PORKKA

UCR - Universal cold- and freezer rooms

Technical data

FESTIVO-PORKKA GROUP
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Technical data

Universal cold and freezer rooms

Cooling unit

Cooling units have been designed to be both powerful and energy efficient. Digital temperature displays have built-in high/low alarms which are both audible and visual. These can be connected via a volt-free relay to a building management system.

Carefully planned materials and details

UCR rooms are constructed of modular panels with male/female joints, which are mounted by eccentric action cam locks giving them all-round strength. The visible exterior surfaces of the panels are hot zinc-coated and rustproof polyester-coated steel, which is classified as food safe. Stainless steel surfaces are also available. The CFC/HCFC-free polyurethane insulation is 80mm, 100mm or 150mm thick.

The UCR room door supplies include hinged or sliding doors for chiller and freezer rooms. Double leaf doors are also available on request. Find more information in our Technical Data sheet for doors.

The insulated floors have a strong marine plywood surface coated with non-slip glass fiber resin. The load limit for a standard floor is max. 40 KN/m2 or max 1.0 KN/40 mm castor. A heavy duty floor with stainless steel surface is available on request.

Individual shelves of the hygienic shelving system can be washed in a commercial dishwasher. The shelves' dimensions allow the maximum storage space available. Our chiller and freezer room assortment offers a wide variety of choices for diverse needs.

Customizability

UCR Cold and Freezer rooms are customized according to the customer's needs. The shape of the room, the location of the door(s), partition walls (if needed) and the location of the cooling unit(s) are designed to suit your needs. With a partition wall and two different cooling units, a combined cold and freezer room is also possible.

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CONTROL UNIT

Combined digital temperature display with built-in control functions

1. Compressor RUN light
2. Automatic defrost in operation light
3. Evaporator fan RUN light
4. Alarm activated light
5. Temperature/information display
6. Temperature adjustment button
7. Manual defrost button
8. Settings button
9. Light switch button with light to indicate ON mode
10. ON/OFF Stand-by mode button
11. Humidity control button
12. Probe display button

Alarm functions

The Porkka temperature display is supplied with a built-in high/low temperature alarm which is both audible and visual and can also be connected to a building management system by means of a volt free connection.

Building automation

Refrigeration equipment can be connected to a control and monitoring service of the building automation system. The controller brand specific devices are also available.

Air-cooled condenser dust filter

The air inlet to the condenser is on the lower part of the refrigeration unit, ensuring the coolest air is always used helping to reduce running costs and extending the service life of the unit. The dust filter behind the air grill is easy to clean or replace. The controller provides information on when the filter requires cleaning or changing.

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TECHNICAL FEATURES AND OPTIONS

Shelving system

The modular shelving system of a UCR room is extremely practical and easy-to-clean.

Four-tier, machine-washable, food safe HMSS-shelves are available on request. The shelving system comprises of steel wall brackets, shelf brackets and bracket tubes, as well as plastic shelf boards on top of the bracket tubes. The steel parts are painted with grey epoxy-polyester paint (RAL 7040) and the shelf board is made of grey food-approved ABS plastic.

Safety

Our products are designed to fulfil the safety requirements. Materials and designs are hygienic, floors are anti-slip treated and the seams of the elements are tight. The freezer rooms have floor panels with integrated heating elements, which prevent freezing and water damage in the structures below the room. Freezer room door frames also have heating cables to prevent the forming of humidity and ice. The lockable door handles have an emergency entrapment release. All panels and doors are CE-marked.

Trolley operation

Floorless chiller rooms ease the use of forklifts, pallet trucks and trolleys. In this case, the room lies on an insulated base and the door has a trail sealing. An insulated floor can be, for example, a concrete floor and the insulating material under it.

For UCR rooms with a threshold, we supply doors with threshold frames and deliver ramps for trolley traffic.

TECHNICAL DATA OF THE COOLING UNITS

- Three temperature ranges: +2 to +12°C (adjustable in increments of 1°C) for chilled produce. For the storage of fresh meat or fish, use –2 to +5°C and for frozen goods, use –18 to –22°C. Set point temperature is the warmest storage temperature: the unit starts to run and goes 2 degrees colder than the set point and starts again when the set point temperature has been reached.
- Insulation options of 80mm, 100mm or 150mm.
- Select floorless chill rooms for trolley operation. (Chill temperature only.)
- Medium and freezer rooms must be supplied with a floor which can be either recessed or with a ramp if a trolley is required.
- A cooling unit integrated in the wall panel (width 900 mm) can be placed on any side of the room. The cooling unit must have unrestricted accessibility. Do not install it on the side that is against the wall of the premises.

The maximum capacity of a Universal room may be affected by the room's environment, operating temperature and characteristics. For example, for a C1240 refrigeration unit in a neutral (+25 °) operating environment, with a 100 mm insulation strength, the maximum size of a refrigerating room with one refrigeration unit is 22 m^3 and with two units, 35 m^3. The shape of the room may affect the number of refrigeration units required. Other refrigeration unit models, see the table Plug-in refrigeration units R290 & R455A. Ask your sales representative about the maximum size of the room to be installed under different conditions.

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For example, for a C950 refrigeration unit in a neutral (+25 °) operating environment, with a 100 mm insulation strength, the maximum size of a refrigerating room with one refrigeration unit is 12 m^3 and with two units, 19 m^3. The shape of the room may affect the number of refrigeration units required. Other refrigeration unit models, see the table Plug-in refrigeration units R290 & R455A. Ask your sales representative about the maximum size of the room to be installed under different conditions.

Note!

- If there is a lack of ventilation or ambient temperatures are likely to remain above or below the recommended levels for a considerable periods of time, please contact us for solutions
- * Includes RHDS® fluid condenser
- RHDS® = Cooling unit with heat exchanger, feed container, pump, external liquid condenser in a weatherproof casket and connection interfaces. The delivery does not include connection pipes, couplings and glycol composition.
- R744 maximum allowable working pressure PS 60bar.

Plug-in refrigeration units R290 & R455A

	C950	C1240	M950	M1240	F840	F850	F851	F1140	F1541
Temperature range	+2°C ... +12°C	+2°C ... +12°C	-2°C ... + 5°C	-2°C ... + 5°C	-22°C ... -18°C	-22°C ... -18°C	-22°C ... -18°C	-22°C ... -18°C	-22°C ... -18°C
Volume (with one refrigeration unit)	≤ 12 m^3	≤ 22 m^3	≤ 12 m^3	≤ 22 m^3	≤ 11 m^3	≤ 5 m^3	≤ 11 m^3	≤ 14 m^3	≤ 22 m^3
Volume (with two refrigeration units)	≤ 19 m^3	≤ 35 m^3	≤ 19 m^3	≤ 35 m^3	≤ 17 m^3	NA	≤ 17 m^3	≤ 22 m^3	≤ 35 m^3
Connection power (plug-in)	0,81 kW	1,07 kW	1,20 kW	1,62 kW	1,42 kW	1,43 kW	1,42 kW	1,91 kW	2,19 kW (2,27 kW)
Connection power WHE *	0,73 kW	0,99 kW	1,12 kW	1,54 kW	1,33 kW	1,35 kW	-	1,83 kW	2,08 kW (2,16 kW)
Connection power RHDS®*	0,86 kW	1,13 kW	1,26 kW	1,68 kW	1,48 kW	1,48 kW	-	1,97 kW	2,27 kW (2,35 kW)
Fuse	1 x 10A	1 x 10 A	1 x 10 A	1 x 10 A	1 x 10 A	1 x 10 A	1 x 10 A	1 x 16 A	3 x 10 A
Voltage	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz	400V/50Hz 3-Ph (220V 3-ph N)
Ambient temperature	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C
Refrigerant	R290	R455A	R290	R455A	R455A	R290	R290	R455A	R455A
Level of sound pressure 1m / 1.5 m (dB re 20 µPa)	53 dB (A)	53 dB (A)	53 dB (A)	53 dB (A)	55 dB (A)	55 dB (A)	55 dB (A)	58 dB (A)	59 dB (A)
Level of sound pressure RHDS® 1m / 1.5 m (dB re 20 µPa)	49 dB (A)	49 dB (A)	49 dB (A)	49 dB (A)	51 dB (A)	51 dB (A)	-	54 dB (A)	55 dB (A)
RHDS® liquid condenser	RHDS® 2160	RHDS® 2160	RHDS® 2160	RHDS® 2160	RHDS® 2160	RHDS® 2160	-	RHDS® 2160	2 x RHDS® 2160
Fluid condenser acoustic pressure at location 10m (dB re 20 µPa)	34 dB (A)	34 dB (A)	34 dB (A)	34 dB (A)	34 dB (A)	34 dB (A)	-	34 dB (A)	37 dB (A)
Permitted temperature range at fluid condenser location	-40°C ... +35°C	-40°C ... +35°C	-40°C ... +35°C	-40°C ... +35°C	-40°C ... +35°C	-40°C ... +35°C	-40°C ... +35°C	-40°C ... +35°C	-40°C ... +35°C

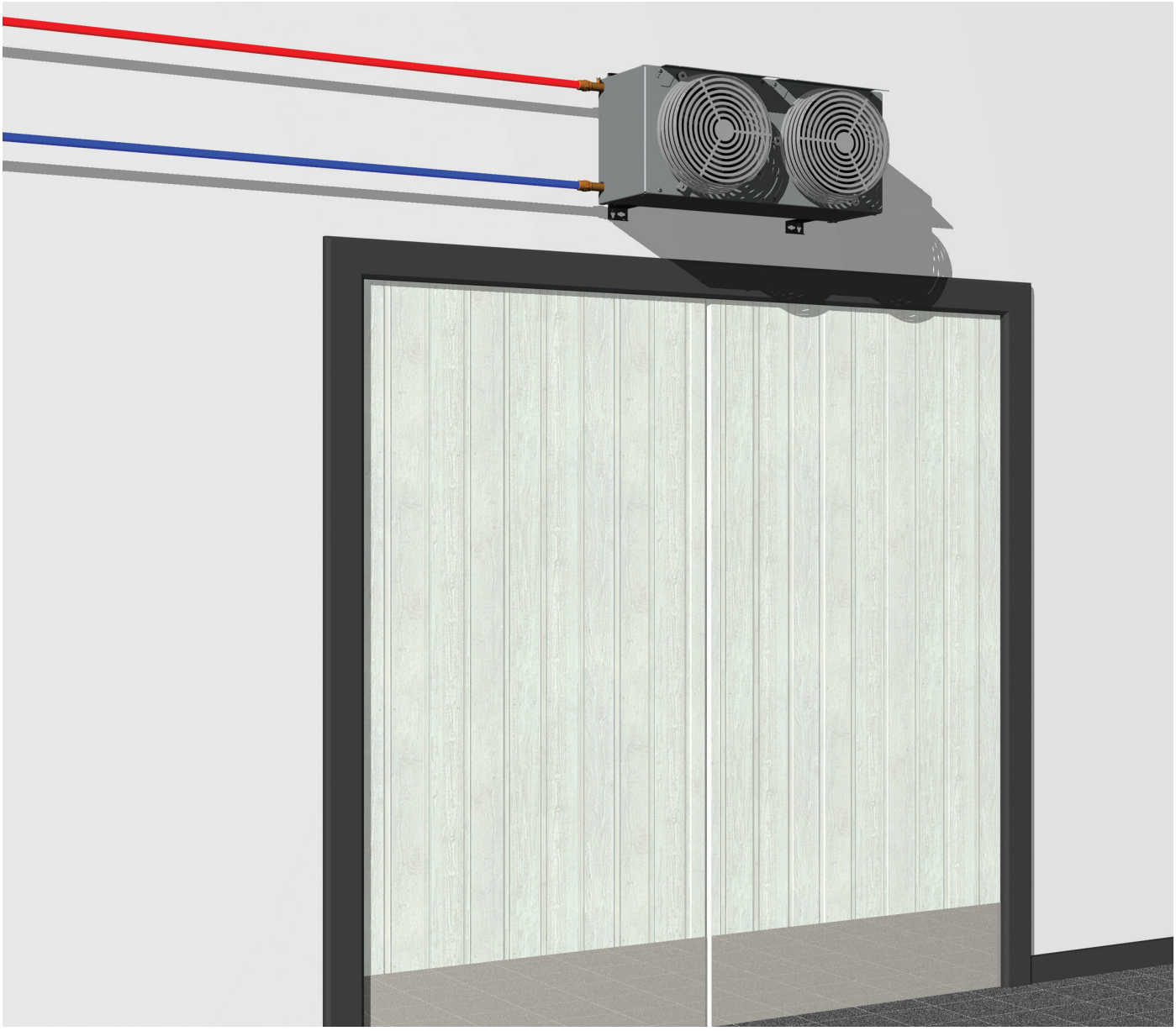
Centrally powered refrigeration units

Mark 5 CC Mark 4 CC	C950 C940	C1250 C1240	M950 M940	M1250 M1240	F851 F840	- F1140	F1551 F1541
Temperature range	+2°C ... +12°C	+2°C ... +12°C	-2°C...+12°C	-2°C...+12°C	-22°C ... -18°C	-22°C ... -18°C	-22°C ... -18°C
Volume (with one refrigeration unit)	≤ 12 m^3	≤ 22 m^3	≤ 12 m^3	≤ 22 m^3	≤ 11 m^3	≤ 14 m^3	≤ 22 m^3
Volume (with two refrigeration units)	≤ 19 m^3	≤ 35 m^3	≤ 19 m^3	≤ 35 m^3	≤ 17 m^3	≤ 22 m^3	≤ 35 m^3
Ambient temperature	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C	+5°C ... +32°C
Refrigerant Mark 5 Refrigerant Mark 4	R744 R452A	R744 R452A	R744 R452A	R744 R452A	R744 R452A	- R452A	R744 R452A
Evaporation temperature	-8°C	-8°C	-10°C	-10°C	-28°C	-28°C	-28°C
Cooling power requirement	1330 W	1900 W	1240 W	1800 W	1200 W	1430 W	2025 W
Connection power	0,35 kW	0,41 kW	1,32 kW	1,83 kW	1,32 kW	1,83 kW	1,83 kW
Fuse	1 x 10 A	1 x 10 A	1 x 10 A	1 x 10 A	1 x 16 A	1 x 16 A	1 x 16 A

Porkka Remote Heat Disposal System (RHDS®)

The RHDS® system is similar to the standard Porkka unit with the addition of a liquid condenser, header tank and pump. Water pipes are connected from the remote condenser to the refrigeration unit. After connecting the system, it is filled with a water glycol solution that will operate in both summer and winter conditions. The multi-fix condenser can be positioned either within an area that will benefit from heat input or externally. The unit can be floor or wall mounted. The equipment is also environment-friendly by utilising a very small refrigerant charge, and reduces running costs.

Installation of the equipment is quick and easy and can be undertaken by competent installers that do not necessarily have to be qualified refrigeration engineers, though they are recommended. The RHDS® can be used throughout our standard range of rooms and at all temperatures, i.e. chilled, medium or freezer versions. For a standard installation, a pipe can be run as much as 25 meters horizontally with a maximum vertical lift of 4.5 meters within the run, the height of which is measured from the pump within the refrigeration unit.



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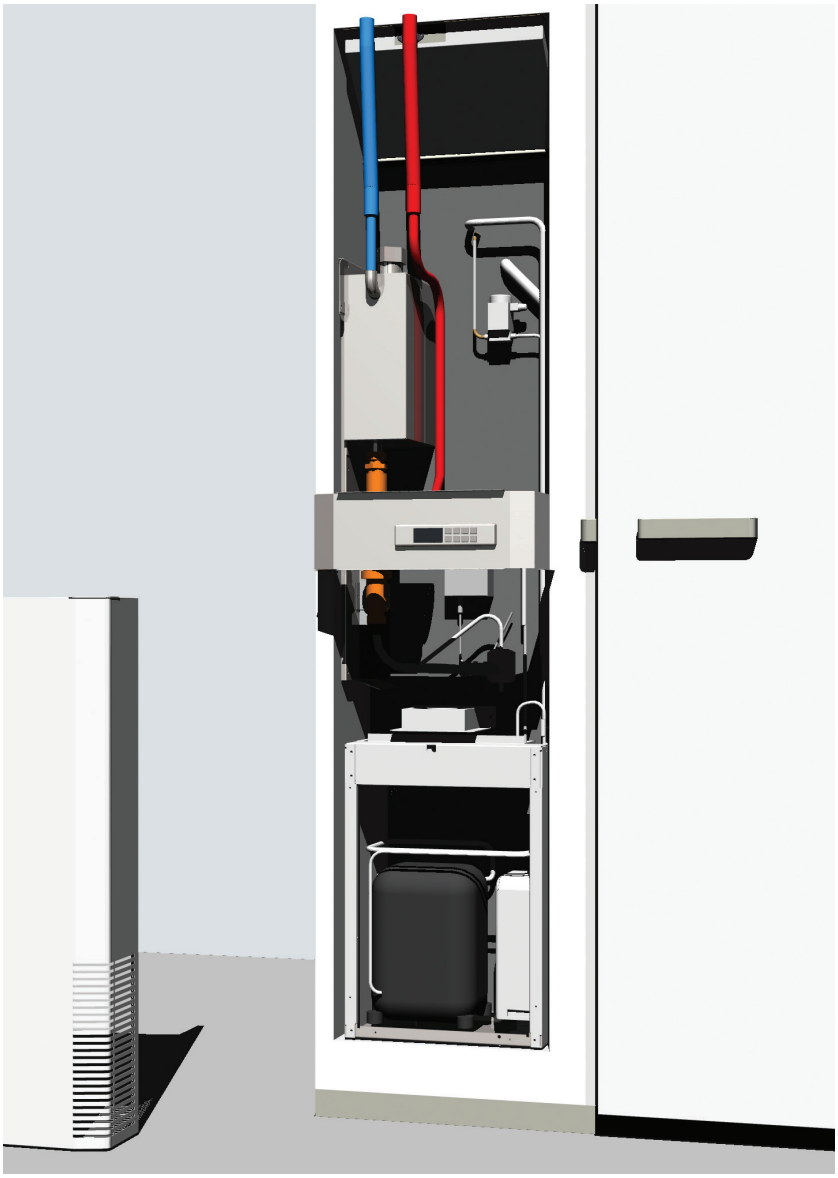
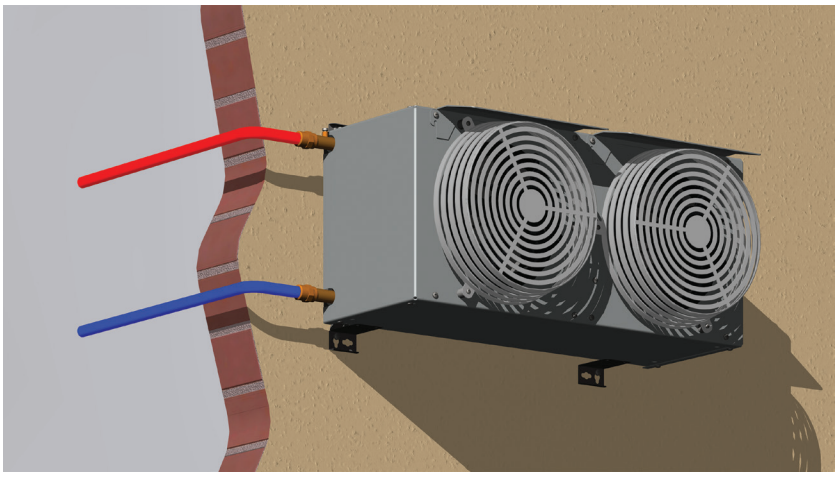
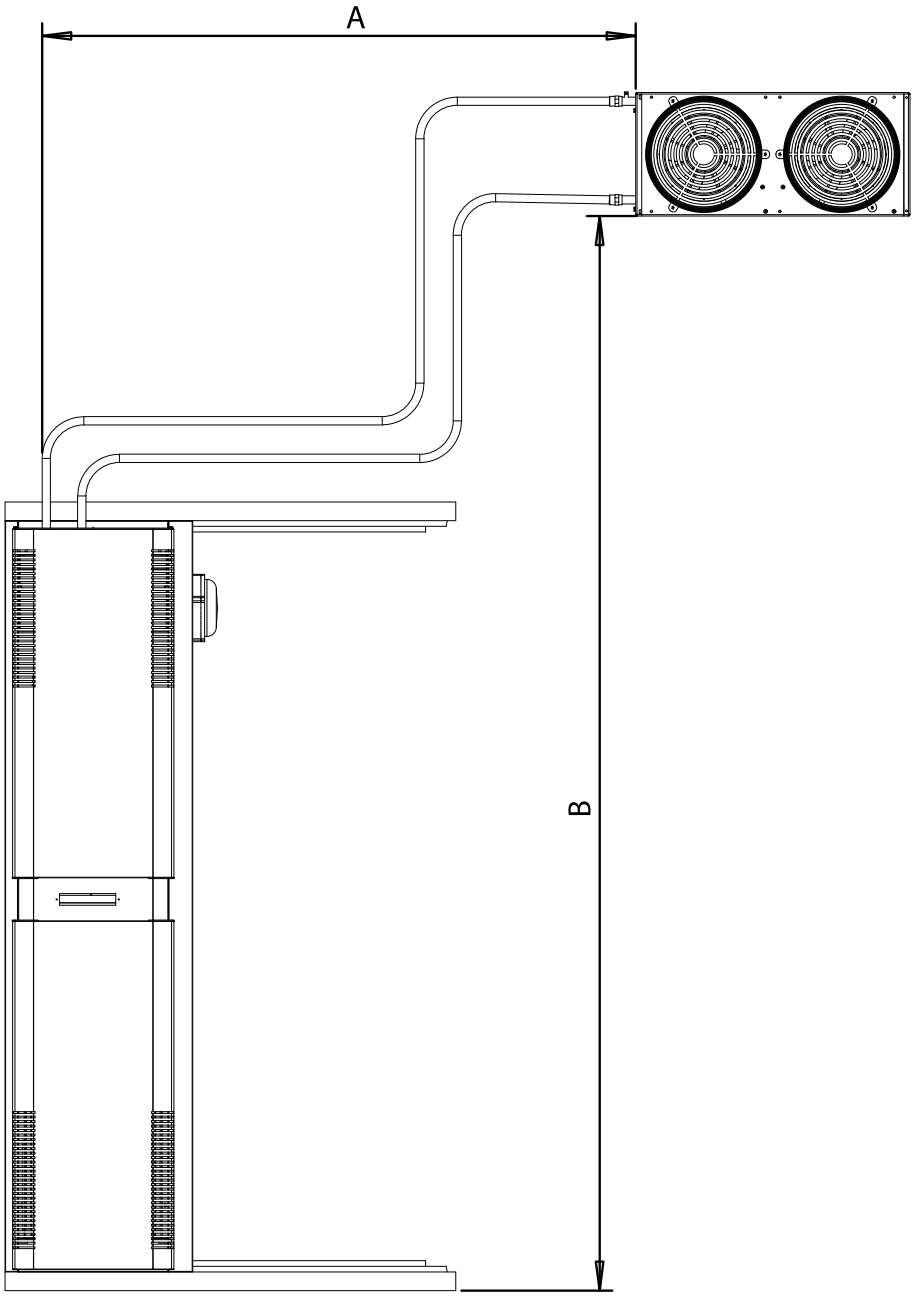


The Porkka RHDS® unit is equipped with a refrigerant-to-liquid heat exchanger. Waste refrigeration heat is transferred to the water solution where it is circulated to the condenser where the heat is given up to the ambient air.



RHDS® liquid to air condenser can be mounted on the wall, floor or roof either externally or, ideally, within an area where the heat can be utilised, such as a warehouse. Noise levels are kept low as only fans are run on the external unit.

Remote condensing unit dimensions: installation height

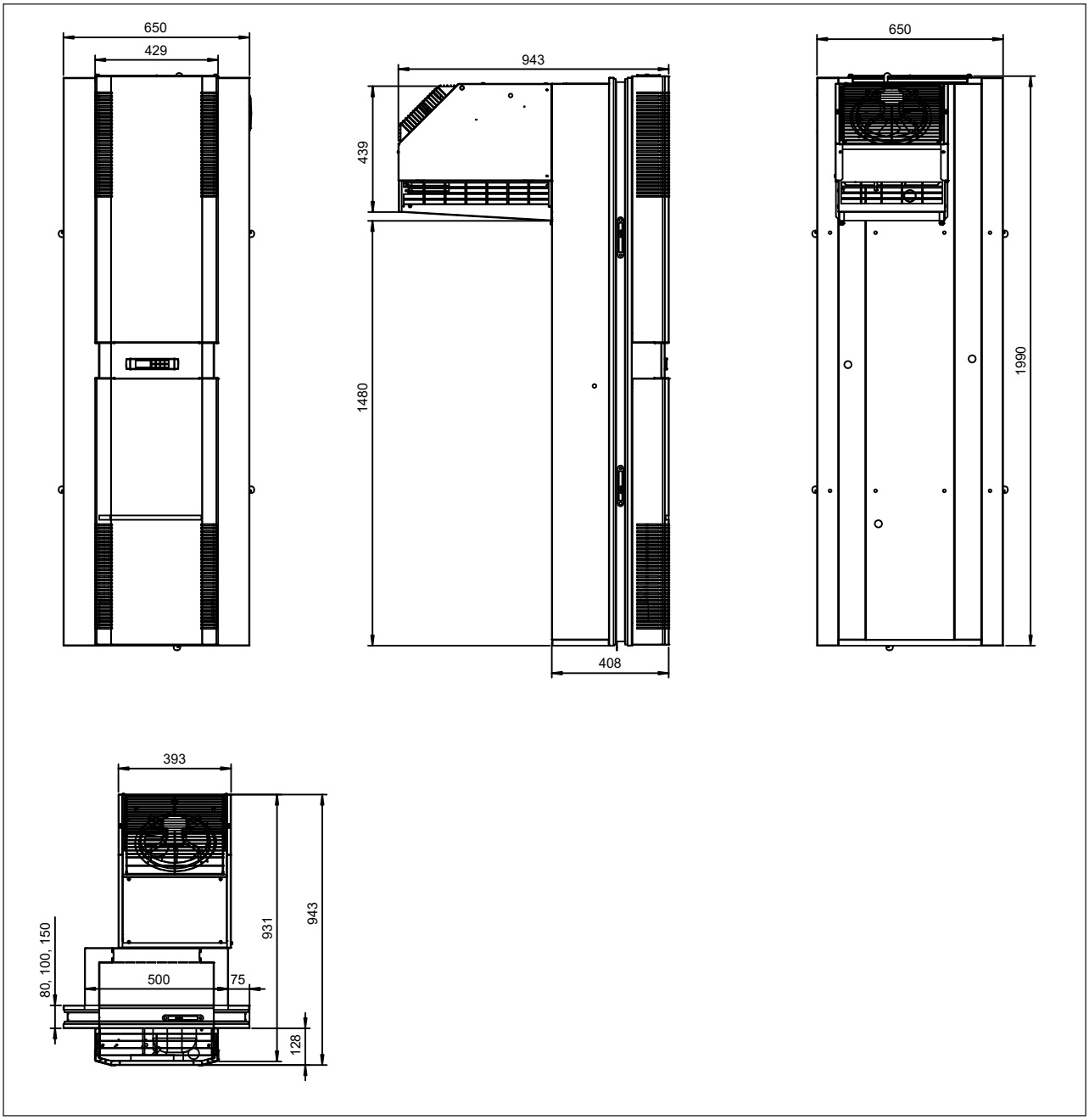


	DISTANCE A (max)	DISTANCE B (max)	DISTANCE A+B (max)
Standard pump	15 m	5 m	20 m
Power pump PICO	30 m	8 m	38 m
Power pump MAXO	45 m	11 m	56 m

Look for more information from the manual: ”Installation_instruction_remote_condensing_unit_202309.pdf”

Cooling unit dimensions: insulation 80mm, 100mm, 150mm

C940, C950, M940, M950, F840, F850, F851



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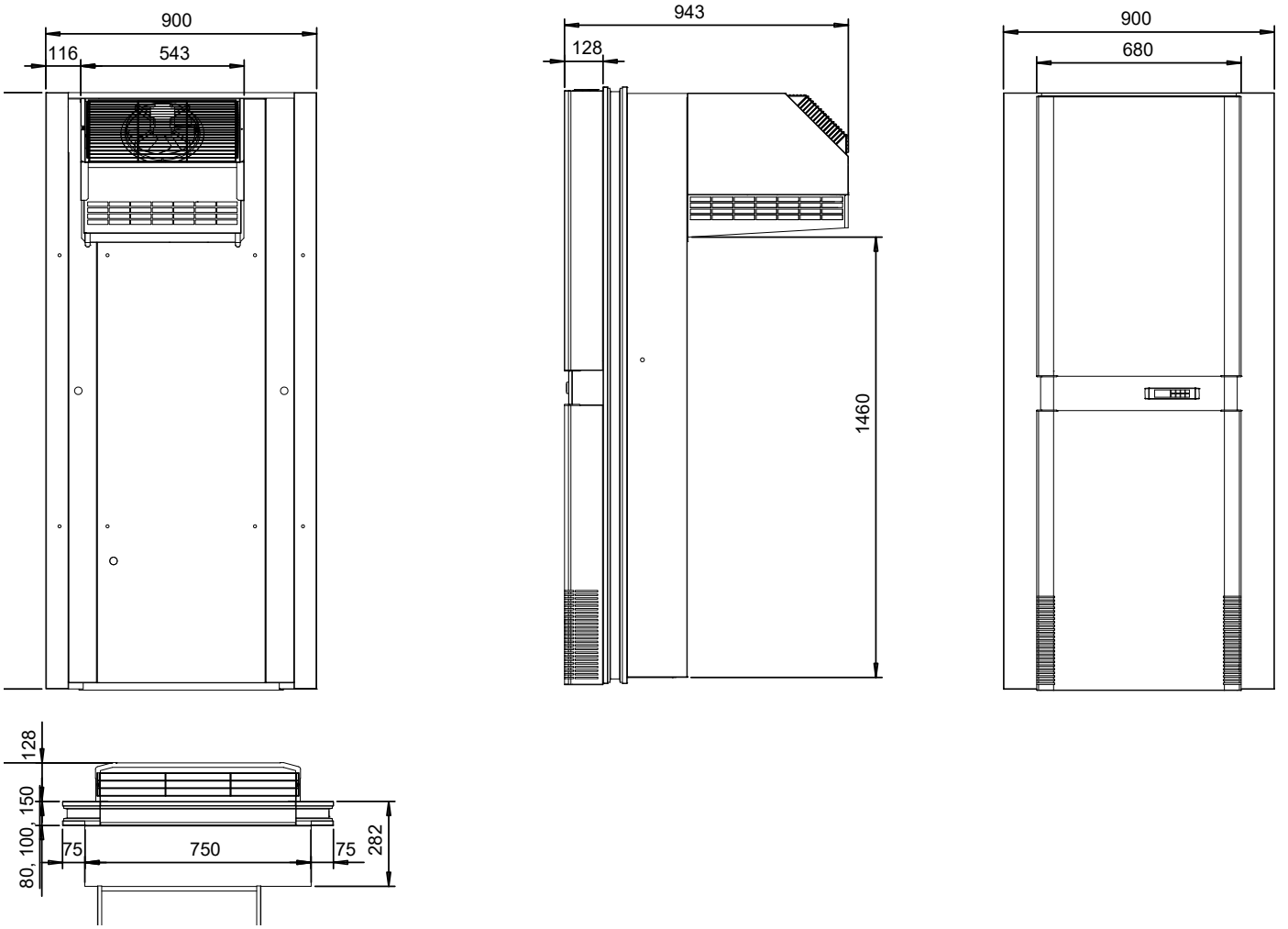
C1240, C1250, M1240, M1250, F1140, F1541, F1551



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PORKKA

Porkka Finland Oy is an internationally recognised designer and manufacturer of professional refrigeration solutions. Key target industries include HoReCa, Medical Research and Marine. Porkka is part of the Finnish Festivo-Porkka Group.

Porkka brand is well known for its quality and reliability throughout the world - the technical know-how and the long life cycle of the products. The success of Porkka is based on decades of experience, customer-centric design and continuous product development. The materials used in Porkka products are as recyclable and eco-friendly as possible. The recyclability of our products is over 95%.

LRQA CERTIFIED
ISO 9001 · ISO 14001

UKAS MANAGEMENT SYSTEMS
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Porkka solutions are designed and manufactured according to a quality standard ISO 9001:2015, controlled and certified by Lloyd's Register Quality Assurance. Porkka also holds the environmental certificate ISO 14001:2015, issued also by LRQA.

Porkka reserves the right to make any changes without prior notice.

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