

Unit Installation

Precision High Performance Ovens

Models 605, 605P, 625, and 645

Installation Guide 7177897 rev. 1



For further information, refer to the enclosed operating manual on CD. A printed copy of the operating manual is available from Technical Services.

Visit us online to register your warranty
www.thermoscientific.com/warranty

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Important Read this installation guide. Failure to read, understand and follow the instructions in this guide may result in damage to the unit, injury to operating personnel, and poor equipment performance. ▲

Caution All internal adjustments and maintenance must be performed by qualified service personnel. ▲

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Important operating and/or maintenance instructions. Read the accompanying text carefully.



Potential electrical hazards. Only qualified persons should perform procedures associated with this symbol.



Equipment being maintained or serviced must be turned off and locked off to prevent possible injury.



Hot surface(s) present which may cause burns to unprotected skin, or to materials which may be damaged by elevated temperatures.



Marking of electrical and electronic equipment, which applies to electrical and electronic equipment falling under the Directive 2012/19/EU (WEEE) and the equipment that has been put on the market after 13 August 2005.



This product is required to comply with the European Union’s Waste Electrical & Electronic Equipment (WEEE) Directive 2012/19/EU. It is marked with the WEEE symbol. Thermo Fisher Scientific has contracted with one or more recycling/disposal companies in each EU Member State European Country, and this product should be disposed of or recycled through them. Further information on Thermo’s compliance with this directive, the recyclers in your country and information on Thermo products will be available at www.thermofisher.com.

- ✓ Always use the proper protective equipment (clothing, gloves, goggles, etc.)
- ✓ Always dissipate extreme cold or heat and wear protective clothing.
- ✓ Always follow good hygiene practices.
- ✓ Each individual is responsible for his or her own safety.

*** All references are to sections in the included operating manual on CD. ***

Section 1 Unpacking and Damage

Save all packing material if apparatus is received damaged. This merchandise was carefully packed and thoroughly inspected before leaving our factory.

Responsibility for its safe delivery was assumed by the carrier upon acceptance of this shipment; therefore, claims for loss or damage sustained in transit must be made upon the carrier by the recipient as follows:

Visible Loss or Damage:

Note any external evidence of loss or damage on the freight bill, or express receipt, and have it signed by the carrier's agent. Failure to adequately describe such external evidence of loss or damage may result in the carrier's refusing to honor your damage claim. The form required to file such a claim will be supplied by the carrier.

Concealed Loss or Damage:

Concealed loss or damage means loss or damage which does not become apparent until the merchandise has been unpacked and inspected. Should either occur, make a written request for inspection by the carrier's agent within 15 days of the delivery date; then file a claim with the carrier since the damage is the carrier's responsibility.

By following these instructions carefully, we guarantee our full support of your claim to be compensated for loss from concealed damage.

DO NOT — FOR ANY REASON — RETURN THIS UNIT WITHOUT FIRST OBTAINING AUTHORIZATION. In any correspondence to Thermo, please supply the nameplate data, including catalog number and serial number.

Section 1

Unpacking and Damage

Section 2 General Information

This operating manual encompasses the following models and their specific electrical characteristics.

Model No.	Volts	Hz	Phase	Total Watts	Total Amps	Blower Motor	Maximum Rated Temp (in °C)
6050/6052	120	50/60	1	2500	20.8	1/6 H.P.	325
6051/6053	230	50/60	1	2500	11	1/6 H.P.	325
6054	230	50/60	1	3700	16	1/6 H.P.	325
6056	230	50/60	1	4800	21	1/6 H.P.	325

The unit should be used for its intended application; alterations or modifications will void the Warranty.

This product is not intended, nor can it be used, as a sterile or patient-connected device. In addition, this apparatus is not designed for use in Class I, II or III locations as defined by the National Electrical Code.

These ovens are microprocessor controlled. The temperature range of the oven is ambient +15°C minimum to 325°C maximum.

These controllers cycle heat "On/Off" in split-second intervals based on input from a Platinum Resistance Temperature Device (RTD) sensor. The controller displays temperature in °C. When this type of control is combined with the appropriate inner chamber design, precise temperature control from ambient +15°C to 325°C is achieved.

Another backup - safety, is a separate adjustable High Limit control which turns the heater "Off", if the selected limit is attained. A glowing red light will indicate this condition.

The timer, located on the front panel, is spring-wound. It will allow the heater to be turned "Off" after a preset time (maximum of 12 hours) or to continue to heat at the desired chamber temperature by turning the timer knob to the "Hold" position.

The air continues to circulate within the chamber after the heater is turned "Off" as the blower motor is still operating.

Section 2
General Information

Section 3 Installation



Warning Installation should be completed by qualified personnel only. ▲

Best operating results are obtained by choosing a location as free as possible from dust, drafts, or severe temperature changes which can affect the performance of the oven. All four legs of the oven are adjustable to compensate for unevenness of the installation site.

An electrical source of proper characteristics should be near at hand. The ambient temperature should be between 10° and 40°C. Allow if possible, 1-5 feet of free space from left oven wall. This space will allow easy access to the electrical compartment of the oven for maintenance. In any case, 6 inches of free space should be provided for proper ventilation of the electrical compartment.

Electrical Connections



Warning For personal safety, this apparatus must be properly grounded. ▲

Important: Please read carefully.

All models are supplied with a junction box located on the rear of the oven. The National Electrical Code must be observed for proper fusing and size of service wires. Electrical power must be supplied to the oven with permanent wire connections as a line cord is not provided. The service wires should be connected to the three conductors inside the junction box by a **qualified electrician**. The green conductor furnished with the oven must be connected to a well grounded conduit/system.

The electrical ratings for each model are printed on the nameplate attached to the oven.

Electrical Connection Check Points:

1. Have proper connections been made at the junction box?
2. Are all wire connections tight?
3. Are service wires size adequate to carry the load?
4. Is the oven properly grounded?
5. Is the oven connected to a properly fused branch circuit?

Explanation of Controls

"Power" Switch:

All electrical power to the oven when energized. The blower motor will always be in operation when the "Power" switch is "On".

"High Limit" Control:

The function of this thermostat is to control the operation of the heater if either the microprocessor or RTD should fail. During normal operation, the control is set so that the pilot lamp, above the control knob, does not glow. A glowing lamp indicates that the heater is not energized. When the control knob is rotated to its maximum position (fully clockwise), the maximum chamber temperature will be limited to 345°C.

"Temperature Control":

"Temperature" Controller: The microprocessor temperature controller provided contains two digital displays - the upper display indicates chamber temperature in °C and the lower display indicates the desired operating temperature in °C.

1. Set (SET) key is used to access the set values for Temperature Control.
2. Setting digit shift left key — moves to and highlights digit to be changed.
3. Set-value decrement key is used to decrease the value of the number highlighted.
4. Set-value increment key is used to increase the value of the number highlighted.
5. Present Value (PV) is the actual chamber temperature.
6. Set-value (SV) is the Temperature Set Value Display (setpoint or desired temperature).
7. First control output (OUT(1) lamp lights up when control output (heat) is turned ON.
8. Not Used
9. Not Used
10. Not Used
11. Not Used

Explanation of Controls (continued)

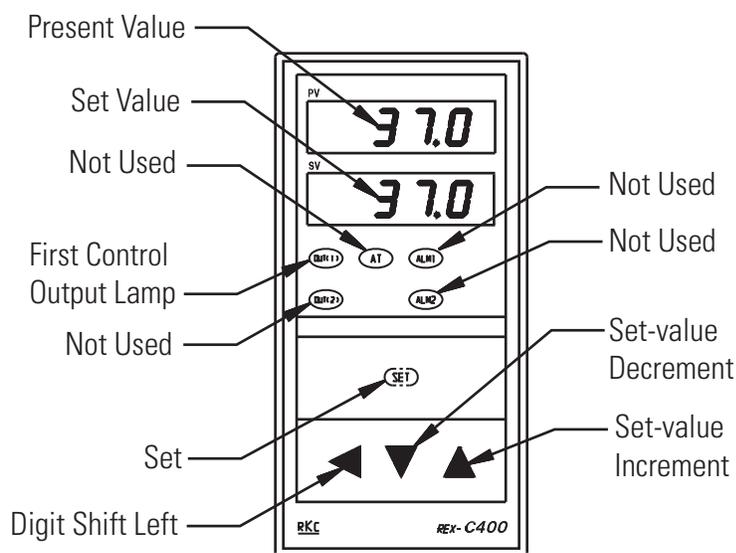


Figure 4-1. Temperature Controller

Timed Heat:

It is a 12-hour spring-wound timer with a "Hold" feature. It turns off the heater after preset time of the timer has elapsed, but the blower motor stays energized and continues to circulate air through the chamber. During normal continuous operation of the oven at a desired temperature, the timer knob should be turned to "Hold" position (counterclockwise).

"Air Volume Control":

It is a mechanical setting and controls the amount of heated air entering the working chamber. The reference dial is numbered 1 through 9. The setting is made by turning the knob slightly counterclockwise, sliding it to a desired position on the scale and locking it by turning clockwise. Although the scale is numbered linearly, the air volume increase is not linear. The air volume increases are relatively small at the lower end of the scale and large when adjusted at the upper end. The "one" setting on the scale provides the minimum airflow, and a setting of "nine" will supply the maximum airflow.

Note The air blower operates at all times when "Power" switch is "On".

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