

# OPERATOR MANUAL

IMPORTANT INFORMATION, KEEP FOR OPERATOR

This manual provides information for:

# CapKold®

## **MODEL WJ100-CC WATERJET 100™ CAPKOLD COOK- CHILL SYSTEMS TANK**

**THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE.  
READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND  
WARNINGS CONTAINED IN THIS MANUAL.**

### **NOTIFY CARRIER OF DAMAGE AT ONCE**

It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Unified Brands suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

Information contained in this document is known to be current and accurate at the time of printing/creation. Unified Brands recommends referencing our product line websites, [unifiedbrands.net](http://unifiedbrands.net), for the most updated product information and specifications.

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# IMPORTANT - READ FIRST - IMPORTANT

- CAUTION:** BE SURE OPERATORS READ, UNDERSTAND AND FOLLOW THE OPERATING INSTRUCTIONS, CAUTIONS, AND SAFETY INSTRUCTIONS IN THIS MANUAL.
- WARNING:** THIS UNIT IS INTENDED FOR USE IN THE COMMERCIAL HEATING, COOKING AND CHILLING OF WATER AND FOOD PRODUCTS, PER THE INSTRUCTIONS CONTAINED IN THIS MANUAL. OTHER USE COULD RESULT IN PERSONAL INJURY OR DAMAGE TO EQUIPMENT AND WILL VOID WARRANTY.
- WARNING:** ELECTRICALLY GROUND THE UNIT AT THE TERMINAL PROVIDED.
- WARNING:** THE WATERJET MUST BE INSTALLED BY PERSONNEL WHO ARE CERTIFIED REFRIGERATION TECHNICIANS, AND WELL-QUALIFIED TO WORK WITH ELECTRICITY AND PLUMBING. IMPROPER INSTALLATION COULD RESULT IN PERSONAL INJURY OR EQUIPMENT DAMAGE.
- WARNING:** DO NOT HEAT EMPTY UNIT.
- WARNING:** AVOID ANY EXPOSURE TO THE STEAM ESCAPING FROM THE COVER. DIRECT CONTACT COULD RESULT IN SEVERE BURNS
- WARNING:** AVOID ALL DIRECT CONTACT WITH HOT EQUIPMENT SURFACES. DIRECT SKIN CONTACT COULD RESULT IN SEVERE BURNS.
- WARNING:** AVOID ALL DIRECT CONTACT WITH HOT FOOD OR WATER IN THE WATERJET. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.
- WARNING:** USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR ITS AUTHORIZED DISTRIBUTORS VOIDS ALL WARRANTIES AND MAY CAUSE BODILY INJURY OR EQUIPMENT DAMAGE. SERVICE PERFORMED BY OTHER THAN FACTORY AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.
- WARNING:** TURN OFF ELECTRIC POWER BEFORE WORKING ON INTERNAL COMPONENTS.
- WARNING:** BEFORE ANY CLEANING OPERATION, TURN THE THERMOSTAT TO “OFF” AND CUT OFF POWER TO REFRIGERATION AND HEATING ELEMENTS. BEFORE CLEANING ANY PART OTHER THAN THE INSIDE OF THE UNIT, DISCONNECT THE ELECTRICAL SUPPLY AT THE CIRCUIT BREAKER OR FUSE BOX.
- WARNING:** BE CAREFUL TO AVOID CONTACT WITH CLEANING PRODUCTS IN ACCORDANCE WITH SUPPLIER AND MANUFACTURER RECOMMENDATIONS. MANY CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. READ THE WARNINGS AND FOLLOW DIRECTIONS ON THE CLEANER LABEL.
- CAUTION:** NEVER LEAVE A CHLORINE SANITIZER IN CONTACT WITH STAINLESS STEEL FOR LONGER THAN 30 MINUTES. LONGER CONTACT CAN CAUSE CORROSION.
- WARNING:** DO NOT USE ANY FUSE WITH A HIGHER AMP RATING THAN THE RATING SPECIFIED FOR THAT CIRCUIT.

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# References

ECONOMICS LABORATORY, INC.  
St. Paul, Minnesota 55102

NEC1999  
NATIONAL FIRE PROTECTION ASSOCIATION  
60 Battery March Park  
Quincy, Massachusetts 02269

NATIONAL SANITATION FOUNDATION  
3475 Plymouth Rd.  
Ann Arbor, Michigan 48106

UNDERWRITERS LABORATORIES, INC.  
333 Pfingsten Rd.  
Northbrook, Illinois 60062

ZEP MANUFACTURING  
1390 Lunt Avenue  
Elk Grove Village, Illinois 60007

Refrigeration Service Engineers Society  
1666 Rand Road  
Des Plaines, IL 60016-3552

# Equipment Description

## GROEN MODEL WJ100 Tank



The Groen WaterJet™ Model WJ100 is designed to rapidly chill pumpable food products and ingredients packaged in special plastic casings or heat sealed pouches in a rapid and turbulently circulating water bath. The unit chills product from bag fill temperature of approx. 180°F to 40° F in 120 minutes or less. The water is chilled by a remote [-R suffix] compressor-driven direct expansion chiller. It can also be used to slow cook meats and other products vacuum packaged in special plastic casings in a circulating warm water bath and then chill the same products to 40°F in 4 hours or less in a circulating cold water bath, for long term refrigerated storage. The unit includes a powerful water circulation pump, patented WaterJet circulation and baffling system, Cook/Chill Fully Automatic operator control package, sheathed and air gap insulated tank with splash covers and product lift system to speed and simplify loading and unloading. The WaterJet Tumble Chiller/CookTank includes the following standard and optional features:

### Standard Features:

1. Type 304 stainless steel tank with 1" radius corners
2. Air gap insulated stainless steel tank sheathing
3. Fully enclosed and vented pump/utility housing
4. Six inch nominal (one inch adjustment) legs with adjustable floor mounting flanges
5. Two piece hinged, stainless steel springassisted splash cover with corner bumpers
6. Powerful 7.5 Horsepower water circulation pump:
  - a. High volume all stainless steel water delivery/circulation system with 4" diameter piping and discharge nozzle
  - b. Manual diverter valve to control water discharge flow and turbulence
  - c. Patented tank bottom turbulent water deflection baffle
  - d. Water level overflow protection
7. ASME stamped direct steam heating system for cooking and rethermalizing.
8. Cook-to-Probe Package
9. Control package enclosed in a UL Listed durable fiberglass NEMA-4X water resistant enclosure, mounted on unit at convenient operator height, with controls that include a Simple Operator/Machine Interface [IAC System] which controls:
  - a. Cook Time setting
  - b. Cook Temperature setting
  - c. Auto Cook then Chill Mode
  - d. Preprogrammed THAW cycle
10. Simple to operate product loading/unloading lift system.
11. Stainless steel wire baskets for loading and separating product during cook tank mode operation.

### Optional Features:

1. Remote mounted Time/Temperature controller/recorder [HACCP Compliant]
2. Product filling, packaging and labeling accessories
3. Vacuum packaging equipment

#### NOTE

THE GROEN EQUIPMENT YOU HAVE PURCHASED HAS BEEN CONSTRUCTED FROM QUALITY MATERIALS AND HAS BEEN CAREFULLY INSPECTED AND TESTED TO ENSURE THAT YOU RECEIVE THE BEST POSSIBLE PRODUCT. WITH REASONABLE CARE AND PERIODIC MAINTENANCE, YOUR GROEN UNIT SHOULD PROVIDE YEARS OF PRODUCTIVE SERVICE.

#### NOTE

PLEASE READ THIS MANUAL CAREFULLY BEFORE YOU INSTALL OR OPERATE YOUR EQUIPMENT. It contains information you will need to install, operate, and maintain the equipment properly.

# Installation

## UNPACKING AND INSPECTION

**WARNING**  
DO NOT ATTEMPT TO OPERATE  
THE UNIT UNTIL QUALIFIED GROEN  
INSTALLERS MAKE NECESSARY  
REFRIGERATION ADJUSTMENTS.

**WARNING**  
THE WATERJET MUST BE INSTALLED  
BY PERSONNEL WHO ARE QUALIFIED  
TO WORK ON THE EQUIPMENT.  
IMPROPER INSTALLATION COULD  
RESULT IN PERSONAL INJURY OR  
EQUIPMENT DAMAGE.

**INSTALLATION MUST COMPLY  
WITH LOCAL CODES.**

When unit is received, immediately inspect for external or internal damage. Report any damage to the carrier. Following inspection, keep the packaging material with the unit.

Minimum door or hallway opening to move the unit is 1.45 meters (57 inches). The unit length of 2.62 meters (103 inches) should also be considered for negotiating any corners.

When choosing a location for the unit be sure that the floor will support the unit's operational weight of 1633 kg (3600 lbs). Minimum clearances required are 1067 mm (42 inches) right and left, and 762 mm (30 inches) at the rear.

Once the unit is in position for installation, level it front to rear and right to left by adjusting all five feet.

Secure unit to the floor through the holes provided on flanges of the feet. Use at least two bolts for each foot.

Before connecting utilities, remove the rear covers of the unit. Each utility connection is labeled.

## ELECTRICAL CONNECTIONS



**WARNING**  
IMPROPER INSTALLATION COULD  
RESULT IN ELECTRICAL SHOCK.  
AN ELECTRICAL GROUND IS REQUIRED.

**CAUTION**  
UTILITY CONNECTIONS MUST BE MADE  
SO AS TO KEEP ALL UTILITY LINES AT  
LEAST 152 MM (6 INCHES)  
ABOVE THE FLOOR.

**UTILITY CONNECTIONS MUST NOT  
BLOCK ACCESS FOR REMOVAL OF  
THE BOTTOM RETURN DUCT, WHICH  
IS LOCATED DIRECTLY UNDER THE  
MOTOR AND PUMP ASSEMBLY.**

**ELECTRICAL CONNECTIONS MUST BE  
MADE BY A QUALIFIED INSTALLER.  
IMPROPER INSTALLATION CAN CAUSE  
DAMAGE TO THE EQUIPMENT.**

**LOCAL CODES AND/OR THE NATIONAL  
ELECTRICAL CODE SHOULD BE  
OBSERVED IN ACCORDANCE WITH  
ANSI/NFPH-70-1987  
(OR THE LATEST EDITION).**

**SUPPLY VOLTAGE AND UNIT VOLTAGE  
MUST MATCH. FAILURE TO SUPPLY  
UNIT WITH PROPER VOLTAGE WILL  
RESULT IN EQUIPMENT DAMAGE.**

1. The WaterJet must be supplied with power as follows:

<b>Supply Voltage</b>	208	240	480
<b>Amperes (MFS)</b>	30	30	20
<b>Herz</b>	60	60	60
<b>Phase</b>	3	3	3
<b>Amp Draw</b>	21	21	15

2. Follow local codes or the National Electrical Code (NEC) to select the proper size wire to the unit.
3. Make watertight conduit connections for the electrical supply through the control panels in the rear of the unit. Be sure to maintain the watertight seal in the box.
4. Attach each phase leg as shown marked inside the control panels.
5. Make a watertight conduit connection at the marked opening inside the main Control Box for the temperature chart recorder through the control panel in the rear of the unit. Be sure to maintain the watertight seal in the box.
6. An electrical schematic of the WaterJet Control Panel and chart recorder connections is provided at the rear of this manual, and on the inside of the main Control Box. The refrigeration unit electrical schematic can be found on the inside panel of the control box.
7. Double-check the wiring phase legs to ensure that they are attached to the correct terminal on the terminal block.

# Installation

8. The refrigeration unit must be supplied with power as follows:

a. Air Condensing Units

<b>Supply Voltage</b>	208	240	480
<b>Fuse Amps</b>	125	125	60
<b>Herz</b>	60	60	60
<b>Phase</b>	3	3	3
<b>Amp Draw (RLA)</b>	66.8	66.8	31.4

b. Water Condensing Units

<b>Supply Voltage</b>	208	240	480
<b>Fuse Amps</b>	125	125	60
<b>Herz</b>	60	60	60
<b>Phase</b>	3	3	3
<b>Amp Draw (RLA)</b>	59.6	59.6	29

c. For other voltages and frequencies, contact the factory.

## WATER CONNECTIONS

**CAUTION**  
PIPING CONNECTIONS AND  
INSTALLATION MUST BE MADE BY  
A QUALIFIED INSTALLER. IMPROPER  
INSTALLATION CAN CAUSE DAMAGE  
TO THE EQUIPMENT.

LOCAL CODES AND/OR NATIONAL  
PLUMBING CODES MUST BE  
OBSERVED WHEN MAKING  
CONNECTIONS TO THE WATERJET.

HOT WATER SUPPLY MUST NOT  
EXCEED 49° C (120° F). EXCESSIVE  
HEAT CAN DAMAGE VALVE SOLENOIDS.

1. The WaterJet has a maximum water capacity of 1325 liters (350 gallons). Water pressure from the supply needs to be between 2.07 bar (30 PSI) and 4.14 bar (60 PSI).
2. There are two 3/4 inch NPT water solenoid connections at the rear of the WaterJet. These connections are for hot and cold water as labeled.
3. If hot water is not to be used, also supply the hot water solenoid inlet with cold water. Both solenoids should be connected to cold water under such circumstances, or the unit will not work.

## DRAIN CONNECTION

**WARNING**  
BACTERIAL HAZARD! IMPROPER  
INSTALLATION COULD RESULT IN  
IMPROPER DRAINAGE, AND ALLOW  
DRAIN MATERIAL INTO THE UNIT.

**CAUTION**  
PIPING CONNECTIONS MUST BE MADE  
BY A QUALIFIED INSTALLER. IMPROPER  
INSTALLATION CAN CAUSE EQUIPMENT  
DAMAGE. LOCAL CODES AND/OR  
NATIONAL PLUMBING CODES MUST BE  
OBSERVED WHEN MAKING PLUMBING  
CONNECTIONS TO THE UNIT.

1. Connect the drain at the rear of the unit using a 1-1/2 inch NPT pipe. Do not use plastic or PVC-type pipe.
2. Install the drain line with a constant downward pitch. Ensure that there is a vertical air gap of at least two inches from the top of the drain unless otherwise specified by codes.
3. The WaterJet has a maximum drain rate of 284 liters (75 gallons) per minute. If the building drain is slower than the WaterJet drain, the two inch drain line may need to be restricted to a smaller diameter compatible with the building drain and the drain time will be lengthened.

# Installation

## STEAM CONNECTIONS

SKIP THIS SECTION IF COOKING OPERATIONS WILL NOT BE REQUIRED

**WARNING**  
**DO NOT ATTEMPT TO OPERATE THE UNIT UNTIL QUALIFIED GROEN INSTALLERS MAKE NECESSARY REFRIGERATION ADJUSTMENTS.**

1. The steam system is ASME shop inspected, stamped (PP) and registered with the National Board for operation up to a maximum working pressure of 90 PSIG.
2. Connect the steam supply to the labeled 3/4" NPT connection at the safety relief valve located on the rear of the WaterJet.
3. Recommended boiler capacity should be nine ( $\pm$  two) BHP.
4. Connect the condensate return line to the labeled 3/4" NPT pipe connection which is found directly under the steam input line.
5. Globe valves (shut-off valves) are not provided with the unit, but should be installed as required.

## REFRIGERATION CONNECTIONS

**WARNING**  
**DO NOT ATTEMPT TO OPERATE THE UNIT UNTIL QUALIFIED GROEN INSTALLERS MAKE NECESSARY REFRIGERATION ADJUSTMENTS. (INSTALLER MUST BE R.S.E.S. CERTIFIED).**

1. Connect refrigeration lines (Suction, Liquid and Hot Gas) as labeled at the rear of the unit.
2. Refrigeration unit must be no more than 100 feet of piping.
3. The 1-5/8" suction line, 7/8" liquid line and the 7/8" hot gas line should be welded with nitrogen-purging during all brazing connections.
4. The suction line must have traps for every rise of 10 feet. In addition, all horizontal runs must have a slope of not less than one inch for every 10 feet in the direction of the condensing unit.
5. Mineral oil must be added to the unit.
6. A 39 pound pre-charge of R22 is required for the condensing unit. An additional charge must be added dependent on the line length from the condensor to the WaterJet.

### Before Replacing Rear Covers on the Unit:

1. Run the WaterJet through a few cycles before replacing covers. This can be done without food being prepared or placed in the unit. These "practice runs" will help identify any latent installation problems such as:
  - a. Improper motor rotation due to improper phase wiring.
  - b. Loose solder connections which cause solenoid valves to stay open.
  - c. Leaks in any of the connections.

# Initial Start-Up

1. Do not attempt to operate the unit until a qualified R.S.E.S. Certified Groen installer has completed the necessary refrigeration adjustments.
2. The Groen installer will instruct the facility supervisor on the proper start-up procedure and provide additional instructions as needed.

# Operation



**WARNING**  
DOORS WILL BE HOT WHEN UNIT IS COOKING OR RETHERMING. CONTACT CAN CAUSE SEVERE BURNS.

**IMPROPER INSTALLATION OR TIGHTENING OF FITTINGS CAN RESULT IN HOT WATER LEAKS.**



**WARNING**  
STEAM ESCAPES WHEN THE DOORS ARE OPENED. CONTACT CAN CAUSE SEVERE BURNS.



**WARNING**  
DISCONNECT POWER BEFORE SERVICING THE WATERJET.  
ONLY REPLACE COMPONENTS WITH GROEN PARTS NON-GROEN PARTS COULD RESULT IN ELECTRICAL SHOCK.

**CAUTION**  
DO NOT CLOSE SUCTION LINE VALVE. FAILURE TO KEEP VALVE OPEN DURING OPERATION WILL CAUSE THE EVAPORATION TO LEAK.

### Intended Use

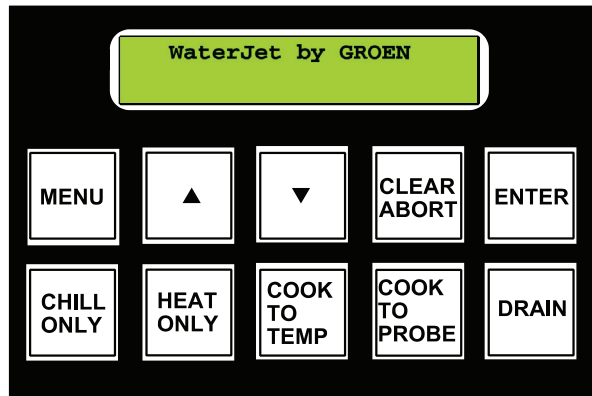
Hot water supply is used to accelerate cooking or retherming times. Steam supply of nine Bhp ( $\pm$  two) is required to obtain and maintain temperatures for proper and safe cooking. Retherming cycles may require some preheat time, depending on the type of food being warmed and the steam supply.

The WaterJet is intended to chill 100 gallons of casing product. It is intended to cook up to 500 lbs of meat per cycle. Individual meat size can be up to 10 lbs.

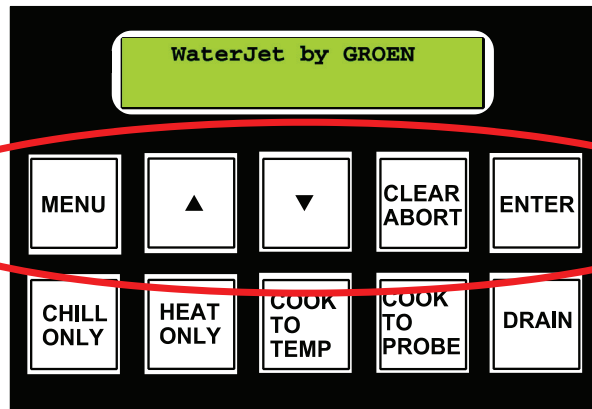
Casings should be filled and sized so that the bags may be folded around a temperature probe, to measure internal product temperatures.

### PROGRAMMING & CHILL TEMPERATURE SET (Graphic Representation)

Once turned on, the WaterJet 100 is programmed and run from the Operator's Console:



The unit is programmed using the upper row of controls:



The paragraphs which follow describe the use of these touch pads.

# Operation

## START-UP

When first initialized, Press **MENU**

1. "CHILL SETUP" will be displayed.

**CHILL SETUP**  
**ENTER/ARROW/CLEAR**

Press **ENTER**

**Temp in Degrees F**      ↑ ↓

2. "TEMPERATURE IN DEGREES F" will be displayed (Pressing the up or down arrow at this point changes the default from Fahrenheit to Celsius and back).

Press **ENTER**

**WATER TEMP**      34°F

3. "WATER TEMP 34' " will be displayed.

Press **UP ARROW**

**WATER TEMP**      35°F

4. "WATER TEMPERATURE 35' " will be displayed

Press **ENTER**.

**WaterJet by GROEN**

5. "WATERJET BY GROEN" will be displayed.

This sets the chilling temperature to 35 degrees F. Fahrenheit is always the default but can be changed at step 2 by using the up or down arrow keys.

This setup function from MENU sets the chill temperature for the "CHILL ONLY" function. Once the unit is set to 35 degrees (with temperature in Fahrenheit) there should be no further need to change the setting.



# Operation

## CHILL

Press **CHILL ONLY** to start

Press **CHILL ONLY** to stop

1. The unit will chill to the temperature set in the CHILL SETUP (35 F). The unit will display the temperature in the tank while running.

## RETHERM

COOL

WATER 35°F

Press **HEAT ONLY** to start

Press **HEAT ONLY** to stop

1. The unit will retherm to the temperature set in the RETHERM SETUP. The unit will display the current, changing temperature in the tank while running.

## COOK TO TIME

HEAT

WATER 130°F

Press **COOK TO TIME** to start.

1. "TEMP IN DEGREES F" will be displayed.

Temp in Degrees F



(Press up or down ARROW to change to degrees C)

Press **ENTER**

SOAK

WATER TEMP

40°F

2. "SOAK WATER TEMP" will be displayed  
(Press up or down ARROW to change to the desired thaw temperature)

Press **ENTER**

SOAK

TIME IN MINUTES

120

3. "SOAK TIME IN MINUTES" will be displayed  
(Press up or down ARROW to change to the desired thaw time)  
REMEMBER! The time function only starts after the unit reaches the set temperature!  
Keep at "0" if no thaw time is desired.

Press **ENTER**

# Operation

4. "COOK WATER TEMP" will be displayed  
(Press up or down ARROW to change to the desired cooking temperature)

**Press ENTER**

5. "COOK TIME IN MINUTES" will be displayed  
(Press up or down ARROW to change to the desired cooking time)

**COOK**  
**TIME IN MINUTES** 720

REMEMBER! The time function only starts after the unit reaches the set temperature!

**Press ENTER**

6. "CHILL WATER TEMP" will be displayed.  
(Press up or down ARROW to change to the desired chilling temperature (35°F))

**CHILL**  
**WATER TEMP** 35°F

**Press ENTER**

**Press COOK TO TIME** to stop

If the display has the desired time or temperature already displayed just press ENTER. The CHILL temperature should never be set lower than 35 F.

## COOK TO PROBE

**Press COOK TO PROBE** to start.

1. "TEMP IN DEGREES F" will be displayed.  
(Press up or down ARROW to change to degrees C)

**Press ENTER**

**Temp in Degrees F** ↑ ↓

2. "SOAK WATER TEMP" will be displayed  
(Press up or down ARROW to change to the desired thaw temperature)

**SOAK**  
**WATER TEMP** 40°F

**Press ENTER**

# Operation

3. "SOAK TIME IN MINUTES" will be displayed.

(Press up or down ARROW to change to the desired thaw time. Keep at "0" if no thaw time is desired)

**SOAK**  
**TIME IN MINUTES** 120

**Press ENTER**

4. "COOK WATER TEMP" will be displayed

**COOK**  
**WATER TEMP** 130°F

(Press up or down ARROW to change to the desired tank temperature)

**Press ENTER**

**COOK PROBE**  
**TEMP** 180°F

5. "COOK PROBE TEMP" will be displayed

(Press up or down ARROW to change to the desired probe temperature)

**Press ENTER**

**COOK**  
**TIME IN MINUTES** 720

6. "COOK TIME IN MINUTES" will be displayed

(Press up or down ARROW to change to the desired cooking time)

REMEMBER! The time function only starts after the unit reaches the set temperature!

**Press ENTER**

7. "CHILL WATER TEMP" will be displayed

**CHILL**  
**WATER TEMP** 35°F

(Press up or down ARROW to change to the desired chilling temperature (35 F))

**Press ENTER**

**Press COOK TO PROBE** to stop

If the display has the desired time or temperature already displayed just press ENTER. The CHILL temperature should never be set lower than 35 F.

REMEMBER! The time function only starts after the unit reaches the set temperature!

REMEMBER! Cook times have to be at least 1 minute.

REMEMBER! The unit will not let you drain manually while it is running.

# Operation

## BROKEN BAG CLEANING

**WARNING**  
BEFORE HANDLING ANY CLEANING  
PRODUCT, WEAR RUBBER GLOVES,  
PROTECTIVE CLOTHING,  
AND A FACE SHIELD.

**WARNING**  
NEVER ADD ANY OTHER CHEMICALS  
TO THE TANK WHEN  
CIR-KLENZ IS PRESENT.

1. Drain the tank completely
2. Remove the lifting platform from the tank
3. Using a wet/dry vacuum, vacuum out large particles of food from the tank and platform
4. Use a brush to clean food particles from in between heat exchanger plates
5. Remove clean-out plate from pump supply duct
6. Use a brush to clean food particles out of the duct
7. Replace the platform in the tank
8. Replace the clean out plate on the supply duct
9. Fill to high water mark with fresh, cool water
10. Add Cir-Klenz II to the tank as follows:
  - WJ100-C - use 1 gallon
  - WJ100-CC - use 3 quarts
11. If the Water Jet has heating capability, heat the tank water to 145F
12. Run the recirculation pump for 10 minutes. (Cir-Klenz is low foaming)
13. Wearing a rubber glove, wipe all around the inside surface of the tank at water level with a soft cloth to remove any food particles
14. Drain the tank, and refill to the high water mark with fresh, cool water
15. Run the recirculation pump for at least one minute
16. Drain the tank

## ROUTINE CLEANING

**WARNING**  
BEFORE HANDLING ANY CLEANING  
PRODUCT, WEAR RUBBER GLOVES,  
PROTECTIVE CLOTHING,  
AND A FACE SHIELD.

**WARNING**  
NEVER ADD ANY OTHER CHEMICALS  
TO THE TANK WHEN  
CIR-KLENZ IS PRESENT.

1. Weekly cleaning is recommended for regular users. For heavy users, it is recommended that routine cleaning be performed after every 20 batches.
2. Leave the tank filled to high water mark with water
3. Add Cir-Klenz II to the tank as shown
  - WJ100-C - use 1 gallon
  - WJ100-CC - use 3 quarts
4. If the Water Jet has heating capability, heat the tank water to
5. Run the recirculation pump for 10 minutes. (Cir-Klenz is low foaming)
6. Wearing a rubber glove, wipe all around the inside surface of the tank at water level with a soft cloth to remove any food particles
7. Drain the tank, and refill to the high water mark with fresh, cool water
8. Run the recirculation pump for at least one minute
9. Drain the tank

# Operation

## DE-LIMING

**WARNING**  
BEFORE HANDLING ANY CLEANING  
PRODUCT, WEAR RUBBER GLOVES,  
PROTECTIVE CLOTHING,  
AND A FACE SHIELD.

1. De-lime as necessary to remove scaling or calcification from tank interior
2. Fill tank with cool water to high water mark
3. Add EcoLabs PL-3 to the tank:  
For water with Less than 20 grains Hardness use ½ gallon  
For water with more than 20 grain  
Hardness or High Iron use three quarts
4. There is no need to heat the water. Run the re-circulation pump for at least 10 minutes
5. Drain the tank
6. There is no need to do a rinse cycle
7. Heavy lime build up may require multiple applications or scrubbing to remove scale.

## SANITIZING

**WARNING**  
BEFORE HANDLING ANY CLEANING  
PRODUCT, WEAR RUBBER GLOVES,  
PROTECTIVE CLOTHING,  
AND A FACE SHIELD.

1. Sanitizing is recommended each time the tank is filled
2. Fill tank to low water mark with cool water
3. Add 32 ounces of Vortexx to the tank
4. Run the recirculation pump for at least 5 minutes
5. There is no need to drain the water after sanitizing
6. There is no need to rinse after sanitizing

**WARNING**  
NEVER ADD ANY OTHER CHEMICALS  
TO THE TANK WHEN  
CIR-KLENZ IS PRESENT.

**NOTE**  
GROEN RECOMMENDS THAT THE TANK  
BE DRAINED AT THE END OF EACH  
PRODUCTION DAY.

# Maintenance

## BROKEN BAG CLEANING

### WARNING

USE OF REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES. SERVICE PERFORMED BY OTHER THAN FACTORY-AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.

### CAUTION

THE FOLLOWING WORK MUST BE PERFORMED BY A CERTIFIED RSES (REFRIGERATION SERVICE ENGINEERS SOCIETY) TECHNICIAN.

### WARNING

ELECTRICAL POWER MUST BE SHUT OFF BEFORE WORK IS DONE ON INTERNAL COMPONENTS. ELECTRICAL SHOCKS AND BURNS COULD RESULT.

Your WaterJet is designed to require minimum maintenance, but some parts may require replacement after prolonged use. After installation, no user adjustment should be necessary. If a service need arises, only authorized personnel should perform the work.

The WaterJet motor must be greased every six months. The grease fitting is located near the top of the motor opposite the pump.

Factory installed NLGI #2 type food grade grease was initially used in the motor. Approved sources are Chevron SRI #2 and Shell Oil Dolium-R. Do not use any other type of grease. Incompatible greases will cause the motor to fail.

The refrigeration system filter dryers must be changed within the first two weeks of operation. Thereafter they must be changed whenever the system has been opened to the atmosphere.

Service personnel should check the unit at least once a year. This should include inspecting wires and connections and cleaning inside the control console. A Maintenance and Service Log is provided at the rear of this manual. Each time work is performed, enter the date on which it was done, what was done, and who did it.

# Troubleshooting

Your CapKold WaterJet 100 will operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem. If the actions suggested do not solve the problem, call your authorized Groen Service Representative. For the phone number of the nearest agency, call your area Groen representative or the Groen Parts and Service Department. If an item on the list is followed by X, the work should only be performed by a qualified service representative.

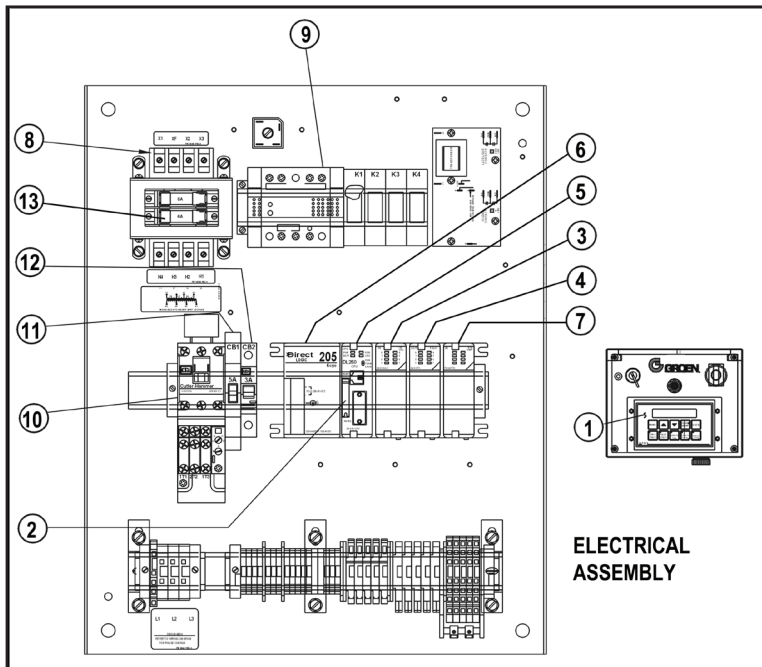
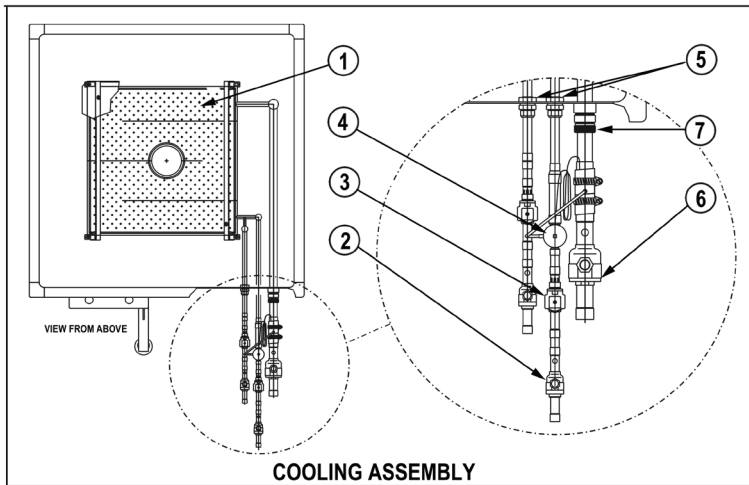
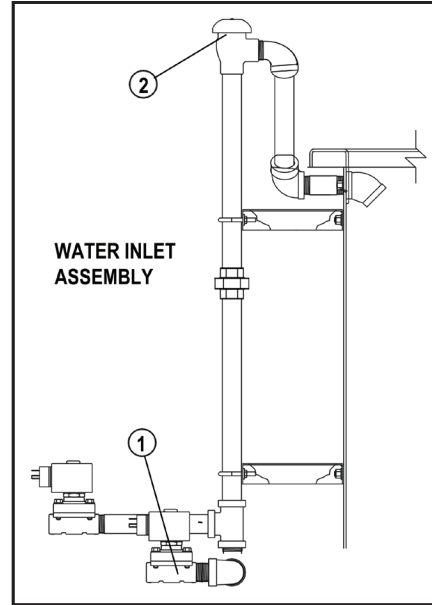
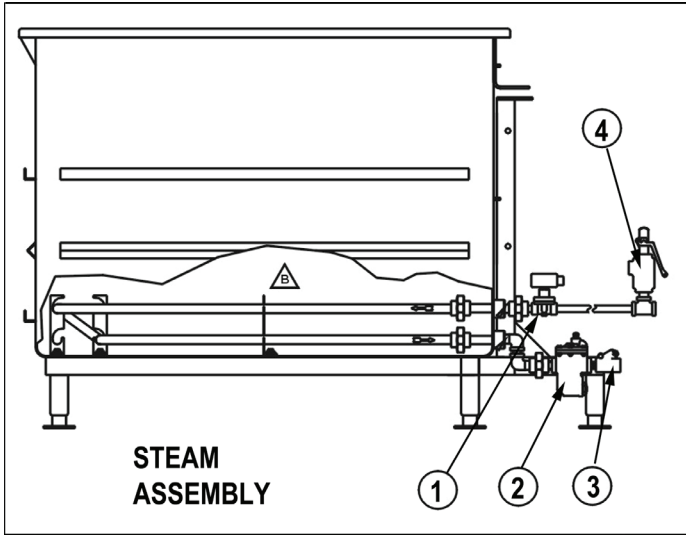
**WARNING**  
**USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.**

SYMPTOM	WHO	WHAT TO CHECK
Unit will not heat	User	a. Steam supply not on b. Steam connection for leaks
	ASA only	c. Open circuit on solenoid connection d. Solenoid not seated correctly e. Refrigeration valve open
Unit will not stop heating	ASA only	a. Solenoid valve needs cleaning (generally trash from installation) b. Electrical short
Unit will not cool	User	a. Refrigeration valves at WaterJet are closed
	ASA only	b. Refrigeration problem c. Steam valve open d. Open circuit on solenoid e. Solenoid not seated properly
Pump is not working - No water flow - Low water flow	User	a. Water probes are dirty b. Diverter not set correctly
	ASA only	c. Lift circuits are bad - possible sensor failure d. Water level board may not be functioning e. Motor overload f. Low current, wrong voltage g. Temperature sensor bad h. Faulty door sensors i. Motor starter failed
Pump/Motor making loud, squeaking or clanging noise	ASA only	a. Low or no grease in motor b. Foreign object(s) in pump
No water fill	User	a. Water supply not turned on b. Leak in water supply line
	ASA only	c. Opener short circuit on solenoid d. Solenoid improperly seated
Water does not stop filling	User	a. Clean water level probes
	ASA only	b. Solenoid valve needs cleaning (generally trash from installation) c. Open circuit on solenoid
Tank will not drain	User	a. Drain valve clogged
	ASA only	b. Open circuit or short in circuits

# Troubleshooting

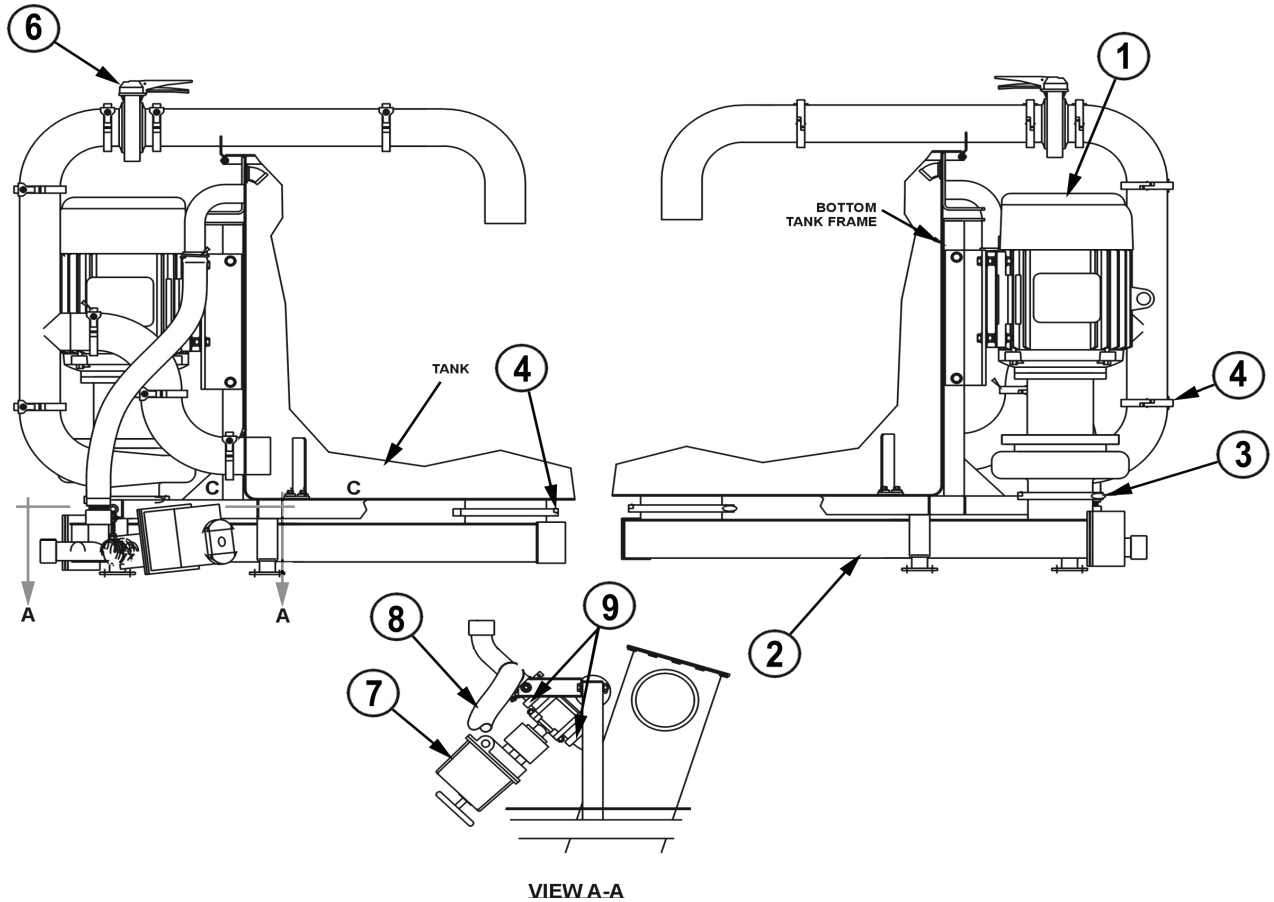
SYMPTOM	WHO	WHAT TO CHECK
Controls will not respond	User	a. Controls locked up. Turn unit off, then back on again.
	ASA only	b. Control failure (lightning strike, power surge, other) c. Battery bad
Lift not moving	ASA only	a. Gearing broken b. System out of position or frozen
Horn/Buzzer sounds continuously	User	a. Close door while heating or cooking b. Move lift to fully down position
	ASA only	c. Motor overload failure d. Buzzer failure
Unit not functioning as programmed	ASA only	a. Temperature probe failure b. Open or short across temperature probes

# Parts List



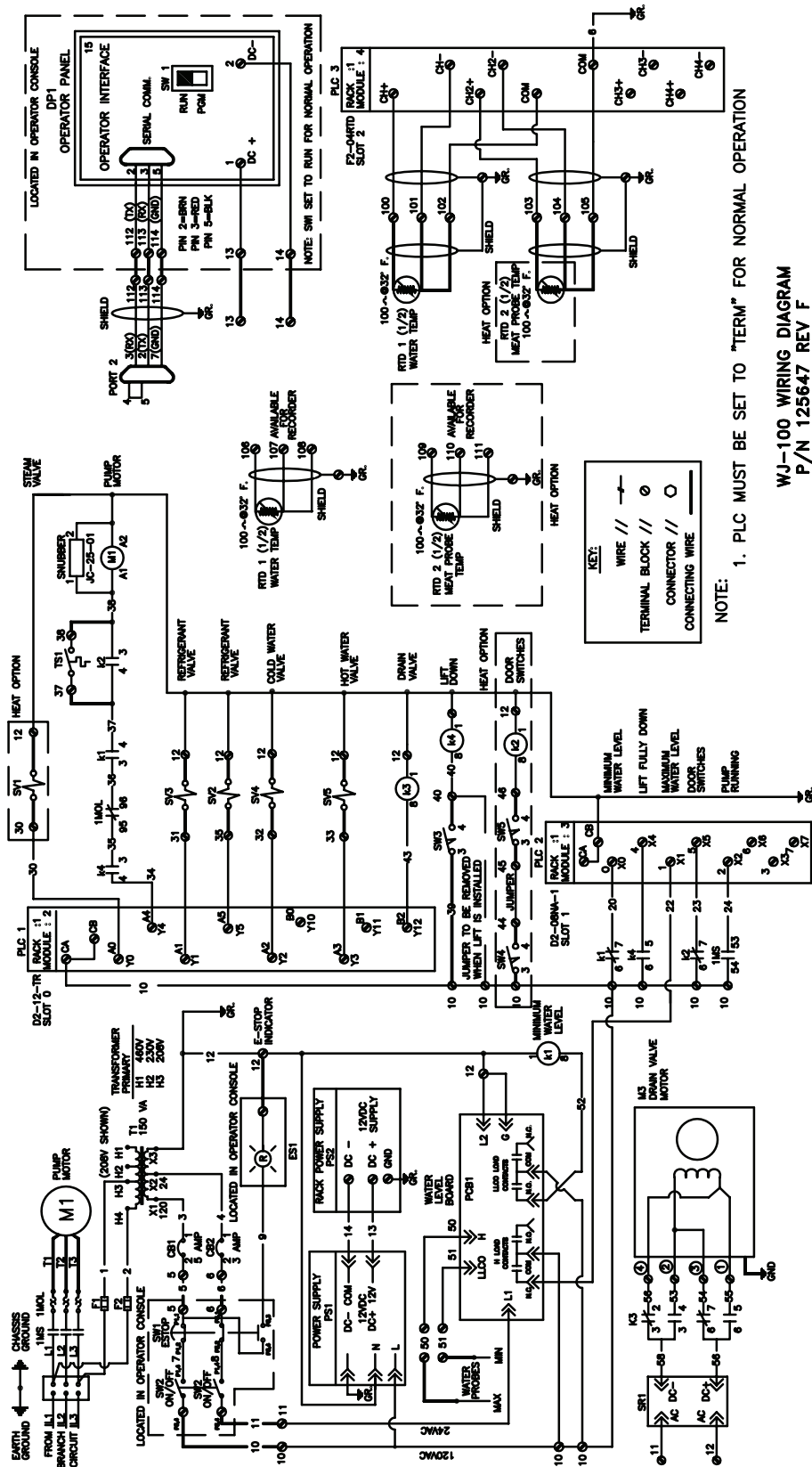
# Parts List

<i>Part Description</i>	<i>CapKold P/N</i>	<i>Key</i>
<b>125308 – COOLING ASSEMBLY</b>		
Plate evaporator	125314	1
Valve, ball 7/8"ODF w/service	125041	2
Valve Solenoid Refrigerant 7/8 OD	125513	3
Valve, expansion	125040	4
Bulkhead fitting 7/8"	125335	5
Valve, ball 1 5/8"ODF w/service	125042	6
Connector, male pipe 1 1/2"	125515	7
<b>133624 – ELECTRICAL ASSEMBLY</b>		
Display, Operator Console	125273	1
Connector DIN for Asco Solenoids	125207	x
Probe Meat Thermometer	125090	x
Probe, temperature	133686	x
Thermostat, Sensor	133692	x
Pen Purple	N102726	y
Pen Red	N102727	y
Chart Recorder	129220	z
Magnetic door sensor Switch	125476	x
Battery, PLC	133728	2
Module, 12 Outputs	125253	3
Module, 8 inputs	125252	4
CPU Module, PLC	125251	5
Power Supply, PLC	125250	6
Module, 4 RTD inputs	125254	7
Transformer	125241	8
Power Supply 120VAC	125614	9
Starter w/Overload sensor	125243	10
Circuit Breaker 5 AMP	125611	11
Circuit Breaker 3 AMP	125246	12
Fuse, 6 AMP	119823	13
<b>125348 – PLATFORM ASSEMBLY</b>		
<b>133764 – WATERJET 100 LID ASSY</b>		
Spring, Gas - 316 SS	125470	-
<b>125302 – STEAM ASSY, WJ100</b>		
Valve Solenoid 3/4"NPT Steam	125107	-
Trap Steam Bucket Type	004050	-
Valve, Swing Check	005515	-
Valve safety release 3/4"NPT	098158	-
<b>133434 – WATER INLET ASSEMBLY</b>		
Valve, Solenoid 3/4" NPT 2 way	125107	-
Vacuum breaker 3/4"	125585	-



Part Description	CapKold P/N	Key
<b>133732 – RECIRCULATION ASSEMBLY</b>		
Pump and Motor Assembly	133693	1
Seal, Motor shaft	133700	-
Pump Casing, Sanitary	133703	-
Pump Impeller	133704	-
Casing Gasket	133706	-
Seal, Pump, Carbon	133709	-
O-ring for Pump Seal	133711	-
Duct, Bottom Return Assembly	133662	2
Gasket, cover plate, return duct	133683	-
Gasket 6" Triclover	N64489	3
Gasket 8" Triclover	N96054	4
Gasket 4" Triclover	053331	5
Valve, diverter	133600	6
Valve/Actuator Assy 24 VDC	133684	7
Overflow Hose Assy	133729	8
Gasket 2" Triclover	016602	9

# Wiring Schematic



WJ-100 WIRING DIAGRAM  
P/N 125647 REV F





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