SelfCookingCenter® CombiMaster® Plus CombiMaster®

Original Installation Manual



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Unit type

Unit type

	Specify for all queries:
Dealer	Appliance model
	Unit no.:
Installer	Set to gas type:
	Your unit was checked by:

1 Introduction

1 Introduction

1.1 About this manual

- > This installation manual is part of and shipped with the unit, and contains information on its safe installation.
- > Read this installation manual completely before installing the unit.
- > This installation manual must be kept available to installers at all times at the installation location.
- > Keep this installation manual on hand throughout the entire life of the unit.
- > This installation manual is to be passed on to any subsequent owners/operators of the unit.

The target group for this installation manual are knowledgeable technicians who are familiar with the process of installing and operating the unit.

All illustrations in this manual are examples only. Deviations between these illustrations and the unit on site are possible.

Target group

Illustrations

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1 Introduction

This manual applies to the following units:

- > all SelfCookingCenter® WE units
- > SelfCookingCenter® XS
- > all CombiMaster® Plus units

Abbreviations used in this manual:

Product name	Abbreviation used
SelfCookingCenter® WE	SCC
SelfCookingCenter® XS	SCC
CombiMaster® Plus	CMP

Appliance size	Abbreviation used
6 x 2/3 GN	60
6 x 1/1 GN	61
6 x 2/1 GN	62
10 x 1/1 GN	11
10 x 2/1 GN	12
20 x 1/1 GN	21
20 x 2/1 GN	22

Unit sizes 60, 61, 62, 11, and 12 are referred to collectively as tabletop units.

Unit sizes 21 and 22 are referred to collectively as floor units.

Device overview:

	60	61	62	11	12	21	22
SCC Elektro	X	X	X	X	X	X	Х
SCC Gas		х	X	X	X	х	Х
CMP Elektro	х	х	х	X	х	х	х
CMP Gas		X	Х	×	X	×	х

1.2 Warnings used



DANGER

Hazardous situation that may result in severe injury or death.



WARNING

Hazardous situation that could potentially result in serious injury or death.



CAUTION

Hazardous situation that could result in minor injury.





Fire hazard!





CAUTION

Danger of burns!





CAUTION

Corrosive chemical substances!



DANGER

High voltage.

Caution, danger to life



Non-compliance can result in severe injury or death.



NOTICE

Non-compliance may result in material damage.

1 Introduction

1.3 Warranty

Exceptions to the warranty include

- > Damage to glass, light bulbs and gaskets,
- > Damage resulting from improper use, installation, maintenance, repair or descaling,
- > Use of the unit for purposes other than those for which it is intended,
- Modifications or technical alterations to the unit not authorized in writing by the manufacturer,
- > Usage of non manufacturer-original service components,
- > Damage resulting from failure to observe the installation instructions in this manual.

2 Safety instructions

2 Safety instructions

Incorrect installation

Incorrect installation, service, maintenance or cleaning of this unit can result in damage, injury or death, as can modifications to the unit. Read the installation manual carefully prior to installation.

Unit usage

> The unit may only be used for purposes of cooking food in commercial kitchens. All other uses are counter to its intended purpose, and may be dangerous.

Gas appliances



Combustion gases!

When installing under an exhaust hood: Ensure to switch the exhaust hood on when the unit is in operation and it is operational.

> Do not place anything near or atop the unit's exhaust pipes.

2 Safety instructions

Operating personnel

- > This unit must not be used by children or by persons with reduced physical, sensory or mental capabilities, or by persons with insufficient experience and/or knowledge, unless such persons are under the supervision of another person who takes responsibility for their safety.
- > To avoid accidents or damage to the unit, it is imperative that operating personnel receive regular training and safety instructions.

Explosion hazard



Explosion hazard

If you smell gas:

- > Shut off gas supply immediately,
- > Do not turn on or off any electrical switching devices,
- > Ventilate the room well,
- > Avoid any open flames or sparks,
- > Use a telephone outside the affected ares to inform the gas provider immediately. If the gas provider cannot be reached, call the local fire department.

3 Installation instructions

3 Installation instructions

Standards

- > Local and country-specific standards and regulations regarding the installation and operation of commercial cooking appliances must be observed at all times.
- In all other countries, the corresponding country-specific standards and regulations are to be observed.

Liability / Warranty

- > Damage occurring as a result of non-compliance with installation instructions is excluded from the warranty.
- Installations and repairs not carried out by authorized professionals or not using original spare parts, and technical modifications to the unit which are not approved by the manufacturer in writing, void the manufacturer's warranty and product liability.

Conformity

> Unit conformity is in reference to the overall unit at the time of delivery. The operator is responsible for ensuring extended conformity following any expansions/connection of additional functions.

Connection work

> The necessary connections (water, electricity, drain and gas) must only be set up by trained professionals in accordance with local regulations.

Prior to installation

> Check the unit for transport damage.

If you suspect the unit has been damaged in transit, contact your dealer/freight forwarder immediately! Ensure to note damage at time of delivery on bill of lading with the driver.

Disposing of old appliances

> When the unit reaches the end of its service life, it must not be taken to a municipal collection point for trash or used electrical appliances. Please conntact your service provider for disposal.

3 Installation instructions

Air filter maintenance:

- > The unit automatically detects dirty air filters. It will display a service prompt instructing you to clean or replace the air filter.
- > Never operate the unit without the air filter.

When replacing the air filter, please note:

Tabletop units The user may replace the air filter. To replace the

air filter, carefully latch the new filter into the correct position. Follow the instructions in the Building Equipment and Appliances chapter of

the user's manual.

Unit size 60 Air filter part number: 40.04.771

Unit sizes 61, 62, 11 and 12 Air filter part number: 40.02.684

Floor units Air filters on these uni

Air filters on these units must only be replaced by authorized service partners.

NOTICE



Water protection class and reach-through protection on floor units are only guaranteed if air filter and cover are correctly installed.

4 Unit transportation

4 Unit transportation



CAUTION

Risk of injury!

Unit may tip over.

When transporting: Secure the unit against

tipping.

21, 22: are top heavy.



CAUTION

Risk of injury!

Note unit weights.

Use lifting aids.

Wear safety shoes.

Weight (without packaging)

	60	61	62	11	12	21	22
SCC Electro [kg]	72	111	145	136	189	266	343
SCC Electro [lb]	159	245	320	300	417	586	756
SCC Gas [kg]		130	173	159	205	294	381
SCC Gas [lb]		287	381	351	452	648	840
CMP Electro [kg]	62	103	147	132	182	254	334
CMP Electro [lb]	137	227	324	291	401	560	736
CMP Gas [kg]		114	160	143	196	284	354
CMP Gas [lb]		251	353	315	432	626	780

Unit size 60



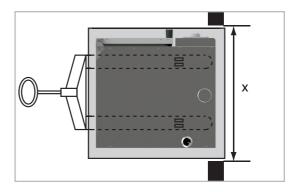


Risk of damage to the unit!

When transporting unit, ensure that air filter box and USB port remain undamaged.

4 Unit transportation

Transporting unit with pallet:



Note required door width:

Appliance size	60	61	62	11	12	21	22
x [mm]	880	920	1120	920	1120	950	1150
x [Inch]	343/4	36 1/4	44 1/8	36 1/4	44 1/8	37 1/2	45 1/4

Transporting unit without pallet:

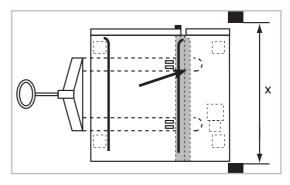


Risk of damage to the unit!

Only floor units may be transported without a pallet using pallet truck.



Lay wooden beams underneath in grey area (see arrow).



4 Unit transportation

NOTICE



Risk of damage to the unit!

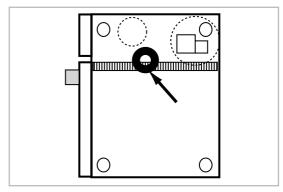
Tabletop units not secured with a pallet should only be transported using carrying straps.

Note required entrance width:

Appliance size	60	61	62	11	12	21	22
x [mm]	630	845	1045	845	1045	925	1145
x [Inch]	24 6/8	33 1/4	41 1/8	33 1/4	41 1/8	363/8	45 1/8

Center of gravity

Keep the unit's center of gravity in mind to prevent it from tipping over (especially unit sizes 21, 22).



NOTICE

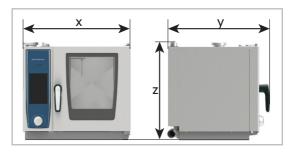


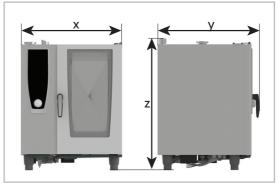
Risk of damage to the unit!

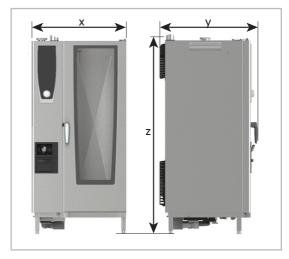
Note height of entrances.

5 Setting up the unit

5.1 Unit dimensions







Width x	60	61	62	11	12	21	22
SCC, CMP [mm]	657	847	1069	847	1069	879	1084
SCC, CMP [Inch]	25 7/8	33 3/8	42 1/8	33 3/8	42 1/8	34 5/8	42 5/8
Depth y	60	61	62	11	12	21	22
SCC, CMP [mm]	623	843	1043	843	1043	909	1114
SCC, CMP [Inch]	24 1/2	33 1/4	41 1/8	33 1/4	41 1/8	35 3/4	43 7/8
Height z	60	61	62	11	12	21	22
SCC, CMP el. [mm]	598	832	832	1092	1092	1842	1842
SCC, CMP el. [Inch]	23 1/2	323/4	323/4	43	43	72 1/2	72 1/2
SCC, CMP gas [mm]		832	832	1092	1092	1842	1855
SCC, CMP gas [Inch]		323/4	323/4	43	43	72 1/2	73

5.2 Minimum distances

NOTICE

Unit overheating may cause material and unit damage!



If the ambient temperature to the left of the unit becomes too high, it may trigger an emergency shutdown of the unit.

NOTICE



Unit overheating may cause material and unit damage!

Do not install fryers to the rear of the unit.

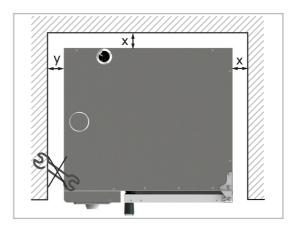
NOTICE



Frost may cause unit damage!

Only install units in frost-proof rooms.

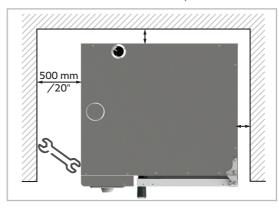
Minimum distance to walls



Appliance size	60	61	62	11	12	21	22
x [mm]	10	50	50	50	50	50	50
x [Inch]	1/2	2	2	2	2	2	2
y [mm]	10	50	50	50	50	500	500
y [Inch]	1/2	2	2	2	2	20	20

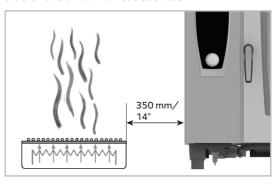
Recommendation

At least 20" [500 mm] away from left side of the unit so that service work can be performed.



Minimum distance to other units

Minimum 14" [350 mm] distance between left side of the unit and heat sources.



Heat shield

To reduce thermo loads to the unit heat shields can be used (see options).

Minimum distance to ceiling

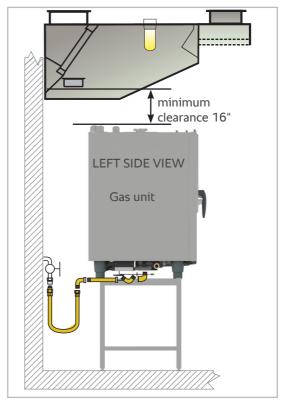


Fire hazard!

Keep minimum clearance between unit and ceiling.

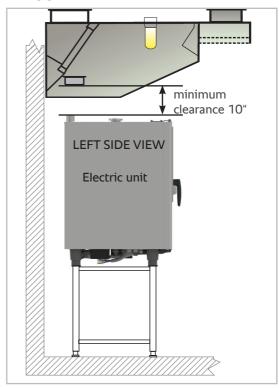
Gas units:

Recommended 16" (400 mm) clearance from unobstructed rear exhaust pipes and any surface collecting grease or flammable material.

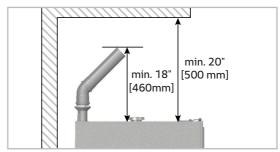


Electric units:

Recommended 10" (254 mm) clearance from unobstructed rear vent pipes and any surface collecting grease or flammable material.



If steam from the venting pipe cannot be directed into an exhaust hood or a ventilating ceiling, there must be at least 20" [500 mm] clearance space above the unit.



Condensation breaker

This clearance space is sufficient to install a condensation breaker so that exhaust air can be directed into non-critical areas

Other

NOTICE

Unit malfunction!



Avoid steam or grease sources near the cooling air filter. Moisture intake may result in unit malfunctions.

5.3 Securing the unit

5.3.1 Tabletop units

For safety reasons, tabletop units should only be placed atop a manufacturer-original oven stand or base unit. Maximum working height for the topmost rack is 63" [1600 mm].

Unit size 60

These units do not have height-adjustable feet; instead, they are set up directly on the installation surface.

The installation surface must be level, clean and free of grease. Unevenness across the width of the unit must be no greater than 0.04" [1 mm].

A sealant band is affixed to the underside of the unit to seal the installation site. This prevents dirt from getting underneath the unit. When moving the unit, take care not to damage this seal.

Mounting onto an oven stand:

Insert the two included neoprene blind rivet nuts into the holes in the rear part of the underbody. Place the unit onto the oven stand. Secure in place using the screws provided.



Unit sizes 61, 62, 11, 12

> Place the unit onto the stand. Catching the feet of the unit in place using the locating pins on the stand.



> Level the unit using the unit feet.





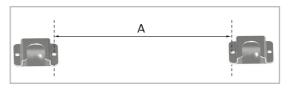
Gas appliances:



Installing onto an original oven stand:

> use the mounting kit (article number 8700.0317) to attach the stand to the floor, either with screws and dowels or with the special adhesive provided.





Appliance size	61 / 11	62 / 12
A [mm]	745.5	965.5
A [Inch]	29 3/8	38

NOTICE



Oven stand mounting kit is not included in delivery and must be ordered separately.

Insert the oven stand into the foot locks and set the stand up horizontally in the installation location.



Securing a gas appliance:

Installing onto an original oven stand, a work table or onto the kitchen floor (e.g., Combi-Duo):

- > Connect unit feet with foot locks Article number: 12.00.519 (1x) Article number: 60.70.463 (set of 4)
 - 1 Unscrew the lower part of the feet
 - 2 Push the retaining plates into the bases and secure using the nuts provided
 - 3 Screw the bases back in with the retaining plates in place
 - 4 Adjust all four feet to same length.

> Secure the retaining plates to the installation site using screws and dowels or nuts and bolts.



NOTICE



Oven stand foot locks are not included in delivery and must be ordered separately.

Movable oven stands/base units:

NOTICE



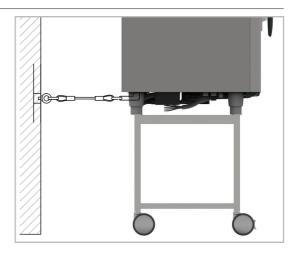
Oven stand foot locks are included in delivery with movable oven stand.

WARNING

Risk of damage / injury!

Damage to electrical, gas, water and drain lines.

When mounting onto a rolling base unit or movable oven stand or movable on castored Combi-Duo, secure additionally with an approved chain shorter than the gas line to prevent excess movement.



5.3.2 Floor units

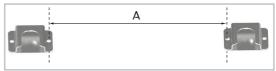






Secure the unit against movement. The enclosed mounting kit may be used to do this.





Appliance size	21	22
A [mm]	732.5	937.5
A [Inch]	28 7/8	37

If using the mounting kit, push the floor unit into the foot locks.



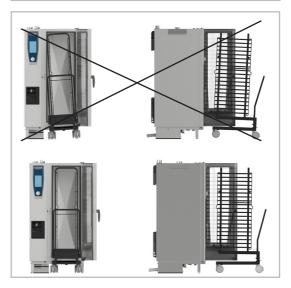
Mobil oven racks

Make sure the mobile oven rack is positioned level within the unit.

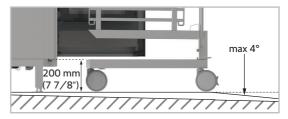
NOTICE



Incorrectly aligning the oven rack may cause the unit to malfunction (e.g., during cleaning).



Make sure there is 7 7/8" [200 mm] distance between the upper edge of the entry ramp and the floor with the unit feet.



Check the cooking cabinet door seal:

Valid for SCC

- > activate the "Rinse Without Tabs" cleaning program,
- > observe for excess leakage,
- > adjust door as needed.

Valid for CMP:

- > activate the interim cleaning (CLE3) cleaning programme.
- > observe for excess leakage,
- > adjust door as needed.

Entry ramp

If the floor is uneven, use an entry ramp to compensate for the unevenness. The approach angle must be no greater than 4°.

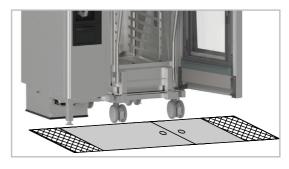


Scalding hazard!

Hot cooking liquid

Exceeding the approach angle can result in hot cooking liquid spilling over from cooking containers.

Drain troughs in front of floor units: Position flat plates over the trough in front of the mobile oven rack.



Handle storage

The included holder provides a convenient place to store the mobile oven rack handle during cooking. Remove the left side panel to mount the holder. Insert the holder onto the left side panel of the unit. Then attach the handle.



NSF cover panel

For hygiene reasons and in accordance with NSF Standard 4 and DIN EN 203-3, a cover panel must be installed over the drain valve and cleaning pump on units 21 and 22.

This cover is included with the unit.





NOTICE

This does not apply to 21, 22 mobile units.

6 Electrical connection



DANGER

Electrocution hazard!

High voltage.



Observe local and NEMA/NEC regulations during installation!



WARNING

Danger to life!

Incorrect connection may result in electric shock!

Note color coding of wires!

Color coding of wires:

yellow/green = electrical ground,

blue = neutral conductor (only 61, 11, 21 gas) brown, red, orange or black = phase L1, L2, L3

NOTICE



Improper connection can cause damage to the unit (e.g., fan motor).

6.1 General information

Only connect the unit in accordance with the installation instructions and the information on the rating label.

Connect the unit to a standard power supply in accordance with the applicable regulations.

Observe all local regulations and standards, which must conform to national, state and local code requirements!

The appliance is equipped with a motor with an integrated frequency converter.

Connect the device to a GFCI Type B (ground fault circuit interrupter).

Applicable standards: NFPA 70/NEC, CSA C22.2

33

CAUTION

Improper installation can lead to personal injury or property damage!

Customer: provide accessible all-pole disconnect unit with at least 3 mm contact separation (disconnect switch or circuit breaker).

If unit must be connected to an earth leakage circuit breaker, consult with the NEC code for specific values according to KW of attached load for selection of valves.

Before disconnecting unit or reconnecting it again be sure the unit is switched off prior.

Remove the left side panel to access the connection port.

- > Remove the two screws on the bottom of the left side panel.
- > Pull the left side panel down from the unit.
- > Remove the left side panel.



Removing the left side panel

6 Electrical connection

Units 12, 21 and 22 Electro:

Maximum connection impedance at the grid connection point is 0.09Ω .

The cross-sections of the connection lines depend on current consumption and local regulations.

Special voltage available on request.

6.2 Electrical units

Each unit should have its own protected power supply connection.

Each unit has its own switched disconnection for safety.

For connection use power cord that is recommended in NEC/NEMA standard.

Unit size 60

are delivered with power cable and angled plug: 2AC208 and 2AC240: 6-50P 40.05.267 3AC208 and 3AC240: 15-30P 40.05.268

Unit size 61 - 22

are delivered without power cable.

Cable connection point

The main fuse (tabletop units) or connection terminal (floor units) is behind the removable left side panel inside the electrical compartment.

6.3 Gas units

We recommend that each unit have its own protected supply line.

Either a fixed connection or a plug connection may be used to connect the unit to the power supply.

All gas units are delivered with an approximately 8 ft [2.5m] connection cable with plug

120V units: 5-15P 208V units: 6-15P.

NOTICE

i

Non-functioning unit!

Note polarity of electrical connection! Burners will not function if polarity is incorrect.

NOTICE

Connection to a residential type GFI (Ground Fault Interrupter) of insufficient leakage current is not advisable.



Random and or nuisance trips of the breaker could result.

6.4 Power supply cable

NOTICE



In order to avoid hazards, the mains power cable may only be replaced by the manufacturer, its customer service representative or similarly qualified service personnel.

NOTICE



Non-functioning unit!

Tighten mains lead connection.

Use copper wire only for power supply connections of connect size.

Electrical units:

Connect a supply cable of at least Type NEC UL standard and tighten the mains lead connection.

Connect the cable according to the following diagram:

Gray connector terminals:

L1, L2, L3 (independent of rotary field). Yellow-green connector terminals: electrical ground connection.

Gas units:

Should the connection line need to be replaced as part of service work, use a cable of quality no less than SGO or SJTOW or equivalent (original rating) 14-2 plus ground.

For plug type reference NEMA.

5-15P 120V IP for 61/101/201

6-15P 208/240V IP for 62/102/201 this is also an option on 61/101/201

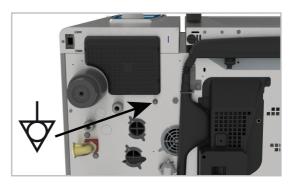
6.5 Equipotential bonding (physical earth ground)

A connection site for optional equipotential bonding is located on the bottom or the back of the unit.

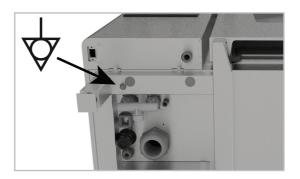
60:



61, 62, 11, 12:



21, 22:



6.6 Voltage Conversion

208/240V units

All electric units and 62/102/202 gas units are set to 208V ex works. They can be converted to 240V.

To convert from 208V to 240V proceed as follows:

- > Disconnect unit from mains
- > Remove left side panel and open operator panel.
- > Set power switch S13 to desired voltage (208 or 240V)
- > On the control transformer T1 change connection to the desired voltage input (208 or 240V)
- > In the starter kit of the unit there is a sticker which has to be filled in after voltage conversion. After filling it in put the sticker next to the type plate.

60:



61-22:



440/480 V units

Units are set to 480V ex works, but can be converted to 440V.

To convert from 480V to 440V proceed as follows:

- > Disconnect unit from mains
- > Remove left side panel and open operator panel.
- > Remove adapter cable W22 from input transformer T3 and plug X72.
- > Connect plug X72 to transformer T3.
- > Set power input switch S13 to 440 V

6.7 Connection values

SCC, CM_P Electrical units

Appliance size	60	61	62	11	12	21	22			
				ower [kW]	-					
Input voltage		Current consumption [A]								
2 AC 208V	5,7 / 27.5	11,1 / 53,4								
2 AC 240V	5,7 / 31.5	11,1 / 61,5								
3 AC 208V	5,7 / 16.5	11,1 / 30,8	22,1 / 61,4	19 / 52,8	37 / 102,7	38 / 105,6	68/ 189			
3 AC 240V	5,7/ 19	11,1 / 35,5	22,1 / 70,8	19 / 60,9	37/ 118,6	38 / 121,8	68 / 218			
3 AC 440V		11,1 / 14,6	22,1 / 33,3	19 / 24,9	37 / 48,6	38 / 49,9	68 / 83,9			
3 AC 480V		11,1 / 15,8	22,1/ 29	19/ 27	37/ 52,6	38 / 54	68 / 96,7			

SCC_WE, CM_P Gas units

Appliance size	61	62	11	12	21	22				
Input voltage		Power [kW] / Current consumption [A]								
1NAC 120V	0,4 / 3,33		0,5 / 4,17		0,95 / 7,9 2					
1NAC 208V	0,4 / 1,92	0,77 / 3,7	0,5 / 2,4	0,8 / 3,85	0,95 / 4,57	1,6 / 7,69				
1NAC 240V	0,4 / 1,66	0,77 / 3,21	0,5 / 2,1	0,8 / 3,33	0,95 / 3,96	1,6 / 6,66				

Fuse [A]

	60	61	62	11	12	21	22
2 AC 208V	50	60					
2 AC 240V	50	70					
3 AC 208V	30	35	70	60	125	125	200
3 AC 240V	30	40	80	75	150	150	250
3 AC 440V		20	35	30	60	60	100
3 AC 480V		25	40	35	70	70	110

AWG [x]

	60	61	62	11	12	21	22
2 AC 208V	8	4					
2 AC 240V	8	4					
3 AC 208V	12	8	3	4	2	1	4/0
3 AC 240V	12	8	3	4	2	1	3/0
3 AC 440V		14	8	8	4	4	2
3 AC 480V		14	8	8	4	4	3

Maximum permissible tolerance for input voltage (see type label for input voltage) is within the range of -15% to +10%.

Use copper wire only for power supply connections.

7 Water connection

7 Water connection

The unit complies with all relevant regulations (SVGW, KIWA, WRAS).

7.1 Prerequisites

- > The user must supply each unit with its own water supply tap.
- > Rinse the water supply line before connecting the unit to water!
- > Water pressure 21 87psi, 43psi recommended.
- > Flow rates required for each unit (max.):

Appliance size	60	61	62	11	12	21	22
[gal/min]	1,8	5,2	6,6	5,2	6,6	6,6	6,6

Connect the unit to drinking water-quality water.

Install the unit with adequate backflow protection to comply with applicable federal, state, and local plumbing codes.

Connect a flexible drinking-water connection hose in accordance with EN 61770 / IEC 61770 or of similar quality. Take any necessary safety precautions with the water tap, such as backflow preventers as required by local code. (Not supplied by manufacturer)

The water connection hose must comply with country-specific hygiene standards for drinking water hoses.

Use only new hoses as water connections. Do not re-use old hoses.

NOTICE

Non-functioning unit!



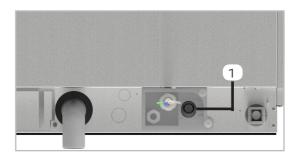
Ensure that the minimum water conductivity value of $50\mu S/cm$ (Micro Siemens) is maintained.

Ref: reverse osmosis treatment.

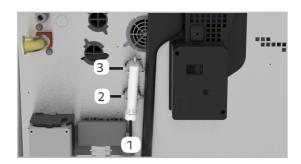
7 Water connection

7.2 Unit water connection

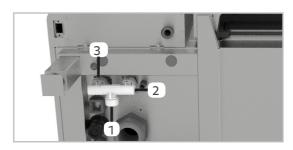
Unit size 60:



Unit sizes 61, 62, 11, 12:



Unit sizes 21, 22:



Water connection legend

61, 62, 11, 12, 21, 22:

1 = 3/4" common water supply line. (cold water up to 30°C [86°F])

If split water connection:

- 2 = 3/4" cold water supply line (max. 30°C [86°F]).
- 3 = 3/4" treated water supply line (max 30°C [86°F]) (steam generator, hand shower, SCC only: additional humidification, cleaning).

NOTICE



Unit size 60 is single water connection only.

All others are for split water connection.

NOTICE



All units are provided with BSP to garden hose thread adapter(s) in starter kit.

article number: 50.00.790



NOTICE

The manufacturer recommends preventative inspection be conducted around six months after unit commissioning to ascertain the degree of limescale buildup in the steam generator, especially for CMP/CM units. This inspection should be performed by a trained technician.



7.3 Water treatment

- > The water connection must not use treated water with hardness below 5.2 gr/gal, as such water is aggressive and corrosive, and can shorten the lifespan of the unit.
- > Connecting the SCC to water with hardness below 7.3 gr/gal: When the self-test begins, the system will prompt the user to indicate the hardness of the water the unit is connected to. Select "Water hardness below 7.3 gr/gal "treated water".
- > Observe all country-specific regulations

7 Water connection

regarding water and sewer connections, especially those regarding installation of water intake points.

Only USA (not valid for CAN)

In most cases, water connections do not require additional filters or water treatment.

Filtration and/or water treatment (A, B, C, D) may be necessary if water conditions are critical.

Contact the local water supply company to inquire about water chloride levels (Cl⁻), chlorine levels (Cl₋) and hardness.

7.4 Selecting water filters

A) Fine filters We recommend fine filters with fineness of 5 -

15µm for filtering water contaminated with sand,

iron particles or suspended matter.

0.2mg/l, corresponds to 0.2ppm; information provided by water supply company), (typically

municiple supplied water).

C) Reverse osmosis system

Due to corrosion risks, a reverse osmosis system

must be used if and only if chloride (Cl⁻) concentrations are above 80mg/I (corresponds to 80ppm, information provided by water supply

company).

Note: Ensure that the minimum conductivity value of 50uS/cm (Micro Siemens) is being

maintained.

D) Water softening:

SCC: When used properly, these units remove lime

from water completely independently, so upscale

water softening is not necessary.

CMP: Recommended for treating water if severe calci-

fication occurs (without chloride contamination).

Systems: Weak acid decarbonization (H⁺ ion

exchange).

Sodium ion exchangers (as are commonly found

in dishwashers) are not recommended.

Phosphate metering is also not recommended due to its negative effects on the water system.

7 Water connection

Important for treated water connections:

To increase filter capacity, split the water connection like shown in chapter 7.2 into cold and treated water inputs (not possible with size 60 units) - remove the common water supply line.

NOTICE



Unit size 60 is single water connection only.

All others are for split water connection.

Filter size sufficient for: Average treated water consumption (without hose shower) at max. flow rate of 4,3gal/min.

Average Treated Water Consumption:

Appliance size	60	61	62	11	12	21	22
[gal/h]	N/A	0,8	2,2	1,7	2,9	3,5	4,2

Important for filter connections:

Water hose with minimum interior \emptyset 1/2". Filter connection \emptyset 3/4".

When using a combination of filters, ensure filter sequence of A-B-C or A-B-D in direction of flow.

8 Gas connection



Danger to life!

Connecting incorrectly may result in burns or fire.



Observe local regulations.



Poisoning hazard!

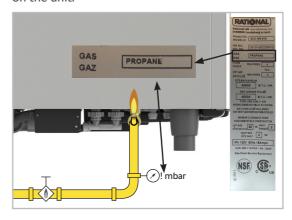
Make sure that factory settings conform with actual connection conditions:

- Perform exhaust gas analysis when first commissioning steam- and convection burners (CO, CO₂)
- > record these values.

If undiluted CO levels are above 150ppm for convection and 400ppm for steam, a company-trained and certified technician must be called in to check burner settings in accordance with setting instructions, and adjust these settings if needed.

Observe all local gas authority regulations!

Check the type of gas available and the dynamic connection pressure against the values specified on the unit.



NOTICE



Any gas equipement like connectors, fittings and regulators must be designed to supply the required amount of gas.

Pipe diameter in accordance with local regulations

- > at least 3/4" ID (interior diameter) for 61-201
- > at least 1" ID (interior diameter) for 202

Gas connection internal thread.

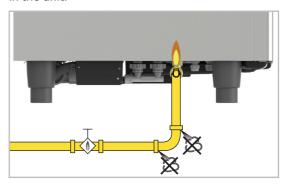
Gas shut-off valve on each unit.

Gas connection with gas outlet possible.

Installation must conform to: CGA-B 149.1 natural gas code, CGA-B 149.2 propane gas code.

Secure the unit against movement.

Use a suitable gas leak detector to check for leaks in the gas supply and gas distribution within the unit.



Inner thread of gas connection at unit manifold: 3/4"

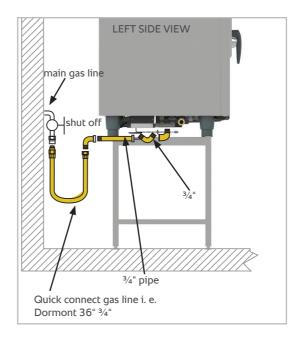
Brass elbow BSP to NPT is included in the starter kit (can be found in the cooking cabinet):

- > 70.00.188 3/4" BSP to 3/4" NPT for 61 201
- > 70.01.012 3/4"BSP to 1" NPT for 202

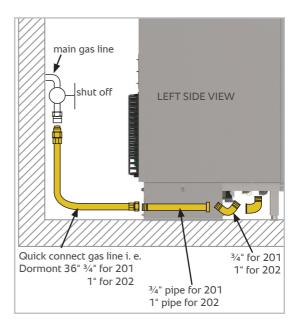
Adapter

8 Gas connection

Gas connection 61, 62, 11, 12



Gas connection 21, 22



Notes



DANGER

Gas connections must only be set up by locally authorized gas technicians!

Set up the gas connection line in accordance with the rated thermal load specified on the type label.

NOTICE

Unit malfunction!

If line pressure deviates from connection flow pressure, contact gas supply company.

Maintain dynamic flow pressure in range of:

- 6,5" 10" w. c. for natural gas
- 10" 15" w. c. for LPG

Otherwise:

- > do not start the unit,
- > shut off the gas connection to the unit.



NOTICE

Non-functioning unit!



Gas components are designed for maximum connection pressure of 26" w. c. Higher operating pressures are not permitted and can damage components.

8 Gas connection

Gas consumption

con	Required connection	Wobbe index [MJ/m³]		Maximum consumption at rated thermal load (15°C, 1013mbar)				
	flow pres- sure	Wi	Ws	61	62	11		
NATURAL	6,5 -10,0 in/wc	45,67	50,72	49,44 ft ³ /h 49000 BTU/hr	107,35 ft ³ /h 106000 BTU/hr	82,98 ft ³ /h 83500 BTU/hr		
PROPANE 3P(G31)	10,0 -15,0 in/wc	74,75	81,19	2,69 lb/h 48200 BTU/hr	5,86 lb/h 103800 BTU/hr	4,61 lb/h 81500 BTU/hr		

/ 1	Required connection flow pressure	Wobbe index [MJ/m³]		Maximum consumption at rated thermal load (15°C, 1013mbar)				
		Wi	Ws	12	21	22		
NATURAL	6,5 -10,0 in/wc	45,67	50,72	171,9 ft ³ /h 170000 BTU/hr	168,4 ft ³ /h 167000 BTU/hr	348,2 ft ³ /h 340000 BTU/hr		
PROPANE 3P(G31)	10,0 -15,0 in/wc	74,75	81,19	9,5 lb/h 166800 BTU/hr	9,1 lb/h 163000 BTU/hr	18,8 lb/h 333500 BTU/hr		

9 Exhaust gas connection



Asphyxiation hazard!

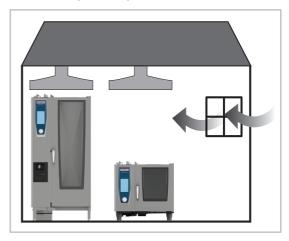
Combustion products (CO and CO₂)

Prevent unacceptable concentrations of harmful combustion products within the installation room.

Set up the unit under conditions of adequate ventilation.

Observe instructions given in the currently valid versions of all local standards during installation.

For gas exhaust on unit, it must be placed under an exhaust hood externally vented (observe your local regulations). Clearance above flue pipes shall be 16" (400 mm).



Room ventilation

The rooms in which these appliances are installed must be well ventilated, in order to prevent an unacceptable build-up of harmful combustion products.

9 Exhaust gas connection

Maintenance

As per the specified standards, we recommend gas components undergo annual maintenance.

After maintenance or repair work:

- > Check that the compensation tube is positioned correctly.
- > Check the gas supply line components for leaks.

Exhaust gas and room volumes (specified values apply only to the individual units)

Appliance size	61	62	11	12	21	22
Min. room size with free ventilation [yd³]	68	146,5	115,1	235,5	230,2	470,9
Min. room size with constant ventilation [yd³]	34	73,3	57,6	117,7	115,1	235,4
Min. combustion air supply [yd³/h]	24,9	58,9	45,8	94,2	91,6	188
Max. exhaust gas volumes [yd³/h]	49,7	141,3	102	235,4	196,2	458
Max. exhaust gas temperature [°F]	662	968	878	1094	806	968°F

Free ventilation

Combustion air supply through windows and doors

Constant ventilation

Combustion air supply via two ventilation openings to the outside, each with 23 inch² free cross section (one near the ceiling, the other near the floor)

10 Wastewater connection

NOTICE



Use only steam temperature-resistant pipes for wastewater drainage (e.g. copper, stainless steel or schedule 80 PVC).

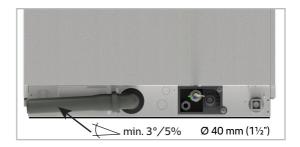
Do not use hoses.

- Unit complies with all relevant regulations (SVGW, KIWA, WRAS).
- > Welding a drain pipe onto the unit drain is not permitted (will result in damage to the unit).
- > Use 2" pipe (1 1/2" for size 60 units) with a constant gradient (at least 5% or 3°); do not reduce pipe diameter.
- Recommended: drain should have 1" air gap and discharge to a floor sink or receptable.
- > Observe drain dimensioning requirements: steam generator short-term pump-off rate = 0,18 gal/s [0.7l/s]
- Average wastewater temperature: 149°F (adjustable by trained technician in unit settings)
- > Applicable standard: DIN 1986, T1
- > We recommend integrating a trap into the wastewater connection in order to optimize energy consumption.
- > Tabletop units may use either a wall drain and /or a floor drain
- > Each unit must have its own wastewater connection (including Combi-Duo).

Tabletop units

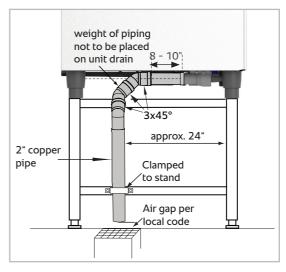
10 Wastewater connection

Unit size 60



Unit sizes 61, 62, 11, 12

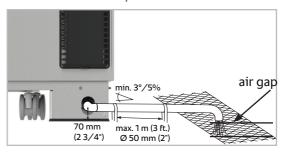
- > Avoid bends attached immediately at unit.
- > Provide 8 10" before a bend.

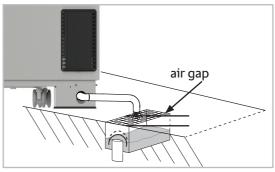


10 Wastewater connection

Floor units

> Floor units can only use floor drains







NOTICE

The average height of the water drainage pipe is 2 3/4" [70 mm].

Options

- > Additional riser tube to reduce steam escaping from drain pipe with open drain systems.
- Tabletop units: Increase ground clearance using longer 4"
 [110 mm] foot bases and height-adjustable transport trolley for mobile oven racks.
- > Floor units: Increase ground clearance by raising up unit and mobile oven rack.

See options; chapter 13.

11 Ventilation, technical data, heat dissipation

11 Ventilation, technical data, heat dissipation

On-site ventilation:

When installing an externally vented exhaust hood, observe the following:

- Comply with all local regulations and standards (NFPA 96; Gas combi or electric combi where applicable)
 The exhaust bood should protrude 1-1.6 ft
 - The exhaust hood should protrude 1-1,6 ft [300-500 mm] over the front of the unit.
- > If using a VarioSmoker the unit must be installed underneath an externally vented exhaust hood (CO!).
- Install a grease filter into the protruding part of the exhaust hood.

Recirculation hoods (UltraVent) are available for most single table electric units. They can be retrofitted. Consult the hood installation guide for information on connecting the hood.

NOTICE

Asphyxiation hazard!

Flue gases (CO and CO₂)



Prevent unacceptable concentrations of harmful flue gases within the installation room. Set up the unit under conditions of adequate ventilation.

Accessories

11 Ventilation, technical data, heat dissipation

Technical data

Noise emissions value: <70dBA

Water jet protection: IPX5

Thermal load - SCC units [kJ/h]:

Electrical units	60	61	62	11	12	21	22
latent:	1.020	2.050	3.450	3.450	6.350	6.850	10.900
sensitive:	1.350	2.450	4.450	4.450	7.750	8.850	14.000

Gas appliances	61	62	11	12	21	22
latent:	2.050	3.450	3.450	6.350	6.850	10.900
sensitive:	2.450	4.450	4.450	7.750	8.850	14.000

Thermal load - CMP units [kJ/h]:

Electrical units	60	61	62	11	12	21	22
latent:	1110	2.143	4.167	3.529	6.667	7.200	12.500
sensitive:	1420	2.727	5.000	4.615	9.474	9.000	14.286

Gas appliances	61	62	11	12	21	22
latent:	2.143	4.167	3.529	6.667	7.200	11.583
sensitive:	2.571	5.000	4.286	9.231	8.780	13.636

We reserve the right to make technical developments \slash modifications.

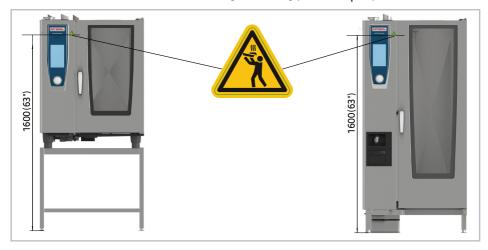
12 Initial start-up



Scalding hazard!

To avoid scalding, when working with liquids or foods that become liquid when heated to higher temperatures, only use containers that are easy to monitor. (DIN: IEC 60335-2-42).

The "Max. rack height for containers with liquid" safety decal is included in the starter kit. After installing the unit, attach the decal at a height of 63" [1600 mm] (see examples).





Risk of fire!

Remove packaging and transportation materials, starter kit, grids and containers from the cooking cabinet.

Self test

When first commissioning a new unit, start a one-time self-test. This test serves to adjust the unit to its specific ambient conditions. It runs automatically, and takes between 45 and 65 minutes depending on the size of the unit; if an UltraVent is in use, the test will take around 20 minutes longer.

- > To perform the self-test, check the hook latches and the air baffle to ensure they are seated correctly and no cardboard/plastic is inside unit.
- > The unit must be connected to water, wastewater, and electricity as per installation instructions; gas units must also be connected to gas supply and operational ventilation hood.
- > The left side panel must be closed.
- > With tabletop units, insert a flat container into the middle of the rack, with the opening facing down.
- > With floor units, insert two containers into the mobile oven rack: one centered in front of each fan, with the openings facing down.



- > Do not open the cooking cabinet door during the self-test.
- Self-test must not be interrupted, e.g. by switching unit off.

61



Poisoning hazard!

Gas units: perform exhaust gas analysis after self-test.

SCC: press "Start"



CMP: press "Prog/Start"



13 Options

Left and right heat shields

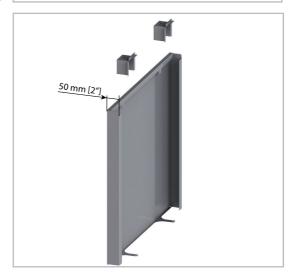
(not suitable for Combi-Duo and UltraVent)

If it is not possible to keep the left side (or right, on unit sizes 61 and 11) of the unit a sufficient distance away from heat sources, an additional heat shield can reduce thermal loads.

NOTICE



A clearance of 2" is still required from the heat shield to the heat source.



Appliance size	61	62	11	12	21	22
Left heat shield	60.70.390	60.70.392	60.70.391	60.70.393	60.70.394	60.70.395
Right heat shield	60.70.736		60.70.743			

Adjusting height on unit sizes 61, 62, 11, 12

If units of these sizes do not have sufficient ground clearance, ground clearance can be increased using longer foot bases (4" [110 mm]).



To do this, simply replace the standard foot bases with longer ones.

Article number: Foot extension: 12.00.224

NOTICE

Scalding hazard!



The topmost rack rail may then be higher than 63" [1600 mm].

Height adjustable transport trolley for mobile oven rack

When using a mobile oven rack and a mobile oven rack transport trolley, height differences can be compensated by using an adjustable transport trolley.



Appliance size	61, 11	62, 12
Article number:	60.60.188	60.70.160

Raising floor units

If ground clearance underneath floor units is too low, use foot extensions to increase the height of the unit by $2\ 3/4$ " [70 mm].



Article number: 60.21.179 (1x)

Article number: 60.70.407 (set of 4)

NOTICE



Scalding hazard!

The topmost rack rail may then be higher than 63" [1600 mm].

Raising mobile oven racks

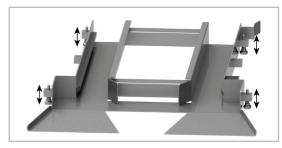
One required per each rack used. When using foot extensions on floor units, compensate the height difference on the mobile oven rack using mobile rack oven elevation 2 3/4" [70 mm].



Appliance size	21	22
Article number:	60.21.184	60.22.184

Floor unit entry ramps

If the ground is not level in the mobile oven rack entry area on floor units, use an entry ramp to compensate this. The plate feet are adjustable by +/-1/2" [+/-10 mm].



The entry ramp is attached to the right feet of the unit using the ramp clamps.

Appliance size	21	22
Article number:	60.21.080	60.22.181

Condensation breaker

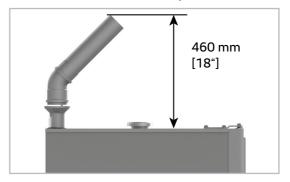
NOTICE

Unit malfunction!



Extending the ventilation pipe without using a condensation breaker can cause the unit to malfunction.

Installing a condensation breaker and the included pipes can divert steam escaping from the exhaust pipe into non-critical areas, or towards the extraction fan of a ventilation system.

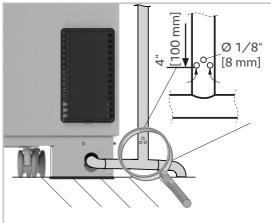


Appliance size	60	61, 62, 11	12	21, 22
Article number:	60.74.037	60.72.591	60.72.592	60.72.593

Reducing excessive steam emissions

An additional riser pipe can be attached to the ventilation pipe to reduce excess steam emissions. Holes must be drilled into this extra vent pipe where air is sucked in and condensates the steam.





Wall mount

Unit sizes 60 and 61 only

The two units named above can be attached to the wall using a wall mount.

NOTICE



Be sure to follow the corresponding modification instructions when performing wall installations.



Appliance size	60	61
Article number:	60.30.968	60.70.963

Interfaces

SCC

come with an Ethernet interface as part of their standard equipment. An CAT-5 Ethernet cable must be used to connect to a network.

Connection location:

Unit size 60: on the rear of the unit Unit sizes 61-22: on the underside of the unit

A detailed description on connecting to a network is provided in the user manual.

CMP

can optionally be ordered or retrofitted with Ethernet interfaces.

Part number for add-on kit:

60-12: 87.01.419 21-22: 87.01.420

14 Conversion tables

14 Conversion tables

	°dH	°f	°e	ppm	mmol/l	gr/ gal(US)	mval/kg
1 °dH	1	1.79	1.25	17.9	0.1783	1.044	0.357
1 °f	0.56	1	0.70	10.0	0.1	0.584	0.2
1 °e	0.8	1.43	1	14.32	0.14	0.84	0.286
1 ppm	0.056	0.1	0.07	1	0.01	0.0584	0.02
1 mmol/l	5.6	0.001	0.0007	100	1	0.00058	2
1 gr/gal (US)	0.96	1.71	1.20	17.1	0.171	1	0.342
1 mval/kg	2.8	5.0	3.5	50	0.5	2.922	1

	CaO[mg/I]	CaCO ₃ [mg/I]	Ca ²⁺ [mg/I]
1 °dH (Germany)	10.00	17.86	7.14
1 °f (France)	5.60	10.0	4.00
1 °e (GB)	8.01	14.3	5.72
1 ppm (USA)	0.56	1.0	0.40
1 mmol/I (chem. cons.)	56.00	100.0	39.98
1 gr/gal (USA)	9.60 / 64.8	17.11	6.85
1 mval/kg (milliequivalent)	28.00	50.0	19.99

3 Installation instructions

kPa	mbar	psi	inch/wc
0.1	1	0.0147	0.4014
0.2	2	0.0294	0.8028
0.3	3	0.0441	1.2042
0.4	4	0.0588	1.6056
0.5	5	0.0735	2.0070
0.6	6	0.0882	2.4084
0.7	7	0.1029	2.8098
0.8	8	0.1176	3.2112
0.9	9	0.1323	3.6126
1	10	0.147	4.0140
1.2	12	0.1764	4.8168
1.4	14	0.2058	5.6196
1.6	16	0.2352	6.4224
1.8	18	0.2646	7.2252
2	20	0.294	8.0280
2.5	25	0.3675	10.0350
3	30	0.441	12.0420
3.5	35	0.5145	14.0490
4	40	0.588	16.0560
4.5	45	0.6615	18.0630
5	50	0.735	20.0700
5.5	55	0.8085	22.0770
6	60	0.882	24.0840
6.5	65	0.9555	26.0910
7	70	1.029	28.0980
7.5	75	1.1025	30.1050
8	80	1.176	32.1120
8.5	85	1.2495	34.1190
9	90	1.323	36.1260
9.5	95	1.3965	38.1330
10	100	1.47	40.1400
20	200	2.94	80.2800
30	300	4.41	120.4200
40	400	5.88	160.5600
50	500	7.35	200.7000
100	1000	14.7	401.4000

14 Conversion tables

14 Conversion tables

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