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BLODGETT **COMBI**®

BCS-6

**ELECTRIC COOKING APPLIANCES
INSTALLATION – OPERATION – MAINTENANCE**



BLODGETT COMBI

www.blodgett.com

44 Lakeside Avenue, Burlington, Vermont 05401 USA Telephone (800) 331-5842, (802) 860-3700 Fax: (802)864-0183

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**A PERSONAL WORD
FROM BLODGETT COMBI**

Congratulations on your purchase of a BLODGETT Combi appliance. We firmly believe that your choice has been a wise one, and trust you will receive many years of excellent service from your new Combi.

You will find that cooking with Combi appliances saves time, labor and extensive cleaning of both the kitchen and the unit.

With Combi appliances the quality, taste, consistency, and look of your food are improved, thus endorsing the policy to which we've always adhered: "For Better Cooking!"

Once you've had a chance to use your Combi, please tell us, your dealer and colleagues about any creative and interesting applications you have discovered; exchange ideas with other users. Be sure to advise us or your dealer immediately should any mechanical or technical problems be encountered (...we're here to help!) and above all "Enjoy Cooking the BLODGETT Combi Way!"

For information on cooking, please refer to our separate cooking guide.

BLODGETT COMBI®

IMPORTANT

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT

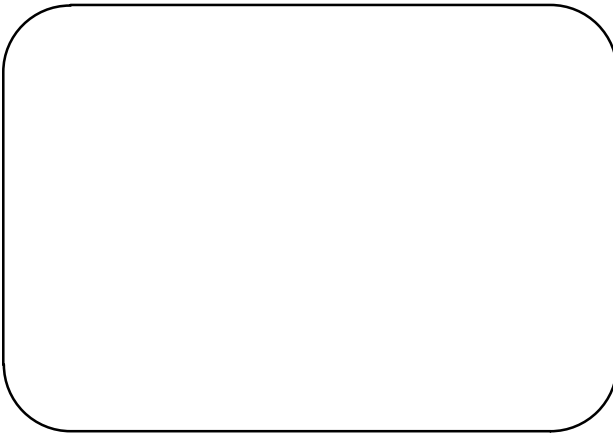
FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

The information contained in this manual is important for the proper installation, use, and maintenance of this oven. Adherence to these procedures and instructions will result in satisfactory baking results and long, trouble free service. Please read this manual carefully and retain it for future reference.

Errors: Descriptive, typographic or pictorial errors are subject to correction. Specifications are subject to change without notice.

Your Service Agency's Address:



Model:

Serial Number:

Your oven was installed by:

Your start-up inspection service was performed:

Date:

ASAP:

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Introduction

The Convection Steamer

Steaming is a well-known cooking process frequently used in restaurant and institutional kitchens. With the Blodgett Convection Steamer, it is now possible to enjoy the many advantages of steaming, some of which are:

Simplified Work Process

The work process is simplified since products are prepared on or in steam table pans and trays. Food can be cooked, stored, and transported with the same pans. Small amounts of product can be processed efficiently; pre-cooked and convenience foods can be rethermalized within minutes. Many frozen foods can be processed without pre-thawing. This flexibility in preparation reduces the need for kettles and steam tables since there is no need for large amounts of food to be kept warm for long periods of time.

High Quality Foods

Today the improvement of food quality is more important than ever. With the use of steam, valuable taste and aroma are preserved since steamed foods retain their own natural taste. During the steaming process foods retain the nutrients and vitamins which are lost in water during boiling. Therefore when compared, steamed foods have much better color than foods that have been boiled. Also, by using shallow containers the product is not layered as deeply and mushing is avoided.

Vitamin Retention

In the Blodgett Convection Steamer vitamins are not destroyed. This is due to the shorter cooking times, the use of less or little water and the use of a low temperature; slightly less than 212°F (100°C).

Firmness

With the use of steam, overcooking is not a problem and firmness can be individually controlled.

Simultaneously Steaming Different Foods

There is no flavor transfer when cooking with the Convection Steamer. For this reason, various types of food with different cooking times can be loaded or removed at any point during the steaming process.

HOW STEAMING WORKS

The Blodgett Convection Steamer gently cooks food using non-pressurized steam. Fresh steam is directed into the unit from the generator. It is not necessary to add water to foods during the steaming process.

WHAT CAN BE STEAMED

Vegetables, side dishes, fish, meat, poultry, diet foods, garnishes, dumplings, casseroles, meat loaf, fruits, desserts and eggs.

In the **Steam** mode you can:

- steam
- defrost
- blanch
- poach
- rethermalize



Description of the Convection Steamer

ABOUT THE CONVECTION STEAMER

Blodgett Convection Steamers are quality produced using high-grade stainless steel with first class workmanship.

The high performance fresh steam generator with its control system makes it possible to enjoy all of the advantages of a high quality steamer at the flick of a switch. Fresh steam enters the steamer cavity without pressure and is circulated at high speed. This process enables quick and gentle cooking and ensures high quality food while providing convenient working methods. The steam generator is completely automatic and protected from running dry.

A patented quench system keeps the air in the steamer clean. Fumes are extracted from the appliance, quenched, and directed out through the condenser drain. This exhaust system results in better quality foods and **no flavor transfer**. The fan, which is guarded against accidental finger contact, is driven by a quiet and powerful motor. The condenser draws out excess steam from the appliance. Condensation and waste water, which result during steaming and cleaning, are continuously drained.

The use of high quality insulation impedes excessive heat radiation and saves energy.

The Convection Steamer has optional adjustable legs which adapt easily to slightly uneven surfaces and optional floor stands which are designed for use with all of the tabletop models.

STEAMER OPERATION

The practical door, with a viewing window, has a wide swing radius and handle which can be operated easily, even with wet or greasy hands.

NOTE: Some models may be supplied with a solid door.

Ease of operation is guaranteed through the simple arrangement of the controls. Graphic symbols make the appliance easy for even inexperienced kitchen staff to operate. Steam can be selected with one switch.

The steamer is designed for easy care and is welded water tight so that the internal cooking cavity may be rinsed with a hose after the steam cleaning process. For more detailed instructions refer to the Maintenance section of this manual.



Introduction

Steamer Features

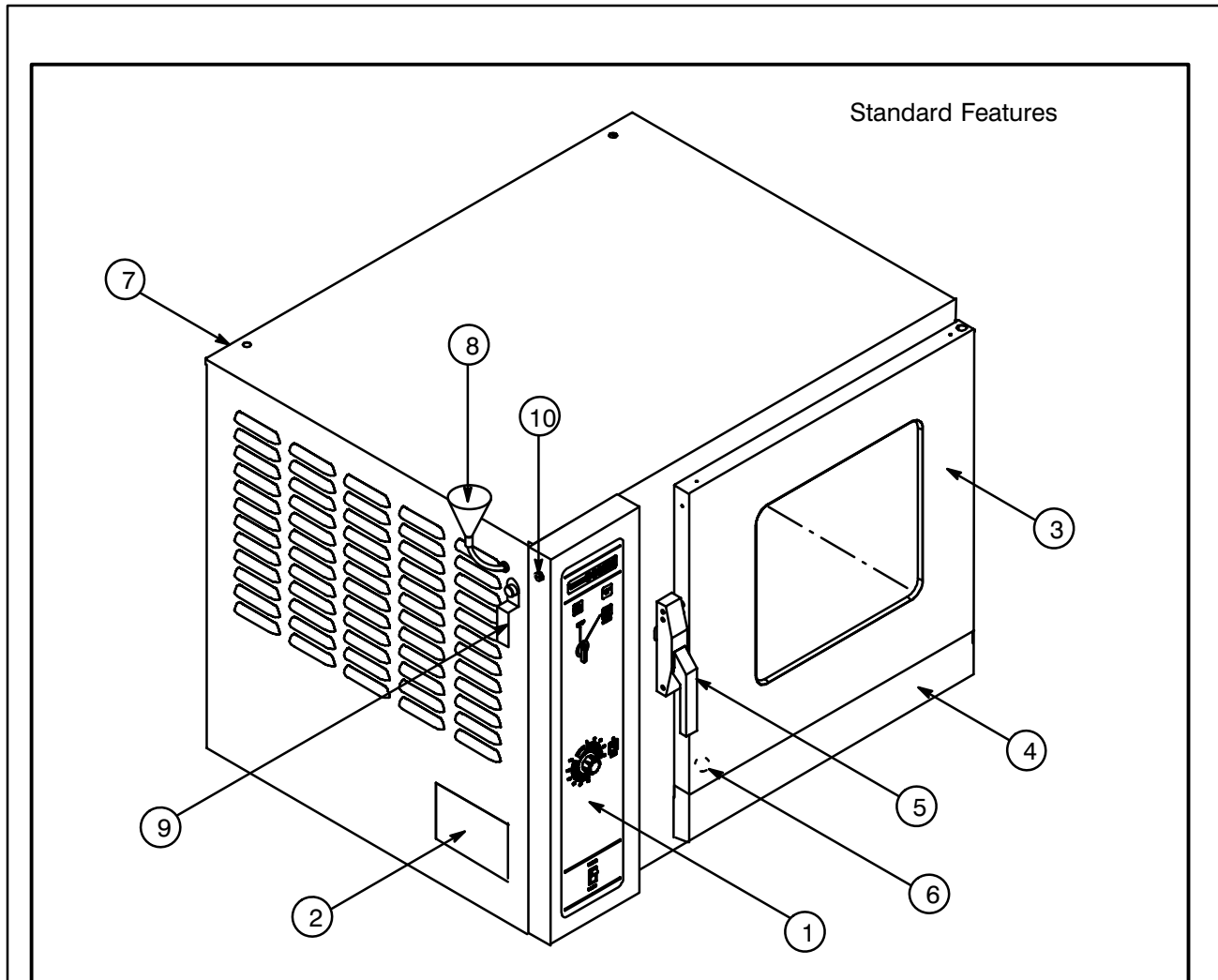


Figure 1

- | | | | |
|---|---|----|--------------------------------------|
| 1 | Control Panel (standard control shown) | 6 | Door Contact Switch |
| 2 | Power Connection | 7 | Vent (not shown) |
| 3 | Steamer Door (glass door shown) | 8 | Decalcifying Inlet & Funnel Assembly |
| 4 | Drip Collector (removable for cleaning) | 9 | Decalcifying Valve Lever |
| 5 | Door Handle | 10 | Tilt Down Panel Release Screw |

Installation



Owner's Responsibilities

1. Steamer(s) are uncrated, stacked (if applies) and put in place.

NOTE: Please refer to Leg Attachment and Stacking Addendum.

2. The owner/operator must have the following plumbing and electrical requirements met and installed.

NOTE: Refer to the Utility Connection information provided.



WARNING!!

Improper installation, adjustment, alteration service or maintenance can cause property damage, injury or death. Read the installation, operation and maintenance instructions thoroughly before installing or servicing this equipment.

PLUMBING			
Water			
Building Water Pressure (min/max)		40 PSI min / 50 PSI max	
Cold Water Connection		3/4" Hose Fitting, 3/8" ID hose minimum	
Water Regulator Setting		35 PSI static – preset	
Drainage		Atmospheric Vented Drain	
Drain Connection		2" Copper	
Avg Water Drain Temp.		Approximately 122°F (50°C)	
ELECTRICAL			
Electrical		9.4 kw	
		Amp/line (max)	
		3 Phase	1 Phase
Volt			
208		26	45
240		23	40
By Mode	Steam	9kw	
	Hot Air	9kw	
	Combi	9kw	
Blower Motor		.33 HP / .4 kW	



Installation

Location

The well planned and proper placement of your appliance will result in long term operator convenience and satisfactory performance.

The following clearances must be maintained between the unit and any combustible or non-combustible construction.

- Steamer right side – 1” (2.54 cm)
- Steamer left side – 4” (10 cm) with casters
12” (30 cm) without casters
- Steamer back – 4” (10 cm)

NOTE: For models with hose assemblies on the back of the unit, the hose must be 1” (2.54 cm) from the wall.

If optional casters are not used, the following clearances are recommended for service.

- Steamer sides – 12” (30 cm)
- Steamer back – 12” (30 cm)

Place the unit in an area which is free of drafts and accessible for proper operation and servicing.

Keep the oven area free and clear of all combustibles such as paper, cardboard, and flammable liquids and solvents.

DO NOT place the oven on a curb base or seal to the wall; either condition will prevent proper ventilation to the blower motors. Slight unevenness can be corrected with the adjustable legs.

Heat sources must not be located near the air vents on the left hand side of the unit. Consult the factory for an optional protective side heat shield kit if a warm surface or water source is to the left of the unit. If excessive ambient temperature or a water source is present a heat shield must be added to the left hand side of the oven to protect the unit from excessive heat or water

- BCS-6 heat shield P/N R9047

On all models, tripping the blower motor's thermal overload device indicates an excessive ambient temperature at the side of the oven. This must be corrected to prevent permanent damage to the oven. All motor bearings are permanently lubricated by the manufacturer; there is no need for additional lubrication during the operational lifetime of the motors.



Agency Approvals

THE INSTALLATION INSTRUCTIONS CONTAINED HEREIN ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY. INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN DAMAGE TO THE STEAMER AND/OR INJURY TO THE OPERATOR.

Qualified installation personnel are individuals, a firm, a corporation, or a company which either in person or through a representative are engaged in, and responsible for:

- the installation of electrical wiring from the electric meter, main control box or service outlet to the electric appliance.

Qualified installation personnel must be experienced in such work, familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction.

U.S. and Canadian installations

All steamers, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70—Latest Edition* and/or *Canadian National Electric Code C22.2* as applicable.

Appliance is to be installed with backflow prevention in accordance with applicable federal, province and local codes.

General export installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your Blodgett Convection Steamer, please contact your local distributor. If you do not have a local distributor, please call Blodgett Combi at 0011-802-860-3700.





Installation

Utility Connections

COLD WATER CONNECTION

Connect the appliance to quality water via a pressure hose with 3/4" couplings. A shut off valve is to be provided adjacent to the steamer.

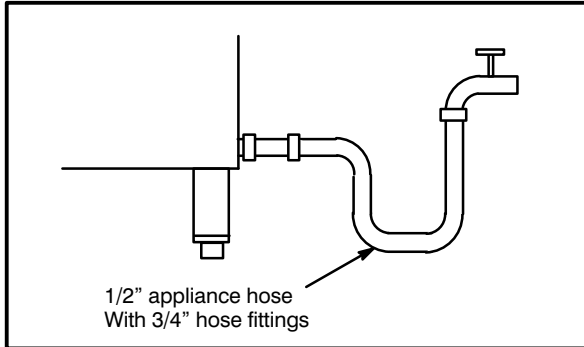


Figure 2

Water must meet the following minimum requirements:

- Total Dissolved Solids (TDS) content will not exceed 30 parts per million.
- Water PH must be 7.0 or higher



WARNING!!

The use of poor quality water will invalidate your warranty.

DRAIN CONNECTION

The Drain Vent assembly, included with the unit, and a 2" (5 cm) copper pipe with standard drain pitch, must be run to an open drain or connected to a standpipe equipped with a vent.

NOTE: The waste water can also be directed to a nearby floor drain. Flexible hose which allows trapped water to accumulate in sagged runs must be avoided.



WARNING!!

Failure to install the drain kit provided will invalidate your warranty.

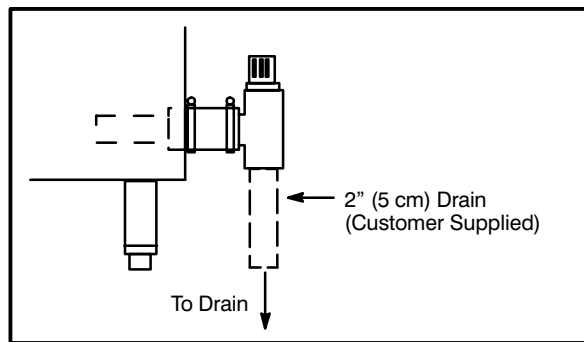


Figure 3



ELECTRICAL CONNECTION

Before making any electrical connections to these units, check that the power supply is adequate for the voltage, amperage, and phase requirements stated on the rating name plate mounted on the right side of the unit.

Wiring diagrams are located on the inside of the louvered side panel.



WARNING!!

Disconnect the power supply to the unit before servicing.

U.S. and Canadian installations

All steamers, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70—Latest Edition and/or Canadian National Electric Code C22.2* as applicable.

General export installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your unit, please contact your local distributor. If you do not have a local distributor, please call Blodgett Combi at 0011-802-860-3700.

NOTE: ALL MANUAL RESETS SHOULD BE RESTORED BEFORE CONNECTING POWER TO THE APPLIANCE.



WARNING!!

Improper installation will invalidate your warranty.



Installation

Leg Attachment

LEG VARIATIONS

Legs are available in 4" (101mm), 6" (152mm) or 25" (635mm) lengths or low profile casters. The 6" legs are used on the lower section of a double stacked unit. The 4" legs may be used with the optional stands if additional height is required or when mounting on a counter. The 25" legs are used for a single unit located on the floor.

NOTE: For safety reasons, casters must not be used with the 25" legs.

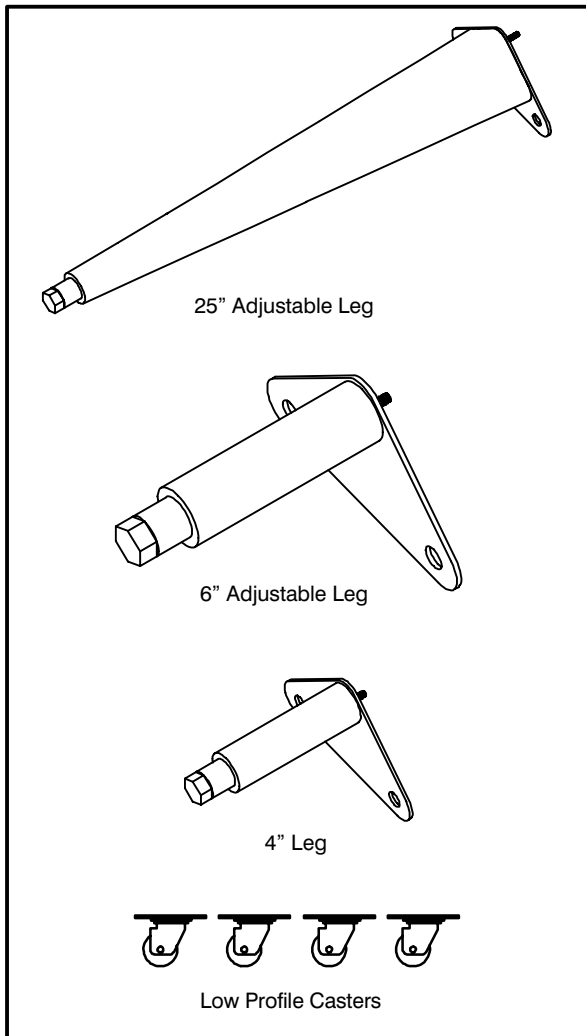


Figure 4

LEG ATTACHMENT

*NOTE: If low profile casters are used, install the locking casters on the front of the oven. The rear casters do not lock. **Be sure the locks are set on the front casters.***

1. Align the threaded stud on each leg to the bolt holes located in the unit's bottom corners. Turn the legs clockwise and tighten to the nearest full turn.
2. Align the leg plate holes with the bolt holes. Secure with the two 1/2" bolts provided.
3. Tip the oven up on the legs. *If casters are used, check that the locks are set on the front casters.*
4. Except for units with casters, level the oven by screwing the adjustable feet in or out as necessary.

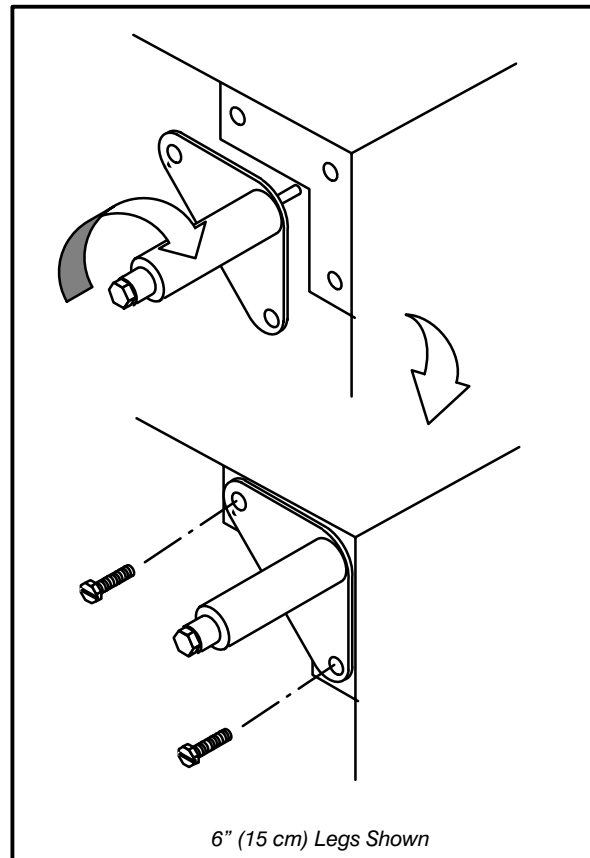


Figure 5



1. Install the casters as directed.
2. Center the upper unit on top of the lower section.
3. Remove the screws from the rear access panel and remove the access panel from the bottom unit.
4. Carefully remove the fan plug and disassemble the steam vent.
NOTE: The fan plug connector can be easily damaged
5. Align the two rear bolt holes in the lower section with the two threaded holes in the upper section.
6. Insert a bolt from the bottom up through each of the two holes and tighten securely.
7. Reassemble the steam vent and reconnect the fan plug. Reinstall the rear access panel on the lower unit.

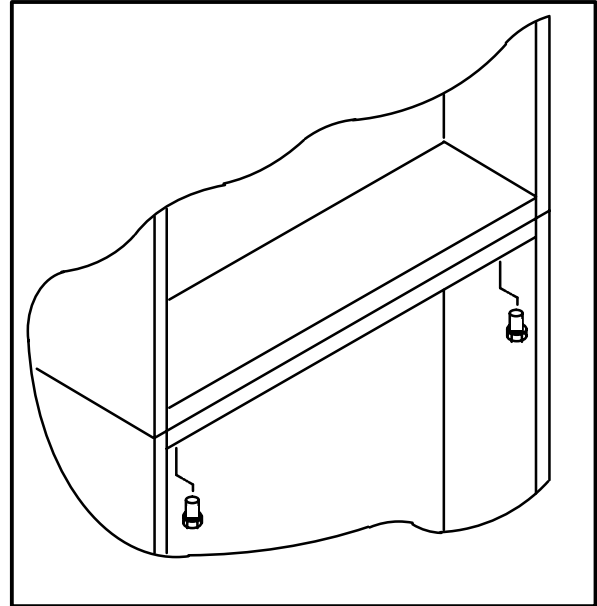


Figure 6



Installation

Adjustments

BEFORE SWITCHING THE APPLIANCE ON

Before applying power to the unit for the first time, check for the following conditions:

- All electrical safety provisions have been adhered to and the electrical connections are correct.
- Water is connected, turned on and all of the connections are water tight.
- The grease filter and holder are in their proper positions.
- The pan holders are inserted into the steamer cavity.



WARNING!!

If the fan turns in the wrong direction, the appliance will not function properly and can be damaged.

NOTE: When the unit is turned on, or after it has been OFF for 5 hours and then turned on, the steam generator automatically flushes for 75 seconds. The steam generator then fills to the proper water level. The unit is now ready for operation.

DOOR ADJUSTMENT

The door latch may be adjusted in two directions, in and out, and up and down, using the following procedure:

1. Adjust up and down by loosening the two bolts holding the latch to the face of the unit (A).
2. Make adjustments so that the leading face of the latch is centered in the opening of the handle assembly.
3. Tighten the bolts so that there is no further movement.
4. Adjust in and out by loosening the bolt on top of the latch (B).
5. The adjustment face is stepped so that movement is limited with the bolt tightened properly.
6. The adjustment is correct when the door closes firmly and no steam leaks from the gasket.

The hinges can also be adjusted as follows:

1. Be certain the latch is adjusted properly.
2. Adjust hinges so that the door back and the unit face are parallel (C).
3. The adjustment is correct when no steam leaks through the gasket.

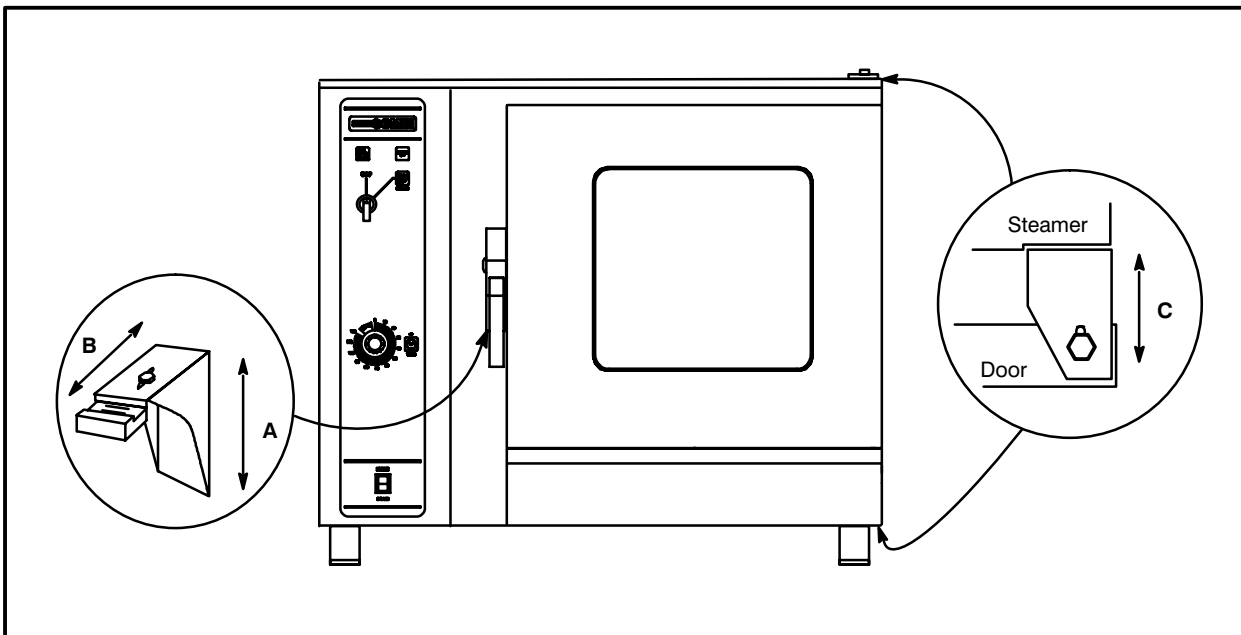


Figure 7



Final Check Lists

ELECTRICAL CONTROL COMPARTMENT

Applied voltage to unit voltage/phase suitable for appliance specified.

- Remove side panel
- Set motor protector (F2) to on position (480V only)
- Adjust motor protector to maximum
- Reset high limit thermostat F6
- Check fuses
- Reinstall side panel

PLUMBING FINAL CHECK

- Incoming water pressure within 40 PSI (minimum) – 50 PSI (maximum)
- Atmospheric vented drain in place
- Water solenoid properly bracketed and not leaking
- Water feed lines intact without leaks
- Water pressure regulator is set to 35 psi
- Spray hose connected properly

STEAMER OPERATIONAL TESTS

NOTE: Checks to be made by customer or authorized service agent.

Turn on STEAM mode and verify (control panel removed):

- Check timer operation in all three positions
 1. Set timer to OFF position, buzzer should sound
 2. Set timer in position other than OFF or STAY ON, timer should count down
 3. Set timer in STAY ON position, steamer should operate continuously without timer
- Run light (power light) turns on
- Unit produces steam, window fogs, door seal does not leak
- Quenching system working

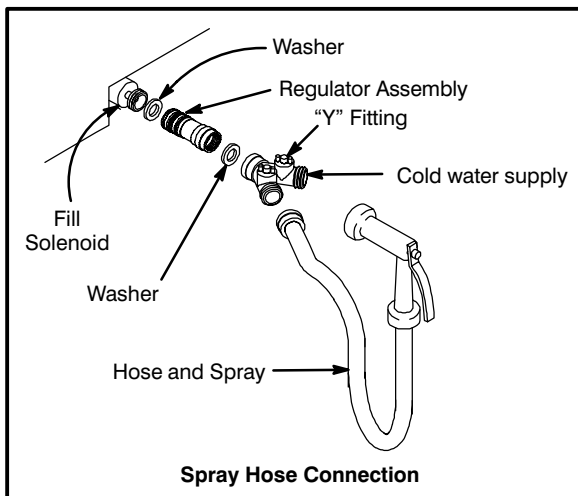


Figure 8



Operation

Standard Controls

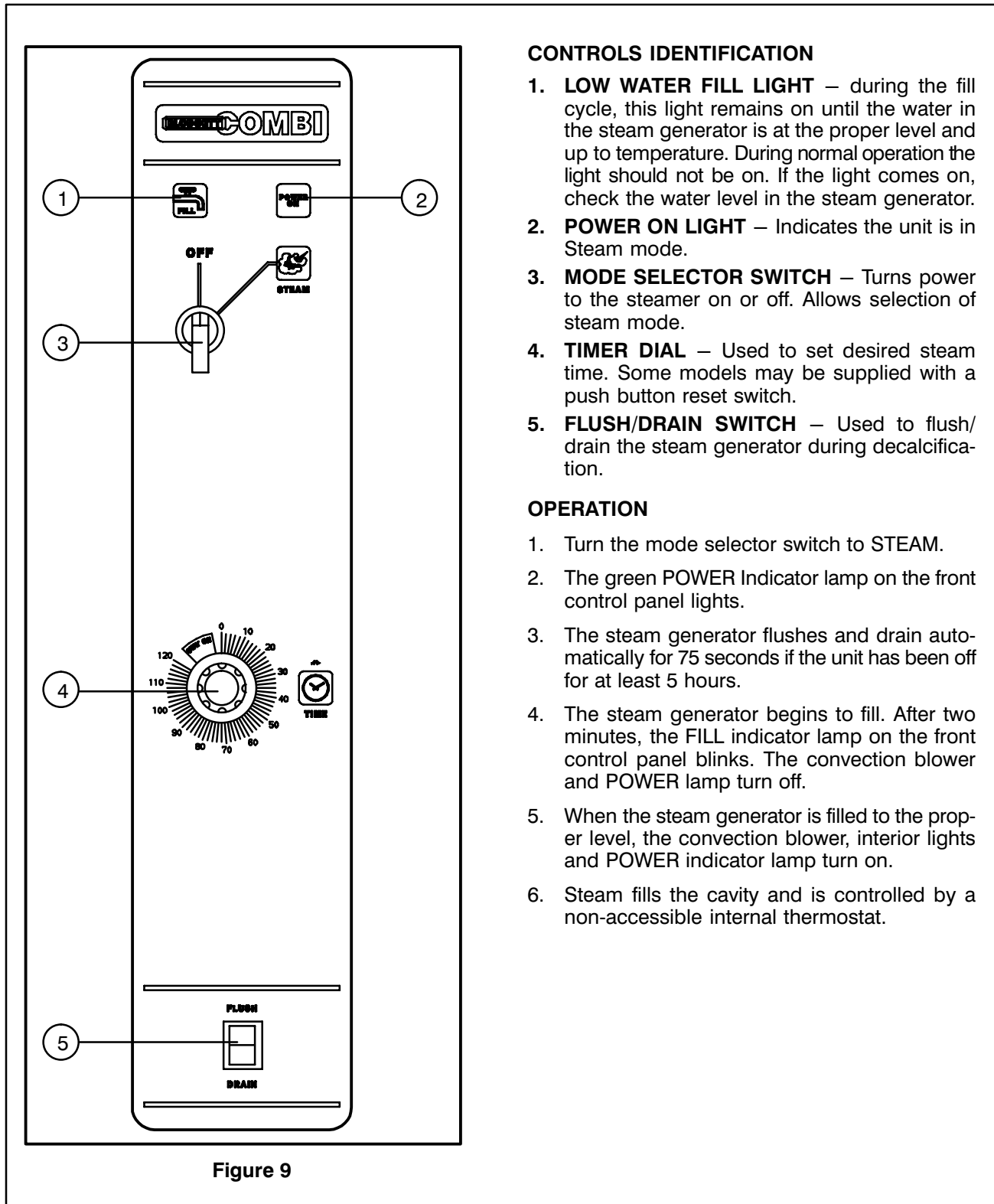


Figure 9



Push Button “Power Saver” Control

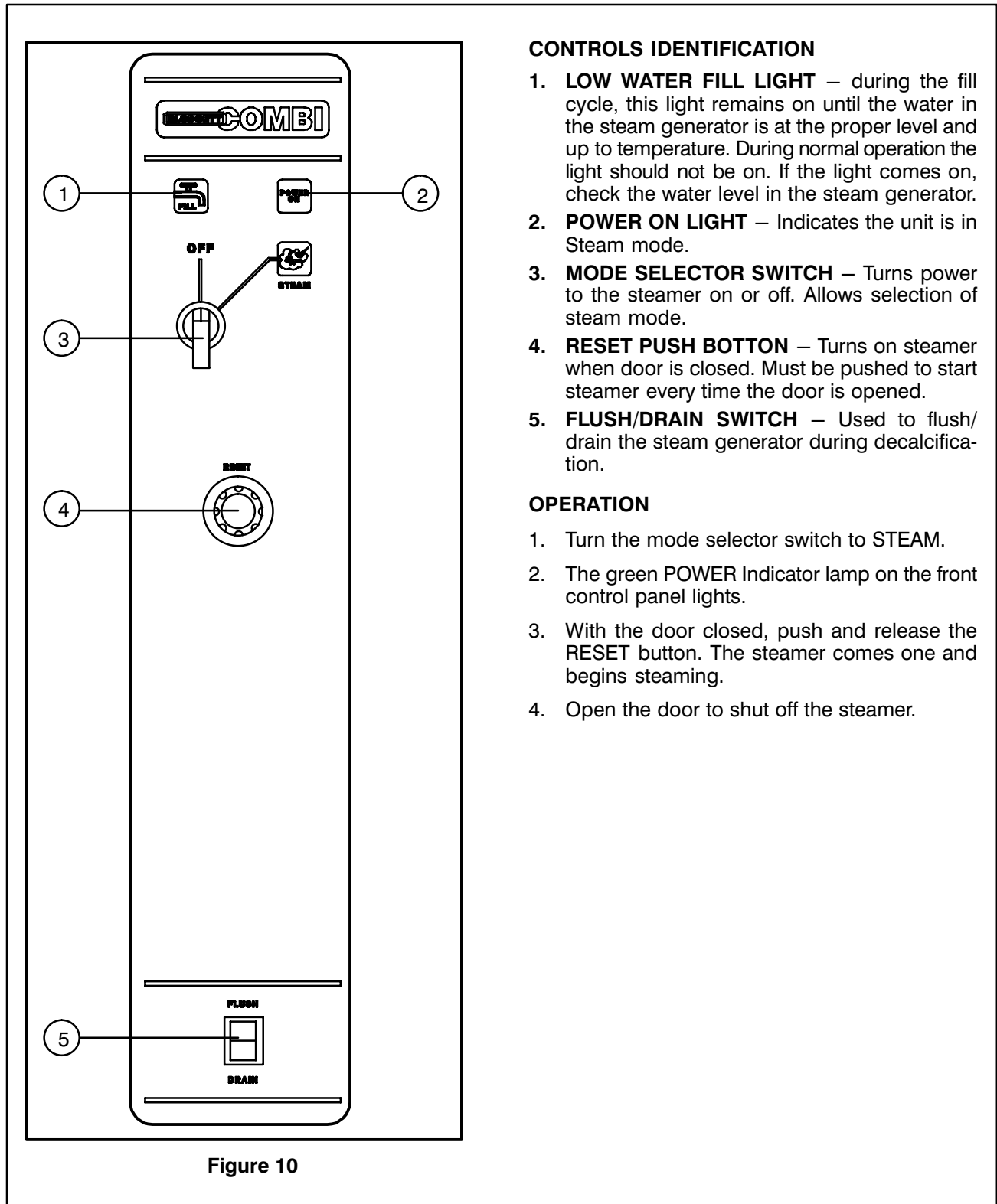


Figure 10

CONTROLS IDENTIFICATION

1. **LOW WATER FILL LIGHT** – during the fill cycle, this light remains on until the water in the steam generator is at the proper level and up to temperature. During normal operation the light should not be on. If the light comes on, check the water level in the steam generator.
2. **POWER ON LIGHT** – Indicates the unit is in Steam mode.
3. **MODE SELECTOR SWITCH** – Turns power to the steamer on or off. Allows selection of steam mode.
4. **RESET PUSH BOTTON** – Turns on steamer when door is closed. Must be pushed to start steamer every time the door is opened.
5. **FLUSH/DRAIN SWITCH** – Used to flush/drain the steam generator during decalcification.

OPERATION

1. Turn the mode selector switch to STEAM.
2. The green POWER Indicator lamp on the front control panel lights.
3. With the door closed, push and release the RESET button. The steamer comes one and begins steaming.
4. Open the door to shut off the steamer.



Maintenance

Spray Bottle Operating Procedure

1. Unscrew the sprayer head and fill the container to the MAX mark. Screw the head assembly on firmly to ensure an airtight seal. The liquid must be clean and free from foreign matter. Do not overfill - space must be left for compressing air.
2. To build up pressure, pump approximately 20 full strokes when the container is filled with liquid. The higher the pressure, the finer the spray. If the container is only partially filled, then more pumping is required to compress the additional air space.
3. To spray, depress the trigger with your thumb.
4. After a period of spraying, the pressure will drop. Restore the pressure by operating the air pump.
5. Release pressure after use by inverting the spray head and depressing the trigger or by slowly unscrewing the spray head assembly which will allow air to escape from around the filling aperture.
6. After use, rinse the spray bottle with clean water and check that the hole in the nozzle is perfectly clean and clear. Warm water (not hot) used with a household detergent is a useful cleaning agent for this purpose.

NOTE: Further information can be found in the instruction leaflet supplied with your spray bottle.

Service Parts:

Complete spray bottle	P/N R0006
Spray nozzle repair kit	P/N R6332



WARNING!!

Protective clothing and eye wear should be worn while using cleaning agents.

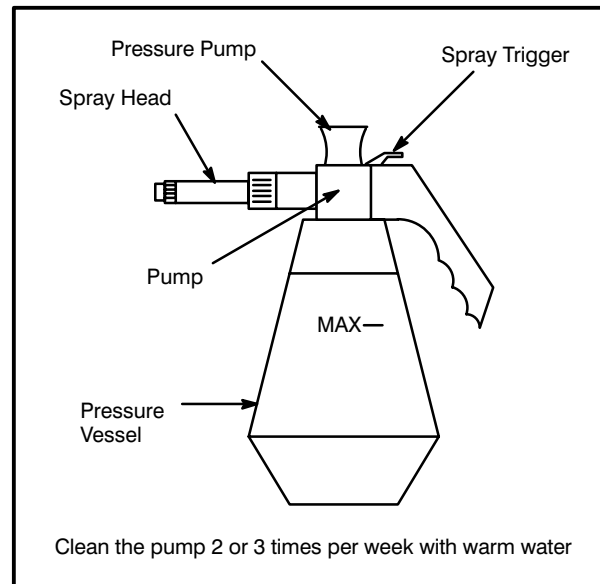


Figure 11



Cleaning and Preventive Maintenance

CLEANING THE INTERIOR

Daily cleaning of the appliance is essential for sanitation and to ensure against operational difficulties. Use an oven cleaning detergent in conjunction with the supplied spray bottle.

On stainless interiors, deposits of baked on splatter, oil, grease or light discoloration may be removed with a good non toxic industrial stainless steel cleaner. Apply cleaners when the unit is cold and always rub with the grain of the metal. The racks, rack supports and the blower wheel may be cleaned either in the unit or removed and soaked in a solution of ammonia and water.

NOTE: DO NOT use corrosive cleaners!

1. Cool the appliance down to 140°F (60°C) or, if the unit has been idle, turn the steam mode on for 3 to 4 minutes in order to warm the interior surfaces.
2. Fill the spray bottle and pump air into the container with the pressure pump.
3. Spray the interior of the unit with a cleaning solution.

NOTE: Never spray water into the unit when the temperature is above 212°F.

4. Let the cleaner work for 10 to 20 minutes with the unit off. For difficult cleaning allow to work over night.
5. Set the timer for 15 to 20 minutes. Turn the mode selector switch to Steam. This will soften all burned on residue.
6. Rinse the interior with the hose and spray assembly.
7. Set the mode selector to steam for another five minutes to flush out the interior and remove all detergent residue.

NOTE: The interior cavity should never be scoured or scraped.

CLEANING THE EXTERIOR

Exteriors may be cleaned and kept in good condition with a stainless steel polish.

NOTE: DO NOT spray the outside of the appliance with water.

PREVENTIVE MAINTENANCE

The best preventive maintenance measures are:

- the proper initial installation of the equipment
- delimiting the steam generator (if applicable)
- a program for routine cleaning.

These units requires no lubrication. Contact the factory, a factory representative or a local Blodgett Combi service company to perform maintenance and repairs should they be required.



WARNING!!

Disconnect the appliance from the power supply before servicing or cleaning.



Maintenance

Decalcification

1. Turn the Mode Selection Switch (1) to the STEAM mode. Wait until steam is produced. This will ensure that the water in the steam generator is hot.
2. Turn the Mode Selection Switch (1) to the COOL DOWN mode and leave the door open. Let the oven compartment cool to 150°F (66°C). This ensures that the Drain/Flush switch will function in STEP 8.
3. Turn the Mode Selection Switch (1) to OFF.
4. In a suitable size container, mix together the deliming solution and tap water. Refer to the following chart for the proper mixture:

Model	Deliming Solution	Tap Water
BCS-6	12 oz.	3 quarts

NOTE: These volumes are approximate. You may need slightly more or less water depending on your site.

5. Remove the Deliming Port Cap from the Deliming Inlet (5). Attach the supplied Funnel and Hose Assembly (3) to the deliming inlet.
6. Open the Deliming Port Valve (2) and pour in the deliming mixture. Stop pouring when the funnel stops draining. This is the correct amount for your site.

7. Shut the Deliming Port Valve (2). Screw on the Deliming Port Cap. Let the mixture stand for 20 minutes. In areas of the country with hard water, allow the mixture to stand for 1 hour maximum.
8. Depress and hold the Drain/Flush Switch (4) in the FLUSH position for 90 seconds. This completes the deliming procedure.

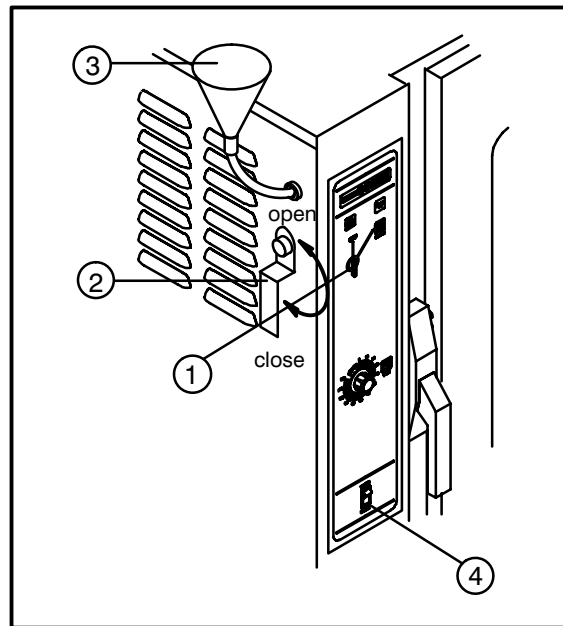


Figure 12

**INSERT
WIRING DIAGRAM
HERE**