

Startup Checklist

for Domestic and Standard Export Ovens



Middleby Marshall | 1400 Toastmaster Drive | Elgin, IL 60120 | 847-741-3300 | Fax 847-741-3801

INSTRUCTIONS

- Checklists are to be completed by the Technician of the Authorized Service Agency
 - Complete one checklist per installation (up to four ovens), IF all of the ovens are of the same model. If ANY of the ovens in the installation are different models, complete an individual checklist for each oven.
- IMPORTANT: IT IS THE CUSTOMER'S RESPONSIBILITY TO REPORT ANY CONCEALED OR NON-CONCEALED DAMAGE TO THE FREIGHT COMPANY.

1. OVEN INFORMATION

1.1 Fill in the Model and Serial Number for each oven in the installation.

Model	Serial Number
_____	_____
_____	_____
_____	_____

1.2 Are ALL of the ovens in the installation of the same model?

- Yes No

If Yes, proceed to Step 1.3
 If No, you must fill out a separate checklist for each oven in the installation.

1.3 Heating System Type/Specifications

- Copy the following utility information from the oven's serial plate.
- Gas-Fired: Natural Electrically Heated
 Propane
 Other:

Nameplate Voltage: _____ Phase: _____ Amperage L1: _____
 L2: _____ L3: _____ N: _____

1.4 Customer Information

Owner _____

Store _____

Address _____

Phone _____

2. UTILITY CONNECTIONS

2.1 Perform the following electrical utility checks

- Electrical Utility Supply:
 Actual Voltage: _____ Phase: _____
 Circuit Breaker Amperage: _____
- Oven(s) are connected to the supply correctly
 - Conduit is not used as a ground connection
 - On 3-phase ovens, a "high leg" connection is NOT PRESENT
 - Each oven cavity has an individual breaker/disconnect

Perform Steps 2.2-2.5 for gas ovens only

2.2 Record the gas meter flow rate: _____

- Middleby recommendations:
- 750 cfh (5.9/sec.) meter: 1-2 oven cavities
 - 1200 cfh (9.4/sec.) meter: 3-4 oven cavities

2.3 Record the gas line size: _____

2.4 Record the gas line TOTAL* length: _____

- Add 7ft (2.1m) to the total for every 90° elbow. Middleby recommends a total gas line length of no more than 200 ft. (61m).

High and Low Flame Settings (PS3240/PS640/PS2020/PS2620)

Natural gas: Manifold pressure should be 3.5" W.C. Bypass pressure should be 0.35" W.C. See attached sheet for adjustments.

Micro-Amps

Micro-Amps - verify micro-amps on the ignition module are greater than 2.0. Different readings depending on type of ignition and module. **Current reading across the flame sensor varies depending on the module. See side of module for exact requirements.** Record the micro amps:

Burner 1: _____ Burner 2: _____

2.5 Perform the following checks:

- Add 7ft (2.1m) to the total for every 90° elbow. Middleby recommends a total gas line length of no more than 200 ft. (61m).
- Natural Gas Propane (LP) Gas
- Gas line is dedicated for ovens only
- Incoming Static Gas Pressure (w.c.): _____
- Incoming Dynamic Gas Pressure (w.c.): _____
- Actual Manifold Gas Pressure (w.c.): _____
- Modulation Valve set and functioning properly?
- Full-flow shutoff valve is present.
- Flexible gas hose(s) are free of bends, folds, or twists.
- Leak detector/soap solution test performed on all gas line joints and unions. Connections tightened if necessary.
- Incoming gas pressures fall into the specific ranges:

Model	Natural Gas	Propane Gas
PS2020	7" - 9" W.C.	12" - 14" W.C.
PS2620	7" - 9" W.C.	12" - 14" W.C.
PS638	7" - 9" W.C.	12" - 14" W.C.
PS640/PS740/PS840	7" - 9" W.C.	12" - 14" W.C.
X55	8" - 12" W.C.	8" - 12" W.C.
X70	8" - 12" W.C.	8" - 12" W.C.

3. CONSTRUCTION/ASSEMBLY CHECKS

3.1 Check all that apply:

- Electrical connections checked and tightened.
- Conveyor is level. If necessary, adjust the pivot plates on the conveyor frame to level the conveyor.
- Drive sprocket set screws checked and tightened.
- Drive chain tension checked.
- Conveyor belt tension checked for proper 1" vertical deflection and adjusted if necessary.
- Restraint cable is properly attached and is shorter than utility connections.

3.2 Photocell/Energy Modes

Break the beam and make sure it goes in and out of energy mode.

3.3 Fingers, Blanks, and End Plugs

Make certain that the finger components mesh properly and are aligned correctly inside and out. Make sure the air fingers, blanks, and end plug themselves are installed correctly and that the eyebrows are appropriately set to the customer's requirements.

3.4 All Modes (except PS2020/PS2620)

First identify direction of conveyor belt (L-R or R-L).

L-R standard from factory

R-L (Reverse belt direction)

a. Photocell must be moved to opposite side

b. Switch belt direction

c. Remove and switch fingers per R-L finger configuration

4. OPERATION AND VENTILATION CHECKS

4.1 Perform the following tests:

- Cooling fan(s) operate and draw air inward.
- Blower wheels/fans are oriented properly and rotate in the correct direction.
- Ventilation hood is present (REQUIRED for all gas ovens consult local codes for electric ovens).
- Is there sufficient make up air?

4.2 Run a test product through the oven to perform the following checks:

- Oven maintains the set point temperature.
- Timing the belt - Place a pan on the conveyor belt. When the leading edge enters the bake chamber, start your timer. When the leading edge exits the bake chamber, stop your timer. The allowable error is 3% of the set time in seconds. Record high and low Hz output on inverters:
High: _____ Low: _____

SIGNING BELOW INDICATES APPROVAL OF THE INSTALLATION AND OPERATION OF THE OVEN(S). AFTER THIS SECTION HAS BEEN SIGNED BY BOTH THE TECHNICIAN AND THE CUSTOMER, THE OVEN(S) MAY BE OPERATED BY THE CUSTOMER.

Technician

Customer

Signature

Date

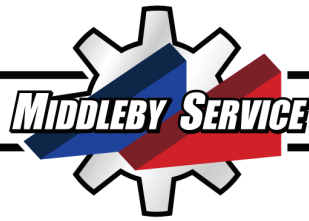
Signature

Date

Service Agency _____

Address _____

Phone _____

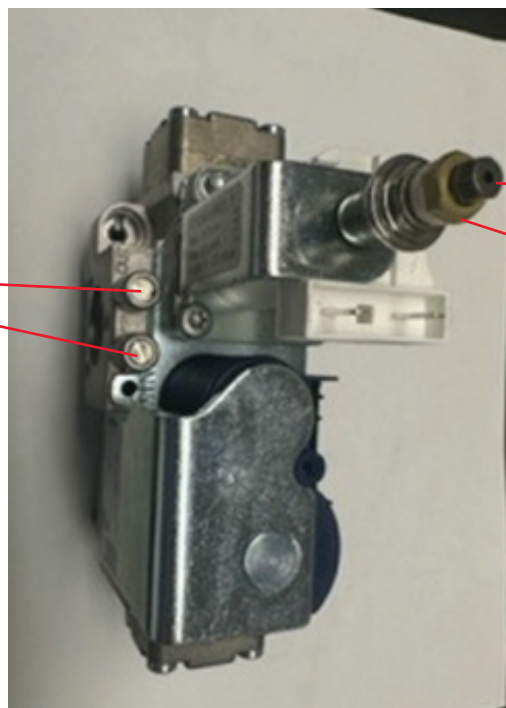


Adjusting High and Low Gas Pressure Honeywell Modulating Gas Valve

- Locate the two stems on the side of the gas valve.
- Loosen the flathead screw a quarter of a turn on the outgoing side of the valve, and slide your manometer tube over the stem.
- Remove the clear plastic cap over the adjustment stack and locate the two adjustment nuts. The 8mm brass nut is your manifold pressure and the 5mm black nut is your bypass pressure. ALWAYS hold one while adjusting the other.
- Zero out your manometer and turn the oven on.
- When the oven fires, you will be reading the manifold pressure. For natural gas, this should be set to 3.5" W.C.
- To adjust this, use an 8mm wrench. Use your 5mm nut driver to hold the bypass adjustment nut in place. In small increments, make the necessary adjustment. Counterclockwise will decrease the pressure, and clockwise will increase the pressure.
- Once your manifold is set to 3.5" W.C. pull one of the small wires off the gas valve. This will force the valve into bypass.
- To adjust your bypass, hold the 8mm adjustment nut in place and use your 5mm nut driver to adjust the pressure to 0.35" W.C. In small increments, make the necessary adjustment. Counterclockwise will decrease the pressure, and clockwise will increase the pressure.
- Once you have the bypass pressure dialed in, put the wire back on the gas valve and check that your manifold pressure is still dialed in at 3.5" W.C.
- Replace the plastic cap.

Top: Manifold/bypass
pressure tap

Bottom: Incoming
gas pressure tap



5mm bypass adjust-
ment

Brass: 8mm manifold
adjustment