



DESIGN & INSTALLATION GUIDE

## **SERIES: FC & IL FORNO CLASSICO**

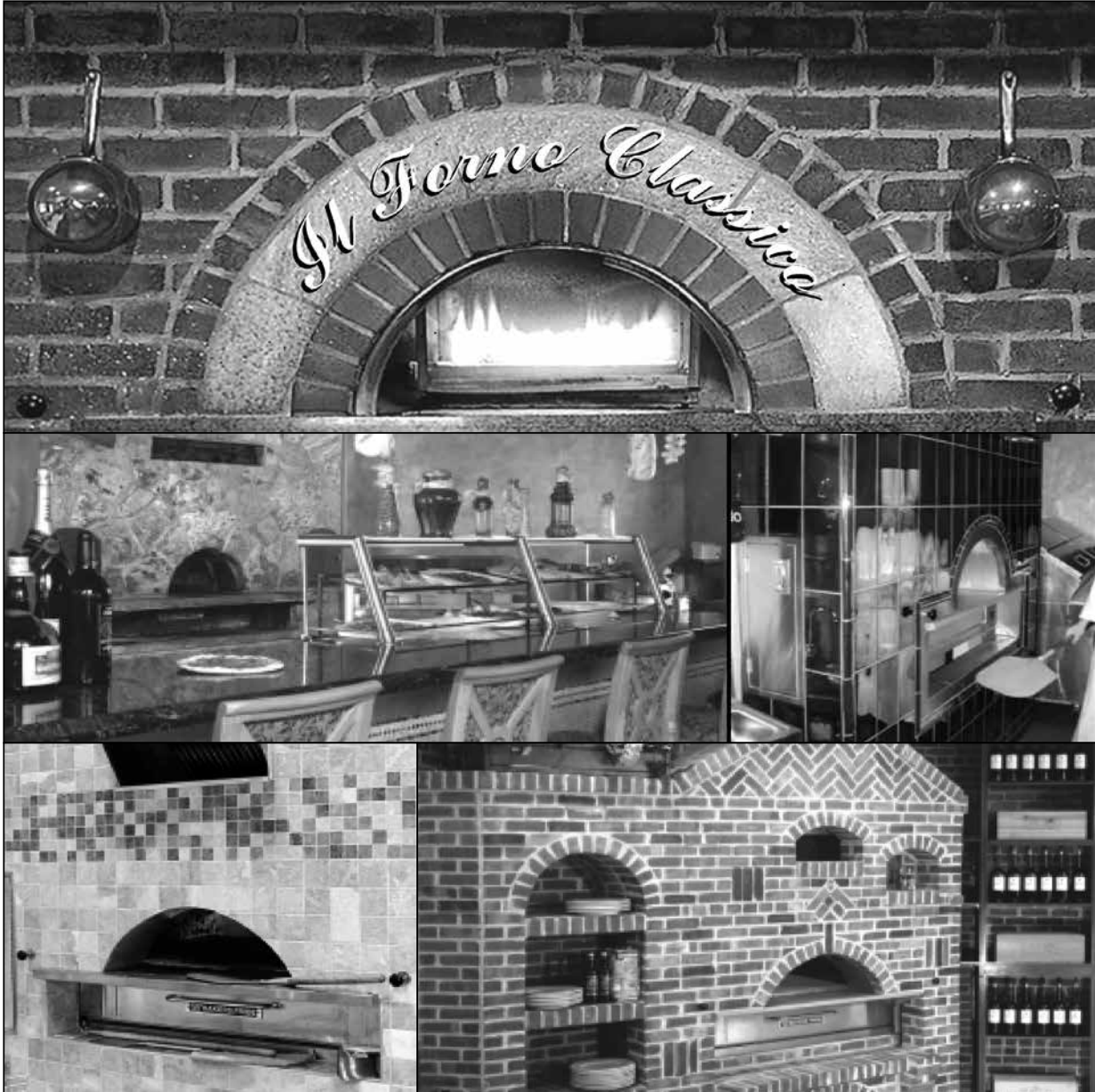


**BUILT BY CRAFTSMEN. TESTED BY TIME®.**



IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE

FC-516, FC-616 AND FC-816 IL FORNO CLASSICO OVENS



**BAKERS PRIDE OVEN COMPANY, LLC.**

1307 N. Watters Rd., Suite 180  
Allen, TX 75013

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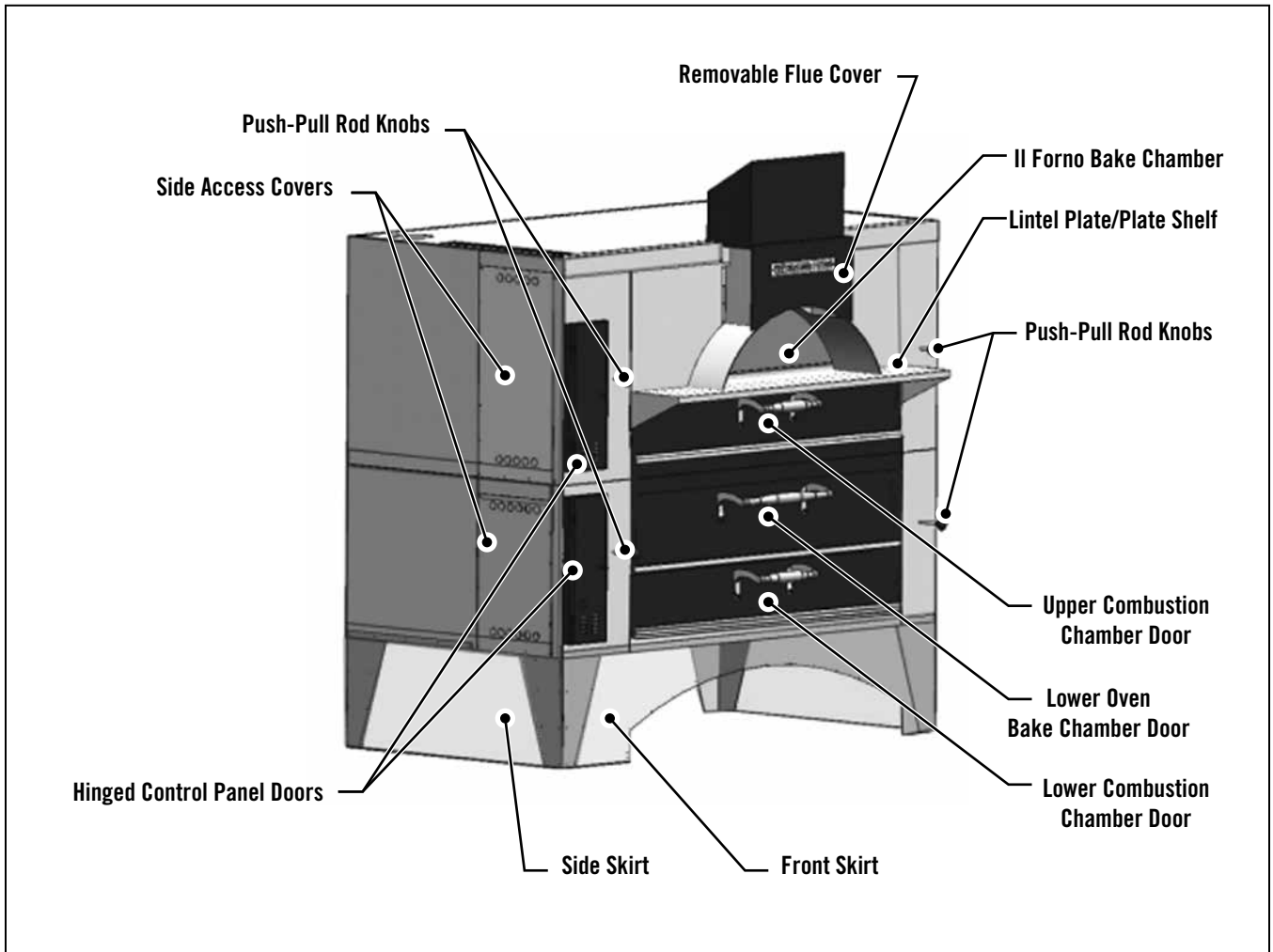
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**IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE**

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FC-616 Stacked on Y-600 (DSP Style With Skirts)



**IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE**

**SPECIFICATION/ORDER GUIDE CHECK LIST**

Date: \_\_\_\_\_  
 Dealer Name: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 P. O. Number: \_\_\_\_\_  
 Signature \_\_\_\_\_

MODEL (Choose One)	
<input type="checkbox"/> FC-516	Single
<input type="checkbox"/> FC-616	Single
<input type="checkbox"/> FC-816	Single
<input type="checkbox"/> FC-516/D-125	Double
<input type="checkbox"/> FC-516/DS-805	Double
<input type="checkbox"/> FC-616/Y-600	Double
<input type="checkbox"/> FC-816/Y-800	Double

**How do you intend to finish/build-in your oven(s)? (Choose One)**

As Is / Decorative Exterior Trim - casters included  
 DSP Style - Apply tile/stone directly on to oven(s) - skirts included  
 Traditional - Building a facade/enclosure - casters included

**Il Forno**

<b>Hinged Control Panel Door (Choose One)</b>	<b>Electric Type (Choose One)</b>	<b>Casters (Set of 4) Not suitable for DSP style finish with skirts</b>
<input type="checkbox"/> Front Mounted	<input type="checkbox"/> 115 volts AC	<input type="checkbox"/> Yes
<input type="checkbox"/> Side Mounted	<input type="checkbox"/> 240 volts AC	<input type="checkbox"/> No
<b>Hinged Control Panel Door (Choose One)</b>	<b>Gas Type (Choose One)</b>	<b>Lintel Plate/Plate Shelf (Choose One)</b>
<input type="checkbox"/> Black Powder Coated	<input type="checkbox"/> Natural Gas	Provided by customer to cover with tile, stone, etc. (1" lower than cook/bake surface)
<input type="checkbox"/> Stainless Steel	<input type="checkbox"/> L.P. Gas	Covered by factory in stainless steel ready to use (same height as cook/bake surface)
<b>Lower Combustion Chamber Door (Choose One)</b>	<b>Automatic Oven Starter (Optional) Allows operator to establish automatic oven start &amp; stop times</b>	<b>Removable Flue Cover (Choose One)</b>
<input type="checkbox"/> Black Powder Coated	<input type="checkbox"/> Yes	<input type="checkbox"/> Black Powder Coated
<input type="checkbox"/> Stainless Steel	<input type="checkbox"/> No	<input type="checkbox"/> Stainless Steel

**Lower Oven of Stacked Installation**

<b>Hinged Control Panel Door (Choose One)</b>	<b>Bake Chamber Door (Choose One)</b>
<input type="checkbox"/> Front Mounted	<input type="checkbox"/> Black Powder Coated
<input type="checkbox"/> Side Mounted	<input type="checkbox"/> Stainless Steel
<b>Hinged Control Panel Door (Choose One)</b>	<b>Automatic Oven Starter (Optional) Allows operator to establish automatic oven start &amp; stop times</b>
<input type="checkbox"/> Black Powder Coated	<input type="checkbox"/> Yes
<input type="checkbox"/> Stainless Steel	<input type="checkbox"/> No
<b>Lower Combustion Chamber Door (Choose One)</b>	<b>Casters (Set of 4) Not suitable for DSP style finish with skirts</b>
<input type="checkbox"/> Black Powder Coated	<input type="checkbox"/> Yes
<input type="checkbox"/> Stainless Steel	<input type="checkbox"/> No
<b>Gas Type (Choose One)</b>	
<input type="checkbox"/> Natural Gas	
<input type="checkbox"/> L.P. Gas	

**Legs**

<b>Legs (total height with or without casters) included. Please specify.</b>
<input type="checkbox"/> 36" (Standard on FC-516, FC-616 and FC-816)
<input type="checkbox"/> 30" (Standard on DS-805, D-125, Y-600 and Y-800)
<input type="checkbox"/> 16" (Standard on all double deck models except FC-516, D-125 and D-250)
<input type="checkbox"/> 12" (Standard on double deck models FC-516/D-125 and D-250)
<input type="checkbox"/> Special height legs - specify length - optional extra charge



## IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE

### SPECIFICATION SHEETS



Model FC-616

#### Specifications

The Bakers Pride® Il Forno Classico oven combines the ambiance of a traditional old world brick oven with the convenience, control and precision of modern technology, and is perfect for display kitchens and exhibition cooking.

The Il Forno Classico features a steel-reinforced, arched open hearth up to 32" wide (813mm) with a visible 20,000 BTUH open flame burner for ambiance and additional top heat with a large lintel plate/landing shelf for ease of operation. Another 120,000 BTUH gas dual burner provides thermostatically controlled temperatures with independent, operator-controlled top & bottom heat control dampers and micro slides for perfectly balanced results.

Il Forno Classico is designed and engineered to be used either as- is, or finished and trimmed with brass, copper, etc. for an elegant high-tech presentation, or finished DSP style with tile, stone or thin brick applied directly to the oven exterior, or built-in behind a decorative facade of brick, stone or tile for an old-world look.

The Il Forno Classico is available in three sizes to meet your space requirements and may be stacked on our standard deck ovens for increased capacity & production in limited spaces. Designed and engineered to fit through a standard door opening, the Il Forno is assembled on-site thus eliminating the need for heavy equipment and cranes.

Standard features include removable 1 1/2" (38mm) thick hearth baking decks, 300°-650°F (149°-343°C) throttling thermostat, removable front mounted flue for easy access for installation of hearth decks, standard brick lining & maintenance, front or side mounted controls behind an extra large black powder-coated access panel, rear gas & electrical connections, combination gas control valve, slide-out flame diverters for even heat distribution, fully insulated, spring-balanced doors and heavy duty, 7-gauge steel legs in a variety of heights, with or without casters.

Interior oven frame is constructed of 1/4" (6mm) heavy-duty angle iron, completely welded to form a single unitized section. The oven body and lining are then welded to the oven framework. Oven interiors are manufactured of high-heat resistant 16-gauge aluminized steel.

2 year limited parts & labor warranty.

Job \_\_\_\_\_ Item # \_\_\_\_\_

#### Single Deck Models

Model FC-516     Model FC-616     Model FC-816

#### Standard Features

- 140,000 BTUH total in natural or LP gas (CE not available in LP gas)
- Brick lining for additional top heat & quicker recovery
- Stackable with traditional deck ovens
- 120v, 15 amp igniter with cord & plug
- 300°-650° F (149°-343°C) throttling thermostat
- Top & bottom heat control dampers & micro-slides
- Combination gas controls with valve, regulator & safety pilot
- Side or front mounted controls
- Rear gas & electrical connections
- Heavy-duty, slide-out flame diverters
- 1 1/2" (38mm) thick hearth baking decks
- Stainless steel or black powder coated control panel door
- Combustion chamber door in black powder coat with custom hard wood handles or stainless steel with tubular chrome plated handle
- Skirts provided on DSP style ovens only
- Spring balanced combustion chamber door
- 7-Gauge legs with casters (casters not provided on DSP style ovens)
- Fully insulated throughout
- 2 Year limited part and labor warranty

#### Options & Accessories

- Natural Wood smoke essence boxes
- Eye Brow style exhaust hood
- Custom height legs
- Stainless steel lintel plate cover
- Stone finishing kits
- 2 1/2" thick fire bricks (not available on FC-816)
- 208v, 220v or 240v electrical connection
- Remote controls for booster burner
- Automatic oven starter
- On-site training & chef support

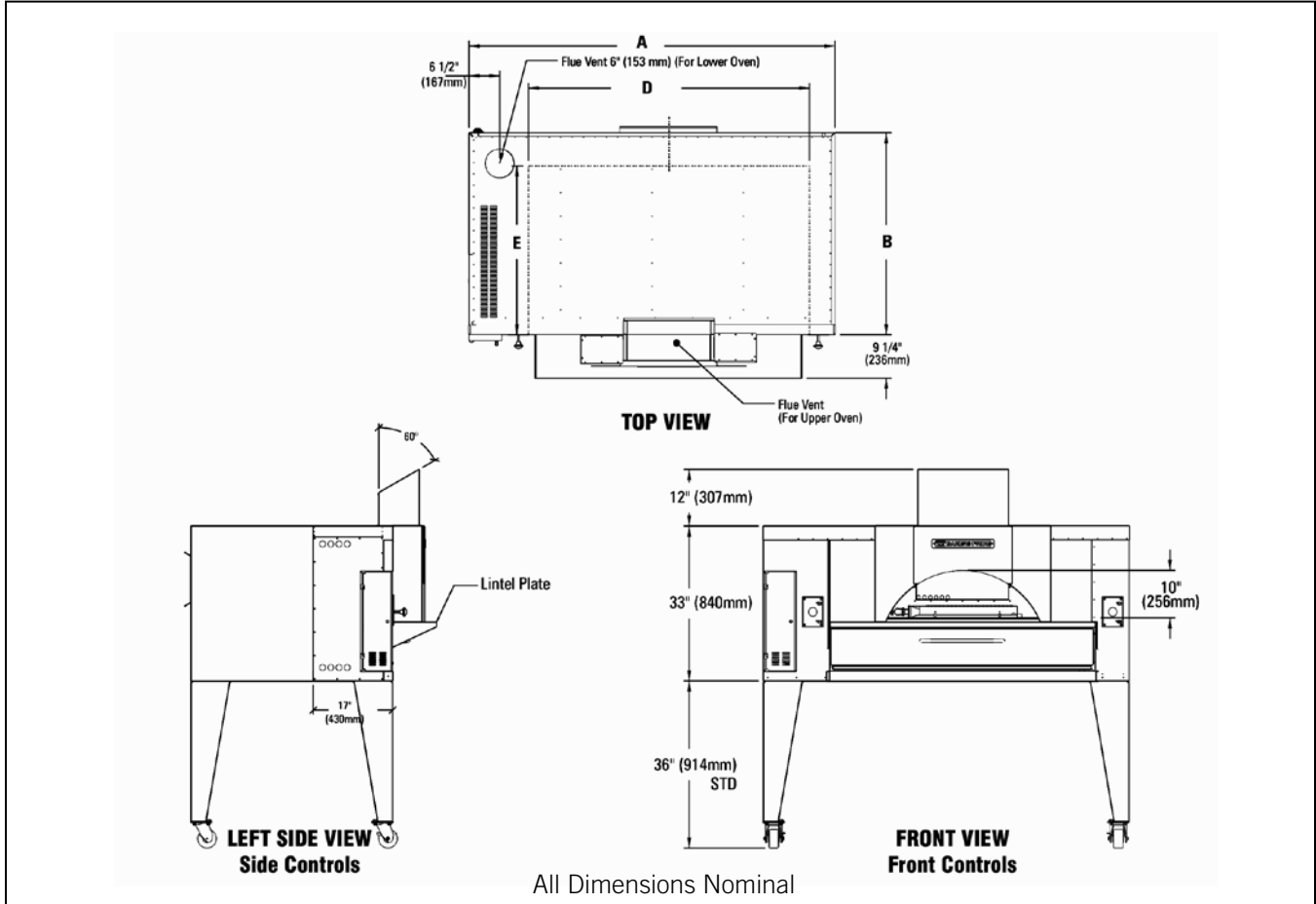
#### Certifications





## IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE

### SPECIFICATION SHEETS



Shipping Information										
Model	Shipping Wt		Carton Dimensions						Crate Size	
	Lbs.	Kilos	Width		Depth		Height		Cubic Feet	Cubic Meter
			In	mm	In	mm	In	mm		
FC-516	1588	720	40	1016	74	1880	62	1575	105	3.0
FC-616	1925	873	40	1016	84	2134	69	1753	133	3.7
FC-816	2155	978	40	1016	88	2236	69	1753	139	3.9

Power Supply					
Model	Gas Type	BTUH	KW	Connection	Voltage
FC-516	Nat/LP	140,000	41.03	3/4"	120/208/240
FC-616	Nat/LP	140,000	41.03	3/4"	120/208/240
FC-816	Nat/LP	140,000	41.03	3/4"	120/208/240

Shipping Class #70. Hearth Decks and Legs ship in separate cartons  
 For DSP style installations, 36" legs are provided without casters.

Specifications													
Model	Oven				No. of Decks	Deck				Arched Opening			
	Width A		Depth B			Width D		Depth E		Width		Depth	
	In	mm	In	mm		In	mm	In	mm	In	mm	In	mm
FC-516	65 1/4	1657	43	1092	1	48	1219	36	914	32	810	10	-254
FC-616	78	1981	43	1092	1	60	1524	36	914	32	810	10	54
FC-816	84	2134	51	125	1	66	1676	44	1118	32	810	10	2542

	Minimum Clearances			
	Non-Combustible		Combustible	
	Inches	mm	Inches	mm
Right	0	0	1	25
Left	0	0	3	76
Rear	2	51	3	76
Front Flue Area	Enclose with non-combustible materials			



## IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE

### SPECIFICATION SHEETS



Model FC-616/  
Y600DSP

#### Specifications

The Bakers Pride® Il Forno Classico ovens combine the ambiance of a traditional old world brick oven with the convenience, control and precision of modern technology, and is perfect for display kitchens and exhibition cooking.

The Il Forno Classico features steel-reinforced, arched open hearth up to 32" wide (813mm) with a visible 20,000 BTUH open flame burner for ambiance and additional top heat with a large lintel plate/landing shelf for ease of operation. Another 120,000 BTUH gas dual burner provides thermostatically controlled temperatures with independent, operator-controlled top & bottom heat control dampers and micro slides for perfectly balanced results.

Il Forno Classico is designed and engineered to be used either as-is, or finished and trimmed with brass, copper, etc. for an elegant high-tech presentation, or finished DSP style with tile, stone or thin brick applied directly to the oven exterior, or built-in behind a decorative facade of brick, stone or tile for an old-world look.

The Il Forno Classico is available in three sizes to meet your space requirements and may be stacked on our standard deck ovens for increased capacity & production in limited spaces. Designed and engineered to fit through a standard door opening, the Il Forno is assembled on-site thus eliminating the need for heavy equipment and cranes.

Standard features include removable 1 1/2" (38mm) thick hearth baking decks, 300°-650°F (149°-343°C) throttling thermostat, removable front mounted flue for easy access for installation of hearth decks, standard brick lining & maintenance, front or side mounted controls behind an extra large black powder-coated access panel, rear gas & electrical connections, combination gas control valve, slide-out flame diverters for even heat distribution, fully insulated, spring-balanced doors and heavy duty, 7-gauge steel legs in a variety of heights, with or without casters.

Interior oven frame is constructed of 1/4" (6mm) heavy-duty angle iron, completely welded to form a single unitized section. The oven body and lining are then welded to the oven framework. Oven interiors are manufactured of high-heat resistant 16-gauge aluminized steel.

2 years limited parts & labor warranty.

Job \_\_\_\_\_ Item # \_\_\_\_\_

#### Double Deck Models

- Model FC-516 / D-125
- Model FC-516 / DS-805
- FC-616 / Y-600
- FC-816 / Y-800

#### Standard Features

- Up to 265,000 BTUH total in natural or LP gas (CE not available in LP)
- Brick lining for additional top heat & quicker recovery
- Stackable with traditional deck ovens
- 120v, 15 amp igniter with cord & plug
- 300°-650° F (149°-343°C) throttling thermostat
- Top & bottom heat control dampers & micro-slides
- Combination gas controls with valve, regulator & safety pilot
- Side or front mounted controls
- Rear gas & electrical connections
- Heavy-duty, slide-out flame diverters
- 1 1/2" (38mm) thick hearth baking decks
- Stainless steel or black powder coated control panel door
- Combination chamber door in black powder coat with custom hard wood handles or stainless steel with tubular chrome plated handles
- Skirts provided on DSP style ovens only
- Spring balanced combustion chamber door
- 7-Gauge legs with casters (casters not provided on DSP style units)
- Fully insulated throughout
- 2 Year limited part and labor warranty

#### Options & Accessories

- Natural Wood smoke essence boxes
- Eye Brow style exhaust hood
- Custom height legs
- Stainless steel lintel plate cover
- Stone finishing kits
- 2 1/2" thick fire bricks (not available on FC-816)
- 208v, 220v or 240v electrical connection
- Remote controls for booster burner
- Automatic oven starter
- On-site training & chef support

#### Certifications









## IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE

### GETTING STARTED

Thank you for choosing a Bakers Pride® Il Forno Classico oven. We recommend you thoroughly read and consider steps #1 thru #8 prior to designing your kitchen and prior to ordering your oven(s). We also recommend that you thoroughly read and understand these installation guidelines prior to installing your new oven(s).

#### STEP 1

Choose which oven size is right for you. Il Forno Classico is available in 3 sizes. Choose single, or double deck for increased capacity and production through put.

MODEL	DESCRIPTION	DECK SIZE	NO. OF DECKS	CAPACITY
FC-516	Single Deck Il Forno Oven	48" x 36"	1	4 each 16" Pizzas
FC-616	Single Deck Il Forno Oven	60" x 36"	1	6 each 16" Pizzas
FC-816	Single Deck Il Forno Oven	66" x 44"	1	8 each 16" Pizzas
FC-516/D-125	Il Forno stacked on D-125	48" x 36"	2	8 each 16" Pizzas
FC-516/DS-805	Il Forno stacked on DS-805	48" x 36"	2	8 each 16" Pizzas
FC-616/Y-600	Il Forno stacked on Y-600	60" x 36"	2	12 each 16" Pizzas
FC-816/Y-800	Il Forno stacked on Y-800	66" x 44"	2	16 each 16" Pizzas

Refer to individual specification sheets for more details.

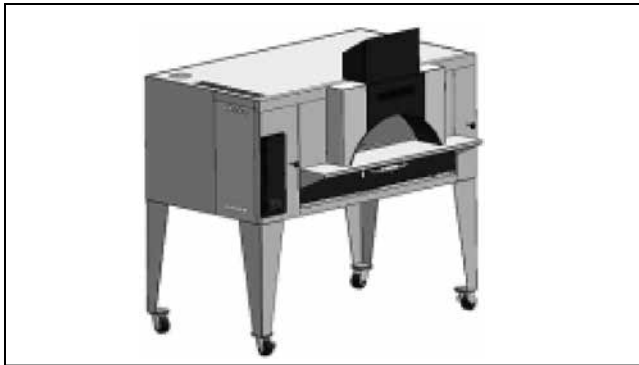


Fig 1A: Single Deck Il Forno



Fig 1B: Il Forno Stacked

#### STEP 2

Choose front-mounted or side-mounted control panel(s). The exterior finish style and location of controls often work together to create the "look" you want.

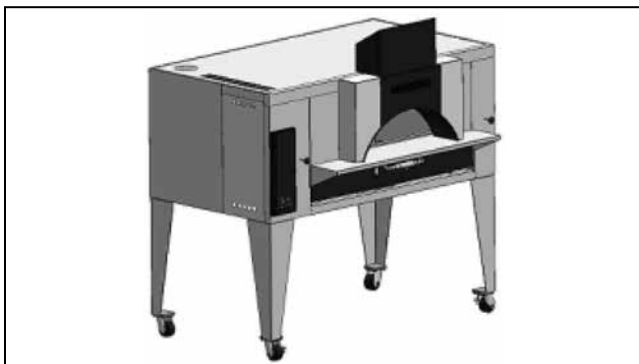


Fig 2A: Single Oven W/Front-Mounted Controls

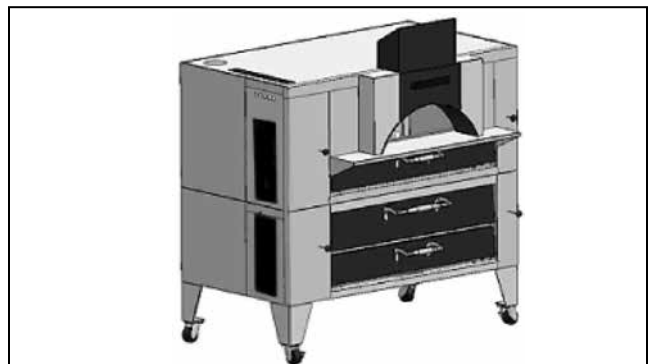


Fig 2B: Double Unit W/Side-Mounted Controls

**GETTING STARTED**

**STEP 3**

Decide how you intend to “finish” or “build-in” your oven(s) prior to ordering. Installation instructions are available for each “finish” style. There are four basic styles: 1, 2, 3, 4.

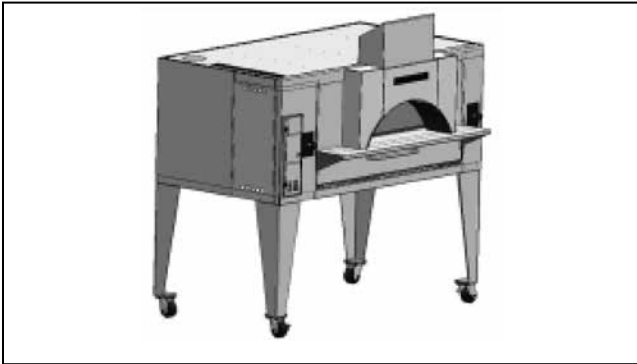


Fig 3A: Plain “As-Is” - Style 1

Plain, AS-IS ready to use. No decorative finish. Available with black powder coated doors & flue or all stainless steel exterior.

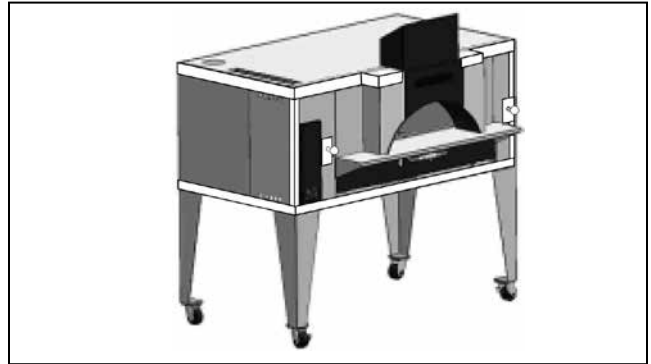


Fig 3B: Decorative Trim - Style 2

Finish your oven with decorative trim-pieces of brass, copper, tile etc., in black powder coated doors & flue or all stainless steel exterior.

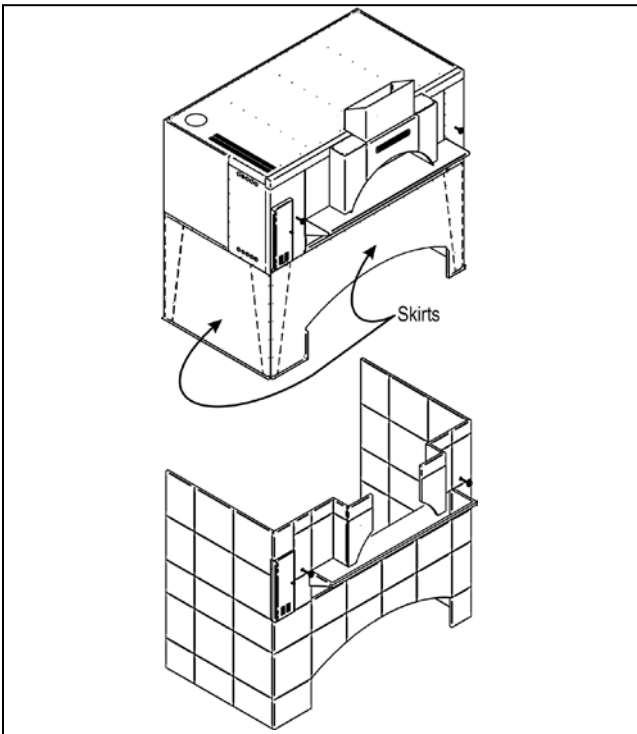


Fig 3C: DSP - Style 3

“DSP” Style. Stone, tile, thin brick or other masonry finish is applied directly to the oven exterior. Skirts provided, casters excluded.

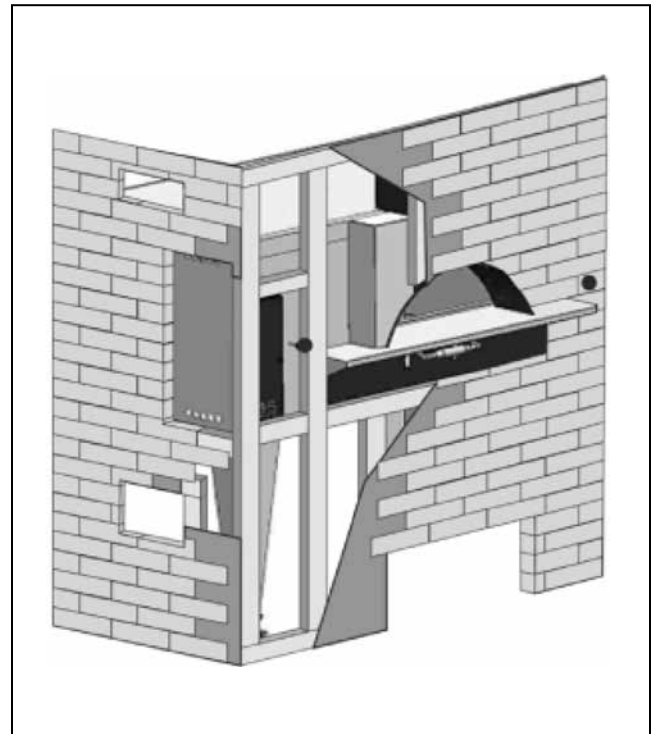


Fig 3D: Traditional - “built-in”. Involves building a facade over the front, or front and side(s) or around all four sides. The facade is finished in brick, stone, tile, marble or materials of choice. Push-Pull rod extensions provided.

**GETTING STARTED**

**STEP 4**

Ventilation: Choose either a canopy or eye-brow style hood. (DO NOT direct vent an Il Forno Classico)

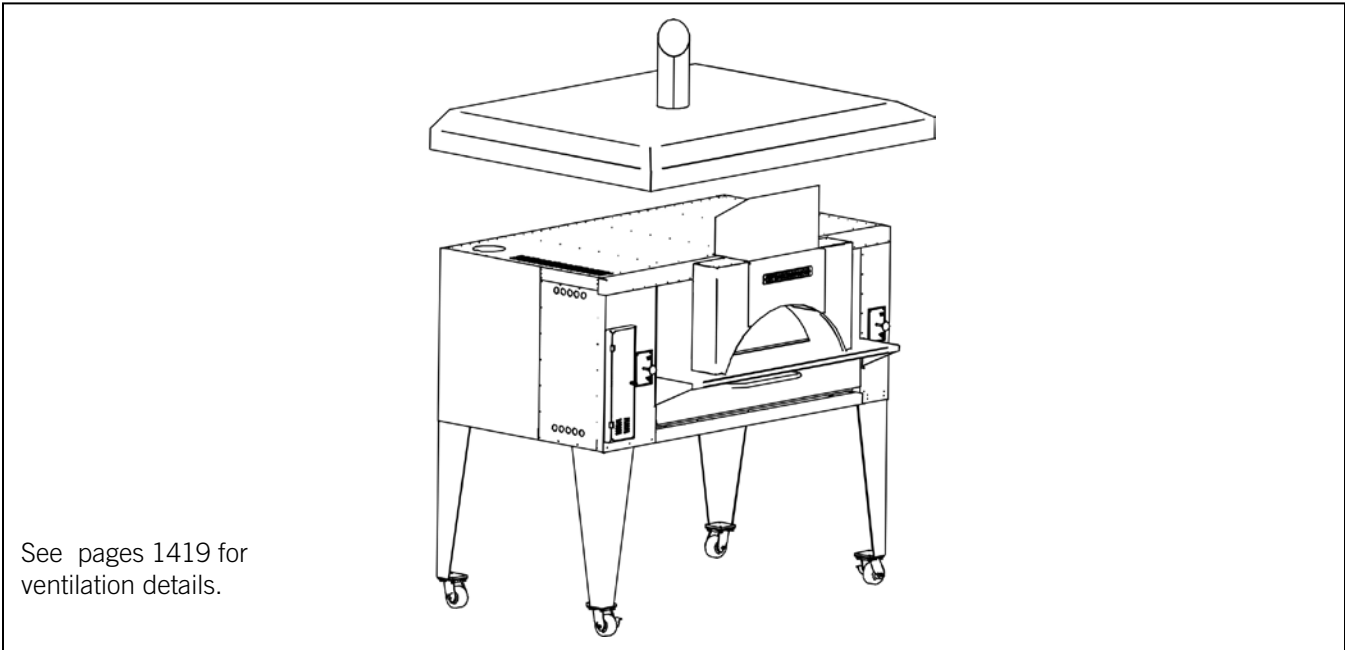


Fig 4A: Canopy Style Hood

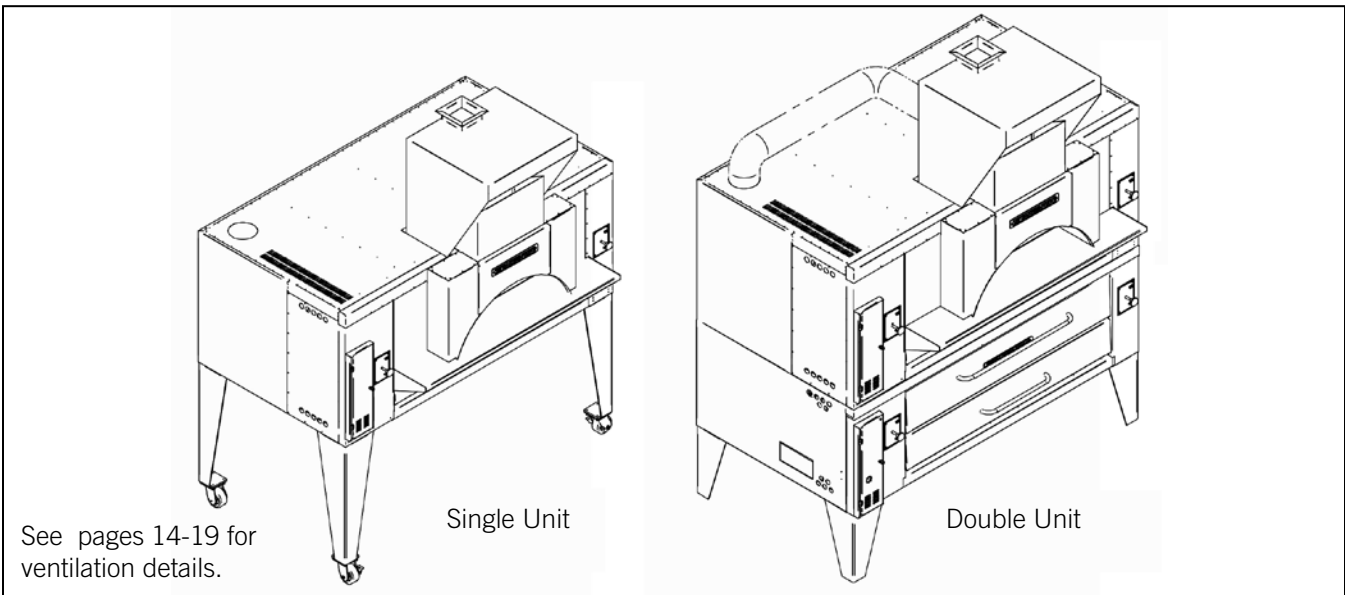


Fig 4B: Eye-Brow Style Hood

**NOTE:** Minimum clearance may be reduced when using UL listed hood assemblies and installed in accordance with the terms of the listing and the manufacturer instructions. Consult NFPA standard number 96 and local codes concerning ventilation requirements and fire extinguishing system requirements.



## GETTING STARTED

### STEP 5

Choose gas type: Natural or L.P. Gas.

### STEP 6

Choose electric type: 120V or 240V.

- Provision of 115 Volts AC, 15 Amps electric supply for the booster burner ignition control systems must be made. (Optional 240 Volts AC available).

### STEP 7

Choose options and accessories

- Casters - Set of 4  
NOTE: Provision for restraints on the legs with casters must be made.  
DO NOT use casters with DSP style built-in ovens as the casters interfere with the skirts.
- Brick lining - Now standard and highly recommended.
- Natural wood essence smoke boxes.
- Automatic oven starter.
- Remote controls for booster burner.
- Combustion chamber door in stainless steel or black powder coated with hard wood handles.
- Hinged control panel access door in stainless steel or black powder coated.
- Removable flue cover in stainless steel or black powder coated.
- Black powder coated doors and flue may be mixed or matched with stainless steel doors and flue on special request.

### STEP 8

Choose leg height

- 36" (Standard on single Il Forno models)
- 16" (Standard on all double deck models except FC-516 stacked on a D-125 or D-250)
- 12" (Standard on double deck models FC-516 stacked on a D-125 or D-250)
- Special height legs - specify length - optional extra charge  
Note: If you choose non-standard leg heights, you must also compensate for height differences when building your facade (traditional style) and skirts will not fit properly (DSP style).

### Other Key Provisions and Notes

Emergency gas shut off valve in an easily accessible location must be provided by the customer.

Units must be electrically grounded to conform to the National Electric Code ANSI/NFPA#70 and/or local codes.

- Gasoline or other flammable vapors and liquids should never be stored in the vicinity of the unit.

### Be Specific When Ordering



## IL FORNO CLASSICO OVEN DESIGN & INSTALLATION GUIDE

### IL FORNO PLAIN “AS-IS” STYLE INSTALLATION

Your IL FORNO CLASSICO oven(s) may be used “as-is” without decorative finishes or architecturally designed facades. For best-looking results consider your preference for stainless steel doors or black powder coated doors with wood handles and other exterior finish options.

Oven(s), decks and legs are shipped in separate cartons. Uncrate, attach legs, install decks then connect gas and electric utilities. Refer to operating instruction manual provided with oven(s) for details .

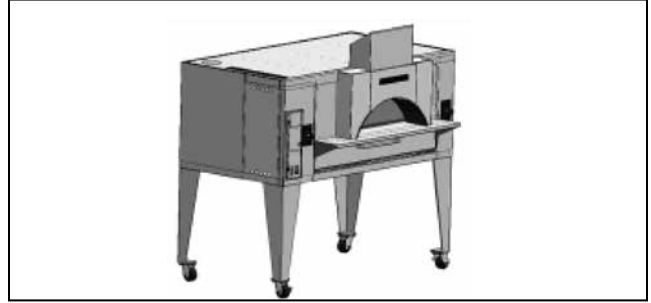


Figure 5: Plain, AS-IS ready to use. No decorative finish. Available with standard front or all stainless steel exterior.

### IL FORNO DECORATIVE TRIM STYLE INSTALLATION

Rather than ‘building-in’ your oven(s) or applying masonry finishes directly to the oven(s) exterior, consider finishing your oven(s) with decorative trim-pieces of brass, copper, powder-coated colored trim or L-shaped tile pieces.

For best-looking results consider your preference for stainless steel doors or black powder coated doors with wood handles and other exterior finish options. Control panel access cover, combustion chamber door and flue-front may be ordered in black-powder-coated finish or stainless steel.

Metal trim pieces are fastened by the foodservice equipment contractor directly to the oven exterior using 3/8” to 1/2” sheet metal screws. Pre-drill holes for best results.

The design is only limited by your imagination. Consider finishing the lintel plate with matching tile, stone or stainless steel. Stainless steel lintel plate provided when ordering the all stainless exterior option.

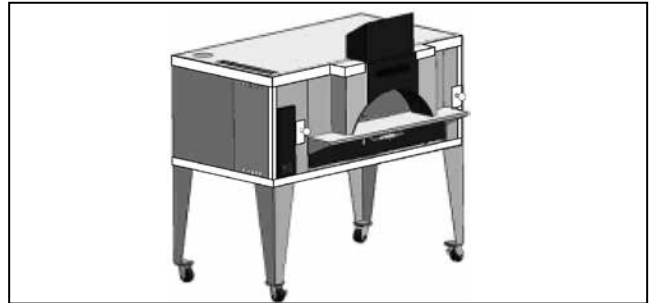


Figure 6: Finished with decorative trim-pieces of brass, copper, tile etc. In standard front or all stainless steel exterior

**Disclaimers:** Continuous product improvement is a policy of Bakers Pride. Therefore specifications and designs are subject to change without notice. Ultimately, the proper design and execution of any appliance installation is the responsibility of the property owner. That party or their representative is expected to engage the service of a qualified professional to carry out that responsibility. This includes matters of compliance with local codes. The above information is provided as guidelines to the installation professional. Job site conditions vary considerably, and therefore Bakers Pride Oven Company can assume no responsibility or liability for the proper installation and operation of the gas-fired appliance. The above assumes certain conditions, which are specified. A quality professional may modify these recommendations as job site conditions dictate. For example, 70°F air is assumed.

## IL FORNO DSP STYLE INSTALLATION

Anyone with some experience laying tile should be able to complete this project with relative ease.

- Step #1 Uncrate oven(s), attach legs, set in place.
- Step #2 Attach front sheet metal skirt (provided) by drilling holes in oven legs using pre-punched holes in sheet metal skirt as a template.  
**NOTE:** Bottom flange of skirt faces outward.
- Step #3 Secure skirt using sheet metal screws.
- Step #4 If you plan on finishing the oven sides with tile, etc, follow steps #2 and #3 for side skirts.
- Step #5 Fasten 3/8" thick fire resistant "Wonder Board" (7mm) to oven front (and sides if appropriate) using 1/2" to 5/8" sheet metal screws. When finishing Lintel Plate, thinner "Wonder Board" and shorter screws may be necessary.  
**NOTE:** "Wonder Board" must be cut to fit. Allow access for push-pull rod holes, oven control access doors and combustion and bake chamber doors.

- Step #6 Attach tile, stone, thin-brick or the material of choice over "Wonder Board" using either a latex/polymer based high-heat ceramic thin-set mortar, "spec" mix mortar or type "S" mortar. Best results will be achieved using tile, etc. no more than 5/8" thick.  
**NOTE:** Start at the floor and work up to top of oven. Cut stone, etc. to fit as required based on your design and to create the look you want.
- Step #7 Consider L-shaped tile or brick trim pieces along front vertical corners and top edges of oven front and side to complete a finished look.
- Step #8 Grout between brick joints. It is best to allow the thin-set mortar to dry over night prior to grouting.
- Step #9 Allow grout to dry for 24 hours prior to starting ovens.  
**NOTE:** Wonder Board equivalents; Harde Backer Board, various trade names.

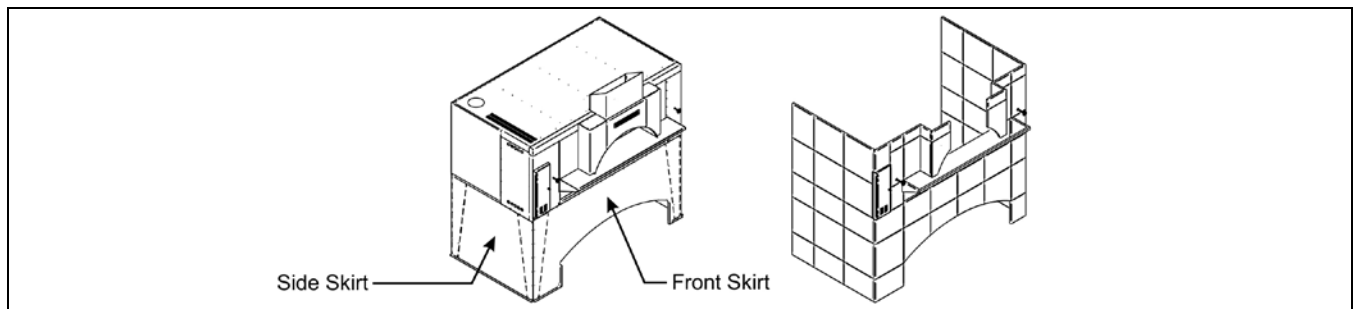


Figure 7: FC-616 DSP With Tilework

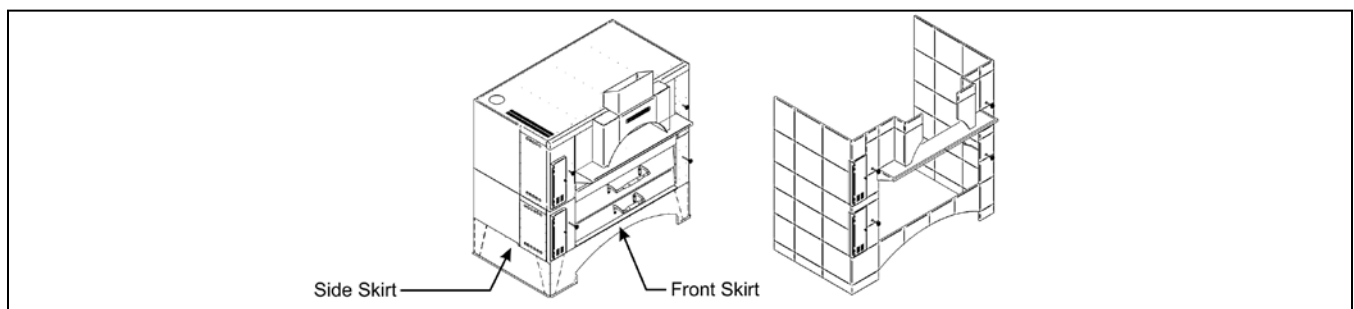


Figure 8: FC-616 DSP Stacked On Y-600 With Tilework



## IL FORNO TRADITIONAL INSTALLATION

### Building a Facade:

The facade may consist of a front only, front and one side, front and two sides or all four sides. Generally the facade is framed with metal studs, then covered with fire-resistant “Wonder Board” and decorated with tile, brick, masonry or material of choice. Check with local health department and building codes for local requirements.

### Before Proceeding:

Note that provisions must be made in the facade for access to the control panel cover, push-pull rods, arched opening, combustion chamber door(s), service panels and electrical and gas connections. Provisions must be made for air movement in architecturally enclosed structures. Instructions on the following pages.

- Step #1 Uncrate oven(s), attach legs, set in place.
- Step #2 Build a metal-stud frame. Work around your oven(s) allowing provisions for air movement and access requirements (described on following pages).
- Step #3 Fasten 3/8” (7mm) “Wonder Board” to oven metal-stud framework using sheet metal screws.
- Step #4 Attach tile, stone, marble, thin brick or finish of your choice over Harde Backer Board using a latex/polymer based high-heat resistant ceramic thin set mortar. Start at the floor and work up to the top of facade enclosure. Cut tile, etc to fit as required based on your design and to create the look you want.

Step #5 Grout between tile/stone joints. It is best to allow thin set mortar to dry overnight prior to grouting.

Step #6 Allow grout to dry for 24 hours prior to starting oven(s).

### Helpful Hints

Control Panel Cover(s), Thermostat(s) and Service Panels: Frame around Control Panel Cover(s) with metal studs. Studs may be placed directly against oven exterior.

Combustion Chamber Door(s): Leave Exposed for easy access.

Push-Pull Rods: Provide 1” or less diameter holes in facade so holes are covered by push-pull rods.

Lintel Plate(s): Leave lintel plates exposed and cover lintel plate with marble, tile, etc for good looks and to provide flush landing shelf. (Lintel plate is 1” lower than deck height). NOTE: See DSP style installation for lintel plate finish instructions and compensate as required.

**Note:** This illustration is intended as a general guide for facade construction. It is not intended to represent specific layout & design but rather to convey the construction process. Dimensions are nominal-Not to scale.

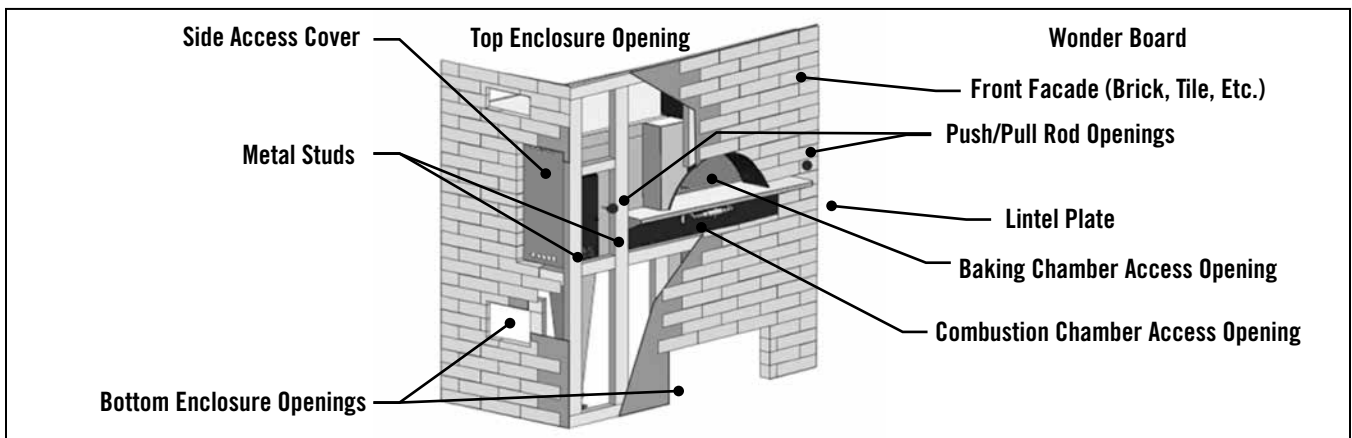


Figure 9: Building A Facade



## VENTILATION OF AN ARCHITECTURALLY ENCLOSED GAS FIRED OVEN

This applies to the FC series ovens initially, but also to FC “stacks” as well as any other enclosed installations. A four walled “room” around the oven is anticipated, with a ventilation hood as the room’s “ceiling”.

(This four-walled room is selected for this discussion as an easily defined, “worst case” scenario. A more ideal installation is enclosed on only one, two or three sides, which face the public space of the restaurant. The back and one or two sides are open to the kitchen and/or other working spaces).

### Air Volume Required

The purpose of ventilation is to remove bi-products of combustion, remove grease laden vapors, limit the temperatures within the enclosure and to provide fresh air for combustion. The combustion air volume is included in the larger volume required for temperature controlling the space, therefore only a single calculation is required.

$$\text{VOLUME REQUIRED (CFM)} = \text{RATED INPUT (BTUH)} / 105$$

e.g. The air required for an FC-816 stacked with a Y-800 is 2,476 CFM ( = 260,000 BTUH / 105 ).

This assumes: (1) 70°F air entering the enclosure, (2) the oven runs at an average of 70% of its rated input during peak business hours and (3) 25% “stack losses” are discharged directly to the top of the enclosure or are removed from the enclosure by a chimney connection.

### Air Openings To The Enclosure

At least three total openings must be provided in the enclosure to allow the oven within the enclosure to properly breathe. Additional openings are acceptable. Louvers and grilles typically have free area ratings provided by their manufacturer. If the ratings are not known, assume 25% free area for wood louvers and 60% free area for metal louvers and grilles.

### Top Opening(s)

At least one opening must be provided. The top opening(s) prevents pressure differences from developing over the height of the enclosure. Provide an

e.g. The top opening for a FC-816 stacked with a Y-800 is 260 sq in (=260,000 BTUH / 1,000). The top edge of this opening should be within (12”) twelve inches of the bottom edge of the ventilation hood.

### Bottom Opening(s)

At least one opening must be provided. The bottom opening(s) provides the bulk of the ventilation air to the space. Enough area must be provided to limit the entering air velocity to five feet per second. The calculation:

$$\text{Bottom Opening Free Area (sq in)} = \text{Rated Input (BTUH)} / 219$$

e.g. The bottom opening for an FC-816 stacked with a Y-800 is 1,187 sq in (=260,000 BTUH / 219).

The same discussion regarding louvers and grilles applies. The bottom opening, or openings, should be planned to distribute air uniformly about the lower portion of the enclosure. The bottom edge of the bottom opening(s) should be within twelve inches of the floor of the enclosure.

### Clearances

Within the enclosure the normal clearances for safety and service should be maintained. Additionally the floor area of the enclosure should be at least equal to the “footprint” area of the oven plus the bottom opening free area. This limits the vertical air velocities inside the enclosure to the same five feet per second.

e.g. FC-816 stacked with Y-800

$$51" \text{ deep} \times 84" \text{ wide} = 4,284 \text{ sq in}$$

Add the bottom free area:

$$1,187 \text{ sq in (Roughly } 4 \frac{1}{2}" \text{ all around)}$$

$$\text{Total } 5,471 \text{ sq in (38 sq ft) [Roughly } 60" \times 93"]$$



## VENTILATION OF AN ARCHITECTURALLY ENCLOSED GAS FIRED OVEN

When building a 4-walled facade, or room around the oven(s), provisions must be made in the facade/enclosure for the free and uninterrupted air movement to the interior of enclosed installations from the room outside the enclosure.

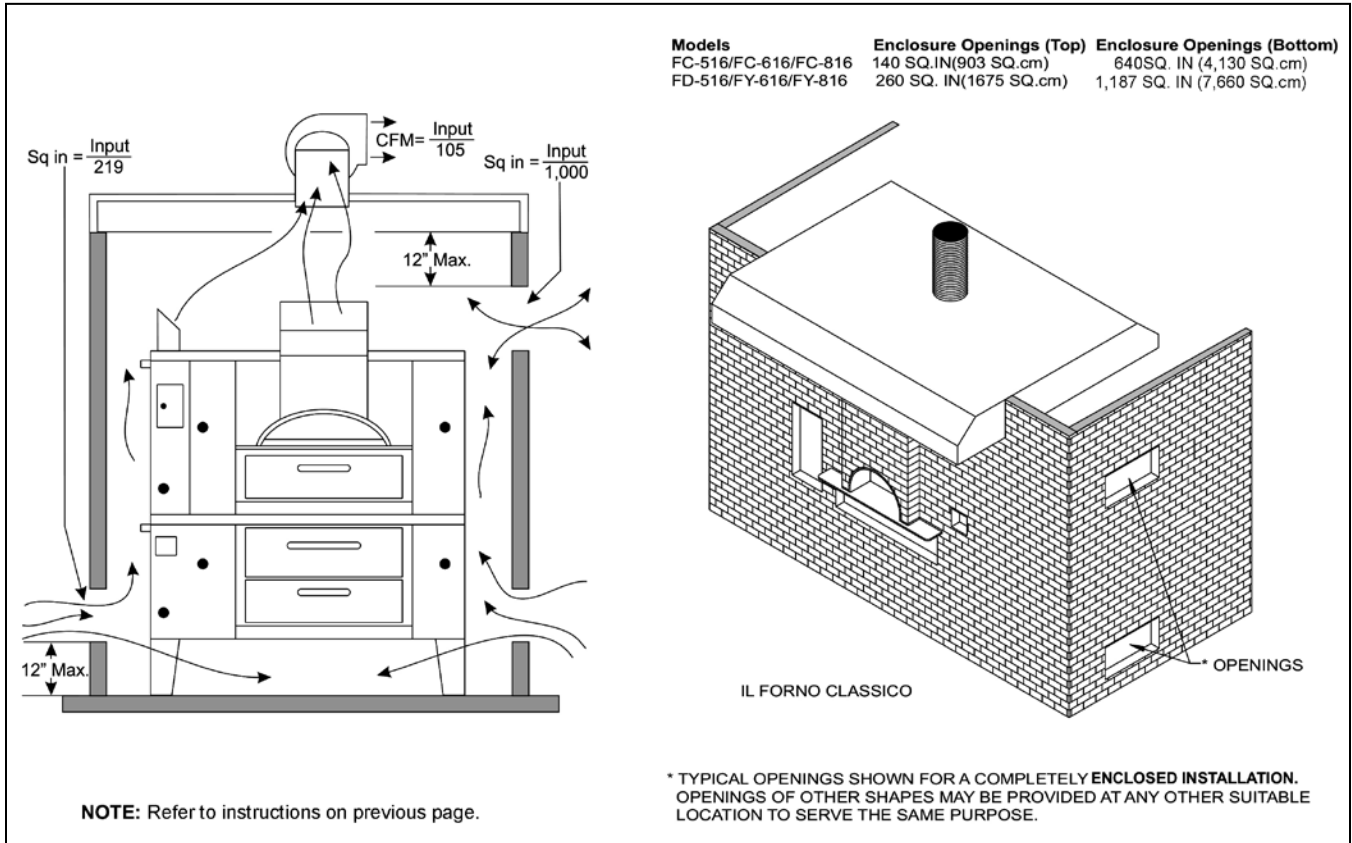


Figure 10: Air Supply & Ventilation



### VENTILATION, AIR SUPPLY AND FIRE PROTECTION

All gas appliances must be ventilated. Proper air supply and ventilation is essential for effective operation. Consult NFPA (National Fire Protection Association) standard number 96 as well as local mechanical codes concerning ventilation requirements and potential fire extinguishing systems requirement in your area.

There are two basic methods for ventilating the IL FORNO CLASSICO; canopy style hood(s) or eye-brow style hood(s). The IL FORNO CLASSICO should not be direct vented although the lower oven in a stacked installation may be direct vented.

**Canopy Hoods:** A properly designed canopy hood will remove heat as well as bi-products of combustion and grease laden vapors. A Type II canopy is appropriate in most areas. Typically the canopy will extend beyond the footprint of the oven(s) by 4 to 6 inches (102 mm to 150 mm) and be at least 78" from the floor (1950 mm).

The distance between the grease removal device and the cooking surface shall be as great as possible but not less than 18" (458mm) and not greater than 30" (762 mm), NFPA standard #96.

**NOTE:** Minimum clearance may be reduced when using UL listed hood assemblies and installed in accordance with the terms of the listing and the manufacturer instructions. Consult NFPA standard number 96 and local codes concerning ventilation requirements and fire extinguishing system requirements.

Low velocity hoods are recommended. High velocity hoods will pull too much heat from your oven(s) baking chamber causing inconsistencies in bake/cook performance (not enough top-heat and too much bottom heat).

**Eyebrow Hoods:** Will remove bi-products of combustion, grease-laden vapors and most heat from your oven(s).

Bakers Pride offers two models of eye-brow style hoods: Model #PB-24 for single IL FORNO CLASSICO ovens and model # PB-24S for IL FORNO CLASSICO stacked on D, DS or Y-Series deck ovens.

Refer to individual specification sheets for details. Hoods are shipped loose with mounting angle for installation by food service equipment contractor.

**Exhaust Fans:** An exhaust fan is required for all ventilation types. The exhaust fan will create a vacuum thus effectively removing bi-products of combustion, grease-laden vapors and heat from your kitchen.

Exhaust fans are required and provided and installed by others in compliance with local mechanical code.

Low-velocity fans are recommended. High volume exhaust fans will pull too much heat from your oven(s) baking chamber causing inconsistencies in bake/cook performance (not enough top-heat and too much bottom heat).

Fan sizing is determined by computing static air pressures at the hood entrance, the length of duct work (static pressure drops) and CFMs required for your particular oven(s). Contact your hood manufacturer or H.V.A.C. Contractor for specifications.

**Air Supply:** Exhausted and make-up air must be properly balanced for your exhaust system and oven(s) to work properly. For proper balance contact your local H.V.A.C. contractor.

Gas burners and pilot lights require sufficient air to operate properly. Do not place objects over the oven vent exits and do not obstruct airflow to the ovens by placing objects in the rear, under or in front of your oven(s).

For minimum air-flow requirements of architecturally enclosed ovens refer to the Traditional Built-in section of this manual.

Make-up air must be supplied for replacement of air exhausted through all kitchen exhaust systems. Make-up air should be delivered through registers at ceiling height and distributed throughout the kitchen. 75% to 80% of replacement air should be fresh, outside air, conditioned (heated or cooled) distributed directly into the kitchen with the remaining 20% to 25% allowed to flow into the kitchen from adjacent areas.

Fire Protection: Contact your local fire officials and refer to local mechanical codes for exact requirements in your area.

NFPA Standard No. 96 requires a fire extinguisher system for protection of the duct collar and plenum of non-water wash ventilators.

**VENTILATION, AIR SUPPLY AND FIRE PROTECTION**

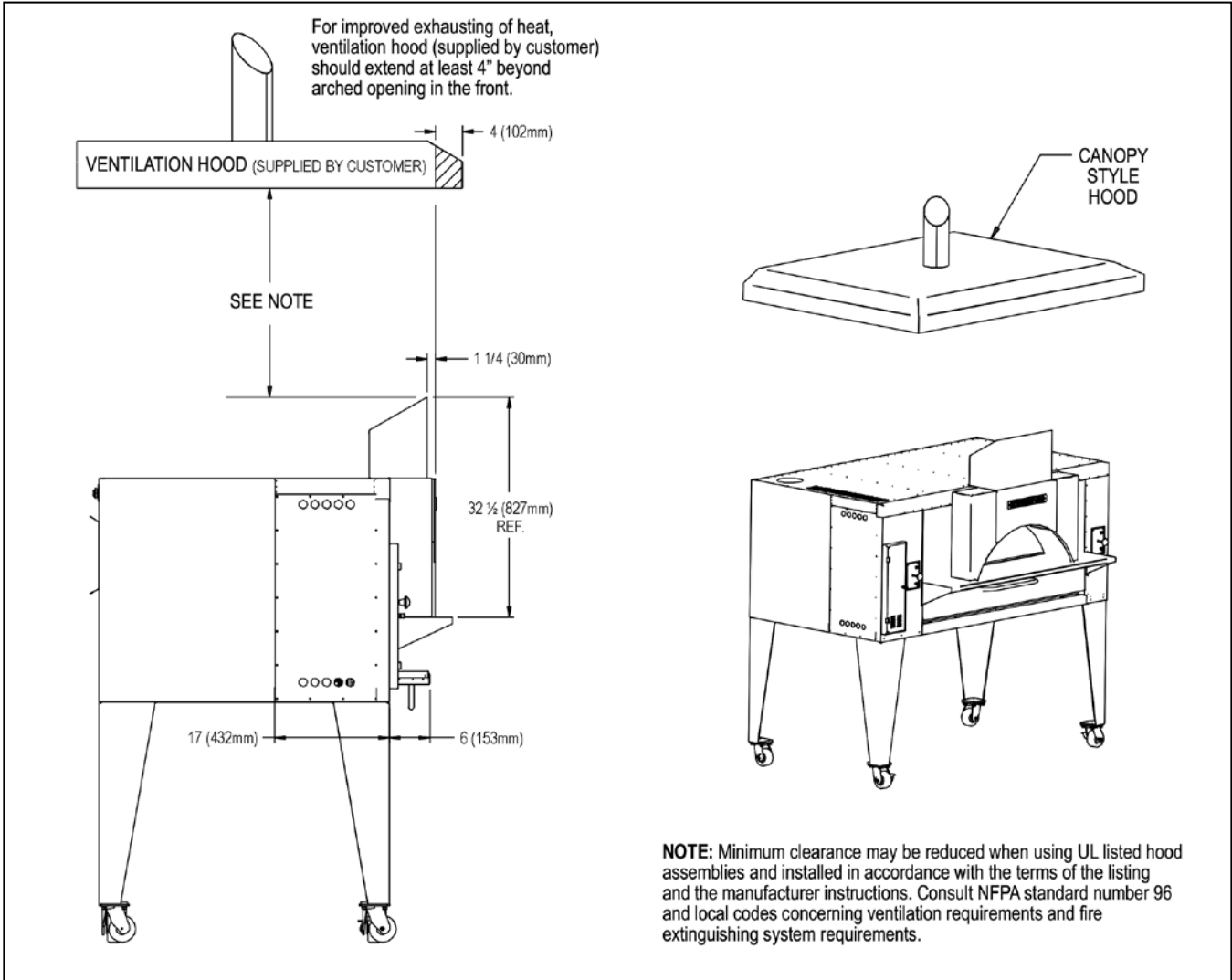


Figure 11: Air Supply & Ventilation (Canopy Style Hood)

**VENTILATION, AIR SUPPLY AND FIRE PROTECTION**

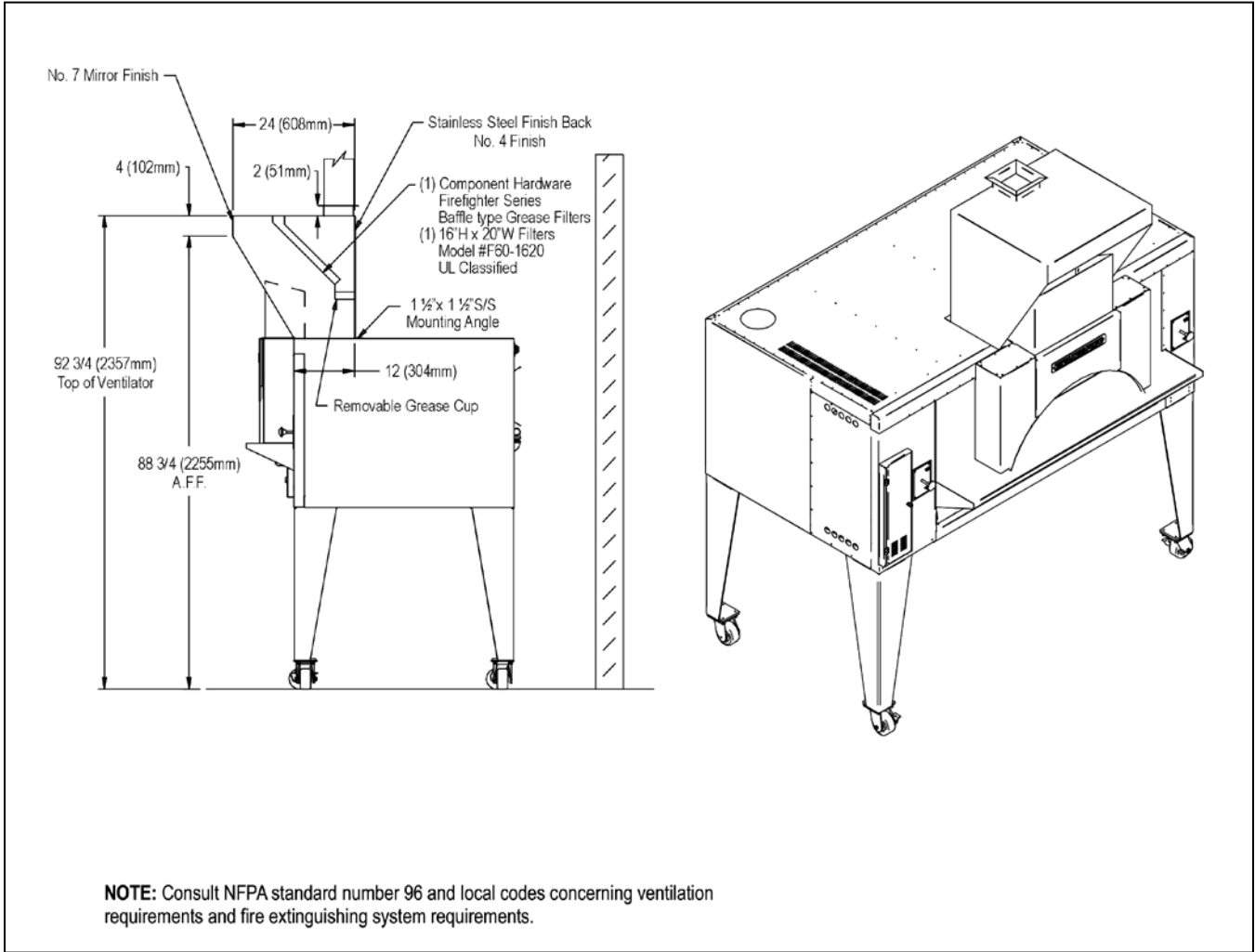


Figure 12: Air Supply & Ventilation (Model PB-24 Eye-Brow Hood)

**VENTILATION, AIR SUPPLY AND FIRE PROTECTION**

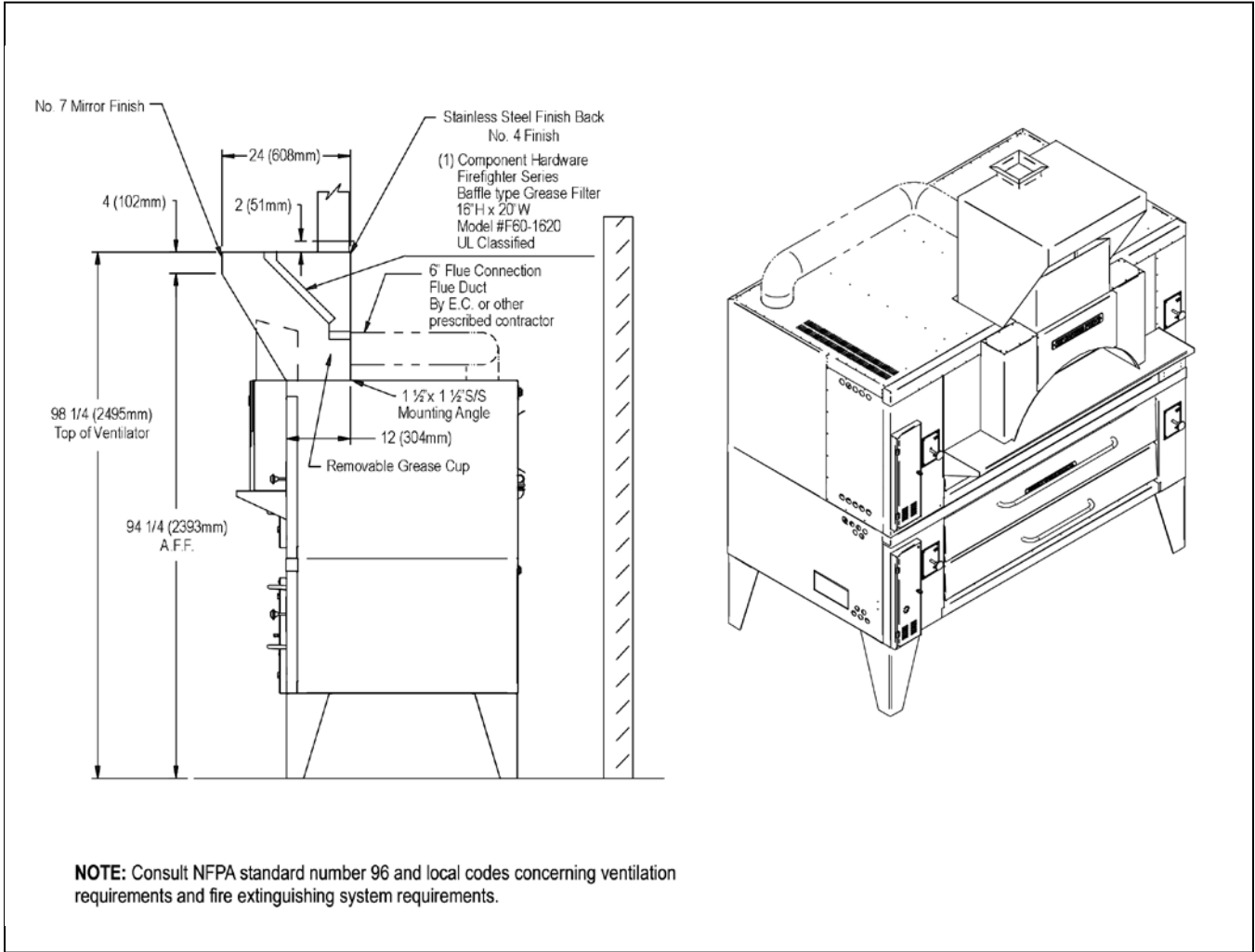


Figure 13: Air Supply & Ventilation (Model PB-24S Eye-Brow Hood)

**SINGLE OVENS WITH FRONT MOUNTED CONTROLS**

When building your facade, provisions must be made for accessing the following: (see sketch 14, page 20)

**Front:**

1. Hinged control access panel
2. Push-pull rods (2)
3. Arched opening and lintel plate
4. Combustion chamber door

**Left Side:**

1. Side service access panel (optional & recommended). Access to this panel eases potential service access to the valve, booster burner control, booster burner ignition module and thermostat. However all components maybe accessed though front hinged controls access panel (difficult).

**Rear:**

1. Rear booster burner, flame sensor and igniter
  - Provision should be considered for potential service of these components. Following are 3 options:
  - A. Rear access panel (recommended).
  - B. Hinged or removable panel on the front of the facade to allow the removal of flue cover and inserts. This provides greater access for a technician to service these components through the front of the oven (see drawing below).
  - C. Through the arched bake chamber entrance (difficult).
2. Electrical connection
3. Gas connection
4. Minimum clearance for ServiceTechnician and/or for safe operation

**Ventilation, Air Supply And Fire Protection:**

See instructions on pages 14-19.

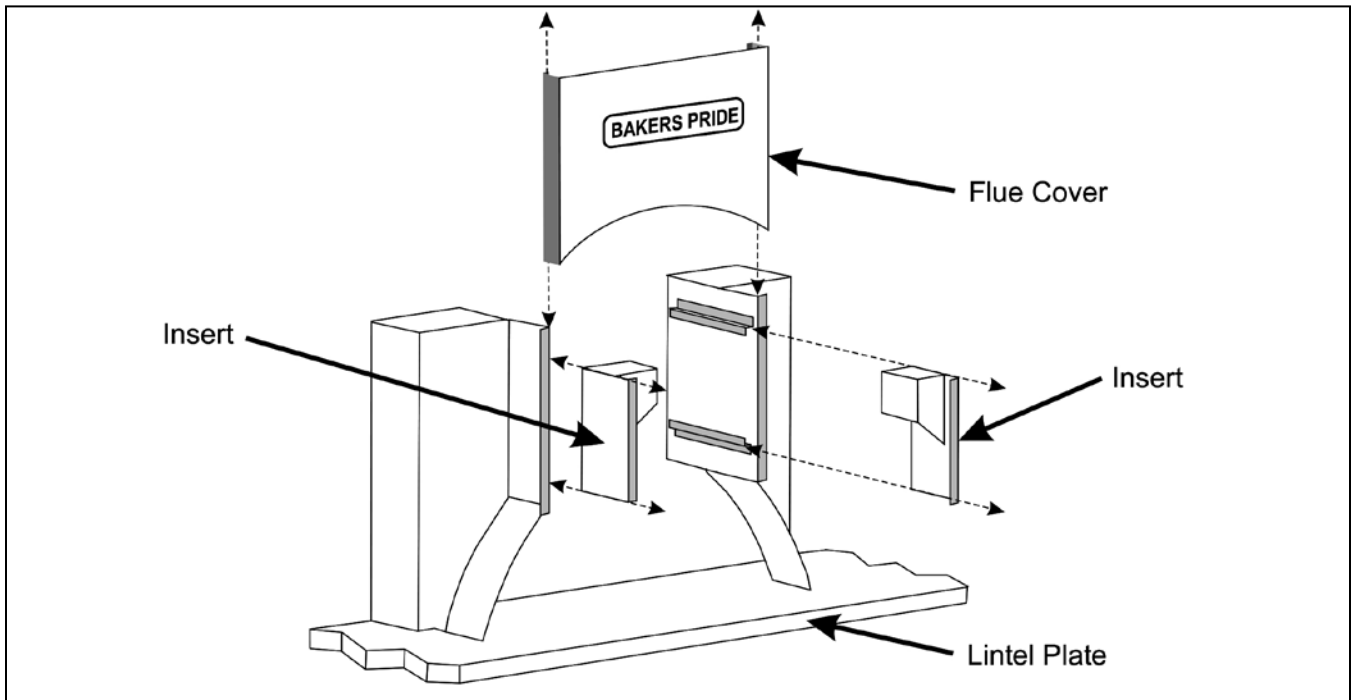


Figure 13B: Option “B” Access To Booster Burner

SINGLE OVENS WITH FRONT MOUNTED CONTROLS

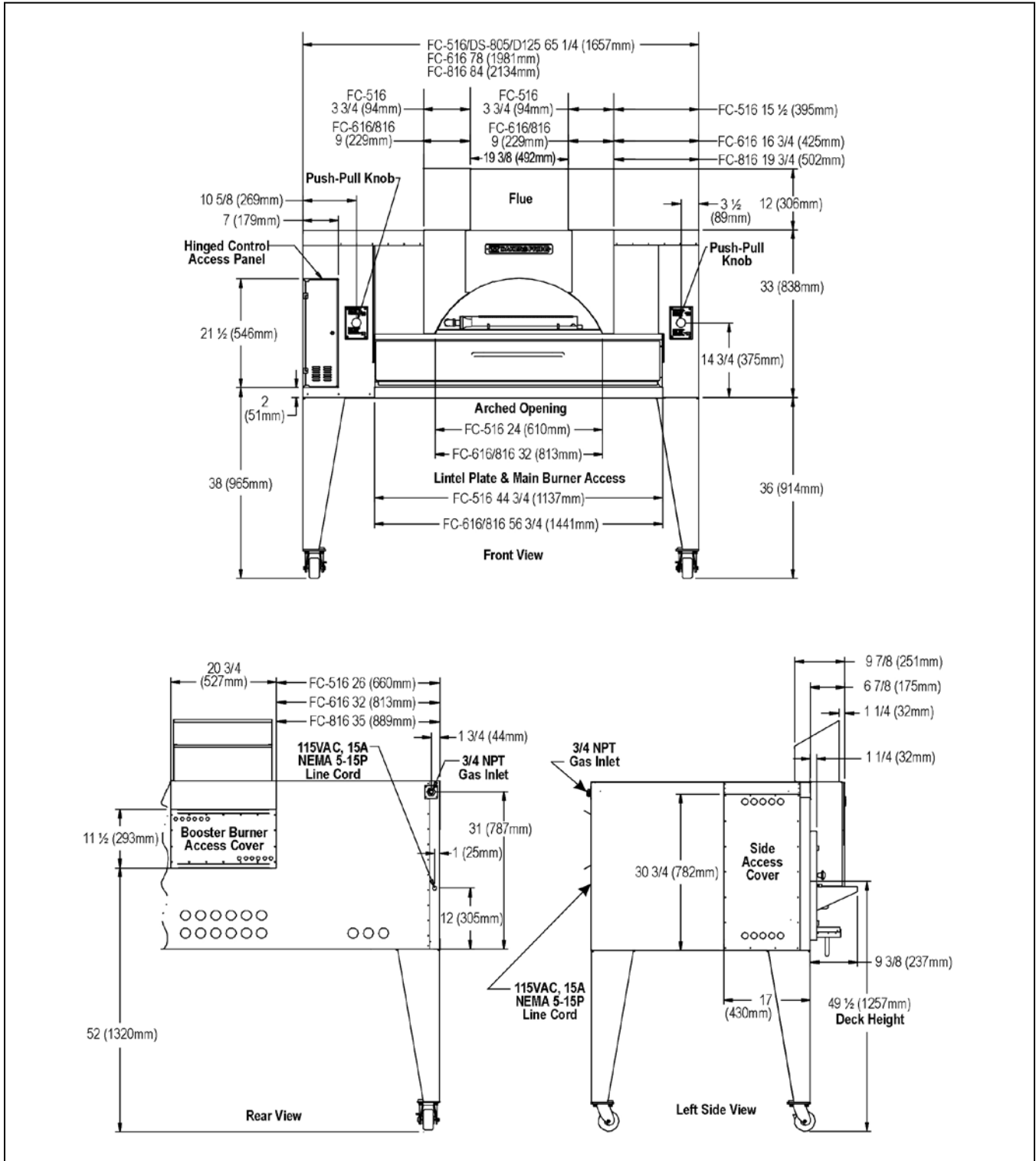


Figure 14: Single Unit (With Front Mounted Controls)

## SINGLE OVENS WITH SIDE MOUNTED CONTROLS

When building your facade, provisions must be made for accessing the following: (see sketch 15, page 23)

### Front:

1. Push-pull rods (2)
2. Arched opening and lintel plate
3. Combustion chamber door

### Left Side:

1. Hinged control access panel
2. Side service access panel (optional). Access to this panel eases potential service access to the valve, booster burner control, booster burner ignition module and thermostat, however all components maybe accessed though the side mounted hinged controls access panel.

### Rear:

1. Rear booster burner, flame sensor and igniter - Provision should be considered for potential service of these components. Following are 3 options:
  - A. Rear access panel (recommended).
  - B. Hinged or removable panel on the front of the facade to allow the removal of flue cover and inserts. This provides greater access for a technician to service these components through the front of the oven (see drawing below).
  - C. Through the arched bake chamber entrance (difficult).
2. Electrical connection
3. Gas connection
4. Minimum clearance for Service Technician and/or for safe operation

### Ventilation, Air Supply And Fire Protection:

See instructions on pages 14-19.

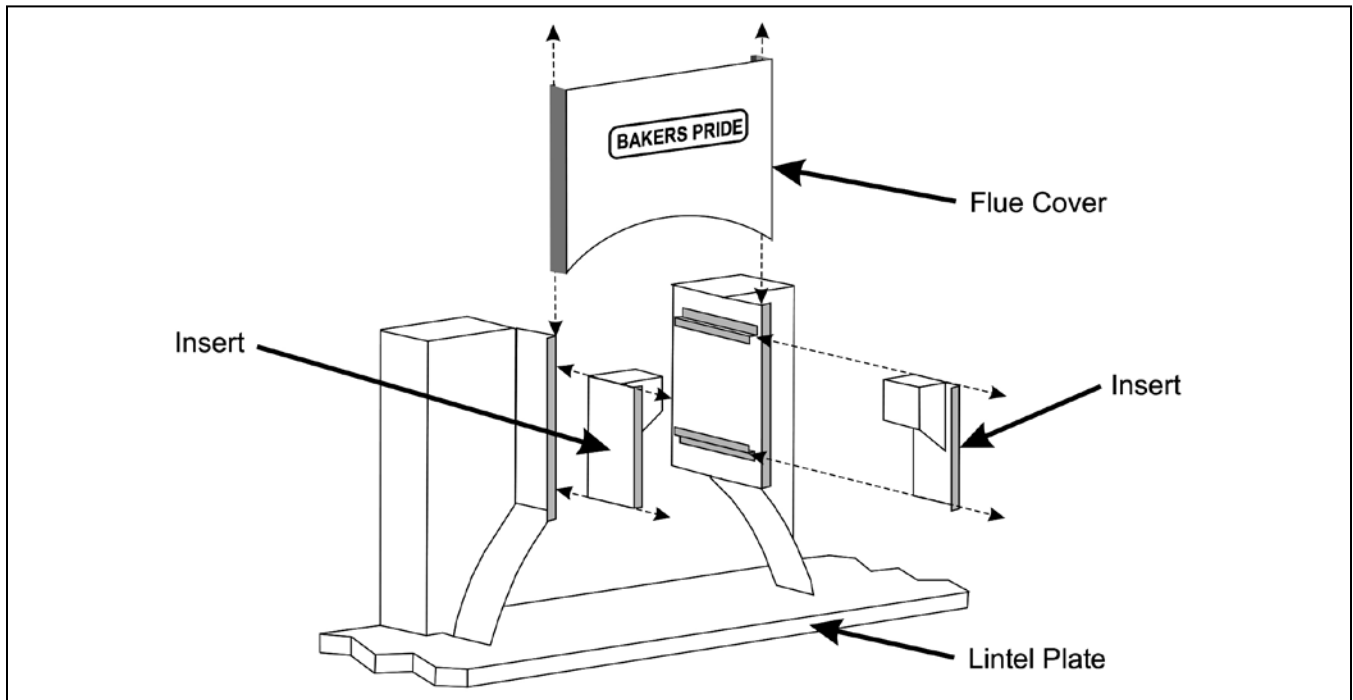


Figure 14B: Option "B" Access To Booster Burner



SINGLE OVENS WITH SIDE MOUNTED CONTROLS

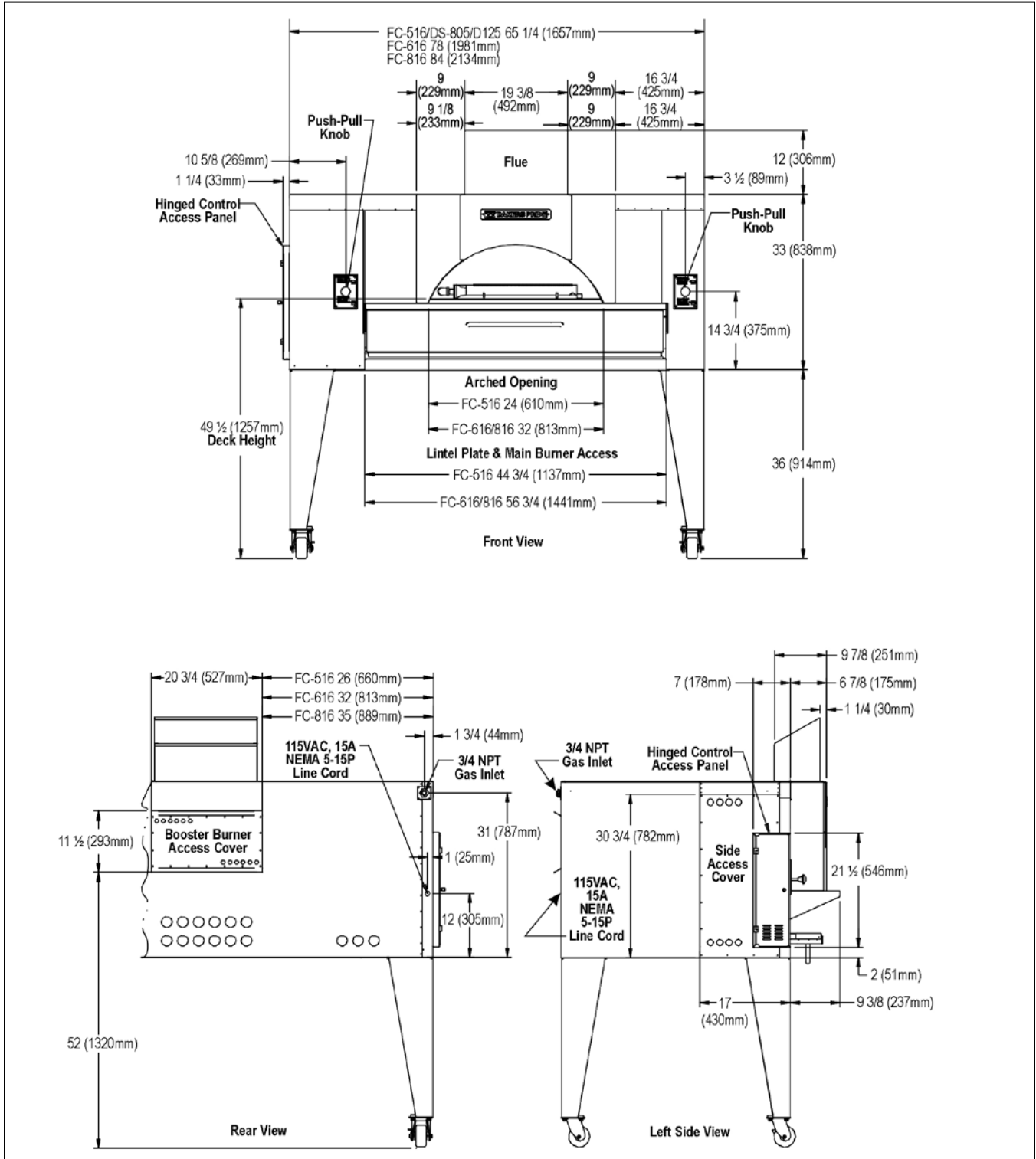


Figure 15: Single Unit (With Side Mounted Controls)

## DOUBLE OVENS WITH FRONT MOUNTED CONTROLS

When building your facade, provisions must be made for accessing the following: (see sketch 16, page 25)

### Front:

1. Hinged control access panels (one per oven)
2. Push-pull rods (two per oven)
3. Arched opening and lintel plate IL Forno only
4. Bake chamber door on lower oven
5. Combustion chamber doors both ovens

### Left Side:

1. Side service access panels (optional & recommended). Access to this panel eases potential service access to the valve, booster burner control, booster burner ignition module and thermostat, however all components may be accessed through the front hinged control access panels (difficult).

### Rear:

1. Rear booster burner, flame sensor and igniter - Provision should be considered for potential service of these components. Following are 3 options:
  - A. Rear access panel (recommended).
  - B. Hinged or removable panel on the front of the facade to allow the removal of flue cover and inserts. This provides greater access for a technician to service these components through the front of the oven (see drawing below).
  - C. Through the arched bake chamber entrance (difficult).
2. Electrical connection- IL Forno only
3. Gas connections - Each oven has a separate gas connection
4. Minimum clearance for Service Technician and/or for safe operation

### Ventilation, Air Supply And Fire Protection:

See instructions on pages 14-19.

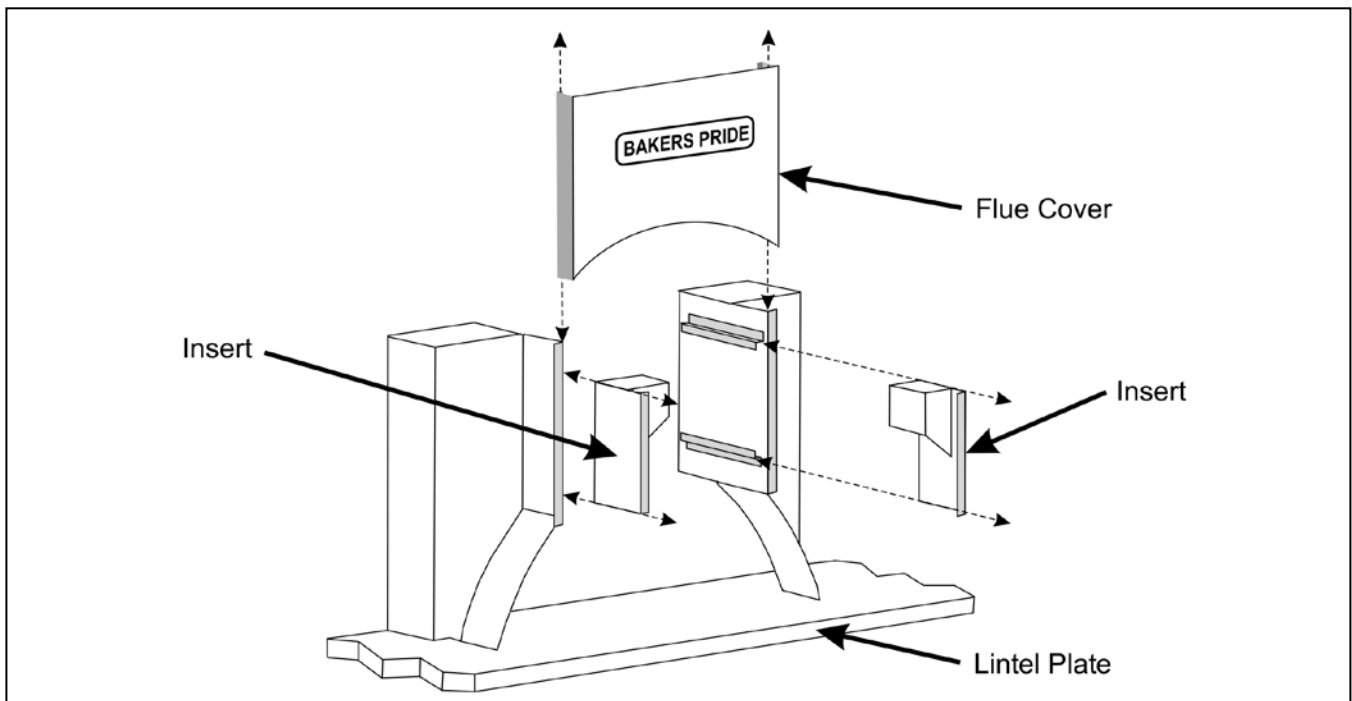


Figure 15B: Option "B" Access To Booster Burner

**DOUBLE OVENS WITH FRONT MOUNTED CONTROLS**

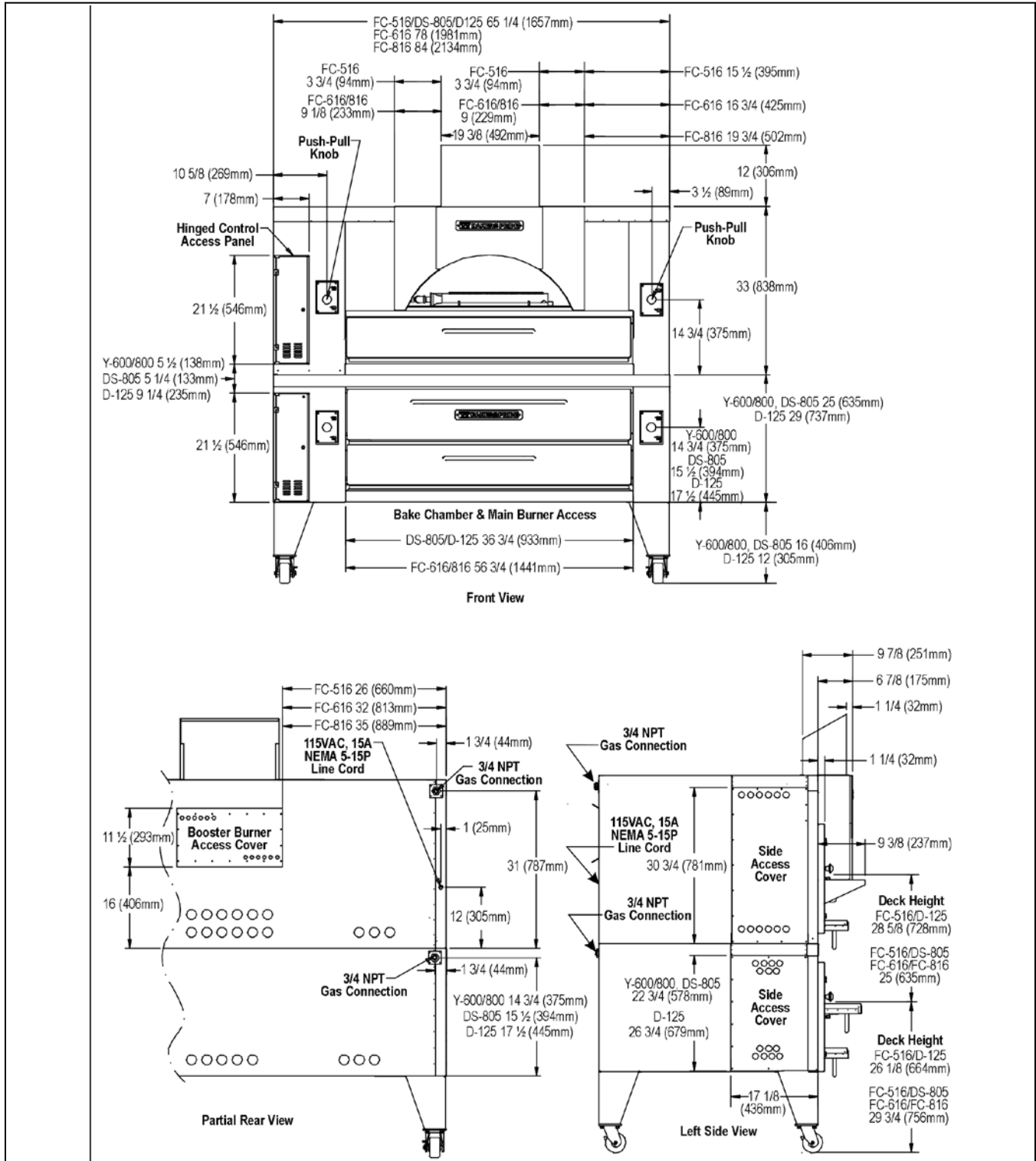


Figure 16: Double Unit (With Front Mounted Controls)

## DOUBLE OVENS WITH SIDE MOUNTED CONTROLS

When Building Your Facade, Provisions Must Be Made For Accessing The Following: (See Sketch 17, Page 27)

### Front:

1. Push-pull rods (two per oven)
2. Arched opening and lintel plate IL Forno only
3. Bake chamber door on lower oven
4. Combustion chamber doors both ovens

### Left Side:

1. Hinged control access panels (one per oven)
2. Side service access panel (optional). Access to this panel eases potential service access to the valve, booster burner control, booster burner ignition module and thermostat, however all components maybe accessed though the side mounted hinged controls access panels.

### Rear:

1. Rear booster burner, flame sensor and igniter - Provision should be considered for potential service of these components. Following are 3 options:
  - A. Rear access panel (recommended).
  - B. Hinged or removable panel on the front of the facade to allow the removal of flue cover and inserts. This provides greater access for a technician to service these components through the front of the oven (see drawing below).
  - C. Through the arched bake chamber entrance (difficult).
2. Electrical connection- IL Forno only
3. Gas connections - Each oven has a separate gas connection
4. Minimum clearance for Service Technician and/or for safe operation

### Ventilation, Air Supply And Fire Protection:

See instructions on pages 14-19.

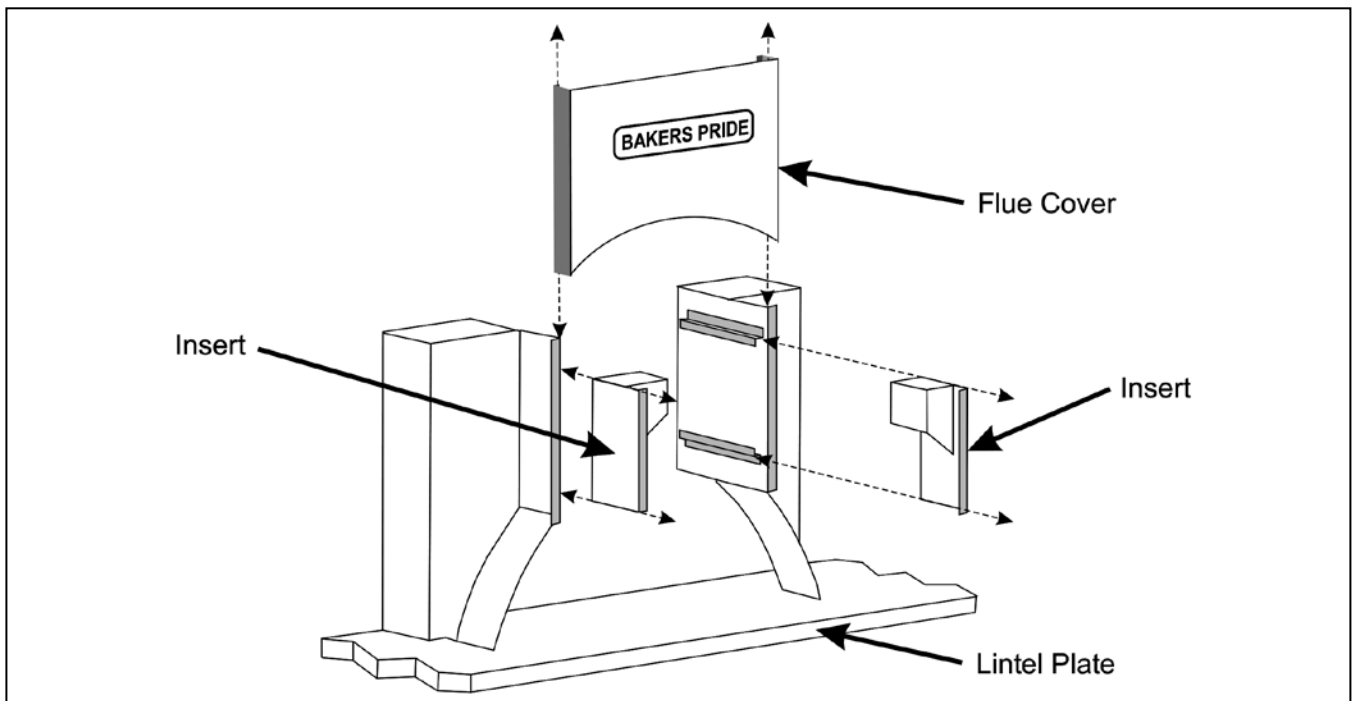


Figure 16B: Option "B" Access To Booster Burner

**DOUBLE OVENS WITH SIDE MOUNTED CONTROLS**

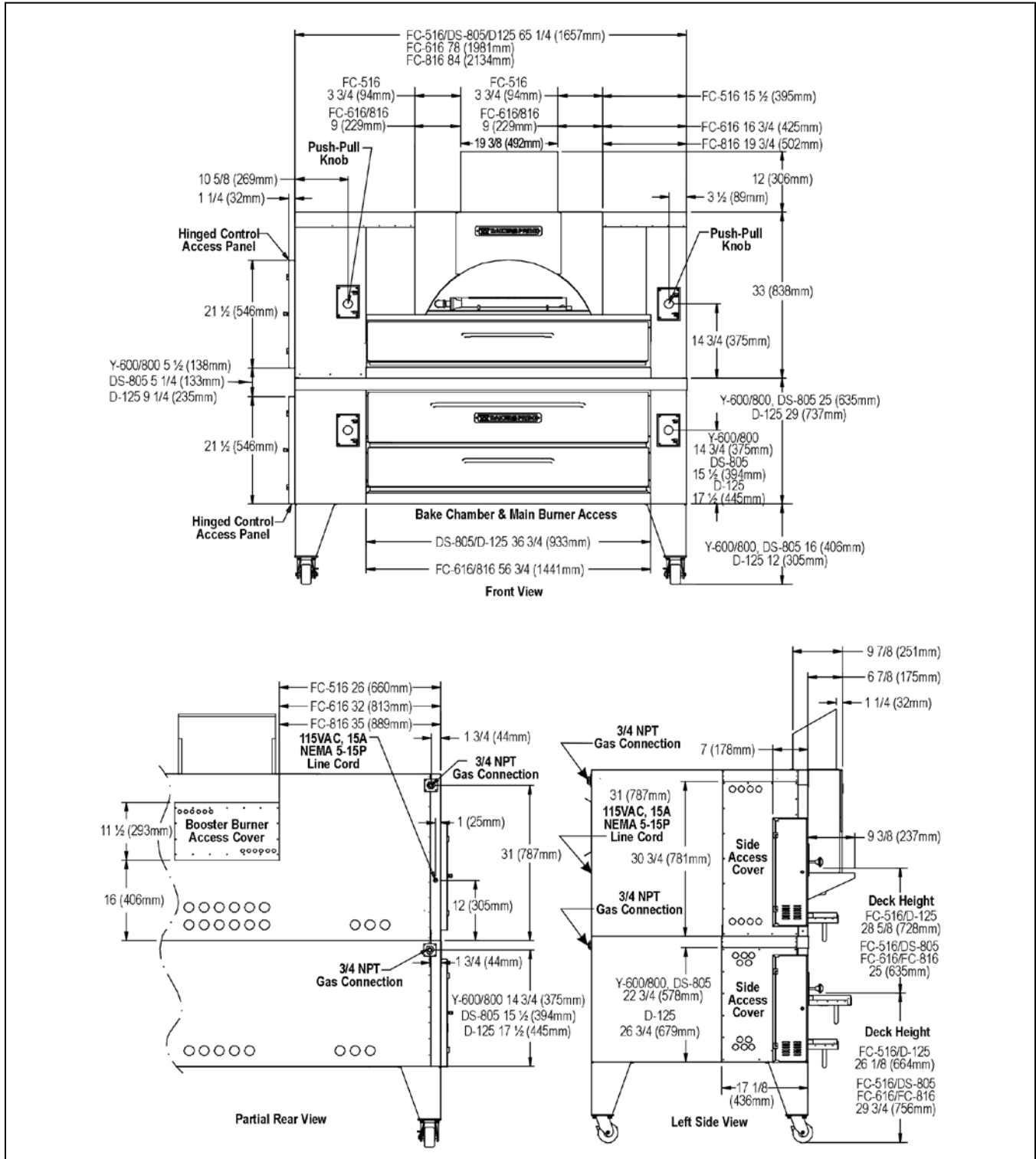


Figure 17: Double Unit (With Side Mounted Controls)

**RECOMMENDED CLEARANCES (ALL MODELS)**

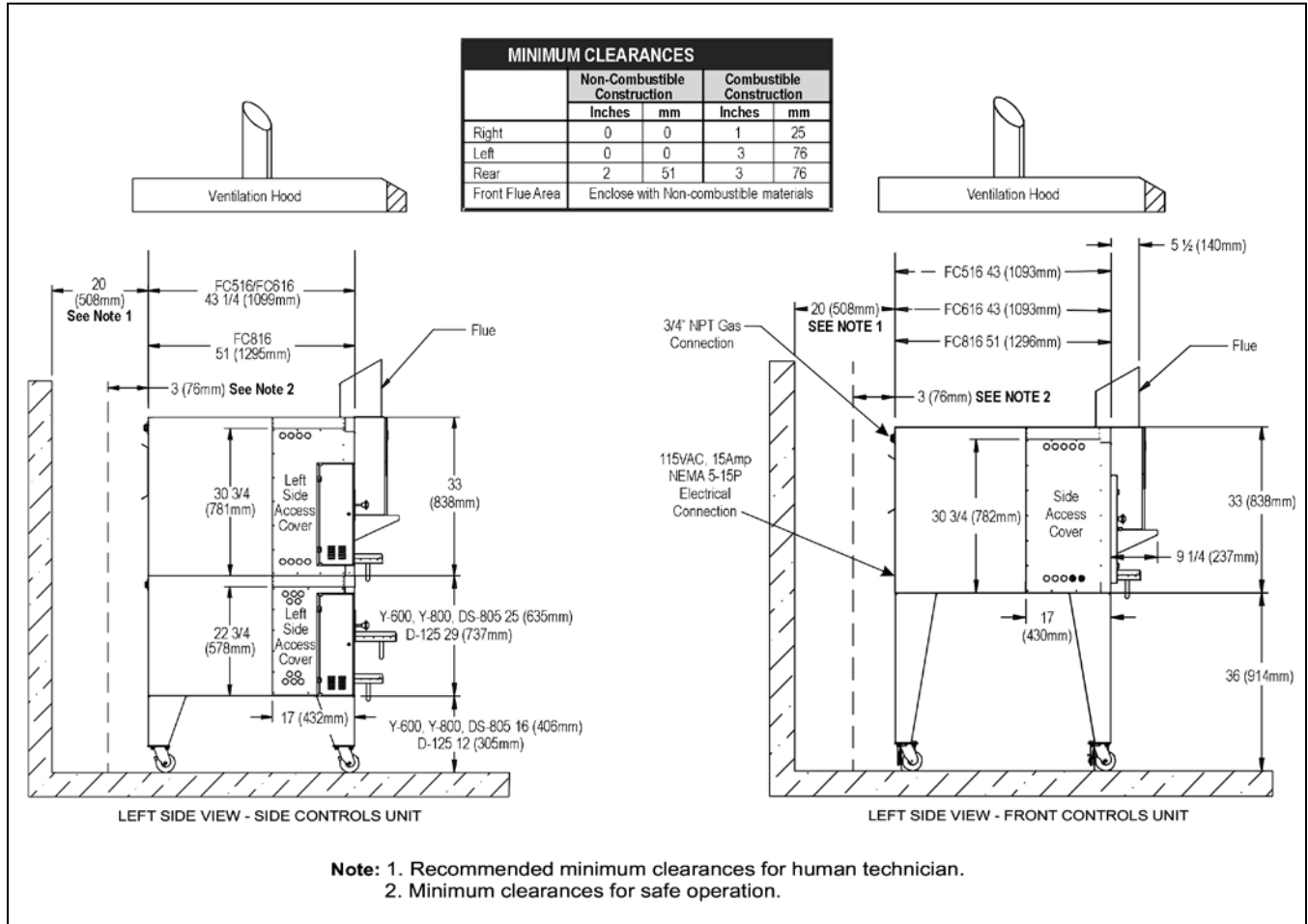


Figure 18: Recommended Clearances (All Models)







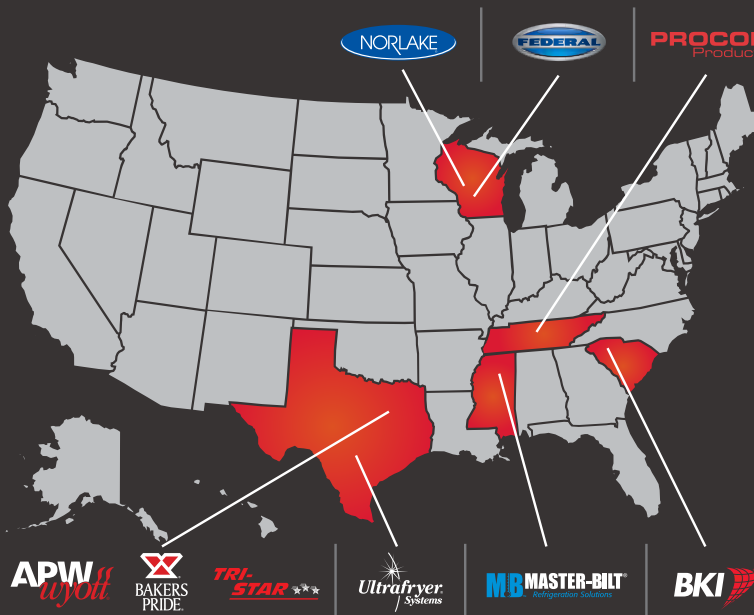


# Standex

Food Service Equipment Group

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