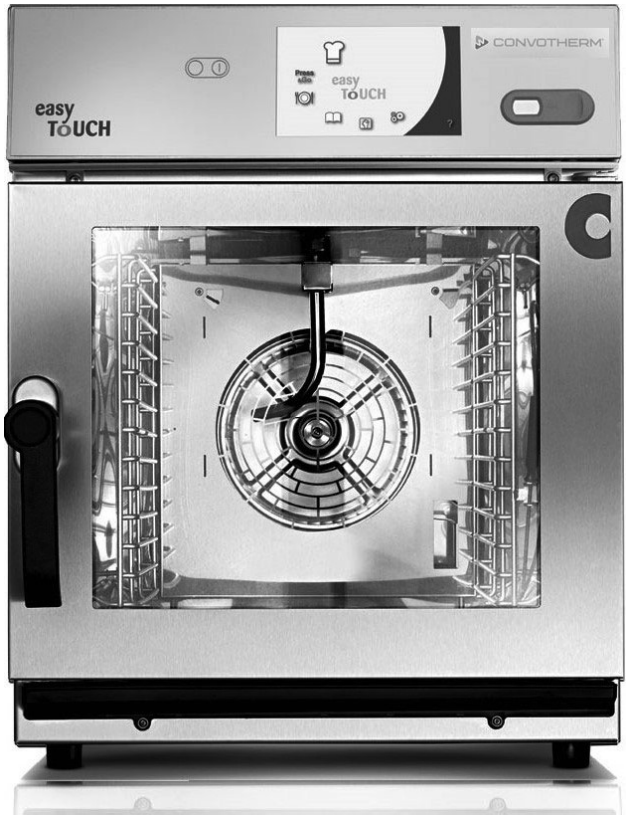
CONVOTHERM®

Advancing Your Ambitions

OES 6.10 Mini (MS610)
Combination Oven

Installation, Operation and Maintenance Manual

This manual is updated as new information and models are released.
This equipment chapter is to be installed in the Oven Section of the *Equipment Manual*.



⚠ CAUTION
DO NOT OPERATE THIS EQUIPMENT WITHOUT READING AND UNDERSTANDING THE INSTRUCTIONS.

8197346

Part Number: CON_IOM_8197346 08/2019

Original Instructions

WELBILT®

Safety

⚠ FOR YOUR SAFETY

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

⚠ WARNING

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

⚠ WARNING

Disconnect power at the main external power switch before servicing or repairing a Combination Oven. Failure to disconnect can result in death, injury and property damage.

⚠ WARNING

Do not connect the Combination Oven drain connection to any drain material that cannot sustain 140 degrees Fahrenheit. Using drain material that cannot withstand 140 degrees Fahrenheit can result in injury, equipment damage and property damage.

NOTICE

This equipment is to be installed with adequate backflow protection if required by federal, state and local codes.

NOTICE

Water and waste plumbing and connections shall comply with the International Plumbing Code (latest edition), International Code Council (ICC), or the Uniform Plumbing Code (latest edition), International Association of Plumbing and Mechanical Officials (IAPMO).

NOTICE TO U.S. CUSTOMERS

This equipment is to be installed in compliance with the basic plumbing code of the Building Officials and Code Administrators International, Inc. (BOCA) and the Food Service Sanitation Manual of the U.S. Food and Drug Administration.

⚠ DANGER

This appliance must be connected to a power supply having the same voltage and phase as specified on the rating plate located on the appliance.

⚠ WARNING

When installed, this appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, the Canadian Electrical Code, CSA C22.2, or the appropriate national code of the country and/or region in which the appliance is installed.

⚠ WARNING

Risk of burns from high temperatures inside the oven and on the inside of the appliance door or any parts that are inside the oven during cooking. Wear personal protective equipment as specified by operational procedures.

NOTICE

This appliance is intended for professional use only and is to be operated by qualified personnel only. A Factory Authorized Servicer (FAS) or other qualified professional should perform installation, maintenance, and repairs. Installation, maintenance, or repairs by unqualified personnel may void the manufacturer's warranty.

NOTICE

This appliance is intended to be used for commercial applications, for example in kitchens of restaurants, canteens, hospitals and in commercial enterprises such as bakeries, butcheries, etc., but not for continuous mass production of food.

⚠ WARNING

Only McDonald's approved cleaning and rinse agents must be used. High-pressure cleaners or water jets must not be used for cleaning. The Combi oven must not be treated with acids or exposed to acid fumes.

NOTICE

IF, DURING THE WARRANTY PERIOD, THE CUSTOMER USES A PART FOR THIS CONVOTHERM FOOD SERVICE EQUIPMENT OTHER THAN AN UNMODIFIED NEW OR RECYCLED PART PURCHASED DIRECTLY FROM CONVOTHERM, OR ANY OF ITS FACTORY AUTHORIZED SERVICERS, AND/OR THE PART BEING USED IS MODIFIED FROM ITS ORIGINAL CONFIGURATION, THIS WARRANTY WILL BE VOID. FURTHER, CONVOTHERM AND ITS AFFILIATES WILL NOT BE LIABLE FOR ANY CLAIMS, DAMAGES OR EXPENSES INCURRED BY THE CUSTOMER WHICH ARISE DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, DUE TO THE INSTALLATION OF ANY MODIFIED PART AND/OR PART RECEIVED FROM AN UNAUTHORIZED SERVICER.

⚠ WARNING

This appliance is not intended for use by children under the age of 16 or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. Do not allow children to play with this appliance.

⚠ WARNING

Operation, installation, and servicing of this product may expose you to chemicals/products including [Bisphenol A (BPA), glass wool or ceramic fibers, and crystalline silica], which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov**.**

NOTICE TO OWNERS OF UNITS EQUIPPED WITH TOUCH SCREEN CONTROLLERS

U.S.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation. While this device is a verified Class A device, it has been shown to meet the Class B limits.

CANADA

This digital apparatus does not exceed the Class A or B limits for radio noise emissions as set out by the ICES-003 standard of the Canadian Department of Communications.

Cet appareil numerique n'emet pas de bruits radioelectriques depassany les limites de classe A et B prescrites dans la norme NMB-003 edictee par le Ministre des Communcations du Canada.

OES 6.10 Mini (MS610) COMBINATION OVEN
TABLE OF CONTENTS

Page

Warranty **1**
Start-Up **2**
Introduction **3**
CHAPTER 1: General Information **3**
1.1 Product Information 3
1.2 Product Information Plate 3
1.3 Model Number 3
1.4 Serial Number and Equipment Record 3
1.5 Inspect for Shipping Damage 4
CHAPTER 2: Installation Instructions **4**
2.1 Laws, Codes and Regulations 4
2.2 General Instructions 5
2.3 Install the MINI 5
2.3.1 Select a Location for the MINI 5
2.3.2 Exhaust Hood Requirements 6
2.3.3 Installation of a Convotherm Hood 7
2.3.4 Dimensions and Clearance 10
2.3.5 Connections 11
2.3.6 Air Supply 11
2.4 Water Connections for the MINI 11
2.4.1 Install Water Supply 11
2.4.2 Water Supply Requirements 12
2.4.2.1 Water Quality 12
2.4.2.2 Minimum Water Quality Requirements 12
2.4.3 Water Supply System Pressure Requirements 12
2.4.4 Connect Water Supply Lines 12
2.4.5 Included water connection and drain kit parts 13
2.4.6 Install Vented Drain Lines from the MINI to the Existing Floor Drain 14
2.4.7 Attach Oven Rinse Aid and Degreaser Pick-Up Tubes 15
2.5 Electric Connections for the MINI 15
2.5.1 Install Electric Power Lines 15
CHAPTER 3: Startup Procedure **16**
3.1 Installation Check List 16
3.2 Startup Temperatures and Checklist 17
CHAPTER 4: Identification and Major Component Function **18**
CHAPTER 5: Equipment Set-up and Close Procedures **19**
5.1 Crew Mode 19
5.2 Manager Mode 21
5.2.1 Add/Remove Recipes to Groups, Edit Recipe Cook Times 21
5.2.2 Removing a Recipe 22
5.2.3 Adding a Recipe 22
5.2.4 Changing a Position in the Group 22
5.2.5 Edit Recipe Cook Times 23
5.2.6 Changing Limited Settings 25
5.3 Automatic Cleaning 26

CHAPTER 6: Troubleshooting, Power Failure and Service and Parts/Service 27
6.1 Troubleshooting Guide 27
6.2 In the Event of a Power Failure 28
6.3 Ordering Parts/Service 28
CHAPTER 7: Planned Maintenance 29
CHAPTER 8: Wiring Diagrams 51

Warranty

CONVOTHERM products are warranted to the original purchaser to be free from defects in materials and workmanship under normal use and service for the standard warranty period of two years from date of startup.
CONVOTHERM agrees to repair or replace, at its option, f.o.b. factory, any part which proves to be defective due to defects in material or workmanship during the warranty period, providing the equipment has been unaltered, and has been PROPERLY INSTALLED, MAINTAINED, AND OPERATED IN ACCORDANCE WITH THE CONVOTHERM OWNER'S MANUAL.
CONVOTHERM agrees to pay any FACTORY AUTHORIZED EQUIPMENT SERVICE AGENCY (within the continental United States, and Hawaii) for reasonable labor required to repair or replace, at our option, f.o.b. factory, any part which proves to be defective due to defects in material or workmanship, during the labor warranty period. This warranty includes travel time not to exceed two hours and mileage not to exceed 50 miles (100 miles round-trip), BUT DOES NOT INCLUDE POST START-UP, TIGHTING LOOSE FITTINGS, DOOR GASKET, MINOR ADJUSTMENTS, MAINTENANCE, CLEANING OR DESCALING. PROPER INSTALLATION IS THE RESPONSIBILITY OF THE DEALER, THE OWNER-USER, OR INSTALLING CONTRACTOR, AND IS NOT COVERED BE THIS WARRANTY. Many local codes exist, and it is the responsibility of the owner and installer to comply with these codes. CONVOTHERM equipment is built to comply with applicable standards for manufacturers, including UL, AGA, NSF, ASNE/Ntl. Bd, CSA, CGA, ETL and others.

STEAM GENERATOR MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER-USER AND IS NOT COVERED BY THIS WARRANTY. The use of good quality feed water is the responsibility of the Owner-User (see Water Quality Recommendations to the right). THE USE OF POOR QUALITY FEED WATER WILL VOID EQUIPMENT WARRANTIES.

MINIMUM WATER QUALITY REQUIREMENTS

TDS……50-125ppm
pH Factor……..7.0-8.5
Free Chlorine……< 0.1 ppm
Silica……. <13ppm
Chloride…….. <25ppm
Alkalinity…….. 50-100 ppm (3-6gpg)
Hardness……..50-100 ppm (3-6gpg)
NH2CL(Monochloramine) … < 0.2 PPM
Water Pressure ……..35-80 psi

The foregoing shall constitute the sole and exclusive remedy of original purchaser and the full liability of CONVOTHERM for any breach of warranty. THE FOREGOING IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL. OR IMPLIED, INCLUDING ANY WARRANTY OF PERFORMANCE, MERCHANTABILITY, OR FITNESS FOR PURPOSE, AND SUPERSEDES AND EXCLUDES ANY ORAL WARRANTIES OR REPRESENTATIONS, OR WRITTEN WARRANTIES OR REPRESENTATIONS, NOT EXPRESSLY DESIGNATED IN WRITING AS A "WARRANTY" OR "GUARANTEE" OF CONVOTHERM MADE OR IMPLIED IN ANY MANUAL, LITERATURE, ADVERTISING BROCHURE OR OTHER MATERIALS.
CONVOTHERM liability on any claim of any kind, including negligence, with respect to the goods or services covered here-under, shall in no case exceed the price of the goods or services, or part thereof, which gives rise to the claim. IN NO EVENT SHALL CONVOTHERM BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES IN THE NATURE OF PENALTIES.

Start Up

You're entitled to a Start Up *that is included with the purchase of your new Convotherm Combi Oven Steamer.*

To arrange startup and activate the warranty, please contact RISE to arrange for the Factory Startup: 844-724-2273, option 4, option 4, or rise.callcenter@welbilt.com

You will need the Model Number and Serial Number which is located on the Combi Oven Steamer rating plate.

Model # _____ Serial # _____

Scanning the QR code below allows access to tutorial videos for the operation of the oven.

Note: These videos can only be viewed on a portable device such as an Iphone or Android Phone

https://carecode.info/q/w89a7no0

To view videos on a computer go to
https://www.youtube.com/channel/UC4No1nnZtkqD7ZULzA65V1A/videos

Introduction

The CONVOTHERM combination convection and steam oven, manufactured exclusively for McDonald's, provides a method for easy menu item cooking, while accommodating a variety of products.

This unit meets all the McDonald's standards for safety, efficiency, quality and cleanliness.

DO NOT OPERATE OR ATTEMPT TO OPERATE THIS APPLIANCE OR ANY ACCESSORIES WITHOUT READING COMPLETELY AND FULLY UNDERSTANDING THIS MANUAL.

KEEP THIS MANUAL FOR REFERENCE.

This manual may be subject to new technical developments, modifications, and unforeseen errors.

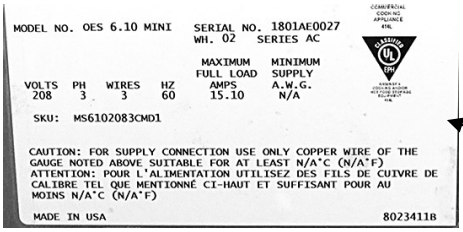
CHAPTER 1
General Information

1.1 Product Information

Convotherm assigns two product identification numbers to each MINI: a model number and a serial number. The model number identifies the product characteristics. The serial number identifies the individual unit.

1.2 Product Information Plate

The Product Information Plate on the left side of the unit lists the model, serial number, electric, and wiring requirements of the appliance.


MODEL NO. OES 6.10 MINI SERIAL NO. 1801AE0027
WH. 02 SERIES AC

VOLTS	PH	WIRES	HZ	MAXIMUM FULL LOAD AMPS	MINIMUM SUPPLY A.W.G.
208	3	3	60	15.10	N/A

SKU: MS6102083CMD1

CAUTION: FOR SUPPLY CONNECTION USE ONLY COPPER WIRE OF THE GAUGE NOTED ABOVE SUITABLE FOR AT LEAST N/A°C (N/A°F)
ATTENTION: POUR L'ALIMENTATION UTILISEZ DES FILS DE CUIVRE DE CALIBRE TEL QUE MENTIONNÉ CI-HAUT ET SUFFISANT POUR AU MOINS N/A°C (N/A°F)

MADE IN USA 8023411B



1.3 Model Number

1. This manual covers installation of The MINI Convotherm Combi/Oven-Steamer.
2. For further information, contact your Convotherm sales representative or Convotherm.

1.4 Serial Number and Equipment Record

During manufacture, MINIs are assigned individual serial numbers. Please provide the following information when you contact Convotherm or a qualified Convotherm authorized service representative:

Serial Number_____
(Write the Serial Number of your MINI here.)

Model Number_____
(Write the Model Number of your MINI here.)

1.5 Inspect for Shipping Damage

- If the appliance is damaged or damage is suspected:
  1) Submit a Damage Claim to the Shipper immediately.
  2) Inform your dealer at once.
  3) Inform Convotherm USA in writing within three (3) days to Convothermsvc@welbilt.com.

CHAPTER 2
Installation Instructions

2.1 Laws, Codes, and Regulations

This equipment should be installed only by qualified service agents, professional plumbers, pipe fitters, and electricians.

1. The installation of this appliance must conform with:
   a. The National Electrical Code, ANSI/NFPA 70 (latest edition), or the Canadian Electrical Code, CSA C22.2, or local codes, as applicable.
      - When installed, the appliance must be electrically grounded in accordance with the above.
   b. The *Food Code* (latest edition) of the Food and Drug Administration (FDA).
2. This equipment may need to be installed with adequate backflow protection to comply with applicable federal, state and local codes.
3. This equipment is to be installed to comply with the applicable federal, state, or local plumbing codes. Water and waste piping connections shall comply with the latest edition of the international plumbing code, International Code Council (ICC) or the uniform Plumbing Code, International Association of Plumbing and Mechanical Officials (IAPMO)
4. Installation instructions must be read in their entirety before starting installation of this appliance. This includes the separate installation instructions provided with accessories such as Convotherm stands designed to be used with the MINI.
5. Install this appliance according to the policies and procedures outlined in this manual.
6. Installation must comply with all local fire and health codes.

⚠ DANGER

Improper installation, adjustment, alteration, service, or maintenance of this appliance, or installation of a damaged appliance can result in DEATH, INJURY, EQUIPMENT DAMAGE, and void the warranty.

NEVER install damaged appliances, equipment, or accessories. This unit may only be installed with optional legs or approved stands. Installation in any other manner can result in DEATH, INJURY, EQUIPMENT DAMAGE, and void the warranty. ALWAYS have installation and service performed by qualified Convotherm authorized personnel.

⚠ DANGER

Operating this appliance out of level can cause DEATH, INJURY, and EQUIPMENT DAMAGE. This appliance must be level both front-to-back and side-to-side in all installations. NEVER operate this appliance out of level. If this appliance is suspected to be out of level, shut it down at once and call your qualified Convotherm authorized service agency immediately.

2.2 General Instructions

1. Select the MINI's operating location.
2. Only install the MINI on an McDonald's approved stand designed specifically for a MINI. Legs are not included and must be ordered separately.
3. Complete the facility, water, drain, and electric lines before positioning and leveling the MINI.
4. Position and level the MINI.
5. Connect the utility lines **AFTER** positioning and leveling the MINI.
6. Call RISE to arrange for the Factory Startup: 844-724-2273, option 4, option 4, or rise.callcenter@welbilt.com.
7. After Setup and Performance Checkout, the MINI should provide years of reliable operation.

⚠ DANGER

Improper lifting can result in DEATH, INJURY, AND EQUIPMENT DAMAGE. Use enough workers with training and experience lifting heavy equipment to place MINIs on supporting surfaces and lift and handle MINIs and accessories.

⚠ DANGER

Operating an out of level MINI can cause DEATH, INJURY, and EQUIPMENT DAMAGE. MINIs must be level both front-to-back and side-to-side in all installations. NEVER operate an out of level MINI. If a MINI is suspected to be out of level, shut it down at once and call you qualified Convotherm authorized service agency at once.

⚠WARNING

All clearance requirements above, below, and around the MINI are the same for non-combustible locations as for combustible locations.

Failure to maintain required clearances and additional distances as needed can result INJURY and EQUIPMENT DAMAGE.

2.3 Install the MINI

2.3.1 Select a Location for the MINI

1. For safe and efficient operation, observe the following criteria when selecting an operating location for a MINI
2. Transport the MINI on its pallet.
3. Passages and doors must be high enough and wide enough for a MINI and its pallet. See Table 2-1.
4. Location selected must be capable of supporting a MINI and or optional stand. See Table 2-1.
5. The area MUST be free from and clear of combustible materials.
6. Position the MINI so it will not tip or slide.
7. To ensure that the oven functions correctly when installed, it should be placed upright and level (horizontally). This is measured at the front and side edge of the roof. The oven can be levelled using the adjusting screws on the stand or on the legs of table models.

8. A MINI MUST be level both front to back and side to side.
9. The ambient temperature should be within 40°F and 95°F.
10. Proper air supply for ventilation is REQUIRED for and CRITICAL to safe, efficient operation of a MINI.
11. Operating Clearances: Sides and Rear - 3".
12. Service Clearance: Above - 20".
13. Allow for sufficient distance if a "high heat source" (e.g. grills) is located next to the unit.
14. Allow for sufficient clearance on the rear for service access. Contact Convotherm at 844-462-9529 for recommendations.
15. Installation must comply with all local fire and health codes.
16. Do not install the MINI directly over a drain. Steam rising up out of the drain will adversely affect operation, hamper cooling air circulation, and damage electrical and electronic components.
17. Do not obstruct the flow of ventilation air. Make sure the air vents of the MINI are not blocked.
18. Attach the included air diverter on the rear air intake vent of the MINI.

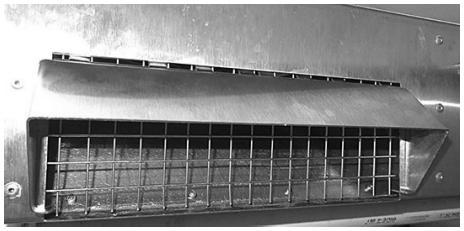


TABLE 2-1 WEIGHT AND DIMENSIONS INCLUDING PALLET AND CRATE

MODEL	WEIGHT	WIDTH	DEPTH	HEIGHT
6.10	190 lb.	25.6"	36.5"	32.1"

TABLE 2-2 OPERATING WEIGHT AND DIMENSIONS

MODEL	WEIGHT	WIDTH	DEPTH	HEIGHT
6.10*	157 lb.	20.3"	34.71"	28.48"

2.3.2 Exhaust Hood Requirements

1. Install the MINI under an exhaust hood or install a Convotherm hood on the oven. See next page for Convotherm Hood installation instructions.
2. Contact your KES for information regarding optional hood applications.

2.3.3 Installation of a Convotherm Hood

1. Carefully unpack the unit and place in an open work area.
2. Remove protective plastic covering.
3. Remove top access panel to retrieve heat exchange connection hose and DB-9 cord.
4. Replace top access panel.
5. Remove back access panel and the side access panel (see Figure 1).

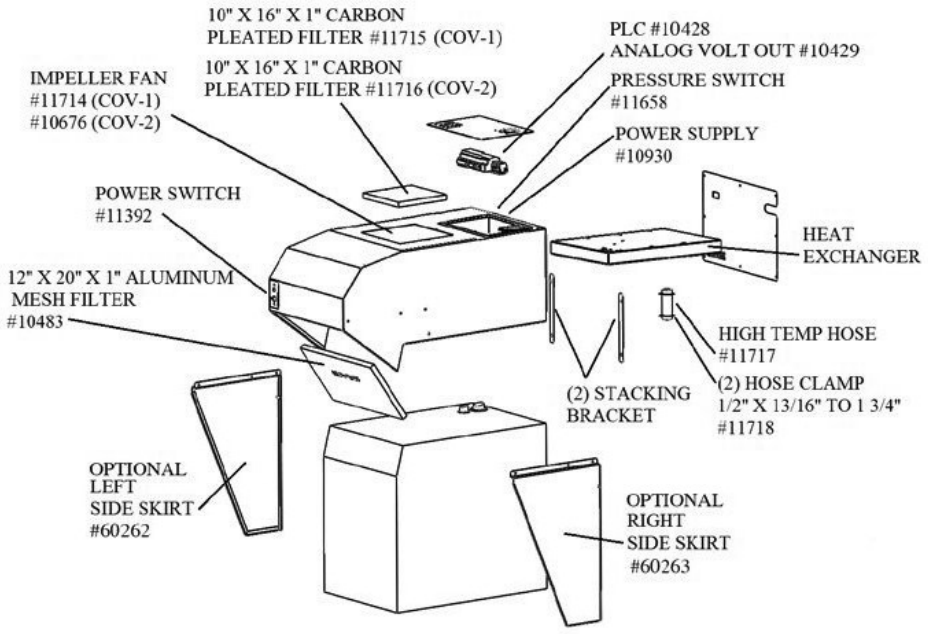


Figure 1

6. Guide the vent tubes on the oven up through the grommets (see Figure 2).
7. Locate the blue hose, hose clamps and data cable in the top access panel, included with the hood (see Figure 3).
8. Attach the hose to the vent connection towards the front of the oven (see Figure 4) and secure with hose clamp.
9. Ensure the heat exchanger is resting on its shelf. It may have shifted during shipping or handling of the box (see Figure 5).



Figure 2



Figure 5

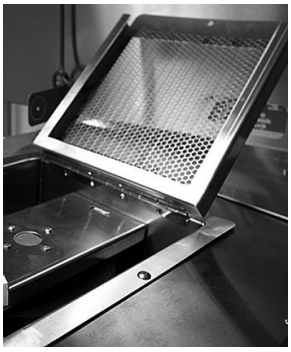


Figure 3



Figure 4

10. Ensure the oven is secure on its table and the top is clean and clear of grease.
11. Carefully lift the hood **(It requires two people to lift it on top of the oven)**.
12. Once the hood is resting on the oven, connect the blue heat exchanger tube, it's accessible from the rear and the side, between the oven's top vent and the heat exchanger (see Figure 6).
13. Secure the heat exchanger tube, with the provided hose clamps (see Figure 7).
14. Attach the brackets between the rear of the oven and the rear of the hood (see Figure 8).
15. Return access panels to the hood.
16. Optional - Attach the skirt (left or right) to the side of the oven (see Figure 9).
17. Attach the DB-9 cable between the hood's port and the port on the rear of the oven (see Figure 10).
18. Open the charcoal access on top of the hood and insert the charcoal filters (see Figure 11).

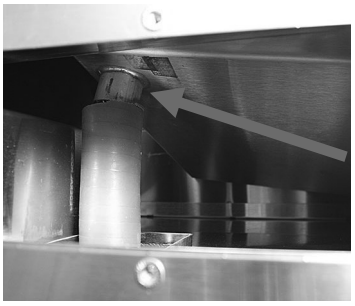


Figure 6

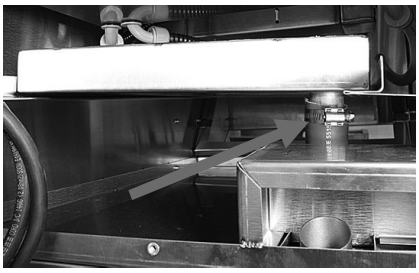


Figure 7



Figure 8



Figure 9

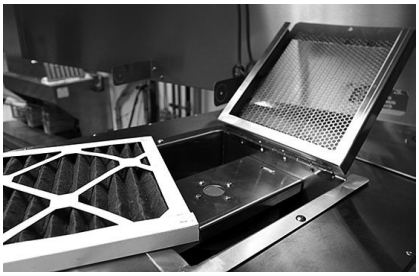


Figure 11

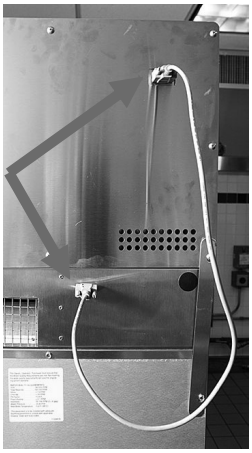


Figure 10

19. Position the mesh filter at the front of the hood by lifting the screen up and into the frame and then pulling it down into position (see Figure 12).

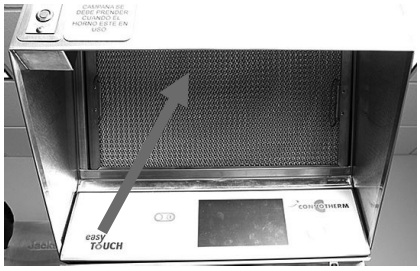


Figure 12

20. Plug the hood into 120V service
21. (Optional, depending on setting of oven upon shipping:) Turn the oven on. Enter Manager Mode on the oven's touch screen by pressing the back button to exit crew mode (see Figure 13).
22. Enter Manager Password (default "Convo") and press the checkmark. This password is case sensitive (see Figure 14).
23. Select "service agent mode" on start screen (see Figure 15).

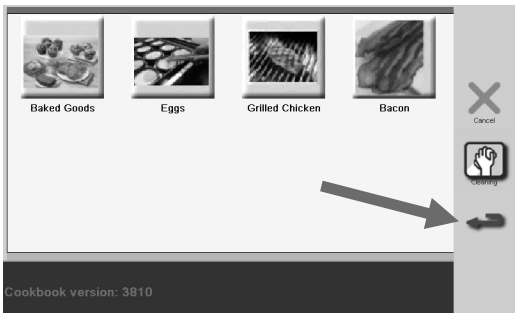


Figure 13

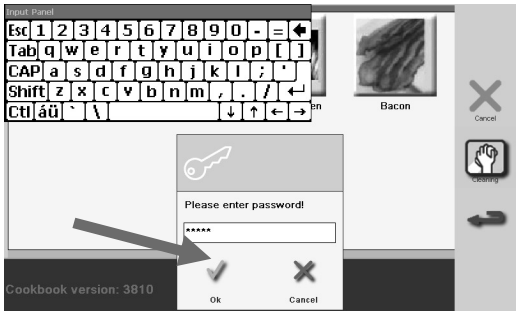


Figure 14

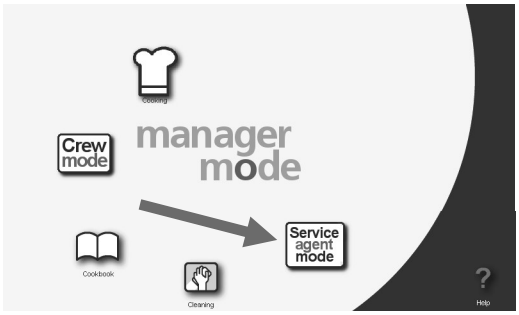


Figure 15

24. Enter Manager Password (default "1qaz") and press the checkmark (see Figure 16).
25. Press Service, Select option 48, Hood Connection. It should be set to 1 (see Figure 17).
26. Cycle power to save changes.

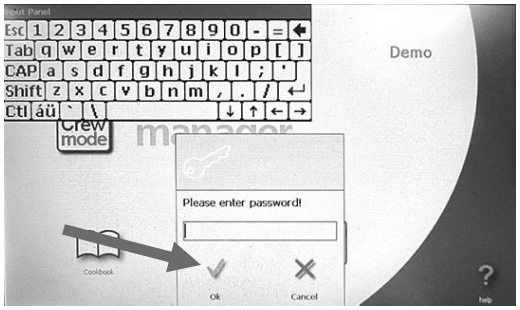


Figure 16

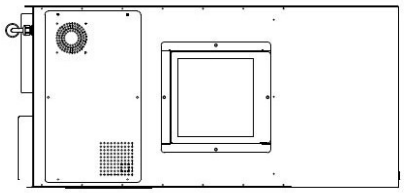


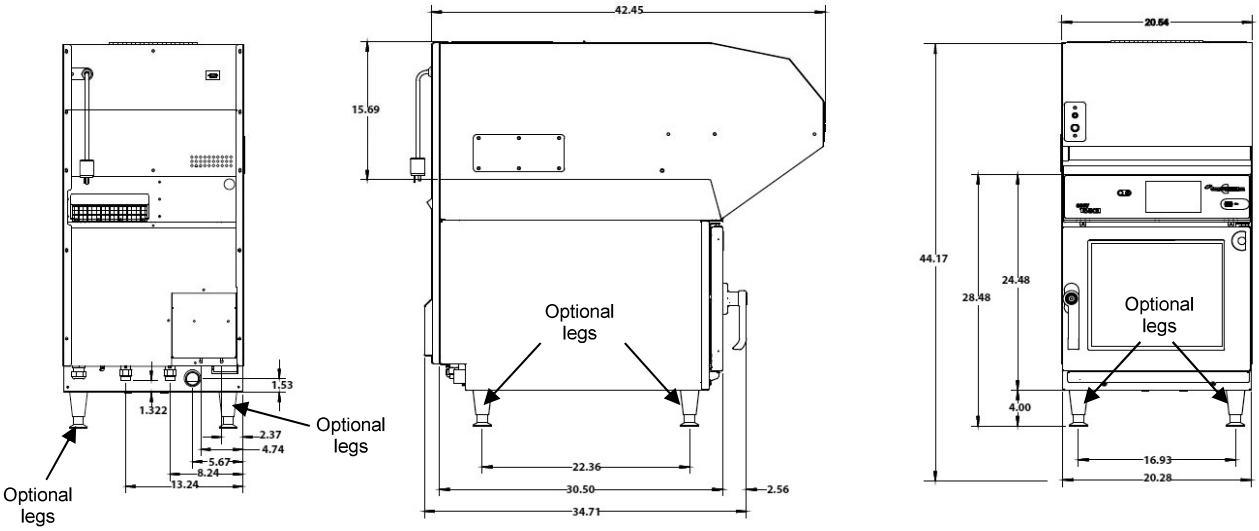
Figure 17

2.3.4 Dimensions and Clearances

Dimensions with hood installed (and optional legs)

Model	Dimension (inches)		
	X	Y	Z
6.10	34.71	44.17	20.54





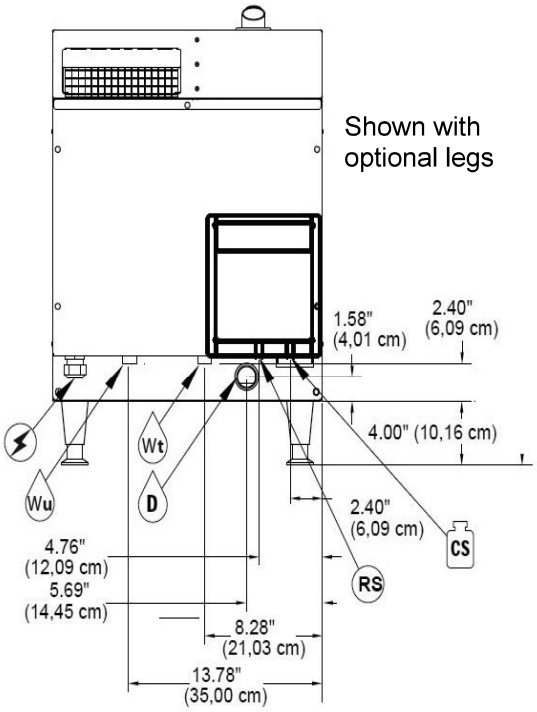
Appliance must be installed level

Operating Clearances: Left-Right: 3”, Back: 3”

Service Clearance: Above: 20” (ventilation)

Allow extra clearance on the left side if the appliance has the optional hand shower.

2.3.5 Connections



COLD WATER CONNECTION

Wt — One 3/4" GHT (Garden Hose Thread) connection for treated potable water.

Wu — One 3/4" GHT (Garden Hose Thread) connection for untreated potable water.

Use NSF approved hose. 35 PSI minimum, 80 PSI maximum.

DRAIN CONNECTION

D — 1 1/2" Tube. Do not connect other units to this drain. Drain line must be vented.

CONNECTION FOR CLEANING SOLUTION

CS

CONNECTION FOR RINSE SOLUTION

RS

2.3.6 Air Supply

1. Air intake is located in the rear of the oven and air exhaust is located in the bottom of the oven.
2. Keep all air intake vents clear, clean, and free of obstructions.

2.4 Water Connections for the MINI

2.4.1 Install Water Supply

1. Install the water supply in the building before positioning the MINI.
2. Water supply line(s) must be designed so the MINI can be moved for service.
3. Construct all supply lines up to the point of installing the MINI.
4. **Flush the water supply lines before connecting the MINI to the water supply lines.**
5. Use of a water filtration system is recommended. Contact Convotherm at 844-462-9529 for details.

2.4.2 Water Supply Requirements

NOTICE
Using water outside the limits specified in this manual without appropriate adjustment in the maintenance schedule voids warranty coverage.

2.4.2.1 Water Quality

1. Check the quality of supply water (described below) before designing the water supply.
2. Contact a local water treatment specialist for on-premises water analysis.
3. Minimum feed water quality requirements are listed in Table 2-3.
4. Poor water supply quality degrades MINI performance.
5. Softened or chlorinated water damages the MINI by increasing corrosion. Filtration is required before water enters the MINI if supply water is softened or chlorinated.
6. If a water treatment system must be installed to achieve acceptable water quality, install it **BEFORE** connecting the water supply lines to a MINI.
7. If analysis shows that supply water is below Minimum Water Quality:
   - **EITHER** a water treatment system must be installed in the treated water inlet line feeding the spritzer,
   - **OR** the frequency of maintenance and cleaning must be increased beyond that recommended in the maintenance schedule,
   - **AND** Contact your Convotherm sales representative for details on how to provide water per Minimum Water Quality Requirements in Table 2-3, or how to increase the frequency of maintenance and cleaning.

2.4.2.2 Minimum Water Quality Requirements – Table 2-3

Scale Forming Factors	Concentrations must be:
Total Dissolved Solids	50-125 parts per million
Silica	less than 13 parts per million
Alkalinity	50-100 parts per million
Hardness	50-100 parts per million (3-6 gpg)
NH2CL(Monochloramine)	less than 0.2 parts per million

Corrosion-Causing Factors	Concentrations must be:
Free Chlorine	less than 0.1 parts per million
Chloride	less than 25 parts per million
pH factor	between 7.0-8.5

2.4.3 Water Supply System Pressure Requirements

The water supply must provide:

- A minimum dynamic pressure of 35 psi (2.4 kg/cm^2)
- A maximum static pressure of 80 psi (4.1 kg/cm^2).

2.4.4 Connect Water Supply Lines

The Installer/Owner is responsible for the correct water connection of the MINI (see next page for included kit parts and instructions). When connecting water supply lines observe the following instructions, and all other applicable national, state, and local codes and regulations:

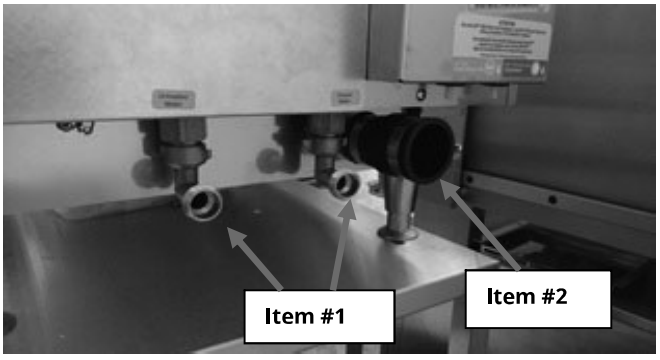
1. **Connect the MINI to COLD POTABLE WATER**

2. Never connect the MINI to HOT WATER! The condenser system will not work properly if connected to HOT or WARM water.
3. The water supply must have a minimum dynamic (flow) pressure of 35 psi (2.4 kg/cm²) and a maximum static pressure of 80 psi (4.1 kg/cm²).
4. If the static pressure is above 80 psi, a pressure regulator must be used and set at approximately 50 psi. Pressure above 80 psi can damage solenoid valves.
5. MINIs have two connection points for incoming water. See Figure in section 4 on page 11.
6. Water supply must meet the minimum requirements shown in the Warranty and Table 2-3. Install a water treatment system as needed.
7. Installation Requirements:
   a. Apply non-hardening pipe thread sealant to all the threaded connections **except** the ¾" GHT Female (Garden Hose Thread or National Hose Thread) connections at the Water Connection. GHT or NHT connections do not require pipe thread sealant.
   b. Install a manual water shut-off valve (not provided) between main water supply lines and MINI supply lines.
   c. This may require the installation of a check-valve (or other approved anti-backflow / anti-siphon device) (not provided) in all supply lines in accordance with and as required by local, state, and national health, sanitation and plumbing codes.
   d. Check local codes to determine exactly what type of anti-backflow / anti-siphon device is necessary to meet local requirements.

2.4.5 Included water connection and drain kit parts

Kit Part # 8104877

Item	ID#	Description	Qty
1	24258	3/4" FEMALE HOSE X 3/4" MALE HOSE LEAD FREE 	2
2	24259	1 1/2" X 1 1/4" RUBBER COUPLING 	1



Item #1 – Connect to the two (2) hose connections on the rear of the oven.

Item #2 – Connect to the stainless steel tube that is exiting the rear of the oven.

2.4.6 Install Free Air Vented Drain Lines from the MINI to the Existing Floor Drain

NOTE: This equipment is to be installed to comply with the applicable federal, state, or local plumbing codes.

⚠ DANGER

DEATH, INJURY, EQUIPMENT and PROPERTY DAMAGE will result from improper installation of drain outlet lines. Install free air vented drain lines as described in this manual.

⚠WARNING

Do not connect the MINI Combi/Oven-Steamer drain connection to any drain material that cannot sustain 140° Fahrenheit. Using drain material that cannot withstand 140° Fahrenheit can result in injury, equipment damage, and property damage.

Notice: Furnishing and installing drain lines is the responsibility of the Owner/Installer.
Notice: If additional drain is required (maximum length 12 feet), use at least 1 1/2" ID piping of an appropriate schedule and of a material suitable for sustained operation at 140°F.

Notice: Joining clamps may be used to connect same size or larger size drain to the existing drain.

The following restrictions and requirements are critical to the safety of personnel and equipment, and must not be violated under any circumstances:

1. Do **NOT** connect the MINI drain connection to any drain material that cannot sustain 140° F.
2. Do **NOT** connect drains from any other equipment to the drain line of the MINI.
3. Do **NOT** connect the drain outlet extension line directly into a floor drain or a sewer line.
4. Do **NOT** connect the MINI drain directly to drains or to the plumbing of any other equipment.
5. The drain line must be free air vented, have gravity flow from the MINI, and terminate outside the perimeter of the MINI.
6. Improper installation of drain outlet lines voids the MINI warranty.
7. The drain lines must be installed in compliance with the Food Service Sanitation Manual of the Food and Drug Administration (FDA) and any other applicable national, state, or local codes and regulations.
8. This equipment is to be installed to comply with the applicable federal, state, or local plumbing codes.
9. Do **NOT** install the MINI directly over a drain. Steam rising up out of the drain will adversely affect operation, hamper cooling air circulation, and damage electrical and electronic components.
10. The total length of drain and number of bend fittings required to reach the open drain determines the drain size used to extend the drain line to an open drain.
    - If the drain outlet extension requires 6 feet or less of drain, and no more than two elbows are required, 1 1/2-inch ID drain and fittings are acceptable.
    - If the drain outlet extension requires 6 to 12 feet of drain, or requires three elbows, then 2-inch ID drain and fittings are required.
    - The drain line must have gravity flow from the MINI drain outlet to floor drain.
    - Do **NOT** install a trap in the drain line.
11. Free air venting requires minimum 1" clearance between the end of the drain line and the top of the floor drain.

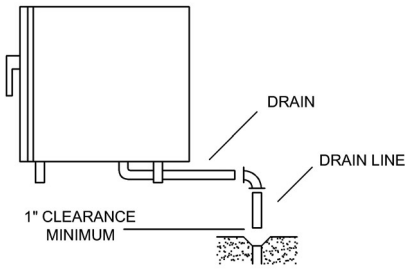


Figure 2-1
Typical Drain Layout

2.4.7 Attach Oven Rinse Aid and Degreaser Pick-Up Tubes

Locate the large envelope with the rinse aid and degreaser pick-up tubes. Follow the instructions in the envelope to attach the pick-up tubes to the MINI and to connect to the proper containers (see page 29). See section 2.1.7 for proper connections.

⚠ DANGER

ELECTRIC SHOCK HAZARD DEATH, INJURY, or EQUIPMENT DAMAGE can result from touching any component inside a MINI when the power is connected to a MINI. Whenever possible disconnect the power while installing, servicing, or testing a MINI. When installation, service, or tests require power to be connected to a MINI; use extreme caution and every possible precaution and safety measure while testing or servicing the MINI.

2..5 Electric Connections for the MINI

2.5.1 Install Electric Power Lines

1. Check the rating plate to make sure the MINI is compatible with the local electric supply.
   - The rating plate is located on the left side of the MINI.
   - The wiring diagram and the spare parts list are behind the rear access panel.
2. The electrical supply must match all electrical and wiring requirements specified on the rating plate and must be made in accordance with the following requirements:
   1) The MINI must be properly grounded by the installer, and have the electrical power lines installed in accordance with:
      - The National Electric Code, ANSI/NFPA No. 70 LATEST EDITION (USA).
      - Canadian Electrical Code, CSA C22.2 LATEST EDITION.
      - Any other applicable national, state, or local laws, codes, and regulations.
3. A main external disconnect switch should be installed near the MINI as shown in Figure 2-2.
4. A separate fuse or breaker sized to meet the line amps required by the MINI should be installed either as part of the main external power switch or in a separate fuse box.
   - The fuse or breaker and disconnect switch combination is called the "Main External Power Switch" (Figure 2-2).

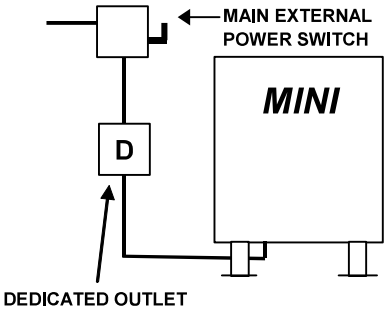


Figure 2-2
Main External Power Switch

5. Mini's are installed with dedicated outlet for the MINI electrical plug per the spec sheet.)
6. If using the optional Convotherm hood it should be on a separate circuit than the MINI.
7. Check all cable and wire connections for size, location, and tightness.
8. Replace the top and rear panels and secure it to the MINI before starting the MINI.

CHAPTER 3
Startup Procedure

⚠ DANGER

ELECTRIC SHOCK HAZARD DEATH, INJURY, or EQUIPMENT DAMAGE can result from touching any component inside a MINI when the power is connected to a MINI. Whenever possible disconnect the power while installing, servicing, or testing a MINI. When installation, service, or tests require power to be connected to a MINI; use extreme caution and every possible precaution and safety measure while testing or servicing the MINI.

⚠ DANGER

Hot air, steam, and condensate can cause DEATH, INJURY, and EQUIPMENT DAMAGE. Do NOT breathe hot air, steam, or condensate. When checking inside the MINI: Stand to the hinge side and away from the MINI, and always open the door slowly.

⚠WARNING

Water leaking from the door gasket can be a sign of a blocked drain. If the drain is blocked, hot water can accumulate inside the compartment and spill out when the door is opened causing INJURY and EQUIPMENT DAMAGE. When checking inside the MINI: Stand to the hinge side and away from the MINI, and always open the door slowly.

3.1.1 Installation Checklist

Table 3-1 Installation Check List

TASK	REFERENCE (Page Number)	COMPLETED
Preparation		
• Check Operating Location Clearances	10-11	_____
• Test Supply Water Quality	12	_____
• Verify Electric Power Requirements.	3, 11, 15	_____
• Verify Exhaust Hood Requirements	6	_____
Installation		
• Unit installed with optional legs or approved stand	5-6	_____
• Check Exhaust Hood Function	6, 9	_____
• Check Electrical Supply Connection	15	_____
• Check Water Supply Connection	11, 12-15	_____
• Verify MINI is Level	5-6	_____
• Check Drain Line Connection	13-15	_____
• **Call for your Start-Up**	**2**	_____

Notes:

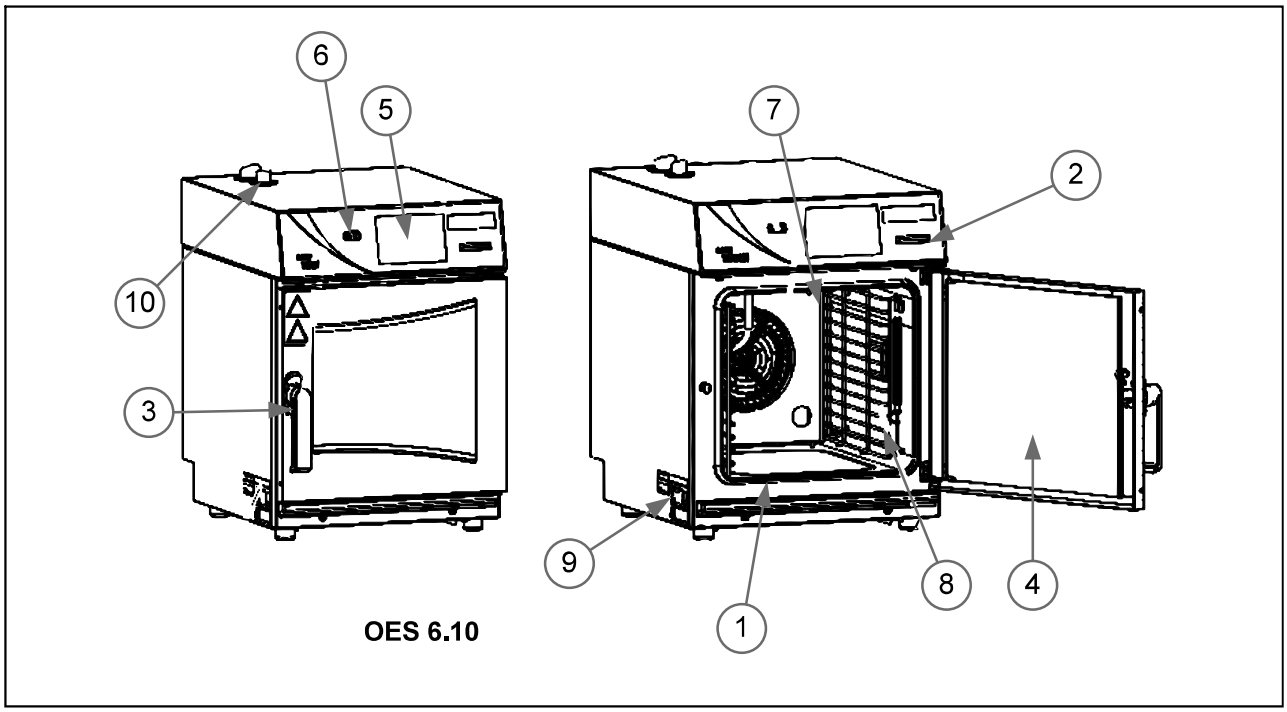
3.2 Startup Temperatures and Checklist

Notice: If the MINI has been delivered when the outside temperature is below 40° F then wait for the MINI to warm up to room temperature (about 72° F) before operating.

Notice: If the MINI has been delivered when the outside temperature is below 32° F then the cooking compartment high limit safety thermostat will be tripped. The cooking compartment high limit safety thermostat must be reset by a qualified Convotherm authorized service technician. Wait for the MINI to warm up to room temperature (about 72°F) before operating.

Use the startup checklist provided by RISE to ensure that all items have been completed for proper operation of the oven.

Chapter 4 Identification and Major Component Function



OES 6.10

1) Door gasket – Seals oven door.

2) USB Slot – Accepts USB drives.

3) Door handle – Has following functions depending on position:

Handle vertical = Combi closed

Handle turned = Combi open

4) Door – Closes oven compartment

5) Touchscreen – Central control of Combi oven.

> Status displays

6)  - Combi power ON / OFF switch

7) Oven compartment – Contains food during cooking

8) Rack guide – Used to hold trays or containers during cooking

9) Rating plate – Used to identify Combi oven

10) Air Vent – Allows vapor to escape (blue hose connects here to optional hood)

Go to the following link or use the QR code for instructions to open the door.
https://www.youtube.com/watch?v=eZZELmx8Mjo

Chapter 5 Equipment Set-up and Close Procedures

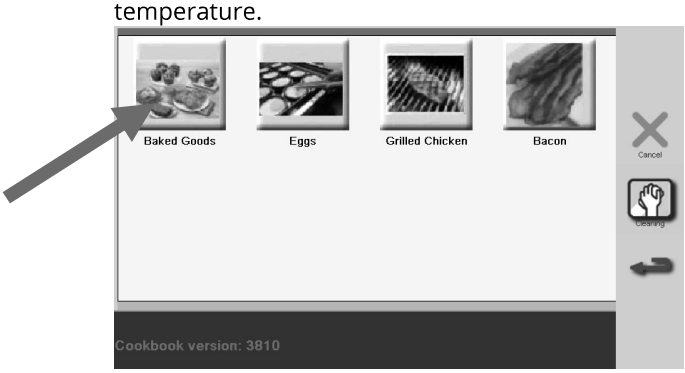
5.1 Crew Mode - The Combi oven performs the following routine when switched ON.

- Self-test performed
- Hood switched on
- The oven light turns on
- The Start page is displayed

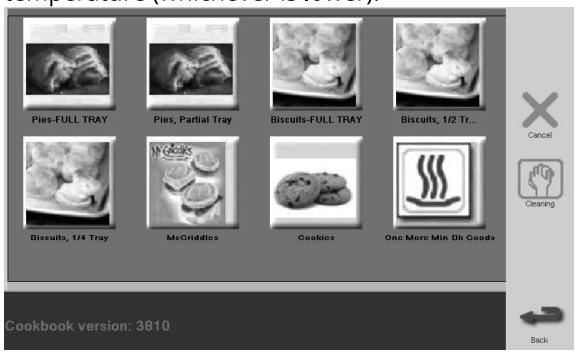


When the start-up checks are finished the oven always starts in Crew Mode.

Select product group preheating to background temperature.



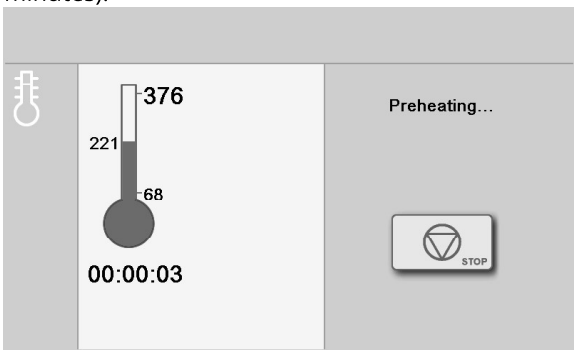
Recipe menus displayed will be preheating to lowest setpoint in menu group or background temperature (whichever is lower).



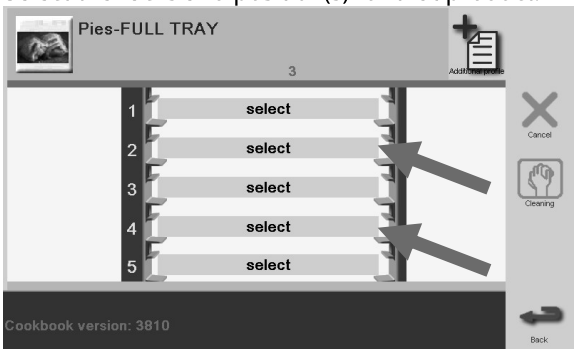
Select a recipe desired



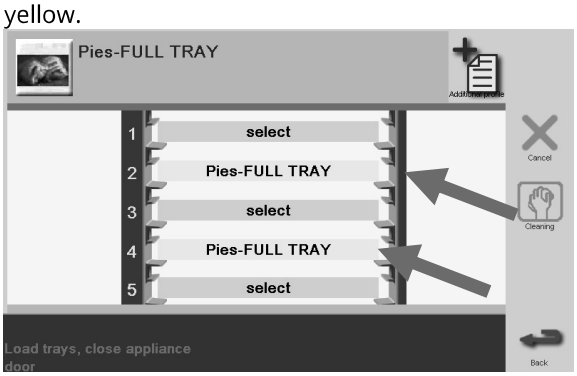
The oven will automatically start the preheating process. No cooking should be done at this time. Wait for the oven to preheat (approximately 3-5 minutes).



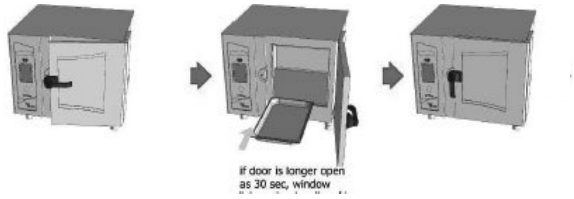
Select the racks and position(s) for that product.



The shelf positions selected are highlighted in yellow.



Open door and load trays onto specified rack positions



Close the door to start a cook. The timer will begin to count down.



Various products can be cooked together. The timers are displayed from first to last to complete from top to bottom.



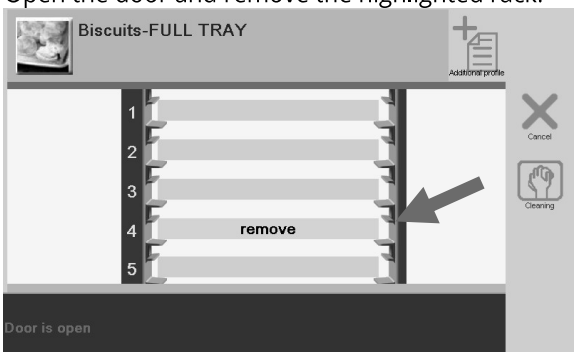
To cancel a cook in progress, press the yellow status bar at the top of the screen. It will turn blue. Press the RED X button.



Confirm the cook cancel by pressing the checkmark.



Alarm will sound when cook cycle is completed. Open the door and remove the highlighted rack.

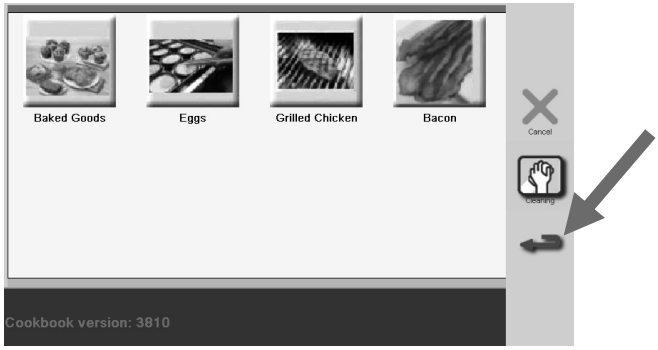


5.2 Manager Mode – In this mode the store manager can adjust recipes and change minor system settings.

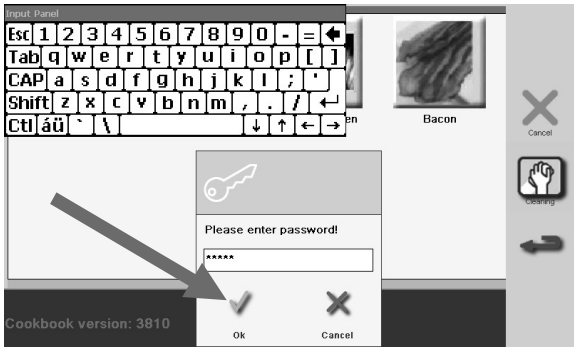
5.2.1 Add/Remove Recipes to Groups, Edit Recipe Cook Times

The Manager can use following sequence to add or remove recipes to various menu groups.

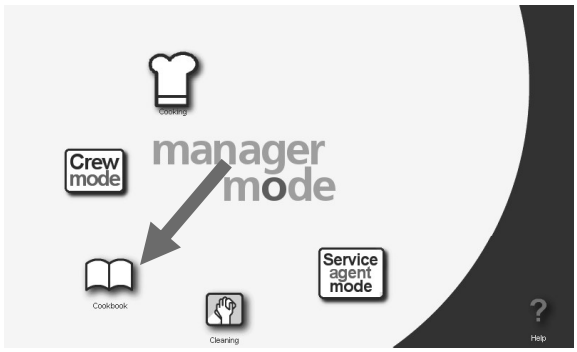
While in crew mode, select the back button to exit crew mode.



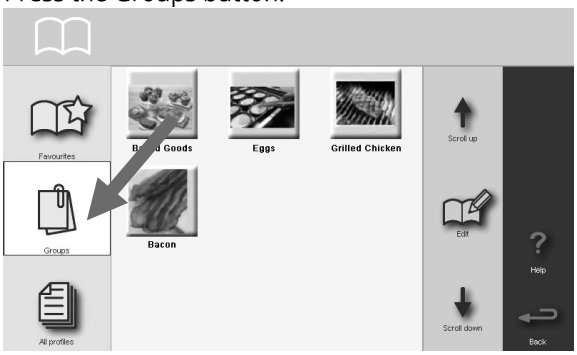
Enter Manager Password (default “Convo”) and press the checkmark. This password is case sensitive.



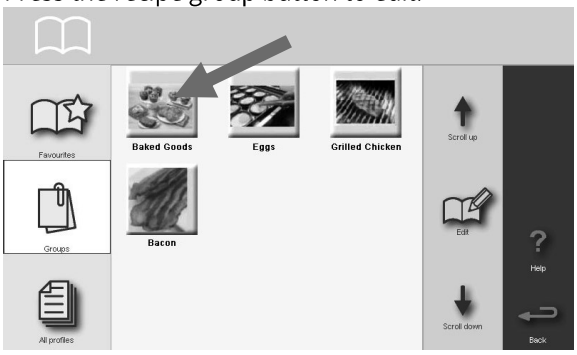
Press the Cookbook icon.



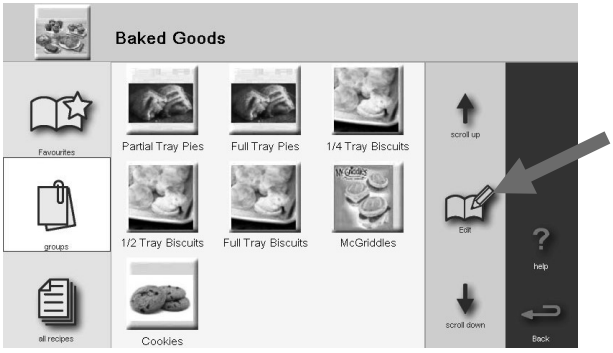
Press the Groups button.



Press the recipe group button to edit.



Press the edit button.

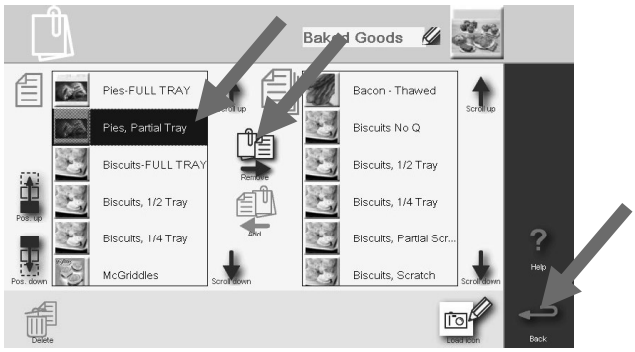


Items in the left column are the ONLY recipes in the “Baked Goods” group. Items in the right column are ALL recipes in the oven.

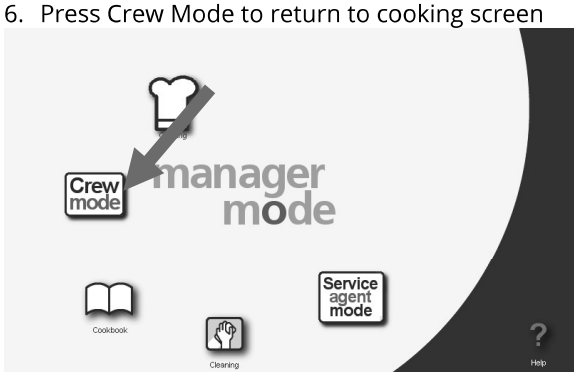


5.2.2 Removing a Recipe

1. Locate the recipe to remove from a group in the left column.
2. Highlight the recipe you want to remove (i.e. Press “Pies, Partial Tray”) on the left side of screen.
3. Press the Remove Button in the middle of the screen.
4. The recipe is now removed from the “Baked Goods” Group.
5. Press the back button two (2) times to exit back to the main menu.

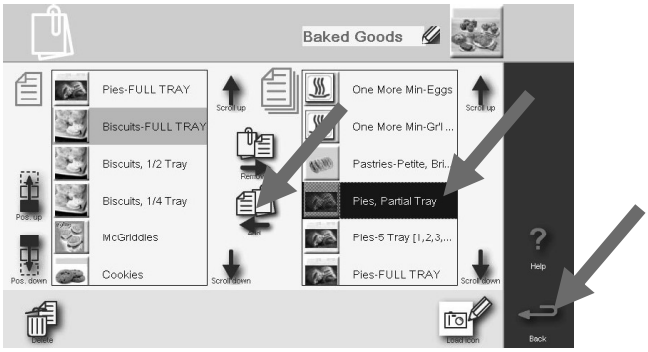


6. Press Crew Mode to return to cooking screen

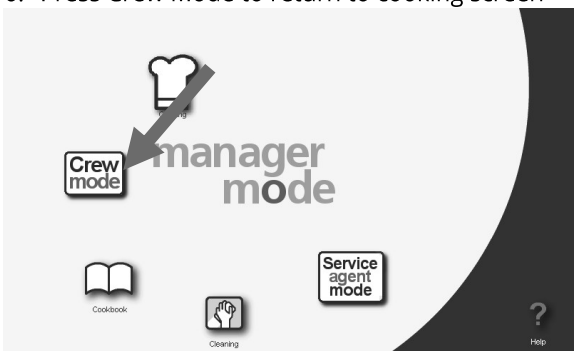


5.2.3 Adding a Recipe

1. Locate the recipe to add to a group in the right column.
2. Highlight the recipe you want to add (i.e. Press “Pies, Partial Tray”) on the right side of screen.
3. Press the Add Button in the middle of the screen
4. The new recipe is now added to the “Baked Goods” Group.
5. Press the back button two (2) times to exit back to the main menu.

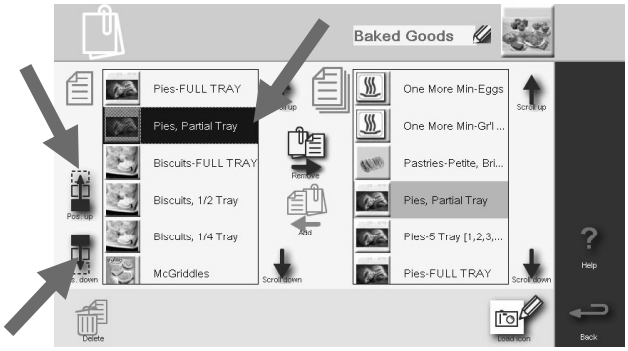


6. Press Crew Mode to return to cooking screen



5.2.4 Changing a Position in the Group List

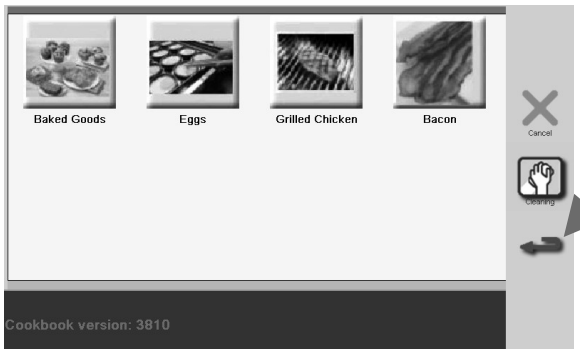
To change the position of the recipe, press to highlight the product and use the up and down arrows on the left hand side of the screen.



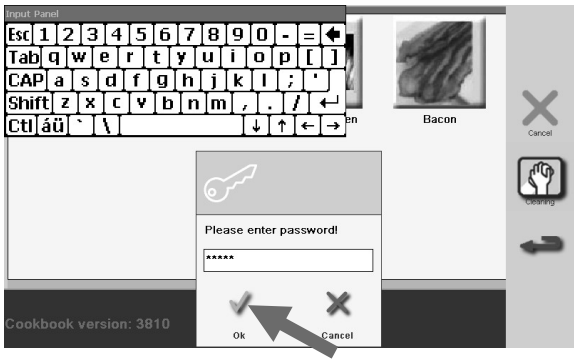
5.2.5 Edit Recipe Cook Times

The Manager can use following sequence to calibrate / check a recipe.

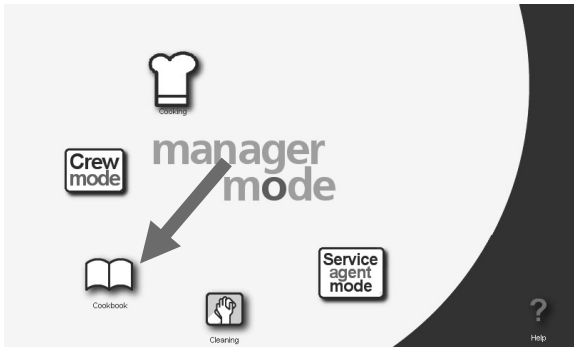
While in crew mode, select the back button to exit crew mode.



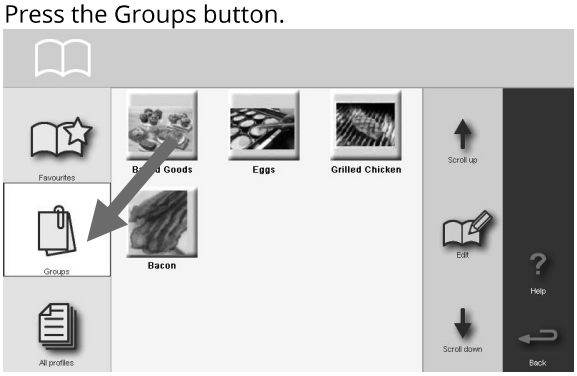
Enter Manager Password (default “Convo”) and press the checkmark. This password is case sensitive.



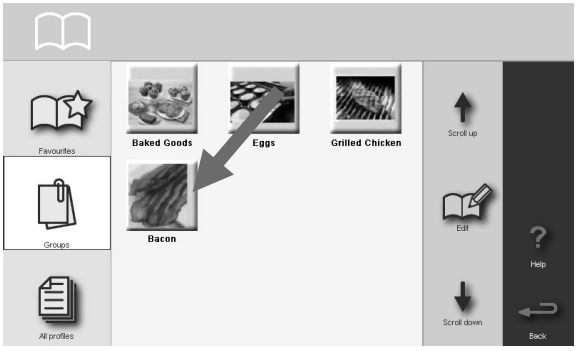
Press the Cookbook icon.



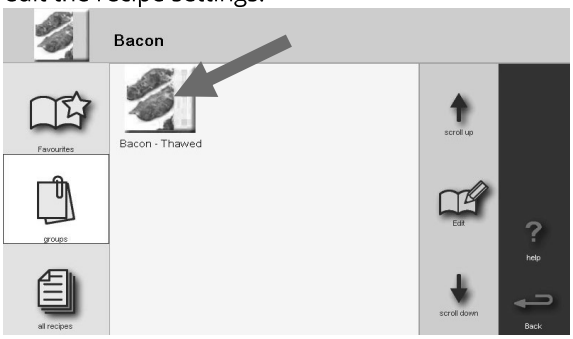
Press the Groups button.



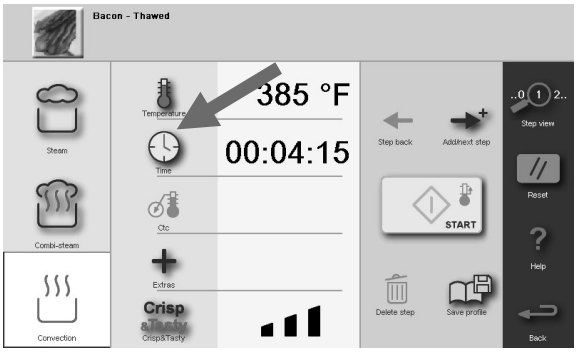
Press the Recipe Group button with the product to edit.



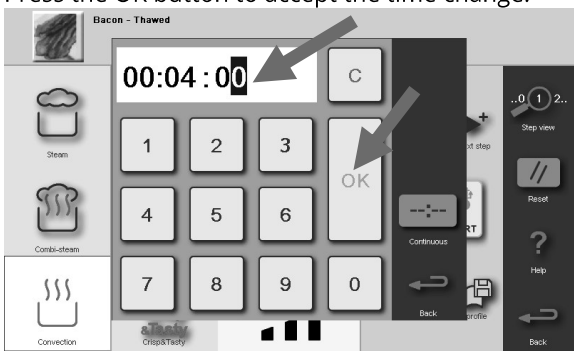
Select and press the product button to check or edit the recipe settings.



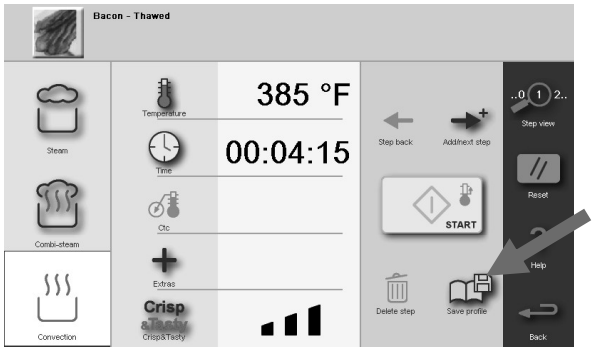
To make an adjustment to cook time press the Clock icon.



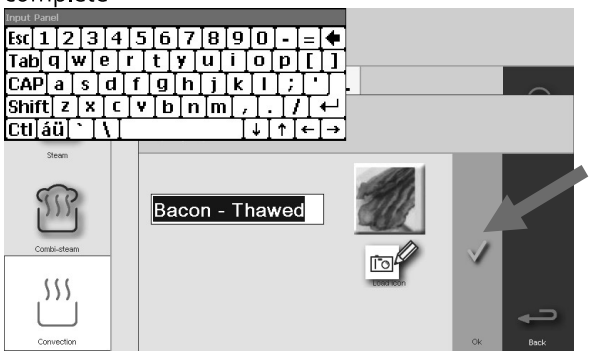
Use the keypad to enter the new time including seconds to make changes. Adjust in 30 second increments until desired results are achieved.
Press the OK button to accept the time change.



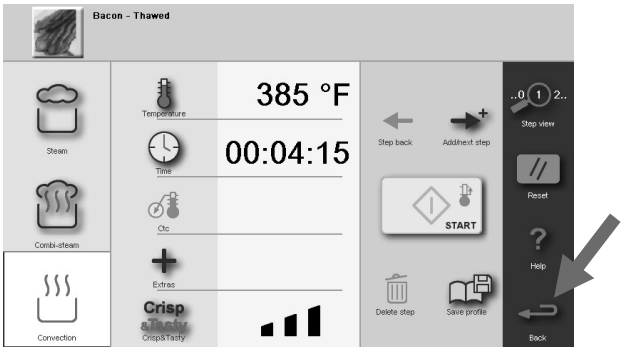
Once the parameter(s) are complete press “Save Profile”.



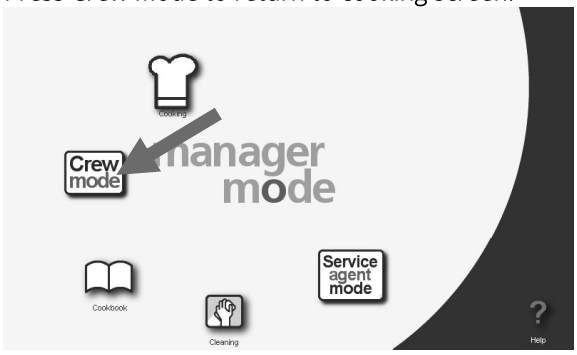
If name is modified, a new recipe is created. If name is **NOT** modified, the original recipe will be overwritten.
Press the OK (checkmark) to Save the recipe when complete



Press the back button two (2) times to exit back to the main menu.



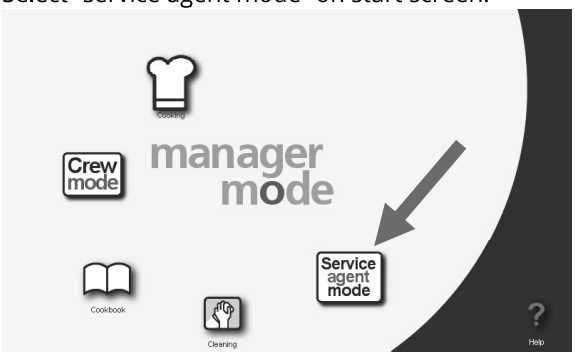
Press Crew Mode to return to cooking screen.



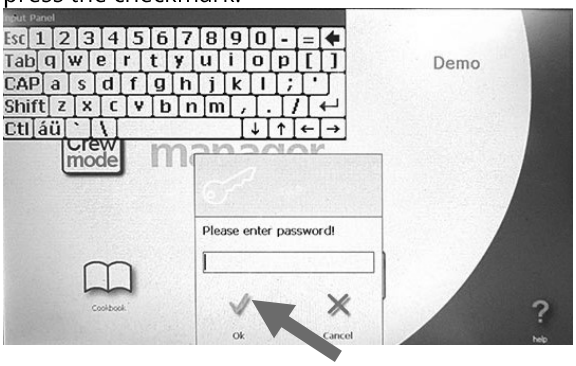
5.2.6 Changing Limited Settings

The Manager can use following sequence to calibrate / check a recipe.

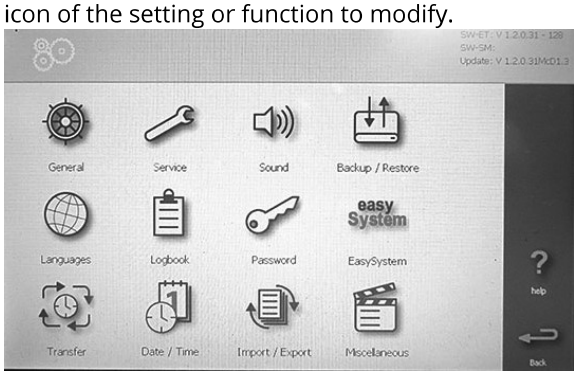
Select “service agent mode” on start screen.



Enter Manager Password (default “1qaz”) and press the checkmark.



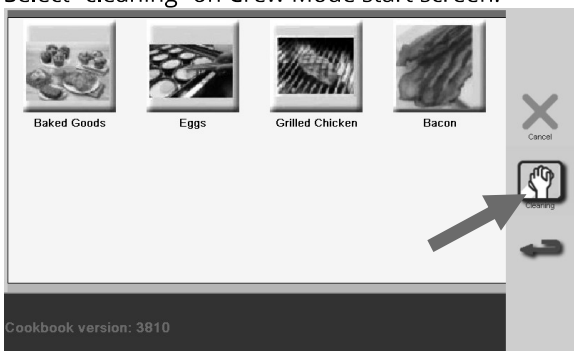
Access on limited settings will appear. Select the icon of the setting or function to modify.



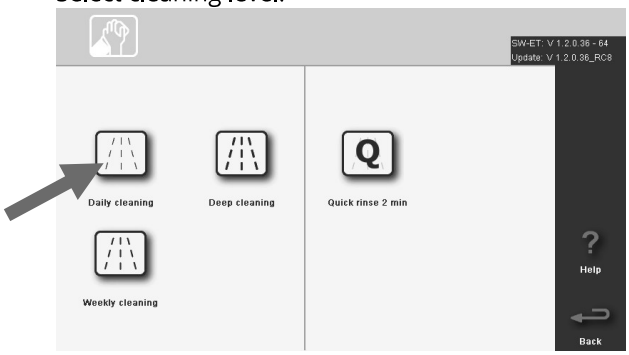
5.3 Automatic Cleaning

Activated cleaning modes are preset at 2-minute Quick Rinse, Daily Cleaning, Weekly Cleaning and Deep Cleaning.

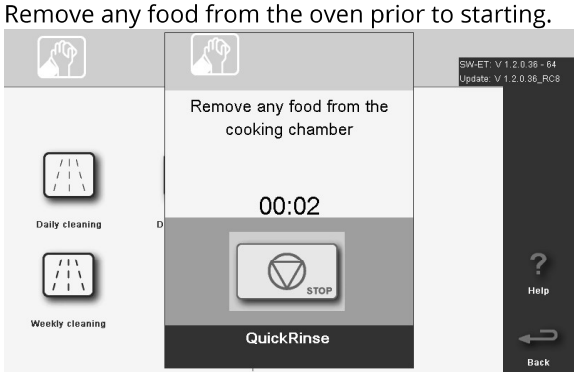
Select “cleaning” on Crew Mode start screen.



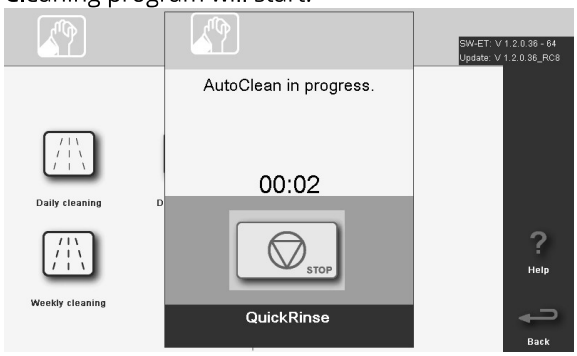
Select cleaning level.



Remove any food from the oven prior to starting.



Cleaning program will start.



When cleaning is finished a sequence of screens will appear

- End of cleaning cycle
- Oven will shut off light and heaters
- “Auto Clean finished” is displayed
- Oven remains inactive until “Auto Clean finished” is confirmed



Start-Up screen will be displayed, with hood check screen.



Chapter 6 Troubleshooting, Power Failure and Parts/Service

6.1 Troubleshooting Guide

Code Failure	Display	Actions
E01.0 No Water	No or low water pressure	Verify supply is connected & switch oven off and on. Can cook recipes up to 356degF
E02.0 Hi Temp	Over temperature in electrical area	Verify ventilation vents. Can cook recipes up to 284degF
E03.0 Fan stopped	Over temperature motor	Call for Service
E04.0 Cooling fan	Cooling fan malfunction	Can cook recipes up to 284degF
E15.0 Condenser temp	Over temperature in condenser	Verify water supply is connected and switch oven off and on. Can cook recipes up to 356degF
E16.0 Humidification valve defective	Dehumidification valve error	Turn oven off and on
E21.0 Oven temp sensor failed	Oven temperature probe failure	Call for Service
E25.0 Condenser sensor failed	Condenser probe failure	Continued cooking will use more water. Can cook recipes up to 356degF

Code Failure	Display	Actions
IDM Error of identification module	No start possible. Checksum of IDM is wrong or damaged.	Call for Service

Auto Clean Failure	Actions
No water or low pressure	Check water connection. If before detergent is dispensed, cleaning can be aborted, and cooking can continue.
No detergent	Check for supply and hose being kinked. If before detergent is dispensed, cleaning can be aborted, and cooking can continue.
No delimer / rinse aid	Check for supply and hose being kinked. If before detergent is dispensed, cleaning can be aborted, and cooking can continue.
Oven cavity too hot	Open door to allow oven to cool. Cleaning can be aborted.
ID78	E62 pressure switch for cleaning agent problem.
ID79	E63 pressure switch for sprinkler problem.
ID80	E64 air supply problem with cleaning agent.
ID81	E65 cleaning stopped due to some undefined problem.

6.2 In the Event of a Power Failure

⚠ DANGER

Do NOT attempt to operate a MINI during a power failure! DEATH, INJURY, and EQUIPMENT DAMAGE can result. Follow the Power Failure Shutdown Instructions.

POWER FAILURE SHUTDOWN INSTRUCTIONS

In the event of a power failure:

1. **Turn OFF the Mini-Combi Power ON/OFF Switch (see item 6 in on page 18.)**
2. **If the power failure is prolonged: turn OFF the water supplies.**
3. **When power is restored: restart a MINI with the Startup Procedure**

6.3 Ordering Parts/Service

For Convotherm Technical Assistance 24 / 7 call:

(844) 462-9529

Useful information when seeking service or parts:

a) Model Number on first page of this manual and located on rating plate on side of oven.

Model Number_____

b) Serial Number located on rating plate on side of oven.

S/N_____

1-Gallon Pick-up Probe Assembly Instructions

Products Required:

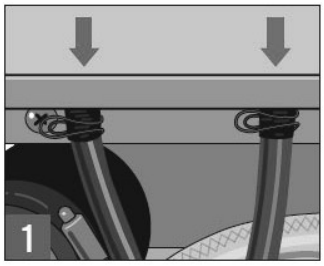


KAY® QSR
Heavy Duty Degreaser

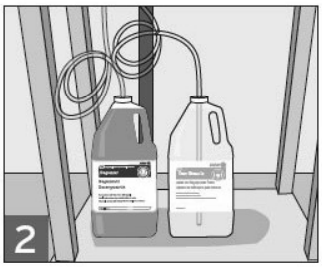


KAY® QSR
Oven Rinse Aid

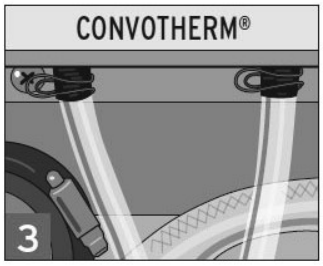
NOTE: Follow the manufacturer's instructions to prime product into lines. Lines must be primed before starting first cleaning cycle. Convotherm ovens: Connect the Oven Rinse Aid on the left, and the Degreaser on the right.



- Disconnect the tubing from the oven by pulling the tubes straight down.
- Tubing may be zip tied or secured to the oven, wall or product; pliers or scissors may be necessary to remove the ties.
- Once removed, discard in trash.



- Insert the new pick-up probe into the product container; tighten the cap onto the container, then place the product tube tag on the tubing.



KAY® QSR Oven Rinse Aid **KAY® Heavy Duty Degreaser**

- Re-route the pick-up tubing to the proper oven connection.
- Clamp tubing around oven connection.
- Zip tie excess tubing together to keep the lines from getting pinched.

IMPORTANT: It is critical that the correct product be hooked up at the correct oven connection at the rear of the oven. When facing the rear oven panel, KAY® QSR Oven Rinse Aid should be installed on the left and KAY® Heavy Duty Degreaser should be installed on the right.

Cleaning of door gasket — Daily — PR 28 D1

Why	To prevent steam leaks and to increase durability of gasket	
Time required	2 minutes to prepare	3 minutes to complete
Time of day	End of day	For 24-hour restaurants: 4am
Hazards	Chemicals can cause irritation of eyes. Always follow directions for use on packages and refer to Material Safety Data Sheet (MSDS) as required. Hot surfaces can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE). Hot liquid/steam can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE).	

Tools and supplies



Bucket, clean and sanitized towels


McD Heavy Duty Degreaser



Bucket, soiled towels

Procedure

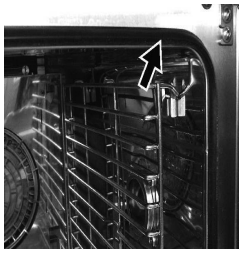
1 Clean door gasket

Clean the hygienic door gasket with detergent and soft cloth.

CAUTION! McD Heavy Duty Degreaser can cause irritation of eyes.

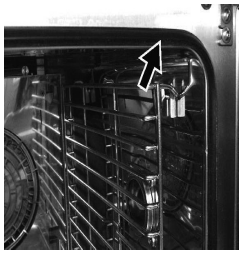
WARNING! Parts of oven may be hot.

WARNING! Hot steam may escape when opening the appliance door.



2 Dry door gasket

Dry the hygienic door gasket thoroughly.



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Cleaning of appliance surface — Daily — PR 28 D2

Why	To keep unit clean	
Time required	2 minutes to prepare	3 minutes to complete
Time of day	End of day	For 24-hour restaurants: 4am
Hazards	Chemicals can cause eye and skin irritations at higher concentrations. Avoid contact with your eyes and skin and always follow directions for use on packages and refer to Material Safety Data Sheet (MSDS) as required. Hot surfaces can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE).	

Tools and supplies



Bucket, clean and sanitized towels | Multi-Purpose Sink Detergent | Bucket, soiled towels

Procedure

1 **Clean appliance surface** Clean appliance surface overall with a soft cloth and detergent.



WARNING!

Surface of oven may be hot.

CAUTION!

Multi-Purpose Sink Detergent may cause irritations.

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Cleaning of double glass door — Weekly — PR 28 W1

Why	To keep glass door clean	
Time required	2 minutes to prepare	4 minutes to complete
Time of day	End of day	For 24-hour restaurants: 4am

Hazards

Chemicals can cause eye and skin irritations at higher concentrations. Avoid contact with your eyes and skin and always follow directions for use on packages and refer to Material Safety Data Sheet (MSDS) as required.

Hot surfaces can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE).

Hot liquid/steam can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE).

Moving of appliance door can cause hands being pinched. Exercise caution when performing this action.

Sharp parts can cause cuts. Exercise caution and wear personal protective equipment (PPE).

Tools and supplies



Bucket, clean and sanitized towels


Multi-Purpose Sink Detergent



Bucket, soiled towels

Procedure

1 Open double glass door

Turn the quick-release catches (1) on the double glass door.

WARNING!

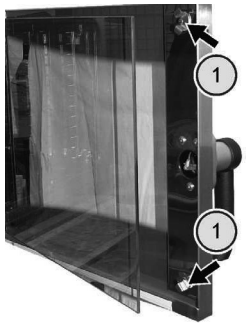
Parts of oven may be hot.

CAUTION!

Door may move.

WARNING!

Parts of oven may be sharp.



2 Clean glass door

Clean the double glass door with Multi-Purpose Sink Detergent. Take care not to scratch the glass.

CAUTION!

Multi-Purpose Sink Detergent may cause irritations.

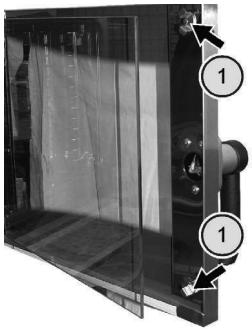
continued ▶



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Cleaning of double glass door (continued)

3 **Re-close double glass door** Re-close the double glass door using the quick-release catches (1).



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Cleaning of (0ptional) Hood Front Screen — Weekly — PR 28 W2

Why	To keep front hood screen clean	
Time required	3 minutes to prepare	3 minutes to complete
Time of day	End of day	For 24-hour restaurants: 4am
Hazards	Chemicals can cause eye and skin irritations at higher concentrations. Avoid contact with your eyes and skin and always follow directions for use on packages and refer to Material Safety Data Sheet (MSDS) as required. Exercise caution and wear personal protective equipment (PPE).	

Tools and supplies

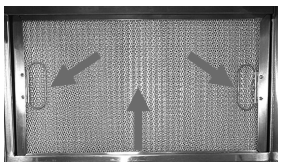


Bucket, clean and sanitized towels | Multi-Purpose Sink Detergent | Bucket, soiled towels

Procedure

1 **Turn off the hood before beginning.**

2 **Remove Mesh Filter.** Using the handles, lift the filter up out of bottom track. Pull the bottom of the filter out and pull down.



3 **Spray Filter.** Spray filter with Sink Detergent Solution. Completely soak filter with Sink Detergent Solution (APSC).

CAUTION!
Multi-Purpose Sink Detergent may cause irritations

4 **Wash Filter.** Wash mesh filter in the sink.

5 **Rinse Filter.** Rinse filter thoroughly in 3 compartment sink.

6 **Dry Filter**
Let filter air dry.

7 **Replace Mesh Filter.** Slide top of filter into rack and push bottom of filter into track. Push down to seat filter.

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Check ventilation slits — Quarterly — PR 28 Q1

Why	To prevent blockages in air flow	
Time required	2 minutes to prepare	1 minute to complete
Time of day	End of day	For 24-hour restaurants: 4am
Hazards	Hot surfaces can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE).	
	Hot liquid/steam can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE).	

Tools and supplies

Procedure

1 Check ventilation slits

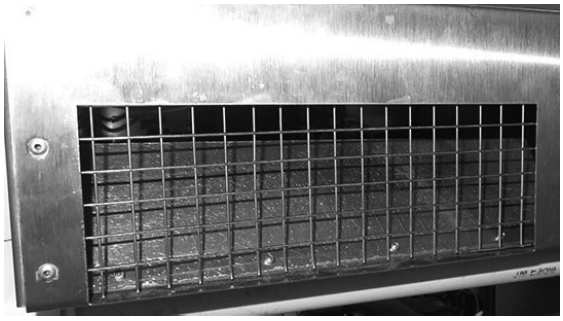
Check ventilation slits on backside of units, see indicators for area. Check for any blockages and clean/ remove if necessary. area.

WARNING!

Parts of oven may be hot.

WARNING!

Steam could escape from the oven



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Replace Charcoal Filter — Quarterly — PR 28 Q2

Why	To prevent blockages in air flow	
Time required	5 minutes to prepare	10 minutes to complete
Time of day	End of day	For 24-hour restaurants: During low-volume periods.
Hazards	Sharp Objects/Surfaces	

Tools and supplies



Procedure

1 Turn off hood

Be sure the hood is turned off. Be sure the exhaust fan has stopped turning.

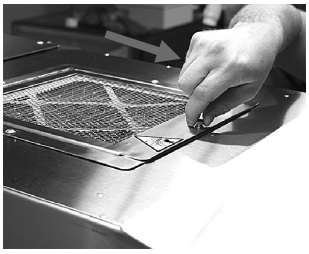
Sharp Objects/Surfaces



2 Loosen Thumb Screw(s).

Loosen the two (2) thumb screw(s) securing the filter access panel on the top of the hood. Single fan versions of the hood have one thumb screw. Dual fan versions have two thumb screws.

Sharp Objects/Surfaces



3 Remove the Old Filter

Lift the filter access panel and slide the old charcoal filter out of its holder and discard.



4 Insert Filter

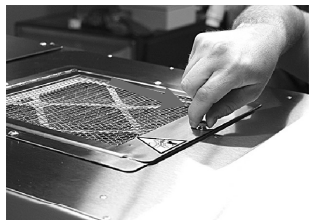
Slide in a new filter taking note of the airflow direction arrow shown on the side of the filter.
The arrow should point up out of the hood.



5 Tighten Thumb Screw

Lower the access panel and tighten the two (2) thumb screw(s) securing the filter access panel on the top of the hood.

Sharp Objects/Surfaces

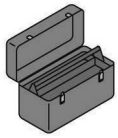


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Replacement of door gasket — Semi-annual — PR 28 S1 T

Why	To prevent steam leakage	
Time required	2 minutes to prepare	5 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: Low-usage period
Hazards	Hot surfaces can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE). Hot liquid/steam can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE).	

Tools and supplies



Tools supplied by technician

Procedure

QUALIFIED TECHNICIANS ONLY

1 Open appliance door

Open appliance door to get access to the hygienic door gasket.

WARNING!

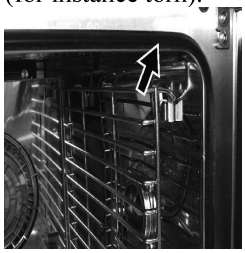
Parts of oven may be hot.

WARNING!

Steam could escape of the oven.

2 Check door gasket

Check whether the hygienic door gasket is damaged (for instance torn).



3 Replace door gasket

Replace the hygienic door gasket if it is damaged.

Follow this link or use the QR code for a video to replace the door gasket.

https://www.youtube.com/watch?v=8qTJ25brT_o&t=5s

CONVOTHERM, Combination oven, OES 6.10

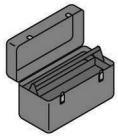
QUALIFIED TECHNICIANS ONLY

SEMI-ANNUAL PR 28 S1 T

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Why	To prevent bulb failure	
Time required	2 minutes to prepare	5 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: Low-usage period
Hazards	Hot surfaces can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE). Hot liquid/steam can cause burns. Wait until the oven has cooled down and wear personal protective equipment (PPE).	

Tools and supplies



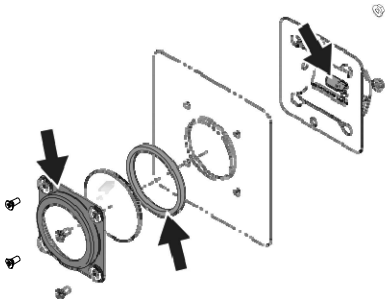
Tools supplied by technician

Procedure

QUALIFIED TECHNICIANS ONLY

1 Check oven light

Open appliance door and check the oven light seal, the lamp and the cover.
Replace the seal if it is damaged and replace the lamp or glass cover if faulty.



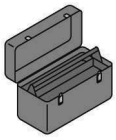
WARNING!
Parts of oven may be hot.

WARNING!
Steam could escape of the oven.

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Why	To save error log and other unit related data	
Time required	2 minutes to prepare	5 minutes to complete
Time of day	Low-usage periods	For 24-hour restaurants: Low-usage periods
Hazards	-	

Tools and supplies



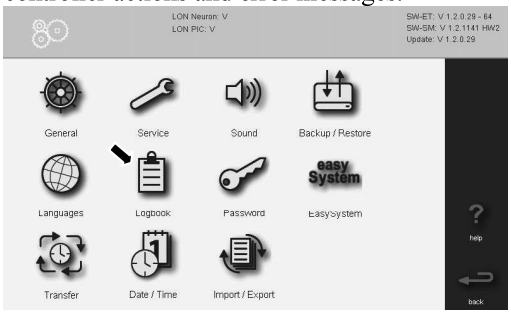
Pen drive

Procedure

QUALIFIED TECHNICIANS ONLY

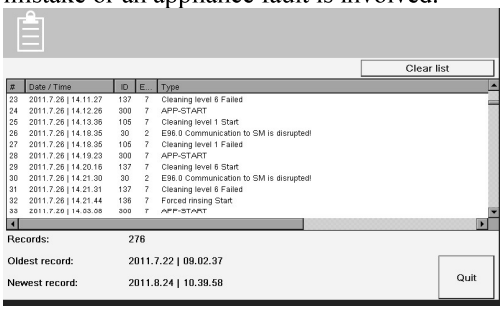
1 Check error log

Open the “Service agent mode” page and open up “Logbook”.
A list is displayed containing recorded information on controller actions and error messages.



2 Assess error messages

Assess error messages and decide whether an operating mistake or an appliance fault is involved.



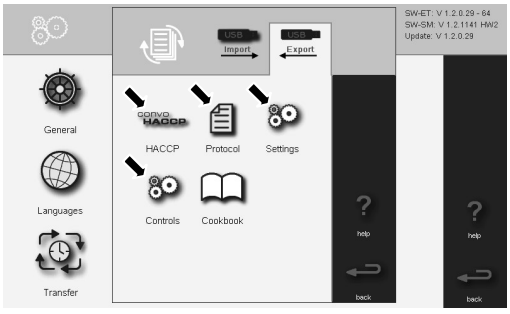
3 Resolve failure

For an operating mistake explain correct operating procedure to operators. For an appliance fault make a repair.

4 Save files

Open the “Service agent mode” page and enter Import/Export page. Export “Protocol”, “Controls”, “Settings” and “HACCP” to pen drive for further reference.





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Check warning signs — Annual — PR 28 A2 T

Why	Check if all warning signs are available	
Time required	2 minutes to prepare	2 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: low-usage period
Hazards	-	

Tools and supplies



Label: Warning of hot liquids (2)

Order no: 6019155



Label: Warning of hot steam and vapor (2)

Order no: 6019155



Label: Warning of corrosive cleaning agents injected into oven (2)

Order no: 6019156



Label: Warning of electric shock (1)

Order no: 6019102



Alcohol pads to clean surface

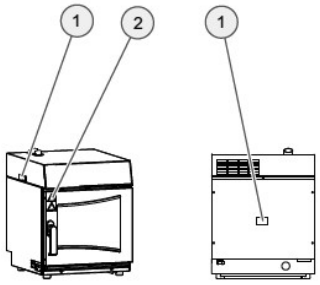
Order no: 7014010

Procedure

QUALIFIED TECHNICIANS ONLY

1 Locate labels

Label locations to check:



2 Check warning signs

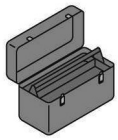
Check if all warning signs are present and legible. If not, remove the illegible warning sign. Use an alcohol pad to remove any grease from the adhesive contact area, then wait until the contact area has dried. Stick the appropriate warning sign in place.

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Check safety devices — Annual — PR 28 A3 T

Why	To maintain highest protection level	
Time required	1 minute to prepare	5 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: Low-usage period
Hazards	Hot liquid/steam can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE). Hot surfaces can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE).	

Tools and supplies



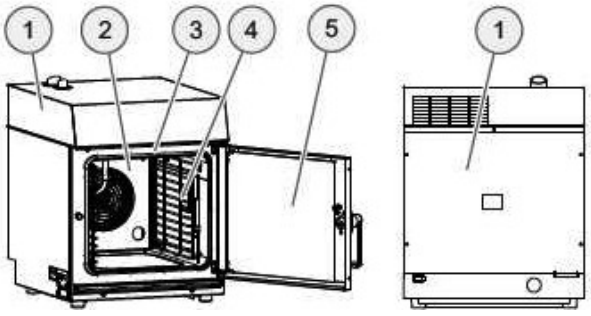
Screwdriver to undo catches of suction panel

Procedure

QUALIFIED TECHNICIANS ONLY

1 Locate safety devices

List and location of safety devices:
1 Covers cannot be opened without tool.
2 Suction panel cannot be opened/removed without a tool.
3 Hygienic door gasket prevents steam escaping from cooking chamber.
4 Rack holds containers securely.
5 Appliance door protects from hot steam.



2 De-energize unit

Disconnect appliance from power supply. Take protective measures to prevent unit being switched on again. Make sure unit is de-energized.

3 Check covers

Check if all covers are fitted on appliance and renew if missing or defective.

WARNING!

Parts of oven may be hot.

4 Check screw presence

Check if any screws are missing and replace/renew if necessary.

5 Check screw tightness

Check if screws are tightened well and retighten any loose screws.

6 Check exterior surface

Check for dents on appliance outside and repair if dents are affecting safety/reliability.

7 Check doors

Check for scratches, cracks or nicks in glass door (inner and outer) and replace if any door is damaged.

WARNING!

Hot steam may escape when opening the door.

continued ▶

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8 Check door gasket

Check if hygienic plug-in door gasket is damaged or worn/torn and replace if necessary.

9 Check suction panel

Check if catches of suction panel are securing the panel properly. Replace if necessary.

10 Check rack

Check rack for bent retainers or cracked welds or if rack is bent. Replace if necessary.

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Check installation, connections and hoses — Annual — PR 28 A4 T

Why	Prevent appliance failures	
Time required	5 minutes to prepare	25 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: Low-usage period

Hazards

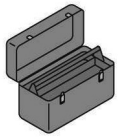
Chemicals can cause eye and skin irritations. Avoid contact with your eyes and skin and always follow directions for use on packages and refer to Material Safety Data Sheet (MSDS) as required.

When the cover is open, there is a risk of electric shock from touching live parts. Make sure that any work on the electrical system is performed by a qualified electrician. The appliance must be disconnected from the power supply, ensuring that it cannot be switched on during servicing.

Hot liquid/steam can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE).

Hot surfaces can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE).

Tools and supplies



Tool set supplied by technician

Procedure

QUALIFIED TECHNICIANS ONLY

1 Check leveling and distances

Check if unit is leveled and if all minimum clearance distances are met. Correct if necessary.

2 Check stability

Check if unit is secured against toppling over and correct if necessary.

3 Check openings

Check if ventilation openings and pipes are not blocked and correct if necessary.

WARNING!

Hot steam may escape from openings.

4 Check water supply

Check water supply for leakage and correct if necessary.

5 Check drain

Check drain trough and drain connection on units for leakage and blockage. Remove any residues in trough.

WARNING!

Hot water may leak out of drain.

6 Check air flow

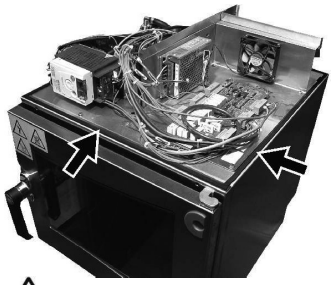
Check air flow situation (ventilation and extraction).

continued ▶

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7 Check seal of top box

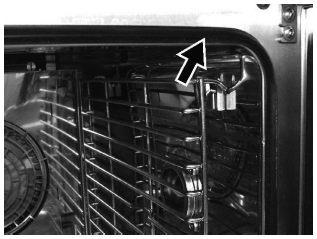
Check whether the seal between the top box and the cooking chamber provides a continuous seal.
Replace the seal if it is damaged.



DANGER!
Some parts may be live.

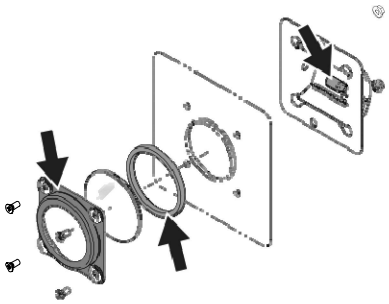
8 Check door gasket

Check whether the hygienic gasket is damaged (for instance torn).
Replace the hygienic gasket if it is damaged.



9 Check oven light

Open appliance door and check the oven-light seal, the lamp and the cover.
Replace the seal if it is damaged and replace the lamp or glass cover if faulty.



WARNING!
Parts of the oven may be hot.

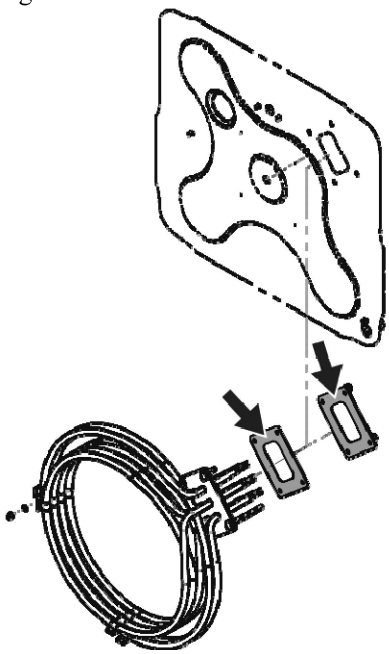
10 Check sensor seal

Check the seal for the oven sensor (B6).
Tighten the screw.



11 Check heating element seal

Check the seal for the hot-air heater.
Tighten the screw.



continued ▶

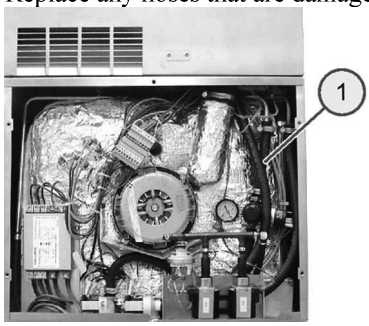
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12 Check hoses

Check all hoses for wear (1). Items to check include:

- Water hoses
- Cleaning-agent hoses

Replace any hoses that are damaged or leaking.



13 Check chemicals filter

Check that the filter unit is fitted at the end of the rinse-agent hose. Rinse the filter unit of the rinse-agent supply with water.



CAUTION!

Chemicals can cause eye and skin irritations.

14 Check connections

Check that the cleaning-agent supply and rinse-agent supply are connected correctly.

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Check water quality — Annual — PR 28 A5 T

Why	Preventing appliance failures	
Time required	3 minutes to prepare	10 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: Low-usage period

☐ **Hazards**

Operating certain actuators will start the fan or the heater, which may cause severe injury to the hands or entangle hair/clothing or cause burns. Make sure that you operate the correct actuator.

The analysis liquid for general hardness can cause eye and skin irritations. Do not let the analysis liquid come in contact with skin or eyes and wear personal protective equipment (PPE).

Hot surfaces can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE).

Tools and supplies

Personal protection equipment: Heat protective gloves	2 sample containers for taking water samples (1 for soft water, 1 for cold water)	1 TDS meter Order no: 3019007 (or similar if sourced locally)	1 water analysis kit Order no: 3019010 (or similar if sourced locally)	Screwdriver to unlock suction panel

Procedure

QUALIFIED TECHNICIANS ONLY

1 Remove suction panel

Sampling soft water:
Use screwdriver to unlock suction panel. Push suction panel upwards and remove it.

WARNING!

Parts of oven may be hot.

2 Enter “Diagnostic mode”

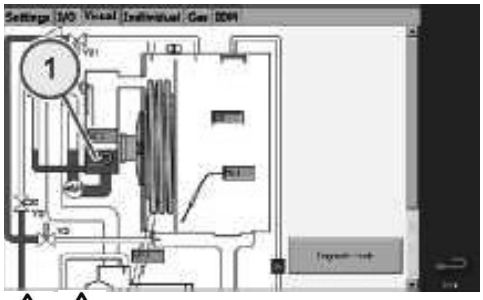
Open the 'Service agent mode' page and then the 'Service' page. Select the 'Visual' tab. Select 'Diagnostic mode'.
At the prompt, enter and confirm the password.

3 Start water injection

Press and hold the actuator (1) for several seconds.

Result:

Water must be injected into the cooking chamber.



DANGER!

Operating certain actuators will start the fan or the heater. Make sure that you operate the correct actuator.

continued ▶

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4 Fill sample container

Rinse the sample container with the sampled water. Fill the sample container.



5 Enter "Diagnostic mode"

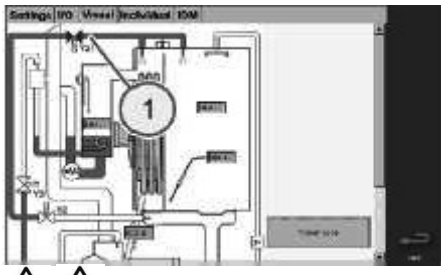
Sampling cold water: Close the appliance door.
Open the 'Service agent mode' page and then the 'Service' page. Select the 'Visual' tab. Select 'Diagnostic mode'.
At the prompt, enter and confirm the password.

6 Start water injection

Press and hold the actuator (1) for several seconds.

Result:

Water must be injected into the cooking chamber.

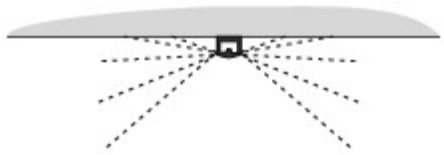


DANGER!

Operating certain actuators will start the fan or the heater. Make sure that you operate the correct actuator.

7 Check water distribution

Check whether the water is distributed over the entire cooking chamber by the sprinkler nozzle. Make especially sure that the water jet reaches the roof of the appliance.
If not, check whether the flow pressure equals 3 - 6bar.



8 Remove sprinkler nozzle

Unscrew and remove the sprinkler nozzle. Position the sample container on a tray under the opened water supply.



9 Fill sample container

Rinse the sample container with the sampled water. Fill the sample container.



10 Check water quality

Check water quality of soft and cold water samples:
Measure the ppm or the conductivity.
1µS/cm = 0.6 ppm (physical assumption)



continued ▶

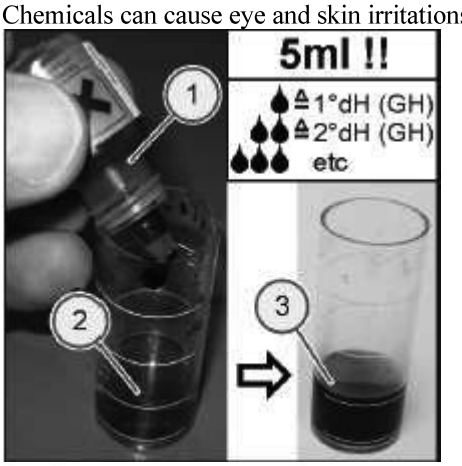
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11 Check general hardness

Measure the general hardness (GH).
Pour 5ml of sampled water into an analysis container for each water type. One drop of the analysis liquid is equivalent to 1°dH.

CAUTION!

Chemicals can cause eye and skin irritations.



No.	Test time	Color of test solution
1	Analysis liquid	green
2	Start of test	colorless / orange
3	End of test	green

12 Check carbonate hardness

Measure the carbonate hardness (KH)
Pour 5ml of sampled water into an analysis container for each water type. One drop of the analysis fluid is equivalent to 1°dH.



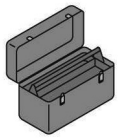
No.	Test time	Color of test solution
1	Analysis liquid	orange
2	Start of test	colorless / purple
3	End of test	orange

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Check electrical installation and components — Annual — PR 28 A6 T

Why	Preventing an appliance failure	
Time required	10 minutes to prepare	15 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: Low-usage period
Hazards	When the cover is open, there is a risk of electric shock from touching live parts. Make sure that any work on the electrical system is performed by a qualified electrician. The appliance must be disconnected from the power supply, ensuring that it cannot be switched on during servicing. Hot surfaces can cause burns. Wait until the cooking chamber has cooled down and wear personal protective equipment (PPE).	

Tools and supplies



Tools supplied by technician

Procedure

QUALIFIED TECHNICIANS ONLY

1 Disconnect unit

Disconnect unit from power and make sure it is de-energized.

DANGER!

Parts of oven may be energized.

continued ▶

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Check electrical installation and components (continued)

2 Check electrical installation

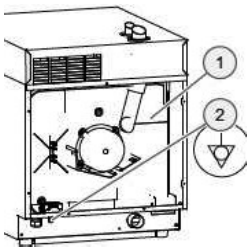
Check the electrical installation:
Equipment provided by customer is installed and installation complies with electrical installation regulations:

- Fusing complies with local and national regulations
- Appliance is incorporated in equipotential bonding system
- Residual current operated device (type B) is fitted in installation in accordance with national regulations
- All-pole disconnection device with a minimum contact separation of 3 mm has been installed.

Power cord has the following properties:

- is oil-resistant, sheathed and flexible in accordance with regulations
- is undamaged
- is fitted with cable strain-relief

Position:
(1) Circuit diagram
(2) Connection point for equipotential bonding



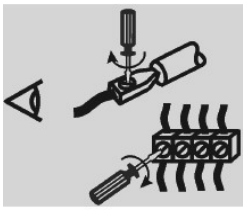
⚠WARNING!

Surfaces of oven may be hot.

3 Check screw connections

Check that all screw connections are tightened firmly. Retighten the connections. Items to check include:

- Mains input filter
- Contactor wiring
- Frequency converter
- Power supply
- Connecting terminal on hot-air heater
- Terminal block



4 Check plug-in connections

Check that all plug-in connections (1) are firmly in place. Plug in the connectors correctly. Items to check include:

- Connectors X10 - X18
- Control module
- Service module

Remove any dirt or moisture from the circuit boards.



5 Check grounding contact

Check the grounding contact.

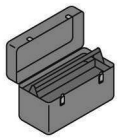
6 Voltage proof test

Carry out a voltage proof test (high voltage).

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Why	Prevent an appliance failure	
Time required	5 minutes to prepare	10 minutes to complete
Time of day	Low-usage period	For 24-hour restaurants: Low-usage period
Hazards	⚠ When the cover is open, there is a risk of electric shock from touching live parts. Make sure that any work on the electrical system is performed by a qualified electrician from an approved customer service office. ⚠ Hot surfaces can cause burns. Be aware of hot surfaces and wear personal protective equipment (PPE). ⚠ Hot liquid/steam can cause burns. Be aware of hot liquid/steam and wear personal protective equipment (PPE).	

Tools and supplies



Tools supplied by technician

Procedure

QUALIFIED TECHNICIANS ONLY

1 ⚠ **DANGER!**

Risk of electric shock from live parts

The following procedure comprises steps that must be carried out at the energized appliance. When the cover is removed, there is a risk of electric shock from touching live parts. Keep away from live parts!

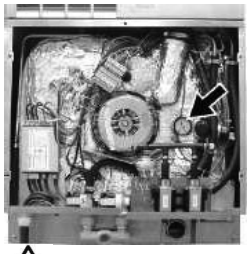
2 Start cooking program

Close the appliance door. Select 'Superheated steam' and enter a cooking temperature of 302°F (150°C). Start the cooking program.



3 Check pressure regulator

Check whether the pressure regulator in the steam-generator water supply is set to 120 kPa (1.2 bar). Take a pressure reading from the pressure gage in the water supply.



⚠ **WARNING!**
Parts of oven may be hot.

⚠ **WARNING!**
Steam may escape.

continued ▶

Functional testing (continued)

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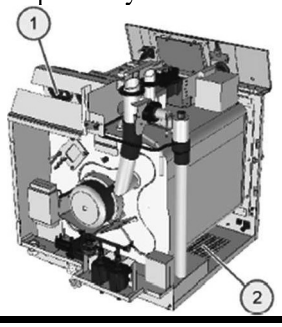
4 Check function

Check whether:

- The oven light is on for 60 seconds after opening the appliance door
- The fan is running
- The temperature inside the oven is rising
- The heater switches off at 302°F (150°C)
- No steam is escaping from the appliance around the door gasket
- Steam is being generated (open appliance door carefully)
- The water supply and drainage system is water-tight

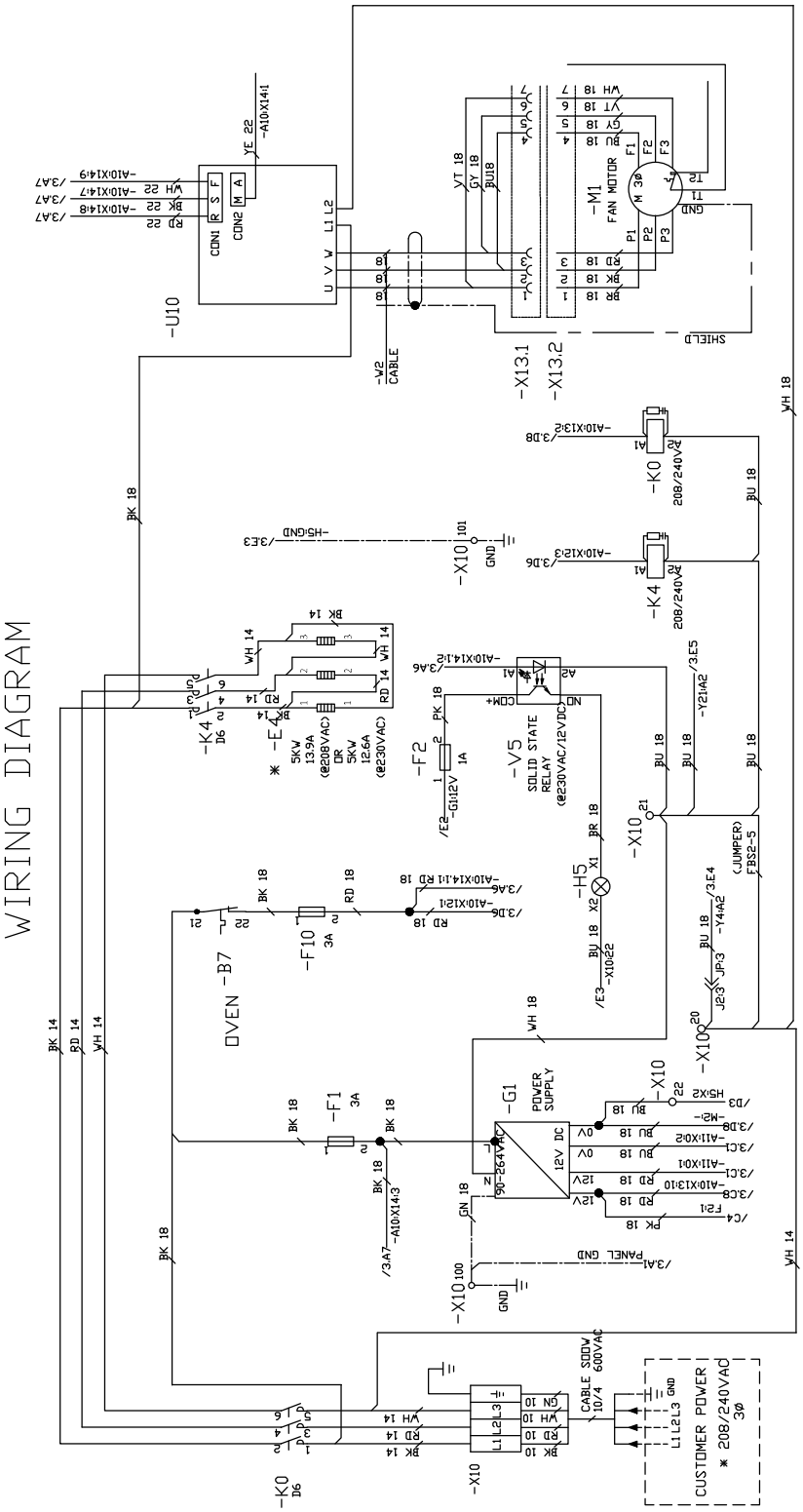
5 Check cooling fans

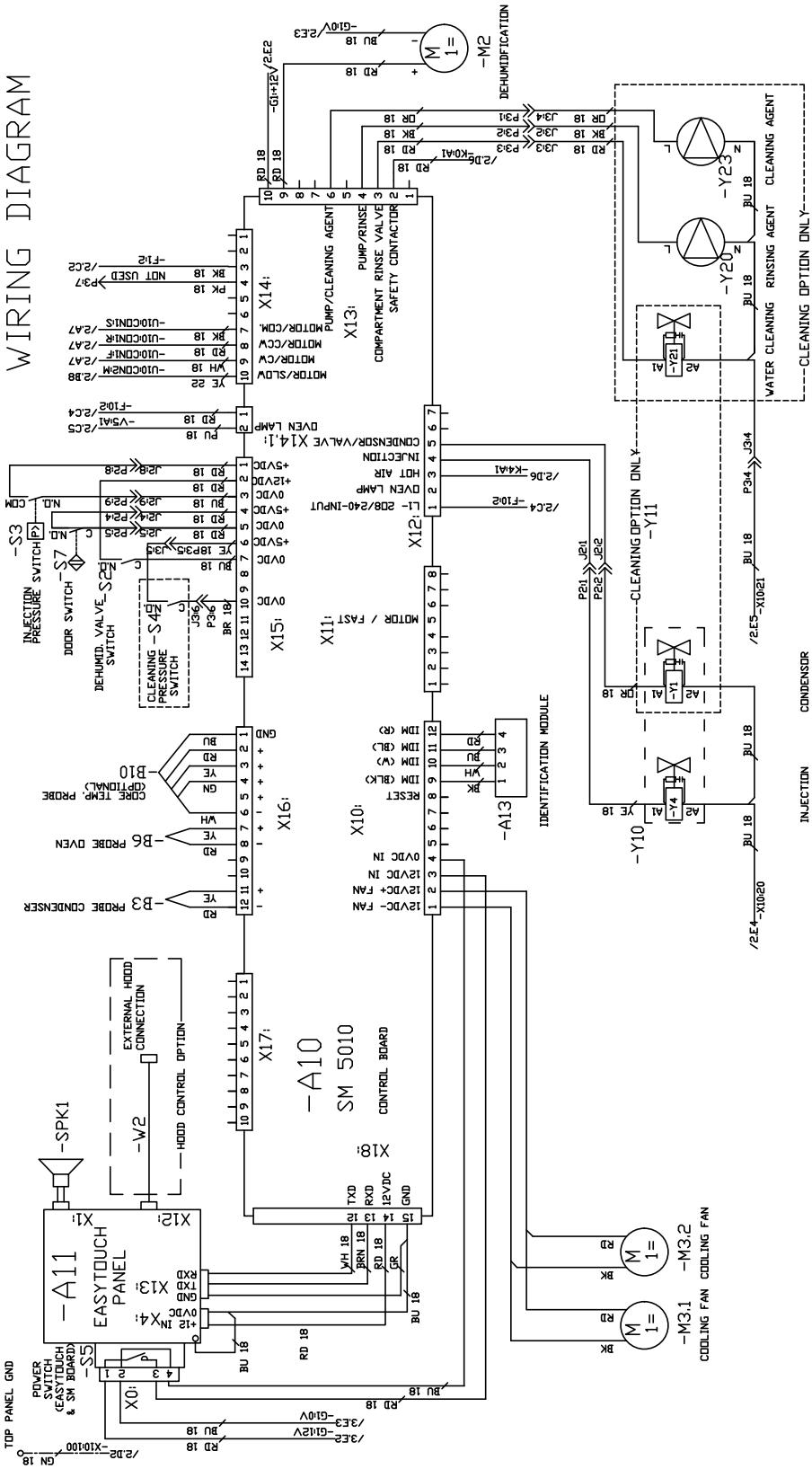
Check whether the cooling fans (1) in the wiring compartment are blowing air out of the ventilation slits (2).
Replace any fans that are faulty.



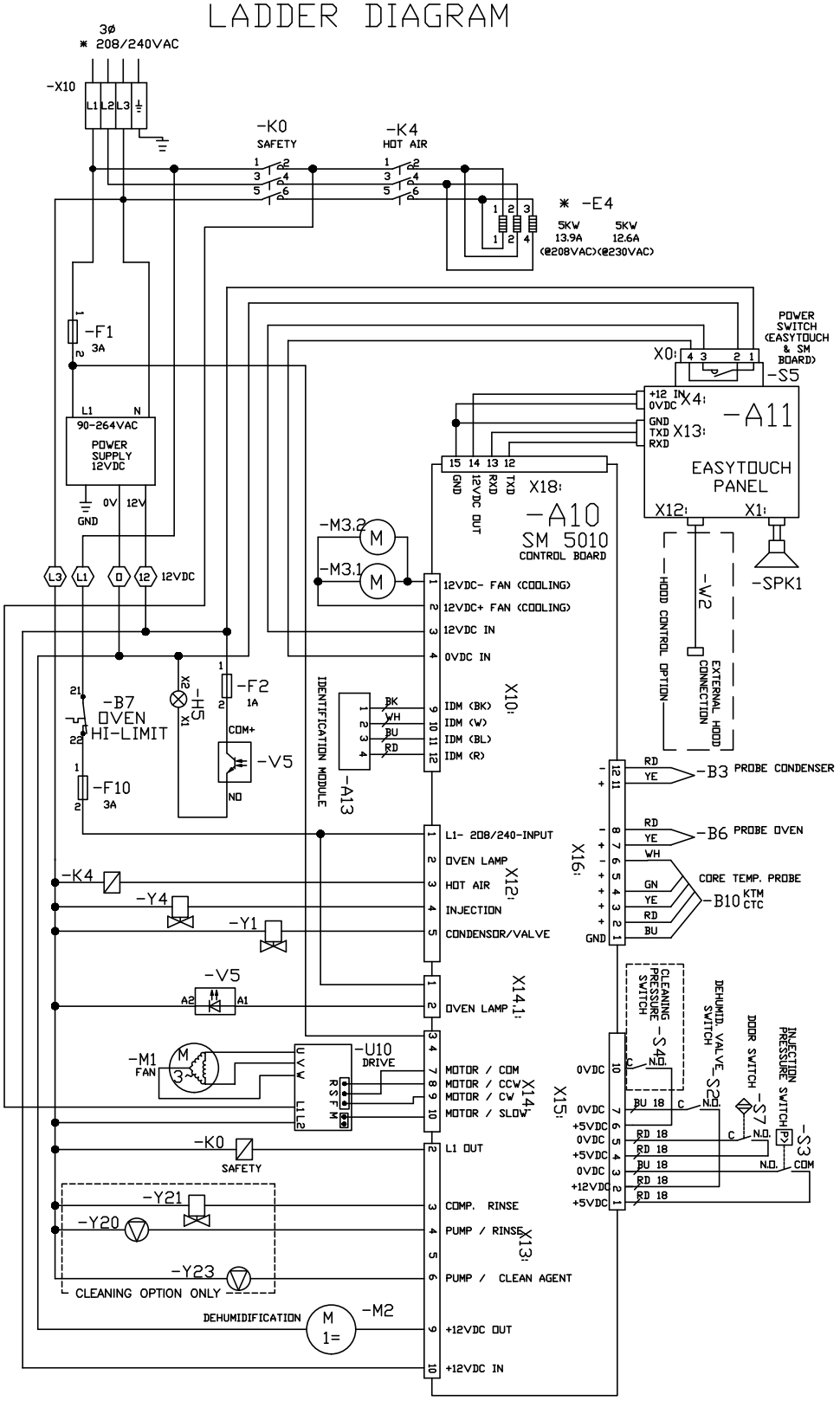
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Chapter 8 Wiring Diagrams




WIRING DIAGRAM
-A10
SM 5010
CONTROL BOARD
-A11
EASYTOUCH
PANEL
-A13
IDENTIFICATION MODULE
-M2
DEHUMIDIFICATION
-M3.1
-M3.2
COOLING FAN
-Y23
-Y20
-Y21
-Y1
-Y4
-Y10
-Y11
WATER CLEANING
RINSING AGENT
CLEANING AGENT
CLEANING OPTION ONLY
INJECTION
CONDENSOR
-S3
INJECTION PRESSURE SWITCH
-S7
DOOR SWITCH
-S2
DEHUMID. VALVE SWITCH
-S4
CLEANING PRESSURE SWITCH
-S5
POWER SWITCH (EASYTOUCH & SM BOARD)
-SPK1
-W2
EXTERNAL HOOD CONNECTION
HOOD CONTROL OPTION
-B10
CORE TEMP. PROBE (OPTIONAL)
-B6
PROBE OVEN
-B3
PROBE CONDENSER
TOP PANEL GND
PUMP/CLEANING AGENT
PUMP/RINSE
COMPARTMENT RINSE VALVE
SAFETY CONTACTOR
MOTOR/SLOW
MOTOR/CW
MOTOR/CCW
MOTOR/COM.
NOT USED
MOTOR / FAST
CONDENSOR/VALVE
INJECTION
HOT AIR
OVEN LAMP
L1- 208/240-INPUT
RESET
IDM (R)
IDM (BL)
IDM (V)
IDM (BLK)
0VDC IN
12VDC IN
12VDC+ FAN
12VDC- FAN
TXD
RXD
12VDC
GND
+12 IN
0VDC
+12VDC
+5VDC
0VDC

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