COMBITHERM. INSTALLATION





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



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

WARNING

For your safety

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

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.

W164 N9221 Water Street • P.O. Box 450 Menomonee Falls, Wisconsin 53052-0450 U.S.A.

PHONE: 262.251.3800 • 800.558.8744 U.S.A. / CANADA FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY www.alto-shaam.com





Consult instructions for operation and use.

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

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.



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.

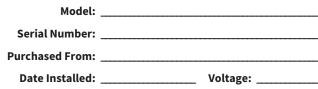
Save all the information packed with the appliance. Register online at www.alto-shaam.com to ensure prompt service in the event of a warranty parts and labor claim.

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

Serial number is required for all inquiries.

Always include both model and serial number(s) in any correspondence regarding the appliance.



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.

WARNING

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 in the environment 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.
- Atmospheric pressure range of 50KPa to 106KPa.

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.

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

DANGER



Used to indicate the presence of a hazard that WILL cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.

WARNING



Used to indicate the presence of a hazard that CAN cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.

CAUTION



Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.

CAUTION

Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.

NOTICE: Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.



Used to indicate that referral to operating instructions is a mandatory action. If not followed the operator could suffer personal injury.



Used to indicate that referral to operating instructions is recommended to understand operation of equipment.

Additional Safety Procedures and Precautions

- 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.



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

\triangle

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.

INSTALLATION

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 must comply with local codes required for gas appliances. In the absence of local codes, installation must comply with the National Fuel Gas Code, ANSI Z223.1 (latest edition). In Canada, the appropriate code is the Natural Gas Installation Code, CAN/CGA-B149.1 or the Propane Installation Code, CAN/CGA-B. Adherence to code by a qualified installer is essential for the following: Gas Plumbing, Gas Appliance Installation, Commercial Cooking Ventilation, Water and Plumbing, and OSHA Regulations and European Standard EN203.



To prevent serious injury, death, or property damage, **always** disconnect appliance from power source before cleaning or servicing.

CAUTION



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.

AVERTISSEMENT



Une installation, une modification, un réglage, une réparation, un nettoyage ou un entretien incorrects peuvent provoquer des dégâts matériels, des blessures graves ou la mort.

Veiller à lire et comprendre les instructions d'installation, d'utilisation et d'entretien avec attention avant d'installer, d'entretenir ou d'utiliser ce matériel.

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.

New Construction

Desig	ner/Consultant Responsibilities: Pre-Installation
	Complete water analysis to be conducted to ensure water quality meets manufacture specifications.
	Proper floor drain within 3' (914mm), not directly underneath, of where the appliance is to be installed.
	Minimum of one (1) 3/4" cold water supply line—two (2) recommended—with 3/4" shut off valve installed ahead of a minimum of two (2) 3/4" NPT connections.
	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 3/4" 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.
nsta	ller Responsibilities: Pre-Installation
	Pre-Installation check sheet has been properly filled out.
	Inspect, receive, deliver, uncrate, and set appliance in place.
nsta	ller Responsibilities: Installation
	Check that the appliance is level. Follow leveling instructions found in the installation manual.
	Make final water connections to both 3/4" cold water lines with required 30 psi minimum dynamic and 90 psi maximum static (2.1–6.3 bar) making sure treated and untreated 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.
SA F	esponsibilities: 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
SP/	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.
Custo	mer/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

Desi	gner/Consultant Responsibilities: Pre-Installation
	Complete water analysis to be conducted to ensure water quality meets manufacture specifications.
	Proper floor drain within 3' (914mm), not directly underneath, of where the appliance is to be installed.
	Minimum of one (1) 3/4" cold water supply line—two (2) recommended—with 3/4" shut off valve installed ahead of a minimum of two (2) 3/4" NPT connections.
	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 3/4" 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.
nsta	Iller Responsibilities: Pre-Installation
	Pre-Installation check sheet has been properly filled out.
nsta	Iller Responsibilities: Installation
	Inspect, receive, deliver, uncrate, set appliance in place, and check that appliance is level.
	Make final water connections to 3/4" cold water lines with required 30 psi minimum dynamic and 90 psi maximum static
	(2.1–6.3 bar) making sure treated and untreated are hooked up properly to the right 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.
SA	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
SP/	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.
	Use the appliance only for its intended purpose.
	Follow cleaning and planned maintenance schedules to maximize the life of the equipment.

Factory Authorized Combitherm[®] Installation Program PRE-INSTALLATION CHECKLIST

Location Street Address: Location City:	Zip:	Site	Contact	tact Name: Phone No.: tact Email:	:				
Pre-Installation Company Informa	tion								
Company Name:			Techni	cian Name					
Mailing Address:		Тес	hnician	Phone No.:					
_			Con	tact Email					
	Zip:								
Number of combis to be instal]					
Model number(s) of combi's to									
Serial number of combi's to be									
Clearance						I			
Measure door/entry way clearance	e (smallest dimension)					PASS		FAIL	
Measure path clearance (smallest	dimension)					PASS		FAIL	
Elevator opening, if applicable (s	mallest dimension)					PASS		FAIL	
Elevator interior dimensions, if a	oplicable (HxWxD)					PASS		FAIL	
Appliance clearance	Right side					PASS		FAIL	
	Left side					PASS		FAIL	
	Rear					PASS		FAIL	
	Тор			1		PASS		FAIL	
Based on the appliances designa would the appliance be accessibl		YE	S			N	0		
If NO, comment on the issue:									
Water Supply									
Is there at least one 3/4" cold w 3 feet of where each appliance		PASS			IL: BE ISSUE				
Do water supply line(s) have shut oven?	-off(s) exclusively for each	PASS			IL: BE ISSUE				
Do water supply line(s) provide a appliance, terminated with male		PASS			IL: BE ISSUE				
Is the dynamic water pressure fro line a minimum of 30 psi for each		PASS		FAIL		UNKN	IOWN		
Is the static water pressure from t line less than 90 psi for each appl		PASS		FAIL		UNKN	IOWN		
Is water treatment (RO blend syst	em, filter, etc.) being used?	YES		NO		UNKN	IOWN		
	If YES - Note the system here:	BRAND	NAME			мо	DEL		
Can the site contact provide evide water analysis has been performe		YE	S			N	0		

Factory Authorized Combitherm® Installation Program PRE-INSTALLATION CHECKLIST

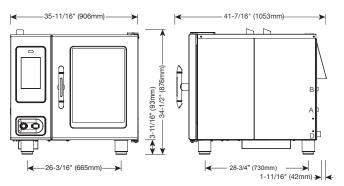
Electrical							
What is the rated voltage and phase of the oven(s) to be supplie	d? vou	TAGE		PHA	\SE		
What is the measured voltage at site?	L1-N		L2-N	L3-N		L1-L2	
	L2-3		L1-L3	PASS		FAIL	
What is the current draw of the oven(s) to be supplied?	AMP R	ATING					
What is the on-site breaker size supplying power to the oven(s)?	' SI	ZE		PASS		FAIL	
Is there a disconnect or junction box within 3' (914mm) of where the oven(s) will be installed?	e PASS		FAIL				
Comments:							
Gas				 			
What is the gas type for the oven(s) to be installed?	NAT	URAL		PROF	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 within 3' (914mn of where the oven(s) will be installed	n) PASS		FAIL				
On the gas line, is there a 3/4" NPT pipe connection with a shut- valve within 3' (914mm) of where the oven(s) will be installed?	off		FAIL				
Comments:							
Drain							
Is there a floor drain within 3' (914mm) of where the oven(s) wil installed?	l be PASS		FAIL				
What is the actual distance to floor drain from where the oven(s will be installed?) MEASU	REMENT		PASS		FAIL	
Is the drain going to be located underneath the oven(s) that will installed? (The drain should not be located directly under the or — a No answer would = Pass)			FAIL				
Comments:							
Other site information				 			
Is there a proper ventilation hood installed above where the oven(s) will be installed?	PASS		FAIL				
Based on the designated location in the kitchen, is the floor leve the point that proper leveling of the oven(s) will be possible?	el to PASS		FAIL				
Is the site 100% ready for oven(s) installation?	PASS		FAIL				
Is site action required?	PASS		FAIL				
Action Required:							
Comments:				 			

ALTO-SHAAM	41-7/16* (1053mm)	B C D	A= UNTREATED WATER 3= TREATED WATER 2= ELECTRICAL 2= WATER DRAIN = OPTIONAL ELECTRICA		6-1 4-1	-	DILER			
↓ -26-3/16" (665mm)→			(A, B) 2-5/16" (58m (D) 3-5/16" (84mn (C, E) 6-3/8" (162mm) 3	- (1 - 1/16" (213 - 1/16" (213 - 1/16" (305 - 1/16" (305 - 17.11/16" (450)		39-1/4" (996	6mm)	60-9/16° (1538mm)		
c 🕕 us 🐞 🕻 🖡 🛛	A [IP X5		EXTERIOR: 34-1/2 EXTERIOR WITH R	' x 35-11/16" x 41-7/1						
LISTED COORDIG APPLANCE SSAM			INTERIOR:	/2" x 16-1/4" x 28-1/1						
	T* one 3/4" line 90 psi maximum static (200 to 600 A VERTICAL VENT TO EXTEND ABOVE THE E	kPa)	to verify that the ir required, a means requirements with Non-compliance w equipment and/or	onsibility of the own coming water supp of "water treatmen the published wate vith these minimum components and w am recommends u	bly is compreh t" provided th r quality stan standards wi bid the origina	nensively tes lat would me dards show Il potentially al equipmen	sted and eet comp n below. r damage t manufa	if liance this acturer's		
			products to proper	ly treat your water.	0					
LEFT: 0" (0mm)	18" (457mm) RECOMMENDED		-	Contaminan		•				
	CES 2" (51mm) DOOR SWING OR COMBUSTIBLE SURFACES			Free Chlorine			ng/L)			
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURFA	COMBCOTIBLE CONTACES		Hardness 30-70 ppm							
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURFA TOP: 20" (508mm) FOR AIR MOVEMENT						Chloride Less than 30 ppm (mg/L)				
TOP: 20" (508mm) FOR AIR MOVEMENT 4" (102mm)	BOTTOM: 5-1/8" (130m	m)			e Less thar		g/L)			
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING	BOTTOM: 5-1/8" (130m	m)		Chloride	e Less thar I 7.0 to 8.5					
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE	,	- - - Total D	Chloride pH	e Less thar I 7.0 to 8.5 a Less thar	n 12 ppm (mę				
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level.	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required	,	. Total D	Chloride pH Silica	e Less thar I 7.0 to 8.5 a Less thar	n 12 ppm (mę				
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc	,	. Total D	Chloride pl Silica issolved Solids (tds	e Less thar I 7.0 to 8.5 a Less thar	n 12 ppm (mợ pm	g/L)			
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc	cal code.	Total D 	Chloride pl Silica issolved Solids (tds	E Less than 7.0 to 8.5 Less than Less than 50-125 pl TH COMBISMO	n 12 ppm (mş pm OKER [®] OPT	g/L)	PTION		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D) VOLTAGE PH HZ AWG CONNECTION	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS kW BREAKER	cal code. **PRO AMPS)power™ option kW BREAKER	Chloride pl- Silica issolved Solids (tds WIT ECO STANI AMPS KW	E Less thar T.O to 8.5 Less thar Less thar 50-125 pl TH COMBISM DARD BREAKER	n 12 ppm (mg pm OKER [®] OPT **PRO AMPS	g/L) TION Dpower™ c kW	BREAKER		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D VOLTAGE PH 4Z AWG CONNECTION 208 – 240 1* 50/60 6 L1, L2/N, G	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS KW BREAKER 37.9 – 43.8 7.9 – 10.5 40 – 50	cal code. **PRO AMPS 44.2 – 51.3	power™ option kW BREAKER 9.2 – 12.3 45 – 60	Chloride pl- Silica issolved Solids (tds WIT ECO STANI AMPS KW 40.4 - 46.6 8.4 - 1	Eess thar T.0 to 8.5 Less thar T.0 to 8.5 So-125 pp TH COMBISM DARD BREAKER 1.2 40 – 50	0 12 ppm (mg pm OKER [®] OPT **PRO AMPS 46.7 – 54.1	g/L) TON Dpower™ c kW 9.7 – 13	BREAKER 50 – 60		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D VOLTAGE PH HZ AWG CONNECTION	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS kW BREAKER	L. cal code. **PRO AMPS 44.2 – 51.3 28.4 – 32.6)power™ option kW BREAKER	Chloride pl- Silica issolved Solids (tds WIT ECO STANI AMPS KW	 Less thar 7.0 to 8.5 Less thar 50-125 pj 50-125 pj TH COMBISMO DARD BREAKER 1.2 40 - 50 1.2 25 - 30 	OKER [®] OPT **PRO AMPS 46.7 – 54.1 30.9 – 35.5	g/L) TON Dpower™ c kW 9.7 – 13	BREAKER 50 – 60 35 – 40		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D VOLTAGE PH HZ AWG CONNECTION 208 - 240 1* 50/60 8 L1, L2/N, G	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS KW BREAKER 37.9 – 43.8 7.9 – 10.5 40 – 50 21.9 – 25.3 7.9 – 10.5 25 – 30	cal code. **PRO AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1	Depower™ option kW BREAKER 9.2 – 12.3 45 – 60 9.2 – 12.3 30 – 35	Chloride pl- Silica issolved Solids (tds WIT ECO STANI AMPS KW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1	 Less thar 7.0 to 8.5 Less thar 50-125 pj TH COMBISMO DARD BREAKER 1.2 40 - 50 1.2 25 - 30 1.2 16 - 32 	OKER [®] OPT **PRO AMPS 46.7 – 54.1 30.9 – 35.5	g/L) ION power™ c kW 9.7 – 13 9.8 – 13 10.9 – 13	BREAKER 50 – 60 35 – 40		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, IC VOLTAGE PH VOLTAGE PH VOLTAGE PH VOLTAGE PH SO/60 6 L1, L2, L3, G 380 – 415 3 50/60 8 L1, L2, L3, N, G	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS KW BREAKER 37.9 – 43.8 7.9 – 10.5 40 – 50 21.9 – 25.3 7.9 – 10.5 25 – 30 13.4 – 14.6 9 – 10.5 16 11.6 – 12.6 9.1 – 10.5 15	cal code. AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1 15 – 16.7	Depower™ option kW BREAKER 9.2 – 12.3 45 – 60 9.2 – 12.3 30 – 35 10.3 – 12.3 32	Chlorida ph Silica issolved Solids (tds ECO STANI AMPS KW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1 16.1 - 17.5 9.6 - 1 12.9 - 14.1 9.6 - 1	E Less thar 1.7.0 to 8.5 2.4 Less thar 50-125 pp TH COMBISM DARD BREAKER 1.2 40 - 50 1.2 16 - 32 1.2 15 	OKER [®] OPT **PRO AMPS 46.7 - 54.1 30.9 - 35.5 22.9 - 25 16.3 - 18.2	g/L) power™ c kW 9.7 - 13 9.8 - 13 10.9 - 13 11 - 13	BREAKER 50 – 60 35 – 40 32 20		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, IC) VOLTAGE PH HZ AWG CONNECTION 208 - 240 1* 50/60 30/60 8 L1, L2, L3, G 340 - 480 3* 50/60	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS KW 37.9 - 43.8 7.9 - 10.5 40 - 50 21.9 - 25.3 7.9 - 10.5 25 - 30 13.4 - 14.6 9 - 10.5 16 11.6 - 12.6 9.1 - 10.5 15 APPLIES PAN CAPACITY	cal code. **PRO AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1 15 – 16.7 **NO-COST OPTIC	Power™ option kW BREAKER 9.2 - 12.3 45 - 60 9.2 - 12.3 30 - 35 10.3 - 12.3 32 10.4 - 12.3 15 - 20 ON ON ELECTRIC MODELS	Chlorida ph Silica issolved Solids (tds ECO STANI AMPS KW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1 16.1 - 17.5 9.6 - 1 12.9 - 14.1 9.6 - 1	E Less thar 1.7.0 to 8.5 2.4 Less thar 50-125 pp TH COMBISM DARD BREAKER 1.2 40 - 50 1.2 16 - 32 1.2 15 	OKER [®] OPT **PRO AMPS 46.7 - 54.1 30.9 - 35.5 22.9 - 25	g/L) power™ c kW 9.7 - 13 9.8 - 13 10.9 - 13 11 - 13	BREAKER 50 – 60 35 – 40 32 20		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, E VOLTAGE PH HZ AWG CONNECTION 208 - 240 1* 50/60 380 - 415 3 50/60 8 L1, L2, L3, G 380 - 415 3 50/60 440 - 480 3* 50/60 CONCENTION CONNECTION	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS KW BREAKER 37.9 - 43.8 7.9 - 10.5 21.9 - 25.3 7.9 - 10.5 13.4 - 14.6 9 - 10.5 16 11.6 - 12.6 9.1 - 10.5 15 APPLIES PAN CAPACITY FULL-SIZE: 20"	cal code. **PRO AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1 15 – 16.7 **No-COST OPTIC x 12" x 2-1/2"	Degower™ option kW BREAKER 9.2 - 12.3 45 - 60 9.2 - 12.3 30 - 35 10.3 - 12.3 32 10.4 - 12.3 15 - 20 ON ON ELECTRIC MODELS STANDA Sev	Chlorida pH Silica issolved Solids (tds CCO STAN AMPS KW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1 16.1 - 17.5 9.6 - 1 12.9 - 14.1 9.6 - 1 3 RD MODEL /en (7)	E Less thar 1.7.0 to 8.5 2.4 Less thar 50-125 pp TH COMBISM DARD BREAKER 1.2 40 - 50 1.2 16 - 32 1.2 15 	OKER [®] OPT **PRO AMPS 46.7 - 54.1 30.9 - 35.5 22.9 - 25 16.3 - 18.2 COMBISMOK Six (6)	g/L) Dopower™ c kW 9.7 – 13 9.8 – 13 10.9 – 13 11 – 13 CER [®] OP1	BREAKER 50 – 60 35 – 40 32 20		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, IC VOLTAGE PH HZ AWG 208 - 240 1* 50/60 380 - 415 3 50/60 8 L1, L2, L3, G *ELECTRICAL 50/60 N L1, L2, L3, G	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc • ECO STANDARD AMPS KW BREAKER 37.9 - 43.8 7.9 - 10.5 1.9 - 25.3 7.9 - 10.5 13.4 - 14.6 9 - 10.5 16 11.6 - 12.6 9.1 - 10.5 15 APPLIES FULL-SIZE: 20" GN 1/1:	cal code. **PRO AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1 15 – 16.7 **NO-COST OPTIC	Degineer™ option kW BREAKER 9.2 - 12.3 45 - 60 9.2 - 12.3 30 - 35 10.3 - 12.3 32 10.4 - 12.3 15 - 20 ON ON ELECTRIC MODELS STANDA See Sev	Chlorida pł Silica issolved Solids (tds CO STANI AMPS kW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1 16.1 - 17.5 9.6 - 1 12.9 - 14.1 9.6 - 1 S RD MODEL ren (7) ren (7)	E Less thar 1.7.0 to 8.5 2.4 Less thar 50-125 pp TH COMBISM DARD BREAKER 1.2 40 - 50 1.2 16 - 32 1.2 15 	OKER [®] OPT **PRO AMPS 46.7 – 54.1 30.9 – 35.5 22.9 – 25 16.3 – 18.2	g/L) Dopower™ c kW 9.7 – 13 9.8 – 13 10.9 – 13 11 – 13 ER [®] OPT	BREAKER 50 – 60 35 – 40 32 20		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D VOLTAGE PH VOLTAGE PL VI 400 VI 50/60 IL L1, L2, L3, G *ELECTRICAL SERVICE CHARGE WEIGHT S24 lbs EST	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc DEDICATED CIRCUIT REQUIRED) ECO STANDARD AMPS KW BREAKER 37.9 - 43.8 7.9 - 10.5 1.9 - 25.3 7.9 - 10.5 13.4 - 14.6 9 - 10.5 16 11.6 - 12.6 9.1 - 10.5 15 APPLIES PAN CAPACITY FULL-SIZE: 20" GN 1/1:	cal code. **PRO AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1 15 – 16.7 **NO-COST OPTIC x 12" x 2-1/2" x 325 x 65mm	Degineer™ option kW BREAKER 9.2 - 12.3 45 - 60 9.2 - 12.3 30 - 35 10.3 - 12.3 32 10.4 - 12.3 15 - 20 ON ON ELECTRIC MODELS STANDA See Sev	Chlorida pH Silica issolved Solids (tds CCO STAN AMPS KW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1 16.1 - 17.5 9.6 - 1 12.9 - 14.1 9.6 - 1 3 RD MODEL /en (7)	E Less thar 1.7.0 to 8.5 2.4 Less thar 50-125 pp TH COMBISM DARD BREAKER 1.2 40 - 50 1.2 16 - 32 1.2 15 	OKER [®] OPT **PRO AMPS 46.7 - 54.1 30.9 - 35.5 22.9 - 25 16.3 - 18.2 COMBISMOK Six (6) Six (6)	g/L) Dopower™ c kW 9.7 – 13 9.8 – 13 10.9 – 13 11 – 13 ER [®] OPT	BREAKER 50 – 60 35 – 40 32 20		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D VOLTAGE PH HZ AWG CONNECTION 208 - 240 • 50/60 0.1, L2, L3, G 30/60 • CONNECTION 208 - 240 50/60 0.1, L2, L3, G 350/60 - 11, L2, L3, G *ELECTRICAL SERVICE CHARGE WEIGHT NET 524 lbs EST SHIP 608 lbs* SHIP	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc >ECO STANDARD AMPS KW BREAKER 37.9 - 43.8 7.9 - 10.5 13.4 - 14.6 9 - 10.5 13.4 - 14.6 9 - 10.5 13.4 - 12.6 9.1 - 10.5 AMPS KW BREAKER 37.9 - 43.8 7.9 - 10.5 21.9 - 25.3 7.9 - 10.5 13.4 - 14.6 9 - 10.5 15 APPLIES PAN CAPACITY FULL-SIZE: 20" GN 1/1: FULL-SIZE SHEET: 18	cal code. AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1 15 – 16.7 **NO-COST OPTIC x 12" x 2-1/2" x 325 x 65mm 3" x 13" x 1"	Degineer™ option kW BREAKER 9.2 - 12.3 45 - 60 9.2 - 12.3 30 - 35 10.3 - 12.3 32 10.4 - 12.3 15 - 20 ON ON ELECTRIC MODELS STANDA See Sev	Chlorida pl- Silica issolved Solids (tds MIT ECO STANI AMPS KW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1 16.1 - 17.5 9.6 - 1 12.9 - 14.1 9.6 - 1 S RD MODEL ven (7) ven (7) ven (7)	E Less thar 1.7.0 to 8.5 2.4 Less thar 50-125 pp TH COMBISM DARD BREAKER 1.2 40 - 50 1.2 16 - 32 1.2 15 	OKER [®] OPT **PRO AMPS 46.7 - 54.1 30.9 - 35.5 22.9 - 25 16.3 - 18.2 COMBISMOK Six (6) Six (6)	g/L) Dopower™ c kW 9.7 – 13 9.8 – 13 10.9 – 13 11 – 13 ER [®] OPT	BREAKER 50 – 60 35 – 40 32 20		
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING INSTALLATION REQUIREMENTS Oven must be installed level. Water supply shut-off valve and back-flow ELECTRICAL - CTP6-10E (NO CORD, NO PLUG, D VOLTAGE PH HZ AWG CONNECTION 208 - 240 1* 50/60 6 L1, L2/N, G 0208 - 240 3 50/60 8 L1, L2, L3, G 380 - 415 3 50/60 8 L1, L2, L3, G VELECTRICAL SERVICE CHARGE WEIGHT NET 524 lbs EST 238 kg SHIP DIMENSIONS	BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE • Hood installation is required preventer when required by loc >ECO STANDARD AMPS KW AMPS KW 37.9 - 43.8 7.9 - 10.5 40 - 50 21.9 - 25.3 7.9 - 10.5 16 11.6 - 12.6 9.1 - 10.5 15 APPLIES FULL-SIZE: 20" GN 1/1: 530. **HALF-SIZE SHEET: 18 PRODUCT CAPACITY 18	L. cal code. AMPS 44.2 – 51.3 28.4 – 32.6 20.3 – 22.1 15 – 16.7 **NO-COST OPTIO x 12" x 2-1/2" x 325 x 65mm 3" x 13" x 1"	Degineer™ option kW BREAKER 9.2 - 12.3 45 - 60 9.2 - 12.3 30 - 35 10.3 - 12.3 32 10.4 - 12.3 15 - 20 ON ON ELECTRIC MODELS STANDA See Sev	Chlorida pl- Silica issolved Solids (tds MIT ECO STANI AMPS KW 40.4 - 46.6 8.4 - 1 24.4 - 28.1 8.4 - 1 16.1 - 17.5 9.6 - 1 12.9 - 14.1 9.6 - 1 S RD MODEL ren (7) ren (7) ren (7)	 Less thar 7.0 to 8.5 Less thar 7.0 to 8.5 Less thar 50-125 pp TH COMBISM DARD BREAKER 1.2 40 - 50 1.2 15 WITH C 	OKER [®] OPT **PRO AMPS 46.7 – 54.1 30.9 – 35.5 22.9 – 25 16.3 – 18.2 COMBISMOK Six (6) Six (6) Seven (7	g/L) Dopower™ c kW 9.7 – 13 9.8 – 13 10.9 – 13 11 – 13 ER [®] OPT	BREAKER 50 – 60 35 – 40 32 20		

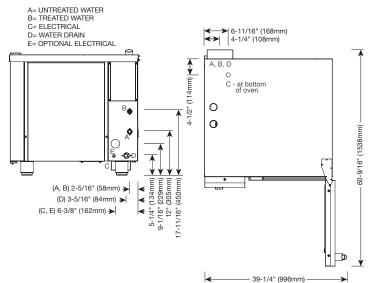




**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY



EXPORT WEIGHT AND DIMENSIONS.



					DIMENSIONS: H x	W x D				
					EXTERIOR:					
• –					34-1/2" x 35-11/16" x 41-7/16" (876mm x 906mm x 1053mm)					
	Ŵ (΄΄ ΓΠΙ		Y5	EXTERIOR WITH RE	CESSED DOOR	<u>.</u> //c" /976mm v 1022n	nm v 1052mm)		
LISTED	EPH	€ EAI		ΛĴ	INTERIOR:	40-11/16 X 41-7	7/16" (876mm x 1033n	nm x 1053mm)		
COOKING APPLIANCE AN 584m	NSI/NSF 4					" x 16-1/4" x 28-1	I/16" (520mm x 411m	m x 712mm)		
WATER REQU	REMENTS				WATER QUALITY	STANDARDS	;			
ONE (1) TREATE ONE (1) UNTREA LINE PRESSURE WATER DRAIN: 1	D WATER INLE TED WATER IN : 30 psi minimu -1/2" (40mm) C	ILET: 3/4" NPT* m dynamic and 90 ps	si maximum sta RTICAL VENT TO EXT	* Can manifold off of one 3/4" line	to verify that the inc required, a means of requirements with the Non-compliance with equipment and/or c	oming water su of "water treatm ne published wa h these minimu omponents and	pply is comprehens ent" provided that w ater quality standard m standards will poi void the original eq	ould meet compliance		
CLEARANCE F	REQUIREMEN	NTS	,		products to properly					
LEFT: 0" (()mm)		18" (457mm	1) RECOMMENDED SERVICE ACCESS		Contamina	ant Inlet Water F	Requirements		
RIGHT: 0" (0)mm) NON-COM	BUSTIBLE SURFACES	2" (51mm) COMBUSTIBLE	DOOR SWING OR E SURFACES		Free Chlorine Less than 0.1 ppm (mg/L)				
TOP: 20"	(508mm) for <i>p</i>	IR MOVEMENT				Hardness 30-70 ppm Chloride Less than 30 ppm (mg/L)				
васк: 4" (102mm)		воттом:	5-1/8" (130mm)	1	pH 7.0 to 8.5				
BACK: 4-5/	16" (109mm) d	OPTIONAL PLUMBING KIT	FOR LEGS, AI			Silica Less than 12 ppm (mg/L)				
INSTALLATION	N REQUIREM	ENTS			Total Dissolved Solids (tds) 50-125 ppm					
Oven must be	installed level	I. • H	lood installation	on is required.]					
Water supply s	shut-off valve	and back-flow prev	venter when re	equired by local code.						
ELECTRICAL (NO	O CORD, NO PLUG	- DEDICATED CIRCUIT	REQUIRED)		•					
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 APPL	IES							
WEIGHT		SHIP DIMENSIC	DNS	PAN CAPACITY						
NET 524 lbs	est 238 kg	(L x W x H) 58" >	(45" x 51"*	FULL-SIZE:	20" x 12" x 2-1/2"	Seven (7)	PRODUCT MAX	KIMUM: 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 MAXIMU	JM: 45 quarts (57 liters)		
*DOMESTIC GROUND	SHIPPING INFORM	MATION. CONTACT FACTO	DRY FOR	*HALF-SIZE SHEET:	18" x 13" x 1"	Seven (7)	**ON WIRE SHELVES ON	ILY. ADDITIONAL WIRE SHELVES		

State shaam.	41-7/16" (1053mm		E	3-3/16"	VATER TER	6.11/16" (1 4-1/4" (108 A, B, D, E O C - at botto of oven O O	GAS BC	
US US ANSUNSF 4		5	Same Mills	EXTERIOR:	VS: H x W x D 34-1/2" x 35-11/16" x 41- VITH RECESSED DOOR 44-1/2" x 40-11/16" x 41-7	<u>R:</u> 7/16" (876mm x	1033mm x 10	53mm)
WATER REQUIREMENTS			,		20-1/2" x 16-1/4" x 28-1 JALITY STANDARDS		411mm x 712	mm)
TWO (2) COLD WATER I ONE (1) TREATED WATER INLET: 3/4" N ONE (1) UNTREATED WATER INLET: 3/4" N LINE PRESSURE: 30 psi minimum dynamica a WATER IARIN: 1-1/2" (40mm) CONNECTION W MATERIALS MUST WITHSTAND TEMPERATURES UP T CLEARANCE REQUIREMENTS LEFT: 0" (0mm) RIGHT: 0" (0mm) NON-COMBUSTIBLE SUF TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUME INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-file GAS REQUIREMENTS (GAS TYPE MUST BE S	PT* * Ca PT* on d 90 psi maximum static (TH A VERTICAL VENT TO EXTEND 2 200°F (93°C). 18" (457mm) Ri FACES 2" (51mm) DOO COMBUSTIBLE SU ING KIT FOR LEGS, AIR IN • Hood installation i w preventer when requ	an manifold off of e 3/4" line (200 to 600 kPa) ABOVE THE EXHAU: ECOMMENDED SERVI R SWING OR RFACES /8" (130mm) TAKE s required.) IST VENT. ICE ACCESS	to verify tha required, a r requirement Non-complia equipment a warranty. All products to		apply is compre- ent" provided i ater quality sta im standards v void the origin using OptiPun er. ant Inlet W ine Less that ass 30-70 p ide Less that pH 7.0 to 8. ica Less that	ehensively te that would me ndards show vill potentially al equipmen re [®] [www.opti ater Require an 0.1 ppm (me pm an 30 ppm (me 5 an 12 ppm (me	sted and if eet compliance n below. ' damage this t manufacturer's purewater.com] ements ig/L) g/L)
GAS REQUIREMENTS (GAS TYPE MUST BE S		HOC	DK-UP: 3/4" N	NPT				
Natural Gas/Propane Gross Heating Value (HHV) Net 48,000 Btu / hr	NTERNATIONAL G20, G25, G31 Heating Value (LHV) 13.0 kW	Na Minimum: 5	atural Gas 5.5" W.C. dyna n: 14" W.C. sta	NORTH AME	Propane Minimum: 9" W.C. dynan Maximum: 14" W.C. stat	nic	INTERN/ G20 G25 G31	20mbar 20mbar 30mbar
ELECTRICAL - CTP6-10G (DEDICATED CIRC								
VOLTAGE PH HZ AW ∞∞ < 120 1 60 14	no cord, no plug	AMPS	BREAKEF		no cord, no plug	AMPS	BREAKER	
	L1, N, G	6.8	20	.84	L1, N, G L1, L2/N, G	12.0 7.3 – 7.1	20	1.46
[∞] 208 – 240 3 50/60 14	L1, L2, L3, G	4.0 - 4.2	15	1.0	L1, L2, L3, G	7.3 - 7.1	15	1.5 - 1.7
→ 250 240 3 50/60 14 → 380 - 415 3 50/60 14	L1, L2, L3, N, G	4.6 - 4.2	15	1.0	L1, L2, L3, N, G	7.2 – 7.1	15	1.6 – 1.7
○ NORTH AMERICA VOLTAGE CHOICE S GROUND FAULT								
	PAN CAPACITY			1	ANDARD MODEL			ER [®] OPTION
WEIGHT	FULL-SIZE:		" x 2-1/2" 5 x 65mm		Seven (7) Seven (7)		Six (6) Six (6)	
NET 524 lbs EST 238 kg SHIP 581 lbs* 264 kg*	GN 1/1: **HALF–SIZE SHEET:	18" x 1			Seven (7)		Seven (7)
NET 524 lbs est 238 kg SHIP 581 lbs* 264 kg* SHIP DIMENSIONS	**HALF–SIZE SHEET: PRODUCT CAPACI	18" x 1 FY			Seven (7)		Seven (7)
NET 524 lbs EST 238 kg SHIP 581 lbs* 264 kg*	**HALF–SIZE SHEET: PRODUCT CAPACIT PRODU	18" x 1				72 lb (33 kg) 5 quarts (57 liters		7)



CTC6-10G GAS BOILER-FREE

	35-11/16" (906mm) 35-11/16" (906mm) 26-3/16" (665mm)	→ 3.11/16 ⁻ (9.30mm) → 3.11/16 ⁻ (9.30mm)	41-7/16" (1053mm)		3-3/16" (TER	← 6-11/16" (168m ← 1/4" (108mm) A, B, D, E O C - at bottom of oven O O O O O O O O O O O O O		
C USTED LISTED COONING APPLIAN SSAM		€ ER	[IP X5	5	EXTERIOR:	NS: H x W x D 34-1/2" x 35-11/16" x 41-7 VITH RECESSED DOOR: 4-1/2" x 40-11/16" x 41-7/ 20-1/2" x 16-1/4" x 28-1/	 16" (876mm x 10	33mm x 1053mm)	
WATER R	REQUIREMENTS					JALITY STANDARDS			
ONE (1) UN LINE PRES WATER DR MATERIALS M	REATED WATER INLET: NTREATED WATER INLET: SURE: 30 psi minimum d RAIN: 1-1/2" (40mm) CONN MUST WITHSTAND TEMPERATU	3/4" NPT* T: 3/4" NPT* lynamic and 90 psi ECTION WITH A VERT JRES UP TO 200°F	one 3/4" i maximum static (200 f TICAL VENT TO EXTEND ABOV	nifold off of ' line to 600 kPa)	to verify that required, a n requirements Non-complia equipment a warranty. Alt	responsibility of the ow the incoming water sup neans of "water treatme s with the published wa nnce with these minimur nd/or components and o-Shaam recommends properly treat your wate	oply is comprehe nt" provided tha ter quality stand n standards will void the original using OptiPure [®]	ensively tested and t would meet compl ards shown below. potentially damage equipment manufac	if iance this cturer's
LEFT:	0" (0mm)		18" (457mm) RECOMM	MENDED SERVICE ACCESS	-	Contamina	nt Inlet Wate	er Requirements	
RIGHT:	0" (0mm) NON-COMBUS	TIBLE SURFACES	2" (51mm) DOOR SWI COMBUSTIBLE SURFAC			Free Chlori	ne Less than	0.1 ppm (mg/L)	
TOP:	20" (508mm) FOR AIR M	IOVEMENT			•	Hardne			
BACK:	4" (102mm) 4-5/16" (109mm) optio	ONAL PLUMBING KIT	BOTTOM: 5-1/8" (FOR LEGS, AIR INTAKE	130mm)	Chloride Less than 30 ppm (mg/L) pH 7.0 to 8.5 Silica Less than 12 ppm (mg/L)				
INSTALL	ATION REQUIREMEN	ITS			і І т	otal Dissolved Solids (td			
• Water su	ust be installed level. upply shut-off valve and	l back-flow prev	1				-)		
GAS REG	QUIREMENTS (GAS TYPE	MUST BE SPECIFIEI	D ON ORDER)	HOOK-UP: 3/4					
	RATED TH	ERMAL LOAD		HUUK-UP. 3/4		CONNECTED PRE	SSURF		
NC	ORTH AMERICA	1	RNATIONAL		NORTH A	AMERICA		INTERNATIONAL	
Natu	ural Gas/Propane		, G25, G31	Natural		Propane		G20 20mbar	
	Heating Value (HHV) I3,000 Btu / hr		ing Value (LHV) I1.5 kW	Minimum: 5.5" W Maximum: 14"	•	Minimum: 9" W.C. dy Maximum: 14" W.C.		G25 20mbar G31 30mbar	
ELECTRIC	AL - CTC6-10G (DEDIC	ATED CIRCUIT REQU	UIRED)						
	VOLTAGE	PH HZ	Z AWG		CONNECTIO	DN	AMPS	BREAKER	kW
∞®	120	1 60) 14	L1, I	N, G - no cord,	no plug	7.0	20	.84
©⊕	208 – 240	3 50/6	60 14	L1, L2	, L3, G - no cor	rd, no plug	4.8 - 4.2	15	1.0
•\$	380 – 415	3 50/6	60 14	L1, L2,	L3, N, G - no c	ord, no plug	4.6 - 4.2	15	1.0
>> NORTH AME	RICA VOLTAGE CHOICE 🛸 GRO	UND FAULT OR RESIDUA	AL CURRENT PROTECTION DEVI	CE MUST ACCOMMODATE A	LEAKAGE CURRENT	OF 20mA 🔹 INTERNATIONAL V	OLTAGE CHOICE		
WEIGHT	S			CAPACITY					

WEIG	HT		SHIP DIMENSIONS	PAN CAPACITY			
NET	524 lbs est	238 kg	(L x W x H) 51" x 45" x 51"*	FULL-SIZE:	20" x 12" x 2-1/2"	Seven (7)	PRODUCT MAXIMUM: 72 lb (33 kg)
SHIP	581 lbs*	264 kg*	(1295 x 1143 x 1295mm)*	GN 1/1:	530 x 325 x 65mm	Seven (7)	VOLUME MAXIMUM: 45 quarts (57 liters)
*DOMES	*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR			**HALF-SIZE SHEET:	18" x 13" x 1"	Seven (7)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE
EXPORT	WEIGHT AND DIM	ENSIONS.					SHELVES REQUIRED FOR MAXIMUM CAPACITY

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	PROformance						ILER-	FREE
	41-7/16" (1053mm)		C 6 - 15/16° (17/mm) (C) 6 - 15/16° (17/mm)	5-76° (148mm) 5-716° (148mm) 9-1716° (230mm) 14-516° (372mm) 14-516° (372mm)	6-11/16 4-1/4" (4.1/4" (A, B, D C - at bo of ove O O	ttom		60-9/16" (1538mm) — 60-9/16"
		[EXTERIOR: 45-11/16	" x 35-11/16" x 41-7/1	16" (1160mm :	x 906mm x 10	053mm)	
		1	EXTERIOR WITH F 45-11/16	RECESSED DOOR: ' x 40-11/16" x 41-7/1	6" (1160mm x	(1033mm x 1	()53mm)	
LISTED COOKING APPLANCE SAM	¶[IP X5	- !	INTERIOR:	2" x 16-1/4" x 28-1/16	,		,	
WATER REQUIREMENTS		,				TTTTTTTT T T Z		
ONE (1) TREATED WATER INLET: 3/4" NF ONE (1) UNTREATED WATER INLET: 3/4" NF LINE PRESSURE: 30 psi minimum dynamic an WATER DRAIN: 1-1/2" (40mm) CONNECTION WIT MATERIALS MUST WITHSTAND TEMPERATURES UP TO	T* one 3/4" line 90 psi maximum static (200 to 600 4 A VERTICAL VENT TO EXTEND ABOVE THE E	ff of I kPa) XHAUST VENT.	to verify that the ir required, a means requirements with Non-compliance w equipment and/or warranty. Alto-Sha	onsibility of the own coming water supp of "water treatmen" the published wate with these minimum components and vo am recommends us	ly is comprel t" provided th r quality stan standards wi bid the origina	hensively tes nat would me idards shown ill potentially al equipmen	sted and i eet compli n below. damage t manufac	f ance this turer's
LEFT: 0" (0mm)	18" (457mm) RECOMMENDED		products to proper	ly treat your water.				
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURF	<u>ר אושפ</u> קססם (51mm) 2" (51mm)			Contaminant Free Chlorine		iter Require n 0.1 ppm (m		
	COMBUSTIBLE SURFACES			Hardness			ig/L)	
TOP: 20" (508mm) FOR AIR MOVEMENT				Chloride		n 30 ppm (m	g/L)	
BACK: 4" (102mm) 4-5/16" (109mm) optional plumbii	G KIT BOTTOM: 5-1/8" (130m FOR LEGS, AIR INTAKE	m)		pH				
INSTALLATION REQUIREMENTS	I		Total D	Silica issolved Solids (tds)		n 12 ppm (mợ nm	g/L)	
Oven must be installed level.	Hood installation is required	l.	iotai D		125 μ	н ш		
Water supply shut-off valve and back-flow		cal code.		1				
ELECTRICAL - CTP10-10E (NO CORD, NO PLUG,					H COMBISM			
	ECO STANDARD	· · ·		ECO STAND			power™ op	
VOLTAGE PH HZ AWG CONNECTION 208 – 240 1* 50/60 2 L1, L2/N, G	AMPS kW BREAKER 68.3 – 78.8 14.2 – 18.9 70 – 80		kW BREAKER	AMPS kW 70.8 - 81.6 14.7 - 19	BREAKER 9.6 70 – 90	AMPS 82.3 – 95		BREAKER 90 – 100
208 – 240 1 50/60 2 L1, L2/N, G 208 – 240 3 50/60 4 L1, L2, L3, G	39.4 - 45.5 14.2 - 18.9 40 - 50		6.6 - 22.1 60 - 100	41.9 - 48.3 14.7 - 1		53.5 – 61.7 ⁻		
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		26.8 - 29.1 16.7 - 1		39 – 42.5		63
440 – 480 3* 50/60 8 L1, L2, L3, G	26.9 - 29.4 18	.6 – 22.1 30	22.2 - 24.2 16.7 - 19	9.6 25	28.3 - 30.8	19.2 – 22.8	30	
	*ELECTRICAL SERVICE CHARGE APPLIES **NO-COST OF							
WEIGHT	PAN CAPACITY	101 0 115		RD MODEL	WITH C	COMBISMOK		ON
NET 625 lbs EST 283 kg		x 12" x 2-1/2" x 325 x 65mm		ven (11) ven (11)		Ten (10) Ten (10)		
SHIP 650 lbs* 295 kg*		x 325 x 65mm 8" x 13" x 1"		ven (11) ven (11)		Eleven (1		
SHIP DIMENSIONS	PRODUCT CAPACITY		1				-	
(L x W x H) 45" x 45" x 65"*	PRODUCT MAXIM	UM		120	0 lb (54 kg)			
(1143mm x 1143mm x 1651mm)*	VOLUME MAXIMU		1		arts (95 liters))		
	1		•					

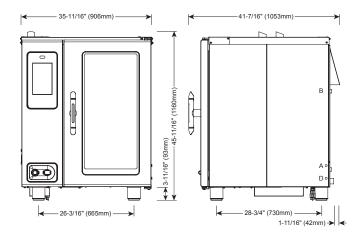
FACTORY FOR EXPORT WEIGHT AND DIMENSIONS. MN-35947 • Rev 10 • 06/16 • COMBITHERM CT PROFORMANCE AND CT CLASSIC SERIES • INSTALLATION MANUAL • 13

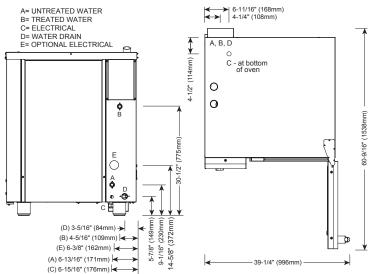
**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT









					DIMENSIONS:	HxWxD					
					EXTERIOR:						
					45-11/	/16" x 35-11/16" x 41-7/	16" (1160mm x	906mm x 1053mm)			
			F			RECESSED DOOR:					
	EPH (E EA	I IP	X5		16" x 40-11/16" x 41-7/1	6" (1160mm x 1	1033mm x 1053mm)			
	ANSI/NSF 4				INTERIOR:	4/01 40 4/41 00 4/4	0.000				
					31-1/2" x 16-1/4" x 28-1/16" (800mm x 411mm x 712mm)						
WATER REQU	REMENTS				WATER QUAL	ITY STANDARDS					
		WATER INLETS			It is the sole responsibility of the owner/operator/purchaser of this equipment						
ONE (1) TREATE ONE (1) UNTREA				* Can manifold off of one 3/4" line	to verify that the	incoming water supp	ly is comprehe t" provided the	ensively tested and if at would meet compliance			
()		m dynamic and 90 ps	i maximum stat		requirements wi	th the published wate	r quality stand	ards shown below.			
WATER DRAIN: 1	-1/2" (40mm) Co	ONNECTION WITH A VER	TICAL VENT TO EXT	TEND ABOVE THE EXHAUST VENT.	Non-compliance	with these minimum	standards will	potentially damage this			
MATERIALS MUST W	ITHSTAND TEMPER	RATURES UP TO 200°F	(93°C).		equipment and/or components and void the original equipment manufacturer' warranty. Alto-Shaam recommends using OptiPure® [www.optipurewater.com						
CLEARANCE F	REQUIREMEN	ITS	,		products to properly treat your water.						
LEFT: 0" (0)mm)		18" (457mm	I) RECOMMENDED SERVICE ACCESS		Contaminan	nt Inlet Water Requirements				
RIGHT: 0" (()mm) NON-COM	BUSTIBLE SURFACES		DOOR SWING OR		Free Chlorine		0.1 ppm (mg/L)			
	,		COMBUSTIBLE	SURFACES		Hardness	30-70 ppm	1			
TOP: 20"	(508mm) for a	IR MOVEMENT				Chloride		30 ppm (mg/L)			
васк: 4" (1	102mm)		BOTTOM:	5-1/8" (130mm)	pH 7.0						
4-5/	16" (109mm) a	OPTIONAL PLUMBING KIT	FOR LEGS, AIF	RINTAKE		Silica		12 ppm (mg/L)			
INSTALLATION		ENTS] Total	Dissolved Solids (tds)					
• Oven must be	installed level	. •H	ood installatio	on is required.			00 120 pp				
· Water supply s	shut-off valve a	and back-flow prev	enter when re	equired by local code.							
ELECTRICAL (NO	O CORD, NO PLUG	, DEDICATED CIRCUIT R	EQUIRED)		•						
MODEL	VOLTAG	E PH	HZ	AMPS	kW	BREAKER	AWG	CONNECTION			
CTC10-10E	208 – 24	0 3	50/60	39.4 - 45.5	14.2 – 18.9	40-50	4	L1, L2, L3, G			
	380 – 41	5 3	50/60	24.1 – 26.2	16.2 – 18.9	32	6	L1, L2, L3, N, G			
	440 – 48	80 3*	50/60	20.8 – 22.7	16.2 – 18.9	25	8	L1, L2, L3, G			
	*ELECTRICAL	SERVICE CHARGE APPL	ES								
WEIGHT		SHIP DIMENSIO	NS	PAN CAPACITY							

WEIG	HT		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)
	TIC GROUND SHIF WEIGHT AND DIM		IATION. CONTACT FACTORY FOR	**HALF-SIZE SHEET:	18" x 13" x 1"	Eleven (11)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

ALTO-SHAAM. CI	PROformat		A= UNTREATED				10G
			A= UNTREATED B= TREATED W C= ELECTRICAL D= GAS	ATER	6-11/16" (1 +1/4" (10		
	41-7/16" (1053mm)		E= WATER DRA	IN T			
	28-3/4" (730mm) 1-11/				A.B.D.E O C-at botto of oven	m 	00.9/16° (1538mm)
				0	← 39	9-1/4" (996mm)	
				NS: H x W x D			
			EXTERIOR:	5-11/16" x 35-11/16" x 41-7	7/16" (1160mm	1 x 906mm x 10	53mm)
			EXTERIOR	WITH RECESSED DOOR: 5-11/16" x 40-11/16" x 41-7	,		,
LISTED COOKING APPLIANCE 584m ANSI/NSF 4		- La	INTERIOR:	21 1/01 - 46 1/41 - 00 4	/16" (000	111mm - 710	2000
WATER REQUIREMENTS				31-1/2" x 16-1/4" x 28-1/	/16" (800mm x	411mm x 712r	nm)
TWO (2) COLD WATER INLI				e responsibility of the ow	, a rlan a rata rl	nurshease of t	hio aquinmont
ONE (1) UNTREATED WATER INLET: 3/4" NPT LINE PRESSURE: 30 psi minimum dynamic and S WATER DRAIN: 1-1/2" (40mm) CONNECTION WITH MATERIALS MUST WITHSTAND TEMPERATURES UP TO 20 CLEARANCE REQUIREMENTS	0 psi maximum static (2 A VERTICAL VENT TO EXTEND A		requiremen Non-compli equipment warranty. A	means of "water treatme ts with the published wat ance with these minimur and/or components and tto-Shaam recommends	ter quality sta m standards w void the origir using OptiPur	ndards showr vill potentially nal equipment	below. damage this manufacturer's
LEFT: 0" (0mm)	18" (457mm) PEG	COMMENDED SERVICE ACCESS	products to	properly treat your wate	r.		
. ,	2" (51mm) DOOR		-	Contamina		ater Require	
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURFAC	COMBUSTIBLE SUR			Free Chlorir Hardne		an 0.1 ppm (m pm	g/L)
TOP: 20" (508mm) FOR AIR MOVEMENT			_	Chlorid		an 30 ppm (mg	/L)
BACK: 4" (102mm) 4-5/16" (109mm) optional plumbing	FOR LEGS, AIR INTA	\ /		I*	oH 7.0 to 8.		
			-	Silio		an 12 ppm (mg	/L)
Oven must be installed level.	Hood installation is	required.	-	Total Dissolved Solids (td	ls) 50-125	ppm	
Water supply shut-off valve and back-flow	preventer when requir	ed by local code.					
GAS REQUIREMENTS (GAS TYPE MUST BE SPEC	IFIED ON ORDER)						
RATED THERMAL LOAD	r	HOOK-UP: 3/4	" NPT	CONNECTED PRESSU	JRF		
NORTH AMERICA INTI	ERNATIONAL		NORTH AMI	ERICA		INTERNA	
	0, G25, G31 ating Value (LHV)	Natural Gas Minimum: 5.5" W.C. d	ynamic	Propane Minimum: 9" W.C. dynam	ic	G20 G25	20mbar 20mbar
80,000 Btu / hr	21.0 kW	Maximum: 14" W.C.		Maximum: 14" W.C. stati	c	G31	30mbar
ELECTRICAL - CTP10-10G (DEDICATED CIRCUI	T REQUIRED) CONNECTION	AMD0 005.00		CONNECTION			1.3.87
VOLTAGE PH HZ AWG ∞∞ 120 1 60 14	L1, N, G	AMPS BREAK	ER kW	L1, N, G	AMPS 12.0	BREAKER 20	kW 1.46
○ 208 - 240 1t 50/60 14	L1, L2/N, G	4.8 - 4.2 15	1.0	L1, N, G	7.3 – 7.1	15	1.5 – 1.7
••• 200 240 1 0000 14 ○⇒ 208 - 240 3 50/60 14	L1, L2, L3, G	4.8 - 4.2 15	1.0	L1, L2, L3, G	7.3 – 7.1	15	1.5 – 1.7
→ 380 - 415 3 50/60 14	L1, L2, L3, N, G	4.6 – 4.2 15	1.0	L1, L2, L3, N, G	7.2 – 7.1	15	1.6 – 1.7
○ NORTH AMERICA VOLTAGE CHOICE S GROUND FAULT OR R	ESIDUAL CURRENT PROTECTION I	DEVICE MUST ACCOMMODATE A	LEAKAGE CURRENT	DF 20mA 🌨 INTERNATIONAL VOLT			-
WEIGHT	PAN CAPACITY		S	TANDARD MODEL	WITH	COMBISMOK	
NET 625 lbs est 283 kg	FULL–SIZE: GN 1/1:	20" x 12" x 2-1/2" 530 x 325 x 65mm		Eleven (11) Eleven (11)		Ten (10) Ten (10)	
SHIP 695 lbs* 315 kg*	**HALF-SIZE SHEET:	18" x 13" x 1"		Eleven (11)		Eleven (1	
SHIP DIMENSIONS	PRODUCT CAPACITY						
(L x W x H) 56" x 45" x 65"* (1422mm x 1143mm x 1651mm)*		T MAXIMUM MAXIMUM			120 lb (54 kg) quarts (95 liters))	
*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FA			**ON \	75 VIRE SHELVES ONLY. ADDITIONA		,	AXIMUM CAPACITY

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

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

	assic™.		A= UNTREATED W	ATER	LC.	10-1 GAS BOILER	
			A= UNTREATED W B= TREATED WATI C= ELECTRICAL D= GAS E= WATER DRAIN	ER	←→ 6-11/16' ←→ 4-1/4" (" (168mm) 108mm)	
35-11/16" (906mm)	41-7/16" (1053mm)		3-5/16" ((ttom	et al. (1538mm) - et al. (1538mm) - et al. (1538mm)
			DIMENSION	S: H x W x D			
۰. س، ۲ <i>۲</i> ۲۲	[IP X5	OASTEC MAN	EXTERIOR W	11/16" x 35-11/16" x 41- ITH RECESSED DOOR 11/16" x 40-11/16" x 41-7	:	, ,	
LISTED COUNTS AND		La	INTERIOR:		,		
WATER REQUIREMENTS			i	31-1/2" x 16-1/4" x 28-1 ALITY STANDARDS	,	411mm x 712mm)	
ONE (1) TREATED WATER INLET: 3/4" NPT* ONE (1) UNTREATED WATER INLET: 3/4" NPT* LINE PRESSURE: 30 psi minimum dynamic and 90 p WATER DRAIN: 1-1/2" (40mm) CONNECTION WITH A VI MATERIALS MUST WITHSTAND TEMPERATURES UP TO 200° CLEARANCE REQUIREMENTS	one 3/4 si maximum static (200 RTICAL VENT TO EXTEND ABOV	to 600 kPa)	required, a m requirements Non-compliar equipment ar warranty. Alto	eans of "water treatmo with the published wance with these minimu nd/or components and	ent" provided ater quality sta m standards v void the origin using OptiPu	ehensively tested and i that would meet compli andards shown below. will potentially damage nal equipment manufac re [®] [www.optipurewate	iance this cturer's
LEFT: 0" (0mm)	18" (457mm) кесоми	MENDED SERVICE ACCESS		Contamina	nt Inlet W	ater Requirements	
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURFACES	2" (51mm) door swi COMBUSTIBLE SURFAC			Free Chlori		an 0.1 ppm (mg/L)	
TOP: 20" (508mm) FOR AIR MOVEMENT				Hardne Chlori		pm an 30 ppm (mg/L)	
BACK: 4" (102mm)	BOTTOM: 5-1/8" (FOR LEGS, AIR INTAKE				pH 7.0 to 8		
4-5/16" (109mm) OPTIONAL PLUMBING KIT	FOR LEGS, AIR INTARE		_	Sili		an 12 ppm (mg/L)	
	Hood installation is rea	quired.	. Ic	tal Dissolved Solids (to	ds) 50-125	ppm	
Water supply shut-off valve and back-flow pre-		by local code.					
GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFI	ED ON ORDER)	HOOK-UP: 3/-	4" NPT				
RATED THERMAL LOAD			τ INI Ι	CONNECTED PR	ESSURE		
	RNATIONAL		NORTH AI			INTERNATIONAL	
· · · · ·	0, G25, G31 iting Value (LHV)	Natural Minimum: 5.5" W		Propane Minimum: 9" W.C. dy	Inamic	G20 20mbar G25 20mbar	
70,000 Btu / hr	18.5 kW	Maximum: 14"		Maximum: 14" W.C.		G31 30mbar	
ELECTRICAL - CTC10-10G (DEDICATED CIRCUIT F	EQUIRED)	-			· · · · ·	•	
	Z AWG		CONNECTION		AMPS		kW
~~~~	60 14		I, G - no cord, r		7	20	.84
<ul> <li>208 - 240</li> <li>3</li> <li>50</li> </ul>	/60 14	L1, L2,	L3, G - no cord	, no plug	4.8 - 4.	2 15	1.0
● <u>380 - 415</u> 3 50	/60 14	L1, L2, L	.3, N, G - no coi	rd, no plug	4.6 – 4.	2 15	1.0
>> NORTH AMERICA VOLTAGE CHOICE	JAL CURRENT PROTECTION DEVI	CE MUST ACCOMMODATE A	LEAKAGE CURRENT O	F 20mA 🌨 INTERNATIONAL V	OLTAGE CHOICE		,
WEIGHT SHIP DIMENSION			0011 4011 - 0.4/01	The second se			
NET         625 lbs est         283 kg         (L x W x H) 56"           SHIP         695 lbs*         315 kg*         (1422 x 1143 x)	: 1651mm)*	FULL-SIZE: GN 1/1:	20" x 12" x 2-1/2' 530 x 325 x 65mr	· · /		FMAXIMUM: 120 lb (54 AXIMUM: 75 quarts (95	

18" x 13" x 1"

Eleven (11)

**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES

REQUIRED FOR MAXIMUM CAPACITY

**HALF-SIZE SHEET:

*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR

EXPORT WEIGHT AND DIMENSIONS.

43-3/4" (1111mm) (43-3/4" (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm) (1111mm)		46-3/16" (1173mm) 46-3/16" (1173mm) 46-3/16" (783mm) - 30-13/16" (783mm) 1-11/16" (42mm)		(D) 3-	WATER AL RAIN			LECTI [6-11/16" (168 4-1/4" (108mi 	(1983) 13 2/1 6, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2, (19)2
								47-7/1	6" (1205mm) ———>
energy				DIMENS		x W x D			
ENERGY STAR				EXTERIO		16" x 43-3/4" x 4	46-3/16"	(961mm ×	1111mm x 1173mm)
				EXTERIO	R WITH I	RECESSED DO	OR:		,
	le f	IP X5		INTERIOF		16" x 48-3/4" x 4	46-3/16"	(961mm x	1238mm x 1173mm)
COOKING APPLIANCE ANSI/NSF 4				INTERIOR		1/4" x 24-1/4" x	32-3/4" (	590mm x 6	16mm x 832mm)
WATER REQUIREMENTS				WATER	QUALIT	Y STANDAR	DS		
ONE (1) UNTREATED WATER IN LINE PRESSURE: 30 psi minimu WATER DRAIN: 1-1/2" (40mm) co MATERIALS MUST WITHSTAND TEMPER CLEARANCE REQUIREMEN	m dynamic and 90 p DNNECTION WITH A VE RATURES UP TO 200°F	RTICAL VENT TO EXTEND ABOVE THE		requireme Non-com equipmer warranty.	ents with pliance v nt and/or Alto-Sha	the published with these mini components a	l water o imum sta and void nds usin	uality star andards w the origin	hat would meet compliance ndards shown below. ill potentially damage this al equipment manufacturer's [®] [www.optipurewater.com]
LEFT: 0" (0mm)	115	18" (457mm) RECOMMENDE			to prope	ny treat your v	valer.		
		2" (51mm) DOOR SWING O		1		Contam			ater Requirements
RIGHT: 0" (0mm) NON-COM	BUSTIBLE SURFACES	COMBUSTIBLE SURFACES		Free Chlorine Less than 0.1 ppm (mg/L) Hardness 30-70 ppm					
<b>TOP:</b> 20" (508mm) FOR A	IR MOVEMENT						loride		n 30 ppm (mg/L)
<b>BACK:</b> 4" (102mm)		BOTTOM: 5-1/8" (130n	nm)				pН	7.0 to 8.	
4-5/16" (109mm) o		FOR LEGS, AIR INTAKE		-			Silica	Less tha	n 12 ppm (mg/L)
• Oven must be installed level			d	-	Total D	Dissolved Solid	s (tds)	50-125 p	ppm
Water supply shut-off valve a		1							
ELECTRICAL - CTP7-20E (NO C							WITH	COMBISM	OKER [®] OPTION
		ECO STANDARD	**PRC	power™ optic	N	ECC	) STANDARD		**PROpower™ OPTION
		MPS kW BREAKER			BREAKER		kW	BREAKER	AMPS kW BREAKER
		-91.3 16.5 - 21.9 80 - 100	92.1 - 106.3		100 - 110		7 – 22.6		94.6 - 109.1 19.7 - 26.2 100 - 110
		- 52.7 16.5 - 21.9 50 - 60 - 30.4 18.7 - 21.9 32	58.7 - 67.7 41.7 - 45.4		60 – 70 63	48.2 - 55.6 1 30.6 - 33.3 19		50 - 60 32 - 63	61.2 - 70.6         19.7 - 26.2         70           44.4 - 48.3         22 - 26.2         63
		- 22.4 15.7 - 18.7 25	26.5 - 28.8		30 – 35	21.9 - 23.8 16			27.3 - 30.0 18.8 - 22.3 30 - 35
	ERVICE CHARGE APPLI		**NO-COST OPT						
WEIGHT	PA	N CAPACITY			STANDA	ARD MODEL		WITH (	COMBISMOKER [®] OPTION
NET 680 lbs est	308 kg		" x 12" x 2-1/2" ) x 325 x 65mm			een (16) een (16)			Fifteen (15) Fifteen (15)
	220 kc*		) x 525 x 65mm ) x 530 x 65mm			ght (8)			Seven (7)
SHIP 727 lbs*	·		18" x 26" x 1"			ght (8)			Eight (8)
SHIP DIMENSIONS		ODUCT CAPACITY							
(L x W x H) 56" x 49" x 6				168 lb (76 kg)					
(1422mm x 1245mm x 165 *DOMESTIC GROUND SHIPPING INFORM	· ·	VOLUME MAXIM	UM			1	105 quar	ts (133 liter	S)
FACTORY FOR EXPORT WEIGHT AND D MN-35947 • Rev 10 • 0	IMENSIONS.								

ACTORY FOR EXPORT WEIGHT AND DIMENSIONS. MN-35947 • Rev 10 • 06/16 • COMBITHERM CT PROFORMANCE AND CT CLASSIC SERIES • INSTALLATION MANUAL • 17





			46-3/16" (1173m		A= UNTREATED WATER B= TREATED WATER C= ELECTRICAL D= WATER DRAIN E= OPTIONAL ELEC (E) 2" (A) 2-5/16" ( (D) 3-3/16" (E) (B) 4-7/8" (12)	R TRICAL	$(11-3)4^{\circ}$ (298mm) $\leftarrow$ $\rightarrow$ $(114mm) \leftarrow$	6-11/16° (16 ←) 6-11/16° (16 (-1000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8mm) im)
	NSI/NSF 4	€ ER	[ IP	X5	EXTERIOR WITH 37-13/ INTERIOR:	/16" x 43-3/4" x 46	<u>)R:</u> -3/16	" (961mm x 1238ı	nm x 1173mm)
WATER REQU	IREMENTS				WATER QUALI	TY STANDARD	S	<b>x</b>	
ONE (1) TREATE ONE (1) UNTREA LINE PRESSURE WATER DRAIN: MATERIALS MUST W	D WATER INLE TED WATER IN : 30 psi minimu 1-1/2" (40mm) cc ITHSTAND TEMPER	LET: 3/4" NPT* m dynamic and 90 ps DNNECTION WITH A VERT RATURES UP TO 200°F	i maximum stat	* Can manifold off of one 3/4" line	to verify that the required, a mean requirements with Non-compliance equipment and/o warranty. Alto-Sh	incoming water s as of "water treat h the published with these minim r components an naam recommend	supply ment" vater num s nd voi ds usi	y is comprehens provided that w quality standard standards will po d the original eq	aser of this equipment ively tested and if ould meet compliance is shown below. tentially damage this uipment manufacturer's ww.optipurewater.com]
CLEARANCE I		ITS	1		products to prope	erly treat your wa	ater.		
LEFT: 0" (	0mm)		18" (457mm	) RECOMMENDED SERVICE ACC	ESS	Contami	nant	Inlet Water I	Requirements
<b>RIGHT:</b> 0" (	Отт) иои-сом	BUSTIBLE SURFACES		OOR SWING OR		Free Chlo	orine	Less than 0.1	ppm (mg/L)
	,		COMBUSTIBLE	JURFAGES		Hardı	ness	30-70 ppm	
	(508mm) FOR A	IK MOVEMENT				Chlo	oride	Less than 30	ppm (mg/L)
	102mm)			5-1/8" (130mm)			pН	7.0 to 8.5	
		OPTIONAL PLUMBING KIT	FOR LEGS, AIF			S	Silica	Less than 12	ppm (mg/L)
INSTALLATION				a ta sa sa ta t	Total I	Dissolved Solids	(tds)	50-125 ppm	
Oven must be     Water supply s				n is required. quired by local code.					
ELECTRICAL (N	O CORD, NO PLU	G, DEDICATED CIRCUIT	REQUIRED)						
MODEL	VOLTAG	E PH	HZ	AMPS	kW	BREAKER		AWG	CONNECTION
CTC7-20E	208 – 24	0 3	50/60	45.7 – 52.7	16.5 – 21.9	50-60		4 – 3	L1, L2, L3, G
	380 - 41		50/60	28 - 30.4	18.7 – 21.9	32		6 – 4	L1, L2, L3, N, G
	440 - 48		50/60	20.6 – 22.4	15.7 – 18.7	25		8	L1, L2, L3, G
		*ELECTRI	CAL SERVICE CH	IARGE APPLIES					
WEIGHT		SHIP DIMENSIO	NS	PAN CAPACITY					
NET 680 lbs	est 308 kg	(L x W x H) 56" x	49" x 65"*	FULL-SIZE:	20" x 12" x 2-1/2"	Sixteen (16)		PRODUCT MAX	MUM: 168 lb (76 kg)
SHIP 727 lbs*	330 kg*	(1422 x 1245 x	1651mm)*	GN 1/1:	530 x 325 x 65mm	Sixteen (16)	VO	LUME MAXIMUN	I: 105 quarts (133 liters)
*DOMESTIC GROUNE	SHIPPING INFORM	ATION. CONTACT FACTO	RY FOR EXPORT	GN 2/1:		Eight (8)	**0	N WIRE SHELVES ON	LY. ADDITIONAL WIRE SHELVES
WEIGHT AND DUCEN									

18" x 26" x 1"

Eight (8)

REQUIRED FOR MAXIMUM CAPACITY

**FULL-SIZE SHEET:

WEIGHT AND DIMENSIONS.

ALTC	-SHA	<b>AM</b> 。 <u>CT</u>	P <u>ROforma</u>	nce™	A= UNTREATED V	<b>↔</b>		GAS B	-20G	
	43-3/4* (1		46-3/16" (117		B= TREATED WAT C= ELECTRICAL D= GAS E= WATER DRAIN 2-4 3-3 4-3	ER A,I	• 1 • ••			
energy	3				DIMENSIO EXTERIOR:	—————————————————————————————————————	47	7-7/16" (1205mm) —	<u>→</u>	
ENERGY STA	AR					37-13/16" x 43-3/4" x 46-3	1	mm x 1111mm x 117	'3mm)	
c UL us		נו <b>ב</b> ר	Т ІРУ			NITH RECESSED DOOR: 37-13/16" x 48-3/4" x 46-3		mm x 1238mm x 11	73mm)	
LISTED COOKING APPLIANCE 584m	ANSI/NSF 4		IL '' '	la Ca	INTERIOR:	23-1/4" x 24-1/4" x 32-3	8/4" (590n	nm x 616mm x 832n	um)	
WATER RE	QUIREMENTS				WATER Q	JALITY STANDARDS	1000II			
ONE (1) UNT LINE PRESS WATER DRA MATERIALS MU	ATED WATER INLE REATED WATER IN URE: 30 psi minimu IN: 1-1/2" (40mm) c IST WITHSTAND TEMPE CE REQUIREME	NLET: 3/4" NPT* um dynamic and 90 CONNECTION WITH A ERATURES UP TO 200	on psi maximum static ( VERTICAL VENT TO EXTEND	in manifold off of e 3/4" line 200 to 600 kPa) ABOVE THE EXHAUST VENT.	required, a requirement Non-compli- equipment a warranty. Al	t the incoming water sup means of "water treatme is with the published wa ance with these minimur and/or components and to-Shaam recommends properly treat your wate	ent" provi ter qualit m standa void the using Op	ided that would me ty standards shown ards will potentially original equipment	et compliance below. damage this manufacturer's	
LEFT:	0" (0mm)		18" (457mm) R	ECOMMENDED SERVICE ACCESS		Contamina		et Water Require	ments	
RIGHT:	0" (0mm) NON-COM	IBUSTIBLE SURFACE	S 2" (51mm) DOOL			Free Chlori		ss than 0.1 ppm (m		
TOP:	20" (508mm) FOR	AIR MOVEMENT			-	Hardne		-70 ppm		
BACK	4" (102mm) 4-5/16" (109mm)	OPTIONAL PLUMBING KI	BOTTOM: 5-1 FOR LEGS, AIR IN			Chlorid F Sili	oH 7.0	ss than 30 ppm (mg ) to 8.5 ss than 12 ppm (mg		
	ION REQUIREA				] .	Fotal Dissolved Solids (td		-125 ppm	, _ ,	
	t be installed leve		<ul> <li>Hood installation i eventer when requ</li> </ul>	•						
	IREMENTS (GAS T				1					
	·		· · · ·	HOOK-UP: 3/	4" NPT					
NOR	RATED T TH AMERICA	HERMAL LOAD	RNATIONAL		NORTH AME	CONNECTED PRESS	URE	INTERNA	TIONAL	
Natura	al Gas/Propane ating Value (HHV)	G20	, G25, G31 ng Value (LHV)	Natural Gas Minimum: 5.5" W.C.		Propane Minimum: 9" W.C. dynam	io.	G20 G25	20mbar 20mbar	
	,000 Btu / hr		ng value (LHV) 6.5 kW	Maximum: 5.5" W.C. Maximum: 14" W.C		Maximum: 14" W.C. stati	ic	G31	30mbar	
Î		EDICATED CIRCUIT RI						SMOKER [®] OPTION		
	TAGE PH	HZ AWG	CONNECTION no cord, no plug	AMPS BREA		CONNECTION no cord, no plug	AMPS	i.	kW	
	120 1 - 240 1 ⁺ 5	60 14 50/60 14	L1, N, G L1, L2/N, G	6.8 20 4.8 - 4.2 15		L1, N, G L1, L2/N, G	12.0 7.3 – 7		1.46	
•≎ ≎→ 208		50/60 14	L1, L2, L3, G	4.8 - 4.2 15		L1, L2/N, G	7.3 - 7		1.5 - 1.7	
•••		50/60 14	L1, L2, L3, G	4.6 - 4.2 15		L1, L2, L3, N, G	7.2 – 7		1.6 – 1.7	
				1		DF 20mA • INTERNATIONAL VOLT				
WEIGHT			AN CAPACITY			TANDARD MODEL	1	VITH COMBISMOK	- 1	
NET	660 lbs est	300 kg	FULL-SIZE:			Sixteen (16)		Fifteen (1	,	
			GN 1/1: GN 2/1:			Sixteen (16) Eight (8)		•	Fifteen (15) Seven (7)	
SHIP	680 lbs*	308 kg*	**FULL-SIZE SHEET:	18" x 26" x 1"	<b>5</b> ( )					
SHIP DIME			RODUCT CAPACI				400 " (= -			
	. x W x H) 56" x 48" x 5 2mm x 1219mm x 129			CT MAXIMUM			168 lb (76	6,		

VOLUME MAXIMUM

105 quarts (133 liters)

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

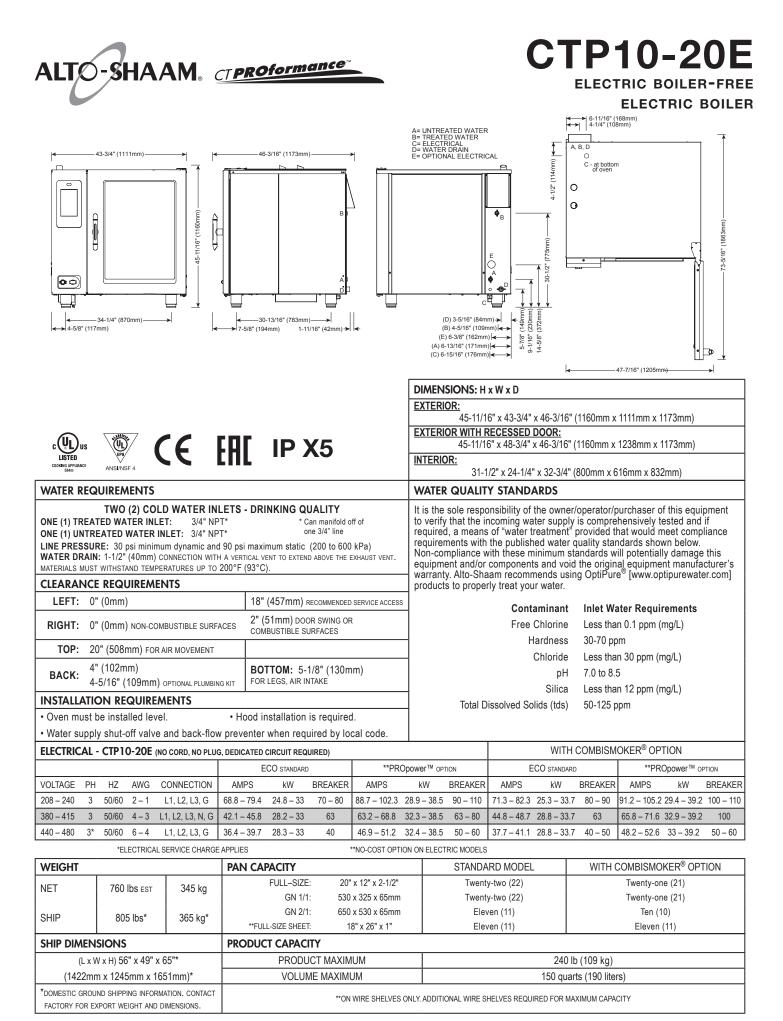
(1422mm x 1219mm x 1295mm)*

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

	© <u>CT <b>Classic</b></u> ™			С		7-2	
43-3/4" (1111mm)	46-3/16" (1173		3- 4-:				
a. anget			DIMENSION		47-7/16"	(1205mm)>	
ENERGY STAR			EXTERIOR:	37-13/16" x 43-3/4" x 46-3/1	6" (061mm v 11	11mm v 1172mm)	
	<b>FDF</b>		EXTERIOR V	VITH RECESSED DOOR:		,	
			3 INTERIOR:	7-13/16" x 48-3/4" x 46-3/1	6" (961mm x 12	38mm x 1173mm)	
584m ANSI/NSF 4				23-1/4" x 24-1/4" x 32-3/4	" (590mm x 616	omm x 832mm)	
WATER REQUIREMENTS	ER INLETS - DRINKING QU			responsibility of the own			
ONE (1) UNTREATED WATER INLET: 3 LINE PRESSURE: 30 psi minimum dynan WATER DRAIN: 1-1/2" (40mm) CONNECTIC MATERIALS MUST WITHSTAND TEMPERATURES CLEARANCE REQUIREMENTS	3/4" NPT* One mic and 90 psi maximum static (2 ON WITH A VERTICAL VENT TO EXTEND 5 UP TO 200°F (93°C).	ABOVE THE EXHAUST VENT.	required, a r requirements Non-complia equipment a warranty. Alt	the incoming water supp neans of "water treatmen s with the published wate ince with these minimum nd/or components and vo o-Shaam recommends us properly treat your water.	t" provided tha r quality stand standards will bid the original	t would meet comp ards shown below. potentially damage equipment manufa	liance this cturer's
LEFT: 0" (0mm)	. ,	COMMENDED SERVICE ACCESS		Contaminant	Inlet Wate	er Requirements	
RIGHT: 0" (0mm) NON-COMBUSTIBLE	E SURFACES 2" (51mm) DOOF COMBUSTIBLE SUF			Free Chlorine		0.1 ppm (mg/L)	
TOP: 20" (508mm) FOR AIR MOVE	MENT		1	Hardness Chloride		30 ppm (mg/L)	
BACK: 4" (102mm)	BOTTOM: 5-1/		1	pH		50 ppm (mg/L)	
4-5/16" (109mm) OPTIONAL I	PLUMBING KIT FOR LEGS, AIR INT	AKE	-	Silica		12 ppm (mg/L)	
• Oven must be installed level.	Hood installation is	required	T	otal Dissolved Solids (tds)	) 50-125 ppr	n	
Water supply shut-off valve and bac		•					
GAS REQUIREMENTS (GAS TYPE MUST		···· <b>,</b> ····					
		HOOK-UP: 3/4	4" NPT				
RATED THERM				CONNECTED PRES	SURE		
NORTH AMERICA	G20, G25, G31	Natural	NORTH A	1		INTERNATIONAL G20 20mbar	
Natural Gas/Propane Gross Heating Value (HHV)	Net Heating Value (LHV)	Minimum: 5.5" V		Propane Minimum: 9" W.C. dyna	amic	G20 Zumbar G25 Z0mbar	
85,000 Btu / hr	22.5 kW	Maximum: 14"		Maximum: 14" W.C. st		G31 30mbar	
ELECTRICAL - CTC7-20G (DEDICATED	) CIRCUIT REQUIRED)				I	1	
VOLTAGE PH			CONNECTIO	N	AMPS	BREAKER	kW
∞ € 120 1	60 14	L1, I	N, G - no cord,	no plug	7.0	20	.84
≈ 208 – 240 3	50/60 14	L1, L2	, L3, G - no cor	d, no plug	4.8 – 4.2	15	1.0
<ul> <li>→ 380 - 415 3</li> </ul>	50/60 14		L3, N, G - no co		4.6 – 4.2	15	1.0
	· · · · · · · · · · · · · · · · · · ·					15	1.0
			LEAKAGE CURRENT	UF ZUMA INTERNATIONAL VOLT	AGE CHOICE		
	DIMENSIONS         PA           W x H) 56" x 48" x 51"*	FULL-SIZE:	20" x 12" x 2-1/2	2" Sixteen (16)			
	22 x 1219 x 1295mm)*	GN 1/1:	530 x 325 x 65m	. ,		IAXIMUM: 168 lb (7	•

SHIP 680 lbs* 308 kg* (1422 x 1219 x 1295mm)* GN 1/1: 530 x 325 x 65mm Sixteen (16) VOLUME MAXIMUM: 105 quarts (133 liters) GN 2/1: 650 x 530 x 65mm Eight (8) **ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES *DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR **FULL-SIZE SHEET: REQUIRED FOR MAXIMUM CAPACITY 18" x 26" x 1" Eight (8) EXPORT WEIGHT AND DIMENSIONS.

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	1111mm) 		— 46-3/16" (1173n			A= UNTREATED WATE B= TREATED WATE C= ELECITRICAL D= WATER DRAIN E= OPTIONAL ELEC (D) 3-5/16" (B) 4-5/16" (E) 6-3/8" (10 (A) 6-13/16" (17 (C) 6-15/16" (17		(uuu¥t1) "2/1-00 → (uuu¥	8mm)
COUNTRY APTILIARE	EFN NSVNSF 4	CE EA	[ IP	X5		EXTERIOR WITH 45-11, INTERIOR:	/16" x 43-3/4" x 46- I RECESSED DOO /16" x 48-3/4" x 46-3	3/16" (1160mm x 111 <u>R:</u> 3/16" (1160mm x 123 -3/4" (800mm x 616r	38mm x 1173mm)
WATER REQU	REMENTS					WATER QUAL	ITY STANDARD	S	,
ONE (1) TREATE ONE (1) UNTREA LINE PRESSURE WATER DRAIN: 1	D WATER INLE TED WATER IN : 30 psi minimu I-1/2" (40mm) c		i maximum stat TICAL VENT TO EXT	* Can manifold off of one 3/4" line ic (200 to 600 kPa)	VENT.	to verify that the required, a mean requirements with Non-compliance equipment and/or	incoming water s ns of "water treatn th the published w with these minim or components and	upply is comprehen nent" provided that rater quality standa um standards will p d void the original e	chaser of this equipment nsively tested and if would meet compliance rds shown below. potentially damage this aquipment manufacturer's (www.optipurewater.com)
CLEARANCE F		NTS					erly treat your wa		[]
LEFT: 0" (0	)mm)		18" (457mm	) RECOMMENDED SERVICE	ACCESS		Contamin	ant Inlet Wate	r Requirements
<b>RIGHT:</b> 0" (0	0mm) NON-COM	IBUSTIBLE SURFACES	2" (51mm) D COMBUSTIBLE	OOR SWING OR SURFACES			Free Chlo Hardn		.1 ppm (mg/L)
<b>TOP:</b> 20"	(508mm) FOR	AIR MOVEMENT					Chlo		0 ppm (ma/L)
	102mm) 16" (109mm)	OPTIONAL PLUMBING KIT	BOTTOM: FOR LEGS, AIF	5-1/8" (130mm) R INTAKE				pH 7.0 to 8.5	2 ppm (mg/L)
INSTALLATION		<b>MENTS</b>				Total	Dissolved Solids (		
Oven must be	installed leve	I. • H	ood installatio	on is required.		iotal		(20) 00 120 ppm	
Water supply s	shut-off valve	and back-flow prev	enter when re	equired by local cod	de.				
ELECTRICAL (NO	CORD, NO PLUG	, DEDICATED CIRCUIT R	EQUIRED)		ı				
MODEL	VOLTA	GE PH	HZ	AMPS		kW	BREAKER	AWG	CONNECTION
CTC10-20E	208 – 2		50/60		.4	24.8 - 33.0	70-80	2 – 1	L1, L2, L3, G
01010-202	380 – 4	15 3	50/60			28.2 - 33.0	63	4 – 3	L1, L2, L3, N, G
	440 – 4	80 3*	50/60	36.4 – 39	.7	28.3 - 33.0	40	6 – 4	L1, L2, L3, G
	*ELECTRICAL	SERVICE CHARGE APPL	ES						· · · · ·
WEIGHT		SHIP DIMENSIO	NS	PAN CAPACITY					
NET 760 lbs	est 345 kg	(L x W x H) 56" x		FULL-SI	ZE:	20" x 12" x 2-1/2"	Twenty-two (22)		XIMUM: 240 lb (109 kg)
SHIP 805 lbs*	0	(1422 x 1245 x		GN		530 x 325 x 65mm	Twenty-two (22)		UM: 150 quarts (190 liters)
	-	,	,	GN		650 x 530 x 65mm	Eleven (11)		ONLY. ADDITIONAL WIRE SHELVES
DOMILOTIC GROUND	OMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR					4.011 0.011 4.11		ON WINE SHELVES	UNLI ADDITIONAL WIRE SHELVES

18" x 26" x 1"

Eleven (11)

REQUIRED FOR MAXIMUM CAPACITY

**FULL-SIZE SHEET:

EXPORT WEIGHT AND DIMENSIONS.

	T PROformal	nce ^m			_		10-2 gas boi	
43-34" (1111mm)	46-3/16" (117)an		B= T C= E D= 0	UNTREATED WATER TREATED WATER ELECTRICAL 3AS WATER DRAIN		i € 11/1° (188mm) 4-1/4° (188mm) D. E O C - at bottom of oven		
Inergy				DIMENSION		47-7/16* (1205	imm) ————>	
ENERGY STAR			E	XTERIOR:				
			Ļ		5-11/16" x 43-3/4" x 46-3/		1111mm x 1173r	nm)
	[f][ IP X		Lew NOx High Efficiency		5-11/16" x 48-3/4" x 46-3/		1238mm x 1173r	nm)
LISTED COOKING APPLIANCE 564m ANSI/NSF 4		La	I	NTERIOR:	24 4/08 04 4/48 20 2	///// /000	10	
WATER REQUIREMENTS					31-1/2" x 24-1/4" x 32-3	8/4" (800mm x 6	516mm x 832mm	)
TWO (2) COLD WATER IN					responsibility of the ow			
LINE PRESSURE: 30 psi minimum dynamic ar WATER DRAIN: 1-1/2" (40mm) CONNECTION WI MATERIALS MUST WITHSTAND TEMPERATURES UP TO CLEARANCE REQUIREMENTS LEFT: 0" (0mm)	H A VERTICAL VENT TO EXTEND 200°F (93°C).		е р	equipment a varranty. Alt	nce with these minimur nd/or components and o-Shaam recommends properly treat your wate	void the origin using OptiPur	al equipment m	anufacturer's
RIGHT: 0" (0mm) NON-COMBUSTIBLE SUR	2" (51mm) DOOF	SWING OR	ICCESS		<b>Contamina</b> Free Chlori		ater Requireme In 0.1 ppm (mg/L	
	COMBUSTIBLE SUF	RFACES			Hardne			,
TOP: 20" (508mm) FOR AIR MOVEMENT 4" (102mm)		(100 )			Chlori	de Less tha	n 30 ppm (mg/L)	
BACK: 4-5/16" (109mm) OPTIONAL PLUMB	BOTTOM: 5-1/ FOR LEGS, AIR INT					oH 7.0 to 8.		
INSTALLATION REQUIREMENTS	I			т	الک otal Dissolved Solids (td		n 12 ppm (mg/L)	
Oven must be installed level.	Hood installation is	required.				13) JU-123 p	,pm	
Water supply shut-off valve and back-flo		red by local code	ə.					
GAS REQUIREMENTS (GAS TYPE MUST BE SE	ECIFIED ON ORDER)							
RATED THERMAL LOAD	ſ	HOOK-U	JP: 3/4" NI		CONNECTED PRESS	JRE		
NORTH AMERICA I	NTERNATIONAL	•••		NORTH AME	RICA		INTERNATIO	
	G20, G25, G31 Heating Value (LHV)	Natura Minimum: 5.5"		mic	Propane Minimum: 9" W.C. dynam	ic		Imbar Imbar
133,000 Btu / hr	36.0 kW	Maximum: 14	" W.C. stat	tic	Maximum: 14" W.C. stati			Imbar
ELECTRICAL - CTP10-20G (DEDICATED CIR	,				WITH CONNECTION			
VOLTAGE         PH         HZ         AWG           ∞∞ <>>         120         1         60         14	no cora, no piug	AMPS I 6.8	BREAKER 20	. kW .84	no cord, no plug	AMPS 12.0	BREAKER 20	kW 1.46
○ 208 - 240 1 ⁺ 50/60 14	L1, N, G	4.8 - 4.2	15	.84	L1, N, G L1, L2/N, G	7.3 – 7.1	15	1.40
[∞] 208 – 240 3 50/60 14	L1, L2, L3, G	4.8 - 4.2	15	1.0	L1, L2, L3, G	7.3 – 7.1	15	1.5 – 1.7
••         200 - 240         3         50/60         14           ••         380 - 415         3         50/60         14	L1, L2, L3, N, G	4.6 - 4.2	15	1.0	L1, L2, L3, N, G	7.2 – 7.1	15	1.6 – 1.7
		DEVICE MUST ACCOMMO	DATE A LEAK	AGE CURRENT OF		TAGE CHOICE TELEC	CTRICAL SERVICE CHAR	GE APPLIES
WEIGHT	PAN CAPACITY			ST	ANDARD MODEL	WITH	COMBISMOKER	[®] OPTION
NET 760 lbs est 345 kg	FULL-SIZE:	20" x 12" x 2			Twenty-two (22)		Twenty-one (21	,
	GN 1/1: GN 2/1:	530 x 325 x 6 650 x 530 x 6			Twenty-two (22) Eleven (11)		Twenty-one (21 Ten (10)	)
			5511111				1611(10)	
SHIP         800 lbs*         363 kg*           SHIP DIMENSIONS	**FULL–SIZE SHEET: PRODUCT CAPACIT	18" x 26" x			Eleven (11)		Eleven (11)	

(L x W x H) 56" x 49" x 65"*	PRODUCT MAXIMUM	240 lb (109 kg)
(1422mm x 1245mm x 1651mm)*	VOLUME MAXIMUM	150 quarts (190 liters)
*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FA	ACTORY FOR EXPORT WEIGHT AND DIMENSIONS.	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY

ALTC	-SHAA	M. CTC	lassic™			СТ		<b>IО-</b> даѕ во		
	43-3/4" (1111mm)		46-3/16" (1173mm) 		A= UNTREATED WATE = TREATED WATER = ELECTRICAL = GAS = WATER DRAIN A 	6 (130hm) 6 (130hm) 6 (130hm) 6 (130hm) 6 (130hm) 6 (130hm) 6 (130hm) 6 (130hm) 6 (140m) 6 (140m) 7 (140m	C = 11/16" (168	//16° (1205mm)		73-5/16* (1883mm)
		€ EA	[ IP X5	CASTEC ISSue	EXTERIOR WI 45- INTERIOR:	S: H x W x D .11/16" x 43-3/4" x 46-3/16 TH RECESSED DOOR: 11/16" x 48-3/4" x 46-3/16 31-1/2" x 24-1/4" x 32-3/4	5" (1160mm x	1238mm x 117	3mm)	
WATER RE						ALITY STANDARDS		1011111 × 032111	11)	
ONE (1) UN LINE PRESS WATER DRA MATERIALS MU	EATED WATER INLE TREATED WATER IN SURE: 30 psi minimu AIN: 1-1/2" (40mm) cu	T: 3/4" NPT* ILET: 3/4" NPT* Im dynamic and 90 ps ONNECTION WITH A VER RATURES UP TO 200°F	one 3/4" i maximum static (200 t TICAL VENT TO EXTEND ABOV	nifold off of line to 600 kPa)	to verify that t required, a m requirements Non-complian equipment an warranty. Alto	esponsibility of the own he incoming water supp eans of "water treatmen with the published wate ce with these minimum d/or components and vo -Shaam recommends us operly treat your water.	ly is compre- t" provided th r quality stan standards wi pid the origina	hensively test nat would mee ndards shown ill potentially o al equipment	ed and if et complia below. damage ti manufact	ance his urer's
	0" (0mm)		18" (457mm) RECOMM	IENDED SERVICE ACCESS						
	. ,	BUSTIBLE SURFACES	2" (51mm) DOOR SWI COMBUSTIBLE SURFAC	NG OR		Contaminan Free Chlorine Hardness	e Less that	nter Requirer n 0.1 ppm (mg m		
TOP: BACK:	20" (508mm) FOR A 4" (102mm) 4-5/16" (109mm) o		BOTTOM: 5-1/8" ( FOR LEGS, AIR INTAKE	130mm)		Chloride	e Less that 7.0 to 8.5	n 30 ppm (mg/	,	
INSTALLA	TION REQUIREN	<b>NENTS</b>			То	tal Dissolved Solids (tds			-)	
Water sup			ood installation is rec enter when required				, · P			
UNU REQU	UNCINE 13 (GAS I	THE MUST BE SPECIFIE	J ON ORDER	HOOK-UP: 3/4	" NPT					
	RATED	THERMAL LOAD				CONNECTED PRES	SURE			
NOF	RTH AMERICA	INTER	RNATIONAL		NORTH /	MERICA		INTERN	ATIONAL	_
	al Gas/Propane		, G25, G31	Natural		Propane		G20	20mbar	
	eating Value (HHV) 1,000 Btu / hr		ng Value (LHV) 2.0 kW	Minimum: 5.5" V Maximum: 14"	,	Minimum: 9" W.C. dy Maximum: 14" W.C.		G25 G31	20mbar 30mbar	
		DEDICATED CIRCUIT RE		I	-		I			
	VOLTAGE	PH H2			CONNECTION		AMPS	BREA	KER	kW
~~~~	120	1 60		L1, N	N, G - no cord, n		7.0	20		.84
-⊛ ●�	208 – 240	3 50/6	60 14	L1, L2,	L3, G - no cord	, no plug	4.8 - 4.2	15	5	1.0
•\$	380 – 415	3 50/6			.3, N, G - no cor		4.6 - 4.2	15		1.0
	ICA VOLTAGE CHOICE	r	l l		EAKAGE CURRENT OF	20mA - INTERNATIONAL VOLT	AGE CHOICE			
WEIGHT		SHIP DIMENSIO	NS PAN (CAPACITY						

WLIG			SHIF DIMENSIONS	FAIN CAFACILL			
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	800 lbs*	363 kg*	(1422 x 1245 x 1651mm)*	GN 1/1:	530 x 325 x 65mm	Twenty-two (22)	VOLUME MAXIMUM: 150 quarts (190 liters)
*DOMES	TIC GROUND SHIF	PING INFORM	IATION. CONTACT FACTORY FOR	GN 2/1:	650 x 530 x 65mm	Eleven (11)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES
EXPORT	WEIGHT AND DIM	ENSIONS.		**FULL-SIZE SHEET:	18" x 26" x 1"	Eleven (11)	REQUIRED FOR MAXIMUM CAPACITY

ALTO-SHAA	M ₀ <i>CTP</i>						(_		20-1 TRIC BOILER ELECTRIC	R-FREE
	(Euuz102)+11-62 — 1" (24mm)		1m) → ← 42mm) → •		(D) 3-1. (B, E) 4-3/ (A) : (C) 7" DIMEN EXTERI	C C 16" (106mm) 5" (126mm) (178mm) (178mm) C ISIONS: H IOR: 79-1/4	S X M X D 9-3/16" (233mm) ← 1 11-13/16" (290mm) ← 1			-11/16" (168mm) -1/4" (108mm) - at bottom of oven - at bottom of oven - 39-11/16" (1008mm) 	
	E EI	¶[IP >	(5		INTERIO		" x 40-11/16"	x 42-1/4" (2	2012mm x	1033mm x 1072mm)	
WATER REQUIREMENTS					\A/ATE		16" x 16-1/4" Y STAND		(1535mm	x 411mm x 712mm)	
	: 3/4" NPT* .ET: 3/4" NPT* in dynamic and 90 NNECTION WITH A ATURES UP TO 200	on) psi maximum static (VERTICAL VENT TO EXTEND	n manifold o e 3/4" line 200 to 600	kPa)	It is the to verify require require Non-co equipm warrant	e sole resp y that the i d, a means ments with mpliance v ent and/or ty. Alto-Sha	onsibility of ncoming wa s of "water t the publish with these m component	the ownern ter supply reatment" led water of hinimum st is and void nends usir	is compre provided f quality sta andards v I the origin	purchaser of this equ shensively tested and that would meet com ndards shown below vill potentially damag al equipment manuf re [®] [www.optipurewa	d'if pliance le this acturer's
LEFT: 0" (0mm)		18" (457mm) R					Cont	aminant	Inlet W	ater Requirements	
RIGHT: 0" (0mm) NON-COMB	USTIBLE SURFACE	COMBUSTIBLE SU		ł				Chlorine		an 0.1 ppm (mg/L)	
TOP: 20" (508mm) FOR AI	R MOVEMENT							lardness Chloride	30-70 p Less tha	pm an 30 ppm (mg/L)	
BACK: 4" (102mm) 4-5/16" (109mm) or		BOTTOM: 5-1		im)				pН	7.0 to 8.		
					-	Tatal		Silica		an 12 ppm (mg/L)	
Oven must be installed level.		Hood installation i	s required	l.	1	iotai L	issolved So	nus (tas)	50-125	hhui	
Water supply shut-off valve a			,	cal code.							
ELECTRICAL - CTP20-10E (NO	CORD, NO PLUG, DE		IRED)							IOKER [®] OPTION	
		ECO STANDARD			Dpower™ op			CO STANDARD		**PROpower™ o	
		AMPS kW 8.8 - 90.9 28.4 - 37.8	BREAKER 80 – 90	AMPS 98.8 – 114	kW	BREAKER 100 – 125	AMPS 81.3 – 93.8		BREAKER	AMPS kW 101.3 – 116.9 33.7 – 44.	BREAKER
208 - 240 3 50/60 I - 1/0 L 380 - 415 3 50/60 4 - 3 L1		3.2 - 52.5 32.3 - 37.8	63	90.0 - 114 60.5 - 65.8			50.9 - 55.4		90 – 100 63	63.1 – 68.7 37.7 – 44.	
· · · · · · · · · · · · · · · · · · ·		.7 - 45.5 32.4 - 37.8	50		37.2 - 44.2		43 - 46.9			53.6 - 58.5 37.8 - 44.	
*ELECTRICAL SE	ERVICE CHARGE APP	PLIES		**NO-COST OPT	ION ON ELEC	TRIC MODELS	S				
WEIGHT	SHIP DIMENS	IONS	PAN CA	PACITY							

WEIG	пі		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)
*DOMES	TIC GROUND SHIF	PING INFORM	ATION. CONTACT FACTORY FOR EXPORT	**HALF-SIZE SHEET:	18" x 13" x 1"	Twenty (20)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES
WEIGH	AND DIMENSION	S.					REQUIRED FOR MAXIMUM CAPACITY



SHIP

1052 lbs*

EXPORT WEIGHT AND DIMENSIONS.

477 kg*

*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR

(1422 x 1143 x 2210mm)*



35-11/1	6" (906mm)	→	— 42-1/4" (1072r	mm) ———>				
	19-1/8" (486mm) 6" (858mm)	(umm2102) "P/1-62			(D) 3-1/4" (81mm (B, E) 4-3/16" (106m (A) 5" (126m) (C) 7" (178mm)	↓ ↓ ↓ ↓ ↓ ↓ </td <td>A= UNTF B= TREA C= ELEC D= WATE</td> <td>08mm)</td>	A= UNTF B= TREA C= ELEC D= WATE	08mm)
COUNTRA APPLIANCE	KEFY KEFY NSLIVISF 4	E EA	[IP	X5	EXTERIOR WIT 79-	.1/4" x 35-11/16" x 42- TH RECESSED DOOI 1/4" x 40-11/16" x 42-	<u>R:</u> 1/4" (2012mm x 1033	3mm x 1072mm)
WATER REQU						-7/16" x 16-1/4" x 28-		Imm x 712mm)
ONE (1) TREATE ONE (1) UNTREA LINE PRESSURE WATER DRAIN:	TWO (2) COLE D WATER INLE TED WATER IN : 30 psi minimu I-1/2" (40mm) co	LET: 3/4" NPT* m dynamic and 90 psi	i maximum stati FICAL VENT TO EXT	* Can manifold off of one 3/4" line	It is the sole re to verify that th required, a me requirements v Non-complianc equipment and	esponsibility of the o ne incoming water su ans of "water treatm vith the published w with these minimu l/or components and	wner/operator/purc upply is comprehen lent" provided that ater quality standar um standards will p d void the original e	would meet compliance
CLEARANCE F	REQUIREMEN	ITS				operly treat your wat		
LEFT: 0" ()mm)		18" (457mm) RECOMMENDED SERVICE ACC	CESS	Contamin	ant Inlet Water	Requirements
RIGHT: 0" (0)mm) NON-COM	BUSTIBLE SURFACES	2" (51mm) D COMBUSTIBLE	OOR SWING OR SURFACES		Free Chlor	rine Less than 0.	1 ppm (mg/L)
TOP: 20"	(508mm) FOR A	IR MOVEMENT				Hardn		
	102mm) 16" (109mm) o	OPTIONAL PLUMBING KIT	BOTTOM: { FOR LEGS, AIR	5-1/8" (130mm) R INTAKE		Chlor	ride Less than 30 pH 7.0 to 8.5 lica Less than 12	
INSTALLATION		ENTS			 Tot:	al Dissolved Solids (i		- Phin (mAir)
Oven must be	installed level	• He	ood installatio	on is required.		2.0001100 00100 (, oo 120 ppin	
Water supply s	shut-off valve a	and back-flow prev	enter when re	equired by local code.				
ELECTRICAL (NO	CORD, NO PLUG,	DEDICATED CIRCUIT RE	EQUIRED)					
MODEL	VOLTAG	GE PH	HZ	AMPS	kW	BREAKER	AWG	CONNECTION
CTC20-10E	208 – 24		50/60		28.4 – 37.8	80-90	1 – 1/0	L1, L2, L3, G
	380 – 41		50/60		32.3 – 37.8	63	4 – 3	L1, L2, L3, N, G
	440 – 48		50/60	41.7 – 45.5	32.4 - 37.8	50	6 – 4	L1, L2, L3, G
	*ELECTRIC	AL SERVICE CHARGE AF	PPLIES					
WEIGHT		SHIP DIMENSIO	NS	PAN CAPACITY				
	est 411 kg	(L x W x H) 56" x		FULL-SIZE		Twenty (20)	PRODUCT MAX	(IMUM: 240 lb (109 kg)
SHIP 1052 lbs	* /77 ka*	$(1/2) \times 11/3 \times 2$)210mm)*	GN 1/1	· 530 x 325 x 65mm	Twenty (20)		INI: 150 guarta (100 litara)

**HALF-SIZE SHEET:

GN 1/1: 530 x 325 x 65mm

18" x 13" x 1"

Twenty (20)

Twenty (20)

VOLUME MAXIMUM: 150 quarts (190 liters)

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

○⇒ 208 - 240 1 ⁺ 50/60 14 L1, L2/N, G 9.6 - 8.4 15 □⇒ 208 - 240 3 50/60 14 L1, L2, L3, G 9.6 - 8.4 15		CTP20-10G GAS BOILER-FREE												
				19-18" (486m)		13/16" (7)				4-1/4" (105mm) ↔ 4-1/4" (105mm) ↔ 4-1/6" (105mm) ↔ (uuuges)	Alter Drain and Alter Drain an	ATER R	(1545mm) →	
								[DIMENSIC	NS: H x W x D				
								ĺ	EXTERIOR:					
_	、	<u> </u>							FXTERIOP	79-1/4" x 35-11/16" x 42 WITH RECESSED DOO		J12mm x 90	U6mm x 107	('2mm)
CODKING			CE	ER	[IP	X		ov HOx ligh Efficiency		79-1/4" x 40-11/16" x 42-	-1/4" (20			,
WATE									WATER O	60-7/16" x 16-1/4" x 28-	,	23211111 X 4		2000)
						0114				e responsibility of the c	-	nerator/nu	rebaser of	this equipment
LINE P WATEF MATERIA	RESSURE: 30 R DRAIN: 1-1/2 ALS MUST WITHST	psi mini " (40mm TAND TEM	mum dyna) CONNECTI IPERATURES	mic and 90 p ION WITH A VE	RTICAL VENT TO EXT			NT.	requiremer Non-compl equipment warranty. A	means of "water treatments to with the published water iance with these minim and/or components and lto-Shaam recommend properly treat your water	vater qu um star d void t s using	ality stand idards will he original	lards show potentially equipmen	n below. damage this t manufacturer's
LEF	-T: 0" (0mm	ı)			18" (457mm)) rec	OMMENDED SERVICE AC	CCESS		Contamin	nant	Inlet Wat	er Require	ements
RIGH	HT: 0" (0mm	i) non-c	OMBUSTIBL	E SURFACES						Free Chlo	rine	Less than	0.1 ppm (m	
тс	DP: 20" (508	smm) fo	R AIR MOVE	EMENT						Hardn Chlo		30-70 ppm Less than	30 ppm (m	g/L)
BAC	:K: `	'	1) OPTIONAL	. PLUMBING KIT							pН	7.0 to 8.5	12 ppm (m	
INSTA	LLATION RE	EQUIRI	EMENTS		•					Total Dissolved Solids (50-125 ppi		9/2/
							•			· · · · · · · · · · · · · · · · · · ·	,			
						quir	ed by local code							
GASI	REQUIREMEN	NI 3 (GA	S TYPE MUS	ST BE SPECIFI	ED ON ORDER)		HOOK-UF	⊃· 3/4 ¹	" NPT					
	F	RATED T	THERMAL	LOAD		Γ				CONNECTED PRES	SURE			
I	NORTH AMER	RICA		INTERNA	TIONAL			1	NORTH AME	RICA			INTERNA	TIONAL
										Propane			G20	20mbar
Gros	•	•) N	•	. ,					Minimum: 9" W.C. dyna			G25	20mbar
ELECT							iviaximum: 14" V	w.c. st	เลแต	Maximum: 14" W.C. sta			G31 R®OPTION	30mbar
ELECI				T	,					CONNECTION	1			
			HZ	AWG			AMPS BR	EAKE	R kW	no cord, no plug	AM		BREAKER	kW
	120	1	60	14	L1, N, G		13.6	20	1.7	L1, N, G	18	.4	25	2.3
•0		1†	50/60	14				15	2.0	L1, L2/N, G	12.1 -		15	2.5 – 2.7
	208 – 240	3	50/60	14	L1, L2, L3, G		9.6 - 8.4	15	2.0	L1, L2, L3, G	12.1 -	- 11.3	15	2.5 – 2.7
•\$	380 – 415	3	50/60	14	L1, L2, L3, N, (G	9.2 - 8.4	15	2.0	L1, L2, L3, N, G	11.8 -	- 11.3	15	2.6 – 2.7
S NOR	TH AMERICA VOLTAG	E CHOICE	SROUNE) FAULT OR RESI	DUAL CURRENT PROTE	CTION	I DEVICE MUST ACCOMM	IODATE A	LEAKAGE CURRE	NT OF 20mA 🌨 INTERNATIONA	AL VOLTAGE	CHOICE [†] ELE	ECTRICAL SERV	ICE CHARGE APPLIES
WEIG				DIMENSI		PA	N CAPACITY		0.011 (.01)		1	0.00/		040 11 / 100 1 1
NET SHIP	905 lbs est	-	· · ·	(W x H) 45" :			FULL-SIZE		20" x 12" x 2-1	, , ,				240 lb (109 kg)
	1175 lbs*	533 kg	<u> </u>	43 x 1422 x	,	**	GN 1/1 HALF-SIZE SHEE1		530 x 325 x 65 18" x 13" x 1					quarts (190 liters)
EVPOPT	ING GROUND SHIP		A MINALI ON . (JUNIAUT FAUL									S UNLY. ADDI	

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

EXPORT WEIGHT AND DIMENSIONS.

Image: State of the state		O-1C		CI		`	-1/4" (1072mm) -		M. <u>CT</u> ⊆	-SHAA		
EXTERNOR 79-14" x 35-11/16" x 42-14" (2012mm x 906mm x 1072mm) EXTERNOR 79-14" x 40-11/16" x 42-14" (2012mm x 906mm x 1072mm) EXTERNOR 79-14" x 40-11/16" x 42-14" (2012mm x 906mm x 1072mm) WATER REQUIREMENTS EXTERNOR 79-14" x 40-11/16" x 42-14" (2012mm x 906mm x 1072mm) WATER OUNDERTENTS Constrained of a responsibility of the source/parator/purchases of this equipment and/or components and void the original equipment manufact with these minimum waters subply is comprehensively tested and fr required, manual estimation to the constrained of the incoming where subply is comprehensively tested and fr required, manufact with these minimum standards will potentially damage to the responsibility of the source/parator/purchases of this equipment manufact with these minimum standards will potentially damage to water responsibility of the source/parator/purchases of the constant standards will potentially damage to water responsibility of the source/parator/purchases of the constant standards will potentially damage to water responsibility of the source/parator/purchases of the constant standards will potentially damage to water subply standards standards		(1545mm)	bottom of oven) bottom of oven) REATED WATER TRICAL ER DRAIN	4-1/4" (108mm) ↔ 4-1/4" (105mm) ↔ 4-3/16" (105mm) ↔ (106mm) ↓ (uuuue888) ↔ 1-11 ↔ 0 ↔ 100			1-15/16" (49n	(24mm) - 28-	19-1/8" (486mm)			
Image: Provided the set of the s				NS: H x W x D								
Child Construction Construction Construction Construction WATER REQUIREMENTS Two (2) COLD WATER INLETS - DRINKING QUALITY INTERNOR: WATER REQUIREMENTS WATER OLALITY STANDARDS INTERNOR: Construction Construction Construction WATER COLURY STANDARDS INTERNOR: UNTREATED WATER INLET: 3/4" NPT" Construction Construction Construction Market Supply standards Showed based and if required, a means of water treatment/operator/purchaser of this equip required, a means of water treatment/operator/purchaser of this equip required, a means and wold the operation standards will potentially damage to water provide that would meet compila to properly treat your water. LEFT: 0" (0mm) 18" (457mm) recommends using optifue" Unwo optipureweit unanufact water supply shutcher water and/or components and wold the optimal equipment and/or components and wold the optimal equipment manufact water supply shutcher water and shut the potimal equipment manufact water supply shutcher water expression INSTALLATION REQUIREMENTS • Hood installation is required. • Hood installation is required. NORTH AMERICA INTERNATIONAL Contaminant International (market water supply shutcher water especified by local code. GAS REQUIREMENTS • Hood installation is required by local code. Contaminant InternationAL		imm x 1072mm)	4" (2012mm x 906i	79-1/4" x 35-11/16" x 42-1/4								
WATER REQUIREMENTS TWO (2) COLD WATER INLETS - DRINKING QUALITY TWO (2) COLD WATER INLETS - DRINKING QUALITY ONE (1) INTERATED WATER INLET: 3/4" NPT' "Can manifold of or on 3/4" lime (1) UNTERATED WATER INLET: 3/4" NPT' "Can manifold of or on 3/4" lime WATER DWATE: 1/2" (domn) consection with a verification of a set lime water DWATE: 1/2" (domn) consection with a verification of the comparison of the original equipment and/add well optimately based and if requirements with the published water quality standards shown below. WATER DRAIN: 1/2" (domn) consection with a verification and well optimately leased and well optimately leased and well optimet a manifold water quality standards with optimation well requirements with the published water quality standards with optimation well requirements with the published water quality standards with optimation of the original equipment and/add with optimately leased and well equipment and/add well optimately leased and well requirements with the published water quality standards with optimation requirements with standards with optimation requirements with the published water quality standards with optimation requirements with the published water requirements Free Chlorine Less than 0.1 ppm (mg/L) Hardness 30-70 ppm Chloride Less than 12 ppm (mg/L) Hardness 30-70 ppm Northaterequality water requirements Wolf-Lip Regresstreas an		,		9-1/4" x 40-11/16" x 42-1/4'	7 INTERIOR:	GASTEC MARK	X5	[IP	€ EA	EPH		
TWO (2) COLD WATER INLETS - DRINKING QUALITY ONE (1) TREATED WATER INLET: 3/4" NPT* Can manifold off or an 34" line ONE (1) INTERATED WATER INLET: 3/4" NPT* Can manifold off or an 34" line ONE (1) INTERATED WATER INLET: 3/4" NPT* Can manifold off or an 34" line UNE PRESSURE: 30 psi maximum dynamic and 90 psi maximum static (200 to 600 KPa) WATER DARE: 1/2" (40m) dynamic and 90 psi maximum static (200 to 600 KPa) MATERIAS MUST WATER DARE: 1/2" (40m) dynamic and 90 psi maximum static (200 to 600 KPa) MATERIAS MUST WATER DARE: 1/2" (40m) MATERIAS MUST WATERIAS WATER DARE: 1/2" (40m) MATERIAS MUST WATERIAS WATE		1mm x 712mm)	6" (1535mm x 411									
ONE (1) TREATED WATER INLET: 3/4" NPT * Can analitid of of one 3/4" line: one 3/4" lin						~					WAIER	
LEFT: 0" (0mm) 18" (457mm) RECOMMENDED SERVICE ACCESS Contaminant Inlet Water Requirements RIGHT: 0" (0mm) NON-COMBUSTIBLE SURFACES 2" (51mm) DOOR SWING OR COMBUSTIBLE SURFACES 30-70 ppm Less than 0.1 ppm (mg/L) TOP: 20" (508mm) FOR AIR MOVEMENT BOTTOM: 5-1/8" (130mm) FOR LESS, AIR INTAKE 30-70 ppm Less than 30 ppm (mg/L) BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING KIT BOTTOM: 5-1/8" (130mm) FOR LESS, AIR INTAKE Stilica Less than 12 ppm (mg/L) INSTALLATION REQUIREMENTS Hood installation is required. • Hood installation is required by local code. 50-125 ppm 50-125 ppm GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFIED ON ORDER) TORLE NATIONAL NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL NAtural Gas/Propane G20, G25, G31 Natural Gas Propane G20 20mbar 140,000 Btu / IN 37.0 KW Minimum: 5.5" W.C. dynamic Minimum: 14" W.C. static G31 30mbar EECTRICAL - CTC20-10G (DEDICATED CIRCUT REQUIRED 140 0.1 2 L1, N, G - no cord, no plug 9.6 - 8.4	iance this cturer's	would meet complian rds shown below. otentially damage this ouipment manufactur	it" provided that ver er quality standar standards will po oid the original en sing OptiPure [®] [v	neans of "water treatmen s with the published wate ince with these minimum nd/or components and vo o-Shaam recommends us	required, a n requirements Non-complia equipment a warranty. Alt	o 600 kPa)	atic (200 t	TICAL VENT TO EXT	ET: 3/4" NPT* dynamic and 90 ps INECTION WITH A VER TURES UP TO 200°F	NTREATED WATER INL SSURE: 30 psi minimum RAIN: 1-1/2" (40mm) col MUST WITHSTAND TEMPER/	ONE (1) I LINE PRI WATER I MATERIALS	
RIGHT: 0° (0mm) NON-COMBUSTIBLE SURFACES 2° (51mm) DOOR SWING OR COMBUSTIBLE SURFACES Free Chlorine Less than 0.1 ppm (mg/L) TOP: 20° (508mm) FOR AIR MOVEMENT BOTTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE BOTTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE BACK: 4" (102mm) 4-5/16" (109mm) optionALPLUMBING KIT BOTTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE BOTTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE • Oven must be installed level. • Hood installation is required. • Hood installation is required. • Total Dissolved Solids (tds) 50-125 ppm GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFIED ON ORDER) HOOK-UP: 3/4" NPT CONNECTED PRESSURE NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL INTERNATIONAL NORTH AMERICA INTERNATIONAL Maimum: 5.5" W.C. dynamic Maimum: 9" W.C. dynamic G31 30mbar Gross Heading Value (HHV) Net Heating Value (LHV) Minimum: 5.5" W.C. dynamic Maximum: 14" W.C. static G31 30mbar ELECTRICAL - CTC20-10G (pedicArED CIRCUT REQUIRED) 4.00 120 1 60 12 L1, N, G - no cord, no plug		Poquiromonto				ENDED SERVICE ACCESS	m) кесомм	18" (457mm		0" (0mm)	LEFT	
TOP: 20" (508mm) FOR AIR MOVEMENT Hardness 30-70 ppm BACK: 4" (102mm) 4-5/16" (109mm) OPTIONAL PLUMBING KIT BOTTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE BOTTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE Chloride Less than 30 ppm (mg/L) pH INSTALLATION REQUIREMENTS • Oven must be installed level. • Hood installation is required. • Hood installation is required. • Water supply shut-off valve and back-flow preventer when required by local code. Total Dissolved Solids (tds) 50-125 ppm GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFIED ON ORDER) HOOK-UP: 3/4" NPT CONNECTED PRESSURE NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL NAtural Gas Propane G20 20mbar Gross Heating Value (HHV) Net Heating Value (LHV) Minimum: 55" W.C. dynamic Maximum: 14" W.C. static G30 VOLTAGE PH HZ CONNECTION AMPS BREAKER 0 120 <th colspa<="" td=""><td></td><td>•</td><td></td><td></td><td>]</td><td></td><td></td><td></td><td>ISTIBLE SURFACES</td><td>0" (0mm) NON-COMB</td><td>RIGHT</td></th>	<td></td> <td>•</td> <td></td> <td></td> <td>]</td> <td></td> <td></td> <td></td> <td>ISTIBLE SURFACES</td> <td>0" (0mm) NON-COMB</td> <td>RIGHT</td>		•]				ISTIBLE SURFACES	0" (0mm) NON-COMB	RIGHT
Chloride Less than 30 ppm (mg/L) pH 7.0 to 8.5 BACK: 4" (102mm) 4-5/16" (109mm) optional PLUMBING KIT POR LEGS, AIR INTAKE BOTTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE Chloride Less than 30 ppm (mg/L) pH 7.0 to 8.5 Silica Less than 12 ppm (mg/L) Total Dissolved Solids (tds) OUTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE Total Dissolved Solids (tds) OUTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE Total Dissolved Solids (tds) OUTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE Total Dissolved Solids (tds) OUTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE OUTOM: 5-1/8" (130mm) FOR LEGS, AIR INTAKE Total Dissolved Solids (tds) OUTOM: 50-125 ppm Total Dissolved Solids (tds) OUTOM: FOR MUST BE SPECIFIED ON ORDER HOOK-UP: 3/4" NPT CONNECTED PRESSURE NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL Natural Gas Propane G20, G20, G20, G21, G31 Natural Gas NRTH AMERICA INTERNATIONAL				Hardness	-				MOVEMENT	20" (508mm) FOR AI	TOF	
BACK: 4-5/16" (109mm) oPTIONAL PLUMBING KIT FOR LEGS, AIR INTAKE Silica Less than 12 ppm (mg/L) INSTALLATION REQUIREMENTS • Hood installation is required. • Uto of installation is required by local code. Silica Less than 12 ppm (mg/L) • Oven must be installed level. • Hood installation is required by local code. Total Dissolved Solids (tds) 50-125 ppm • Water supply shut-off valve and back-flow preventer when required by local code. HOOK-UP: 3/4" NPT GAS REQUIREMENTS (cas type must be specified on order) HOOK-UP: 3/4" NPT RATED THERMAL LOAD CONNECTED PRESSURE INTERNATIONAL NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL NAtural Gas/Propane G20, G25, G31 Natural Gas Propane G20 20mbar Gross Heating Value (HHV) Net Heating Value (LHV) Minimum: 5.5" W.C. dynamic Maximum: 14" W.C. static G31 30mbar ELECTRICAL - CTC20-10G (oEDICATED CIRCUT REQUIRED) AWG CONNECTION AMPS BREAKER • 120 1 60 12 L1, N, G - no cord, no plug 13.0 20 •• 208 – 240 3 50/60 1) ppm (mg/L)			-	30mm)	5-1/8" (*	BOTTOM		4" (102mm)		
INSTALLATION REQUIREMENTS • Oven must be installed level. • Hood installation is required. • Water supply shut-off valve and back-flow preventer when required by local code. Description GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFIED ON ORDER) HOOK-UP: 3/4" NPT CONNECTED PRESSURE NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL Natural Gas/Propane G20, G25, G31 Natural Gas Propane G20 20mbar Gross Heating Value (HHV) Net Heating Value (LHV) Minimum: 5.5" W.C. dynamic Minimum: 9" W.C. dynamic G31 30mbar ELECTRICAL - CTC20-10G (pEDICATED CIRCUIT REQUIRED) CONNECTION AMPS BREAKER 120 1 60 12 L1, N, G - no cord, no plug 13.0 20 ** 208 – 240 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.6 – 8.4 15		2 ppm (mg/L)				oonini)			TIONAL PLUMBING KIT		BACK	
• Water supply shut-off valve and back-flow preventer when required by local code. GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFIED ON ORDER) HOOK-UP: 3/4" NPT CONNECTED PRESSURE NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL NAtural Gas/Propane G20, G25, G31 Natural Gas Propane G20 20mbar Gross Heating Value (HHV) Net Heating Value (LHV) Minimum: 5.5" W.C. dynamic Minimum: 9" W.C. dynamic G20 20mbar ELECTRICAL - CTC20-10G (DEDCATED CIRCUT REQUIRED) AWG CONNECTION AMPS BREAKER Q00 12 L1, N, G - no cord, no plug 13.0 20 Q08 – 240 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 – 8.4 15 Q08 – 240 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 – 8.4] T			-		ATION REQUIREME	INSTAL	
GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFIED ON ORDER) HOOK-UP: 3/4" NPT CONNECTED PRESSURE NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL Natural Gas/Propane G20, G25, G31 Natural Gas Propane G20 20mbar Gross Heating Value (HHV) Net Heating Value (LHV) Minimum: 5.5" W.C. dynamic Minimum: 9" W.C. dynamic G31 30mbar ELECTRICAL - CTC20-10G (DEDICATED CIRCUIT REQUIRED) VOLTAGE PH HZ AWG CONNECTION AMPS BREAKER ©% 208 – 240 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.6 – 8.4 15 • 380 – 415 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 – 8.4 15												
HOOK-UP: 3/4" NPT CONNECTED PRESSURE NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL Natural Gas/Propane G20, G25, G31 Natural Gas Propane G20 20mbar Gross Heating Value (HHV) Net Heating Value (LHV) Minimum: 5.5" W.C. dynamic Minimum: 9" W.C. dynamic G31 30mbar ELECTRICAL - CTC20-10G (DEDICATED CIRCUIT REQUIRED) VOLTAGE PH HZ AWG CONNECTION AMPS BREAKER 120 1 60 12 L1, N, G - no cord, no plug 13.0 20 208 - 240 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.6 - 8.4 15						by local code.	equired					
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NORTH AMERICA INTERNATIONAL North America Propane G20 20mbar 20mbar 20mbar 20mbar 20mbar 20mbar 20mbar 30mbar 80mbar 80mbar <td></td> <td></td> <td>SSURE</td> <td>CONNECTED PRES</td> <td></td> <td></td> <td></td> <td></td> <td>HERMAL LOAD</td> <td>RATED T</td> <td></td>			SSURE	CONNECTED PRES					HERMAL LOAD	RATED T		
Gross Heating Value (HHV) 140,000 Btu / hr Net Heating Value (LHV) 37.0 kW Minimum: 5.5" W.C. dynamic Maximum: 14" W.C. static Minimum: 9" W.C. dynamic Maximum: 14" W.C. static G25 G31 20mbar 30mbar ELECTRICAL - CTC20-10G (DEDICATED CIRCUIT REQUIRED) HZ AWG CONNECTION AMPS BREAKER VOLTAGE PH HZ AWG CONNECTION AMPS BREAKER State 120 1 60 12 L1, N, G - no cord, no plug 13.0 20 State 380 – 415 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.6 – 8.4 15		INTERNATIONAL			NORTH			RNATIONAL	1		Ν	
140,000 Btu / hr 37.0 kW Maximum: 14" W.C. static Maximum: 14" W.C. static G31 30mbar ELECTRICAL - CTC20-10G (DEDICATED CIRCUIT REQUIRED) AWG CONNECTION AMPS BREAKER ∞ 120 1 60 12 L1, N, G - no cord, no plug 13.0 20 ∞ 208 – 240 3 50/60 14 L1, L2, L3, G - no cord, no plug 9.6 – 8.4 15 •• 380 – 415 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 – 8.4 15												
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VOLTAGE PH HZ AWG CONNECTION AMPS BREAKER area 120 1 60 12 L1, N, G - no cord, no plug 13.0 20 area 208 - 240 3 50/60 14 L1, L2, L3, G - no cord, no plug 9.6 - 8.4 15 area 380 - 415 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 - 8.4 15		G31 30mbar	STATIC	Maximum: 14" W.C. s	vv.C. static	Maximum: 14"				,		
Image: Second state 120 1 60 12 L1, N, G - no cord, no plug 13.0 20 Image: Second state 208 - 240 3 50/60 14 L1, L2, L3, G - no cord, no plug 9.6 - 8.4 15 Image: Second state 380 - 415 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 - 8.4 15	kW	BDEAKED	AMDO	N							ELECIR	
Corr 208 - 240 3 50/60 14 L1, L2, L3, G - no cord, no plug 9.6 - 8.4 15 •• 380 - 415 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 - 8.4 15	куу 1.7					11 1					C. P. ®	
→ 380 - 415 3 50/60 14 L1, L2, L3, N, G - no cord, no plug 9.2 - 8.4 15	2.0										~⊛	
🔗 NORTH AMERICA VOLTAGE CHOICE 👒 GROUND FAULT OR RESIDUAL CURRENT PROTECTION DEVICE MUST ACCOMMODATE A LEAKAGE CURRENT OF 20mA 🗢 INTERNATIONAL VOLTAGE CHOICE	2.0	15	9.2 - 8.4	ord, no plug	_3, N, G - no co	L1, L2, I	4	60 14	3 50/6	380 – 415		
			TAGE CHOICE	DF 20mA 🌨 INTERNATIONAL VOLT	LEAKAGE CURRENT (E MUST ACCOMMODATE A	ECTION DEVIC	AL CURRENT PROTEC	OUND FAULT OR RESIDUA	ERICA VOLTAGE CHOICE 🔍 G	≫ NORTH A	
WEIGHT SHIP DIMENSIONS PAN CAPACITY						APACITY	PANO	NS			WEIGH	

WEIG	н		SHIP DIMENSIONS	PAN CAPACITY			
NET	905 lbs est	411 kg	(L x W x H) 45" x 56" x 87"*	FULL-SIZE:	20" x 12" x 2-1/2"	Twenty (20)	PRODUCT MAXIMUM: 240 lb (109 kg)
SHIP	1175 lbs*	533 kg*	(1143 x 1422 x 2210mm)*	GN 1/1:	530 x 325 x 65mm	Twenty (20)	VOLUME MAXIMUM: 150 quarts (190 liters
*DOMES	TIC GROUND SHIF	PING INFORM	ATION. CONTACT FACTORY FOR	**HALF-SIZE SHEET:	18" x 13" x 1"	Twenty (20)	**ON WIRE SHELVES ONLY. ADDITIONAL WIRE
EXPORT	WEIGHT AND DIM	ENSIONS.					SHELVES REQUIRED FOR MAXIMUM CAPACITY.



CTP20-20E ELECTRIC BOILER-FREE

ELECTRIC BOILER

43-3/4" (1111mm) 43-3/4" (1111mm) (Euclide Constraints of the constr		A B B C C C C C C C C C C C C C C C C C		(D) 3-1/4" (8 (B, E) 4-3/16" (1 (A) 5" (12 (C) 7" (178	26mm) ↔ (mm00 200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	59-1/4" (1504mm) → 59-1/4" (1504mm) → 50-1/4" (1504mm) → 50-1/4">	- 41/16" (168mm) - at bottom of oven - at bottom - at	
COMMUNA APPLIANCE COMMUNA APPLIANCE SAM	[A[IP]	X5	-	EXTERIOR WIT	: H x W x D 79-1/4" x 43-3/4" x 43 H RECESSED DOO 19-1/4" x 48-3/4" x 47 -7/16" x 24-1/4" x 32	<u>R:</u> 7" (2012mm x 12	238mm x 1192mm)	
WATER REQUIREMENTS TWO (2) COLD WATER IN ONE (1) TREATED WATER INLET: 3/4" NI ONE (1) UNTREATED WATER INLET: 3/4" NI LINE PRESSURE: 30 psi minimum dynamic an WATER DRAIN: 1-1/2" (40mm) CONNECTION WIT MATERIALS MUST WITHSTAND TEMPERATURES UP TO CLEARANCE REQUIREMENTS	PT* * C PT* 0 d 90 psi maximum static H A VERTICAL VENT TO EXTEN	Can manifold off of ne 3/4" line (200 to 600 kPa)	T VENT.	It is the sole re- to verify that th required, a mea requirements w Non-complianc equipment and warranty. Alto-S	e incoming water s ans of "water treatm ith the published w e with these minimu for components and	wner/operator/ upply is compr nent" provided ater quality sta um standards v d void the origi s using OptiPu	/purchaser of this equipm ehensively tested and if that would meet complia andards shown below. will potentially damage th nal equipment manufactu re [®] [www.optipurewater.o	nce is ırer's
LEFT: 0" (0mm)	18" (457mm) F	RECOMMENDED SERVIC	E ACCESS		Contamin		/ater Requirements	
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURF	2" (51mm) DOG				Free Chlo		an 0.1 ppm (mg/L)	
	COMBUSTIBLE SI	URFACES			Hardn			
TOP: 20" (508mm) FOR AIR MOVEMENT BACK: 4" (102mm)	BOTTOM: 5- FOR LEGS, AIR IN				Chlo	ride Less the pH 7.0 to 8	an 30 ppm (mg/L)	
4-5/16" (109mm) OPTIONAL PLUMBI	NG KII I OK ELOO, MIKI					lica Less the		
4-5/16" (109mm) OPTIONAL PLUMBI				Tota				
	Hood installation	is required.		Tota	I Dissolved Solids (
INSTALLATION REQUIREMENTS	Hood installation		ode.	Tota				
INSTALLATION REQUIREMENTS • Oven must be installed level.	Hood installation w preventer when requ	uired by local co	ode.	Tota	I Dissolved Solids (tds) 50-125		
INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flo	Hood installation w preventer when requ	uired by local co UIRED)		Tota	I Dissolved Solids (tds) 50-125 /ITH COMBISM	ppm	
INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flo	Hood installation w preventer when requ G, DEDICATED CIRCUIT REQ	uired by local co UIRED)			I Dissolved Solids (tds) 50-125 /ITH COMBISM	ppm IOKER [®] OPTION **PROpower™ option	REAKER
INSTALLATION REQUIREMENTS Oven must be installed level. Water supply shut-off valve and back-flo ELECTRICAL - CTP20-20E (NO CORD, NO PLU VOLTAGE PH HZ AWG CONNECTION	Hood installation w preventer when requ G, DEDICATED CIRCUIT REQ ECO STANDARD	uired by local co UIRED) BREAKER AM	**PROpov IPS	wer™ option kWBREAKEI	I Dissolved Solids (W ECO STAI R AMPS KV	tds) 50-125 /ITH COMBISM NDARD V BREAKER	ppm IOKER [®] OPTION **PROpower™ option	REAKER
INSTALLATION REQUIREMENTS Oven must be installed level. Water supply shut-off valve and back-flo ELECTRICAL - CTP20-20E (NO CORD, NO PLU VOLTAGE PH HZ AWG CONNECTION	Hood installation w preventer when requ G, DEDICATED CIRCUIT REQ ECO STANDARD AMPS kW 137.6 – 158.8 49.6 – 66	UIRED) BREAKER AM 150 – 175 172 –	**PROpov IPS	wer™ ортіон kW BREAKEI 7.8 – 77 175 – 200	I Dissolved Solids (W ECO STAI R AMPS KV	tds) 50-125 /ITH COMBISM NDARD V BREAKER -66.7 150 – 175	ppm IOKER [®] OPTION **PROpower™ option AMPS kW BI	REAKER
INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flo ELECTRICAL - CTP20-20E (NO CORD, NO PLU VOLTAGE PH HZ AWG CONNECTION 208 – 240 3 50/60 4/0 L1, L2, L3, G	Hood installation w preventer when requ G, DEDICATED CIRCUIT REQ ECO STANDARD AMPS kW 137.6 – 158.8 49.6 – 66	UIRED) UIRED) BREAKER AM 150 – 175 172 – 100 105.3 -	**PROpov IPS 198.5 57	wer™ ортіон kW BREAKEI 7.8 – 77 175 – 200 4.7 – 77 125	I Dissolved Solids (tds) 50-125 /ITH COMBISM NDARD V BREAKER - 66.7 150 – 175 - 66.7 100	ррт IOKER [®] OPTION **PROpower™ ортіол AMPS kW Bi 174.5 – 201.3 58.4 – 77.7 20	REAKER)0 – 225
INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flo ELECTRICAL - CTP20-20E (NO CORD, NO PLU VOLTAGE PH HZ AWG CONNECTION 208 - 240 3 50/60 4/0 L1, L2, L3, G 380 - 415 3 50/60 1 - 1/0 L1, L2, L3, N, G	Hood installation w preventer when requ ECO STANDARD AMPS kW 137.6 – 158.8 49.6 – 66 84.2 – 91.7 56.4 – 66 72.7 – 79.4 56.5 – 66	UIRED) UIRED) BREAKER AM 150 – 175 172 – 100 105.3 - 80 90.9 –	**PROpor IPS 198.5 57 – 114.6 64 – 99.2 64	wer™ ортіон kW BREAKEI 7.8 – 77 175 – 200 4.7 – 77 125	I Dissolved Solids (ECO STAI R AMPS KU 140.1 – 161.6 50.1 – 86.9 – 94.5 56.9 – 74.1 – 80.8 57.1 –	tds) 50-125 /ITH COMBISM NDARD V BREAKER - 66.7 150 – 175 - 66.7 100	ppm IOKER [®] OPTION ***PROpower™ option AMPS kW BI 174.5 – 201.3 58.4 – 77.7 20 107.9 – 117.5 65.3 – 77.7	REAKER 00 – 225 150
INSTALLATION REQUIREMENTS • Oven must be installed level. • Water supply shut-off valve and back-flo • Water supply shut-off valve and back-flo ELECTRICAL - CTP2O-20E (NO CORD, NO PLU VOLTAGE PH VO	Hood installation w preventer when requ ECO standard AMPS kW 137.6 - 158.8 49.6 - 66 84.2 - 91.7 56.4 - 66 72.7 - 79.4 56.5 - 66 IES	UIRED) UIRED) BREAKER AM 150 – 175 172 – 100 105.3 - 80 90.9 –	**PROpor IPS 198.5 57 – 114.6 64 – 99.2 64 IST OPTION	wer™ option kW BREAKEI 7.8 – 77 175 – 200 4.7 – 77 125 4.8 – 77 100	I Dissolved Solids (ECO STAI R AMPS KU 140.1 – 161.6 50.1 – 86.9 – 94.5 56.9 – 74.1 – 80.8 57.1 –	tds) 50-125 /ITH COMBISM NDARD V BREAKER - 66.7 150 – 175 - 66.7 100	ppm IOKER [®] OPTION ***PROpower™ option AMPS kW BI 174.5 – 201.3 58.4 – 77.7 20 107.9 – 117.5 65.3 – 77.7	REAKER 00 – 225 150

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**FULL-SIZE SHEET:

*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR EXPORT

WEIGHT AND DIMENSIONS.

GN 2/1: 650 x 530 x 65mm

18" x 26" x 1"

Twenty (20)

Twenty (20)

**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES

REQUIRED FOR MAXIMUM CAPACITY



*DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR EXPORT

WEIGHT AND DIMENSIONS.



	111mm) — >	79-1/4" (2012mm)	47" (1192mm)		<u> </u>	• _В	(A, B, D ⊙ E C - at	1/16" (168mm) 4" (108mm) bottom oven
41-7/8° (10	- 27-1/4" (691mm) 663mm)	- 1" (24mm)		A D D D D D D D D D D D D D	(D) 3-1/4" (81 (B, E) 4-3/16" (10 (A) 5" (124 (C) 7" (178n	9-3/16" (0000) 22-3/16" (2337 22-3/16" (5397) 22-3/16" (5637)	A= B= C D= E=	- 47-7/8" (1215mm)
					DIMENSIONS: EXTERIOR:	HxWxD		
						9-1/4" x 43-3/4" x 47	7" (2012mm x 1111	mm x 1192mm)
	()	€ EA	Г Ір	¥5	-	I RECESSED DOO -1/4" x 48-3/4" x 47		2mm v 1102mm)
LISTED COOKING APPLIANCE	ANSLINSF 4	.с сп		ΛJ	INTERIOR:	1-1/4 × 40-3/4 × 41		
584m					60-	7/16" x 24-1/4" x 32	2-3/4" (1535mm x 6	616mm x 832mm)
WATER REQU	IREMENTS				WATER QUAL	ITY STANDARD	S	
ONE (1) TREATE ONE (1) UNTREA LINE PRESSURE WATER DRAIN:	D WATER INLET ATED WATER INL 30 psi minimun 1-1/2" (40mm) co VITHSTAND TEMPER	LET: 3/4" NPT* n dynamic and 90 ps INNECTION WITH A VER IATURES UP TO 200°F	i maximum stati	Can manifold off of one 3/4" line	to verify that the required, a mea requirements wi Non-compliance equipment and/o warranty. Alto-S	incoming water s ns of "water treatr th the published w with these minim or components an	supply is compre- nent" provided th vater quality stan- um standards wil d void the origina ls using OptiPure	urchaser of this equipment tensively tested and if at would meet compliance dards shown below. Il potentially damage this Il equipment manufacturer's [www.optipurewater.com]
LEFT: 0" (0mm)		18" (457mm	RECOMMENDED SERVICE ACCESS]	Contamir	ant Inlat Wa	tor Poquiromonto
RIGHT: 0" (BUSTIBLE SURFACES	2" (51mm) D	OOR SWING OR	1	Contamir Free Chlo		ter Requirements
	UTITI) NUN-COMB	DUSTIBLE SURFACES	COMBUSTIBLE	SURFACES	4	Hardr		
TOP: 20"	(508mm) FOR AI	R MOVEMENT			4		ride Less than	
I BACK `	102mm) /16" (109mm) o	PTIONAL PLUMBING KIT	BOTTOM: 5	5-1/8" (130mm) INTAKE			pH 7.0 to 8.5	
INSTALLATION					Total	Dissolved Solids		
Oven must be			ood installatio					
		· · ·		quired by local code.				
		DEDICATED CIRCUIT R	_				· · · · · · · · · · · · · · · · · · ·	
MODEL	VOLTAG		HZ	AMPS	kW	BREAKER	AWG	CONNECTION
	208 – 24		50/60	137.6 – 158.8	49.6 – 66	150-175	4/0	L1, L2, L3, G
CTC20-20E		5 3	50/60	84.2 – 91.7	56.4 - 66	100	1 – 1/0	L1, L2, L3, N, G
CTC20-20E	380 - 41							
CTC20-20E	440 - 48	0 3*	50/60	72.7 – 79.4	56.5 – 66	80	2 – 1	L1, L2, L3, G
	440 - 48	0 3* SERVICE CHARGE APPL	ES	1	56.5 - 66	80	2-1	L1, L2, L3, G
WEIGHT	440 – 48 *ELECTRICAL S	0 3* ERVICE CHARGE APPL	es DNS	PAN CAPACITY			1	
	440 – 48 *ELECTRICAL S s est 499 kg	0 3* SERVICE CHARGE APPL	es DNS x 53" x 87"*	1	56.5 - 66 20" x 12" x 2-1/2" 530 x 325 x 65mm	80 Forty (40) Forty (40)	PRODUCT N	L1, L2, L3, G IAXIMUM: 480 lb (218 kg) MUM: 300 quarts (380 liters)

*FULL-SIZE SHEET:

GN 2/1: 650 x 530 x 65mm

18" x 26" x 1"

Twenty (20)

Twenty (20)

**ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES

REQUIRED FOR MAXIMUM CAPACITY

We the the the the the the the the the th
EXTERIOR: 79-1/4" x 43-3/4" x 47" (2012mm x 1111mm x 1192mm) EXTERIOR: 79-1/4" x 43-3/4" x 47" (2012mm x 1111mm x 1192mm) EXTERIOR: 79-1/4" x 43-3/4" x 47" (2012mm x 1238mm x 1192mm) INTERIOR: 60-7/16" x 24-1/4" x 32-3/4" (1535mm x 616mm x 832mm) WATER REQUIREMENTS WATER REQUIREMENTS TWO (2) COLD WATER INLETS - DRINKING QUALITY ONE (1) TREATED WATER INLET: 3/4" NPT* * Can manifold off of
INTERIOR: INTERIOR: G0-7/16" x 24-1/4" x 32-3/4" (1535mm x 616mm x 832mm) WATER REQUIREMENTS WATER QUALITY STANDARDS TWO (2) COLD WATER INLETS - DRINKING QUALITY ONE (1) TREATED WATER INLET: 3/4" NPT* * Can manifold off of
TWO (2) COLD WATER INLETS - DRINKING QUALITY It is the sole responsibility of the owner/operator/purchaser of this equip to verify that the incoming water supply is comprehensively tested and ONE (1) TREATED WATER INLET: 3/4" NPT* * Can manifold off of
ONE (1) TREATED WATER INLET: 3/4" NPT* * Can manifold off of to verify that the incoming water supply is comprehensively tested and
ONE (1) UNTREATED WATER INLET: 0/4 'IN T one 3/4' line LINE PRESSURE: 30 psi minimum dynamic and 90 psi maximum static (200 to 600 kPa) WATER DRAIN: 1-1/2" (40mm) CONNECTION WITH A VERTICAL VENT TO EXTEND ABOVE THE EXHAUST VENT. MATERIALS MUST WITHSTAND TEMPERATURES UP TO 200°F (93°C). current and/or components and void the original equipment manufactor waranty. Alto-Shaam recommends using OptiPure [®] [www.optipurewate products to properly treat your water.
LEFT: 0" (0mm) 18" (457mm) RECOMMENDED SERVICE ACCESS Contaminant Inlet Water Requirements
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURFACES 2" (51mm) DOOR SWING OR COMBUSTIBLE SURFACES Free Chlorine Less than 0.1 ppm (mg/L)
TOP: 20" (508mm) FOR AIR MOVEMENT Hardness 30-70 ppm
4" (102mm) BOTTOM: 5-1/8" (130mm) Chloride Less than 30 ppm (mg/L) # 7.0 to 8.5 Chloride Less than 30 ppm (mg/L) Chloride Less than 30 ppm (mg/L)
4-5/16" (109mm) OPTIONAL PLUMBING KIT FOR LEGS, AIR INTAKE Silica Less than 12 ppm (mg/L)
INSTALLATION REQUIREMENTS Total Dissolved Solids (tds) 50-125 ppm
Oven must be installed level. Hood installation is required. Water supply shut-off valve and back-flow preventer when required by local code.
GAS REQUIREMENTS (GAS TYPE MUST BE SPECIFIED ON ORDER)
HOOK-UP: 3/4" NPT
RATED THERMAL LOAD CONNECTED PRESSURE
NORTH AMERICA INTERNATIONAL NORTH AMERICA INTERNATIONAL Natural Gas/Propane G20, G25, G31 Natural Gas Propane G20 20mbar
Gross Heating Value (HHV) Net Heating Value (LHV) Minimum: 5.5" W.C. dynamic Minimum: 9" W.C. dynamic G25 20mbar
266,000 Btu / hr 72.0 kW Maximum: 14" W.C. static Maximum: 14" W.C. static G31 30mbar
ELECTRICAL - CTP20-20G (DEDICATED CIRCUIT REQUIRED) WITH COMBISMOKER® OPTION
VOLTAGE PH HZ AWG CONNECTION no cord, no plug AMPS BREAKER kW CONNECTION no cord, no plug AMPS BREAKER
□ ∞ ≪ 120 1 60 14 L1, N, G 13.6 20 1.7 L1, N, G 18.4 25
208 - 240 1 ⁺ 50/60 14 L1, L2/N, G 9.6 - 8.4 15 2.0 L1, L2/N, G 12.1 - 11.3 15 2.5
208 - 240 3 50/60 14 L1, L2, L3, G 9.6 - 8.4 15 2.0 L1, L2, L3, G 12.1 - 11.3 15 2.5
→ 380 - 415 3 50/60 14 L1, L2, L3, N, G 9.2 - 8.4 15 2.0 L1, L2, L3, N, G 11.8 - 11.3 15 2.6
∞ NORTH AMERICA VOLTAGE CHOICE So GROUND FAULT OR RESIDUAL CURRENT PROTECTION DEVICE MUST ACCOMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE ELECTRICAL SERVICE CHARGE AND A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE ELECTRICAL SERVICE CHARGE AND A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE ELECTRICAL SERVICE CHARGE AND A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE CHARGE AND A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE A COMMODATE A COMMODATE A LEAKAGE CURRENT OF 20mA INTERNATIONAL VOLTAGE CHOICE A COMMODATE A COM
Image: North America Voltage Choice Image: Choice Choice Choice Image: Choice Cho
C® NORTH AMERICA VOLTAGE CHOICE SQ GROUND FAULT OR RESIDUAL CURRENT PROTECTION DEVICE MUST ACCOMMODATE A LEAKAGE CURRENT OF 20mA 🍽 INTERNATIONAL VOLTAGE CHOICE TELECTRICAL SERVICE CHARGE A

		47" (1192mm)			СТ		0-20	
	(EUC)02. ***		B B D D C C C C C C C C C C C C C C C C		4-1/4" (108mm) 4-1/4" (108mm) 4-1/4" (105mm) 4-1/8" (105mm)	C (at bottom of oven)		
	DIMENSIONS: H x W x D							
				EXTERIOR: 79-1/4" x 43-3/4" x 47" (2012mm x 1111mm x 1192mm)				
				EXTERIOR WITH RECESSED DOOR: 79-1/4" x 48-3/4" x 47" (2012mm x 1238mm x 1192mm)				
COOKING APPLIANCE ANSI/NSF 4			AU Ca	INTERIOR:			,	
WATER REQUIREMENTS				60-7/16" x 24-1/4" x 32-3/4" (1535mm x 616mm x 832mm) WATER QUALITY STANDARDS				
ONE (1) UNTREATED WATER I LINE PRESSURE: 30 psi minim WATER DRAIN: 1-1/2" (40mm) MATERIALS MUST WITHSTAND TEMP CLEARANCE REQUIREME	um dynamic and 90 p CONNECTION WITH A VE ERATURES UP TO 200°F	RTICAL VENT TO EXTEN		requirements Non-complian equipment an warranty. Alto	the incoming water sup eans of "water treatmen with the published wath ce with these minimum d/or components and v -Shaam recommends u roperly treat your water	er quality standa n standards will µ void the original using OptiPure [®]	ards shown below. potentially damage equipment manufa	e this acturer's
LEFT: 0" (0mm) 18" (457mm) RECOM			RECOMMENDED SERVICE ACCESS	Contaminant Inlet Water Requirements				
RIGHT: 0" (0mm) NON-COMBUSTIBLE SURFACES 2" (51mm) DOOR COMBUSTIBLE SUR			Free Chlorine Less than 0.1 ppm (mg/L)					
TOP: 20" (508mm) FOR AIR MOVEMENT			Hardness 30-70 ppm Chloride Less than 30 ppm (mg/L)					
BACK: 4" (102mm)				pH 7.0 to 8.5				
4-5/16" (109mm) OPTIONAL PLUMBING KIT FOR LEGS, AIR INTAKE			NIARE	Silica Less than 12 ppm (mg/L)				
Oven must be installed leve		lood installation	is required.	lo lo	tal Dissolved Solids (tds	s) 50-125 ppm	n	
Water supply shut-off valve			uired by local code.					
GAS REQUIREMENTS (GAS	TYPE MUST BE SPECIFIE	D ON ORDER)	HOOK-UP: 3/					
RATE	THERMAL LOAD		100K-0F. 3/	וואו ד	CONNECTED PRE	SSURE		
NORTH AMERICA	1	INTERNATIONAL		NORTH AMERICA		INTERNATIONAL		
Natural Gas/Propane		G20, G25, G31		Natural Gas Propane			G20 20mba	
Gross Heating Value (HHV) 242,000 Btu / hr		ting Value (LHV) 64.5 kW		Minimum: 5.5" W.C. dynamic Minimum: 9" W.C. d Maximum: 14" W.C. static Maximum: 14" W.C			G25 20mba G31 30mba	
				vv.0. sidili		SIGIL		1
FLECTRICAL - CTC20-20G		Z AWG		CONNECTION	1	AMPS	BREAKER	kW
ELECTRICAL - CTC20-20G VOLTAGE	PH H					i		
1	<u></u> HH 1 6		L1, I	N, G - no cord, n	io plug	13.0	20	1.7
VOLTAGE ∞ € 120 ∞ 208 - 240		0 12		N, G - no cord, n L3, G - no cord		13.0 9.6 – 8.4	20	
VOLTAGE ∞ ● 120 ∞ ● 208 - 240	1 6	0 <u>12</u> /60 14	L1, L2	L3, G - no cord	, no plug		15	1.7 2.0
VOLTAGE ∞ ≪ 120 ∞ 208 - 240 ∞ 380 - 415	1 6 3 50 3 50	0 12 /60 14 /60 14	L1, L2 L1, L2, I	L3, G - no cord .3, N, G - no cor	, no plug rd, no plug	9.6 - 8.4 9.2 - 8.4		1.7
VOLTAGE ∞ ● 120 ∞ ● 208 - 240	1 6 3 50 3 50	0 12 /60 14 /60 14	L1, L2 L1, L2, I	L3, G - no cord .3, N, G - no cor	, no plug rd, no plug	9.6 - 8.4 9.2 - 8.4	15	1.7 2.0

NEI 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 1236 lbs* 561 kg* GN 1/1: 530 x 325 x 65mm Forty (40) (1346 x 1346 x 2210mm)* VOLUME MAXIMUM: 300 quarts (380 liters) GN 2/1: 650 x 530 x 65mm Twenty (20) **ON WIRE SHELVES ONLY. ADDITIONAL WIRE SHELVES *DOMESTIC GROUND SHIPPING INFORMATION. CONTACT FACTORY FOR EXPORT **FULL-SIZE SHEET: 18" x 26" x 1" Twenty (20) REQUIRED FOR MAXIMUM CAPACITY WEIGHT AND DIMENSIONS.

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INSTALLATION

SITE INSTALLATION

WARNING

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.

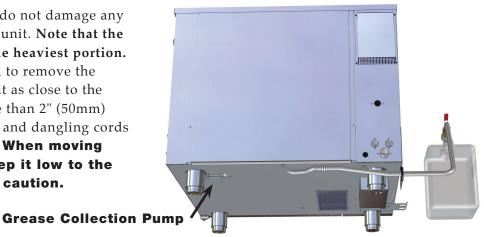
Slide the preheat strip into place before using a forklift or pallet jack in between the trolley guides to avoid damaging the preheat strip when lifting.

LIFTING INSTRUCTIONS

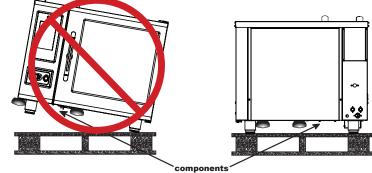
Remove banding before lifting. Lift the unit from the front only, <u>never from the side</u>.

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



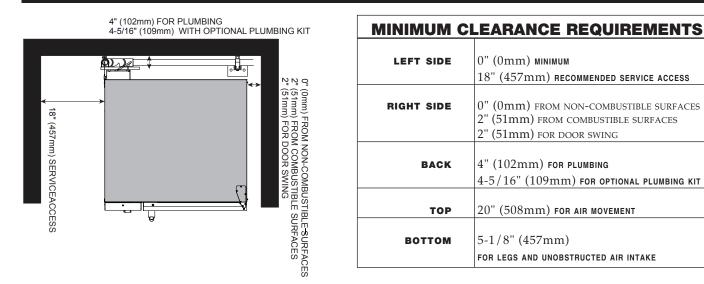




components protrude below oven

INSTALLATION

SITE INSTALLATION



- **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 fork lift for service access. Service charges in connection with inadequate service access is 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 table top 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

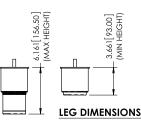
the stand. Each of the legs on the stand and the oven can be adjusted

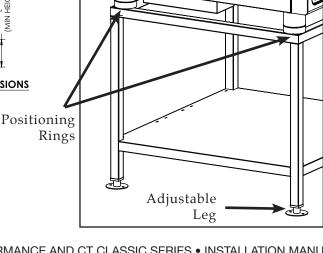
Each of the legs on the stand and the oven can be adjusted 2" (51mm) up or down.

Level the oven from front-to-back and side-to-side by means of the adjustable legs. Components within

the oven condenser tank are sensitive to pitch and can be damaged. The tolerance to level is +/-.125"

If this tolerance range is not achievable, the floor must be repaired to obtain level.





Adjustable

Positioning

Leg

Ring

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).
- **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.

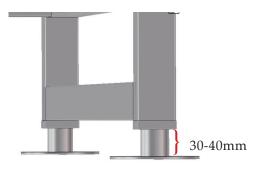
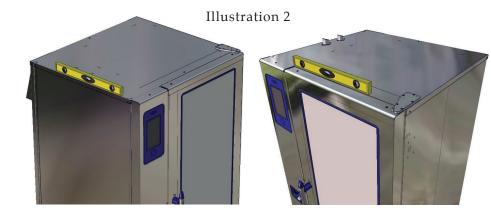
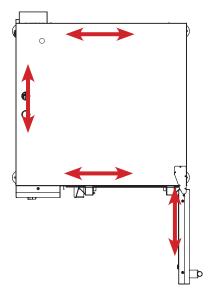


Illustration 1



- **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 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.



OPTIONS & ACCESSORIES



□ CombiClean® CombiTabs [™] — specially formulated for ctp/ctc combitherm ovens 90 (18 gram) water soluble tablets each container, sold in boxes of two (2)	CE-36354
□ Combitherm® Cleaning Liquid — specially formulated for combitherm ovens twelve (12) containers/case, 1 quart (c. 1 liter) each [special handling required]	CE-24750
□ Liquid Cleaner — Approved for combitherm ovens equipped with the optional Automatic liquid cleaning system	CE-36457
Gas Line Quick Disconnect	CR-33543
Grease Collection Pan with drain (not needed for grease collection system)	
□ 6-10, 10-10, 20-10 — 1-1/2" (38mm) deep	5003463
□ 7-20, 10-20, 20-20 — 1-1/2" (38mm) deep	4758
□ 7-20, 10-20, 20-20 — 2-3/4" (70mm) deep	14475
Probe, Sous Vide	PR-36576
Shelf, Stainless Steel Wire	
□ 7-20, 10-20	SH-22584
□ 6-10, 10-10, 20-10	SH-2903
□ 20-20	SH-22473
Smoker Box	5021859
Wood Chips — bulk pack 20 lb (9 kg)	
APPLE	WC-22543
	WC-22541
	WC-2829
MAPLE	WC-22545

ELECTRICAL SAFETY REGULATIONS

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.

WARNING



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.

DANGER



Appliances with no cord provided by factory must be equipped with a cord of sufficient length to permit the appliance to be moved for cleaning.

To prevent SERIOUS INJURY, DEATH, or PROPERTY DAMAGE: all electrical connections must be made by a qualified service technician in accordance with applicable electrical codes.

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

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.

To prevent serious injury, death, or property damage, **always** disconnect appliance from power source before cleaning or servicing.

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 since 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.

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. Recheck the main power connections at the terminal block, cable connections, and electrical terminal connections to make certain they remain tight.

WARNING

ELECTRICAL GROUNDING INSTRUCTIONS:

This appliance may be equipped with a three-pronged (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle.

NEVER cut or remove the grounding prong from this plug. Removing the grounding prong may result in serious injury, death or property damage.

AVERTISSEMENT

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Directives pour la prise de courant électrique Cet appareil est muni d'une fiche à trios branches (prise de Courant) afin de vous proéger des chocs et doit être branché Directemet dans un receptacle adequate de prise do courant À trios branches. Il ne faut pas couper ou enlever une banche De cette fiche.

380-415V:



For CE approved appliances: To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances/metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol.

ELECTRICAL CONNECTION FOR ELECTRIC 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.** 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 since connections can loosen during transport.

Hard wired models:

Hard wired models must be equipped with a country certified external allpole disconnection switch with sufficient contact separation.

If a power cord is used for the connection of the product an oil resistant cord like H05RN or H07RN or equivalent must be used.

NOTICE: Check motor rotation on the Combitherm® CT Classic CTC model line. Arrows on the motor housing indicate proper rotation.

> 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. Recheck the main power connections at the terminal block, cable connections, and electrical terminal connections to make certain they remain tight.

380-415V:

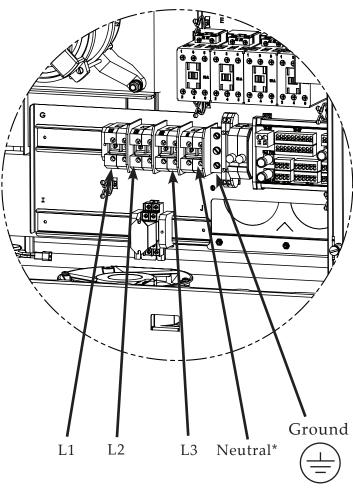


For CE approved appliances: To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances/metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol.

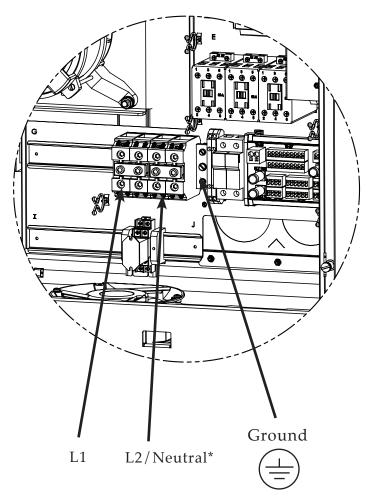
ELECTRICAL CONNECTION

Examples shown. Not all 3-phase units require a neutral.

3-PHASE ELECTRICALWITH NEUTRAL

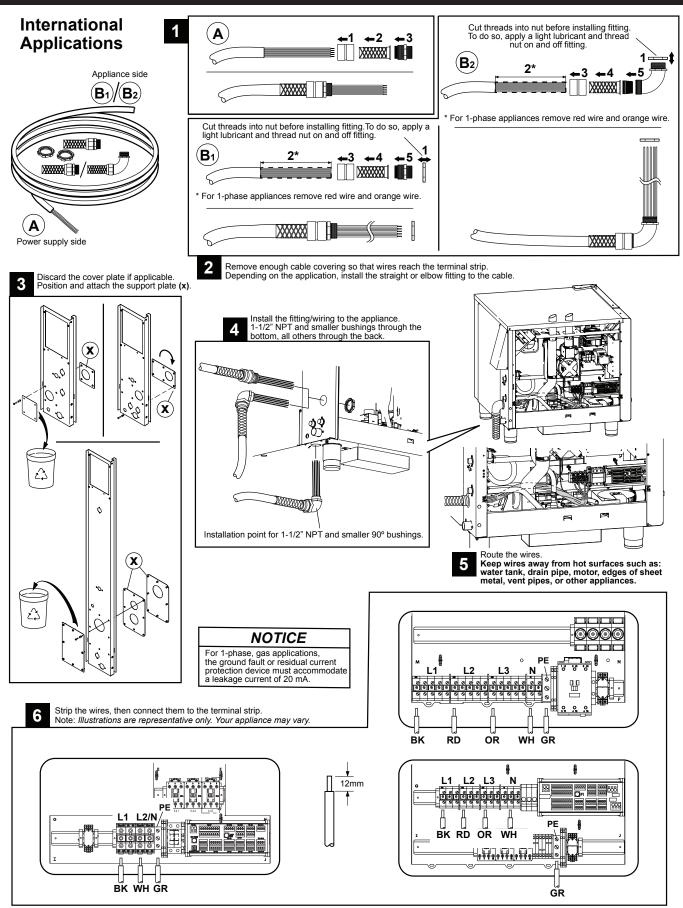


1-PHASE ELECTRICAL WITHOUT NEUTRAL

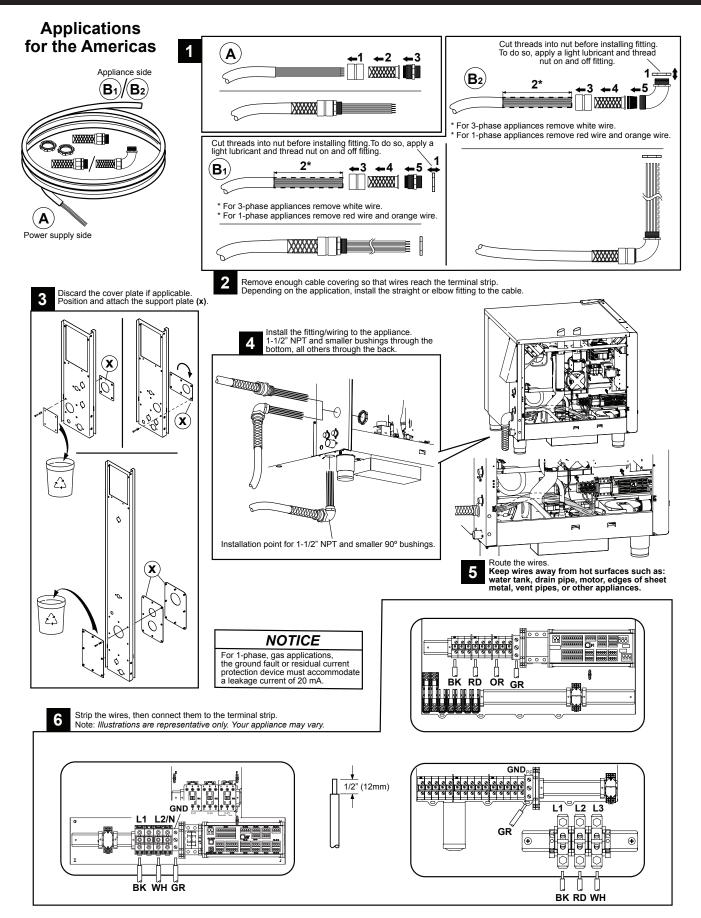


*Neutral applies only to 380/415V models

ELECTRICAL KIT INSTALLATION - 50 Hz



ELECTRICAL KIT INSTALLATION - 60 Hz



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VENTILATION REQUIREMENTS

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.

- 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 thermaloverload 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. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. When writing refer to NFPA No. 96.

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.

GAS SUPPLY & INSTALLATION

WARNING



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.



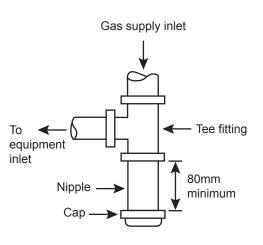
To prevent SERIOUS PERSONAL INJURY, installation of this appliance must conform to local, state, and national codes; the current edition of the American National Standard Z223.1, National Fuel Gas Code, and all local municipal building codes. In Canada, installation must be in accordance with Standard CAN/CSA B 149.1 and Installation Codes - Gas Burning Appliances, and local codes.

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	II2H3B/P	2H-G20-20mbar
СҮ	II2H3B/P	2H-G20-20mbar
ES/FR/GB/IE/CH	II2H3P	2H-G20-20mbar
AT	II2H3B/P	2H-G20-20mbar
BE	II2E(S)3B/P	2H-G20-20mbar
DE	II2ELL3B/P	2E-G20/G25-20mbar
NL	II2L3B/P	2L-G25-25mbar
Butane/Propane Mixture	Cat	Gas Type
GR	II2H3B/P	3B/P-G30/G31-30mbar
СҮ	II2H3B/P	3B/P-G30/G31-30mbar
ES/FR/GB/IE/CH	II2H3P	3P-G31-30mbar
AT	II2H3B/P	3B/P-G30/G31-50mbar
BE	II2E(S)3P	3P-G31-30mbar
DE	II2ELL3B/P	3B/P-G30/G31-50mbar
NL	II2L3B/P	3B/P-G30/G31-30mbar
AUS/NZ		NGN 1.37 kPa
AUS/NZ		LPG-X Propane 2.24 kPa
Japan		Natural Gas 13A 1.96 kPa
Japan		LPG - Propane 2.8 kPa

SEDIMENT TRAP **REQUIRED:**

Where a sediment trap is not incorporated as part of the appliance, 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.



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GAS SUPPLY & INSTALLATION

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 factory-authorized and listed kits or accessories when modifying this appliance.

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*, page 53.

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.

WARNING



To prevent serious injury, death, or property damage, **always** disconnect appliance from power source before cleaning or servicing.

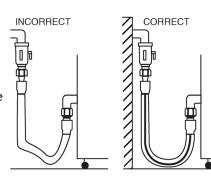
GAS SUPPLY & INSTALLATION

WARNING

To prevent SERIOUS INJURY, DEATH, or PROPERTY DAMAGE:

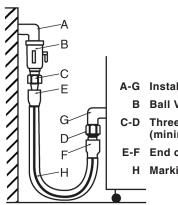
Installation, air adjustment and/or service work must be in accordance with all local codes and must be performed by a trained service technician qualified to work on gas appliances.

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 *must be disconnected* 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

- **B** Ball Valve
- C-D Three-piece union fitting (minimum 1 per installation)
- E-F End connector for the flexible tube

H Marking line

WARNING

For your safety



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

AVERTISSEMENT



PAR MESURE DE SÉCURITÉ NE PAS entreposer ni utiliser d'essence ou autres gaz ou liquides inflammables à proximité de cet appareil ou de tout autre appareil.

WARNING



To prevent SERIOUS INJURY, DEATH or PROPERTY DAMAGE:

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

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.

CAUTION

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

GAS SUPPLY & 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.

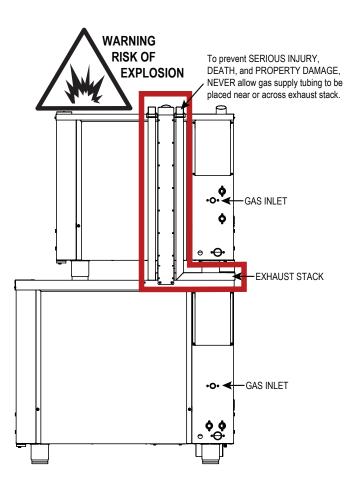
The minimum size requirement for gas piping or a flexible connector is 3/4 - inch (19mm). For long runs of gas piping, the pipe diameter must conform to the tables in the National Fuel Gas Code, ANSI/NFPA Z223.1 or European Standard EN203.

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, 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.

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 SUPPLY & INSTALLATION

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 no-hazard 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.

WARNING



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.

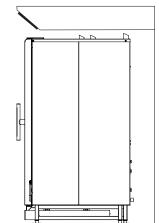
GAS EXHAUST

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 listed to ANSI/UL 705 (latest edition), and the installation must be completed in accordance with the ANSI/NFPA 96-1987, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.

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 as 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

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.

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 published at right. 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.

Contaminant	Inlet Water Requirements (Untreated Water)
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)	50-125 ppm

Alto-Shaam Combitherm Water Quality Standards

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

WARNING

Water supply must be open when cleaning program is activated.

Verify water supply before starting cleaning program.

WATER SUPPLY & INSTALLATION

WATER REQUIREMENTS

 TWO (2) COLD WATER INLETS - DRINKING QUALITY

 ONE (1) TREATED WATER INLET:
 3/4" NPT*
 * Can manifold off of one 3/4" line

 ONE (1) UNTREATED WATER INLET:
 3/4" NPT*
 one 3/4" line

 LINE PRESSURE:
 30 psi minimum dynamic and 90 psi maximum static
 (200 to 600 kPa)

 WATER DRAIN:
 1-1/2" (40mm) CONNECTION WITH A VERTICAL VENT TO EXTEND ABOVE THE EXHAUST VENT.

WATER QUALITY STANDARDS

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.

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

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.

NOTICE:

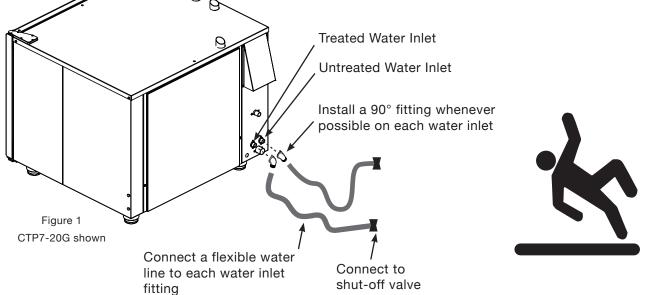
To prevent SERIOUS INJURY or **PROPERTY DAMAGE**:

Two water supplies are required for proper operation of the oven. Either both water supplies should be treated water or one may be treated and the other untreated. NEVER use two untreated water supplies.

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

To prevent water supply lines from bursting, incoming water supply should be turned OFF when not in use.

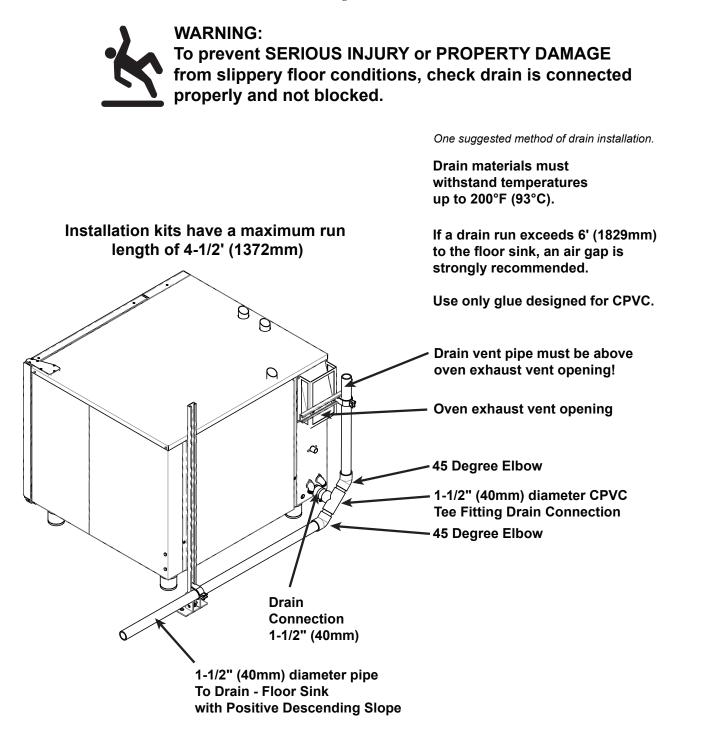
- Flush the water line at the installation site.
- **Backflow Prevention** The equipment must be installed with a check-valve or other anti-backflow/anti-siphon device on all inlet water lines in accordance with and as required by national, state, and local health, sanitation and plumbing codes.
- PIPE 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.



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.

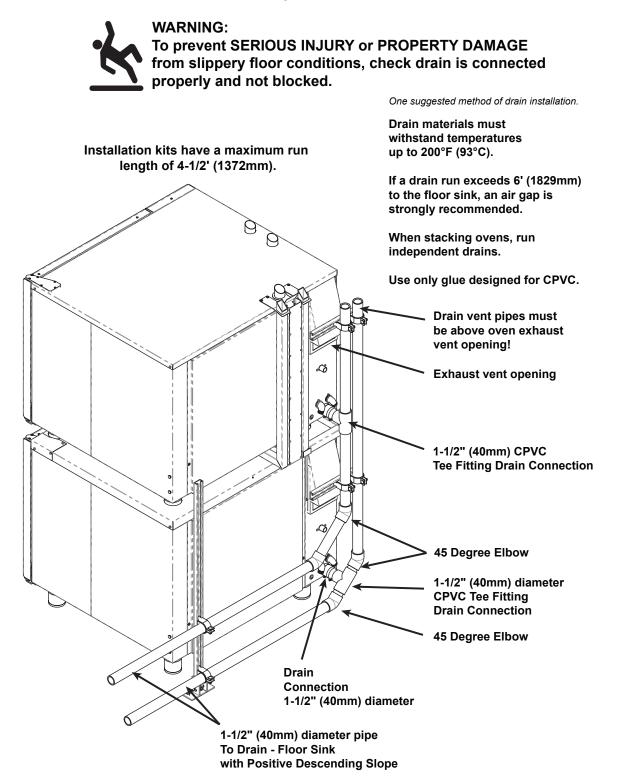
NOTICE: In the U.S.A., this equipment is to be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. [BOCA], and the Food Service Sanitation Manual of the Food & Drug Administration [FDA].



WATER DRAINAGE - FOR STACKED OVENS

A union is required. Install a 1-1/2-inch (41mm) 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].



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, nor 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.
- 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.

FIRE HAZARD

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 is not furnished with a power supply cord but 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.



WARNING

ELECTRIC SHOCK HAZARD.

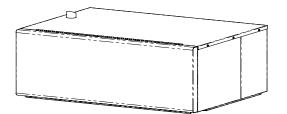
To prevent SERIOUS INJURY or DEATH, your appliance must be secured to building structure to prevent unintended movement.

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.

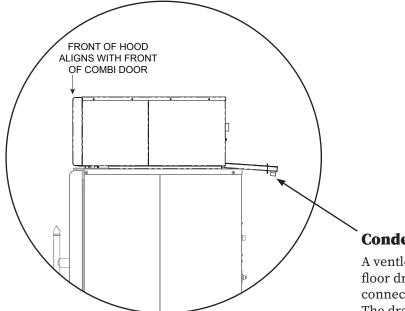
NOTICE: The mobile base used on stacked ovens is not adjustable. The equipment must be placed on a stable, non-combustible level horizontal surface.

CombiHood PLUS™ Ventless Hood 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.
- Alto-Shaam's factory installed Ventless Hood is placed directly on the top of a Combitherm oven.
- A high-power fan captures all steam and fumes from the oven cavity into the hood intake and out the back surface exhaust vent, trapping grease as the air moves through the filter system.
- As fumes and vapors are circulated through the hood, condensed steam drains from a drain at the rear of the hood.
- An activated charcoal filter cleans the air before venting it out the top of the hood.
- CombiHood PLUS[™] performance is "smart"; engaging the fan during the last minute of the cook mode which provides quiet operation and consumes less power.

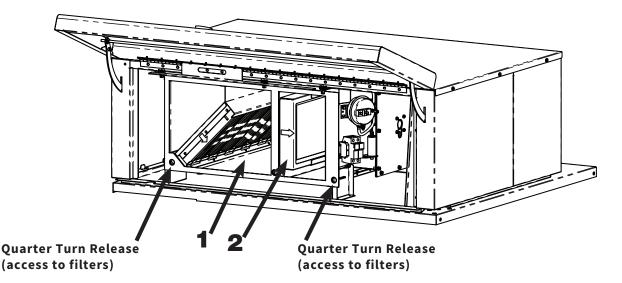


Condensate Drain

A ventless hood condensate drain line to the floor drain must be installed. The 1/2" barbed connection is found at the back of the hood. 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™ Ventless Hood Option



1 Grease Filter

(5017362):

Cleaning 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.

To replace the grease filter, the air flow arrow on the filter casing should be pointing toward the hood fan.

2 Charcoal Filter

(Class I - 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.

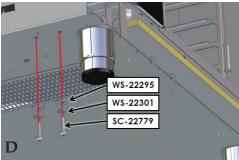
If the filters are not seated properly, an error code E102 will appear on the oven control display at the end of a cooking cycle.

GREASE COLLECTION INSTALLATION (IF EQUIPPED WITH THIS OPTION)

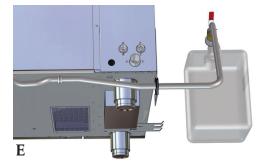


Grease Collection Hose

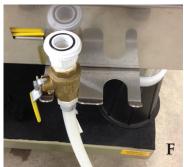
Hose hanger bracket with film



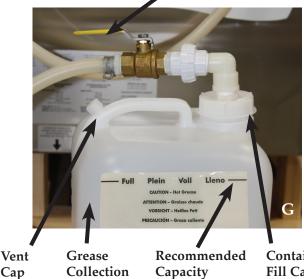




- Grease Collection Hose Assembly is attached to the oven in the back.
- The hose guide bracket can be attached on either the left side or the right side toward the back. *Placement* on the left side is recommended whenever possible. Thumb screws are in position for this purpose. Remove thumb screws, 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.







Collection Container

Capacity

Container Fill Cap

Liquid Cleaner Hook-Up (If Equipped with this Option)



- 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 eye wear, remove cap from liquid oven cleaner bottle. Pull out the Cleaner Cap and Tubing Assembly from the back of the unit screw on to 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.

WARNING

ALWAYS wear protective eye wear 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.

WARNING

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

- ---- - --- - ---- - ----

Turn on water supply.

Turn on gas supply valve (if applicable).

Turn on main electrical power to appliance.

Press Power ON icon on the appliance control panel.



The oven will automatically fill the steam generator equipped models with water that will heat to a stand-by mode temperature of 188°F (77°C).

NOTE: To power off the appliance, press and hold the power icon for 5 seconds to initiate power shut down sequence to the oven. Oven will not shut down during a cooking cycle. From time to time, the control may become unresponsive. ONLY when this happens, firmly press and hold the power key for 10 seconds to power down the oven.

If, for any reason, the oven is turned off or loses power during this start-up process, the operator will be prompted to calibrate the Touch screen when the oven is next powered up.

Return to Home Screen - Press the red arrow if the PROtouch[™] screen does not need to be calibrated.

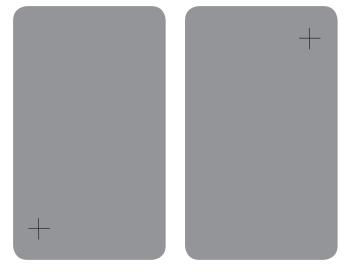
Begin Calibration Process - Press the green check mark if the Touch screen does need to be calibrated. The screen will switch to a grey background. See illustration at right. A crosshairs icon will appear. The operator should touch the center intersection using a stylus for an accurate calibration. This prompt and required action will be repeated several times in different areas of the Touch screen. When complete, the operator will be returned to the Home screen.

NOTICE: Accumulations on the main burners 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 your appliance and call a qualified and trained service technician.

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



When the oven is powered on, the PROtouch screen illuminates. "Loading" indicates that the software is booting up. The screen will also indicate what level of progress has been made as the software becomes fully operational.



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.

CT PROFORMANCE™ START-UP PROCEDURES

CONTINUED



CT CLASSIC™ START-UP PROCEDURES

- Turn on exhaust hood.
- Turn on water supply.
- Turn on gas supply valve (if applicable).
- Turn on main electrical power to appliance.
- Push power ON icon on the appliance's control panel.



The oven will automatically fill the steam generator equipped models with water that will heat to a stand-by mode temperature of 188°F (77°C).

Note: To power off the appliance, press and hold the power icon for 5 seconds to initiate power shut down sequence to the oven. Oven will not shut down during a cooking cycle. From time to time, the control may become unresponsive. **ONLY** when this happens, firmly push and hold the power button for 10 seconds to power down the oven.

Preheat the oven

Alto-Shaam recommends preheating the Combitherm® before cooking.

Steam

• Choose a **Mode**.



- Push **Temperature** button; adjust temperature with arrows.
- Push **Cook Time** button; adjust time with arrows.
- Push **Start/Stop**.
- Preheat oven before loading food.



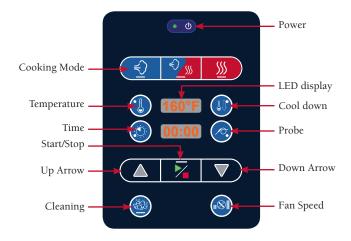
DANGER

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- 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.

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



Factory Authorized Combitherm® Installation Program POST-INSTALLATION CHECKLIST

Location Information							
Location Name:	·····	Site Con	tact Name:				
Location Street Address:	Site Contact Phone No.:						
Location City:	Site Contact Email:						
Location State:	Zip:						
Post-Installation Company Informa							
Company Name:		Techni	cian Name:				
Mailing Address:		echnician	Phone No.:				
		Cor	ntact Email:				
State:	Zip:						
Model number(s) of combi's in							
Serial number of combi's insta	lled						
		İ					
Clearance				•			
Appliance clearance	Right side			PASS	FAIL		
	Left side			PASS	FAIL		
	Rear			PASS	FAIL		
	Тор			PASS	FAIL		
Is the appliance accessible for ser	vice?	YES		NO			
If NO, comment on the issue:							
Other comments:							
Water Supply		· · · · ·				1	
Have all Y1/Y3 water lines been (treated/filtered line, if provide		PASS	FAIL				
Have all Y2/Y4 water lines been co		PASS	FAIL				
Do water supply line(s) have shut- appliance?	off(s) exclusively for each	PASS	FAIL				
Is the dynamic water pressure fro a minimum of 30 psi for each app	m the 3/4" cold water supply line liance?	PASS	FAIL	UNKNOWN			
Is the static water pressure from the 3/4" cold water supply line less than 90 psi for each appliance?			FAIL	UNKNOWN			
Is water treatment (RO blend system, filter, etc.) being used?			NO	TYPE			
If YES - Note the system here: BRAND NAME				MODEL			
Are all exterior water connections	YES		NO				
Are all interior water connections tight prior to operation?				NO	ļ		
Are there any exterior water leaks after operation?				NO	ļ		
Are there any interior water leaks	after operation?	YES		NO			
Comments:							

Factory Authorized Combitherm® Installation Program POST-INSTALLATION CHECKLIST

Electrical								
What is the rated voltage and phase of the appliance(s) installed?	VOL	TAGE			PH	ASE		
Is the wire size for the main incoming power to the appliance(s) in accordance with the minimum size listed in the specification sheet for this specific appliance?	PASS		FAIL					
What is the measured voltage at site?	L1-N		L2-N		L3-N		L1-L2	
	L2-3		L1-L3		PASS		FAIL	
What is the current draw of the appliance(s) to be supplied?	AMP R	ATING				n		
What is the on-site breaker size supplying power to the appliance(s)?	SI	ZE			PASS		FAIL	
Is there a disconnect or junction box within 3' (914mm) of where the appliance(s) will be installed?	PASS		FAIL					
Comments:								
Gas				1				
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:								
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?	PASS		FAIL					
Is there a vertical vent within 12" (305mm) of the appliance drain?	PASS		FAIL					
Is there an air gap installed at the end of the drain run?	PASS		FAIL		SI	ZE		
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.	PASS		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:								

Factory Authorized Combitherm[®] Installation Program 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	MEAS	SURE		
Cycle Y2 - Operation condensate cooling valve	YES		NO	
Dynamic water pressure with Y2	MEAS	SURE		
Cycle Y3 - Operation rinse solenoid valve	Yes		NO	
Dynamic water pressure with Y3	MEAS	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	1
	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	

Factory Authorized Combitherm® Installation Program 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					
Are water supply lines 3/4" inside diameter?	YES		NO		
Size of treated water line:					
Size of untreated water line:					

AL	to-Shaam	UN	TT	INF	ORN	TAN	IOP	1
B	usiness Name:							
М	lodel Number:							
S	erial Number:							
Daily Ir	nspection - Start Date:							
	DAILY INSP	ECT			ECK	LIST	ľ	
INS	PECT & CLEAN:	Tueso	A cune	Tinun Sedar	R Hick	Satur Satur	rday Sull	day
	uct Probe (Thermometer)	\Box	\Box			\Box	\square	\square
Door	Gasket (Inner Door Seal)							
	Inner Door Glass							
	Front Drip Tray							
	ouchscreen & Overlay ect for cracks, peeling, moisture, etc)							
	e Automatic Wash Cycle Approved Cleaning Chemical <u>ONLY</u>)							
EMI	PLOYEE INITIALS							
	COMPONENT FA							
List det <i>Monday</i>	ails of the failure(s) beside the day th	ney occurre	ed. (Leave	blank if co	omponent	s are work	ing prope	rly)
-								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								

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ALTO-SHAAM -	UNIT INFORMATION
Business Name:	
Model Number:	
Serial Number:	
Weekly Inspection - Date:	

WEEKLY INSPECTION CHECKLIST					
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					
GAS UNITS ONLY Inspect - The Heat Exchanger for any signs of major deformation (If Yes, IMMEDIATELY remove from service and take corrective action steps)					
GAS UNITS ONLY Inspect - The Heat Exchanger for any loose/disconnected pipes or flanges (If Yes, IMMEDIATELY remove from service and take corrective action steps)					
ELEC. UNITS ONLY Inspect - Convection Elements for signs of cracking, deformation, or damage					
Clean Ventless Hood grease filters					
EMPLOYEE INITIALS					

Component Failure & Replacement			
List	details of the weekly failure(s) beside the week they occurred. (Leave blank if items are working properly)		
Week 1			
Week 2			
Week 3			
Week 4			

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ALTO-SHAAM -	UNIT INFORMATION
Business Name:	
Model Number:	
Serial Number:	
Monthly Inspection - Date:	

MONTHLY INSPECTION CHECKLIST			
Inspect/Test - Proper Draining of the Oven Cavity			
Inspect - <u>All</u> Drain Lines for Leaks or Clogs			
ELEC. BOILER UNITS ONLY 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			

Component Failure & Replacement

Summarize any component failure(s) that may have occurred during this month. (Leave blank if items are working properly)

Summary of the month's component failure or replacement:

ALTO-SHAAM – UNIT INFORMATION

Business Name:

Model Number:

Serial Number:

12 Month Inspection - Date:

Twelve-Month Inspection Check	KLIST
Replace - Steam Bypass Hose	
Inspect - Cleaning Pump Hose	
Inspect/Test - Proper Draining of the Oven Cavity	
Inspect - <u>All</u> Drain Lines for Leaks or Clogs	
Inspect - <u>All</u> Solenoid Hoses (Both Ends)	
Inspect - Upper Browning Valve Hose	
Inspect - Low Pressure Relief Valve & Hose	
Inspect - Convection Element Seal (from the electrical compartment)	
GAS UNITS ONLY Inspect - Gas Heat Exchanger Seal (from the electrical compartment)	
Inspect - N6 Oven Temperature Probe Seal	
ELEC. BOILER UNITS ONLY Descale the Steam Generator	
Remove & Inspect - Steam Generator Elements	
Inspect - Hand Shower Hose	
Inspect - Hand Shower Handle	
Inspect - Product Probe	
Inspect - Water Injection Tube	

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r		
	Inspect - Oven Cavity for any signs of Scale Buildup	
	Inspect - Oven Cavity Lamp	
	Inspect - Oven Cavity for signs of Grease/Carbon Buildup	
Ins	pect - 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	
GAS UNITS ONLY	Inspect - The Heat Exchanger for any signs of major deformation (If Yes, IMMEDIATELY remove from service and take corrective action steps)	
GAS UNITS ONLY	Inspect - The Heat Exchanger for any loose/disconnected pipes or flanges (If Yes, IMMEDIATELY remove from service and take corrective action steps)	
GAS UNITS ONLY	Inspect & Ensure - Exhaust Pipes are Exiting the Oven Cavity	
GAS UNITS ONLY	Inspect - Heat Exchanger Flange Gasket (Replace as Needed)	
GAS UNITS ONLY	Inspect & Tighten - Heat Exchanger Flange Bolts	
GAS UNITS ONLY	Inspect & Tighten - Heat Exchanger Burner Flange Hardware & Gasket (Replace as Needed)	
GAS UNITS ONLY	Inspect & Tighten - Heat Exchanger Igniter Flange Hardware & Gasket (Replace as Needed)	
GAS UNITS ONLY	Inspect - Heat Exchanger Exhaust Pipes (Ensure they are exiting out past the oven cavity ceiling flange) ESG models only	
GAS UNITS ONLY	Inspect - Oven Cavity Ceiling Flange & Flange Gasket - ESG models only	
GAS UNITS ONLY	Tighten - Burner Flange Bolts	
GAS UNITS ONLY	Tighten - Igniter Flange Bolts	
<u>(If the l</u>	Inspect - Heat Exchanger Weep Holes to ensure they are free of obstructions nole is obstructed, IMMEDIATELY remove oven from service and replace the Heat Exchanger) Not applicable to CTP/CTC models	
ELEC. UNITS ONLY	Inspect - Convection Elements for signs of cracking, deformation, or damage	
	Replace - Oven Lamp Cover(s) & Gasket(s)	
	Descale the Oven Interior	
	Descale the Oven Interior Inspect - Door Gasket (Replace as Needed)	

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Inspect - Front Drip Tray (Clean as Needed)	
Inspect - Front Drip Tray Hose	
Inspect - Control Overlay	
Inspect & Tighten - All Electrical Connections	
Inspect & Test - All cooling fans for proper operation	
Inspect & Tighten - Door Hinges	
Inspect & Tighten - Door Handle	
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 <u>All</u> Three Legs <u>(WHEN HEATING)</u>	
Function Test All Components (List Components)	

COMPONENT FAILURE & REPLACEMENT

Note any component failure that was discovered during this twelve month inspection. (Leave blank if items are working properly)

Summary of the twelve month component failure or replacement:

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 Agent.

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 (Y1). 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.

CONTINUED ON NEXT PAGE

Error Codes

Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
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.
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

Error Codes

Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
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	N8 Boiler Safety Temperature Probe Fault	Boiler heating element protection probe defective or disconnected.	 N8 boiler temperature probe defective. N8 probe wires connected backwards.
E27	Boiler Element Temperature High	Boiler protection heat element temperature detected by N8 probe is more than 266°F (130°C) for more than 25 seconds, or has reached 275°F (135°C).	 Calcium build up in boiler. Check wiring to all components mentioned below. Steam element contactor locked/on. N8 boiler temperature probe defective. N8 probe wires connected backwards. Water level probe has calcium buildup.
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.
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 miss wired probe.
E41	B4 Fault	B4 probe shorted to ground	— Defective or miss wired probe.
E42	B5 Fault	B5 probe shorted to ground	— Defective or miss wired probe.
E43	N6 Fault	N6 probe shorted to ground	— Defective or miss wired probe.
E44	N8 Fault	N8 probe shorted to ground	— Defective or miss wired probe.
E45	B10 Fault	B10 probe shorted to ground	— Defective or miss wired probe.

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Error Codes

Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
E51	No Water In Boiler	Lower water level probe B2 is not satisfied within 5 minutes, after water solenoid valve Y1 is activated	 Water supply is shut off. 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.
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.

Error Codes

Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
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 5 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.

Error Codes

Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
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
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.

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Error Codes

Error Code	Error Call Out in Display	Description of Error	Possible Cause(s)
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.

SEE MOTOR CONTROL ERROR CHART ON NEXT PAGE

TOUCH MOTOR CONTROL ERROR CODES

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 setting 115V/230V		
Watchdog	LED flashing sequence, with 8 flashes per period.	Watchdog of the microcontroller released, program crash		

SERVICE PARTS

Item	Part	Description
1	5014934	Directional Panel, 6-10E
	5016376	Directional Panel, 6-10G
	5014936	Directional Panel, 10-10E
	5016377	Directional Panel, 1010G
	5014935	Directional Panel, 7-20E
	5016273	Directional Panel, 7-20G
	5014937	Directional Panel, 10-20E
	5016274	Directional Panel, 10-20G
	5015293	Directional Panel, 20-10E
	5016378	Directional Panel, 20-10G
	5015294	Directional Panel, 20-20E
	5016281	Directional Panel, 20-20G
2	GS-35235	Door Gasket, 6-10E, 6-10G
	GS-35236	Door Gasket, 10-10E, 10-10G
	GS-35238	Door Gasket, 7-20E, 7-20G
	GS-35239	Door Gasket, 10-20E, 10-20G
	GS-35237	Door Gasket, 20-10E, 20-10G
	GS-35240	Door Gasket, 20-20E, 20-20G
3	5016194	Drain Screen
4	FE-35178	Leg, Adjustable, 6-10, 10-10, 7-20, 10-20
5	1014700	Side Racks, Left, 6-10
	1014749	Side Racks, Left, 10-10
	1014748	Side Racks, Left, 7-20
	1014750	Side Racks, Left, 10-20
	5016609	Side Racks, Right, 6-10
	5016611	Side Racks, Right, 10-10
	5016610	Side Racks, Right, 7-20
	5016612	Side Racks, Right, 10-20
6	SR-36767	Side Rack Stop, 6-10
	SR-36768	Side Rack Stop, 7-20
	SR-36769	Side Rack Stop, 10-10, 10-20
7	5016536	Smoker Tray

ORIGINAL EQUIPMENT LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser that any original part that is found to be defective in Alto-Shaam, Inc. warrants to the original purchaser that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The labor warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first. Alto-Shaam will bear normal labor charges performed by an authorized Alto-Shaam service agent during standard business hours, excluding overtime, holiday rates or any additional fees.

The parts warranty remains in effect for one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first. An optional extended warranty is available but must be purchased with the original equipment order. Please consult the factory for net pricing options and details.

This warranty does not apply to:

- 1. Replacement of wear parts, including light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
- 2. Equipment damage caused by accident, shipping and handling, improper installation or alteration of any kind.
- 3. Equipment chassis or component/system damage as a result of inadequate routine maintenance and cleaning. Required maintenance and cleaning of steam generating equipment is the responsibility of the owner/operator.
- 4. Equipment used under conditions of abuse, neglect, misuse, carelessness or abnormal conditions including, but not limited to, equipment subjected to non-approved or inappropriate chemicals including, but not limited to, compounds containing chlorine, chlorides or quaternary salts, or equipment with missing or altered serial numbers. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Oven Cleaner including, but not limited to, damage due to chlorine, bleach, quaternary salts, souring powders or other harmful chemicals. Use of Alto-Shaam's Combitherm® Cleaner on Combitherm appliances is highly recommended.
- 5. 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 published at right. 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[®] products to properly treat your water.
- 6. Any losses or damage resulting from malfunction, including loss of product or consequential or incidental damages of any kind.
- Equipment damage resulting from modification in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

COMBITHERM WATER QUALITY MINIMUM STANDARDS

CONTAMINANT	INLET WATER REQUIREMENTS
Free Chlorine	Less than 0.1 ppm (mg\L)
Hardness	30-70 ppm
Chloride	Less than 30 ppm (mg\L)
рН	7.0 to 8.5
Silica	Less than 12 ppm (mg\L)
Total Dissolved Solids (tds)	50-125 ppm

This warranty is exclusive and is in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, incidental or consequential damages.

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.

Warranty effective January 1, 2014



All Alto-Shaam equipment is sold 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 equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
- 2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.

- 3. Note all damage to packages directly on the carrier's delivery receipt.
- 4. Make certain the driver signs this receipt. If he 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. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of 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.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, 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.

5		0	0	11	
Model:	 				_
Serial Number:	 				
Date Installed:	 				_
Voltage:	 				_
Purchased From:	 				_



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.