

# Contractor's Utility Requirements

## TMB Baking Steelheart™ Bassanina® Zoom 812 Gas Deck Oven

NATURAL GAS FIRED or PROPANE

### - INSTALL INSTRUCTIONS -

This Manual is prepared for the use of **licensed utility contractors**. All gas, electrical, plumbing and venting connections should be made according to local codes.

This manual is not intended to be all encompassing. You should read, in its entirety, the installation procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained technician.



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## Utility Requirements

- Electric Power:** 110V / 60 Hz / 20 amp / supply 3 wire including neutral and Ground. See enclosed photo (Fig. 1) and spec sheet for details
- Natural Gas:** 90,000 BTU at 14" WC max, 7" WC min  
Flexible gas line is not recommended.
- Gas lines should be 3/4" inside diameter from top of oven to gas valve, with shut-off both outside and underneath oven front cabinet.
- Gas lines must have a shut off valve and union located in burner compartment for ease of servicing the burner. See enclosed drawing (Fig. 2), picture (Fig. 3) and spec sheet.  
Gas line should have drip leg in gas line.
- Propane Gas:** 90,000 BTU at 14" WC max, 5" WC min
- Water:** 60 PSI at 4 GPM. Oven usage 2.5 GPH per bake. See enclosed photo (Fig. 4) and spec sheet. Water pressure regulator provided by TMB Baking
- Drain:** 3/4" IPS drain connection in front of oven. Floor Sink Required.
- Venting Requirements:** See spec sheet.
- Wall Clearance:** 0" Clearance fire code rating back and sides.



THE HEART OF ARTISAN BAKERIES™

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**Setting requirements Midco Burner:** Natural Gas: Orifice size: 0.358 inches  
**Model EC200** Manifold Pressure: 2.9 WC  
Propane Gas: Orifice size: 0.219  
Manifold Pressure: 3.2 WC

**Draft Requirements:** 0.05 - 0.10 Negative pressure at site hole above burner.

**Exhaust Fan:** An exhaust fan can be installed above the roof line if required to increase draft. If installed, an automatic burner shutoff wired to the control panel must be installed.

Bassanina Steelheart Zoom Oven Dimensions  
(Exterior) Height includes burner and steam exhaust

Model	Width (W)	Depth (D)	Height (H)	BTU	Weight
Steelheart™ 812	54"	90 5/8"	91"	90	4,079
Steelheart™ 1212	71"	90 5/8"	91"	250	4,960
Steelheart™ 1218	71"	114 ¼"	91"	250	6,504

All dimensions are in inches

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## ELECTRICAL CONNECTIONS

Fig. 1

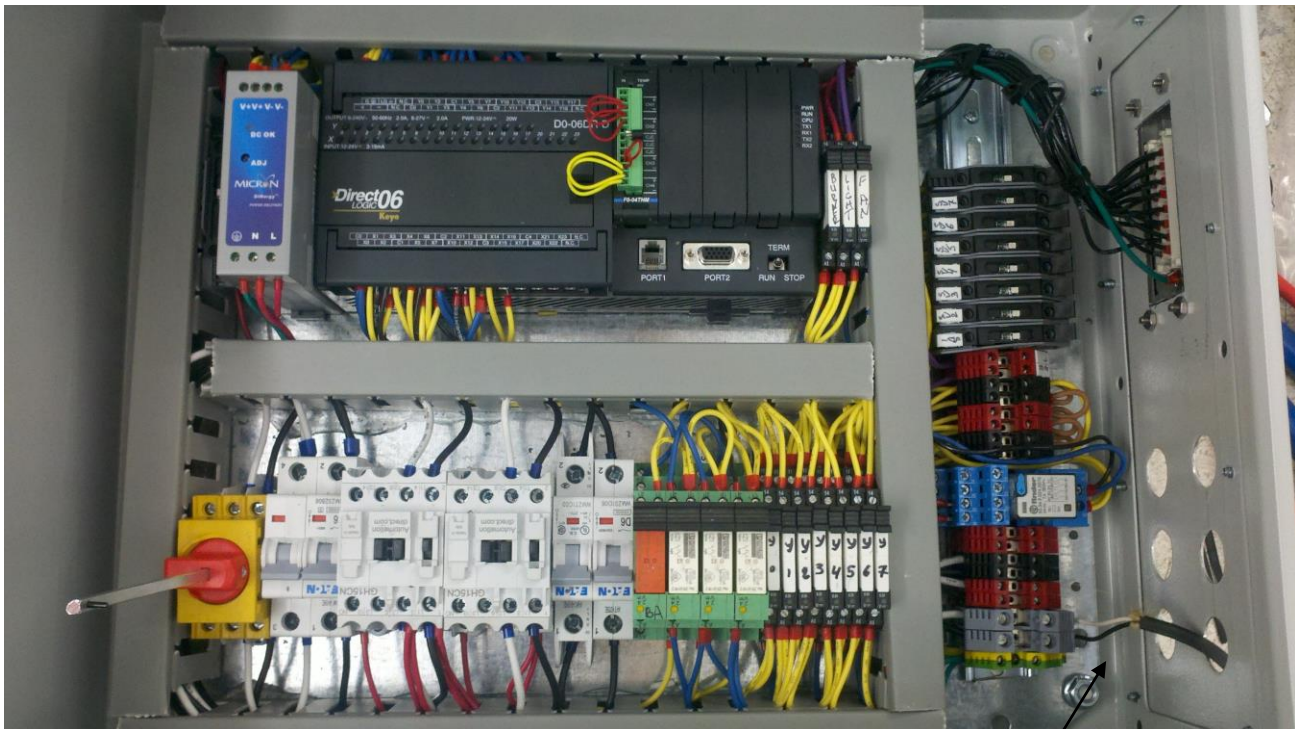


Photo shows sub-panel – single phase electrical connection on lower right.

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## Burner Connections

See accompanying Midco Economite EC200

Note: High Pressure regulator used only when low pressure gas is not available in the building

Burner location – Under front panel of oven



Figure 2 Midco Economite

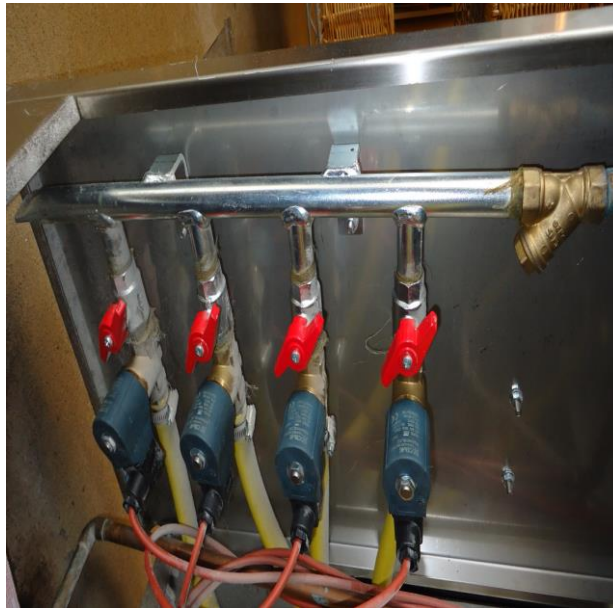
Gas: 4" – 7" W.C., 1" Union connection to burner with shut-off under cabinet, as well as on line leading to oven

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## WATER SUPPLY

Cold water ½” copper pipe with backflow prevention valve to water solenoid with shut off valve and union installed in burner compartment.

Figure 3 – Water Solenoid valves serving steam generators.



Water discharge from steam generators located on left-hand side under cabinet. ¾” copper pipe runs from condensate collection manifold to mandatory floor sink near front or back of oven.



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## VENTING INSTRUCTION

All venting must comply with local codes.

### GAS BURNER EXHAUST

The **gas exhaust** venting shall be 6" double wall with a Tee and 6" barometric damper. A 24" extension on the Tee is required to attach the barometric damper. See picture and spec sheet for detail. The outlet for the burner exhaust is located on the right rear of the oven with the opening 9" from the back of the oven and 18" from the right side of the oven (see diagram, below)

A straight pipe is recommended through the ceiling, but not required. No more than two 45° fittings can be used within a distance of 3 feet. An exhaust fan can be added above the roof, if required to increase draw.

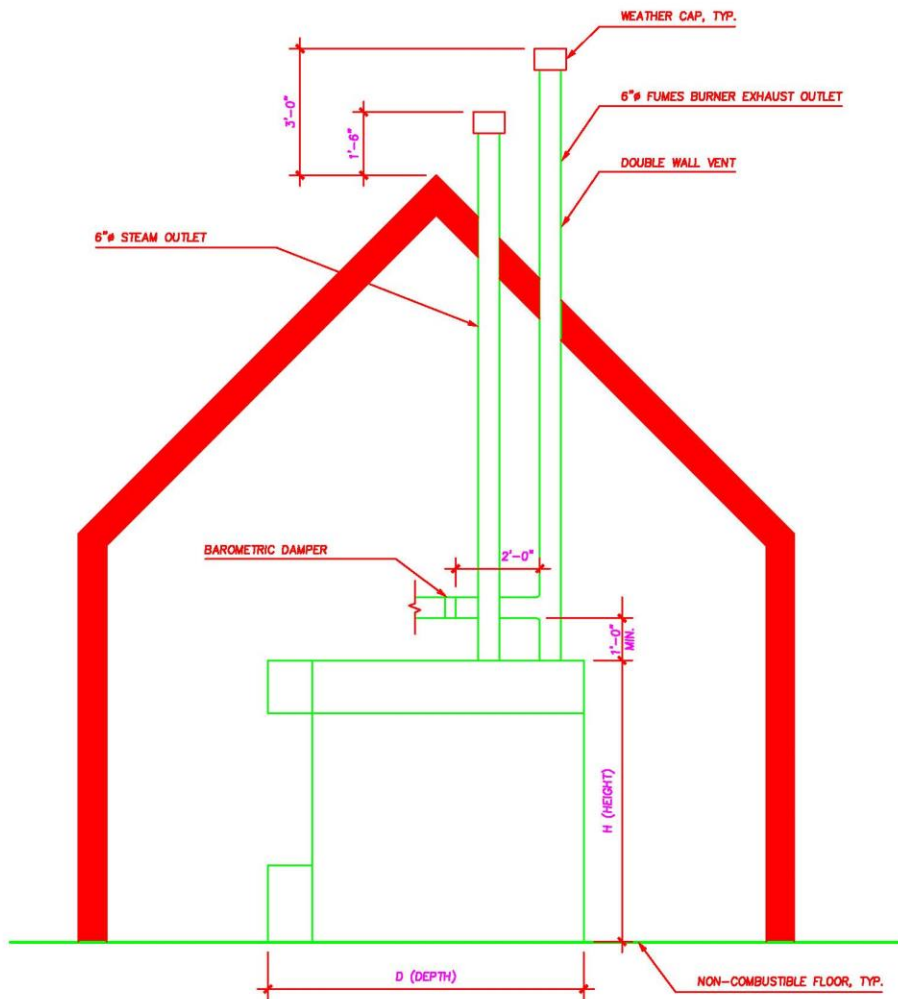
Note: if any of these recommended configurations are not applicable in the building, a draft inducer needs to be calculated by the mechanical engineer to obtain, when the burner is off, a 0.01 - 0.04 WC negative pressure inside the combustion chamber still hot at site hole above burner. Make up air ON and exhaust fan ON, all windows and doors closed.



Example of gas exhaust with barometric damper.

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Optimal Ventilation Routing – Straight up and out of building, if possible.



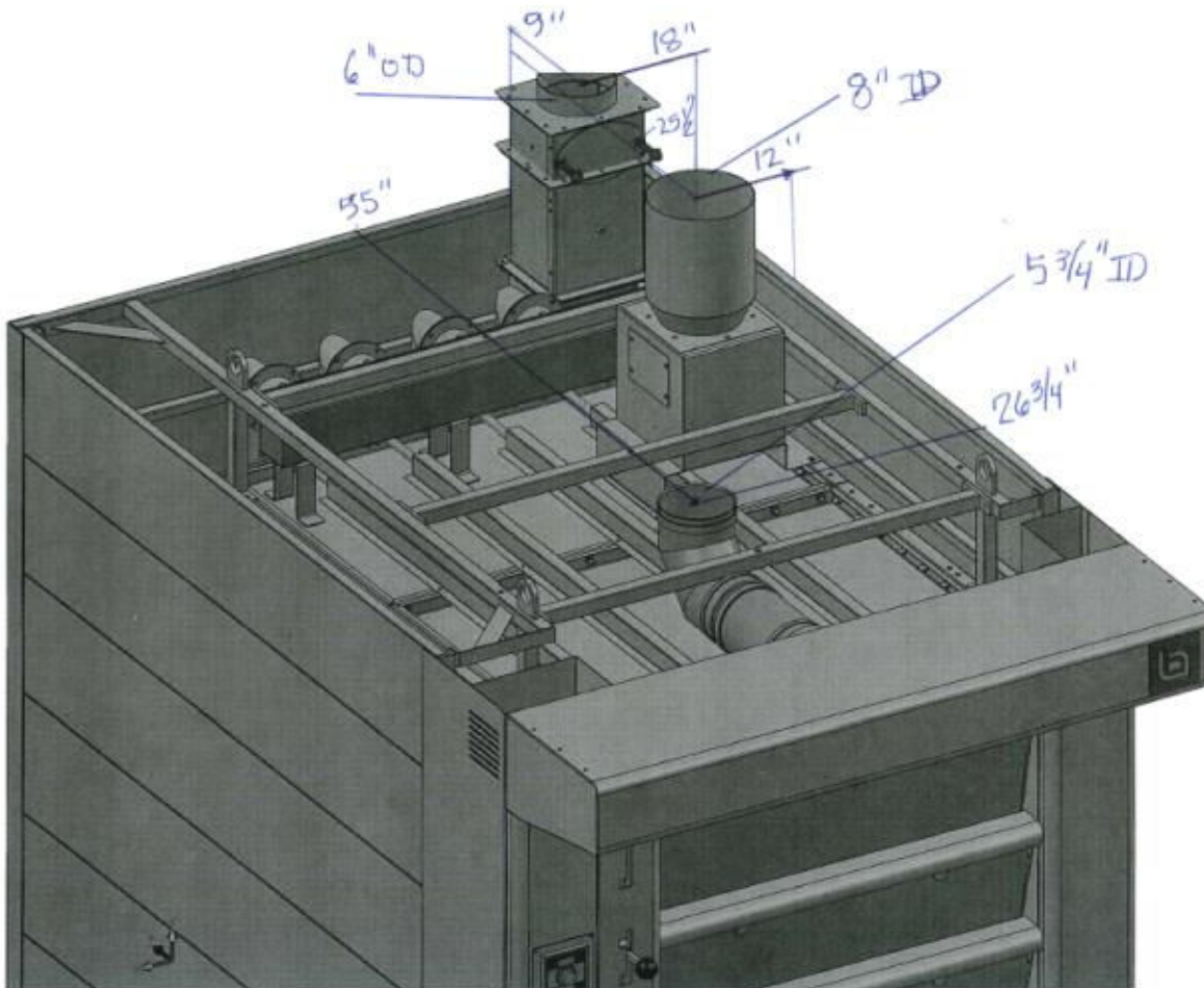
TMB BAKING - ZOOM OVEN (ELEVATION)  
N.T.S.  
2012.03.30



# TMB Baking Steelheart™ Bassanina® Zoom 812 Gas Deck Oven

## STEAM EXHAUST

There are two **steam exhaust** vents on the oven. The **hood steam exhaust** is located 26  $\frac{3}{4}$ " from the right side of the oven and 55" from the back of the oven. The opening has a 5  $\frac{3}{4}$ " ID. The **damper steam exhaust** is located in front of the burner exhaust toward the right rear of the oven, 12" from the right side of the oven and 25  $\frac{1}{2}$ " from the back of the oven, and has an 8" ID for the opening.



Hood exhaust, front center; damper exhaust, middle right; burner exhaust rear right.

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The two steam exhaust outlets can be tied together for a single, 8" duct run from the oven to the roof of the building. A condensation trap should also be incorporated into the ducting design to allow condensate to collect and return to the floor sink, which will lengthen the life of the oven (see photo, below). We recommend stainless steel ducting, as well, as the acid in sourdough vapor has the tendency to corrode galvanized steel.



Two steam vents tied together with condensate trap at base.  
Condensate hose runs to floor sink.

## EXHAUST FAN

TMB Baking recommends roof-mounted fans, supplied by customer, with 600cfm. However, calculations and specs must be performed by mechanical engineer according to local codes requirements, taking into account the length of the ducting run from the oven to the roof.

If the HVAC contractor can notify TMB Baking of the amperage requirements for the fan, we can wire the control for the required amperage. Please accommodate a maximum amperage of 6amps, 120VAC, if possible. The decision of which model of fan to use is that of the HVAC contractor with guidance from a mechanical engineer, if not one in the same. However, the model we typically recommend is from McMaster-Carr, Model 2322K55, along with the mounting base 2230K31. See specifications, below.

**Power**  
 Less than 0.25 hp  
 0.25 to 0.49 hp  
 0.5 to 0.99 hp  
 1 to 1.99 hp  
 2 hp or greater

**Overall Height**

- 11 1/4"
- 11 3/4"
- 14 1/2"
- 14 5/8"
- 15 1/2"
- 16 1/4"
- 16 3/8"
- 16 3/4"

**Overall Diameter**

- 18 5/16" 29 3/4" 39 3/8"
- 20 5/16" 30" 42 1/2"
- 22" 31 7/8" 43 3/8"
- 23 3/4" 33 1/4" 44"
- 25 1/2" 33 9/16" 50"
- 26 1/4" 36" 52 3/4"
- 27 5/16" 38 1/4" 56"

**Volume**

33 dB @ 15 ft.

80 Products

Measured in decibels (dB), volume ratings indicate how much noise equipment makes. Some common volume levels include a whisper @ 20 dB, a refrigerator @ 40 dB, a conversation @ 60 dB, and a light machine shop @ 90 dB. OSHA recommends hearing protection for exposure to 80 dB and greater.

Direct-Drive Upblast Roof-Mount Exhaust Fans



Direct-drive fans have fewer moving parts than belt-drive fans for less maintenance. These exhaust fans draw stagnant and humid air out through your roof and then expel it up and away from the roof surface. All fans have a disconnect switch to turn off the power for servicing.

**Note:** Airflow depends on the resistance created by ductwork. This resistance, known as static pressure (SP), is measured in inches of water.

Fans										Mounting Bases					
Blade Dia.	Airflow @ Static Pressure	Volume	Motor Speed, rpm	Power, hp	Overall		Base Wd.	Housing Material	Specifications Met	Each	Each				
					Dia.	Ht.									
<b>Open Dripproof Motor Enclosure</b>															
<b>120V AC, Single Phase—Hardwire</b>															
1	11"	400 cfm @ 1/2 in. of H <sub>2</sub> O 710 cfm @ 0 in. of H <sub>2</sub> O	33 dB @ 15 ft.	1,625	3/16	22"	18"	19"	300° F	Aluminum	ETL Listed	2232K55	\$563.67	2230K64	\$137.23
<div style="border: 1px solid #ccc; padding: 5px;"> <p><b>Product Detail</b></p> <p>Direct-Drive Upblast Roof-Mount Exhaust Fan with Open Dripproof Motor Enclosure, 11" Blade Diameter</p> <p><input type="checkbox"/> Each</p> <p><b>ADD TO ORDER</b></p> <p>In stock</p> </div>															

If our customer or their contractor has questions regarding any information on this manual, they can contact TMB Baking and ask for our Technical Support Manager, Michael Kudatsky, who can provide assistance by phone or email ([parts@tmbbaking.com](mailto:parts@tmbbaking.com)).

End Contractor's Manual