## **SERVICE MANUAL**

## FRI-JADO FJ7500 7-SPIT ROTISSERIE OVEN

#### **MODELS**

FJ7500\*



\*Fri-Jado produced Programmable Rotisseries with serialnumbers starting with 7500

#### - NOTICE -

This manual is prepared for the use of trained Service Technicians and should not be used by those not properly qualified. If you have attended a trianing for this product, you may be qualified to perform all the procedures in this manual.

This manual is not intended to be all encompassing. If you have not attended a training for this product, you should read, in its entirety, the repair 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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# EMPTY PAGE



## **INDEX**

| Index   | 3    |
|---|------|
| General technical data<br>Technical Data        |      |
| Programming instructions                        | 5    |
| Optional settings                               |      |
| Removal and replacement of parts                |      |
| Right or left side panel                        |      |
| Top cover                                       | 9    |
| Knob  |      |
| Instrument panel                                |      |
| Electric panel                                  |      |
| Display   |      |
| Panel and keypad assembly                       |      |
| Namepanel                                       |      |
| Quartz lamp                                     |      |
| Power section                                   |      |
| High limit thermostat                           |      |
| Thermostat                                      |      |
| Rotor or main switch                            |      |
| Contactor                                       |      |
| Blower motor                                    |      |
| Blower motor bottom rotisserie (Stacked Models) |      |
| PT500 sensor<br>Heating element                 |      |
| Drive motor                                     |      |
| Door adjustment (left side)                     |      |
| Door glass inside                               |      |
| Door glass inside                               |      |
| <u> </u>  |      |
| Electrical tests and service procedures         |      |
| PT500 Sensor test                               |      |
| Heating element test                            |      |
| Keypad test                                     |      |
|   |      |
| Part 1: General troubleshooting list            |      |
| Troubleshooting                                 | . 23 |
| Part 2: Analytic troubleshooting list           | . 24 |
| Servicing and repairing                         | 24   |
| Exploded views & Partlists                      | . 28 |
| FJ7500 - Sheet Iron Work                        |      |
| FJ7500 - Components                             | 30   |
| Electrical diagrams                             |      |
| FJ7500 - Circuit diagram                        |      |
| FJ7500 - Wiring diagram                         |      |
|   |      |



#### GENERAL TECHNICAL DATA

This manual covers the Fri-Jado produced Programmable Rotisseries with seven spits (28 to 35 chickens) starting with serialnumber #7500 (called FJ7500 from here). Ovens will also be delivered in stacked versions.

All of the information, illustrations and specifications contained in this manual are based on the latest product information available at the time of printing.

#### **TECHNICAL DATA**

| Туре  | FJ7500      |  |  |  |  |
|---|-------------|--|--|--|--|
| Power   | 9500W       |  |  |  |  |
| Fuses needed with power connection 208 V, 3 ~ 60 Hz (3 phases without zero)   | 3x 35 A     |  |  |  |  |
| Fuses needed with power connection 208 V, 1N $\sim$ 60 Hz (1 phase with zero) | _           |  |  |  |  |
| Recommended plug  | NEMA 15-50P |  |  |  |  |
| Stacked cabinets: each cabinet comes with separate power cord!!               |             |  |  |  |  |
| Net weight  | 399 lbs.    |  |  |  |  |
| Gross weight  | 478 lbs.    |  |  |  |  |
| Height  | 40"         |  |  |  |  |
| Width   | 38 13/16"   |  |  |  |  |
| Depth   | 33 1/2"     |  |  |  |  |

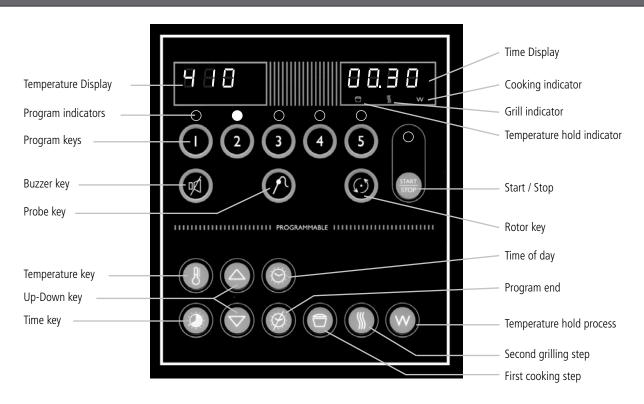
#### Tools

- Standard set of tools.
- Metric wrenches, sockets and hex socket key wrenches.
- VOM with AC current tester (any VOM with a sensitivity of at least 20,000 ohms per volt can be
  used).
- Insulation value tester (Megger).
- Temperature tester.
- TL 84919 Field Service Grounding Kit.



#### PROGRAMMING INSTRUCTIONS

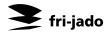
## **DISPLAY AND KEYS**



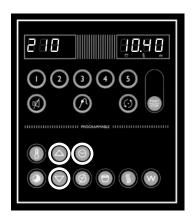
## **SETTING THE ROTISSERIE**



When the main switch is turned to "1" the display lights up and the rotisserie is ON.



## **SETTING ACTUAL TIME**

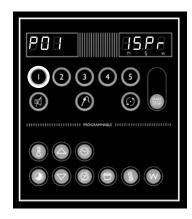


Press and hold Time of day key

Press up or down key

Release Time of day key

#### 15 PROGRAMS



After the unit is switched-on the time display indicates: 15PR

Key 1:

1x = program 01

2x = program 06

3x = program 11

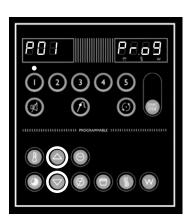
Key 2:

1x = program 02

2x = program 07

3x = program 12

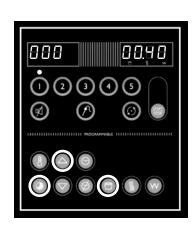
#### **ENTERING A PROGRAM**



Select Program number

Press both Up and Down keys during 2 seconds

#### FIRST COOKING STEP (TIME)



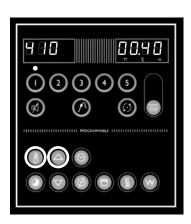
Press Cooking process key

Cooking symbol lights up

Press and hold the Time key

Press Up or Down key

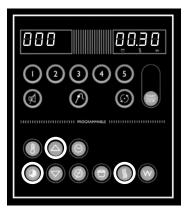
#### FIRST COOKING STEP (TEMP)



Press and hold the Temperature key

Press Up or Down key

## **SECOND COOKING STEP (TIME)**



Press Grilling process key

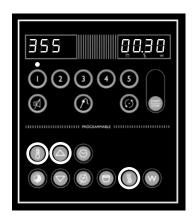
Grilling symbol lights up

Press and hold the Time key

Press Up or Down key



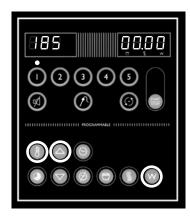
#### 2ND COOKING STEP (TEMPERATURE)



Press and hold Temperature key

Press Up or Down key

## **TEMPERATURE HOLD**



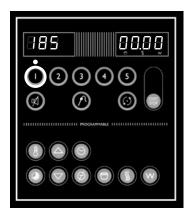
Press Temperature Hold process key

Temperature Hold symbol lights up

Press and hold the Temperature key

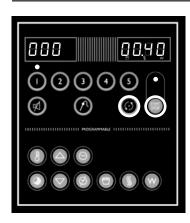
Press Up or Down key

#### **LOADING PROGRAM**



Press program number to load pre-set values

#### **PROGRAM START & LOADING**



Press Start / Stop key

On indicator lights up

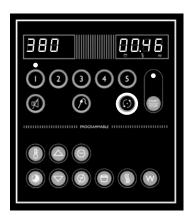
Press Rotor key to start turning the rotor

Press Rotor key again to stop

Load the rotisserie with products

#### OPTIONAL SETTINGS

#### **INTERRUPTING ACTIVE PROGRAM**



Press Rotor key

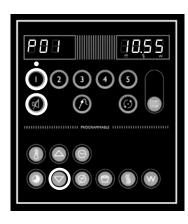
Heaters and front lamp switch off

Rotor stops

On indicator is blinking

Process time in hold

#### **SET ADDITIONAL BUZZER SIGNAL**



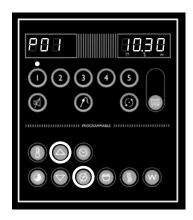
Select a pre-defined program

Press and hold Buzzer key

Press Down key



#### SET PROGRAM END TIME

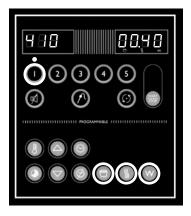


Select a pre-defined program

Press and hold the Program end key

Press Up key

#### **DISPLAY SET TIME & TEMPERATURE**



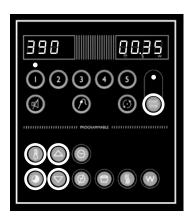
Select a pre-defined program

Press Cooking, Grilling or Temperature hold key

No time indictaion for Temperature hold

Visible during process or program selection

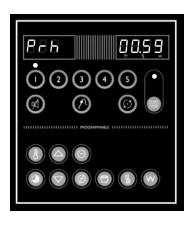
#### **ADJUSTING ACTIVE PROGRAM**



Press and hold Temperature or Time key

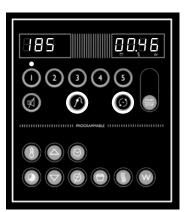
Adjust temperature or time with Up or Down key

#### PREHEAT INDICATION



Under 40°C (104°F) the display shows PRH

#### **TEMPERATURE PROBE (OPTIONAL)**



Press the Rotor key

Insert the probe in the meat up to the core

Press Temperature sensor key; after 20 seconds the temperature reading swtiches off

#### **INDICATIONS DURING PROCESS**

- Process indicators shows actual process after completion indicator switches off
- Time display shows remaining program time which is the sum of the remaining cooking and grilling time
- Temperature display indicates actual temperature in the grill. Under 40°C (104°F) the display shows PRH (preheat)
- When remaining time reaches 0, the process indicators and the On-indicator switches off



#### REMOVAL AND REPLACEMENT OF PARTS

**WARNING:** Disconnect the electrical power to the machine at the main circuit box. Place a tag on the circuit box indicating the circuit is being serviced. Follow OSHA Lockout/Tagout procedures.

## RIGHT OR LEFT SIDE PANEL



- 1. Remove the 4 screws that secure the panel to the frame.
- 2. Remove the panel.
- 3. Reverse the procedure to install.

#### **TOP COVER**



- Remove the left side panel according prior procedure.
- 2. Remove the 4 screws from the cover plate and remove this plate.
- 3. Remove the 6 screws from the top cover.
- 4. Remove the top cover. (Lift at left side and remove to the left).
- 5. Reverse the procedure to install.

#### **KNOB**





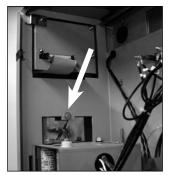
- Remove cover plate on the knob with a small screw driver.
- 2. Loosen the srew inside the knob.
- 3. Remove the knob and ring.
- 4. Reverse the procedure to install.

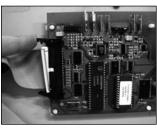
**Note** that the ring behind the knob is in the right position and runs free from the panel.



## INSTRUMENT PANEL









- 1. Remove the right side panel according prior procedure.
- Remove the knobs according prior procedure.
- 3. Remove the screws that secure the panel.
- 4. Remove the 2 bolts on the backside of the instrument panel (top and bottom side).
- Remove the screws that secure the meat probe holder and remove the holder (if supplied).
- 6. Remove the flatcable on the power section.
- 7. Remove the clip on the back, top left side that secures panel and frame.
- 8. Remove the instrument panel.
- 9. Reverse the procedure to install.

#### **ELECTRIC PANEL**



- Remove the instrument panel according prior procedure.
   Remove on the front side the screws that
- secure the panel.
- 3. Remove on the inside bottom of the electric panel the bolt and nuts.
- 4. Disconnect the wiring.
- 5. Slide the electrical panel backwards.
- 6. Reverse the procedure to install.





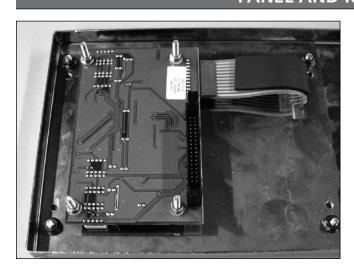
## **DISPLAY**





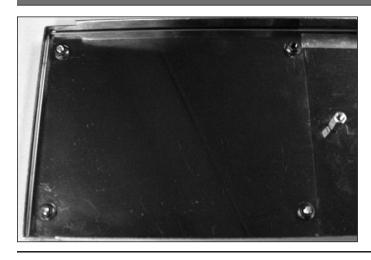
- 1. Remove the right side panel according prior procedure.
- 2. Disconnect the flatcable on the display.
- 3. Remove the clip on the back, top left side that secures panel and frame.
- Remove the nuts and washers on the backside of the display and remove the metal cover.
- Remove the nuts and plastic rings that secure the board and remove the board.
   Do not forget to disconnect the blue connector on the board.
- 6. Reverse the procedure to install.

## PANEL AND KEYPAD ASSEMBLY



- 1. Remove the instrument panel according prior procedure.
- 2. Remove the display according prior procedure.
- 3. Remove the nuts that secure the panel with foil and remove panel.
- 4. Reverse the procedure to install.

#### **NAMEPANEL**



- 1. Remove the instrument panel according prior procedure.
- 2. Remove the 4 nuts that secure the panel and remove panel.
- 3. Reverse the procedure to install.



## **QUARTZ LAMP**

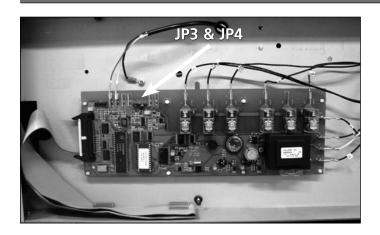


Caution: Do not touch the glass with your hands. The moisture from your hands could affect the live span of the lamp. This moisture can be removed with alcohol while the lamp is cold.

**Note:** Use a clean rag or paper towel to replace the lamp.

- 1. Remove the insulators of the lamp.
- 2. Remove the bolt from each end of the lamp and remove the lamp.
- 3. Install the lamp with the painted side towards the top of the oven. Hold the metal when tightening the bolts to prevent the metal from twisting and damaging the lamp.
- 4. Tighten the insulators evenly to prevent damage.

#### **POWER SECTION**

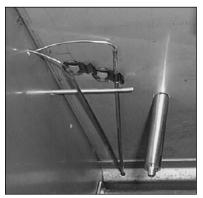


- 1. Remove the right side panel according prior procedure.
- Disconnect wiring and flatcable on the board.
- 3. Remove the board from the clips by pressing the clips together.
- 4. Reverse the procedure to install.

**Note:** When installing new board, ensure that JP3 and JP4 on new board are set the same as on the old board.



## **HIGH LIMIT THERMOSTAT**



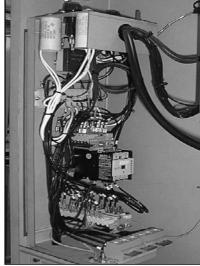


- 1. Remove the right side panel according prior procedure.
- 2. Remove the suction and fan plate on the inside of the oven.
- 3. Remove the thermostat-probe from the clip in the oven and guide it outside through the opening in the side wall.
- 4. Remove the screws on the electric panel that secure the thermostat.
- 5. Remove the thermostat and disconnect the wiring.
- 6. Reverse the procedure to install.

**Note:** Set the new high limit thermostat to its maximum position.

#### **THERMOSTAT**

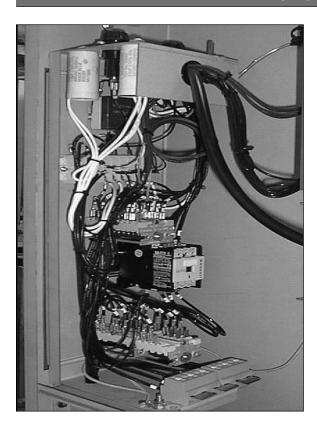




- Remove the instrument panel, suction and fan plate on the inside of the oven according prior procedures.
- 2. Remove the thermostat-probe from the clip in the oven and guide it outside through the opening.
- 3. Loosen the 2 screws on the electric panel that secure the thermostat.
- 4. Remove the thermostat and disconnect the wiring.
- 5. Reverse the procedure to install.



## **ROTOR OR MAIN SWITCH**

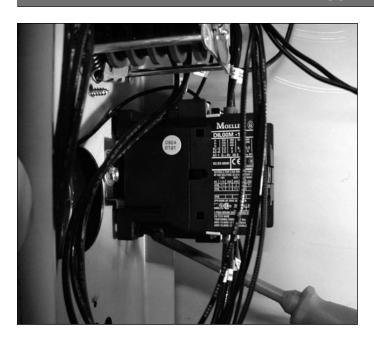


- 1. Remove the instrument panel according prior procedure.
- 2. Loosen the screws on the electric panel that secure the switch.
- 3. Remove the switch and disconnect the wiring.
- 4. Reverse the procedure to install.





## **CONTACTOR**



- 1. Remove the right side panel according prior procedure.
- 2. Disconnect the lead wires to the switch.
- Push down on the locking tab and lift out and then up to remove it from the mounting bracket.
- 4. Reverse the procedure to install.

#### **BLOWER MOTOR**



- 1. Remove the right side panel and the top cover according to prior procedures.
- 2. Remove the rotor discs, suction and fan plate in the oven.
- 3. Remove the wing nut on the fan blade and remove fan blade. (Left handed threads)
- 4. Disconnect wiring of the motor.
- 5. Remove the screws that secure the motor and remove the motor.
- 6. Reverse the procedure to install.

**Note:** The blowers are equipped with a capacitor. Check the direction of rotation of the motor (clockwise) and change the wiring if necessary.



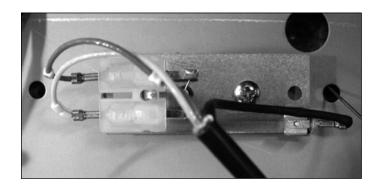
## **BLOWER MOTOR BOTTOM ROTISSERIE (STACKED MODELS)**



- 1. Remove the right side panel according prior procedures.
- 2. Remove the rotor discs, suction and fan plate in the bottom oven.
- 3. Remove the wing nut on the fan blade and remove fan blade. Left handed threads.
- 4. Remove fat drawer from upper oven.
- 5. Remove the bolts that secure the intermediate plate and remove this plate.
- 6. Remove the drip trays from the upper oven.
- 7. Remove the bolts that secure the top plate and remove the top plate.
- 8. Disconnect wiring of the motor.
- 9. Remove the screws that secure the motor and remove the motor.
- 10. Reverse the procedure to install.

**Note:** The blowers are equipped with a capacitor. Check the direction of rotation of the motor (clockwise) and change the wiring if necessary.

## PT500 SENSOR



- 1. Remove the right side panel according to prior procedure.
- 2. Disconnect the wiring of the sensor.
- Remove the screw that secures the sensor and remove the sensor.
- 4. Reverse the procedure to install.

**Note:** The wiring cable is an insulated cable with an earthing screen.



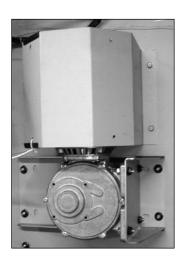
#### **HEATING ELEMENT**





- 1. Remove the rotor discs, right side panel, suction and fan plate according prior procedures.
- 2. Disconnect the wiring from the element.
- 3. Remove the mounting nut.
- 4. Remove the element from the mounting clip and pull it from the wall.
- 5. Reverse the procedure to install.

#### **DRIVE MOTOR**





- 1. Remove the right side panel and rotor discs according prior procedure.
- 2. Disconnect the wiring of the motor. Check where the wire, marked A is connected.
- 3. Remove the screws that secure the fan cover and remove the cover.
- 4. Set the drive arm in a position vertical downwards. This can be done manually or by turning the fan blade by hand.
- 5. Mark the position of the motor support with a marker.
- Remove the bolts that secure the motor and the nuts that secure the motor support and remove the motor.
- 7. Check the white Teflon ring. Replace if necessary.
- 8. Install the fan blade on the new motor.
- 9. Reverse the procedure to install.

**Note:** Always make a test run on maximum temperature to insure the motor is well mounted and adjusted.



## **DOOR ADJUSTMENT (LEFT SIDE)**



- 1. Remove the left side panel according prior procedure.
- 2. Loosen the nuts of the upper hinge. The door must be closed.
- 3. Loosen the locknut and adjust the bolt in or out to adjust the door.
- 4. Tighten the nuts of the hinge and mount the left-hand panel.

#### **DOOR GLASS INSIDE**



- 1. Lift the door upward out of the hinges and place on a table.
- 2. Remove the cap nuts and rings on the profiles of the door.
- 3. Remove the profiles from the glass.
- 4. Mount the profiles on the new glass. Do not forget the teflon rings inside the holes.
- 5. Mount the cap nuts and rings. Note! Tightening of nuts max.3.1 lbf.ft.
- 6. Place the door in the hinges.



## **DOOR GLASS OUTSIDE**



- 1. Lift the inner door out of the hinges and lay aside.
- 2. Remove the left side panel according prior procedure.
- 3. Remove the 2 nuts behind the top hinge. The door must be closed.
- 4. Hold the door on both sides and move this towards yourself, before lifting it out of the hinges. Place the door with the rounded side down on a table.
- 5. Remove the screws, cap nuts and rings on the profiles of the door and remove the profiles.
- 6. Mount the profiles on the new glass. Do not forget the teflon rings inside the holes.
- 7. Reverse the procedure to install.



#### **ELECTRICAL TESTS AND SERVICE PROCEDURES**

**WARNING:** Disconnect the electrical power to the machine at the main circuit box. Place a tag on the circuit box indicating the circuit is being serviced. Follow OSHA Lockout/Tagout procedures.

#### **PT500 SENSOR TEST**

| Temp | erature | Resistance |
|------|---------|------------|
| °F   | °C      | ± 5 Ohms   |
| 60   | 16      | 531        |
| 70   | 21      | 541        |
| 80   | 27      | 553        |
| 90   | 32      | 562        |
| 100  | 38      | 574        |
| 125  | 52      | 601        |
| 150  | 65      | 626        |
| 200  | 94      | 681        |
| 250  | 121     | 732        |
| 350  | 177     | 837        |
| 450  | 233     | 940        |

- 1. Remove the right side panel according prior procedure.
- 2. Remove the wiring from the sensor.
- 3. Connect a temperature sensor to the probe for comparison.
- 4. Test the probe with an Ohmmeter.

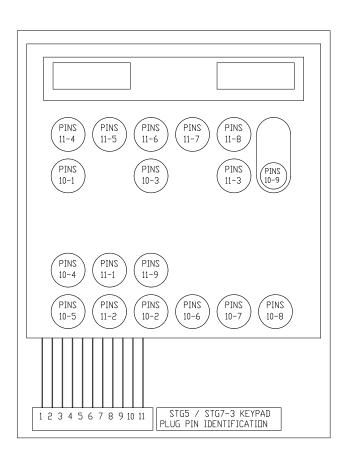
## **HEATING ELEMENT TEST**

| Туре   | Wattage/Vol-<br>tage | Resistance Ω<br>-5% + 10% | Current A |
|--------|----------------------|---------------------------|-----------|
| FJ7500 | 2100 / 208           | 20.5                      | 10.0      |
|        | 2100 / 230           | 25.0                      | 9.1       |
| FJ7500 | 3100 / 208           | 14.0                      | 14.9      |
|        | 3100 / 230           | 17.0                      | 13.4      |

**Note:** When testing the resistance of the element remove the wiring.



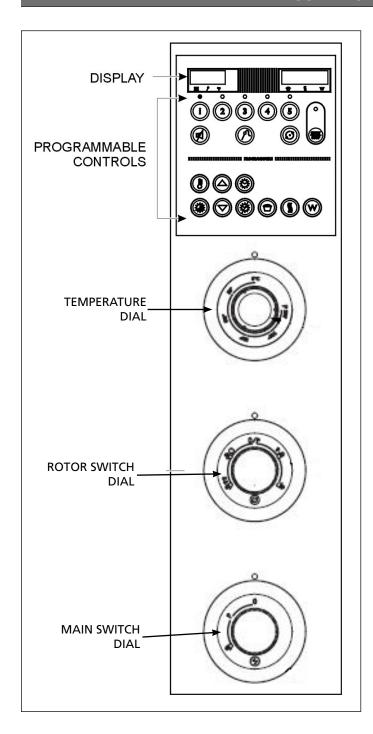
## **KEYPAD TEST**

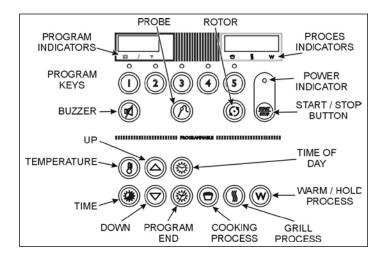


- Remove the instrument panel according prior procedure.
- 2. Remove the display according prior procedure.
- 3. Remove the nuts that secure the panel with foil and remove panel.
- 4. Use a multimeter to test. Connect the measuring pins to the cable plug pins for each key to be tested as indicated in the diagram. You can set the multimeter on a beep signal or set it on resistance measuring. Press the key to be tested and the meter should give a beep signal or indicates a resistance less than 200 Ohms.



## **CONTROL LOCATION**







#### PART 1: GENERAL TROUBLESHOOTING LIST

#### **TROUBLESHOOTING** Possible causes Symptom No power to oven controls. 1. Main breaker open. 2. Fuse F3 burned. 3. Switch malfunction 4. Wiring loose. Main fuse or breaker blows. 1. Wiring incorrectly. 2. Heating element, drive motor, blower or contactor shorted. 3. Wiring shorted. Drive motor does not run in either auto 1. Main braker on L3 open (also no readings or manual mode. on display). 2. Fuse F3 burned (also no readings on display). 3. Fuse F1 or F2 burned 4. Capacitor malfunction. 5. Wiring loose. 6. Rotor switch malfunction. 7. Main switch malfunction. 8. Motor malfunction. Drive motor does not run in manual mode 1. Rotor switch malfunction. but runs in auto mode. 2. Main switch malfunction. 3. Wiring loose. Drive motor does not run in auto mode 1. Fuse F3 (also no readings on display). 2. Power board malfunction (relay). but runs in manual mode. 3. Wiring loose. Blower motor does not run. 1. Capacitor malfunction. 2. Motor inoperative. 3. Relay on power board malfunction. 4. Powerboard malfunction (relay). Oventemperature differs from temperature 1. Safety thermostat malfunction. setting in auto or manual mode. 2. Thermostat malfunction. 3. Blower motor(s) inoperative (turning direction?) 4. Electronic control inoperative. 5. Rotorswitch and thermostat in auto mode, but main switch in manual. (temperature too high). 6. PT-500-sensor malfunction. 7. Dirty fanguard or fanblade(s). All heating elements out, one quartzlamp 1. Thermostat malfunction. and blowers operate while oven cavity 2. Safety thermostat malfunction. is below set temperature. 3. Contactor inoperative. 4. Wiring loose. Oven temperature does not reach desired 1. Control thermostat not in auto or malfunction. temperature in auto mode. 2. Safety thermostat malfunction. 3. PT-500-sensor malfunction. 4. Electronic control inoperative. 5. Heater(s) inoperative. 6. Incorrect line voltage. 1. Loose flatcable from display to electronic control. No display and/or keypad does not 2. Fuse F4 (63mA) burned. function. 3. Fuse F3 (10A) burned.

4. Display and/or electronic control malfunction.



#### PART 2: ANALYTIC TROUBLESHOOTING LIST

## **SERVICING AND REPAIRING**

This is an analytic description for servicing and repairing all major parts of the rotisseries and warmers. It consists off 4 basic steps to recognize and solve the problems. These steps are:

- 1. Symptoms.
- 2. Possible causes.
- 3. Solving of the problem: checking/action.
- 4. Replacing of parts and testing.
- a. Replacing is described in the service manual.
- b. For testing see programming of rotisserie on page 5 in this manual.

| Description of part | Symptoms                                      | Possible causes  | Solving: checking/action  |
|---------------------|---|--|---|
| Inside door         | Broken glass                                  | Slamming of door.                                      | Give instruction to operator.                                   |
|                     |   | Fastening bolts and nuts are loose.                    | Tighten all fastenings.   |
|                     |   | No sealing ring between steel and glass.               | Mount new glass with sealing rings between glass and steel.     |
| Outside door        | Broken glass                                  | Slamming of door.                                      | Give instruction to operator.                                   |
|                     |   | Fastening bolts and nuts are loose.                    | Tighten all fastenings.   |
|                     |   | No sealing ring bet-<br>ween steel and glass.          | Mount new glass with sealing rings between glass and steel.     |
|                     | Door adjustment                               | Door not well adjusted and closes against bottom side. | Adjust door on hinge and tighten the hinge plate.               |
| Heating element     | Rotisserie doesn't reach adjusted temperature | Wiring.  | Check the wiring. Check the power on the element.               |
|                     |   | Element malfunction.                                   | Check the current with AC current tester. See table on page 20. |
|                     | Duration of grilling time is too long         | Wiring.  | Check the wiring.   |
|                     |   | Element malfunction.                                   | Check the current with AC current tester. See table on page 20. |



| PT-sensor                    | Temperature indication on display runs up very fast and over the maximum of 250°C / 482°F 290°C / 550°F in 20 seconds) | No connection between wires.                      | Check the wiring.<br>Check thin wire on sensor.  |
|------------------------------|--|---|--|
|                              | Temperature indication on display doesn't go up and stays on Prh   | Full contact between wires of sensor.             | Check the wiring.  |
|                              |  | Short circuit in sensor.                          | Measure resistance of sensor. This is zero.  |
|                              | Rotisserie doesn't reach adjusted temperature  | Malfunction sensor.                               | Measure resistance of sensor with a thermometer probe next to the sensor. See table in service manual.                       |
|                              |  | Sensor not in right                               | Check position of sensor.  |
|                              | Temperature indication on  | position.   | Measure resistance of sensor. See table on page 20.  |
|                              | display runs up too fast.  | Malfunction sensor.                               |  |
| (Safety) ther-               | Contactor doesn't come in  | Wiring.   | Check the wiring.  |
| mostat                       | after starting of program  | Thermostat malfunction.                           | Check if the thermostat is making contact.   |
|                              | Contactor switches off before reaching the adjusted temperature in program   | Thermostat malfunction.                           | Check if the thermostat is turned fully clockwise (contact closed).  |
|                              |  | Thermostat probe not in right position.           | Check the position of the thermostat probe.  |
| Main switch/<br>rotor switch | No power to all, or some oven controls   | Wiring.   | Check the wiring on the switch.  |
| Totol switch                 | Controls   | Malfunction of the cams on the switch.            | Check the cams.  |
|                              | Switch comes in, but one   | Contacts burned.                                  | Check the wiring.  |
|                              | or more functions from the switch don't work.  |   | Check the power on all contacts.   |
| Contonton                    | Contact and contact acres in   | NA/inim m   | Check the contacts of the switch.  |
| Contactor                    | Contactor doesn't come in  | Wiring.   | Check the wiring.  |
|                              |  | Coil malfunction.                                 | Check resistance of the coil. This should be $525\Omega$ .   |
|                              |  | Contact burned.                                   | Check the contacts of the contactor.   |
| Keypad on dis-<br>play       | No possibility to make a program   | Permanent contact of one, or more, membrane keys. | Check key functions. Check functions of keypad. See table on page 21.  |
|                              |  | Some keys don't function.                         | Check grey flat cable connection. Check green flat cable connection. Check functions after connecting a new grey flat cable. |
|                              |  |   |  |

| Dicalay and po-<br>we pafeli-jado | No illumination on display   | Wirin∰OUBLESHOOTI   | Check the wiring.<br>Check the power on the board.   |
|-----------------------------------|--|---|--|
|                                   |  | Fuse burned.  | Check the 63 mA fuse on the power board. Replacing of fuse for 100 mA is permitted.  |
|                                   |  | Flat cable.   | Check grey flat cable connection. Check functions after connecting a new grey flat cable.  |
|                                   |  | Display malfunction.  | Check power to display on connector J1 of power board. 5V DC between pin 30 and 32 or between 31 and 33.   |
|                                   |  |   | Check functions after connecting a new display board.  |
|                                   |  | Power board mal-<br>function.                                   | Check functions after connecting a new power board.  |
|                                   | Some function doesn't work or stay activated.                              | Relay malfunction.  | Check relay on function with problem.  |
|                                   | No possibility to make a program   | Power board mal-<br>function.                                   | Check functions after connecting a new power board.  |
| Capacitor                         | Drive motor or blower don't  | Wiring.   | Check the wiring.  |
|                                   | work   | Capacitor malfunction.  | Check function after connecting a new capacitor. Checking of capacitor: Discharge capacitor with screwdriver. Set meter on $M\Omega$ and connect the pins of the meter on contacts, value runs up. Change the pins on contacts, value runs up again. This means the capacitor is OK. |
| Drive motor                       | Motor doesn't run  | Wiring.   | Check the wiring. Check the power to the motor.  |
|                                   |  | Coil malfunction  | Check resistance of the coils. Between white A and white wire $234\Omega$ Between white A and brown wire $117\Omega$ Between white and brown wire $117\Omega$  |
|                                   |  | Reduction gearbox.  | Check if reduction gearbox is blocked.   |
|                                   |  | Relay on power board.   | Check power on relay X14.  |
|                                   | Motor runs after starting it up by hand                                    | Capacitor malfunction.  | Check capacitor (see capacitor) or connect new capacitor.  |
|                                   | Motor stops during process<br>and comes in again after a<br>period of time | Coil overheated,<br>thermistor switches<br>off (105°C – 221°F). | Check position of fan blade. Air is sucked up over the motor. Check cooling circuit of motor. Check if rotisserie is close to another heat source.   |
|                                   | Fuse F1 or F2 burned   | Short circuit in coil<br>to earth                               | Measure temperature motor during process. Check insulation value of coil with Megger on 500V. Minimum value is 0.5 $M\Omega$ .   |

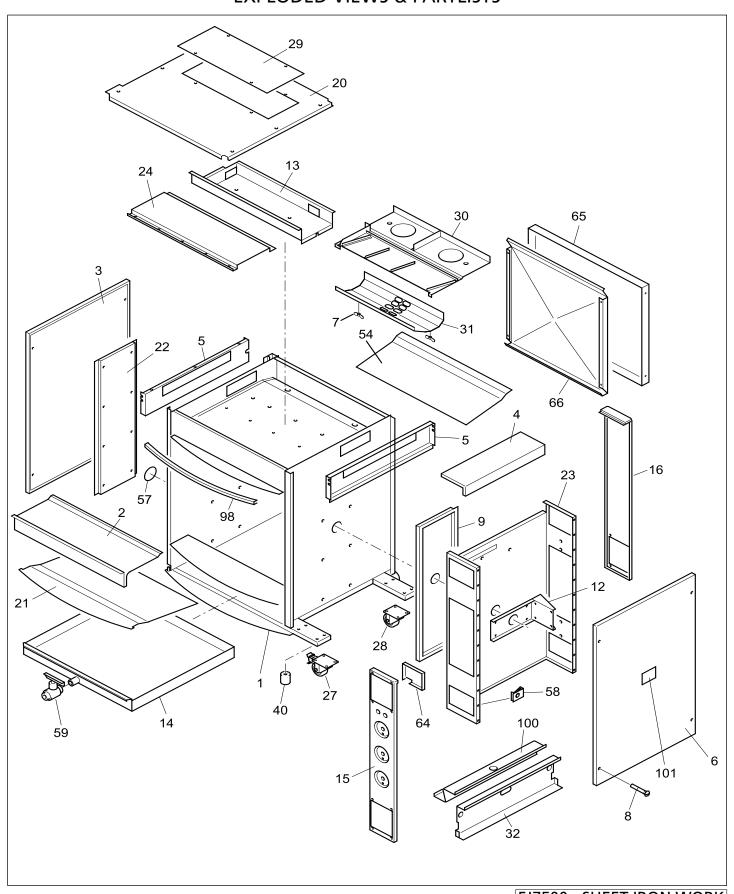
#### TROUBLESHOOTING



| Blower | Blower doesn't run  | Wiring.                                  | Check the wiring.  |
|--------|---|--|--|
|        |   |  | Check the power on the blower.   |
|        |   | Coil malfunction.                        | Check resistance of the coils.   |
|        |   |  | Between blue and brown wire 310Ω;  |
|        |   |  | Between blue and black wire $320\Omega$ ;  |
|        |   |  | Between brown and black wire 630Ω  |
|        |   | Relay on power                           | Check power on relay X9 and X10  |
|        |   | boara.                                   |  |
|        | Blower runs after starting it                                     | Capacitor malfunc-                       | Check capacitor (see capacitor)  |
|        | up by hand  | tion.                                    | Or connect new capacitor.  |
|        |   |  |  |
|        | Blower stops during process                                       | Coil overheated,                         | Check cooling circuit of blower.   |
|        | and comes in again after a period of time                         | thermistor switches off (150°C – 302°F). | Check if rotisserie is close to another heat source.  Measure temperature blower during process. |
|        | Temperature indication on   | Blower doesn't turn                      | Check the wiring.  |
|        | display runs up very fast<br>(180°C - 355°F after 5 minu-<br>tes) | and heat stays in top of cavity          | Check the power on the blower.   |
|        | Fuse F1 or F2 burned  | Short circuit in coil to                 | Check insulation value of coil with a Megger on  |
|        |   | earth                                    | 500V. Minimum value is 0.5 M $\Omega$ .  |
|        |   |  |  |

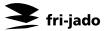


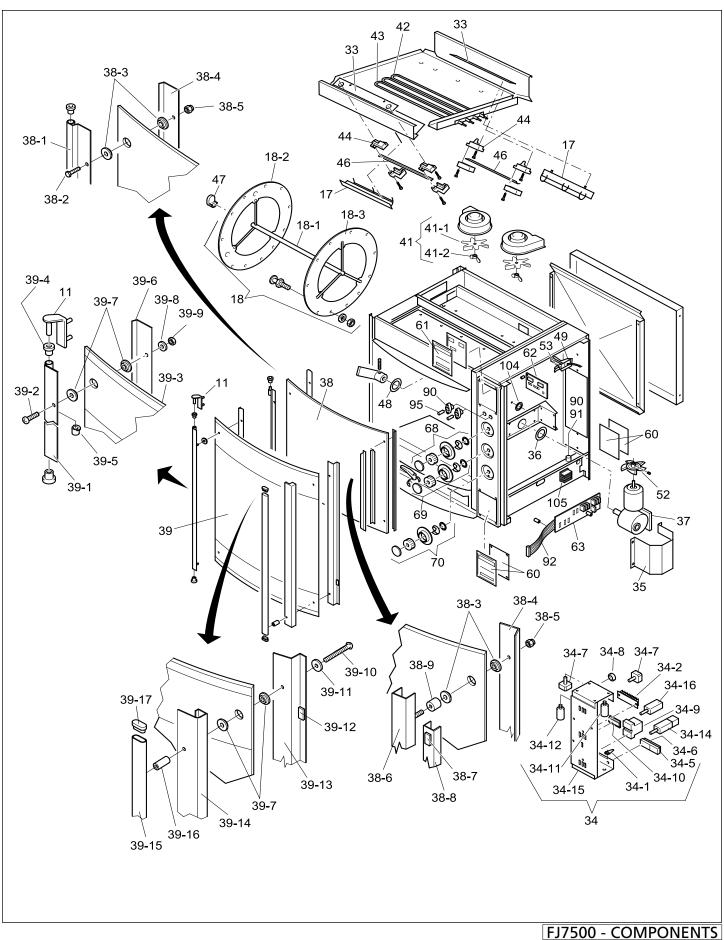
## **EXPLODED VIEWS & PARTLISTS**





| Item | Partnumber | QTY | Description                                   |  |
|------|------------|-----|---|--|
| 1    | 9170448    | 1   | Frame, ass.                                   |  |
| 2    | 9170404    | 1   | Heat shield                                   |  |
| 3    | 9170419    | 1   | Side panel, left                              |  |
| 4    | 9174005    | 1   | Cover, removable                              |  |
| 5    | 9170421    | 2   | Side panel, top                               |  |
| 6    | 9170531    | 1   | Side panel, right                             |  |
| 7    | 9073149    | 3   | Wingnut M6, SS                                |  |
| 8    | 4288322    | 8   | Screw M5 x 10, SS socket button head          |  |
| 9    | 9170425    | 1   | Reinforcement, side plate, right              |  |
| 12   | 9170444    | 1   | Support, gear motor                           |  |
| 13   | 9170450    | 1   | Mounting plate, blower                        |  |
| 14   | 9170451    | 1   | Drawer  |  |
| 15   | 9174615    | 1   | Operation panel                               |  |
| 16   | 9174031    | 1   | Panel, customer side                          |  |
| 20   | 9174004    | 1   | Cap, top                                      |  |
| 21   | 9172202    | 1   | Bottom plate, coated                          |  |
| 21   | 9174010    | 1   | Bottom plate, stainless steel                 |  |
| 22   | 9174013    | 1   | Reinforcement, side plate, left               |  |
| 23   | 9174015    | 1   | Cover plate, machine components               |  |
| 24   | 9174016    | 1   | Ceiling                                       |  |
| 27   | 9172066    | 2   | Castor with brake (only for stacked units)    |  |
| 28   | 9172065    | 2   | Castor without brake (only for stacked units) |  |
| 29   | 9174099    | 1   | Cover, removable                              |  |
| 30   | 9170640    | 1   | Cover plate, blower                           |  |
| 31   | 9111913    | 1   | Air guide plate                               |  |
| 32   | 9174034    | 1   | Mounting plate                                |  |
| 40   | 9171125    | 4   | Leg, rubber 1 15/16"                          |  |
| 40A  | 9011260    | 4   | Leg, rubber 1 9/16" (till 01-01-2008)         |  |
| 54   | 9172232    | 1   | Bottom plate, coated                          |  |
| 54   | 9174280    | 1   | Bottom plate, stainless steel                 |  |
| 57   | 9112430    | 4   | Washer, insulation support                    |  |
| 58   | 9172053    | 8   | Nut   |  |
| 59   | 9171008    | 1   | Drain-tap with handle                         |  |
| 64   | 9174146    | 1   | Protection plate, electric components         |  |
| 65   | 9170505    | 1   | Back wall, outside                            |  |
| 66   | 9172231    | 1   | Back wall, inside                             |  |
| 98   | 9172116    | 2   | Sealing profile, Silicon L= 71 cm             |  |
| 100  | 9174140    | 1   | Spark catcher                                 |  |
| 101  | 9123410    | 1   | Indication plate                              |  |
|      |            |     |   |  |

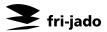




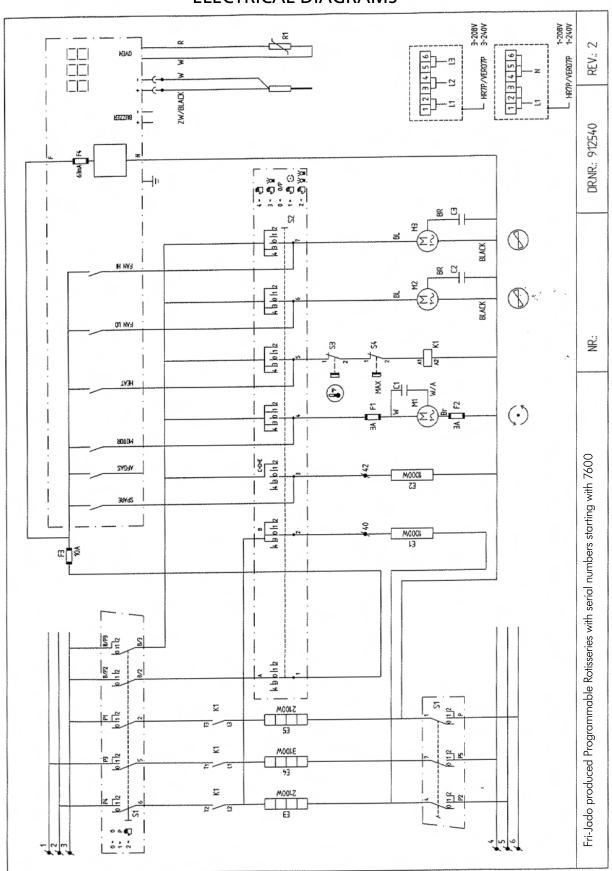


| Item  | QTY | Partnumber | Description  |
|-------|-----|------------|--|
| 11    | 1   | 9170427    | Hinge, left  |
| 17    | 2   | 9116662    | Protection, lamp                                   |
| 18    | 1   | 9170045    | Rotorset ass., coated                              |
| 18-1  | 1   | 9172205    | Rotor shaft, ass., coated                          |
| 18-2  | 1   | 9172248    | Rotor disc, left, coated, incl. support            |
| 18-3  | 1   | 9172249    | Rotor disc, right, coated, incl. sup-<br>port pins |
| 18    | 1   | 9170055    | Rotorset ass., stainless steel                     |
| 18-1  | 1   | 9070272    | Rotor shaft, stainless steel                       |
| 18-2  | 2   | 9174351    | Rotor disc 3 mm, stainless steel                   |
| 18-3  | 14  | 9172169    | Supprt pin, stainless steel                        |
| 18-4  | 14  | 4312271    | Nut M8, supprt pin, stainless steel                |
| 18-5  | 14  | 0142056    | Spring washer M8, support pin, stainless steel     |
| 18-6  | 12  | 4288230    | Tensilock bolt M5x10, stainless steel              |
| 33    | 2   | 9112210    | Mounting plate, lamp holder                        |
| 34    | 1   | 9173002    | Electric panel, ass.                               |
| 34-1  | 1   | 0166555    | Earth symbol                                       |
| 34-2  | 1   | 8033659    | Connecting block, 9-pol.                           |
| 34-5  | 1   | 9044564    | Connecting block, 1,2,3                            |
| 34-6  | 1   | 9044572    | Connecting block, 4,5,6                            |
| 34-7  | 1   | 9070531    | Thermostat 50-250 °C                               |
| 34-8  | 2   | 9070840    | Grommet  |
| 34-9  | 1   | 3500069    | Contactor  |
| 34-10 | 1   | 9077088    | Bracket, magnetic switch                           |
| 34-11 | 1   | 9077102    | Capacitor 3 mF                                     |
| 34-12 | 2   | 9110030    | Capacitor 1,5 mF                                   |
| 34-14 | 1   | 9172056    | Main switch  |
| 34-15 | 1   | 9174106    | Electric panel                                     |
| 34-16 | 1   | 9172055    | Rotor switch                                       |
| 35    | 1   | 9174161    | Protection support                                 |
| 36    | 1   | 9110797    | Sealring, drive bearing                            |
| 37    | 1   | 9173004    | Gearmotor, complete with drive arm                 |
| 38    | 1   | 9179852    | Door inside, ass.                                  |
| 38-1  | 1   | 9170423    | Hinge profile                                      |
| 38-2  | 2   | 0211520    | Bolt M5 x 12 ss hexagon head                       |
| 38-3  | 8   | 3702341    | Flange bush, PTFE 2 mm                             |
| 38-4  | 2   | 9174029    | Cover profile, inner glass                         |
| 38-5  | 4   | 4285408    | Nut, M5  |
| 38-6  | 1   | 9174026    | Holder, magnet                                     |
| 38-7  | 10  | 9070141    | Magnet block                                       |
| 38-8  | 1   | 9174027    | Profile  |
| 38-9  | 2   | 9172081    | Spacing pin  |

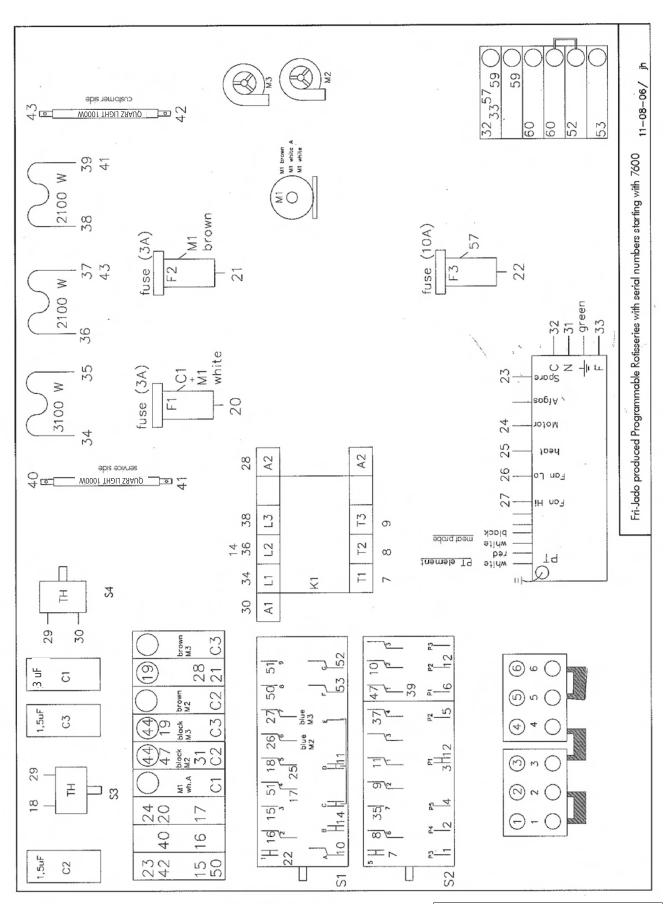
| Item  | QTY | Partnumber | Description                          |
|-------|-----|------------|--------------------------------------|
| 39    | 1   | 9179850    | Door outside, ass.                   |
| 39-1  | 1   | 9170422    | Hinge profile                        |
| 39-2  | 2   | 4288321    | Screw M5 x 16, SS socket button head |
| 39-3  | 2   | 9172079    | Protection profile                   |
| 39-4  | 2   | 9172054    | Brass bearing 8 mm                   |
| 39-5  | 2   | 9172122    | Brass bearing 8 mm, adjusted         |
| 39-6  | 1   | 9174022    | Mounting profile, hinge side         |
| 39-7  | 8   | 3702342    | Flange bush, PTFE 3 mm               |
| 39-8  | 2   | 4311110    | Washer                               |
| 39-9  | 2   | 0144359    | Nut, self locking M5                 |
| 39-10 | 2   | 4288320    | Screw M5x45 SS                       |
| 39-11 | 2   | 9174680    | Washer                               |
| 39-12 | 12  | 9070141    | Magnet block                         |
| 39-13 | 1   | 9174025    | Fastening, door handle               |
| 39-14 | 1   | 9170454    | Profile, magnet                      |
| 39-15 | 1   | 9174131    | Door handle                          |
| 39-16 | 2   | 9172300    | Spacing pin                          |
| 39-17 | 2   | 9171014    | Plug, door handle                    |
| 41    | 2   | 9110048    | Blower                               |
| 41-1  | 2   | 9110153    | Fanblade                             |
| 41-2  | 2   | 9073150    | Wingnut, left hand threaded          |
| 42    | 2   | 9040633    | Heating element 208 V, 2100 W        |
| 43    | 1   | 9110909    | Heating element 208 V, 3100 W        |
| 44    | 4   | 9110023    | Lamp holder, cap + housing           |
| 46    | 2   | 9056082    | Quartz light, 1000 W                 |
| 47    | 1   | 9172063    | Steel bearing, 14 mm                 |
| 48    | 1   | 9073131    | Sealing ring                         |
| 49    | 1   | 9070094    | Temperature sensor                   |
| 52    | 1   | 9172078    | Fanblade, motor                      |
| 53    | 1   | 9044140    | Sensor cable                         |
| 60    | 2   | 9172043    | Name plate , foil + backplate        |
| 61    | 1   | 9172045    | Keypad + backplate                   |
| 62    | 1   | 9110242    | Display                              |
| 63    | 1   | 9110276    | Power section                        |
| 68    | 1   | 9173015    | Thermostat knob assembly, 480°F      |
| 69    | 1   | 9173013    | Rotor knob assembly                  |
| 70    | 1   | 9173014    | Main power knob assembly             |
| 78    | 4   | 3702342    | Flange bush, PTFE 3 mm               |
| 90    | 3   | 9044205    | Fuse holder                          |
| 91    | 1   | 9110250    | Fuse SC10, 10A                       |
| 92    | 1   | 9172113    | Flatcable, 34-pol. (P)               |
| 95    | 2   | 9044213    | Fuse SC10, 3A                        |
| 104   | 3   | 9171018    | Plug                                 |
| 105   | 1   | 9151010    | Connecting block                     |
|       |     |            |                                      |



## **ELECTRICAL DIAGRAMS**



FJ7500 - CIRCUIT DIAGRAM



FJ7500 - WIRING DIAGRAM



## EMPTY PAGE



## EMPTY PAGE



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