



# BUILDER 800 FIREPLACE SYSTEM

## MODELS

### 828

### 836

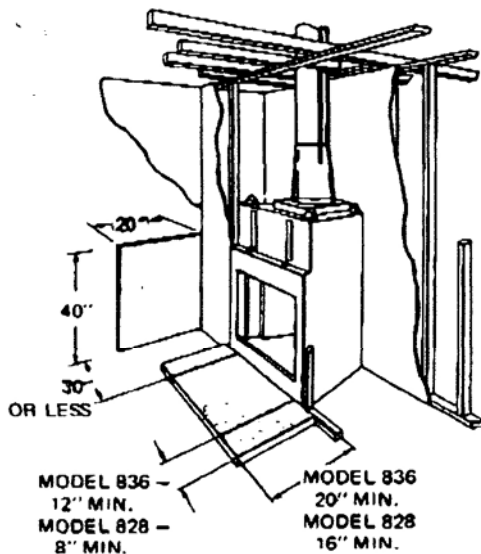
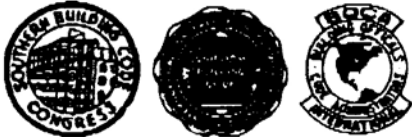
## • INSTALLATION INSTRUCTIONS •

### JULY '75

### 28" & 36" FRONT OPENING FIREPLACES

#### INTRODUCTION

This brochure covers installation of Superior Fireplace Company Builder 800 zero-clearance fireplace Models 836 and 828. Topics covered include fireboxes, flue pipe assembly, use of flue pipe accessories, framing dimensions and details, code approvals, and facing/hearth suggestions. The Installation Instructions are laid out in the same sequence used to assemble the Builder 800 Fireplace system. Please see separate set of installation instructions for termination/cap devices used with Builder 800 fireplace systems.



#### GENERAL INFORMATION

#### APPROVALS AND LISTINGS

Builder 800 fireplace systems are listed by Underwriters Laboratories (No. MH8988), International Conference of Building Officials (Report 2301), and Building Officials Code Administrators (BOCA International No. 76-13).

#### LOCAL CODES

Local building codes should always be consulted in advance of fireplace planning and installation to establish compliance for factory built zero clearance fireplace systems.

#### CLEARANCE TO COMBUSTIBLES

Builder 800 fireplaces may be placed directly on a combustible floor, against a combustible wall or upon a raised wooden platform. Framing may be placed directly against the side and back surfaces of the fireplace. To comply with NFPA 211, the floor in front of the fireplace opening must be protected. (See further references on Hearth Extensions.) Chimney sections on all Builder 800 fireplace systems require 1" clearance to combustibles. (The terms "chimney" and "flue" are synonymous.)

Builder 800 fireplaces may be installed against or through any wall or diagonally across a corner. Any adjacent combustible wall must either be 30" minimum from the fireplace opening or must be protected to a height of 40" with a noncombustible material or protective wall panel. The "Hearth Extensions" section in these Installation Instructions present necessary details.

#### CHIMNEY (FLUE PIPE) SYSTEMS

Superior Builder 800 zero clearance Model 836 and 828 fireplace systems are designed and code listed for use only with Superior Air Syphon 8" (inner pipe diameter) and Superior Air Kool 10" (inner pipe diameter) chimney sections, offset/return elbows, fittings and roof termination devices.

The 10" Air Kool 3-piece chimney system consists of an inner pipe (10" diameter), intermediate pipe (12-1/2" diameter), and outer pipe (15" diameter). This 10" Air Kool chimney system may be used on both Model 836 and Model 828 Builder 800 fireplaces.

The more economical 8" Air Syphon 3-piece chimney system may also be used in Builder 800 Model 836 and Model 828 fireplaces and consists of an inner pipe (8" diameter), intermediate pipe (10" diameter), and outer pipe (12-1/2" diameter). The 8" Air Syphon chimney system requires the use of a starter section (AS8-SS) on both fireplace models 836 and 828. The AS8-SS starter section reduces the inner flue section from 10" to 8" diameter. The AS8-SS starter section may be attached directly to the fireplace collar or immediately following any 10" system Air Kool chimney section or offset or return elbow. All flue pipe installed beyond the AS8-SS starter section must then consist of 8" Air Syphon system.

Superior Builder 800 fireplace systems are code listed for 90' maximum heights. This measurement includes fireplace, flue pipe, and the "effective height" of the termination device. (See comments on "effective height" in termination installation instructions.)

NOTE: DIAGRAMS AND ILLUSTRATIONS NOT TO SCALE

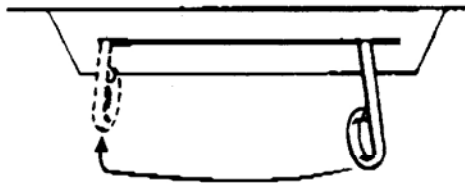
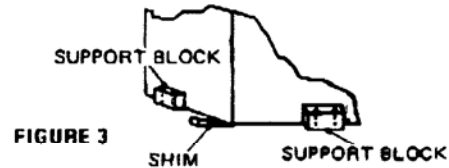
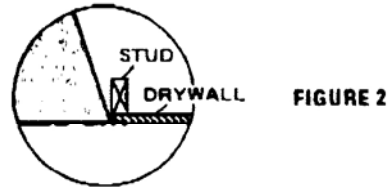
### STEP 3 – BEGIN INSTALLATION

If fireplace opening is framed before fireplace is positioned, allow minimum clearance of 54" from bottom of header to fireplace platform. (See Figure 1)

Slide fireplace into position on floor or raised fireplace platform. Locate fireplace properly in relationship to adjacent wall materials: if dry wall or wall paneling is to be used, measure dry wall or plywood thickness and position fireplace forward of wall studs enough to allow wall material to fit flush against side of fireplace to form smooth joint. (See Figure 2)

Check level of fireplace, both side to side and front to back. If necessary, insert shim block to level. (See Figure 3)

It is suggested that the fireplace then be securely fastened into position: Nail support blocks onto floor or fireplace platform at either side and back of fireplace.



OPEN FIGURE 4 CLOSED

### STEP 4 – DAMPER CHECK

Check damper operation and clearances. Damper rod handle extends down from inside top of firebox. Push up to open, pull down to close. Move slightly to right to lock. (See Figure 4)

### FRAMING DIMENSIONS FOR CHIMNEY ROUTE

Minimum allowable (includes clearance)

TYPE FLUE	CEILING OPENING		ROOF OPENINGS	
	"A"	"B"	PITCH	"C" "D"
10" Air Kool, Vertical Air Kool, Offset 30° (offset applies only to ceiling openings)	17"	17"	0/12	17" 17"
	17"*	26"*	6/12	17" 19"
			12/12	17" 24"
		60°	17" 34"	
8" Air Syphon, Vertical Air Syphon, Offset 30° (offset applies only to ceiling openings)	14½"	14½"	0/12	14½" 14½"
	14½"*	25"*	6/12	14½" 17"
			12/12	14½" 21½"
		60°	14½" 30"	

\*Note:  
Align chimney opening in same direction as offset flue pipe.

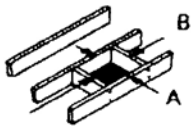


FIGURE 5

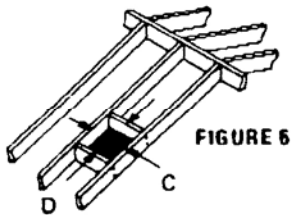


FIGURE 6

### STEP 5 – CHIMNEY ROUTE

Cut and frame openings for chimney route up and through ceiling and roof construction or into outside chase. Roof framing must be 2x4s or 2x6s securely nailed to support roof flashing. See Figures 5 and 6 and note chart on framing dimensions.

Note: On vertical flue pipe runs a simple technique for aligning chimney passages is to plumb from ceiling level directly above hole which has just been completed.

On straight flue pipe run from top of fireplace, plumb to center of flue collar from ceiling directly above, drive nail through ceiling from below to mark position, and then mark and cut passage from above ceiling (around nail). (See Figure 7) Thus, you can always "work from the top down."

### STEP 6 – FLUE PIPE ASSEMBLY

Beginning at fireplace flue collar, attach inner flue pipe (or offset) section first, followed by intermediate pipe section, and then outer pipe section. Note: Inner flue pipe assembly fits inside previous section, but intermediate and outer pipe section fit over or outside previous section. (See Figure 8) Install the inner pipe with the hemmed end down. Intermediate and outer pipes are installed with hemmed end up. Firestop spacers should be installed at each ceiling level prior to the flue pipe reaching above the ceiling level. (See Figure 9)

Continue to build flue pipe assembly up and through framed openings, but do NOT assemble flue pipe section which goes through roof opening.

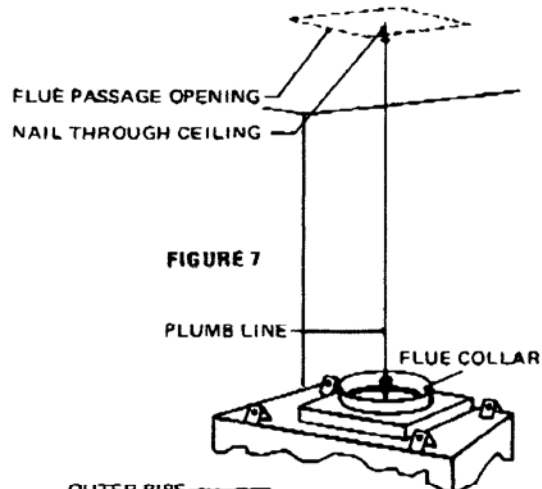


FIGURE 7

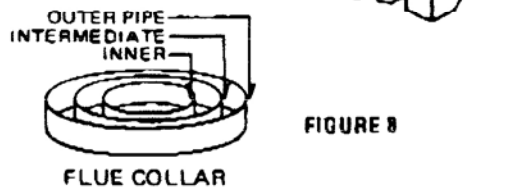


FIGURE 8

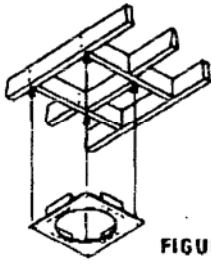


FIGURE 9

### STEP 7 - ROOF FLASHING

Remove roof flashing from packaging and center carefully over roof passage hole. Nail temporarily into position, so flashing will not slide off center. Note: if conical style flashing is used, make sure it has proper pitch by sliding outer pipe section down into the flashing cone. Make sure proper alignment exists with flue pipe below, and that flue pipe will fit in fully vertical position as it passes through flashing. (Do not lock outer pipe section into position with flue pipe below.) Check vertical alignment of outer flue pipe section with level. If necessary, adjust position of flashing to allow proper vertical alignment of flue pipe.

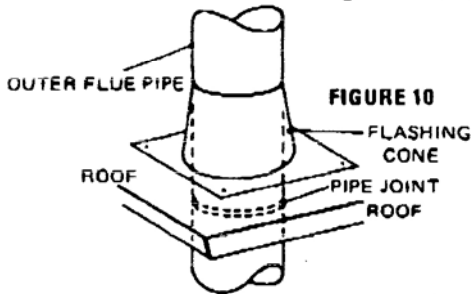


FIGURE 10

Remove outer section of flue pipe from flashing cone.

Secure flashing in place permanently by nailing along perimeter into roof construction. If shingled roof, cover the side and upper flashing with roofing material, but cover the roofing with the lower part of the flashing. Cover nail heads with mastic. Beginning with inner section, add flue pipe to bring chimney up through roof and flashing. (See Figure 10)

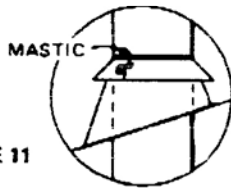


FIGURE 11

### STEP 8 - STORM COLLAR

If flashing assembly includes a storm collar, as with conical style flashings, slide storm collar over outer flue pipe section, insert storm tab in slot, pull tight, and bend tab back over slot. (See Figure 11)

Seal storm collar to outer flue pipe with mastic bead around entire circumference of pipe. Also add extra mastic to storm collar joint and tab/slot area to seal completely against water penetration.

### STEP 9 - CHIMNEY HEIGHTS ABOVE ROOF

See separate Installation Instructions packaged with each termination. General Notes: Extension of chimney above roof, as required by UBC and NFPA 211, shall be at least 3 feet above the highest point where it passes through the roof of the building, and also shall be at least 2 feet higher than any part of the building (including roof) within 10 feet. (See Figure 12)

The amount of "effective flue length" of the termination device is used in calculating the 3 feet and "2-feet-in-10-feet" measurements above. (See illustrated termination instructions.)

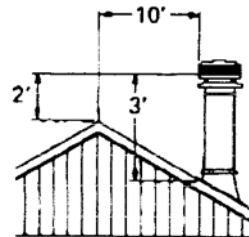


FIGURE 12

### STEP 10 - TERMINATION

Refer to separate Installation Instructions for Builder 800 chimney termination and assembly information.

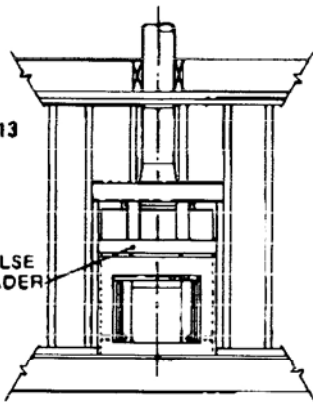


FIGURE 13

### STEP 11 - COMPLETION OF FRAMING

If fireplace was positioned after preliminary framing was completed, add false header to complete framing. (See Figure 13) Complete facing wall by positioning dry wall, paneling. (See Figure 2) Reference should be made to drawing (page 1) showing fireplace location relative to adjacent wall surfaces. Note first page precautions on clearances to combustible wall surfaces.

FIGURE 14A

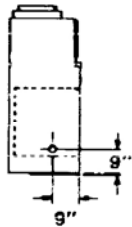


FIGURE 14B



### GAS LINE INSTALLATION

A gas line should be installed before the fireplace is framed. Remove knock out plug at lower left or right side of fireplace. Use only 1/2" black iron pipe through fireplace wall for connection to a log lighter or gas log unit inside the firebox. Outside, the iron pipe connects to a gas shut off valve recessed flush into a wall or floor and controlled by removable valve key for safety.

After connecting closed valve to regular gas line, open valve to regular gas line, open valve and check all connections with soapsuds; leaks will bubble. Never test with a match. (Fig. 14A, B).

## SPECIAL UNITIZED STABILIZERS

For Air Syphon 8" chimney systems — AS8-S4 4" long, unitized and strapped straight pipe (Figures 15A and 15B); AS8-E30 unitized and strapped 30° elbow (Figures 15C and 15D).

Install by fitting inner and intermediate sections down into respective sections of preceding flue pipe and locking outer stabilizer section into place over the outer flue pipe. Position for proper clearance through framed opening and nail straps securely into place on framing. Attach successive lengths of flue pipe directly to stabilizer or elbow using same technique as described in Step 6.

FIGURE 15A



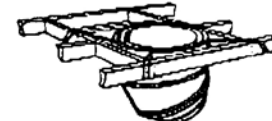
FIGURE 15C



FIGURE 15B



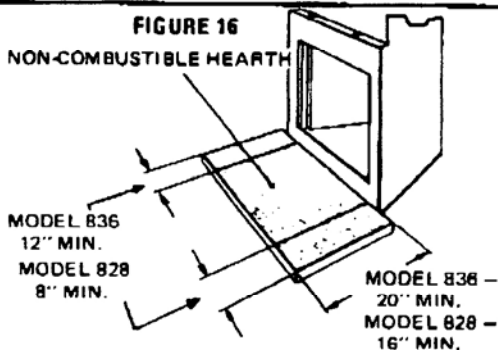
FIGURE 15D



Nails Must Be In Shear

FIGURE 16

NON-COMBUSTIBLE HEARTH

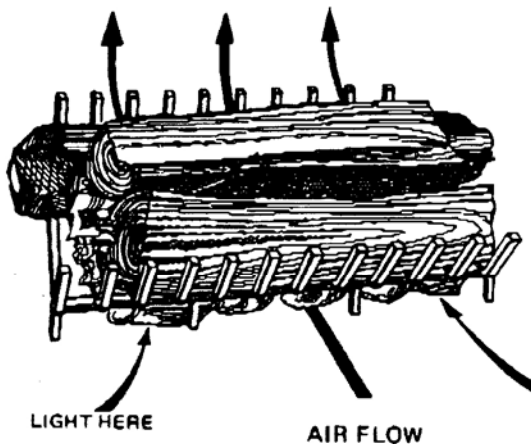


## BUILDER 800 HEARTH EXTENSIONS/CONSTRUCTION DETAILS

To comply with NFPA211 the floor in front of the fireplace opening must be protected. The Builder 800 model 836 fireplace opening requires a hearth extension at least 20" in front and 12" beyond each side of the opening, in accordance with NFPA211, Article 1203D. The model 828 fireplace opening requires a minimum hearth extension of at least 16" to the front and at least 8" beyond each side of its fireplace opening. Hearth extensions, model numbers AS8-FP36 and AS8-FP28 for models 836 and 828 respectively, are provided for this purpose.

## INSTRUCTIONS ON USE OF YOUR BUILDER 800 FIREPLACE

FIGURE 17



1. Obtain best results by using a steel grate or andirons to hold the wood or logs. A Superior high-backed grate provides extra air circulation for easier, better burning and protects the firebox floor.
2. Open damper — slide damper rod slightly left, push up — check to see that damper is in full open position.
3. Crumple newspapers on the grate and lay in some kindling or small pieces of dry wood for starter. Then place three logs to the rear of your grate or andirons and light newspapers. Slightly open a window for air circulation if your house is well insulated. Important: always use the three log configuration for fast lighting and satisfactory burning.
4. Position or close screen to prevent escape of sparks and embers on the floor.
5. Close damper completely only when your fire is completely out and ashes are cold. Keep closed when fireplace is not in use to prevent unnecessary loss of heated or cooled air.

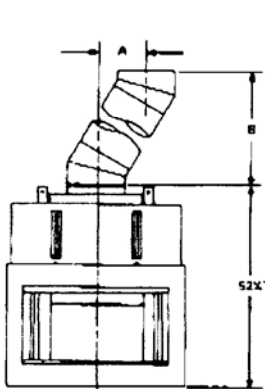
## TIPS ON FIREPLACE USE

1. Why use a grate? It's important in the use of your Builder 800 fireplace. Besides positioning the fire bed properly, it protects the refractory floor of your Builder 800 fireplace. Further, it insures a proper flow of combustion air into and around the fire bed — producing the hottest type of fire and maximum burning efficiency.
2. The firebox contains a furnace refractory floor and back. These are reinforced with steel, but can be cracked and broken with improper use. Dropping logs on the bottom refractory and building fires directly against both refractories can cause damage and premature burnout of these components. Like the metal fireplace shields on either side of the firebox, the bottom and back refractories are intended to be sacrificial and may easily be replaced at costs far below repair and maintenance costs for masonry-built fireplaces. Proper care and "burn in" of your firebox will prolong the period of enjoyment without maintenance. For the first few fires build small, but normal sized fires — not roaring infernos. The materials used in the bottom and back refractories of your fireplace contain and absorb moisture. It is important to "cure" the bottom and back refractories in the first use of the fireplace by building modest fires.
3. A proper amount of combustion air is important for your fireplace. Fireplaces consume large amounts of

oxygen, and it is important to allow an adequate supply of air from the area surrounding the fireplace. If the fireplace can not obtain a sufficient amount of air from inside the house or structure in which it is installed, the only other source is outside air which may be pulled in through the fireplace chimney which may cause smoke spillage from the firebox into the room. Smoke spillage often occurs when a fire is first started until the fireplace and the chimney have had an opportunity to "come up to temperature" and to begin to function normally. If smoke spillage problems persist, a window may be opened just a crack to allow the proper flow of combustion air to the fireplace.

- Your Builder 800 fireplace system is equipped for "all fuels" operation. Dry and well seasoned hardwoods and coal are recommended, because they provide hot, long lasting fires. Soft woods generally tend to burn away too quickly. Some types of wood, especially scrap construction lumber, are generally so dry that they produce an excessive amount of sparks. Never use woods that have been dipped in tar, pitch, creosote, etc. Woods which have been dipped in these materials will probably produce a sputtering, smoldering fire; and they may produce toxic fumes. Wood products which are manufactured with synthetic binders, such as plywood, produce abnormally high temperatures as a result of the binder materials. In general, it is best not to use these types of wood products as fuel.

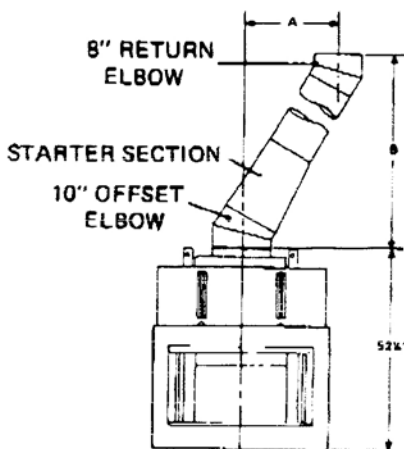
## BUILDER 800 CHIMNEY OFFSET ASSEMBLY CHARTS



BUILDER 800  
FIREPLACE SYSTEM  
WITH 10" AIR KOOL CHIMNEY SYSTEM

A"	B"	AK10-30 OFFSET/ RETURN ELBOWS	AK10- 12" FLUE	AK10- 18" FLUE	AK10- 36" FLUE
3½	14½	2			
9	23½	2	1		
12	28½	2		1	
14	32½	2	2		
17	38	2	1	1	
20	43	2		2	
21	44½	2			1
22	47	2	2	1	
25	52	2	1	2	
26	53½	2	1		1
28½	57	2		3	
30	58	2		1	1

A"	B"	AK10-30 OFFSET/ RETURN ELBOWS	AK10- 12" FLUE	AK10- 18" FLUE	AK10- 36" FLUE
34½	67½	2	1	1	1
38	74	2			2
42	80½	2	1	4	
43½	83½	2	1		2
45½	87	2		3	1
46½	88½	2		1	2
48½	92	2	2		2
51½	97½	2	1	1	2
54½	102½	2		2	2
55½	104	2			3
57	107	2	2	1	2
60½	113½	2	1		3



BUILDER 800 FIREPLACE SYSTEM  
WITH 8" AIR SYPHON CHIMNEY SYSTEM

A"	B"	AK10-30 10" OFFSET ELBOW	AS8-30 8" RETURN ELBOW	AS8-SS START. SEC.	AS8- 12" FLUE	AS8- 18" FLUE	AS8- 36" FLUE
13	31½	1	1	1			
18½	40½	1	1	1	1		
21½	45½	1	1	1		1	
23½	49½	1	1	1	2		
27½	53½	1	1	1	1	1	
30	60	1	1	1		2	
31½	61½	1	1	1			1
32½	63½	1	1	1	2	1	
35½	69	1	1	1	1	2	
36	70½	1	1	1	1		1
38½	74½	1	1	1		3	
38½	75½	1	1	1		1	1
44½	84½	1	1	1	1	1	1
48½	91½	1	1	1			2
51½	97½	1	1	1	1	4	
53	100½	1	1	1	1		2
55½	104½	1	1	1		3	1
56½	105½	1	1	1		1	2
58½	109½	1	1	1	2		2
61½	114½	1	1	1	1	1	2
64½	120	1	1	1		2	2
65½	121½	1	1	1			3
66½	123½	1	1	1	2	1	2
74½	130½	1	1	1	1		3

# BUILDER 800 VERTICAL INSTALLATION ELEVATION CHART

\*... height from bottom of fireplace to top of chimney, excluding termination device does not include use of 4" unitized strapped stabilizers pipe at end of each 30'. \*ASB-CTD round contemporary top adds 6" effective dimension. ASB-H square and rectangular simulated brick housings add 5" min./19" max. effective dimension.

NET HT. FIREPLACE & FLUE	HT. OF FLUE ONLY	NO. OF PIPE LENGTHS		
		12"	18"	36"
NOTE: For installation heights from 12' 2" minimum (add termination) to 16' level, use only 10" AIR KOOL Chimney System (no starter section)				
12' 4"	8'	1	1	2
12' 11 1/2"	8' 7"			3
13' 2 1/2"	8' 10"	2	1	2
13' 10"	9' 8"	1		3

30' 3 3/4"	24' 4"		1	8
30' 7 1/2"	24' 9"	2		8
31' 1 1/2"	25' 3"	1	1	8
31' 9 1/2"	25' 10"			9

57' 10 1/2"	52'	2	1	17
58' 6 1/2"	52' 7"	1		18
59' 1/2"	53' 1"		1	18
59' 4 1/2"	53' 6"	2		18

12' 4"	8'	1	1	2
12' 11 1/2"	8' 7"			3
13' 2 1/2"	8' 10"	2	1	2
13' 10"	9' 8"	1		3

34' 1/2"	28' 1"	1	1	9
34' 7 1/2"	28' 9"			10
34' 10 1/2"	29'	2	1	9
35' 6 1/2"	29' 7"	1		10

61' 10 1/2"	56'		1	19
62' 3 1/2"	56' 4"	2		19
62' 9 1/2"	56' 10"	1	1	19
63' 4 1/2"	57' 6"			20

NET HT. F/P STARTER SECTION & FLUE	HT. OF FLUE ONLY, EXCLUDING STARTER SECTION	NO. OF PIPE LENGTHS IN ADDITION TO STARTER SECTION		
		12"	18"	36"
NOTE: For installation heights 16' and above (add termination) use 8" AIR SYPHON chimney system.				
15' 10"	11' 6"			4

37' 8 1/2"	31' 10"	2	1	10
38' 4 1/2"	32' 6"	1		11
38' 10 1/2"	33'		1	11
39' 3 1/2"	33' 4"	2		11

65' 7 1/2"	59' 9"	1	1	20
66' 3 1/2"	60' 4"			21
66' 6 1/2"	60' 7"	2	1	20
67' 1 1/2"	61' 3"	1		21

17' 7 1/2"	11' 9"	2	1	3
18' 3 1/2"	12' 4"	1		4
18' 9 1/2"	12' 10"		1	4
19' 1 1/2"	13' 3"	2		4

41' 9 1/2"	35' 10"	2	1	12
42' 1 1/2"	36' 3"	2		12
42' 7 1/2"	36' 9"	1	1	12
43' 3 1/2"	37' 4"			13

69' 4 1/2"	63' 6"	2	1	21
70' 1/2"	64' 1"	1		22
70' 6 1/2"	64' 7"		1	22
70' 10 1/2"	65'	2		22

21' 7 1/2"	15' 9"	2	1	5
22' 1/2"	16' 1"	2		5
22' 6 1/2"	16' 7"	1	1	5
23' 1 1/2"	17' 3"			6

45' 6 1/2"	39' 7"	1	1	13
46' 1 1/2"	40' 3"			14
46' 4 1/2"	40' 6"	2	1	13
47' 1/2"	41' 1"	1		14

73' 4 1/2"	67' 8"		1	23
73' 9 1/2"	67' 10"	2		23
74' 3 1/2"	68' 4"	1	1	23
74' 10 1/2"	69'			24

25' 4 1/2"	18' 6"	1	1	8
26' 1/2"	20' 1"			7
26' 3 1/2"	20' 4"	2	1	6
26' 10 1/2"	21'	1		7

49' 3 1/2"	43' 4"	2	1	14
49' 10 1/2"	44'	1		15
50' 4 1/2"	44' 6"		1	15
50' 8 1/2"	44' 10"	2		15

77' 1 1/2"	71' 3"	1	1	24
77' 9 1/2"	71' 10"			25
78' 1/2"	72' 1"	2	1	24
78' 7 1/2"	72' 9"	1		25

53' 3 1/2"	47' 4"	2	1	16
53' 7 1/2"	47' 9"			16
54' 1 1/2"	48' 3"	1	1	16
54' 9 1/2"	48' 10"			17

53' 3 1/2"	47' 4"	2	1	16
53' 7 1/2"	47' 9"			16
54' 1 1/2"	48' 3"	1	1	16
54' 9 1/2"	48' 10"			17

**ILLUSTRATED BROCHURE**  
This 4-page fully illustrated brochure includes scale and complete system assembly drawings and firebox details. Ask for Form No. 8800-F



## HOW TO USE OFFSET ASSEMBLIES AND VERTICAL INSTALLATION ELEVATION CHARTS

- 1) Use Offset Chart to determine amount of horizontal offset (A) and height (B) for various flue pipe section assemblies.
- 2) Use "height of flue only" column on Vertical Elevation Chart to determine combinations of pipe used above return elbow to achieve desired heights. This does not include 20" ASB-SS starter section.
- 3) To use Elevation Chart as job estimator, add necessary firestop spacers, one per floor level. Also, add appropriate number of stabilizers. (See General Information on pg. 2 of Installation Instructions for stabilizer requirements). When strapped pipe stabilizer ASB-S4 is used, add 2-3/4" per stabilizer to figure net height of flue pipe system.



**SUPERIOR FIREPLACE COMPANY**  
4325 ARTESIA AVE.  
FULLERTON, CALIFORNIA 92633  
(714) 521-7302

1516 SOUTH BAYLIS STREET  
BALTIMORE, MARYLAND 21224  
(301) 342-8500

QUALITY PRODUCTS  
TO REDUCE CONSTRUCTION COSTS



**DISTRIBUTED BY:**

All product specifications subject to change without notice and subject to Local Building Codes