



COMBITHERM

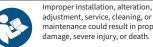
Combination Oven/Steamer





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

Λ WARNING



adjustment, service, cleaning, or maintenance could result in property damage, severe injury, or death. Read and understand the installation,

operating and maintenance instructions thoroughly before installing, servicing, or operating this equipment.



CT PROFORMANCE™

CTP6-10E	CTP6-10G
CTP10-10E	CTP10-10G
CTP7-20E	CTP7-20G
CTP10-20E	CTP10-20G
CTP20-10E	CTP20-10G
CTP20-20E	CTP20-20G

CT CLASSIC™

CTC6-10E CTC10-10E **CTC7-20E** CTC10-20E CTC20-10E CTC20-20E

CTC6-10G CTC10-10G CTC7-20G CTC10-20G CTC20-10G CTC20-20G

EN

MN-35947 **Rev 18** 05/19





All Alto-Shaam equipment is sold Free on Board (F.O.B.) shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, do not put the appliance into service until the damage has been inspected by an authorized Alto-Shaam service provider.

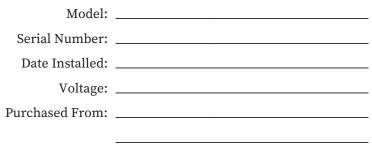
Shipping damages are a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

- 1. Make an immediate inspection while the appliance is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the appliance is moved to a storage area.
- 2. Do not sign a delivery receipt or a freight bill until a proper count has been made and inspection of all appliances are received.

- 3. Note all damage to packages directly on the carrier's delivery receipt.
- 4. Make certain the driver signs the delivery receipt. If the driver refuses to sign, make a notation of this refusal on the receipt.
- 5. If the driver refuses to allow inspection, write the following on the delivery receipt: **Driver refuses to allow inspection of containers for visible damage.**
- 6. Contact the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation to the carrier's office with the time, date, and the person called.
- 7. Save any packages and packing material for further inspection by the carrier.
- 8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

Alto-Shaam will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. Alto-Shaam cannot, however, file any damage claims, assume the responsibility of any claims, or accept deductions in payment for such claims.

Record the model and serial number of the appliance for easy reference. Always refer to both model and serial number in any contact with Alto-Shaam regarding this appliance.





Alto-Shaam has established a twenty-four hour emergency service call center to offer immediate customer access to a local authorized service agency outside of standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through the use of Alto-Shaam's toll-free number. Emergency service access is available seven days a week including holidays.



Delivery

Delivery

This Alto-Shaam appliance has been thoroughly tested and inspected to ensure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. *See Transportation Damage and Claims section located in this manual.*

This appliance, complete with unattached items and accessories, may be delivered in one or more packages. Ensure all standard items and options have been received with each model as ordered.

Save all the information packed with the appliance. Register online at www.alto-shaam.com to ensure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the equipment model. Contact the Alto-Shaam Tech Team Service Department if you have any questions concerning installation, operation, or maintenance.

1-800-558-8744; servicedept@alto-shaam.com

The serial numbe	r is required for all inquiries.	
Always include both model and serial number(s) in any correspondence regarding the appliance.		
Model:		
Serial number:		
Purchased from:		
Date installed:	Voltage:	

Unpacking

- Carefully remove the appliance from the carton or crate.
 - **NOTICE:** Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.



- Read all instructions in this manual carefully before installing this appliance, using the appliance or performing routine maintenance. Following procedures other than those indicated in this guide to use and clean the appliance is considered inappropriate and may cause damage, injury or fatal accidents, in addition to invalidating the guarantee and relieving Alto-Shaam of all liability.
- DO NOT DISCARD THIS MANUAL. This manual is considered part of the appliance and is provided for the owner or manager of the business and for training personnel. Additional manuals are available from the Alto-Shaam Tech Team Service Department.
- Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.

Appliance and accessories may be heavy. To prevent serious injury, **always** use a sufficient number of trained and experienced workers when moving or leveling appliance and handling accessories.

ENVIRONMENTAL CONDITIONS

Operational Environmental Conditions

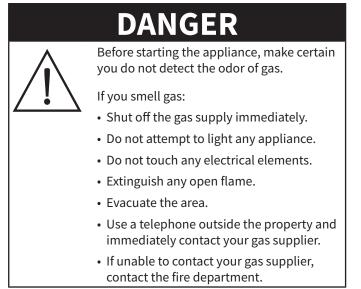
- Unit must acclimate to room temperature of the environment in which it is placed. 24 hours is recommended.
- Ambient temperature range of 60°F to 110°F (16°C to 43°C).
- Relative humidity of less than 95% non-condensation.



This manual covers the following CTC and CTP series models:

Control Type		Boiler-Free Models	Steam Generator Models			
CTP	CT PROformance™ with	6-10E, 6-10G	6-10EB			
	PROtouch™ control	10-10E, 10-10G	10-10EB			
стс	CT Classic with Classic manual control	7-20E, 7-20G	7-20EB			
		10-20E, 10-20G	10-20EB			
		20-10E, 20-10G	20-10EB			
		20-20E, 20-20G	20-20EB			

Please post the following instructions in a prominent location in the event the user smells gas.



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Safety Procedures and Precautions



- This appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized and is therefore considered dangerous. The appliance must not be used to cook food containing flammable materials (such as food with alcohol). Substances with a low flash point can ignite spontaneously and cause a fire.
- This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users. We recommend regular training of your staff to avoid the risk of accident or damage to the unit. Operators must also receive regular safety instructions.
- Any trouble shooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified and trained technicians.
- This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. The following signal words and symbols may be used throughout this manual.

A DANGER

Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE: Indicates information considered important, but not hazard-related (e.g., messages relating to property damage).

NOTICE:

For equipment delivered for use in any location regulated by the following directive: 2012/95/EC WEEE

DO NOT dispose of electrical or electronic equipment with other municipal waste.

- To prevent serious injury, death or property damage, your appliance should be inspected and serviced at least every twelve (12) months by an authorized service partner or trained technician.
- ONLY allow an authorized service partner or trained technician to service or to repair your appliance. Installation or repairs that are not performed by an authorized service partner or trained technician, or the use of non-factory authorized parts will void the warranty and relieve Alto-Shaam of all liability.
- When working on this appliance, observe precautions in the literature, on tags, on labels attached to or shipped with the appliance and other safety precautions that may apply.
- If the appliance is installed on casters freedom of movement of the appliance must be restricted so that utility connections (including gas, water, and electricity) cannot be damaged when the unit is moved. If the appliance is moved, make sure that all utility connections are properly disconnected. If the unit is returned to its original position, make sure that any retention devices and utility connections are properly connected.
- ONLY use the appliance when it is stationary. Mobile oven racks, mobile plate racks, transport trolleys, and appliances on casters can tip over when being moved over an uneven floor or threshold and cause serious injury.
- ALWAYS apply caster brakes on mobile appliances or accessories when these are not being moved. These items could move or roll on uneven floors and cause property damage or serious injury.
- Be extremely careful when moving appliances because the food trays may contain hot fluids that may spill, causing serious injury.
- ALWAYS open the appliance door very slowly. Escaping hot vapors or steam can cause serious injury or death.

- If your gas appliance is installed under an exhaust hood, the hood must be switched ON when the oven is in use to avoid the build up of combustion gases. Failure to do so may result in serious injury, death or property damage.
- NEVER place objects near the oven exhaust vents. This area is hot and could be a potential ignition source for a fire.
- Do not allow objects to block or obstruct the area below the oven base. This may result in fire, damage to the equipment or serious injury.
- Do not use the attached hand-held hose to spray anything other than the interior of the oven compartment.
- Do not use the attached hand-held hose on the surface of a hot cooking compartment. The sudden temperature change can damage the oven interior. Allow the oven to cool to a minimum of 150°F (66°C). Failure to observe this precaution can void the warranty.

WARNING



This appliance is not intended for use by persons (including children) 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 person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

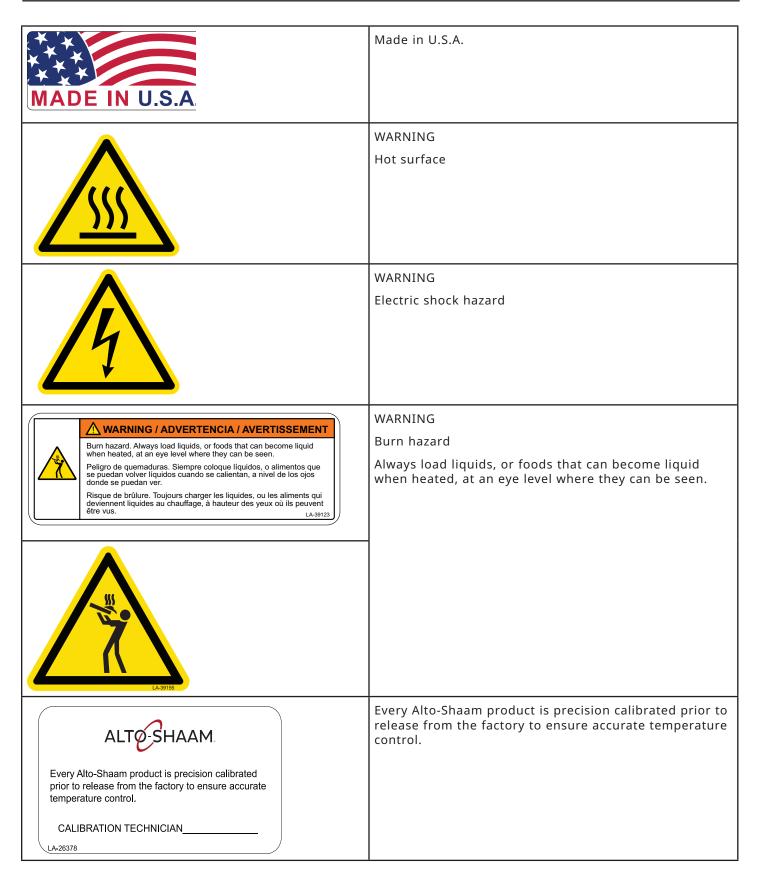
WARNING



DO NOT obstruct or block exhaust flues or attach any flue extension that may impede proper burner operation, restrict the exhaust fumes and cause negative backdraft or the appliance to shut down. Failure to do so may result in serious injury or death.

Labels





L1 LA-36443-L1	Line 1 supply terminal
	Line 2 supply terminal
L2	
LA-36443-L2	
L3 LA-36443-L3	Line 3 supply terminal
L2/N LA-36443-L2/N	Neutral
LA-36443-G	Ground terminal
LA-36443-E	Equipotential terminal
	Drain water connection point.
LA-38910	Untreated, drinkable water connection point.
LA-38909	Treated, drinkable water connection point.

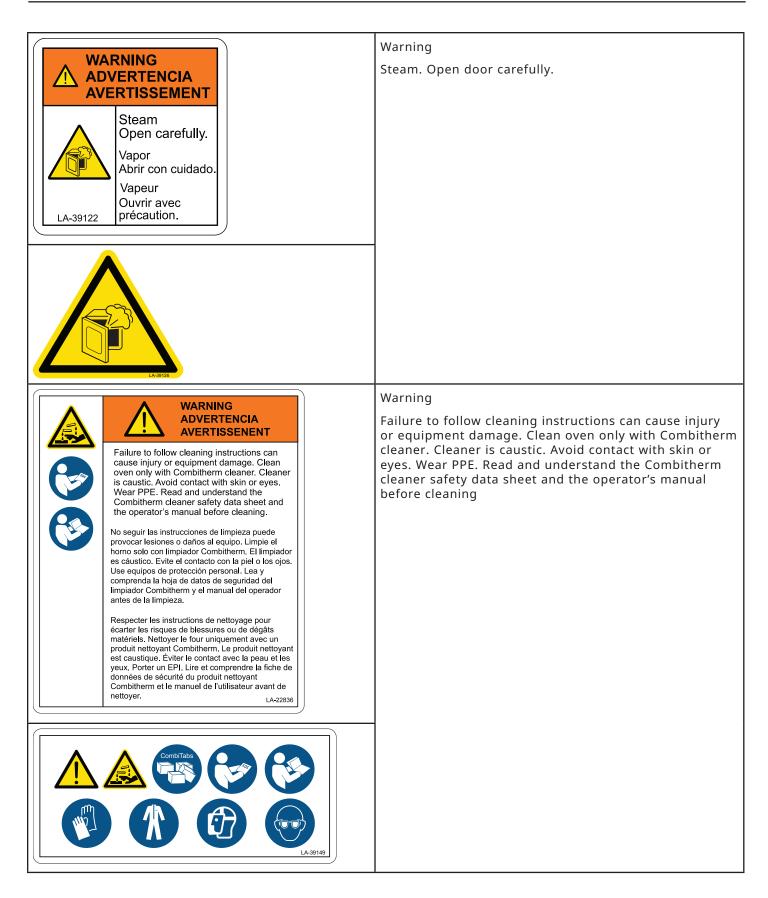
Labels

ALTO-SHAAM.

Labels



		liters		Capacities
	Σ kg max.	Σ liter max.	Σ GN 1/1	
6-10	33	57	6	
10-10	54	95	10	
7-20	76	133	14	
10-20	109	190	20	
20-10	109	190	20	
20-20	218	380	40	
Fir This or b Pel This or b Riss This	e Hazard s unit is only for use ase. ligro de incend s unit is only for use ase. sque d'incendie	e with factory-suppli	ed legs, casters, ed legs, casters,	This unit is only for use with factory-supplied legs, casters, or base. Read the installation manual.





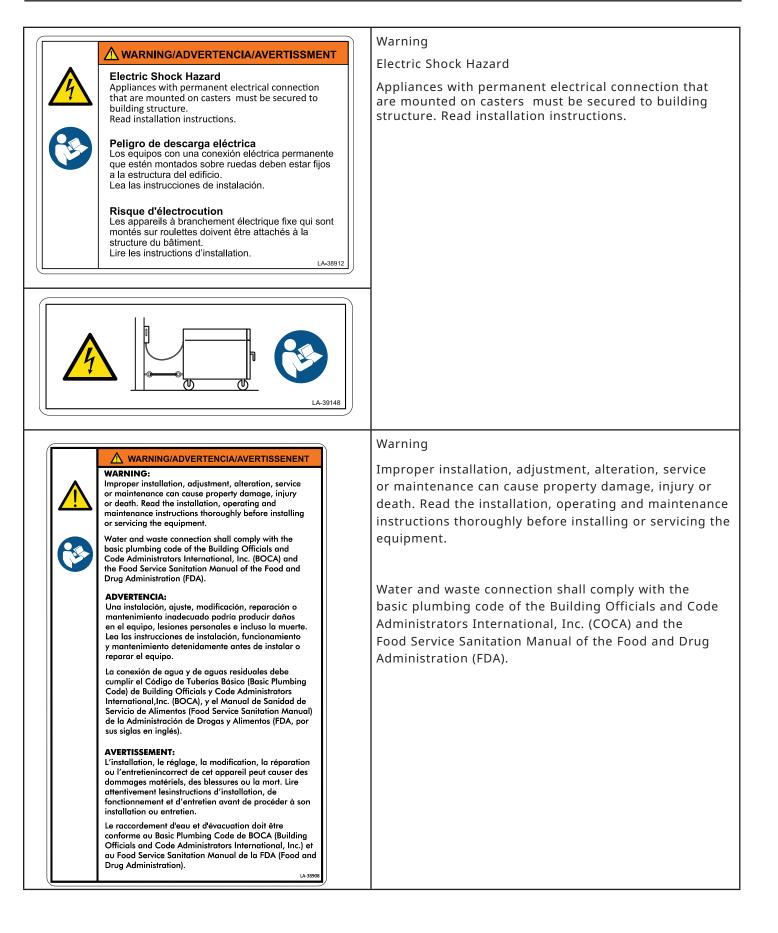




Image: Warning/ADVERTENCIA/AVERTISSEMENT Image: Warning/ADVERT	Warning Fire Hazard For use only on noncombustible surfaces. Maintain the correct clearances to combustibles. Read the installation instructions.
Top/tope/haut 20" (508mm) 20" (508mm) Left/izquierda/gauche 0" (0mm) 0" (0mm) Right/derecho/droite 2" (51mm) 0" (0mm) Rear/posterior/arrière 4" (102mm) 4" (102mm)	
102 mm	
COA #5760	City of New York Fire Department condition of acceptance number.
NOTICE/AVISO/AVIS For trained personnel only: The installation manual and the wiring diagram for this appliance can be found inside the oven attached to the opposite side of this panel. Solo para personal capacitado: El manual de instalación y el diagrama de cableado de este equipo se pueden encontrar dentro del horno, en el lado opuesto de este panel. Personnel formé seulement : Le manuel d'installation et le schéma de cáblage de cet appareil se trouvent à l'intérieur du four attachés de l'autre côté de ce panneau.	Notice For trained personnel only: The installation manual and the wiring diagram for this appliance can be found inside the oven attached tothe opposite side of this panel.



	1
	Warning
Electric Shock Hazard	Electric shock hazard.
To reduce the risk of electric shock, do not remove or open cover. No user-serviceable parts inside. Refer servicing to gualified personnel.	To reduce the risk of electric shock, do not remove or open cover. No user-serviceable parts inside. Refer
Qualified personnel: Disconnect power before servicing. Peligro de descarga eléctrica Para reducir el riesgo de descarga eléctrica, no retire ni abra la cubierta. No hay piezas en el interior a la que se les pueda realizar mantenimiento. Derive el mantenimiento a personal calificado. Personal calificado. Personal calificado: Desconecte la energía antes de realizar mantenimiento. Dur réduire le risque de décharge électrique Pour réduire le risque de décharge électrique, ne par ouvrir ni retirer le capot. Ne contient pas de pièces réparables par l'utilisateur. Confier les réparations à du personnel qualifié. Personnel qualifié : Sectionnez l'alimentation avant toute intervention. LA-38950 UseAWG for supply connections. Use only copper wires suitable for temperatures ≥ 90°C. Do not connect to a circuit operating at more than 150 VAC to ground.	Open cover. No user-serviceable parts inside. Refer servicing to qualified personnel. Qualified personnel: Disconnect power before servicing. UseAWG for supply connections. Do not connect to a circuit operating at more than 150 VAC to ground.For use on individual branch circuits only Use only copper wires suitable for temperatures ≥ 90°C.
For use on individual branch circuits only. Use AWG para las conexiones de suministro. Use solo cables de cobre aptos para temperaturas mayores que 90 °C. No conecte a un circuito que funcione a más de 150 V CA a tierra. Para su uso en circuitos derivados individuales solamente. Utiliser du calibreAWG pour les raccordements électriques. Utiliser exclusivement des conducteurs en cuivre qui conviennent à des températures ≥ 90 °C. Ne pas raccorder à un circuit fonctionnant sous plus de 150 VCA par rapport à la terre. Utiliser exclusivement sur des circuits de dérivation propres. LA-38852	ose only copper wires suitable for temperatures 2 50 C.
NOTICE: Use only factory-supplied casters when needed. When this appliance includes casters, the following must also be installed: • a connector complying with ANSI Z21.69 / CSA 6.16; • a quick-disconnect device complying with ANSI Z21.41 / CSA 6.9; • a restraining device to guard against transmission of strain to the	NOTICE: Use only factory-supplied casters when needed. When this appliance includes casters, the following must also be installed: • a connector complying with ANSI Z21.69 / CSA 6.16;
 connector as specified in the manual. AVISO: Solo use ruedas proporcionadas de fábrica cuando sea necesario. Si este equipo incluye ruedas, también se debe instalar lo siguiente: un conector que cumpla con las normas ANSI Z21.69 y CSA 6.16; un dispositivo de desconexión rápida que cumpla con las normas ANSI Z21.41 y CSA 6.9; un dispositivo de sujeción para proteger contra la transmisión de tensión al conector como se especifica en el manual. 	• a quick-disconnect device complying with ANSI Z21.41 / CSA 6.9; • a restraining device to guard against transmission of strain to the connector as specified in the manual.
 AVIS : S'il y a lieu, utiliser uniquement les roulettes fournies par le fabricant. Si cet appareil comporte des roulettes, les articles suivants doivent également être installés : un connecteur conforme à ANSI Z21.69 / CSA 6.16; un raccord découpleur rapide conforme à ANSI Z21.41 / CSA 6.9; un moyen de retenue pour empêcher la transmission de la contrainte au connecteur comme indiqué dans le manuel. LA25784 	



SITE INSTALLATION

WARNING

Improper installation, alteration, adjustment, service, cleaning, or maintenance could result in property damage, severe injury, or death.

Read and understand the installation, operating and maintenance instructions thoroughly before installing, servicing, or operating this equipment.

INSTALLATION CODES & STANDARDS

The following codes and standards are required for installation of this oven:

AIR SUPPLY, ELECTRICAL CONNECTIONS, WATER CONNECTIONS, AND WASTE WATER DISCHARGE.

Installation shall comply with local codes required for gas appliances. In the absence of local codes, installation shall comply with the latest edition of:

- USA: National Fuel Gas Code, ANSI Z223.1 (NFPA 54). And OSHA Regulations
- Canada: Natural Gas and Propane Installation Code, CAN/CSA-B149.1-15
- EU: European Standard EN203
- Australia/New Zealand: AS 5601

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Adherence to code by a qualified installer is essential for the following: gas plumbing, gas appliance installation, commercial cooking ventilation, water and plumbing.

Electric shock hazard.

Perform lockout/tagout procedures before cleaning or servicing this appliance.

VENTILATION REQUIREMENTS

A steam ventilation hood is mandatory for the operation of the oven. In addition, a single gas Combitherm oven requires a minimum of 28 CFM make-up air for both natural and propane gas. Authorities having jurisdiction should be consulted as to the requirements for this equipment with respect to ventilation and fire extinguishing systems to ensure conformity with any Federal, State, or local installation codes.

See the section titled Gas Exhaust

SOUND PRESSURE MEASUREMENTS

The A-weighted sound pressure level without ventless hood operating is less than 70dBA.

INSTALLATION TEMPERATURE REQUIREMENTS

Malfunctions may occur if the oven is put into service too soon after having been stored or transported in cold temperatures. Therefore, allow the oven to acclimate to room temperature at the installation site for at least 24 hours before use. If this is impractical, install the oven as directed and immediately run it in convection mode at 450°F (232°C) for 25–30 minutes. Then proceed with completing all remaining functional tests.

NOTICE: ALWAYS remove the electronic control boards BEFORE welding any stainless steel components on this appliance. Failure to do so will damage the control boards and may void the warranty.



New Construction

Desi	gner/Consultant Responsibilities: Pre-Install
	Complete water analysis to be conducted to ensure water quality meets manufacture specifications.
	Record the GPM rate from main water line from site that will be feeding the oven, using hose and bucket.
	Proper floor drain within 3' (914mm), not directly underneath, of where the appliance is to be installed.
	Two (2) cold water inlets - drinking quality. Both inlets can be from same source; must meet line pressure and flow rate specifications for both inlets. Divide using a manifold. Run one side through treatment device before running to oven. A shut-off valve must be installed ahead of inlets. One (2) treated water inlet: 3/4" NPT connection. Line pressure 30 psi minimum dynamic and 90 psi maximum static (200 to 600 kPa) at a minimum flow rate of 0.26 gpm (1 L/min) for 6-10, 10-10 and 7-20 models, 0.53 gpm (2 L/min) for 10-20 models, and 0.80 gpm (3 L/min) for 20-10 and 20-20 models.
	One (1) untreated water inlet: 3/4" NPT connection. Line pressure 30 psi minimum dynamic and 90 psi maximum static (200 to 600 kPa) at a minimum flow rate of 2.64 gpm (10 L/min) for all models.
	Gas appliances require one 3/4" line within 3' (914mm) of the appliance equipped with a manual shut off, and ready to be hooked to a quick disconnect hose.
	Vent hood, and possible interconnection with gas supply as determined by local code.
	Proper electrical voltage, phase, wire size, breaker size, and disconnects are provided for hook ups within 3' (914mm) of the appliance.
	Exhaust air for gas appliances, exhaust hood, ventilation ceiling, chimney, spacing from top edge of appliance to lower edge of grease filters/ceiling.
	If floor is to be sloped then level surface must be provided for trolley/cart appliances.
	Confirm clearances of hallways, and doors to the installation area are sufficient for the model of the appliance being installed.
Insta	ller Responsibilities: Pre-Install
	Pre-Installation check sheet has been properly filled out.
Insta	ller Responsibilities: Install
	Inspect, receive, deliver, uncrate, and set appliance in place.
	Check that the appliance is level. Follow leveling instructions found in the installation manual.
	Make water connections. Make sure treated and untreated water lines are hooked up properly to the correct fittings.
	Hook up final electrical, check for proper voltage, phase, wire size, and breaker size. Ground fault or residual current protection device must accommodate a leakage current of 20mA. Report any issues to the designer / consultant.
	Plumb in the appliance drain per the required specifications found in the installation manual.
	Ensure gas pressure is above minimum and below maximum pressures listed in the installation manual for the corresponding gas type.
	Check that all accessories are unpackaged and set up for the end user.
	Ensure combi appliance is properly fastened to the ground, or has a restraint installed if on casters.
	Test that the CombiOven is fully operational, report any issues or manufacturing defects.
	Ensure most current software is installed.
	Pick up any packaging trash and debris from the installation.
	Clean and wipe down the outside of the appliance and make presentable to the end user.
	Take pictures of the installation verifying proper drain, water lines, and clearances are met.
ASA	Responsibilities: After Install
	Perform mechanical startup.
	Complete post installation check sheet.
	Pictures of the install's electrical connections, water, drain, and clearances should be taken and sent to: installation_program@alto-shaam.com
RSP/	Dealer: After Install
	Confirm installation is correct.
	Provide operational training and demonstration, and contact information for post installation support.
	Verify warranty registration documentation has been submitted.
Cust	omer/End User
	Complete and submit warranty registration documentation: www.alto-shaam.com/warranty
	Use the appliance only for its intended purpose.
	Follow cleaning and planned maintenance schedules to maximize the life of the equipment.



Retro Fit/Existing Kitchen

	igner/Consultant Responsibilities: Pre-Install
	Complete water analysis to be conducted to ensure water quality meets manufacture specifications.
	Record the GPM rate from main water line from site that will be feeding the oven, using hose and bucket.
	Proper floor drain within 3' (914mm), not directly underneath, of where the appliance is to be installed.
	Two (2) cold water inlets - drinking quality. Both inlets can be from same source; must meet line pressure and flow rate specifications for both inlets. Divide using a manifold. Run one side through treatment device before running to oven. A shut-off valve must be installed ahead of inlets.
	One (2) treated water inlet: 3/4" NPT connection. Line pressure 30 psi minimum dynamic and 90 psi maximum static (200 to 600 kPa) at a minimum flow rate of 0.26 gpm (1 L/min) for 6-10, 10-10 and 7-20 models, 0.53 gpm (2 L/min) for 10-20 models, and 0.80 gpm (3 L/min) for 20-10 and 20-20 models. One (1) untreated water inlet: 3/4" NPT connection. Line pressure 30 psi minimum dynamic and 90 psi maximum static (200 to 600 kPa) at a minimum flow rate of 2.64 gpm (10 L/min) for all models.
	Gas appliances require one 3/4" line within 3' (914mm) of the appliance equipped with a manual shut off, and ready to be hooked to a quick disconnect hose.
	Proper vent hood is installed, and possible interconnection with gas supply per by local code.
	Proper electrical voltage, phase, wire size, breaker size, and disconnects are provided for hook ups within 3' (914mm) of the appliance
	Exhaust air for gas appliances, exhaust hood, ventilation ceiling, chimney, spacing from top edge of appliance to lower edge of grease filters/ceiling.
	If floor is to be sloped then level surface must be provided for trolley/cart appliances.
	Confirm clearances of hallways, and doors to the installation area are sufficient for the model of the appliance being installed.
nst	aller Responsibilities: Pre-Install
	Pre-Installation check sheet has been properly filled out.
nst	aller Responsibilities: Install
	Inspect, receive, deliver, uncrate, set appliance in place, and check that appliance is level.
	Make water connections. Make sure treated and untreated water lines are hooked up properly to the correct fittings.
	Hook up final electrical, check for proper voltage, phase, wire size, and breaker size. Ground fault or residual current protection device must accommodate a leakage current of 20mA. Report any issues to the designer / consultant.
	Plumb in the appliance steam resistant drain per manufactures required specifications as found in the installation manual.
	Ensure gas pressure is above minimum and below maximum pressures listed in the installation manual for the corresponding gas type
	Check that all accessories are unpackaged and set up for the end user.
	Ensure Combi appliance is properly fastened to the ground, or has a restraint installed if on casters.
	Ensure most current software is installed / uploaded.
	Verify installation meets the manufacture specifications per the installation manual.
	Test that the Combi appliance is fully operational, report any issues or manufacturing defects.
	Pick up any packaging trash and debris from the installation.
	Clean and wipe down the outside of the appliance and make presentable to the end user.
	Take pictures of the installation verifying proper drain, water lines, and clearances are met.
ASA	Responsibilities: After Install
	Perform mechanical startup.
	Complete post installation check sheet.
	Pictures of the install's electrical connections, water, drain, and clearances should be taken and sent to: installation_program@alto-shaam.com
RSP	P/Dealer: After Install
	Confirm installation is correct.
	Provide operational training and demonstration, and contact information for post installation support.
	Verify warranty registration documentation has been submitted.
Cust	tomer/End User
	Complete and submit warranty registration documentation.
	Use the appliance only for its intended purpose.
	······································



Pre-Installation Checklist

Location Information									
Location Name:	Site Contact Name:								
Location Street Address:	et Address: Site Contact Phone No.:								
Location City:	ty: Site Contact Email:								
Location State:	Zip:								
Pre-Installation Company Informa	tion								
Company Name:			Technie	ian Name:	:				
Mailing Address:		Tech	nician	Phone No.:					
City:			Con	tact Email:					
State:	Zip:	D		ite Survey:					
Number of combis to be installed	ł								
Model number(s) of combis to be	e installed								
Serial number of combi's to be in	stalled								
Clearance									
Measure door/entry way clearan						PASS		FAIL	
Measure path clearance (smalles						PASS		FAIL	
Elevator opening, if applicable (si						PASS		FAIL	
Elevator interior dimensions, if a						PASS		FAIL	
Appliance clearance	Right side					PASS		FAIL	
	Left side					PASS		FAIL	
	Rear					PASS		FAIL	
Тор						PASS		FAIL	
Based on the appliances designated spot in the kitchen, would the appliance be accessible for service?			YES NO						
If NO, comment on the issue:									
Water Supply									
Is there at least one cold water 3 feet of where each appliance		PASS			IL: BE ISSUE				
Do water supply line(s) have shut oven?	-off(s) exclusively for each	PASS		FAIL: DESCRIBE ISSUE					
Do water supply line(s) provide a appliance, terminated with fema		PASS		FAIL: DESCRIBE ISSUE					
Is the dynamic water pressure from the cold water supply line a minimum of 30 psi (200 kPa) for each appliance?				FAIL		UNKN	OWN		
Is the static water pressure from the cold water supply line less than 90 psi (600 kPa) for each appliance?				FAIL		UNKN	OWN		
Is the minimum water flow rate for the treated water line 0.26 gpm (1 L/min) for 6-10, 10-10 and 7-20 models, 0.53 gpm (2 L/min) for 10-20 models, and 0.80 gpm (3 L/min) for 20-10 and 20-20 models.?				FAIL		UNKN	OWN		
Is the minimum water flow rate for the untreated water line 2.6 gpm (10 L/min)?				FAIL		UNKN	OWN		
Is water treatment (RO blend system, filter, etc.) being used?				NO		UNKN	OWN		
If YES - Note the system here:			NAME			МО	DEL		
Can the site contact provide evidence that a documented water analysis has been performed?			5			N	0		



Pre-Installation Checklist

Electrical									
Alto-Shaam oven ratings	BREAKER:	VOLTAG	iE:			PHASE			
						0			
The following f	ields must be completed	d by the	service	tech on	site.				
What is the measured voltage at the site?		L1-N		L2-N		L3-N		L1-L2	
		L2-3		L1-L3		PASS		FAIL	
What is the on-site breaker size supplying pow	ver to the appliance(s)?	SIZE:				PASS		FAIL	
Is there a disconnect or junction box within 3' appliance(s) will be installed?	(914mm) of where the	PASS		FAIL					
Comments:									
Gas									
What is the gas type for the appliance(s) to be	installed?	ΝΑΤ	JRAL			PROI	PANE		
What is the gas type confirmed at installation	site?	NAT		PRO		PASS		FAIL	
Is there a minimum of one 3/4" gas supply line where the appliance(s) will be installed?	e within 3' (914mm) of	PASS		FAIL					
On the gas line, is there a 3/4" NPT pipe conne valve within 3' (914mm) of where the applianc		PASS		FAIL					
Comments:									
Drain									
Is there a floor drain within 3' (914mm) of whe be installed?	ere the appliance(s) will	PASS		FAIL					
What is the actual distance to the floor drain fr appliance(s) will be installed?	rom where the	MEASU	REMENT			PASS		FAIL	
Is the floor drain going to be located undernea that will be installed? (The drain should not be under the appliance — a No answer would = P.	e located directly	PASS		FAIL					
Comments:									
Other Site Information									
Is there a proper ventilation hood installed ab appliance(s) will be installed?	ove where the	PASS		FAIL					
Does the designated location for the appliance i.e., no more than 1.5" (38mm) change in eleva to lowest surface point?		PASS		FAIL		-			
Is the site 100% ready for appliance(s) installa	tion?	PASS		FAIL					
Is site action required?		PASS		FAIL					
Action Required:									



Please provide a copy of this document to an on-site manager.

Service company name:

Service company number:

Model of oven(s) to be installed:

The site is ready for installation of the oven(s); planned install location passes inspection. Once the oven(s) arrive at the site (or the delivery date is certain), please contact the service company listed above to schedule the installation.

The site is NOT ready for the installation of the oven(s); planned install location needs the following changes made before installation can proceed:

On-site manager should make the necessary contacts to move forward with theses changes as soon as possible. If there are any questions, please contact Alto-Shaam Technical Service Department at 800-558-8744 ext. 6702. Or, review documentation regarding the equipment www.alto-shaam.com/en/resource-library.

Once the necessary site changes have been made and the oven(s) have arrived (or the delivery date is certain), please contact the service company listed above to schedule the installation.

Technician name and signature:

On-site manager name and signature:





(L x W x H) 56" x 45" x 51"*

(1422mm x 1143mm x 1295mm)*

*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR EXPORT WEIGHT AND DIMENSIONS.

COMBITHERM. CTP6-10G

					Back		Тор,	/Bottom					R-
				A: 6" - (153mm)	\leftarrow	A: 18-1/4" (464mm)	<	41-7/16"	(1053mm)	9/16" (1538mm) —	>		Q
/8" nm)				B: 4-5/16" (109mm) C: 2-1/2" · (63mm)	-	B: 16-1/16" (408mm) :: 12-3/4" 324mm) 324mm)			28-3/4" — 730mm)				
d water ical (Back) Drain	35-11 4" (102n	¥) 	E: 3-5/16" (84mm) D: 6-1/2" (165mm)			E E E E E E E E E E E E E E E E E E E	- F: 4-1/2" (11- m)	4mm)] 		- 	
ical (Bottom)							DIMENSIO	NS: H x W	хD				
	97 C	E EA	[₩	IP X5		Sted Gas Safety To	EXTERIOR	-1/8" x 35- WITH REC	ESSED D				
	BI/NSF 4 0	063	Giobal-Mark com au			Global-Mark.com.au [®] ID Number: GAS-103285-001	INTERIOR	·	.1/16 X4.	1-7/16" (892m	m x 1033mm	1 X 1053mm	1)
			L 710B, section	1/						3-1/16" (520m	m x 411mm :	x 712mm)	
	REQUIREN		er oven) NKING QUALITY	*						ARDS the owner/oper	atax/au		
Must meet lin WATER DR/ materials m	ne pressure and f AIN: 1-1/2" (4 nust withstan NCE REQU	low rate specific 10mm) conne 1d temperatu	cations for both inlets. ection with a ver ures up to 200°F (rtical vent to exten (93°C).	d above the e	exhaust vent.	damag manuf	ge this equip acturer's wa	ment and/ rranty. Alten] products	these minimum or components o-Shaam recomm to properly trea minant Inle	and void the c mends using C at your water.	original equip OptiPure® [wv	omen
	0" (0mm) 0" (0mm) No	on-combust ⁱ	ible surfaces	18" (457mm) rec 2" (51mm) door			es		Free 0	Chlorine Less	than 0.1 ppm		
	20" (508mm)		vement s, air aintake								0 ppm than 30 ppm	(mg/L)	
	4" (102mm)	init tot tegs	, an annake	4-5/16" (109mm) optional pl	umbing kit				pH 7.0 t Silica Less	o 8.5 than 12 ppm	(mg/L)	
	ATION RE	-	1	lood inst-ll-ti.				Total Dis	solved Sol	ids (tds) Trea	ted line: 50-12	25 ppm	
				lood installation i		ode.				Untr	reated line: 50	-360 ppm	
Oven mus Water sup			Jack-flow preve										
• Water sup	UIREMEN			IFIED ON ORDER)	HC	OOK-UP: 3/4"	NPT						
Water sup GAS REQ UL Marked	Maximum	TS (GAS TYF Minimum	PE MUST BE SPEC	Minimum Inlet	1		AGA Marked	Maximum	Minimum	Maximum Inlet	Minimum Inl		
Water sup GAS REQ UL Marked Appliances	Maximum Input BTU/h	TS (GAS TYP	PE MUST BE SPEC	Minimum Inlet Pressure Inches WC	Maximum Fue	OOK-UP: 3/4" el Consumption* GPH	AGA Marked Appliances	Maximum Input MJ/h	Minimum Input MJ/h	Maximum Inlet Pressure kPa	Pressure kPa	Consu m³/h	umptio L
• Water sup GAS REQ UL Marked	Maximum Input BTU/h 48,000	TS (GAS TYP Minimum Input BTU/h 32,000	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0	Minimum Inlet Pressure Inches WC 5.5 9.0	Maximum Fue CFH 45.7 19.2	OOK-UP: 3/4" el Consumption* GPH N/A 0.5	AGA Marked	Input	Input	Pressure	Pressure	Consi	umptic L
Water sup GAS REQ UL Marked Appliances Natural Gas	Maximum Input BTU/h 48,000 *Assumes an o	TS (GAS TYP Minimum Input BTU/h 32,000 average heatin	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 g value for natural g	Minimum Inlet Pressure Inches WC 5.5	Maximum Fue CFH 45.7 19.2 F and a specifc g	OOK-UP: 3/4" el Consumption* GPH N/A 0.5	AGA Marked Appliances Natural Gas	Input MJ/h	Input MJ/h	Pressure kPa	Pressure kPa 1.13	Consu m³/h 1.3	umptio L
• Water sup GAS REQ UL Marked Appliances Natural Gas Propane	Maximum Input BTU/h 48,000 *Assumes an o The assumed arked M	TS (GAS TYP Minimum Input BTU/h 32,000 average heatin value for propo	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 Ig value for natural g ane gas is 2,500 BTU, put Min	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI //SCF, and a specific gra- nimum Input	Maximum Fue CFH 45.7 19.2 F and a specifc g avity of 1.53 Nominal	DOK-UP: 3/4" Consumption* GPH N/A 0.5 Irravity of 0.60. Gas Pressure	AGA Marked Appliances Natural Gas Propane Maximum G	Input MJ/h 50.6	Input MJ/h 33.8	Pressure kPa 3.48	Pressure kPa 1.13 2.75	Consu m³/h 1.3	umptic L
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E	Maximum Input BTU/h 48,000 *Assumes an of The assumed mrked Mances KWh (G20)	TS (GAS TYP Minimum Input BTU/h 32,000 average heatin value for propo laximum Inpu (Hs) kW	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 Ig value for natural g ane gas is 2,500 BTU, juit Mir h (Hi) kWh (H	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI //SCF, and a specific gr nimum Input Hs) kWh (Hi)	Maximum Fue CFH 45.7 19.2 F and a specifc g avity of 1.53 Nominal	COK-UP: 3/4" Consumption* GPH N/A 0.5 ravity of 0.60. Gas Pressure nbar 20	AGA Marked Appliances Natural Gas Propane	Input MJ/h 50.6	Input MJ/h 33.8	Pressure kPa 3.48 num Fuel Consum m ³ 1.3	Pressure kPa 1.13 2.75	Consu m³/h 1.3	umptic L
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E 2LL	Maximum Input BTU/h 48,000 *Assumes an or The assumed mrked (G20) (G25) (G31)	TS (GAS TYP Minimum Input BTU/h 32,000 average heatin value for proper laximum Inpi (Hs) kWI .1 1	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 ang value for natural g ang gas is 2,500 BTU, but Min th (Hi) kWh (H 12.7 12.5	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI //SCF, and a specific grn nimum Input Hs) kWh (Hi) 5 11.3	Maximum Fue CFH 45.7 19.2 F and a specifc g avity of 1.53 Nominal	COK-UP: 3/4" Consumption* GPH N/A 0.5 ravity of 0.60. Gas Pressure nbar	AGA Marked Appliances Natural Gas Propane Maximum G	Input MJ/h 50.6 as Pressure ar	Input MJ/h 33.8	Pressure kPa 3.48 num Fuel Consum m ³	Pressure kPa 1.13 2.75	Consu m³/h 1.3	umptio L
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E 2LL	Maximum Input BTU/h 48,000 *Assumes an a The assumed inces kWh (G20) (G25) (G31) 13	TS (GAS TYP Minimum Input BTU/h 32,000 average heatin value for proper laximum Inpi (Hs) kWI .1 1	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 Ig value for natural g ane gas is 2,500 BTU, juit Mir h (Hi) kWh (H	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI //SCF, and a specific grn nimum Input Hs) kWh (Hi) 5 11.3	Maximum Fue CFH 45.7 19.2 F and a specifc g avity of 1.53 Nominal	OOK-UP: 3/4" al Consumption* GPH N/A 0.5 arravity of 0.60. Gas Pressure nbar 20 20	AGA Marked Appliances Natural Gas Propane Maximum G mb	Input MJ/h 50.6 as Pressure ar	Input MJ/h 33.8	Pressure kPa 3.48 num Fuel Consum m ³ 1.3 1.6	Pressure kPa 1.13 2.75	Consu m³/h 1.3	num Fu umptio L, N
• Water sup GAS REQ UL Marked Appliances Propane CE Ma Applia 2E 2LL 3P 3B/P	Maximum Input BTU/h 48,000 *Assumes an a The assumed wwh (G20) (G21) (G30)	TS (GAS TYF Minimum Input BTU/h 32,000 average heatin, value for proper laximum Inpu (Hs) kWI .1 1 .8 1	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 ang value for natural g ang gas is 2,500 BTU, but Min th (Hi) kWh (H 12.7 12.5	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SC //SCF, and a specific grn imimum Input Hs) kWh (Hi) 5 11.3 2 11.3	Maximum Fue CFH 45.7 19.2 F and a specifc g avity of 1.53 Nominal	OOK-UP: 3/4" el consumption* GPH N/A 0.5 oravity of 0.60. Gas Pressure nbar 20 20 37 Gas Pressure nbar	AGA Marked Appliances Natural Gas Propane Maximum G mb	Input MJ/h 50.6 as Pressure ar	Input MJ/h 33.8	Pressure kPa 3.48 um Fuel Consum m ³ 1.3 1.6 0.5 0.5	Pressure kPa 1.13 2.75	Consu m³/h 1.3 0.5	umptio L
• Water sup GAS REQ UL Marked Appliances Propane CE Ma Applia 2E 2LL 3P 3B/P	Maximum Input BTU/h 48,000 *Assumes an a The assumed wwh (G20) (G21) (G30)	TS (GAS TYF Minimum Input BTU/h 32,000 average heatin value for propo laximum Inpi (Hs) kWI .1 1 .8 1 6-10G (DED	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 and galue for natural g and gas is 2,500 BTU vut Mir h (Hi) kWh (H 12.7 12.5 12.7 12.2	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI y/SCF, and a specific gr nimum Input Hs) kWh (Hi) i 11.3 2 11.3 REQUIRED CONNECT	Maximum Fue	OOK-UP: 3/4" el consumption* GPH N/A 0.5 oravity of 0.60. Gas Pressure nbar 20 20 37 Gas Pressure nbar	AGA Marked Appliances Natural Gas Propane Maximum G mb	Input MJ/h 50.6 as Pressure ar	Input MJ/h 33.8 Maxim	Pressure kPa 3.48	Pressure kPa 1.13 2.75	Consu m³/h 1.3 0.5	umptio L
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E 2LL 3P 3B/P ELECTRI	Maximum Input BTU/h 48,000 *Assumes an or The assumed mked M inces kWh (G20) 14 (G31) 13 CAL - CTPC VOLTAGE 120 120	TS (GAS TYF Minimum Input BTU/h 32,000 average heatin value for proper laximum Inpi (Hs) kWW 1 1 6-10G (DED PH H 1 (PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 and galue for natural g and gas is 2,500 BTU vut Mir h (Hi) kWh (H 12.7 12.5 12.7 12.5 DICATED CIRCUIT R HZ AWG (mm 60 12 (3.31)	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI //SCF, and a specific grn inimum Input 11.3 ts) kWh (Hi) j 11.3 2 11.3 REQUIRED) CONNEC no cord, 1 j CONNE(no cord, 1) j L1, L2/	Maximum Fue CFH 45.7 19.2 F and a specife g avity of 1.53 Nominal No CTION no plug (N, G	OOK-UP: 3/4" el Consumption* GPH N/A 0.5 travity of 0.60. Gas Pressure bar 20 20 20 20 20 20 20 20 37 29 AMPS 6.8	AGA Marked Appliances Natural Gas Propane Maximum G mb 50 51 51 51 51 51 51 51 51 51 51 51 51 51	Input MJ/h 50.6 as Pressure ar	Input MJ/h 33.8 Maxim CONNE no cord, L1, L2	Pressure kPa 3.48 3.48 num Fuel Consum m³ 1.3 1.6 0.5 0.5 WITH COMI r ictTION no plug r /N, G 1.4	Pressure kPa 1.13 2.75 aption BISMOKER* (AMPS BR AMPS BR BR 12.0 BR	Consu m³/h 1.3 0.5 OPTION REAKER 20	kW 1.5
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E 2LL 3P 3B/P ELECTRI A	Maximum Input BTU/h 48,000 ''Assumes an or The assumed mrked Maximum (G20) (G20) (G30) (G30) (G20) (G20) <t< td=""><td>Kigas Type Minimum Input BTU/h 32,000 average heatin average heatin value for proper Iaximum Inpu HS KWW .1 1 .8 1 6-10G (DED PH 1 1 1 1</td><td>Number of the state o</td><td>Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCF, inimum Input Hs) kWh (Hi) 5 11.3 2 11.3 2 11.3 REQUIRED) CONNEC no cord, 1 2 1.1.3</td><td>Maximum Fue CFH 45.7 19.2 F and a specific g avity of 1.53 Nominal D CTION no plug /N, G</td><td>OOK-UP: 3/4" el consumption* GPH N/A 0.5 ravity of 0.60. Gas Pressure hobar 20 20 20 20 37 29 AMPS 6.8 4.8 - 4.2</td><td>AGA Marked Appliances Natural Gas Propane Maximum G mb 50 51 51 51 51 51 51 51 51 51 51 51 51 51</td><td>Input MJ/h 50.6 as Pressure ar 0 kW .84 1.0</td><td>Input MJ/h 33.8 Maxim CONNE CONNE</td><td>Pressure kPa 3.48 </td><td>Pressure kPa 1.13 2.75 aption BISMOKER*6 AMPS BR 12.0 3 - 7.1</td><td>Consu m³/h 1.3 0.5 OPTION REAKER 20 15</td><td>kW 1.5 1.5 - 1</td></t<>	Kigas Type Minimum Input BTU/h 32,000 average heatin average heatin value for proper Iaximum Inpu HS KWW .1 1 .8 1 6-10G (DED PH 1 1 1 1	Number of the state o	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCF, inimum Input Hs) kWh (Hi) 5 11.3 2 11.3 2 11.3 REQUIRED) CONNEC no cord, 1 2 1.1.3	Maximum Fue CFH 45.7 19.2 F and a specific g avity of 1.53 Nominal D CTION no plug /N, G	OOK-UP: 3/4" el consumption* GPH N/A 0.5 ravity of 0.60. Gas Pressure hobar 20 20 20 20 37 29 AMPS 6.8 4.8 - 4.2	AGA Marked Appliances Natural Gas Propane Maximum G mb 50 51 51 51 51 51 51 51 51 51 51 51 51 51	Input MJ/h 50.6 as Pressure ar 0 kW .84 1.0	Input MJ/h 33.8 Maxim CONNE CONNE	Pressure kPa 3.48	Pressure kPa 1.13 2.75 aption BISMOKER*6 AMPS BR 12.0 3 - 7.1	Consu m³/h 1.3 0.5 OPTION REAKER 20 15	kW 1.5 1.5 - 1
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia ZE 2LL 3P 3B/P ELECTRI A A A	Maximum Input BTU/h 48,000 "Assumes an a The assumed mked Maximum (G20) (G20) (G20) </td <td>Kigas Type Minimum Input BTU/h 32,000 average heatin value for propo laximum Inpi (Hs) kWI .1 1 .8 1 6-10G (DED PH 1 1 1 1 1 1 1 6-10G (DED PH 1 1 3 3 3 3 3</td> <td>PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 ng value for natural g ane gas is 2,500 BTU, yut Miri (h (Hi) kWh (Fi 12.7 12.8 0/CATED CIRCUIT F HZ AWG (mm 60 12 (3.31) 0/60 14 (2.08) 0/60 14 (2.08)</td> <td>Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI y/SCF, and a specific gr nimum Input Hs) kWh (Hi) i 11.3 2 11.3 REQUIRED CONNE(no cord, I) 1 L1, L2/ 1 L1, L2, L</td> <td>Maximum Fue CFH 45.7 19.2 F and a specific gravity of 1.53 Nominal n CTION no plug /N, G 13, G 3, N, G</td> <td>OOK-UP: 3/4" Consumption* GPH N/A 0.5 aravity of 0.60. Gas Pressure nbar 20 37 29 AMPS 6.8 4.8 - 4.2 4.8 - 4.2 4.6 - 4.2</td> <td>AGA Marked Appliances Natural Gas Propane Maximum G mb 50 50 50 50 50 50 50 51 51 51 51 51 51 51 51 51 51 51 51 51</td> <td>Input MJ/h 50.6 as Pressure ar 0 kW .84 1.0 1.0 1.0</td> <td>Input MJ/h 33.8 Maxim CONNE no cord, L1, L2 L1, L2 L1, L2,</td> <td>Pressure kPa 3.48 </td> <td>Pressure kPa 1.13 2.75 aption 3.75 BISMOKER*0 BR 12.0 3.7.1 3.7.1 2.7.1</td> <td>Consu m³/h 1.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5</td> <td>kW 1.5 1.5 - J</td>	Kigas Type Minimum Input BTU/h 32,000 average heatin value for propo laximum Inpi (Hs) kWI .1 1 .8 1 6-10G (DED PH 1 1 1 1 1 1 1 6-10G (DED PH 1 1 3 3 3 3 3	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 ng value for natural g ane gas is 2,500 BTU, yut Miri (h (Hi) kWh (Fi 12.7 12.8 0/CATED CIRCUIT F HZ AWG (mm 60 12 (3.31) 0/60 14 (2.08) 0/60 14 (2.08)	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI y/SCF, and a specific gr nimum Input Hs) kWh (Hi) i 11.3 2 11.3 REQUIRED CONNE(no cord, I) 1 L1, L2/ 1 L1, L2, L	Maximum Fue CFH 45.7 19.2 F and a specific gravity of 1.53 Nominal n CTION no plug /N, G 13, G 3, N, G	OOK-UP: 3/4" Consumption* GPH N/A 0.5 aravity of 0.60. Gas Pressure nbar 20 37 29 AMPS 6.8 4.8 - 4.2 4.8 - 4.2 4.6 - 4.2	AGA Marked Appliances Natural Gas Propane Maximum G mb 50 50 50 50 50 50 50 51 51 51 51 51 51 51 51 51 51 51 51 51	Input MJ/h 50.6 as Pressure ar 0 kW .84 1.0 1.0 1.0	Input MJ/h 33.8 Maxim CONNE no cord, L1, L2 L1, L2 L1, L2,	Pressure kPa 3.48	Pressure kPa 1.13 2.75 aption 3.75 BISMOKER*0 BR 12.0 3.7.1 3.7.1 2.7.1	Consu m³/h 1.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	kW 1.5 1.5 - J
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E 2LL 3P 3B/P ELECTRI A A A A A A A A A A A A	Maximum Input BTU/h 48,000 'Assumes an or The assumed inces M (620) 14 (631) 13 (630) 14 (631) 13 CAL - CTPE VOLTAGE 120 208 - 240 208 - 240 380 - 415 ERICA VOLTAGI 380 - 415	Kigas Typ Minimum Input BTU/h 32,000 average heatin average heatin value for properties akimum Input Iaximum Input Baximum Input 6-10G (DED PH 1 6 1 5 0 5 0 5 0 5 6 1 6 1 6 1 6 1 6 1 6 1 6 1 50 50 6 6	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 ang value for natural g ane gas is 2,500 8TU, vut Maximum Inlet Pressure 14.0 ang value for natural g ane gas is 2,500 8TU, vut Maximum Inlet Mit Augusta 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.8 0/CATED CIRCUIT R HZ AWG (mm 60 12 (3.31) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08)	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCF, ond a specific grn 11.3 i 11.3	Maximum Fue CFH 45.7 19.2 F and a specific g avity of 1.53 Nominal 1 n CTION no plug /N, G L3, G J3, N, G PROTECTION	Amplify Amplify OOK-UP: 3/4" 3/4" el Consumption* GPH N/A 0.5 iravity of 0.60. Gas Pressure Gas Pressure Manual State 20 20 20 37 29 State AMPS 6.8 4.8 - 4.2 4.8 - 4.2 4.6 - 4.2 Device MUST ACCCO	AGA Marked Appliances Natural Gas Propane Maximum G mb 50 50 50 50 50 51 51 51 51 51 51 51 51 51 51 51 51 51	Input MJ/h 50.6 as Pressure ar 0 kW .84 1.0 1.0 1.0	Input MJ/h 33.8 Maxim CONNE no cord, L1, L2 L1, L2 L1, L2,	Pressure kPa 3.48	Pressure kPa 1.13 2.75 aption 3.75 BISMOKER*0 BR 12.0 3.7.1 3.7.1 2.7.1	Consu m³/h 1.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	kW 1.5 1.5 - 1 1.5 - 1
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E 2LL 3P 3B/P ELECTRI A A A NORTH AM	Maximum Input BTU/h 48,000 'Assumes an or The assumed inces M (620) 14 (631) 13 (630) 14 (631) 13 CAL - CTPE VOLTAGE 120 208 - 240 208 - 240 380 - 415 ERICA VOLTAGI 315	Kigas Typ Minimum Input BTU/h 32,000 average heatin average heatin value for properties akimum Input Iaximum Input Baximum Input 6-10G (DED PH 1 6 1 5 0 5 0 5 0 5 6 1 6 1 6 1 6 1 6 1 6 1 6 1 50 50 6 6	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 ng value for natural g ane gas is 2,500 BTU, yut Mirit KWh (Hi) kWh (Hi) L2.7 12.7 DICATED CIRCUIT FF HZ AWG (mm 60 12 (3.31) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08)	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI (/SCF, and a specific grn inimum Input Hs) kWh (Hi) 5 11.3 2 11.3 REQUIRED) CONNEC no cord, 1 0 L1, L2/ 1 L1, L2, L 0 L1, L2, L 1 L1, L2, L	Maximum Fue CFH 45.7 19.2 F and a specific g avity of 1.53 Nominal 1 Nominal 1 Nominal 1 N CTION no plug N, G L3, G J3, N, G PROTECTION I CONNECTED TO	Amplify Amplify OOK-UP: 3/4" 3/4" el Consumption* GPH N/A 0.5 iravity of 0.60. Gas Pressure Gas Pressure Manual State 20 20 20 37 29 State AMPS 6.8 4.8 - 4.2 4.8 - 4.2 4.6 - 4.2 Device MUST ACCCO	AGA Marked Appliances Natural Gas Propane Maximum G mb 50 50 50 50 50 51 51 51 51 51 51 51 51 51 51 51 51 51	Input MJ/h 50.6 as Pressure ar 0 kW .84 1.0 1.0 1.0	Input MJ/h 33.8 Maxim CONNE no cord, L1, L2 L1, L2, OF 20mA	Pressure kPa 3.48	Pressure kPa 1.13 2.75 aption 3.75 BISMOKER*0 BR 12.0 3.7.1 3.7.1 2.7.1	Consumination of the second se	kW 1.5 1.5 - 1 1.6 - 1
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Marked Applia 2E 2LL 3P 3B/P ELECTRI A A A A A A A A A A A	Maximum Input BTU/h 48,000 'Assumes an or The assumed inces M (620) 14 (631) 13 CAL - CTPC VOLTAGE 120 208 - 240 208 - 240 380 - 415 SEIERICA VOLTAGE 120 120 208 - 240 208 - 240 200 - 415	Kigas Typ Minimum Input BTU/h 32,000 average heatin average heatin value for properties akimum Input Iaximum Input Baximum Input 6-10G (DED PH 1 6 1 5 0 5 0 5 0 5 6 1 6 1 6 1 6 1 6 1 6 1 6 1 50 50 6 6	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 ng value for natural g ane gas is 2,500 BTU ng value for natural g ane gas is 2,500 BTU ng value for natural g ane gas is 2,500 BTU ng value for natural g ane gas is 2,500 BTU ng value for natural g Mir http://www.maximum 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.3 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 14 (2.08) 0/60 12 (2.38 kg)	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI //SCF, and a specific grn inimum Input Hs) kWh (Hi) 5 11.3 2 11.3 2 11.3 REQUIRED) CONNEC no cord, 1 2 ²) CONNE(no cord, 1 1 L1, L2/ 1 L1, L2, L 1 L1, L2, L 1 L1, L2, L 1 EPERMANENTLY PAN CAPACITY FULL-SIZE:	Maximum Fue CFH 45.7 19.2 F and a specific g avity of 1.53 Nominal T CTION no plug /N, G L3, G 3, N, G PROTECTION D CONNECTED TO CONNECTED TO 20" x	AMPS Amps 6.8 4.8 - 4.2 4.8 - 4.2 4.8 - 4.2	AGA Marked Appliances Natural Gas Propane Maximum G mb 50 50 50 50 50 51 51 51 51 51 51 51 51 51 51 51 51 51	Input MJ/h 50.6 as Pressure ar 0 kW .84 1.0 1.0 1.0 AGE CURENT STANDAR Seve	Input MJ/h 33.8 Maxim CONNE no cord, L1, L2 L1, L2, OF 20MA D MODEL n (7)	Pressure kPa 3.48	Pressure kPa 1.13 1.75 aption 1.13 BISMOKER*0 1.13 AMPS BR 12.0 .3 - 7.1 .3 - 7.1 .2 - 7.1 OLTAGE CHOICE TH COMBISI Si Si	Const m³/h 1.3 0.5	kW 1.5 1.5 - 1 1.6 - 1
Water sup GAS REQ UL Marked Appliances Natural Gas Propane CE Ma Applia 2E 2LL 3P 3B/P ELECTRI A A A NORTH AM SERVICE CH/ WEIGHT	Maximum Input BTU/h 48,000 *Assumes an or The assumed mked Mances kWh (G20) (G31) (G30) 13 CAL - CTP(C) VOLTAGE 120 208 - 240 208 - 240 380 - 415 TERICA VOLTAGE 5	Kigas Typ Minimum Input BTU/h 32,000 average heatin average heatin value for properties aiximum Inpi (Hs) kWW .1 1 6-10G (DED PH 1 1 3 50 3 50 6 CHOICE A PER UL RE	PE MUST BE SPEC Maximum Inlet Pressure Inches WC 14.0 Ing value for natural g ane gas is 2,500 BTU, mut Min (h (Hi) KWh (H 12.7 12.5 12.7 12.2 DICATED CIRCUIT R HZ AWG (mm 60 12 (3.31) 0/60 14 (2.08) 0/60 14	Minimum Inlet Pressure Inches WC 5.5 9.0 gas to be 1050 BTU/SCI (/SCF, and a specific grn inimum Input 11.3 ts) kWh (Hi) i1.3 11.3 2 11.3 p2 ¹ CONNE(no cord, 1) j L1, L2/) j L1, L2/) j L1, L2, L L1, L2, L R RESIDUAL CURRENT ST BE PERMANENTLY PAN CAPACITY	Maximum Fue	OOK-UP: 3/4" el Consumption* GPH N/A 0.5 travity of 0.60. Gas Pressure nbar 20 20 20 20 37 29 AMPS 6.8 4.8 - 4.2 4.6 - 4.2 DeVice MUST ACCCO DEUCTRICAL SUP	AGA Marked Appliances Natural Gas Propane Maximum G mb 50 50 50 50 50 51 51 51 51 51 51 51 51 51 51 51 51 51	Input MJ/h 50.6 as Pressure aar	Input MJ/h 33.8 Maxim CONNE no cord, L1, L2 L1, L2 L1, L2, OF 20MA D MODEL n (7) n (7)	Pressure kPa 3.48	Pressure kPa 1.13 2.75 aption 3.75 BISMOKER*0 6 AMPS BF 12.0 3.71 .3.71 2.71 .3.71 2.71 .3.71	COPTION REAKER 20 15 15 ELECTRICAL MOKER [®] OF	kW 1.5 1.5 - 1 1.6 - 1

72 lb (33 kg)

45 quarts (57 liters)

**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

PRODUCT MAXIMUM

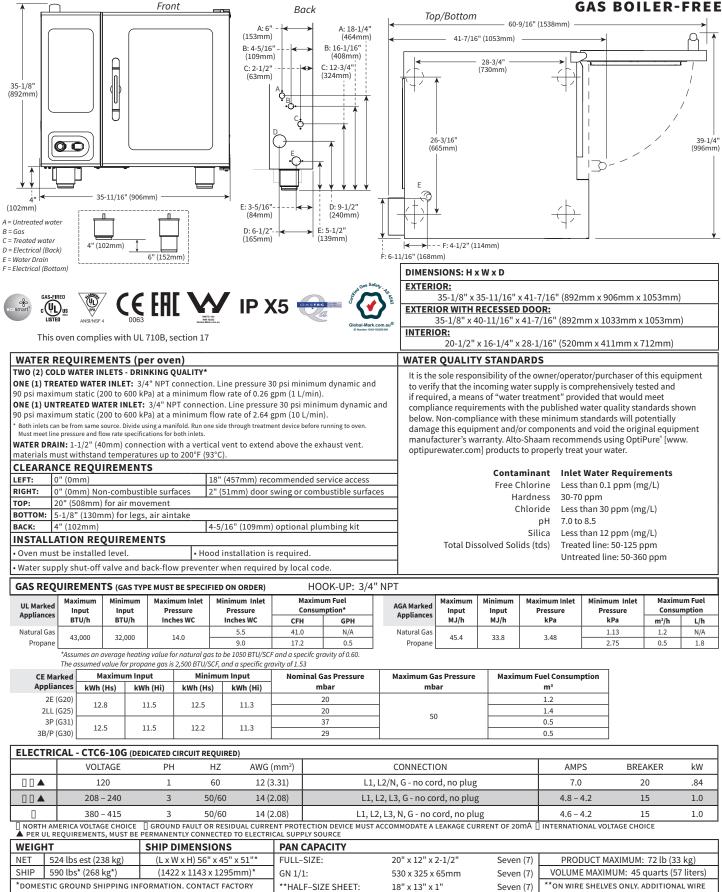
VOLUME MAXIMUM

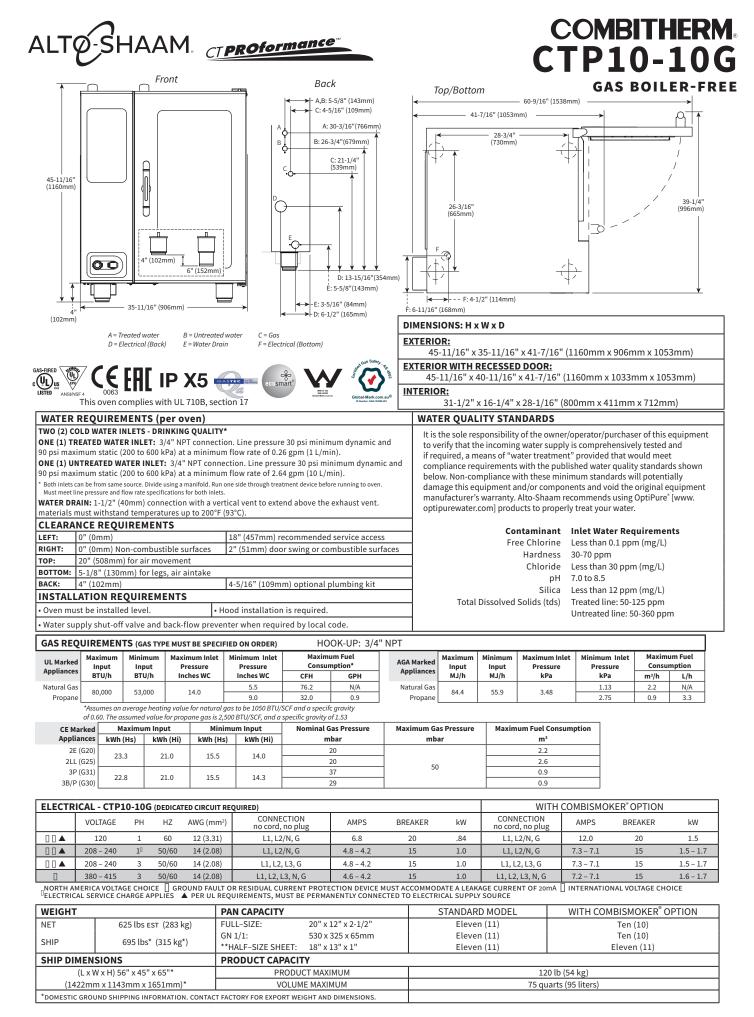


FOR EXPORT WEIGHT AND DIMENSIONS

COMBITHERM. CTC6-10G GAS BOILER-FREE

SHELVES REQUIRED FOR MAXIMUM CAPACITY







 SHIP
 695 lbs* (315 kg*)
 (1422 x 1143 x 1651mm)*

*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY

FOR EXPORT WEIGHT AND DIMENSIONS.

COMBITHERM. CTC10-10G GAS BOILER-FREE

VOLUME MAXIMUM: 75 quarts (95 liters)

SHELVES REQUIRED FOR MAXIMUM CAPACITY

**ON WIRE SHELVES ONLY. ADDITIONAL WIRE

Eleven (11)

Eleven (11)

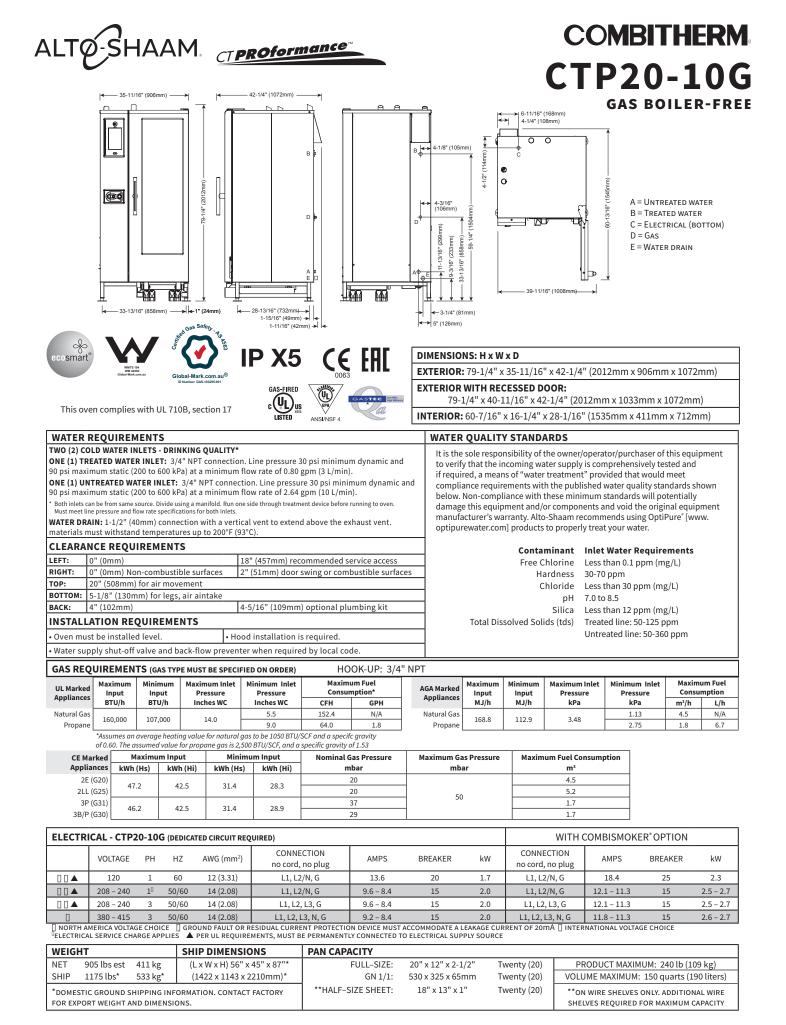
		Fr	ont			Back					G	AS BOI	LER-	FRI
		┢			i La		(0) (142	То	p/Bottom					I
							/8" (143mm) 6" (109mm)	<	41-7/	16" (1053mm	50-9/16" (1538mm))			a
1/16" 0mm)						B: 26-3/ C: (5:	-3/16"(766mm) 4"(679mm) 21-1/4" 399mm)		26-3/16" (665mm)	– 28-3/4" — (730mm)				/ /
		4" (102m	6" (152r			É: 5	D: 13-15/16"(354m -5/8"(143mm) 6" (84mm)			" (114mm)				
4" ^ 2mm)		5-11/16" (90	*		←		" (165mm)	F: 6-11/16" (16						
			ated water ctrical (Back)	B = Untre E = Water		= Gas = Electrical (Bo	ttom)	DIMENSIO		x D				
		EAC	IP X5		ecosmart [®]		Jundons Safety - To Fr	45-11 EXTERIOR	L/16" x 35- WITH REC	ESSED D	1-7/16" (1160r DOR: 1-7/16" (1160m			
ANSI/NSF	* 0063		with UL 71			Wild 4000 Ginibah Mark.com.au	Global-Mark.com.au [®] ID Number: GAS-102285-001	INTERIOR:						/
		· · ·	(per over						1-1/2" x 10 QUALIT		-1/16" (800mn	1 x 411mm x <i>1</i>	12mm)	
naterials mu CLEARAN LEFT: 0 RIGHT: 0 TOP: 2 BOTTOM: 5	ust withst: CE REQ " (0mm) 0" (508m) -1/8" (130 " (102mm) TION R	Non-combu m) for air m m) for len m) EQUIREI	atures up to NTS ustible surfa novement egs, air ainta	200°F (93°C 18° ces 2" ake 4-5	' (457mm) reco (51mm) door s 5/16" (109mm)	ommended swing or con	service access nbustible surfac	optipu	rewater.con	n] products Conta Free C Ha	ardness 30-70 hloride Less t pH 7.0 to Silica Less t ds (tds) Treat	your water. Water Requir han 0.1 ppm (n ppm han 30 ppm (m 8.5 han 12 ppm (m ed line: 50-125	ements ng/L) g/L) ppm	
			d back-flow		installation is when require		ode				Untre	ated line: 50-36	60 ppm	
					D ON ORDER)		OOK-UP: 3/4	<u> </u>						
UL Marked	Maximur Input		m Maximu		Ainimum Inlet Pressure		el Consumption*	AGA Marked	Maximum Input	Minimum Input	Maximum Inlet Pressure	Minimum Inlet Pressure		um Fuo Imptio
Appliances Natural Gas	BTU/h 70,000	BTU/ł 53,000		es WC	Inches WC 5.5	CFH 66.7	GPH N/A	Appliances Natural Gas	MJ/h 73.9	MJ/h 55.9	kPa 3.48	kPa 1.13	m ³ /h 2.0	L/ N,
Propane		,			9.0 o be 1050 BTU/SCI	28.0 and a specifc	0.8 gravity of 0.60.	Propane	13.9	55.9	3.48	2.75	0.8	2
CE Ma		ed value for p Maximum			and a specific gro um Input		Gas Pressure	Maximum G	as Pressure	Maxim	ium Fuel Consump	tion		
Applia	nces kV	Vh (Hs)	kWh (Hi)	kWh (Hs)	kWh (Hi)		mbar	mb			m ³			
	(G20) (G25)	20.5	18.5	15.5	14.0		20 20	-			2.0			
3P 3B/P	(G31) (G30)	20.1	18.5	15.5	14.3	- 50)		0.8 0.8					
			•		· ·			•						
ELECTRIC		C10-10G LTAGE	(DEDICATED PH	CIRCUIT REG		G (mm²)		CONNEC			AMP	C DDC	AKER	k٧
	-	120	<u>РН</u> 1	<u>н</u> 6		2 (3.31)	1	L2/N, G - no c		ug	AMP 7		20	.84
		3 - 240	3	50/		(2.08)		L2, L3, G - no		0	4.8 - 4		15	1.0
) – 415	3	50/		(2.08)		2, L3, N, G - no		0	4.6 - 4		15	1.0
NORTH AI		LTAGE CHO	ICE GROU	JND FAULT (OR RESIDUAL C	URRENT PRO		E MUST ACCOMM		. 0	ENT OF 20mA	NTERNATIONAL	/OLTAGE	
WEIGHT				MENSIO		PAN CAF								
NET 62	5 lbs est		(L x W	x H) 56" x	45" x 65"*	FULL-SIZI		20" x 12" x 2	'	Eleven (JCT MAXIMUM:		0.

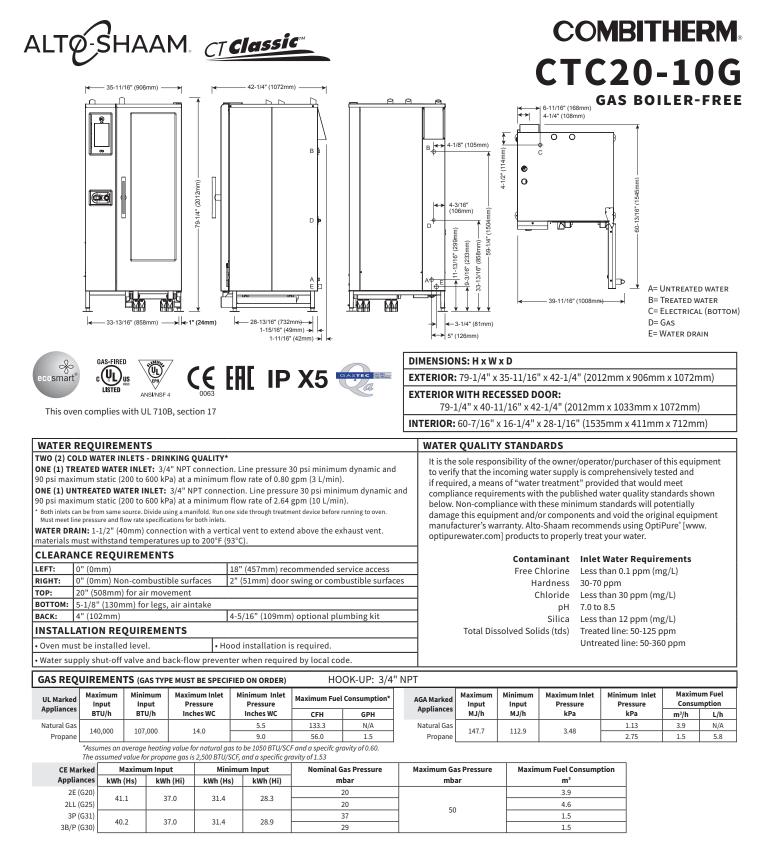
530 x 325 x 65mm

18" x 13" x 1"

GN 1/1:

**HALF-SIZE SHEET:





ELECTR	ELECTRICAL - CTC20-10G (DEDICATED CIRCUIT REQUIRED)												
	VOLTAGE	PH	HZ	AWG (mm ²)	CONNECTION	AMPS	BREAKER	kW					
	120	1	60	12 (3.31)	L1, L2/N, G - no cord, no plug	13.0	20	1.7					
	208 – 240	3	50/60	14 (2.08)	L1, L2, L3, G - no cord, no plug	9.6 - 8.4	15	2.0					
	380 - 415	3	50/60	14 (2.08)	L1, L2, L3, N, G - no cord, no plug	9.2 - 8.4	15	2.0					
OROTH AMERICA VOLTAGE CHOICE GROUND FAULT OR RESIDUAL CURRENT PROTECTION DEVICE MUST ACCOMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE FRUIT REQUIREMENTS, MUST BE PERMANENTLY CONNECTED TO ELECTRICAL SUPPLY SOURCE													

WEIG	HT		SHIP DIMENSIONS	PAN CAPACITY			
NET	905 lbs est	411 kg	(L x W x H) 56" x 45" x 87"*	FULL-SIZE:	20" x 12" x 2-1/2"	Twenty (20)	PRODUCT MAXIMUM: 240 lb (109 kg)
SHIP	1175 lbs*	533 kg*	(1422 x 1143 x 2210mm)*	GN 1/1:	530 x 325 x 65mm	Twenty (20)	VOLUME MAXIMUM: 150 quarts (190 liters)
*DOME	STIC GROUND S	HIPPING IN	FORMATION. CONTACT FACTORY	**HALF-SIZE SHEET:	18" x 13" x 1"	Twenty (20)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE
FOR E	PORT WEIGHT A	ND DIMENS	IONS.				SHELVES REQUIRED FOR MAXIMUM CAPACITY.



COMBITHERM. **CTP7-20G** Ε

						Ва	ck	To	op/Bottoi				5 BOIL	ER-FR
1	P		Fro	nt		27mm)	① 19-1/16" (484mm)	←	46-3	/16" (1173mm	3-5/16" (1863mm)	∪ <u> </u>		
37-13/16" (961mm) ↓ ↓ ↓ (102mm)			3/4" (1111mm)		(10)	5/16" ++ 1/8"++ 1/8" ++ 1/8" ++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"++ 1/8"+++ 1/8"+++ 1/8"+++ 1/8"+++ 1/8"+++ 1/8"++++ 1/8"+++++++++++++++++++++++++++++++++	© 16-7/16" (417mm) © 12-3/16" (309mm) 0 (194mm) (194mm)		34-1/4" (870mm)	– 30-13/16" – (783mm)				47-7/16" (1205mm)
	*	4" (10])2mm)6" (15 6" (15) 6" (15)	52mm)		27mm) A = Treated B = Gas C = Electric D = Untreat E = Water D F = Electric GAS-FIRED	al (Back) ted water train	© 6-11/16" (1 DIMENSIO	ONS: H x <u>R:</u>	W x D	46.2/16" (06		.1mm x 1173	
er gy C ed	o s mart [®]		ଁ (ଏ)	IP)	(5 💬	։ (ՍՆ) ա	• (E			ECESSED		111111 X 111	.1mm x 1173	mm)
His oven co	omplies	with UL	Global-Mark.com.au [®]	on 17			FAL	37 INTERIOF	<u> </u>				8mm x 1173	
	FOUIE	EMENT	S (per ov	(00)		ANSI/NSF 4	LIIL			(24-1/4" x		0mm x 616i	mm x 832mn	ו)
Both inlets car Must meet line ATER DRAI Inaterials mu LEARAN EFT: 0 IGHT: 0 OP: 2 OTTOM: 5 ACK: 4	be from s. pressure a N: 1-1/2 ast withs CE RE " (0mm) 0" (508r -1/8" (1 " (102m TION	me source. nd flow rate " (40mm) tand tem QUIREN Non-con m) for ai 30mm) for m) REQUIR	Divide using a m specifications for connection peratures up IENTS nbustible su movemen r legs, air a EMENTS	anifold. Run o or both inlets. with a vert to 200°F (S urfaces t intake	18" (457mm) re	tment device before ecommended or swing or co m) optional p	re running to oven. exhaust vent. service access mbustible surface	dama manu optip	age this eq ufacturer's urewater.c	uipment an warranty. A com] produc Con Free	d/or compone lto-Shaam re- cts to properly taminant e Chlorine Hardness Chloride pH Silica iolids (tds)	ents and voic commends u y treat your w Inlet Water Less than 0.: 30-70 pm Less than 30 7.0 to 8.5 Less than 12 Treated line:	Requiremen 1 ppm (mg/L) 9 ppm (mg/L) 9 ppm (mg/L) 50-125 ppm	quipment ' [www. 1ts
					ter when requi		ode.					Untreated In	ne: 50-360 ppr	n
GAS REQU	JIREM	ENTS (G/	AS TYPE MUS	T BE SPECIF	IED ON ORDER)		OK-UP: 3/4" N	PT						
UL Marked	Maximu Input	m Minii Ing		mum Inlet ressure	Minimum Inlet Pressure		um Fuel mption*	AGA Marked	Maximum Input	Minimum Input	Maximum Inle Pressure	et Minimum Pressu	inter Com	num Fuel sumption
Appliances Natural Gas Propane	BTU/h 98,000	65,0		14.0	Inches WC 5.5 9.0	CFH 93.3 39.2	GPH N/A 1.1	Appliances Natural Gas Propane	MJ/h 103.4	MJ/h 68.6	kPa 3.48	kPa 1.13 2.75	2.7	LPH N/A 4.1
					as to be 1050 BTU, 500 BTU/SCF, and a	/SCF and a speci	fc gravity							
CE Mar Appliar 2E (0	rked nces k	Maximu Wh (Hs)		- <u>,</u>	mum Input	Nominal	Gas Pressure nbar 20	Maximum Ga mba		Maxim	um Fuel Consu m ³ 2.8	mption		
2LL (2LL (3P (3B/P (G25) G31)	29.4 28.8	26.5 26.5	20.0	18.0		20 37 29	50	I		3.3 1.1 1.1			
		P7-200	(DEDICATED	CIRCUIT RE	QUIRED)	1							ER®OPTION	
	VOLTA		-	AWG (n	CON	NECTION rd, no plug	AMPS	BREAKER	kW	CONNE no cord,	CTION	AMPS	BREAKER	kW
	120	1		12 (3.3	31) L:	1, N, G	6.8	20	.84	L1, ľ	N, G	12.0	20	1.5
	208 – 2 208 – 2			14 (2.0		L2/N, G L2, L3, G	4.8 - 4.2 4.8 - 4.2	15 15	1.0	L1, L2 L1, L2,		7.3 - 7.1	15 15	1.5 - 1.7
	380 - 4	15 3	50/60	14 (2.0	08) L1, L2	2, L3, N, G	4.6 - 4.2	15	1.0	L1, L2, I	_3, N, G	7.2 - 7.1	15	1.6 - 1.7
LECTRICAL	IERICA V	CHARGE CHARGE	HOICE ∐ GR APPLIES ▲	OUND FAUL	T OR RESIDUAL (QUIREMENTS, M	CURRENT PRO	TECTION DEVICE M	ED TO ELECTRI	ICAL SUPPL	Y SOURCE	ENT OF 20mA	-		
VEIGHT					AN CAPACITY		20" x 12" x 2-1/2"		STANDAR Sixtee	D MODEL			BISMOKER [®] Fifteen (15)	OPTION
IET	6	60 lbs es 728 lbs*		0 kg) kg*	G GI	N 1/1: 5 N 2/1: 6	30 x 325 x 65mm 50 x 530 x 65mm		Sixtee Eigh	en (16) it (8)			Fifteen (15) Seven (7)	
HIP	1				**FULL-SIZE S	ntti:	18" x 26" x 1"	1	Eigh	ıt (8)	1		Eight (8)	
	ENSIO	NS			RODUCT CA	PACITY								
·	x W x H) 56" x 49	" x 51"* 1295mm)*		RODUCT CA	PACITY RODUCT MAX OLUME MAXI					168 lb (105 guarts (0.		





					Back		Тор/Во	ttom					
	n	C FI	ront	0 5" (127mm)		① 19-1/16" (484mm)	·	46-3/16" (117	— 73-5/16" (: 3mm) —	1863mm)			
37-13/16" (961mm) 		43-3/4" (1111m "(102mm)6"	m)	(9.4-5/16" - (109mm) (9.2-1/8" (53mm) (9.3-5/16" (84mm) (9.5" (127mm) (2.5"		Ø 16-7/16" (417mm) -3/16" (99mm) @ 7-11/16" (194mm) 5-5/8" (143mm)	34-1 (870r © © 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30-13/ (783m	16"			47-7/16 (1205mm	
			Gas Safety	L	= Water Drain = Electrical (Bott		DIMENSIO	IC. Ц у W					
an and the	*		To ass	IP X5	FMF	GAS-FIRED	EXTERIOR:						
ENERGY STAR	ecosmart	WHTS 104 WH 40022 Global-Mark corn au	Global-Mark com su [®]		tHL		37-1	3/16" x 43		, ,	n x 1111mm x 1	173mm)
			ID Number: GAS-10225-001			(U)	EXTERIOR 37-1				n x 1238mm x 1	173mm)
This ove	ven complie	s with UL 71	0B, section 17	CASTEC 2	0063	ANSI/NSF 4	INTERIOR:				n x 616mm x 83		/
		MENTS (pe	er oven) IKING QUALITY*				WATER	QUALIT	STAND	ARDS			
90 psi maxin * Both inlets car Must meet line WATER DRAI materials mu CLEARAN LEFT: 0 RIGHT: 0 TOP: 2 BOTTOM: 5 BACK: 4 INSTALLA • Oven must	mum static (nn be from same ee pressure and 1 IN: 1-1/2" (4 ust withstar ICE REQU 0" (0mm) 0" (0mm) No 20" (508mm 5-1/8" (130r 4" (102mm) ATION RE t be installed	200 to 600 kF source. Divide us flow rate specific: domm) conne nd temperatu JIREMENT Don-combustii) for air moven nm) for legs, QUIREME ed level.	a) at a minimum ing a manifold. Run o ations for both inlets. ction with a verti- res up to 200°F (S S ble surfaces ement air aintake NTS • Ho	ction. Line pressu flow rate of 2.64 ne side through treatm ical vent to exten 93°C). 18" (457mm) rec 2" (51mm) door 4-5/16" (109mm bod installation i ter when require	gpm (10 L/mir nent device before d above the ex- commended s swing or com n) optional plu is required.	n). running to oven. khaust vent. ervice access bustible surfac umbing kit	damag manufa optipur	Non-compl e this equip cturer's wa ewater.con	iance with t ment and/o rranty. Alto] products Conta Free C Ha	these minimum s or components a -Shaam recomm to properly treat minant Inlet hlorine Less t ardness 30-70 hloride Less t pH 7.0 to Silica Less t ids (tds) Treat	Water Require than 0.1 ppm (m) ppm than 30 ppm (mg	tentially nal equip Pure [®] [ww ements g/L) g/L) g/L) pm	ment
GAS REO				FIED ON ORDER)	HO	OK-UP: 3/4'	' NPT						
v	UIREMEN	TS (GAS TYP	E MOST DE SPECI								Minimum Inlet	Maxim	
UL Marked Appliances	Maximum	ITS (GAS TYP Minimum Input BTU/h	Maximum Inlet Pressure Inches WC	Minimum Inlet Pressure Inches WC	Maximum Fue	l Consumption*	AGA Marked Appliances	Maximum Input MJ/h	Minimum Input MJ/h	Maximum Inlet Pressure kPa	Pressure kPa	Consu m³/h	mption L/h
UL Marked Appliances Natural Gas	Maximum Input BTU/h	Minimum	Maximum Inlet Pressure	Minimum Inlet Pressure	Maximum Fue CFH 81.0		AGA Marked Appliances Natural Gas	Input	Input	Pressure	kPa 1.13	Consu m ³ /h 2.4	mption L/h N/A
UL Marked Appliances	Maximum Input BTU/h 85,000 *Assumes an	Minimum Input BTU/h 65,000 average heating	Maximum Inlet Pressure Inches WC 14.0 value for natural gas	Minimum Inlet Pressure Inches WC 5.5	Maximum Fuel CFH 81.0 34.0 and a specifc gravi	GPH N/A 0.9	AGA Marked Appliances	Input MJ/h	Input MJ/h	Pressure kPa	kPa	Consu m³/h	mption L/h
UL Marked Appliances Natural Gas Propane CE Ma	Maximum Input BTU/h 85,000 *Assumes an assumed valu arked	Minimum Input BTU/h 65,000 average heating te for propane ge Maximum Inpu	Maximum Inlet Pressure Inches WC 14.0 value for natural gas is is 2,500 BTU/SCF, a t Min	Minimum Inlet Pressure Inches WC 5.5 9.0 to be 1050 BTU/SCF of and a specific gravity of inimum Input	Maximum Fuel CFH 81.0 34.0 and a specifc gravi f 1.53 Nominal C	GPH N/A 0.9 ity of 0.60. The Gas Pressure	AGA Marked Appliances Natural Gas Propane Maximum Ga	Input MJ/h 89.7 s Pressure	Input MJ/h 68.6	Pressure kPa 3.48 num Fuel Consumpt	kPa 1.13 2.75	Consu m ³ /h 2.4	mption L/h N/A
UL Marked Appliances Natural Gas Propane CE Ma Applia	Maximum Input BTU/h 85,000 *Assumes an assumed valu arked ances kWh (G20)	Minimum Input BTU/h 65,000 average heating te for propane gr Maximum Inpu I(Hs) kWl	Maximum Inlet Pressure Inches WC 14.0 value for natural gas ts is 2,500 BTU/SCF, au t Min n (Hi) kWh (Hs	Minimum Inlet Pressure Inches WC 5.5 9.0 s to be 1050 BTU/SCF of a specific gravity of nimum Input s) kWh (Hi)	Maximum Fuel CFH 81.0 34.0 and a specifc gravi f 1.53 Nominal C	GPH N/A 0.9 ity of 0.60. The	AGA Marked Appliances Natural Gas Propane	Input MJ/h 89.7 s Pressure	Input MJ/h 68.6	Pressure kPa 3.48	kPa 1.13 2.75	Consu m ³ /h 2.4	mption L/h N/A
UL Marked Appliances Natural Gas Propane CE Ma Applia 2E (2LL (Maximum Input BTU/h 85,000 *Assumes an assumed valu arked ances kWh (G20) (G25)	Minimum Input BTU/h 65,000 average heating te for propane gr Maximum Inpu I(Hs) kWl	Maximum Inlet Pressure Inches WC 14.0 value for natural gas is is 2,500 BTU/SCF, a t Min	Minimum Inlet Pressure Inches WC 5.5 9.0 to be 1050 BTU/SCF of and a specific gravity of inimum Input	Maximum Fuel CFH 81.0 34.0 and a specifc gravi f 1.53 Nominal C m	GPH N/A 0.9 ity of 0.60. The Gas Pressure bbar 20 20	AGA Marked Appliances Natural Gas Propane Maximum Ga	Input MJ/h 89.7 s Pressure	Input MJ/h 68.6	Pressure kPa 3.48 num Fuel Consumpt m ³ 2.4 2.8	kPa 1.13 2.75	Consu m ³ /h 2.4	mption L/h N/A
UL Marked Appliances Natural Gas Propane CE Ma Applia 2E (2LL (Maximum Input BTU/h 85,000 *Assumed valu arked ances kWh (G20) (G25) 25 (G31) 20	Minimum Input BTU/h 65,000 average heating te for propane ge Maximum Inpu (Hs) kWI 5.0 2	Maximum Inlet Pressure Inches WC 14.0 value for natural gas ts is 2,500 BTU/SCF, au t Min n (Hi) kWh (Hs	Minimum Inlet Pressure Inches WC 5.5 9.0 s to be 1050 BTU/SCF of a specific gravity of nimum Input s) kWh (Hi)	Maximum Fuel CFH 81.0 34.0 and a specifc gravi f 1.53 Nominal C	GPH N/A 0.9 ity of 0.60. The Gas Pressure bbar 20	AGA Marked Appliances Natural Gas Propane Maximum Ga mba	Input MJ/h 89.7 s Pressure	Input MJ/h 68.6	Pressure kPa 3.48 num Fuel Consumpt m ³ 2.4	kPa 1.13 2.75	Consu m ³ /h 2.4	mption L/h N/A
UL Marked Appliances Natural Gas Propane CE Ma Applia 2E (2LL (3P 3B/P (Maximum Input BTU/h 85,000 *Assumes an assumed valu arked ances (G20) (G25) (G31) (G30)	Minimum Input BTU/h 65,000 average heating te for propane go Maximum Input (Hs) kWl 5.0 2 3.5 2	Maximum Inlet Pressure Inches WC 14.0 value for natural gas is is 2,500 BTU/SCF, a t Min n (Hi) KWh (H: 2.5 20.0 2.5 19.5	Minimum Inlet Pressure Inches WC 5.5 9.0 sto be 1050 BTU/SCF of a specific gravity of imum Input s) kWh (Hi) 18.0 18.0	Maximum Fuel CFH 81.0 34.0 and a specifc gravi f 1.53 Nominal C	GPH N/A 0.9 ity of 0.60. The Gas Pressure bbar 20 20 37	AGA Marked Appliances Natural Gas Propane Maximum Ga mba	Input MJ/h 89.7 s Pressure	Input MJ/h 68.6	Pressure kPa 3.48 num Fuel Consumpt m ³ 2.4 2.8 0.9	kPa 1.13 2.75	Consu m ³ /h 2.4	mption L/h N/A
UL Marked Appliances Natural Gas Propane CE Ma Applia 2E (2LL (3P (3B/P (Maximum Input BTU/h 85,000 *Assumes an assumed valu arked ances (G20) (G25) (G31) (G30)	Minimum Input BTU/h 65,000 average heating te for propane go Maximum Inpu (Hs) kWI 5.0 2 1.5 2 7-20G (DED	Maximum Inlet Pressure Inches WC 14.0 value for natural gas is is 2,500 BTU/SCF, au t Min n (Hi) kWh (H: 2.5 20.0	Minimum Inlet Pressure Inches WC 5.5 9.0 sto be 1050 BTU/SCF of a specific gravity of simum Input s kWh (Hi) 18.0 18.0 EQUIRED	Maximum Fuel CFH 81.0 34.0 and a specifc gravi f 1.53 Nominal C	GPH N/A 0.9 ity of 0.60. The Gas Pressure bbar 20 20 37	AGA Marked Appliances Natural Gas Propane Maximum Ga mba	Input MJ/h 89.7 s Pressure r	Input MJ/h 68.6	Pressure kPa 3.48 num Fuel Consumpt m ³ 2.4 2.8 0.9	kPa 1.13 2.75 tion	Consu m ³ /h 2.4	mption L/h N/A
UL Marked Appliances Natural Gas Propane CE Ma Applia 2E (2LL (3P 3B/P (Maximum Input BTU/h 85,000 *Assumes an assumed valu arked ances kWh (G20) 25 (G31) 24 CAL - CTCC	Minimum Input BTU/h 65,000 average heating te for propane go Maximum Input (Hs) KWI 5.0 2 1.5 2 7-20G (DED 'AGE	Maximum Inlet Pressure Inches WC 14.0 value for natural gas ts is 2,500 BTU/SCF, a tt Min 1 (Hi) KWh (H: 2.5 20.0 2.5 19.5	Minimum Inlet Pressure Inches WC 5.5 9.0 sto be 1050 BTU/SCF of ad a specific gravity of simum Input s) kWh (Hi) 18.0 18.0 EQUIRED) HZ AV	Maximum Fuel CFH 81.0 34.0 and a specific gravi f 1.53 Nominal C m	GPH N/A 0.9	AGA Marked Appliances Natural Gas Propane Maximum Ga mba	Input MJ/h 89.7 s Pressure r ION	Input MJ/h 68.6	Pressure kPa 3.48 num Fuel Consumpt m ³ 2.4 2.8 0.9 0.9 0.9	kPa 1.13 2.75 tion S BRE/	Consu m ³ /h 2.4 0.9	mption L/h N/A 3.5
UL Marked Appliances Natural Gas Propane CE Ma Applia 2E (2LL 3P (3B/P (Maximum Input BTU/h 85,000 *Assumes an assumed valu arked ances kWh (G20) 25 (G31) 24 CAL - CTCC VOLT	Minimum Input BTU/h 65,000 average heating te for propane go Maximum Input (Hs) kWI 5.0 2 4.5 2 7-20G (DED AGE 20 -	Maximum Inlet Pressure Inches WC 14.0 value for natural gas is is 2,500 BTU/SCF, a t Min n (Hi) kWh (H: 2.5 20.0 2.5 19.5 CATED CIRCUIT RE PH 1 3	Minimum Inlet Pressure Inches WC 5.5 9.0 sto be 1050 BTU/SCF of ad a specific gravity of simum Input s) kWh (Hi) 18.0 18.0 EQUIRED) HZ AV 60 1 50/60 1	Maximum Fuel CFH 81.0 34.0 and a specific gravi f 1.53 Nominal C m VG (mm ²)	GPH N/A 0.9	AGA Marked Appliances Natural Gas Propane Maximum Ga mba 50 CONNECT	Input MJ/h 89.7 s Pressure r ION rd, no plug ord, no plug	Input MJ/h 68.6 Maxim	Pressure kPa 3.48 num Fuel Consumpt m ³ 2.4 2.8 0.9 0.9 0.9	kPa 1.13 2.75 tion S BRE/ 2 1.2 1	Consu m ³ /h 2.4 0.9 	mption L/h N/A 3.5

☐ NORTH AMERICA VOLTAGE CHOICE ☐ GROUND FAULT OR RESIDUAL CURRENT PROTECTION DEVICE MUST ACCOMMODATE A LEAKAGE CURRENT OF 20MA ☐ INTERNATIONAL VOLTAGE CHOICE
▲ PER UL REQUIREMENTS, MUST BE PERMANENTLY CONNECTED TO ELECTRICAL SUPPLY SOURCE

WEIG	HT		SHIP DIMENSIONS	PAN CAPACITY			
NET	660 lbs est	300 kg	(L x W x H) 56" x 49" x 51"*	FULL-SIZE:	20" x 12" x 2-1/2"	Sixteen (16)	PRODUCT MAXIMUM: 168 lb (76 kg)
SHIP	728 lbs*	330 kg*	(1422 x 1245 x 1295mm)*	GN 1/1:	530 x 325 x 65mm	Sixteen (16)	VOLUME MAXIMUM: 105 quarts (133 liters)
*DOMES	STIC GROUND SH	IIPPING INFO	RMATION. CONTACT FACTORY FOR	GN 2/1:	650 x 530 x 65mm	Eight (8)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE
EXPORT	T WEIGHT AND DI	MENSIONS.		**FULL-SIZE SHEET:	18" x 26" x 1"	Eight (8)	SHELVES REQUIRED FOR MAXIMUM CAPACITY



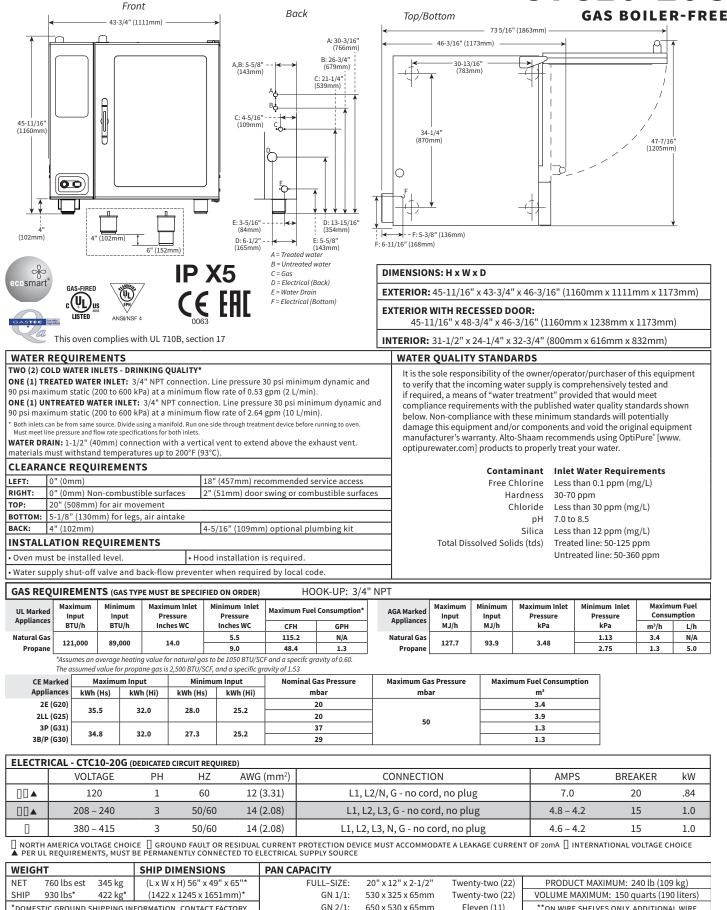
COMBITHERM. CTP10-20G

				French											U – 4	
	-		— 43	Front -3/4" (1111	.mm) ——			Back			Top/Bot	tom		GAS	BOIL	ER-FI
7		<u>ا</u>						A: 30-3			4	6-3/16" (1173	– 73 5/16" (1863m mm) –	m)		
45-11 (1160	20mm) ↓ ↓ ↓ ↓						B: 5-5/8" + - + - + + + + + + + + + + + + +	B: 26-3/- (679mr C: 21-1/4" (539mm)	5/16"		34-1/4 (870mm)				 / / / / / / / / / / / / / / / / /
	mm)	4	' (102m	_*	6" (152mm)		D: 6-1/2" 🗲 165mm)	E: 5-5/8" (143mm)	_	F: 6-11/1	.6" (168mm)	,				
(STAR		Gas Safety				\č		eated water ntreated water			ONS: H x					
*) •	пг 🚽		GAS-FIRED	C = Gc D = El	ns ectrical (Back)					/4" x 46-3/16"	(1160mm x 1	111mm x	1173mm
nărt"	WMTS 104 WM 40302 Robal-Mark.com.au	Global-Mark.cor	n.au®	HL 1	La			ater Drain ectrical (Bottom)	E			ECESSED 48-3/4" x	DOOR: 46-3/16" (1160	0mm x 1238n	וm x 1173	mm)
nis oven	n compl	es with L	JL 710	B, sectio	on 17		⁰⁰⁶³ IP	X 5		NTERIO	R: 31-1/2'	' x 24-1/4'	x 32-3/4" (80	0mm x 616m	m x 832m	m)
ATER	REQUI	REMEN	TS							WATE	R QUAL	TY STAN	DARDS			-
International states and a state of the state of the state of the state of the states and states an	ne pressur AIN: 1-1, nust with NCE RI 0" (0mr 0" (0mr 20" (508 5-1/8" (4" (102 ATION	and flow rat (2" (40mm astand ter EQUIRE n) n) Non-co Bmm) for 130mm) f mm) REQUI	te specif n) conr MEN MEN mbus air mo for leg	fications for nection w tures up t TS tible surf ovement gs, air ain	both inlets. vith a vert to 200°F (S faces ntake	ical vent to exte 33°C). 18" (457mm) r 2" (51mm) doo 4-5/16" (109m	end above th ecommende or swing or c m) optional		ICES	man	ufacturer's ourewater.c	warranty. <i>F</i> om] produ Con Free	Hardness 30 Chloride Le pH 7. Silica Le solids (tds) Tr	mmends using reat your wate elet Water Re ess than 0.1 pp 0-70 ppm ess than 30 pp	g OptiPure® r. m (mg/L) m (mg/L) m (mg/L) 125 ppm	įwww.
		talled lev				od installatio							U	ntreated line: !	0-360 ppn	1
						ter when requ		OOK-UP: 3/4"	NDT							
. Marked	Maxin			1		Minimum Inlet	Maxi	mum Fuel		A Marked	Maximum	Minimum	Maximum Inlet	Minimum Inle		num Fuel
pliances			nput FU/h		ssure les WC	Pressure Inches WC	Cons	umption* GPH		ppliances	Input MJ/h	Input MJ/h	Pressure kPa	Pressure kPa	Consu m³/h	umption L/h
itural Gas Propane	133 (00 89	,000	1	4.0	5.5 9.0	126.7 53.2	N/A 1.5	Ν	atural Gas Propane	140.3	93.9	3.48	1.13	3.7	N/A 5.5
						as to be 1050 BTU 500 BTU/SCF, and a										
CE Ma	arked	Maxim	um Inp	out	Minii	num Input	Nomina	l Gas Pressure	Ма		as Pressure	Maxim	um Fuel Consum	ption		
Applia 2E	(G20)	kWh (Hs)		/h (Hi)	kWh (Hs			mbar 20		mba	ar		m ³ 3.8			
	(G25) (G31)	40.0		36.0	28.0	25.2		20 37		50)		4.4 1.5			
	(G31) (G30)	39.1		36.0	27.3	25.2		JI					1.5			
ECTRI	CAL - (TP10-2	<u>0G (</u> D	EDICATED	CIRCUIT	EQUIRED)							WITH CO	MBISMOKER	<u>OPTION</u>	
	VOLTA	GE PI	-	HZ A	AWG (mm²) CONNI no cord	ECTION , no plug	AMPS	BRI	EAKER	kW		NECTION d, no plug	AMPS I	BREAKER	kW
	120				12 (3.31)	L1,	N, G	6.8		20	.84	L	., N, G	12.0	20	1.5
	208 -				14 (2.08)	-	2/N, G	4.8 - 4.2		15	1.0			7.3 - 7.1	15	1.5 - 1
	208 -				14 (2.08) 14 (2.08)		, L3, G L3, N, G	4.8 - 4.2		15 15	1.0			7.3 - 7.1	15 15	1.5 - 1 1.6 - 1
NORTH A	AMERICA	VOLTAGE	сноіс	E GRO	UND FAUL	T OR RESIDUAL	CURRENT PR	OTECTION DEVICE	MUST	АССОММО	DDATE A LEA	KAGE CURR				
EIGHT		CE CHARG		LIEJ A		AN CAPACIT		ANENTLY CONNEC				D MODEL	N I	/ITH COMBIS	MOKER	OPTION
T		760 lbs E	ST	345		FULI	-SIZE:	20" x 12" x 2-1/2		1	Twenty-	two (22)		Twent	y-one (21)	
IIP		930 lbs'		422 4	-	G	SN 1/1: N 2/1:	530 x 325 x 65mn 650 x 530 x 65mi			Twenty- Eleve	n (11)		Te	y-one (21) n (10)	
				1 .22 /	<u> </u>	**FULL-SIZE S		18" x 26" x 1"		<u> </u>	Eleve	n (11)		Elev	ven (11)	
		H) 56" x 4	19" x 6	5"*			RODUCT MA	XIMUM		1			240 lb (10	9 kg)		
(142	22mm x	1245mm	x 165	1mm)*			OLUME MAX	KIMUM					150 quarts (19	90 liters)		
OMESTIC	GROUNE	SHIPPING	INFOR	MATION. C	CONTACT F	ACTORY FOR EXP	DRT WEIGHT A	ND DIMENSIONS.		**ON	WIRE SHELV	ES ONLY. ADI	DITIONAL WIRE SH	ELVES REQUIRED	FOR MAXIMU	JM CAPACIT

Ø-SHAAM. CT**Classic**

FOR EXPORT WEIGHT AND DIMENSIONS

COMBITHERM. CTC10-20G



18" x 26" x 1"

Eleven (11)

SHELVES REQUIRED FOR MAXIMUM CAPACITY

**FULL-SIZE SHEET:

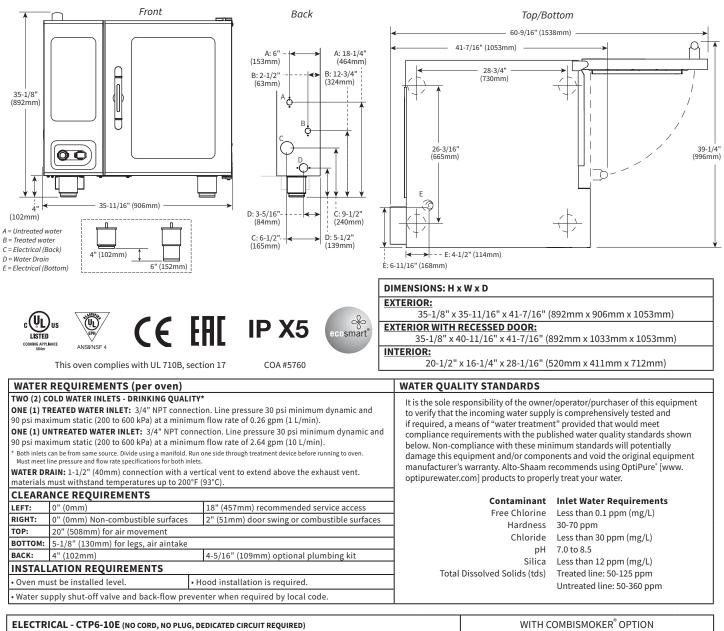
ALT Ø	∫-S⊦	Η A	AM	° CT P	ROfori	mance	764				C	OME	BITH	
لم الم الم الم الم الم الم الم الم الم ا	3/4" (1111mm) —			47" (119				<u>3 </u>			CT			20G
			(implication) (B D (852mm)→ 1-15/16" (49mm)→		•	B ← (B) 4-1/8" (D) 4-3/11 (106mm) D (uugg2) 3, (S; C) - 9, (FG (1)) A ⊕ E (1) (106mm) D (uugg2) 4, (C) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	4. (C) 33-13/16 [°] (356mm) → (C) 40mm) (C) 4-1/2 [°] (114mm) (C) 4-1/2 [°]		O om of oven)		B= Tre C= Ele D=Gas	treated water ated water ctrical (bottom) ter Drain
	*			Gas Safety	To GAS-FIRED		~	DIMENSION	S: H x W	x D				
ENERGY STAR	ecosmăr	ť	WHTS 104 WH 40202		LISTED							n x 1111mm	ı x 1192mm)
		G	lobal-Mark.com.au	Global-Mark.cor ID Number: GAS-10329	5-001	ANSI/NSF 4	rnr	EXTERIOR V				n x 1238mm	ı x 1192mm)
This oven co	omplies wi	th UL 7	10B, sectio	on 17	X5 ┥		tHL	INTERIOR: 60	-7/16" x 2	4-1/4" x 32	-3/4" (1535	5mm x 616n	nm x 832mr	n)
WATER R	EQUIREN	IENTS	;					WATER	QUALITY	Y STANDA	RDS			
* Both inlets can Must meet line WATER DRAI materials mu CLEARAN LEFT: 0' RIGHT: 0' TOP: 20 BOTTOM: 5-	be from same pressure and f N: 1-1/2" (4 st withstan CE REQU ' (0mm) ' (0mm) No 0" (508mm) -1/8" (130n ' (102mm)	source. Div low rate sp 0mm) co d tempe IREME on-comb) for air 1 nm) for	vide using a m recifications for connection eratures up ENTS poustible su movement legs, air ai	with a vertical to 200°F (93°C 18" rfaces 2" t intake	ide through treatm vent to exten C). ' (457mm) rec	d above the e commended s swing or con	e running to oven. exhaust vent. service access nbustible surface	damage manufa optipure	this equip cturer's wa ewater.com	ment and/o rranty. Alto- 1] products t Contan Free Cł Ha Cł	r componen Shaam reco to properly t ninant In Norine Le rdness 30 Noride Le pH 7. Silica Le	um standards ts and void tl mmends usir reat your wat elet Water R ess than 0.1 p p-70 ppm ess than 30 p 0 to 8.5 ess than 12 p reated line: 50	he original ee ng OptiPure [*] ter. Requiremen opm (mg/L) pm (mg/L) pm (mg/L)	quipment [www.
• Oven must					installation i						U	ntreated line	: 50-360 ppn	n
-				ow preventer			ode. OOK-UP: 3/4"	NPT						
UL Marked Appliances Natural Gas Propane	Maximum Input BTU/h 266,000	Minim Inpu BTU/ 177,0	1 t P / h In 00	imum Inlet Pressure Inches WC 14.0	Ininimum Inlet Pressure Inches WC 5.5 9.0 5 to be 1050 BTU/	Const CFH 253.3 106.4	num Fuel umption* GPH N/A 2.9 ifc gravity	AGA Marked Appliances Natural Gas Propane	Maximum Input MJ/h 280.6	Minimum Input MJ/h 186.7	Maximum In Pressure kPa 3.48	let Minimum Press kPa 1.1 2.7	sure C a m ³ 3 7.	4 N/A
CE Mar		issumed v laximum		pane gas is 2,500 Minimu) BTU/SCF, and a um Input	1	of 1.53 Gas Pressure	Maximum Ga	s Pressure	Maximu	ım Fuel Cons	umption		
Appliar 2E (0	G20)		kWh (Hi) 72.0	kWh (Hs) 56.0	kWh (Hi) 50.4		mbar 20	mba	r		m³ 7.6			
2LL (0 3P (0	525)		72.0	56.0	50.4		20 37	50			8.9 2.9			
3B/P (0	G30) 78		12.0	J4.0	50.4		29				2.9			
ELECTRIC	AL - CTP	20-20G	(DEDICATE	ED CIRCUIT REQ								MBISMOKI	ER®OPTION	1
	VOLTAGE		HZ	AWG (mm ²)	no cord	ECTION , no plug	AMPS	BREAKER	kW	CONNE no cord,	no plug	AMPS	BREAKER	kW
	120 208 – 240	1 1 ⁰	60 50/60	12 (3.31) 14 (2.08)		2/N, G 2/N, G	13.6 9.6 - 8.4	20 15	1.7 2.0	L1, L2/ L1, L2/		18.4 12.1 - 11.3	25 15	2.3 2.5 - 2.7
	208 - 240 380 - 415	3	50/60 50/60	14 (2.08) 14 (2.08)	L1, L2	2, L3, G L3, N, G	9.6 - 8.4 9.2 - 8.4	15 15	2.0 2.0	L1, L2, L1, L2, L	L3, G	12.1 - 11.3 11.8 - 11.3	15 15	2.5 - 2.7 2.6 - 2.7
□ NORTH AN CHOICE ▲							DTECTION DEVICE RICAL SUPPLY SO							
WEIGHTNET1100 ReceSHIP1250 Rece	lbs (499 kg ssed Door: lbs* (567 k ssed Door: ound Shipp	;) est 1217 lbs g*) 1350 lbs	s (552 kg) e s* (612 kg)*	SHIP (L x W (1346	DIMENSIO (x H) 53" x 53" 6 x 1346 x 2210	NS P/ ' x 87"*)mm)*	AN CAPACITY FULL-S GN 1	IZE: 20" x 12" 1/1: 530 x 325 2/1: 650 x 530	x 2-1/2" x 65mm x 65mm	Forty (40 Forty (40 Twenty (2 Twenty (2)) VOLUI 0) **on v	UCT MAXIMU	IM: 480 lb (2 1: 300 quart 5 ONLY. ADDIT	218 kg) s (380 liters) IONAL WIRE

LT@-			MA M		7" (1192mm)	ssi		_	F	<u>1 A.</u>	<u> </u>		—	CC CT	C2 GA	20)-2	ERN 200 R-FRI
			(umc100); }r; 6L - 1" (24mm) seo 655 5			B A A C A A C A A C C A A C C A A C A A A A A A A A A A A A A						4-1/4" 1) 4-1/8" (105mm) (uuuvgg) 1, yt/ 95 (B) (uuuvgg) 1, yt/ 95 (B) ((C) 4-1/2 (114mm	C (at bottom of oven		L	B= Trea C= Eleo D= Gas	reated wate ated water ctrical (bott er drain
ecosmart [®] This ov	witte is witte der Giebal-Mark c	of constant blies with	Global-Mai D Namber G		GAS-FIRE CULSTED	ANSI/NS		0063		<u>EX</u>	TERIOR:	79-1/4" x 4 WITH REC	13-3/4" x 4	7" (2012mm x DOR: 7" (2012mm x				
								~	Car)-7/16" x 2	24-1/4" x 3	2-3/4" (1535m	m x 616r	mm x 83	2mm)	
WATER RE TWO (2) COLL ONE (1) TREA 90 psi maximu ONE (1) UNTE 90 psi maximu * Both inlets can b Must meet line p	WATER I TED WATI Um static REATED W Um static De from same pressure and	INLETS - ER INLET (200 to 6 IATER IN (200 to 6 e source. Dir flow rate sp	DRINKIN 1: 3/4" NF 00 kPa) at LET: 3/4" 00 kPa) at vide using a pecifications	PT connect a minimum NPT conn a minimum manifold. Run for both inlets	ion. Line p n flow rat ection. Lin n flow rat one side thr s.	e of 0.80 § ie pressur e of 2.64 § ough treatme	gpm (3 L/ re 30 psi r gpm (10 L ent device b	min). minimum ./min). efore runni	n dynamic a ng to oven.		It is the to verify if requir complia below. I damage	sole respo y that the in red, a mear ance requir Non-compl e this equip	ncoming wa ns of "water rements wit liance with pment and/o	the owner/operative supply is con- treatment" pro- the published these minimum or components and the supponents of the supponents of the supponent of the suppo	mprehens vided tha water qua standard and void t	sively tes It would I ality star s will pot the origir	ted and meet idards sh tentially nal equip	own ment
<u> </u>	st withsta	nd tempe	eratures u ENTS	p to 200°F	(93°C).	'mm) reco	ommend	ed servi	st vent. ce access ible surface	es			n] products Conta Free C	to properly trea minant Inle hlorine Less ardness 30-7	it your wa t Water F than 0.1	nter. Require	ments	
BOTTOM: 5-	(102mm)	mm) for)	legs, air i	aintake	4-5/16"	(109mm)) optiona	ıl plumb	ing kit			Total Dis		hloride Less pH 7.0 to Silica Less	than 30 p o 8.5	opm (mg	/L)	
• Oven must l					lood inst									Untr	eated line	e: 50-360	ppm	
Water suppl	y shut-of	f valve a	nd back-	flow preve	nter whe	n require	d by loca	al code.										
GAS REQU	Maximum	Minim	num Ma	ximum Inlet	Minim	um Inlet	Maximum		-UP: 3/4" sumption*		GA Marked	Maximum	Minimum	Maximum Inlet	Minimu			um Fuel
Appliances	Input BTU/h	Inpu BTU		Pressure nches WC		ssure es WC	CFH		GPH		ppliances	Input MJ/h	Input MJ/h	Pressure kPa	Pres: kP		m³/h	mption L/h
Natural Gas Propane	242,000	177,0	000	14.0		5.5 9.0	230.5 96.8		N/A 2.7	N	latural Gas Propane	255.3	186.7	3.48	1.1		6.8 2.7	N/A 10.1
				ie for natural	gas to be 1	50 BTU/SCF	and a spec	cifc gravity			[I		
CE Marl	ked	Maximun	n Input		inimum In	put		inal Gas F	ressure	Ма		s Pressure	Maxim	um Fuel Consum	ption			
Applian 2E (G	20)	h (Hs)	kWh (Hi)			Nh (Hi)		mbar 20		-	mba	ar		m ³ 6.8				
2LL (G	25)	'1.6	64.5	56.	0	50.4		20		1	50			7.9				
3P (G 3B/P (G	. 7	0.1	64.5	54.	в	50.4		37 29		-	50			2.6 2.6				
										•			1		I			
ELECTRIC	AL - CTP	20-200	G (DEDICA	TED CIRCUIT	REQUIRE	D)					CON	IECTION		1				
		VOLT	AGE		PH		HZ		AWG (mn	n²)		VECTION d, no plug	AM	IPS	BREAKE	R	k١	N
		12			1		60		12 (3.31		L1, I	L2/N,G		3.0	20		1.	
		208 - 380 -			3	50/60 14 (2.08) 50/60 14 (2.08)						.2, L3, G ., L3, N, G	_	- 8.4	15 15		2.	
	ERICA VOL			ROUND FA		SIDUAL C		PROTECT						ENT OF 20mA		IONAL VO		
	QUIKEME	1415, MUS	DI BE PER															1
WEIGHT	bs (499 k	g) est			HIP DIM		-	PAN C	APACITY					PRODUCT	ΜΑΧΙΜΠ	M· 480	b (218 k	7)

NET 1100 lbs (499 kg) est Recessed Door: 1217 lbs (552 kg) est 1250 lbs* (567 kg*) Recessed Door: 1350 lbs* (612 kg)*	(L x W x H) 53" x 53" x 87"* (1346 x 1346 x 2210mm)*	FULL-SIZE: 20" x 12" x 2-1/2" Forty (40) PRODUCT MAXIMUM: 480 lb (218 kg) GN 1/1: 530 x 325 x 65mm Forty (40) VOLUME MAXIMUM: 300 quarts (380 liters) GN 2/1: 650 x 530 x 65mm Twenty (20) **ON WIRE SHELVES ONLY. ADDITIONAL WIRE
*DOMESTIC GROUND SHIPPING INFORMATION. CON WEIGHT AND DIMENSIONS.	TACT FACTORY FOR EXPORT	**FULL-SIZE SHEET: 18" x 26" x 1" Twenty (20) SHELVES REQUIRED FOR MAXIMUM CAPACITY.



COMBITHERM. CTP6-10E ELECTRIC BOILER-FREE



ELECTR	LECTRICAL - CTP6-10E (NO CORD, NO PLUG, DEDICATED CIRCUIT REQUIRED)									WITH COMBISMOKER [®] OPTION						
					ECO STANDARD		**PROpower™ ортіом		ECO STANDARD			**PROpower™ OPTION		TION		
VOLTAGE	PH	ΗZ	AWG	CONNECTION	AMPS	kW	BREAKER	AMPS	kW	BREAKER	AMPS	kW	BREAKER	AMPS	kW	BREAKER
208 - 240	1*	50/60	6	L1, L2/N, G	37.9 - 43.8	7.9 - 10.5	40 - 50	44.2 - 51.3	9.2 - 12.3	45 - 60	40.4 - 46.6	8.4 - 11.2	40 – 50	46.7 - 54.1	9.7 - 13	50 - 60
208 - 240	3	50/60	8	L1, L2, L3, G	21.9 - 25.3	7.9 – 10.5	25 - 30	28.4 - 32.6	9.2 - 12.3	30 - 35	24.4 - 28.1	8.4 - 11.2	25 - 30	30.9 - 35.5	9.8 - 13	35 - 40
380 - 415	3	50/60	8	L1, L2, L3, N, G	13.4 - 14.6	9 - 10.5	16	20.3 - 22.1	10.3 - 12.3	32	16.1 - 17.5	9.6 - 11.2	16 - 32	22.9 – 25	10.9 – 13	32
440 - 480	3*	50/60	10 - 8	L1, L2, L3, G	11.6 - 12.6	9.1 - 10.5	15	15 - 16.7	10.4 - 12.3	15 - 20	12.9 - 14.1	9.6 - 11.2	15	16.3 - 18.2	11 - 13	20

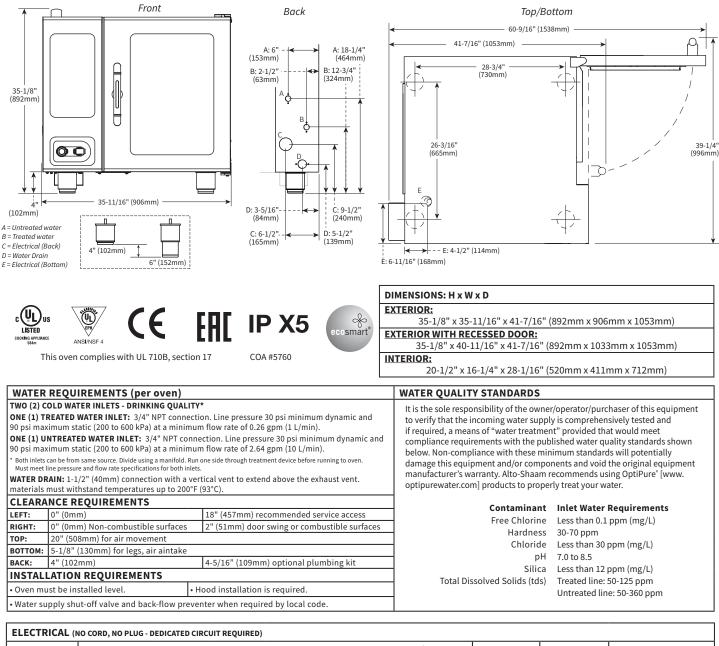
*ELECTRICAL SERVICE CHARGE APPLIES

**NO-COST OPTION ON ELECTRIC MODELS

	ELECTRICAL	SERVICE CHARGE	APPLIES	NO-COST OPTION C	JN ELECTRIC MODELS				
WEIGHT			PAN CAPACITY		STANDARD MODEL	WITH COMBISMOKER® OPTION			
NET	524 lbs est	238 kg	FULL-SIZE:	20" x 12" x 2-1/2"	Seven (7)	Six (6)			
	5211051251	200 Ng	GN 1/1: 530 x 325 x 65mm Seven (7)		Six (6)				
SHIP	608 lbs*	276 kg*	**HALF-SIZE SHEET:	18" x 13" x 1"	Seven (7)	Seven (7)			
SHIP DIMEN	SIONS		PRODUCT CAPACITY						
(L x W	/ x H) 58" x 45" x !	51"*	PRODUCT	MAXIMUM	72 lb (33 kg)				
(1473mm	n x 1143mm x 12	95mm)*	VOLUME N	MAXIMUM	45 quarts (57 liters)				
*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR EXPORT WEIGHT AND DIMENSIONS.			**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY						



COMBITHERM CTC6-10E ELECTRIC BOILER-FREE



MODEL	VOLTAGE	PH	HZ	AMPS	kW	BREAKER	AWG	CONNECTION
CTC6-10E 208 – 240		3	50/60	21.9 – 25.3	7.9 – 10.5	25 - 30	8	L1, L2, L3, G
	380 - 415	3	50/60	13.4 - 14.6	9.0 - 10.5	16	8	L1, L2, L3, N, G
	440 - 480	3*	50/60	11.6 - 12.6	9.1 - 10.5	15	10 - 8	L1, L2, L3, G

*ELECTRICAL SERVICE CHARGE APPLIES

WEIG	нт		SHIP DIMENSIONS	PAN CAPACITY			
NET	524 lbs est	238 kg	(L x W x H) 58" x 45" x 51"*	FULL-SIZE:	20" x 12" x 2-1/2"	Seven (7)	PRODUCT MAXIMUM: 72 lb (33 kg)
SHIP	608 lbs*	276 kg*	(1473 x 1143 x 1295mm)*	GN 1/1:	530 x 325 x 65mm	Seven (7)	VOLUME MAXIMUM: 45 quarts (57 liters)
	STIC GROUND S PORT WEIGHT A		FORMATION. CONTACT FACTORY IONS.	*HALF-SIZE SHEET:	18" x 13" x 1"	Seven (7)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

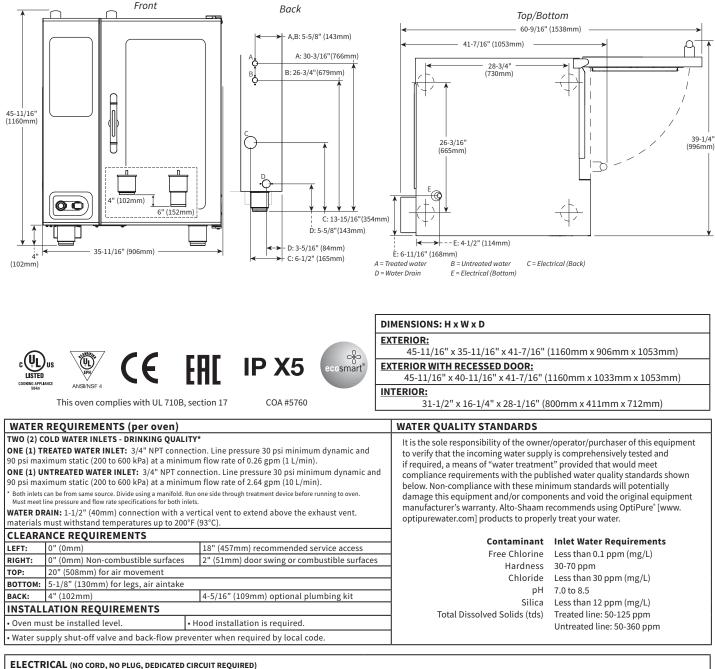
۹LT	O-SHAAM. CTP	<u>ROformance</u> ™	COMBITHERM. CTP10-10E
	- Front	Back	
45-11/16" 1160mm) 	(102mm) 6"(152mm) 35-11/16" (906mm)	A,B: 5-5/8" (143mm) A: 30-3/16"(766mm) B: 26-3/4"(679mm) C C: 13-15/16"(354m D: 5-5/8"(143mm) C: 13-15/16"(354m D: 5-5/8"(143mm) C: 5-5/8"(143mm) C	Top/Bottom $60-9/16" (1538mm)$ $41-7/16" (1053mm)$ $(730mm)$ $(730mm)$ $(730mm)$ $(996mm)$ $(996mm)$ $E: 6-11/16" (168mm)$ $A = Treated water$ $B = Untreated water$ $C = Electrical (Back)$ $D = Water Drain$ $E = Electrical (Bottom)$
			DIMENSIONS: H x W x D
COOKING APPL COOKING APPL 584m	This oven complies with UL 710B, section	LIP X5 cosmart	EXTERIOR: 45-11/16" x 35-11/16" x 41-7/16" (1160mm x 906mm x 1053mm) EXTERIOR WITH RECESSED DOOR: 45-11/16" x 40-11/16" x 41-7/16" (1160mm x 1033mm x 1053mm) INTERIOR: 31-1/2" x 16-1/4" x 28-1/16" (800mm x 411mm x 712mm)
	REQUIREMENTS (per oven) COLD WATER INLETS - DRINKING QUALITY*		WATER QUALITY STANDARDS
ONE (1) T 90 psi max ONE (1) U 90 psi max * Both inlets Must meet WATER DF	REATED WATER INLET: 3/4" NPT connection. ximum static (200 to 600 kPa) at a minimum fluin INTREATED WATER INLET: 3/4" NPT connectivity ximum static (200 to 600 kPa) at a minimum fluin can be from same source. Divide using a manifold. Run one line pressure and flow rate specifications for both inlets. RAIN: 1-1/2" (40mm) connection with a vertica must withstand temperatures up to 200°F (93°	ow rate of 0.26 gpm (1 L/min). on. Line pressure 30 psi minimum dynamic an ow rate of 2.64 gpm (10 L/min). side through treatment device before running to oven. Il vent to extend above the exhaust vent.	It is the sole responsibility of the owner/operator/purchaser of this equipment to verify that the incoming water supply is comprehensively tested and if required, a means of "water treatment" provided that would meet compliance requirements with the published water quality standards shown below. Non-compliance with these minimum standards will potentially damage this equipment and/or components and void the original equipment manufacturer's warranty. Alto-Shaam recommends using OptiPure* [www. optipurewater.com] products to properly treat your water.
	ANCE REQUIREMENTS		Contaminant Inlet Water Pequirements
LEFT:		" (457mm) recommended service access	Contaminant Inlet Water Requirements Free Chlorine Less than 0.1 ppm (mg/L)
RIGHT:	<u>.</u>	(51mm) door swing or combustible surfaces	Hardness 30-70 ppm
TOP:	20" (508mm) for air movement		Chloride Less than 30 ppm (mg/L)
BOTTOM:	5-1/8" (130mm) for legs, air aintake		pH 7.0 to 8.5
BACK:	4" (102mm) 4-	5/16" (109mm) optional plumbing kit	
INSTAL	LATION REQUIREMENTS	· · · · ·	Silica Less than 12 ppm (mg/L)
		d installation is required.	Total Dissolved Solids (tds) Treated line: 50-125 ppm
	apply shut-off valve and back-flow prevente		Untreated line: 50-360 ppm
• water su	apply shut-on valve and back-now prevente	r when required by local code.	

ELECTRI	ECTRICAL - CTP10-10E (NO CORD, NO PLUG, DEDICATED CIRCUIT REQUIRED)										WITH COMBISMOKER [®] OPTION					
					ECO STANDARD		**PROpower™ ортіом		ECO STANDARD			**PROpower™ ортіом				
VOLTAGE	PH	ΗZ	AWG	CONNECTION	AMPS	kW	BREAKER	AMPS	kW	BREAKER	AMPS	kW	BREAKER	AMPS	kW	BREAKER
208 - 240	1*	50/60	2	L1, L2/N, G	68.3 - 78.8	14.2 - 18.9	70 - 80	79.8 - 92.1	16.6 - 22.1	80 - 100	70.8 - 81.6	14.7 - 19.6	70 – 90	82.3 - 95	17.1 - 22.8	90 - 100
208 - 240	3	50/60	4	L1, L2, L3, G	39.4 - 45.5	14.2 - 18.9	40 - 50	51 - 58.8	16.6 - 22.1	60	41.9 - 48.3	14.7 - 19.6	50	53.5 - 61.7	17.1 - 22.8	60 – 70
380 - 415	3	50/60	6	L1, L2, L3, N, G	24.1 - 26.3	16.2 - 18.9	32	36.4 - 39.6	18.6 - 22.1	63	26.8 - 29.1	16.7 - 19.6	32 - 63	39 - 42.5	19.2 - 22.8	63
440 - 480	3*	50/60	8	L1, L2, L3, G	20.8 - 22.7	16.2 - 18.9	25	26.9 - 29.4	18.6 - 22.1	30	22.2 - 24.2	16.7 - 19.6	25	28.3 - 30.8	19.2 - 22.8	30
	*ELECTRICAL SERVICE CHARGE APPLIES **NC									TRIC MODEL	S					

	*ELECTRICAL SERVICE CHARGE APPLIES **NO-COST OPTION ON ELECTRIC MODELS											
WEIGHT			PAN CAPACITY		STANDARD MODEL	WITH COMBISMOKER [®] OPTION						
NET	625 lbs est	283 kg	FULL–SIZE: 20" x 12" x 2-1/2"		Eleven (11)	Ten (10)						
	020 100 201	200 Ng	GN 1/1: 530 x 325 x 65mm El		Eleven (11)	Ten (10)						
SHIP	650 lbs*	295 kg*	**HALF-SIZE SHEET:	18" x 13" x 1"	Eleven (11)	Eleven (11)						
SHIP DIMEN	SIONS		PRODUCT CAPACITY									
(L x W	/ x H) 45" x 45" x 6	65"*	PRODUCT	MAXIMUM	120 lb (54 kg)							
(1143mm	n x 1143mm x 16	51mm)*	VOLUME N	MAXIMUM	75 quarts (95 liters)							
* DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR EXPORT WEIGHT AND DIMENSIONS.			**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY									



COMBITHERM. CTC10-10E ELECTRIC BOILER-FREE

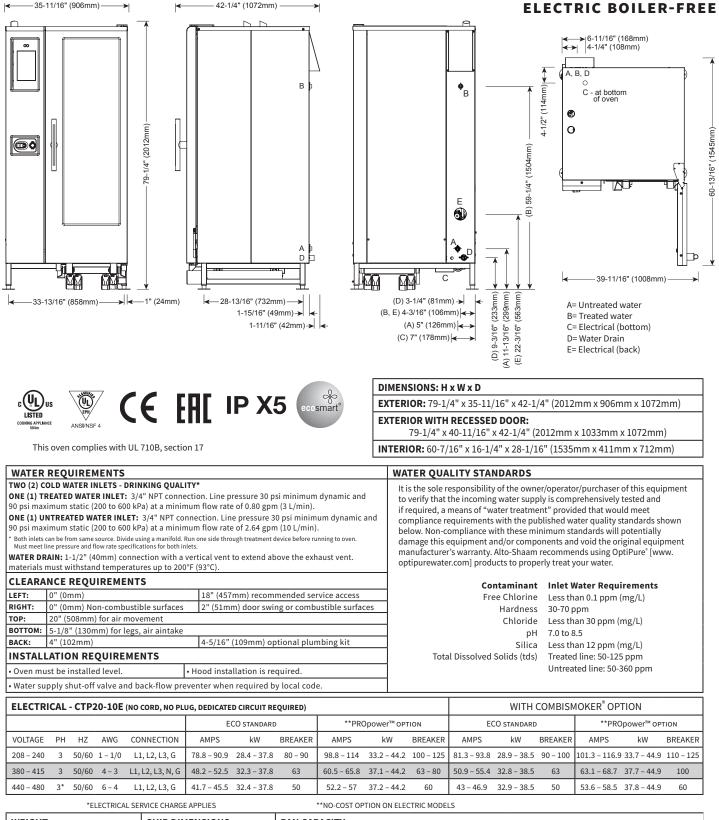


LECTRICAL (N	LECTRICAL (NO CORD, NO PLOG, DEDICATED CIRCOTI REQUIRED)												
MODEL	VOLTAGE	PH	HZ	AMPS	kW	BREAKER	AWG	CONNECTION					
CTC10-10E	208 – 240	3	50/60	39.4 - 45.5	14.2 - 18.9	40-50	4	L1, L2, L3, G					
	380 - 415	3	50/60	24.1 – 26.2	16.2 – 18.9	32	6	L1, L2, L3, N, G					
	440 - 480	3*	50/60	20.8 - 22.7	16.2 - 18.9	25	8	L1, L2, L3, G					

*ELECTRICAL SERVICE CHARGE APPLIES

WEIG	нт		SHIP DIMENSIONS	PAN CAPACITY			
NET	625 lbs est	283 kg	(L x W x H) 45" x 45" x 65"*	FULL-SIZE:	20" x 12" x 2-1/2"	Eleven (11)	PRODUCT MAXIMUM: 120 lb (54 kg)
SHIP	650 lbs*	295 kg*	(1143 x 1143 x 1651mm)*	GN 1/1:	530 x 325 x 65mm	Eleven (11)	VOLUME MAXIMUM: 75 quarts (95 liters)
	STIC GROUND SH T WEIGHT AND D		RMATION. CONTACT FACTORY FOR	**HALF-SIZE SHEET:	18" x 13" x 1"	Eleven (11)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

COMBITHERM. CTP20-10E ELECTRIC BOILER-FREE



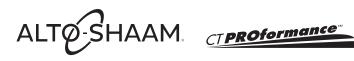
ØSHAAM. <u>CIPROformance</u>

WEIGH	нт		SHIP DIMENSIONS	PAN CAPACITY			
NET	905 lbs est	411 kg	(L x W x H) 56" x 45" x 87"*	FULL-SIZE:	20" x 12" x 2-1/2"	Twenty (20)	PRODUCT MAXIMUM: 240 lb (109 kg)
SHIP	1052 lbs*	477 kg*	(1422 x 1143 x 2210mm)*	GN 1/1:	530 x 325 x 65mm	Twenty (20)	VOLUME MAXIMUM: 150 quarts (190 liters)
	TIC GROUND SHIP		ATION. CONTACT FACTORY FOR EXPORT	**HALF-SIZE SHEET:	18" x 13" x 1"	Twenty (20)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY



*ELECTRICAL SERVICE CHARGE APPLIES

WEIG	нт		SHIP DIMENSIONS	PAN CAPACITY			
NET	905 lbs est	411 kg	(L x W x H) 56" x 45" x 87"*	FULL-SIZE:	20" x 12" x 2-1/2"	Twenty (20)	PRODUCT MAXIMUM: 240 lb (109 kg)
SHIP	1052 lbs*	477 kg*	(1422 x 1143 x 2210mm)*	GN 1/1:	530 x 325 x 65mm	Twenty (20)	VOLUME MAXIMUM: 150 quarts (190 liters)
	STIC GROUND S PORT WEIGHT A		FORMATION. CONTACT FACTORY IONS.	**HALF-SIZE SHEET:	18" x 13" x 1"	Twenty (20)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY



COMBITHERM. **CTP7-20E ELECTRIC BOILER-FREE**

	Front				L	Top/Bot	tom	72 5/10" (10(2),			. [
	Tronc		Back				46-3/16" (1173	— 73 5/16" (:	186311111) —	.1		
					•		46-3/16 (11/3	mm) —				
37-13/16" (961mm)	43-3/4" (1111mm)	A: 5" (127mm) B: 2-1/8" (53mm) D: 3-5/16"- (84mm)		A: 19-1/16" (484mm) B: 12-3/16 ⁽¹⁾ (309mm) C: 7-11/16 ⁽¹⁾		34-1/ (870mm				8	, , , , , , , , , , , , , , , , , , , ,	/ / / / / / / (1205mm)
(102mm) 4-1/4" (108mm)	(102mm)6" (152mm)	C: 5"- (127mm)	A = Treated wat B = Electrical (B C = Untreated w D = Water Drain	D: 5-5/8" (143mm) ter Back) vater	↓ - : -	→E:5-3/8'	' (136mm)					
CT-DIM-005362			E = Electrical (B	lottom)	DIMENS	SIONS: H >	x W x D					
				Ī	EXTERIO							
	7		\frown	0		,	x 43-3/4" x	, ,	961mm x	1111mm	x 1173mm)
	' ((th	[IP X5	-energy	ecosmart [®]		-	RECESSED x 48-3/4" x		061mm v	1220mm	v 1172mm	\
COOKING APPLIANCE 584m ANSI/NSF			ENERGY STAR		INTERIO		x 40-3/4 x	40-3/10 (90111111 X	123011111	X 117 SIIIIII)
This oven c	complies with UL 710B, s	ection 17 COA	#5760			23-1/4" x 24-1/4" x 32-3/4" (590mm x 616mm x 832mm)						
	WATER QUALITY STANDARDS											
	MENTS (per oven)				WA	TER QUA	LITY STAN	DARDS				
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20.6 - 22.4 15.7 - 18.7 L1, L2, L3, G *ELECTRICAL SERVICE CHARGE APPLIES

440 - 480

3* 50/60

8

WEIGHT PAN CAPACITY STANDARD MODEL WITH COMBISMOKER[®] OPTION FULL-SIZE: 20" x 12" x 2-1/2" Sixteen (16) Fifteen (15) NET 680 lbs est 308 kg GN 1/1: 530 x 325 x 65mm Sixteen (16) Fifteen (15) GN 2/1: 650 x 530 x 65mm Eight (8) Seven (7) 727 lbs* SHIP 330 kg* **FULL-SIZE SHEET: 18" x 26" x 1" Eight (8) Eight (8) SHIP DIMENSIONS PRODUCT CAPACITY (L x W x H) 56" x 49" x 65"* PRODUCT MAXIMUM 168 lb (76 kg) (1422mm x 1245mm x 1651mm)* VOLUME MAXIMUM 105 quarts (133 liters) *DOMESTIC GROUND SHIPPING INFORMATION, CONTACT **ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY FACTORY FOR EXPORT WEIGHT AND DIMENSIONS.

26.5 - 28.8 18.3 - 21.8

**NO-COST OPTION ON ELECTRIC MODELS

25

30 - 35 21.9 - 23.8 16.2 - 19.2

30

27.3 - 30.0 18.8 - 22.3 30 - 35



*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR

EXPORT WEIGHT AND DIMENSIONS.

COMBITHERM. CTC7-20E ELECTRIC BOILER-FREE

	Front		D /	Тор/Во		/16" (1863mm)	- 1
			Back		46-3/16" (1173mm) -	> (1865)((1))	
37-13/16" (961mm) (961mm) (102mm) 4-1/4" (108mm) CT-DIM-005362	43-3/4" (1111mm) — 43-3/4" (1111mm) — 4" (102mm) _ 6" (152mm)	A: 5 (127mn B: 2-1/6 (53mn	B B B C C C C C C C C C C C C C	34-1 (870m (870m E: 6-11/16" (168mm	'm) 		47-7/16" (1205mm)
304m ·	ANSUNSF 4	S, section 17	X5 ecosmart*	EXTERIOR WITH 37-13/16 INTERIOR:	" x 43-3/4" x 46-3/ I RECESSED DOO " x 48-3/4" x 46-3/	/16" (961mm x 111 R: /16" (961mm x 123 :/4" (590mm x 616r	8mm x 1173mm)
				- 1			1111 x 65211111)
			WATER OUA	ALLEY STANDAR	DS		
TWO (2) COLD WA ONE (1) TREATED 90 psi maximum st ONE (1) UNTREAT 90 psi maximum st * Both inlets can be fror Must meet line pressu WATER DRAIN: 1-3	tatic (200 to 600 kPa) at a mini m same source. Divide using a manifold ure and flow rate specifications for both 1/2" (40mm) connection with a	ection. Line pressure 30 mum flow rate of 0.26 g ponnection. Line pressure mum flow rate of 2.64 g . Run one side through treatme iniets. a vertical vent to extend	gpm (1 L/min). re 30 psi minimum dynamic and gpm (10 L/min). ent device before running to oven.	It is the sole r to verify that if required, a compliance r below. Non-c damage this manufacture	the incoming water means of "water tre equirements with th ompliance with the equipment and/or c r's warranty. Alto-Sh	owner/operator/purc supply is comprehen atment" provided that ne published water qu se minimum standard components and void	at would meet uality standards shown ds will potentially the original equipment sing OptiPure [®] [www.
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TWO (2) COLD WA ONE (1) TREATED 90 psi maximum si ONE (1) UNTREAT 90 psi maximum si * both inlets can be fror Must meet line pressu WATER DRAIN: 1-1 materials must wiit CLEARANCER LEFT: 0" (0m RIGHT: 0" (0m TOP: 20" (5C BOTTOM: 5-1/8" BACK: 4" (102 INSTALLATIOI • Oven must be in • Water supply sh	ATER INLETS - DRINKING QUAI WATER INLET: 3/4" NPT conn tatic (200 to 600 kPa) at a mini FED WATER INLET: 3/4" NPT co tatic (200 to 600 kPa) at a mini m same source. Divide using a manifold me and flow rate specifications for both 1/2" (40mm) connection with a thstand temperatures up to 20 REQUIREMENTS mm) mm) Non-combustible surfaces 08mm) for air movement (130mm) for legs, air aintake 2mm) N REQUIREMENTS nstalled level. nut-off valve and back-flow pr NO CORD, NO PLUG, DEDICAT VOLTAGE 208 – 240	ection. Line pressure 30 mum flow rate of 0.26 g onnection. Line pressur- mum flow rate of 2.64 g Run one side through treatme inlets. a vertical vent to extend 0°F (93°C). 18" (457mm) reco 2" (51mm) door s 2" (51mm) door s 4-5/16" (109mm) • Hood installation is reventer when requirece ED CIRCUIT REQUIRED) PH HZ 3 50/60	gpm (1 L/min). e 30 psi minimum dynamic and gpm (10 L/min). ent device before running to oven. I above the exhaust vent. bommended service access is wing or combustible surfaces is optional plumbing kit erequired. d by local code.) AMPS 45.7 – 52.7	kW It is the sole i to verify that if required, a compliance r below. Non-c damage this manufacture optipurewate Tota	esponsibility of the the incoming water means of "water tre equirements with th equipment and/or c r's warranty. Alto-Sh er.com] products to Contamin Free Chlo Hard Chlo S al Dissolved Solids	owner/operator/purc supply is comprehen atment" provided the e published water quick se minimum standard components and void haam recommends us properly treat your with nant Inlet Water properly treat your with ness 30-70 ppm pride Less than 0.1 ness 30-70 ppm pride Less than 10 pH 7.0 to 8.5 silica Less than 12 (tds) Treated line: Untreated line	nsively tested and at would meet uality standards shown ds will potentially the original equipment sing OptiPure* [www. ater. Requirements ppm (mg/L) ppm (mg/L) ppm (mg/L) 50-125 ppm ne: 50-360 ppm CONNECTION L1, L2, L3, G
TWO (2) COLD WA ONE (1) TREATED 90 psi maximum si ONE (1) UNTREAT 90 psi maximum si * Both inlets can be fror Must meet line pressu WATER DRAIN: 1-1 materials must with CLEARANCE R LEFT: 0" (0m RIGHT: 0" (0m TOP: 20" (50 BOTTOM: 5-1/8" BACK: 4" (102 INSTALLATIOI • Oven must be in • Water supply sh ELECTRICAL (1) MODEL	ATER INLETS - DRINKING QUAI WATER INLET: 3/4" NPT conn tatic (200 to 600 kPa) at a mini FED WATER INLET: 3/4" NPT con tatic (200 to 600 kPa) at a mini m same source. Divide using a manifold me and flow rate specifications for both thstand temperatures up to 20 REQUIREMENTS mm) mm) Non-combustible surfaces D8mm for air movement (130mm) for legs, air aintake 2mm) N REQUIREMENTS nstalled level. nut-off valve and back-flow pr NO CORD, NO PLUG, DEDICAT VOLTAGE 208 – 240 380 – 415	ection. Line pressure 30 mum flow rate of 0.26 g ponnection. Line pressure mum flow rate of 2.64 g Run one side through treatme inlets. a vertical vent to extend 0°F (93°C). 18" (457mm) reco s 2" (51mm) door s 2" (51mm) door s 4-5/16" (109mm) • Hood installation is reventer when required ED CIRCUIT REQUIRED) PH HZ 3 50/60	gpm (1 L/min). e 30 psi minimum dynamic and gpm (10 L/min). ent device before running to oven. I above the exhaust vent. bommended service access is optional plumbing kit is required. d by local code.) AMPS	kW	esponsibility of the the incoming water means of "water tre equirements with th equipment and/or c r's warranty. Alto-Sh er.com] products to Contamin Free Chlo Hard Chlo Sal Dissolved Solids BREAKER 50-60	owner/operator/purc supply is comprehen atment" provided the e published water quick se minimum standard components and void haam recommends us properly treat your with nant inlet Water orine Less than 0.1 ness 30-70 ppm oride Less than 30 pH 7.0 to 8.5 illica Less than 12 (tds) Treated line: Untreated line: AWG 4 - 3	nsively tested and at would meet uality standards shown ds will potentially the original equipment sing OptiPure* [www. ater. Requirements .ppm (mg/L) ppm (mg/L) 50-125 ppm he: 50-360 ppm CONNECTION
TWO (2) COLD WA ONE (1) TREATED 90 psi maximum si ONE (1) UNTREAT 90 psi maximum si * Both inlets can be fror Must meet line pressu WATER DRAIN: 1-1 materials must with CLEARANCE R LEFT: 0" (0m RIGHT: 0" (0m TOP: 20" (50 BOTTOM: 5-1/8" BACK: 4" (102 INSTALLATIOI • Oven must be in • Water supply sh ELECTRICAL (1) MODEL	TER INLETS - DRINKING QUAI WATER INLET: 3/4" NPT conn tatic (200 to 600 kPa) at a mini rED WATER INLET: 3/4" NPT con tatic (200 to 600 kPa) at a mini m same source. Divide using a manifold are and flow rate specifications for both 1/2" (40mm) connection with a thstand temperatures up to 20 REQUIREMENTS mm) mm) Non-combustible surfaces D8mm) for air movement (130mm) for legs, air aintake 2mm) N REQUIREMENTS nstalled level. 100 100 100 100 100 100 100 100 100 10	ection. Line pressure 30 mum flow rate of 0.26 g onnection. Line pressur- mum flow rate of 2.64 g Run one side through treatme inlets. a vertical vent to extend 0°F (93°C). 18" (457mm) reco 5 2" (51mm) door s 2" (51mm) door s 4-5/16" (109mm) • Hood installation is reventer when required ED CIRCUIT REQUIRED) PH HZ 3 50/60 3 50/60	gpm (1 L/min). e 30 psi minimum dynamic and gpm (10 L/min). ent device before running to oven. l above the exhaust vent. commended service access wing or combustible surfaces optional plumbing kit crequired. d by local code. commended service access swing or combustible surfaces commended service access swing or combustible surfaces commended service access commended s	kW 16.5 – 21.9 1t is the sole I to verify that if required, a compliance r below. Non-c damage this manufacture optipurewate Tota kW 16.5 – 21.9	esponsibility of the the incoming water means of "water tre equirements with th equipment and/or c r's warranty. Alto-Sh er.com] products to Contamil Free Chlc Hard Chlc al Dissolved Solids BREAKER 50-60 32	owner/operator/purc supply is comprehen- eatment" provided the e published water quick see minimum standard components and void haam recommends us properly treat your with nant inlet Water orine Less than 0.1 ness 30-70 ppm oride Less than 30 pH 7.0 to 8.5 silica Less than 12 (tds) Treated line: Untreated line: Untreated line: AWG 4 - 3 6 - 4	nsively tested and at would meet uality standards shown ds will potentially the original equipment sing OptiPure* [www. ater. Requirements ppm (mg/L) ppm (mg/L) ppm (mg/L) 50-125 ppm ne: 50-360 ppm CONNECTION L1, L2, L3, G L1, L2, L3, N, G
TWO (2) COLD WA ONE (1) TREATED 90 psi maximum si ONE (1) UNTREAT 90 psi maximum si * Both inlets can be fror Must meet line pressu WATER DRAIN: 1-1 materials must with CLEARANCE R LEFT: 0" (0m RIGHT: 0" (0m TOP: 20" (50 BOTTOM: 5-1/8" BACK: 4" (102 INSTALLATIOI • Oven must be in • Water supply sh ELECTRICAL (1) MODEL	ATER INLETS - DRINKING QUAI WATER INLET: 3/4" NPT conn reading of the second second second second read water inless and second second second manual second second second second second manual second second second second second read flow rate specifications for both thatand temperatures up to 20 REQUIREMENTS mm) Non-combustible surfaces Damm) for air movement (130mm) for legs, air aintake Damm) Nn-combustible surfaces Damm) for legs, air aintake Damm) NREQUIREMENTS mstalled level. mut-off valve and back-flow pr NO CORD, NO PLUG, DEDICAT VOLTAGE 208 – 240 380 – 415 440 – 480	ection. Line pressure 30 mum flow rate of 0.26 g ponection. Line pressure mum flow rate of 2.64 g Run one side through treatme inlets. A vertical vent to extend 0°F (93°C). 18" (457mm) reco s 2" (51mm) door s 2" 4-5/16" (109mm) • Hood installation is reventer when required ED CIRCUIT REQUIRED) PH HZ 3 50/60 3 50/60	gpm (1 L/min). e 30 psi minimum dynamic and gpm (10 L/min). ent device before running to oven. l above the exhaust vent. commended service access wing or combustible surfaces optional plumbing kit crequired. d by local code. commended service access swing or combustible surfaces commended service access swing or combustible surfaces commended service access commended s	kW 16.5 – 21.9 1t is the sole I to verify that if required, a compliance r below. Non-c damage this manufacture optipurewate Tota kW 16.5 – 21.9	esponsibility of the the incoming water means of "water tre equirements with th equipment and/or c r's warranty. Alto-Sh er.com] products to Contamil Free Chlc Hard Chlc al Dissolved Solids BREAKER 50-60 32	owner/operator/purc supply is comprehen- eatment" provided the e published water quick see minimum standard components and void haam recommends us properly treat your with nant inlet Water orine Less than 0.1 ness 30-70 ppm oride Less than 30 pH 7.0 to 8.5 silica Less than 12 (tds) Treated line: Untreated line: Untreated line: AWG 4 - 3 6 - 4	nsively tested and at would meet uality standards shown ds will potentially the original equipment sing OptiPure* [www. ater. Requirements ppm (mg/L) ppm (mg/L) ppm (mg/L) 50-125 ppm ne: 50-360 ppm CONNECTION L1, L2, L3, G L1, L2, L3, N, G
TWO (2) COLD WA ONE (1) TREATED 90 psi maximum si ONE (1) UNTREAT 90 psi maximum si * both inlets can be fror Must meet line pressu WATER DRAIN: 1-1 materials must wii CLEARANCE R LEFT: 0" (0m RIGHT: 0" (0m TOP: 20" (5C BOTTOM: 5-1/8" BACK: 4" (102 INSTALLATIOI • Oven must be in • Water supply sh ELECTRICAL (1 MODEL CTC7-20E	TER INLETS - DRINKING QUAI WATER INLET: 3/4" NPT conn tatic (200 to 600 kPa) at a mini red WATER INLET: 3/4" NPT con tatic (200 to 600 kPa) at a mini m same source. Divide using a manifold are and flow rate specifications for both thstand temperatures up to 20 REQUIREMENTS mm) Non-combustible surfaces D8mm) for air movement (130mm) for legs, air aintake 2mm) N REQUIREMENTS mstalled level. NO CORD, NO PLUG, DEDICAT VOLTAGE 208 – 240 380 – 415 440 – 480 *	ection. Line pressure 30 mum flow rate of 0.26 g ponnection. Line pressure mum flow rate of 2.64 g Run one side through treatme inlets. a vertical vent to extend 0°F (93°C). 18" (457mm) reco 5 2" (51mm) door s 2" (51mm) door s 4-5/16" (109mm) • Hood installation is reventer when required ED CIRCUIT REQUIRED) DH HZ 3 50/60 3 50/60 BLECTRICAL SERVICE CH	gpm (1 L/min). e 30 psi minimum dynamic and gpm (10 L/min). ent device before running to oven. I above the exhaust vent. commended service access swing or combustible surfaces coptional plumbing kit e required. d by local code.) AMPS 45.7 – 52.7 28 – 30.4 20.6 – 22.4 HARGE APPLIES PAN CAPACITY	kW 16.5 – 21.9 1t is the sole I to verify that if required, a compliance r below. Non-c damage this manufacture optipurewate Tota kW 16.5 – 21.9	esponsibility of the the incoming water means of "water tre equirements with th equipment and/or c r's warranty. Alto-Sh er.com] products to Contamil Free Chlc Hard Chlc al Dissolved Solids BREAKER 50-60 32	owner/operator/purc supply is comprehen eatment" provided the e published water quick se minimum standard components and void haam recommends us properly treat your wick nant inlet Water prine Less than 0.1 ness 30-70 ppm oride Less than 30 pH 7.0 to 8.5 silica Less than 12 (tds) Treated line: Untreated line: Untreated line: AWG 4 - 3 6 - 4 8	nsively tested and at would meet uality standards shown ds will potentially the original equipment sing OptiPure* [www. ater. Requirements ppm (mg/L) ppm (mg/L) ppm (mg/L) 50-125 ppm ne: 50-360 ppm CONNECTION L1, L2, L3, G L1, L2, L3, N, G

**FULL-SIZE SHEET:

GN 2/1: 650 x 530 x 65mm

18" x 26" x 1"

Eight (8)

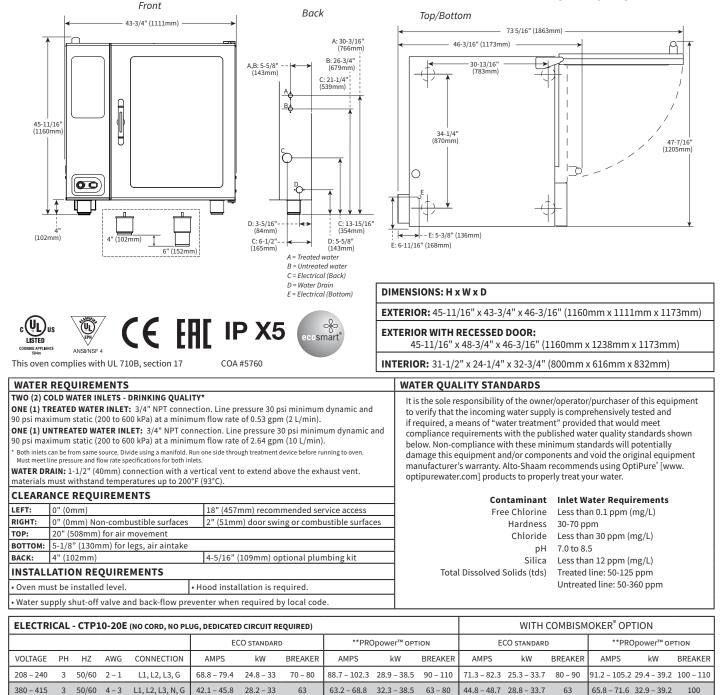
Eight (8)

**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES

REQUIRED FOR MAXIMUM CAPACITY



OMBITHERM CTP10-20E **ELECTRIC BOILER-FREE**



L1, L2, L3, G *ELECTRICAL SERVICE CHARGE APPLIES

36 4 - 39 7

283-33

40

440 - 480

3* 50/60 6 – 4

**NO-COST OPTION ON ELECTRIC MODELS

32 4 - 38 5

50 - 60

46.9 - 51.2

37.7 - 41.1 28.8 - 33.7

40 - 50

48.2 - 52.6 33 - 39.2

50 - 60

WEIGHT			PAN CAPACITY		STANDARD MODEL	WITH COMBISMOKER® OPTION			
NET	760 lbs est	345 kg	FULL-SIZE:	20" x 12" x 2-1/2"	Twenty-two (22)	Twenty-one (21)			
	100 (D3 231	545 Kg	GN 1/1: 530 x 325 x 65mm Twenty-two (22)		Twenty-one (21)				
SHIP	805 lbs*	365 kg*	GN 2/1:	650 x 530 x 65mm	Eleven (11)	Ten (10)			
5111	805 (DS		**FULL-SIZE SHEET:	18" x 26" x 1"	Eleven (11)	Eleven (11)			
SHIP DIMEN	SIONS		PRODUCT CAPACITY	RODUCT CAPACITY					
(L x W	/ x H) 56" x 49" x 6	65"*	PRODUCT	MAXIMUM	240 lb (109 kg)				
(1422mn	n x 1245mm x 16	51mm)*	VOLUME N	IAXIMUM	150 quarts (190 liters)				
	ND SHIPPING INFORMA PORT WEIGHT AND DIMI		**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY						



COMBITHERM. CTC10-20E ELECTRIC BOILER-FREE

<	Front 43-3/4" (1111mm)	Back	<i>Top/Bottom</i> 73.5/16" (1863mm)
45-11/16" (1160mm) 45-11/16" (1160mm)		A; 30-3/16" (766mm) A,B: 5-5/8" B: 26-3/4" (143mm) A,B: 5-5/8" B: 26-3/4" (539mm) C: 21-1/4" (539mm) C: 21-1/4" (143mm) C: 21-1/4" (143mm) D: 5-5/8" (143mm) C: 21-1/4" (143mm) D: 2-5/16" C: 21-1/4" (143mm) D: 2-5/16" C: 21-1/4" (143mm) D: 2-5/16" C: 21-1/4" (143mm) C:	46-3/16" (1173mm)
boein	VERN CEEE	tion 17 COA #5760	DIMENSIONS: H x W x D EXTERIOR: 45-11/16" x 43-3/4" x 46-3/16" (1160mm x 1111mm x 1173mm) EXTERIOR WITH RECESSED DOOR: 45-11/16" x 48-3/4" x 46-3/16" (1160mm x 1238mm x 1173mm) INTERIOR: 31-1/2" x 24-1/4" x 32-3/4" (800mm x 616mm x 832mm)
WATER REQUI			WATER QUALITY STANDARDS
TWO (2) COLD WAT ONE (1) TREATED V 90 psi maximum sta ONE (1) UNTREATE 90 psi maximum sta * Both inlets can be from Must meet line pressur; WATER DRAIN: 1-1,	ER INLETS - DRINKING QUALITY' VATER INLET: 3/4" NPT connection (tic (200 to 600 kPa) at a minimum D WATER INLET: 3/4" NPT conne (tic (200 to 600 kPa) at a minimum same source. Divide using a manifold. Run et and flow rate specifications for both inlets.	on. Line pressure 30 psi minimum dynamic and n flow rate of 0.53 gpm (2 L/min). ction. Line pressure 30 psi minimum dynamic an n flow rate of 2.64 gpm (10 L/min). one side through treatment device before running to oven. tical vent to extend above the exhaust vent.	It is the sole responsibility of the owner/operator/purchaser of this equipment to verify that the incoming water supply is comprehensively tested and if required, a means of "water treatment" provided that would meet
CLEARANCE R	EQUIREMENTS		Contaminant Inlet Water Requirements
TOP: 20" (508	n) Non-combustible surfaces Rmm) for air movement 130mm) for legs, air aintake	 18" (457mm) recommended service access 2" (51mm) door swing or combustible surfaces 4-5/16" (109mm) optional plumbing kit 	Free Chlorine Less than 0.1 ppm (mg/L) Hardness 30-70 ppm Chloride Less than 30 ppm (mg/L) pH 7.0 to 8.5
	REQUIREMENTS	ood installation is required.	Silica Less than 12 ppm (mg/L) Total Dissolved Solids (tds) Treated line: 50-125 ppm Untreated line: 50-360 ppm
		nter when required by local code.	

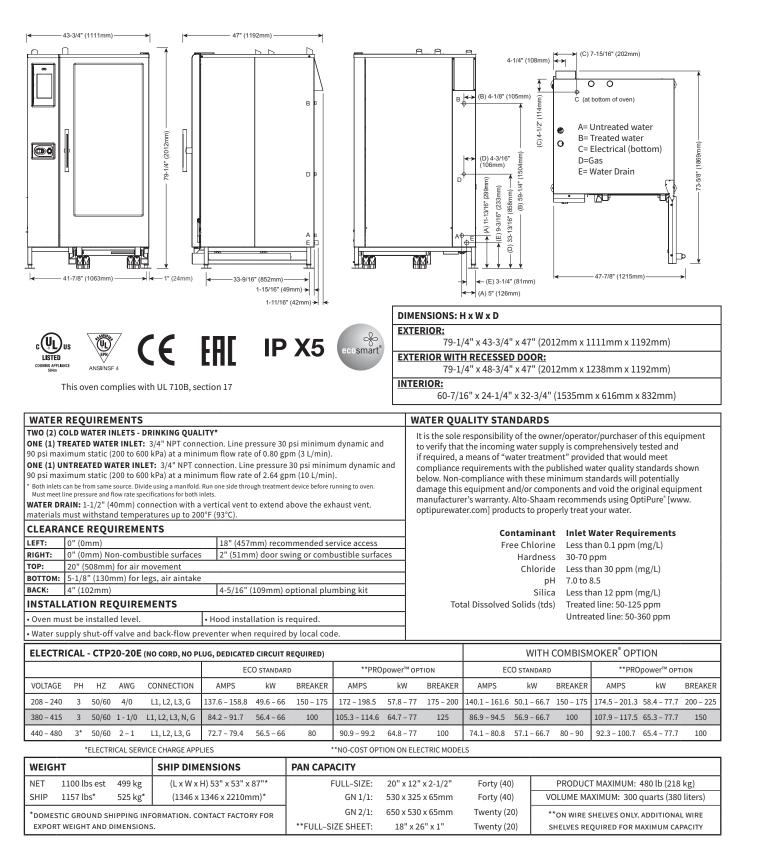
ELECTRICAL (N	ELECTRICAL (NO CORD, NO PLUG, DEDICATED CIRCUIT REQUIRED)								
MODEL	VOLTAGE	PH	HZ	AMPS	kW	BREAKER	AWG	CONNECTION	
CTC10-20E	208 - 240	3	50/60	68.8 – 79.4	24.8 - 33.0	70-80	2 - 1	L1, L2, L3, G	
	380 - 415	3	50/60	42.1 - 45.8	28.2 - 33.0	63	4 - 3	L1, L2, L3, N, G	
	440 - 480	3*	50/60	36.4 - 39.7	28.3 - 33.0	40	6 – 4	L1, L2, L3, G	

*ELECTRICAL SERVICE CHARGE APPLIES

WEIG	нт		SHIP DIMENSIONS	PAN CAPACITY			
NET	760 lbs est	345 kg	(L x W x H) 56" x 49" x 65"*	FULL-SIZE:	20" x 12" x 2-1/2"	Twenty-two (22)	PRODUCT MAXIMUM: 240 lb (109 kg)
SHIP	805 lbs*	365 kg*	(1422 x 1245 x 1651mm)*	GN 1/1:	530 x 325 x 65mm	Twenty-two (22)	VOLUME MAXIMUM: 150 quarts (190 liters)
*DOME	STIC GROUND S	HIPPING IN	FORMATION. CONTACT FACTORY	GN 2/1:	650 x 530 x 65mm	Eleven (11)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE
FOR EX	PORT WEIGHT A	ND DIMENS	IONS.	**FULL-SIZE SHEET:	18" x 26" x 1"	Eleven (11)	SHELVES REQUIRED FOR MAXIMUM CAPACITY

ALTO-SHAAM. CTPROformance

COMBITHERM. CTP20-20E ELECTRIC BOILER-FREE





COMBITHERM. **CTC20-20E ELECTRIC BOILER-FREE**

◄ 43-3/4" (1	111mm)	• ≼ 47" (1192mr			I	ELECIRIO	C BOILER-FREE
				<u>A</u> A			5-11/16" (168mm) !" (108mm)
	63mm) — — — — — —	1-15	A B B Common 11/16" (42mm) →	(D) 3-1/4" (8 (B, E) 4-3/16" (1 (A) 5" (12 (C) 7" (178	106mm) ↔ (565 c) 26mm) ↔ (26mm) ↔	B= Tr C= El D= W	-47-7/8° (1215mm) → htreated water eated water ectrical (bottom) ater Drain ectrical (back)
	ISI/NSF 4	Vith UL 710B, section 17	X5 ecosmart*	EXTERIOR WIT 79-1 INTERIOR:	H x W x D 1/4" x 43-3/4" x 47" H RECESSED DOO 1/4" x 48-3/4" x 47" 16" x 24-1/4" x 32-3	<u>R:</u> (2012mm x 1238	3mm x 1192mm)
WATER REQUI	REMENTS			WATER OL	JALITY STANDAR	DS	
90 psi maximum sta ONE (1) UNTREATE 90 psi maximum sta * Both inlets can be from Must meet line pressure WATER DRAIN: 1-1/	vater INLET: 3, atic (200 to 600 k D WATER INLET atic (200 to 600 k same source. Divide u and flow rate specifi (2" (40mm) conn Istand temperati EQUIREMEN	/4" NPT connection. Line pressure 3 Pa) at a minimum flow rate of 0.80 g : 3/4" NPT connection. Line pressur Pa) at a minimum flow rate of 2.64 g using a manifold. Run one side through treatme cations for both inlets. ection with a vertical vent to extend ures up to 200°F (93°C). TS	pm (3 L/min). e 30 psi minimum dynamic a pm (10 L/min). nt device before running to oven.	nd below. Non damage thi manufactu	at the incoming wate a means of "water tra- requirements with the is equipment and/or rer's warranty. Alto-Sater.com] products to Contami	r supply is compre- eatment" provided he published wate ese minimum stand components and v haam recommend properly treat you	I that would meet r quality standards shown dards will potentially oid the original equipment s using OptiPure [®] [www. Ir water. ter Requirements
RIGHT: 0" (0mn TOP: 20" (508	n) Non-combust 3mm) for air mov 130mm) for legs	tible surfaces 2" (51mm) door s vement	wing or combustible surface	25	Harc	Iness 30-70 ppr oride Less than	n 30 ppm (mg/L)
BOTTOM: 5-1/8" (BACK: 4" (102)	, 0	,	optional plumbing kit		:	pH 7.0 to 8.5 Silica Less than	
INSTALLATION	REQUIREM	ENTS		To	otal Dissolved Solids	(tds) Treated li	ne: 50-125 ppm
• Oven must be ins	talled level.	Hood installation is	required.			Untreated	d line: 50-360 ppm
Water supply shu	t-off valve and I	back-flow preventer when require	d by local code.				
ELECTRICAL (N	O CORD, NO PLU	G, DEDICATED CIRCUIT REQUIRED)					
MODEL	VOLTAG	E PH HZ	AMPS	kW	BREAKER	AWG	CONNECTION
CTC20-20E	208 – 24	0 3 50/60	137.6 - 158.8	49.6 - 66	150-175	4/0	L1, L2, L3, G
CICZU-ZUL	380 - 41	.5 3 50/60	84.2 - 91.7	56.4 - 66	100	1 - 1/0	L1, L2, L3, N, G
	440 – 48	3* 50/60	72.7 – 79.4	56.5 – 66	80	2 - 1	L1, L2, L3, G
	*ELECTRICAL S	SERVICE CHARGE APPLIES					
WEIGHT		SHIP DIMENSIONS	PAN CAPACITY				
NET 1100 lbs	est 499 kg	(L x W x H) 53" x 53" x 87"*	FULL-SIZE:	20" x 12" x 2-1/2"	Forty (40)	PRODUCT M	AXIMUM: 480 lb (218 kg)

WEIG			SHIF DIMENSIONS	PANCAPACITI			
NET	1100 lbs est	499 kg	(L x W x H) 53" x 53" x 87"*	FULL-SIZE:	20" x 12" x 2-1/2"	Forty (40)	PRODUCT MAXIMUM: 480 lb (218 kg)
SHIP	1157 lbs*	525 kg*	(1346 x 1346 x 2210mm)*	GN 1/1:	530 x 325 x 65mm	Forty (40)	VOLUME MAXIMUM: 300 quarts (380 liters)
*DOME	STIC GROUND SH	IPPING INF	ORMATION. CONTACT FACTORY FOR	GN 2/1:	650 x 530 x 65mm	Twenty (20)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE
EXPOR	r weight and di	MENSIONS.		*FULL-SIZE SHEET:	18" x 26" x 1"	Twenty (20)	SHELVES REQUIRED FOR MAXIMUM CAPACITY



SITE INSTALLATION

Installation

To prevent serious injury, death, or property damage:

- *Always* keep appliance on top of a pallet when using a fork lift or a pallet lift truck to move appliance.
- *Always* use a sufficient number of trained and experienced workers to place the appliance on floor, stand, or counter.

INSTALLATION

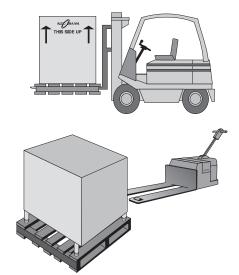
To ensure proper operation, the installation of this oven must be completed by qualified technicians in accordance with the instructions provided in this manual. Failure to follow the instructions provided may result in damage to the oven, building, or cause personal injury to personnel.

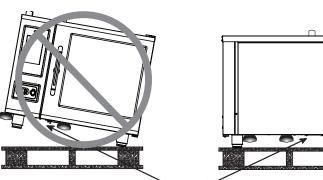
NOTICE: To prevent PROPERTY DAMAGE:

Check the dimensions of the doorways and aisles before attempting to move the oven and pallet to the installation site.

Do not tilt the oven. Transport the oven in an upright and level position only.

Slide the preheat strip into place before using a forklift or pallet jack in between the trolley guides to avoid damaging the preheat strip when lifting.





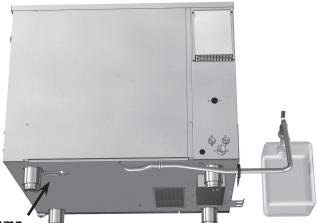
components protrude below oven

LIFTING INSTRUCTIONS

Remove banding before lifting. Lift the unit from the front only, <u>never from the side</u>.

Adjust the forks so that they do not damage any of the components under the unit. **Note that the control side of the oven is the heaviest portion.** Lift the unit just high enough to remove the wooden pallet. Lower the unit as close to the floor as possible and no more than 2" (50mm) above the floor. Secure hoses and dangling cords to avoid tangling or damage. **When moving the unit, drive slowly, keep it low to the ground, and use extreme caution.**

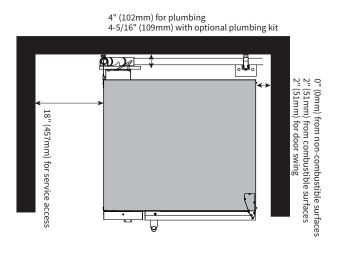
DEPTH OF FORKS IS CRITICAL FOR UNITS EQUIPPED WITH GREASE COLLECTION TO AVOID DAMAGING THE PUMP



Grease Collection Pump



SITE INSTALLATION



MINIMUM	CLEARANCE REQUIREMENTS
LEFT SIDE	0" (0mm) MINIMUM
	18" (457mm) RECOMMENDED SERVICE ACCESS
RIGHT SIDE	0" (0mm) FROM NON-COMBUSTIBLE SURFACES 2" (51mm) FROM COMBUSTIBLE SURFACES
	2" (51mm) FOR DOOR SWING
BACK	4" (102mm) for plumbing 4-5/16" (109mm) for optional plumbing kit
ТОР	20" (508mm) for air movement
воттом	5-1/8" (457mm) For legs and unobstructed air intake

Adjustable

Positioning

Leg

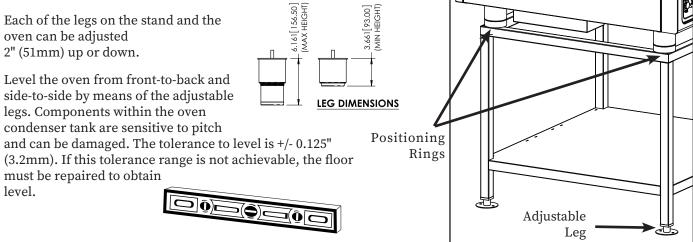
Ring

- **NOTICE:** A minimum distance of 18" (457mm) is strongly recommended for service access. If adequate service clearance is not provided, it will be necessary to disconnect the gas, water, and drain to move the oven with a forklift for service access. Service charges in connection with inadequate service access are not covered under warranty.
 - Do not install a stacked combination directly over a drain. Steam rising up out of the drain will adversely affect operation, hamper cooling air circulation, and may damage electrical and electronic components. Failure to do so will void the warranty. A single oven installed on a stand with solid surface bottom shelf can be positioned over a drain since the solid surface will block the rising steam.

POSITIONING ON SITE – COUNTERTOP

Place the oven on a stable, non-combustible level horizontal surface. Use the adjustable feet to overcome an uneven floor and ensure that the unit is level.

It is strongly recommended that tabletop models be mounted on a factory supplied stand or a stand that is stable, open, and level. The adjustable oven legs should be extended beyond the depth of the positioning ring to allow for leveling after the oven has been placed on the stand.





SITE INSTALLATION

POSITIONING ON SITE - 20-10 & 20-20 MODELS

Place the oven on a stable, non-combustible level horizontal surface. Use the adjustable feet to overcome an uneven floor and ensure that the unit is level.

1. Once the unit has been positioned properly beneath a ventilation hood system, adjust the four outside feet located on the outside corners of the base frame. Begin with a 32mm (1.25") height (illustration 1) leveling the oven from side-to-side and front-to-back (illustration 2).

NOTICE

To ensure proper fit of the trolley, the overall height of the oven must meet this specification:

Minimum: 79-7/8" (203 cm) Maximum: 80-3/8" (204 cm)

In addition, the vertical distance from the bottom of the door frame to the floor must meet this specificaiton:

Minimum: 8-1/4" (210mm)

Maximum: 8-3/4" (222mm)

2. Roll the trolley into the oven and check the overall fit of the trolley. Close the door and check fit. Make adjustments as needed.

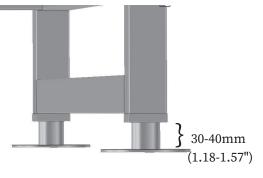
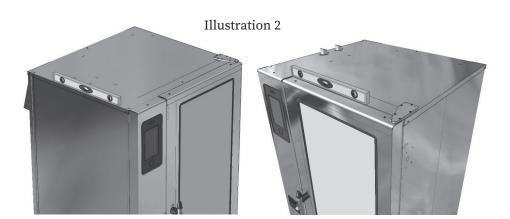
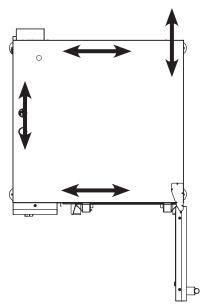


Illustration 1



NOTICE: Adjustable measurements are from the top of the leg flange to the bottom of the leg square frame (see illustration 1). If measurements exceed 40mm (1.57") in height or trolley is not on a level and stable horizontal floor, the following may occur:

- Improper sealing of the door sweep gasket to the trolley plate, or heat strip.
- Trolley may not fit properly.





SITE INSTALLATION

<u>A</u> CAUTION

Power source must match voltage identified on appliance rating tag. The rating tag provides essential technical information required for any appliance installation, maintenance or repairs. Do not remove, damage or modify the rating tag.



To prevent serious injury, death, or property damage:

All electrical connections must be made by a qualified and trained service technician in accordance with applicable electrical codes.



This appliance must be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.



CE-approved appliances include an equipotential-bonding terminal marked with the symbol shown on the left. Provisions for earthing are to be made in accordance with IEC:2010 60335-1 section 27 or local codes.



Appliances without a cord provided by the factory must be equipped with a cord of sufficient length to permit the appliance to be moved for cleaning.

Always use the correct AWG wire size based on the electrical requirements for the appliance.

WARNING



4

Improper installation, alteration, adjustment, service, cleaning, or maintenance could result in property damage, severe injury, or death.

Read and understand the installation, operating and maintenance instructions thoroughly before installing, servicing, or operating this equipment.



Electric shock hazard.

Perform lockout/tagout procedures before cleaning or servicing this appliance.

ELECTRICAL CONNECTION FOR GAS MODELS

- **1.** An electrical wiring diagram is located behind the control panel on the left side of the oven. This appliance must be branch circuit protected with proper ampacities, in accordance with the wiring diagram.
- **2.** For 1-phase applications, the ground fault or residual current protection device must accommodate a leakage current of 20 mA.
- **3.** Wire size for the main incoming power to the unit must match the minimum size listed in the specifications applicable to the specific oven model. For supply connections, locate the wire size posted on the label located on the electrical control box cover behind the service panel.
- **4.** Before operating the oven, check all cable connections and electrical terminal connections in the electrical connection area for tightness. Connections can loosen during transport.
- **NOTICE:** Check motor rotation on the Combitherm® CT Classic CTC model line. Arrows on the motor housing indicate proper rotation.
- **5.** After both water and electrical connections have been completed on all Combitherm model types, operate the oven in any cooking mode for a period of 15 minutes.
- **6.** Recheck the main power connections at the terminal block, cable connections, and electrical terminal connections to make certain they remain tight.

ELECTRICAL CONNECTION FOR ELECTRIC MODELS

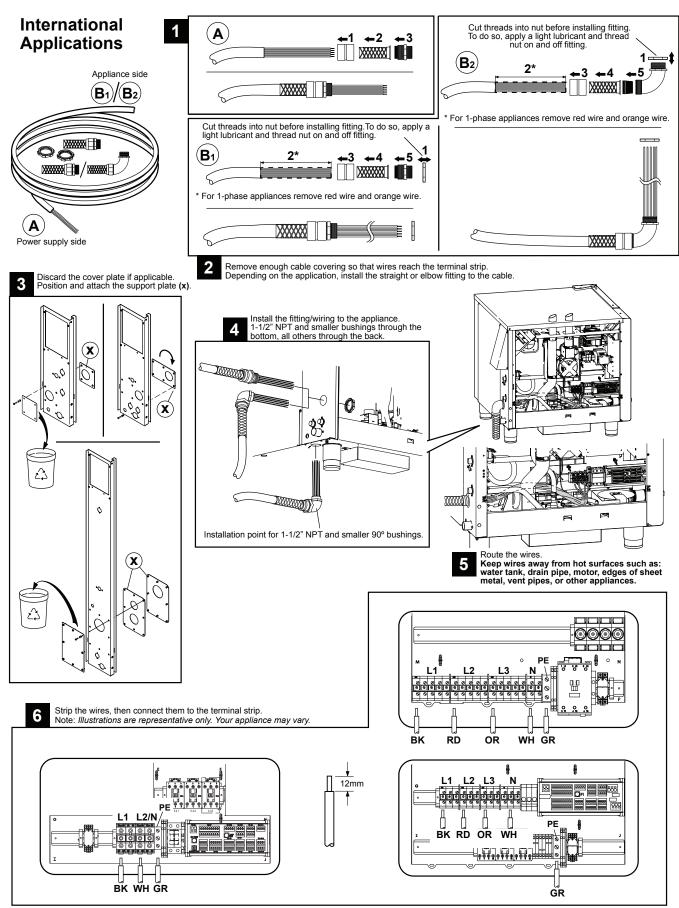
NOTICE: All models must be equipped with a country certified external allpole disconnection switch with sufficient contact separation.

An oil resistant cord like H05RN or H07RN or equivalent must be used.

- **1.** An electrical wiring diagram is located behind the control panel on the left side of the oven. This appliance must be branch circuit protected with proper ampacities, in accordance with the wiring diagram.
- 2. Wire size for the main incoming power to the unit must match the minimum size listed in the specifications applicable to the specific oven model. For supply connections, locate the wire size posted on the label located on the electrical control box cover behind the service panel.
- **3.** Before operating the oven, check all cable connections and electrical terminal connections in the electrical connection area for tightness. Connections can loosen during transport.
- **NOTICE:** Check motor rotation on the Combitherm[®] CT Classic CTC model line. Arrows on the motor housing indicate proper rotation.
- **5.** After both water and electrical connections have been completed on all Combitherm model types, operate the oven in any cooking mode for a period of 15 minutes.
- **6.** Recheck the main power connections at the terminal block, cable connections, and electrical terminal connections to make certain they remain tight.

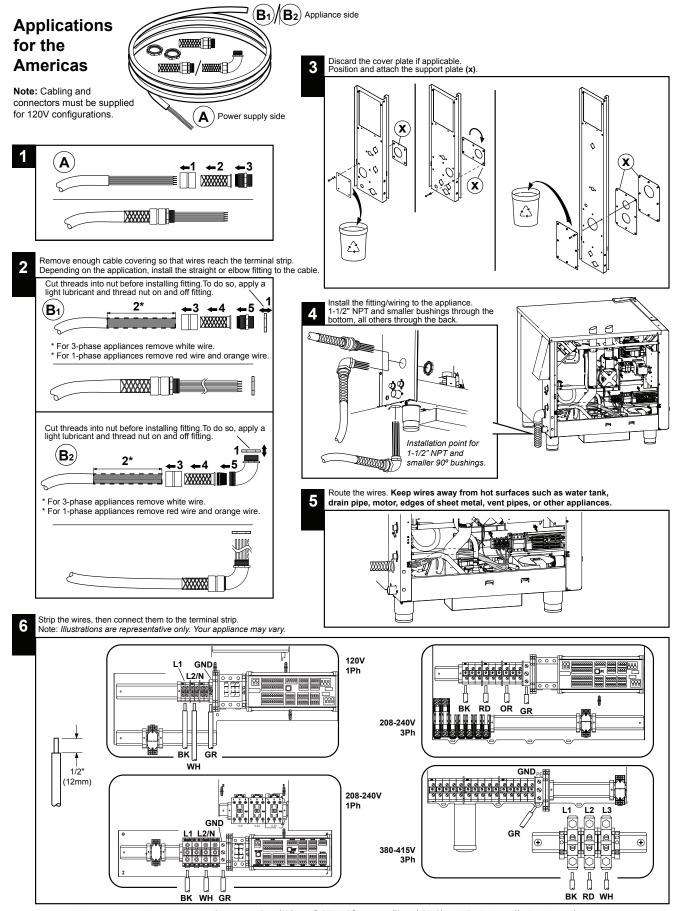


ELECTRICAL KIT INSTALLATION - 50 Hz





ELECTRICAL KIT INSTALLATION – 60 Hz



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VENTILATION REQUIREMENTS FOR GAS MODELS

WARNING

To prevent SERIOUS INJURY, DEATH, or PROPERTY DAMAGE:

Installation, air adjustment and/or service work must be in accordance with all local codes and must be performed by a trained service technician qualified to work on gas appliances.

1. A single gas Combitherm oven requires a minimum of 28 CFM make-up air for both natural and propane gas. The bottom of the oven allows necessary air flow into the appliance necessary for gas combustion and must be kept clear at all times.

DO NOT obstruct or restrict ventilation nor the air flow required to support combustion.

- **2.** It is especially critical that gas supply piping and electrical support cord and/or receptacle be routed away from the path of the hot combustion fumes.
- **3.** Make certain the oven installation maintains adequate air ventilation to provide cooling for electrical and gas components. The area around the oven should be clear of any obstructions which might retard the flow of cooling air. Failure to observe this caution may result in damage to the components and will void the warranty.
- **4.** This oven cannot be direct vented.
- **5.** Install the oven under a ventilation hood meeting all applicable code requirements. Combustion fumes must be vented in accordance with local, state, or national codes.

NOTICE

Inadequate ventilation, or failure to ensure an adequate air flow may result in high ambient temperatures at the rear of the appliance. High ambient temperatures can cause the thermal-overload protection device on the blower motor to trip resulting in severe damage to the blower motor. An adequate ventilation system is required for commercial cooking equipment. The minimum ventilation system shall comply with local regulations and relevant codes. In the absence of local codes, the ventilation system shall comply with:

- USA and Canada: NFPA 96
- EU: EN203
- Australia/New Zealand: AS 1668.1 and AS 1668.2

The oven must be installed under a ventilation hood listed to ANSI/UL 705 (latest edition).

WARNING



DO NOT obstruct or block exhaust flues or attach any flue extension that may impede proper burner operation, restrict the exhaust fumes and cause negative backdraft or the appliance to shut down. Failure to do so may result in serious injury or death.

WARNING



Failure to properly vent this appliance may cause SERIOUS INJURY, DEATH, or PROPERTY DAMAGE. The formation of volatile substances may cause suffocation, equipment damage, operational problems and unsatisfactory cooking performance as a consequence of improper venting and is not covered by your warranty.

Ventilation hoods and exhaust systems shall be permitted to be used to vent appliances installed in commercial applications.

In accordance with NFPA 54 for the Commonwealth of Massachusetts only:

Where automatically operated appliances are vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust, provisions shall be made to allow the flow of gas to the main burners only when the damper is open to a position to properly vent the appliance and when the power means of exhaust is in operation.



WARNING

Noturo1

To prevent SERIOUS INJURY or DEATH from fire or explosion:

Only connect the type of gas indicated on the identification nameplate. Your gas Combitherm® is equipped to operate using only the fuel type specified on the identification name plate. Should conversion from natural gas to propane or from propane to natural gas be desired, conversion parts must be ordered from Alto-Shaam. Conversions must be peformed by an **Alto-Shaam authorized service provider only. Always ensure the oven's nameplate reflects the intended fuel type for your oven.**

Residential gas connections and hard-piped gas connections DO NOT meet NSF certifications and should NEVER be used with your Combitherm oven.

Please refer to model specifications for rated thermal loads and connected pressure requirements.

Cat

CooTypo

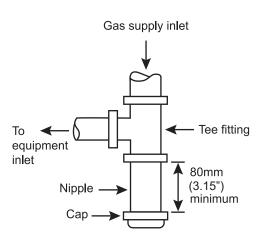
Installation shall comply with local codes required for gas appliances. In the absence of local codes, installation shall comply with the latest edition of:

- USA: National Fuel Gas Code, ANSI Z223.1 (NFPA 54). And OSHA Regulations
- Canada: Natural Gas and Propane Installation Code, CAN/CSA-B149.1-15
- EU: European Standard EN203
- Australia/New Zealand: AS 5601
- **NOTICE:** Connection components not supplied by Alto-Shaam must comply with the regulations in force of the country of use.

Natural	Cat	Gas Type
GR	II _{2H3B/P}	2H-G20-20mbar
СҮ	II _{2H3B/P}	2H-G20-20mbar
ES/FR/GB/IE/CH	II _{2H3P}	2H-G20-20mbar
AT	II _{2H3B/P}	2H-G20-20mbar
BE	II _{2E(S)3B/P}	2H-G20-20mbar
DE	II _{2ELL3B/P}	2E-G20/G25-20mbar
NL	II _{2L3B/P}	2L-G25-25mbar
Butane/Propane Mixture	Cat	Gas Type
GR	II _{2H3B/P}	3B/P-G30/G31-30mbar
СҮ	II _{2H3B/P}	3B/P-G30/G31-30mbar
ES/FR/GB/IE/CH	II _{2H3P}	3P-G31-30mbar
AT	II _{2H3B/P}	3B/P-G30/G31-50mbar
BE	II _{2E(S)3P}	3P-G31-30mbar
DE	II _{2ELL3B/P}	3B/P-G30/G31-50mbar
NL	II _{2L3B/P}	3B/P-G30/G31-30mbar
AUS/NZ	_	NGN 1.13 kPa
AUS/NZ	_	LPG-X Propane 2.75 kPa
Japan	_	Natural Gas 13A 1.96 kPa
Japan		LPG - Propane 2.8 kPa

SEDIMENT TRAP REQUIRED:

A sediment trap shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical at the time of appliance installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet, as illustrated below or another device recognized as an effective sediment trap.

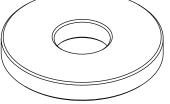




WARNING

Improper installation, adjustment of burner pressures, alteration, service, maintenance, or use can cause carbon monoxide poisoning, explosion, fire, electrical shock, or other conditions which may cause SERIOUS INJURY, DEATH or PROPERTY DAMAGE. Consult a qualified and trained installer, service agency, local gas supplier, or your distributor for information or assistance. The qualified and trained installer or agency must use only factoryauthorized and listed kits or accessories when modifying this appliance.

GAS TRAIN - ORIFICE



When converting gas units to either propane or natural gas you will need to provide the corresponding orifice and restrictor plate, and new serial data tags, part numbers: LA-26348 and LA-26349

Item	Part	Description	Qty.
1	OR-35874	ORIFICE, GAS VALVE DISC 4.60mm, 6-10 G25, 10-20 G31, 20-20 G31	1
2	OR-35876	ORIFICE, GAS VALVE DISC 2.60mm, 6-10 G30	1
3	OR-35877	ORIFICE, GAS VALVE DISC 4.00mm, 10-10 G30, 20-10 G30, 7-20 G30	1
4	OR-35878	ORIFICE, GAS VALVE DISC 4.10mm, 10-10 G31, 20-10 G31, 10-20 G30, 20-20 G30	1
5	OR-35943	ORIFICE, GAS VALVE DISC 5.70mm, 10-10 G20, 20-10 G20, 10-20 G20, 20-20 G20	1
6	OR-36006	ORIFICE, GAS VALVE DISC 6.30mm, 7-20 G25	1
7	OR-36007	ORIFICE, GAS VALVE DISC 6.00mm, 10-10 G25, 20-10 G25	1
8	OR-36207	ORIFICE, GAS VALVE DISC 6.40mm, 10-20 G25, 20-20 G25	1
9	OR-36625	ORIFICE, GAS VALVE DISC 3.75mm, 6-10 G20	1
10	OR-36626	ORIFICE, GAS VALVE DISC 2.75mm, 6-10 G31	1
11	OR-36627	ORIFICE, GAS VALVE DISC 5.55mm, 7-20 G20	1
12	OR-36628	ORIFICE, GAS VALVE DISC 4.20mm, 7-20 G31	1

INSTALLATION REQUIREMENTS

GAS CONNECTION: 3/4" NPT For Europe, gas connection thread fittings should conform to

EN ISO 228-1, or ISO 7-1, or shall have a compression fitting.

If the appliance has casters, a restraint system must be installed. See section *Mobile Equipment Restraint*.

NOTE: If a flexible gas line is used, it must be AGA approved, commercial type and at least 3/4" I.D. or comply to European Standard EN203.

HOOD INSTALLATION IS REQUIRED

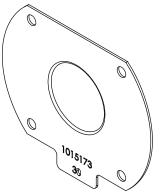
After installation, burner and gas valve should be checked and adjusted by a qualified and trained Alto-Shaam technician for proper operation and validate CO2 levels. GAS VALVE MAY REQUIRE FIELD ADJUSTMENT ABOVE 2,000' (610m) AND IS NOT ADJUSTED AT THE FACTORY.



Electric shock hazard.

Perform lockout/tagout procedures before cleaning or servicing this appliance.

NOTE: Natural Gas = G20 Propane = G31 Butane = G30 Low Calorific Natural Gas = G25



GAS TRAIN -RESTRICTOR PLATE

Item	Part	Description	Qty.
1	1012504	PLATE, RESTRICTOR COMBI, 20mm, 10-20 G30, 20-20 G30	1
2	1012817	PLATE, RESTRICTOR COMBI, 25mm, 7-20 G25	1
3	1013843	PLATE, RESTRICTOR COMBI, 14mm, 6-10	1
4	1013844	PLATE, RESTRICTOR COMBI, 21mm, 10-20 G25, 20-20 G25	1
5	1013845	PLATE, RESTRICTOR COMBI, 22mm, 10-20 G20, 10-20 G31, 20-20 G20, 20-20 G31	1
6	1014619	PLATE, RESTRICTOR COMBI, 17mm, 10-10 G31, 10-10 G30, 20-10 G31, 20-10 G30	1
7	1015074	PLATE, RESTRICTOR COMBI, 18mm, 10-10 G20, 10-10 G25, 20-10 G20, 20-10 G25	1
8	1015075	PLATE, RESTRICTOR COMBI, 23mm, 7-20 G31	1
9	1015076	PLATE, RESTRICTOR COMBI, 24mm, 7-20 G20, 7-20 G30	1

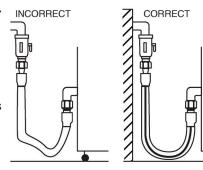


WARNING

To prevent SERIOUS INJURY, DEATH, or **PROPERTY DAMAGE:**

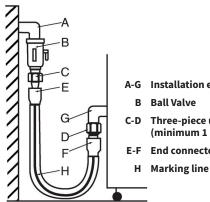
Installation, air adjustment and/or service work must be in accordance with all local codes and must be performed by a trained service technician qualified to work on gas appliances.

Remove any tape or compound residue on all external thread connections before proceeding. Use an approved gas pipe sealant at all external threaded connections, Gas piping used on gas



connections must avoid sharp bends that may restrict the flow of gas to the appliance. If the connected pressure exceeds 14.0" W.C. (3.5 kPa), a step-down regulator is required to be supplied by the owner/ operator.

Close the individual manual shut-off valve to **isolate the** appliance from the gas supply piping system during any pressure testing at test pressures equal to or less than 1/2 psig. (3,4 kPa). The appliance and individual shut-off valve **<u>must be disconnected</u>** from the gas supply piping system during any pressure testing at pressures in excess of 1/2 psig. (3,4 kPa).



GAS INTAKE

A-G Installation elbow

- C-D Three-piece union fitting (minimum 1 per installation)
- End connector for the flexible tube

To prevent personal injury, death or property damage:

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

<u>^ W A R N I N G</u>



To prevent SERIOUS INJURY, DEATH or **PROPERTY DAMAGE:**

DO NOT spray aerosols in the vicinity of this appliance when in operation.

CAUTION



To prevent **INJURY** or **PROPERTY DAMAGE**, make certain the area around the appliance is kept clear of combustible items.

In the U.S.A., installation must conform to local codes or, in the absence of local codes, with the current edition of the National Fuel Gas Code, NFPA-54 and ANSI Z83.11a CSA 1.8a 2004 (or latest edition). In Canada, installation must be in accordance with local codes, CAN/CGA-B149.1, Installation for Natural Gas Burning Appliances and Equipment (latest edition) or CAN/CGAB149.2 Installation for Propane Burning Appliances and Equipment (latest edition). In Europe, installation must be in accordance with European Standard EN203.

The inlet supply line must be properly sized to accommodate all individual appliances simultaneously used on the same line but must never be smaller than 3/4" NPT.



GAS SUPPLY AND INSTALLATION

WARNING

To prevent SERIOUS INJURY, DEATH, or PROPERTY DAMAGE:

Always use proper length pipes to avoid stress on the gas control manifold.

Always use an approved gas pipe sealant at all external threaded connections.

Always remove any tape or compound residue on all external thread connections before installing appliance.

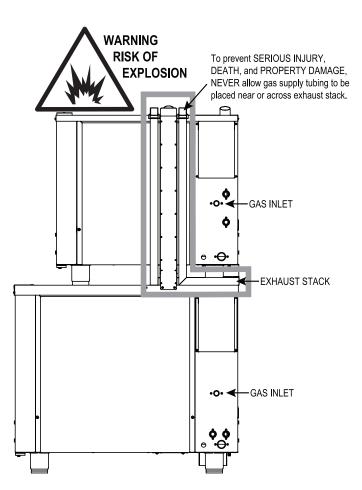
The minimum size requirement for gas piping or a flexible connector is 3/4 inch (19mm). For long runs of gas piping, the pipe diameter must conform to the tables in the National Fuel Gas Code, ANSI/NFPA Z223.1 or European Standard EN203.

A listed gas shut-off valve must be installed upstream of the appliance to shut off the gas supply during servicing. The shut-off valve should be accessible with the appliance in the normal installation position.

If the oven or the oven stand is supplied with casters, the gas connection must be made with a flexible connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69; or in Canada, Connectors for Movable Gas Appliances, CAN/CGA-6.16-M87. When using a flexible connector, a quick disconnect device must be used to comply with the Standard for Quick-Disconnect Devices for Gas Fuels, ANSI Z21.41; or in Canada, Quick Disconnect Devices for Use with Gas Fuels, CAN1-6.9 or European Standard EN203. In Australlia / New Zealand AS 5601, AS 1869.

When a quick disconnect device and flexible connector are used, a restraining device must be installed to limit the movement of the appliance and prevent damage to the connector or quick disconnect. An example of a restraining device would consist of a 2000 pound test stainless steel cable, attached to a structural member of the kitchen wall behind the oven. The means of attachment should consist of a quick connect snap so that the oven can be disconnected when the appliance must be moved away from the wall. The other end of the cable should be permanently attached to the rear frame of the oven. The cable should be of sufficient length so that no strain is ever placed on the flexible gas connector in the event of accidental movement of the oven without properly disconnecting the gas connector. The flexible connector should be routed to form a downward "U" loop between the building gas supply and the permanent attachment at the rear of the oven.

The routing of the flexible connector must not run along the side of the exhaust stacks or cross the exhaust stacks. Oven temperatures achieved during operation are too hot for safe operation. Gas piping should be installed from the point of gas connection at the back of the oven and run away from the exhaust stacks where the flexible connector may be safely used. See the illustration for the area to avoid.





GAS LEAK TESTING

If a pressure leak test above 1/2 psi (34.5 mbar) is to be performed on the building supply gas piping, the shut-off gas valve and oven inlet gas supply line must be disconnected from the building supply piping before conducting the pressure test. Failure to do so may result in damage to the manual gas valve, gas components in the oven, or both.

If any gas leak tests are to be conducted at pressures equal to or below 1/2 psi (34.5 mbar), the manual gas shut-off valve upstream of the oven must be turned off before conducting the tests.

Leak testing of the internal oven piping system was conducted before shipping the oven from the factory. If additional testing is needed, it should only be conducted at normal gas supply pressures. If the testing is performed using combustible gas in the piping, the leak checking should be done with a soap solution (bubble checking). The use of an electronic combustible gas leak detector is helpful, however, this type of detector can be oversensitive. Electronic detectors may indicate false leaks from other sources which would not be detected when checking with a liquid solution to verify a nohazard gas connection.

When starting the oven after initial installation, the gas lines must be free of air. It may take up to 30 minutes to eliminate all air from the lines. If, after this time there is no heat, call for factory assistance.



Never use an open flame or other ignition sources to check for gas leakage. Failure to do so may cause a fire or explosion and result in serious injury or death.

GAS EXHAUST

The oven is not designed for direct connection to a chimney vent system or for direct connection to a horizontal exhaust system.

The oven must be installed under a ventilation hood.

Oven operators should be instructed with regard to the hazards of placing any material on top of the oven that would obstruct the flow of flue products out the opening of the flue diverter. Operators should also be instructed with regard to the hazards of hot flue gases and that any material or items placed on top of, or in front of the flue defector could be damaged or cause a fire hazard.

DANGER

Before starting the appliance, make certain you do not detect the odor of gas.

If you smell gas:

- Shut off the gas supply immediately.
- Do not attempt to light any appliance.
- Do not touch any electrical elements.
- Extinguish any open flame.
- Evacuate the area.
- Use a telephone outside the property and immediately contact your gas supplier.
- If unable to contact your gas supplier, contact the fire department.

WARNING

DO NOT obstruct or block exhaust flues or attach any flue extension that may impede proper burner operation, restrict the exhaust fumes and cause negative backdraft or the appliance to shut down. Failure to do so may result in serious injury or death.





WATER QUALITY REQUIREMENTS

Water Quality Requirements

Use a drinking quality, cold water supply only.

△ WARNING

Significant damage to the appliance cavity, elements, or heat exchanger could result from improper water quality. Failure to meet the water quality requirements and observe this precaution will void the warranty.

Water quality is of critical importance when installing steam producing equipment of any kind, particularly high temperature steam producing equipment. Water that is perfectly safe to drink is composed of chemical characteristics that directly affect the metal surfaces of steam producing equipment. These chemical characteristics differ greatly from region to region throughout the U.S. and the world. Varying combinations of pH; alkalinity; hardness; chlorides; total dissolved solids; and other chemical characteristics, when subjected to high temperatures, will cause water to have a tendency to either scale or corrode.

Alto-Shaam has consulted with people who understand the properties of water in order to provide water quality standards that meet the broadest possible range of acceptable water quality requirements to help protect your investment.

We strongly urge water testing to ascertain the water quality on site prior to the installation of any steam producing equipment. Since water quality is an important issue, Alto-Shaam is committed to provide as much information as possible to help protect the investment made in this equipment.

A water filtration system, when properly installed, maintained, and combined with the required levels of steam producing equipment maintenance, will help lessen the affect water has on metal surfaces. It will not, however, provide complete protection against all water damage from region to region. Due to the complexity of water chemistry, it is important to understand that water quality plays a significant role in the longevity of steam producing equipment. Water quality and required maintenance of steam generating equipment is the direct responsibility of the owner/operator. Damage incurred as a direct result of poor water quality and/or surfaces affected by water quality is also the responsibility of the owner/operator. Damage due to water quality that does not meet the minimum standards shown below is not covered under the Alto-Shaam Combitherm warranty.

Contaminant	Inlet Water Requirements
Free Chlorine	Less than 0.1 ppm (mg/L)
Hardness	30-70 ppm
Chloride	Less than 30 ppm (mg/L)
pH	7.0 to 8.5
Silica	Less than 12 ppm (mg/L)
Total Dissolved Solids (tds)	Treated line: 50-125 ppm
	Untreated line: 50-360 ppm

It is the sole responsibility of the owner/operator/ purchaser of this equipment to verify that the incoming water supply is comprehensively tested and if required, a means of "water treatment" provided that would meet compliance requirements with published water quality standards. Non-compliance with these minimum standards will potentially damage this equipment and/ or components and VOID the original equipment manufacturer's warranty. Alto-Shaam recommends using OptiPure[®] [www.optipurewater.com] products to properly treat your water.

Alto-Shaam will continue our efforts to provide viable solutions to ease the impact of water quality as it relates to heat producing equipment.



Notice: To prevent water pipes from bursting, the incoming water supply should be off when the appliance is not in use.



Notice: Verify that the water supply is open before starting the cleaning program.



WATER SUPPLY AND INSTALLATION

Significant damage to the appliance cavity, elements, or heat exchanger could result from improper water quality. Failure to meet the water quality requirements and observe this precaution will void the warranty.

- Flush the water line at the installation site.
- **Backflow Prevention** The equipment must be installed with a check-valve or other anti-backflow/ anti-siphon device on all inlet water lines in accordance with and as required by national, state, and local health, sanitation and plumbing codes.
- PIPE SEALING TAPE (Teflon®) MUST BE USED AT ALL CONNECTION POINTS. The use of a pipe sealing compound is not recommended.
- Install a manual water shut-off valve between the main cold water supply line(s) and Combi supply lines.

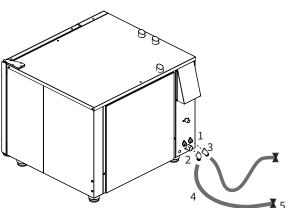
WARNING

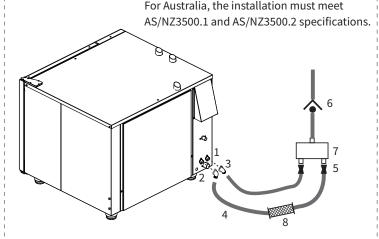
Bursting water supply lines may cause serious injury or flooding. Always turn OFF incoming water supply valves when the oven is not in use.

NOTICE:

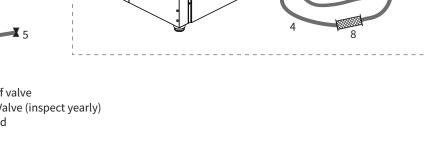
Untreated water supplies will permanently damage the water system in this oven. Two water supplies are required for proper operation. At least one MUST be treated.

Supply lines should be flexible to allow oven to be moved when service or cleaning is needed.





- 1. Untreated water inlet
- 2. Treated water inlet
- 3. Install a 90° fitting whenever possible on each water line.
- 4. Connect a flexible water line to each inlet fitting.
- 5. Shut-off valve
- 6. Check Valve (inspect yearly)
- 7. Manifold
- 8. Filter

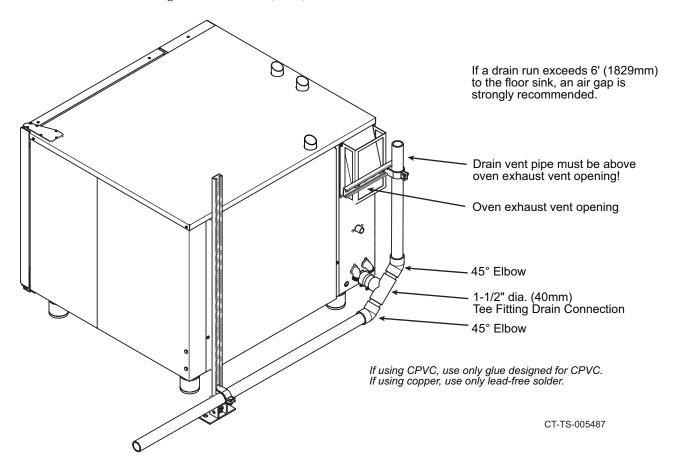




WATER DRAINAGE - FOR SINGLE OVEN

A union is required. Install a 1-1/2-inch (40mm) diameter connection, drain line and clamp into place. The drain line must always be a positive gradient away from the Combitherm oven. An end of drain run air gap may be required by local code. Vertical air vent required.

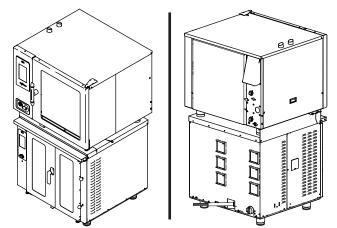
NOTICE: In the U.S.A., this equipment is to be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. [BOCA], and the Food Service Sanitation Manual of the Food & Drug Administration [FDA].



SPECIAL NOTES FOR WHEN STACKING DISSIMILAR UNITS

When installing two dissimilar units, for example, a CTP 7-20 over a VMC-F4, consult the specification sheet of each unit for the required clearances. Always use the largest clearance dimension when a choice between two competing dimensions needs to be made.

Always plumb the units in such a way that does not inhibit the ability to remove access panels, clean filters, or install the utilites of the companion unit.







WATER DRAINAGE - FOR STACKED OVEN

A union is required. Install a 1-1/2-inch (40mm) diameter connection, drain line and clamp into place. The drain line must always be a positive gradient away from the Combitherm oven. An end of drain run air gap may be required by local code. Vertical air vent required.

NOTICE: In the U.S.A., this equipment is to be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. [BOCA], and the Food Service Sanitation Manual of the Food & Drug Administration [FDA].



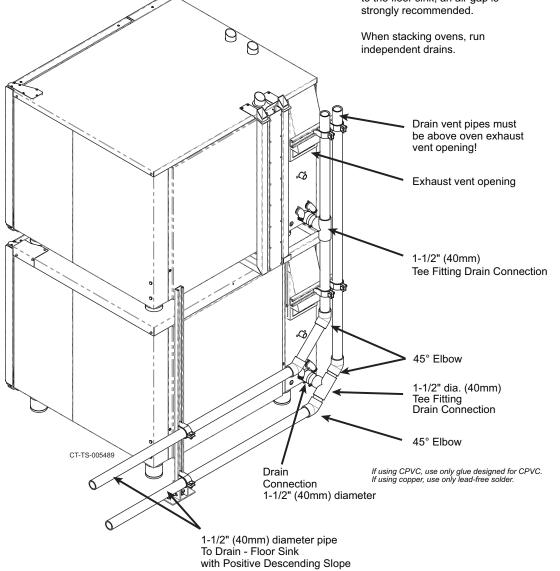
properly and not blocked.

Local codes may require that the type of material used for the drain One suggested method of drain installation. pipes be different than the CPVC pipes provided in the installation kit. Drain materials must In such cases, any costs associated with changing the drain pipes to meet the local codes are the responsibility of the end user. Installation kits have a maximum run

length of 4-1/2' (1372mm).

withstand temperatures up to 200°F (93°C). If a drain run exceeds 6' (1829mm)

to the floor sink, an air gap is



MOBILE EQUIPMENT RESTRAINT

For Gas Models:

The gas Combitherm must use a connector that complies with The Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 CSA 6.16 and addenda Z21.69a-1989. A quick disconnect device must be installed to comply with The Standard for Quick Disconnect Devices for Use with Gas Fuel, ANSI Z21 CSA 6.9. and European Standard EN203.

Adequate means must be provided to limit the movement of this appliance. Limitation of movement must be made without depending on the connector, the quick disconnect device, or the associated piping designed to limit appliance movement. If it becomes necessary to disconnect the restraint, it must be reconnected immediately following the return of the appliance to its original position. 1. Install a manual gas shut-off valve along with an approved disconnect device.

FIRE HAZARD

2. Install an A.G.A. certified, heavy-duty connector that complies with ANSI Z 21.69 or CAN 1-6.10m88 along with a quick-disconnect device in compliance with ANSI Z21.41 or CAN 1-6.9m70. Connectors must be installed with a cable restraint to prevent excessive tension from being placed on the connector.

st

To prevent SERIOUS INJURY or DEATH, your appliance must be secured to building structure to prevent unintended movement.

For Electric Models:



This section is provided for the assistance of qualified and trained service technicians only and is not intended for use by untrained or unauthorized service personnel. Failure to observe this precaution may void the warranty.

Any appliance that includes a set of casters must be installed with a tether. Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. The following requirements apply:

- 1. Casters must be a maximum height of 6" (152mm).
- 2. Two of the casters must be the locking type.
- 3. Such mobile appliances or appliances on mobile stands must be installed with the use of a flexible connector secured to the building structure.



ELECTRIC SHOCK HAZARD.

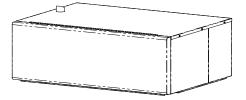
To prevent SERIOUS INJURY or DEATH, your appliance must be secured to building structure to prevent unintended movement.

A mounting connector for a restraining device is located on the lower back flange of the appliance chassis or on an oven stand, approximately 18" (457mm) from the floor. A flexible connector is not supplied by, nor is it available from, the factory.

NOTICE: The mobile base used on stacked ovens is not adjustable. The equipment must be placed on a stable, non-combustible, level, horizontal surface.



COMBIHOOD PLUS[™] VENTLESS HOOD (IF EQUIPPED WITH THIS OPTION)



The CombiHood PLUS option is factory installed directly on the top of the Alto-Shaam Combitherm CTP or CTC series oven.

- Using EPA method 202 testing, grease laden vapors emitted by the Combi Ventless hood are 0.58 mg/m³ far less than U.L.'s established standard of 5 mg/m³.
- A high-powered fan moves all steam and vapors from the oven cavity into the hood intake and out the back exhaust vent, trapping grease as the air moves through the filter system.
- As steam and vapors are circulated through the hood, condensed steam drains at the back of the hood.
- An activated charcoal filter cleans the air before venting it out the back of the hood.
- CombiHood PLUS[™] performance is "smart"; engaging the fan during the last two minutes of the cook cycle, which provides quiet operation and consumes less power.

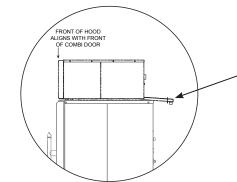
To access the filters, swing the outer door up until the hinges latch in place. Then turn the three thumb screws (a) one quarter-turn to release the inner door.

CombiHood Plus Washable Grease Filter with metal housing (5017362) (b)

Washing frequency should be based on oven usage with a maximum of two weeks between cleaning if the oven is used for non-grease laden products or steam applications only. Grease laden products require cleaning frequency of at least once a week.

Remove the grease filter by pulling it straight out of the housing. Place the filter in the dishwasher or wash separately by placing in hot, soapy water until all grease and particles have been removed. Rinse thoroughly. Allow the filter to air dry before reinstalling.

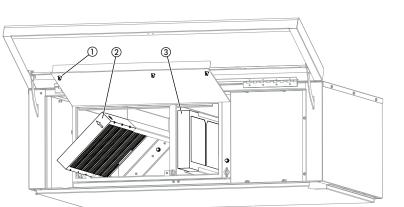
The air flow arrow on the filter casing should point toward the hood fan when the filter is reinstalled.



Condensate Drain

A condensate drain line to the floor drain must be installed. The drain line must always be a positive gradient away from the Combitherm oven.

Test the drain for proper drainage and signs of leaking on a monthly basis.



CombiHood Plus Charcoal Filter with paper housing, Class II (FI-25866) (c)

CombiHood Plus Charcoal Filter with metal housing, Class I *required for New York City and Los Angeles* (FI-36620)

The charcoal filter should be inspected once a month for contaminants. Replacement must be made at a minimum of three month intervals — more often if heavy contaminants are visible or if the filter no longer controls odors.

To remove the filter, pull and slide out while holding the bottom housing. When replacing the filter, make certain the air flow arrow(s) point toward the hood fan, and that the filter is replaced in the three-sided metal frame provided with the hood.

NOTICE: A pressure switch is used to detect when the airflow through the charcoal filter is reduced by 25% - indicating a possible blockage. This will generate an E101 error message on the oven control display. The filters will need to cleaned or replaced.

If the washable filter is not seated properly, an error code E102 appears on the oven control display during the selftest at the beginning of a cooking cycle or during the last two minutes of a cooking cycle.

When an E101 or E102 appears on the control display, a cook cycle cannot be started until the cause of the fault has been fixed.



SPECIAL CONDITIONS FOR UNITS INSTALLED WITHIN THE CITY OF NEW YORK

- 1. Installation and start up must be performed by an Alto-Shaam authorized installation company.
- 2. Operating instructions in the manual must be read and understood by all persons using the appliance. The person responsible for training of the operators is responsible for the safekeeping of the manual.
- 3. A ventless hood condensate drain line to the floor drain shall be installed as applicable. The drain line must always be a positive gradient away from the Combitherm.
- 4. The grease filter shall be cleaned at least once a week. The disposable dry-type air filter should be inspected for contaminants on a regular basis. Replacement must be made at a minimum of three month intervals. A hood maintenance log must be included with the unit and shall be completed at the intervals indicated.
- 5. The filter interlocks shall be inspected/tested at least every 6 months.
- 6. Suitable fire protection shall be provided for each installation. This protection system is subject to FDNY Range Hood Inspection Unit's inspection and approval.
- 7. Installation, maintenance, and cleaning procedures shall comply with all applicable New York City Fire Code, New York City Electric Code, Construction Codes (including the Building Code and the Mechanical Code), rules and regulations.
- 8. Underwriters Laboratories, Inc.'s listing requirements and limitations shall be complied with and manufacturer's installation, maintenance procedures and safety limitations shall be complied with.
- 9. The ductless hood and Combitherm unit shall be used for light duty cooking only and the entire ductless hood on a combi oven with grease filter I air filter shall be inspected, cleaned and replaced if necessary, by qualified person holding a Certificate of Fitness type W-64 or F-64. A record of such inspection and cleaning shall be kept on the premises for inspection.
- 10. Certificate of Approval number shall be plainly and permanently labeled upon the appliance.
- 11. All installations shall be subject to inspection by representatives of the Bureau of Fire Prevention which may result in added requirements being imposed.
- 12. The Fire Department reserves the right to make periodic inspections of the above referenced ductless hood on a combi oven without warning to ensure that maintenance requirements are being followed. These audit inspections will be solely at the discretion of the Fire Department.

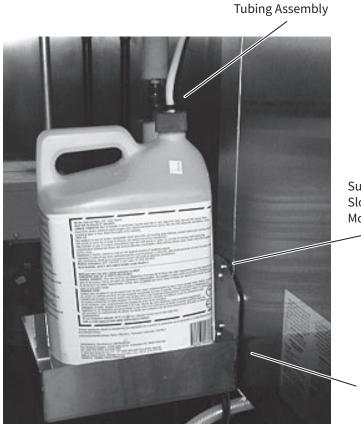
HOW TO TEST THE FILTER INTERLOCKS

- 1. Start the oven and set the temperature to 500°F.
- 2. Set the timer to three minutes and allow the oven to run for 90 seconds.
- 3. Verify that the hood is operating (Listen for noise from fan.)
- 4. Open the hood door.
- 5 Loosen the three quarter-turn screws on the filter access door and open the filter access door.
- 6. Observe the controller screen. An E101 or E102 error code displays.
- 7. Close the filter access cover.
- 8. Close the hood door.
- 9. Press the checkmark button to clear the error codes.



LIQUID CLEANER HOOK-UP (IF EQUIPPED WITH THIS OPTION)

Cleaner Cap and



Support Tray Slotted Opening and Mounting Studs

Support Tray

- Removable, cleaner support tray can be mounted on the left or right exterior wall of the oven. Slide slotted openings on the tray over the mounting studs.
- Support tray holds a 2-1/2-gallon (9,5 liter) bottle and measures 10-1/2" x 7-3/4" (267mm x 194mm).
- Place liquid oven cleaner bottle inside tray.
- Wearing protective rubber gloves and eyewear, remove cap from liquid oven cleaner bottle. Pull out the Cleaner Cap and Tubing Assembly from the back of the unit, and screw onto liquid oven cleaner bottle.
- Position cap to ensure the hose is not kinked after tightening.
 - Combitherm liquid oven cleaner jugs are quickly and easily replaced.
 - Combitherm liquid oven cleaner is automatically pumped through the system, saving labor and providing greater employee safety by eliminating the need to handle caustic cleaning liquids each day.

ALWAYS wear protective eyewear and rubber gloves when using liquid oven cleaner to prevent eye, skin, and respiratory tract irritation.

Keep out of reach of children.

See Safety Data Sheet for additional information.

WARNING



To prevent SERIOUS INJURY or DEATH, NEVER operate this appliance in a cleaning mode without the liquid cleaner connected, with a kink in the cleaning hose line, or with an empty liquid cleaner container. Failure to do so may result in poor oven cleaning, grease and/or carbon accumulating inside the oven cavity and increased risk of fire.

To prevent **serious personal injury**, **death**, or **property damage**:

The appliance must be cleaned thoroughly to avoid deposits of grease and or food residues inside the appliance that may catch fire. If fat deposits and/or food waste inside the appliance ignite, shut down the appliance immediately and keep the appliance door closed to extinguish the fire. If further extinguishing is required, disconnect the appliance from the main power and use a fire extinguisher (do not use water to extinguish a grease fire!). Failure to clean the appliance properly invalidates the warranty and relieves Alto-Shaam of all liability.

CT PROformance[™] Start-Up Procedures



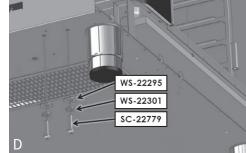
GREASE COLLECTION INSTALLATION (IF EQUIPPED WITH THIS OPTION)

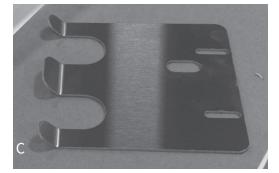
Thumb screw

Hose guide bracket

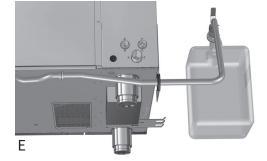
Hose hanger bracket with film





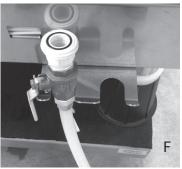


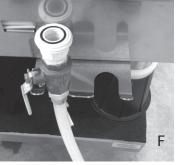
Hose hanger bracket

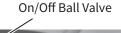


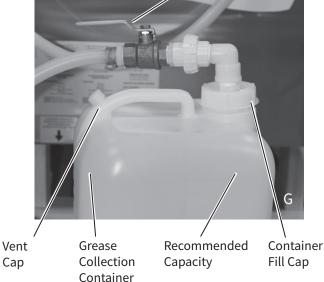
Grease Collection Hose

- · Grease Collection Hose Assembly is attached to the oven in the back.
- The hose guide bracket can be attached on either the left side or the right side toward the back. Placement on the left side is recommended whenever possible. Thumb screws are in position for this purpose. Remove thumb screws, position hose guide bracket and secure screws (PHOTO A). Thread grease hose through the guide.
- The hose hanger bracket can be attached on either the left side or the right side toward the front of the oven. Placement on the left side is recommended whenever possible. Remove the plastic protective film from the bracket (PHOTO B,C). Pan head screws are in position beneath the oven for this purpose. For stacked configurations, always place the hanger bracket on bottom of the top **oven.** Remove pan head screws and washers (PHOTO D), position hose hanger bracket on either side of the oven and secure screws and washers (PHOTO E,F). The hanger bracket is used to secure the grease collection hose while changing grease collection containers.
- Place Grease Collection Containers inside the tray of the Mobile Grease Collection Cart. Roll into place next to the oven and apply the caster brake.
- Loosen vent cap on container. Pull out the Grease Collection Hose Assembly from the back of the unit. Remove collection container fill cap (PHOTO G).
- · Screw Grease Collection Hose Assembly on to collection container until snug.
- Turn ball valve handle to the **ON** position.











CT PROformance™ Start-Up Procedures

How To Turn On the Appliance

Prerequisites

- 1. Turn on the exhaust hood.
- 2. Make sure that the water supply to the appliance is turned on.
- 3. Make sure that the electrical power supply to the appliance is turned on.
- 4. For gas appliances, make sure the gas supply valve is in the open position.

Steps

1. Press the ON/OFF button (• 0).

The ON/OFF indicator glows green and the loading screen ① displays while the controller software loads. When the software is 100% loaded, the home screen ② displays.

NOTE: If the appliance has a steam generator, the steam generator fills with water and the appliance heats the water to an initial temperature of 188°F (77°C).

How To Start a Manual Calibration

- 1. Make sure the appliance is off.
- Press and hold the ON/OFF button for eight (8) seconds. The ON/OFF indicator glows red and the calibration prompt (3) displays.

The prompt moves from the center to all four corners of the screen. This sequence repeats three (3) times. Then the calibration screen (4) displays.

NOTE: The first time the appliance is turned on, or if the appliance loses power during startup, the touchscreen calibration prompt (3) displays at the end of the next startup.

NOTE: Touch the check mark icon v to start the calibration immediately. Touch the cancel icon v to cancel the calibration.

How To Calibrate the Touchscreen

1. Touch the target icon (+) each time it appears on screen. The icon appears in all four corners, then the center of the screen.

NOTE: If the controller software has not been updated to the current version (11/16 update), the calibration stops when this step is complete. Download the current controller software from the Alto-Shaam website and install it.

2. The verification screen ⑤ displays. Touch all five target icons ⊕. The icons change to green boxes when they are touched.

NOTE: The calibration screen and verification screen both display a 30-second countdown. If you do not touch all five icons before the countdown is complete, the controller stops the calibration. If you do not see the countdown, download the current controller software from the Alto-Shaam website and install it.

How To Turn Off the Appliance

1. Press and hold the ON/OFF button of for five to ten (5-10) seconds.

DANGER

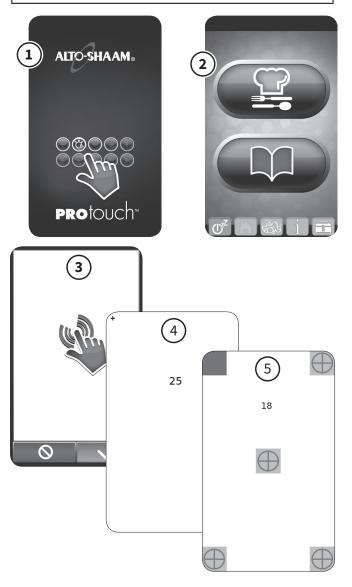


Before starting the appliance, make certain you do not detect the odor of gas. If you smell gas:

- Shut off the gas supply immediately.
- Do not attempt to light any appliance.
- Do not touch any electrical elements.
- Extinguish any open flame.
- Evacuate the area.
- Use a telephone outside the property and immediately contact your gas supplier.
- If unable to contact your as supplier, contact the fire department.

CAUTION

Accumulations on the main burners of gas appliances can result in firing out of normal sequence. This delayed ignition creates an alarmingly loud sound. If your appliance makes an especially loud noise when starting up, shut down the appliance and call a qualified and trained service technician.



CT PROformance™ Start-Up Procedures



How To Run a Cycle Test of the Appliance

Run the cycle test in combination cook mode

- 1. Touch the professional cooking mode icon ① in the home screen. The cooking screen displays.
- 2. Touch the icon for the combination cook mode (2).
- Touch the displayed temperature (4). The touchpad displays.
- 4. If necessary, use the number keys (a) to set the cooking temperature to 350°F (177°C), then touch the check mark icon (9).
- 5. Touch the displayed time (5). The touchpad screen displays.
- 6. Use the number keys (18) to enter the cooking time (00:15:00), then touch the check mark icon (9).
- 7. Touch the start icon (6). The start icon changes to a red square (stop icon) and the appliance begins cooking.
- 8. Make sure that the appliance cycles correctly.
 - 1. The appliance raises the cavity temperature to the set temperature.
 - 2. The appliance cycles off by itself when the set temperature is reached.
 - 3. The appliance idles until the cavity temperature drops below the set temperature.
 - 4. The appliance cycles back on by itself until the cavity temperature again reaches the set temperature.

Allow the appliance to run through several cycles.

Cool down the appliance

- 1. Touch the stop icon ⁽⁶⁾ to stop the cooking process.
- 2. Touch the cool down icon ⑦. The touchpad screen displays.
- 3. Use the number keys (3) to set the cool down temperature to 110°F (43°C).
- 4. Open the appliance door.
- 5. Touch the check mark icon ⁽⁹⁾. The fan activates.

The cool down screen (not shown) displays the cavity temperature at the top and the cool down temperature at the bottom.

The fan turns off when the cavity temperature matches the set cool down temperature.

Run the cycle test in convection cook mode

- 1. Touch the icon for the convection cook mode ③.
- 2. Repeat the cycle test steps for convection cook mode.
- 3. Cool down the appliance when the cycle test is complete.









How To Turn On the Appliance

Prerequisites

- 1. Turn on the exhaust hood.
- 2. Make sure that the water supply to the appliance is turned on.
- 3. Make sure that the electrical power supply to the appliance is turned on.
- 4. For gas applicances, make sure the gas supply valve is in the open position.

Steps

- 1. Press the ON/OFF button ①. The ON/OFF indicator glows green.
- **NOTE:** If the appliance has a steam generator, the steam generator fills with water and the appliance heats the water to an initial temperature of 188°F (77°C).
- **NOTE:** To power off the appliance, press and hold the Power button for 5 to 10 seconds to initiate the power shut down sequence to the oven.

How To Run a Cycle Test of the Appliance

Run the cycle test in combination cook mode

- 2. Press the combination cook mode button (2).
- 3. Press the cook temperature button ③.
- 4. If necessary, use the up arrow button (5) or the down arrow button (9) to set the cooking temperature to 350°F (177°C).
- 5. Press the cook time button ④.
- 6. Use the up arrow button (5) or the down arrow button (9) to enter the cooking time (00:15:00).
- 7. Press the start/stop button ⁽ⁱ⁾. The appliance begins cooking.
- 8. Make sure that the appliance cycles correctly.
 - 1. The appliance raises the cavity temperature to the set temperature.
 - 2. The appliance cycles off by itself when the set temperature is reached.
 - 3. The appliance idles until the cavity temperature drops below the set temperature.
 - 4. The appliance cycles back on by itself until the cavity temperature again reaches the set temperature.
 - Allow the appliance to run through several cycles.

Cool down the appliance

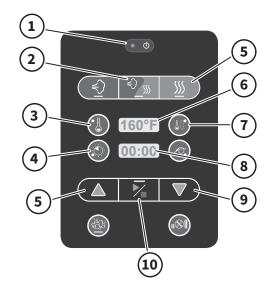
- 1. Press the start/stop button 10 to stop the cooking process.
- 2. Press the cool down button \overline{O} .
- 3. Use the up arrow button (5) or the down arrow button (9) to set the cool down temperature to 110°F (43°C).
- 4. Open the appliance door.
- **NOTE:** The cook time field (3) diplays "dOOr" if the door is not open.



CAUTION

Accumulations on the main burners of gas appliances can result in firing out of normal sequence. This delayed ignition creates an alarmingly loud sound. If your appliance makes an especially loud noise when starting up, shut down the appliance and call a qualified and trained service technician.

NOTICE: In the event of a power failure, the oven will not operate.



5. Press the start/stop button ⁽¹⁾. The fan activates.
The cook time field ⁽³⁾ displays the cavity temperature.
The fan turns off when the cavity temperature matches the set cool down temperature.

Run the cycle test in convection cook mode

- 1. Press the convection cook mode button (5).
- 2. Repeat the cycle test steps for convection cook mode.
- 3. Cool down the appliance when the cycle test is complete.



Post-Installation Checklist

Location Information										
Location Name:	Site Contact Name:									
Location Street Address: Sit			ite Contact Phone No.:							
Location City:	Location City: Site Contact Email:									
Location State:	Zip:									
Post-Installation Company Informa	ation									
Company Name:		Tech	nician Nam	e:						
Mailing Address:		Technicia	Technician Phone No.:							
City:		С	ontact Ema	il:						
State: Zip: Date of Installation:										
Model number(s) of combi's installed										
Serial number of combi's installed			I				1			
Clearance										
Appliance clearance	Right sid	e			PASS		FAIL			
	Left sid	-			PASS		FAIL			
	r			PASS		FAIL				
	To				PASS		FAIL			
Is the appliance accessible for service If NO, comment on the issue:	<u>}</u>	Y	ES		N	0				
Other comments:										
Water Supply										
Have all treated water inlets been o	connected to water supply?	PASS		AIL						
Have all untreated water inlets been of		PASS		AIL						
Do water supply line(s) have shut-off(PASS	F/	AIL	1					
Is the dynamic water pressure from t of 30 psi (200 kPa) for each appliance	PASS	F/	AIL	UNKNOWN						
Is the static water pressure from the 90 psi (600 kPa) for each appliance?	PASS	F/	AIL	UNKNOWN						
Is the minimum water flow rate for th 0.26 gpm (1 L/min) for 6-10, 10-10 an 0.53 gpm (2 L/min) for 10-20 models, 0.80 gpm (3 L/min) for 20-10 and 20-2	PASS	FA	AIL	UNKNOWN						
Is the minimum water flow rate for th 2.6 gpm (10 L/min)?	PASS	F/	AIL	UNKNOWN						
Is water treatment (RO blend system,	YES	N	ю	ТҮРЕ						
If YES - Note the system here:				мо	DEL					
Are all exterior water connections tig	YES			NO						
Are all interior water connections tigh	YES			NO						
Are there any exterior water leaks aft	Y	YES		NO						
Are there any interior water leaks after	Are there any interior water leaks after operation?				N	0				
Comments:										



Post-Installation Checklist

Is the wire size for the main incoming power to the appliance(s) in accordance with the minimum size listed in the specification sheet response of the specific appliance? L1-N L2-N L3-N L1-L2 MAIN BATENG L2-3 L1-L3 PASS FALL MATERIAL COMMENTS IN THE SPECIFIC ADDINATES IN THE SPECIFICATION ADDINATES ADDINATES ADDINATES ADDINATES ADDINT ADDINATES ADDINATES ADDINAT	Electrical								
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What is the on-site breaker size supplying power to the appliance(s)? SIZE PASS FAIL Is there a disconnect or junction box within 3' (914mm) of where the appliance(s) will be installed? PASS FAIL Comments:		L2-3		L1-L3		PASS		FAIL	
appliance(s)? SIZE PASS FAIL Is there a disconnect or junction box within 3' (914mm) of where the appliance(s) will be installed? PASS FAIL Comments:	What is the current draw of the appliance(s) to be supplied?	AMP F	RATING						
the appliance(s) will be installed? PASS FAIL Comments:	What is the on-site breaker size supplying power to the appliance(s)?	SI	ZE			PASS		FAIL	
Gas PASS FAIL Does the gas supply match the information listed on the nameplate of the appliance(s)? PASS FAIL What is the rated gas supply type? NAT PRO What is the actual gas supply type? NAT PRO Is the gas supply piping, water hose lines, electrical support cord and/or receptacle routed away from the path of any hot combustion pipes or fumes? PASS FAIL Comments:	Is there a disconnect or junction box within 3' (914mm) of where the appliance(s) will be installed?	PASS		FAIL					
Does the gas supply match the information listed on the nameplate of the appliance(s)? PASS FAIL What is the rated gas supply type? NAT PRO What is the rated gas supply type? NAT PRO What is the actual gas supply piping, water hose lines, electrical support cord and/or receptacle routed away from the path of any hot combustion pipes or fumes? PASS FAIL Comments:	Comments:								
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Is the gas supply piping, water hose lines, electrical support cord and/or receptacle routed away from the path of any hot combustion pipes or fumes? Comments: Drain What type of material was used for the drain? Does the vertical drain vent extend above the appliance exhaust opening at the rear of the appliance? Is there a vertical vent within 12" (305mm) of the appliance drain? Is there an air gap installed at the end of the drain run? Is the drain piped with a positive descending slope? If the appliance has a ventless hood (appliance model name ending in "EVH"), has the ventless hood drain been plumbed along with the appliance main.	What is the rated gas supply type?	NAT		PRO					
cord and/or receptacle routed away from the path of any hot combustion pipes or fumes? PASS FAIL Comments: Drain PASS FAIL What type of material was used for the drain? PASS FAIL PASS Does the vertical drain vent extend above the appliance exhaust opening at the rear of the appliance? PASS FAIL FAIL Is there a vertical vent within 12" (305mm) of the appliance drain? PASS FAIL SIZE SIZE Is there an air gap installed at the end of the drain run? PASS FAIL SIZE SIZE SIZE If the appliance has a ventless hood (appliance model name ending in "EVH"), has the ventless hood drain been plumbed along with the appliance in drain. PASS FAIL FAIL	What is the actual gas supply type?	NAT		PRO					
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Is the drain piped with a positive descending slope? PASS FAIL If the appliance has a ventless hood (appliance model name ending in "EVH"), has the ventless hood drain been plumbed along with the appliance main drain.	Is there a vertical vent within 12" (305mm) of the appliance drain?	PASS		FAIL				•	
If the appliance has a ventless hood (appliance model name ending in "EVH"), has the ventless hood drain been plumbed along PASS FAIL with the appliance main drain.	Is there an air gap installed at the end of the drain run?			FAIL		SI	ZE		
ending in "EVH"), has the ventless hood drain been plumbed along PASS FAIL with the appliance main drain.	Is the drain piped with a positive descending slope?			FAIL					
Comments:	If the appliance has a ventless hood (appliance model name ending in "EVH"), has the ventless hood drain been plumbed along with the appliance main drain.			FAIL					
	Comments:								
Other Site Information									
	Is there a proper ventilation hood installed above the location of the appliance(s)?	PASS		FAIL					
	Is the appliance level according to leveling instructions in the installation manual?	PASS		FAIL					
Comments:	Comments:								



-

Function Test Checklist

Wire Connections				
Behind the left side panel, check and tighten all electrical connections, and tighten all electrical screws.				
Behind the left side panel, check and tighten all electrical screws.				
Behind the control panel, check and tighten all connections on the control board.				
Behind the control panel, check and tighten all connections on the options board.				
Behind the control panel, check and tighten all connections on the interface board.				
Check that the SD card is fully inserted into the interface board.				
Comments:				
Gas Appliances				
With the burner on, check the following:				
Static gas pressure at gas valve must be less than 14" W.C.				
Dynamic gas pressure at gas valve must be greater than 5.5" W.C. for NG; 9" W.C. for propane				
CO ₂ flue gas analysis				
Were burner adjustments required?	YES		NO	
If YES, Record CO ₂ values				
CTP/CTC Appliance Function Test				
Cycle Y1 - Operation fill/Steam injection	YES		NO	
Dynamic water pressure with Y1 (treated water inlet)	MEA	SURE		
Cycle Y2 - Operation condensate cooling valve	YES		NO	
Dynamic water pressure with Y2 (untreated water inlet)	MEA	SURE		
Cycle Y3 - Operation rinse solenoid valve	YES		NO	
Dynamic water pressure with Y3 (untreated water inlet)	MEA	SURE		
Cycle Y5 - Operation hand shower	YES		NO	
Dynamic water pressure with Y5 (untreated water inlet)	MEA	SURE		
Cycle appliance in steam mode at 212° Fahrenheit (100° Celsius) for 10 minutes. Did the appliance perform correctly?	PASS		FAIL	
Record amperage at all phases:	L1		L2	
	L3			
During the cycle, check CTP motor rotation: 3 minutes clockwise - break - 3 minutes counter-clockwise	PASS		FAIL	
Cycle appliance in convection mode at 350° Fahrenheit (175° Celsius) for 10 minutes. Did it perform correctly?	PASS		FAIL	
Record amperage at all phases:	L1		L2	
	L3			
Cycle appliance in combination mode at 400° Fahrenheit (205° Celsius) for 10 minutes. Did it perform correctly?	PASS		FAIL	
Record amperage at all phases:	L1		L2	
	L3			
Check motor rotation for CTC models. Note: Arrows on the motor housing indicate proper rotation.	PASS		FAIL	
Check all lines and connections for leaks, both inside and outside of the combi appliance.	PASS		FAIL	



Function Test Checklist

Installation Complete		
Cleanup job site		
Wipe down and clean exterior of combi appliance		
Picture of screen displaying current software versions		
Picture(s) of complete drain run		
Picture of water connections at combi appliance		
Picture of gas line and connections at combi appliance		
Picture of appliance in place with surrounding equipment		
Size of treated water line:		
Flow rate of treated water line in gmp (L/min)		
Size of untreated water line:		
Flow rate of untreated water line in gmp (L/min)		

Has the customer been notified of any issues with the installation?	YES	NO	
Customer Signature			
Technician Signature			

Inspection Checklist



Daily Inspection

Unit Information		
Business Name:	 Serial Number:	
Model Number:	 Daily Inspection Start Date:	

Daily Inspection Checklist

Inspect and clean:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Product probe (thermometer)							
Door gasket (inner door seal)							
Inner door glass							
Front drip tray							
Screen and overlay (inspect for cracks, peeling, moisture, etc.)							
Execute automatic wash cycle (with approved cleaning chemical ONLY)							
Employee initials							

Component Malfunction and Replacement

List details of	List details of the failure(s) next to the day they occurred. Leave blank if components are working properly.		
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			



Weekly Inspection

Unit Information					
Business Name:	Serial Number:				
Model Number:	Weekly Inspection Start Date:				
Weekly Inspection Checklist					
Inspect - Oven cavity lamp					
Inspect - Oven cavity for signs of grease/carbon buildup					
Inspect - Loosen thumb screws to inspect behind the fan pa	nel inside the oven cavity for signs of grease/carbon buildup				
Inspect - Loosen thumb screws to inspect behind the fan panel inside the oven cavity for signs of scale buildup					
Inspect - The heat exchanger for any signs of major deformation. If yes, immediately remove from service and take corrective action steps.					
Inspect - The heat exchanger for any loose/disconnected pipes or flanges. If yes, immediately remove from service and take corrective action steps.					
E Inspect - Convection elements for signs of cracking, deformation, or damage					
Clean ventless hood grease filters					
Employee initials					
G Gas units only E Electric units only					
Component Malfunction and Replacement		Component Malfunction and Replacement			

List details of	List details of the failure(s) next to the day they occurred. Leave blank if components are working properly.			
Week 1				
Week 2				
Week 3				
Week 4				

Inspection Checklist



Monthly Inspection

Unit Information		
Business Name:	Serial Number:	
Model Number:	Monthly Inspection Start Date:	
Monthly Inspection Checklist		
Inspect/Test - Proper draining of the oven cavity		
Inspect - All drain lines for leaks or clogs		
EB Descale the steam generator		
Inspect - Oven cavity for any signs of scale buildup		
Descale the oven interior		
Inspect ventless hood paper filter (replace as needed)		
Test ventless hood drain for proper drainage and signs of leaking		
Employee initials		

EB Electric boiler units only

Component Malfunction & Replacement

Summarize any component failure(s) that may have occurred during this month.



Yearly Inspection

Unit Information			
Business Name:	Serial Number:		
Model Number:	12-Month Inspection Start Date:		
12-Month Inspection Checklist		1	
Replace - Steam bypass hose			
Inspect - Cleaning pump hose			
Inspect/Test - Proper draining of the oven cavity			
Inspect - All drain lines for leaks or clogs			
Inspect - All solenoid hoses (both ends)			
Inspect - Upper browning valve hose			
Inspect - Low pressure relief valve & hose			
E Inspect - Convection element seal (from the electrical compart	tment)		
G Inspect - Gas heat exchanger seal (from the electrical compartment)			
Inspect - N6 oven temperature probe seal			
EB Descale the steam generator			
EB Remove & Inspect - Steam generator elements			
Inspect - Hand shower hose			
Inspect - Hand shower handle			
Inspect - Product probe			
Inspect - Water injection tube			
Inspect - Oven cavity for any signs of scale buildup			
Inspect - Oven cavity lamp			
Inspect - Oven cavity for signs of grease/carbon buildup			
Inspect - Behind the fan panel inside the oven cavity for signs of grease/carbon buildup			
Inspect - Behind the fan panel inside the oven cavity for signs of scale buildup			
EB Electric boiler units only G Gas units only E Ele	ctric units only		

Inspection Checklist



Unit Information			
Business Name: Serial Number:			
Model Number: 12-Month Inspection Start Date:			
12-Month Inspection Checklist			
Inspect - The heat exchanger for any signs of major deformation. If yes, immediately remove from service and take corrective action steps.			
Inspect - The heat exchanger for any loose/disconnected pipes or flanges. If yes, immediately remove from service and take corrective action steps.			
G Inspect and Ensure - Exhaust pipes are exiting the oven cavity			
G Inspect - Heat exchanger flange gasket (replace as needed)			
G Inspect and Tighten - Heat exchanger flange bolts			
G Inspect and Tighten - Heat exchanger burner flange hardware & gasket (replace as needed)			
G Inspect and Tighten - Heat exchanger igniter flange hardware & gasket (replace as needed)			
G Inspect - Heat exchanger exhaust pipes (ensure they are exiting out past the oven cavity ceiling flange) - ESG models only			
G Inspect - Oven cavity ceiling flange & flange gasket - ESG models only			
G Tighten - Burner flange bolts			
G Tighten - Igniter flange bolts			
Inspect - Heat exchanger weep holes to ensure they are free of obstructions (if the hole is obstructed, immediately remove oven from service and replace the heat exchanger) - Not applicable to CTP/CTC models			
E Inspect - Convection elements for signs of cracking, deformation, or damage			
Replace - Oven lamp cover(s) & gasket(s)			
Descale the oven interior			
Inspect - Upper and lower door hinges and pins			
Inspect - Door gasket (replace as needed)			
Inspect - Door upper and lower hinges (replace as needed)			
Wipe the inner door glass			
Inspect - Front drip tray (clean as needed)			
Inspect - Front drip tray hose			
Inspect - Control overlay			
Inspect and Tighten - All electrical connections			
Inspect and Tighten - All cooling fans for proper operation			

EB Electric boiler units only

G Gas units only E Electric units only



Unit Information		
Business Name:	Serial Number:	
Model Number:	12-Month Inspection Start Date:	
12-Month Inspection Checklist		
Inspect and Tighten - Door hinges and lower hinge pin bolt		
Inspect and Tighten - Door handle		
If there is a smoker, inspect the smoke element for visual signs of d	deformation, cracks or breaks (replace as needed)	
Review - Error code history		
Note the software version (update if not current)		
Record - Water pressure (static & dynamic)		
Record - Line voltage across all lines		
Record - Line voltage to ground on each line		
Record - Amperage across all three legs (when heating)		
Function test all components (list components)		
For ovens shipped to New Zealand or Australia, inspect the backflow preventer check valve per AS/NZ3500.1 and AS/NZ3500.2		

Component Failure and Replacement

Summarize any component failure(s) that may have occurred during this month.

Customer Signature: _____

Technician Signature: _____



Error Codes

ALWAYS check the circuit breaker is turned "ON" and your unit is receiving power BEFORE calling your Authorized Alto-Shaam Service

NOTICE

This section is provided for the assistance of qualified and trained service technicians only and is not intended for use by untrained or unauthorized service personnel. Do not attempt to repair or service the oven beyond this point. Contact Alto-Shaam for the nearest authorized service agent. Repairs made by any other service agents without prior authorization by Alto-Shaam will void the warranty.

When the oven malfunctions, an error code will appear in the display.



Press the Start icon to acknowledge the error.

When the oven error notification has been acknowledged, the Combitherm will attempt to return to normal operation.

Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
E01	Low Water Boiler	Upper water level probe B1 is not satisfied within 5 minutes, after water solenoid valve Y1 is activated.	 Water supply is shut off. Low water pressure. Boiler drain cap is missing. Boiler drain pump is defective. Drain pump elbow leaking. Water level probe has calcium build up. Double water solenoid valve is defective. Relay board, high voltage is defective.
E02	Control Temperature High	Low voltage relay board temperature higher than 176°F (80°C).	 Check wiring to all components listed below. Cooling fan on relay board assembly is defective. Cooling fan on display board assembly is defective. Main cooling fan is defective. Cooling fan on motor drive is defective.
E03	Fan Motor Error	Fan motor does not spin after 60 seconds, detected by the Hall Sensor. Error 03 does not appear if error E53 is detected first.	 Check wiring to all components listed below. If LED on motor control flashes, see error codes for motor control. Motor or fan wheel locked. Hall sensor does not detect motor rotation. Motor Thermo Temperature protection. Fan wheel damaged.
E04	Lower Fan Motor Error	Lower Fan motor does not spin after 60 seconds, detected by the Hall Sensor. Error 04 does not appear if error E54 is detected first.	 Check wiring to all components mentioned below. If LED on motor control flashes, see error codes for motor control. Motor or fan wheel locked. Hall sensor does not detect motor rotation. Motor Thermo Temperature protection. Fan wheel damaged.
E05	VFD Comm Failure	When VFD does not respond to a query on the CAN interface.	 Loss of power to VFD. VFD malfunction. CAN cable disconnected. CAN address not correct on VFD.
E06	Lower VFD Comm Failure	When VFD does not respond to a query on the CAN interface.	 Loss of power to VFD. VFD malfunction. CAN cable disconnected. CAN address not correct on VFD.
E07	Error Received from VFD	When VFD is flashing the green light	 Refer to VFD error code list and match to number of blinks on the green LED of VFD.
E08	Error Received from Lower VFD	When VFD is flashing the green light	 Refer to VFD error code list and match to number of blinks on the green LED of VFD.



Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
E11	Convection Temperature High	In Combination program, cavity temperature N6 is measuring in excess of 572°F (300°C) for a minimum of 25 seconds In Convection program, cavity temperature N6 is measuring in excess of 572°F (300°C) for a minimum of 25 seconds	 Check wiring to all components mentioned below. Steam element contactor locked/on. N6 oven cavity temperature probe is defective. N6 oven cavity temperature probe wires connected backwards Relay board, high voltage, defective.
E13	Boiler Temperature High	Boiler temperature is more than 248°F (120°C) for more than 25 seconds, detected by B4 Probe	 Calcium build up in boiler Check wiring to all components mentioned below. Steam element contactor locked/on. B4 boiler temperature probe is defective. B4 probe wires connected backwards Water level probe has calcium build up.
E15	Condensor Temperature High	Condensor water temperature is more than 212°F (100°C) for more than 180 seconds, detected by B3 probe	 Water supply is shut off. Check wiring to all components mentioned below. B3 condensor temperature probe is defective. B3 condensor probe wires connected backwards Single water solenoid valve defective (Y2). Relay board, high voltage, defective.
E20	B11 Core Temperature Probe Single Point Fault	Single point core temperature probe defective or disconnected	 Clean probe receptacle pins with sand paper. B11 Single Point Core Temperature probe with quick connect defective. B11 Single Point Core Temperature probe wires with quick connect disconnected. B11 Single Point Core Temperature probe receptacle defective. B11 Single Point Core Temperature probe receptacle wires disconnected.
E21	N6 Cavity Probe Fault	Cavity temperature probe defective or disconnected	 N6 oven cavity temperature probe defective. N6 oven cavity temperature probe wires.
E22	B10 Core Temperature Probe Multi-point Fault	Multipoint core temperature probe defective or disconnected	 B10 multipoint core temperature probe defective. B10 multipoint core temperature probe wires disconnected.
E23	B4 Boiler Probe Fault	Boiler temperature probe defective or disconnected	 B4 boiler temperature probe defective. B4 probe wires connected backwards.
E24	B5 Bypass Probe Fault	Bypass steam temperature probe defective or disconnected	 B5 bypass steam temperature probe defective. B5 bypass steam temperature probe wires connected backwards.
E25	B3 Condensor Probe Fault	Condensor water temperature probe defective or disconnected.	 B3 condensor temperature probe defective. B3 condensor probe wires connected backwards.
E26	B10 - Point 1 - Core Temperature Probe Multipoint Fault	Multipoint core temperature probe defective or disconnected.	 B10 Multipoint Core Temperature probe defective. B10 Multipoint Core Temperature probe wires disconnected.
E27	B10 - Point 2 - Core Temperature Probe Multipoint Fault	Multipoint core temperature probe defective or disconnected.	 B10 Multipoint Core Temperature probe defective. B10 Multipoint Core Temperature probe wires disconnected.
E28	B10 - Point 3 - Core Temperature Probe Multipoint Fault	Multipoint core temperature probe defective or disconnected.	 B10 Multipoint Core Temperature probe defective. B10 Multipoint Core Temperature probe wires disconnected.
E29	B10 - Point 4 - Core Temperature Probe Multipoint Fault	Multipoint core temperature probe defective or disconnected.	 B10 Multipoint Core Temperature probe defective. B10 Multipoint Core Temperature probe wires disconnected.
E34	Steam Generator Drain Pump Fault	If water level does not drop below lower water level probe after three minutes when steam generator drain pump is activated in cleaning program.	 Calcium build up in steam generator drain pump. Boiler drain pump defective. Relay board, high voltage, defective. Water level probe defective.



Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
E36	Steam Temperature High	In Steam program, cavity temperature N6 is measuring in excess of 395°F (200°C) for more than 60 seconds. In Combination program, cavity temperature N6 is measuring in excess of 520°F (270°C), for more than 60 seconds.	 Water supply is shut off. Low water pressure. Water injection pipe, calcium build up. Water flow valve defect or calcium build up. Double water solenoid valve defective (Y1). Relay board, high voltage, defective.
		In Retherm program, cavity temperature N6 is measuring in excess of 395°F (200°C), for more than 60 seconds. In Cleaning program, cavity	
		temperature N6 is measuring in excess of 395°F (200°C), for more than 60 seconds.	
E40	B3 Fault	B3 probe shorted to ground	– Defective or miswired probe.
E41	B4 Fault	B4 probe shorted to ground	– Defective or miswired probe.
E42	B5 Fault	B5 probe shorted to ground	– Defective or miswired probe.
E43	N6 Fault	N6 probe shorted to ground	– Defective or miswired probe.
E44	N8 Fault	N8 probe shorted to ground	– Defective or miswired probe.
E45	B10 Fault	B10 probe shorted to ground	– Defective or miswired probe.
E46	B10 - Point 1 Fault	B10 probe shorted to ground	– Defective or miswired probe.
E47	B10 - Point 2 Fault	B10 probe shorted to ground	– Defective or miswired probe.
E48	B10 - Point 3 Fault	B10 probe shorted to ground	– Defective or miswired probe.
E49	B10 - Point 4 Fault	B10 probe shorted to ground	– Defective or miswired probe.
E51	No Water In Boiler	Lower water level probe B2 is not	– Water supply is shut off.
		satisfied within 5 minutes, after water solenoid valve Y1 is activated	 Low water pressure. Boiler drain cap missing. Boiler drain pump defective. Drain pump elbow leaking. Water level probe has calcium build up. Double water solenoid valve defective (Y1). Relay board, high voltage, defective.
E53	Fan Motor High Temperatures	Fan motor does not spin, result in over- heating, detected by motor coil safety thermo element. Temperature more than 320°F (160°C).	 Motor high limit open or wired incorrectly. If LED on motor control flashes, see error codes for motor control. Motor or fan wheel locked. Fan wheel damaged.
E54	Lower Fan Motor High Temperature	Lower fan motor does not spin, result in over-heating, detected by motor coil safety thermo element. Temperature more than 320°F (160°C).	 Motor high limit open or wired incorrectly. If LED on motor control flashes, see error codes for motor control. Motor or fan wheel locked. Fan wheel damaged.
E55	Vent Not Open (Lower vent on dual vent system)	60 seconds after the venting motor is activated the vent motor safety switch did not open.	 Alignment issue between motor cam and vent motor safety switch (micro switch). Faulty vent valve (motor). Faulty vent valve safety switch (micro switch).
E56	Vent 2 Not Open (Upper vent on dual vent system)	60 seconds after the venting motor is activated the vent motor safety switch did not open.	 Alignment issue between motor cam and vent motor safety switch (micro switch). Faulty vent valve (motor). Faulty vent valve safety switch (micro switch).
E57	No Rinse Water	Flow switch for solenoid valve Y4 does not detect any water flow for a minimum of 60 seconds.	 Water supply is shut off. Low water pressure. Flow switch is dirty or defective. Double water solenoid valve defective (Y3). Relay board, high voltage, defective.



Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
E88	Lower Gas Ignition Failure NOTE: If after 2 attempts to clear this error, the error appears a third time, remove the oven from service and immediately contact an Alto-Shaam authorized service provider.	Reset output from Ignition Module is ON	 Hot surface ignitor not functioning. No gas supply. Flame sensor not functioning. Faulty ignition control.
E89	Upper Gas Ignition Failure NOTE: If after 2 attempts to clear this error, the error appears a third time, remove the oven from service and immediately contact an Alto-Shaam authorized service provider.	Reset output from Ignition Module is ON	 Hot surface ignitor not functioning. No gas supply. Flame sensor not functioning. Faulty ignition control.
E90	Lower Gas Combustion Blower Not at Speed	Speed is too slow.	 Power supply cable is not connected to blower motor. Speed control cable is not connected to blower motor. Blower motor is blocked, rotation is impeded, or motor is faulty. Faulty control board.
E91	Upper Gas Blower Not at Speed	Speed is to slow.	 Power supply cable is not connected to blower motor Speed control cable is not connected to blower motor Blower motor is blocked, rotation is impeded, or motor is faulty Faulty control board
E92	Communication Error CB does not properly respond	Twelve (12) instances of no-response from the relay board (CB) to the display board (IB).	 Check CAN cable connections. CAN cable defective. Relay board, low voltage, connector defective. Display board connector defective.
E93	Interface Board (IB) and Control Board (CB) are in different states	The IB is in a different running state than the CB for more than 20 seconds.	 Check CAN cable connections. CAN cable defective. Relay board, low voltage, connector defective. Display board connector defective.
E94	Communication Error, TO Interface Board	No signal transfer for more than 20 seconds between the Interface Board (IB) and the Control Board (CB).	 Check CAN cable connections. CAN cable defective. Relay board, low voltage, connector defective. Display board connector defective.
E100	One or more maintenance reminder has timed out.	When any maintenance reminder has expired without action having been taken by the operator.	 Enter maintenance reminder screen and address the item that has timed out and reset
E101	Ventless Hood Fault - No Pressure	If the power switch or pressure switch is not closed.	 Check power switch is on. Check vent motor is turning in the proper direction. Pressure switch is miss wired or defective. Filter(s) require cleaning or replacement
E102	Ventless Hood Fault – Filters Not Present	If the air filter switches are not closed.	 Check filters are installed and properly seated. Check filter switches are not damaged, defective or dislodged.
E103	Option Board Doesn't Send Switch Setting	OB not communicating its switch settings to the CB.	 Check CAN cable connection between OB and CB. Ensure CB dip switch is set to see an OB. Incompatible OB and CB software (update software). OB defective. CB defective.
E104	Option Board Not Communicating	Option board is not communicating with CB.	 Check option board CAN connection at CB and OB. Defective OB. Defective CB.
E105	No or Low Water Pressure	Water pressure switch not activated.	 Water supply not connected. Water supply is shut off. Water supply to unit blocked or obstructed Faulty or miswired pressure switch



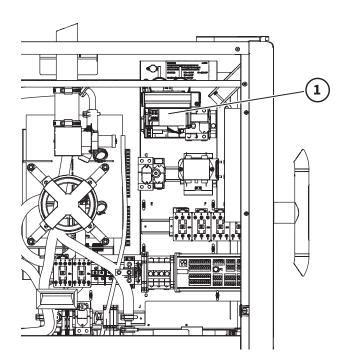
Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
E106	Boiler Drain Pump Fault	Hall effect or rotational sensor is not sending a signal to the relay board	 Drain pump motor not running or defective. Hall effect sensor broken or incorrectly wired. Motor improperly wired.
E108	Cooling Fan Failure	If the temperature on the control board (relay board) is greater than 140°F (60°C) and less than 176°F (80°C). (See error code E02)	 Cooling fan damaged. Cooling fan blocked or blades have been kept from rotating. Incoming air temperature exceeds 100°F (38°C). Air inlet has become blocked.
E109	High Limit Switch NOTE: Any oven experiencing this error should be investigated by an authorized Alto-Shaam service provider.	The High Limit Switch input to the CB (N7) is "open"	 Unit has experienced an over heat condition. Convection element contactors stuck closed. Failed Y1 solenoid. Obstruction between Y1 solenoid and injection pipe. Improperly connected drain. Condensate pan clean out not closed. Improperly wired high limit switch at the switch or at the CB. Defective high limit switch.
E200	The SD card has been detected to be larger than 2GB in size.	The SD card inserted is larger than 2GB in size.	 SD card is larger than 2GB in size. Contact service to order replacement SD card.
E210	VFD Under Voltage	VFD has detected an under-voltage situation.	– Possible VFD failure.
E211	VFD Over Voltage	VFD has detected an over-voltage situation.	– Possible VFD failure.
E212	VFD Overheating	VFD has detected an overheat situation.	 Unit has experienced an over heat condition. Defective high limit switch. Defective cooling fans. Possible VFD failure.
E213	Motor Over Current	Motor over current detected.	– Blocked fan wheel. – Possible VFD failure.
E214	VFD Current Peak	VFD current peak detected.	– Possible VFD failure.
E215	VFD EEPROM Error	VFD EEPROM error detected.	– Possible VFD failure.
E216	VFD Over Current	VFD over current detected.	– Possible VFD failure.
E217	VFD Short Circuit	VFD Short Circuit detected.	– Possible VFD failure.
E218	VFD Voltage Error	VFD voltage does not correspond to jumper settings.	 VFD voltage jumper is not correct. Possible VFD failure.
E220	Lower VFD Under Voltage	Lower VFD has detected an under- voltage situation.	– Possible Lower VFD failure.
E221	Lower VFD Over Voltage	Lower VFD has detected an over- voltage situation.	– Possible Lower VFD failure.
E222	Lower VFD Overheating	Lower VFD has detected an overheat situation.	 Unit has experienced an over heat condition. Defective high limit switch. Defective cooling fans. Possible Lower VFD failure.
E223	Lower Motor Over Current	Lower Motor over current detected.	– Possible Lower VFD failure.
E224	Lower VFD Current Peak	Lower VFD current peak detected.	– Possible Lower VFD failure.
E225	Lower VFD EEPROM Error	Lower VFD EEPROM Error detected.	– Possible Lower VFD failure.
E226	Lower VFD Over Current	Lower VFD over current detected.	– Possible Lower VFD failure.
E227	Lower VFD Short Circuit	Lower VFD short circuit detected.	– Possible Lower VFD failure.
E228	Lower VFD Voltage Error	Lower VFD voltage does not correspond to jumper settings.	 Lower VFD voltage jumper is not correct. Possible Lower VFD failure.
E289	Unknown Error from VFD	VFD has provided an unknown error.	– Possible VFD failure.
E290	Unknown Error from Lower VFD	Lower VFD has provided an unknown error.	– Possible Lower VFD failure.



Touch Motor Control Error Codes

The LED is located on the variable frequency drive (VFD) (1) of the oven.

Type of Error	Indication	Release of Error
Undervoltage	LED flashing sequence, with 1 flash per period.	Voltage of intermediate circuit is less than 250V
Overvoltage	LED flashing sequence, with 2 flashes per period.	Voltage of intermediate circuit exceeds 445V
Excess Temperature	LED flashing sequence, with 3 flashes per period.	Temperature sensor in the power unit is more than 199°F (93°C)
Current Peak	LED flashing sequence, with 4 flashes per period.	Blocked motor, detected by current peak monitoring from 900 rpm rotating field
Overcurrent	LED flashing sequence, with 5 flashes per period.	Intermediate circuit current exceeds 4.0 A
Short-circuit	LED flashing sequence, with 6 flashes per period.	Release of interrupt at intermediate circuit current larger than 53 A
Power on	LED flashing sequence, with 7 flashes per period.	Effective mains voltage does not correspond to jumper set- ting 115V/230V
Watchdog	LED flashing sequence, with 8 flashes per period.	Watchdog of the microcontroller released, program crash



Original Equipment Limited Warranty



Introduction	Alto-Shaam, Inc. warrants to the original purchaser only, that any original part found to be defective in material or workmanship will be replaced with a new or rebuilt part at Alto- Shaam's option, subject to provisions hereinafter stated.			
Warranty Period	The original parts warranty period is as follows:			
	• For all other original parts, one (1) year from the date of installation of appliance or fifteen			
	• (15) months from the shipping date, whichever occurs first.			
	• The labor warranty period is one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.			
	 Alto-Shaam will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees. 			
	 For the refrigeration compressor, if installed, the warranty period is five (5) years from the date of original installation of the appliance. 			
	 For heating elements on Halo Heat[®] Cook and Hold ovens, the warranty period is for as long as the original owner owns the oven. This warranty period applies to units sold after 2/1/2009 and excludes holding-only ovens. 			
	 To be valid, a warranty claim must be asserted during the applicable warranty period. This warranty is not transferable. 			
Exclusions	This warranty does not apply to: • Calibration.			
	 Replacement of light bulbs, rubber gaskets, grease filters, air filters, racks, jet plates, and/ or the replacement of glass due to damage of any kind. 			
	 Equipment damage caused by accident, shipping, improper installation or alteration. 			
	 Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers. 			
	 Equipment damage caused by use of any cleaning agents other than those recommended by Alto-Shaam, including but not limited to damage due to chlorine or other harmful chemicals. 			
	 Any losses or damage resulting from malfunction, including loss of food product, revenue, or consequential or incidental damages of any kind. 			
	 Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, unauthorized removal of any parts including legs, or unauthorized addition of any parts. 			
	 Equipment damage incurred as a direct result of poor water quality*, inadequate maintenance of steam generators and/or surfaces affected by water. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/ operator. 			
	 Equipment damage incurred as a result of not following the required maintenance schedule published in the manuals for the equipment. 			
Conclusion	This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto- Shaam equipment.			
	*Refer to the product spec sheet for water quality standards.			



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