires without damage and comes with a lifetime warranty.

EXCEliner is easier to clean

EXCEliner's smooth surface accumulates less creosote than a flexible liner and is much easier to clean.

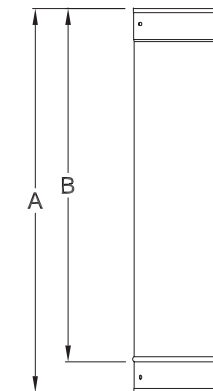


Excel has been tested and listed to the ULC S-635 ULC S-640 and UL 1777 chimney liner standards by Intertek Testing Services.

Listing # 195-7034-02
Listing # 192-5119

EXCEliner Product Descriptions

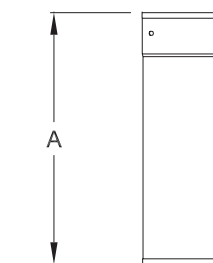
Fixed Lengths (LL4, LL3, LL2 & LL1) EXCEliner is available in 4', 3', 2' and 1' lengths. EXCEliner components fasten together with 100% stainless steel pop rivets which are supplied with the liner. The holes and slots for the rivets are factory pre-punched so no drilling is required. The male and female ends are hemmed to make the liner more rigid and reduce the likelihood of cutting yourself during installation.



Liner Length 12-24 Dimensions				
Diameter	LL1 (12)		LL2 (24)	
	A	B	A	B
5"	11 7/16	9 9/16	23 3/8	21 1/2
6"	11 7/16	9 9/16	23 3/8	21 1/2
7"	11 7/16	9 9/16	23 3/8	21 1/2
8"	11 7/16	9 9/16	23 3/8	21 1/2

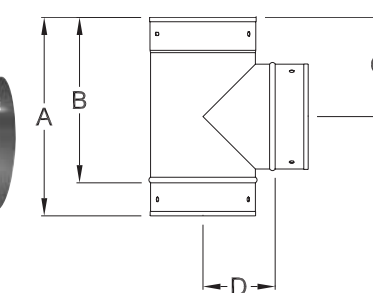
Liner Length 36-48 Dimensions				
Diameter	LL3 (36)		LL4 (48)	
	A	B	A	B
5"	35 5/16	33 7/16	47 1/4	45 3/8
6"	35 5/16	33 7/16	47 1/4	45 3/8
7"	35 5/16	33 7/16	47 1/4	45 3/8
8"	35 5/16	33 7/16	47 1/4	45 3/8

Adjustable Lengths (LLA4 & LLA1) Adjustable lengths are available in 4' and 1' lengths. Adjustable lengths are used to adjust the length of the system without cutting. *Note: Adjustable lengths must be installed above a fixed length or they will not adjust. They should not be installed immediately above a support, tee or elbow.*



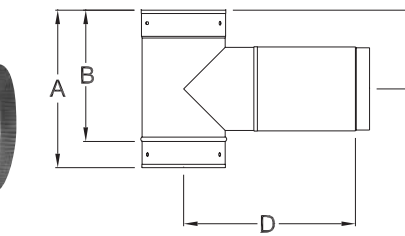
Adjustable Length Dimensions		
Diameter	A (LLA1)	A (LLA4)
5"	11 7/16	47 1/4
6"	11 7/16	47 1/4
7"	11 7/16	47 1/4
8"	11 7/16	47 1/4

Split Base Tee (LT) The flange for the tee mouth is formed into the vertical tee body to provide a strong connection while minimizing projection to facilitate installation in tight flues. The tee mouth fastens to the body with heavy duty stainless steel screws which install through the inside of the mouth.



Liner Tee Dimensions				
Code	A	B	C	D
5LT	10 1/4	8 3/8	5 1/8	3 5/8
6LT	11 1/4	9 3/8	5 5/8	4 1/8
7LT	12 1/4	10 3/8	6 1/8	4 5/8
8LT	13 1/4	11 3/8	6 5/8	5 1/8

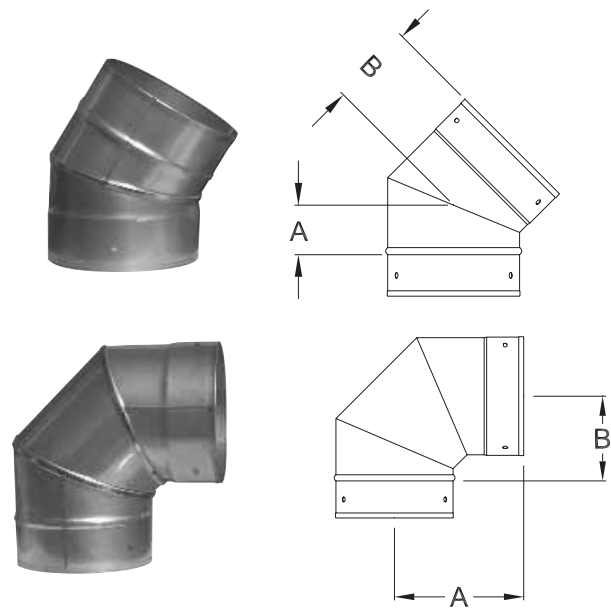
Adjustable Snout Tee (LTA) The LTA eliminates the difficult job of cutting and fastening a short horizontal section of liner in the breeching. The horizontal section adjusts from 9 3/4 to 15 3/4.



Snout Tee Dimensions					
Code	A	B	C	D MIN.	D MAX.
5LTA	10 1/4	8 3/8	5 1/8	9 3/4	15 3/4
6LTA	11 1/4	9 3/8	5 5/8	10 1/4	16 1/4
7LTA	12 1/4	10 3/8	6 1/8	10 3/4	16 3/4
8LTA	13 1/4	11 3/8	6 5/8	11 1/4	17 1/4

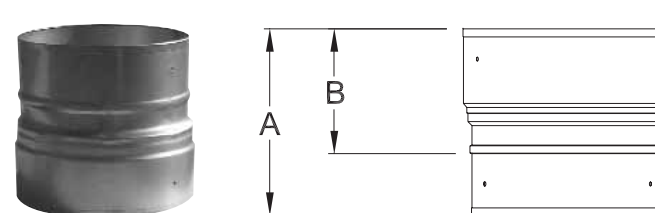
EXCELiner Product Descriptions

Elbows (LE30, LE45 & LE90) Used when a directional change is required.



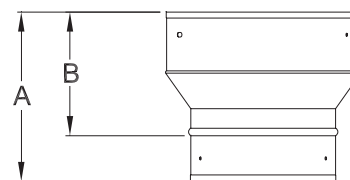
Elbows dimensions		
Code	A	B
5LE30	1 3/4	3 1/4
6LE30	1 7/8	3 3/8
7LE30	2	3 1/2
8LE30	2 1/8	3 5/8
5LE45	2	3 1/2
6LE45	2 1/4	3 3/4
7LE45	2 1/2	4
8LE45	2 5/8	4 1/8
5LE90	6 1/8	4 1/8
6LE90	6 5/8	4 1/2
7LE90	7	4 7/8
8LE90	7 5/8	5 1/2

Flex Liner Adapter (LAF) Designed to connect EXCELiner to a flexible liner where the rigid liner is installed below the flexible liner. It can be also used to connect a flexible liner to an appliance collar. *Note: The EXCELiner male end will fit into most brands of flexible liner (except for some models of flex which are intentionally made undersize) so no adapter is generally required when the flex is installed below the rigid.*



Flex Liner Adapter Dimensions		
Code	A	B
5LAF	5 3/4	3 7/8
6LAF	5 3/4	3 7/8
7LAF	5 3/4	3 7/8
8LAF	5 3/4	3 7/8

Increases and Reducers (LR & LI) Designed to increase or reduce the size of an EXCELiner to accommodate a range of flue sizes, appliances and installations. *Note: Increasing or decreasing chimney size can have a negative impact of chimney performance and safety. Use these components only when appropriate.*



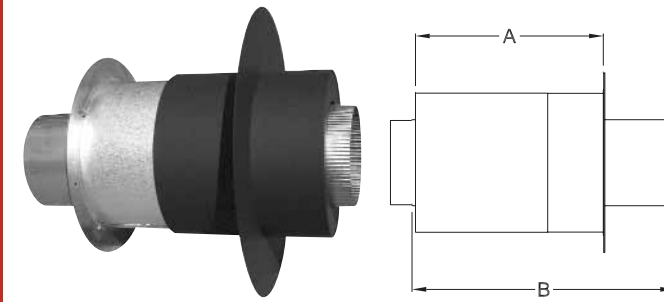
Increaser Dimensions		
Code	A	B
LI56	6 1/4	4 1/16
LI67	6 1/4	4 1/16
LI78	6 1/4	4 1/16
LI57	7	4 13/16
LI68	7	4 13/16



Reducer Dimensions		
Code	A	B
RI65	6 1/4	4 1/16
RI76	6 1/4	4 1/16
RI87	6 1/4	4 1/16
RI75	7	4 13/16
RI86	7	4 13/16

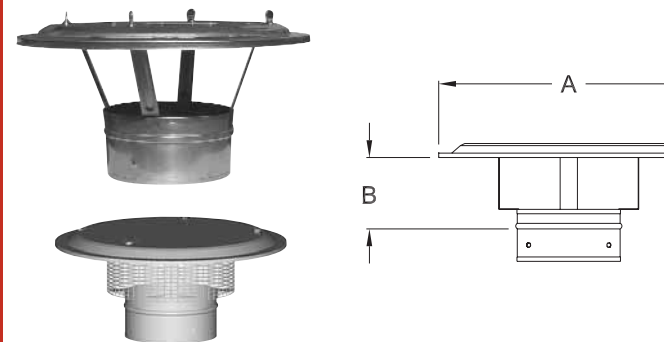
EXCELiner Product Descriptions

Insulated Thimble (ITH) The ITH is tested and listed to connect through a combustible wall into a masonry chimney. It is adjustable to accommodate wall thicknesses up to 10".



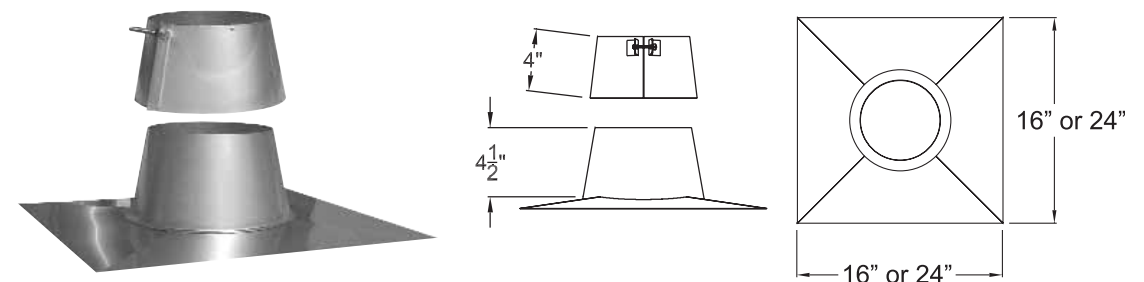
Thimble Dimensions			
Code	A MIN.	A MAX.	B
5ITH	7 1/2	13	20
6ITH	7 1/2	13	20
7ITH	7 1/2	13	20
8ITH	7 1/2	13	20

Rain Cap (LCR & LCD) EXCELiner rain caps are made entirely of type 304 stainless steel. The rain cap top is held in place with four wing nuts so it can be removed easily for cleaning without the need to remove the rain cap itself. Deluxe model has a stainless steel band. The optional Excel stainless steel spark screen (ERCS) can be installed if required.



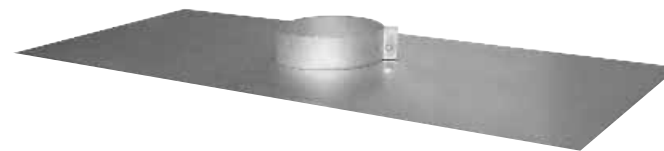
Rain Cap Dimensions		
Code	A	B
5LCR	13	4 1/8
6LCR	13	4 1/8
7LCR	13	5 3/8
8LCR	13	5 3/8

Top Support (LSA, LSAL, LSAAG & LSAGL) The top support is designed to seal off the top of the liner system and support the vertical liner. It is available in either stainless steel or galvalume. There are two base sizes available - 16" X 16" and 24" X 24".



Base Support (LSB)

The base support is designed to seal and support a liner system. It is available in galvalume only.



EXCELiner Warranty

ICC warrants its stainless steel chimney liner to be free from functional failure due to defects in material or workmanship for as long as the original consumer owns the chimney system. This warranty provides for replacement of any stainless steel components, except rain caps, which fail as a result of normal use with a residential freestanding fireplace, wood burning stove, furnace or boiler, including damage to the liner due to a chimney fire. This warranty does not cover damage caused to the original masonry chimney, or to the building, by chimney fires or misuse of the product.

Note: Chimney fires are dangerous and preventable, we strongly encourage you to have your chimney liner cleaned regularly.

ICC will only be responsible for repair or replacement of stainless steel components found to be defective under this warranty. In no event shall ICC be responsible for any incidental or consequential damage caused by defects in the stainless steel chimney liner system.

During the first ten years of the warranty ICC will repair or replace any defective stainless steel components, except rain caps, at no charge. For the balance of the warranty ICC will provide replacement stainless steel components at 50% of the current retail price at the time of the warranty claim. To obtain service under this warranty the defective liner should be returned to the dealer from whom it was purchased. If you are unable to return the liner to the original dealer contact ICC for the name of the closest dealer who can assist you. ICC will not be responsible for shipping charges related to warranty replacements.

ICC will not be responsible for labor of any kind required in the removal or replacement of a chimney liner system replaced under this warranty.

This liner is designed to vent residential heating oil, untreated wood, and natural or LP gas. It is designed to operate at a continuous temperature of 1200°F or less. It is not designed to vent coal burning appliances, condensing gas or condensing oil appliances. This warranty is void if the liner is used in an application for which it is not designed.

The chimney liner system must be installed according to the Installation Instructions included with every system at the time of purchase. If you do not have a set of installation instructions they are available free upon request. This warranty is void if the liner system is not installed according to the installation instructions.

This warranty may not be extended or modified by our agents or representatives. This warranty is in lieu of all other express warranties or guarantees of any kind.

Model RIS Large Diameter Technical Information

Certification

Model RIS is tested and listed by Warnock Hersey - Intertek Testing Services to the following standard:

UL 103HT - The standard for solid and liquid fuel chimneys.

Applications

RIS chimney is suitable for use on appliances that burn:

- Wood
- Oil
- Coal
- Natural or LP Gas
- Charcoal

Model RIS is certified to vent wood burning stoves, fireplaces and residential furnaces. In addition, there are a number of RIS components specifically designed and certified to vent large open masonry fireplaces burning wood and/or gas. There are also specific components designed to extend masonry chimneys and repair earthquake damaged masonry chimneys.

***Note for customers in Canada:** Model RIS is not certified to the ULC S-629 Standard. Do not install an RIS system on a wood fireplace without first contacting your local authority for approval. ICC can provide complete engineering services (sizing, material selection, installation recommendations, drawings etc.) to assist you in obtaining approval. However, we can not guarantee that it will be accepted in all cases. If you have a large fireplace project you would like to quote on please be sure to contact us in advance so we can work with your local engineer, architect and building authority.*

Allowable Flue Gas

Temperatures

Max Continuous	650°C (1200°F)
Brief Forced Firing	925°C (1700°F)
Tested To	1150°C (2100°F)

Clearance to Combustible Materials

Model RIS is certified for 2" clearance to combustible materials.

Construction

Flue :

Type 304 stainless steel, .018" - .025" thickness.

Casing :

Type 304 stainless steel, .018" - .025" thickness or galvalume steel, .018" - .025" thickness.

Seam :

Interior and exterior seams are continuous seam welded.

Insulation :

Thermoplus continuous blanket.

Wall thickness :

1"

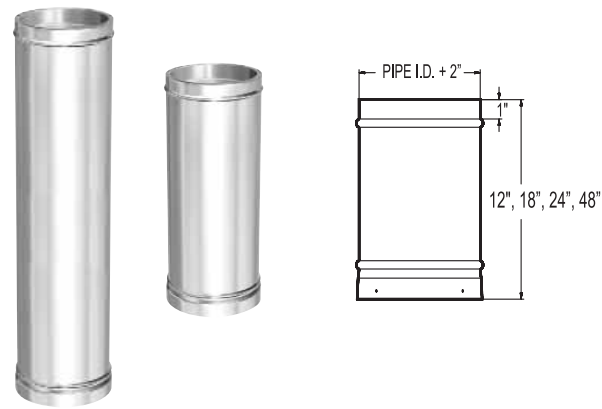
See page 38 of this catalog for recommended chimney sizing for masonry fireplaces.



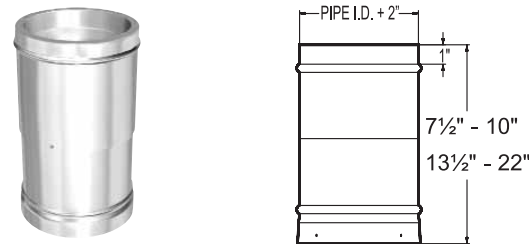
Model RIS has been tested and listed to the UL 103HT chimney standards by Intertek Testing Services.
Listing #50195-C7-704800

Model RIS Product Descriptions

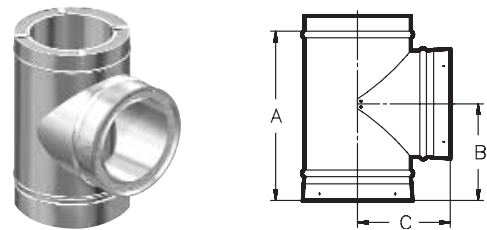
Chimneys Lengths (RIL) RIS is available in 12", 18", 24" and 48" lengths. Deduct 1 1/2" from overall length of each section to determine the actual installed length.



Adjustable Lengths (RILA) 12" and 24" adjustable lengths are available. The 12" can be adjusted from 7 1/2" to 10". The 24" can be adjusted from 13 1/2" to 22". Deduct 1 1/2" from overall length to determine the actual installed length. *Note: Adjustable lengths must be installed above a fixed length or they will not work. They should not be installed immediately above a round or square support, tee or elbow.*

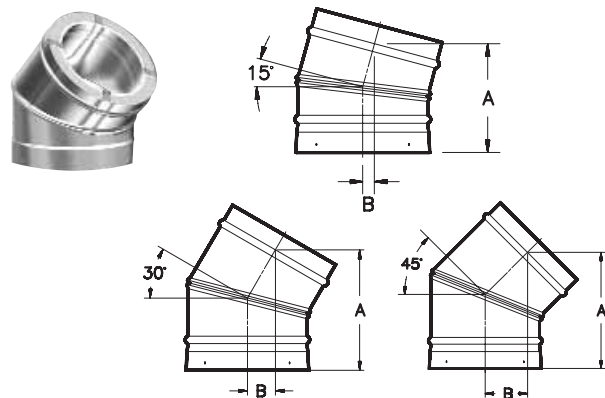


Insulated Tee (RIT) Designed to connect horizontal and vertical sections of the chimney.



Insulated Tee Dimensions			
PIPE I.D.	A	B	C
6	12 3/4	7	7
8	14 3/4	8	8
10	16 3/4	9	9
12	18 3/4	10	10
14	20 3/4	11	11
16	22 3/4	12	12
18	24 3/4	13	13
20	26 3/4	14	14
22	28 3/4	15	15
24	30 3/4	16	16

Elbows (RIE15, RIE30 & RIE45) Used when a directional change is required. *Note: 45° elbows are approved for use in Canada only.*

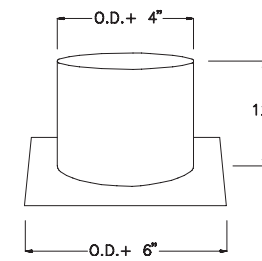


Elbows dimensions						
PIPE I.D.	15°		30°		45° CANADA ONLY	
	A	B	A	B	A	B
6	5 7/8	5/8	7 1/2	1 5/8	7 7/8	1 7/8
8	6 3/8	3/4	8	1 3/4	8 5/8	2 3/8
10	6 7/8	3/4	8 1/2	1 7/8	9 3/8	2 3/4
12	7 3/8	7/8	9	2	10	3 1/4
14	7 7/8	7/8	9 1/2	2 1/8	10 3/4	3 3/4
16	8 3/8	1	10	2 1/4	11 1/2	4 1/4
18	8 7/8	1	10 1/2	2 1/2	12 1/4	4 5/8
20	9 3/8	1 1/8	11	2 5/8	12 7/8	5 1/8
22	9 7/8	1 1/8	11 1/2	2 3/4	13 1/2	5 5/8
24	10 3/8	1 1/4	12	2 7/8	14 1/4	6

Model RIS Product Descriptions

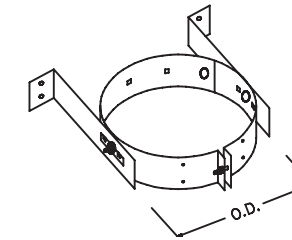
Radiation Shield (RRS)

Used when the chimney passes through a combustible floor or ceiling.



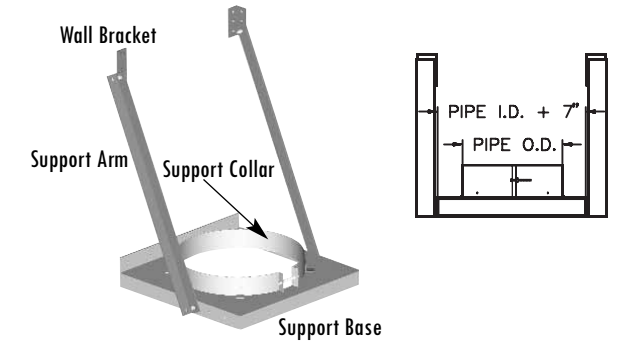
Wall Band (RWB)

Used on vertical or horizontal runs of chimney to stabilize the chimney. The maximum distance between wall bands is 8'.



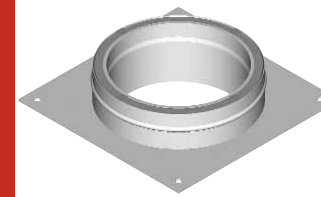
Wall support (RWS)

Designed to support a vertical chimney on a wall.



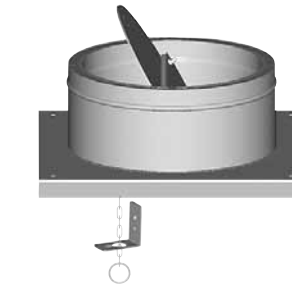
Anchor Plate (RAP)

Is used to connect an appliance (such as a masonry fireplace or heater) to an RIS chimney.



Anchor Plate Damper (RAPD)

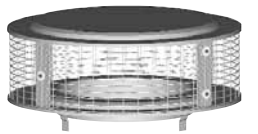
Combines the anchor plate with a heavy gauge stainless steel damper. The RAPD simplifies masonry fireplace construction, reduces installation cost and provides a superior seal.



Rain Caps (RRC)

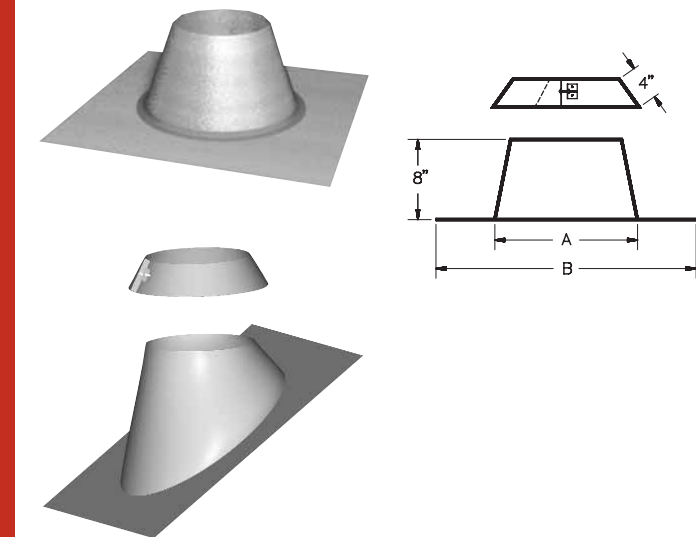
The RIS rain cap is constructed entirely of stainless steel. It is designed to provide good protection from wind and rain while incorporating small size and a low profile.

Note: We do not recommend the use of untested, unlisted rain caps or shrouds. In some cases it is possible to create an unsafe installation simply by using an aftermarket shroud. If you choose to do so you must terminate the chimney with an ICC Rain Cap Base (RRCB). The RRCB closes off the top of the chimney to prevent moisture from entering the insulation.



Roof Flashing (RF, RFA & RFB)

Used to provide weather protection where the chimney penetrates the roof. Three models are available to accommodate various roof pitches. The storm collar (SC) is included.

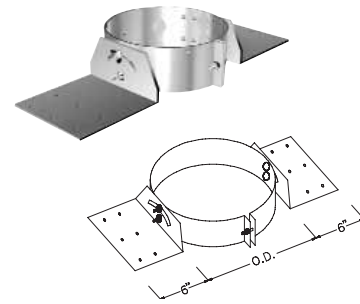


Ø	INCHES					
	(F)		(FA)		(FB)	
	Pitch 0 - 2/12		Pitch 1/12 - 7/12		Pitch 8/12 - 12/12	
	A	B	A	B	A	B
10"	17 15/16	28 x 28	16 7/8 - 17 7/8	28 x 28	19 1/8 - 23	28 x 33
12"	19 15/16	30 x 30	19 1/4 - 20 1/4	30 x 30	21 3/4 - 26 1/8	32 x 36
14"	21 15/16	32 x 32	21 1/2 - 22 5/8	32 x 32	24 - 29 1/8	34 x 40
16"	23 15/16	34 x 34	23 3/4 - 25	35 x 35	27 - 32 1/2	37 x 42
18"	25 15/16	36 x 36	27 3/8 - 26	37 x 37	29 1/8 - 35 1/8	40 x 45
20"	27 15/16	38 x 38	29 3/4 - 28 1/4	38 x 40	32 - 38 3/8	42 x 48
22"	29 15/16	40 x 40	31 7/8 - 33 5/8	42 x 44	n/a	n/a
24"	31 15/16	42 x 42	32 1/8 - 38 1/2	42 x 48	32 1/8 - 38 1/2	48 x 51

Model RIS Product Descriptions

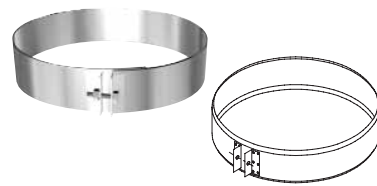
Roof Support (RSR)

The roof support is used above an offset, to provide additional support when the chimney height exceeds the primary support capacity.



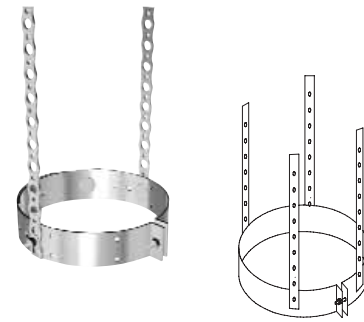
Locking Band (RSLB & RGLB)

All RIS insulated components are designed to be fastened together with the stainless steel screws provided with each part. In some cases, it may be desirable to install a locking band for aesthetic purposes. The locking band is designed to overlap the two beads immediately above and below the chimney joint and fastens with a 1/4" bolt. All screws are required even when the locking band is installed. Available in stainless steel and galvalume.



Offset Support (ROS)

The offset support is primarily used to re-support the chimney above an offset. However it may also be used to provide additional support when the chimney height exceeds the capacity of the primary support.



Roof Brace (RRB)

Designed to provide a lateral support for the chimney above a roof. The roof brace must be fastened solidly into a structural member.



Model RIS Offset Tables

RIS Offset Table 10 to 16 inches

LENGTH BETWEEN ELBOWS	2 X 15°		2 X 30°		2 X 45°	
	OFFSET	RISE	OFFSET	RISE	OFFSET	RISE
10 INCH Ø						
NO LENGTH	1.57	11.89	3.77	14.09	6.58	15.88
12" Length	4.35	22.28	9.15	23.40	14.18	23.48
24" Length	7.45	33.87	15.15	33.79	22.66	31.96
48" Length	13.67	57.05	27.15	54.58	39.63	48.93
48" + 12"	16.45	67.43	32.52	63.88	47.23	56.53
48" + 24"	19.55	79.03	38.52	74.28	55.72	65.02
48"+24"+12"	22.34	89.41	43.90	83.59	63.32	72.62
48" + 48"	25.77	102.2	50.52	95.06	72.69	81.99
12 INCH Ø						
NO LENGTH	1.57	11.89	4.02	15.02	7.11	17.16
12" Length	4.35	22.28	9.40	24.33	14.71	24.76
24" Length	7.45	33.87	15.40	34.72	23.19	33.24
48" Length	13.67	57.05	27.40	55.51	40.16	50.21
48" + 12"	16.45	67.43	32.77	64.82	47.77	57.82
48" + 24"	19.55	79.03	38.77	75.21	56.25	66.30
48"+24"+12"	22.34	89.41	44.15	84.52	63.85	73.90
48" + 48"	25.77	102.2	50.77	95.99	73.22	83.27
14 INCH Ø						
NO LENGTH	1.70	12.88	4.27	15.95	7.81	18.86
12" Length	4.48	23.26	9.65	25.26	15.41	26.46
24" Length	7.58	34.85	15.65	35.66	23.90	34.95
48" Length	13.80	58.03	27.65	56.44	40.87	51.92
48" + 12"	16.58	68.42	33.02	65.75	48.47	59.52
48" + 24"	19.68	80.01	39.02	76.14	56.96	68.01
48"+24"+12"	22.47	90.39	44.40	85.45	64.56	75.61
48" + 48"	25.89	103.1	51.02	96.63	73.93	84.98
16 INCH Ø						
NO LENGTH	1.70	12.88	4.52	16.89	8.34	20.14
12" Length	4.48	23.26	9.90	26.20	15.95	27.75
24" Length	7.58	34.85	15.90	36.59	24.43	36.23
48" Length	13.80	58.03	27.90	57.37	41.40	53.20
48" + 12"	16.58	68.42	33.27	66.68	49.00	60.80
48" + 24"	19.68	80.01	39.27	77.08	57.49	69.29
48"+24"+12"	22.47	90.39	44.65	86.39	65.09	76.89
48" + 48"	25.89	103.1	51.27	97.86	74.46	86.26

All measurements are in inches

RIS Offset Table 18 to 24 inches

LENGTH BETWEEN ELBOWS	2 X 15°		2 X 30°		2 X 45°	
	OFFSET	RISE	OFFSET	RISE	OFFSET	RISE
18 INCH Ø						
NO LENGTH	1.82	13.86	4.77	17.82	8.87	21.42
12" Length	4.61	24.24	10.15	27.13	16.48	29.03
24" Length	7.71	35.83	16.15	37.52	24.96	37.51
48" Length	13.92	59.02	28.15	58.31	41.93	54.48
48" + 12"	16.71	69.40	33.52	67.62	49.53	62.08
48" + 24"	19.81	80.99	39.52	78.01	58.02	70.57
48"+24"+12"	22.59	91.38	44.90	87.32	65.62	78.17
48" + 48"	26.02	104.1	51.52	98.79	74.99	87.54
20 INCH Ø						
NO LENGTH	1.82	13.86	5.15	19.22	9.58	23.13
12" Length	4.61	24.24	10.52	28.53	17.18	30.73
24" Length	7.71	35.83	16.52	38.92	25.67	39.22
48" Length	13.92	59.02	28.52	59.71	42.64	56.19
48" + 12"	16.71	69.40	33.90	69.02	50.24	63.79
48" + 24"	19.81	80.99	39.90	79.41	58.73	72.28
48"+24"+12"	22.59	91.38	45.27	88.72	66.33	79.88
48" + 48"	26.02	104.1	51.90	100.1	75.70	89.25
22 INCH Ø						
NO LENGTH	1.95	14.84	5.40	20.15	9.93	23.98
12" Length	4.74	25.23	10.77	29.46	17.54	31.59
24" Length	7.84	36.82	16.77	39.86	26.02	40.07
48" Length	14.05	60.00	28.77	60.64	42.99	57.04
48" + 12"	16.84	70.38	34.15	69.95	50.59	64.64
48" + 24"	19.94	81.97	40.15	80.34	59.08	73.13
48"+24"+12"	22.72	92.36	45.52	89.65	66.68	80.73
48" + 48"	26.15	105.1	52.15	101.1	76.05	90.10
24 INCH Ø						
NO LENGTH	1.95	14.84	5.65	21.09	10.64	25.69
12" Length	4.74	25.23	11.02	30.40	18.24	33.29
24" Length	7.84	36.82	17.02	40.79	26.73	41.78
48" Length	14.05	60.00	29.02	61.57	43.70	58.75
48" + 12"	16.84	70.38	34.40	70.88	51.30	66.35
48" + 24"	19.94	81.97	40.40	81.27	59.79	74.84
48"+24"+12"	22.72	92.36	45.77	90.58	67.39	82.44
48" + 48"	26.15	105.1	52.40	102.0	76.76	91.81

All measurements are in inches

RIS WARRANTY

The Model RIS and Excel warranties are exactly the same. You can read the warranty on page 13.

EXCELPellet Technical Information

Certification

EXCELPellet has been tested and listed to UL 641 and ULC S609 by Intertek Testing Services.

Applications

EXCELPellet is certified as a chimney liner for use on appliances that burn:

- Pellet
- Corn
- Natural or LP Gas

Allowable Flue Gas

Temperatures

Max Continuous 300°C (572°F)
Tested To 927°C (1700 °F)

Clearance to Combustible Materials

EXCELPellet is certified for 2" clearance to combustible materials.

Construction

Flue :

- .016" Plasma welded Type 430 stainless Steel for pellet fuel*
- .016" Type 304 Plasma welded stainless steel for corn fuel*

Casing :

- .018" Plasma welded Galvalume steel for pellet fuel*
- .016" Type 304 Plasma welded stainless steel for corn fuel*

Paint :

Forrest "Stove Bright" flat black

* With the exception of the straight lengths all EXCELPellet components which come in contact with flue gasses are manufactured from premium Type 304 stainless steel and can be used for both pellet and corn applications.

EXCELPellet Engineering and Design Considerations

We suggest that your pellet system be designed with a vertical rise. This is not a requirement but will help the stove to vent combustion products in the case of a power failure.

Keeping the horizontal run and number of elbows to a minimum will reduce the cost of your installation and improve performance.

Although not required we recommend that terminations be installed 12" away from the wall to reduce the potential for smoke staining on outside walls.

Do not install a vent smaller in diameter than the flue outlet on the stove.

The EXCELPellet installation instructions (available from your dealer or on our web site) have drawings of typical installations and detailed installation information.

EXCELPellet is manufactured using specialized machinery which makes it possible to maintain strict tolerances between components. This precision permits the use of a factory installed silicone gasket and eliminates the need for field application of silicone.

This unique factory installed silicone rubber gasket solves two major pellet venting problems:

- The gasket seals perfectly so there is no need for sealant application in the field. This speeds up installation, simplifies clean up, facilitates painting and eliminates callbacks.
- Not only do all parts assemble easily, they can be disassembled and reassembled just as easily making routine maintenance much easier.

EXCELPellet has a smooth attractive Galvalume steel exterior. Galvalume is corrosion resistant and requires very little preparation for painting.



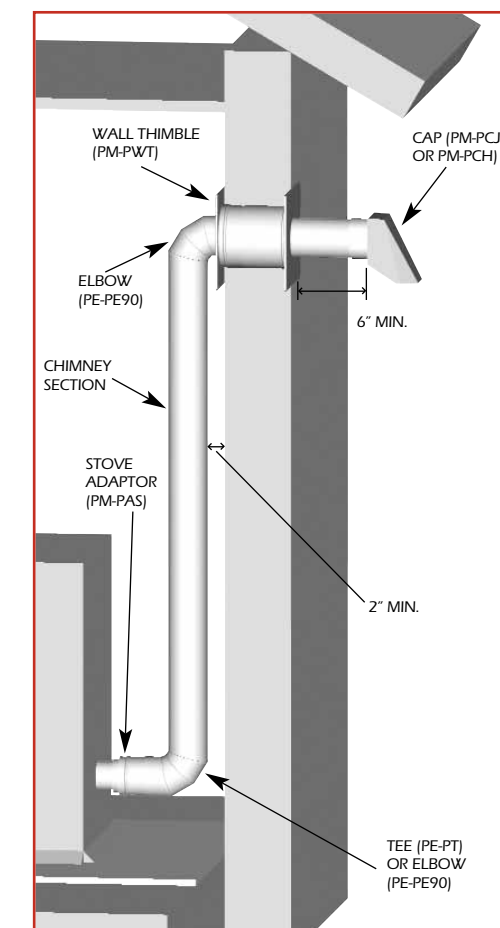
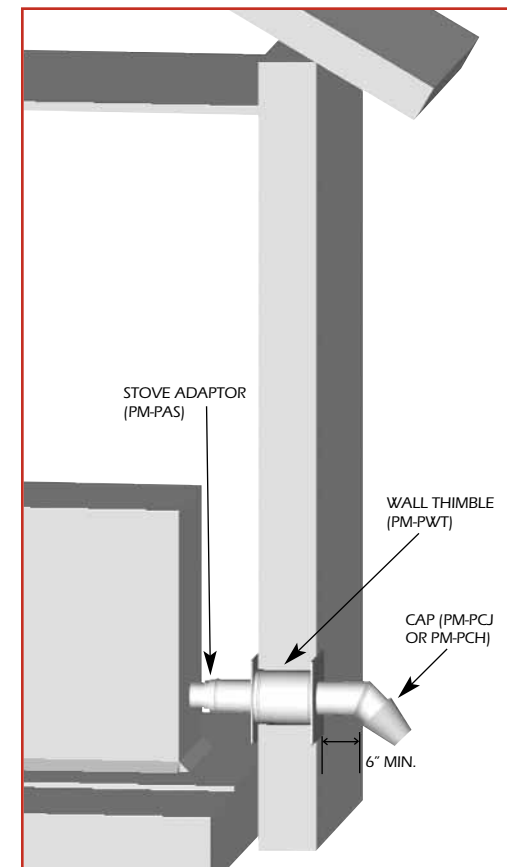
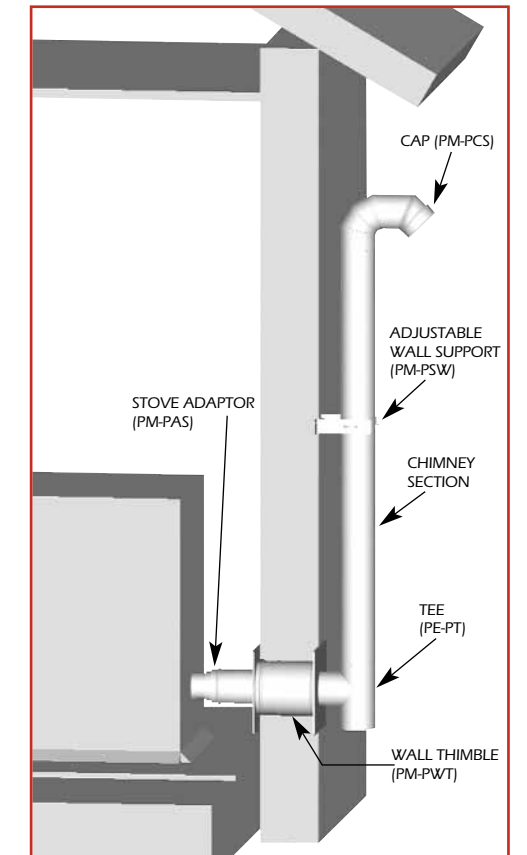
EXCELPellet has been tested and listed to the UL 641, CAN/ULC-S609 and ULC/ORD-C441-1992 standards by Intertek Testing Services.
Listing # 3070812

EXCELPellet Typical Installations

NOTE: The following information are not to be used as installation instructions. Please refer to the detailed EXCELPellet installation instructions for complete details on your specific application.

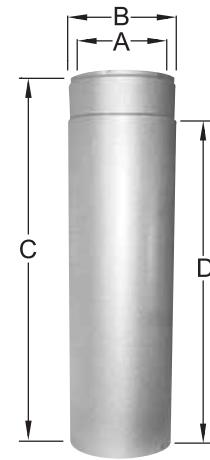
All measurements are in inches

Framing rough opening dimensions:		
Inside Diameter	3	4
Outside Diameter	3 3/4	4 3/4
Weight/Foot (lb./ft.)	1.3	1.6
Supports (PM-PSA, PM-PSF)	7 3/4 x 7 3/4	8 3/4 x 8 3/4
Supports (PM-PSS)	8 3/4 x 8 3/4	8 3/4 x 8 3/4
Adjustable Wall Thimble (PM-PWT)	6 1/2 x 6 1/2 or 6 1/2 round	7 1/2 x 7 1/2 or 7 1/2 round



ExcelPellet Product Descriptions

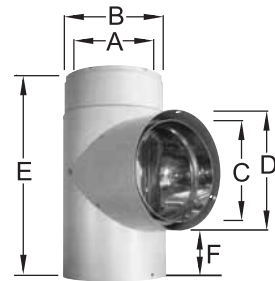
Lengths 48", 36", 24", 12", 6" & 6" adjustable



Length Dimensions							
	3"	4"					
A	3	4					
B	3 3/4	4 3/4					
C			6	12	24	36	48
D			4 1/4	10 1/4	22 1/4	34 1/4	46 1/4

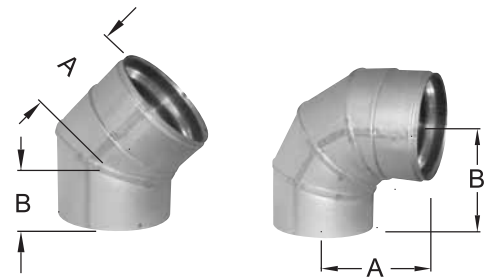
6" Adjustable Length Dimensions		
	3"	4"
A	2 7/8	3 7/8
B	3 7/8	4 7/8
C	8	8
D	6 1/4	6 1/4

Tees The tee cap incorporates the same silicone gasket as the lengths making it easy to remove for cleaning.



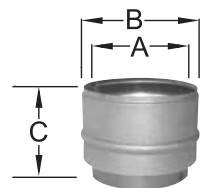
Tee Dimensions			
	3"	4"	3" to 4"
A	3	4	4
B	3 3/4	4 3/4	4 3/4
C	3	4	3
D	3 3/4	4 3/4	3 3/4
E	9	10	10
F	3	3	3

Elbows Small radius to make installations in tight spaces easier. 45° and 90° available.



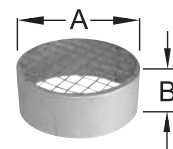
Elbows Dimensions		
	A	B
3PE45	3 9/16	1 15/16
4PE45	3 13/16	2 3/16
3PE90	5 5/32	5 1/8
4PE90	5 5/32	5 1/8

Stove Adapter Universal adapter fits both large OD flue collars (e.g.: Harman) and small OD flue collars. The stove adapter fastens permanently to the stove but can be easily disconnected from the rest of the vent to simplify cleaning.



Stove Adapter Dimensions		
	3"	4"
A	3	4
B	3 5/8	4 5/8
C	3 3/4	

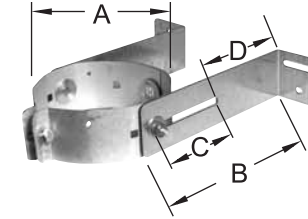
Universal Spark Screen Fits elbows, horizontal cap, vertical rain cap and adjustable jet cap.



Universal Spark Screen Dimensions		
	3"	4"
A	3 3/4	4 3/4
B	2	2

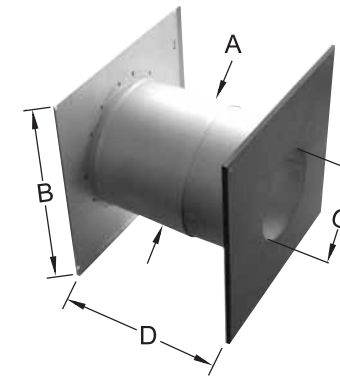
EXCEPellet Product Descriptions

Adjustable Wall Support Rated to support up to 21' (3") or 17' (4") of venting. Fits 3" and 4" diameters. It adjusts easily to provide from 2" to 5" of clearance to the wall.



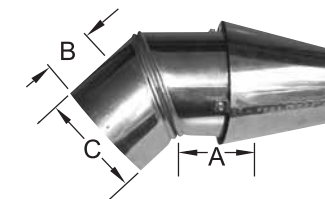
Adjustable Wall Support Dimensions		
	3"	4"
A	3 3/4	4 3/4
B	7 1/2	7 1/2
C	3 1/4	3 1/4
D	3 3/4	3 3/4

Adjustable Wall Thimble Telescopes to accommodate wall thicknesses from 5" to 10". It is fully insulated to maintain insulation integrity and fits tightly to prevent air flow. The 3" requires a 6 1/2" X 6 1/2" framed opening; the 4" requires a 7 1/2" X 7 1/2" framed opening.



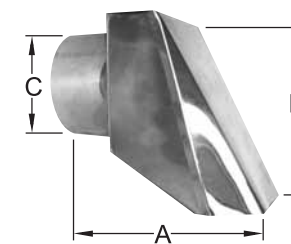
Adjustable Wall Thimble Dimensions		
	3"	4"
A	6 3/8	7 3/8
B	11 1/4	11 1/4
C	3 7/8	4 7/8
D min. 5	D max. 10	

Adjustable Jet Cap Can be rotated to direct hot flue gasses away from bushes or other things in proximity to the exhaust.



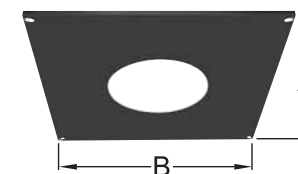
Adjustable Jet Cap Dimensions		
	3"	4"
A	3 1/2	3 1/2
B	2 1/2	2 1/2
C	3 3/4	4 3/4

Horizontal Cap Directs and accelerates flue gasses away from the house reducing the possibility of "moustache effect" from smoke accumulation.



Horizontal Cap Dimensions		
	3"	4"
A	8	9
B	6 1/4	7 1/2
C	3 7/8	4 7/8

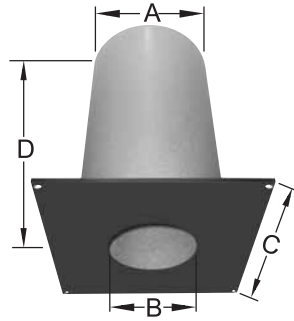
Ceiling Support/firestop Rated to support up to 30' (3") or 25' (4") of venting where it passes through an un-insulated floor or ceiling. Supplied with a support collar, not shown.



Ceiling Support/firestop Dimensions		
	3"	4"
A	11 1/4	11 1/4
B	11 1/4	11 1/4

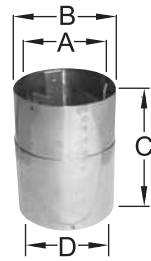
ExcelPellet Product Descriptions

Ceiling Support/Radiation Shield Rated to support up to 30' (3") or 25' (4") of venting where it passes through an insulated ceiling. It telescopes from 12" to 23" to keep insulation and debris away from the vent.



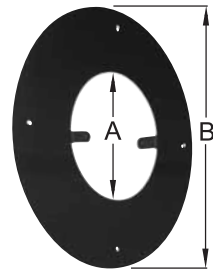
Radiation Shield Dimensions		
	3"	4"
A	7 3/4	8 3/4
B	3 7/8	4 7/8
C	11 1/4	11 1/4
D min. 12	D max. 23	

Flex Adapter Provides a sealed connection where a flexible liner is installed above an EXCELpellet system.



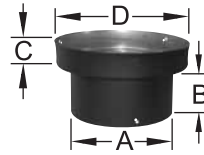
Flex Adapter Dimensions		
	3"	4"
A	2 3/4	4 3/4
B	3 3/4	3 3/4
C	4 7/8	4 7/8
D	3 3/4	4 3/4

Masonry Adapter Provides a tight, positive transition to a masonry chimney.



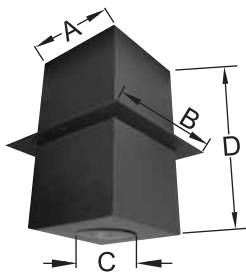
Masonry Adapter Dimensions		
	3"	4"
A	3 13/16	4 13/16
B	9	10

Class A Chimney Adapter Provides a positive sealed connection between EXCELpellet and Class A chimneys. Models to connect 3" or 4" pellet vent to 6", 7" or 8" Class A.



Class A Chimney Adapter Dimensions		
	3"	4"
A	3 3/4	4 3/4
B	2 1/4	2 1/4
C	1	1
D	6 - 7 - 8	

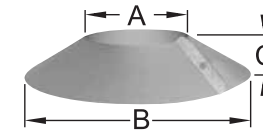
Square Support/Radiation Shield Rated to support up to 37' (3") or 30' (4") of venting where it passes through an insulated or un-insulated ceiling. It is particularly suitable for cathedral and drop ceilings.



Square Support Dimensions		
	3"	4"
A	8 3/4	8 3/4
B	13	13
C	3 7/8	4 7/8
D	16	16

EXCEPellet Product Descriptions

Storm Collar



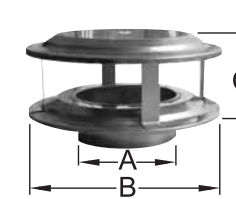
Storm Collar Dimensions		
	3"	4"
A	3 3/4	4 3/4
B	11	12
C	2	2

Increaser 3" - 4"



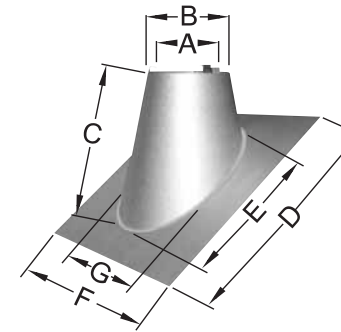
Increaser Dimensions	
A	4
B	4 5/8
C	3
D	3 5/8
E	5 1/8

Vertical Rain Cap



Vertical Rain Cap Dimensions		
	3"	4"
A	3 7/8	3 7/8
B	8	9
C	3 5/8	3 5/8

Flashing



Flat Flashing Dimensions		
	3"	4"
A	3 7/8	4 7/8
B	5 1/16	6 1/16
C	8 1/16	8 1/16
D	16	16
E	9	9
F	16	16
G	9	9
1/12 - 7/12 Flashing Dimensions		
	3"	4"
A	3 7/8	4 7/8
B	5 1/16	6 1/16
C	6 11/16	6 11/16
D	18	18
E	9 1/4	10 3/8
F	16	16
G	8 3/4	9 3/16
8/12 - 12/12 Flashing Dimensions		
	3"	4"
A	3 7/8	3 7/8
B	5 1/16	6 1/16
C	6	6
D	22 1/2	24
E	12 1/2	14 3/16
F	18	18
G	9 3/4	10 3/8

Materials:		
Exterior (casing):	.019" Galvalume Steel or .016" 304 Stainless Steel	
Interior (flue):	.016" Type 430 or 304 Stainless Steel	
Insulation:	3/8" Air Space	
Gasket:	Silicone Rubber	
Inside Diameter	3 Inch	4 Inch
Outside Diameter	3 3/4"	4 3/4"
Weight/Foot (lb/ft.)	1.3	1.6
Rough Opening Required:		
Supports (PM-PSA, PM-PSF)	7 3/4" x 7 3/4"	8 3/4" x 8 3/4"
Support (PM-PSS)	8 3/4" x 8 3/4"	8 3/4" x 8 3/4"
Adjustable Wall Thimble (PM-PWT)	6 1/2" x 6 1/2" or 6 1/2" round	7 1/2" x 7 1/2" or 7 1/2" round
Masonry Chimney Adapter (PM-PAM)	4" dia.	5" dia.
Maximum Support Capacity		
Ceiling Supports (PM-PSA, PM-PSF)	30 feet	25 feet
Ceiling Supports (PM-PSS)	37 feet	30 feet
Adjustable Wall Support (PM-PSW)	21 feet	17 feet
Clearances		
Clearance to combustibles	2"	2"

LIMITED LIFETIME WARRANTY ICC EXCELPellet Chimney

ICC warrants its EXCELPellet chimney components to be free from functional failure due to defects in material or workmanship for as long as the original consumer owns the chimney system. This warranty provides for replacement of any chimney components, including the gasket which fail as a result of normal use on a residential appliances. This warranty does not cover smoke damage or damage caused to the building by chimney fires or misuse of the product.

No claims under this warranty will be honoured unless ICC is notified of the potential claim and is given the opportunity to have one of its agents examine the chimney prior to replacement.

ICC will only be responsible for repair or replacement of any chimney found to be defective under this warranty. In no event shall ICC be responsible for any incidental or consequential damage caused by defects in the EXCELPellet chimney system.

During the first five years of the warranty ICC will provide replacement chimney lengths at no charge. During the balance of the warranty ICC will provide replacement chimney lengths at 50% of the current retail price at the time of the warranty claim.

ICC will not be responsible for labor of any kind required in the removal or replacement of an EXCELPellet system replaced under this warranty.

This chimney is designed to vent residential automatic particulate fuel-burning appliances (pellet and corn stoves), natural gas, propane and liquid fuel-burning appliances. It is designed to operate at a continuous temperature of 300°C or less. Corn burning appliances must be installed with EXCELPellet corn chimney lengths. EXCELPellet is not designed to vent condensing oil or gas appliances. This warranty is void if the chimney is used in an application for which it is not designed.

The EXCELPellet system must be installed according to the Installation Instructions included with every system at the time of purchase. If you do not have a set of installation instructions they are available free upon request. This warranty is void if the chimney is not installed according to the installation instructions.

This warranty may not be extended or modified by our agents or representatives. This warranty is in lieu of all other express warranties or guarantees, of any kind.

Open Fireplace Chimney Design Considerations

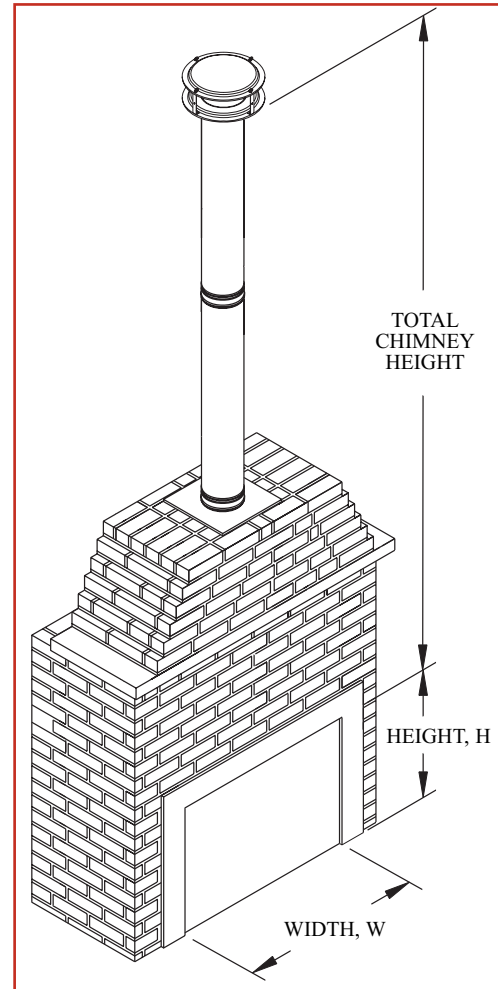
Chimney Sizing & Flue Height

The following information is provided to assist you in determining the correct chimney size and overall height required to provide trouble free operation. It is intended as a guideline only. There are many other factors, which determine the effective draft of a specific installation.

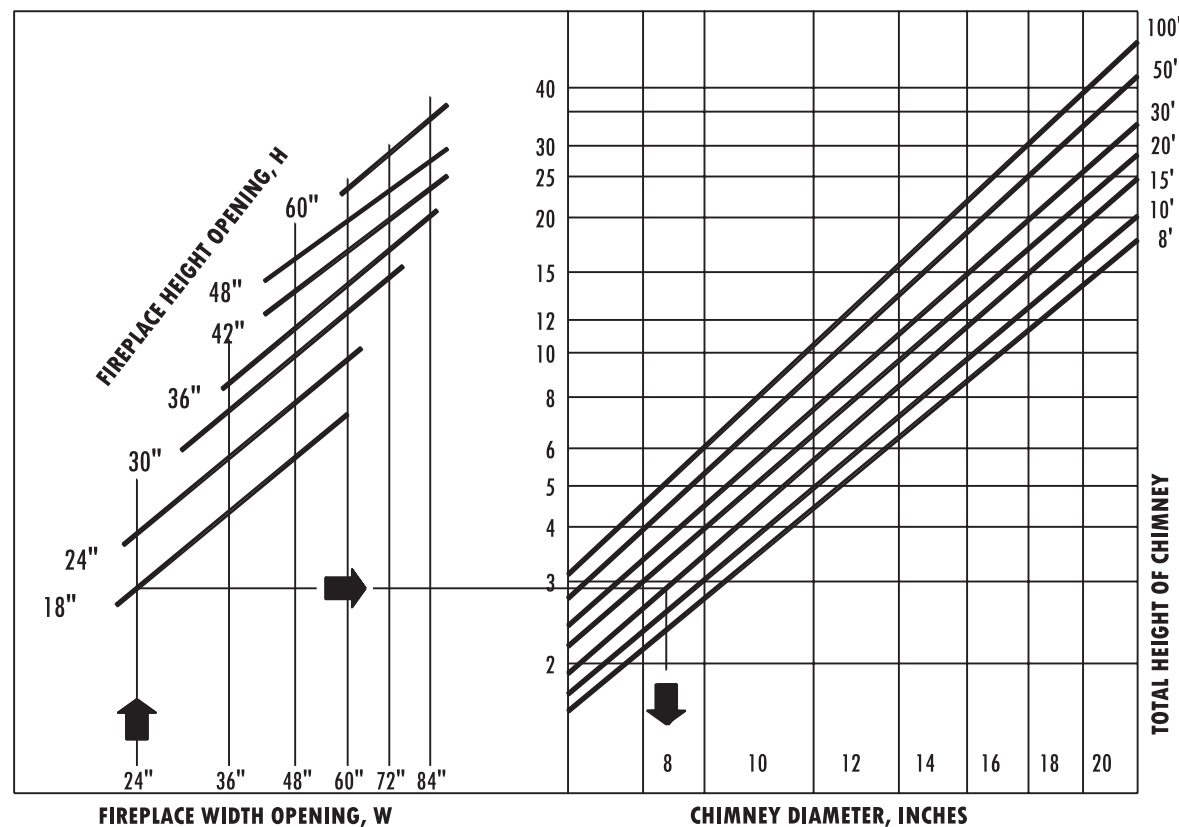
Sizing Fireplace Chimneys

The chimney-sizing chart on this page determines the correct chimney size for an open fireplace. For factory-built fireplaces and wood-burning stoves, use the size specified by the appliance manufacturer. In most cases, this is the diameter of the flue collar.

If you need help with a more complicated shape such as a multisided fireplace or an open fire pit please feel free to contact us by phone, fax or e-mail. Our engineering department will be pleased to assist you with sizing, material specifications, and any other technical information you require.



Example: A fireplace with a 24 inch wide by 18 inch high opening requires a 8 inch diameter chimney for 15' of chimney height.



Chimney Height Design Considerations

Recommended Flue Height

Once the correct chimney size has been determined, there are two factors which can be compensated for when calculating the optimum height of the system-elevation and chimney layout. The higher the elevation, the greater the chimney height required to provide the same draft as an installation at sea level. The more complex the chimney layout is (the more tees, elbows, etc. in the system), the greater the chimney height required to provide the same draft as a straight up system.

The minimum overall height of any chimney system is 12 feet for a vertical chimney with no offsets at sea level.

You must increase the vertical height of the system to compensate for horizontal runs, tees, and elbows. To compensate for:

- One Tee Add 3 feet. to the minimum height.
- One 45° Elbow Add 1 foot. to the minimum height.
- One 90° Elbow Add 2 feet. to the minimum height.
- Each foot of horizontal run Add 2 feet. to the minimum height.
- Each 1000 feet. above sea level Add 4% to the minimum height.

Example 1: House Built at Sea Level

A wood burning stove is installed on the main floor of a single story house at sea level. The chimney is installed with a 90° elbow through the wall into a tee, then straight up through the roof. To determine the minimum overall height add:

- The minimum overall height = 12 feet
- 1 1/2 feet of horizontal run = 3 feet
- One "Tee" = 3 feet
- One 90° Elbow = 2 feet
- Additional Height = 8 feet

The minimum overall chimney height required is 12 ft. + 8 ft. = 20 ft.

Example 2: Identical House Built at 8,000 feet

To determine the minimum overall height, add 32% (4% per 1000 feet) to the height calculated in the above example:
20 feet + 32% = 26.4 feet

If the house were built at an altitude of 5000 feet, the overall height would be:
20 feet + 20% (4% per 1000 feet.) = 24 feet

Minimum Recommended Flue Height from the flue connection on the appliance (feet)									
Elevation Above Sea Level (feet)	Number of elbows								
	0	2 X 15°	2 X 30°	2 X 45°	4 X 15°	4 X 30°	4 X 45°	1	2
0-1000	12	13	15	16	14	18	20	18	20
1000-2000	12 1/2	13 1/2	15 1/2	16 1/2	14 1/2	19	20 1/2	19	21
2000-3000	13	14	16	17	15	19 1/2	21 1/2	19 1/2	21 1/2
3000-4000	13 1/2	14 1/2	17	18	15 1/2	20	22 1/2	20	22 1/2
4000-5000	14	15	17 1/2	18 1/2	16	21	23	21	23
5000-6000	14 1/2	15 1/2	18	19	17	21 1/2	24	21 1/2	24
6000-7000	15	16	18 1/2	20	17 1/2	22 1/2	25	22 1/2	25
7000-8000	15 1/2	16 1/2	19	20 1/2	18	23	25 1/2	23	25 1/2
8000-9000	16	17	20	21	18 1/2	24	26 1/2	24	26 1/2
9000-10000	16 1/2	17 1/2	20 1/2	22	19	24 1/2	27	24 1/2	27

No more than two offsets (four elbows) allowed
 1. This column shows the height required for a rear vented stove run 18" horizontally into a tee
 2. This column shows the height required for a top vented stove with a 90° degree elbow and an 18" horizontal run into a tee

The table above can be used to determine the minimum height required for many common installations