Commercial Kitchen Equipment Parts

RATIONAL ICOMBI

Rational ICOMBI Installation Guide

Provided by PartHubz

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iCombi® Pro
iCombi® Classic
CombiMaster® Plus

Original installation manual



Unit handover

Dealer:	Installer:

Specify for all queries:

Unit type:	
Unit no.:	
Set to gas type:	
Your unit was checked by:	

⚠ WARNING

FOR YOUR SAFETY

Do not store or use petrol or other flammable vapours and liquids near this or any other units.

⚠ WARNING

Improper installation, adjustment, modification, maintenance or repair can result in material damage, injuries or death. Read the installation, operating and maintenance instructions carefully before installing or servicing this unit.

NOTICE

Risk from leaking gas

Risk of explosion from leaking gas.

Watch out for the smell of gas.

Avoid any damage to the gas line.

If you smell gas:

- Close the main gas supply.
- Do not touch any electrical controls.
- Ventilate the room well.
- Avoid naked flames or sparking.
- Immediately inform the responsible gas supplier with an external telephone. If the gas provider cannot be reached, call the local fire department.

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1 Introduction

1.1 Information on this manual

This document is a preliminary version of the installation manual. Please note the relevant version and date.

This document is part of the unit. Read the manual prior to installation. The manual is there to ensure that you use the unit safely and install it properly.

The illustrations in this manual are examples only and may differ from the unit.

This manual applies to the following devices:

- LM1: iCombi Pro
- LM2: iCombi Classic
- LM2: CombiMaster Plus XS

Storage

Keep the installation manual and operating instructions close to the unit. The installation manual must be accessible for professionals authorised by the manufacturer at any time during service calls.

Distribution.

This installation manual must be passed on to the owner of the unit.

Circuit diagram

The starter kit contains a circuit diagram for the unit. If the circuit diagram is lost, it can be found in the service parts catalogue and in the TechAssistant app. The TechAssistant app is available from the App Store and Google Play.

Explanation of symbols

✔ A condition states all of the requirements that need to be met before the unit can be used.

1. One action step describes an action to be performed by the reader.

> It expresses a successful interim result.

2. Another action step.

>> The result reflects the outcome of the action.

1.2 Target group

- This document is intended for skilled technicians, who have been certified by the manufacturer after attending training and safety instructions.
- Installation, inspection, maintenance, and repair work must only be carried out by trained technicians.
- It is recommended that only technicians authorised by the manufacturer perform inspection, maintenance and repair work.
- The unit may not be used, cleaned, or maintained by children. The unit may not be used for play. This is prohibited even under supervision.

- The unit may not be used, cleaned, or maintained by people with limited physical, sensory, or mental capacity or those without the necessary experience or knowledge, unless such people are supervised by a person who is responsible for their safety and who has been informed of the hazards of the unit.
- In order to prevent accidents or damage, the manufacturer recommends that technicians attend training and safety instructions.

1.3 Copyrights

Forwarding product-specific information to third parties is prohibited. We reserve the right to make technical developments and changes in the interest of progress. All rights, including to translation and duplication, are reserved.

1.4 Conformity

Appliance conformity refers to the overall unit at the time of delivery. The operator is responsible for ensuring extended conformity following any expansions, modification and connection of additional functions.

Observe the corresponding local and country-specific standards and regulations regarding the installation and operation of commercial cooking appliances.

Conformity Europe

- The electricity connection has been constructed and tested according to IEC 60335 in consideration of EN 60335 and VDE 0700.
- The water connection has been constructed and tested according to IEC 61770 in consideration of EN 1717 and EN 13077.
- The drain connection meets the requirements of the applicable provisions pursuant to WRAS, SVGW and KIWA and has been tested and certified accordingly.
- The unit is approved for use up to 4,000 m above sea level according to IEC 60335.

Conformity USA and Canada

- The power connection is built and tested according to UL 197 or CSA C22.2 number. or CSA C22.2 No. 109.

1.5 Liability and warranty provisions

Liability

Installations and repairs not carried out by professionals authorised by the manufacturer or not using original service parts, and technical modifications to the unit, which are not approved by the manufacturer, may void the manufacturer's product liability.

Warranty

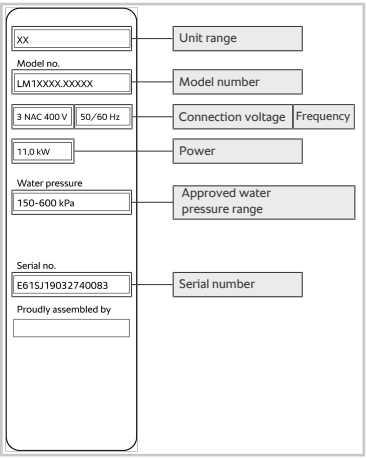
Damage occurring as a result of non-compliance with this installation manual is excluded from the warranty.

The following are also excluded from the warranty:

- Damage resulting from improper use, installation, maintenance or repair
- Damage resulting from improper descaling
- Use of the unit for purposes other than those for which it is intended
- Modifications or technical alterations to the unit not authorised by the manufacturer
- Use of non manufacturer-original service parts
- Damage to glass, light bulbs and seal materials

1.6 Identification of the unit

Type plate



Unit sizes

Unit size type plate	Unit size
LMxxx**A**...	6 x 2/3 GN
LMxxx**B**...	6 x 1/1 GN
LMxxx**C**...	6 x 2/1 GN
LMxxx**D**...	10 x 1/1 GN
LMxxx**E**...	10 x 2/1 GN
LMxxx**F**...	20 x 1/1 GN
LMxxx**G**...	20 x 2/1 GN

Unit size type plate	Unit size
LMxxx**A**...	XS
LMxxx**B**...	6 half size
LMxxx**C**...	6 full size
LMxxx**D**...	10 half size
LMxxx**E**...	10 full size
LMxxx**F**...	20 half size
LMxxx**G**...	20 full size

Unit overview

	Tabletop units					Standalone units	
	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
iCombi Pro Electric units	✓	✓	✓	✓	✓	✓	✓
iCombi Pro Gas units		✓	✓	✓	✓	✓	✓
iCombi Classic Electric units		✓	✓	✓	✓	✓	✓
iCombi Classic Gas units		✓	✓	✓	✓	✓	✓
CombiMaster Plus	✓						

2 Safety

2.1 Warning symbols

⚠ DANGER

Type and source of danger
Non-compliance will lead to very serious injury or death.
Preventative measures

⚠ WARNING

Type and source of danger
Non-compliance can lead to serious injury or death.
Preventative measures

⚠ CAUTION

Type and source of danger
Non-compliance can lead to minor or moderate injuries.
Preventative measures

NOTICE

Failure to heed the NOTICE can lead to damage to the unit.

2.2 General safety instructions

This unit is designed in such a way that it presents no danger if installed according to instructions. This manual describes how to install the unit correctly.

- Adhere to the relevant local regulations and standards in your country.
- Use carrying aids such as carrying straps during transportation.
- Secure the unit against tipping during transport, after setting up at the installation location.

- Wear appropriate protective clothing, such as protective gloves and safety shoes, when transporting and installing the unit.
- The appliance must be installed in a frost-resistant, non-windy and protected environment.
- Do not expose the unit to weather conditions such as rain.
- Only connect the unit in accordance with the installation manual and the information on the nameplate.
- Switch the unit off before disconnecting the mains power or connecting to the mains.
- After use, only transport the unit at ambient temperatures above 0°C [32°F].
- Only store the unit at ambient temperatures above 0°C [32°F].
- Do not operate the unit without an air filter.
- Do not spray aerosols in the vicinity of this appliance while it is in operation.
- Check the unit for transport damage. If you suspect the device has been damaged in transit, contact your dealer/ freight forwarder immediately.

2.3 Safety instructions for gas appliances

Toxic exhaust fumes

Risk of asphyxiation from unauthorised concentration of toxic exhaust fumes.

- Ensure that the installation area can be adequately ventilated.
- Always perform a flue gas analysis when commissioning gas units.
- If an exhaust hood is used, make sure that the exhaust hood is switched on when operating the unit.
- Do not put objects on the exhaust pipes.

- Do not obstruct the area around the combustion air extraction with objects.

Risk of fire due to dirty chimney

Risk of fire due to irregular cleaning of the chimney.

- Have the chimney cleaned regularly in accordance with the country-specific regulations.

Risk of explosion from leaking gas.

Risk of explosion from leaking gas.

- Watch out for the smell of gas.
- Avoid any damage to the gas line.
- If you smell gas:

1. Close the main gas supply.
2. Do not touch any electrical controls.
3. Ventilate the room well.
4. Avoid naked flames or sparking.
5. Immediately inform the responsible gas supplier with an external telephone. If the gas provider cannot be reached, call the local fire department.

NOTICE
Keep the area around the unit free of flammable materials.

2.4 Intended use

This unit has been developed for the preparation of hot food. This unit may only be used commercially, such as in restaurant kitchens and large and commercial kitchens in hospitals, bakeries or butcheries. This unit may not be used outdoors. This unit may not be used for continuous industrial mass production of food.

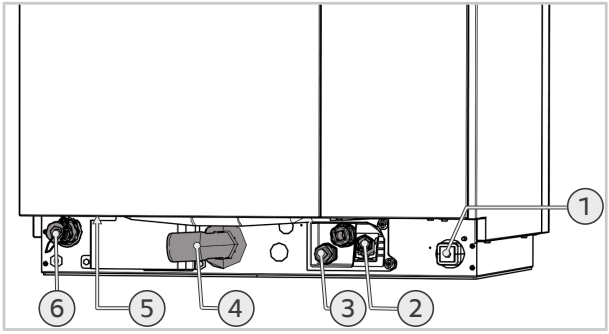
All other uses are contrary to the intended purpose, and may be dangerous. The manufacturer assumes no liability for the consequences of using the unit contrary to the intended use.

3 Product description

3.1 Unit description

Unit size 6-2/3 GN

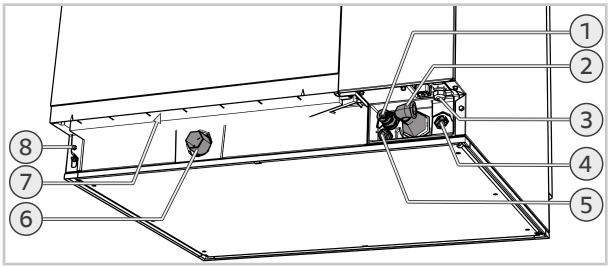
The installation connections are on the rear of the unit:



1	Equipotential bonding	2	Water connection
3	Electrical connection	4	Waste water connection
5	Safety overflow for waste water connection	6	Network connection

Unit size 6-1/1 to 10-2/1 GN

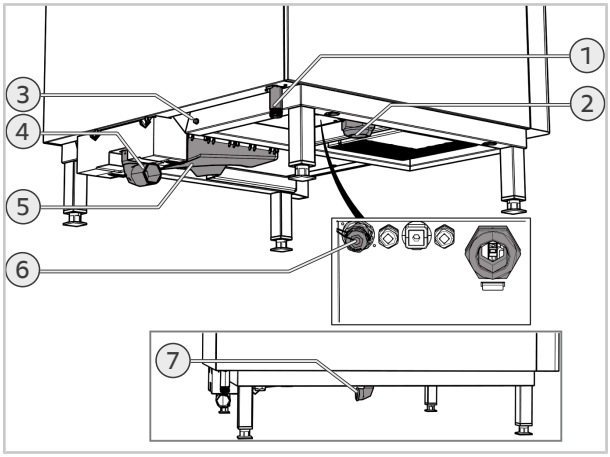
The installation connections are on the rear of the unit:



1	Network connection	2	Gas units only: Gas connection Electric units only: Electrical connection
3	Power supply	4	Water connection
5	Optional connection	6	Waste water connection
7	Safety overflow for waste water connection	8	Equipotential bonding

Unit size 20-1/1 and 20-2/1 GN

The installation connections are on the underside of the unit and go up to the rear of the unit:



1	Water connection	2	Cable conduit for electrical connection
3	Equipotential bonding	4	Waste water connection
5	Safety overflow for waste water connection	6	Network connection
7	Gas units only: Gas connection		

3.2 Technical data

Protection class

The unit corresponds to spray water protection class IPX5.

Environmental conditions

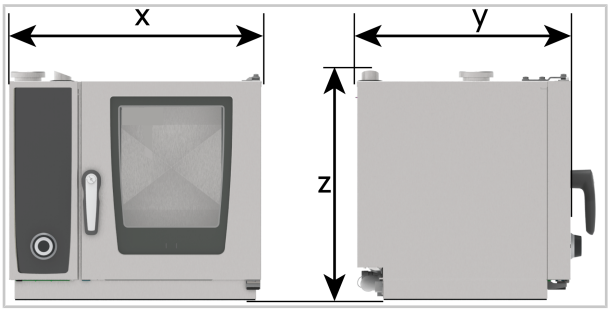
- Do not install the unit at ambient temperatures of below 10 °C [50 °F].
- Do not operate the unit at ambient temperatures of below 10 °C [50 °F].
- Install the unit in a facility which is sufficiently ventilated with windows or an extraction hood.

Noise emissions value

The noise emissions value is <65 dB.

3.2.1 Unit dimensions

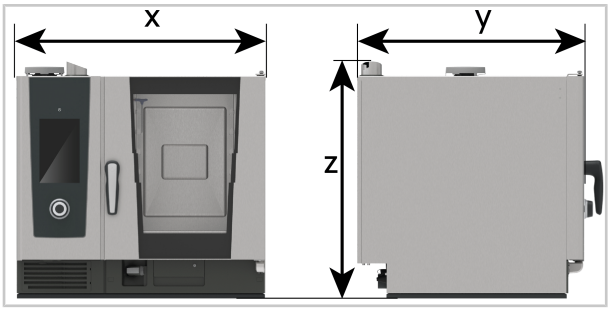
Unit size 6-2/3 GN



	Width (mm) x	Width (inch)	Depth (mm) y	Depth (inch)	Height (mm) z	Height (inch)
6-2/3	655	25 3/4	555	21 7/8	567	22 3/8

	Depth overall dimension (mm)	Depth overall dimension (inch)	Height overall dimension (mm)	Height overall dimension (inch)
6-2/3	621	24 1/2	594	23 1/2

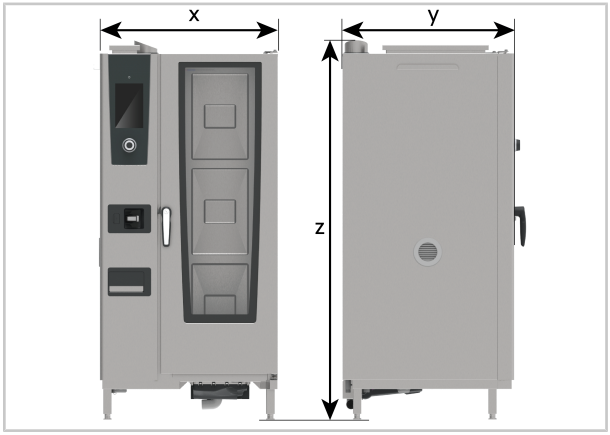
Unit size 6-1/1 up to 10-2/1 GN



	Width (mm) x	Width (inch)	Depth (mm) y	Depth (inch)	Height (mm) z	Height (inch)
6-1/1	850	33 1/2	775	30 1/2	754	29 5/8
6-2/1	1072	42 1/4	975	38 3/8	754	29 5/8
10-1/1	850	33 1/2	775	30 1/2	1014	39 7/8
10-2/1	1072	42 1/4	975	38 3/8	1014	39 7/8

	Depth overall dimension (mm)	Depth overall dimension (inch)	Height overall dimension (mm)	Height overall dimension (inch)
6-1/1	842	33 1/8	804	31 5/8
6-2/1	1042	41	804	31 5/8
10-1/1	842	33 1/8	1064	41 7/8
10-2/1	1042	41	1064	41 7/8

Unit size 20-1/1, 20-2/1 GN



	Width (mm) x	Width (inch)	Depth (mm) y	Depth (inch)	Height (mm) z	Height (inch)
20-1/1	877	34 1/2	847	33 3/8	1807	71 1/8
20-2/1	1082	42 5/8	1052	41 3/8	1807	71 1/8

	Depth overall dimension (mm)	Depth overall dimension (inch)	Height overall dimension (mm)	Height overall dimension (inch)
20-1/1	912.5	35 7/8	1872	73 3/4
20-2/1	1116.5	44	1872	73 3/4

3.2.2 Unit weight

iCombi Pro Electric units

	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Weight without packaging (kg)	66	99	137	127	179	263	336

	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Weight without packaging (lbs)	145	218	302	279	394	579	740

iCombi Pro Gas units

	6-1/1	10-1/1	6-2/1	10-2/1	20-1/1	20-2/1
Weight without packaging (kg)	117	155	144	192	284	379
Weight without packaging (lbs)	257	341	317	423	626	835

iCombi Classic Electric units

	6-2/3	6-1/1	10-1/1	6-2/1	10-2/1	20-1/1	20-2/1
Weight without packaging (kg)	62	93	121	131	160	231	304
Weight without packaging (lbs)	137	205	266	288	352	509	670

iCombi Classic Gas units

	6-1/1	10-1/1	6-2/1	10-2/1	20-1/1	20-2/1
Weight without packaging (kg)	101	139	128	184	276	371
Weight without packaging (lbs)	222	306	282	405	608	817

3.2.3 Thermal load

iCombi Pro Electric units

	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Thermal load latent (kJ/h)	1020	2050	3450	3450	6350	6850	10900
Thermal load sensible (kJ/h)	1350	2523	4583	4583	7982	9115	14420

iCombi Pro Gas units

	6-1/1	10-1/1	6-2/1	10-2/1	20-1/1	20-2/1
Thermal load latent (kJ/h)	2050	3450	3450	6350	6850	10900
Thermal load sensible (kJ/h)	2523	4583	4583	7982	9115	14420

iCombi Classic Electric units

	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Thermal load latent (kJ/h)	1110	2050	3450	3450	6350	6850	10900
Thermal load sensible (kJ/h)	1420	2450	4450	4450	7750	8850	14000

iCombi Classic Gas units

	6-1/1	10-1/1	6-2/1	10-2/1	20-1/1	20-2/1
Thermal load latent (kJ/h)	2050	3450	3450	6350	6850	10900
Thermal load sensible (kJ/h)	2450	4450	4450	7750	8850	14000

We reserve the right to make technical developments/modifications.

4 Transport

⚠ CAUTION

Risk of crushing due to the weight of the unit

Hands and fingers can be crushed.

- Use appropriate protective clothing during transport.
- Use carrying aids such as carrying straps supplied by the manufacturer.
- At least 3 persons are required for transportation.

⚠ CAUTION

Risk of tipping during transport

Risk of crushing if the unit tips onto persons.

- Note the centre of mass of the unit.
- Make sure that the unit does not tip over during transport or lifting.

NOTICE

Unit damage due to narrow points

Note the width and height of entrances during transport.

Transport options

Unit size	6-2/3	6-1/1 - 10-2/1	20-1/1 - 20-2/1
With shipping pallet	✓	✓	✓
Without a pallet with a pallet jack (only with carrying aid)	✓	✓	✓
With carrying straps	-	✓	-

Transport unit

1. Remove the packaging material.
2. Transport the unit to its place of installation. Adhere to the following descriptions.

4.1 Centre of mass of unit

⚠ CAUTION

Risk of crushing and injury if centre of mass not adhered to

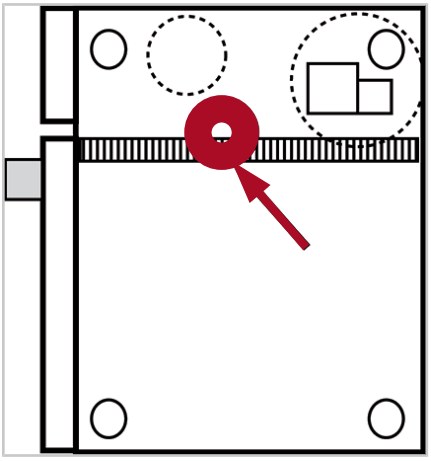
If the centre of mass is not adhered to, the unit can tilt when lifted and transported.

- Ensure an even weight distribution of the unit.
- Note the centre of mass of the unit.

NOTICE

Unit size 6-2/3 GN: Damage to the appliance if lifted incorrectly

During transportation, make sure that the air filter box and the USB connection remains intact.



4.2 Transport with pallet

⚠ CAUTION

Inclinations when transporting with a transport aid

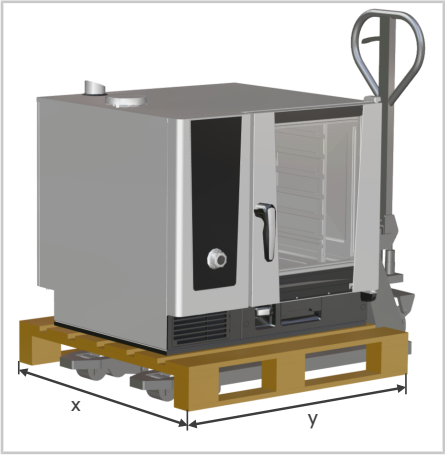
Risk of crushing and injury during transport with a transport aid over inclinations or uneven floors.

- Do not go over an incline of more than 10°.
- Transport the unit carefully.

NOTICE

Transporting with a transport aid without protection

Transport the unit as far as you can on the pallet. Do not transport the unit without protection with a transport aid or a similar transport tool. For protection, you can use a wooden pallet.



Required door width with transport pallet

Unit size	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
x (mm)	880	945	1150	945	1150	989	1194
x (inch)	34 5/8	37 1/4	45 1/4	37 1/4	45 1/4	38 7/8	47
y (mm)	930	935	1170	935	1170	969	1174
Y (inches)	36 5/8	36 3/4	46 1/8	36 3/4	46 1/8	38 1/8	46 1/4

Transporting tabletop units with transport pallet

- ✔ The packaging material is removed.
- ✔ The unit is on the shipping pallet.
- ✔ The unit is on the base frame.

1. Transport the unit to its place of installation with the transport pallet.
2. Lift the unit at the lifting points or with the aid of the transport straps from the transport pallet and place it on its intended installation surface. Follow the description for transporting using carrying straps in this manual.

>> The unit is standing on its intended installation surface and is ready for installation.

Transporting standalone units with transport pallet

Upon delivery, standalone units are on a special, separable transport pallet.

- ✔ The packaging material is removed.
- ✔ The unit is on the shipping pallet.
- ✔ The unit feet are positioned in the rubber frame of the shipping pallet.

1. Transport the unit to its place of installation with the transport pallet. During transport, watch out for protruding parts on the underside of the unit.

>> The unit is standing on its intended installation surface and is ready for installation.

4.3 Transporting without a shipping pallet with a pallet jack

NOTICE

Transporting without a shipping pallet with a pallet jack

Do not transport the unit without protection with a pallet jack. For protection, you can use a wooden pallet or wooden beams.

NOTICE

Unit size 6-2/3 GN: Damage to the appliance if lifted incorrectly

During transportation, make sure that the air filter box and the USB connection remains intact.

Required door width without a transport pallet

Unit size	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
x (mm)	630	845	1045	845	1045	925	1145
x (inch)	24 3/4	33 1/4	41 1/8	33 1/4	41 1/8	36 3/8	45 1/8

4.3.1 Transporting tabletop units without a pallet with a pallet jack

- ✔ The packaging material is removed.
- ✔ The unit is on the base frame.
- ✔ To avoid scratches on the underside of the unit, provide protection against damage to the unit.

1. Slide the gasket upwards from the slot in the base frame.



2. Place the damage protection on the pallet jack.

3. Lift the unit at the lifting points with the pallet jack.
4. Transport the unit to its intended installation surface.
5. Slide the gasket back into its slot in the base frame.



>> The unit is standing on its intended installation surface and is ready for installation.

4.3.2 Transporting standalone units without a pallet with a pallet jack

✔ The packaging material is removed.

✔ The unit is on its feet.

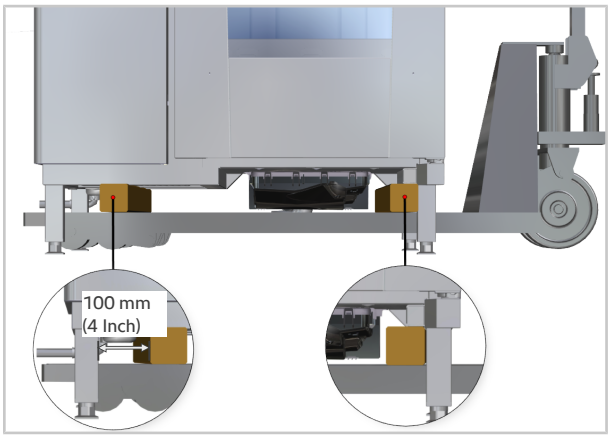
✔ The carrying aids are available for use.

✔ The pallet truck is at the lowest setting.

1. Drive the pallet jack underneath the unit from the left or right. Make sure that the pallet jack is at the lowest setting.
2. Loosen the two screws holding the transport aids together and separate the transport aids.
3. Place the transport aids between the standalone unit and the pallet jack. Watch out for protruding parts.

> The left carrying aid must be positioned around 100 mm [4 inches] next to the left unit foot.

> The right carrying aid must be positioned by the right unit foot.



4. Lift the standalone unit with the pallet jack.
5. Transport the unit to its intended installation surface.

>> The unit is standing on its intended installation surface and is ready for installation.

4.4 Transporting with carrying straps

Only transport the unit size 6-1/1 to 10-2/1 GN with carrying straps.

⚠ CAUTION

Risk of crushing and injury if unit is incorrectly lifted with carrying straps

Hands, fingers or feet could be crushed.

- Observe the maximum load indicated on the carrying straps. Only lift the unit according to the maximum load of the carrying straps.
- Only lift the unit by hand using all four carrying straps. Do not use any mechanical aids to lift the unit.

NOTICE

Risk of damage to the unit

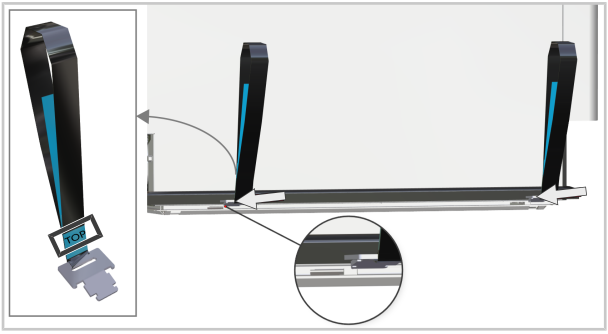
Only transport the unit size 6-1/1 to 10-2/1 GN with carrying straps provided by the manufacturer. The carrying straps are not included in the delivery and must be ordered separately (article number 91.01.135).

✔ All side panels of the unit must be closed.

1. Slide the gasket upwards from the slot in the base frame.



2. Put the carrying strap into the side vent with the top side upwards on the unit sides, so that they lock in. There are two side slots for carrying straps on each side of the unit underneath the floor gasket. Note the markings on the top side of the carrying strap. Insert the carrying straps up to the mark on the metal buckle.



3. Pull on the carrying straps and make sure that the carrying straps are securely locked into place.
4. Lift the unit with the carrying straps. Note the minimum required number of persons for lifting and transporting the unit according to the unit weight.
5. Transport the unit with the carrying straps and place it on its intended installation surface.
6. Press the carrying strap buckles down and pull the carrying straps out of the side slots.
7. Slide the gasket back into its slot in the base frame.

>> The unit is standing on its intended installation surface and is ready for installation.

5 Placement

⚠ CAUTION

Risk of crushing when positioning the unit

Fingers, hands and feet could be crushed beneath the unit.

- Wear appropriate protective clothing when positioning the unit.
- Only lift the unit at the intended lifting points.

NOTICE

Unit damage from frost

Ambient temperatures below freezing (frost) may damage the unit. The unit must be installed in a frost-resistant environment.

NOTICE

Unit malfunction due to aspirated atmospheric humidity

Humidity can be aspirated into the air filter from sources of steam near the air filter which would cause the unit to malfunction.

- Avoid having steam sources near the air filter.

NOTICE

Unit malfunction due to blocked air filter

If the air filter is blocked, the unit will not be able to suck in air or, in the case of gas units, combustion air.

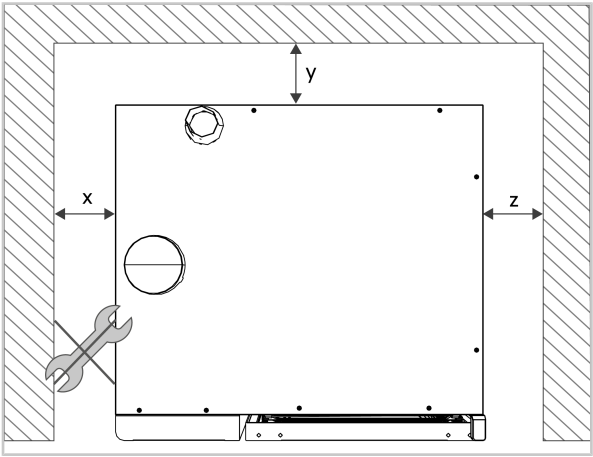
- Make sure that the grate of the air filter is not closed or covered.

5.1 Minimum clearance to unit

5.1.1 Distance to walls

Minimum clearance on all sides

Place the unit in consideration of the minimum clearance to the wall. The clearances depend on the unit size, as shown in the following table.



Unit size	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
x (mm)	10	50	50	50	50	500	500
x (inch)	1/2	2	2	2	2	20	20
y (mm)	10	0	0	0	0	0	0
y (inch)	1/2	0	0	0	0	0	0
z (mm)	10	50	50	50	50	50	50
z (inch)	1/2	2	2	2	2	2	2

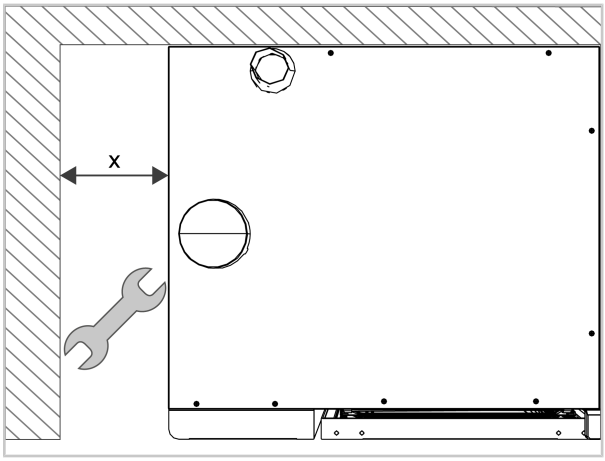
The following table only applies to gas units in Japan.
If the wall is flammable, the clearance between the gas units and the wall must be as follows:

Unit size	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
x (mm)	200					
x (inch)	7 3/4					
y (mm)	150					
y (inch)	6					
z (mm)	200					
z (inch)	7 3/4					

Recommended clearance on left side of the unit

Place the unit with a minimum recommended clearance to the wall on its left to ensure sufficient space on the left side of the unit to perform servicing works at the installation site.

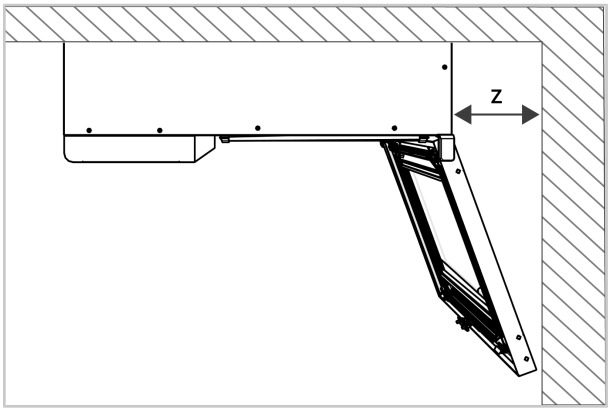
If this clearance on the left side of the unit is not possible, place the unit so that the unit can be pulled out from the installation recess for maintenance work.



	Distance on the left unit side
x (mm)	500
x (inch)	20

Recommended clearance on right side of the unit

To open the unit door to the first lock lever, place the unit with a minimum recommended clearance to the wall on the right. The clearance depends on the unit size, as shown in the following table.



Unit size	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
z (mm)	214	246	316	246	316	268	338
z (inch)	8 1/2	10	12 1/2	10	12 1/2	11	13

5.1.2 Distance to heat sources

NOTICE

Minimum clearance not adhered to

Place the unit with the minimum clearance to heat sources or open fire required to prevent any damage to the unit or malfunctions.

NOTICE

High ambient temperature next to the installation site (left side of the unit)

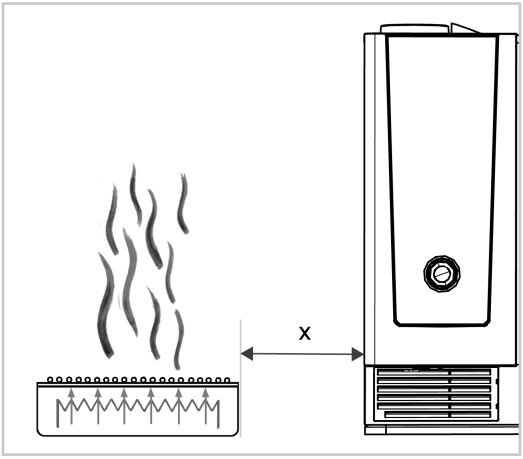
If the temperatures at the installation site on the left side of the unit exceed 80°C [176°F], the heating system will be switched off by the automatic emergency shutdown.

NOTICE

High ambient temperatures on the rear side of the unit

Do not place any deep-fat fryers or other heat sources by the rear side of the unit.

Place the unit with a minimum clearance to heat sources.



	Minimum clearance heat sources
x [mm]	350
x [inch]	14

Heat shield (optional)

If a sufficient distance to the heat source on the left cannot be maintained, an additional heat shield is available that reduces thermal loads.

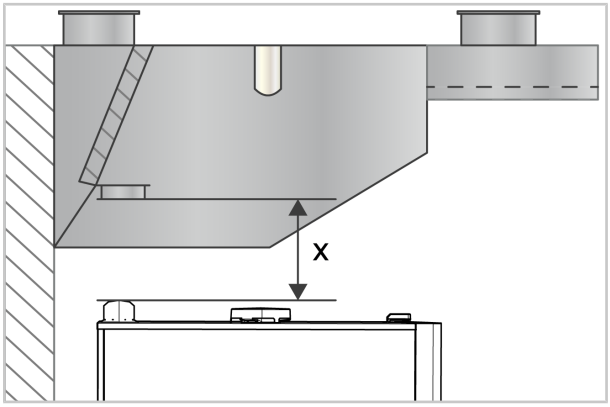
For the unit sizes 6-1/1 GN and 10-1/1 GN an additional heat shield is available for the right side.

Please note: The heat shield for unit sizes 6-1/1 GN to 20-2/1 GN is not suitable for the Combi-Duo and the UltraVent.

5.1.3 Clearance to ceiling

Electric units

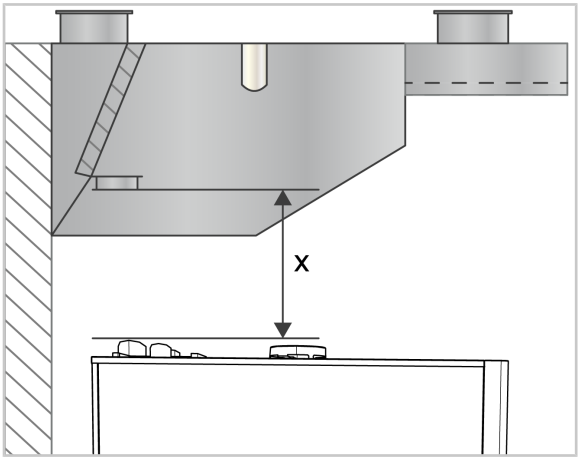
Position the electric unit with a minimum clearance between the unit's ventilation pipe and the grease filters of the exhaust hood/ventilation ceiling.



	Minimum clearance ceiling
x [mm]	254
x [inch]	10

Gas units

Position the gas unit with a minimum clearance between the unit's flue pipes and the grease filters of the exhaust hood/ventilation ceiling.

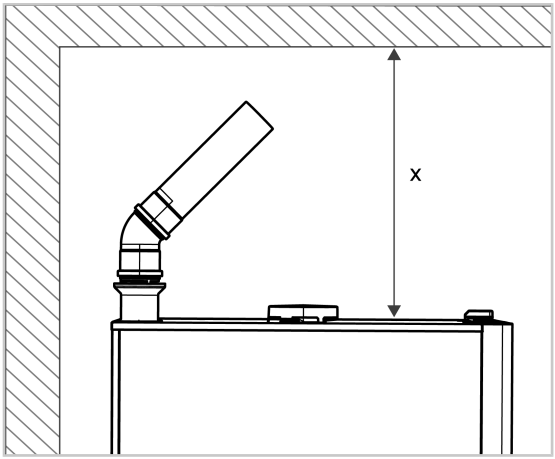


	Minimum clearance ceiling
x [mm]	400
x [inch]	16

Condensation breaker

If steam from the ventilation pipe cannot be directed into an exhaust hood or a ventilating ceiling, there must be a minimum clearance to the ceiling above the unit.

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



	Minimum clearance ceiling
x [mm]	500
x [inch]	20

5.2 Installation of tabletop units

⚠ WARNING

The unit is falling from the installation surface

Risk of crushing and injury from tipping or turning of the unit.

- Do not tip the unit onto the installation surface.
- When turning the unit, make sure that the weight of the unit is evenly distributed and that the unit is completely on the installation surface.

⚠ WARNING

Height-adjustment with unit feet or levelling frame

Risk of burning during operation when loading on rack rails above 1600 mm [63 inch].

- Affix the safety label enclosed to the unit.
- Inform the end user about the hazard of elevated rack rails.

NOTICE

Dirty unit due to broken sealing strip

A sealing strip is affixed to the underside of the unit to seal it at the installation site. The sealing strip prevents dirt from getting underneath the unit. When moving the unit, take care not to damage this seal.

Pre-requisites

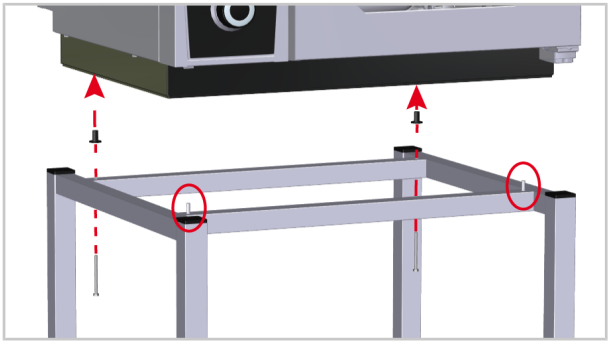
- When placing the unit on a base frame or base cabinet, be sure to use only original equipment from the manufacturer for the base frames and cabinets.
- The unit must only be placed on a level installation surface. Unevenness across the width of the unit must be no greater than 1 mm [0.04 inches] .
- If the installation surface is not even, use a levelling frame to level the surface.
- The installation surface must be clean and free of grease.

5.2.1 Unit size 6-2/3 GN set up on base frame

✔ The installation surface is level, clean and free of grease.

✔ 2 neoprene blind rivet nuts and 2 screws are provided to secure the unit.

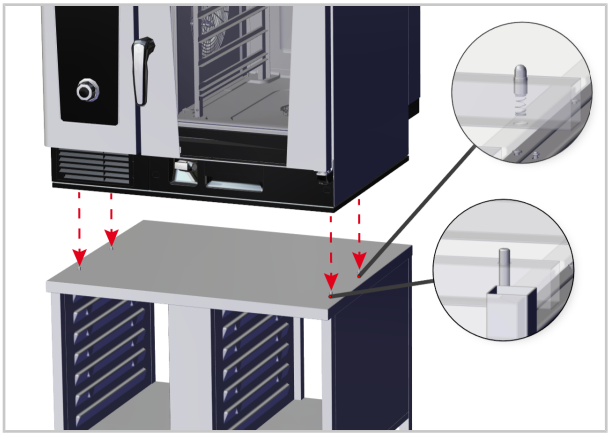
1. Place the 2 neoprene blind rivet nuts in the holes on the rear area on the underside of the unit.
2. Place the unit on the stand. Make sure that the positioning bolts of the stand fit into the front holes on the underside of the unit.
3. Insert the 2 screws from underneath into the rear holes and tighten them.



5.2.2 Unit sizes 6-1/1 up to 10-2/1 GN set up on base frame

- ✔ The installation surface is level, clean and free of grease.
- ✔ Carrying aids such as carrying straps are available.

1. Lift the unit onto the stand, e.g. using carrying straps.
2. Position the unit with the spring pins.
3. Screw the unit to the stand with 2 screws. The diagram indicates the position of the screws in the stand. The screws are attached with the nuts welded in the unit.



5.2.3 Align the base frame horizontally and fasten

⚠ CAUTION

Shifting the unit to the installation position.

Risk of crushing if the unit is shifted.

Gas units can damage gas lines.

- Secure the unit with the fixing kit.

Non-mobile stand

Levelling the stand

✔ The unit is positioned on the stand and is standing at its intended installation surface.

1. Place 2 spirit levels on the unit: 1 spirit level along the right edge of the unit and 1 spirit level along the front edge of the unit.
2. Make the unit level on the right by turning the front right and back right feet of the stand.
3. Make the unit level on the left by turning the front left and back left feet of the stand.

Securing the stand

Secure the stand against slipping with the mounting kit.

The mounting kit including the special label, screws and dowels is not included in the delivery of the unit and can be ordered separately from the manufacturer under article number 8700.0317.



Adhere to the clearances of the foot locks for the relevant unit sizes:

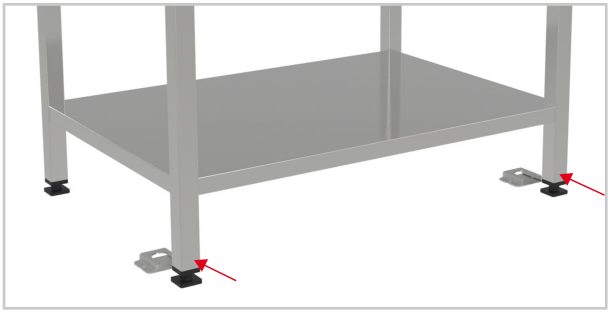


	6-1/1 - 10-1/1	6-2/1 - 10-2/1
x [mm]	755.5	977.5.

	6-1/1 - 10-1/1	6-2/1 - 10-2/1
x [inch]	29 3/4	38 1/2

✔ The foot locking mechanisms and the mounting kit are ready for use.

1. Fix the foot locks to the floor for the front feet with the special adhesive or screws and anchors. Make sure that both foot locks with the openings show towards the front.
2. Insert the stand into the foot locks.



Mobile stand

Align mobile stand

To counter any bumps in the ground and to align the mobile stand, proceed as follows:

1. Loosen the headless screws on the castors with an Allen key.
2. Adjust the height to the castors with a screw wrench until the castors are secure.
3. Secure the grub screw to the castors with a hexagon socket wrench.

Attach the mobile base frame

NOTICE

Damage to electrical or gas lines due to shifting

Also secure the unit with a suitable retention device to prevent it from slipping on the rear wall (retention devices are not included in the scope of delivery).

5.3 Installation of standalone units

5.3.1 Installing and aligning standalone units

Lift and set up standalone unit from transport pallet

⚠ CAUTION

Risk of tipping when installing the unit

Risk of crushing if the unit tips onto persons.

- Note the centre of mass of the unit.
- Make sure that the unit does not tip over from the pallet during installation.

⚠ CAUTION

Risk of injury due to the weight of the unit

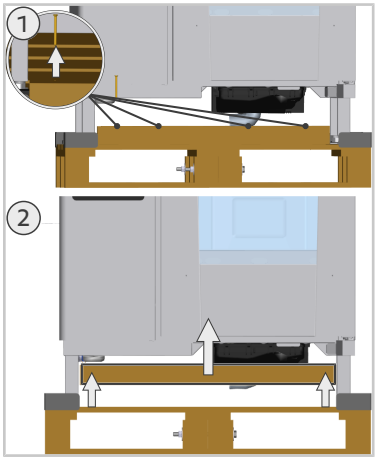
Personal injury and damage to property due to tipping over of the unit

- At least 2 people are required to set up the unit.

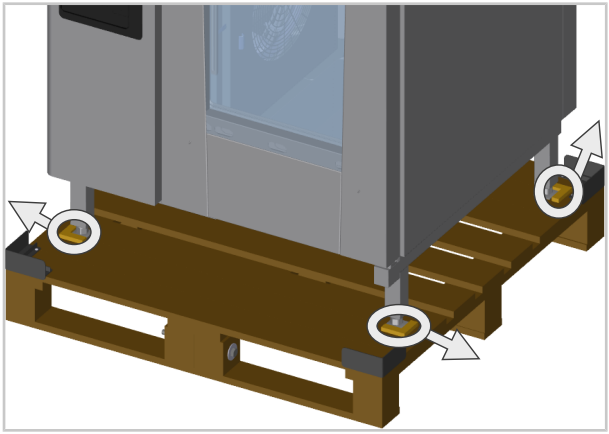
✔ The installation surface is level, clean and free of grease.

✔ The carrying aid is available.

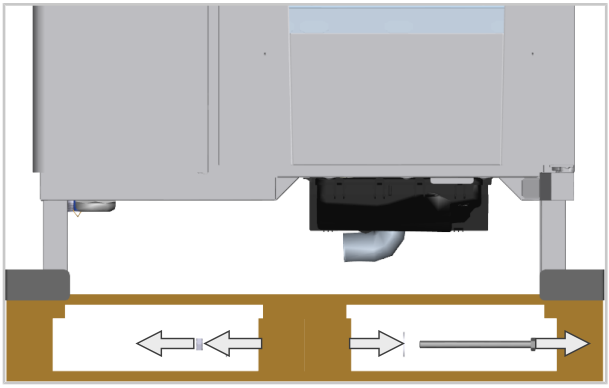
1. Loosen the screws that connect the transport pallet to the transport aid. Place the transport aids screwed together on the right next to the shipping pallet.



2. Remove the foam rubber pieces next to the unit feet of the transport pallet.

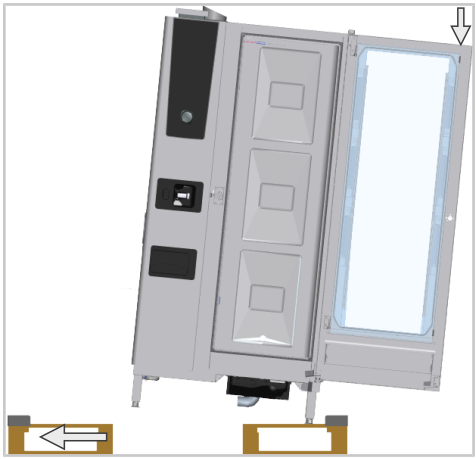


3. Loosen the screws with nut on the split transport pallet.

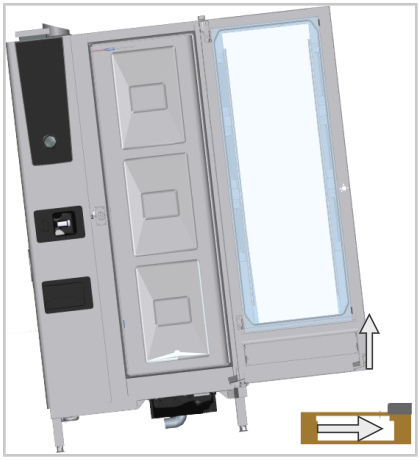


4. Open the cooking cabinet door.

5. Pull the unit downwards by the cooking chamber door. Remove the part of the pallet under the electrical compartment.



6. Place the unit with the rear unit feet on the installation surface.
7. Gently lift the unit from the cooking chamber door and pull the pallet under the unit.



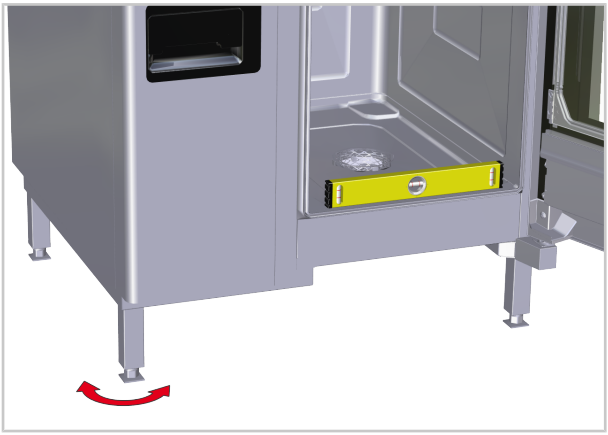
8. Place the unit on the installation surface using the front unit feet.

Aligning the standalone unit

✔ The unit is positioned and is standing at its intended installation surface.

1. Place a spirit level in the cooking cabinet of the unit.
2. Make the unit level on the right by turning the front right and back right unit feet.

3. Make the unit level on the left by turning the front left and back left unit feet.



5.3.2 Securing the standalone unit

⚠ CAUTION

Shifting the unit to the installation position.

Risk of crushing if the unit is shifted.

Gas units can damage gas lines.

- Secure the unit with the fixing kit.

Secure the standalone unit against slipping with the mounting kit.

The mounting kit including the special label, screws and dowels is not included in the delivery of the unit and can be ordered separately from the manufacturer under article number 8700.0317.



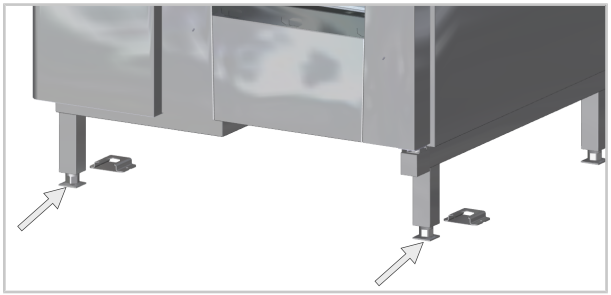
Adhere to the clearances of the foot locks for the relevant unit sizes:



	20-1/1	20-2/1
x [mm]	741	946
x [inch]	29 1/8	37 1/4

✔ The foot locking mechanisms and the mounting kit are ready for use.

1. Fix the foot locks to the floor for the front feet with the special adhesive or screws and anchors. Make sure that both foot locks with the openings show towards the front.
2. Insert the standalone unit into the foot locks.



5.3.3 Aligning the mobile oven rack

⚠ WARNING

Maximum approach angle of entry ramp is exceeded

Risk of burning due to hot liquid and food if the approach angle is too steep.

Ensure that the approach angle of the entry ramp is less than 4 degrees.

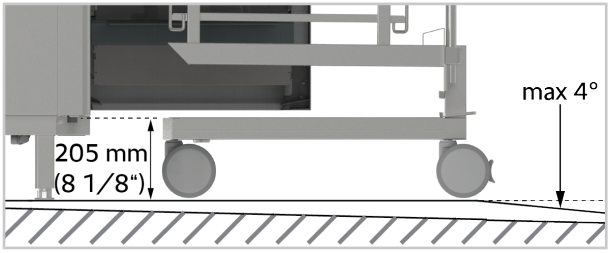
NOTICE

Malfunction due to a skewed mobile oven rack

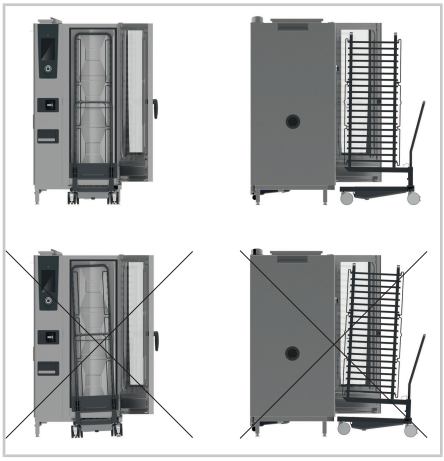
Incorrectly aligning the mobile oven rack may cause the unit to malfunction, such as during cleaning.

Make sure the mobile oven rack is level inside the unit.

1. Make sure there is 205 mm [8 1/8 inches] of clearance between the upper edge of the entry frame and the floor using the feet on the mobile oven rack. The clearance is required so that the mobile oven rack can be pushed correctly into the unit.



2. Check that the mobile oven rack can be pushed straight into the unit. If this is not the case, use an entry ramp or transfer aid.



Entry ramp and rolling aid

- If the floor is uneven, use an entry ramp to compensate the unevenness.

- If there is a gully grid in front of the standalone unit, position a rolling aid near the entry area of the mobile oven rack.



Handle storage

The included holder provides a secure place to store the mobile oven rack handle during cooking.

1. Secure the holder for the handle to the unit cover, so that the holder is aligned with the left side panel.
2. Hang the handle in the holder.

5.4 Fixing the unit

⚠ CAUTION

Shifting of units to the installation position

Risk of crushing if the units are moved or shifted.

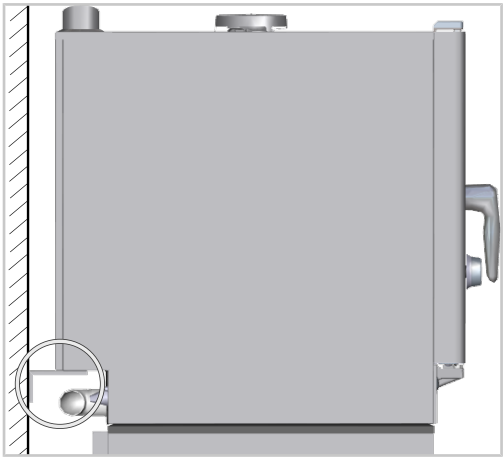
Gas units can damage gas lines.

- Secure the unit with the fixing kit.
- Also secure the unit with a suitable retention device to prevent it from slipping on the rear wall (retention devices are not included in the scope of delivery).

Fixing

Secure units with optional extensions to prevent them from shifting (e.g. marine, Combi-Duo). The fixing set can be expanded with suitable retention devices.

If available, use the supplied retention devices for options (e.g. bracket for wall mounting).



5.5 Notes on extractor hood

⚠ DANGER

Toxic exhaust fumes

Risk of asphyxiation from unauthorised concentration of harmful exhaust gases.

- Ensure that the ventilation options in the installation area are adequate.
- Perform a flue gas analysis prior to commissioning the unit.
- Only for Japan:
  The unit must be installed under an exhaust hood.

On-site ventilation

When installing an exhaust device, observe the following:

- VDI Directive 2052, NFPA 96 and local construction authority regulations on exhaust hoods.
- The exhaust hood must protrude 300-500 mm [12 – 20 inches] over the front of the unit.
- Install the unit underneath an exhaust device if using a VarioSmoker.
- Install a grease filter into the protruding part of the exhaust device.

Exhaust hood

Exhaust hoods are available for the units (including retrofitting). To install the exhaust hood, follow the installation manual enclosed with the exhaust hood.

6 Electrical connection

⚠ DANGER

High voltages when connecting to the mains power

Danger to life due to high voltage.

- Disconnect from the power supply.
- Make sure the unit is disconnected from the power.

⚠ DANGER

Electric shock from incorrect connection

There is a danger to life if the wires are incorrectly connected.

Connect the wires correctly according to their colour coding.

⚠ CAUTION

Risk of injury due to improper installation

Use an accessible all-pole disconnection device provided by the customer with a minimum of 3 mm [0.12 inches] contact gap.

NOTICE

Mains voltage does not correspond to unit voltage

Before connecting, check whether the mains voltage corresponds to the required voltage on the type plate of the unit.

6.1 Regulations for electrical connection

- Adhere to the regulations of the VDE and the local energy supplier.
- Connect the unit in accordance with the applicable regulations of your country, federal state, city or local authority.
- Connect the unit to a standard energy supply network.
- The amp draw, contactors and cable cross-sections depend on the following factors:
  - Local regulations
  - Cable length
  - Cable quality
  - Power supply
- For a proper electricity connection, adjust the power ratings to the local circumstances and requirements.
- Adhere to the regulations of the NFPA 70/NEC and CSA C22.2.

- Only use power cables in accordance with the provisions of the NEC/NEMA.

Colour coding of wires:

Note the colour coding of wires and local deviations.

Wire colour	Wire function
Yellow/green	Protective conductor
Blue	Neutral conductor (neutral wire)
Brown, grey or black	Phase L1, L2, L3

Residual current circuit breaker

All units are generally equipped with a protective conductor terminal. In accordance with national standards and regulations, an RCD (residual current device) must be incorporated in the installation of the unit.

Unit size 6-1/1 GN to 20-2/1 GN

Connect the unit to a residual current device according to the table Power ratings of different voltage types [▷ 58].

Unit size 6-2/3 GN

Voltages with neutral conductor (NAC): Connect the unit to a residual current device according to the table Power ratings of different voltage types [▷ 58].

Voltages without neutral conductor (AC): Connect the unit to a residual current device according to the table Power ratings of different voltage types [▷ 58].

Notes for standalone units

- Maximum connection impedance at the grid connection point is 0.09 Ω.
- The cross-sections of the connection lines depend on current consumption and local regulations.

Notes for UltraVent/UltraVent Plus condensation hoods

For units with a condensation hood, both appliances must be disconnected from the mains prior to servicing work.

Before you disconnect the power cable from the mains or reconnect it to the mains, make sure that the unit is switched off to prevent the condensation hood from running.

Notes for 6-2/3 GN units with a UltraVent/UltraVent Plus condensation hood

- The condensation hood be connected to an electrical supply in line with applicable standards (VDE and UL/CSA NEC regulations).
- The condensation hood is connected to the power supply with a permanent connection. The fixed connection with an all-pole disconnection device with at least a 3 mm [1/8 inch] contact gap must be accessible on site.
- If the condensation hood is connected with a power cable, the power cord must always be accessible.

- The condensation hood must be fused with a maximum of 16 A by the customer.
- The condensation hood must be fused with a maximum of 15 A by the customer.
- The condensation hood is equipped with an approx. 2 m [approx. 6 1/2 inches] long connection cable without a plug.
- If the connecting cable is replaced, use a H05 RN-F 3x1.5 mm^2 quality cable at the very least. The mains power cable may only be replaced by qualified personnel authorised by the manufacturer.
- Before you disconnect the power cable from the mains or reconnect it to the mains, make sure that the unit is switched off to prevent the condensation hood from running.

Notes for units with the Uninterrupted Power Supply (UPS) option

With the UPS option, electronic components can be connected to a stable voltage supply. With this option, a second connection cable for the electronic components will be routed out of the unit. When performing servicing work on the unit, both voltage sources must be disconnected from the mains.

6.2 Open the electrical compartment

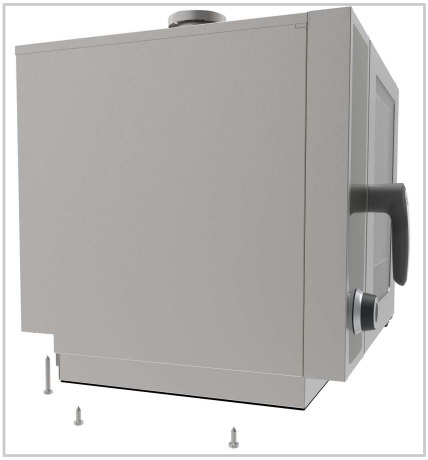
The electrical compartment is behind the left side panel.

- ✔ The unit is standing on its intended installation surface.
- ✔ The unit is switched off.
- ✔ All power sources are switched off by way of an external circuit breaker.

1. Open the electrical compartment as described below for the relevant unit size.

Unit size 6-2/3 GN

1. Loosen two screws on the underside of the left side panel and 1 screw on the rear side.



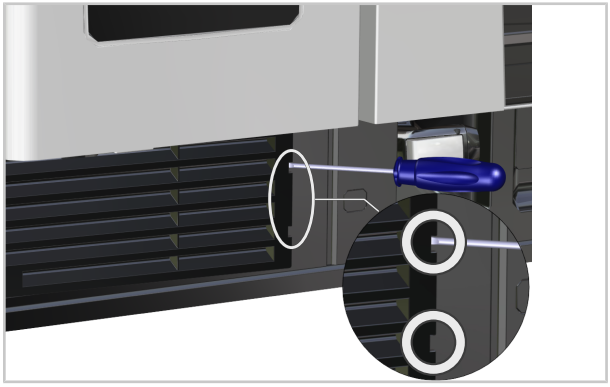
2. Lift up the left side panel from below and pull the side panel downwards away from the unit.



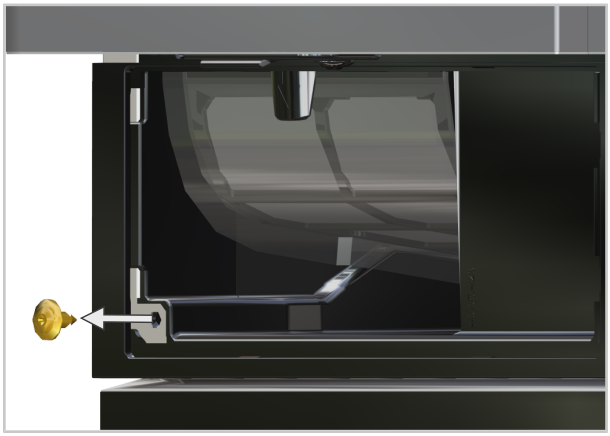
>> The electrical compartment is open.

Unit size 6-1/1 GN to 10-2/1 GN

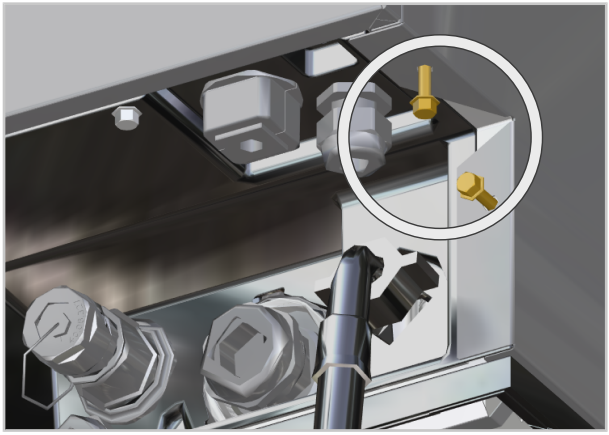
1. Lever out the grating underneath the control panel with a screwdriver.



2. Unscrew the blind rivet nuts in the bottom left corner.



3. Loosen two screws in the recess of the unit's side panel.

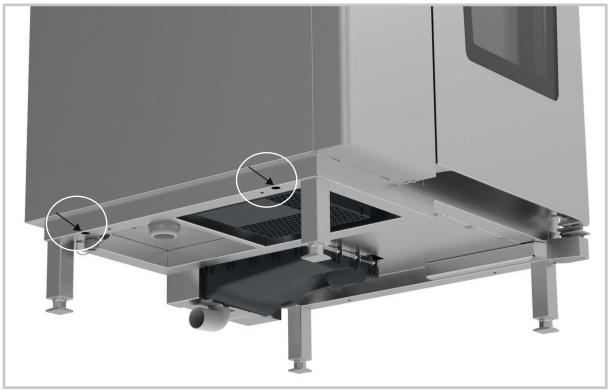


4. Pull the left side panel downwards away from the unit.
5. Remove the side panel.

>> The electrical compartment is open.

Unit size 20-1/1 GN, 20-2/1 GN

1. Loosen two screws on the underside of the side panel.



2. Lift up the left side panel from below and pull the side panel downwards away from the unit.

>> The electrical compartment is open.



6.3 Connecting electric units to the mains

Notes on power cable and connection point

- A fixed connection is provided for the electrical connection of the unit.
- Units with a 3 NAC 400 V supply voltage can be connected with a permanent connection or a plug connection.
- A dedicated supply line is available for the unit. The flexible power cable is at least of type H07 RN-F.
- Tabletop units are equipped with power cables without plugs. The cables are around 2.5 m [98.5 inches] in length.
- Standalone units are delivered without mains cables.
- Units with a 3 NAC 400 V supply voltage must be connected to a safety switch by means of a permanent connection (conduit connection).
- A dedicated supply line is available for the unit.
- Units are delivered without mains cables.
- Unit size 6-2/3 GN: The unit is supplied with a mains cable.
- The connection point for the power cable is on the main contactor in the electrical compartment behind the removable left side panel.

Connecting the tabletop unit

- ✔ Unit size 6-2/3 GN: An all-pole disconnection device with at least a 3 mm [0.12 inches] contact gap must be supplied on site.
- ✔ A type B residual current circuit breaker is provided.
- ✔ For unit size 6-2/3 GN, a type A residual current device can be used.
- ✔ The mains lead cleat for the supply cable is tightened.
- ✔ The electrical compartment is open.

1. Lead the mains cable through the opening on the rear side to the connection point in the electrical compartment.
2. Connect the wires to the connector terminals. Adhere to the following colour coding.
3. Check that the wires are properly plugged in.

>> The unit is connected to the mains.

Connecting the standalone unit

- ✔ A type B residual current circuit breaker is provided.
- ✔ The mains lead cleat for the mains cable is tightened.
- ✔ The electrical compartment is open.

1. Lead the mains cable through the opening on the underside to the connection point in the electrical compartment.
2. Tighten the cable screw in the opening.
3. Open the connector terminals with the appropriate tool and connect the wires. Adhere to the following colour coding.
4. Check that the wires are properly plugged in.

>> The unit is connected to the mains.

Connector terminal colour coding

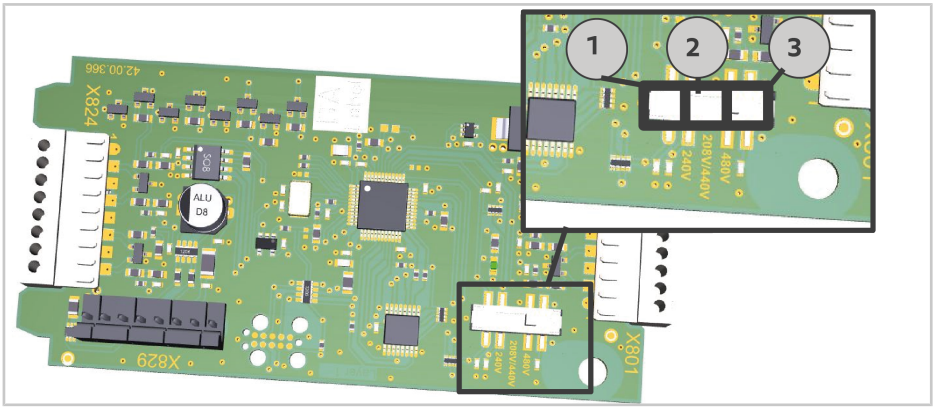
Connection	Wire colour	Connector terminals	Tool (standalone units only)
Phase (non-phase-sequence-dependent)	Grey, black or orange	L1, L2, L3	Allen key
Neutral conductor	Blue	N	Slot sccrewdriver
Protective conductor	Yellow/green	PE	Hexalobular socket (Torx)

6.4 Voltage supply (USA and Canada only)

- ✔ The unit is switched off.
- ✔ All power sources are switched off by way of an external circuit breaker.
- ✔ The electrical compartment is open.

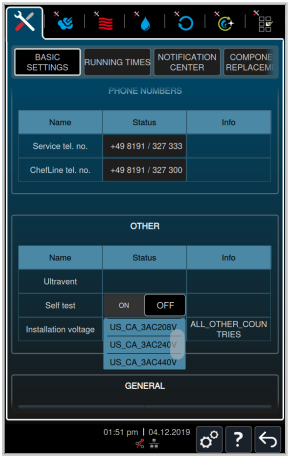
1. Check the power supply at the connection.

2. Set the voltage at the switch according to the power supply. In the basic position, the switch is in position 2:



Position	Voltage (V)
1	240
2	208 / 440
3	480

1. Close the electrical compartment.
2. Connect the unit to the power supply.
3. Switch the unit on.
4. Select the service level using the control panel. Navigate to the Basic settings - Other - Installation voltage. Set the voltage.



5. Switch the unit off and on again. The changes are now applied.
6. Perform a performance review. Check that the measured performance values match the information on the nameplate.

>> The voltage was successfully changed.

6.5 Conduit connection (USA and Canada only)

The conduit connection for installing tabletop units is not included with the unit and must be ordered separately.

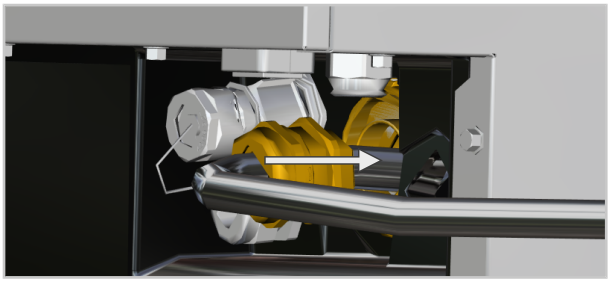
The conduit connection is required for units with the following voltage variants. Refer to the following table for diameters of conduit connection kits:

Voltage variants	6-1/1	10-1/1	6-2/1	10-2/1
11 - 3 AC240V 60 Hz	3/4 inch	1 inch	1 inch	1 1/4 inch
12 - 3 AC208V 60 Hz				
19 - 2 AC208V 60 Hz	1 inch			
42 - 3 AC440V 60 Hz	1/2 inch	3/4 inch	3/4 inch	1 inch
43 - 3 AC480V 60 Hz	1/2 inch	3/4 inch	3/4 inch	1 inch

6.5.1 Carry out conduit connection

- ✔ The unit is switched off.
- ✔ All power sources are switched off by way of an external circuit breaker.
- ✔ The matching pipe adapter is loosely placed on the wires (the pipe adapter is not included).
- ✔ The wires are inserted in the cable. The lock nut and the seals for the outside of the unit are loosely on the cable.

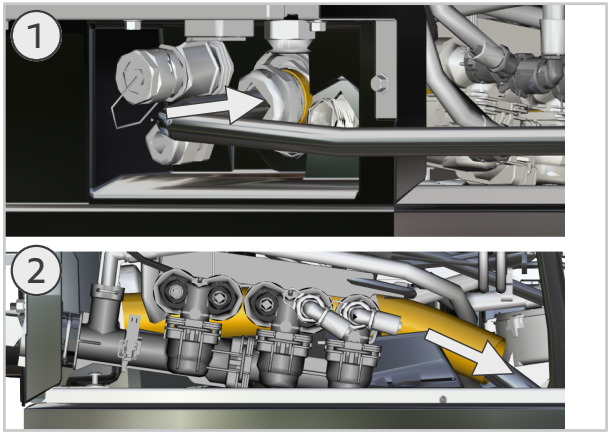
1. Mount the appropriate pipe adapter to the electrical connection on the back of the unit.



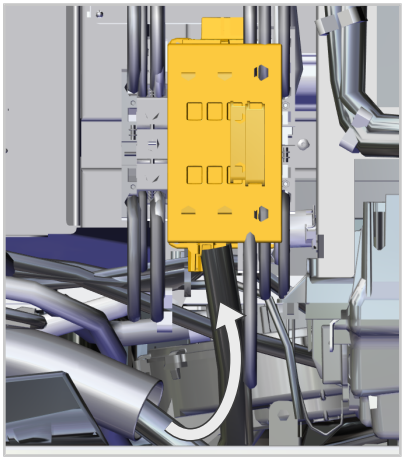
2. Open the left side panel.

> The electrical compartment is open.

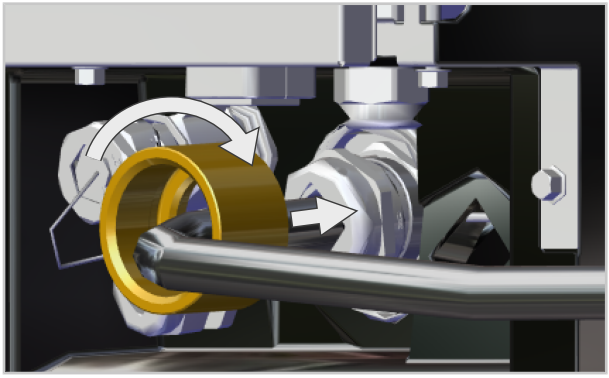
3. Feed the wires through the connecting pipe.



4. Connect the wires to the main protection switch.



5. Mount the gaskets and the lock nut over the cable to the pipe adapter.



6. Close the left side panel.

>> The installation of the conduit connection is completed on the unit side.

6.6 Connecting gas units to the mains

NOTICE

Incorrect polarity in electrical connection

Note polarity of electrical connection. An error message will appear if polarity is incorrect. The unit is not functional.

Notes on power cable and connection point

- The manufacturer recommends that each unit should have its own fused power supply line.
- Either a fixed connection or a plug connection may be used to connect the device to the power supply.
- A dedicated supply line is available for the unit. The flexible power cable is at least of type H07 RN-F.
- Tabletop units are equipped with power cables without plugs. The cables are around 2.5 m [98.5 inches] in length.
- Standalone units are delivered without mains cables.
- A dedicated supply line is available for the unit.
- The units are delivered with a power cable without plugs.
- For gas units, the connection point of the mains cable is located on the flat pins of the integrated mains filter in the electrical compartment.

Establish the connecction

✔ A type B residual current circuit breaker is provided.

✔ The mains lead cleat for the mains cable is tightened.

✔ The electrical compartment is open.

1. Connect the wires to the flat pins. Adhere to the following colour coding.
2. Check that the wires are properly plugged in.

>> The unit is connected to the mains.

Colour coding of flat pins

Connection	Wire colour	Flat pin
Phase	Brown, black or grey	L1
Neutral conductor	Blue	N
Protective conductor	Yellow/green	PE

6.7 Close the electrical compartment

NOTICE

Clamped cable

When closing the electrical compartment, make sure that no cables or tubes are trapped.

Unit size 6-2/3 GN

1. Insert the left side panel underneath the unit frame upwards.
2. Press the side panel upwards.
3. Tighten 2 screws on the underside of the side panel and 1 screw on the rear side.

>> The electrical compartment is closed.

Unit size 6-1/1 GN to 10-2/1 GN

1. Insert the left side panel underneath the unit frame upwards.
2. Press the side panel upwards.
3. Press the side panel inwards in the bottom area.

> The front edge is behind the plastic part and the rear edge is above the earthing plate.

4. Tighten 2 screws on the rear side of the unit.
5. Put the blind rivet nuts on the front side in the bottom left corner and tighten them.
6. Insert the grate and press it down.
7. Check that the floor gasket is positioned correctly.

>> The electrical compartment is closed.

Unit size 20-1/1 GN - 20-2/1 GN

1. Insert the left side panel underneath the unit frame upwards.

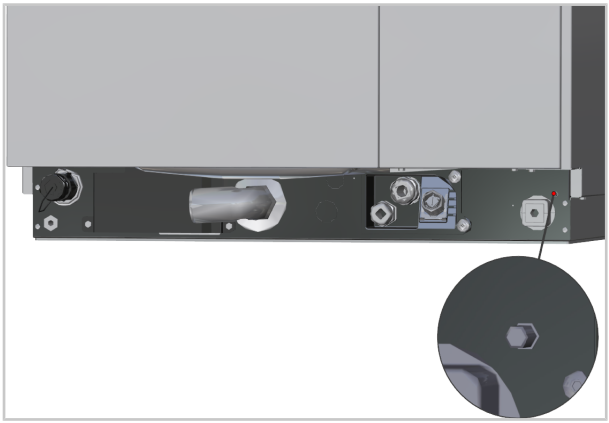
2. Press the side panel upwards.
3. Tighten 2 screws on the underside of the side panel.

>> The electrical compartment is closed.

6.8 Connecting the equipotential bonding

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

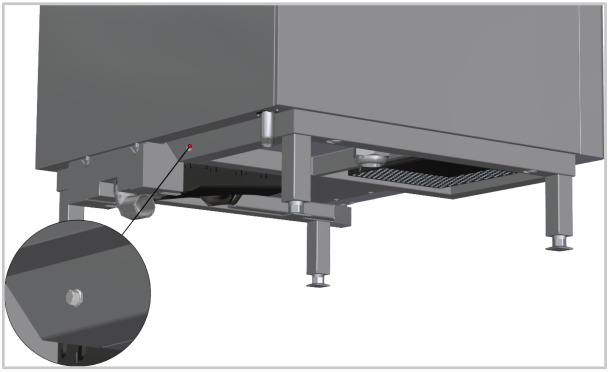
Unit size 6-2/3 GN



Unit size 6-1/1 GN to 10-2/1 GN



Unit size 20-1/1 GN, 20-2/1 GN



6.9 Power ratings of different voltage types

Maximum connection voltage

- Maximum permissible tolerance for input voltage: -15% to +10%.
- The unit can be used with frequencies of 50 Hz and 60 Hz without making any technical modifications.

iCombi Pro, iCombi Classic Electric units

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (1 NAC 220 V)	60	22	5	25	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (1 NAC 230 V)	50/60	23.1	5.3	25	F
6-1/1 E (1 NAC 230 V)	50/60	47	10.8	50	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (1 NAC 240 V)	50/60	24	5.7	25	F
6-1/1 E (1 NAC 240 V)	50/60	48.8	11.7	50	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 208 V)	60	27.4	5.7	40	B
6-1/1 E (2 AC 208 V)	60	51.9	10.8	60	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 230 V)	50/60	23.1	5.3	25	B
6-1/1 E (2 AC 230 V)	50/60	47	10.8	50	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 240 V)	50/60	24	5.7	25	B
6-1/1 E (2 AC 240 V)	50/60	48.8	11.7	50	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 240 V)	50/60	24	5.7	40	B
6-1/1 E (2 AC 240 V)	50/60	45	10.8	60	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 200 V)	50/60	15.9	5.3	16	B
6-1/1 E (3 AC 200 V)	50/60	29.2	10.1	32	B
6-2/1 E (3 AC 200 V)	50/60	60	20.8	63	B
10-1/1 E (3 AC 200 V)	50/60	50.5	17.5	63	B
10-2/1 E (3 AC 200 V)	50/60	99.9	34.6	100	B
20-1/1 E (3 AC 200 V)	50/60	99.6	34.5	100	B
20-2/1 E (3 AC 200 V)	50/60	181.9	63	200	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 208 V)	60	15.9	5.7	20	B
6-1/1 E (3 AC 208 V)	60	30	10.8	35	B
6-2/1 E (3 AC 208 V)	60	62.2	22.4	70	B
10-1/1 E (3 AC 208 V)	60	52.5	18.9	60	B
10-2/1 E (3 AC 208 V)	60	103.8	37.4	125	B
20-1/1 E (3 AC 208 V)	60	103.3	37.2	125	B
20-2/1 E (3 AC 208 V)	60	188.5	67.9	200	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 220 V)	50/60	14.4	5.3	20	B
6-1/1 E (3 AC 220 V)	50/60	26	9.9	32	B
6-2/1 E (3 AC 220 V)	50/60	54.1	20.6	63	B
10-1/1 E (3 AC 220 V)	50/60	45.4	17.3	50	B
10-2/1 E (3 AC 220 V)	50/60	90	34.3	100	B
20-1/1 E (3 AC 220 V)	50/60	89.5	34.1	100	B
20-2/1 E (3 AC 220 V)	50/60	163.8	62.4	200	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 220 V)	60	14.4	5.3	20	B
6-1/1 E (3 AC 220 V)	60	26	9.9	32	B
6-2/1 E (3 AC 220 V)	60	54.1	20.6	63	B
10-1/1 E (3 AC 220 V)	60	45.4	17.3	50	B
10-2/1 E (3 AC 220 V)	60	90	34.3	100	B
20-1/1 E (3 AC 220 V)	60	89.5	34.1	100	B
20-2/1 E (3 AC 220 V)	60	163.8	62.4	200	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 230 V)	50/60	14.9	5.7	16	B
6-1/1 E (3 AC 230 V)	50/60	27.1	10.8	32	B
6-2/1 E (3 AC 230 V)	50/60	56.2	22.4	63	B
10-1/1 E (3 AC 230 V)	50/60	47.4	18.9	50	B
10-2/1 E (3 AC 230 V)	50/60	93.9	37.4	100	B
20-1/1 E (3 AC 230 V)	50/60	93.4	37.2	100	B
20-2/1 E (3 AC 230 V)	50/60	170.4	67.9	200	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 240 V)	50/60	15.5	6.2	16	B
6-1/1 E (3 AC 240 V)	50/60	28.1	11.7	32	B
6-2/1 E (3 AC 240 V)	50/60	58.5	24.3	63	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
10-1/1 E (3 AC 240 V)	50/60	49.3	20.5	50	B
10-2/1 E (3 AC 240 V)	50/60	97.2	40.6	100	B
20-1/1 E (3 AC 240 V)	50/60	97.2	40.4	100	B
20-2/1 E (3 AC 240 V)	50/60	177.5	73.8	200	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 E (3 AC 400 V)	50/60	15.6	10.8	16	B
6-2/1 E (3 AC 400 V)	50/60	32.3	22.4	35	B
10-1/1 E (3 AC 400 V)	50/60	27.3	18.9	32	B
10-2/1 E (3 AC 400 V)	50/60	54	37.4	63	B
20-1/1 E (3 AC 400 V)	50/60	53.7	37.2	63	B
20-2/1 E (3 AC 400 V)	50/60	98	67.9	100	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 E (3 AC 415 V)	50/60	15	10.8	16	B
6-2/1 E (3 AC 415 V)	50/60	33.7	24.2	35	B
10-1/1 E (3 AC 415 V)	50/60	28.5	20.5	32	B
10-2/1 E (3 AC 415 V)	50/60	56.5	40.6	63	B
20-1/1 E (3 AC 415 V)	50/60	56.2	40.4	63	B
20-2/1 E (3 AC 415 V)	50/60	102.7	73.8	125	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 E (3 AC 440 V)	50/60	14.2	10.8	16	B
6-2/1 E (3 AC 440 V)	50/60	29.4	22.4	32	B
10-1/1 E (3 AC 440 V)	50/60	24.8	18.9	32	B
10-2/1 E (3 AC 440 V)	50/60	49.1	37.4	63	B
20-1/1 E (3 AC 440 V)	50/60	48.8	37.2	63	B
20-2/1 E (3 AC 440 V)	50/60	89.1	67.9	100	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 E (3 AC 440 V)	60	14.2	10.8	20	B
6-2/1 E (3 AC 440 V)	60	29.4	22.4	35	B
10-1/1 E (3 AC 440 V)	60	24.8	18.9	30	B
10-2/1 E (3 AC 440 V)	60	49.1	37.4	60	B
20-1/1 E (3 AC 440 V)	60	48.8	37.2	60	B
20-2/1 E (3 AC 440 V)	60	89.1	67.9	100	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 E (3 AC 480 V)	50/60	13	10.8	16	B
6-2/1 E (3 AC 480 V)	50/60	26.9	22.4	32	B
10-1/1 E (3 AC 480 V)	50/60	22.7	18.9	25	B
10-2/1 E (3 AC 480 V)	50/60	45	37.4	50	B
20-1/1 E (3 AC 480 V)	50/60	44.7	37.2	50	B
20-2/1 E (3 AC 480 V)	50/60	81.7	67.9	100	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 E (3 AC 480 V)	60	13	10.8	20	B
6-2/1 E (3 AC 480 V)	60	26.9	22.4	35	B
10-1/1 E (3 AC 480 V)	60	22.7	18.9	30	B
10-2/1 E (3 AC 480 V)	60	45	37.4	60	B
20-1/1 E (3 AC 480 V)	60	44.7	37.2	60	B
20-2/1 E (3 AC 480 V)	60	81.7	67.9	100	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 NAC 380 V)	60	8.9	5.3	10	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 NAC 400 V)	50/60	7.1	4.9	10	F
6-1/1 E (3 NAC 400 V)	50/60	15.6	10.8	16	F
6-2/1 E (3 NAC 400 V)	50/60	32.3	22.4	35	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
10-1/1 E (3 NAC 400 V)	50/60	27.3	18.9	32	F
10-2/1 E (3 NAC 400 V)	50/60	54	37.4	63	B
20-1/1 E (3 NAC 400 V)	50/60	53.7	37.2	63	F
20-2/1 E (3 NAC 400 V)	50/60	98	67.9	100	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 NAC 415 V)	50/60	9.5	6.3	10	F
6-1/1 E (3 NAC 415 V)	50/60	15	10.8	16	F
6-2/1 E (3 NAC 415 V)	50/60	33.7	24.2	35	B
10-1/1 E (3 NAC 415 V)	50/60	28.5	20.5	32	F
10-2/1 E (3 NAC 415 V)	50/60	56.5	40.6	63	B
20-1/1 E (3 NAC 415 V)	50/60	56.2	40.4	63	F
20-2/1 E (3 NAC 415 V)	50/60	102.7	73.8	125	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (1 NAC 220 V)	60	22	5	25	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (1 NAC 230 V)	50/60	23.1	5.3	25	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (1 NAC 240 V)	50/60	24	5.7	25	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 208 V)	60	27.4	5.7	40	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 230 V)	50/60	23.1	5.3	25	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 240 V)	50/60	24	5.7	25	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 240 V)	50/60	24	5.7	40	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 200 V)	50/60	15.9	5.3	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 208 V)	60	15.9	5.7	20	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 220 V)	50/60	14.4	5.3	20	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 220 V)	60	14.4	5.3	20	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 230 V)	50/60	14.9	5.7	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 240 V)	50/60	15.5	6.2	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 NAC 380 V)	60	8.9	5.3	10	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 NAC 400 V)	50/60	7.1	4.9	10	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 NAC 415 V)	50/60	9.5	6.3	10	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 E (3 AC 240 V)	60	15.5	5.7	20	B
6-1/1 E (3 AC 240 V)	60	26	10.8	35	B
6-2/1 E (3 AC 240 V)	60	53.9	22.4	70	B
10-1/1 E (3 AC 240 V)	60	45.5	18.9	60	B
10-2/1 E (3 AC 240 V)	60	90	37.4	125	B
20-1/1 E (3 AC 240 V)	60	89.5	37.2	125	B
20-2/1 E (3 AC 240 V)	60	163.3	67.9	200	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (2 AC 220 V)	50/60	22	4.84	25	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-2/3 (3 AC 220 V)	50/60	13.3	5	16	B

iCombi Pro, iCombi Classic Gas units

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (1 NAC 100 V)	50/60	3.8	0.38	16	F
10-1/1 G (1 NAC 100 V)	50/60	7.5	0.75	16	B
20-1/1 G (1 NAC 100 V)	50/60	12	1.2	16	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (1 NAC 110 V)	50/60	5.5	0.6	16	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
10-1/1 G (1 NAC 110 V)	50/60	8.3	0.9	16	B
20-1/1 G (1 NAC 110 V)	50/60	11.8	1.3	16	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (1 NAC 120 V)	60	5.0	0.6	16	F
10-1/1 G (1 NAC 120 V)	60	7.5	0.9	16	B
20-1/1 G (1 NAC 120 V)	60	10.8	1.3	16	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (1 NAC 127 V)	50/60	4.7	0.6	16	F
10-1/1 G (1 NAC 127 V)	50/60	7.1	0.9	16	B
20-1/1 G (1 NAC 127 V)	50/60	10.2	1.3	16	F

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (1 NAC 230 V)	50/60	2.6	0.6	16	F
6-2/1 G (1 NAC 230 V)	50/60	3.9	0.9	16	B
10-1/1 G (1 NAC 230 V)	50/60	3.9	0.9	16	B
10-2/1 G (1 NAC 230 V)	50/60	6.5	1.5	16	B
20-1/1 G (1 NAC 230 V)	50/60	5.7	1.3	16	F
20-2/1 G (1 NAC 230 V)	50/60	9.6	2.2	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (1 NAC 240 V)	50/60	2.5	0.6	16	F
6-2/1 G (1 NAC 240 V)	50/60	3.8	0.9	16	B
10-1/1 G (1 NAC 240 V)	50/60	3.8	0.9	16	B
10-2/1 G (1 NAC 240 V)	50/60	6.3	1.5	16	B
20-1/1 G (1 NAC 240 V)	50/60	5.4	1.3	16	F
20-2/1 G (1 NAC 240 V)	50/60	9.2	2.2	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (2 AC 200 V)	50/60	1.9	0.38	16	B
6-2/1 G (2 AC 200 V)	50/60	3.3	0.65	16	B
10-1/1 G (2 AC 200 V)	50/60	3.8	0.75	16	B
10-2/1 G (2 AC 200 V)	50/60	6.3	1.25	16	B
20-1/1 G (2 AC 200 V)	50/60	6.0	1.2	16	B
20-2/1 G (2 AC 200 V)	50/60	9.5	1.9	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (2 AC 208 V)	60	2.9	0.6	16	B
6-2/1 G (2 AC 208 V)	60	4.3	0.9	16	B
10-1/1 G (2 AC 208 V)	60	4.3	0.9	16	B
10-2/1 G (2 AC 208 V)	60	7.2	1.5	16	B
20-1/1 G (2 AC 208 V)	60	6.3	1.3	16	B
20-2/1 G (2 AC 208 V)	60	10.6	2.2	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (2 AC 220 V)	50/60	2.7	0.6	16	B
6-2/1 G (2 AC 220 V)	50/60	4.1	0.9	15	B
10-1/1 G (2 AC 220 V)	50/60	4.1	0.9	16	B
10-2/1 G (2 AC 220 V)	50/60	6.8	1.5	16	B
20-1/1 G (2 AC 220 V)	50/60	5.9	1.3	16	B
20-2/1 G (2 AC 220 V)	50/60	10	2.2	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (2 AC 230 V)	50/60	2.6	0.6	16	B
6-2/1 G (2 AC 230 V)	50/60	3.9	0.9	16	B
10-1/1 G (2 AC 230 V)	50/60	3.9	0.9	16	B
10-2/1 G (2 AC 230 V)	50/60	6.5	1.5	16	B
20-1/1 G (2 AC 230 V)	50/60	5.7	1.3	16	B
20-2/1 G (2 AC 230 V)	50/60	9.6	2.2	16	B

	Hz	Current consumption (A)	Power (kW)	Fuse (A)	RCD type
6-1/1 G (2 AC 240 V)	50/60	2.5	0.6	16	B
6-2/1 G (2 AC 240 V)	50/60	3.8	0.9	16	B
10-1/1 G (2 AC 240 V)	50/60	3.8	0.9	16	B
10-2/1 G (2 AC 240 V)	50/60	6.3	1.5	16	B
20-1/1 G (2 AC 240 V)	50/60	5.4	1.3	16	B
20-2/1 G (2 AC 240 V)	50/60	9.2	2.2	16	B

7 Network connection

*this section does not apply to the USA and Canada.

7.1 Notes on network connection

The network connection allows you to connect the unit to your network, in order to connect the unit to ConnectedCooking.

Ethernet connection (Local Area Network)

iCombi Pro:

- Units are equipped with an Ethernet connection as standard.
- For a network connection, use at least a CAT-5 network cable.
- For unit size 6-2/3 GN to 10-2/1 GN, the connection is located on the back of the unit.
- For unit sizes 20-1/1 GN and 20-2/1 GN, the connection is on the underside of the unit.
- A detailed description of the connection to the network can be found in the original operating instructions.

iCombi Classic:

Units can optionally be ordered or retrofitted with an Ethernet connection.

The retrofitting kit is available under article number 87.01.420.

WLAN (Wireless Local Area Network)

The built-in WLAN adapter is a market-dependent option that is not available in every country.

- Series units iCombi Pro have a WLAN adaptor as standard.
- For series units iCombi Classic, a WLAN adaptor is available as an option.

7.2 Connecting the unit to the network

Connecting the Ethernet cable

1. Unscrew the LAN connection.
2. Unscrew the cap.
3. Remove the sealing plugs.
4. Push the Ethernet cable through the union nut.
5. Push the Ethernet cable through the rubber grommet.
6. Insert the rubber grommet into the clamp ring.
7. Plug the Ethernet cable into the socket.
8. Screw in the connection.
9. Tighten the cap.

>> The Ethernet cable is connected.

8 Water connection

8.1 Regulations for water connection

NOTICE

Malfunction due to minimum conductivity not being met

Make sure that the minimum conductivity of the water is 50 µS/cm [32 ppm TDS].

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

Adhere to the country standards and regulations for a connection to the drinking water supply, such as for hygiene requirements.

Water hose

- Supply and use a separate water tap for each unit.
- Use a water hose at least meeting the requirements of IEC 61770, EN 61770, EN 13618 or of equivalent quality.
- Do not use any used water hoses.
- Water hoses complying with EN 61770 are available from the manufacturer under the article number 2067.0709. The materials used in this connection hose meet KTW, WRAS and FDA requirements. For the USA and Canada an adapter is required on the water hose.

Drinking water protection

For a drinking water connection, a drinking water protection device meeting the requirements of EN 1717 is required.

- To connect unit size 6-2/3 GN of series iCombi Classic to the drinking water supply, a drinking water protection device pursuant to EN 1717 must be installed in the feed line to the water tap, such as a CA system separator pursuant to EN 14367. The CA system separator is included in the delivery in the Netherlands, in Switzerland and Japan. For other countries in Europe, the CA system separator is available under article number 50.01.820.
- All other units meet the requirements for drinking water protection pursuant to EN 1717 in as-delivered condition.

Water pressure

- The water pressure (flow pressure) in the inlet is 1.5 - 6 bar (21 - 87 psi).
- A water pressure of 3 bar (43 psi) is recommended.

Flow rates required for each unit

Unit size	6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Max. flow rate [l/min]	5	12	12	12	12	12	12
Max. flow rate (gal/min)	1.32	3.17	3.17	3.17	3.17	3.17	3.17

United Kingdom only: WRAS note on installation requirements (IRN) R160

To be performed by the installer:

An approved double check valve or another non-return valve that is just as effective must be mounted directly on the water tap at the connection point.

8.2 Connecting water inlet

The water inlet connection is on the rear or underside of the unit.

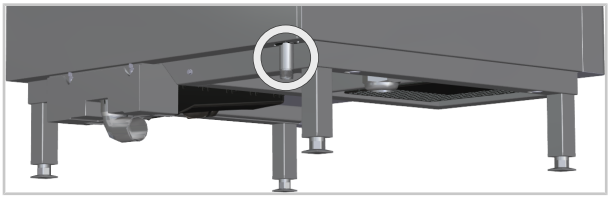
Unit size 6-2/3 GN



Unit size 6-1/1 GN to 10-2/1 GN



Unit size 20-1/1 GN, 20-2/1 GN



- ✔ The on-site water inlet is rinsed and ventilated.
- ✔ The water hose is rinsed.
- ✔ Safety devices, such as backflow prevention devices or CA system separators, have been installed in the inlet to the water tap.
- ✔ Line for joint cold water connection: 3/4 inches
- ✔ Temperature cold water: max. 30 °C [86 °F]
- ✔ Water hardness: min. 5 °dH (90 ppm).

- ✔ Conductivity: min. 50 µS
- ✔ The chlorine level (Cl_2) is below 0.2 mg/l (0.2 ppm) and the chloride concentration (Cl^-) is below 80 mg/l (80 ppm). If the values are higher, use a water filter. Note the information on selecting the water filter.

1. Connect the water hose to the water inlet of the unit.
2. Open the water tap.

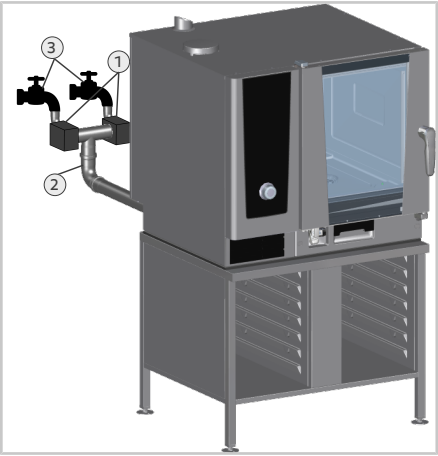
>> The water inlet is connected.

Recommendation for CombiMaster Plus without Care

The manufacturer recommends a preventative inspection be conducted around 6 months after unit commissioning to ascertain the degree of limescale buildup in the steam generator. This inspection should be performed by a trained technician.

Recommendation for two on-site water connections

The connection of two on-site water connections (item 3: drinking water and/or soft water) on the unit is possible.



Connect the connections to the unit using a Y or T piece (item 2) (connection size: 3/4 inches). Connect a backflow preventer device between each tap and the Y or T-piece (item 1).

8.3 Notes on water treatment

If the water quality is inappropriate for the unit, then water treatment is required. Please note the following:

- Treated water with hardness below 5°dH may be aggressive and corrosive, and can shorten the lifespan of the device. Do not use treated water with hardness below 5°dH.

- Observe all country-specific regulations regarding water and waste water connections, especially those regarding installation of water tapping points.
- Contact the local water supply company to inquire about water chloride levels (Cl^-), chlorine levels (Cl_2), conductivity and hardness.
- Connecting the iCombi Pro to water with hardness below 7°dH: When the self-test begins, the system will prompt the user to indicate the hardness of the water the unit is connected to. In this case, select Water hardness below 7°dH.
- In most cases, water connections do not require additional filters or water treatment.
- If critical water conditions prevail, filtration and/or water treatment is required.

8.4 Selecting the water filter

If critical water conditions prevail, filtration and/or water treatment is required. Please note the following in relation to the selection:

(A) Fine filters

We recommend particle filters with fineness of 5 - 15 µm [0.0002 – 0.0006 inches] for filtering water contaminated with sand, iron particles or suspended particles.

(B) Activated charcoal filters

If water contains high levels of chlorine (Cl_2) over 0.2 mg/l (corresponds to 0.2 ppm), an upstream activated carbon filter must be installed. Information about the chlorine level (Cl_2) can be obtained from the local water supply company.

(C) Reverse osmosis system

If the chloride concentration (Cl^-) is above 80 mg/l [80 ppm], a reverse osmosis system must be installed, due to the risk of corrosion. Information about the chloride level (Cl^-) can be obtained from the local water supply company.

NOTICE

Malfunction due to minimum conductivity not being met

Make sure that the minimum conductivity of the water is 50 µS/cm [32 ppm TDS].

(D) Water softening

iCombi Pro / iCombi Classic

When used according to instructions, iCombi Pro / iCombi Classic units will automatically remove limescale. Upstream water softening is not necessary.

CombiMaster Plus without Care

- Water softening is recommended for treating water if severe calcification occurs (without chloride contamination).

- Use a slightly acidic decarbonisation ion exchanger (H^+). Sodium ion exchangers (as are commonly found in dishwashers) are not recommended.
- Phosphate metering is not recommended due to its negative effects on the water system.

Notes on connecting the water filter

The diameter of the water hose must be at least 1/2 inch and to the water filter at least 3/4 inch.

When using a combination of filters, ensure filter sequence in direction of flow:

- (A)-(B)-(C)

  or

- (A)-(B)-(D)

9 Waste water connection

9.1 Regulations for waste water connection

General notes for all units

NOTICE

The drain pipe does not meet requirements

Use a drain pipe with a high temperature resistance, which corresponds at least to a type PP pipe. Do not use a hose.

NOTICE

Incorrect installation of drain pipe

Do not stick or weld the drain pipe to the unit drain.

Do not connect the drain pipe using a reducer to the unit drain.

NOTICE

Never close or cover the safety overflow

Do not reduce the safety overflow in the cross section.

The safety overflow must always be accessible and free. This is used for ventilation and drainage as a drain.

NOTICE

Dirty and greasy waste water

Make sure that a grease trap is installed by the owner to clarify the waste water.

- The unit complies with all relevant regulations (SVGW, KIWA, WRAS).
- The average wastewater temperature is 65°C [149°F].
- When dimensioning the drain, ensure that the steam generator short-term pump-off rate is 0.5 l/s [0.13 gal/s].
- If floor drain has no odour lock, make sure a 20 mm [0.79 inch] free outlet section is in place.
- Each unit size can be connected to a wall drain or floor drain.

Requirements for the unit size 6-2/3 GN

We recommend integrating a siphon into the waste water connection in order to optimise energy consumption.

- Diameter of the unit drain: DN 40 mm [1.5 inches]

- The unit has a DN 40/50 unit drain. A unit drain DN 40/50 is available from the manufacturer separately under the article number 8720.1031.
- Each unit must have its own waste water connection.

Requirements for the unit size 6-1/1 GN to 20-2/1 GN

NOTICE

Unit overflowing through external siphon

The unit is already equipped with an integrated siphon. A second external siphon without aeration of the drain will cause the unit to overflow.

No external siphon may be connected to the waste water connection without upstream aeration.

You must ensure that there is a free outlet section and vent for the drain connection.

- Diameter of the unit drain: DN 50 mm [2 inches]
- A connection set for unit drain DN 40/50 is available from the manufacturer under the article number 8720.1031.
- Tabletop units: Each unit must have its own waste water connection.

Additional requirements for Combi-Duo

In addition to the requirements for individual units, please note the following for a Combi-Duo system:

- Each unit must have its own waste water connection.
- For Combi-Duo with floor drain, no odour lock may be installed in the drain.

Options

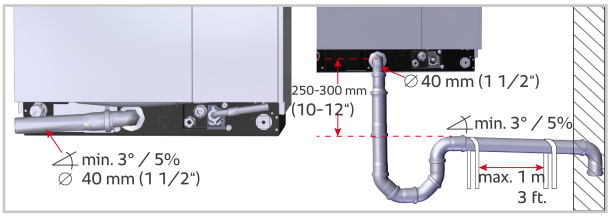
- In order to reduce pressure in the drain pipe, install a riser pipe in the drain pipe.
- Tabletop units: To increase ground clearance, a 110 mm [4.33 inches] unit elevation kit and a height-adjustable transport trolley for mobile oven racks are available.
- Standalone units: To increase ground clearance, a unit elevation kit and elevation kit for the mobile oven rack are available.

9.2 Connect waste water drain

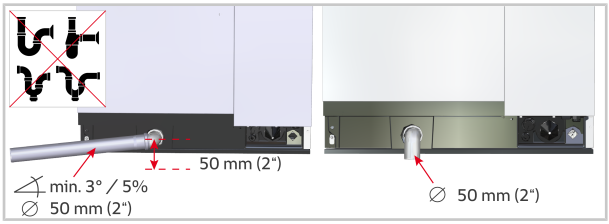
✔ The drain pipe is resistant to high temperatures.

1. Connect the drain pipe DN 50 mm [2 inches] (for unit sizes 6-2/3 : .DN 40 mm [1.5 inches]) so the unit drain has a constant fall of at least 5% or 3 (1.4 inches/foot). Use a 90° elbow as the first pipe section for the drain pipe.
2. Place the drain pipe to the side, straight or downwards.

Unit size 6-2/3 GN

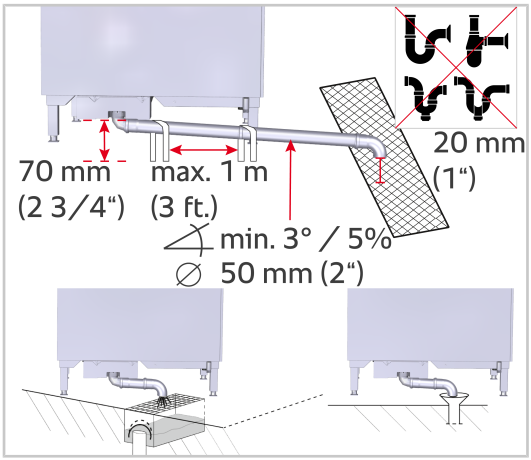


Unit size 6-1/1 GN to 10-2/1 GN



The average height of the waste water connection for tabletop units is around 50 mm [1.57 inches].

Unit size 20-1/1 GN, 20-2/1 GN



The average height of the waste water connection is 70 mm [2.76 inches].

9.3 Additional aeration of the drain (optional)

NOTICE

Unit overflowing through external siphon

The unit is already equipped with an integrated siphon. A second external siphon without aeration of the drain will cause the unit to overflow.

No external siphon may be connected to the waste water connection without upstream aeration.

You must ensure that there is a free outlet section and vent for the drain connection.

NOTICE

Regular cleaning of the funnel

The funnel on the vent pipe must be cleaned at regular intervals. The funnel must be removed from the vent pipe for cleaning.

NOTICE

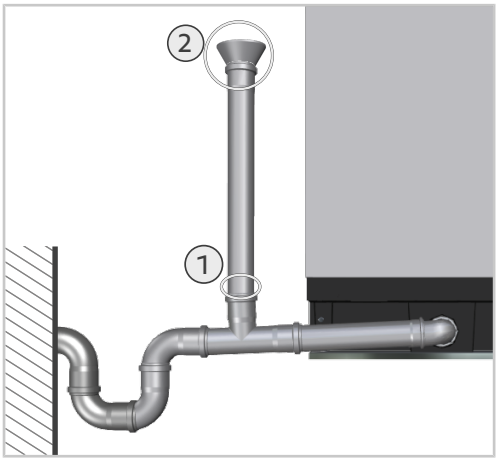
Odour formation due to unnecessary ventilation section

If a ventilation pipe is installed for safety reasons due to an unknown wastewater section, an odour may form. This is the case if there is no external odour trap installed in the wall.

- The ventilation pipe is not necessary.
- Remove the ventilation section with the ventilation pipe.
- Connect the wastewater section according to the specifications.

If an external siphon is connection, the unit requires additional aeration of the drain via a ventilation pipe, which is connected to the drain pipe and prevents the unit from overflowing. This ventilation pipe is provided with holes in the lower area (1), in order to achieve a suction effect.

The ventilation pipe must be fitted with a funnel (article number: 60.76.798) (2). The funnel destroys the foam that is produced during cleaning and prevents the vent pipe from overflowing.



Cleaning the funnel

⚠ CAUTION

Risk of scalding when cleaning with liquid

There is a risk of scalding when cleaning with hot water.

- Carefully clean the funnel with hot water.
- Wear protective clothing when cleaning.

✔ The unit is switched off.

✔ The funnel must be removed from the unit for cleaning.

1. Clean the funnel with hot water.
2. Install the cleaned funnel on the vent pipe.

>> The funnel is clean and installed. The unit can be put into operation again.

10 Gas connection for gas units

This section only applies to gas units.

⚠ DANGER

Fire due to incorrect gas connection

Danger to life due to fire from an incorrect gas connection.

- Follow local regulations of the gas supply company.
- Check the type of gas available and the dynamic connection pressure against the values specified on the unit.

⚠ DANGER

Permissible CO/CO_2 values exceeded

Risk of poisoning due to excessive CO/CO_2 values because of incorrect burner settings.

- Always perform a flue gas analysis when commissioning gas units.
- Document the flue gas values.
- It is recommended that the installation site be equipped with a CO gas detector.

⚠ DANGER

Increased CO values due to wrong gas type

Risk of poisoning due to connection of wrong gas type

- Only connect the unit to the gas type stated on the unit type plate.
- Check the type of gas available and the dynamic connection pressure against the values specified on the unit.
- It is recommended that the installation site be equipped with a CO gas detector.

10.1 Regulations for gas connection

NOTICE

Connection flow pressure exceeded

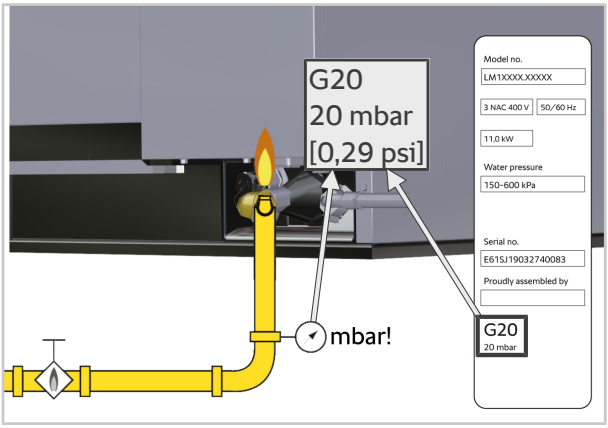
A connection flow pressure above 65 mbar [0.94 psi] will lead to the unit malfunctioning and the gas components being damaged.

- Adhere to the maximum connection flow pressure for natural gas of 21 mbar [0.44 psi].

- For LPG, adhere to the maximum connection flow pressure of 37 mbar [0.84 psi].
- Adhere to the general maximum connection flow pressure of 65 mbar [0.94 psi].
- If the pressure is higher, block the gas supply to the unit and do not commission the unit.
- Only USA and Canada: National Fuel Gas Code, ANSI Z223.1/NFPA 54 and the Natural Gas and Propane Installation Code, CSA B149.1

Requirements for gas type and gas pressure

- Check that the factory gas setting on the unit corresponds to the actual local gas supply conditions.
- The gas type and the dynamic connection pressure set on the unit must correspond to those stated on the type plate.



- If the line pressure deviates from the connection flow pressure of the unit, contact your gas supply company.
- Adhere to all local gas company regulations.

Requirements for gas inlet and gas line

- The exhaust gas analysis may only be carried out by a technician who is authorised by the manufacturer. The exhaust gas analysis must be carried out before commissioning.
- Gas connections must only be set up by locally authorised gas technicians.
- The gas connection line must be set up in accordance with the rated thermal load specified on the type plate.
- Use a suitable gas leak detector to check for leaks in the gas supply and gas distribution within the unit.
- The cross-section of the gas line must be designed to the maximum connected output of all loads, at least ¾ inch.

- A gas shut-off valve must be installed in front of every unit.
- All connection components installed on-site must be checked in accordance with DIN-DVGW (local gas supply company).
- It is possible to connect the gas line with a gas socket.
- A connection with an internal thread is necessary to connect the gas line.
- The unit must be protected against slipping.
- If undiluted CO levels are above 174.7 mg/m^3 [150 ppm] for convection mode and 465.8 mg/m^3 [400 ppm] for steam mode, 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. A flue gas analysis must then be performed by the technician.
- Follow the maintenance instructions for gas components.
- The gas installation must meet the CGA-B 149.1 natural gas regulation or the CGA-B 149.2 propane gas regulation.

Australian Supplement to Gas Installation

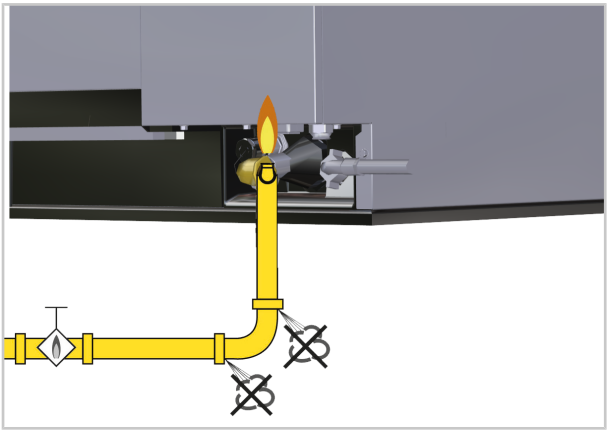
- To be installed only by authorised person in accordance with AS/NZS 5601, local authority, gas, electricity, any applicable statutory regulations and manufacturer requirements.
- Particular attention should be given to relevant requirements regarding ventilation.
- This appliance is not suitable for use in marine environment.

10.2 Connecting the unit to the gas supply

- ✔ The width of the gas pipe must be at least ¾ inch in accordance with local provisions.
- ✔ A connection with an internal thread is provided to connect the gas line. An additional Teflon tape to seal in the thread is available.
- ✔ A gas shut-off valve is provided on-site.
- ✔ The type of gas available and the dynamic connection pressure correspond the values specified on the unit's type plate.
- ✔ The unit is secured to prevent it from slipping.

1. Connect the gas pipe with the unit's gas connection.

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



10.3 Gas consumption by gas type

Natural gas H G20

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	18-25	18-25	18-25	18-25	18-25	18-25
Wobbe index (MJ/m^3) Wi	45.67	45.67	45.67	45.67	45.67	45.67
Wobbe index (MJ/m^3) Ws	50.72	50.72	50.72	50.72	50.72	50.72
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	1.4 m^3/h	3.05 m^3/h	2.35 m^3/h	4.23 m^3/h	4.44 m^3/h	8.47 m^3/h
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	13 kW	28 kW	22 kW	40 kW	42 kW	80 kW

Natural gas L G25

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	20-30	20-30	20-30	20-30	20-30	20-30
Wobbe index (MJ/m^3) Wi	37.38	37.38	37.38	37.38	37.38	37.38
Wobbe index (MJ/m^3) Ws	41.52	41.52	41.52	41.52	41.52	41.52

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	1.60 m^3/h	3.45 m^3/h	2.71 m^3/h	4.92 m^3/h	5.17 m^3/h	9.85 m^3/h
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	13 kW	28 kW	22 kW	40 kW	42 kW	80 kW

Natural gas EK G25.3 Netherlands

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	20-30	20-30	20-30	20-30	20-30	20-30
Wobbe index (MJ/ m^3) Wi	38.49	38.49	38.49	38.49	38.49	38.49
Wobbe index (MJ/ m^3) Ws	42.71	42.71	42.71	42.71	42.71	42.71
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	1.56 m^3/h	3.37 m^3/h	2.65 m^3/h	4.81 m^3/h	5.05 m^3/h	9.63 m^3/h
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	13 kW	28 kW	22 kW	40 kW	42 kW	80 kW

LPG G30

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	25-57.5	25-57.5	25-57.5	25-57.5	25-57.5	25-57.5
Wobbe index (MJ/ m^3) Wi	80.58	80.58	80.58	80.58	80.58	80.58
Wobbe index (MJ/ m^3) Ws	87.33	87.33	87.33	87.33	87.33	87.33
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	1.06 kg/h	2.33 kg/h	1.81 kg/h	3.31 kg/h	3.47 kg/h	6.62 kg/h
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	13.5 kW	29.5 kW	23 kW	42 kW	44 kW	84 kW

LPG G31

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	25-57.5	25-57.5	25-57.5	25-57.5	25-57.5	25-57.5
Wobbe index (MJ/m^3) Wi	74.75	74.75	74.75	74.75	74.75	74.75
Wobbe index (MJ/m^3) Ws	81.19	81.19	81.19	81.19	81.19	81.19
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	1.01 kg/h	2.18 kg/h	1.71 kg/h	3.11 kg/h	3.26 kg/h	6.21 kg/h
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	13 kW	28 kW	22 kW	40 kW	42 kW	80 kW

LPG Australia

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Dynamic gas pressure (kPa)	2.75-3.5	2.75-3.5	2.75-3.5	2.75-3.5	2.75-3.5	2.75-3.5
Wobbe index (MJ/m^3) Wi	74.75	74.75	74.75	74.75	74.75	74.75
Wobbe index (MJ/m^3) Ws	81.19	81.19	81.19	81.19	81.19	81.19
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	52 MJ/h	112 MJ/h	88 MJ/h	160 MJ/h	152 MJ/h	320 MJ/h

Natural Gas Australia

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Dynamic gas pressure (kPa)	1.13-2.5	1.13-2.5	1.13-2.5	1.13-2.5	1.13-2.5	1.13-2.5
Wobbe index (MJ/m^3) Wi	45.67	45.67	45.67	45.67	45.67	45.67
Wobbe index (MJ/m^3) Ws	50.72	50.72	50.72	50.72	50.72	50.72
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	52 MJ/h	112 MJ/h	88 MJ/h	160 MJ/h	152 MJ/h	320 MJ/h

Natural Gas 13A Japan

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	18-25	18-25	18-25	18-25	18-25	18-25
Wobbe index (MJ/m^3) Wi	55.3	55.3	55.3	55.3	55.3	55.3
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	13.7 kW	29.4 kW	23.1 kW	42 kW	44.1 kW	84 kW

Liquid Gas Japan

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	25-57.5	25-57.5	25-57.5	25-57.5	25-57.5	25-57.5
Wobbe index (MJ/m^3) Wi	74.75	74.75	74.75	74.75	74.75	74.75
Wobbe index (MJ/m^3) Ws	81.19	81.19	81.19	81.19	81.19	81.19
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	14.1 kW	30.4 kW	23.9 kW	43.5 kW	45.7 kW	87 kW

Natural Gas G20 USA

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	6.5-10.0 in/wc	6.5-10.0 in/wc	6.5-10.0 in/wc	6.5-10.0 in/wc	6.5-10.0 in/wc	6.5-10.0 in/wc
Wobbe index (MJ/m^3) Wi	45.67	45.67	45.67	45.67	45.67	45.67
Wobbe index (MJ/m^3) Ws	50.72	50.72	50.72	50.72	50.72	50.72
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	48.58 ft^3/h	104.64 ft^3/h	82.21 ft^3/h	149.48 ft^3/h	156.96 ft^3/h	298.96 ft^3/h
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	49500 BTU/hr	106500 BTU/hr	83500 BTU/hr	152000 BTU/hr	159500 BTU/hr	303500 BTU/hr

Propane Gas 3P G31 USA

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Required connection flow pressure (mbar)	10-15 in/wc	10-15 in/wc	10-15 in/wc	10-15 in/wc	10-15 in/wc	10-15 in/wc

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Wobbe index (MJ/m^3) Wi	74.75	74.75	74.75	74.75	74.75	74.75
Wobbe index (MJ/m^3) Ws	81.19	81.19	81.19	81.19	81.19	81.19
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	2.23 lb/h	4.80 lb/h	3.77 lb/h	6.85 lb/h	7.19 lb/h	13.7 lb/h
Max. Consumption at rated thermal load (at 15°C, 1013 mbar)	48500 BTU/hr	104000 BTU/hr	82000 BTU/hr	148500 BTU/hr	156000 BTU/hr	296500 BTU/hr

11 Exhaust gas connection on gas units

This section only applies to gas units.

⚠ DANGER

Toxic exhaust fumes

Risk of asphyxiation from unauthorised concentration of harmful exhaust gases.

- Ensure that the ventilation options in the installation area are adequate.
- Perform a flue gas analysis prior to commissioning the unit.
- Only for Japan:
  The unit must be installed under an exhaust hood.

11.1 Regulations for exhaust gas connection

- The units are classified pursuant to DVGW G631 of 03/2012 as exhaust gas types A3 and B23, B13, B13BS. Adhere to the provisions for the relevant types.
- Observe instructions given in the currently valid versions of all local standards during installation.
- The flue gas connection must meet the requirements of the NFPA 96.
- Follow the maintenance instructions for gas components.

Exhaust gas and room volumes

The following values only apply to the individual unit:

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Min. Room size with constant ventilation (m^3)	26	56	44	80	88	-
Min. Room size with free ventilation (m^3)	52	112	88	160	176	-
Min. Combustion air supply (m^3/h)	21	45	35	64	70	128
Min. Combustion air supply (ft^3/h)	742	1590	1236	2260	2472	4521
Max. Exhaust gas volumes (m^3/h)	38	108	78	160	150	311
Max. Exhaust gas volumes (ft^3/h)	1342	3814	2755	5651	5298	10983
Max. Exhaust gas temperature (°C)	350	520	470	590	430	520

	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Max. Exhaust gas temperature (°F)	662	968	878	1094	806	968

*Combustion air supply from technical room ventilation systems

Combustion air supply

The combustion air supply is ensured by free ventilation or constant ventilation, one near the ceiling, one near the floor.

Free ventilation

Combustion air supply is assured through windows and doors.

Constant ventilation

Combustion air supply is assured via two ventilation openings to the outside, each with 150 m^3 [9153561.62 in^3] free cross section (one near the ceiling, the other near the floor).

Technical room ventilation systems

Kitchens in which gas units with a total nominal heat load of more than 50 kW are installed must be ventilated and ventilated with HVAC systems. These air conditioning systems also assure the combustion air supply for gas units if designed in accordance with VDI 2052.

NOTICE

Special provisions for appliances in Switzerland

Observe the following regulations for the set up and installation of gas units in Switzerland:

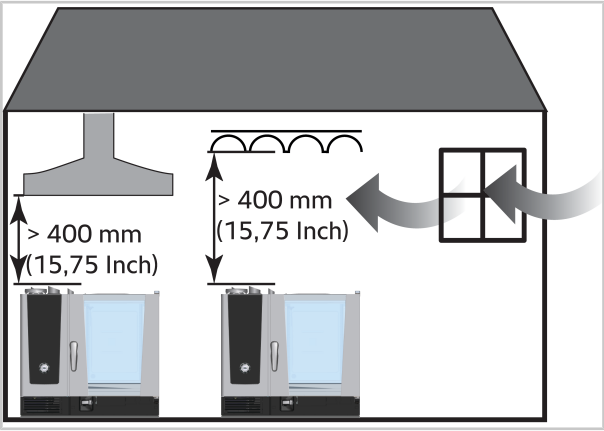
- SVGW gas regulations G1
- EKAS Directive No.1942: LPG, Part 2 (EKAS: Federal Coordination Commission for Occupational Safety)
- Rules of the Association of Cantonal Fire Insurance (VKF)

11.2 Exhaust gas connection Type A3 and B23

Requirements for unit size 6-1/1 GN

- Type A3 exhaust air connection for this unit size corresponds to a room air-dependent gas furnace with fans in front of burners without flow guards and total rated load in installation space less than or equal to 14 kW.

- A clearance of 400 mm [15.75 inches] must be kept between the flue pipes of the unit and the grease filters of the exhaust hood/ventilation ceiling in order to prevent a risk of fire in the fat filter.

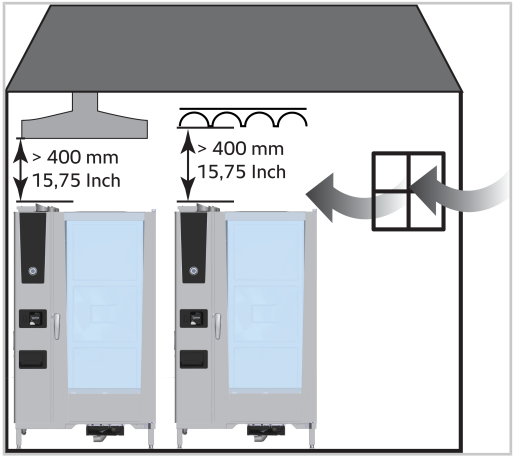


- It is not mandatory that gas only be supplied to the burners when the exhaust system is in operation.
- An ascending flow socket is not necessary.
- To install Type A gas units with total rated loads less than or equal to 14 kW, it is sufficient if the installation site meets one of the following criteria:
  - The installation site has a capacity of more than 2m³/kW [70.63 ft³/kW].
  - The installation site has a door or window to the outside that can be opened.
  - The kitchen ventilation system in use has a minimum extraction volume of 15m³/h [529.72 ft³/h] per kW total rated load and corresponding ventilation openings.

Requirements for unit size 6-2/1 GN to 20-2/1 GN

- Type B23 exhaust air connection for these unit sizes corresponds to a room air-dependent gas furnace with fans in front of burners without flow guards and total rated load in installation space greater than 14 kW.

- A clearance of 400 mm [15.75 inches] must be kept between the flue pipes of the unit and the grease filters of the exhaust hood/ventilation ceiling in order to prevent a risk of fire in the fat filter.



- An ascending flow socket is not necessary.
- Exhaust gases must be directed outside through kitchen ventilation systems. Type A gas units first emit exhaust gases into the room, and must be promptly extracted via the kitchen ventilation system.
- Monitor the exhaust vent to ensure that gas is only fed to the burners when extraction is ensured.

11.3 Type B13 exhaust gas connection

NOTICE

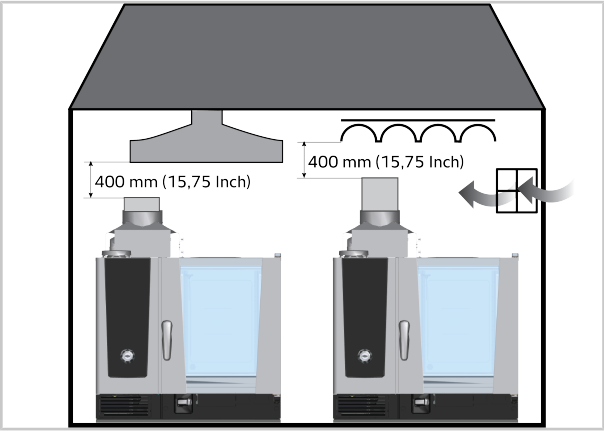
Installation with a non-original flow guard

In order to prevent damage to the unit, use an original flow guard for a type 13 exhaust gas connection.

Requirements

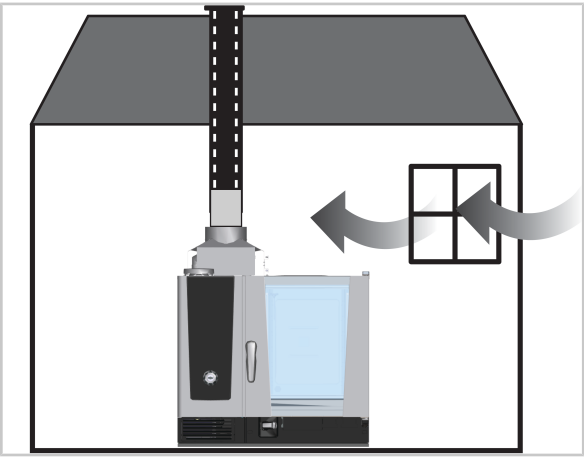
- Type B13 exhaust air connection corresponds to a room air-dependent gas unit with fans in front of burners with a flow guard.

- A clearance of 400 mm [15.75 inches] must be kept between the flue pipes of the unit and the grease filters of the exhaust hood/ventilation ceiling in order to prevent a risk of fire in the fat filter.



- Please note that for flue gas connection type B13 there must be a vertical upflow section.
- The upflow section must end 400 mm [15.75 inches] beneath the fat filter. The unit must be installed underneath an exhaust hood or a ventilation ceiling.
- Monitor the exhaust vent to ensure that gas is only fed to the burners when extraction is ensured.

11.4 Type B13BS exhaust gas connection

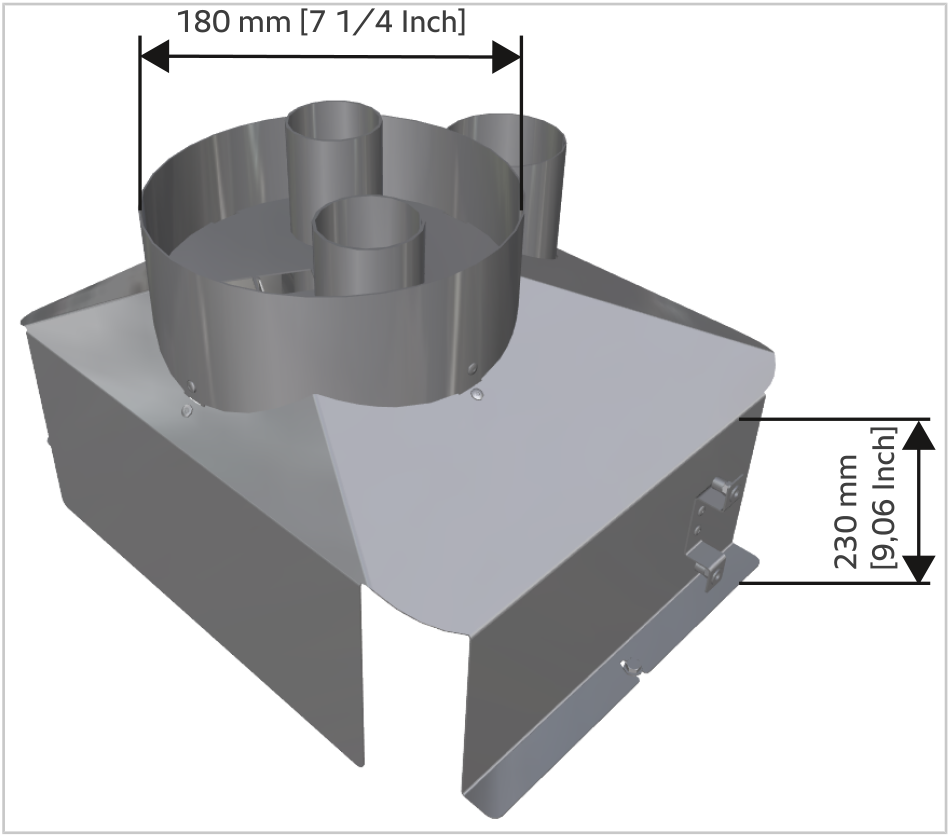


Requirements

For a type B13BS, a fixed connection to a chimney is permitted if a flow guard is also in use.

Contact the local master chimney sweep or an authorised authority for assistance in calculating the intake and exhaust air required.

11.5 Flow guards for B13 and B13BS



Flow guards are not included with the unit, but can be ordered using the following article numbers:

Flow guard	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Strömungssicherungen B13	70.01.360	70.01.432	70.01.376	70.01.586	70.01.493	70.01.492
Strömungssicherungen B13BS	70.01.339	70.01.431	70.01.340	70.01.582	70.01.583	70.01.492

The installation manual is enclosed with the flow guard.

Notes on the exhaust gas system

NOTICE

Temperature-resistant exhaust gas pipes for high exhaust gas temperatures

The exhaust gas pipes must be temperature-resistant to 400°C [752°F].

Due to high exhaust gas temperatures, do not use exhaust pipes made of aluminium or of any materials that are not temperature-resistant up to 400°C [752°F].

Flue pipes must be sealed and installed in accordance with local standards. Continuous suction must be ensured. In the event of back pressure, the safety temperature limiter in the flow safety device triggers. The safety temperature limiter is set to 103°C [217.4°F].

12 Initial start-up

⚠ WARNING

Risk of scalding from hot steam

Hot steam is emitted during operation and when cleaning the unit. You could scald yourself on the hot steam when opening the cooking cabinet door.

- Open the cooking cabinet door carefully and leave the cooking cabinet door ajar for a few seconds so that the steam can escape upwards.
- Make sure that there is nobody standing in the area where steam is escaping.

12.1 Prior to commissioning

Removing shipping materials from the cooking cabinet

⚠ CAUTION

Flammable materials and objects in the cooking cabinet

Risk of fire due to packaging and transportation materials and starter kit in the cooking cabinet.

Remove all flammable materials and objects from the cooking cabinet prior to the initial commissioning.

Starter kit

The unit includes a starter kit which varies according to the scope of the order. Remove the starter kit from the cooking cabinet.

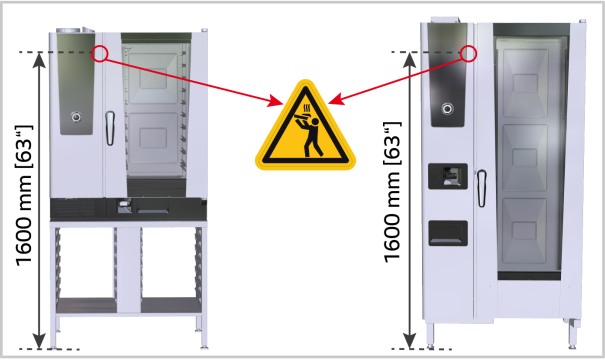
Maximum rack height

⚠ WARNING

Risk of scalding due to liquids

To avoid scalding, when working with liquids or foods that become liquid when heated, only use containers that are easy to monitor.

After installing the unit, affix the sticker indicating the maximum rack height at a height of 1600 mm [63 inches] to the unit. The sticker is provided in the starter kit.



Perform software update

NOTICE

Perform software update

Always conduct a software update for commissioning. Your unit will then start up with the latest software version.

12.2 Perform the self-test

⚠ DANGER

Changed CO / CO_2 values after the self-test

Risk of poisoning due to excessive exhaust gas values.

- Conduct a flue gas analysis after the selftest.
- Set the values pursuant to the flue gas analysis provisions.

When first commissioning the unit, the selftest must be started once. During the selftest, the unit adapts to the ambient conditions.

The selftest runs automatically. The duration depends on the unit size and is between 45 and 65 minutes. With an UltraVent exhaust hood, the selftest is extended by around 20 minutes.

Preparations

- The unit must be properly connected to water, waste water, and electricity as described in this manual; gas models must also be connected to gas supply and flue exhaust lines.
- Check the side racks and the air baffle to ensure they are seated correctly.
- The left side panel is closed.

- For the selftest, one GN container is required per fan wheel.

Insert the GN container

1. Insert one flat GN container in front of each fan wheel into the middle of the hook ladders, with the opening facing the bottom.

>> For unit sizes 6-2/3 GN to 6-2/1 GN, there is a GN container located in the middle of the hook ladder in front of the fan wheel.

>> For unit sizes 10-1/1 GN and 10-2/1 GN, there are 2 GN containers in the hook ladders, one in front of each fan wheel.

>> For unit sizes 20-1/1 GN and 20-2/1 GN, there are 3 GN containers in the mobile oven rack, one in front of each fan wheel.



Start self-test

1. Close the cooking cabinet door.
2. Start the selftest.

>> The selftest will check whether the unit is sealed. If steam emerges from the closed cooking cabinet door during the self-test, wait until the self-test is completed and then check the door setting.

>> The display will indicate when the selftest is complete.

NOTICE

If steam escapes from the door during the selftest, the door setting may be incorrect. In this case, check the door setting and reset the door if necessary.

13 Maintenance

13.1 Maintenance notice

Notes for gas appliances

- In accordance with the specified standards, gas components must undergo annual maintenance.
- If maintenance and repair works have been performed on gas appliances, please note the following:
  - Check that the compensation tube is positioned correctly.
  - Check the gas supply line components for leaks.
  - Perform a flue gas analysis.

13.2 Replacing air filter

If the air filter is dirty, the unit will display a service prompt instructing you to replace the air filter.

Notes for the replacement of the air filter

Air filters may be replaced by the end user. When replacing it, ensure that the new air filter is carefully locked int the right position. Follow the instructions in the original operating instructions in the Maintenance chapter.

Air filter article numbers

Unit size	6-2/3	6-1/1 - 10-2/1	20-1/1 - 20-2/1
Air filter article number	40.04.771	40.05.424	40.05.654

14 Decommissioning

14.1 Notes on decommissioning

Note the following information on decommissioning the unit:

- Make sure the unit is cooled to below 40°C [104°F].
- Ensure that the steam generator is pumped dry.
- Make sure the cleaning box is pumped.
- Switch off the gas inlet.
- Make sure that the unit is disconnected from the power supply.
- Remove all water, waste water, and for gas units, also gas connections from the unit.
- If the unit is to be transported, remove the unit from the foot locks and from any wall brackets (fastening chain).

14.2 Disposal

Electric and electronic units like the iCombi Pro and iCombi Classic must be disposed of separately.

- Do not dispose of the unit with the household waste and should not be disposed of at a municipal collection point for waste or used electrical appliances.
- The appliance disposal regulations of each country must be observed.
- If required, contact the manufacturer for further information on disposal.

15 Accessories

A detailed overview with article numbers can be found in the accessories catalogue.

Accessories	Description
Base frames UG I – IV	Different base frames, with or without support rails for storage of accessories and partially closed. For varying installation options, the base frames can be extended with castors or fixable feet.
Left and right heat shield	If a sufficient distance to the heat source on the left cannot be maintained, an additional heat shield is available that reduces thermal loads. For the unit sizes 6-1/1 GN and 10-1/1 GN an additional heat shield is available for the right side.
Levelling frame for tabletop units	If the installation surface is not level, use a levelling frame to compensate this. The adjustment range is +/- 20 mm [3/4 inches].
Unit elevation for tabletop units	Suitable for unit sizes 6-1/1 GN and 10-1/1 GN with a minimum depth of 700 mm [27.6 inches]. If the distance to the worktop is too small, the unit can be increased by 150 mm [5.91 inches].
Unit elevation for standalone units	If the floor clearance for standalone units is insufficient, the clearance can be increased by elevating the unit feet by 70 mm [2.76 inches].
Transport trolley for mobile oven racks (Standard or Combi-Duo)	Recommended for use with mobile oven racks. Two variants for table-top units (Standard) or Combi-Duo with different docking systems. Requires the correct feed rail. The standard transport trolley is also available as height adjustable to compensate for height differences in the installation.
Mobile oven rack elevation	If the unit feet on standalone units are increased with a foot elevation, a mobile oven rack elevation (70 mm) [2.76 inches]) must be installed to compensate.
Entry ramp for standalone units	If the installation surface is not level in the mobile oven rack entry area on standalone units, use an entry ramp to compensate this. The plate feet are adjustable by +/- 10 mm [0.39 inches].
Condensation breaker	Extending the ventilation pipe without using a condensation breaker can cause the device 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 range of a ventilation system.

Accessories	Description
Wall mounting	Tabletop unit sizes 6-2/3 GN and 6-1/1 GN can be attached to the wall using a wall bracket.

16 Conversion tables

Water hardness

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

	CaO [mg/l]	$CaCO_3$ [mg/l]	Ca^{2+} [mg/l]
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/l (chemical concentration)	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

Pressure

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

kPa	mbar	psi	inch/wc
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

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