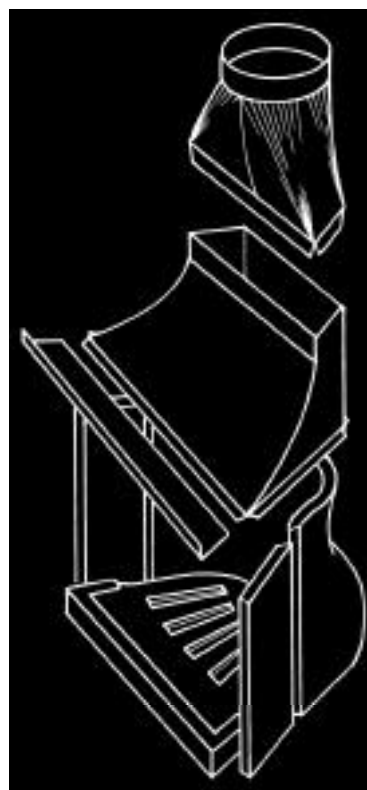




Bellfires®
BSV Models:
BSV 19
BSV 21
BSV 25
BSV 28
BSV 36



Installation Guide

SLEEPY HOLLOW CHIMNEY SUPPLY, LTD.

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IMPORTANT SAFEGUARDS AND PRECAUTIONS

A properly installed Bellfires® BSV fireplace and its associated components form a safety tested system. This manual serves as a guide for the proper and safe installation of a Bellfires® fireplace. It does not serve as a substitute for the necessary professional judgment and skills of a trained installer. Instead, it should be used in conjunction with standard safety considerations including, but not limited to, applicable state or provincial and local fire codes, the National Fire Protection Association Standard NFPA 211 or Canadian Standard B365, building and inspection codes, and the trained installer's professional judgment and skills to provide the owner with a safe installation. Please save these instructions for any future repairs or use.

Safe and efficient operation of the Bellfires® BSV fireplace and its associated components mandates installation of this unit in accordance with this installation guide. Proper installation requires an installer skilled in standard construction techniques. The installer must read and understand the contents of this manual before starting the installation.

WARNING:
DO NOT PACK REQUIRED AIR SPACES
WITH INSULATION OR OTHER MATERIALS!!!!

Consult the local and state or provincial building and fire safety code officials and investigate the requirements for installing a factory-built fireplace in the homeowner's community. It is the responsibility of the installer to (1) obtain a building permit for installation of a Bellfires® BSV fireplace before construction begins and, (2) assure the installation meets or surpasses all minimum requirements of the homeowner's jurisdiction.

It is highly recommended the homeowner install a smoke detector.

Failure to use components provided or specified by Sleepy Hollow Chimney Supply, Ltd., manufacturers of Bellfires®, in accordance with this installation guide may create a fire hazard. Use of other components or misuse of Bellfires® components voids the Bellfires® warranty.

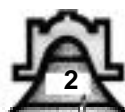


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Introduction

Early fireplaces were very inefficient, drawing a good deal of the heat up the chimney while admitting an unbearable amount of smoke into the room. In the late 1700's, Benjamin Thompson, Count of Rumford, recognizing that a fireplace heats an area by radiation, began a series of experiments aimed at improving its performance.

He discovered through observations and various constructions that the exaggerated width of the chimney of his time, necessitated by the need for room for a chimney sweep to climb through the throat area into the flue, was a primary cause of inefficiency and smokiness. He attributed the problem not only to the chimney, but the width of the throat and also specific fireplace dimensions and configurations. Using the knowledge gained from his studies, Rumford modified the traditional fireplace design into one that burned cleaner and hotter and, most importantly, did not smoke. His efforts greatly improved the performance of the fireplace.

Later, in the 1900's, a series of scientific experiments were conducted by Professor Peter O. Rosin, Dr. Ing., under the auspices of the British Coal Utilisation Research Association. The results are documented in his report, "The Aerodynamics of Domestic Open Fires". Through the use of laboratory equipment, Dr. Rosin was able to observe air and smoke flow patterns and thus developed the ideal firebox and chimney shape for maximum efficiency. While expanding on Rumford's work, some of Dr. Rosin's findings varied dramatically from Rumford's earlier theories; perhaps the most notable being the smoke shelf theory, shown diagrammatically at the left.

The important point of Dr. Rosin's work is that it was performed in a scientific manner and pointed the way to a much more efficient and functional fireplace. Bell of England took this information and applied it to develop the Bellfire Fireplace, providing the ideal firebox and throat shape to guarantee a smoke-free efficient fireplace capable of producing maximum radiant heat with minimum fuel. It was commonly used to heat the complete home until the second World War. Since then it has been further developed by using more modern aerodynamic concepts and thermal insulation techniques

to improve the design.

Sleepy Hollow Chimney Supply has optimized the Bellfires® designs, and produced a superior radiant firebox combining advanced casting techniques and high temperature, high alumina ladle cast refractory. We feel confident that our Bellfires® units are the finest heat-producing open fireplaces to be found, whether used to upgrade old metal or masonry fireboxes or in new construction.

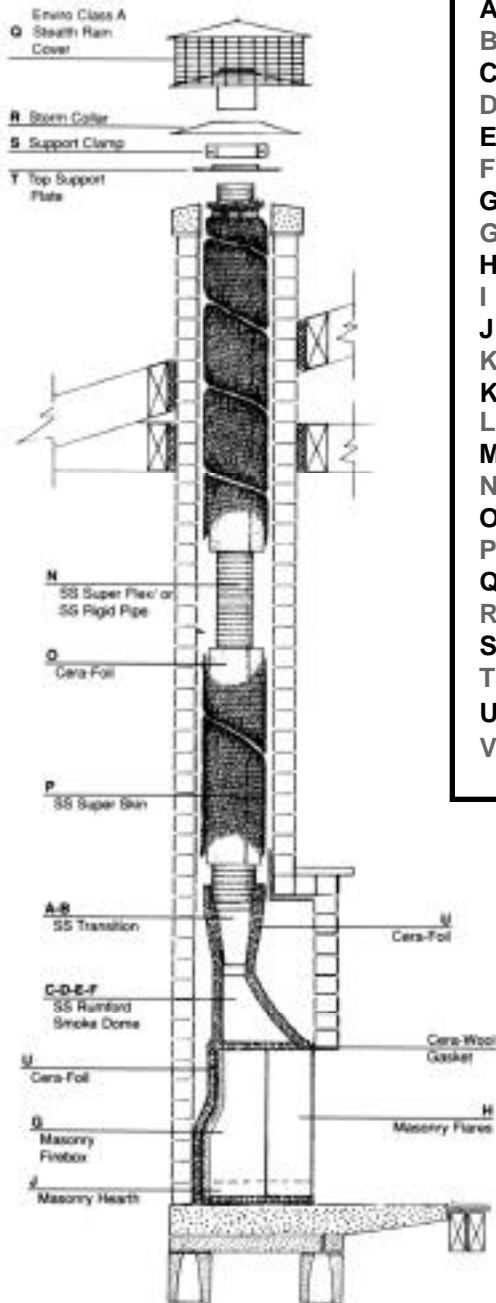
The Super Vent is the Repair Unit with the addition of a correctly proportioned Smoke Chamber design, constructed of type 316 stainless steel for lifetime durability.

The Smoke Chamber is connected to a properly sized round or oval Super Flex® flexible flue liner. Cera-Foil® space age insulating blanket insulates the entire Super Vent™ system, stopping heat transfer to combustibles—the cause of home fires. In homes where the fireplace is in question for whatever reason, the Bellfire Super Vent has established itself as a safe, state-of-the-art, non smoking super radiant fireplace retrofit system.

A top mounted round damper with a control key at the firebox level helps to prevent cold air from draining into an unused fireplace and help ensure a warm flue for instant draft. Super radiant heat output and thorough combustion provide ample warmth and fuel efficiency that sets new standards for the open hearth. The refractory firebox stores heat and warms the house long after the flames have died out.



Essential Components of a BSV Installation

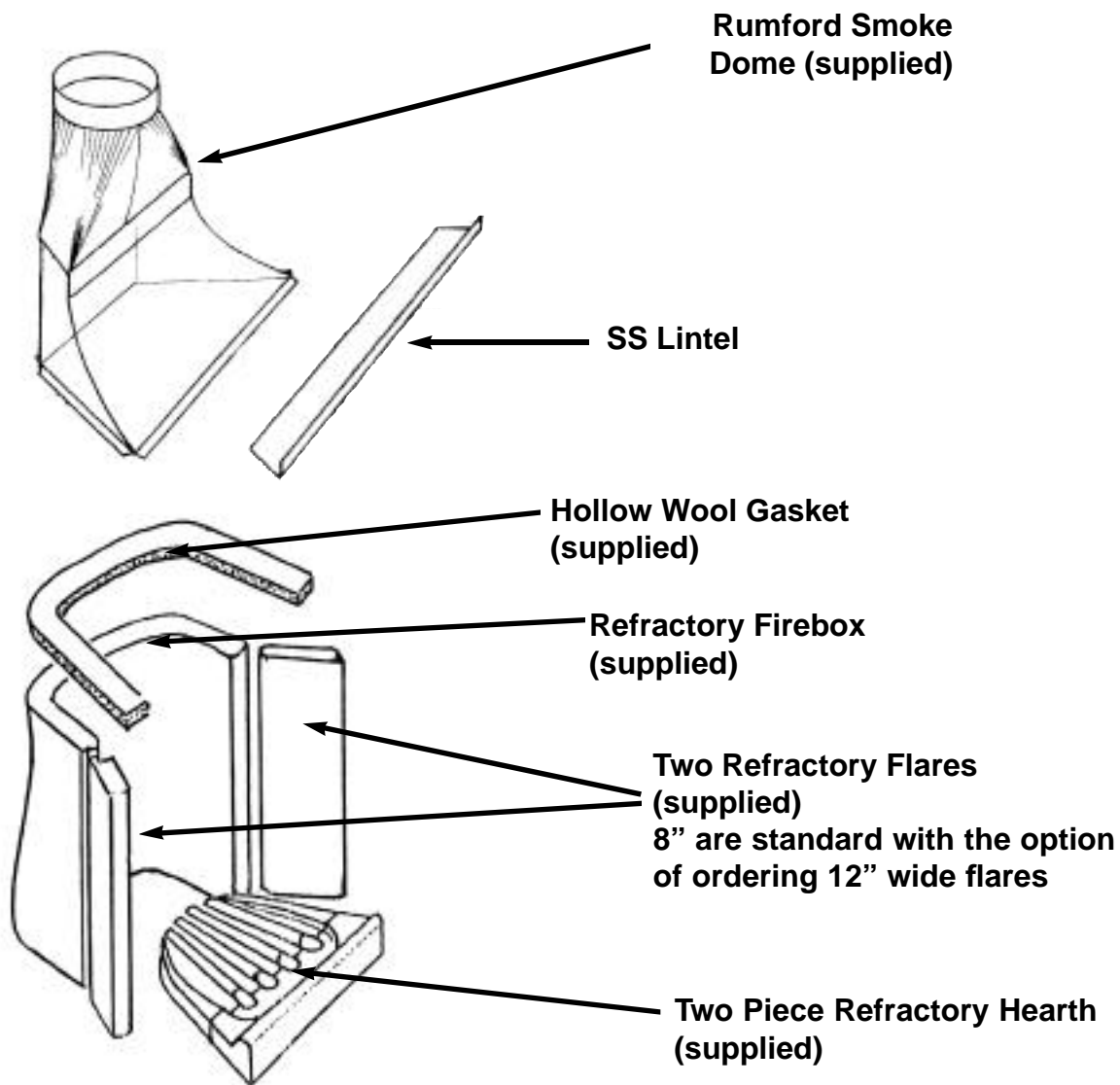


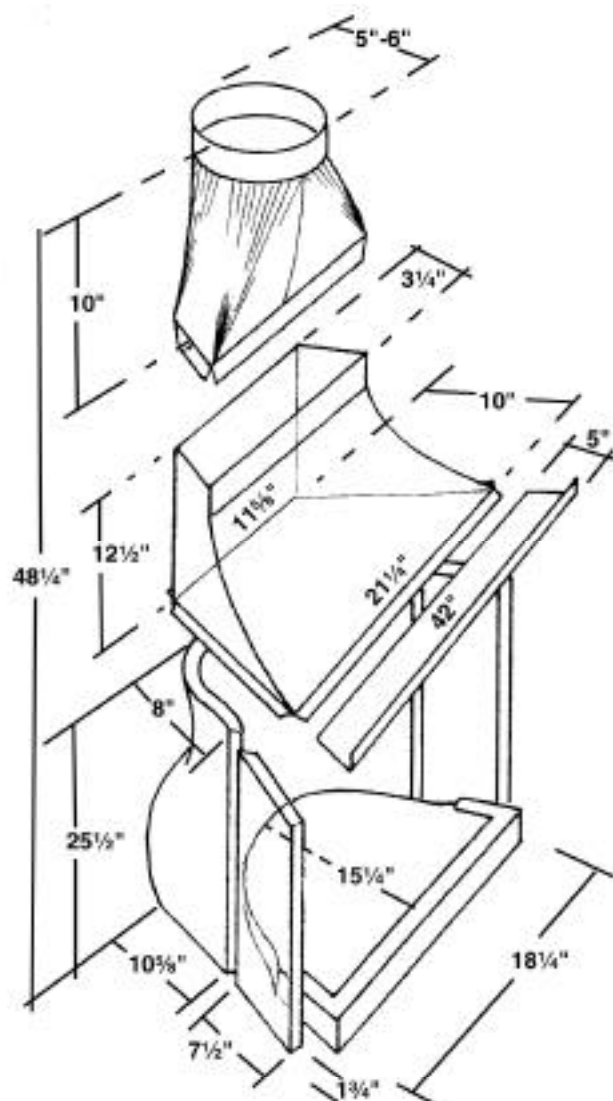
	BSV 19	BSV 21	BSV 25	BSV 28	BSV 36
A	5" – 6"	6" – 7"	7" – 8"	8"	9" – 10"
B	10"	12 ³ / ₄ "	12 ¹ / ₂ "	14 ¹ / ₂ "	14 ¹ / ₂ "
C	12 ¹ / ₂ "	13 ¹ / ₂ "	13 ¹ / ₂ "	13 ¹ / ₂ "	16"
D	3 ¹ / ₄ "	3"	3 ¹ / ₂ "	3 ¹ / ₂ "	4"
E	10"	11 ¹ / ₂ "	11 ¹ / ₂ "	12"	18"
F	21 ¹ / ₄ "	25"	28"	31"	42 ¹ / ₂ "
G	25 ¹ / ₂ "	25 ¹ / ₂ "	28 ¹ / ₂ "	28 ¹ / ₂ "	28 ¹ / ₂ "
G tall	NA	30 ¹ / ₂ "	33 ¹ / ₂ "	33 ¹ / ₂ "	33 ¹ / ₂ "
H	7 ¹ / ₂ "	8 ¹ / ₂ "	8 ¹ / ₂ "	8 ¹ / ₂ "	8 ¹ / ₂ " – 12"
I	17"	17"	21"	19 ³ / ₄ "	20 ¹ / ₂ "
J	21"	23"	27 ¹ / ₂ "	31 ¹ / ₂ "	40"
K	48 ¹ / ₄ "	51 ¹ / ₂ "	54 ¹ / ₂ "	56 ¹ / ₂ "	59"
K tall	NA	56 ¹ / ₂ "	59 ¹ / ₂ "	61 ¹ / ₂ "	64"
L	18"	20 ¹ / ₂ "	25"	29"	37"
M	31 ¹ / ₂ "	31 ¹ / ₂ "	–	42"	–
N	5" – 6"	6" – 7"	7" – 8"	8"	9" – 10"
O	1 ¹ / ₄ " – 1 ¹ / ₂ "	1 ¹ / ₄ " – 1 ¹ / ₂ "	1 ¹ / ₄ " – 1 ¹ / ₂ "	1 ¹ / ₄ " – 1 ¹ / ₂ "	1 ¹ / ₂ " – 1"
P	14"	18"	18"	18"	18"
Q	5" – 6"	6" – 7"	7" – 8"	8"	9" – 10"
R	5" – 6"	6" – 7"	7" – 8"	8"	9" – 10"
S	5" – 6"	6" – 7"	7" – 8"	8"	9" – 10"
T	5" – 6"	6" – 7"	7" – 8"	8"	9" – 10"
U	1"	1"	1"	1"	1"
V	4 ¹ / ₂ "	4 ¹ / ₂ "	4 ¹ / ₂ "	4 ¹ / ₂ "	4 ¹ / ₂ "

The Bellfires® cutaway diagram at the left shows components necessary for a complete BSV installation.

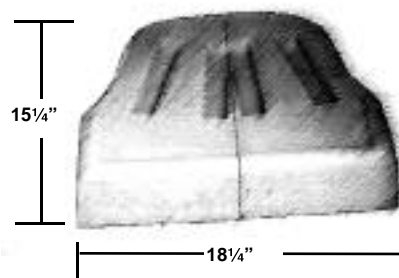
The key above shows specifications for individual models.

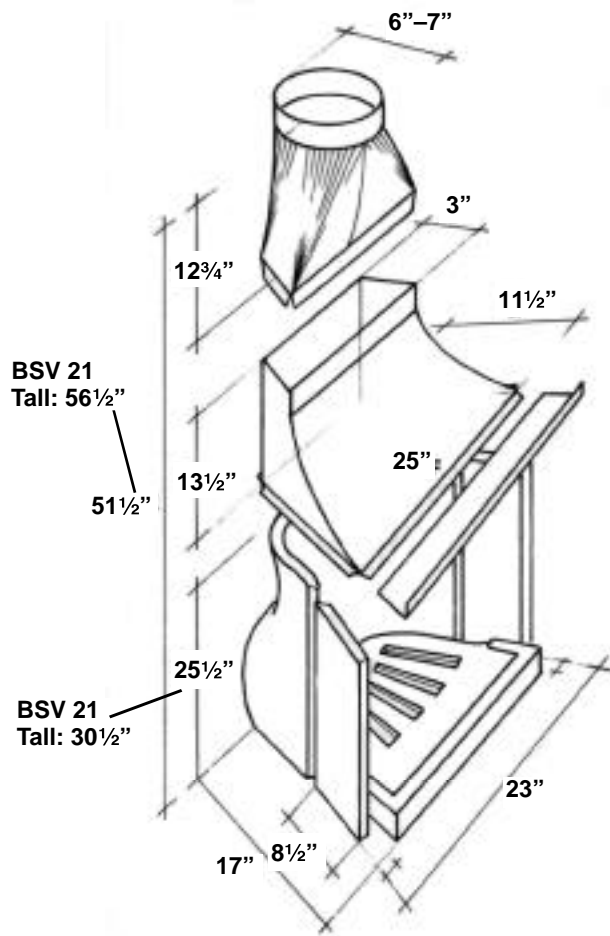
Standard Bellfires® Super Vent Parts



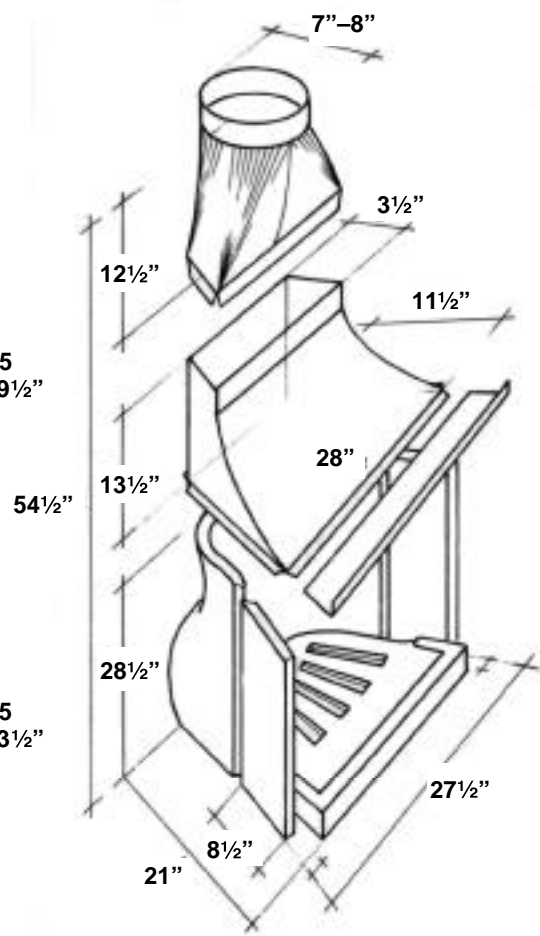


BSV 19

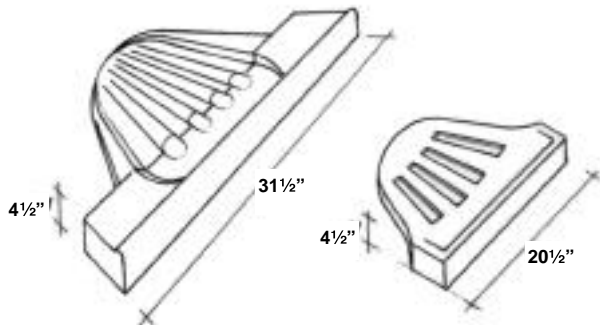


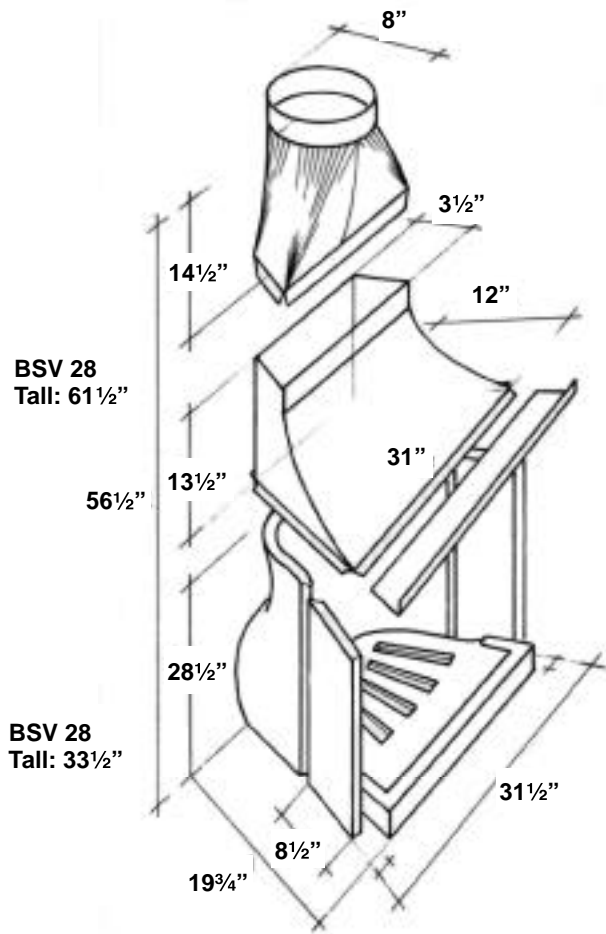


BSV 21

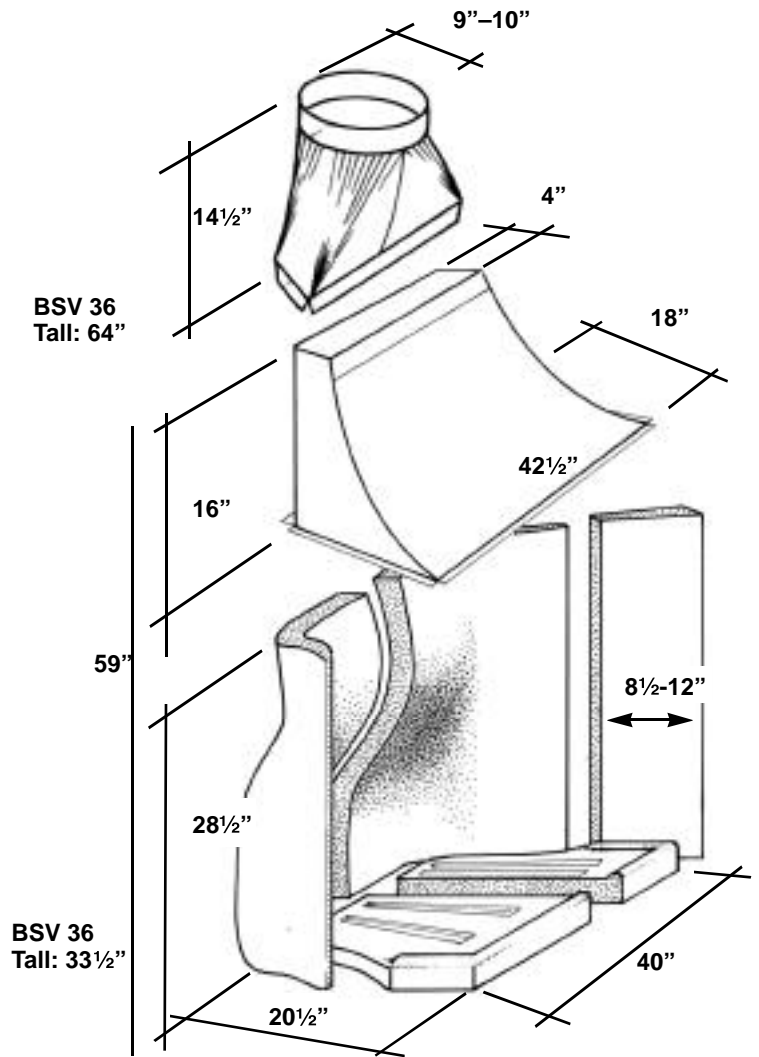


BSV 25

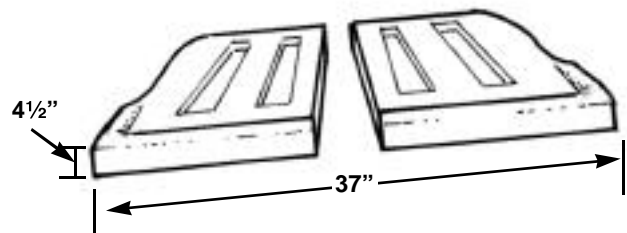
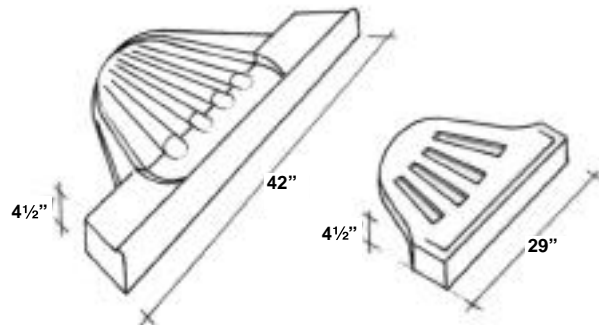




BSV 28



BSV 36



BSV Spider Damper Parts

1- Drop In Damper



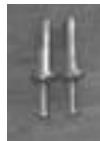
28' Stainless Steel Cable



1 -Bracket



2 -Hammer Drive Pins



1- Stainless Steel Sash Chain



1 -Stainless Steel Ring (attach to chain)

1 -Stainless Steel Clamp (attach to cable)

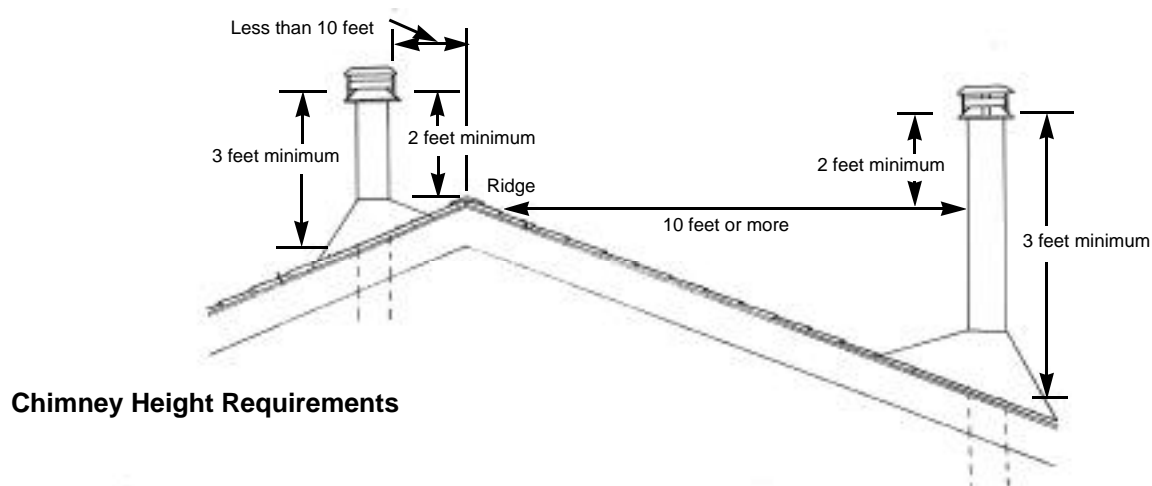


You need....

Ladder
Hammer Drill
1/4 inch Masonry Drill Bit
Safety glasses
Wire Cutters
Marker
Flat Gasket or Silicone Caulk

Safety Guidelines

- A. Bellfires® fireplaces are not approved for use in mobile homes.
- B. There must be an air space clearance between the outermost portion of any section of the chimney system and any combustible surface. Although two inches is a typical clearance, adhere to the requirements set forth by the chimney manufacturer. Combustible surfaces include: ceilings, joists, flooring, walls, electrical wiring, insulation and roof structures.
- C. Never fill any required air space with insulation or other material.
- D. The chimney system must be vented to the outside.
- E. The chimney must extend at least three feet (900mm) above the roof and at least two feet (600mm) above any portion of the roof within 10 feet (3m).
- F. Maximum chimney height from the top of the firebox to the top of the chimney should not exceed 40 feet when supported solely by the fireplace, or 90 feet when resupported at or above 40 feet according to the chimney manufacturer's resupport specifications.
- G. Minimum chimney height from the top of the firebox to the top of the chimney must be 10 feet.
- H. The chimney must not be inclined more than 30 degrees from vertical. Greater angles result in hazardous deposits of soot and ash in flue.
- I. A maximum of two offsets (4 elbows total) is allowed in a chimney.
- J. Firestops and joist shields must be used at each floor level through which the chimney rises.
- K. There should not be any forced air furnace registers in the room within ten feet of the fireplace. They can cause negative pressure and create chimney down-drafts.
- L. Never mix parts of one chimney system with those of a different manufacturer. Do not install damaged chimney parts. Remember, more fires are caused by chimneys than by solid-fuel appliances.
- M. Practice good workmanship. Sloppy work could jeopardize the safety of the installation.



Steps to a Bellfires® BSV Installation



1
Measurement



2
**Demolition and
prep for new BSV**



3
**Layout for
new BSV**



4
**Install
Super Flex®**



5
**Install
new BSV**



6
**Finish trim
& facade**

(1) Measure Old Fireplace

There are 6 Steps to a SuperVent installation.

1. Measure old fireplace to determine what size BSV unit to use, and the appropriate liner size.
2. Demolition of firebox and smoke chamber and preparation for the new BSV.
3. Layout for the new BSV.
4. Installation of the Super Flex® , (or Super Rigid) liner system.
5. Installation of the BSV.
6. Finish and trim facade.

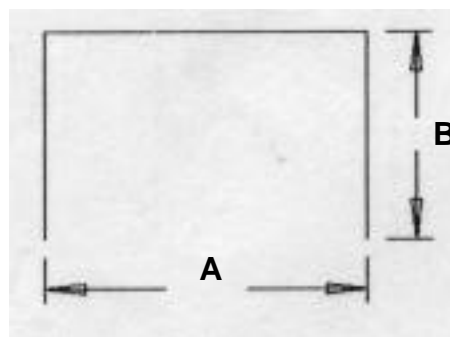
Measuring fireplace (depth of fireplace cavity)

Plumb down to floor from front edge of smoke shelf or damper frame with level or plumb bob and string. Measure from this point on floor to rear of firebox. Subtract this measurement from the depth of smoke shelf measurement. This amount less the thickness of the firebox brick will represent the total depth available with rear firebox removed.

There are as many different size and shape fireplaces as there are masons who build them. Some are large and cavernous and some are small and tight. It is much easier to install the Super Vent® in a fireplace with a deep firebox and tall, wide smoke chamber, and large flue diameter, than an installation with a shallow firebox, short, tight chamber, and an undersized or offset flue. Careful measurements should be taken when inspecting and estimating the job. Measurements to take during inspection/estimate:

- A. Width of opening
- B. Height of opening
- C. Thickness of opening (lintel size or arch thickness)
- D. Depth of firebox behind face
- E. Width of firebox rear
- F. Depth of smoke shelf to rear smoke chamber wall
- G. Distance from firebox floor to base of flue
- H. Flue size
- I. Total Height

Measure from firebox floor to base of flue tile. If measurement from floor to flue is greater than height of Bellfires firebox and smoke chamber, and flue size is greater than liner size, installation will be simple and little smoke chamber demolition will be necessary. If measurement from floor to flue is less than height of Bellfires firebox and smoke chamber, and/or flue size is smaller than liner size, demolition of smoke chamber and base of flue will be necessary.



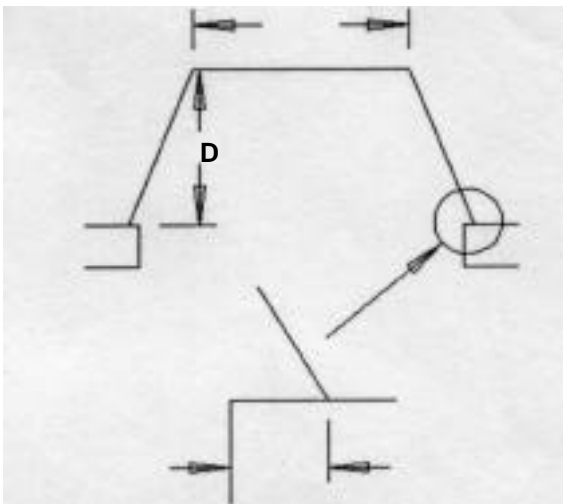
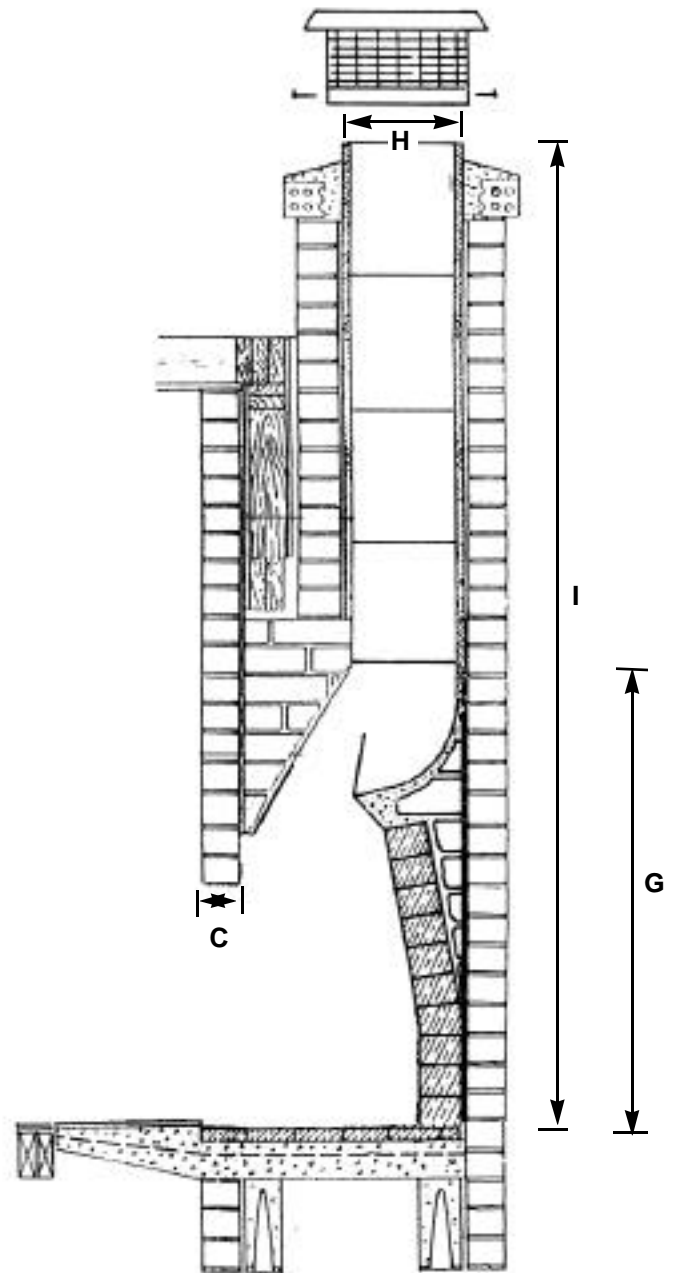
Flue size: _____

Chimney height: _____

Firebox: Metal _ Masonry _

Offset: Right ____ Left ____
Back _____

Chimney top access: _____



BSV Firebox Dimension and Liner Size Charts

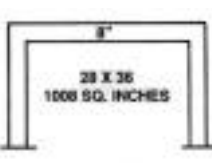
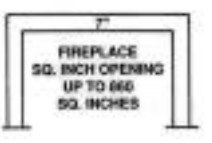
Bellfire Quick Reference Chart
Models BR21, 25, and 28 (includes tall)

		HEIGHT →											
		22	23	24	25	26	27	28	29	30	31	32	33
W I D T H ↓	21	21				21-T							
	22												
	23												
	24												
	25												
	26	21		21-T		21-T		25-T					
	27	25		25		25-T							
	28	21 25 28		21-T 25 28		21-T 25-T 28-T							
	29					25			25-T				
	30												
	31					28			28-T				
	32												
	33												
34													
35													
36													
37	28					28-T							
38													
39													
40													
41													
42													

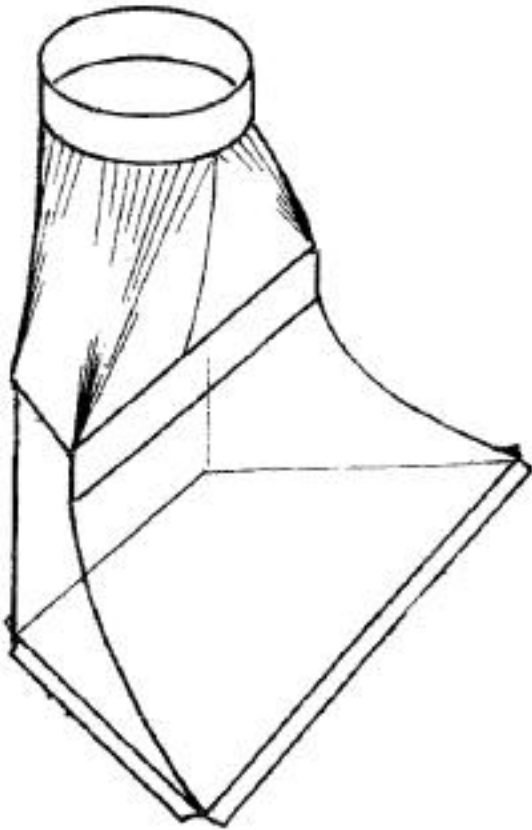
Use this chart to determine which BSV model to install.

Use this chart to determine the liner size to use for your BSV model installation.

SS Flue Liner to
Fireplace Opening
Ratio



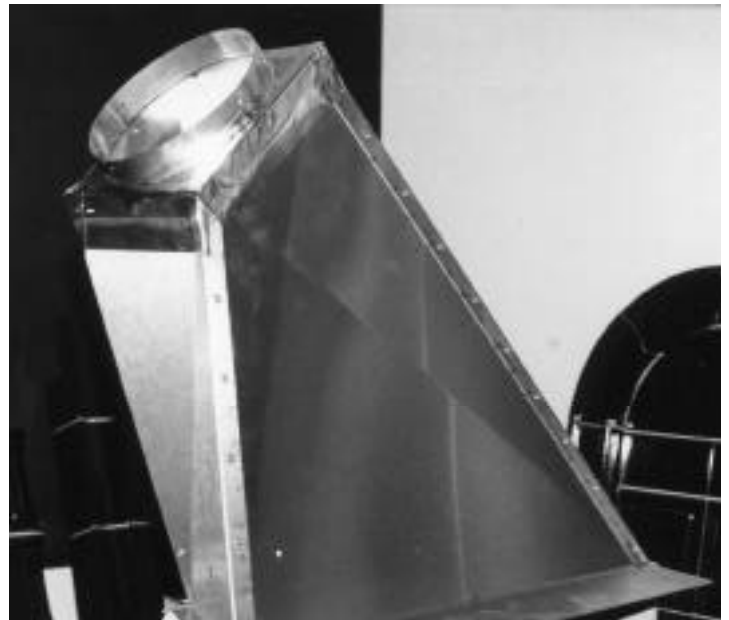
Example: 28 x 36 fire-
place opening = 1008
8" diameter liner or
6 x 10 Super Flex oval



Notes on the Bellfires® Rumford Smoke Dome

In other installation information that has circulated on BSV installations references were made to using stainless steel elbows off of the Smoke Dome for chimneys with offsets.

Sleepy Hollow's custom fabrication shop makes any dome to the exact dimensions required for your installation. DO NOT USE elbows off of the Smoke Dome.



(2) Demolition and Preparation for BSV



↑ This fireplace will require major demolition to allow for the Bellfires® Super Vent firebox and Super Flex®



↑ A more common job will require only the removal of the existing firebox and clay liners.



Possibilities for installations are practically endless. Once you have prepared the firebox and chase for placement of the Bellfires® BSV firebox you are ready to trace the dimensions of the box and flares on the hearth floor. Some installers wrestle the firebox and flares into place and trace the outlines from the outline of the Bellfires®, and others have found it easier to make a cardboard template and use that to find the exact placement of the finished Bellfires® in the existing fireplace. Experience (and your back) will lead you to a preferred method, but both can be used.



Some installations can be done with only minor modifications to the fireplace; others will require more serious demolition. This can include removal of the existing firebrick (or common red brick if a very old fireplace) firebox, and damper throat, damper, and smoke chamber. Only onsite measurement will tell you how far you will have to go to prepare for a smooth Bellfires® installation.

Preparing the customer's home for installation of Bellfires® BSV fireplaces is very important. Care should be taken to ensure that your customer's home is protected from the process the installation requires. Cover interior walkways with weather appropriate materials—snow and rain create problems that never come up when working in dry weather . Use vacuum heads or exhaust fans on the chimney top to help remove dust and soot. Powerful vacuums should be used indoors at the points of demolition to further control dust.



Check Catalog for:

Rotary Hammer pg. 89
Hammer Head System
pg. 76
Exhausto fans pg. 48
Drop Cloths pg. 71
Super Vac pg. 72



←
Checking fit
with a card-
board template,
a job that is
much easier
with cardboard
than refractory.

↓ Slipping on
Super Skin.



↑ Wrapping Super
Flex with Cera-Foil

Once the firebox and smoke
chamber are ready for place-
ment of Super Flex® liner and
the Bellfires® Super Vent, its
time to prepare the Super
Vent liner. See Super Vent®
installation Guide.



↓ Wrapping Super Flex,
Cera-Foil, and Super Skin
with Stainless wire.



Installing Super Flex® can be done from either the top or bottom of the chimney. Sleepy Hollow introduced to the industry the concept of winching—something that no other lining system had considered. The Super Winch® simplifies flex liner installation in situations where it is possible to use it. Once you have used the Winch you will always look for ways to continue to use it.

Working safely on the roof is extremely important. Sleepy Hollow offers a number of scaffolding options to help you set up the job on the roof.



Attach nose cone to flex, clip the winch clip to the nose cone eye and begin winching up.



This installation was winched without the Super Vent smoke chamber attached. Depending on the length of the flex it may be easier to handle moving the insulated flex around without the smoke attached before winching. Short lengths of liner may be easier to install with the smoke chamber securely riveted in place.



See Catalog for:

Super Winch pg. 84
Center Platform pg. 85
Ultimate Ridge Hooks
pg. 86

Insulating Smoke Dome



Wrap Cera-Foil® around Smoke Dome. Notice that Smoke Dome can be laid on Cera-Foil and “rolled” to maximize the area covered by a single cut of blanket. Use either Super Cement or Spray Glue to adhere blanket to Dome. Tape all edges and seams with Cera-Foil® Metal Seam Tape. Be sure to cut and fit all small areas that are not easily covered in the first wraps.



→
Tape all seams.



←
Completely wrapped and insulated Smoke Dome waiting to be riveted to Super flex liner



→
Insulated Smoke Dome being riveted to insulated Super Flex® with Cordless Electric Rivet Gun.



See Catalog for:

Cordless Electric Rivet Gun pg. 92
Ultimate Hand Rivet Gun pg. 92
Cordless Angle Drill pg. 90



The nice thing about using the Super Winch is that it will patiently hold Super Flex in place until you are ready to lower it onto the Bellfires® firebox.



!!!IMPORTANT NOTE!!!

Other installation information circulating on the Bellfires® has indicated it is possible to use stainless elbows between flex liner and Smoke Domes. That is not true. Sleepy Hollow makes custom stainless domes where chimney offsets demand them. **DO NOT USE ELBOWS** in the Bellfires® system.



Attach and rivet the Smoke Dome to Super Flex® liner. Be sure to insulate the connection completely and tape the seams with Cera-Foil® Metal Seam Tape.



Smoke Dome and liner wixed into place, just a few inches above from where it will be lowered onto the installed Bellfires® firebox. The cardboard template can be used to check for placement of the firebox and to be sure the Smoke Dome can be lowered and properly seated on the firebox. Now you can prepare the firebox for installation.



Winching the preattached Smoke Dome and liner into place.



Carefully look over the refractory firebox and flares to check for uneven bumps, etc., anything that might prevent a smooth joint and a tight seam between the rear firebox panel and side flares. A grinder can be used to sand down any imperfections.



See Catalog for:

4½" Sander-Grinder
pg. 90

Insulating Bellfires® firebox



Lay the Bellfires® firebox on its face. Unroll Cera-Foil blanket insulation over the back, from one edge to the other. Carefully cut with a sharp knife. Completely cover all the rear surface area and tape all seams with Cera-Foil® Metal Seam Tape.



Cutting of Bellfires® refractory components is possible and many times necessary. If you will only be doing limited Bellfires® installations it is possible to get by cutting flares and hearth extensions with circular saws and grinders fitted with diamond blades. Constant application with water to the saw cut will help prevent overheating of the blade and saw.

However, this is a very crude method of cutting refractory material. It is also very time consuming and can give less than satisfactory results.

Sleepy Hollow recommends using a masonry wet saw whenever possible to make clean, accurate cuts on refractory flares and hearth extensions. Less time will be taken in achieving far more accurate cuts and results. If you cannot afford to own such a saw it is advised you look to rent one from a local equipment rental yard. You will never want to go back to cutting these materials dry and by hand.



See Catalog for:

Diamond Blades pg. 90



Place insulated Bellfires® fireback on hearth at predrawn outlines.



Flares can be cut with grinders or circular saws outfitted with diamond blades.





The shiplap edge of the flare is buttered with Super Cement®. The back side of the flare should be insulated with Cera-Foil.



The buttered, insulated flare is fitted to the fireback. A rubber mallet can be used to tap the flare to the fireback. Wipe off any Super Cement that seeps out of the connection shiplap joint.



Mix coarse pea size perlite with light masonry cement at a ratio of 7:1 (7 perlite, 1 masonry cement). No sand is needed. Before adding water, mix ingredients thoroughly. Slowly add water, bringing mixture to a potting soil consistency.





Before pouring mixture, make sure the 1" Cera-Foil is snugged against back of firebox. Pour mixture behind firebox, tamping lightly inbetween pours. Be sure the mix is at least level with the height of the firebox.

Place Cera-Foil gasket on top of refractory firebox. Lower liner and Smoke Dome onto the firebox, making sure all space between the Smoke Dome and firebox is filled with gasket.



See Catalog for:

Tapcon Fastening System
pg. 99



Attach the two Smoke Dome fasteners to the Bellfires® firebox by drilling a hole for the Tapcon screw supplied. Install with the Tapcon fastening system. Tighten the stainless ratcheting screw until snug. Do not over tighten.

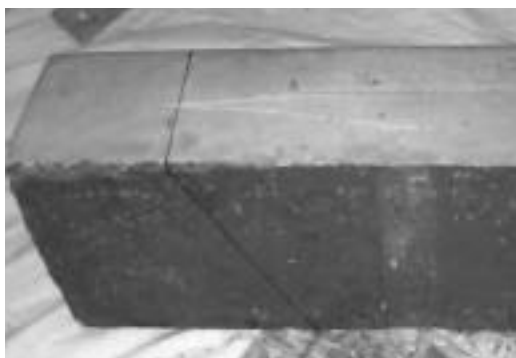


You are now ready to lay the hearth. Lay hearth piece (or pieces if two piece) on Cera-Foil blanket, trace outline and cut out the resulting piece and lay it on the floor of the fireplace. Place the rear refractory hearth piece down on the Cera-Foil.



Use cardboard to make a template for the front hearth piece. It is very possible the two outside angles for the flares will be different. It is much easier to cut a new cardboard template than to recut the refractory floor piece. Remember: Measure Twice—Cut Once.





If you will be cutting the hearth piece by hand with a grinder, etc., you will need to carefully mark all four sides to be able align all cuts.



Marked and ready to be cut.



Bricking up the face.



Adding the final backfill of perlite.



Finishing up the face and cleaning up construction mess. Many possibilities exist for finish work to dress up the fireplace facade.



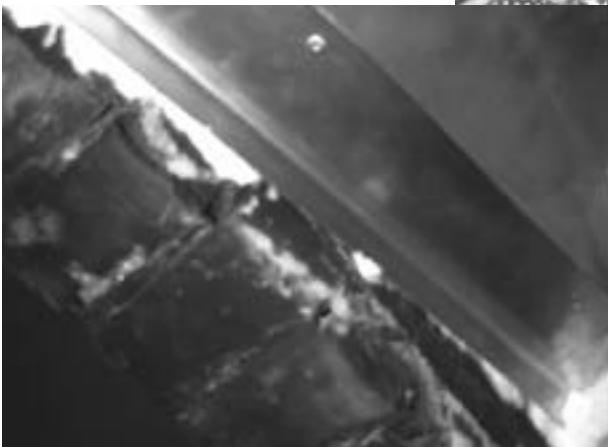
Installing Bellfires® lintel



Place lintel up against fireplace face. This will cover any space between the Smoke Dome and the fireplace face. Drill $\frac{5}{32}$ " holes for each Super Rivet and then install rivets.



Using the Super Brute to do the heavy duty job of installing Super Rivets.

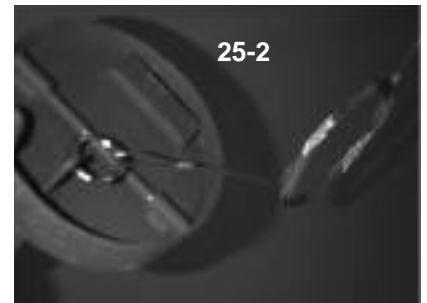


It's a good idea to use a gasket made from Cera-Wool between the Bellfires® Smoke Dome lintel and the fireplace face. Fill any larger holes with extra Cera-Wool.





25-1

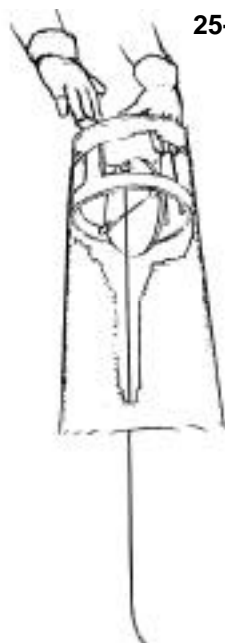


25-2

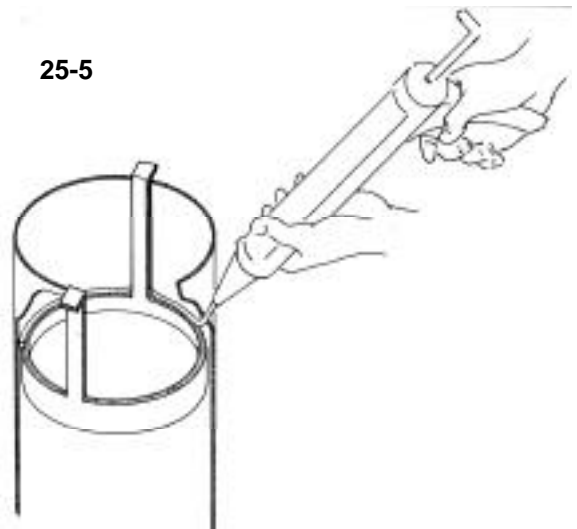


25-3

Super
Vent®
chimney
liner



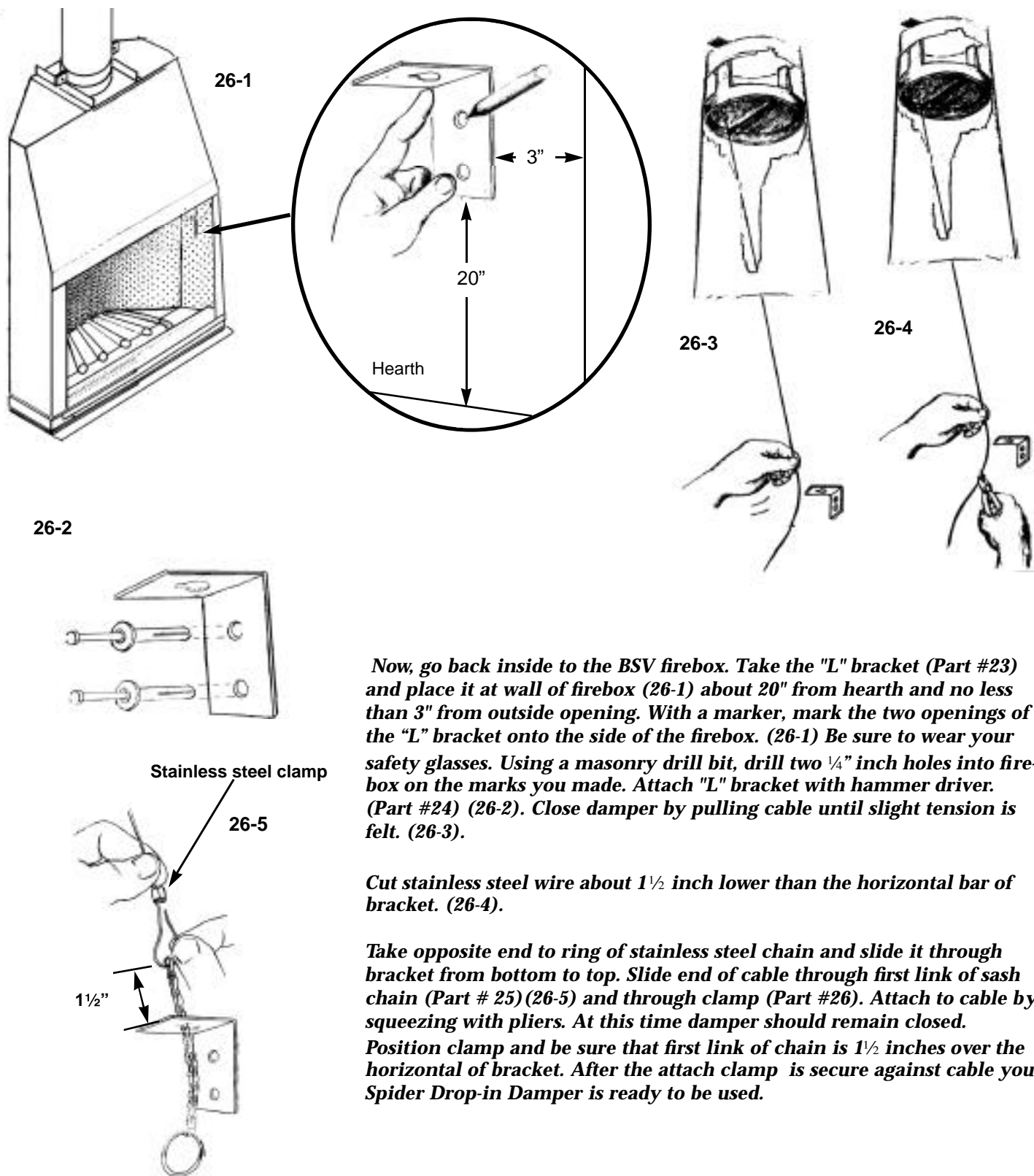
25-4



25-5

After the Super Flex® chimney liner has been installed, but before the chimney cap is placed, the BSV top mounted Spider Damper must be installed. The Spider Damper is placed in the top section of the Super Vent® chimney liner.

The Spider Drop-in Damper (25-1) (Part #21) installs typically like other top mounted dampers. The bottom hook-up is also typical. Attach the ring on the 28' stainless cable (Part #22) to the underside ring of the Spider Damper. (25-2) The installer must go to the roof and place the Spider Drop-in Damper inside the top section of the Super Vent® chimney liner until handles of damper don't go any further down. (25-3, 25-4) Unroll cable, dropping it all the way down the flue until cable reaches the firebox. The important installation step to be observed is as follows: check for tightness in between flue walls and outside damper. Any air clearance should be sealed with flat gasket or silicone caulk. (25-5) Check damper plate to be sure it moves freely. Because blade is counterweight, damper should always be in the opening position.



Now, go back inside to the BSV firebox. Take the "L" bracket (Part #23) and place it at wall of firebox (26-1) about 20" from hearth and no less than 3" from outside opening. With a marker, mark the two openings of the "L" bracket onto the side of the firebox. (26-1) Be sure to wear your safety glasses. Using a masonry drill bit, drill two 1/4" inch holes into firebox on the marks you made. Attach "L" bracket with hammer driver. (Part #24) (26-2). Close damper by pulling cable until slight tension is felt. (26-3).

Cut stainless steel wire about 1 1/2 inch lower than the horizontal bar of bracket. (26-4).

Take opposite end to ring of stainless steel chain and slide it through bracket from bottom to top. Slide end of cable through first link of sash chain (Part # 25) (26-5) and through clamp (Part #26). Attach to cable by squeezing with pliers. At this time damper should remain closed. Position clamp and be sure that first link of chain is 1 1/2 inches over the horizontal of bracket. After the attach clamp is secure against cable your Spider Drop-in Damper is ready to be used.

Build the World's Best Fire

Handy Items to Have

A Fireplace Screen
A Kindling Ax (Be careful)
Stove Gloves
An Ash Rake

Think of your fuel load as three component parts:
The Base Course (can be unsplit if proper diameter)
The Middle Course (split)
The Top Courses (split finer)

THIS TYPE OF FIRE IS NOT RECOMMENDED FOR THE FIRST EIGHT TO TEN FIRES. BELLFIRE® MUST BE GRADUALLY BROKEN IN AND CURED WITH SMALL FIRES FOR THE FIRST EIGHT TO TEN FIRES.

DO NOT OVERFIRE YOUR BCC!!

A fireplace grate is not necessary with the BCC 28. A grate increases your critical burn rate allowing logs to burn faster than normal. Logs burn best in contact with hot firebrick in a bed of wood ashes.

Helpful Hints & Precautions before you start:

Make sure your fireplace and flue have been inspected for fire worthiness and are cleaned if found dirty (full of flammable cresosote), by a reputable Chimney Sweep. Make sure the damper is open. The damper is controlled from the keyed stainless cable and ring installed to either side of the firebox sidewall. Pull down and unhook to release the tension of the stainless steel cable. Pull down and rehook the cable to close the damper. There are no other settings than completely open or completely closed. If your fireplace and flue are located on an outside wall or, when the damper is open, you feel a flow of frigid air rushing down into the room, pre-heat the flue with a sheet of lit newspaper. Hold the lit newspaper high into the damper area, wearing a pair of stove gloves for protection. This will reverse the cold air plug present in the flue, creating a strong updraft with no smoke into your room. As soon as the newspaper is burned up, light your newspaper on top of your fuel load. Approximately 3-4 hours later when you have a nice bed of hardwood coals, use a fireplace rake to push the coals against the rear wall of the firebox. Next, lay your new logs, minimum of four, on top of the hot coals, lay the bottom two horizontally. The top two, a little shorter in length, place front to back approximately 3 inches apart creating a throat.

The greatest volume of smoke and particulate pollution from a wood fire occurs during a cold start up.

Wood fires lit from the bottom, in a conventional manner, promote a dirty burn and waste a large amount of potential heat in the form of unburned gases.

A clean and efficient method for kindling a fire is a top burn. This almost forgotten ancient European technique places the largest wood at the bottom in a criss cross crib fashion. As each tier is laid, the criss crossing becomes smaller. Kindling and a small amount of paper are placed on top and lit.

When the top burn fire is lit, the flames are always above the fuel load. The smoke and flammable gas from each tier of wood will always travel up through the flame and burn, thereby reducing particulate pollution and unburned fuel.

A top kindling fire also produces large and less compacted glowing coals, providing excellent long-lasting radiant heat.

A top burn fire laid with seasoned hardwood to a height of eighteen to twenty-four inches will burn approximately four hours without adding additional wood. The fire will be mesmerizing as each tier slowly ignites and burns its way down.

TOP BURN RECIPE

Always start with dry, well-seasoned, split firewood and kindling. (Ideally seasoned firewood will have a 20% moisture content. The wood will show radial cracks at the ends and sound like bowling pins when beaten together.)

Bottom layer:

Three good sized pieces of split hardwood five to six inches thick, laid front to back.

Second layer:

Three slightly smaller pieces of split firewood three to five inches thick, laid side to side.

Third layer:

Four to five smaller pieces of split firewood two to three inches thick, laid front to back. Keep alternating and decreasing in size with split hardwood until they are about one inch thick.

Now alternate two rows with split softwood (pine, spruce, etc.) until pencil thick. Place a small piece of newspaper on top and light.



BSV Operating Instructions & Fireplace & Chimney Maintenance

Keep These Instructions for Future Use

NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL-LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS FIREPLACE. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE FIREPLACE WHILE IT IS IN USE.

Use solid wood or processed
solid fuel firelogs only.

Do not poke or stir logs while they are burning. Use only firelogs that have been evaluated for the application in fireplace and refer to firelog warnings and caution markings on packaging prior to use.

Beware of burning certain materials in your fireplace. These items include plastic, poison ivy, and chemically treated woods such as pressure-treated lumber, discarded telephone poles, or railroad ties. These not only create air pollution, they can induce extreme illness or irritation for some individuals. Do not burn driftwood that has been in the ocean or in salt water as the salt will corrode the chimney. Do not abuse the fireplace by overfiring by burning paper, cardboard, or construction materials such as pressed wood, plywood, or lumber. Some fuels, such as charcoal, natural gas, etc., give off carbon monoxide when they burn. As this is a toxic gas you should insure that the fireplace does not spill flue gas into the house.

Disposal of Ashes

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground well away from all combustible materials pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. Ashes should never be placed in a container with combustible materials.

Chimney Maintenance

CREOSOTE-Formation and Need for Removal

When wood is burned slowly it produces tar and other organic vapors which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow burning fire. As a result creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire.

The chimney should be inspected at least twice a year during the season to determine if creosote buildup has occurred.

If creosote has accumulated it should be removed to reduce the risk of a chimney fire.

Check the specific chimney manufacturer's instructions on removal of the chimney cap for chimney cleaning.

When the fireplace is first placed in use inspect the chimney frequently and clean the chimney anytime an accumulation of $\frac{1}{8}$ " thick or more is observed on the flue walls. The frequency of these inspections can be increased or reduced appropriately after a pattern of accumulation has been established. Please note however that changes in the outside environmental conditions such as temperature and humidity, or changes in the operation of the fireplace can lead to rapid buildup of soot and/or creosote.

To clean the chimney obtain the services of a qualified and reputable chimney sweep or remove the accumulation with brushes on wooden, poly, or fiberglass poles. Do not use metal pipes, chains, wires, etc., to clean the chimney because such items can scratch the surface of the stainless steel flue which can shorten the life of the flue and provide a rough surface for soot particles to attach to.

In addition to checking and cleaning the chimney on a regular basis, be sure to inspect the chimney before starting a fire at the beginning of each heating season. Make sure the chimney is clear from any accumulation of soot, creosote, or any other debris and that all chimney joints are intact.





CONDITIONS OF WARRANTY

LIFETIME WARRANTY

Bellfires® Manufacturing Company extends the following warranty on the BSV, subject to the conditions of guarantee thereon. The fireplace is warranted for the lifetime of the original owner from the date of installation. If examination by the Bellfires® representative proves to our satisfaction that any part or portion of the fireplace is defective in material or workmanship, under normal use and service, such part or portion shall be replaced or repaired at no cost to you.

(A) Warranty may not be altered or extended by any of our dealers or agents, and except as provided herein, there are no other warranties. (B) Warranty does not cover damage resulting from misuse, abuse or accident. (C) Warranty shall be void if your unit is not operated in accordance with the operation instructions provided at time of purchase and outlined below, or if the unit has been removed from the place in which it was originally installed. (D) Hairline cracking on the surface of refractory components, a normal condition of use for refractory products, and/or cracking are expressly excluded from this warranty.

Important Instructions For Curing Refractory Fireplaces: (1) If the firebox has gotten wet, it must be dried slowly with a hair dryer or heat lamp before any fire is started. (2) The first eight fires must be built very small and well forward on the hearth so as not to contact the firebox. This will allow the unit to cure slowly by removing excess moisture in the refractory cavity behind the firebox, caused by the environment during storage or transportation, and mortar and materials used for installation. Proper curing eliminates the possibility of fracturing the firebox.

Dealer/Installer _____

Address _____

Dealer Signature _____ ***Date*** _____



