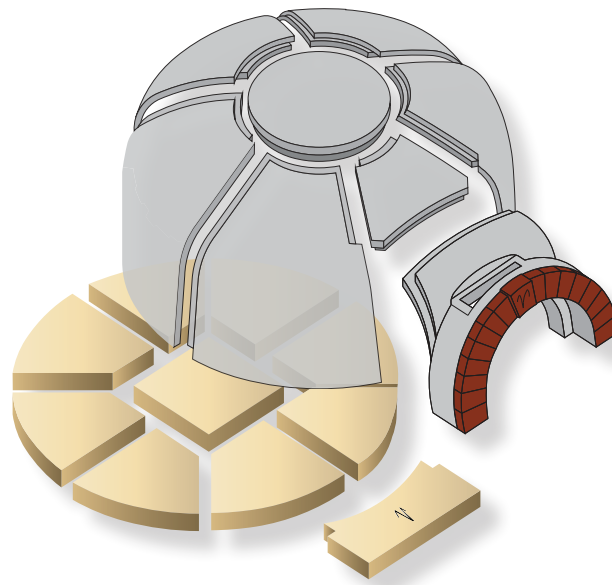


COMMERCIAL 120 ASSEMBLY ON SITE/ MASONRY CONSTRUCTION MANUAL ITALIAN WOOD-FIRED OVEN



Includes: Venting and Oven Curing Instructions

Mugnaini Commercial Wood-Fired Ovens have been tested to:

UL 737-2007 ♦ UL 2162-2001



NSF-4 Sanitation Standards ♦ CAN/ULC S627-M93



**A MAJOR CAUSE OF OVEN-RELATED FIRES IS FAILURE TO MAINTAIN
REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS.
IT IS OF UTMOST IMPORTANCE THAT THIS OVEN BE INSTALLED ONLY
IN ACCORDANCE WITH THESE INSTRUCTIONS.**

READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING THIS OVEN

THIS MANUAL COVERS THE FOLLOWING MASONRY ASSEMBLED SERIES MODELS:
120 AOS

FOR USE WITH SOLID WOOD FUEL ONLY

WARNING

WHEN THIS OVEN IS NOT PROPERLY INSTALLED, A FIRE MAY RESULT. TO REDUCE THE RISK OF FIRE, FOLLOW THE INSTALLATION INSTRUCTIONS. PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL THE OVEN. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY AND EVEN DEATH.

WARNING

DO NOT PACK THE REQUIRED 1" AIR SPACES WITH INSULATION OR OTHER MATERIAL.

INSTALLATION OF THE EXHAUST VENT SHALL BE IN ACCORDANCE WITH THE STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS, NFPA96.

SEEK OUT QUALIFIED INSTALLERS IN YOUR AREA AND OBTAIN THE PROPER PERMITS.

CONTACT LOCAL BUILDING OR FIRE OFFICIALS CONCERNING ANY INSTALLATION RESTRICTIONS OR NEED FOR INSPECTION OF THE INSTALLATION.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCES.

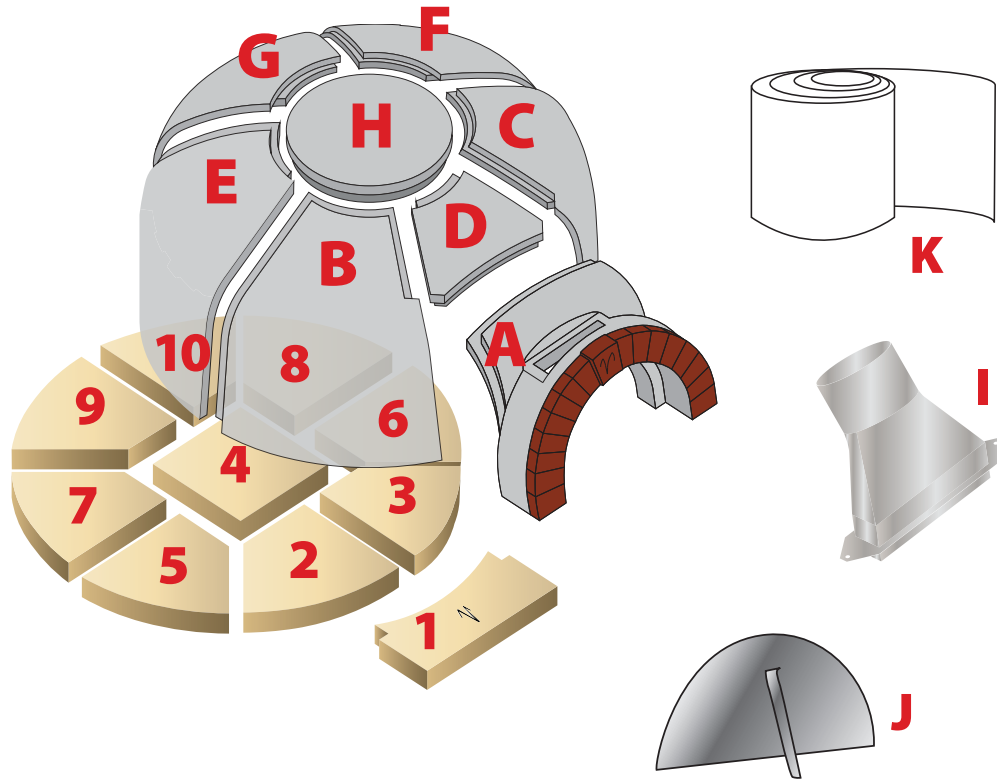
SAVE THESE INSTRUCTIONS FOR FUTURE USE

TABLE OF CONTENTS

1. INTRODUCTION	
Package Contents and Dimensions	4
2. CONSTRUCTING THE OVEN BASE	
Materials List and Step-by-Step Instructions.....	5
3. OVEN ASSEMBLY	
Materials List	7
Step 1 – Floor Layout.....	7
Step 2 – Mortaring The Floor	7
Step 3 – Crown Assembly	8
Step 4 – Mortaring Crown Base	9
Step 5 – Mortaring Crown Joints	9
Step 6 – Installing Flue Manifold	10
Step 7 – Insulation	10
Step 8 – Oven Venting	11
4. ENCLOSING THE OVEN	
Diagrams	12
Gable Shaped Enclosure	13
Dome Shaped Enclosure	15
5. OVEN VENTING INSTRUCTIONS	
Overview	18
Conditions of Acceptability.....	18
Recommended Chimney Pipe.....	19
Elbow Offset Chart	20
Precautions.....	21
6. CURING A WOOD-FIRED OVEN	22
Instructions.....	23
Selecting The Proper Wood For Your Oven	23
Fire Starting Tools	23
Using The Door.....	24
How to Measure Oven Temperature	24
Starting a Fire.....	25
Curing The Oven	25
Curing Schedule	29
6. LIMITED WARRANTY	30

INTRODUCTION

The following is intended to be used as a general reference for the installation of the Mugnaini Commercial 120 wood-burning oven, and more specifically for those individuals (like yourself, your architect, or your contractor) who will be involved with the design and the construction of your oven.



Package Contents Check List

- ☐ Oven Crown Elements (**Items A–H**)
- ☐ Metal Flue Manifold with Screws (**Item I**)
- ☐ Removable Iron Door (**Item J**)
- ☐ Thermal Insulating Blanket (**Item K**)
- ☐ Floor Elements (**Items 1–10**)

Dimensions: W 120

Exterior:

- Crown Width: **54"**
- Crown Length: **56"**
- Crown Height: **23"**
- Arch width: **32"**

Interior:

- Cooking Floor: **48" W x 52" L**
- Arch Opening: **22" W x 11" H**

CONSTRUCTING THE OVEN BASE

Oven Base Materials List Using 6" CMU Block

- ☐ 6 Sack Concrete
 - Foundation ~ 1 yd.
 - 1st Load Bearing Floor ~ 5/8 yd.
 - Final Elevated Slab ~ 1/2 yd.
- ☐ #4 Rebar ~ 180 LF
- ☐ 6" CMU Block ~ 56 blocks
- ☐ Sand ~ 5/8 yd.
- ☐ 6"x6" – 10/10 WWF ~ 34 sq. ft.
- ☐ Construction Paper (**free of oil, tar, or resins**) ~ 34 sq. ft.

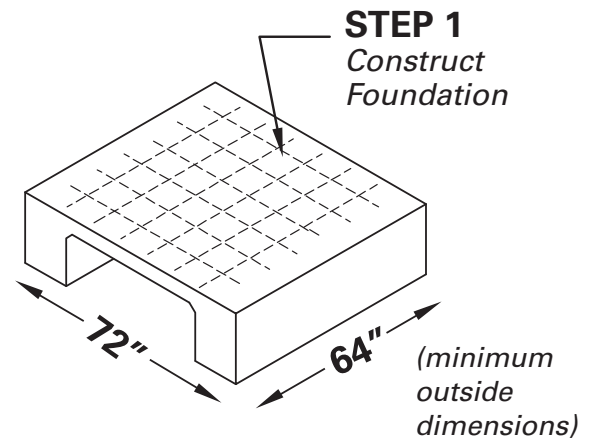
STOP

Before you begin construction, determine your finished oven floor height. Oven floor height should be about users elbow height.

INSTRUCTIONS

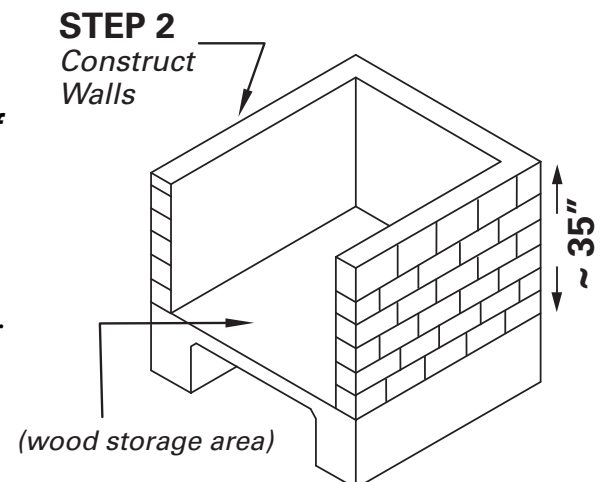
STEP 1

Construct 6" min. reinforced concrete foundation on top of 6" aggregate base and 95% compacted native soil. (See Step 1 for a typical cross section.) Footing dimensions are 12" x 12".



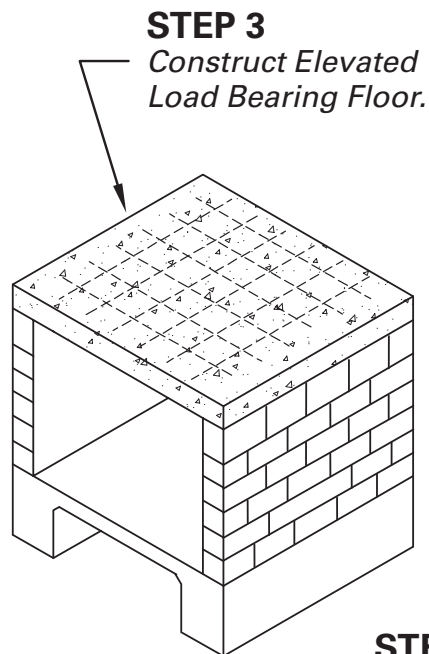
STEP 2

Construct 2 side walls and 1 back wall using 6" concrete blocks (or other) with #4 rebar at 16" o.c. The height for this first block layer is typically 35". **Note that the stated height of the base has been formulated for use by individuals 5'6" to 5'9" in height. If elevation adjustments are desired, modify the height of the lower base only (the wood storage area).** Contractor to verify height of final installation with the owner.



STEP 3

Place #4 rebar 12" o.c., each way, 2" above CMU block and pour a leveled 4" concrete slab.

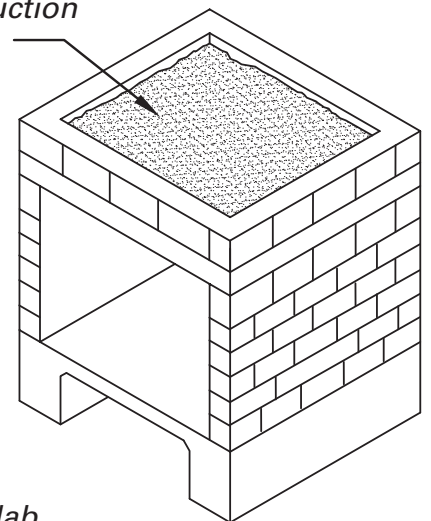


STEP 4

Install/extend 6" or 8" concrete block around perimeter of load bearing floor to a height ~ 8"). Fill with 4" of dry sand. Cover dry sand with [Brown Rosin Paper](#) (free of oil, tar or resins) or similar product (NO PLASTIC!) as moisture barrier. **Before progressing to step 5 determine desired length and depth of extended shelf — may extend beyond minimum of 10" deep x 32 ½" wide.**

STEP 4

Construct Additional Block Layer. Fill with Sand and Cover with Construction Paper.

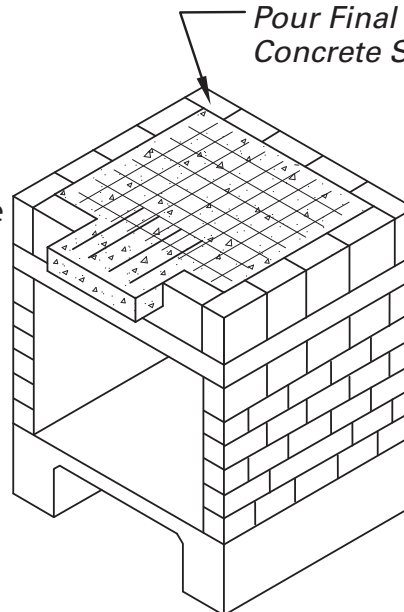


STEP 5

Notch front row of block. Place 6"x6" – 10/10 welded wire fabric (1" above sand using wire dobies) and place #4 rebar for a front shelf 10" deep x 32 ½" wide (minimum--wider if preferred) as support for shelf. Pour a leveled 3" concrete slab on top of the rosin paper and sand base. Once cured, go to Section 3 — Oven Assembly.

STEP 5

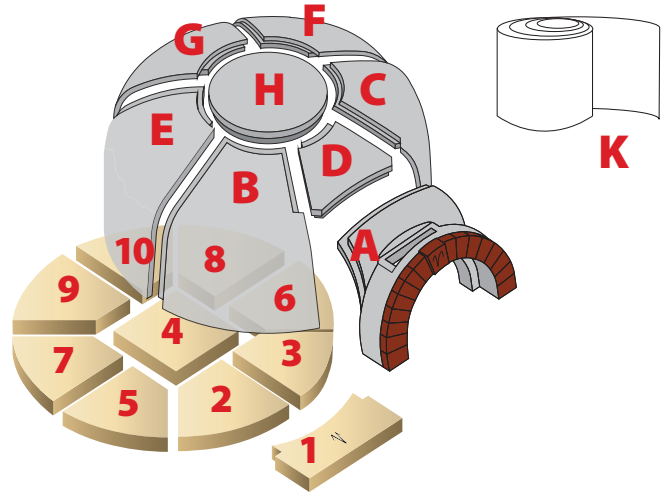
Pour Final Concrete Slab



OVEN ASSEMBLY

Materials List

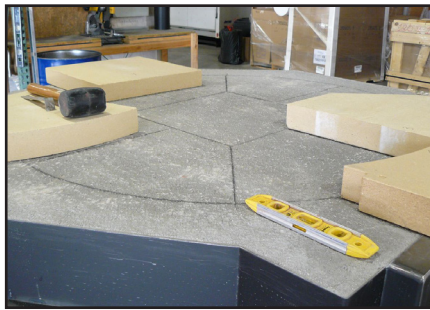
- ☐ Refractory Mortar
 - 1 - 80lb. bag dry
 - or 1 - 75lb. bucket, pre-mixed
 - Final Elevated Slab ~ ½ yd.
- ☐ Perlite
 - 8 bags (32 cubic ft. total)



INSTRUCTIONS

STEP 1 – FLOOR LAYOUT

Lay out floor elements (**Items 1 thru 10**) onto the concrete slab to establish the center point. Next, using a pencil, mark an outline of the pre-assembled floor on the concrete slab for easy assembly.



STEP 2 – MORTARING THE FLOOR

Using **refractory** mortar, place each floor element in the following succession (**Item 1 thru 10**). Floor pieces should fit together as snug as possible.

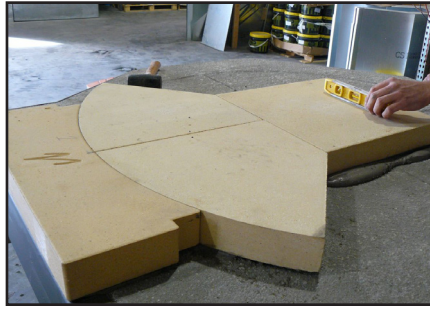
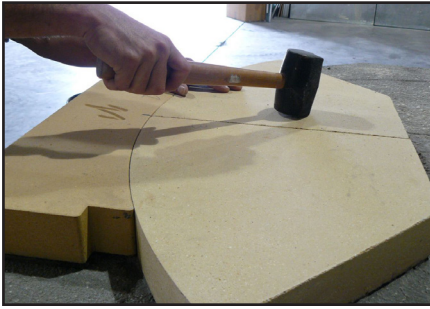
Note: Due to the handmade characteristics of this product, a 1/8" gap may exist between floor elements.

DO NOT mortar or grout in between the floor element joints.

The natural gap between floor elements is designed to allow for thermal expansion.



STEP 2 – MORTARING THE FLOOR continued



STEP 3 – CROWN ASSEMBLY

First, place and interconnect the crown elements (**Items A and H**) around the floor elements.

(Item B and C must slide into item A). All other items overlap each other. You may use a small pry bar at base to manipulate into place the dome pieces on the exterior of the dome.

DO NOT place mortar in the crown element joints.

A small gap of roughly $\frac{1}{4}$ " – $\frac{1}{2}$ " will also exist between the oven floor and crown elements.



STEP 4 – MORTARING CROWN BASE

Wet sponge joints. Apply **refractory** mortar to the outside base of crown elements. (Approximately 3" wide x 1/2" thick over the outside perimeter).



STEP 5 – MORTARING CROWN JOINTS

Wet sponge joints. Apply **refractory** mortar over the joints. (Approximately 4" wide x 1/2" thick over each joint). **Do not allow mortar to enter joints.**



STEP 6 – INSTALLING THE FLUE MANIFOLD

Place flue manifold on arch and mark for screws. Drill 2 holes with masonry bit (1/8" w – 1 1/4" d). Attach flue manifold with provided screws. Mortar base of metal manifold (1/2" – 2").

Note: Ensure the flue manifold is level on top of crown elements.



STEP 7 – INSULATION

Cover the entire oven with 2-layers of 1" or 1-layer of 2" Thermal Insulation Blanket (**Item K**).



STEP 7 – INSULATION continued



STEP 8 – OVEN VENTING

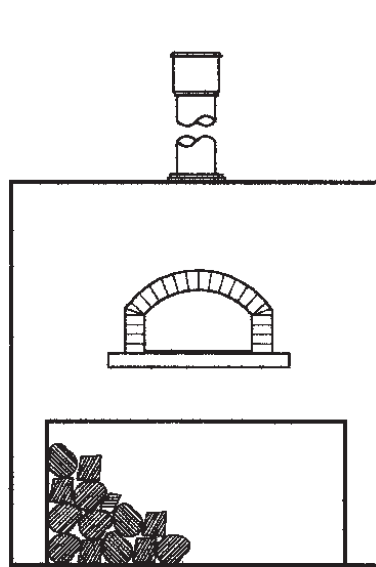
Based on the overall oven design and architecture, each chimney system will vary. Contact your local licensed chimney or mechanical contractor. See pg. 18 for “Oven Venting Instructions”.



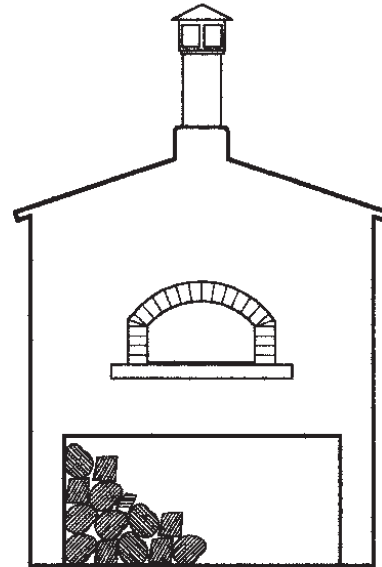
ENCLOSING THE OVEN

Your Mugnaini Oven is now ready for the final step of the construction process – which relies entirely on your level of creativity and desired architectural effect. The oven enclosure protects the oven from atmospheric moisture, supplies ventilation to the oven (so that condensation does not occur within the compartment), and retains the insulating materials placed over and around the oven crown itself.

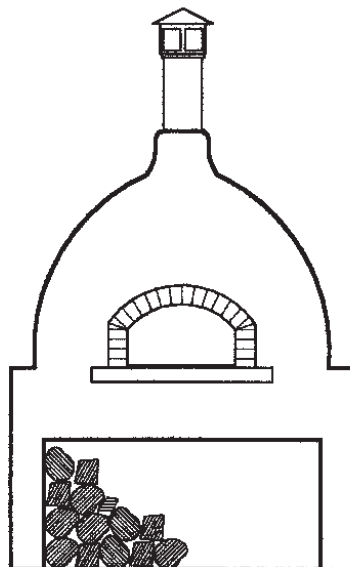
Chimney pipe length will vary depending on oven enclosure design. Consider this when determining your oven roof height. See page 19 & 20 for chimney pipe information.



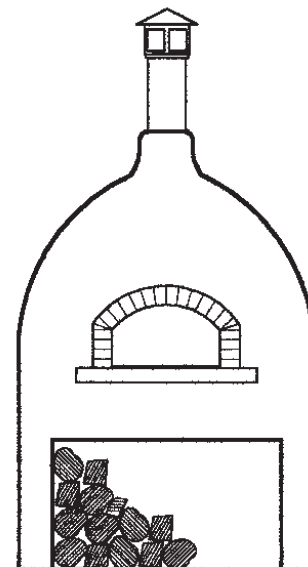
BUILT IN



GABLE



DOM - WIDE



DOM - NORMAL

GABLE SHAPED ENCLOSURE

Example

STEP 1

Using 6" concrete blocks, build enclosure walls around the oven at the perimeter of the concrete slab to a **minimum height of 35"**.

STEP 2

Setting Anchor Bolts: Before the grout sets on the top coarse of concrete blocks, place ½" x 10" foundation bolts for the roof framing.

STEP 3

Once the oven enclosure walls have been completed and before the top is put in place, fill this enclosure with the specified loose Perlite 9" on top (measured from the 1" Thermal Insulation Blanket).

STEP 4

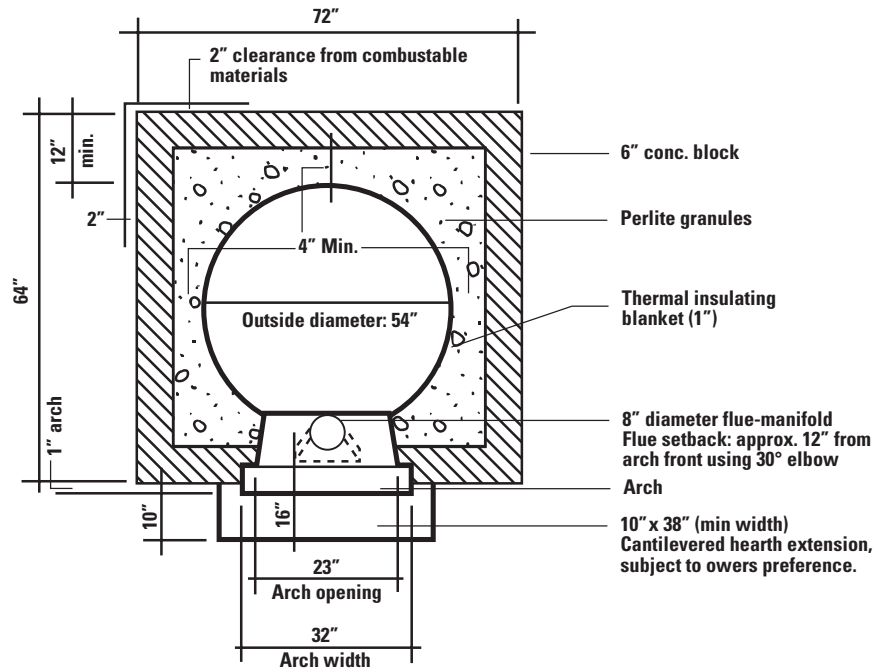
Place pressure treated 2" x 4" (P.H.T.F's) or metal studs around the top edge of the concrete blocks and attach to the foundation bolts. Build your roof rafters to the appropriate pitch for the roofing materials being used and attach ½" plywood. Place a 2" diameter metal weatherproof air vent on the back near the top of your structure. You may use nonflammable roofing materials of your choice. (e.g. Slate, Roof Tiles, Metal etc.)



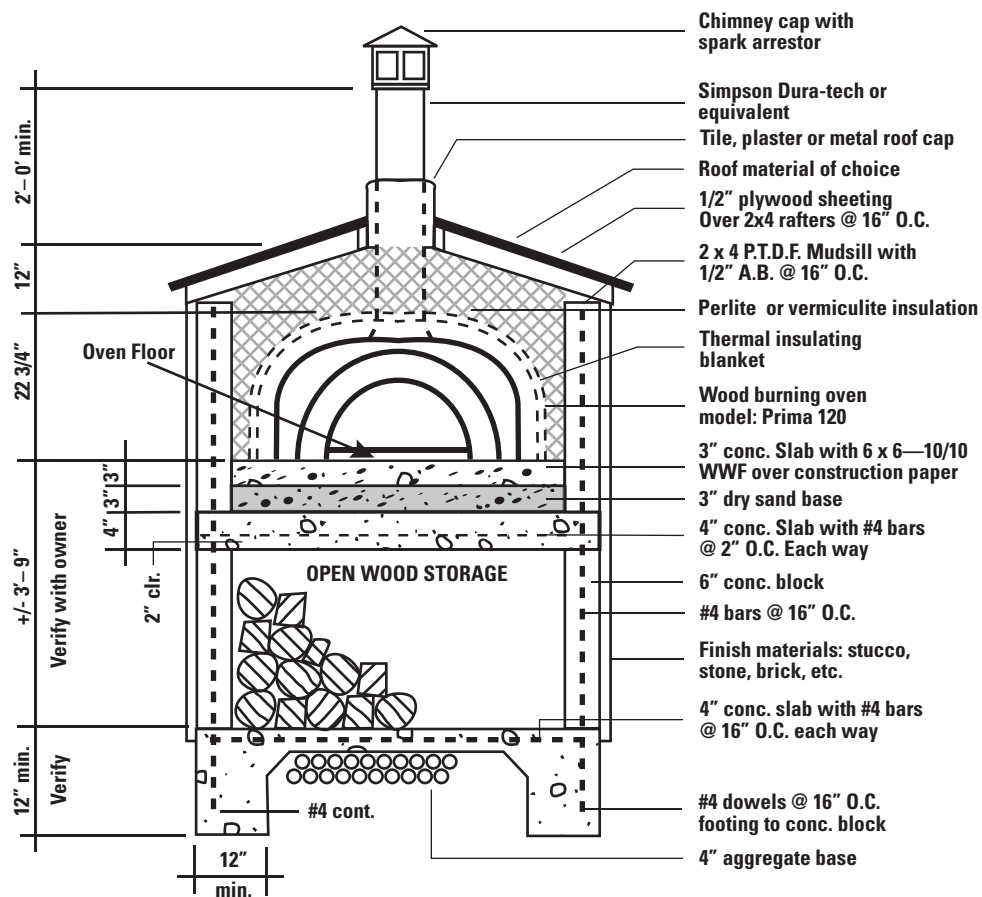
STEP 5

Finish the exterior enclosure walls with non-flammable materials of your choice. (e.g. Exterior Weatherproof Stucco, River Rock, Slate, Ceramic Tile etc.)

NOTE: If placing the oven under an overhang or patio structure follow local Building Codes and Fire Marshall requirements for passing the chimney through combustible ceilings.



DOME FLOOR AND BASE PLAN



DOME SECTION SAMPLE DIMENSIONS

DOME SHAPED ENCLOSURE

Example

STEP 1

Attach the appropriate Simpson DuraTech chimney (or similar product) on top of the flue and extend, based on your overall dimensions.

STEP 2

Drill holes to accommodate $\frac{1}{4}$ " steel pencil rod rebar around the perimeter of the concrete slab 12" apart.

STEP 3

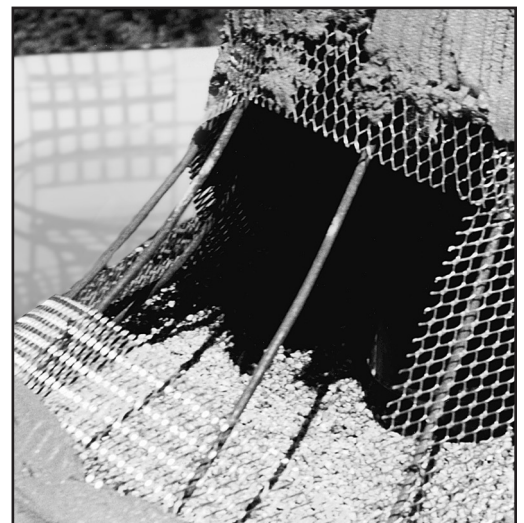
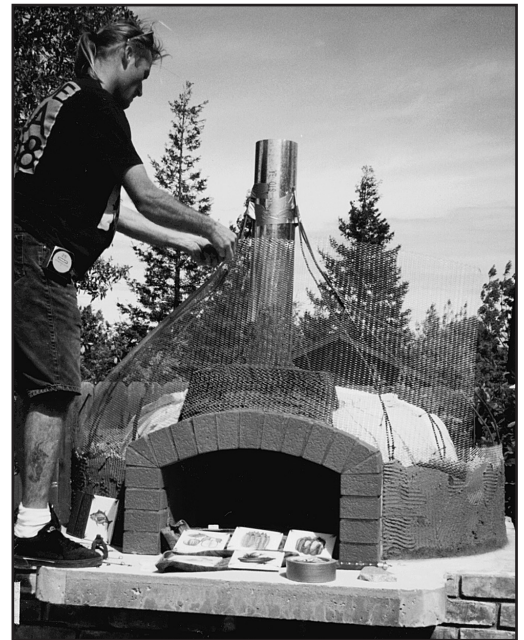
Place Pour Stone™ or equivalent and 6ft. lengths of the above mentioned rebar in the drilled holes and bend to desired shape, then wait for the Pour Stone™ to cure.

STEP 4

Once the Pour Stone™ or equivalent has cured, reshape the rebar and wire all the ends together at the top around the chimney, leaving the excess for now.

STEP 5

Begin at the bottom of the rebar and wrap with expanded metal lath around the perimeter. Work your way to the top, wiring the lath together as you go. Cut out a 12"x 12" access hole in the back at least 10" up from the oven crown to pour in the Perlite granules. Place a 2" diameter metal weatherproof air vent on the back near the top of your structure at the chimney to prevent condensation within the oven enclosure.



STEP 6

Begin again at the bottom and work your way to the top overing the expanded metal lath with the first (scratch) coat 3/8" thick exterior stucco. Pour in the Perlite granules then wire and stucco the access hole closed and wait for this coat to cure.

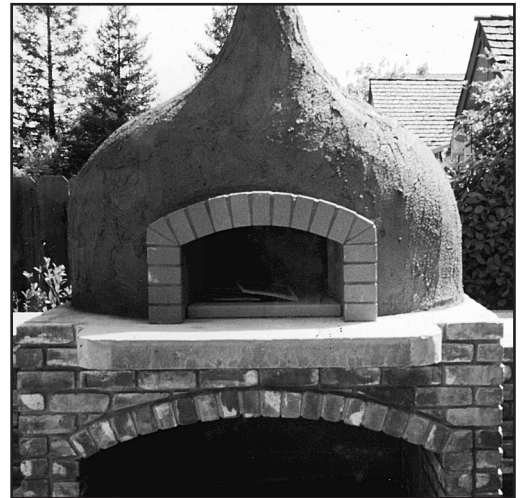
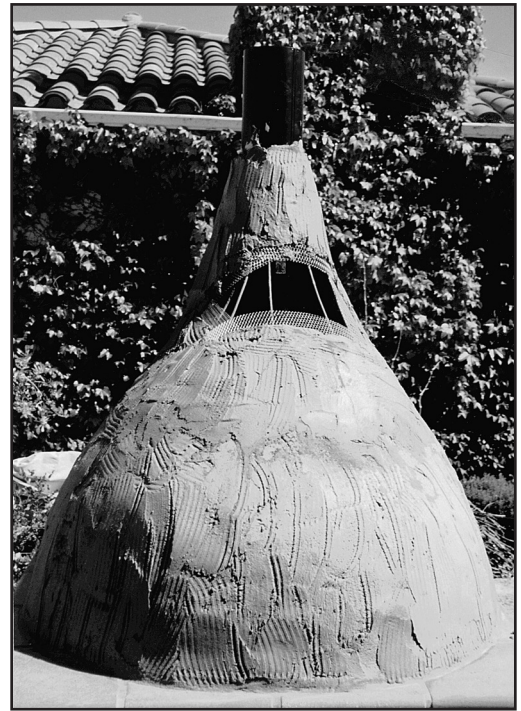
STEP 7

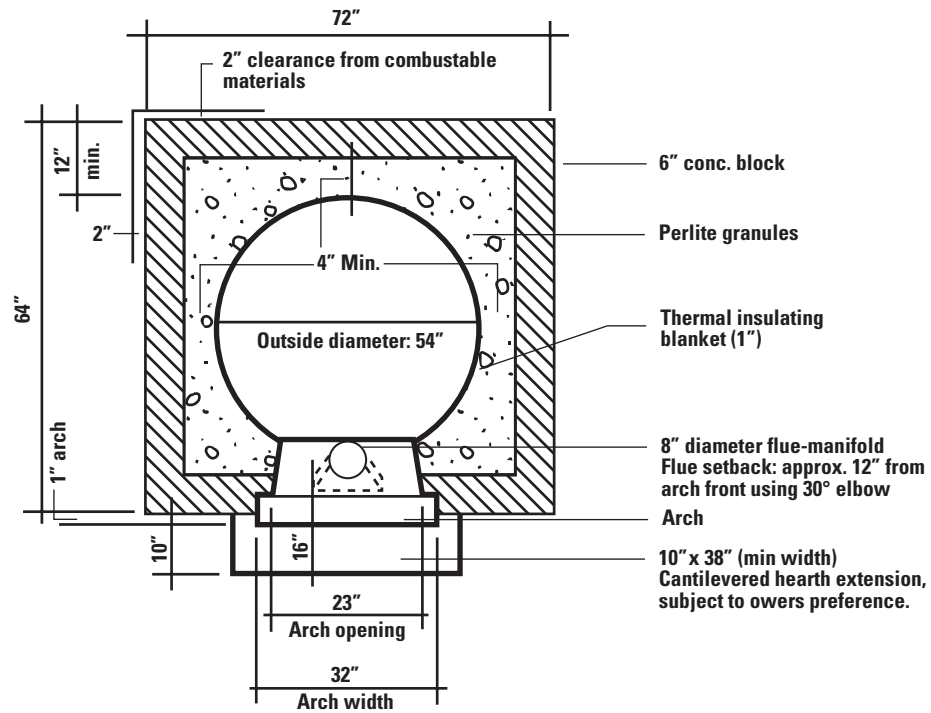
Once the first coat has cured you may now cut off the excess rebar at the chimney. Begin again at the bottom and cover the first coat with the second (brown) coat 3/8" thick exterior stucco right up to the chimney to seal completely. Wait for this to cure.

STEP 8

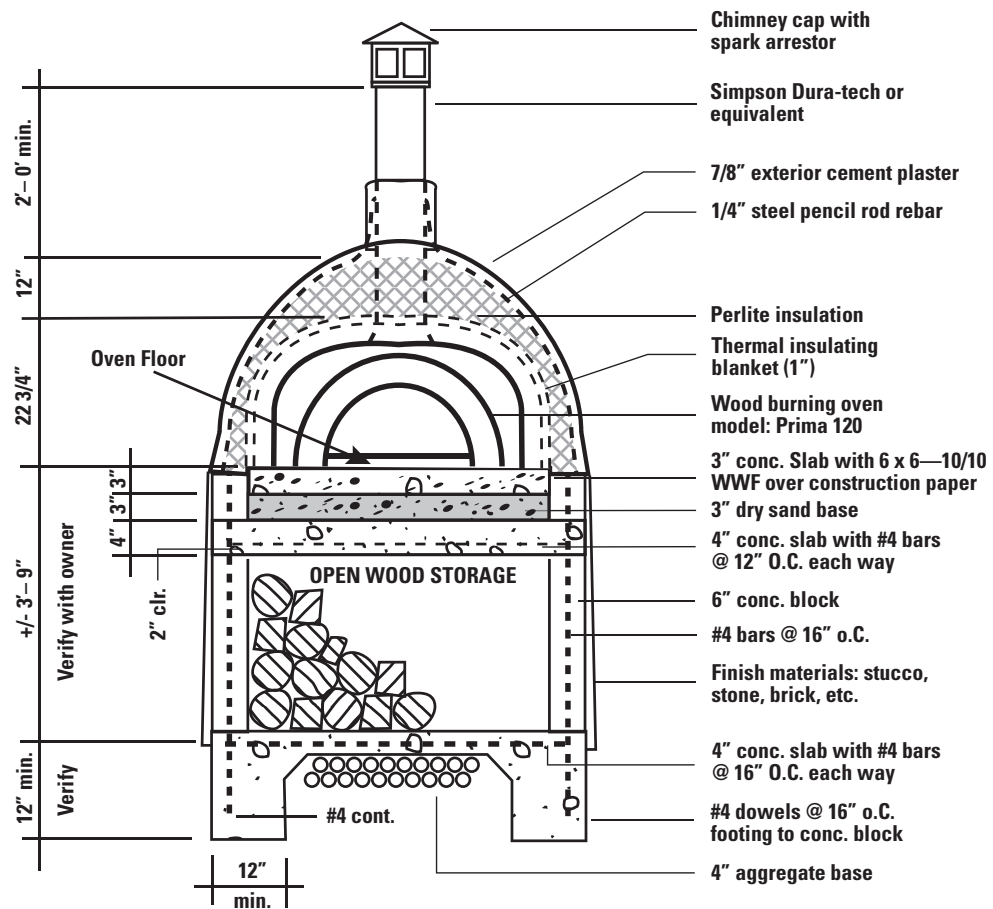
After second coat of stucco has cured, you may now paint or use finished stucco coat.

NOTE: If placing the oven under an overhang or patio structure follow local Building Codes and Fire Marshall requirements for passing the chimney through combustible ceilings.





DOME FLOOR AND BASE PLAN

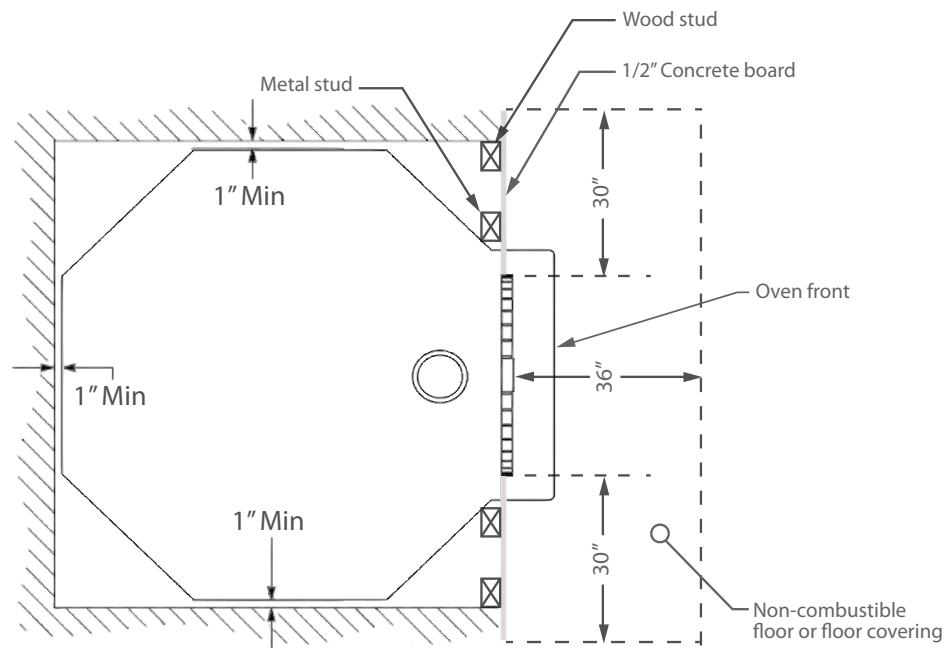


DOME SECTION SAMPLE DIMENSIONS

CLEARANCES AND FACADES

Clearances to Combustible Construction

The oven requires a 1" clearance on back wall and side walls to any combustible materials. Do not pack the air gap with insulation or other material. You may bridge the gap between the oven and façade wall with metal stud framing and concrete board. A metal stud may be fastened directly to the sides of the oven. Use ½" Durock brand concrete board, or similar, to transition to any wood framing.



Clearances to Combustible Construction.

Note: This diagram shows a factory assembled oven footprint, however the same clearances apply to a masonry build.

Wood Storage

A wood storage area below the oven is part of the masonry method of building the oven. Maintain 8" of clearance from the bottom of the oven to any wood storage below.

Finish Materials

Use only non-combustible materials such as tile, brick or stone, to finish your installation. Use metal framing braced to the oven in order to build a facade wall or transition to combustible construction.

Covering the Arch

The arch is not removable but may be covered with ceramic tile or similar non-combustible material. Remove the paint on the arch to create a proper bonding surface. Use Thinset or other cement based product to mount tiles. Do not use adhesives or glue to attach finish materials to front panel or arch.

**CHECK WITH LOCAL HEALTH DEPARTMENT REGARDING ACCEPTABLE MATERIALS
FOR COVERING THE ARCH OR FRONT PANEL.**

VENTING THE OVEN

Overview

The oven may be vented in a variety of ways depending upon the usage, the building the oven is installed in and restrictions due to local codes. It is very important to take into consideration the complete venting system, including maintenance, before committing to a location.

SEEK OUT QUALIFIED INSTALLERS IN YOUR AREA AND OBTAIN THE PROPER PERMITS. MANY BUILDING AND PLANNING DEPARTMENTS REQUIRE MECHANICAL DRAWINGS OF THE VENTING SYSTEM DEMONSTRATING CODE COMPLIANCE.

Exhaust Vent Requirements

Installation of the exhaust vent shall be in accordance with the Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, NFPA 96. This code references UL 737 for direct venting and UL 2162 for indirect venting.

The oven may be vented in either of the following methods:

- 1. Direct vent** by connecting the oven to an approved 8" factory built chimney pipe per UL 737.
- 2. Indirect vent** by installing the oven under a Type 1 Grease Hood per UL 2162.

**SINGLE WALL AND B-TYPE VENT PIPES ARE NOT ACCEPTABLE FOR THIS TYPE OF APPLIANCE!
IT IS IMPORTANT FOR THE INSTALLER TO CONTACT THE LOCAL BUILDING OR FIRE INSPECTOR TO
DETERMINE WHICH VENTING METHOD IS ACCEPTABLE.**

DIRECT VENTING WITH FACTORY BUILT CHIMNEY

Direct Vent Requirements Using Factory Built Chimneys

- Oven installations utilizing direct vent insulated chimneys must comply with UL 737 and NFPA 96
- DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE
- Factory built insulated chimneys must be listed to UL 103 HT or ULC S627.
- Example chimney pipe: Simpson DuraTech www.duravent.com
- Applicable for building with chimneys 3 stories or less
- 2 sets of offsets (elbows) allowed (15 or 30 degree angles only)
- Attach chimney anchor plate to oven using **Direct Vent Flue Adaptor - part# DVA**
- Chimney must be installed per chimney manufacturer's installation instructions
- Chimney must terminate to an approved chimney cap with spark arrestor (screen mesh)
- Chimney lengths 25 feet or longer may require an exhaust fan. The Enervex GSV series fan is listed for use with a wood burning pizza oven see: <http://www.greasefans.com>
- Applicable for pizza and bread products only

Additional Requirements for Canada

- The use of smoke detectors is highly recommended
- The chimney connector shall not pass through an attic, roof space, closet floor, ceiling, or similar concealed space. Where passage through a wall or partition of combustible construction is desired, the installation shall conform with CAN/CSA-B365

Oven Flue Outlet

- Flue size: 8" round (internal diameter)
- Flue location: on top of oven centered above arch

DIRECT VENTING WITH FACTORY BUILT GREASE DUCT

Direct Vent Requirements Using Factory Built Grease Duct

- Oven installations utilizing direct vent grease duct must comply with NFPA 96
- DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE
- Factory built grease duct assemblies must be listed to UL 1978
- Example grease duct: Metal Fab G-Series www.metal-fabinc.com
- Ideal for complicated runs, long lengths or horizontal runs
- Weld grease duct starter piece to oven using *Direct Vent Flue Adaptor - part# GDV*
- Chimney must be installed per chimney manufacturer's installation instructions
- Chimney must terminate to an approved chimney cap with spark arrestor (screen mesh)
- Chimney lengths 25 feet or longer may require an exhaust fan. The Enervex GSV series fan is listed for use with a wood burning pizza oven see: <http://www.greasefans.com>
- Applicable for any menus including cooking meat

Additional Requirements for Canada

- The use of smoke detectors is highly recommended
- The chimney connector shall not pass through an attic, roof space, closet floor, ceiling, or similar concealed space. Where passage through a wall or partition of combustible construction is desired, the installation shall conform with CAN/CSA-B365



Part # GDV Grease duct adaptor

Oven Flue Outlet

- Flue size: 8" round (internal diameter)
- Flue location: on top of oven centered above arch, 10 3/8" (+/- 1") on center behind the front panel

Connecting Factory Built Grease Duct to Oven

Mugnaini offers an optional Direct Vent Flue Adaptor for installation in the factory. Part# GDV has a 2" weldable stainless stub for a field welded grease duct adaptor.

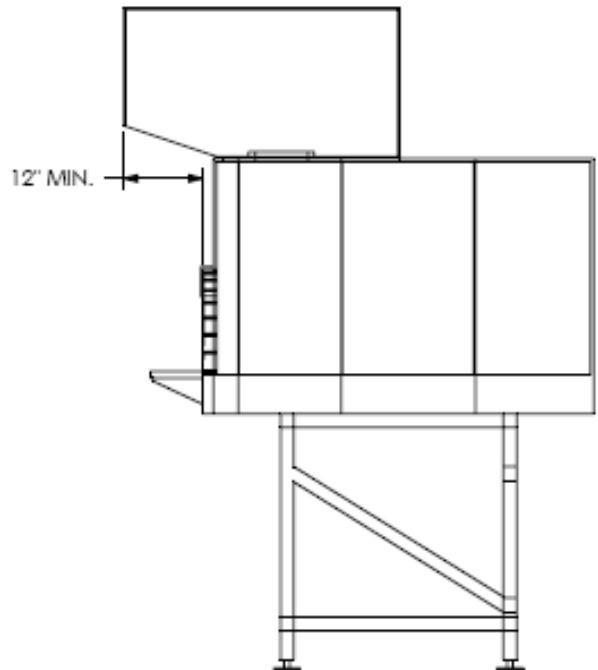
INDIRECT VENTING

Indirect Venting Requirements

- DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE
- Oven installations using indirect venting require a Type 1 Hood listed to UL 710
- The hood shall allow adequate clearance for removal and cleaning of the grease baffles (Captive Aire model SND is a low profile hood that enhances access)
- Fire suppression system shall be used in the hood only and not pointed into the oven
- Flue outlet temperatures reach 550° F so be sure to place fusible link appropriately
- May be vented with single wall grease duct or insulated factory built grease duct list to UL 1978
- Example grease duct: Metal Fab G-Series www.metal-fabinc.com
- Exhaust fan listed for use with a wood burning oven is recommended. The Enervex GSV series fan is listed for use with a wood burning pizza oven see: <http://www.greasefans.com>

Type 1 Hood

- Minimum Type 1 Hood dimensions: 36" wide x 42" deep
- Example: Captive Aire model SND Exhaust Hood www.captiveaire.com
- Install hood directly on top of oven using ceiling supports
- The hood shall extend 12" beyond the front of the oven opening (arch/mouth) and extend 6" beyond the sides of the oven opening. See diagram below



Type 1 Hood Placement

SEEK OUT A QUALIFIED PROFESSIONAL TO DESIGN AND INSTALL YOUR VENTING SYSTEM. CHECK WITH LOCAL AUTHORITIES FOR SPECIFIC CODE REQUIREMENTS

OVEN VENTING INSTRUCTIONS

Commercial Model Wood-Fired Ovens

OVERVIEW

Your Mugnaini wood-fired oven has been listed to the UL Standard for Safety for Fireplace Stoves, UL 737 8th edition.

These requirements cover fireplace stoves that are freestanding assemblies having fire chambers intended to be operated open to the room with the door either open or closed.

Ovens covered by these requirements are intended for attachment to a commercial chimney capable of being used for use with solid wood or coal fuels.

Mugnaini wood-fired ovens are intended for installation in accordance with the Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances, NFPA 211.

CONDITIONS OF ACCEPTABILITY

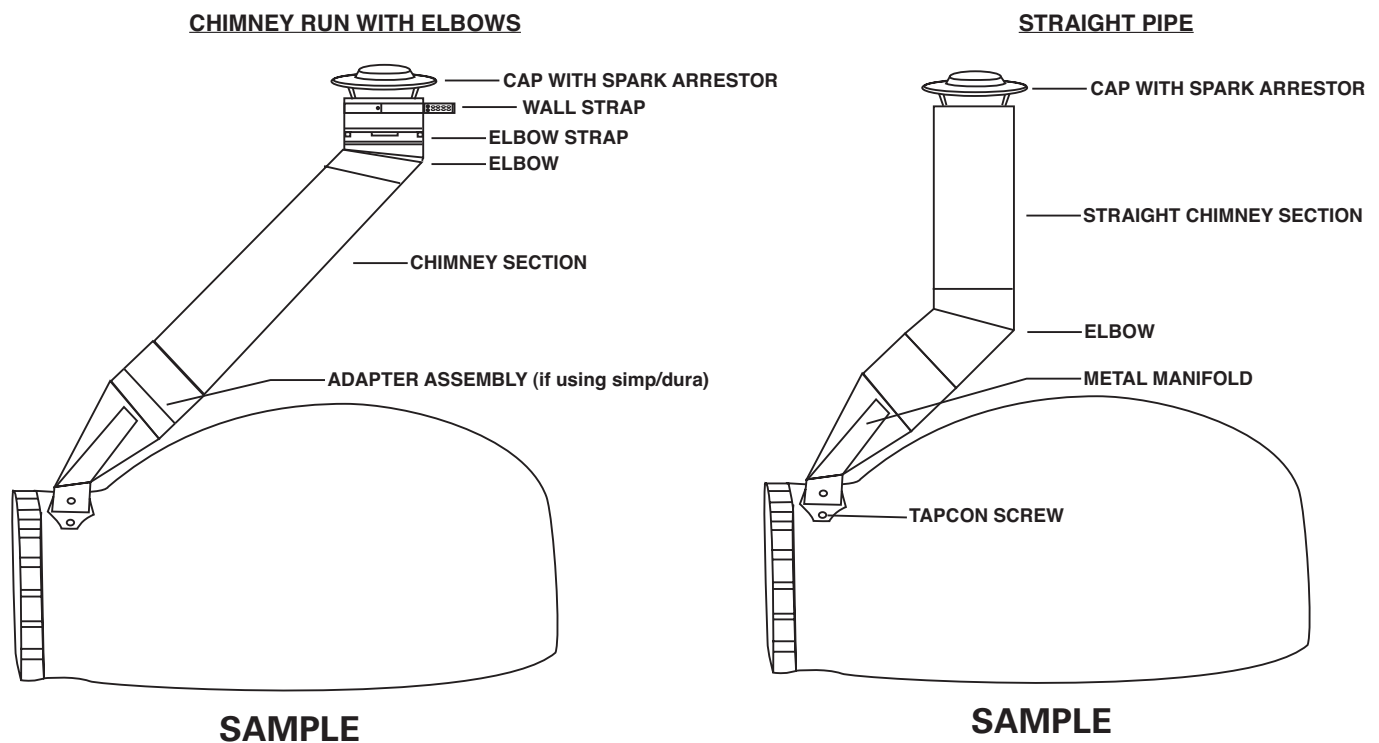
- The wood-burning oven is not provided with a chimney system. The oven must be connected to any listed chimney assembly.
- The chimney assembly must be installed in accordance with NFPA 211 Standard for Chimneys.
- The chimney diameter size is 8".
- Factory-built chimneys or clay flue liners are acceptable.
- The chimney must have at least 36" of vertical rise.
- **The oven is not designed to support the weight of a chimney length greater than 36" without additional support.** Failure to properly support the chimney pipe may damage the oven and void your warranty. Follow chimney manufacturer's installation instructions for proper chimney support.
- Chimney must terminate to an approved chimney cap with spark arrestor (screen mesh).
- Single wall and B-type vent pipes are NOT acceptable for this type of appliance.
- DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.
- CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

RECOMMENDED CHIMNEY PIPE

Mugnaini Imports recommends the **Simpson DuraTech** chimney pipe.

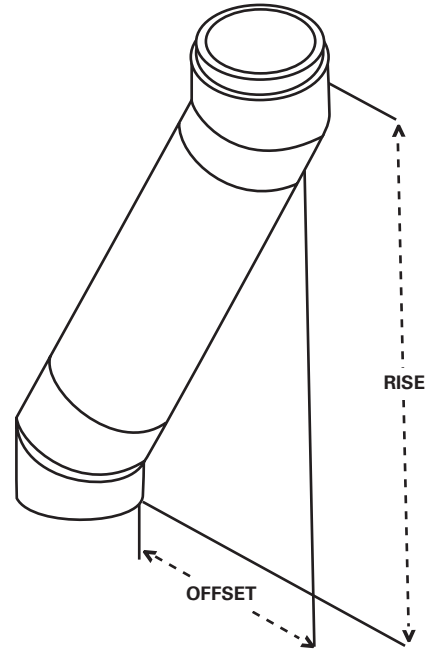
Simpson products can be found on the web at **www.duravent.com**. Proper planning of the chimney venting system is essential for a safe and successful installation.

- DuraTech is an all-fuel chimney system designed for appliances that require a UL 103 chimney system. With a Thermal Tech blanket insulation encased between dual walls, DuraTech offers safety and performance. It keeps the outer wall cool, while ensuring high flue gas temperatures for optimum draft.
- **Clearances:** 2" clearance to combustibles.
- Direct vent by connecting the oven flue outlet to a 8-inch diameter listed chimney rated for use as a 2100° F chimney system. Chimney must terminate to an approved spark arrestor.
- Your Mugnaini wood-fired oven was evaluated to meet the fire safety standards of UL 737-Eighth Edition by Intertek Testing Laboratories, ETL Listing Report #J20020124 www.interteksemco.com.
- The oven is designed for use with dry wood fuel only.



ELBOW OFFSET CHART

SIZE		5", 6", 7", 8" Diameter	
Elbow Angle from Vertical	Chimney Length between Elbows	Offset inches	Rise inches
15°	0"	2"	16 1/2"
15°	6"	3 1/4"	21 1/4"
15°	9"	4"	24 1/8"
15°	12"	4 3/4"	27"
15°	18"	6 1/4"	32 3/4"
15°	24"	8"	38 1/2"
15°	36"	11"	50 1/4"
15°	48"	14 1/4"	61 3/4"
15°	48" + 6"	15 1/2"	66 1/2"
15°	48" + 9"	16 1/4"	69 3/8"
15°	48" + 12"	17"	72 1/4"
15°	48" + 18"	18 1/2"	78"
15°	48" + 24"	20"	83 3/4"
30°	0"	4"	15 3/4"
30°	6"	6 1/4"	20"
30°	9"	7 3/4"	22 5/8"
30°	12"	9 1/4"	25 1/4"
30°	18"	12 1/4"	30 1/4"
30°	24"	15 1/4"	35 1/2"
30°	36"	21 1/4"	46"
30°	48"	27 1/4"	56 1/4"
30°	48" + 6"	29 3/4"	60 1/2"
30°	48" + 9"	31 1/4"	63 1/8"
30°	48" + 12"	32 3/4"	65 3/4"
30°	48" + 18"	35 3/4"	71"
30°	48" + 24"	38 3/4"	76"



PRECAUTIONS

WHEN WOOD IS BURNED SLOWLY, IT PRODUCES TAR AND 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 MONTH DURING THE COOKING SEASON TO DETERMINE IF CREOSOTE BUILDUP HAS OCCURRED.

IF CREOSOTE HAS ACCUMULATED IT SHOULD BE REMOVED TO REDUCE THE RISK OF A CHIMNEY FIRE.

VENTING

There are two approved methods of venting your Mugnaini wood-fired oven.

1. Direct vent with a factory built chimney.
2. Direct vent with a masonry chimney using clay flue liner.

FACTORY BUILT CHIMNEY

- Per NFPA 211 wood-burning ovens are required to use chimneys listed to UL 103 HT rated for use as a 2100° F chimney system.
- UL 103 chimneys require a minimum 2" clearance to combustible materials.
- UL 103 chimneys are available in double wall or triple wall pipe and various lengths in 6" increments.
- Only 15° or 30° elbows are available.
- An anchor plate is used as the starter piece and is to be installed per Mugnaini oven installation instructions.
- Follow chimney manufacturer's installation instructions for proper assembly.

MASONRY CHIMNEY

- Masonry chimneys use a 8" ID clay flue liner.
- Build chimney according to NFPA 211 standard.

NOTE: Masonry chimneys need to offer support to keep the weight of the entire chimney off of the oven.

CURING YOUR MUGNAINI WOOD-FIRED OVEN

This section covers the following Mugnaini series models:

100 ♦ 120 ♦ 140 ♦ 160×120 ♦ 160×140 ♦ 180×140 ♦ 180×180

READ ALL INSTRUCTIONS BEFORE STARTING A FIRE AND CURING YOUR OVEN

FOR USE WITH SOLID WOOD FUEL ONLY

WARNING

FOLLOW THE COMPLETE CURING SCHEDULE BEFORE COOKING IN THIS OVEN. FAILURE TO DO SO MAY CAUSE PERMANENT DAMAGE TO YOUR OVEN AND WILL VOID THE WARRANTY.

DO NOT START A FIRE OR INITIATE THE CURING PROCESS UNTIL THE EXHAUST VENT HAS BEEN INSTALLED AND APPROVED BY THE LOCAL BUILDING OR FIRE OFFICIALS.

NEVER USE GASOLINE, GASOLINE TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR “FRESHEN UP” A FIRE IN THIS OVEN. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE OVEN WHEN IN USE.

NEVER USE WATER TO LOWER TEMPERATURE INSIDE THE OVEN OR TO EXTINGUISH THE FIRE.

USE SOLID WOOD FUEL ONLY. DO NOT USE RESINOUS WOOD SUCH AS PINE OR SPRUCE.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCES.

OVEN CURING INSTRUCTIONS

Your Mugnaini wood-fired oven is made from *Refrattari Cotto* or refractory clay. The water used to form the clay must be *cooked* out before your oven can be put into use. Curing is the process of slowly heating an oven to first drive out the moisture from the oven components and surrounding mass, and then to temper the oven dome. This process is simply a matter of starting fires according to a schedule for several hours a day over a four-day period. It is crucial that this curing schedule be followed in order to not “thermally shock” the oven components which will result in a crack. A crack does not ruin the oven but it should be avoided to prolong the life of your oven.

NOTE: Fine shallow cracks may become noticeable on the inside of the oven dome. This is a natural occurrence with refractory castable components and does not indicate a failure of the material.

These procedures are only used for curing an oven. You only need to cure an oven once. However, if the oven has not been used for a long period it is recommended to allow one full day to slowly bring the oven up to maximum temperature.

SELECTING THE PROPER WOOD FOR YOUR OVEN

You should use only seasoned hardwood (moisture content of 20% or less). The type of wood available to you will depend on where you are located and what your local firewood vendors stock. Oak, ash or maple are common hardwoods but fruit and nut woods such as apple, almond, cherry, walnut and pecan are all good choices. Avoid using soft resinous woods with a lot of sap and oil such as spruce, pine, eucalyptus or birch.

The size of the wood is crucial to controlling the oven environment. We recommend double split wood in lengths of 12–16”. Double split logs are typically triangular in shape approximately 2–5” in diameter. Plan on using one cord of wood every 3–6 weeks depending upon usage.



FIRE STARTING TOOLS

In addition to double split hardwood, you will want to stock some kindling (small pieces of wood approximately 1” in diameter, preferably hardwood), and fire starters. We recommend Weber® brand Firestarters or any other non-toxic, non-resinous starters.

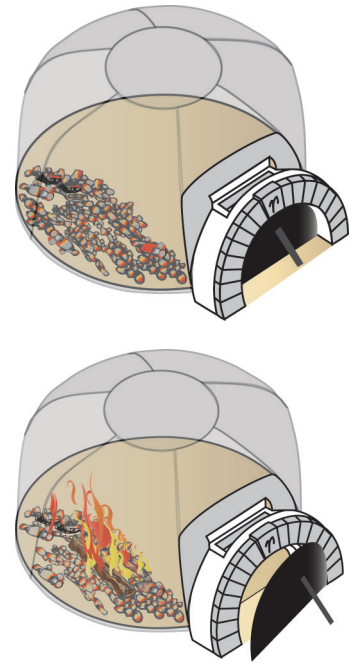
The curing process will require 20 pounds of kindling. You will find firestarters and kindling are very helpful for starting and refreshing a fire.



USING THE DOOR

The door has two positions and functions. In its' fully closed position the door is inserted at an angle through the arch and then straightened up and pushed back to close the bake chamber. This position is only used when there is no live flame in the oven.

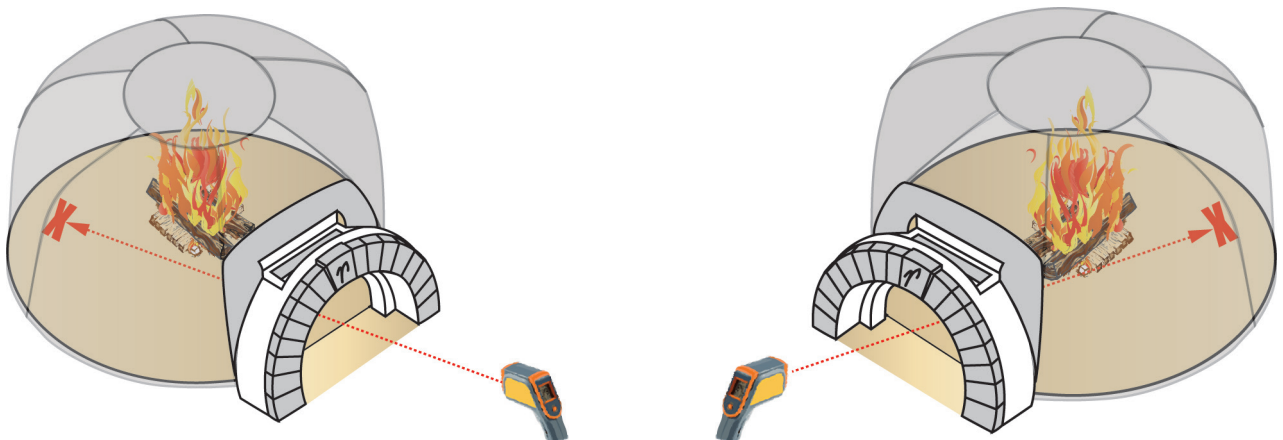
The door may also be placed outside of the arch on the shelf in a partially closed position to "damp down" the oven which will keep it in a holding pattern. It is important to allow enough room for combustion air to enter the bake chamber if you intend on keeping a fire going. We will use this partially closed position during the curing process to control any smoke roll out.



HOW TO MEASURE OVEN TEMPERATURE

Mugnaini wood-fired ovens will self regulate based on the size of the flame and the floor temperature. We measure temperature inside a wood-fired oven with an infrared thermometer for accuracy. By checking the floor temperature, using visual cues and flame size we can create distinct repeatable oven environments for different styles of cooking.

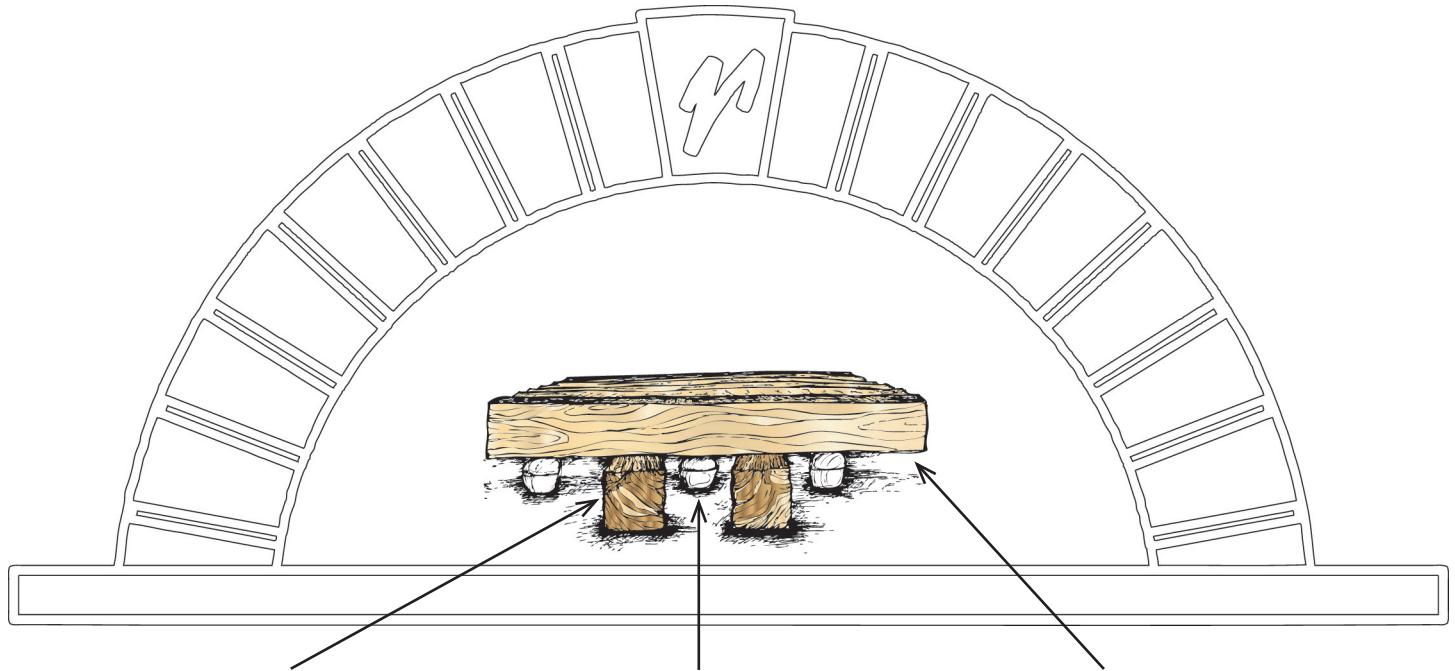
NOTE: For curing your oven read the temperature of the dome in the center of the oven walls just below the curve. Measure left and right sides of the oven and average the temperature. This method is for curing only—see diagram below for details.



STARTING A FIRE

To start a fire, first place two small pieces of wood on the oven floor aligned front to back. Lay 5–6 pieces of kindling across the first two pieces as per the diagram. Place 3 Weber® brand fire starters in between the wood and light. Push the pile to the center of the oven.

TIP: Use the long handled peel to push the wood to the center of the oven. Then light the fire starters and push them under the woodpile using a piece of kindling.



1) Two small pieces double split hardwood—aligned front to back

2) 3 Weber brand fire starters

3) 5-6 or \approx 1 lb. kindling sticks—aligned perpendicular to the hardwood

CURING THE OVEN

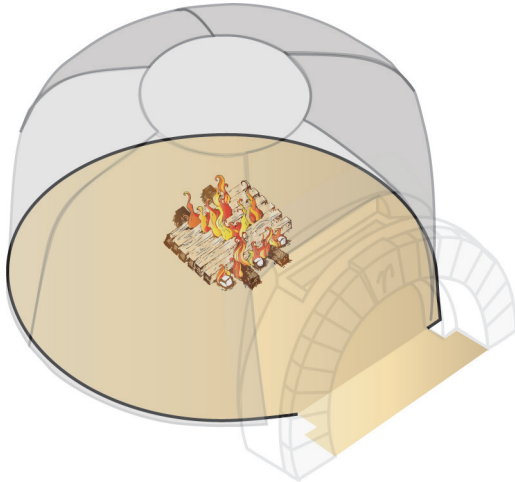
The goal is to increase the temperature of the oven at a rate of 50–75° F per hour by making a small fire every hour. Use the chart at the end of this manual to record the starting time and temperature of the oven. Start a small fire per the instructions. Allow the fire to burn and adjust the wood if necessary. You can place the door in the partially closed position to establish a draft and keep smoke from rolling out. After the fire has gone out place the door in the fully closed position until the next hour's fire.

Prior to starting the next fire, open the door slowly and measure the temperature of the sides of the dome paying attention to use the same spot each time you measure. Average left and right side temperatures and record on the chart.

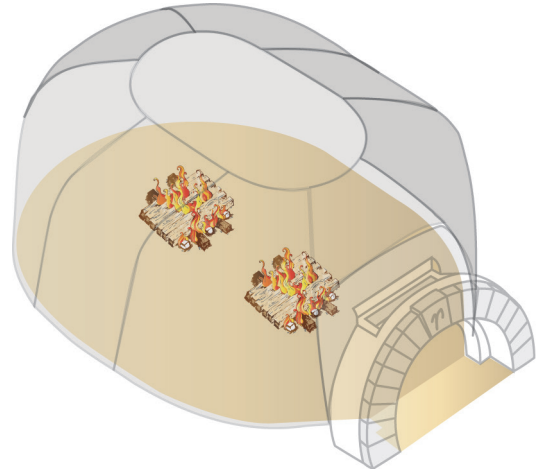
NOTE: If the oven has reached the target temperature – skip the next fire and check again after one hour.

Repeat the fires until the oven has reached the target temperature for the day. When finished, spread any coals evenly across the oven floor and place the door in the fully closed position.

DAY 1: (4 ½ hr. time commitment) Build fires hourly and bring the oven up to a maximum of 250° F. The Model 160 and 180 ovens will require two small fires, one placed deep in the oven and the other towards the front as per the diagram. After the fire goes out, place the door through the arch into the fully closed position. The door should stay in place unit the next day's fire.

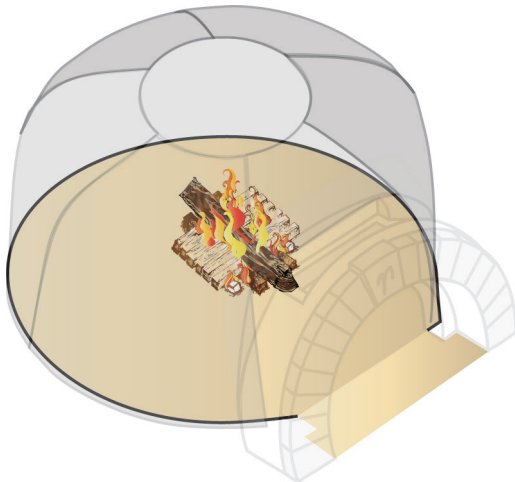


100 ♦ 120 ♦ 140

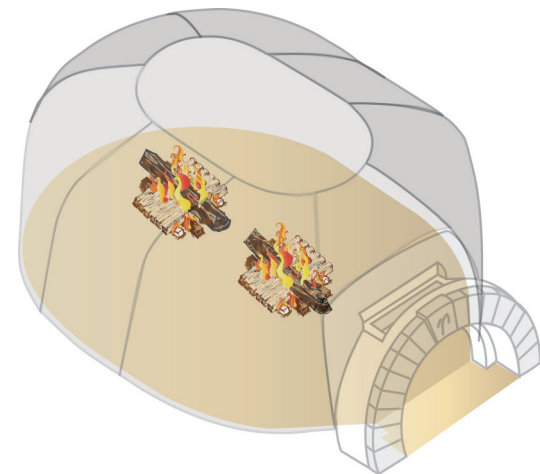


160×120 ♦ 160×140 ♦ 180×140 ♦ 180×180

Day 2: (5 ½ hr. time commitment) Record the oven temperature in the chart and repeat the hourly fires as necessary to reach a maximum 400° F. You may need to add a single piece of hardwood to the fire if the temperature is not increasing. Use your common sense and let the chart help guide the amount of wood you use. After the fire goes out, place the door through the arch into the fully closed position. The door should stay in place unit the next day's fire.



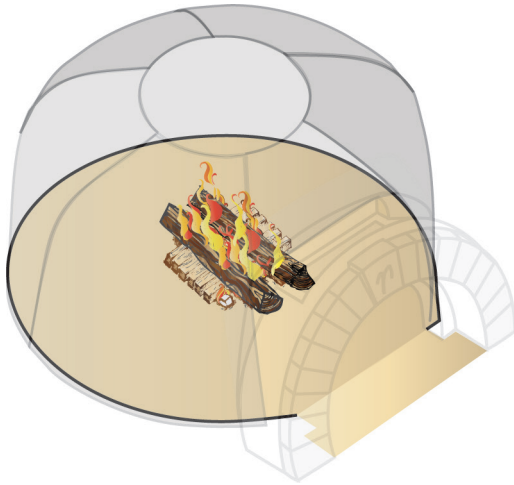
100 ♦ 120 ♦ 140



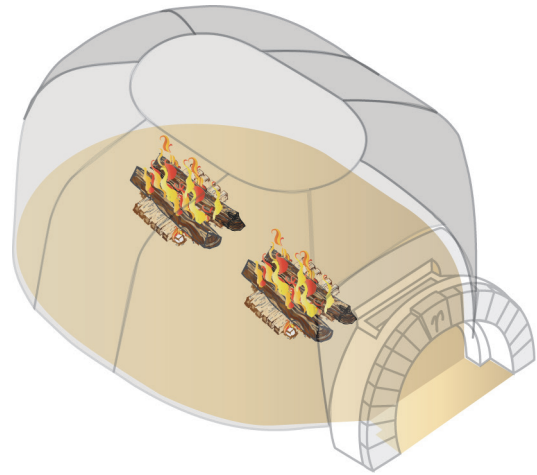
160×120 ♦ 160×140 ♦ 180×140 ♦ 180×180

NOTE: The first two days are the most critical. Be careful not to over fire the oven. If this happens just use the long handled peel to knock the fire down.

Day 3: (5 hr. time commitment) Repeat the hourly fires, increasing the oven temperature at a rate of 50–75° per hour to maximum of 600° F. At this point you will be adding more wood to the fire. After the fire goes out, place the door through the arch into the fully closed position. The door should stay in place until the next day's fire.



100 ♦ 120 ♦ 140



160×120 ♦ 160×140 ♦ 180×140 ♦ 180×180

Day 4: (4 hr. time commitment) Repeat the hourly fires starting slowly and then adding enough wood to create a large enough fire to roll across the dome. Soon the black soot will burn off the dome right above the fire. Spread the fire out and move it slightly to burn off all of the black soot on the dome. After the fire goes out, place the door just inside the arch so the flue is open to the cooking chamber. This will allow the fire to burn down and vent up the chimney.

NOTE: When the black soot has burned off the dome; this is your visual reference that the oven is fully heated. If this has not happened by the end of Day 4 just repeat the same steps for a 5th day making sure to add enough wood to raise the temperature appropriately.

DO NOT OVER FIRE

IF FLAMES EXTEND BEYOND THE OVEN DOOR OPENING AND UP THE EXHAUST FLUE – YOU ARE OVER FIRING THE OVEN.

CONGRATULATIONS—you have fully cured your pizza oven!
You can now fire your oven as per the operating instructions and start cooking.

HELPFUL TIPS

TIMING

Starting the curing schedule on a Thursday night and working through the weekend is very effective. If you miss one of your curing fires just repeat the last step and continue.

The first two days are the most important and should be completed together. Like wise the last two days should be completed together. If this is the case add an extra one hour burn to the beginning of the Day Three cycle.

TEMPERATURE READINGS

The temperature in the oven will vary greatly when starting a fire. If you are reading the temperature with a thermometer do not be alarmed. Most of what you read with an infrared thermometer gun is the surface temperature which will regulate down in the pauses between fires.

FIRE PLACEMENT

If you have trouble reaching into the oven place the fire within your reach in order to start it. Then push it deeper in the oven with the metal peel supplied with your oven. It is good to vary the placement slightly from one fire to the next.

ASHES

Keep a metal can with a tight fitting lid to collect the ashes with. It is OK to let them build up for a couple of firings. Use the metal peel to shovel the ashes out of the oven.

TECHNICAL ASSISTANCE

We want your experience to be rewarding. Please call the office at 888.887.7206 if you have any questions or need help understanding these steps.

CURING SCHEDULE

Measure the oven temperature before each fire and increase the oven temperature at a rate of 50–75° F per hour until the daily target temperature is reached. Close door until the next day's firing.

DAY 1		DAY 2	
Time	Temperature	Time	Temperature
Target	250° F maximum	Target	400° F maximum

DAY 3		DAY 4	
Time	Temperature	Time	Temperature
Target	600° F maximum	Target	Burn off all soot

LIMITED WARRANTY

MUGNAINI IMPORTS, INC. (“Mugnaini”), a California corporation, is a distributor of Italian wood-burning residential and commercial ovens (the “Oven(s)”). Mugnaini warrants to the **original purchaser only** (“Original Purchaser”) that the Oven will be free from defects in materials and workmanship for a period of **five (5) years** from the date of delivery (“Warranty Period”).

Remedies available to the Original Purchaser against Mugnaini under this warranty are limited to: (i) repair and replacement of parts and/or the necessary labor and services required to repair the Oven; or, (ii) at Mugnaini’s option, refund of the purchase price.

Information in Mugnaini’s catalog or other information provided by Mugnaini is given after the exercise of due care in its compilation, preparation, and issuance; however, Mugnaini disclaims any liability resulting from such information, except for the obligation under the warranty provided herein.

NO OTHER EXPRESS WARRANTY IS GIVEN, AND NO AFFIRMATION OF MUGNAINI, BY WORDS OR ACTION, SHALL CONSTITUTE AN ADDITIONAL WARRANTY. THIS WARRANTY IS NON-TRANSFERRABLE.

THIS WARRANTY IS EXPRESSLY IN LIEU OF AND EXCLUDES ALL OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE OVEN OR ANY RELATED EQUIPMENT OR ACCESSORY, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR PARTICULAR PURPOSE, USE OR APPLICATION AND ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF MUGNAINI, UNLESS SUCH OTHER WARRANTIES, OBLIGATIONS OR LIABILITIES ARE EXPRESSLY AGREED TO IN WRITING BY MUGNAINI.

This warranty shall not apply:

- (a) To damage to any Oven, or related equipment or accessory, that results from the failure to adhere to the factory instructions regarding the use of the Oven, related equipment, and accessories;
- (b) To any Oven, or related equipment or accessory, that is improperly installed or maintained;
- (c) To products resold in other than Mugnaini original packaging or to Ovens modified or altered by the Original Purchaser;
- (d) To failure or malfunction of the Oven, or any related equipment or accessory, that results from improper use, improper maintenance, or any failure to assemble or install the Oven, or any related equipment or accessory, pursuant to factory instructions;
- (e) To any Oven, or any related equipment or accessory, that has been materially altered from the condition in which it was shipped to the Original Purchaser;
- (f) To any cracking of the Oven, or related equipment or accessory, that results from overfiring the Oven, by failing to follow a proper curing schedule, or from the expansion or contraction in either refractory mortar or refractory Oven component;
- (g) To normal wear and tear;
- (h) To freight and shipping charges for sending an Oven to Mugnaini for repair;
- (i) To any damage to any Oven, or related equipment or accessory, that results from loading firewood into an Oven in a manner not in conformity with the factory instructions;

- (j) To any damage to any Oven, or related equipment or accessory, that results from improperly removing the log grate (which must be lifted out and not dragged across the oven floor);
- (k) To any damage to any Oven, or related equipment or accessory, that results from using any other log grate than the Mugnaini log grate provided with the Oven;
- (l) To any damage to any Oven, or related equipment or accessory, that results from icing or wet-mopping the Oven while it is still heated (which can result in the Oven floor cracking and decay setting it); and
- (m) To any damage to any Oven, or related equipment or accessory, that results from storing any items on top of preassembled Ovens

All claims under warranty ("Warranty Claim(s)") must be made within fifteen (15) days after occurrence of circumstances giving rise therein and all Warranty Claims must be received within the applicable Warranty Period by Mugnaini or its authorized representative. Any and all rights under this warranty or at law of Original Purchaser against Mugnaini shall terminate and be void in the event Warranty Claims are not submitted within the time set forth in the immediately preceding sentence. Such Warranty Claims must be in writing and include the Oven type, the model and serial number of the Oven, the purchase date and a full description of the circumstances giving rise to the Warranty Claim. Warranty Claims under this warranty are to be mailed to:

MUGNAINI IMPORTS, INC.
1530 Grove Street
Healdsburg, California 95448

Before any Oven is returned for repair, written authorization must be obtained from Mugnaini or its authorized representative for the return and instructions, as to how and where the Oven should be shipped. Any Oven returned to Mugnaini for examination shall be shipped with all shipping charges prepaid, at Original Purchaser's expense, via the means of transportation indicated as acceptable by Mugnaini. Mugnaini reserves the right to reject any Warranty Claim not promptly reported and any Warranty Claim on any Oven that has been altered or has been shipped by non-acceptable means of transportation. When an Oven is returned for examination and inspection or for any other reason, Original Purchaser shall be responsible for all damages resulting from improper packing or handling and the risk of loss in transit, notwithstanding any defect or nonconformity in the Oven.

In all cases, Mugnaini has sole responsibility in its reasonable judgment for determining the cause and nature of failure, and Mugnaini's determination with regard thereto shall be final and binding upon the Original Purchaser. If it is found that Mugnaini's Oven has been returned without cause and is still serviceable, Original Purchaser will be notified and the Oven returned at Original Purchaser's expense. In addition, a charge for testing and examination may, in Mugnaini's sole and reasonable discretion, be made on any Oven so returned.

THE LIABILITY OF MUGNAINI FOR WARRANTY CLAIMS (REGARDLESS OF THE LEGAL THEORY ASSERTED, SUCH AS BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, TORT, VIOLATION OF STATUTE OR REGULATION, STRICT PRODUCTS LIABILITY, CONSUMER PROTECTION STATUTES OR DECEPTIVE TRADE PRACTICES STATUTES); OR (2) DAMAGES (INCLUDING SETTLEMENTS, JUDGMENTS AND AWARDS, AND COSTS, INCLUDING ATTORNEYS' FEES AND EXPENSES INCURRED IN DEFENDING CLAIMS) ARISING OUT OF THE OVEN, SHALL NOT BE GREATER THAN THE ACTUAL PRICE OF THE OVEN WITH RESPECT TO WHICH THE WARRANTY CLAIM OR DAMAGES ARISES.

UNDER NO CIRCUMSTANCES IS MUGNAINI LIABLE FOR CONSEQUENTIAL, SPECIAL, INCIDENTAL OR INDIRECT DAMAGES OF ANY KIND OR TYPE INCLUDING WITHOUT LIMITATION, CLAIMS FROM ORIGINAL PURCHASER, OR OTHER THIRD PARTIES, PROSPECTIVE OR PRESENT LOSS OF PROFITS, BUSINESS REPUTATION OR GOODWILL, EVEN IF MUGNAINI WAS AWARE OF A POTENTIAL FOR SUCH DAMAGE.

If Original Purchaser is not satisfied with the warranty service, the Original Purchaser must submit a Warranty Claim in writing to Mugnaini's Dispute Settlement Representative at 1530 Grove Street, Healdsburg, California 95448. The written notice must include the Oven type, the model and serial number of the Oven, the purchase date, a detailed description of the problem and the address at which the Original Purchaser can be reached. Mugnaini will review each notice and respond to the Original Purchaser in an effort to settle such dispute. Under federal law, no lawsuit may be initiated unless and until the dispute settlement procedures outlined in this warranty have been exhausted. Any Warranty Claim shall be governed by and construed in accordance with the internal laws of the State of California. Original Purchaser consents to the jurisdiction and venue of any court, federal or state, sitting in the State of California, County of Sonoma for the resolution of any dispute arising out of the Warranty Claim.

This warranty gives Original Purchaser specific legal rights, and Original Purchaser may also have other rights that vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply.