

COMBITHERM®

12•20^{Esi} COMBIoven™

Boiler-FREE

MODEL 12•20^{Esi}DELUXECAPACITY OF TWENTY -FOUR (24) FULL-SIZE OR GN 1/1 PANS,
TWELVE (12) FULL-SIZE SHEET OR GN 2/1 PANS

- Flash-steam generation makes conventional steam generator obsolete:
 - Eliminates steam generating boiler maintenance
 - Ends boiler heating element burn-out
 - Maintains steam levels without a water reservoir
- Cook by internal product temperature or time with temperature variable steam, convection heat, or a combination of both to roast, steam, bake, or oven-fry in a single piece of equipment.
- Provides increased food quality and expands menu options while increasing production efficiency and speed by as much as 70-percent compared to conventional cooking methods.
- EcoSmart™ technology reduces energy cost by using less electricity and water during both normal operation and the cleaning function.
- Gold-n-Brown™ feature provides the operator with the ability to add additional product color.
- CombiClean™ feature uses scrubbing jets of water for fully automatic cleaning. Use either commercial-strength CombiClean Tablets or Combitherm Cleaning Liquid Spray.
- Standard and Deluxe control offers additional moisture injection, Delta-T cooking, multiple language display, and other features.
- Enhanced safety feature includes automatic steam venting immediately before cooking time expires. (U.S. Pat. 7,282,674)
- CombiSmoke™ is an optional feature — patented smoking technology (U.S. Pat. 7,157,668; EU Pat. 1659911) that gives operators the unique ability to smoke any product, hot or cold.

SHORT FORM SPECIFICATIONS:

Provide Alto-Shaam Combitherm® floor standing Model 12•20^{Esi} flash-steam electric CombiOven designed with EcoSmart™ technology for reduced energy and water usage and include operational modes for steam, convection, and a combination of steam and convection heat. Standard features to include patented automatic steam venting; Gold-n-Brown™ browning function; and a self-adjusting, flush-mounted rotary door handle with a steam venting safety stop. Control to include 2-speed fan and cool-down function. Oven is to be constructed of 18 gauge stainless steel, include an attached spray hose with backflow preventer, and automatic cleaning function. The oven is to accommodate up to 12 full-size sheet pans or 24 full-size hotel pans, include standard right-hand door hinging, and Roll-in pan cart with removable drip tray and cart handle. The oven is to include the patented CombiSmoke™ smoking function (*only if requested with order*).

STANDARD CONTROL: To include removable quick-connect internal product temperature probe in the oven interior.

DELUXE CONTROL: To include removable quick-connect internal product temperature probe in the oven interior and programming capability with Rapid-Touch™ operational quick-keys.

S-CONTROL: To include removable quick-connect internal product temperature probe in the oven interior as an option.

MODELS:
 12•20^{Esi}: STANDARD

 12•20^{Esi}: DELUXE

 12•20^{Esi}: S-CONTROL
STANDARD FEATURES AND ACCESSORIES

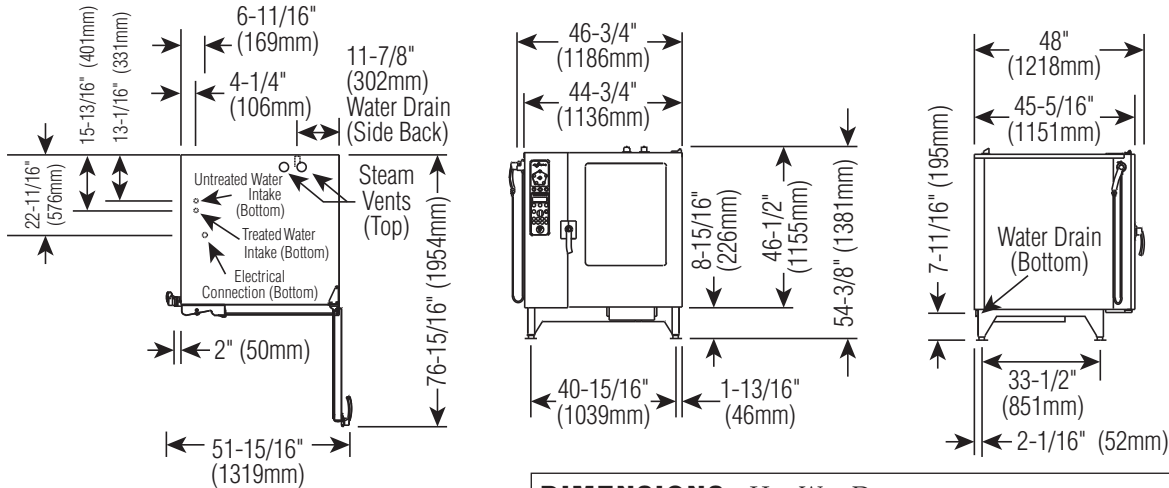
- Roll-in pan cart completely interchangeable with QC-50 QuickChiller™ and 12•20 CombiMate® companion holding cabinet with:
 - Twelve (12) non-tilt pan support rails
 - 21-1/16" (535mm) horizontal width between rails
 - 2-5/8" (65mm) vertical spacing between rails
 - Six (6) stainless steel shelves
 - Removable drip tray and cart handle
- Four (4) adjustable legs
- One (1) hand-held shower with backflow preventer PATENT PENDING
- One (1) flush-mounted rotary door latch with steam venting position
- Single-point detachable temperature probe (OPTIONAL ON S-CONTROL MODELS)



ALTO-SHAAM

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www.alto-shaam.com





| DIMENSIONS: H x W x D | |
|--|---|
| EXTERIOR: | 54-3/8" x 46-3/4" x 48" (1381mm x 1186mm x 1218mm) |
| EXTERIOR WITH RETRACTABLE DOOR: | 54-3/8" x 50-3/4" x 48" (1381mm x 1288mm x 1218mm) |
| INTERIOR: | 38-11/16" x 26-1/4" x 32-11/16" (983mm x 667mm x 830mm) |

INSTALLATION REQUIREMENTS

Oven must be installed level.

Hood installation is required.

Water supply shut-off valve and back-flow preventer.

WATER REQUIREMENTS

TWO (2) COLD WATER INLETS - DRINKING QUALITY

ONE (1) TREATED WATER INLET: 3/4" NPT*

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

LINE PRESSURE: 30 to 90 psi 2.8 to 6.2 bar

WATER DRAIN: 1-1/2" CONNECTION WITH AIR GAP

* Can manifold off of one 3/4" line.

WATER QUALITY MINIMUM STANDARDS

USING A WATER SUPPLY NOT MEETING ALTO-SHAAM'S MINIMUM WATER QUALITY STANDARDS WILL VOID THIS WARRANTY. It is the responsibility of the purchaser to ensure that incoming water supply is compliant with the specifications listed through adequate treatment measures. Installation of the CombiGuard™ Water Filtration System is recommended, but this system may not address all water quality issues present.

| Contaminant | Inlet Water Requirements (untreated water) |
|------------------------------|--|
| Free Chlorine | Less than 0.1 ppm (mg/L) |
| Hardness | Less than 3 gpg (52 ppm) |
| Chloride | Less than 30 ppm (mg/L) |
| pH | 7.0 to 8.5 |
| Alkalinity | Less than 50 ppm (mg/L) |
| Silica | Less than 12 ppm (mg/L) |
| Total Dissolved Solids (tds) | Less than 60 ppm |

CLEARANCE REQUIREMENTS

LEFT: 6" (152mm) PLUS SERVICE ACCESS: 18" (457mm) RECOMMENDED 20" (508mm) FROM HEAT PRODUCING EQUIPMENT

RIGHT: 4" (102mm) TOP: 20" (508mm) FOR AIR MOVEMENT

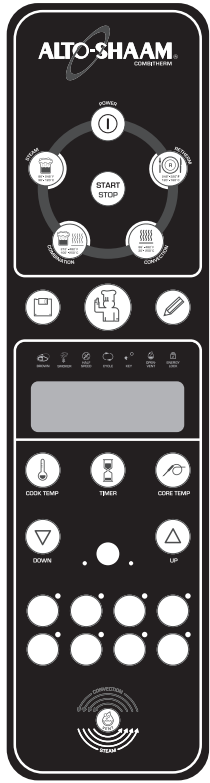
BACK: 4" (102mm) BOTTOM: 5-1/8" (130mm) FOR LEGS

| ELECTRICAL (DEDICATED CIRCUIT REQUIRED) | | | | 12•20esi | | 12•20esi/sk | | |
|--|---------|-------|----------|--------------------|---------|--------------------|---------|------|
| | VOLTAGE | PHASE | CYCLE/HZ | AWG | AMPS | kW | AMPS | kW |
| 208-240 | at 208 | 3 | 60 | 3 Wire plus ground | 75.6/ph | 27.2 | 77.0/ph | 27.7 |
| | at 240 | | | AWG 2 | 87.0/ph | 36.1 | 88.2/ph | 36.6 |
| 380-415 | at 380 | 3 | 50 | 4 Wire plus ground | 41.4/ph | 27.2 | 42.1/ph | 27.7 |
| | at 415 | | | AWG 6 | 50.0/ph | 35.7 | 51.0/ph | 36.6 |
| 440-480 | at 440 | 3* | 60 | 3 Wire plus ground | 36.0/ph | 27.2 | 36.4/ph | 27.7 |
| | at 480 | | | AWG 6 | 43.5/ph | 36.1 | 44.0/ph | 36.6 |

* ELECTRICAL SERVICE CHARGE APPLIES

| WEIGHT | | | CAPACITY | |
|--|-----------------|--|---|------------------|
| NET | 630 lb (286 kg) | | FULL-SIZE PANS: 20" x 12" x 2-1/2" | Twenty-four (24) |
| SHIP | 750 lb (340 kg) | | GN 1/1: 530 x 325 x 65mm | Twenty-four (24) |
| CRATE DIMENSIONS: (L x W x H) EST 53" x 53" x 87" (1346 x 1346 x 2210mm) | | | GN 2/1: 650 x 530 x 65mm | Twelve (12) |
| | | | FULL-SIZE SHEET PANS:* 18" x 26" x 1" ON WIRE SHELVES ONLY | Twelve (12) |
| | | | 288 lb (131 kg) MAXIMUM | |
| | | | VOLUME MAXIMUM: 180 QUARTS (228 LITERS) | |

* ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY



Deluxe Control

(PICTURED)

The Combitherm deluxe control includes all the operational functions of the standard control and adds a programming function. Program memory can accept up to 250 procedures, each with up to 20 steps in any combination of cooking modes. The deluxe control also features a set of 8 Rapid-Touch™ keys to assign frequently used programs to cook at the touch of a single button.

Standard Control

The Combitherm standard control includes all operational functions shown to steam, bake, and roast by time or internal product temperature. The control features the Gold-n-Brown™ automatic browning function, a Retherm Mode for plate regeneration, plus a wide variety of auxiliary functions and operational settings. This control is offered for operators that do not require programming capability.



S-Control

The Combitherm S-Control includes all basic combination oven operational modes with the use of rotary dials. The S-Control also features the Gold-n-Brown™ automatic browning function, an automatic cleaning setting, an oven cool-down function, and a half-speed fan position. S-Control models can also be furnished with CombiSmoke or Core Temperature option package.



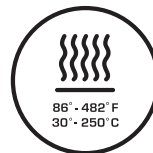
Steam Mode

Automatic steaming at 212°F (100°C)
Quick steaming between 213°F and 248°F (101°C and 120°C)
Low temp steaming between 86°F and 211°F (30°C and 99°C)



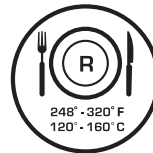
Combination Mode

Steam and convection cooking with a temperature range of 212°F to 482°F (100°C to 250°C)



Convection Mode

Cooking without steam at a temperature range of 86°F to 482°F (30°C to 250°C)



Retherm Mode

Food or plated meal reheating with automatic steam injection at a temperature range of 248°F to 320°F (120°C to 160°C)



Core Temperature Mode

Cooking by sensing internal product temperature in any selected cooking mode



Gold-n-Brown™

An automatic browning function to be set or programmed as needed to add additional product color in the combination or convection mode of operation.



CombiSmoke™ (option)

Patented Alto-Shaam technology (U.S. Pat. 7,157,668; EU Pat. 1659911) provides the ability to smoke any product, hot or cold, utilizing real wood chips. The smoking feature functions in both combination and convection mode and can be programmed into deluxe model operating procedure.



FACTORY INSTALLED OPTIONS

(MAY REQUIRE ADDITIONAL LEAD TIME)

- CombiSmoke™** (U.S. Pat. 7,157,668; EU Pat. 1659911)

NO CHARGE WHEN REQUESTED AT TIME OF ORDER.
SAMPLE BAG OF WOOD CHIPS INCLUDED.



- Recessed Door**

INCREASES OVEN WIDTH BY 4" (102mm)

Single-point removable temperature probe

INCLUDED ON STANDARD AND DELUXE OVENS

- OPTIONAL ON S-CONTROL OVENS WITHOUT COMBISMOKE OPTION [5005679]

- OPTIONAL ON S-CONTROL OVENS WITH COMBISMOKE OPTION [5011457]

- Multi-point, hard-wired internal product temperature probe** [5005678]

NOT AVAILABLE ON OVENS WITH S-CONTROL

- Security Devices** FOR CORRECTIONAL FACILITY USE

EXCLUDES TEMPERATURE PROBE

Additional Security Options

- ANTI ENTRAPMENT DEVICE [5011081]

- CONTROL PANEL SECURITY COVER [5011080]

- HASP DOOR LOCK (PADLOCKS NOT INCLUDED) [5011079]

- SEISMIC LEG PACKAGE (FOR BOLTING TO THE COUNTERTOP) [5011135]

- TAMPER-PROOF SCREW PACKAGE FOR OVEN [5011082]

- ROLL-IN PAN CART [5010365]

- Computer Software Options** [5005676]

Not available on S-Control Models.

REFER TO HACCP SPECIFICATION SHEET #9015

FOR APPLICABLE PART NUMBERS

- HACCP Documentation**

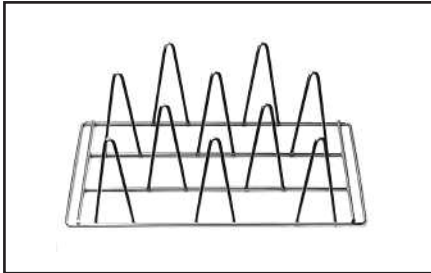
- HACCP Documentation with Kitchen Management**



- Wireless HACCP Documentation with Kitchen Management**



IEEE 802.11b STANDARDS



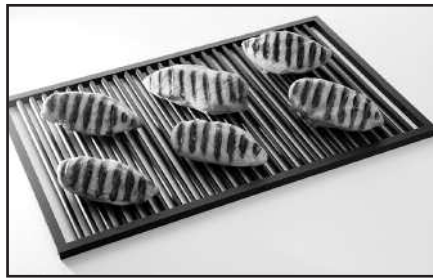
Ten (10) Chicken Roasting Rack
SH-22634



Six (6) Chicken Roasting Rack
(PAN NOT INCLUDED) SH-23000



Fry Basket BS-26730



Grilling Grate SH-26731



Roll-In Pan Cart
UN-27968



| OPTIONS & ACCESSORIES | |
|---|---------------------|
| <input type="checkbox"/> CHICKEN GREASE TRAY WITH DRAIN: 1-1/2" (38mm) DEEP | 4758 |
| <input type="checkbox"/> CHICKEN GREASE TRAY WITH DRAIN: 2-3/4" (70mm) DEEP | 14475 |
| CHICKEN ROASTING RACKS: | |
| <input type="checkbox"/> 6 CHICKEN CAPACITY — FITS FULL-SIZE PAN: 6 RACKS PER OVEN | SH-23000 |
| <input type="checkbox"/> 8 CHICKEN CAPACITY — FITS FULL-SIZE PAN: 8 RACKS PER OVEN | SH-23619 |
| <input type="checkbox"/> 10 CHICKEN CAPACITY — FITS IN SIDE RACKS: 8 RACKS PER OVEN | SH-22634 |
| <input type="checkbox"/> COMBIGUARD™ TRIPLE-GUARD WATER FILTRATION SYSTEM (INCLUDES 1 CARTRIDGE) | FI-23014 |
| <input type="checkbox"/> COMBIGUARD™ REPLACEMENT FILTER | FI-26356 |
| <input type="checkbox"/> COMBITHERM CLEANING LIQUID — SPECIALLY FORMULATED FOR COMBITHERM OVENS ➔ TWELVE (12) CONTAINERS/CASE, 1 QUART (C. 1 LITER) EACH | CE-24750 |
| <input type="checkbox"/> COMBICLEAN™ TABLETS — SPECIALLY FORMULATED FOR COMBITHERM OVENS ➔ 90 PACKETS EACH CONTAINER - MUST BE ORDERED IN EVEN QUANTITIES OF TWO (2) OR MORE | CE-28892 |
| <input type="checkbox"/> FRY BASKET, 12" x 20" (325mm x 530mm) | BS-26730 |
| <input type="checkbox"/> GRILLING GRATE, 12" x 20" (325mm x 530mm) | SH-26731 |
| <input type="checkbox"/> PREHEAT SEALING STRIP (TO PREHEAT RIGHT HAND UNITS WITHOUT ROLL-IN TROLLEY) | 1010739 |
| <input type="checkbox"/> PREHEAT SEALING STRIP (TO PREHEAT RECESSED DOOR UNITS WITHOUT ROLL-IN TROLLEY) | 1010752 |
| <input type="checkbox"/> ROLL-IN PAN CART: (H x W x D): 48-13/16" x 28-15/16" x 35-3/16" (1240mm x 734mm x 892mm) INTERCHANGEABLE WITH 12•20 COMBIMATE HOLDING CABINET AND QC-50 QUICKCHILLER | UN-27968 |
| <input type="checkbox"/> ROLL-IN PAN CART — SECURITY OPTION: INCLUDES TAMPER-PROOF SCREWS AND WELDED HANDLE (H x W x D): 48-13/16" x 28-15/16" x 35-3/16" (1240mm x 734mm x 892mm) INTERCHANGEABLE WITH 12•20 COMBIMATE HOLDING CABINET AND QC-50 QUICKCHILLER | 5010365 |
| ROLL-IN PLATE CART: (H x W x D): 48-3/4" x 28-15/16" x 36-7/8" (1238mm x 734mm x 937mm) INTERCHANGEABLE WITH 12•20 COMBIMATE HOLDING CABINET AND QC-50 QUICKCHILLER | |
| <input type="checkbox"/> 52 PLATE CAPACITY – PLATE SIZE 10" TO 12" DIAMETER (254mm TO 305mm) PLATES; 3-3/4" (95mm) SPACING | UN-28456 |
| <input type="checkbox"/> 70 PLATE CAPACITY – PLATE SIZE 10" TO 12" DIAMETER (254mm TO 305mm) PLATES; 2-3/4" (70mm) SPACING | UN-27969 |
| <input type="checkbox"/> SCALE FREE™ (CITRUS BASED, NON-CORROSIVE DELIMING PRODUCT) | CE-27889 |
| <input type="checkbox"/> SERVICE START-UP CHECK AVAILABLE THROUGH AN ALTO-SHAAM FASTEAM CENTER | SPECIFY AS REQUIRED |
| <input type="checkbox"/> SHELF, STAINLESS STEEL WIRE | SH-22473 |
| WOOD CHIPS — BULK PACK 20 lb (9 kg) | |
| <input type="checkbox"/> ➔ Apple . . .WC-22543 <input type="checkbox"/> ➔ Cherry . . .WC-22541 <input type="checkbox"/> ➔ Hickory . . .WC-2829 <input type="checkbox"/> ➔ Maple . . .WC-22545 | |