

AriaPRO ME

High efficiency heat pumps



Installation & Servicing Instructions



THESE INSTRUCTIONS
TO BE RETAINED
BY USER



Vokèra is a licensed member of the Benchmark scheme which aims to improve the standards of installation and commissioning of domestic hot water systems in the UK.



Dear Customer,
 Thank you for choosing a Vokèra AriaPRO.
 This booklet contains information necessary for the correct installation of this appliance.
 Thanks again.
 VOKÈRA Ltd.

Compliance

The unit complies with the following Standards:

- Electromagnetic Compatibility Directive 2004/108/EC as subsequently amended
- Machinery Directive 2006/42/EC as subsequently amended
- Directive ErP 2009/125/ECw

Range

Heat pumps	Code
AriaPRO 004 ME	20099423
AriaPRO 006 ME	20099424
AriaPRO 008 ME	20099425
AriaPRO 012 ME	20099426
AriaPRO 015 ME	20099427

Warranty

The Vokèra product you bought has a SPECIFIC WARRANTY, valid from the date of installation.
 Conditions are specified in the WARRANTY CERTIFICATE, which we invite you to read carefully.

Contents

General	
General notices	3
Fundamental safety rules	3
Description	4
Identification	4
Technical Data	5
Performance based on the climatic zone	
Electrical data	
Dimensions	7
Electrical diagrams	8
Refrigerating circuit	18
Installer	
Product delivery	18
Handling and transportation	18
Access to inner parts	18
Installation	19
Hydraulic connections	20
Condensate discharge connection	20
Electrical connections	21
Control panel	22
System's charging	24
Technical Service	
First commissioning	24
Stop for an extended period of time	24
System's drainage	24
Ordinary maintenance	24
Extraordinary maintenance	25
Adjustment of the circulation pump	
Control	
Control panel	26
Functions	27
Fault signals	30

The following symbols are used in this publication:

- ⚠ WARNING = actions requiring special care and appropriate training.
- ⊘ DO NOT = actions that MUST ON NO ACCOUNT be carried out.

General

General notices

- ⚠ Check the integrity and completeness of the supplied equipment as soon as you take it out of its packaging. If necessary, consult the Agency that sold you the equipment.
- ⚠ All VOKÈRA equipment shall be installed by competent persons. The installation must conform to current Legislation and the instructions in this booklet.
- ⚠ These units must comply with their intended use, pursuant to their performance characteristics.
- ⚠ VOKÈRA will not accept any liability for damages to property, people or animals because of installation, calibration and maintenance mistakes or erroneous usage of the equipment.
- ⚠ In case of abnormal operation, or leaks of liquids or refrigerant gases, position the main switch of the system in the "off" position and close the stop taps. Call VOKÈRA's Technical Service or other professionally qualified personnel immediately. Do not try to repair the unit.
- ⚠ This booklet must be kept carefully as it is an integral part of the equipment and must ALWAYS be present, including in case of sale of the equipment to another owner or user, or of transfer to another system. Should the manual get damaged or lost, please ask for a duplicate manual from the VOKÈRA's Technical Service.
- ⚠ Repairs or maintenance actions must be carried out by VOKÈRA's Technical Service staff or other skilled staff, pursuant to the provisions of this publication. Do not modify or tamper with this equipment, as doing so might cause dangerous situation, for which the manufacturer waives all liability.
- ⚠ In the installation and/or maintenance operations please adopt the appropriate attire and accident prevention devices. The Manufacturer waives all and any responsibility for failure to observe the safety and accident prevention regulations from time to time in force.
- ⚠ Comply with the legislation in force on the country of deployment with regard to the use and disposal of packaging, of cleaning and maintenance products and for the management of the unit's decommissioning.
- ⚠ Pursuant to the EC standard n. 842/2006 on certain fluorinated greenhouse gases, it is mandatory to declare the exact quantity of refrigerant present in the installed system. This piece of information can be found on the technical tag attached to the outdoor unit.
- ⚠ This unit contains fluorinated greenhouse gases covered by the Kyoto protocol. Maintenance and disposal activities must be carried out exclusively by skilled personnel.
- ⚠ The units contain refrigerant gas: handle them carefully, to avoid damaging the gas circuit.

Fundamental safety rules

- ⊘ Do not allow children or unassisted disabled people to use the unit.
- ⊘ Do not open the access covers and carry out technical or cleaning activities before disconnecting the unit from the power grid by positioning the system's main switch in the "off" position.
- ⊘ It is forbidden to modify the safety or regulation devices without the authorisation and directions of the manufacturer.
- ⊘ Do not stand, sit and/or place objects on the unit.
- ⊘ Do not pull, detach or twist the electrical wires coming out of the unit, even when the unit is disconnected from the power grid.
- ⊘ Do not spray or throw water directly on the unit.
- ⊘ Do not dispose of, abandon or leave the potentially hazardous packaging materials within the reach of children.
- ⊘ It is strictly forbidden to touch any moving parts, interfere with them or introduce pointed objects through the grids.



At the end of its life, the product should be not be disposed of as solid urban waste, but rather it should be handed over to a differentiated waste collection centre.

Description

AriaPRO

The product is characterised by:

- PAM and PWN modulation DC-INVERTER control, which allows the compressor to modulate its performance continuously from 30% up to 120%, guaranteeing high energetic standards at all moments.
- Pre-painted sheet metal cabinet.
- ROTARY compressor, for size 4, and TWIN ROTARY, for sizes 6-8-12-15, mounted on antivibration support and placed in a special compartment.
- Electronically controlled variable speed fan, ensuring a highly silent operation.
- AISI 316 stainless steel plate heat exchanger, utilities side, insulated with closed cell anticondensation lining, complete with resistor and differential pressure switch.
- Exchanger made of copper pipes and aluminium corrugated fins.
- Safety devices such as pressure switches, sensors, specific automatic switches.
- Integrated hydronic module, quickly installed with the help of a few external components.
- Micro-processor electronic control regulation performance
- Climate control.

The AriaPRO range units are designed for the production of refrigerated water for air conditioning, heated water for heating and sanitary hot water for homes, residential units, etc., and are used together with terminal units for small and medium systems.

They are designed for outdoor installation, so their constituent materials were chosen for this specific requirement.

1	Automatic air vent valve
2	Temperature probe
3	Safety valve (output 1/2')
4	Recirculation pump
5	Cap to release pump seizure
6	Flow meter
7	Expansion tank

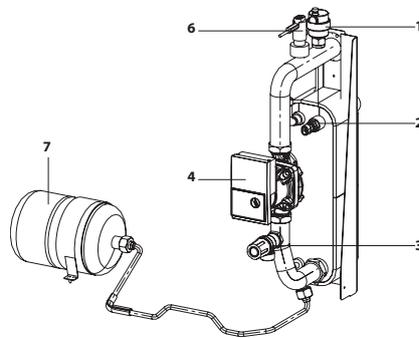
Identification

Technical Tag

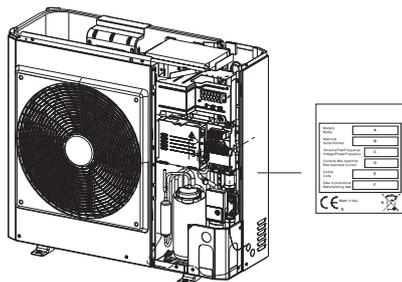
⚠ The technical tag shows all technical and performance data of the unit. Should the tag get lost, please ask for a duplicate tag from the VOKERA's Technical Service.

⚠ Any tampering with, the removal or the lack of the Technical Tag or of any other element whose absence prevents certain identification of the product makes it more difficult to install and maintain the product.

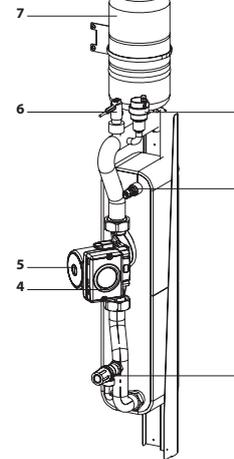
004 - 006 - 008



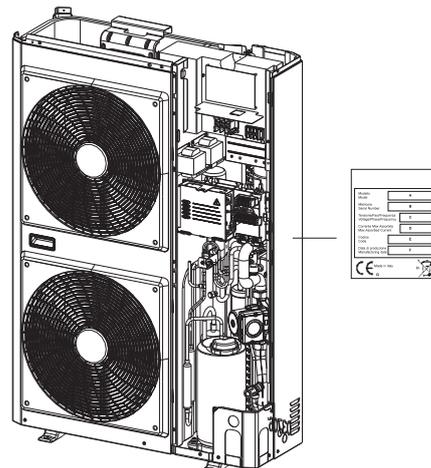
004 - 006 - 008



012 - 015



012 - 015



Technical Data

Model		004 ME	006 ME	008 ME	012 ME	015 ME
Performance in heating mode						
Nominal capacity (1)	kW	4,07	5,76	7,16	11,86	14,46
Power consumption (1)	kW	0,98	1,35	1,80	3,00	3,54
COP (1)		4,15	4,28	3,97	3,95	4,09
Nominal capacity (2)	kW	3,87	5,76	7,36	12,91	13,96
Power consumption (2)	kW	1,19	1,89	2,31	4,26	4,32
COP (2)		3,26	3,05	3,19	3,03	3,23
Nominal capacity (3)	kW	3,5	3,8	4,1	8	10,2
Power consumption (3)	kW	1,13	1,23	1,31	2,6	3,29
COP (3)		3,1	3,1	3,1	3,1	3,1
Nominal capacity (4)	kW	3,4	3,7	3,9	8	10,2
Power consumption (4)	kW	1,31	1,42	1,48	3,08	3,92
COP (4)		2,6	2,6	2,6	2,6	2,6
Nominal capacity (5)	kW	4,1	5,4	6,7	11,5	11,7
Power consumption (5)	kW	1,51	2,09	2,91	4,64	4,18
COP (5)		2,71	2,58	2,3	2,48	2,8
Nominal capacity (6)	kW	4,27	5,43	7,25	10,87	12,36
Power consumption (6)	kW	1,46	1,95	2,58	4,05	4,09
COP (6)		2,92	2,77	2,81	2,68	3,02
Capacity (7)	kW	1,06	1,50	1,86	4,68	4,78
COP (7)		2,75	2,82	2,81	2,70	2,75
Performance in cooling mode						
Nominal capacity (8)	kW	4,93	7,04	7,84	13,54	16,04
Power consumption (8)	kW	1,17	1,90	1,96	3,70	4,17
EER (8)		4,2	3,7	3,99	3,66	3,85
Nominal capacity (9)	kW	3,33	4,73	5,84	10,24	13,04
Power consumption (9)	kW	1,10	1,58	1,96	3,46	4,42
EER (9)		3,02	3	2,98	2,96	2,95
ESEER (9)		4,36	4,51	4,15	4,22	4,31
Generalities						
Sound pressure in heating mode	dB(A)	42	42	44	47	48
Sound pressure in cooling mode	dB(A)	44	44	45	48	49
Compressor		ROTARY DC INV.		TWIN ROTARY DC INVERTER		
R410a refrigerant charge **	kg	1,195	1,35	1,81	2,45	3,39
Empty weight	kg	57	61	69	104	112
Number of fans	n	1	1	1	2	2
Fan diameter	mm	495	495	495	495	495
Water circuit						
Static pressure available	kPa	60	60	56	70	58
Expansion tank capacity	l	2	2	2	3	3
Expansion tank pre-charge	kPa	200	200	200	200	200
System minimum water volume	l	14	21	28	42	49
System maximum water volume *	l	65	65	65	95	95
Machine water volume	l	0,8	0,8	1,0	2,3	2,3
Maximum operating pressure	kPa	300	300	300	300	300
Minimum filling pressure	kPa	120	120	120	120	120
Hydraulic connections diameter	Inches	1M	1M	1 M	1 M	1 M

* For greater water volumes it is necessary to provide an additional expansion tank

** The value of the refrigerant charge is indicative. The correct value is indicated on the technical data plate.

Reference conditions

Note / Note	
1	outdoor temperature d.b. + 7 °C / w.b. + 6°C, water 35 - 30 °C.
2	outdoor temperature + 7 °C / w.b. + 6°C, water 45 - 40 °C.
3	outdoor temperature d.b. + 2 °C / w.b. +1°C, water 35 - 30 °C.
4	outdoor temperature d.b. + 2 °C / w.b. +1°C, water 45 - 40 °C.
5	outdoor temperature d.b. + 7 °C / w.b. + 6°C, water 55 °C.
6	outdoor temperature d.b. + 7 °C / d.b. + 6°C, water 47 - 55 °C. EN 14511
7	outdoor temperature -7 °C, water 35 °C (with rated water flow)
8	outdoor temperature d.b. +35 °C / w.b. +24°C, water 18 - 23 °C.
9	outdoor temperature d.b. +35 °C, water 7 - 12 °C.
d.b.	dry bulb
w.b.	wet bulb

- Sound pressure measured in a hemispheric field 4 metres in front of the fan.
- Unit performances have been provided in reference to Directive UNI EN 14511:2011.
- Fouling factor: 0.18×10^{-4} (m² K)/W.

Performance based on the climatic zone

Model		004 ME	006 ME	008 ME	012 ME	015 ME
Temperate zone - Average temperature (47 / 55 °C)						
ηs		138	132	111	115	127
SCOP		3,53	3,37	2,84	2,95	3,25
Pdesign	kW	3,28	4,22	4,65	8,68	9,05
Annual consumption *	kW/h	1.900	2.571	3.367	6.077	5.748
Energy class		A++	A++	A+	A+	A++
Cold zone - Average temperature (47 / 55 °C)						
ηs		126	112	103	106	119
SCOP		3,23	2,87	2,64	2,72	3,06
Pdesign	kW	5,16	6,65	6,59	13,67	14,52
Annual consumption *	kW/h	3.911	5.431	5.867	11.859	11.188
Warm zone - Average temperature (47 / 55 °C)						
ηs		190	181	152	158	175
SCOP		4,82	4,60	3,88	4,03	4,44
Pdesign	kW	3,10	3,79	4,83	8,04	8,38
Annual consumption *	kW/h	843	1.085	1.649	2.651	2.508
Temperate zone - Low temperature (30 / 35 °C)						
ηs		146	141	118	125	141
SCOP		3,73	3,60	3,03	3,19	3,61
Pdesign	kW	3,83	4,92	4,56	10,00	10,75
Annual consumption *	kW/h	2.015	2.806	3.088	6.467	6.137
Energy class		A+	A+	A	A+	A+
Cold zone - Low temperature (30 / 35 °C)						
ηs		133	120	110	115	133
SCOP		3,41	3,07	2,82	2,94	3,40
Pdesign		6,03	7,75	6,46	15,75	17,25
Annual consumption *	kW/h	4.148	5.927	5.381	12.620	11.945
Warm zone - Low temperature (30 / 35 °C)						
ηs		201	194	163	171	194
SCOP		5,09	4,92	4,14	4,36	4,93
Pdesign	kW	3,42	4,06	5,09	9,20	9,96
Annual consumption *	kW/h	880	1.084	1.624	2.809	2.681
Noise level						
Sound power	dB(A)	62	62	64	67	68

* With backup electric heater

Electrical Data

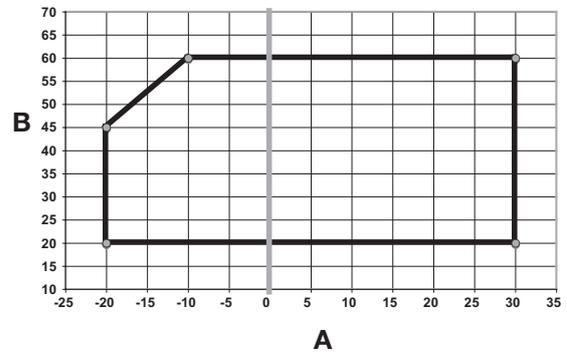
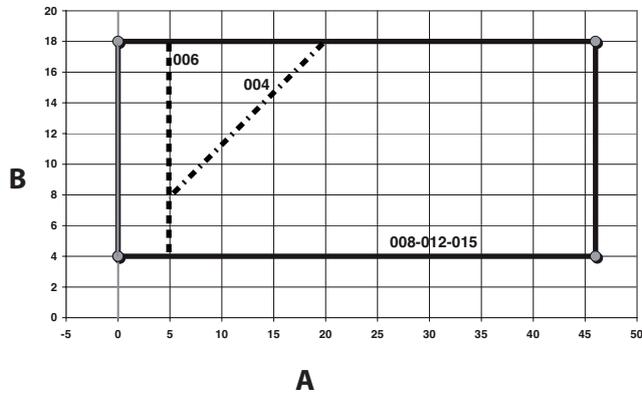
Modello		004 ME	006 ME	008 ME	02 ME	015 ME	012 TE	015 TE
Power supply	V- ph - Hz		230 - 1 - 50				400 - 3 - 50	
Allowable voltage range	V		207 ÷ 254				373 ÷ 424	
Maximum power drawn	kW	2	2,3	3,7	5,1	5,1	6,5	6,5
Maximum current drawn	A	7,2	11	14	23	20	16	16
Type of fuses			gL type					
Power supply fuses current	A	10- type B	16- type B	16- type B	25 - type D	25 - type D	16- type B	16- type B
Power supply cables	mm ²		H07RN-F 3 x 2.5mm ²				H07RN-F 5 x 2.5mm ²	
Maximum pump current external circulation	A		2					

Use H03W-F 4x0.75 mm² cables to connect the remote control to the wires

Operating conditions

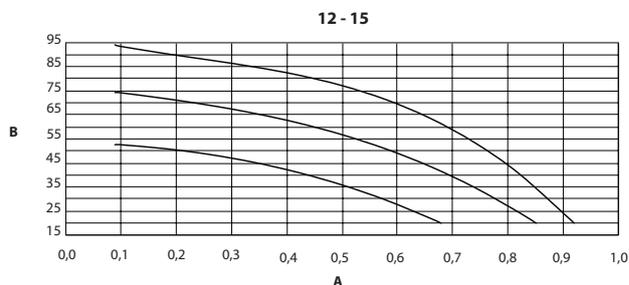
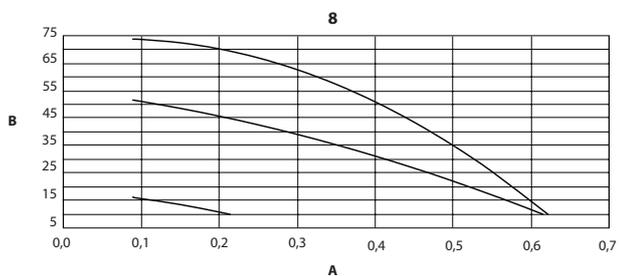
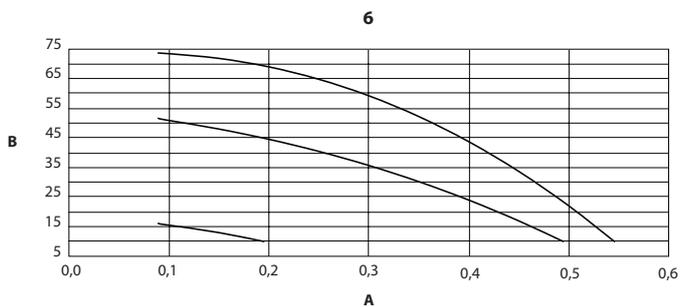
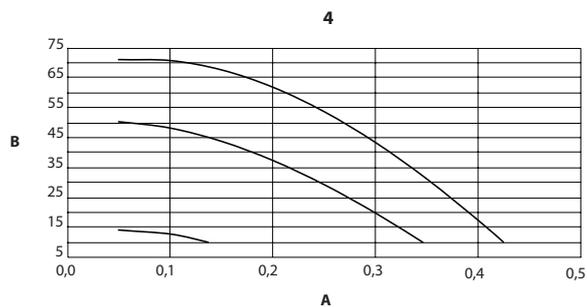
- ⚠ With models 004 - 006, min. outdoor air temperature must be +5°C if operating in cooling mode.
- ⚠ For the optimum working of the heat pump when producing hot water in summer operation, outdoor air temperature should not exceed 30°C.
- ⚠ When outdoor air temperature exceeds 30°C, hot water production may be limited according to the settings of the safety devices in the equipment.
- ⚠ For technical activities, please refer to the technical tag mounted on board the machine
- ⊘ It is forbidden to work outside of the working field

1	Cooling
2	Heating
A	Outdoor temperature (°C)
B	Outlet water temperature (°C)



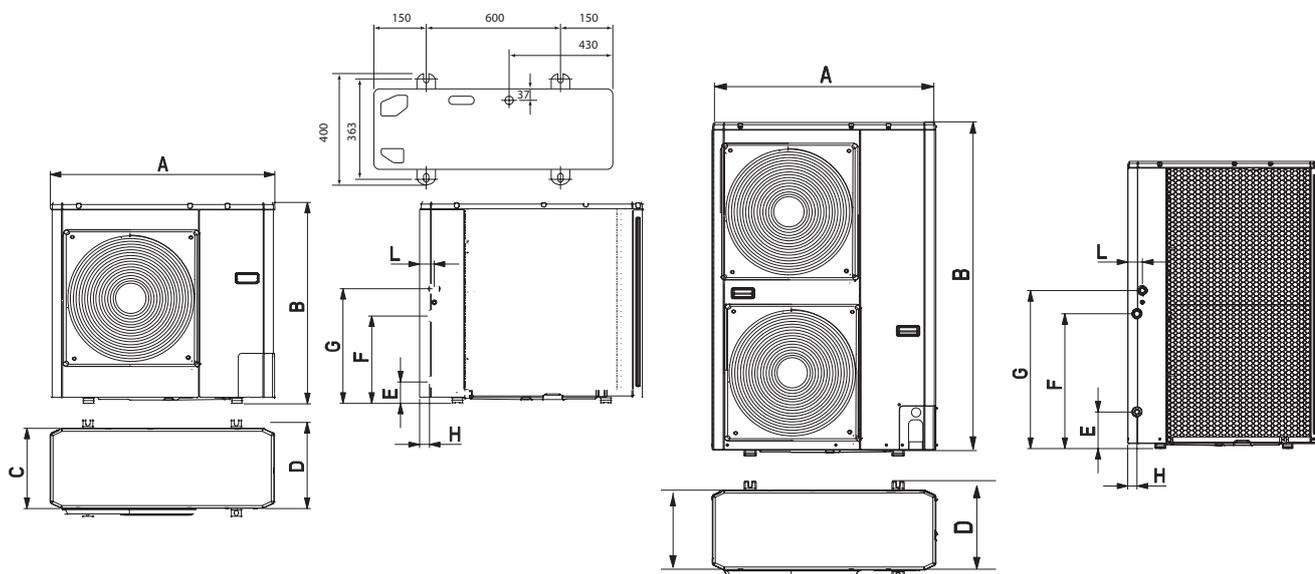
Flow-rate/head diagram

A	Flow rate (l/s)
B	Available static pressure (kPa)



Dimensions

Model		004 ME	006 ME	008 ME	012 ME	015 ME
Overall dimensions						
Empty weight	kg	57	61	69	104	112
A	mm				908	
B	mm	821			1363	
C	mm				326	
D	mm				350	
E	mm	87			174	
F	mm	356			640	
G	mm	466			750	
H	mm	40			44	
L	mm	60			69	

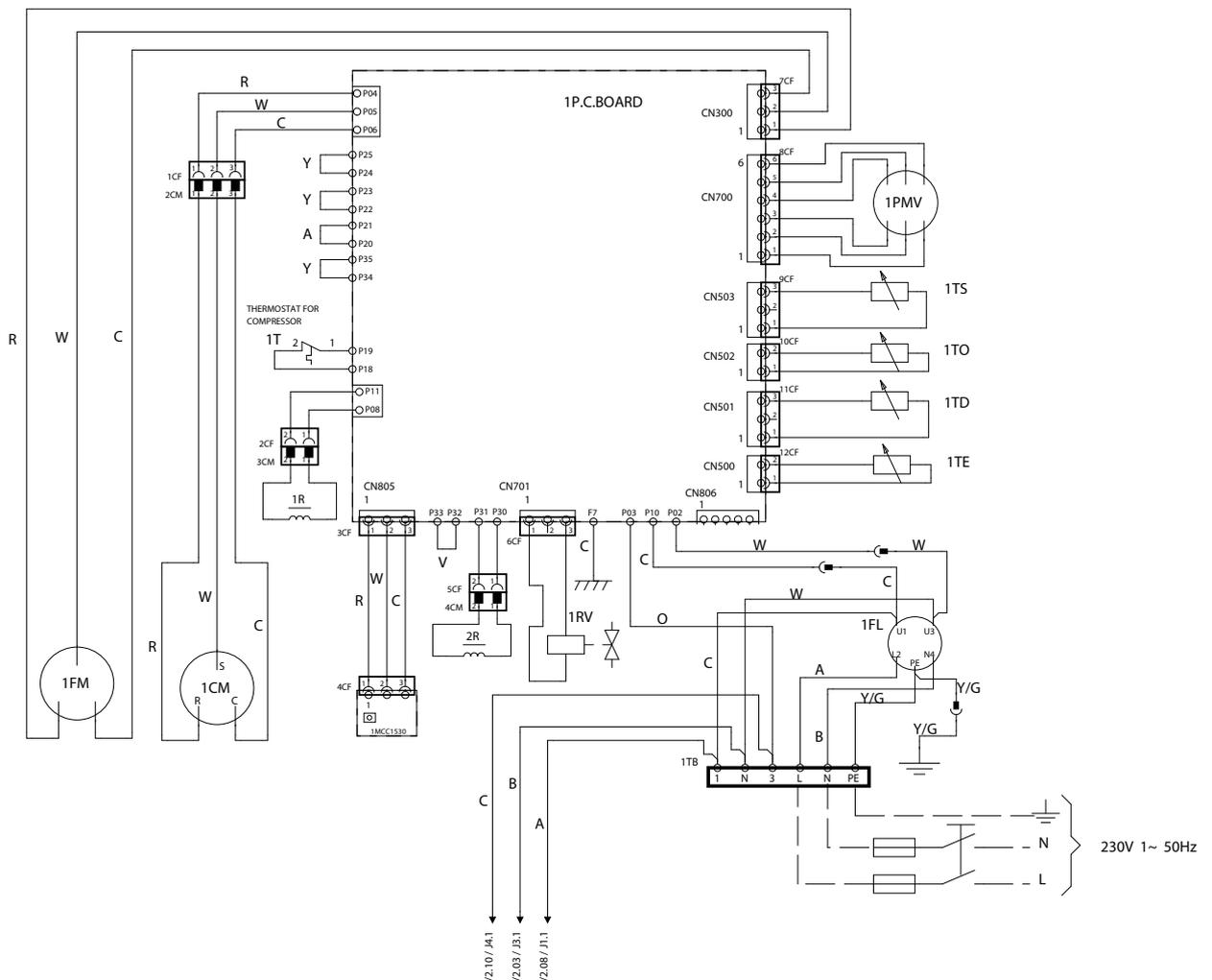


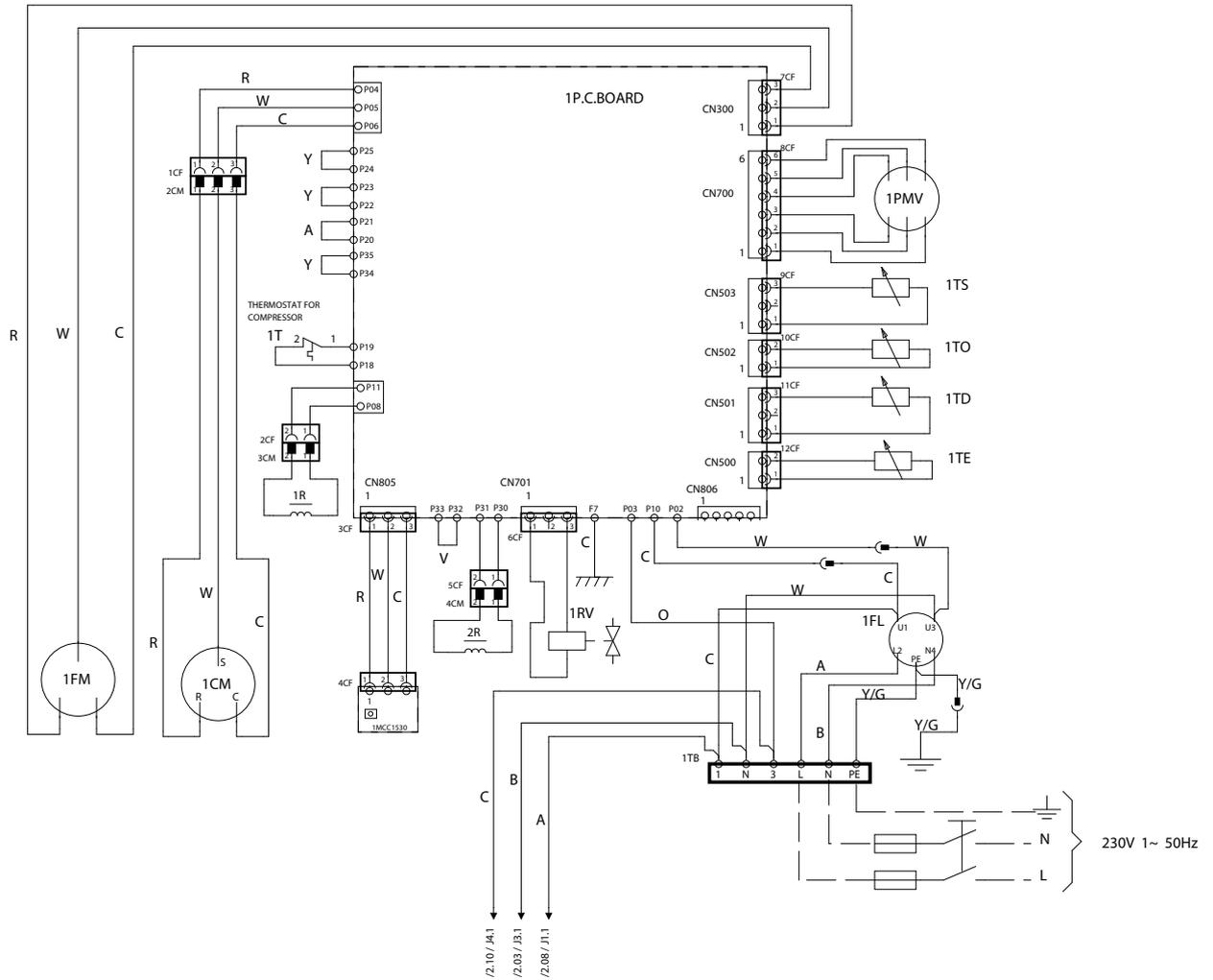
Electrical diagrams

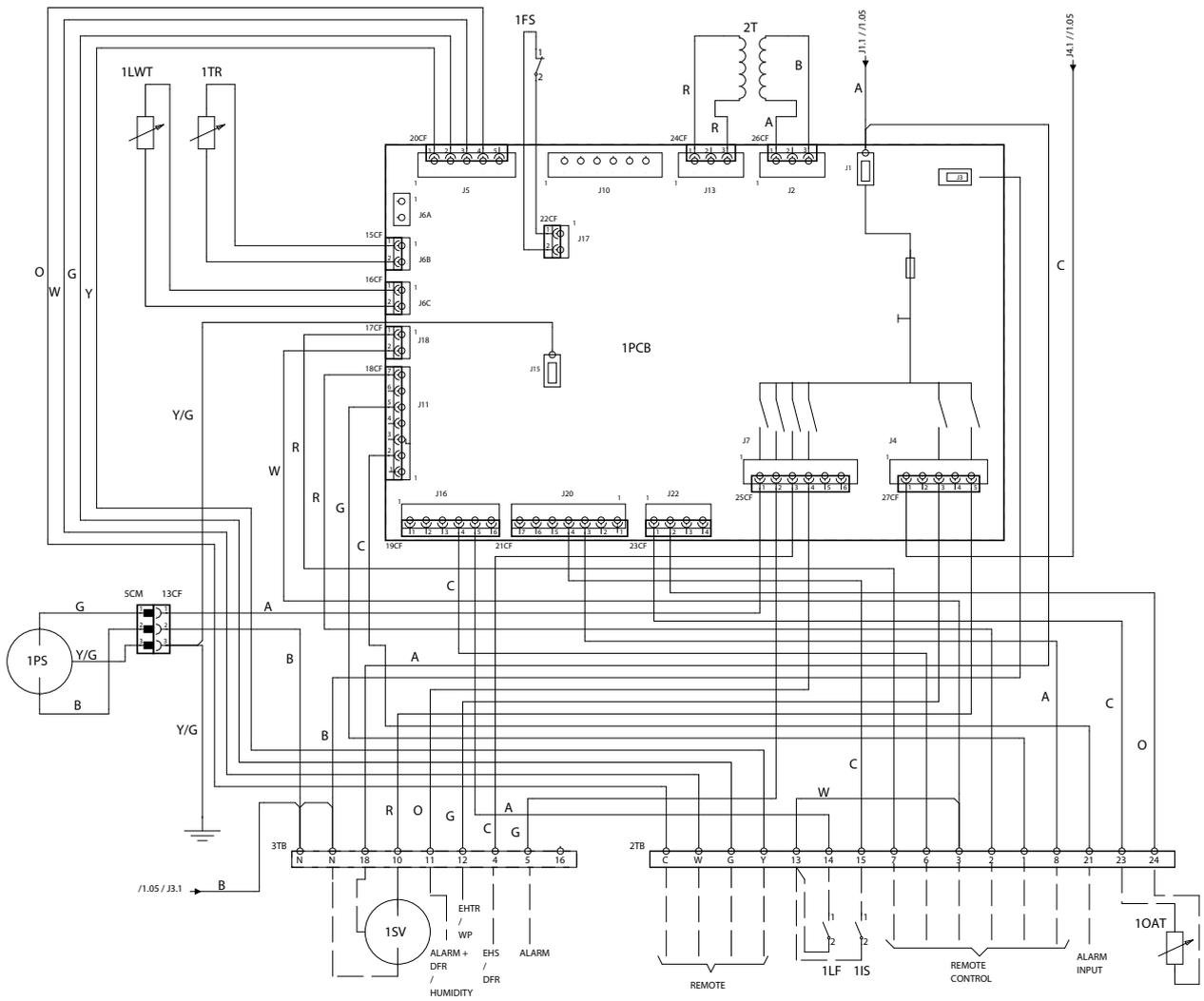
-	Wiring of the manufacturer
----	Wiring of the installer
CM	Compressor motor
FM	Fan motor
RV	Reversing valve (4 way)
TS	Temperature probe low pressure pipe
TO	Temperature probe external unit
TD	Temperature probe high pressure pipe
TE	Temperature probe capacitor pipe
PMV	Modulating valve motor
1R/2R...	Reactor
F	Fuse
LWT	Water outlet probe
EWT	N.A.
TR	Refrigerant sensor
FS	Flow meter
TL	Temperature probe capacitor pipe 2
C	Compressor thermostat
H	High pressure switch
RY	Relay

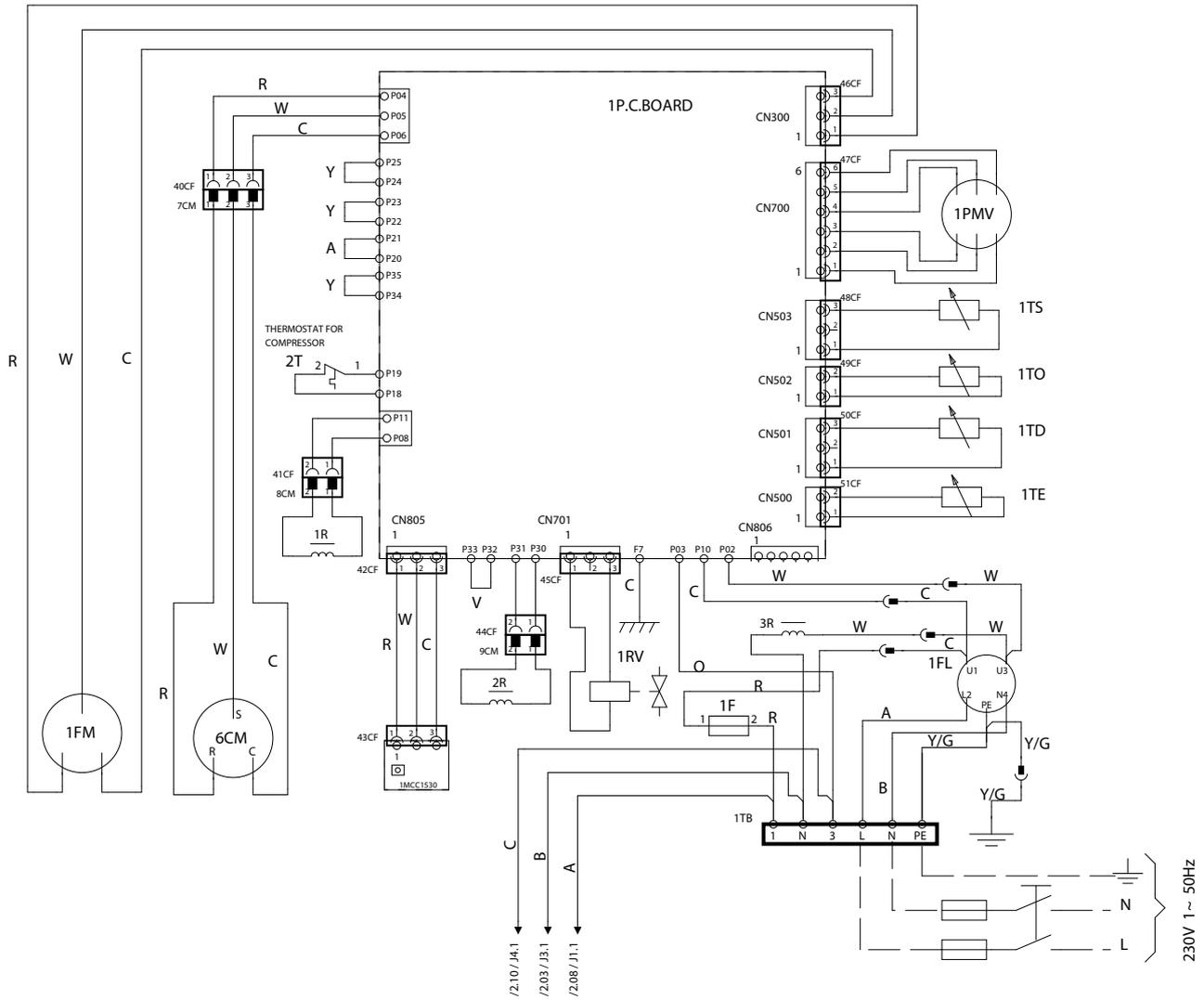
T	Transformer
PS	Water pump motor
E-HTR	Electric heater
AD	Alarm status and defrost
OAT	Outside air probe
LF	Frequency Limiting
IS	Domestic water input
SV	Three-way domestic water valve
Y	Yellow
O	Orange
R	Red
G	Grey
A	Brown
C	Black
V	Violet
B	Blue
W	White
Y/G	Yellow Green

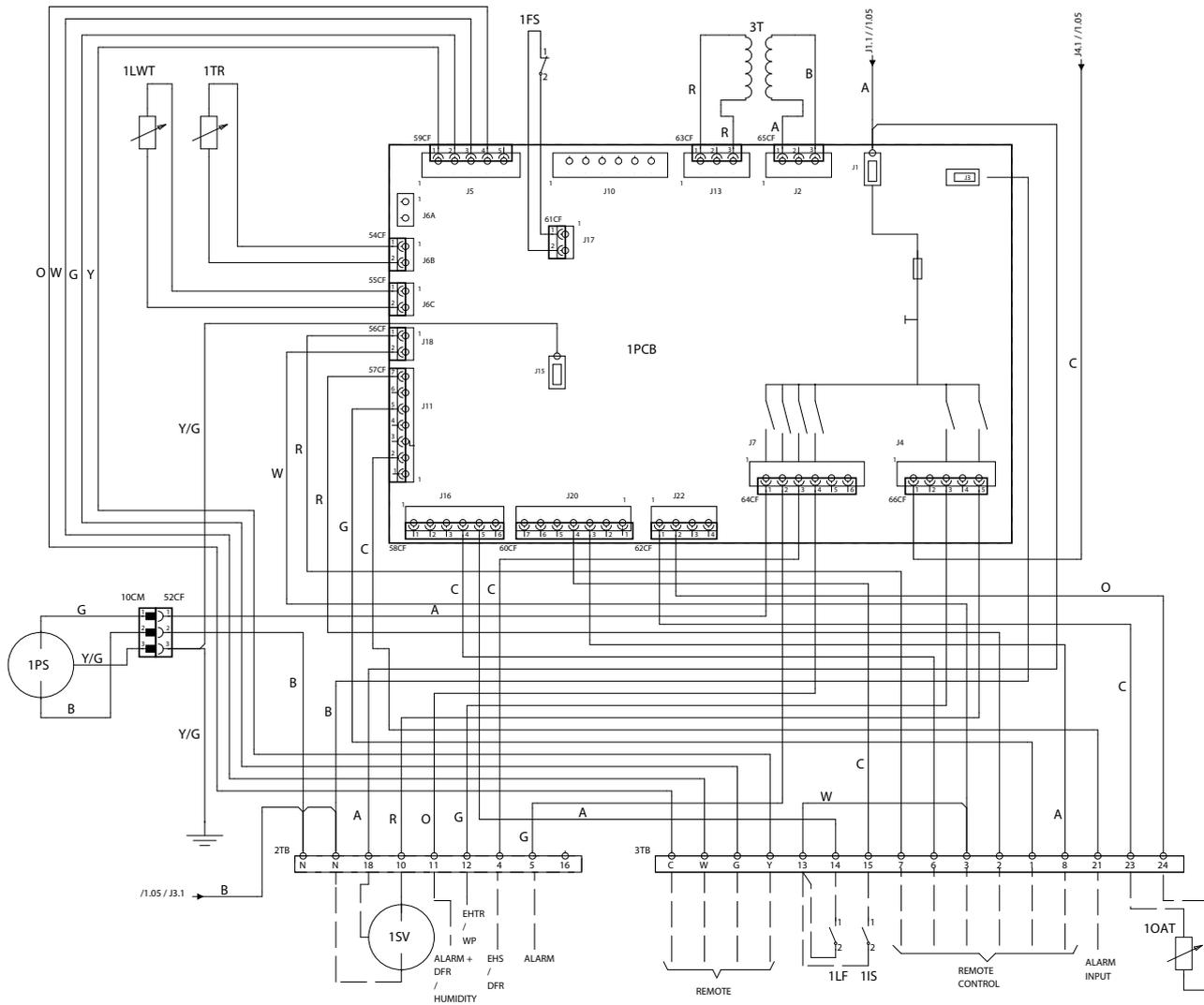
004 ME Power

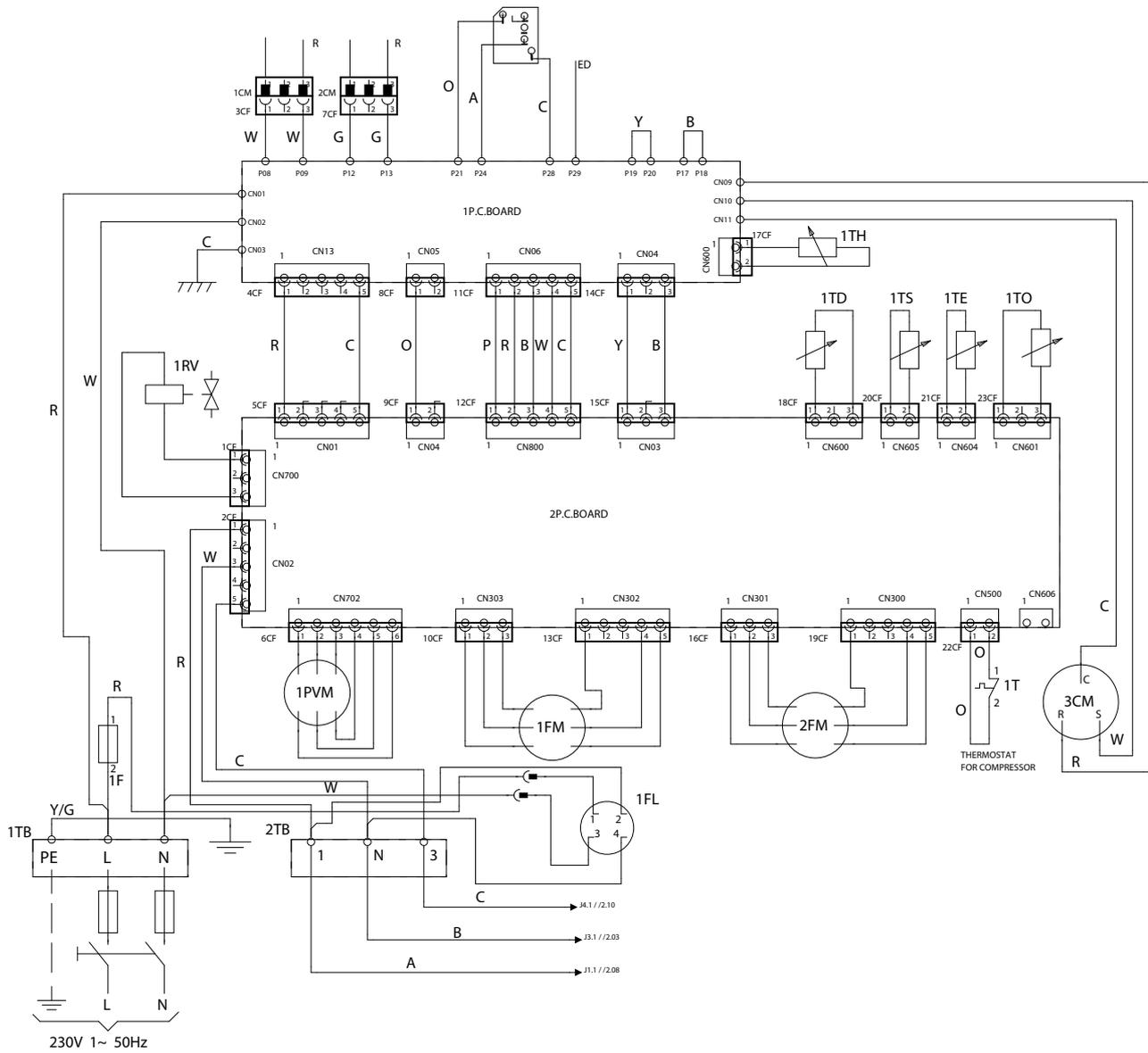


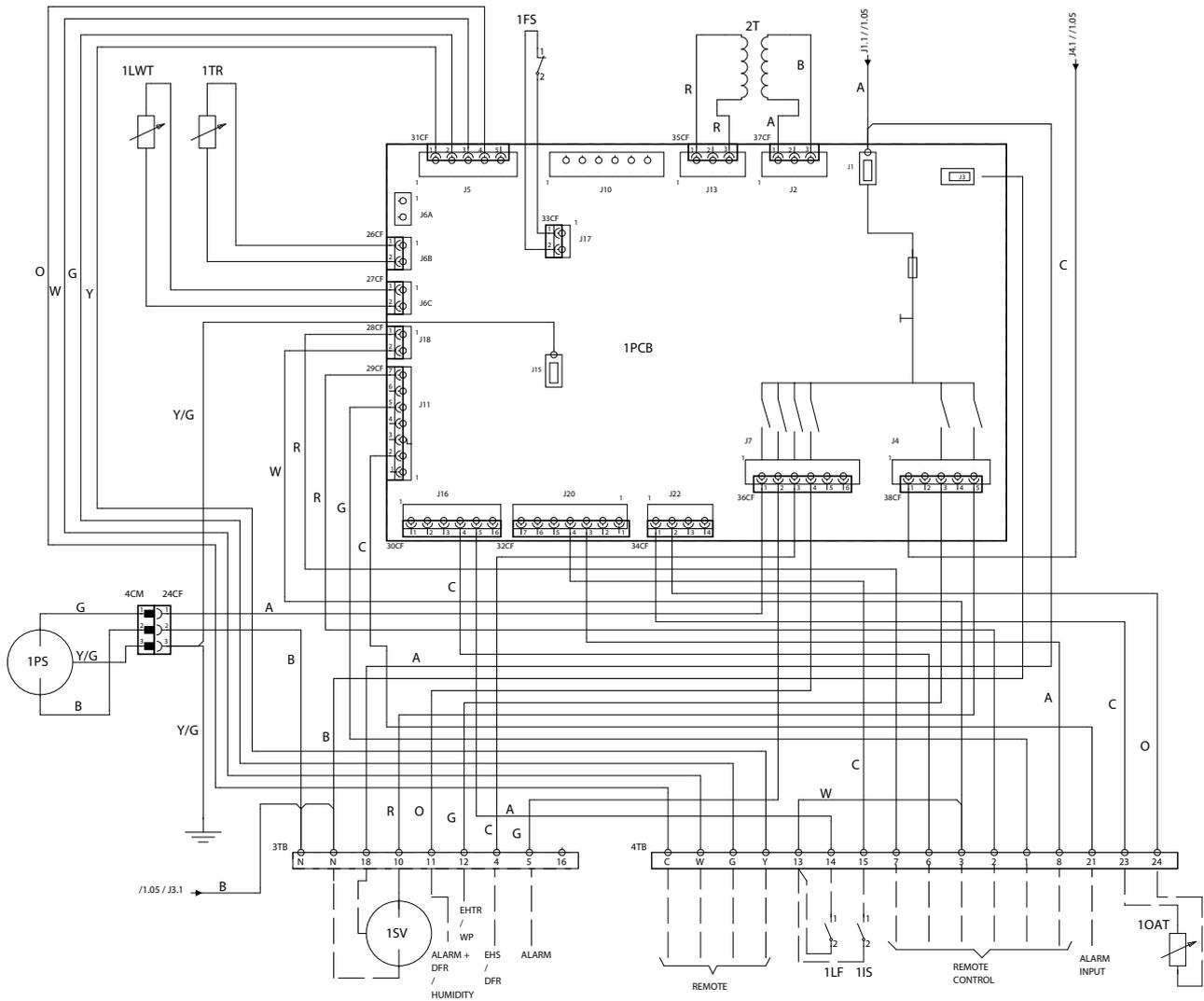


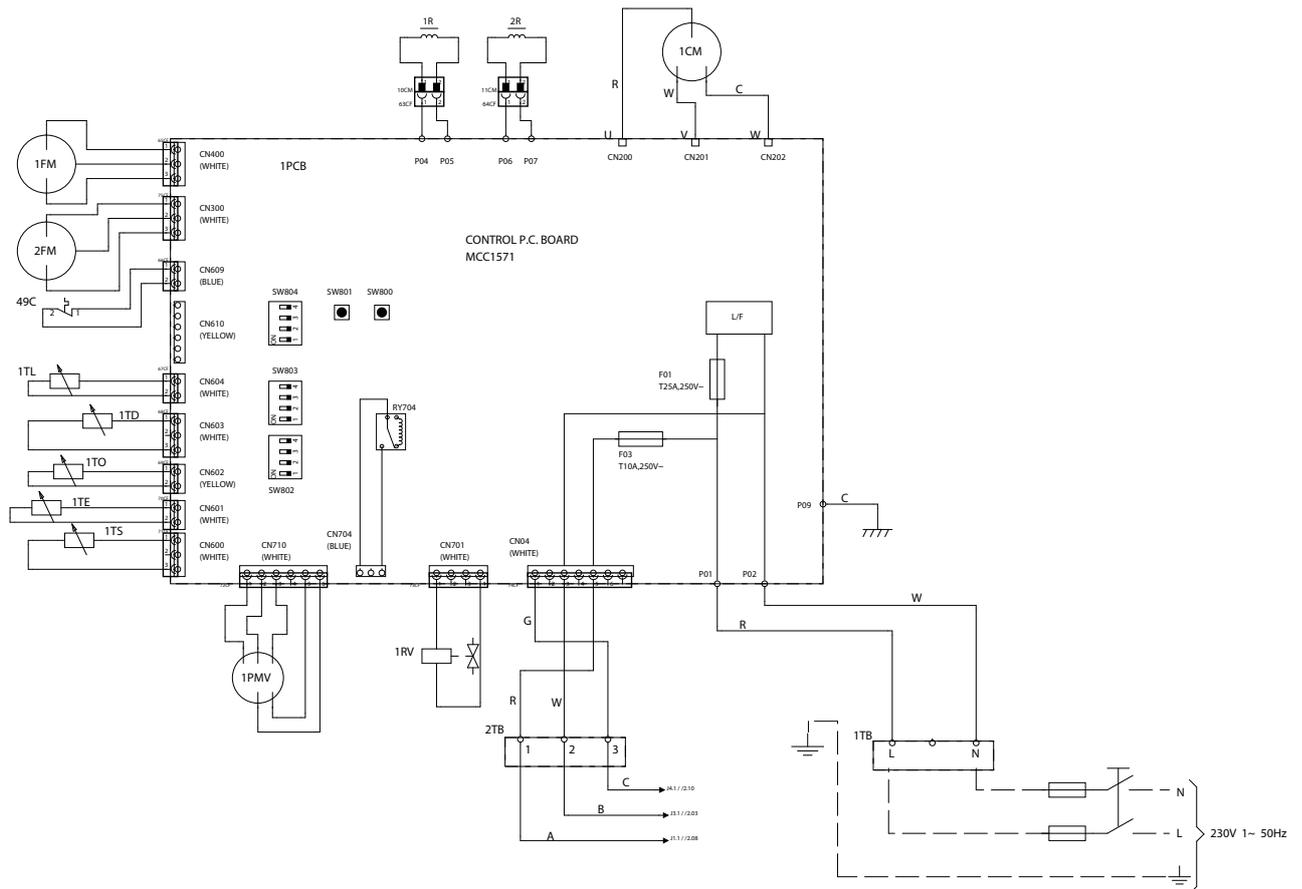


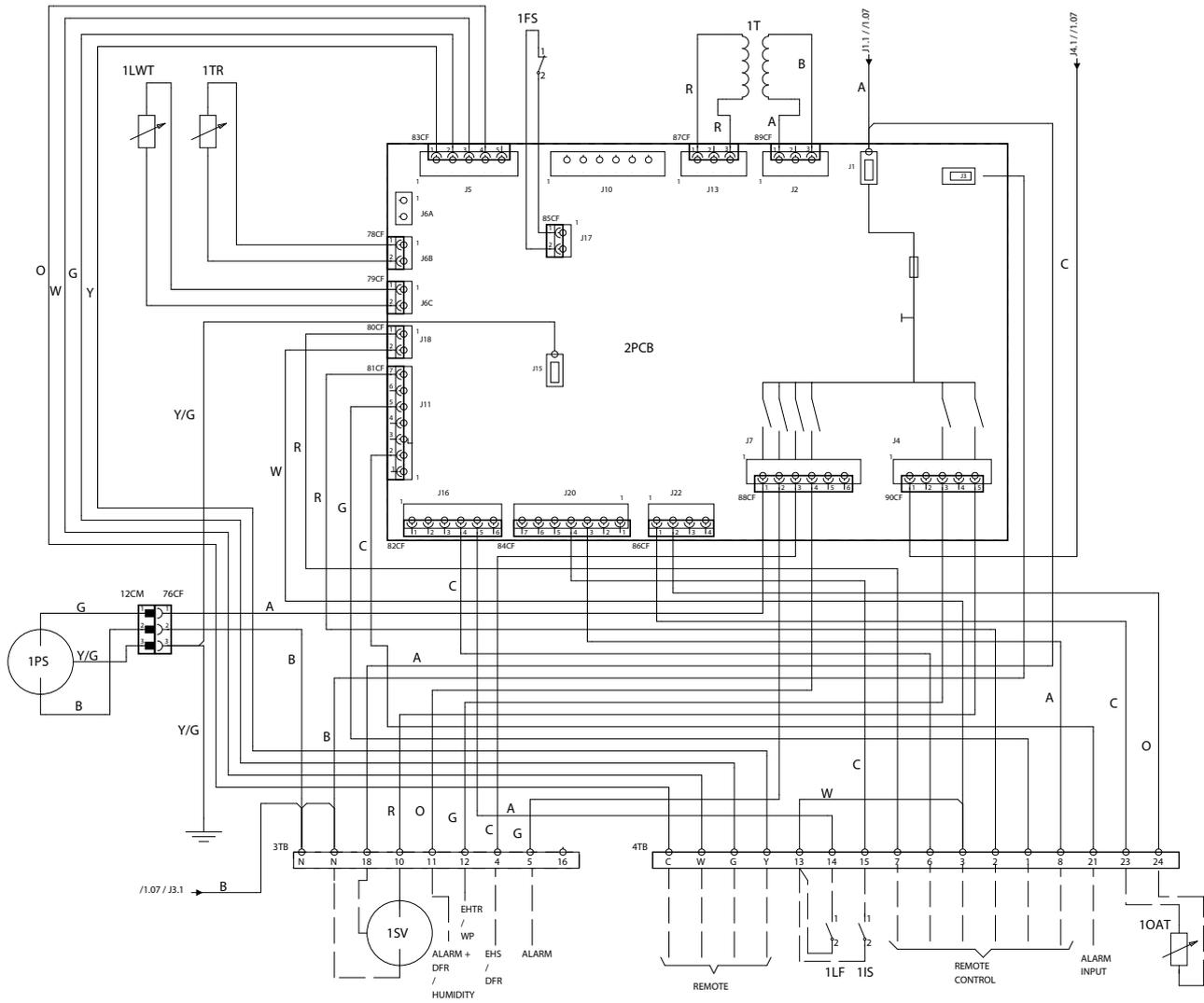




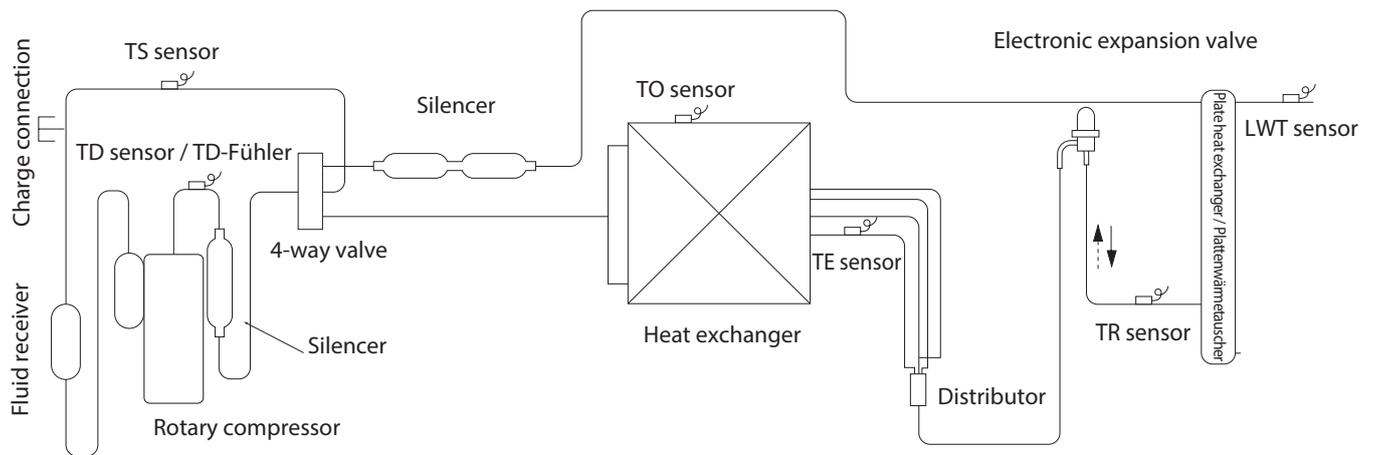








Refrigerating circuit



Installer

Product delivery

Preliminary instructions

- ⚠ We suggest to take the equipment out of its packaging only when it has been placed in position at the installation point.
- ⚠ Carefully remove any adhesive strips positioned on the unit.
- ⚠ Do not dispose of, abandon or leave the potentially hazardous packaging materials within the reach of children.

Scope of supply

Also supplied:

- Installer manual
- External probe
- Barcode labels
- Control panel
- Strain relief (size O15ME only)
- List of spare parts
- Cable gland
- Drain discharge pipe

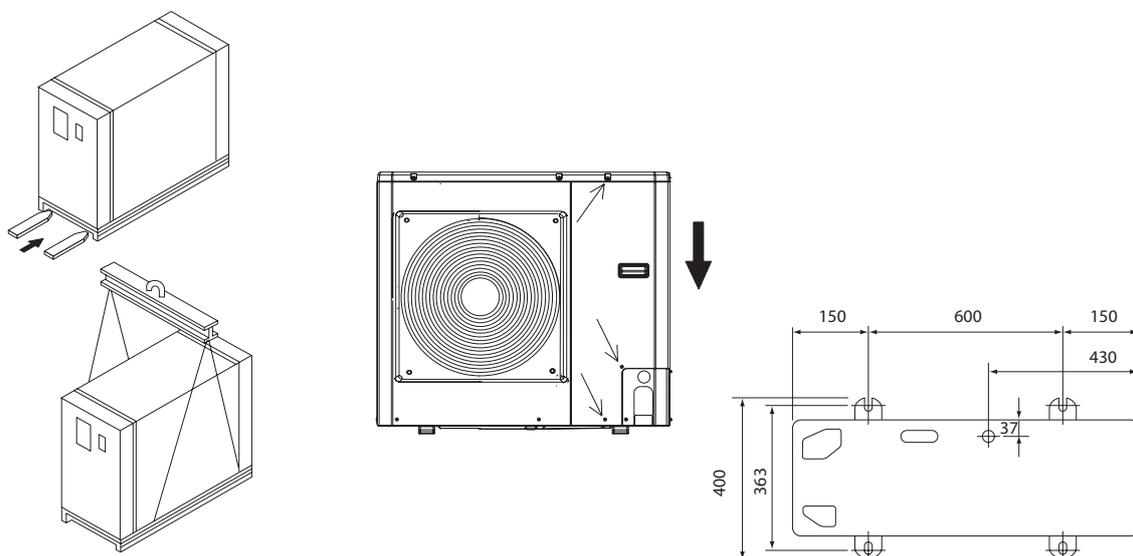
- ⚠ The supplied accessories are positioned inside the electrical panel.

Handling and transportation

- ⚠ The unit must be handled by skilled technicians, appropriately equipped and with the appropriate tools to manage the unit's weight in compliance with the accident prevention regulations.
- ⚠ When handled, the unit must always be kept in a vertical position.
- ⚠ The weight of the equipment is off balance towards the compressor.
- ⚠ If the unit is lifted, use pipes with a diameter and thickness appropriate for the weight of the unit.
- ⚠ Use all the lifting points shown.

Access to inner parts

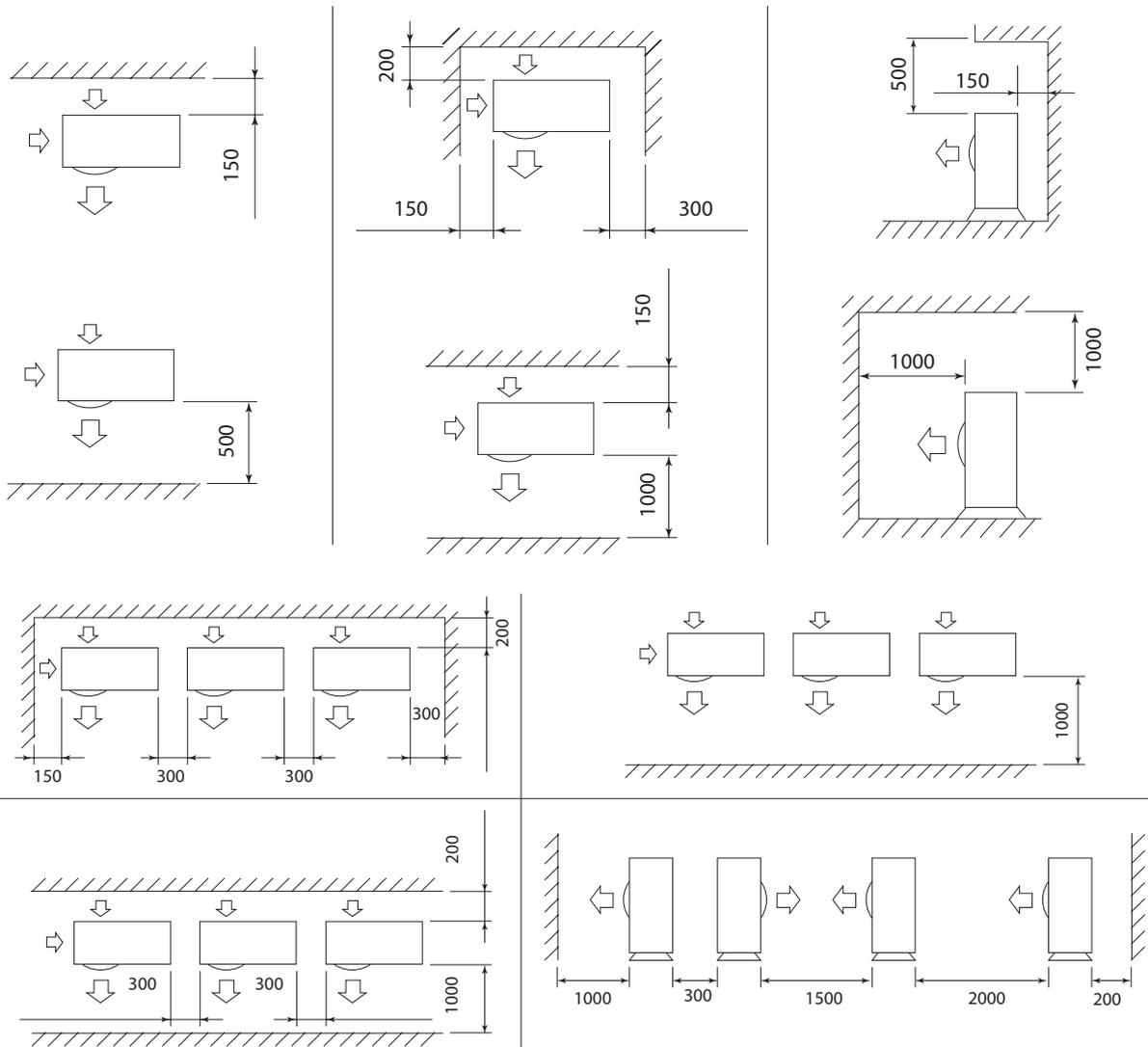
- Loosen the fastening screw.
- Remove the access panel.



Preliminary instructions

- ⚠ The place of installation must be determined by the system's designer or by an expert in the field and must take into account the technical requirements and the current standards and legislation.
- ⚠ We suggest to avoid:
 - The placement in service ducts and/or hopper windows
 - Obstacles or barriers that cause a recirculation of the expelled air
 - Places with aggressive atmospheres
 - Small places where the unit's noise level can be enhanced by reverberation and resonance.
 - Placement in corners, where dust, leaves and other debris may easily deposit and reduce the efficiency of the unit, through obstruction of the air flows.
 - The airflow from the unit can penetrate in the inhabited rooms through doors or windows, creating discomfort.
 - That the airflow from the unit is opposed by a contrary wind.
- ⚠ The units must:
 - Be placed on a level surface able to support their weight.
 - Be placed on a sufficiently rigid floor slab that does not transfer vibrations to the rooms below or next door.
 - It is suggested to place a rubber plate between the slab and the unit, or to use anti-vibrating mounts appropriate for the unit's weight.
- ⚠ The unit must only be installed outdoors.
- ⚠ If there are several units placed side by side on the bank side, the required distances must be summed.
- ⚠ Provide for lifting of the unit from the floor:
 - 20mm without conveying of condensation discharge
 - 90 - 100 mm to allow the conveying of the condensation discharge
- ⚠ If the unit is installed in areas subject to heavy snowfall, it shall be necessary to avoid the unit being directly exposed to it.

⚠ All installers are asked to follow the Benchmark Scheme by adhering to the Code of Practise, which can be obtained from www.centralheating.co.uk.



Hydraulic connections

Preliminary instructions

- ⚠ The selection and the installation of the components of the system is referred to the expertise of the installer, who must operate according to the rules of good technique and current Legislation.
- ⚠ Make sure that the pipes do not contain stones, rust, debris or other materials that could damage the system.
- ⚠ We suggest a by-pass of the unit be made so that the pipes can be washed without having to disconnect the unit.
- ⚠ The connection pipes should be of a suitable diameter and supported so that their weight does not rest on the appliance.
- ⚠ It is mandatory:
 - To install a water filter to protect the appliance from the impurities in the water going into the appliance
 - To install air venting valves at the highest points of the piping
 - To install flexible elastic joints to connect the pipes
 - To prevent the risk of ice forming in the water circuit, during defrosting operations or the continuous modulation of the frequency of the compressor, make sure that the amount of water in the circuit exceeds the minimum required of 3.5 litres/kW.
- ⚠ Systems charged with anti-freeze or subject to special legal provisions require the use of water disconnectors.
- ⚠ Failure to install filters and anti-vibration supports could cause problems of obstructions, breakages and noise issues for which the manufacturer cannot be held responsible.
- ⚠ Check for pressure drops from the appliance and all other in-line accessories.
- ⚠ The water flow rate should also be maintained constant when operating with a water ΔT of 5-6°C.

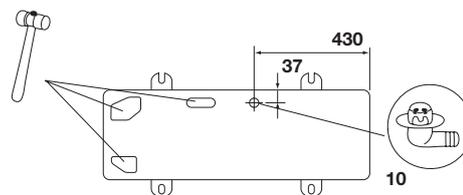
- ⚠ For sealing the threads it is recommended that hemp and green paste be used. Teflon should not be used when there is anti-freeze liquid in the unit.
- ⚠ Do not use the heat pump to treat water used in industrial processes, swimming pool water or domestic water. In all these cases use an intermediate heat exchanger. Make sure to comply with the minimum water content, adding additional storage if necessary.
- ⚠ If the appliance is connected in parallel to a boiler, when this latter is running make sure that the temperature of the water circulating inside the heat pump does not exceed 60°C.

Condensate discharge connection With conveying

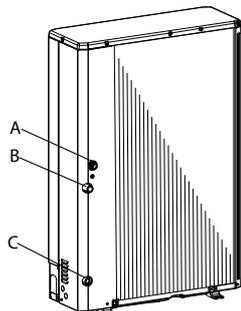
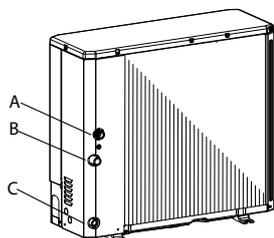
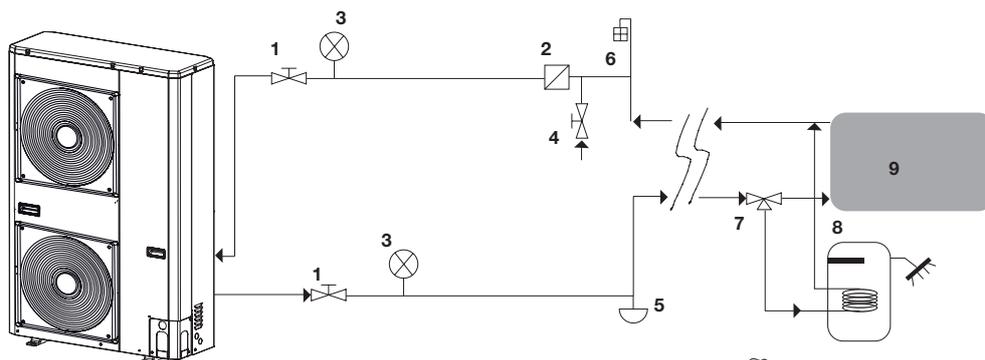
Connect a drainage tube to the connector on the collector tray and run it towards and appropriate discharge area.

Without conveying

- The drainage capacity increases if the pre-cut holes in the base are open.
- ⚠ In case of installation in very cold areas or areas subject to heavy snowfall, where freezing out is a possibility, foresee appropriate antifreeze systems.



Model			004	006	008	012	015
Water flow rate							
Nominal water flow rate	Std	l/s	0,20	0,28	0,34	0,57	0,57
System volume per model	Min	l	14	21	28	42	42
	Max	l	65	65	65	95	95
Maximum system pressure	Max	kPa	300	300	300	300	300
Water charge pressure	Min	kPa	120	120	120	120	120
Maximum elevation	Max	m	20	20	20	20	20



A	Unit water input
B	Unit water outlet
C	Unit water discharge
1	Shut-off valves
2	Line water filter (10 mesh/inch ²)
3	Pressure gauge
4	Filling valve
5	System discharge valve (at the lowest points of the circuit)
6	Air vent valve (at the highest points in the circuit)
7	3-way valve
8	Storage tank for domestic water
9	Indoor system
10	Drainage connection

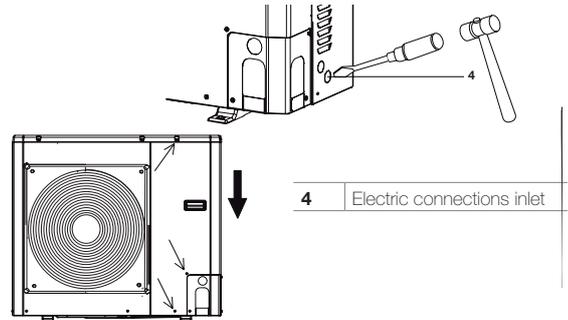
Electrical connections

Preliminary instructions

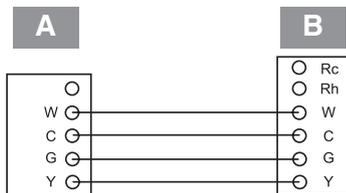
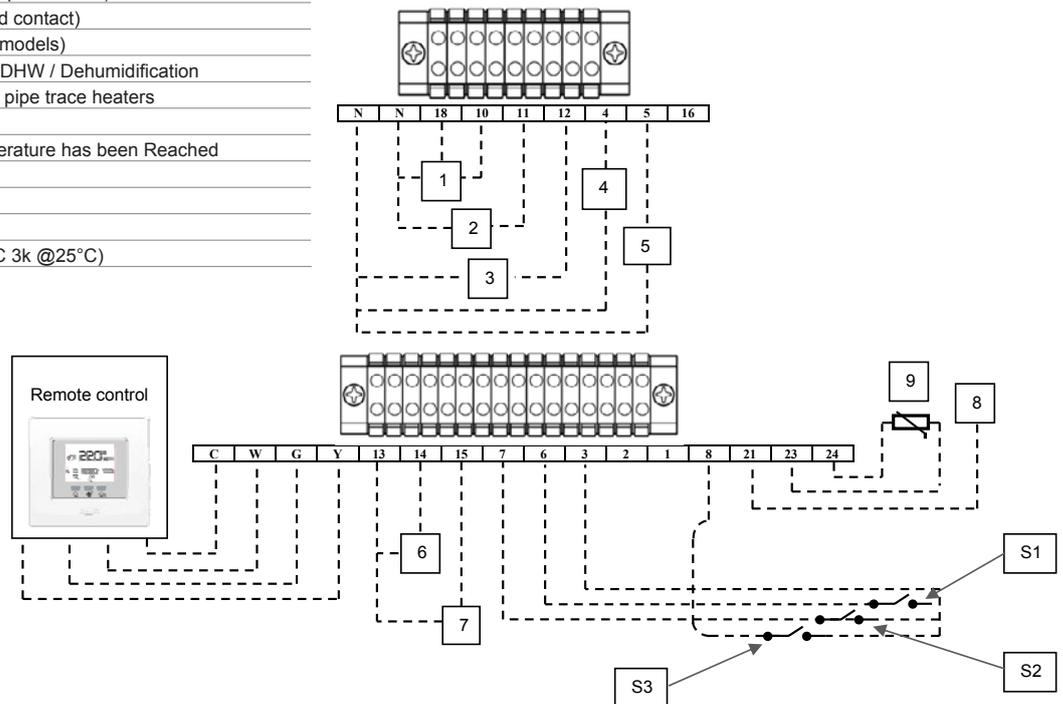
- ⚠ The choice and installation of system components is left to the skilled installer, who shall operate pursuant to the best practices and the legislation from time to time in force.
- ⚠ The manufacturer waives all liability for damages caused by lack of grounding or departure from the electrical diagrams.
- ⚠ Check that:
 - The characteristics of the power supply network shall be appropriate for the unit's power requirements, taking into account also other equipment which might be operated in parallel.
 - Electrical voltage shall be equal to the nominal value +/-10%.
- ⚠ Mandatory items:
 - The use of an omnipolar magnetothermic switch, lockable line disconnector, compliant with CEI-EN standards (contacts open by at least 4 mm), with adequate disconnection power and differential protection in compliance with the electrical data table below, installed next to the unit.
 - Ground the unit thoroughly.
- ⚠ At the end of the connections, fasten the cables with the appropriate cable glands and replace the terminal boxes' covers.
- ⊖ Do not use gas and water pipes to ground the unit.

Connection

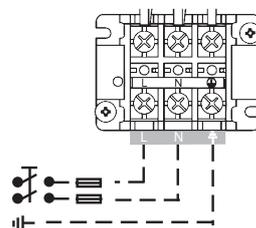
- Punch out the connection points in the pre-cut part.
- Remove the pre-cut part.
- Remove the hole's cutting edges.
- Insert the supplied cable protections .
- Only for size 015 use the strain relief supplied with the unit
- Thread the cables through the holes from the outside, guiding them towards the electrical panel.
- Fasten the cables with the supplied cable grips.
- ⚠ Avoid any direct contact with non insulated copper pipes and the compressor.
- ⊖ It is forbidden to thread the unit's electrical wires in positions not specifically foreseen in this manual.



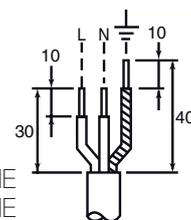
A	Unit
B	Control panel
S1	OFF (open contact) - ON (closed contact)
S2	Cooling (closed contact)/Heating(open contact)
S3	Normal (open contact)/Eco (closed contact)
1	3-way valve (only N-10 for spring models)
2	Auxiliary heat source required for DHW / Dehumidification
3	Additional water circulator / Water pipe trace heaters
4	External heat source / Defrosting
5	Alarm / Signal that Ambient Temperature has been Reached
6	Maximum frequency reduction
7	Domestic water requested
8	External alarm input
9	External temperature sensor (NTC 3k @25°C)

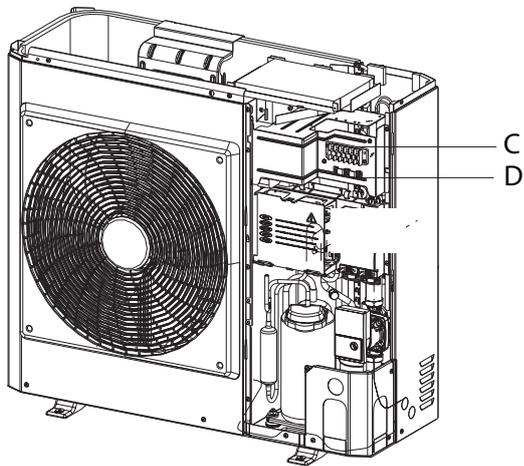
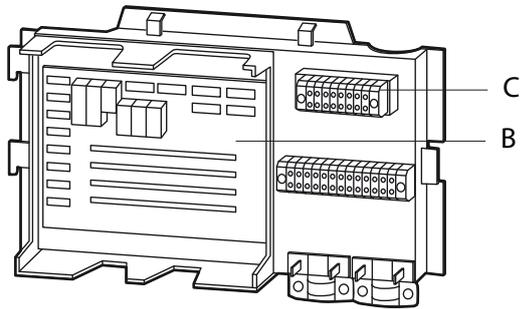


004 ME - 006 ME
008ME - 012 ME

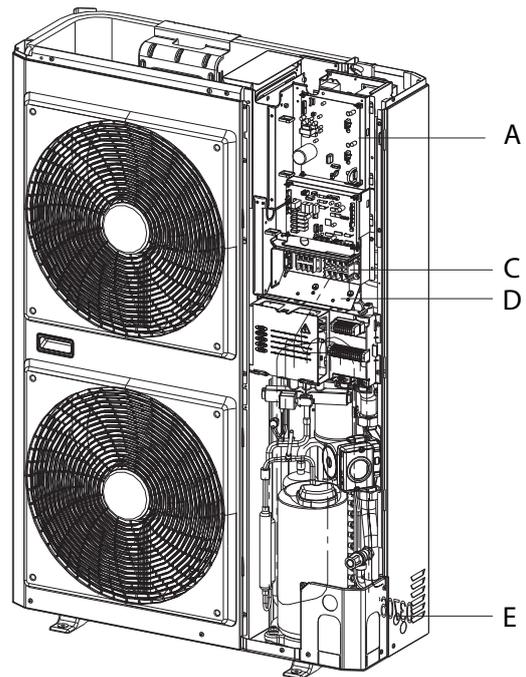


015 ME





004 - 006 - 008



012 - 015

Legend:

- A Position 4 Led/Inverter diagnostics board (12ME - 15ME)
- B LED GMC position/Diagnostic board
- C Installation terminal strip
- D Cable holder
- E Strain relief

Control panel

The control panel makes it possible to carry out all necessary calibrations to allow the unit to function, and to view the main parameter values and the alarms.

Preliminary instructions

- ⚠ For correct installation, remember that the panel:
 - Must be installed on a wall, preferably not a perimeter one, and one without any hot or cold pipes inside.
 - It must be mounted at 1.5 m from the floor.
 - It must not be placed next to doors or windows, cooking devices, radiators, fan coils or, more generally, it must not be placed in conditions that might alter the measured temperatures.
 - The maximum length of the connecting cable must be taken into account (max 50 m).
 - Use a shielded cable for the connection.
 - The connection cable must not be spliced; if splicing is necessary, it shall be tinned and adequately protected.
 - Any trenching of the connection cable must be separated from the live wires.

1	Fixing hole
2	Terminal box
3	Connection hole

Placement

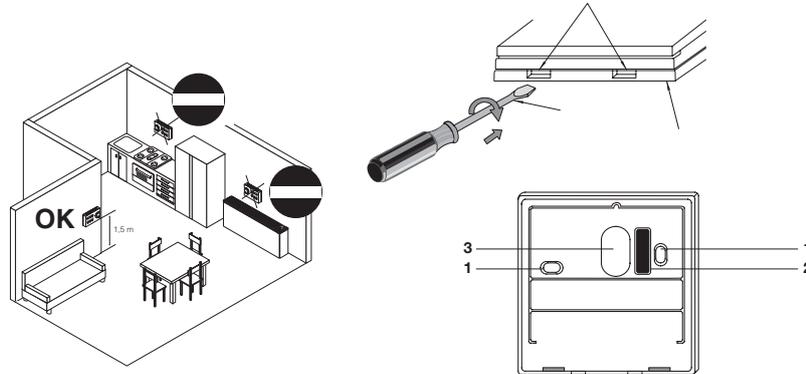
- Separate the control panel from the base.
- Mark the fastening points using the base as a template.
- Drill a hole in the wall, through which the connections shall be threaded,

Connection

- Thread the connection cable of the control panel through the hole in the base.
- Anchor the base with appropriate screws and bolts.
- Connect the cable to the clamps on the control panel, paying attention to polarity.
- Remount the control panel on the base.

Adjustments

Set the parameters 100 and 101 and adjust the climate curves (see Climate curves section).



System's charging

Preliminary instructions

- ⚠ Do not open the access covers and carry out technical or cleaning activities before disconnecting the unit from the power grid by positioning the system's main switch in the "off" position.
- ⚠ Check that the main power supply line is disconnected.
- ⚠ Check that the discharge taps are closed and that the air bleeder screws are open

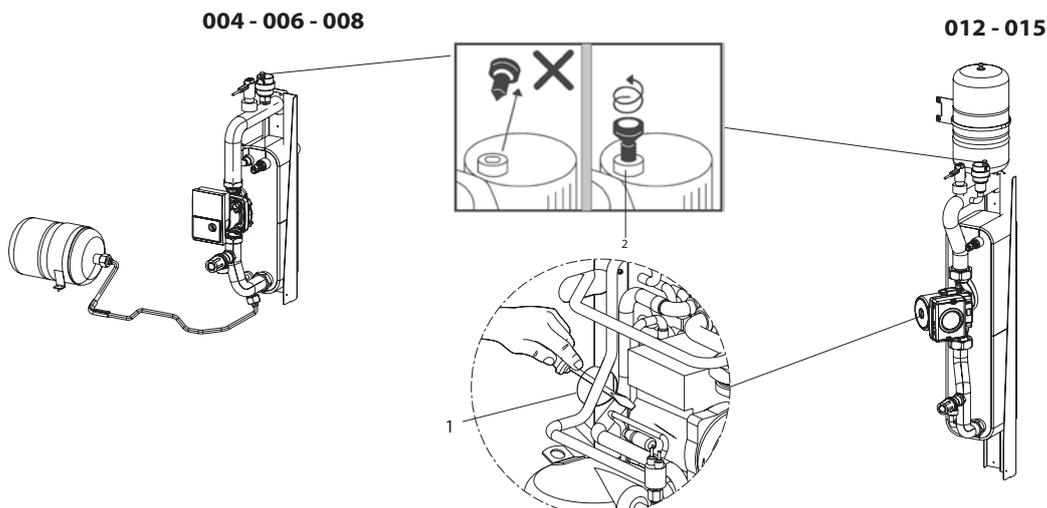
Pump's release

In case of prolonged stop, it might become necessary to unblock the circulation pump.

- ⊖ To unblock:
 - ⊖ Access the pump.
 - Rotate the impeller with a screwdriver.

Operations

- Open the hydraulic system's stop valves.
- Start charging.
- When water starts to come out of the bleeder valves, close the valves and bring the water's pressure to the system's set value. Consider that the safety valves are calibrated at 3 bar. When the water pressure has stabilised, close the charging valve. Check the hydraulic sealing of the joints. Making up of the hydraulic circuits must always take place with the pumps stopped.



Adjustment of the circulation pump

Model 004 - 006 - 008

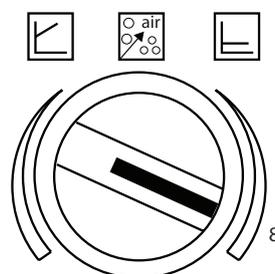
The circulation pump features a knob for adjusting the head in 2 operating modes with 8 positions each.

The factory setting is in Mode with constant pressure differential in position 8.

The deaeration function is activated after 3 seconds with a duration of at least 10 minutes.

⚠ For any change in the factory settings please contact Vokèra's Technical Service.

	Mode with variable pressure differential
	Deaeration function
	Mode with constant pressure differential



Modello 012 - 015

The circulation pump features an interface that allows the head to be adjusted in 6 levels and 2 operating modes.

The factory setting is CP3.

⚠ For any change in the factory settings please contact Vokèra's Technical Service.

1	2
	
PP1	CP1
	
PP2	CP2
	
PP3	CP3

Technical Service

First commissioning

Preliminary instructions

⚠ The equipment's first commissioning must be carried out by a qualified engineer.

⚠ Check that:

- All safety conditions have been fulfilled
- The unit was appropriately fastened to support base and correctly positioned.
- All connections have been made correctly
- Check that the stop valves are open.
- Check that the power supply values are correct
- Grounding has been done correctly.
- All connections have been fastened well.
- The parameters 100, 101 and climatic curvers have been set up

⚠ Check that the voltage values fall within the pre-set limits.

⚠ Make sure that the amount of water in the primary circuit is higher than the required minimum of 3.5 liters/kW, for the correct operation of the unit.

Checks during and after the first commissioning.

⚠ Check that:

- That the power absorbed by the compressor is lower than maximum power.
- That the unit is operating within the suggested operating limits.
- In maximum power operation (both in cold and in heat temperature) is respected a difference temperature between flow and return of approximately 5K.
- That the unit stops and then starts again.
- The unit switch of when all utilities plant are met.

APPLIANCE COMMISSIONING CHECKLIST (UK only)

A commissioning checklist section can be found at the rear of the appliance installation booklet. This important document must be completed during the installation/commissioning of your boiler. Failure to install and commission the appliance in accordance with the manufacturers instructions will invalidate the warranty. This does not affect your statutory rights.

Stop for an extended period of time

Preliminary instructions

⚠ Deactivate the unit exclusively from the control panel.

⚠ If the appliance is kept switched off during winter, with an ambient temperature of less than 0°C and you do not want to use glycol (for example ethylene glycol) in the hydraulic circuit, it is recommended that the entire system be emptied using the discharge provided for in the installation phase and the appliance through the specific discharge.

Operations

After deactivating the unit:

- Position the remote switch in the "off" position.
- Position the system's main switch in the "off" position.
- Deactivate the indoor terminal units by positioning the switch of each unit in the "off" position.
- Close the water supply taps.
- Close the hydraulic system's stop valves.

Setting up parameter 104 to position (1) forces the circulation pump to start.

⚠ If there is any air left in the circuit, the system does not operate correctly.

	% Inhibited ethylene glycol	10%	20%	30%	40%
	Freezing temperature (°C)	-4°C	-9°C	-15°C	-23°C
Correction factor	Capacity	0,996	0,991	0,983	0,974
	Input power	0,990	0,978	0,964	1,008
	Pressure drop	1,003	1,010	1,020	1,033
(*) Note : the temperature values are approximate					
Always refer to the temperature values indicated for the specific model					

System's drainage

- Position the system's main switch in the "off" position.
- Check that the system's charging tap is closed.
- Open the water discharge tap outside the machine.
- ⚠ Any antifreeze liquid contained in the system should not be discharged freely as it is a pollutant.

Ordinary maintenance

Preliminary instructions

- ⚠ Regular maintenance is essential in order to keep the unit in top condition, and must be carried out at least once a year by the Technical Service or by skilled technicians.
- ⚠ Plan the maintenance schedule according to the characteristics of installation and the use of the unit.
- ⚠ For units installed in a seaside environment, the maintenance intervals shall be halved.
- ⚠ After carrying out the necessary maintenance actions, the original conditions must be restored.
- ⚠ Do not open the access covers and carry out technical or cleaning activities before disconnecting the unit from the power grid by positioning the system's main switch in the "off" position.

Once the appliance has been serviced, the benchmark Service Record must be completed.

For UK only: It is important that the Benchmark Service Record is correctly completed and handed to the user. Failure to install and commission the appliance to the manufacturers instructions will invalidate the warranty.

Cleaning

- ⚠ Do not open the access covers and carry out technical or cleaning activities before disconnecting the unit from the power grid by positioning the system's main switch in the "off" position.
- The only necessary cleaning activity to be carried out by the system's user concerns the unit's external cabinet, which must be cleaned using exclusively a cloth wet with soapy water.
- In case of tough stains, wet the cloth with a mix of 50% water and denatured alcohol or with specific detergents.
- After washing, dry the surfaces carefully.
- ⚠ Do not use sponges with scouring products or powdered detergents.

Operations

The annual maintenance plan includes the following checks:

- Mesh filter cleaning
- Supply voltage
- Fastening of electric connections
- Status of the hydraulic joints
- Water circuit charging
- Pump operation check
- Presence of air in the hydraulic circuit
- Safeties efficiency
- Compressor's remote control switch status
- Plate heat exchanger's resistor efficiency
- Compressor's resistor efficiency
- Cleaning of fan grids

Extraordinary maintenance

Preliminary instructions

- ⚠ Check that the main power supply line is disconnected.
- ⚠ Use tools appropriate for the refrigerant used.
- ⚠ It is strongly suggested to use safety goggles and gloves.
- ⚠ In case of partial leak of refrigerant gas, the circuit must be completely emptied before being recharged, and the refrigerant must be recovered.
- ⚠ Any gas leaks indoors can generate toxic gases if they come into contact with naked flames or high temperature bodies, in case of leaks, please air the rooms thoroughly.
- ⊖ Do not charge the refrigerating circuits with a different refrigerant from the prescribed one.
- ⊖ Do not use oils that are different from the prescribed one. The use of different oils may seriously damage the compressor.
- ⊖ Do not use oxygen or acetylene or other flammable or poisonous gases in the refrigerating circuit, as they can cause explosions.
- ⚠ Operating conditions different from the nominal ones may yield values that differ considerably.

Compressor

The compressor is installed on the unit already charged with oil and sealed.

In case of breakages, if the compressor can be repaired, use only original ester oil. The oil used in the compressor is ESTER OIL VG74 (VG68 for the 12kW).

- ⚠ Do not use oils that are different from the prescribed one. The use of different oils may seriously damage the compressor.

Refrigerant charge

Proceed as follows:

- Empty and dry the whole refrigerating circuit using a vacuum pump connected to the low pressure port, until the value displayed on the vacuum gauge is about 10 Pa.
- Wait for a few minutes and check that said value does not go up again.
- Connect the refrigerant gas cylinder or a charging cylinder to the low pressure line port (the charge connection position can be seen on the refrigerant circuit diagram).
- Charge the required quantity of refrigerant gas, as shown in the unit's technical tag

In case of a partial leak, the circuit must be completely emptied before being recharged.

- ⚠ The refrigerant must be charged into the unit only in its liquid state.
- ⚠ Do not use refrigerants and lubricants different from those specified.
- ⚠ Do not compress the air (Avoid the presence of air, caused by leaks, in the refrigerant circuit).

Always check the overheating and undercooling values which, in the unit's nominal operating conditions, must fall between 5 and 10° C in the refrigerators and 4 and 8°C in the heat pumps, respectively.

Functions

Setting the current date and time.

Upon first use of the machine, it is necessary to set the current date and time.

Push the D/H/M SET TIME key.

The selected parameter starts blinking.

Push the D/H/M SET TIME key to change parameter.

Activate the arrow keys.

Set the current value.

Push the OK key to confirm.

Setting of room temperature

- Push the mode key.
- Select the desired operation mode.
- Activate the arrow keys.
- Set the desired temperature.
- The temperature value is stored until the next programmed period.
- The icon for the timer programme blinks.
- Push the lock key.
- The set temperature shall be maintained until the user presses the lock key again.

Keyboard lock

To lock:

- Push the Days, Period and Period Start keys concurrently for 3 seconds.
- All keys shall be disabled.
- The keyboard locked icon is displayed.

To unblock:

- Push the Days, Period and Period Start keys concurrently for 3 seconds.

Touch'n'Go functions

The Touch'n'Go functions make it possible to access simplified programming options.

The functions values are pre-set by default on typical temperatures and periods, different for heating and cooling.

Available functions and pre-set values:

Function	Heating	Cooling
Indoor	20° C	24° C
Outdoor	15° C	28° C
Night	18° C	26° C

To select:

- Push the key for the desired function.
- Push the Lock key to keep the home at one of three comfort levels indefinitely.

To change:

- Push the key for the desired function for 3 seconds.
- The set temperature starts blinking.
- The heat or cool symbol starts blinking
- Activate the arrow keys.
- Set the desired temperature.
- The triangular icon above the key starts blinking.

To change mode:

- Push the mode key.
- Select the desired operation mode.
- Repeat the change operations.
- Push the OK key to confirm.

Reset user parameters

- Press the At home and Away keys concurrently for 10 seconds to enter the user configuration mode.
- The number 999 is displayed in the Temperature area of the screen.
- The number 10 is displayed in the Time area of the screen.
- Activate the arrow keys.
- Set the value "0".
- The temperature "Fd" abbreviation is displayed in the Temperature area of the screen.
- Reset is activated.
- The Control panel is reset to the default values.

Time slots.

The Control panel can hold up to six time slots, called periods, identified on the display as P1, P2, P3, P4, P5 and P6.

Period	Start time
P1	6:00 AM
P2	8:00 AM
P3	17:00 PM
P4	22:00 PM
P5	22:00 PM
P6	00:00 AM

The period values are pre-set by default:

To select:

- Push the Days key repeatedly.
- Select the desired time option.
- Push the period key.
- The "P" and "1" values start blinking.
- The P1 period is activated.

To change:

- Push the Start period key.
- 6:00 AM starts blinking.
- Activate the arrow keys.
- Select the desired value.
- Push the Start period key to change parameter.
- Repeat the change operations.
- Push the OK key to confirm.

⚠ The end of period value corresponds to the start or period one for the next period.

To check:

- Push the Days key.
- Select the time option.
- Push the period key.
- Check the set times.
- Push the period key to proceed.

If the settings are incorrect:

- "--" is displayed on screen.
- The triangular icons are turned on.

If the settings are correct:

- Push the OK key to confirm.

Programming

The time slots can be associated with:

The functions:

- indoor
- outdoor
- night

The unit's setting modes:

- ON/OFF
- Frequency reduction ON/OFF.

To match:

- Set the time slot as shown in the relevant chapter
- Push the desired Touch'n'Go key.
- The triangular icon above the key starts blinking.
- Push the Zone key.
- If the unit's status is ON, you are choosing to turn the heat pump OFF during the P1 period
- If the unit's status is OFF, you are choosing to turn the heat pump ON during the P1 period
- Push the Maintain key.
- If the unit's status is ON, you are choosing to turn the frequency reduction mode "OFF"
- If the unit's status is OFF, you are choosing to turn the frequency reduction mode "ON"

To go to the second period:

- Press the Period key twice
- P2 starts blinking
- Repeat the settings

To check:

- Push the Days key.
- Select the time option.
- Push the Period key.
- Check the set times.
- Push the Period key to proceed.

If the settings are incorrect:

- "--" is displayed on screen.

- The triangular icons are turned on.
- If the settings are correct:
- Push the OK key to confirm.

Temporary change of the programming

While the unit is in use, it might be necessary to change its programming temporarily.

To change:

- Push the desired Touch'n'Go key.
- The function's symbol starts blinking

The system shall start in the selected function until the following programming or until further choice.

To go back to the original programmed period:

- Push the Touch'n'Go key that had been previously activated.
- The function's symbol stops blinking

Settings lock

While the unit is in use, it is possible to lock the temperature values associated with a Touch'N'Go function also for a time slot for which they had not been meant.

To lock:

- Push the desired Touch'n'Go key.
- Push the Block key.
- The icon for the timer programme blinks off.

To go back to the original programming:

- Push the Maintain key.
- The icon for the timer programme starts blinking and then remains turned on.

Change of parameters

It is possible to change the settings of different functions on the Control Panel.

- Push the 3 Touch'N'Go keys concurrently for 3 seconds.
- "1" starts blinking in the Time area of the screen.
- Push the mode key.
- The value of the parameter starts blinking in the Temperature area of the screen.
- Activate the arrow keys.
- Select the desired value.
- Push the Mode key to lock the settings.
- If you press the OK key the settings shall be saved and the value of the parameter shall start blinking, with the possibility of changing it later on.
- If you press the Mode key the settings shall be saved and the change of the next parameter shall be enabled.

To move:

- Activate the arrow keys.

To confirm:

Push the OK key to confirm.

⚠ Refer to the functions table for further details on the various parameters.

Quick keys to activate the frequency reduction mode.

To activate:

- Push the Lock key for 10 seconds.
- The Heat pump active with frequency reduction icon lights up.

To deactivate:

- Push the Lock key for 10 seconds.
- The Heat pump active with frequency reduction icon turns off.

⚠ The frequency reduction mode has priority over other time programmes.

Installer configuration mode:

To enter:

- Push the Zone key and the Lock key concurrently for 3 seconds.
- The number of the parameter starts blinking in the Time area of the screen.
- The value of the parameter is shown in the Temperature area of the screen.

To change:

- Push the mode key.
- The value of the parameter starts blinking in the Temperature area of the screen.
- Activate the arrow keys.

Select the desired value.

Push the Mode key to lock the settings.

- If you press the OK key the settings shall be saved and the value of the parameter shall start blinking, with the possibility of changing it later on.

- If you press the Mode key the settings shall be saved and the change of the next parameter shall be enabled.

To move:

- Activate the arrow keys.

To exit without saving:

- Push the Zone key.

To confirm:

- Push the OK key to confirm.

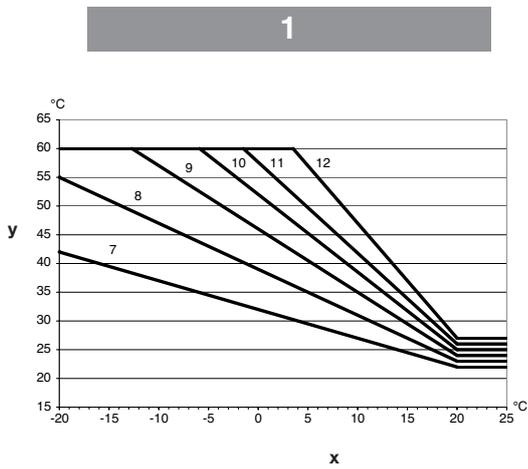
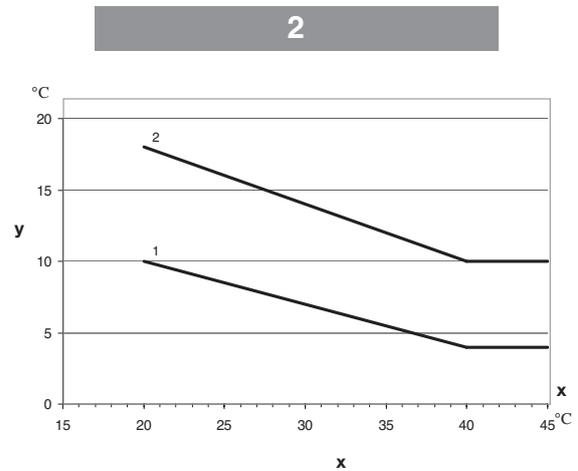
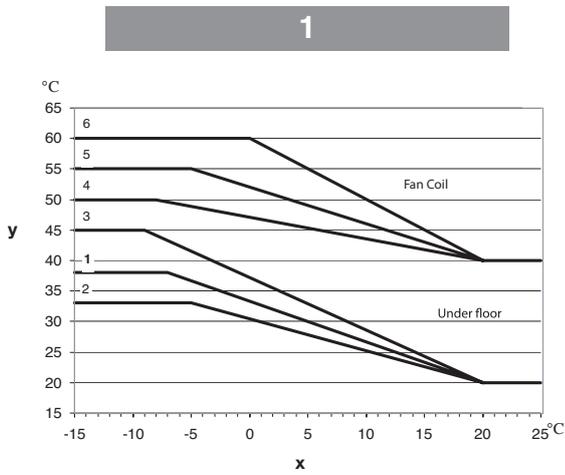
Climate curves

⚠ When the control panel is installed (par 100 =3 or par 100=4) or else par 100 =2, the control waits to receive an instruction regarding the climate curves to use: pre-set or customised. At the time of installation, therefore, using the parameters 112 and 117 you need to select one of the pre-set curves or design your own climate curve using parameters 118 to 121, for heating and from 122 to 125, for cooling.

Pre-set curves

There are six available curves for heating and two for cooling, accessible through parameters 112 and 117 in the installer's configuration table. The curves are set so as to maintain an indoor temperature of 20°C.

1	Heating
2	Cooling
x	Outdoor temperature
y	Water temperature



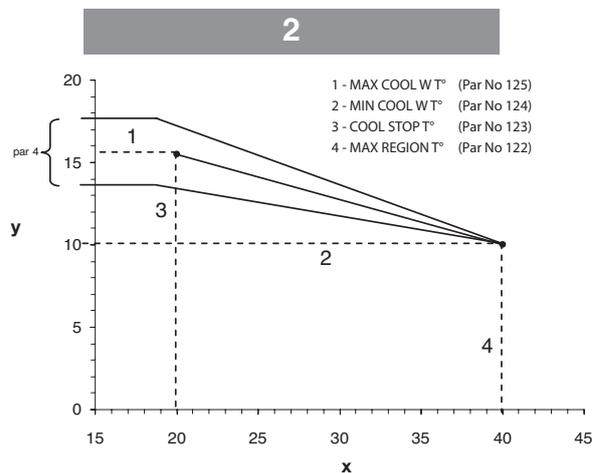
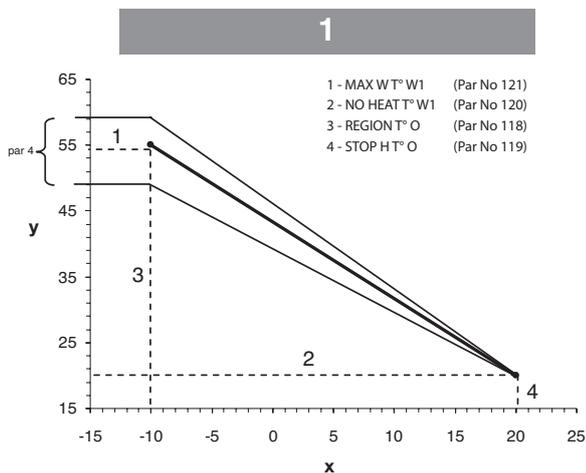
Customised climate curves

Parameters 112 and 117 set to zero allow to include a customised curve in the control.

The pictures show which parameters in the installer configuration table must be set to create the customised climate curves for heating and cooling.

In the event that the application requests to work at a fixed water set point it is necessary to set a horizontal climate curve. This is possible by fixing the parameter 120 = 121 in heating mode and 124 = 125 in cooling mode.

1	Heating
2	Cooling
x	Outdoor temperature
y	Water temperature



Adapting the heating curve.

The Control Panel adapts the water's set-point to the actual temperature in the room, as measured by the Control Panel's user interface, so as to maintain a constant temperature in the room, for comfort and energy saving.

For this reason the actual water temperature may vary as against the calculated set point one, by +/- 5°C.

The user can interact with this function increasing or decreasing the set-point, regulating the water temperature through parameter 4, as shown in the picture.

Correction of room temperature

The user can correct the temperature measured by the Control Panel in case of mistakes due to placement.

Through parameter 13 (see parameter's functions table) it is possible to correct the temperature by +/-5°C.

Reset of installer parameters

To enter:

- Push the Zone key and the Lock key concurrently for 10 seconds.
- The number 899 is displayed in the Temperature area of the screen.
- The number 10 is displayed in the Time area of the screen.
- Activate the arrow keys.
- Set the value "0".
- The temperature "Fd" abbreviation is displayed in the Temperature area of the screen.
- Reset is activated.
- The Control panel is reset to the default values.

Fault signal

Preliminary instructions

- ⚠ In the presence of operating faults, the unit is put into a safety condition and its use is blocked.
- ⚠ The safety shutdown can be due to a random situation.
- ⚠ Wait for at least 10 minutes before restarting the unit.
- ⚠ Any repetition of the abnormal operation requires an accurate check of the unit's components.
- ⚠ Before resetting, it is necessary to remove the cause of the anomaly.
- ⚠ Abnormal operations are notified by the Control Panel with numeric codes.
- ⚠ Part of the alarms resets automatically, while others require a manual reset by the Technical Service.
- ⚠ Frozen plates exchanger. If this fault code is displayed, it means that the plates exchanger froze during cooling operation. The only way to restart the unit is to power OFF -->ON the unit. Before doing this operation, contact the Technical Service.

Faults are also indicated by a LED on the circuit board.

- Example: error 23.
- Off for 4 seconds.
- 2 flashes: first number.
- Off for 2 seconds.
- 3 flashes: second number.
- Off for 6 seconds.
- The cycle repeats until the problem is solved.

See the diagrams of page 22 of this booklet for the positions of the LED

Code	Description
2	Outside safety alarm
3	Frozen plates exchanger
4	Heat exchanger refrigerant temperature sensor BPHE
5	Air temperature sensor GMC
6	Loss of communication with the Control Panel
7	Control Panel control room temperature sensor
9	Water sensor / water pump error
10	EEPROM Corrupt
11	Wrong capacity setting
12	4-way valve faulty
13	Loss of communication to RS485 (system configuration 6)
14	Loss of inverter board signal
15	Water outlet temperature sensor (LWT)
17	Inverter air temperature sensor (TO)
18	G-Tr short circuit protection
20	Compressor rotor position control error
21	Inverter current sensor error
22	Heat exchanger refrigerant or compressor suction line sensors (TE)/ (TS)
23	Compressor outlet temperature sensor (TD)
24	Fan motor error
26	Other inverter board errors
27	Compressor locked
28	Outlet temperature error
29	Compressor breakdown
30	Low pressure system error
31	High pressure system error

Only for AriaPro 12 models

In these models, the faults are signalled through the indicators on the inverter board and on the control panel.

Before any check, make sure that the DIP micro-switches are set to off.

LED indication	Cycle control P.C. board				Cause
	LED indication				
	D800	D801	D802	D803	
D800 O: Red	○	●	●	●	Heat exchanger sensor (TE) error
	●	●	○	●	Suction sensor (TS) error
D801 O: Yellow	○	○	●	●	Hot gas discharge sensor (TD) error
	●	○	●	○	High-pressure protection error
D802 O: Yellow	●	○	●	●	Outdoor air temperature sensor error (TO)
	○	○	○	●	Outdoor motorised fan error DC
D803 O: Yellow	○	●	●	○	Communication error between IPDU (Abnormal stop)
	●	○	●	○	High-pressure release operation
◆: Flashing	●	○	○	●	Discharge temp. error: hot gas is too high
	○	○	●	○	EEPROM error
●: Off	●	●	○	○	Communication error between IPDU (No abnormal stop)
	◆	●	●	●	G-Tr short-circuit protection
○: On	●	◆	●	●	Detect circuit error
	◆	◆	●	●	Current sensor error
	●	●	◆	●	Comp. lock error
	◆	●	◆	●	Comp. break down

Only for AriaPro 15 models

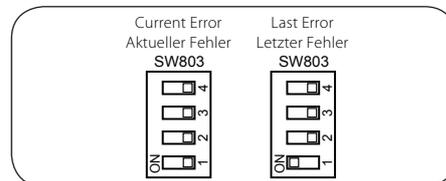
In these models, the faults are signalled through the indicators on the inverter board and on the control panel.

The active alarm and the previous one are signalled through the lighting up of the LED from D800 to D804 on the inverter board.

- When all the SW803 switches are OFF, the current error is displayed
- If only switch 1 of the SW803 is on, the last error is displayed (the last error including the current error)
- If there is an error, LED D800, D801, D802, D803, D804 come on (Display 1)
- If the SW800 button is pressed for about 1 second, the display changes (Display 2)
- When the SW800 button is pressed again or after 2 minutes, the display returns to display 1.

Legend		
●	D800	Yellow
●	D801	Yellow
■	D802	Yellow
●	D803	Yellow
●	D804	Yellow
○	D805	Green

Legend	
●	Off
■	Flashing
○	On



Display 1 (Initial display)	Display 2 (SW800 operation)	Error contents
●●●●○	●●●●○	Normal
○●●●○	●●■●○	Discharge temp. sensor (TD) error
	●●■●○	Heat exchanger temp. sensor (TE) error
	■●●●○	Heat exchanger temp. sensor (TL) error
	●●■●○	Outside temp. sensor (TO) error
	●●■●○	Suction temp. sensor (TS) error
	■●■●○	Heat sink temp. sensor (TH) error
	■●■●○	Heat exchanger sensor (TE, TS) miswiring
	■●■●○	EEPROM error
●●●●○	■●●●○	Compressor break down
	●●●●○	Compressor lock
	■●●●○	Current detection circuit error
●●●●○	●●●●○	Case thermostat operation
	●●■●○	Model unset
	■●■●○	Communication error between MCU
○●●●○	○●●●○	Other error (Compressor disorder, etc.)
	■●●●○	Discharge temp. error
	■●●●○	Power supply error
	■●●●○	Heat sink overheat error
	■●●●○	Gas leak detection
	■●●●○	4-way valve reverse error
	●●■●○	High pressure protective operation
	●●■●○	Fan system error
	●●■●○	Driving element short-circuit
■●■●○	Position detection circuit error	

User feature and parameters sheet

Function	Parameter	Description	Icon	Value range		Set value
				Min	Max	
Mode	1	This parameter allows you to select the mode 0. Off 2. Cooling 3. Heating	Current mode	-	-	0
Homeantifreeze	2	This parameter enables the ambient antifreeze option when the system is off: 1. NO. Disabled 2. YES. Enabled	antifreeze:	1	2	1
Ambient antifreeze temperature	3	This code allows you to select the temperature threshold below which the ambient (0/+ 2 °C hysteresis) antifreeze starts	°C	6°C	12°C	6°C
Set point adjustment	4	Changing the water set point on the basis of the temperature taken by the thermostat	°C	-5°C	+5°C	0°C
frequency reduction mode	5	This code provides the information whether the mode is activated: Night/Reduction of the frequency 1. Not active 2. Active		1	2	1
Frequency reduction	6	Value of the compressor's frequency reduction in %		50%	100%	100%
Room mode	7 Lock	The control panel displays these parameters 1. At home 2. Night 3. Away from home	Arrow depending on the Touch 'N Go selected	1	3	1
Room control set point	8 Lock	This code is the control room set point determined by pressing the home, night, away buttons	°C	12°C	38°C	20°C
Room set point	9 Lock	This is the room air temperature read by the thermostat sensor	°C	-20°C	50°C	
Relative humidity value from the sensor	10 Lock	This is the relative humidity value from the thermostat sensor	%	0	100	
Outdoor temperature	11 Lock	Outdoor Temperature measured by the sensor	°C	-30°C	90°C	
Outdoor temperature - GMC	12 Lock	Outdoor temperature read by the GMC board	°C	-20°C	65°C	
Room sensor temperature adjustment	13	Correction of the temperature read to correct errors due to the position of the thermostat.	°C	-5°C	5°C	0°C
Day period	14	This parameter specifies the number of periods per day that should be activated for the timing programme: 2 4 6		2	6	4
"At home" temperature in heating mode	15	AT HOME set point temperature in heating mode	°C and the At Home arrow	12°C	38°C	20°C
"At home" temperature in cooling mode	16	AT HOME set point temperature in cooling mode	°C and the At Home arrow	12°C	38°C	24°C
"Night" temperature in heating mode	17	NIGHT set point temperature in heating mode	°C and the night arrow	12°C	38°C	18°C
"Night" temperature in cooling mode	18	NIGHT set point temperature in cooling mode	°C and the night arrow	12°C	38°C	26°C
"Away from Home" temperature in heating mode	19	AWAY FROM HOME set point temperature in heating mode	°C and the away from home arrow	12°C	38°C	15°C
"Away from Home" temperature in cooling mode	20	AWAY FROM HOME set point temperature in cooling mode	°C and the away from home arrow	12°C	38°C	28°C
Room set point	21 Lock	Room set point	°C	12°C	38°C	20°C
Last alarm code	22 Lock	Shows the last alarm code		-	-	
Alarms log	23 Lock	Shows the 4 most recent error codes		-	-	

In case of parameters which are read-only and cannot be edited by user, key pad lock (Lock) icon is displayed on the screen. The list of Read-only parameters is given below: 7, 8, 9, 10, 11, 12, 21, 22 and 23

Table of functions and installer parameters

Function	Parameter	Description	Value range		Default value	Set value
			Min	Max		
System configuration	100	Code used to set the type of system: 1. Heat pump with fixed water temperature (clean contacts) 2. Heat pump with set-up of the climate curve (clean contacts) 3. Heat pump with control panel control 4. Monoblock Comfort with Control Panel as Thermostat 5. N.A. 6. Monoblock RS485 7. N.A.	1	7	1. A2W	
Type of user interface	101	Code used to indicate if and how the User Panel control interface is used: 0. Control panel not used (Input Relay active) 1. Control panel installed 2. Control panel used as programmer	0	2	0. Not used	
Control panel software release	102	The code indicates the Control panel software release	-	-	-	Lock
Control panel software version	103	The code indicates the Control panel software version	-	-	-	Lock
Output test	104	Code used to force the Output ON to carry out the test (max 10 minutes) 0. No test 1. Water pump 2. Alarm/Ambient temperature reached 3. External heat source /Defrost 4. Auxiliary heat source required for ACS/Dehumidification 5. Electric trace heater / Additional water pump 6. 3-way valve 7. Not used 8. Not used	0	8	0. No test	
Reset pump run-time	105	This code is use to reset the water pump working hours to zero	no	yes	no	
External heat source/defrosting	106	Code is used to select the output connected to PIN 4 on the terminal board 1. Auxiliary heat source required 2. Defrost output signal	1	2	1	
Humidity limit	107	Code used to set the humidity threshold limit to enable the output for the external de-humidifier system	20	100	50%	
Auxiliary source required for ACS or humidity control	108	Code used to select the output connected to PIN 11 on the terminal board 1. Auxiliary source required for ACS when External Air Temperature < temperature set with code 148 2. Humidity control	1	2	2	
Frost Delta set point	109	Code used to set the frost set point delta used by the antifreeze system as per algorithm	0°C	6°C	1°C	
Compressor run-time reset	110	Code used to reset the compressor working hours to zero	No	yes	No	
Flow switch status	111	The code displays the status of the flow switch: 0. Water not flowing 1. Water flowing	-	-	-	Lock
Heating climate curve number	112	Code used to select the number of the heating climate curve. 0. No pre-set climate curve (the installer has to draw up the Climate Curve) 1-12. For more information on the curves, read the specific section	0	12	0	
Heating water set point	113	Code used to set the fixed set point of the heating water	20°C	60°C	45°C	
Heating temperature reduction in eco mode	114	Code used to set the temperature reduction value for the fixed set point of the heating water when the unit is in ECO mode.	1°C	20°C	5°C	
Cooling water set point	115	Code used to set the fixed set point of the cooling water.	4°C	25°C	7°C	
Cooling temperature reduction in eco mode	116	Code used to set the temperature reduction value for the fixed set point of the cooling water when the unit is in ECO mode.	1°C	10°C	5°C	
Cooling climate curve number	117	Code used to select the number of the cooling climate curve. 0. No pre-set climate curve (the installer has to draw up the Climate Curve) 1-2. For further information on the climate curves consult the control panel manuals.	0	2	0	
Min outdoor air temperature in heating mode	118	Code used to select the minimum outdoor temperature of the heating climate curve, which depends on the country where the system is installed.	-20°C	+10°C	-7°C	
Max outdoor air temperature in heating mode	119	Code used to select the maximum outdoor temperature of the heating climate curve.	10°C	30°C	30°C	

Function	Parameter	Description	Value range		Default value	Set value
			Min	Max		
Min heating water temperature	120	Code used to select the minimum outdoor temperature of the heating climate curve.	20°C	60°C	35°C	
Max heating water temperature	121	Code used to select the maximum outdoor temperature of the heating climate curve.	20°C	60°C	55°C	
Max outdoor air temperature in cooling mode	122	Code used to select the maximum outdoor temperature of the cooling climate curve, which depends on the country where the system is installed.	24°C	46°C	40°C	
Min outdoor air temperature in cooling mode	123	Code used to select the minimum outdoor temperature of the climate curve in cooling mode	0°C	30°C	20°C	
Min cooling water temperature	124	Code used to select the minimum water temperature of the climate curve in cooling mode.	4°C	20°C	4°C	
Max cooling water temperature	125	Code used to select the maximum water temperature of the climate curve in cooling mode.	4°C	20°C	15°C	
Outdoor air temp. sensor GMC	126	Code used to indicate whether the GMC outdoor air temperature sensor is installed or not 1. GMC external air temperature sensor installed 2. GMC external air temperature sensor not installed	1	2	2	
TO sensor value	127	The code indicates the outdoor air temperature value measured by the TO sensor	-	-	-	Lock
TE sensor value	128	The code indicates the refrigerant temperature value measured by the TE sensor	-	-	-	Lock
TS sensor value	129	The code indicates the refrigerant temperature value measured by the TS sensor	-	-	-	Lock
TD sensor value	130	The code indicates the refrigerant temperature value measured by the TD sensor	-	-	-	Lock
Operating mode	131	The code indicates the current operating mode of the Heat Pump 1. Off 2. Cooling 3. Heating 4. Faulty 5. Defrost	-	-	-	Lock
Compressor max frequency	132	The code indicates the maximum frequency of the compressor calculated by the GMC control board	-	-	-	Lock
Requested frequency	133	The code indicates the frequency requested by the system control	-	-	-	Lock
Actual frequency	134	The code indicates the actual compressor frequency	-	-	-	Lock
Compressor run time	135	The code indicates the compressor working hours	-	-	-	Lock
Capacity	136	The code indicates the nominal capacity of the heat pump (kW)	-	-	-	Lock
EWT sensor value	137	N.A.	-	-	-	Lock
LWT sensor value	138	The code indicates the temperature of the water leaving the heat pump read by the LWT sensor	-	-	-	Lock
TR sensor value	139	The code indicates the temperature of the refrigerant measured by the TR sensor	-	-	-	Lock
Operating mode	140	The code indicates the operating mode requested by the System Control 0. Off 1. Stand by 2. Cooling 3. Heating 4. N.A. 5. N.A. 6. Nominal Heating 7. Nominal cooling 8. Antifreeze protection 9. Defrost 10. High temperature protection 11. Compressor start waiting 12. System error 13. Advanced freeze protection	-	-	-	Lock
Errors	141	The code lists all the error codes detected by the outdoor unit. If there are no errors, no code is displayed.	-	-	-	Lock
Gmc software version	142	The code indicates the GMC software release	-	-	-	Lock
Gmc software version	143	The code indicates the GMC Software Version	-	-	-	Lock
Water pump run time	144	The code indicates how long the water pump has been operating.	-	-	-	Lock
Current water set point	145	The code indicates the current water set point set by the system control.	-	-	-	Lock
Clean contact off	146	Code used to set the various SWITCHING OFF logics 1. Standard OFF 2. Controlled OFF cycle (only if the Heat Pump is controlled by clean contact)	1	2	1	
Alarm/ ambient air temperature reached	147	Code used to select the output connected to PIN 5 of the terminal board 1. Alarm signal 2. Signal that the air temperature set point has been reached	1	2	1	

Function	Parameter	Description	Value range		Default value	Set value
			Min	Max		
External heat source air temperature limit	148	This code is used to set the outside air temperature threshold value below which only the external heat source will be operative as per algorithm. (Heat Pump Stop)	-20°C	65°C	-20°C	
Temperature list	149	Code used to set which temperature the control panel should display in the temperature zone. 1. Indoor air temperature 2. Outlet water temperature (from LWT sensor) 3. N.A. 4. Refrigerant temperature (from TR sensor) 5. Suction temperature (from TS sensor) 6. Discharge temperature (from TD sensor) 7. Refrigerant temperature (from TE sensor)	1	7	1	
Auxiliary outdoor air temperature limit	150	This code is used to set the outside air temperature threshold value below which both the heat pump and the external heat source will be operative as per algorithm.	-20°C	30°C	0°C	
Auxiliary delay	151	This code is used to set the delay time after which, when (temperature set in code 148) < Outside Air Temperature < (temperature set in code 150), the external heat source will switch on. The counting of the time starts when the activation of the external heat source is required as per algorithm.	1 Min	60 Min	10 Min	
Auxiliary hysteresis	152	This code is used to set the hysteresis temperature needed to activate the external heat source.	1°C	20°C	5°C	
Domestic hot water in off mode	153	Code to establish whether, when the system is in off mode, the domestic hot water production logic can be activated: 1. Yes, the domestic hot water logic is always active 2. No, the domestic hot water logic can be activated only in Heating or Cooling mode	1	2	1	
Status of external heat source	154	Code used to establish the status of the external heat source when this later is activated and the outside air temperature is below the temperature value set with parameter 148: 0. Always active 1. On/Off depending by actual room temperature vs room temperature set-point (same hysteresis of the thermostat function). If the command is not installed or the room sensor is unavailable, On/Off depends on the water set-point (+1/-4 °C of hysteresis) 2. On/Off depending on the water set-point (+1/-4 °C of hysteresis).	0	2	1	
Main water pump vs external heat source status	155	This code is used to define the water pump logic when the external heat source is activated and the outside air temperature < temperature value set in Code 148 0. Always off 1. On/Off depending on the On/Off status of the external heat source 2. Always on	0	2	1	
Electric trace heater/ additional water pump	156	Code used to select the output connected to PIN 12 on the terminal board. In case an additional water pump option is active, this code is used to select its operating system with respect to the domestic hot water request (ACS) (if outside air temperature > (temperature value set with Code 148). 0. Electric heat tracing installed for the antifreeze system 1. Additional water pump On/Off depending on the main water pump logic. This means that if the DHW is on, the additional water pump is ON. 2. Additional water pump On/Off depending on the main water pump logic, but always OFF when the DHW is on.	0	2	1	
Additional water pump	157	This code is used to establish the additional water pump, if it has been installed, when the outside air temperature < temperature value set with Code 148: 0. Always off 1. On/Off depending on the On/Off status of the external heat source 2. Always on	0	2	2	
Delta air set point	158	Code used to establish the hysteresis with respect to the ambient temperature set point to switch off the unit when control panel system is installed and used as a thermostat (100 control panel code = 4).	0.2°C	1°C	0.3 °C	

Table of factory parameters and functions

Function	Parameter	Description	Value range		Default value	Set value
			Min	Max		
Unit configuration	302	This code is used to configure the unit: 0. Cooling only 1. Heating and cooling 2. Heating only	0	2	1	

Service Record

It is recommended that your heating system is serviced regularly and that the appropriate Service Interval Record is completed.

Service Provider

Before completing the appropriate Service Interval Record below, please ensure you have carried out the service as described in the manufacturer's instructions.

Always use the manufacturer's specified spare part when replacing controls.

Service 1 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 2 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 3 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 4 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 5 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 6 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 7 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 8 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 9 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Service 10 Date: _____
Engineer Name: _____
Company Name: _____
Telephone No. _____
Operative ID No. _____
Comments: _____
Signature: _____

Registered address:

Vokèra Ltd
Borderlake House
Unit 7 Riverside Industrial Estate
London Colney
Herts AL2 1HG

enquiries@vokera.co.uk

www.vokera.co.uk
www.vokera.ie

Sales, General Enquires

T 0844 391 0999
F 0844 391 0998

Vokèra Ireland
West Court, Callan
Co Kilkenny
T 056 7755057
F 056 7755060

Vokèra Limited reserve the right to change
specification without prior notice
Consumers statutory rights are not affected.

A Riello Group Company.
Company Reg No: 1047779