

Model 802P Roller Oven Instruction Manual



Manual No. 102196658, Revision E
Instrument No. 102030761

Model 802P Roller Oven Instruction Manual

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Houston, Texas, USA

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1 Introduction

The Model 802P Roller Oven is an insulated, temperature-controlled oven with stainless steel exterior and interior. Operators use this roller oven to test, heat, and agitate drilling fluids and samples.

The Model 802P Roller Oven is designed for laboratory and field use. This roller oven can be set for 115 V or 230 V AC power. This oven can handle two 600°F aging cells.

1.1 Drilling Fluids Investigation

Fann roller ovens provide an excellent method of simulating the heating and agitating that the drilling fluid experiences when it is circulated through the hole.

Roller ovens are used primarily in drilling fluid investigations as follows:

1. To simulate downhole conditions, particularly the slow flow rate in the annulus.
2. To simulate the chemical reactions taking place in freshly prepared drilling fluids, and to determine the time for these reactions to reach equilibrium under temperatures of interest.

The sample is heated and agitated on power-driven rollers. This technique, called hot rolling, is valuable for

- Investigating drilling fluids in which a base exchange reaction occurs (e.g., lime-treated drilling fluids).
- Determining the stability of drilling fluids additives, like thinners and organic colloids.
- Determining the stability of drilling fluids, such as oil-emulsion drilling fluids and oil-based drilling fluids.

The sample must be contained in the appropriate container for the test temperature:

- At temperatures less than 180°F (82°C), the sample may be contained in a glass jar.
- At temperatures from 180°F (82°C) to 500°F (260°C), the sample must be contained in a high-temperature aging cell or a standard HPHT filter press cell.
- For tests at temperatures greater than 500°F (260°C), only the 600°F (315°C), 550 ml cell should be used.





1.2 General Use

Fann roller ovens provide heating and agitating, simultaneously or separately. Its applications are as follows:

- Heating and Rolling
- Heating only
 - Drying oven
 - Aging oven
- Rolling only
 - Ball mill roller
 - Homogenous mixing
 - Mixing chemicals
 - De-aerating fluids

1.3 Document Conventions

The following icons are used as necessary to distinguish elements of text.

	NOTE. Notes emphasize additional information that may be useful to the reader.
	CAUTION. Describes a situation or practice that requires operator awareness or action in order to avoid undesirable consequences.
	MANDATORY ACTION. Gives directions that, if not observed, could result in loss of data or in damage to equipment.
	WARNING! Describes an unsafe condition or practice that if not corrected, could result in personal injury or threat to health.



ELECTRICITY WARNING! Alerts the operator that there is risk of electric shock.



HOT SURFACE! Alerts the operator that there is a hot surface and that there is risk of getting burned if the surface is touched.



EXPLOSION RISK! Alerts the operator that there is risk of explosion.

2 Safety

To safely operate all roller ovens, the operator must understand and practice its correct use. Misusing the roller oven or using defective parts and sample cells could result in cell leakage, cell failure, and eventual serious injury or damage.

The Model 802P oven can be heated to 600°F (315°C). Follow these practices for loading the ovens.



Only use the 600°F (315°C), 550 ml Aging Cell (P/N 102111608) for testing at temperatures greater than 500°F (260°C).



EXPLOSION RISK! Do NOT heat the oven above the temperature rating of the test cell.



Before performing a test, please check the pressure/temperature rating of the aging cell. The rating should be stamped on the cell; if the rating is not visible, do not use the cell. Follow the manufacturer's recommendations for maximum temperature, pressure and sample size. Failure to do so can lead the serious injury. See chart in 600°F High Temperature Aging Cell Instruction Manual for recommended applied pressure.

There are two ways to load the sample cells into the oven: before preheating (cold oven) or after preheating (hot).



Caution should be exercised when loading and unloading cells into the hot oven to avoid getting burned.

If you load the samples into a hot oven, you must use insulating gloves and other suitable protection to prevent burns. When the oven is in use at high temperatures for 24 hours or more, the outer surface, especially the door, may get hot. Be aware of these hot areas and avoid contact; touching hot surfaces could result in burns.



The rollers on this oven are driven by a gear-motor through a chain and sprocket drive. If repairing or servicing this area, isolate the unit from the power source. Also, be cautious not to get your fingers or clothing caught in this mechanism.



Maintain the electrical wiring in good condition. If the wiring is faulty, electrical shorts can occur, causing damage to the oven and possible injury to the operator.



These ovens should always be used on a grounded circuit.

The oven has a feature to lock out the lid, preventing unauthorized personnel from opening the hot oven. The user is responsible for writing and implementing lockout/tagout (LOTO) procedures.

2.1 Safe Heating



Caution should be exercised when the roller ovens are in operation to avoid accidental burns.

After the test has ended, safeguard the oven and sample test cells until they are cool. Use the lockout/tagout feature on the oven latches.

Removing a hot sample test cell and cooling it under water is dangerous; this practice is not recommended. Severe burns may occur from touching or dropping the hot cell, or being exposed to the hot steam generated when the water hits the cell.

The Model 802P has a fail-safe, overtemperature system. See Section 2.3 Enhanced Safety Shut-down System.

2.2 Safe Electrical Operation



This oven has built-in supplemental circuit protection. Always use an outlet that has branch-rated circuit protection.



Always disconnect the power cable before attempting any repair.

Make sure that the electrical source has the correct capacity. See Table 3-1.

Verify that the power cord is in good condition and has the proper ground connection.

The oven has manually resettable circuit breakers. If the roller oven trips a breaker, the circuit breaker can be reset by pressing the trip switch. If the breakers continuously trips, this could indicate a problem with the internal circuitry. A qualified technician must service the oven.

If heating time seems too long, or the temperature controller does not work properly, there may be problems in the heating circuit. Contact Fann Instrument Company for assistance.

2.3 Enhanced Safety Shut-down System

This roller oven is equipped with a fail-safe, overtemperature system. This system, located on the oven's back panel, opens an electrical contact and shuts off power to the oven heaters when the internal oven temperature exceeds $625^{\circ}\text{F} \pm 5^{\circ}\text{F}$ ($329^{\circ}\text{C} \pm 3^{\circ}\text{C}$).

When the Safety Shut-down System activates, it indicates that the heating or electrical circuit has potential problems.

When the overtemperature system is tripped, the user must reset the system in order for temperature to be applied again.

Before resetting the overtemperature controller, thoroughly investigate all potential causes of overtemperature activation and system shut-down. After investigating and eliminating all potential hazards, reactivate the safety system.

See Section 5 for operating instructions.

3 Features and Specifications

The Model 802P oven is commonly used in drilling fluid aging tests at static, dynamic, ambient, or heated conditions. This stainless steel oven has power-driven rollers and a digital electronic temperature controller. See Figure 3-1.

The electrical circuit has a state-of-the-art digital electronic controller that uses solid state relays and has a redundant overtemperature protection system.

The roller oven and aging cell specifications are listed in Table 3-1 and 3-2, respectively.

3.1 Roller Oven & Aging Cell Specifications

Table 3-1 Model 802P Roller Oven Specifications

Category	Specification
Heating Temperature Range	Ambient to 600°F (315°C)
Operating Temperature Range	32°F to 122°F (0°C to 50°C)
No. of Cells	Two 550 ml
Electrical	115V, 50/60 Hz, 10A or 230V, 50/60 Hz, 5A
Power	1000 watts
Dimensions (Width x Depth x Height)	20 x 18.6 x 13 inches 51 x 47 x 33 centimeters
Weight	90 lb (41 kg)

Table 3-2 Aging Cell Specifications for Model 802P

Category	Specification
Maximum Temperature	600°F (315°C)
Maximum Allowable Working Pressure	2500 psi @ 850°F 17,237 kPa @ 454°C
Cell Volume	550 ml
Cell Material	Type 316 Stainless Steel, with valve stem

3.2 Control Display Features

Table 3-3 Control Display Features

Front Control Panel	
Oven Temp	Temperature Controller for setting oven temperature. Display shows current temperature and set point
Timer	Program modes to control oven— delayed start, delayed stop, and immediate start
J Type Thermocouple/ Temp Data Log Output	Temperature Data Logger Port for connecting to a Type J Thermocouple and monitoring temperature. (Temperature Data Logger not included.)
Roller ON/OFF	Press ON to activate the rollers. This control switch lights in ON position.
Heater ON/OFF	This control switch works with the temperature controller and timer.
Rear Control Panel	
Over Temperature Controller	Enhanced Safety Shutdown System (ESS). Shuts off power to oven heaters at > 525°F ± 1°F (274°C ± 0.5°C)
Voltage Selector	Set to voltage available—115VAC or 230VAC
Push Button Circuit Breakers	Press button, 5A or 10A, to reset circuit breaker.
Power Inlet	Main Power Input
Power ON/OFF	Press to control power to the oven.



Refer to Section 5 for detailed operating instructions.

3.3 Environmental Operating Specifications

Table 3-4 Environmental Operating Specifications

Maximum Altitude	6562 ft (2000 m)
Temperature Range	39°F to 122°F (4°C to 50°C)
Maximum Relative Humidity (RH)	80% RH at 87.8°F (31°C) or less 50% RH at 104°F (40°C)



Figure 3-1 Model 802P Roller Oven

4 Installation



The roller oven weighs approximately 90 lb (41 kg).

The roller ovens are shipped completely assembled.

Choose the location for the instrument using the following considerations:

Counter or Floor Space	Ovens should be placed where the operator can easily reach the controls and load or unload sample cells.
Clearance	Ovens should be located with adequate space above and on all sides to allow inspection and maintenance.
Power Source	The electrical outlet should be within reach.
Ventilation	Make sure that there is sufficient room ventilation to prevent accumulation of vapors.

5 Operation

This section describes the operations involved in using the Model 802P roller ovens. Refer to Figures 5-1 and 5-2.



EXPLOSION RISK! Do NOT heat the oven above the temperature rating of the test cell.

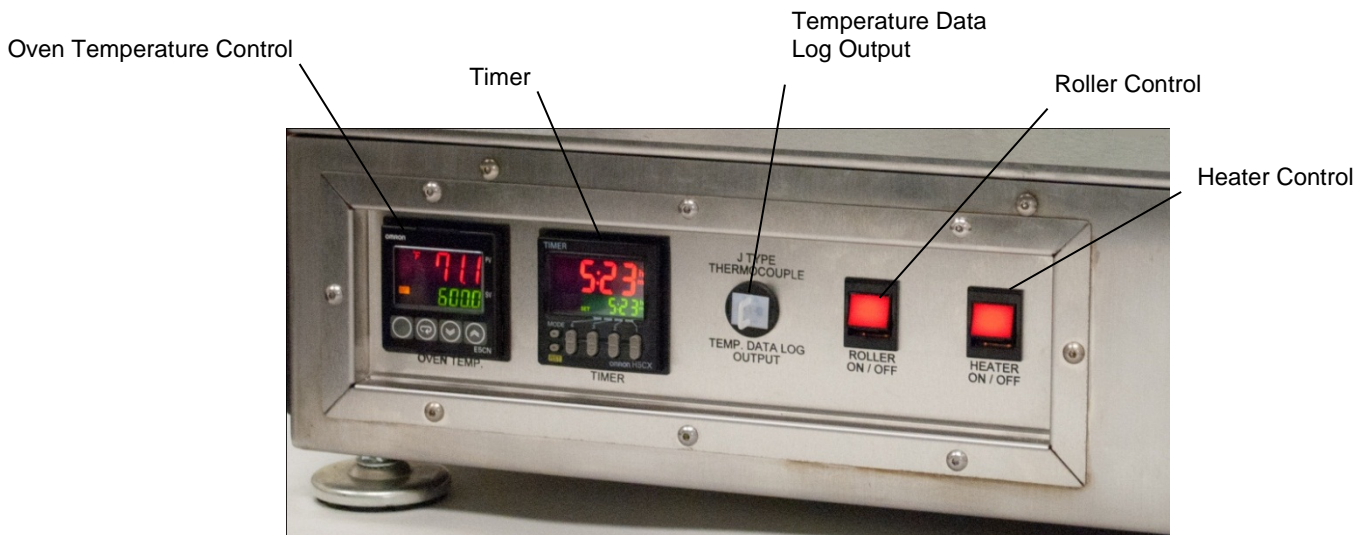


Figure 5-1 Front Control Panel

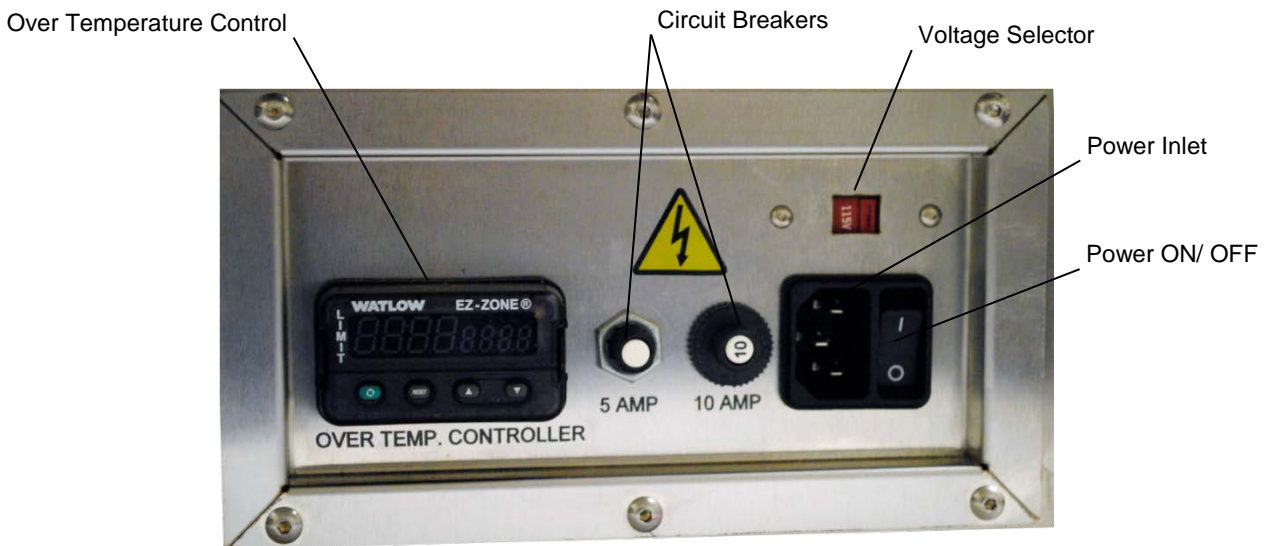


Figure 5-2 Rear Control Panel

5.1 Power Connection

1. Make sure that all switches on the front panel are in the OFF position.
2. Make sure that the voltage selector switch (Figure 5-2) is set to the correct voltage based on the available power. The two options are 115V and 230V AC.
3. Connect the roller oven to the proper voltage as indicated on the voltage selector. Verify the power outlet is rated to carry the wattage of the oven.

5.2 Control Panel

1. Two switches are located on the front:
 - a. **ROLLER ON/OFF** – activates rollers and lights when in the ON position
 - b. **HEATER ON/OFF** - activates heater and lights when in the ON position
2. The **HEATER ON/OFF** switch controls the heaters through a temperature controller that uses a PID algorithm to maintain the oven temperature at setpoint.
3. The digital temperature controller (**OVEN TEMP**) controls the oven temperature and displays the set point and process temperatures.
4. The timer (**TIMER**) controls the way the oven operates. The oven settings modes are delayed start, delayed stop, and immediate start. Programming instructions for these modes are provided in Section 5.3.



To start the timer, you must change the **HEATER ON/OFF** switch to the **ON** position.

5. The Temperature Data Logger port (TEMP DATA LOG OUTPUT) can accept a Type J Thermocouple Data Logger.



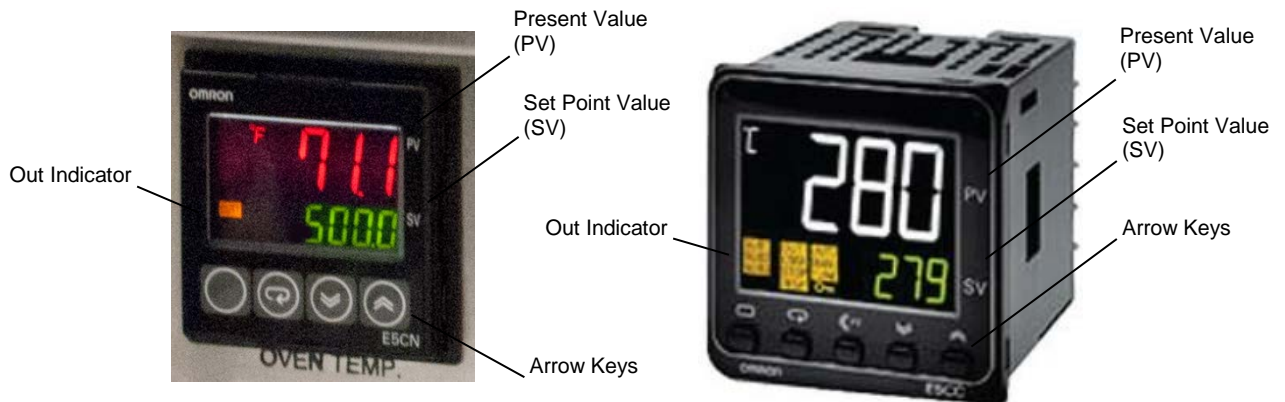
This data logger port accepts a Type J Thermocouple Data Logger. A temperature data logger is not included. Review manufacturer's instructions for your data logger before testing.



A data logger measures various electrical signals, converts them to digital data, and stores data in its internal memory for later download to a computer. With a temperature data logger, real-time oven temperature data can be collected at a set logging rate and start time.

5.3 Oven Temperature Controller

The temperature controller is a full PID controller with an auto-tune feature that varies the cycle time with the demands of the oven. The unit will arrive tuned and ready for set point operation. One of two temperature controllers will be used in the manufacture of the Model 802, which have comparable display and controls:



Omron E5CN-QMT-500 AC100-240

Omron E5CC-QX3A5M-000

1. Use the arrow up and arrow down keys to increase or decrease the set point temperature.
2. When the arrow keys are pressed and then released, the temperature is set.



The temperature setpoint should be set before setting the delayed start or delayed stop functions.

3. The out indicator will light when the heater is on.



The heaters receive power only when the **HEATER ON/OFF** switch is in the **ON** position, and the timer is setup to allow power to be applied to the heaters.

4. The current temperature is displayed on the PV section.
5. The desired temperature is displayed on the SV section.

5.4 Timer

The timer has several output modes, but for this application you only need to use modes A-1 and E.

Mode A-1 is for delayed start operation. Mode E is for delayed stop.



This timer cannot be programmed for both delayed start and delayed stop at the same time.



Make sure that the oven temperature controller is set to the desired temperature. The timer starts when the **HEATER ON/OFF** switch is in the **ON** position. The elapsed time shows the countdown (hours and minutes) to the set time. When the elapsed time display is green, the oven is heating. When the elapsed time display is red, the oven is not heating.

5.4.1 Delayed Start Mode



The timer default setting is immediate start. To change to delayed start, follow the steps below.

The Delayed Start Mode allows you to delay turning on the heaters. After the timer counts down the hours and minutes, the heaters will turn on.

1. Turn the power switch on.
2. Press and hold the **MODE** key for approximately 3 seconds. The display will change to the time range mode.



3. In the time range mode, press the rocker button 1, either up or down, to choose time units:
 - hours (h)
 - hour and minutes (h:m)
 - minutes (m)
 - minutes and seconds (m:s)
 - seconds (s)
4. Press the **MODE** key until the display changes to time mode. Press rocker button 1 until down is selected. This setting puts the timer in countdown mode to start the heater.



5. Press the **MODE** key again until the display changes to output mode.



6. Press the rocker button 1, either up or down, until **Mode A-1** is selected.
7. Then press and hold **MODE** to return to run mode. In the run mode, you can now use the rocker buttons to preset the timer.



8. Use the rocker buttons (4, 3, 2, or 1) to preset the timer in hours, minutes, and seconds.
9. Then set **HEATER ON/OFF** to **ON** to start the timer. When heating is enabled, the Oven Temperature Controller display will change from red to green and the **Out Indicator** will be orange.



The reset key (**RST**) on the timer, restarts the timer. It does not activate immediate start mode.

5.4.2 Immediate Start

With the timer set to 0 (zero) in Delayed Start Mode, the oven will immediately heat when heater switch is on

Press and hold the **MODE** key for approximately 3 seconds. The display will change to the time range mode.



Press and hold **MODE** to return to run mode. Use the rocker buttons to set the timer to 0 (zero).



5.4.3 Delayed Stop Mode

The Delayed Stop Mode allows you to turn the heaters off after a specified time.

1. Turn the power switch on.
2. Press and hold the timer **MODE** key for approximately 3 seconds. The display will change to the time range mode.



3. In the time range mode, press the rocker button 1, either up or down, to choose
 - hours (h)
 - hour and minutes (h:min)
 - minutes (m)
 - minutes and seconds (m:s)
 - seconds (s)
4. Press the MODE key until the display changes to time mode. Press rocker button 1 until down is selected. This setting puts the timer in countdown mode to stop the heater.



5. Press the **MODE** key again until the display changes to output mode.



6. Press the rocker button 1, either up or down, until **Mode E** is selected. The delayed stop **Mode E**, the timer must be counting down for the oven to heat. If the display shows red, then heating is not enabled.
7. Then press and hold **MODE** to return to run mode. In the run mode, you can now use the rocker buttons to preset the timer



8. Use rocker buttons (4, 3, 2 or 1) to preset the timer for heating time in hours and minutes.
9. Then set **HEATER ON/OFF** to **ON** to start the timer. When heating is enabled, the Oven Temperature Controller display will change from red to green and the **Out Indicator** will be orange.



The reset key (**RST**) on the timer, restarts the timer. It does not activate immediate start mode.

5.5 Over Temperature Control

The Over Temperature Controller settings are preset and cannot be changed by the user.

If the overtemperature system is tripped, the power to the heaters will shut down and the oven will stop heating.

To resume heating, turn the power switch to the **OFF** position and then to the **ON** position

5.6 Cell Protector O-rings

To prevent excessive wear and reduce noise, O-rings should be used on the outside of the sample cells to be rolled.

O-ring specifications are as follows:

- For temperatures up to ~ 300°F (149°C) : O-rings, P/N 205660
- For temperatures > 300°F (149°C) to 500°F (315°C) : Teflon[®] O-ring, P/N 205661
- For the 600°F Aging Cell
 - For temperatures up to 450°F (232°C): Viton[®] O-ring, P/N 102124946
 - For temperatures up to 600°F (315°C): Teflon[®] O-ring, P/N 102124947

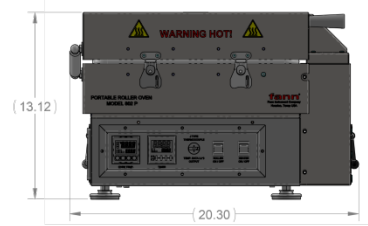
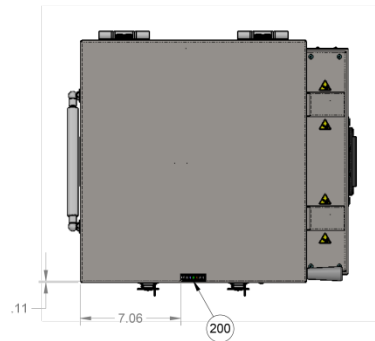
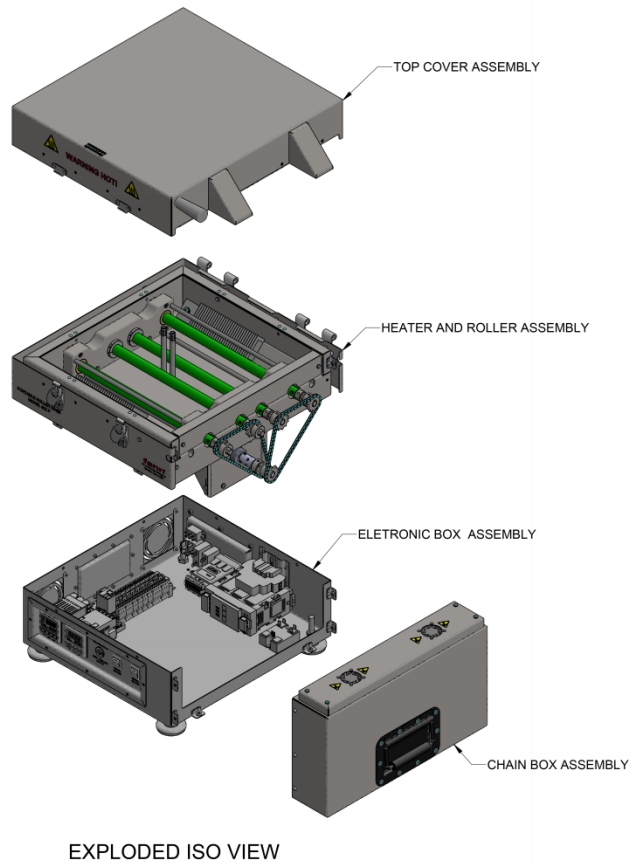
6 Parts List

Table 6-1 Model 802P Roller Oven Assembly, P/N 102030761, Rev H

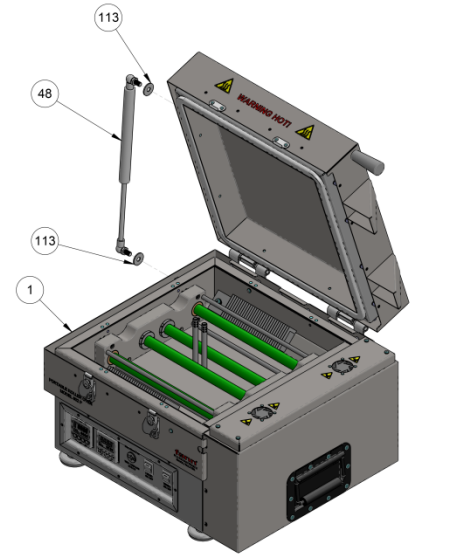
Item No.	Part No.	Quantity	Description
0001	102087026	1	CHASSIS, PORTABLE ROLLER OVEN, MODEL 802 P
0002	102006492	1	ROLLER ASSY
0004	102169703	1	GASKET WITH CLIPS, HIGH TEMPERATURE, BRAIDED FIBERGLASS
0006	102092998	2	DUAL THERMOCOUPLE, PROBE DIA 0.125 X 7 IN. LENGTH, WIRE LENGTH 40 IN.
0007	102091320	1	MOTOR, PARALLEL SHAFT DC GEARMOTOR, 139 RPM, 24 VOLTS, 1/29 MOTOR HP
0008	102004492	1	COUPLING, MOTOR SHAFT
0009	102004479	2	SPROCKET, 10 TEETH 12MM BORE DIA, 304 STAINLESS STEEL
0010	102092999	2	35 B SERIES CHAIN, 42 LINKS, 304 STAINLESS STEEL
0011	102004478	2	HEATER, FINNED STRIP HEATERS, 120VAC, 400 WATTS, 304 SS
0012	100022082	4	COVER, TERMINAL, CERAMIC, SET (2-Piece), FOR MICA BAND HEATER
0013	102091323	3	FAN, 40MM X 40MM X 28MM, 24V DC, 9500 RPM
0014	102092965	1	6 CONNECTOR PLUG, SOFT SHELL, NYLON, 0.084, 13 A
0015	102092966	6	CONTACT, PIN, 20-14 AWG, BRASS
0016	102092967	1	6 CONNECTOR RECEPTACLE, SOFT SHELL, NYLON, 0.084, 13 A
0017	102092968	6	CONTACT, SOCKET, 20-14 AWG, BRASS
0018	101761371	1	POWER SUPPLY, 24V, 5 AMP, LED DISPLAY, DIN RAIL MOUNT
0019	101443927	1	RELAY, MULTIFUNCTION TIME, UNIVERSAL SUPPLY VOLTAGE AC/DC 12 - 240 V
0020	101391619	4	CLAMP, END, UNIVERSAL, FOR 35MM X 7.5MM MOUNTING RAIL, E/NS 35 N
0021	101462159	8	COVER, 2.2MM X 48.5 MM CONTACT
0022	101483688	21	FEED-THROUGH TERMINAL BLOCKS WITH SPRING-CAGE CONNECTION
0023	101483689	13	PLUG-IN BRIDGE FOR CROSS-CONNECTIONS IN THE TERMINAL CENTER
0024	102091322	1	TEMPERATURE CONTROLLER, 1/16 DIN, TC OR PT INPUT, 1 VOLTAGE OUT, 100-240VAC
0025	102091321	1	DIGITAL TIMER, RELAY, E-MECH, MULTI-FUNCTION, CUR-RTG 5A, CONTROL-V 100-240 AC
0026	101443937	1	PANEL THERMOCOUPLE JACK, ROUND HOLE, RMJ MINIATURE
0027	102091257	2	SWITCH, ROCKER DPDT, 5A, 125V, 28V ISOLATED LAMP CIRCUIT FOR INCANDESCENT
0028	101948879	1	CONTROLLER, 1/32DIN, LIMIT CONTROLLER, 100 TO 240V, +/-0.1C ACCURACY
0029	101959461	1	CIRCUIT BREAKER, 5 AMP, PUSH BUTTON, 125-250 VAC/32 VDC

Item No.	Part No.	Quantity	Description
0030	101752942	1	CIRCUIT BREAKER, 10 AMP, PUSH BUTTON, 125-250 VAC/32 VDC
0031	101984629	1	SWITCH DPDT, POWER AND SELECT, SLIDE, 10.1A AT 125 VAC, 4A AT 28VCD, 5A AT 250VAC
0032	101985471	1	INLET AC, WITH ON/OFF SWITCH, SNAP-IN FRONT 1.5MM 12A
0033	102172207	1	SOLID STATE RELAY, DUAL OUTPUT, 25 A, OUTPUT 24-280 V AC
0034	102083129	2	FAN FILTER ASSEMBLY, PLASTIC 3 5/8 IN.
0036	208452	1	CABLE POWER 115V 18 AWG M&F PLUG
0040	102142213	1	ACCESSORY, NON-ADHESIVE THERMAL PAD FOR SOLID STATE RELAY
0041	101825519	21	TERMINAL FORK 22-18AWG BLOCK FORK
0042	204299	11	TERMINAL FEMALE Q.C 0.25 X 0.032 1
0043	208457	6	BUTT SPLICE 2RA-18
0044	101736420	2	FEMALE CONNECTOR, 4 POLE, 5MM PIN SPACING, 12 A
0045	101736419	2	MALE CONNECTOR, 4 POLE, 5MM PIN SPACING, 12 A
0046	120159754	1	CONNECTOR INLINE 4 POS FEMALE
0047	100024575	4	TERMINAL, CRIMP, FEMALE, 22-24 AWG
0048	102152013	1	GAS SPRING, 20 LB FORCE, WITH BALL JOINT FITTINGS
0049	101988218	1	RELAY, DPDT, 15A, 24DC, VOL-RTG 300V, PLUG-IN
0050	101988217	1	SOCKET, RELAY, 16A, 300V, 8-PIN, DIN/PANEL MOUNT
0051	101988812	1	HOLD DOWN CLIP, 782 HERMETIC RELAYS IN FINGER SAFE SOCKET
0052	102186064	4	SHAFT COLLAR, SPACER, 1.35 OD X 0.75 ID X .22 WIDTH
0053	204276	4	TERMINAL RING NO. 10 16-14 AWG
0100	100028793	4	SCREW, SET, #8-32 NC X 3/16, CUP PORT, HEX SOCKET, PL
0101	101262268	4	SCREW, THREADED, BUTTON HEAD SCS (US) - NO. 10 - 32 UNF X 0.375 - 18-8 SS
0102	101267977	4	WASHER, LOCK, REGULAR SPRING (US) - NO. 10 - 18-8 SS
0103	101265337	6	SCREW, THREADED, CAP, SOC HEAD (US) - NO. 8 - 32 UNC X 1.25 - 18-8 SS
0104	101262172	12	SCREW, THREADED, BUTTON HEAD SCS (US) - NO. 4 - 40 UNC X 1.50 - 18-8 SS
0105	102092974	14	NUT, ELASTIC STOP, 4-40 UNC, 18-8 STAINLESS STEEL
0106	100033128	1	RAIL, MOUNTING, 35MM, X 2 METER, DIN, 46277, SYMMETRICAL
0107	100033128	1	RAIL, MOUNTING, 35MM, X 2 METER, DIN, 46277, SYMMETRICAL
0108	101262246	4	SCREW, THREADED, BUTTON HEAD SCS (US) - NO. 8 - 32 UNC X 0.375 - 18-8 SS
0109	101267975	4	WASHER, LOCK, REGULAR SPRING (US) - NO. 8 - 18-8 SS
0110	101262158	2	SCREW, THREADED, BUTTON HEAD SCS (US) - NO. 4 - 40 UNC X 0.375 - 18-8 SS
0111	101262200	2	SCREW, THREADED, BUTTON HEAD SCS (US) - NO. 6 - 32 UNC X 0.25 - 18-8 SS

Item No.	Part No.	Quantity	Description
0112	101262829	8	SCREW, THREADED, FLAT HEAD SCS (US) - NO. 6 -32 UNC X 0.50 - 18-8 SS
0113	102152332	2	FLAT WASHER, M8 SCREW SIZE, 24 MM OD LARGE DIAMETER
0114	210227	3	CHAIN CONNECTOR LINKS, NO. 25, 1/4 PITCH
0200	102061744	1	REVERSIBLE TEMPERATURE, INDICATORS THERMOMETERS
0201	102025671	10	WIRE, LEAD, HIGH TEMPERATURE 842F/450C WIRE GAUGE 16 AWG
0202	208529	1	WIRE 18 AWG PVC STRANDED WHITE
0203	208521	1	WIRE 18 AWG PVC STRANDED BROWN
0204	208523	1	WIRE 18 AWG PVC STRANDED RED
0205	208522	1	WIRE 18 AWG PVC STRANDED BLACK
0206	206254	1	WIRE 16 AWG PVC STRANDED BROWN
0207	206224	1	WIRE 16 AWG PVC STRANDED WHITE
0208	206212	1	WIRE 16 AWG PVC STRANDED GREEN
0209	204292	16	SLEEVING SIZE 3/8
0215	102263490	1	WARNING LABEL
0216	102263492	1	WARNING LABEL, TOP COVER
9996	102196658	1	INSTRUCTION MANUAL, MODEL 802P ROLLER OVEN



FRONT VIEW



OVEN OPEN
ISO VIEW

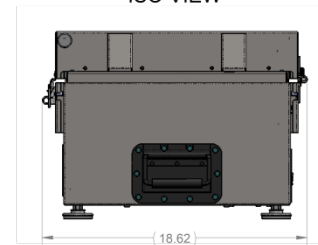


Figure 6-1 Model 802P, 600°F Roller Oven

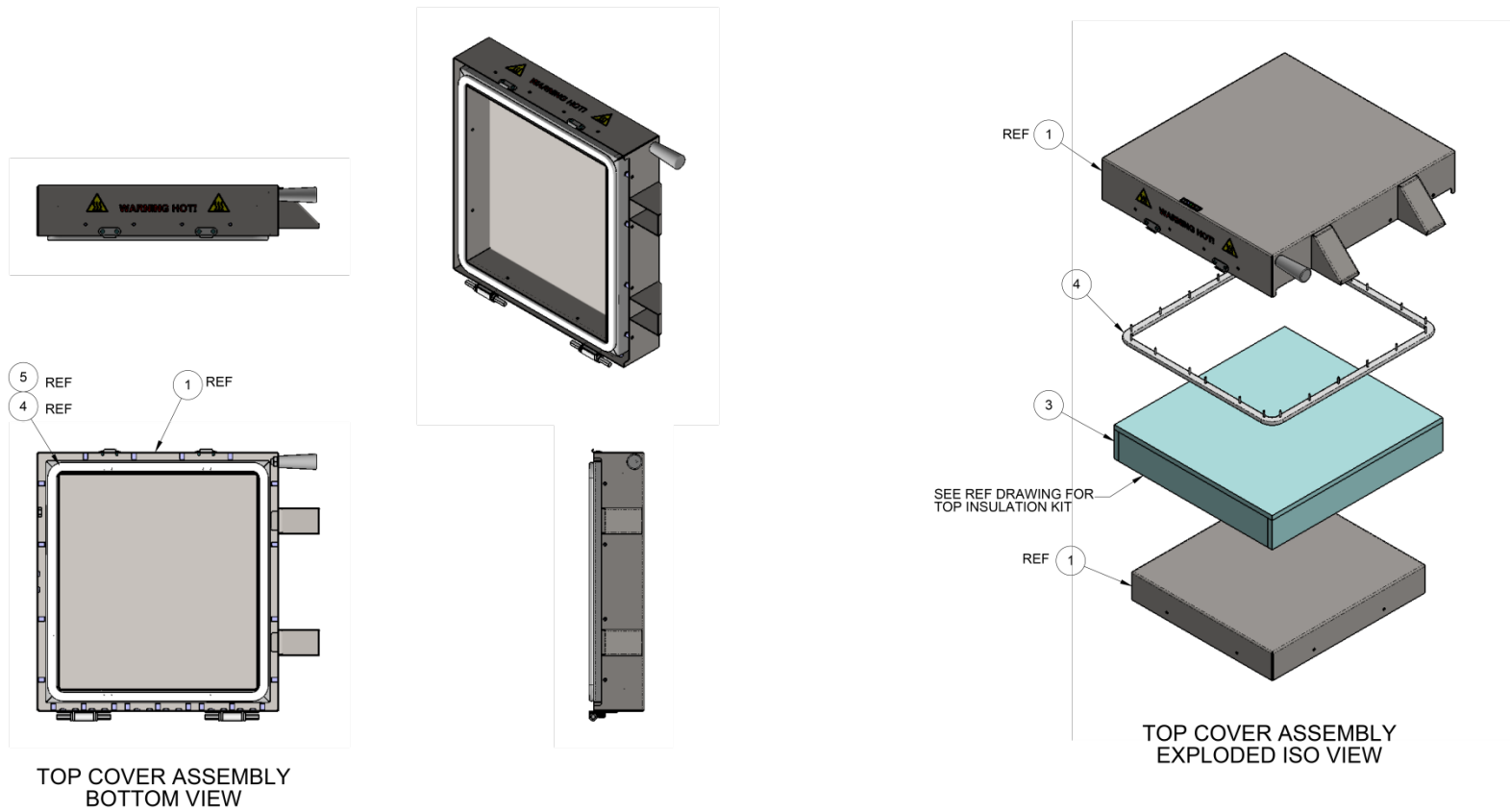


Figure 6-2 Model 802P Top Cover Assembly

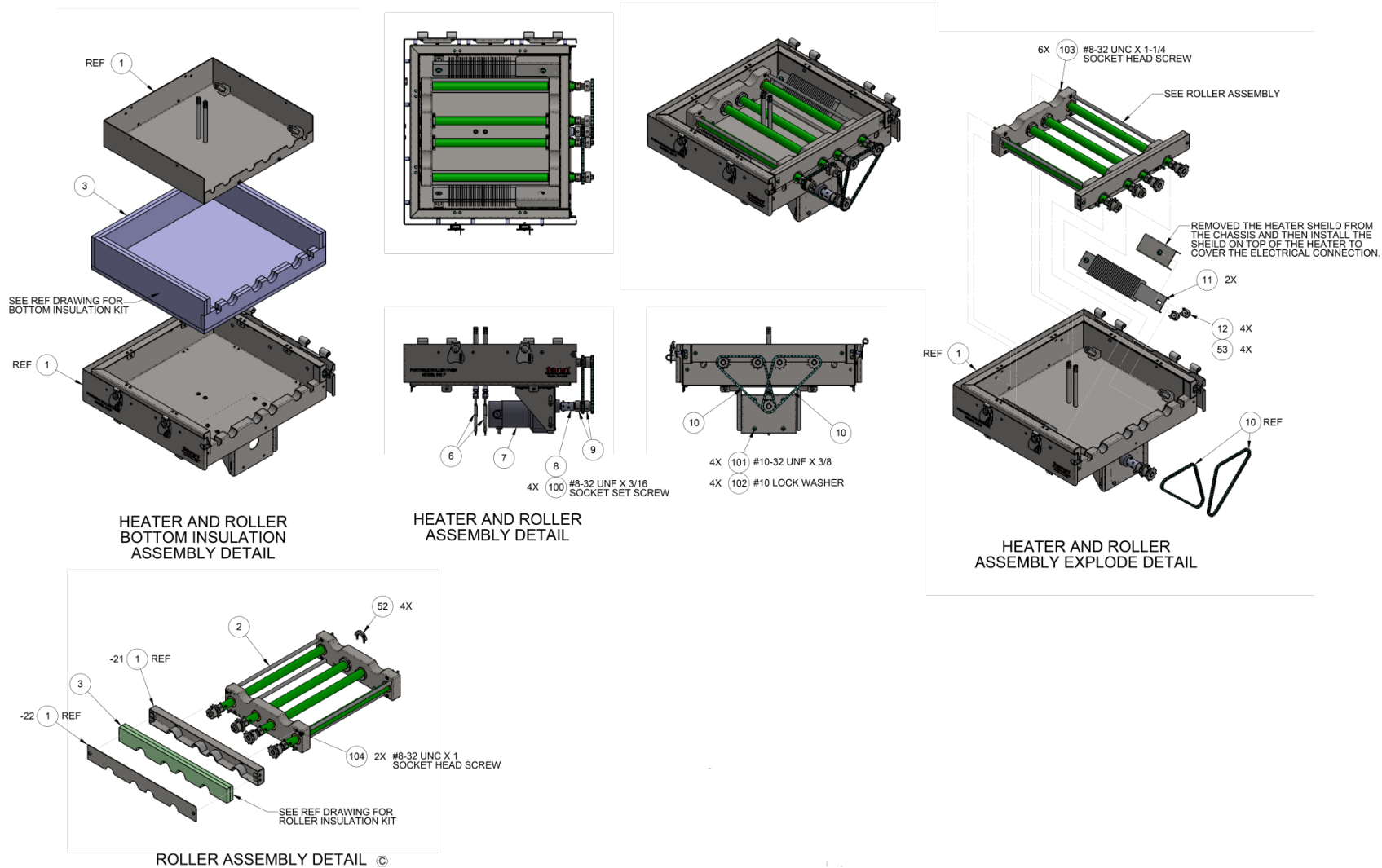


Figure 6-3 Model 802P Heater and Roller Assembly

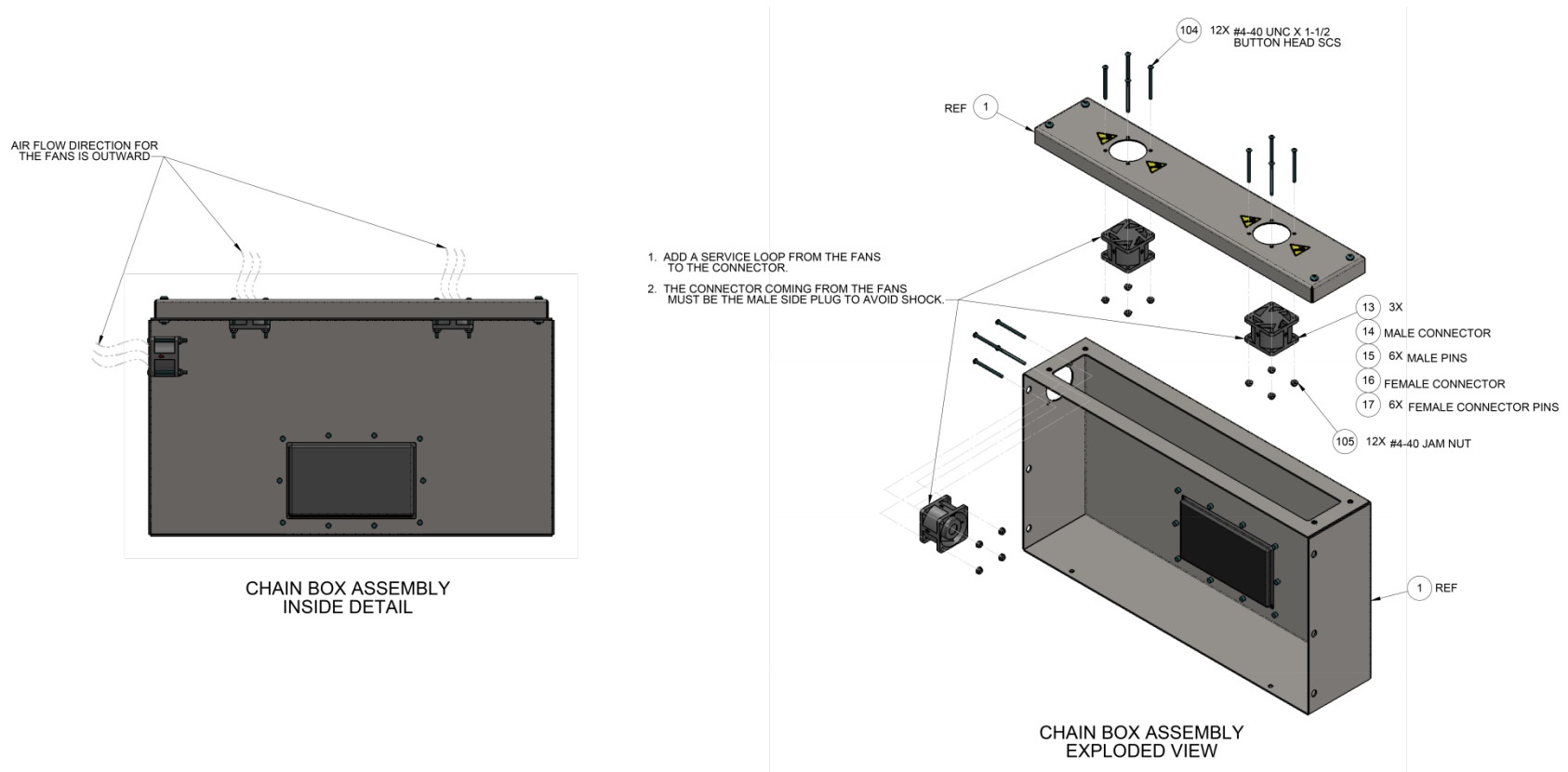


Figure 6-4 Model 802P Chain Box Assembly

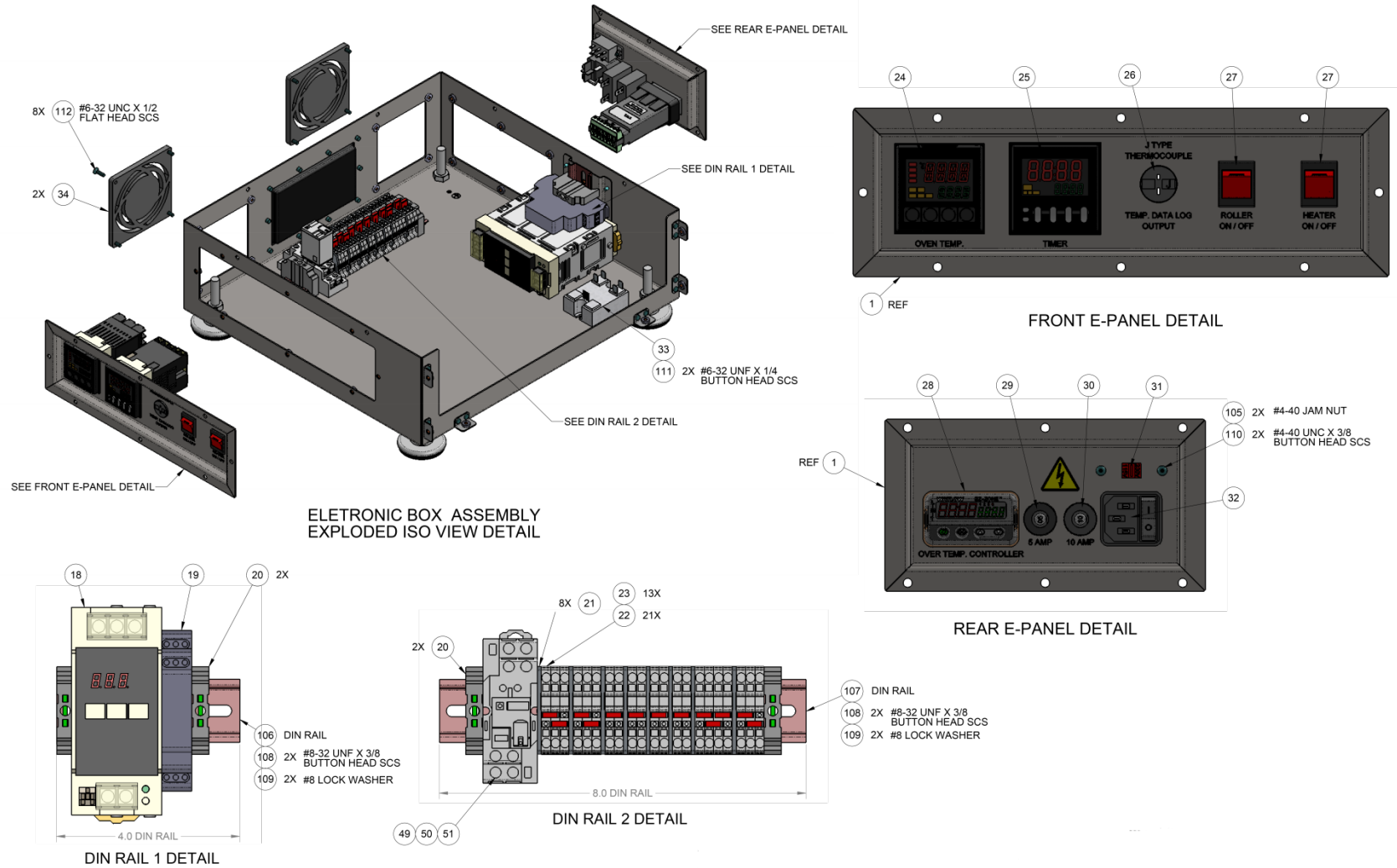


Figure 6-5 Model 802P Electronics Assembly

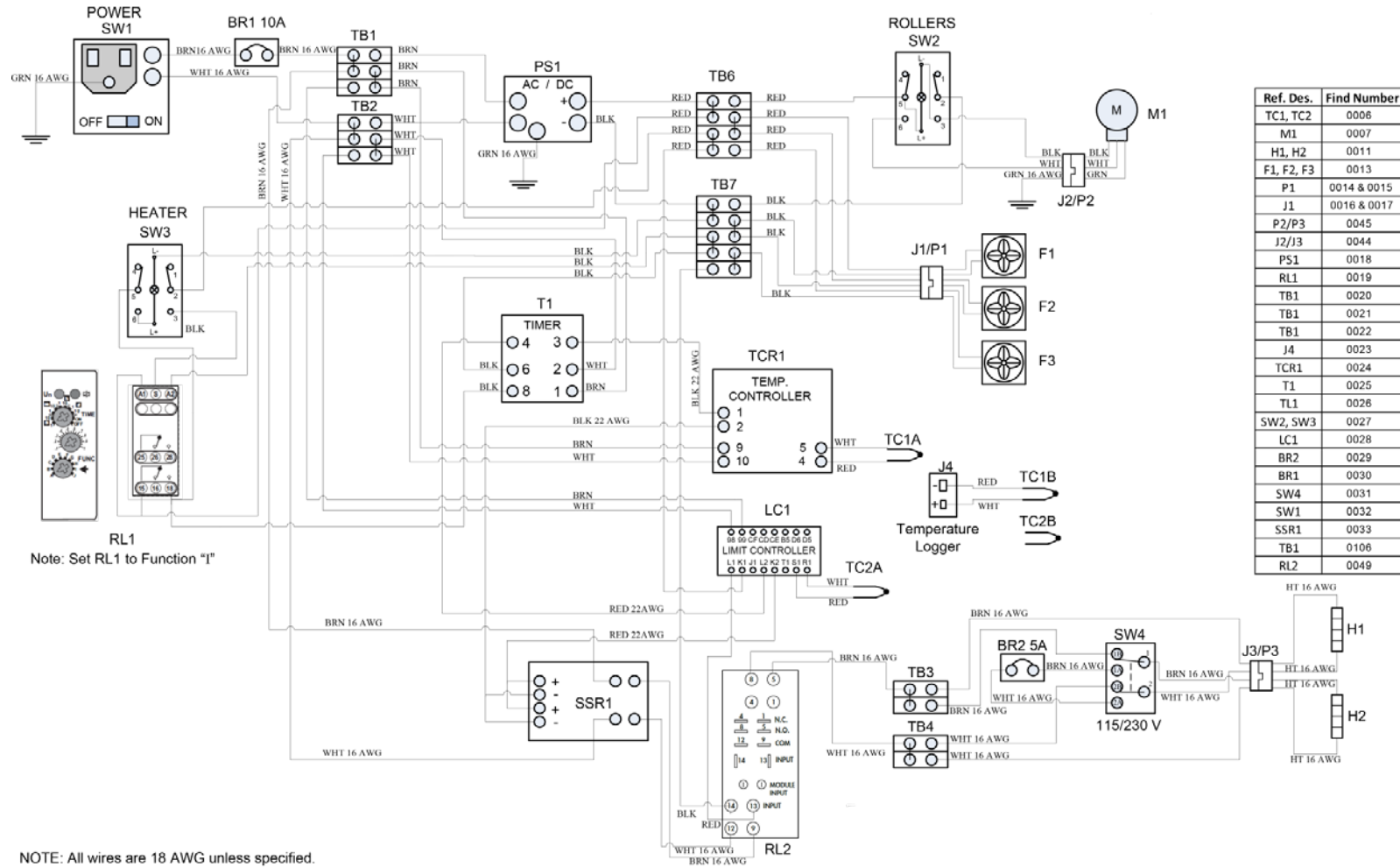


Figure 6-6 Model 802P Wiring Diagram*

* Temperature Controller Omron E5CN-QMT-500 AC100-240

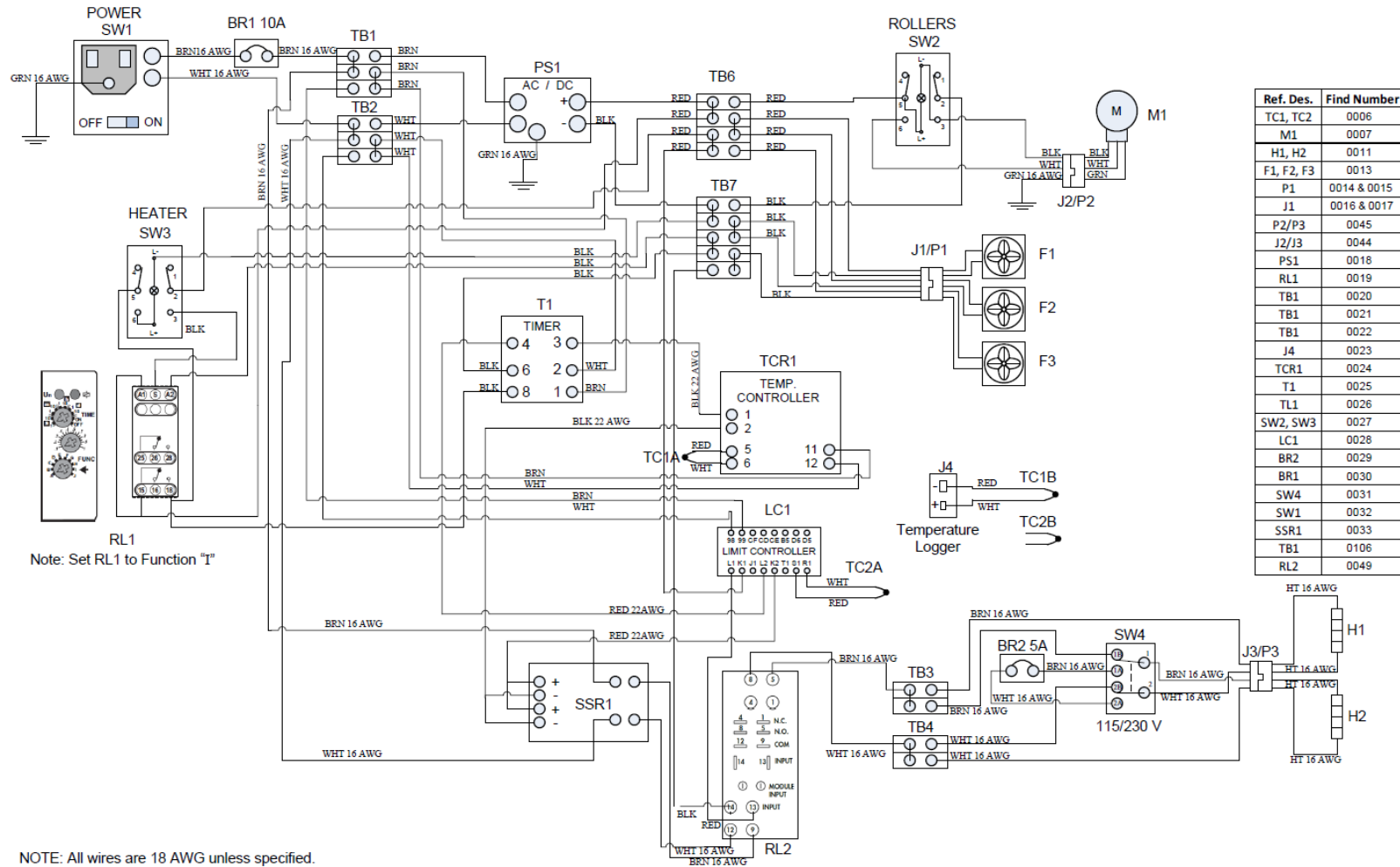


Figure 6-7 Model 802P Wiring Diagram*

* Temperature Controller Omron E5CC-QX3A5M-000

7 Warranty and Returns

7.1 Warranty

Fann Instrument Company warrants only title to the equipment, products and materials supplied and that the same are free from defects in workmanship and materials for one year from date of delivery. **THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY, FITNESS OR OTHERWISE BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE.** Fann's sole liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale, lease or use of any equipment, products or materials is expressly limited to the replacement of such on their return to Fann or, at Fann's option, to the allowance to Customer of credit for the cost of such items. In no event shall Fann be liable for special, incidental, indirect, consequential or punitive damages. Notwithstanding any specification or description in its catalogs, literature or brochures of materials used in the manufacture of its products, Fann reserves the right to substitute other materials without notice. Fann does not warrant in any way equipment, products, and material not manufactured by Fann, and such will be sold only with the warranties, if any, that are given by the manufacturer thereof. Fann will only pass through to Customer the warranty granted to it by the manufacturer of such items.

7.2 Returns

For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Fann will not be responsible for damage resulting from careless or insufficient packing.

Before returning items for any reason, authorization must be obtained from Fann Instrument Company. When applying for authorization, please include information regarding the reason the items are to be returned.

Our correspondence address:

Fann Instrument Company
P.O. Box 4350
Houston, Texas USA 77210

Telephone: 281-871-4482
Toll Free: 800-347-0450
FAX: 281-871-4446

Email fanmail@fann.com

Our shipping address:

Fann Instrument Company
14851 Milner Road, Gate 5
Houston, Texas USA 77032

Appendix Declaration of Conformity



Declaration of Conformity

Roller Oven, Model 802P

Fann Instrument Company
15112 Morales Road
Houston, Texas 77032

Declares that the following product:

Description:	Portable Roller Oven, 600°F
Model Number:	802P
Rated Voltage and Frequency:	115 Volts, 50/60 Hz, 230 Volts, 50/60 Hz
Rated Power Consumption:	1000 watts

Meets the essential requirements of the IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), by using the relevant standard shown below to indicate compliance.

IEC 61010-1:2001 (Second Edition)
Safety requirements for electrical equipment for measurement, control, and laboratory use
Part 1: General requirements




Engineering Manager



Quality Control Manager



Place of Issue



Date of Issue