

TMB Baking TSV Gas Oven TAG Series

Contractor's Utility Requirements

NATURAL GAS FIRED

- 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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TMB Baking TAG Deck Oven

Utility Requirements

- Electric Power:** 110 Volt / 1 phase / 60 Hz / 20 amp / supply 3 wire, live neutral and ground. See enclosed photo (Fig. 1) and spec sheet for details
- Natural Gas:** 550,000 BTU at 14" WC max, 7" WC min (8-door oven)
 650,000 BTU at 14" WC max, 7" WC min (12-door oven)
 Flexible gas line is not recommended.
 Gas lines should be 1" inside diameter from top of oven to gas valve.
 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:** 550,000 BTU at 14" WC max, 5" WC min
- Water:** 60 PSI at 4 GPM. Oven usage 2.5 GPM per bake. See enclosed photo (Fig. 4) and spec sheet.
- Drain:** 1" IPS drain connection in front of oven. Rear drain optional.
- Venting Requirements:** See section below with photo & illustrations
- Wall Clearance:** 0" Clearance fire code rating back and sides.
- Door Opening Requirements:**
- | | |
|---------------|-------------|
| Heat Section: | Skidded 36" |
| Oven Section: | Skidded 40" |
- Setting requirements Midco Burner:**
- | | |
|----------------------------|---------|
| Natural Gas: Orifice size: | .500 |
| Manifold Pressure: | 3.15 WC |
| Propane Gas: Orifice size: | .358" |
| Manifold Pressure: | 3.3 WC |
- Draft Requirements:** .05 - .10 Negative pressure at site hole above burner.

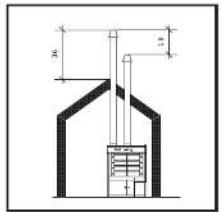
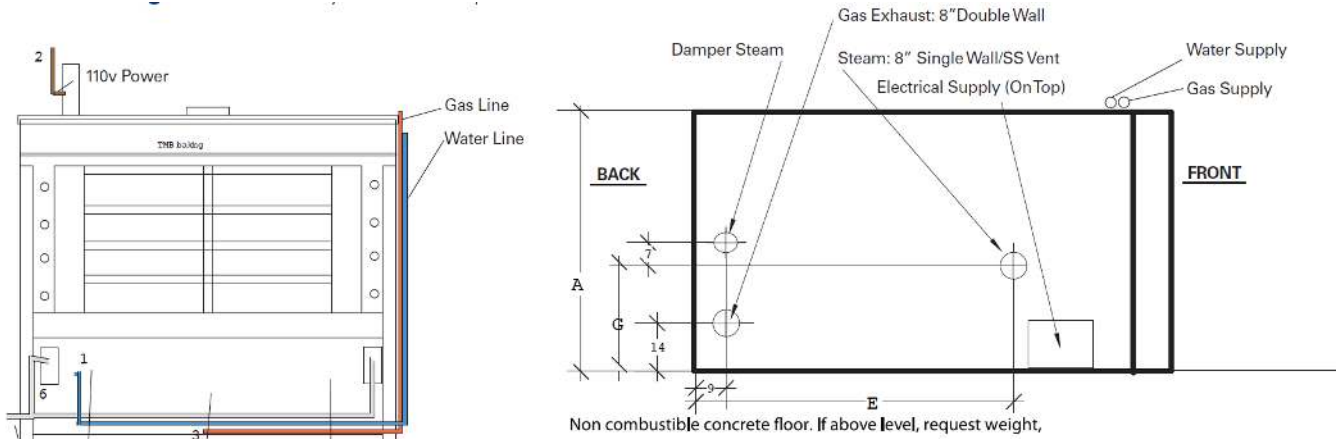
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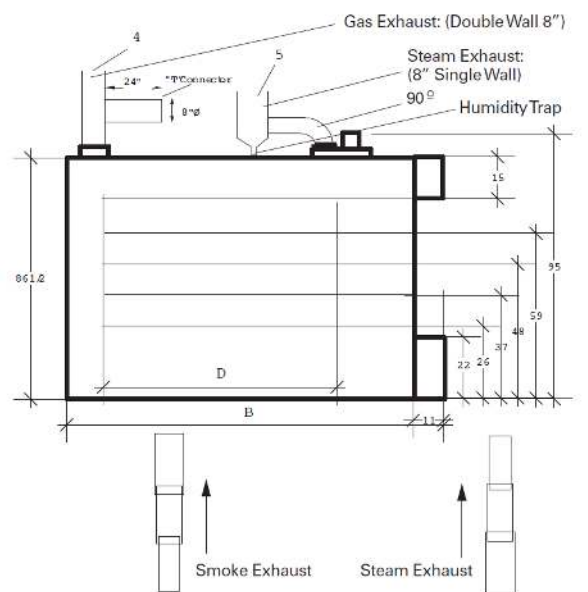
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Specs common to all models:

1. Water supply: 1/2" cold water (65 to 100 psi)
Valve and union connection to manifold
2. Electrical: 110v/60hz/G+N 20 amps
3. Gas: 4" to 7" W.C., 1" Union connection to burner
4. Gas Exhaust: 8" Ø Double Wall
Pressure inside heat exchanger: —.10" WC with burner off "T" Connector and Humidity trap provided by customer
5. Steam Exhaust: 8" Ø S/S Single Wall. Optional steam exhaust fan (800 cfm)
6. Water Discharge: 3/4" connection from right and left drain manifold to closest floor sink.
Floor sink required.



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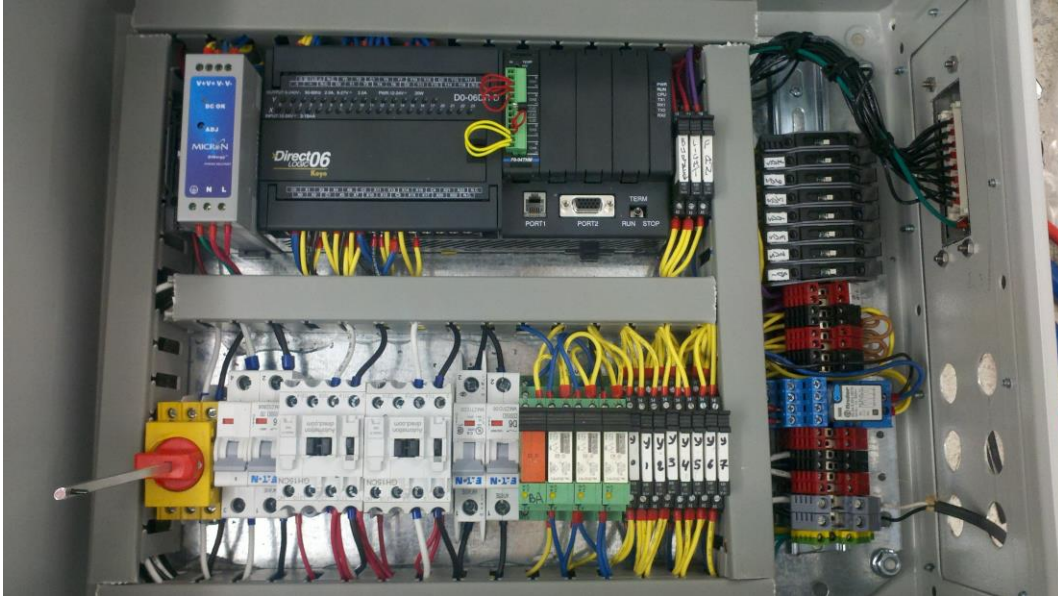
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ELECTRICAL CONNECTIONS

Fig. 1

Sub-Control Panel Sits on Top of Oven



Electrical connection – gray terminal block lower left of photo, lower right, above.



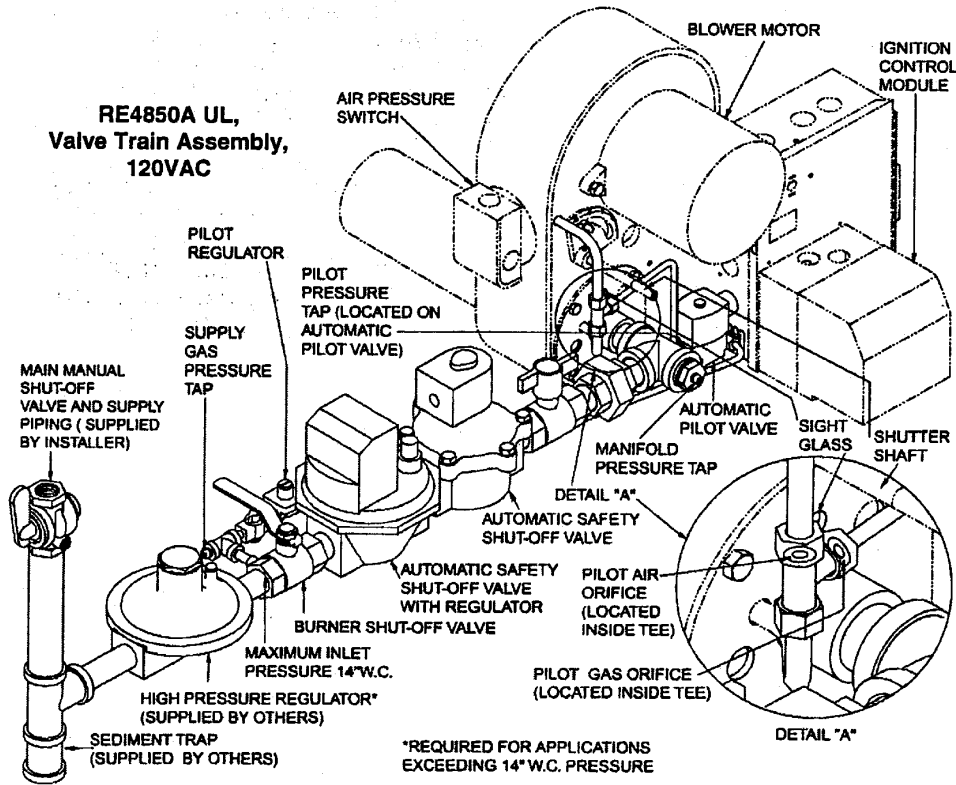
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Fig. 2

Burner Connections



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



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Fig. 3



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WATER SUPPLY

Cold water ½” copper pipe to water solenoid with shut off valve and union installed in burner compartment. See enclosed drawing (Fig. 4) Water should be filtered if hard, to prologue the life of the steam generators and avoid calcium build-up inside the oven.

Steam floor sink should be located in front or at back of oven.

WATER SUPPLY

Fig. 4



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Venting Instructions

All venting, including clearance from combustible surfaces, must comply with local codes. It is required that all customer-supplied ducting meet all state and local code requirements.

The gas exhaust venting shall be 8" double wall with a Tee and 8" barometric damper. A 24" extension on the Tee to attach the barometric damper is needed. See picture (Fig 5) and spec sheet for detail. Barometric damper always supplied by TMB Baking. Tee & ducting provided by customer/contractor.

A straight pipe is recommended. No more than two 45° fittings can be used within a distance of 3 feet.

Note: if any of those recommended configurations are not applicable in the building, a draft inducer needs to be calculated by the mechanical engineer to obtain, when burner off, .04 - .1 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.

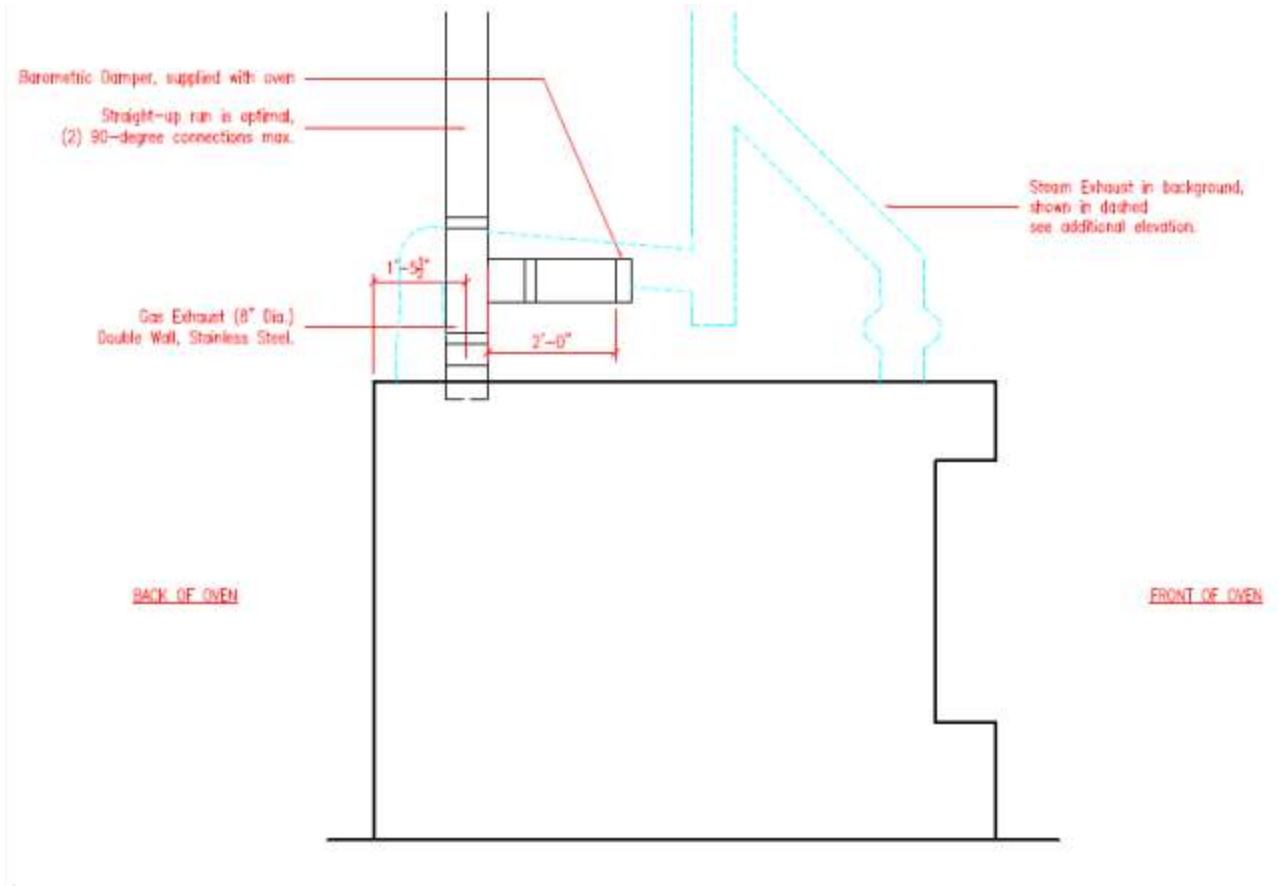
Gas Burner Exhaust (Fig 5)



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Illustration of Gas Burner Exhaust



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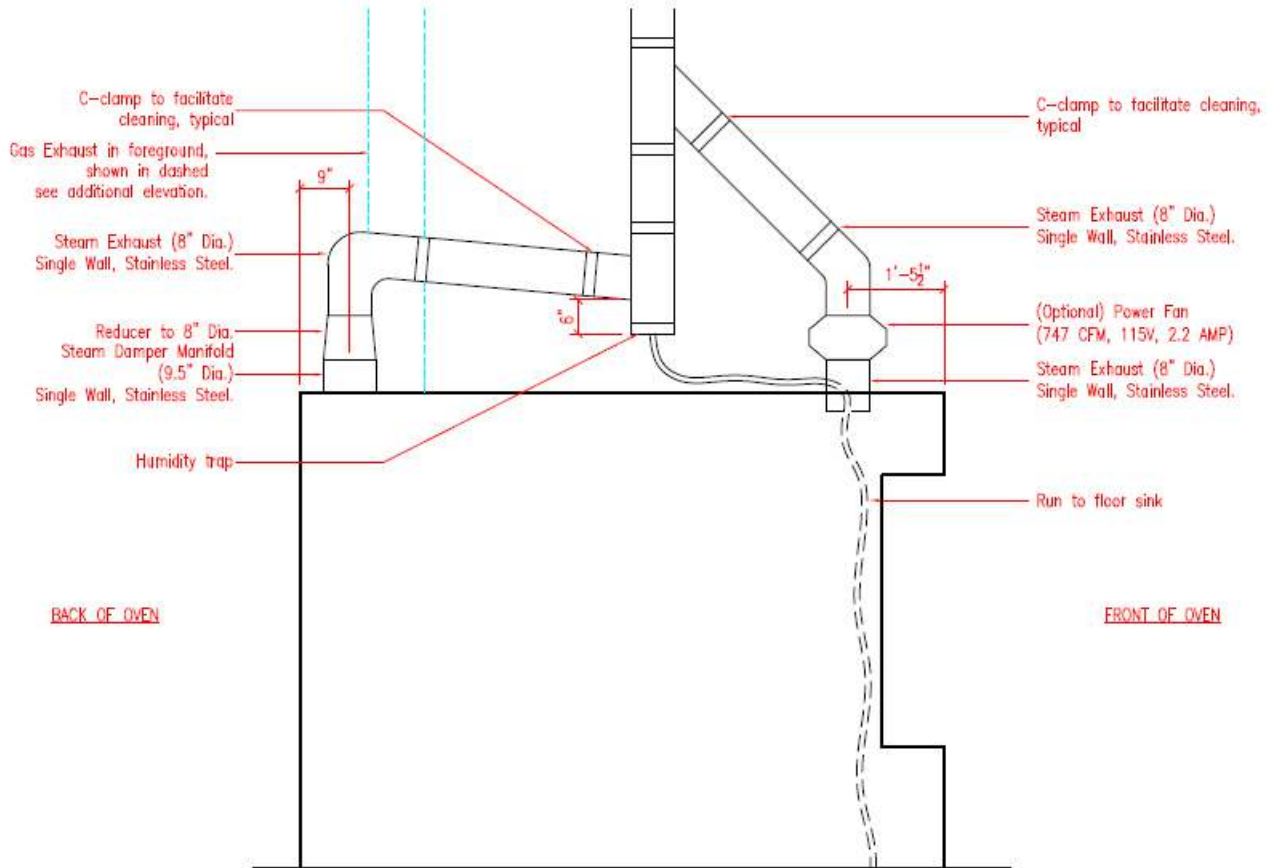


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STEAM HOOD EXHAUST

8" Diameter single wall. Galvanized acceptable. Stainless steel recommended only for durability



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VENTING INSTRUCTION

HOOD FAN EXHAUST

TMB Baking provides a steam exhaust fan (see below) with the oven, however it is optional. Some customers may choose to supply their own fan and have it mounted on the roof, for instance, and this steam exhaust fan may support other steam exhaust requirements in the bakery. The fan supplied by TMB Baking is operated by the control panel on the oven.

MAKEUP AIR & INTERLOCK

In most situations, makeup air is required in the bakery near the oven in order to ensure the mandatory required combustion air for the oven burner. Many state, county or city building codes will require, and TMB Baking strongly recommends, that the makeup air fan be interlocked with the deck oven control. Our control has this feature built in, however the customer/HVAC contractor is required to source the appropriate interlock device for the fan they supply and to run an electrical line from the device to the TMB Baking control panel on top of the oven. Once connected (TMB Baking can provide technical support for the connection), the oven will not start unless the fan is running. Should the makeup fan fail during oven operation or be turned off inadvertently by a switch, the oven burner will shut down as a safety precaution.

Customers frequently ask how much air is required for the oven. A licensed mechanical engineer is best qualified to answer that question, based on the size of the room, other bakery equipment using makeup air in which the oven is located, the BTU consumption of the deck oven burner (found in burner specifications), and the CFM of the steam exhaust fan (the one we supply consumes 747CFM). TMB Baking is not a licensed contractor capable of making these determinations.

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SKU: VTX800

□ **Specifications for Vortex 8", 847CFM In-Line Steam Exhaust Fan (Supplied by TMB Baking)**

Weight:	16.4 lbs.
Package Dimensions:	13.5L x 14.5W x 11.6H
Rated Wattage:	260
Voltage:	115
Approx. CFM @ 0.0	449
SP:	
Duct Diameter:	8"
Rated Amperage:	2.2
Max. Decibels:	49
Warranty:	10 Year
Frequency:	60Hz
RPM:	2750
CFM	847

TMB Baking Technical Support

For TMB Baking Technical Support, please call the office number, below, or for emergency support, please call Michael Kudatsky, Technical Support Manager, at (415) 531-4906. You are also recommended to email parts@tmbbaking.com with questions.

End of Manual



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