

Installation and maintenance manual
Manuel d'installation et de maintenance
Installations- und Wartungshandbuch
Manuale di installazione e di manutenzione
Manual de instalación y de mantenimiento

Aqu@Scop Advance Split DCI

5 ÷ 14



English

Français

Deutsch

Italiano

Español



5.3
↓
14.5kW



4.4
↓
14.0kW



Air-water SPLIT Heat Pump
Pompe à Chaleur SPLIT air-eau
Splitwärmepumpe Luft-Wasser
Pompa di Calore SPLIT aria-acqua
Bomba de Calor SPLIT aire-agua

IOM AQHAS 01-N-6GB

Part number / Code / Teil Nummer / Codice / Código : **3990649GB**
Supersedes / Annule et remplace / Annulliert und ersetzt /
Annulla e sostituisce / Anula y sustituye : **IOM AQHAS 01-N-5GB**



INSTALLATION INSTRUCTION

NOTICE D'INSTALLATION

INSTALLATIONSHANDBUCH

ISTRUZIONI INSTALLAZIONE

INSTRUCCIONES DE INSTALACIÓN

English

Français

Deutsch

Italiano

Español

CONTENTS

1. GENERAL RECOMMENDATIONS	3
1.1. SAFETY DIRECTIONS	3
1.2. WARNING.....	3
1.3. EQUIPMENT SAFETY DATA	4
2. INSPECTION AND STORAGE	5
3. WARRANTY	5
4. CONTENTS OF PACKAGE	5
5. PRODUCT PRESENTATION	5
6. TECHNICAL SPECIFICATIONS	6
7. DIMENSIONS	6
8. HANDLING	6
8.1. NET WEIGHT	6
9. REFRIGERATION SPECIFICATIONS	7
9.1. INDOOR AND OUTDOOR UNIT LINKS	7
9.2. PHYSICAL CHARACTERISTICS	7
9.3. ELECTRIC SPECIFICATIONS.....	8
9.4. OPERATING LIMITS	9
10. REFRIGERATION AND HYDRAULIC DIAGRAM	9
11. INSTALLATION	10
11.1. OUTDOOR UNIT.....	10
11.2. INDOOR UNIT	12
12. HYDRAULIC LINKS	13
12.1. GENERAL RECOMMENDATIONS.....	13
12.2. STANDARD CIRCUITS	15
12.3. WATER TREATMENT WARNING.....	21
12.4. CONNECTION TO THE CENTRAL HEATING LOOP.....	21
12.5. HEAT INSULATION	21
12.6. FILLING THE SYSTEM WITH WATER.....	22
12.7. DETERMINING WATER FLOW	22
13. REFRIGERATION LINKS	24
13.1. PIPE LINKS TO BE CREATED ON SITE	24
13.2. LENGTH OF COOLING PIPE	24
13.3. ASSEMBLY	25
13.4. VACUUM OF COOLING PIPES AND INDOOR UNIT	26
13.5. PIPE INSULATION (NOT SUPPLIED)	26
14. WIRING DIAGRAM AND LEGEND	27
14.1. WIRING DIAGRAM.....	27
14.2. LEGEND	27
15. ELECTRICAL CONNECTIONS	28
15.1. OUTDOOR UNIT.....	29
15.2. INDOOR UNIT	29
15.3. CONNECTIONS BETWEEN OUTDOOR AND INDOOR UNITS.....	30
15.4. ELECTRIC HEATER CONNECTION	30
15.5. ELECTRICAL CONNECTIONS FOR A BOILER RELIEF INSTALLATION	31
15.6. DOMESTIC HOT WATER PROBE FITTING.....	32
16. COMMISSIONING	33
16.1. PRE-START CHECK LIST	33
17. REGULATION	34
17.1. USER INTERFACE	34
17.2. MENUS	35
17.3. MESSAGE SCREENS	48
18. STARTING THE APPLIANCE	49
18.1. SIMPLIFIED START-UP OR COMMISSIONING PROCEDURE	49
19. OPERATING CHECK LIST	53
19.1. GENERAL	53
19.2. OPERATING VOLTAGE:	53
19.3. CONTROL.....	53
19.4. FAN & DRIVE.....	53
19.5. COMPRESSOR AND REFRIGERATION SYSTEM	53
19.6. FINAL CHECK	53
20. FINAL TASKS	53
21. IN CASE OF WARRANTY - MATERIAL RETURN PROCEDURE	53
22. ORDERING SERVICE AND SPARE PARTS ORDER	53
23. MAINTENANCE	54
23.1. REGULAR MAINTENANCE	54
23.2. GENERAL INSPECTION	54
23.3. REFRIGERATION CIRCUIT.....	54
23.4. ELECTRICAL SECTION	54
23.5. SERVICING CHECKLIST	55
24. LIST OF SETTINGS	56
25. ALARM LIST AVAILABLE ON THE DISPLAY	58
26. FAULTY DIAGNOSIS GUIDE	59
26.1. STEPS IF THE ROOM TEMPERATURE IS TOO LOW.....	59
26.2. OVERVIEW OF INTERNAL COMPONENTS	59
26.3. DRAINING THE HEAT PUMP ON THE PRIMARY/SECONDARY SIDE	61
26.4. CHECKING SENSORS	62
26.5. CHECKING THE FUSES	62



POWER SUPPLY MUST BE SWITCHED OFF BEFORE STARTING WORK IN THE ELECTRIC CONTROL BOX

1. GENERAL RECOMMENDATIONS

The purpose of this Manual is to provide users with instructions for installing, commissioning, using and maintaining the units.

It does not contain the complete description of all the maintenance operations guaranteeing the unit's long life and reliability. Only the services of a qualified technician can guarantee the unit's safe operation over a long service life.

Please read the following safety precautions very carefully before installing the unit.

1.1. SAFETY DIRECTIONS

Follow the safety rules in forces when you are working on your appliance.

The installation, commissioning and maintenance of these units should be performed by qualified personnel having a good knowledge of standards and local regulations, as well as experience of this type of equipment.

This appliance has not been designed for use by persons (including children) with reduced physical, sensorial or mental faculties or by persons without any experience or knowledge of heating systems, unless they act under the safety and supervision of a responsible person or have received prior training concerning the use of the appliance.

Children should be supervised to ensure that they do not play with the appliance.

The unit should be handled using lifting and handling equipment appropriate to the unit's size and weight.

Any wiring produced on site must comply with the corresponding national electrical regulations.

Make sure that the power supply and its frequency are adapted to the required electric current of operation, taking into account specific conditions of the location and the current required for any other appliance connected to the same circuit.

The unit must be EARTHED to avoid any risks caused by insulation defects.

It is forbidden to start any work on the electrical components if water or high humidity is present on the installation site.

1.2. WARNING

Cutoff power supply before starting to work on the appliance.

When making the hydraulic connections, ensure that no impurities are introduced into the pipe work.

The manufacturer declines any responsibility and the warranty becomes void if these instructions are not respected.

If you meet a problem, please call the Technical Department of your area.

If possible, assemble the compulsory or optional accessories before placing the appliance on its final location. (see instructions provided with each accessory).

In order to become fully familiar with the appliance, we suggest to read also our Technical Instructions.

The information contained in these Instructions are subject to modification without advance notice.

1.3. EQUIPMENT SAFETY DATA

Safety Data	R410A
Toxicity	Low
In contact with skin	Skin contact with the rapidly evaporating liquid may cause tissue chilblains. In case of skin contact with the liquid, warm the frozen tissue with water and call a doctor. Remove contaminated clothing and footwear. Wash the clothing prior to re-use.
In contact with eyes	Vapours have no effect. Liquid splashes or sprays may cause freeze burns. In these cases rinse your eyes with running water or with a solution for eye lavages for at least 10 minutes. Immediately apply to a doctor.
Ingestion	In this case, burns may result. Do not attempt to make the patient vomit. If the patient is conscious, rinse the mouth with water. Call a doctor immediately.
Inhalation	In case of inhalation, move the patient to an area with fresh air and provide oxygen if necessary. Perform artificial respiration if the patient has stopped breathing or lacks air. In case of cardiac arrest, perform external cardiac massage. Call a doctor immediately.
Further Medical Advice	Exposure to high concentrations can be dangerous for individuals with cardiac problems, as the presence of catecholamines such as adrenalin in the bloodstream may lead to increased arrhythmia and possible cardiac arrest.
Occupational exposure limits	R410A: Recommended limits: 1,000 ppm v/v 8 hours TWA.
Stability	Stable product
Conditions to avoid	Increased pressure due to high temperatures may cause the container to explode. Keep out of the sun and do not expose to a temperature $>50^{\circ}\text{C}$.
Hazardous reactions	Possibility of dangerous reactions in case of fire due to the presence of F and/or Cl radicals
General precautions	Avoid the inhalation of high concentrations of vapours. The concentration in the atmosphere shall be kept at the minimum value and anyway below the occupational limits. Since vapours are heavier than air and they tend to stagnate and to build up in closed areas, any opening for ventilation shall be made at the lowest level.
Breathing protection	In case of doubt about the actual concentration, wear breathing apparatus. It should be self-contained and approved by the bodies for safety protection.
Storage Preservation	Refrigerant containers shall be stored in a cool place, away from fire risk, direct sunlight and all heat sources, such as radiators. The maximum temperature shall never exceed 50°C in the storage place.
Protection clothes	Wear boots, safety gloves and glasses or masks for facial protection.
Behaviour in case of leaks or escapes	Never forget to wear protection clothes and breathing apparatus. Isolate the source of the leakage, provided that this operation may be performed in safety conditions. Any small quantity of refrigerant which may have escaped in its liquid state may evaporate provided that the room is well ventilated. In case of a large leakage, ventilate the room immediately. Stop the leakage with sand, earth or any suitable absorbing material. Prevent the liquid refrigerant from flowing into drains, sewers, foundations or absorbing wells since its vapours may create an asphyxiating atmosphere.
Disposal	The best procedure involves recovery and recycle. If this is not possible, the refrigerant shall be given to a plant which is well equipped to destroy and neutralise any acid and toxic by-product which may derive from its disposal.
Combustibility features	R410A: Non-inflammable at ambient temperatures and atmospheric pressures.
Containers	If they are exposed to the fire, they shall be constantly cooled down by water sprays. Containers may explode if they are overheated.
Behaviour in case of fire	In case of fire wear protection clothes and self-contained breathing apparatus.

2. INSPECTION AND STORAGE

At the time of receiving the equipment carefully cross check all the elements against the shipping documents in order to ensure that all the crates and boxes have been received. Inspect all the units for any visible or hidden damage.

In the event of shipping damage, write precise details of the damage on the shipper's delivery note and send immediately a registered letter to the shipper within 48 hours, clearly stating the damage caused. Forward a copy of this letter to the manufacturer or his representative.

Never store or transport the unit upside down. It must be stored indoors, completely protected from rain, snow etc. The unit must not be damaged by changes in the weather (high and low temperatures). Excessively high temperatures (above 60 °C) can harm certain plastic materials and cause permanent damage. Moreover, the performance of certain electrical or electronic components can be impaired.

3. WARRANTY

The appliances are delivered fully assembled, factory tested and ready to operate.

Any modification to the units without the manufacturer's prior approval, shall automatically render the warranty null and void.

The following conditions must be respected in order to maintain the validity of the warranty:

- Commissioning shall be performed by specialised technicians from technical services approved by the manufacturer.
- Maintenance shall be performed by technicians trained for this purpose.
- Only Original Equipment spare parts shall be used.
- All the operations listed in the present manual shall be performed within the prescribed SCHEDULE.



THE WARRANTY SHALL BE NULL AND VOID IN THE EVENT OF NON-COMPLIANCE WITH ANY OF THE ABOVE CONDITIONS.

4. CONTENTS OF PACKAGE

1 Outdoor unit including:

- 4 rubber pads
- 1 Drain Pipe

1 Indoor Unit including:

- Documentation
- Outdoor temp sensor
- Refrigerant pipe connection adaptor (only for size 05)
- Electrical Plug in connectors kit
- Wall Hung kit with Fisher screw kit
- Water pipe gaskets

5. PRODUCT PRESENTATION

The new family **Aqu@Scop Advance Split DCI R410A** covers a capacity range from 5 to 14 kW, developed in 4 different sizes.

This system comprises an outdoor unit connected via refrigerating water pipes and electric cables to an indoor hydronic module that can be fitted to a water circuit to fulfil building room heating and domestic hot water needs.

To satisfy different application, hydronic module has been developed in 2 versions: first one is an heating/cooling version with auxiliary back-up electrical heater for "stand alone" application; second one is an heating only version (without electrical heater) that can be fitted in an existing heating system with a 2nd heat generator (for example a fossil fuel boiler)

The outdoor unit has been optimized for heating application, in order to reach high COP level for radiator, fan coil and floor heating applications. The feed water temperature of the heat pump to the system can be chosen between 35°C (LT), 45°C and 55°C (MT). Defrost algorithm optimization and blue fin coil on whole range are other 2 key factors that permits very high performances also at lower outdoor ambient temperature, down to -15°C. The system is optimized for average climate at +2°C ambient.

6. TECHNICAL SPECIFICATIONS

- Domestic Hot Water tank (temperature probe to be ordered separately)
- DHW temperature probe
- Ambience Terminal
- Mixing tank with temperature probe (temperature probe to be ordered separately) (obligatory for a boiler relief installation)
- Mixing tank temperature probe
- Sludge Pot
- Anti-vibration pads
- Zone valve (obligatory for a boiler relief installation)
- Heating outlet common probe (obligatory for a boiler relief installation)

7. DIMENSIONS

SEE APPENDIX

8. HANDLING

Take care to avoid a harsh handling or impacts when unloading or moving appliances. Push or pull them along only by their base.

Never put weight on top of the appliance.



If the compressor in the external unit is steeply angled, lubricant will enter the refrigerant circuit and damage the appliance.

Angle of tilt:







- Max. 45° for type **AWAU-YVD005-H11** and **AWAU-YVD008-H11**
- Max. 30° for type **AWAU-YVD012-H11** and **AWAU-YVD014-H11**

8.1. NET WEIGHT

8.1.1. OUTDOOR UNIT





AWAU-YVD005-H11	AWAU-YVD008-H11	AWAU-YVD012-H11	AWAU-YVD014-H11
60kg	70kg	110kg	

8.1.2. INDOOR UNIT

AWSI-HVD005_08-R11	AWSI-HVD012_14-R11	AWSI-HVD005_08-H11	AWSI-HVD012_14-H11
		 	 
30kg	35kg	35kg	40kg

9. REFRIGERATION SPECIFICATIONS

9.1. INDOOR AND OUTDOOR UNIT LINKS

	AWSI- HVD005 08-R11	AWSI- HVD012 14-R11	AWSI- HVD005 08-H11	AWSI- HVD012 14-H11
				
AWAU- YVD005-H11 (5 kW)	●		●	
AWAU- YVD008-H11 (8 kW)	●		●	
AWAU- YVD012-H11 (12 kW)		●		●
AWAU- YVD014-H11 (14 kW)		●		●

9.2. PHYSICAL CHARACTERISTICS

9.2.1. OUTDOOR UNIT

		AWAU YVD005-H11	AWAU YVD008-H11	AWAU YVD012-H11	AWAU YVD014-H11
REFRIGERANT					
Type		R410A			
Factory charge for links between 3 and 12.5 metres	g	1200	2150	2950	2950
Additional charge	g/m	20	60	60	60
Maximum link length	m	25	30	30	30
Maximum slope	m	10	15	15	15
LINKING PIPES					
Suction (gas) pipe	inches	1/2"	5/8	5/8	5/8
Liquid pipe	inches	1/4"	3/8	3/8	3/8
FANS					
Fans		1 (variable)		2 (variable)	
SOUND POWER					
Sound power	dB(A)	59	62	63	64

This equipment contains fluorinated gas with greenhouse gas effects covered by the Kyoto agreement.

For the 5 kW module use the adapters supplied with the indoor unit:

➤ 5/8 → 1/2

➤ 3/8 → 1/4

9.2.2. INDOOR UNIT

		AWSI HVD005-R11 AWSI HVD005-H11	AWSI HVD008-R11 AWSI HVD008-H11	AWSI- HVD012-R11 AWSI HVD012-H11	AWSI HVD014-R11 AWSI- HVD014-H11
HYDRAULIC LINKS					
Inlet water	gas	1" 1/4			
Outlet water	gas	1" 1/4			
Buffer tank - Volume	litres	10			
PERFORMANCES					
Nominal heating capacity	kW	5.3	8.1	12	14.5
Water flow	l/h	912	1393	2064	2494

9.3. ELECTRIC SPECIFICATIONS

9.3.1. OUTDOOR UNIT

		AWAU-YVD005-H11	AWAU-YVD008-H11	AWAU-YVD012-H11	AWAU-YVD014-H11
Rated voltage, compressor		1/N/PE 230 V/50 Hz			
Rated current, compressor (max.)	A	5	9	10	15
Starting current, compressor	A	10.5	15	10	10
Starting current, compressor with stalled armature	A	20	25	25	32
Fuse, internal	A	3.5	3.5	3.15	3.15
IP rating	IP	25	25	25	25
Recommended power cable		3 x 2.5 mm ²	3 x 2.5 mm ²	3 x 4.0 mm ²	3 x 6.0 mm ²
Max. fuse rating	A	16	16	16	16

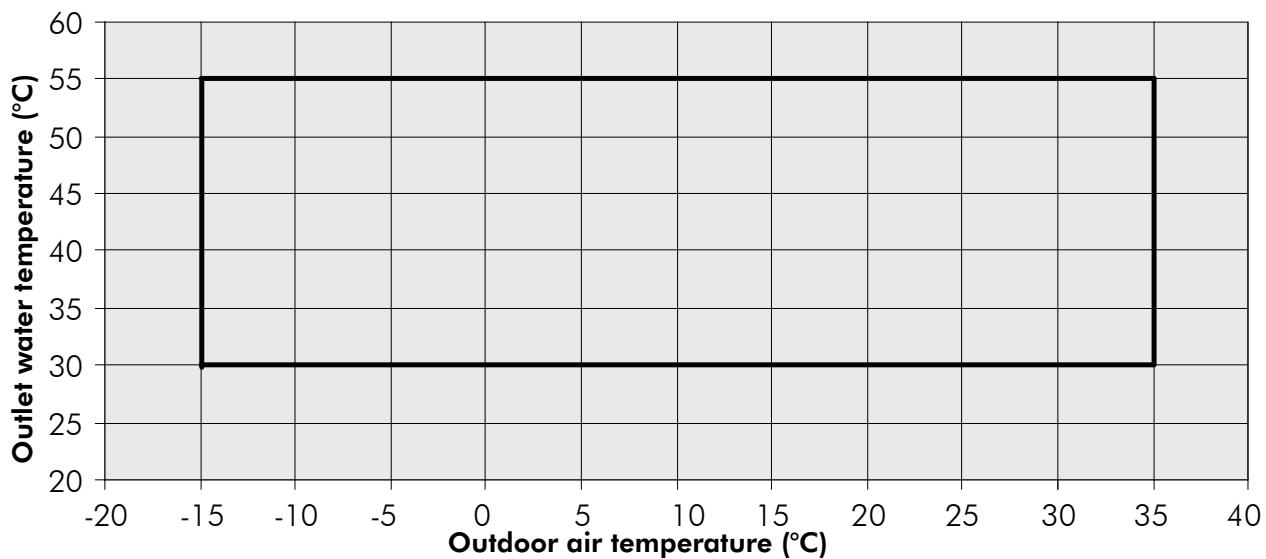
9.3.2. INDOOR UNIT

		AWSI-HVD005_08-R11	AWSI-HVD012_14-R11
Rated voltage control unit/PCB		1/N/PE 230 V/50 Hz	
Fuse protection, power supply		1xB16A	
Fuse, internal		6.3A (slow) / 250 V	
Max. fuse rating	A	16	16

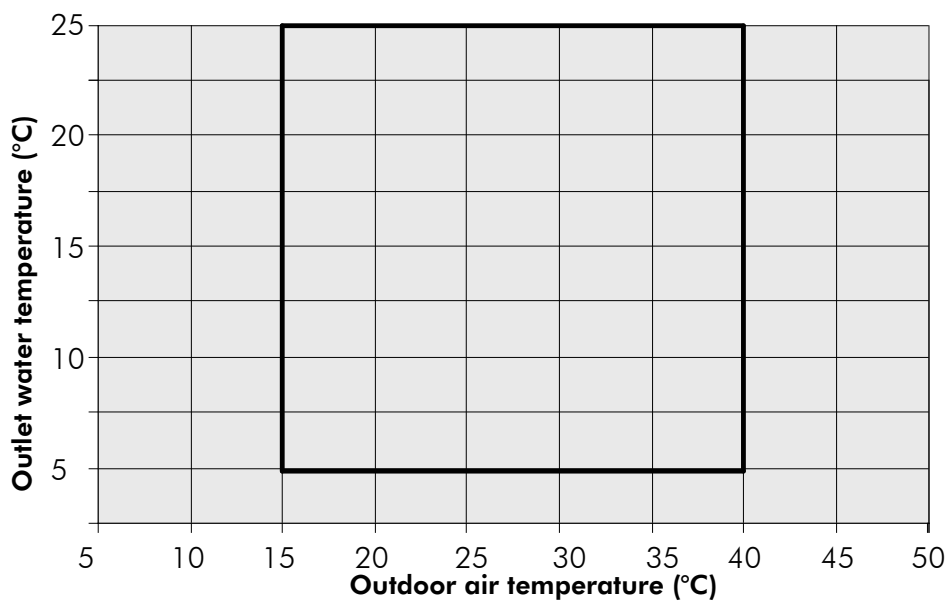
		AWSI-HVD005_08-H11	AWSI-HVD012_14-H11
Rated voltage control unit/PCB		1/N/PE 230 V/50 Hz	
Fuse protection, power supply		1xB16A	
Fuse, internal		6.3A (slow) / 250 V	
Instantaneous heating water heater			
Rated voltage		1/N/PE 230 V/50 Hz	
Recommended power cable		7 x 2.5 mm ²	
Rated voltage		3/N/PE 400 V/50 Hz	
Recommended power cable		5 x 2.5 mm ²	
Heating output	kW	9	9
Fuse protection, power supply	A	3xB16	3xB16
IP rating	IP	20	20
Max. fuse rating	A	16	16

9.4. OPERATING LIMITS

9.4.1. HEATING MODE



9.4.2. COOLING MODE



10. REFRIGERATION AND HYDRAULIC DIAGRAM

SEE APPENDIX

11. INSTALLATION



The unit is not designed to withstand weights or stresses from adjacent equipment, pipe work or constructions. Any foreign weight or stress on the unit structure could lead to a malfunction or a collapse with dangerous consequences for personnel and property. In such an event, the warranty shall be null and void.

11.1. OUTDOOR UNIT

11.1.1. SITING THE INSTALLATION

The outdoor unit must be installed outdoors with sufficient surrounding clearance to enable unobstructed air circulation through the appliance and access for maintenance work.

The unit can be installed in geographic regions where outdoor temperatures below -15°C are rare and of short duration throughout the year. We advise against installing the unit at heights above 1000m as a decline in performance is to be expected.

11.1.1.1. PREVAILING WIND

In the case of the unit being sited in areas exposed to high winds, you must avoid the wind hitting the fan blowing surface areas directly to avoid any risk of recycling cooled air. Strong wind can disrupt exchanger ventilation and create de-frosting problems.



Unit operation depends on air temperature. Any recycling of air extracted by the fan lowers the air intake temperature across the exchanger fins and alters the standard operating conditions.

The arrows show the direction of air circulation through the appliance. (Refer to Fig. § CLEARANCE).

11.1.1.2. CONDENSATE WATER MANAGEMENT

Depending on temperature and outdoor air humidity conditions, water vapour contained in the air can condense on the finned heat exchanger and even form ice under low outdoor temperature conditions (around $< 5^{\circ}\text{C}$). This condensate water and defrosted water runs off via outlets provided under the exchanger. To facilitate water evacuation and to avoid ice remaining in the unit in winter conditions, we recommend the use of the shock-absorbing pad kit to raise the unit to a height of around 10 cm above the ground. In this way, condensate and defrosted water can run off freely and be absorbed into the ground or channelled to a basin built under the appliance in order to protect the environment.

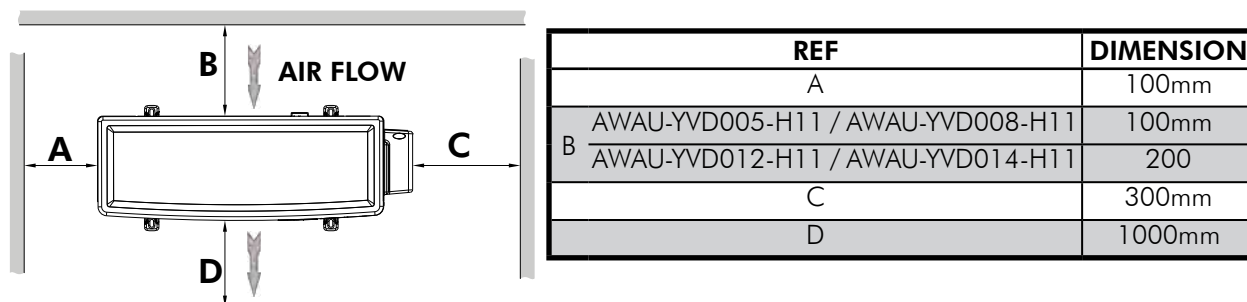
11.1.1.3. HOW TO REDUCE NOISE POLLUTION

In order to contain noise levels, we equip our appliances with quiet fans and encase the technical compartment in sound-proofed panels. However, noise levels can be reduced even further by following a few installation precautions:

- Do not install the appliance near a bedroom window. Avoid locating the appliance in a corner (increased reverberated noise).
- Install the rubber pads supplied or anti-vibration pads (available as an option) under the appliance.
- Do not join the concrete slab supporting the appliance to the structure of the dwelling (structure-borne noise transmission)

11.1.2. CLEARANCE

When choosing the location for the appliance, take care to leave sufficient free clearance on all sides to ensure easy access for maintenance work. The minimum free clearance dimensions indicated must be observed to ensure both proper system operation and allow access for maintenance and cleaning.

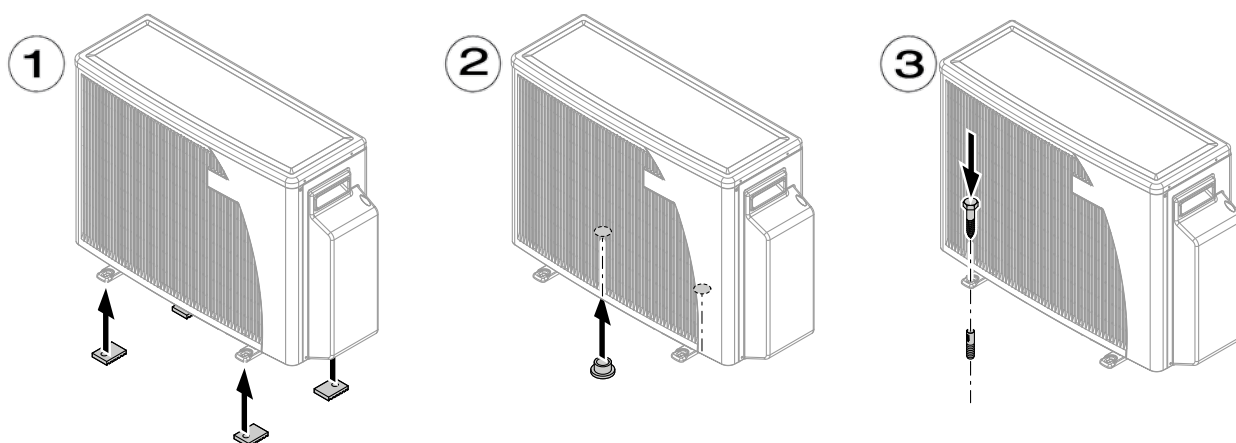
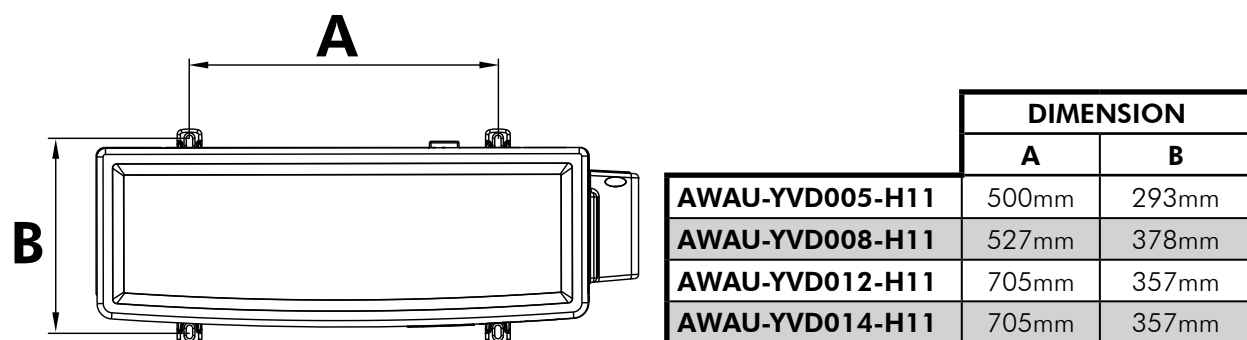


11.1.3. ATTACHMENT TO THE GROUND

The appliance should be mounted 10 cm above the ground on a level, rigid and preferably concrete surface.

The unit location dimensions are indicated on the figure below. A slope of 1 cm/m should be created to assist rainwater drainage.

Vibration dampers must be fitted during installation to overcome any risks of vibration being transmitted due to direct contact with a rigid support surface.



1. Install the 4 mounting pads under the feet of the outdoor unit.
2. Attach the outdoor unit to the ground or to its wall bracket.

11.1.4. CONDENSATE EVACUATION

Direct the condensation water towards the wastewater or storm water network.

To ensure effective condensate run-off when connecting to a drain, the pipe should be directed downward towards the drain at a slope of 2.5 cm/m.

When the installation is completed, test the run-off to ensure that the water runs freely to the drain.

11.2. INDOOR UNIT

11.2.1. SITING THE INSTALLATION

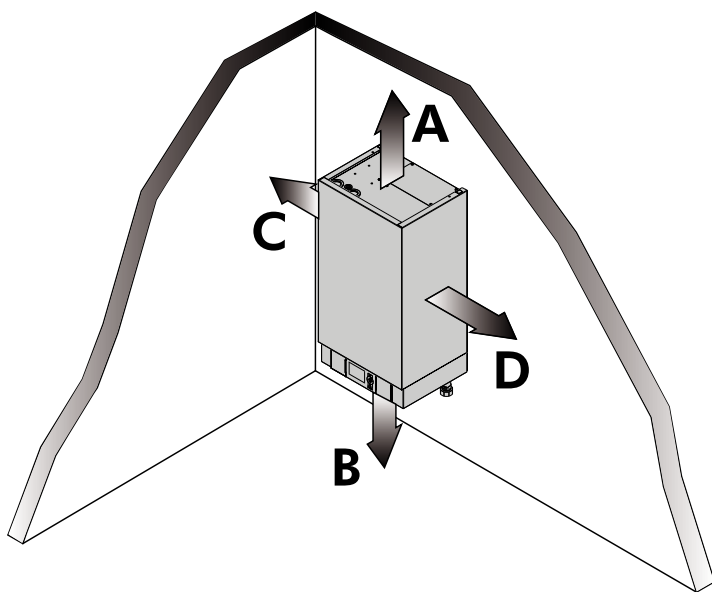
The unit has been designed for indoor applications and must be sited in a location protected from bad weather and without any risk of freezing during winter months. The premises must be clean, dry and properly ventilated.

The appliance must be sited with its anti-vibration pads on a level, solid and preferably masonry, floor.

If there is a possibility of the indoor temperature falling below 1°C, you must take every precaution to provide anti-freeze protection for the hydraulic circuit (addition of mono-propylene glycol)

When choosing the location for the appliance, take care to leave sufficient free clearance all around to ensure easy access for maintenance work. The minimum free clearance dimensions indicated must be observed to ensure both proper system operation and allow access for maintenance and cleaning.

11.2.2. CLEARANCE

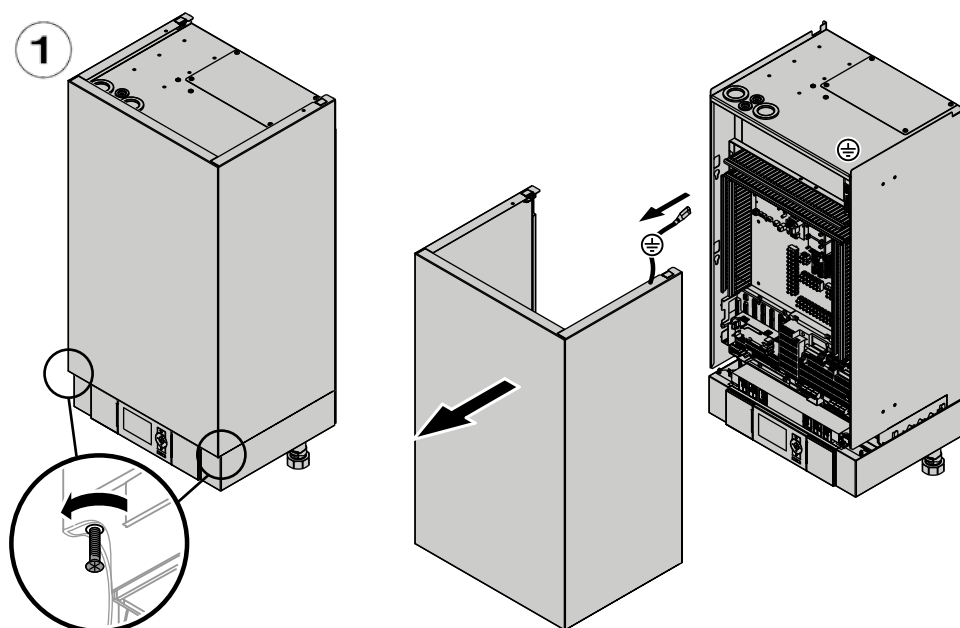


REF	DIMENSION
A	150
B	1160
C	100
D	100

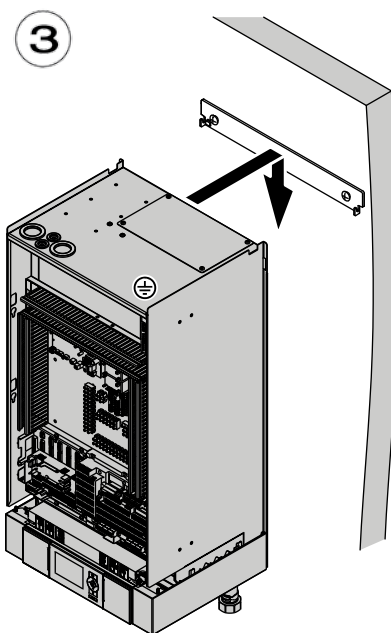
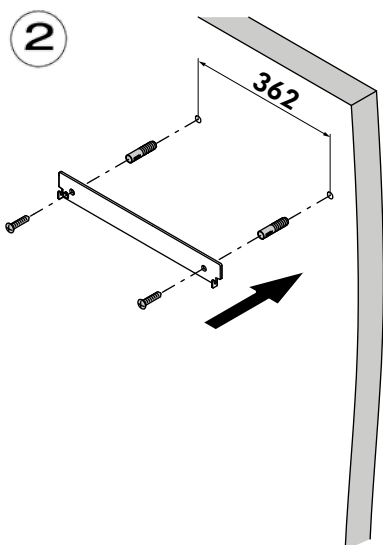
The free clearance zones **B**, **C** and **D** are not obligatory for correct Heat Pump operation, However, they are necessary for cleaning and maintenance operations.

11.2.3. ATTACHMENT

1. Remove the outdoor unit casing.



2. Attach the wall bracket (2 screws \varnothing 7).
3. Hang the indoor unit.



12. HYDRAULIC LINKS

When choosing and installing water pipes, you must consult and observe all current local standards, regulations and instructions.

12.1. GENERAL RECOMMENDATIONS

You must design the pipe network with the minimum number of bends and keep the number of changes in height to the strict minimum. This will reduce installation costs and ensure optimum system performance. The pipe network must include:

- Stop cocks to isolate the hydraulic circuit during maintenance.
- Manual or automatic bleed valves at the highest point on the water circuit.
- A suitable system for maintaining water pressure in the circuit (all **Aqu@Scop Advance Split DCI** models have an internal expansion tank).

12.1.1. EXPANSION TANK

Aqu@Scop Advance Split DCI units are equipped with an expansion tank with the following volumes and pre-pressurisation pressures:

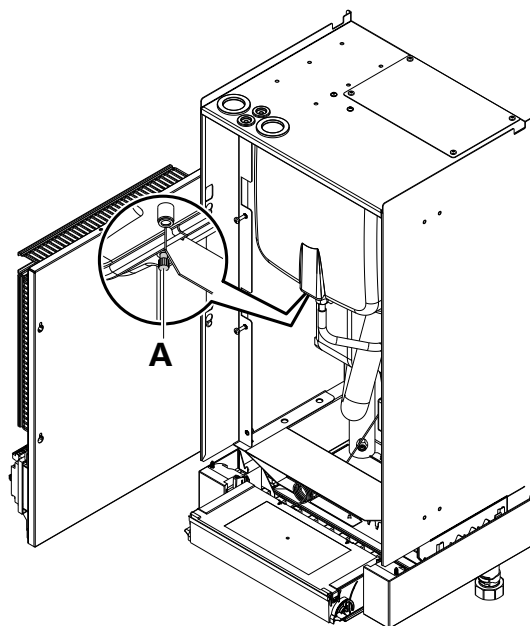
		AWSI-HVD005_08-R11 AWSI-HVD005_08-H11	AWSI-HVD012_14-R11 AWSI-HVD012_14-H11
Volume	l	10	10
Pre-pressurisation pressure	bar	0.95	0.95

1. Check of the required volume
2. Adjustment of the pressurisation pressure

It is important to make sure that the pressure in the water supply system is sufficient to enable the installation to be filled correctly. It is necessary to ensure that the expansion tank is sufficiently large for the installation.

Check the expansion tank pre-charge pressure at test nipple **A** and recharge, if required.

Check the pre-charge pressure also at the on-site expansion tank.



12.1.2. ANTI-CLOGGING PROTECTION

To avoid all risks of foreign object ingress and to preserve the performance of the machine, IT IS NECESSARY TO INSTALL THE WATER FILTER ACCESSORY at the inlet of the machine.

When installing **Aqu@Scop Advance Split DCI** appliances in existing water circuits, a sludge trap and a removable mesh filter should be installed upstream of the appliance.

12.1.3. MINIMUM HEATED WATER VOLUME REQUIREMENTS – BUFFER TANK.

To ensure that the system operates correctly you must use suitably sized and properly routed pipes for the hydraulic links between the Heat pump and the mains network.

The volume of water in the installation must be sufficient to avoid short defrosting cycles and to operate without any loss of comfort. To ensure the **Aqu@Scop Advance Split DCI** functions efficiently, available installation water volume must be:



		AWSI-HVD005-R11 AWSI-HVD005-H11	AWSI-HVD008-R11 AWSI-HVD008-H11	AWSI-HVD012-R11 AWSI-HVD012-H11	AWSI-HVD014-R11 AWSI-HVD014-H11
available water volume	l	120	160	200	250

When water circulation through heat emitters can be interrupted (thermostatic radiator valves closed) or the heating supply halted, you must ensure that:

- The heat pump maintains its nominal water flow.
- The heat pump works in a loop with a useful volume that complies with the required minima.

The use of a 3-speed circulation pump enables water flow through the appliance to be adapted to pressure losses in the system. Refer to water flow graph.

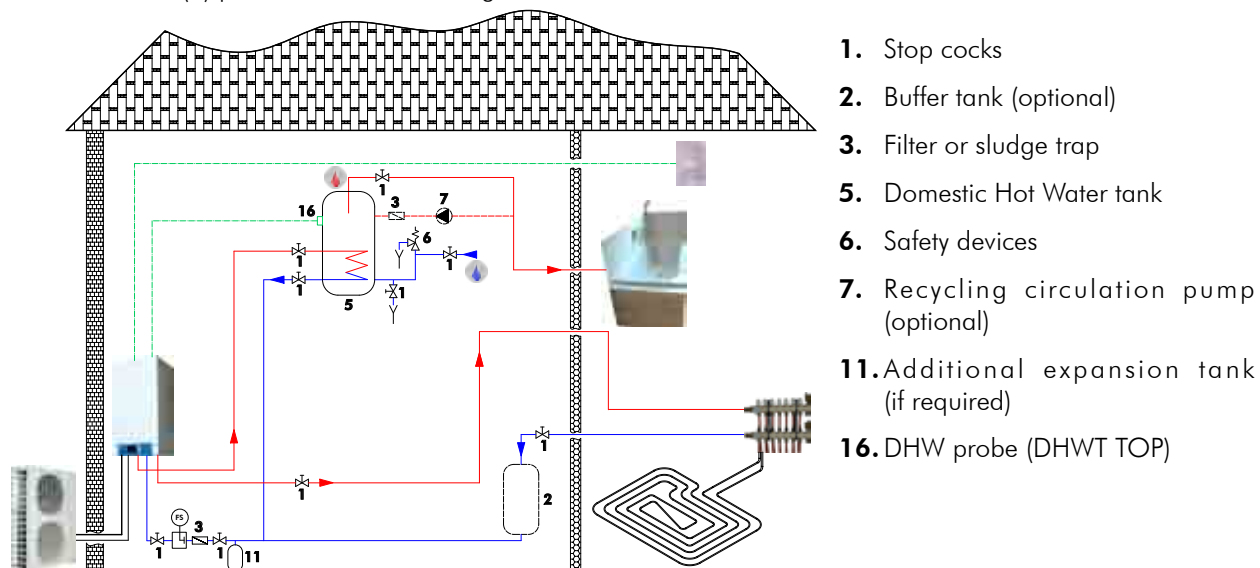
12.2. STANDARD CIRCUITS

12.2.1. AQU@SCOP ADVANCE SPLIT DCI ONLY

Layout 1: underfloor heating application without individual room regulation

This layout is recommended when the **Aqu@Scop Advance Split DCI** water flow is continuous and close to the nominal value (**no thermostatic valves**).

The buffer tank (2) provides extra circulating water volume to maintain the minimum volume.



1. Stop cocks
2. Buffer tank (optional)
3. Filter or sludge trap
5. Domestic Hot Water tank
6. Safety devices
7. Recycling circulation pump (optional)
11. Additional expansion tank (if required)
16. DHW probe (DHWT TOP)

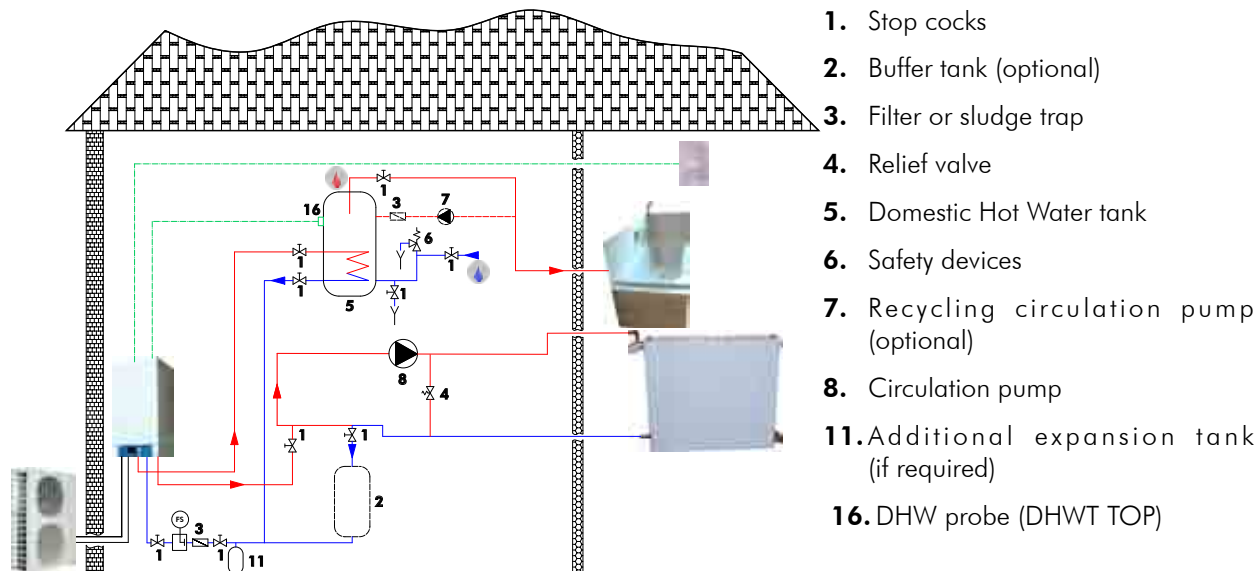
A water circuit protection aquastat must be installed on an under-floor heating application.

GLOBAL PARAMETER ACTION	PARAMETER N°	SETTINGS.
INSTALLATION DEFINITION	7000	1 (without DHW) 2 (with DHW)
INDOOR UNIT CAPACITY CODE	5030	4 (for 5 kW) 12 (12 kW) 8 (8 kW) 14 (14 kW)
GENERAL ACTIVATION OF THE PAC'S BACK-UP ELECTRIC HEATING FOR DHW AND/OR HEATING.	7900 (If installed)	0 (without back-up) * 1 (Back-up activated) for DHW and Heating
DOMESTIC HOT WATER		
General activation of back-up heating for DHW: electric or boiler.	6014	0 (without back-up) * 1 (Back-up activated)
Type of back-up heating for DHW: electric	6015	0 (without back-up) 1 (Back-up activated) *
Type of back-up heating for DHW: boiler	7B0D	0 (without back-up) * 1 (Back-up activated)
Set temperature	6000	From 10° C to 70° C; (50°)*
HEATING		
Activate the PAC's elec. back-up for heating	7902	0 (without back-up) 1 (Back-up activated) *
Set Temp.	2000	From 10° C to 30° C; (20°)*
Terminal presence (Thermostat)	2003	0 (without terminal) * 1 (with terminal)
Heating curve setting (Slope)	2006	From 0 to 3.5; (0.6)*
Heating curve setting (Parallel)	2007	From - 15 to + 40K; (0)*
PAC max. water outlet temp. (floor)	200E	From 10 to 70° C.; (40°)*
Probe (SFT) presence declaration on heating water outlet	701B	0 (probe absent) 1 (probe present) *
BLOCKED USER ACCESS TO MENUS	8800	0 (access all menus) * 1 (No access to STD and Extended Menus). 2 (Access STD menu only)

* : Factory setting

Layout 2: underfloor heating application without individual room regulation

This layout is recommended for heating installations with wide operating water flow variations (radiator thermostatic valves present in the system). We strongly recommend including the buffer tank (2) as it guarantees that the heating loop capacity is higher than the minimum volume when the maximum number of thermostatic valves are closed.



1. Stop cocks
2. Buffer tank (optional)
3. Filter or sludge trap
4. Relief valve
5. Domestic Hot Water tank
6. Safety devices
7. Recycling circulation pump (optional)
8. Circulation pump
11. Additional expansion tank (if required)
16. DHW probe (DHWT TOP)

GLOBAL PARAMETER ACTION	PARAMETER N°	SETTINGS.
INSTALLATION DEFINITION	7000	1 (without DHW) 2 (with DHW)
INDOOR UNIT CAPACITY CODE	5030	4 (for 5 kW) 12 (12 kW) 8 (8 kW) 14 (14 kW)
GENERAL ACTIVATION OF THE PAC'S BACK-UP ELECTRIC HEATING FOR DHW AND/OR HEATING.	7900 (If installed)	0 (without back-up) * 1 (Back-up activated) for DHW and Heating
DOMESTIC HOT WATER		
General activation of back-up heating for DHW: electric or boiler.	6014	0 (without back-up) * 1 (Back-up activated)
Type of back-up heating for DHW: electric	6015	0 (without back-up) 1 (Back-up activated) *
Type of back-up heating for DHW: boiler	7B0D	0 (without back-up) * 1 (Back-up activated)
Set temperature	6000	From 10° C to 70° C; (50°)*
HEATING		
Activate the PAC's elec. back-up for heating	7902	0 (without back-up) 1 (Back-up activated) *
Set Temp.	2000	From 10° C to 30° C; (20°)*
Terminal presence (Thermostat)	2003	0 (without terminal) * 1 (with terminal)
Heating curve setting (Slope)	2006	From 0 to 3.5; (0.6)*
Heating curve setting (Parallel)	2007	From - 15 to + 40K; (0)*
PAC max. water outlet temp. (radiator)	200E	From 10 to 70°C.; (40°)*
Probe (SFT) presence declaration on heating water outlet	701B	0 (probe absent) 1 (probe present) *
BLOCKED USER ACCESS TO MENUS	8800	0 (access all menus) * 1 (No access to STD and Extended Menus). 2 (Access STD menu only)

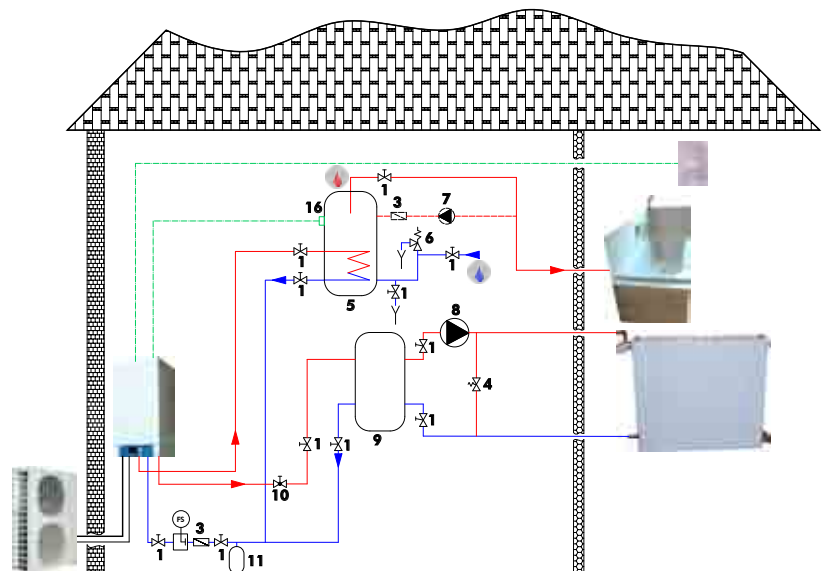
* : Factory setting

Layout 3: radiator application or underfloor heating application with individual room regulation

This layout is also recommended for heating installations with wide operating water flow variations (radiator thermostatic valves present in the system). Minimum system volume is guaranteed by a mixing tank (10). Take care when calculating the volume of water in the installation and only take account of 50% of the mixing tank's volume.

Example: For a useful volume of 100 litres the actual mixing tank volume will be 200 litres.

The flow regulating valve (10) is used to balance the flow in heating mode and domestic hot water production mode to always ensure optimum **Aqu@Scop Advance Split DCI** operation.



1. Stop cocks
2. Buffer tank (optional)
3. Filter or sludge trap
4. Relief valve
5. Domestic Hot Water tank
6. Safety devices
7. Recycling circulation pump (optional)
8. Circulation pump
9. Mixing tank
10. Flow regulating valve
11. Additional expansion tank (if required)
16. DHW probe (DHW TOP)

GLOBAL PARAMETER ACTION	PARAMETER N°	SETTINGS.
INSTALLATION DEFINITION	7000	1 (without DHW) 2 (with DHW)
INDOOR UNIT CAPACITY CODE	5030	4 (for 5 kW) 12 (12 kW) 8 (8 kW) 14 (14 kW)
GENERAL ACTIVATION OF THE PAC'S BACK-UP ELECTRIC HEATING FOR DHW AND/OR HEATING.	7900 (If installed)	0 (without back-up) * 1 (Back-up activated) for DHW and Heating
DOMESTIC HOT WATER		
General activation of back-up heating for DHW: electric or boiler.	6014	0 (without back-up) * 1 (Back-up activated)
Type of back-up heating for DHW: electric	6015	0 (without back-up) 1 (Back-up activated) *
Type of back-up heating for DHW: boiler	7B0D	0 (without back-up) * 1 (Back-up activated)
Set temperature	6000	From 10° C to 70° C; (50°)*
HEATING		
Activate the PAC's elec. back-up for heating	7902	0 (without back-up) 1 (Back-up activated) *
Set Temp.	2000	From 10° C to 30° C; (20°)*
Terminal presence (Thermostat)	2003	0 (without terminal) * 1 (with terminal)
Heating curve setting (Slope)	2006	From 0 to 3.5; (0.6)*
Heating curve setting (Parallel)	2007	From - 15 to + 40K; (0)*
PAC max. water outlet temp. (radiator)	200E	From 10 to 70° C.; (40°)*
Probe (SFT) presence declaration on heating water outlet	701B	0 (probe absent) 1 (probe present) *
BLOCKED USER ACCESS TO MENUS	8800	0 (access all menus) * 1 (No access to STD and Extended Menus). 2 (Access STD menu only)

* : Factory setting

12.2.2. AQU@SCOP ADVANCE SPLIT DCI WITH BOILER

To ensure optimum operation, the Heat Pump must always be connected to the radiator or under-floor heating return water pipe via a secondary circuit to avoid affecting the water flow in the existing heating network. This type of layout meets the following three criteria:

- Constant water flow to avoid any major changes in water temperature to the condenser.
- High water flow so that the Heat Pump delivers its heating capacity with a low temperature variance.
- Lowest possible water temperature even when the boiler is in use, in order to improve the Heat Pump's COP and increase the number of operating hours.

We recommend the fitting of a zone valve to avoid heat losses via the boiler when the Heat Pump is working on its own.

All system devices should be of a suitable size to limit pressure losses

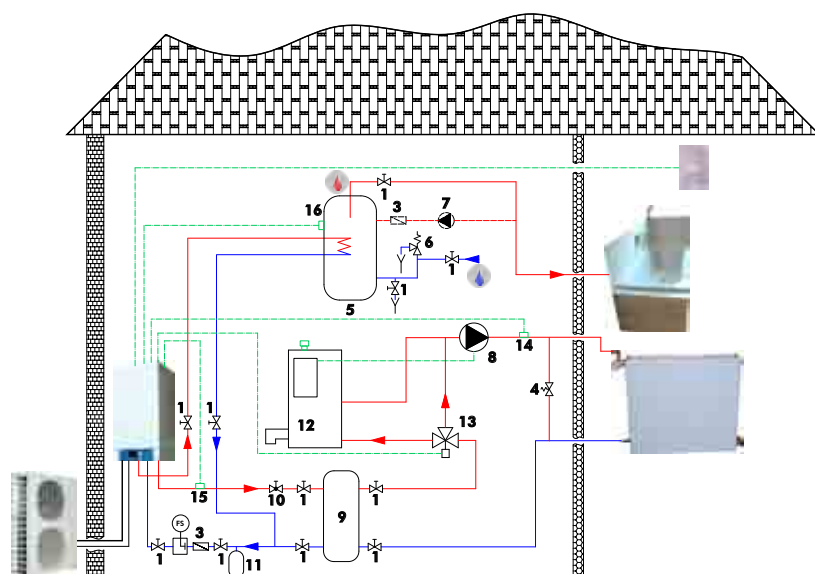
Water flow within the heating circuit is normally driven by the circulation pump already present in the installation (recommended solution) or by the Heat Pump's circulation pump. In this case, you must ensure that the circulation pump generates sufficient water pressure.

The heat pump is equipped with a 10 litre expansion tank. Ensure that the size is adequate for both the volume of water in the installation and its operating water temperature.



COMMENT: WALL-MOUNTED GAS-FIRED BOILER with domestic hot water production and a single circulation pump used for both heating and domestic hot water:

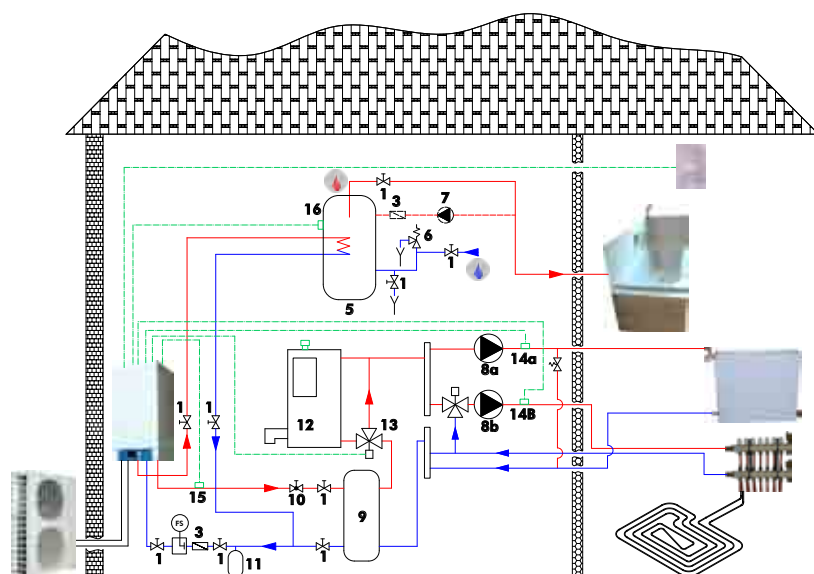
DO NOT FIT A ZONE VALVE



1. Stop cocks
3. Filter or sludge trap
4. Relief valve
5. Domestic Hot Water tank
6. Safety devices
7. Recycling circulation pump (optional)
8. Circulation pump
9. Mixing tank
10. Flow regulating valve
11. Additional expansion tank (if required)
12. Boiler
13. Zone valve
14. Common water outlet probe (SFT)
15. Buffer tank probe (BTT)
16. DHW probe (DHWT TOP)

GLOBAL PARAMETER ACTION	PARAMETER N°	SETTINGS.
INSTALLATION DEFINITION	7000	1 (Direct circuit, without DHW) 2 (Direct circuit, with DHW) 3 (Mixed circuit, without DHW, with buffer tank) 4 (Mixed circuit, with DHW, with buffer tank)
INDOOR UNIT CAPACITY CODE	5030	4 (for 5 kW) 12 (12 kW) 8 (8 kW) 14 (14 kW)
BOILER SUBSTITUTION FUNCTION	7B00	0 (function deactivated) * 1 (function activated)
Boiler priority on electric Back-up heating	7B01	0 (priority given to electrical heating resistance)* 1 (priority given to boiler)
Bivalence point	7B02	Factory setting: 10 °C (adjustable from – 50 °C to 50 °C)
Boiler back-up for DHW authorisation	7B0D	0 (Boiler back-up not authorised) * 1 (Boiler back-up authorised)
Buffer tank probe (BTT) presence. Parameter only to be set with install. def. 1 and 2 (Par. 7000).	7200	0 (without probe tank) * 1 (with probe tank)
BLOCKED USER ACCESS TO MENUS	8800	0 (access all menus) * 1 (No access to STD and Extended Menus). 2 (Access STD menu only)
DOMESTIC HOT WATER	6014; 6015; 6000 (same as layout 3)	
HEATING	2000; 2003; 2006; 2007; 200E; 701B (same as layout 3)	
PAC ELEC. BACK-UP HEATING	7900 (same as layout 3)	

* : Factory setting



- 1. Stop cocks
- 3. Filter or sludge trap
- 4. Relief valve
- 5. Domestic Hot Water tank
- 6. Safety devices
- 7. Recycling circulation pump (optional)
- 8. Circulation pump
- 9. Mixing tank
- 10. Flow regulating valve
- 11. Additional expansion tank (if required)
- 12. Boiler

13. Zone valve

15. Buffer tank probe (BTT)

14a. Common water outlet probe (SFT)

16. DHW probe (DHWT TOP)

14b. Zone 2 outlet probe (DZSFT))

A water circuit protection aquastat must be installed on an under-floor heating application.

GLOBAL PARAMETER ACTION	PARAMETER N°	SETTINGS.
INSTALLATION DEFINITION	7000	5 (Double zone, without DHW) 6 (Double zone, with DHW)
INDOOR UNIT CAPACITY CODE	5030	4 (for 5 kW) 12 (12 kW) 8 (8 kW) 14 (14 kW)
BOILER SUBSTITUTION FUNCTION	7B00	0 (function deactivated) * 1 (function activated)
Boiler priority on electric Back-up heating	7B01	0 (priority given to electrical heating resistance)* 1 (priority given to boiler)
Bivalence point	7B02	Factory setting: 10 °C (adjustable from - 50 °C to 50 °C)
Boiler back-up for DHW authorisation	7B0D	0 (Boiler back-up not authorised) * 1 (Boiler back-up authorised)
Buffer tank probe (BTT) presence. Parameter only to be set with install. def. 1 and 2 (Par. 7000).	7200	0 (without probe tank) * 1 (with probe tank)
BLOCKED USER ACCESS TO MENUS	8800	0 (access all menus) * 1 (No access to STD and Extended Menus). 2 (Access STD menu only)
DOMESTIC HOT WATER	6014; 6015; 6000 (same as layout 3)	
HEATING	2000; 2003; 2006; 2007; 200E 3000; 3003; 3006; 3007; 300E 701B (same as layout 3)	
PAC ELEC. BACK-UP HEATING	7900 (same as layout 3)	

* : Factory setting

12.3. WATER TREATMENT WARNING

Using untreated or inadequately treated water in this appliance can lead to a build-up of limescale, algae or sludge deposits and cause corrosion and erosion. As the manufacturer is not aware of the components used in the hydraulic network, or of the quality of water used, the installer or the owner should contact a specialised water treatment company. This issue is particularly important and every care should be taken to ensure that circuit water is properly treated in order to avoid problems associated with incorrect water distribution. A clogged water network will systematically lead to premature wear of the appliance's components.

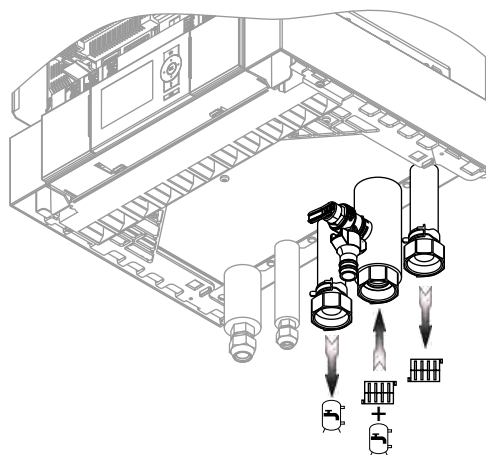
12.4. CONNECTION TO THE CENTRAL HEATING LOOP

You must check water tightness and the cleanliness of the installation before connecting the **Aqu@Scop Advance Split DCI**.

For the **Aqu@Scop Advance Split DCI**'s WATER INLET and OUTLET connections, you must install manual stop cocks with the same diameter as the main pipe work. This will enable maintenance work to be carried out on the **Aqu@Scop Advance Split DCI** without having to bleed the entire system.

A link valve with pressure tap kit is available.

The **Aqu@Scop Advance Split DCI** must be protected by a water filter. Connect this subassembly to the water inlet of the unit, taking care to maintain the strainer of the water filter downwards. A sludge trap should be fitted in the event of high sludge build-ups.

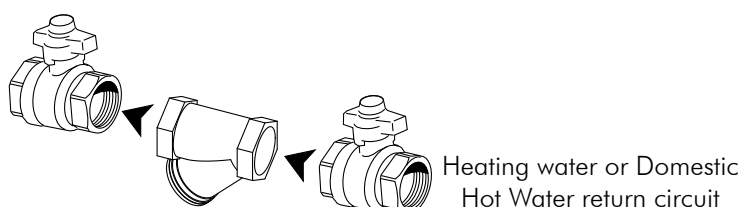


Connect the group's safety evacuation pipe to the wastewater network.



THE MANUFACTURER'S WARRANTY IS VOID IF THE FILTER IS NOT INSTALLED TO PROTECT THE APPLIANCE

**Aqu@Scop Advance
Split DCI inlet**



12.5. HEAT INSULATION

To guarantee proper energy efficiency and compliance with current standards, water pipes passing through uninhabited zones should be properly lagged to retain heat.

To achieve correct insulation with conductivity of 0.04 W/m.K, lag the pipes with insulating material with a radial thickness between 25mm and 30 mm.

12.6. FILLING THE SYSTEM WITH WATER

All installation works must be completed and the **system cleaned and drained**, before filling the water circuit in accordance with current best practices. The system should be filled to obtain a service pressure not exceeding 2.5 bars.

The water supply should come either from the mains network or from the Heat Pump or from any other point on the installation.

Check that the automatic and manual bleed valve operates correctly.

You must completely bleed the circuit of all air to ensure efficient operation.

Close the inlet water valve once the hydraulic circuit is filled correctly.

12.7. DETERMINING WATER FLOW

To ensure that the **Aqu@Scop Advance Split DCI** operates properly and to attain the required outlet water temperatures, the water flow through the appliance has to be within specifications. The water flow through the **Aqu@Scop Advance Split DCI** can be controlled and regulated by measuring the difference between:

- Both the outlet water and inlet water pressures.

12.7.1. METHOD BASED ON WATER PRESSURES

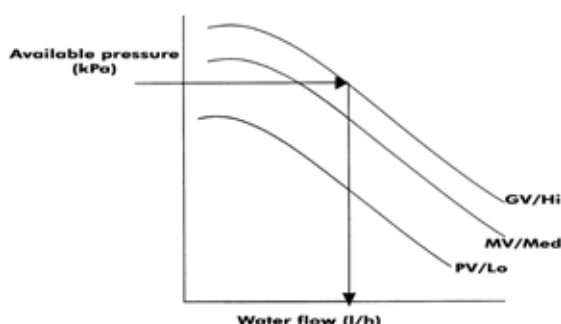
$$\text{AVAILABLE PRESSURE} = P1 - P2$$

- P1 = **Aqu@Scop Advance Split DCI** outlet water pressure.
- P2 = **Aqu@Scop Advance Split DCI** inlet water pressure.

Reminder:

1 bar = 100kPa = 10m water column

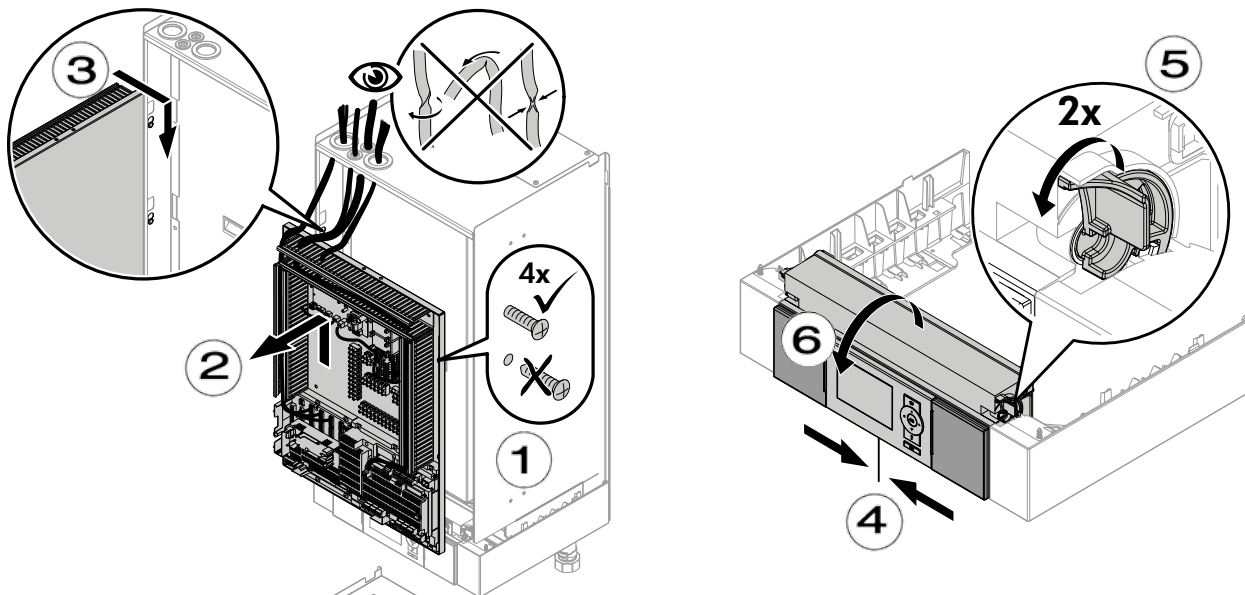
WATER FLOW CALCULATION GRAPH



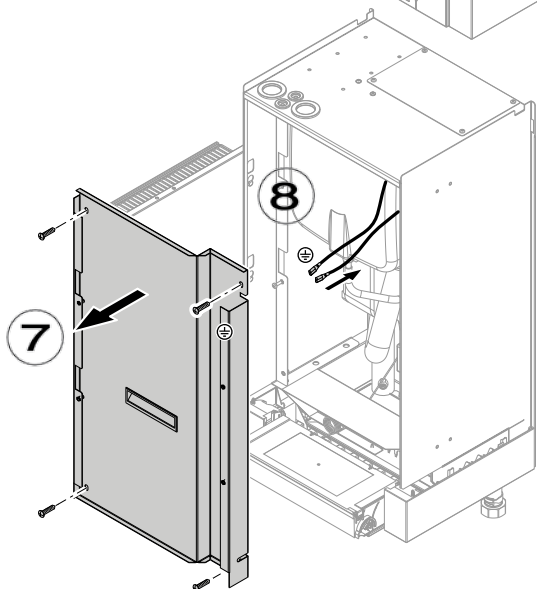
When you have measured the available pressure, expressed in kPa, refer to the graph corresponding to the appliance installed and read the flow value at the point where the pressure value crosses the speed curve for the pump.

SEE APPENDIX

12.7.2. WATER FLOW CALCULATION GRAPH

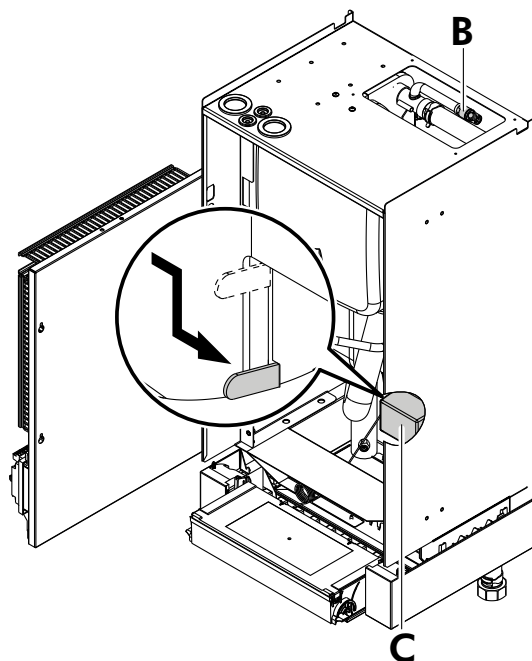


Pump output (flow) is adjustable in relation to the system's pressure losses, by means of the internal pump speed selector.



12.7.3. WATER CIRCUIT BLEEDING

- At the air vent valve of the secondary circuit **B**, connect the on-site hose to prevent damage to electrical components. Open air vent valve **B** of the secondary circuit with the cap key provided
- Move 3-way diverter valve **C** by its handle into its centre position.
- Close air vent valve **B** of the secondary circuit.

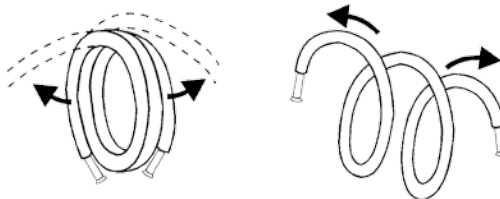


13. REFRIGERATION LINKS

13.1. PIPE LINKS TO BE CREATED ON SITE

This work must be performed by qualified personnel in accordance with the best heating and air conditioning engineering practices (brazing, vacuum draining, filling, etc.).

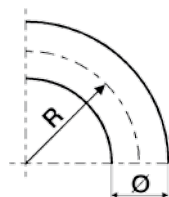
- Only use refrigeration quality copper pipe.
- Use anti-vibration collars for attaching pipe work to the walls.
- To avoid the introduction of foreign bodies into the pipes (dust, filings, etc.) always fit the pipes with end caps before handling or work.
- Carefully unwind pipe coils in the opposite direction to the spirals and take care to avoid creating folds or twists.



13.1.1. REFRIGERATION PIPE BENDING

The bending radius of the pipes should be equal to or more than 3,5 times de outside diameter of the pipe.

Do not bend the pipes consecutively more than three times and do not make more than 12 bends over the complete length of the link.



WARNING!

Take care not to damage the refrigerating pipe links by applying too much tightening pressure. Use a second wrench to compensate for the tightening torque.

You should always use a counter-wrench for tightening valves.

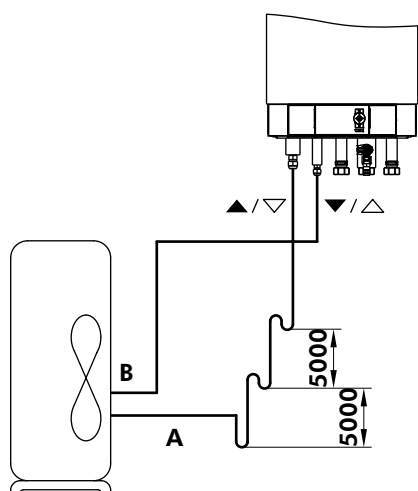


13.2. LENGTH OF COOLING PIPE

Aqu@Scop Advance Split DCI units are pre-charged at the factory for pipe lengths between 3m and 12.5m. Pipe lengths can then extended up to 25m for the outdoor units ODU1, and to 30m of other models, in accordance with the additional refrigerant charge table (refer to the technical specifications).

		AWAU YVD005-H11	AWAU YVD008-H11	AWAU YVD012-H11	AWAU YVD014-H11
Maximum pipe lengths	m	25	30	30	30
Maximum height difference	m	10	15	15	15

Aqu@Scop Advance Split DCI units can function correctly up to a maximum height difference of 5m between the modules. If the difference in height exceeds 5m, a siphon must be incorporated in the gas line every 5m.



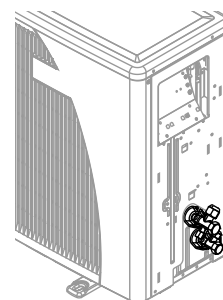
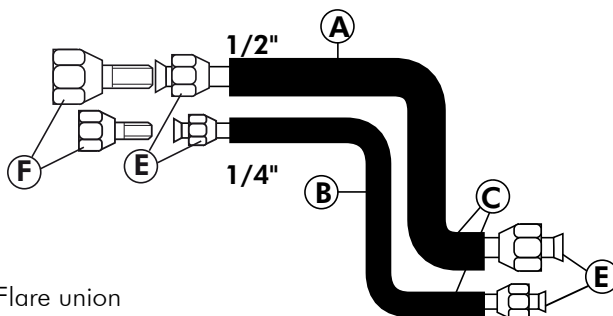
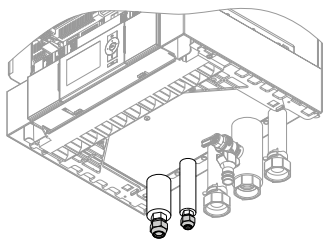
A: Gas line

B: Liquid line

▲: Refrigerant fluid direction of flow in Heating mode

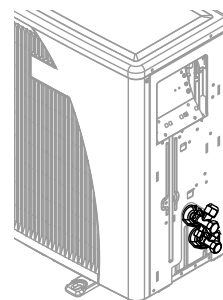
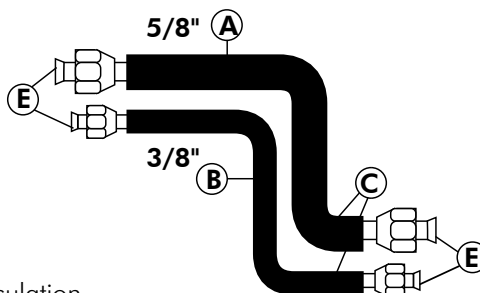
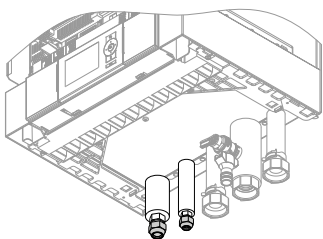
△: Refrigerant fluid direction of flow in Cooling mode

13.2.1. AWAU-YVD005-H11



- A:** Gas line
- B:** Liquid line
- C:** Pipe insulation
- E:** Flare union
- F:** Adapter supplied with the unit

13.2.2. AWAU-YVD008-H11 - AWAU-YVD012-H11 - AWAU-YVD014-H11

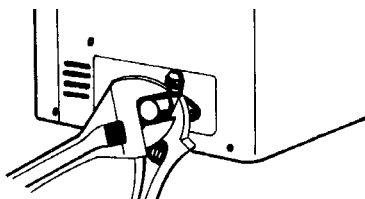
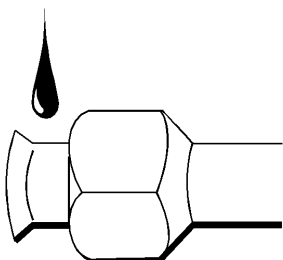


- A:** Gas line
- B:** Liquid line
- C:** Pipe insulation
- E:** Flare union

13.3. ASSEMBLY

Connect the connecting pipes to the units by FLARE NUTS

- To obtain the right tightening, cover the surface with cooling oil.
- The use of a counter wrench is required to tighten the valves.
- The values of the tightening torque are shown in the table below.



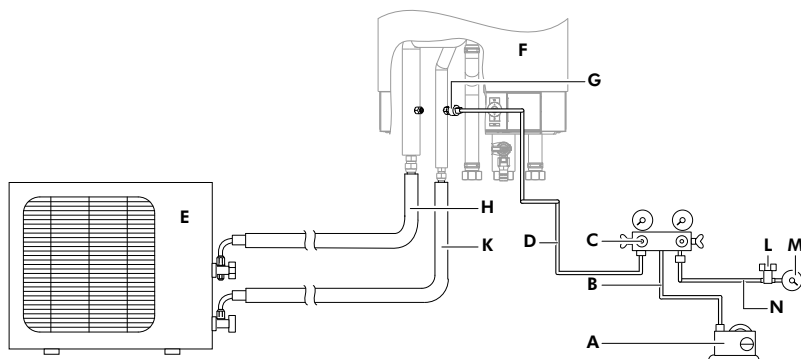
Ø CONNECTION	TIGHTENING TORQUE
1/4"	14-18 Nm
3/8"	33-42 Nm
1/2"	50-62 Nm
5/8"	63-77 Nm

13.4. VACUUM OF COOLING PIPES AND INDOOR UNIT



Only the outdoor unit is charged with refrigerant fluid., it is imperative to vacuum the linking pipes and the indoor unit and **always leave both the stop cocks on the outdoor modules in the closed position.**

13.4.1. ASSEMBLY



- A** Vacuum pump
- B** Connection hose between pressure gauge set and vacuum pump
- C** Pressure gauge set
- D** Filling hose between pressure gauge set and internal unit
- E** External unit
- F** Internal unit

- G** Service valve (Schrader valve)
- H** Hot gas line
- K** Liquid gas line
- L** Valve for vacuum gauge
- M** Vacuum gauge
- N** Connection hose between pressure gauge set and vacuum gauge

1. Shut the service valve on the external unit and keep it closed for the entire evacuation process.
2. Close all valves at the pressure gauge set.
3. Make all connections, as shown above.



Connect filling hose end with valve port to the service valve in the internal unit last. For all connections, counterhold with a second openended spanner.

4. Start the vacuum pump. At the pressure gauge set, open the valve to the vacuum pump and the valve to the hot gas connection.
5. After approx. 5 min, open the valve to the vacuum gauge. Leave the vacuum pump running until almost 0 bar is indicated on the vacuum gauge (at least 30 min).



The vacuum pump runtime will depend on the ambient conditions.

6. Close the valve on the pressure gauge set to the vacuum pump. Stop the vacuum pump and wait approx. 5 min. There is a leak if the indication on the vacuum gauge rises. Remove the leak and repeat the process.
7. Close all valves at the pressure gauge set.
8. Remove the vacuum pump and vacuum gauge.
9. Open that all valves on the refrigerant connection between Outdoor and Indoor unit

13.5. PIPE INSULATION (NOT SUPPLIED)

The PAC installed inside the building is connected to the outdoor unit via 2 refrigerant pipes.

The small diameter pipe is the "liquid" line.

The larger correspond to the "gas" line.

In practice, we recommend an insulation thickness of 13 mm (λ of insulating material 0.036 W/m.K). With this thickness of insulation, the capacity drop for a 30m pipe link is less than 4%.

14. WIRING DIAGRAM AND LEGEND

14.1. WIRING DIAGRAM

SEE APPENDIX

14.2. LEGEND

SE 4071	Aqu@Scop Advance Split DCI	230V +/-10% 50Hz 3N~400V +/-10% 50Hz (electrical heating)
SE 4072	Aqu@Scop Advance Split DCI Aqu@Scop Advance Split DCI-R	230V +/-10% 50Hz 230V +/-10% 50Hz
SE 4073	Aqu@Scop Advance Split DCI-R	230V +/-10% 50Hz

14.2.1. WIRING DIAGRAM KEY DESCRIPTIONS

ON/OFF :	Control Panel on/off button
WP :	Water circulation pump
H/DW V :	"Heating or Domestic Hot Water" switchover valve
KEH1 :	Electric heating resistance power relay (Stage 1)
KEH2 :	Electric heating resistance power relay (Stage 2)
EH :	Heating elements
EWT :	Inlet water temperature probe
LWT 1 :	N°1 outlet water temperature probe
LWT 2 :	N°2 outlet water temperature probe
IN :	IN probe
EP :	Pressure transducer
OAT :	Outdoor air temperature installation probe
AVI :	Card Airwell interface

14.2.1.1. OPTION

BOILER :	Boiler
FS :	flow detector
BTT :	Buffer tank temperature probe (boiler relief installation)
DHWT TOP :	Domestic Hot Water temperature probe (UPPER)
DHW EH :	Domestic Hot Water electric heating resistance
SFT :	Heating circuit temperature probe (boiler relief installation)
R :	Resistance: 536 ohms (boiler relief installation)
ES :	External dry contact safety
EJP :	Off-peak electricity tariff contact
BRV :	Boiler relief valve
KBR :	Boiler relief valve
WPS :	Secondary network water circulation pump

15. ELECTRICAL CONNECTIONS

WARNING



Before carrying out any work on the equipment, make sure that the electrical power supply is disconnected and that there is no possibility of the unit being started inadvertently. Non-compliance with the above instructions can lead to injury or death by electrocution.

The electrical installation must be performed by a fully qualified electrician, and in accordance with local electrical standards and the wiring diagram corresponding to the unit model.

Any modification performed without our prior authorisation may result in the unit's warranty being declared null and void.

The power supply cable section must be sufficient to provide the appropriate voltage to the unit's power supply terminals, both at start-up and under full load operating conditions.

The power supply cable shall be selected in accordance with the following criteria:

1. Power supply cable length.
2. Maximum unit starting current draw – the cables shall supply the appropriate voltage to the unit terminals for starting.
3. Power supply cables' installation mode.
4. Cables' capacity to transport the total system current draw.

Short circuit protection shall be provided. This protection shall comprise fuses or circuit breakers with high breaking capacity, mounted on the distribution board.

If the local control includes an remote ambient temperature sensor and/or a set temperature adjustment module, these shall not pass through the same conduits as the power supply cables as the voltages induced may create reliability faults in the unit's operation.

WARNING!

On-site wiring must be performed in accordance with the wiring diagram present in the appliance's electrical connection box.

Mains power supply cables to the appliance must have copper conducting cores and be sized in compliance with currently applicable IEC standards.

The appliance must be grounded via a terminal block located inside the electrical connection box.

The power supply must not fluctuate by more than 10 %. Imbalance between phases must not exceed 3%.

A circuit breaker or fuse holder (not supplied) must be installed on the main power supply of the unit in accordance with the circuit diagram; for the ratings, refer to the electrical specifications.

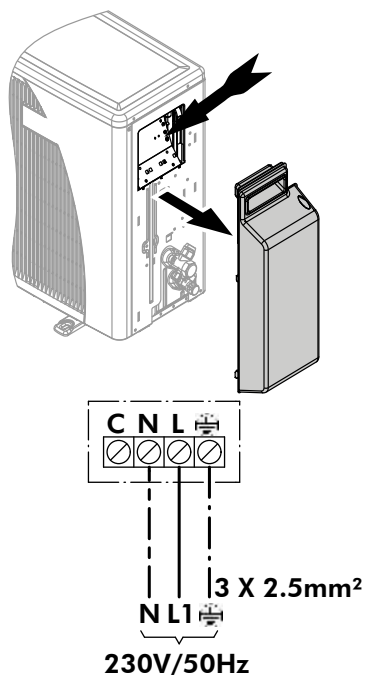
15.1. OUTDOOR UNIT

Remove the outdoor unit casing.

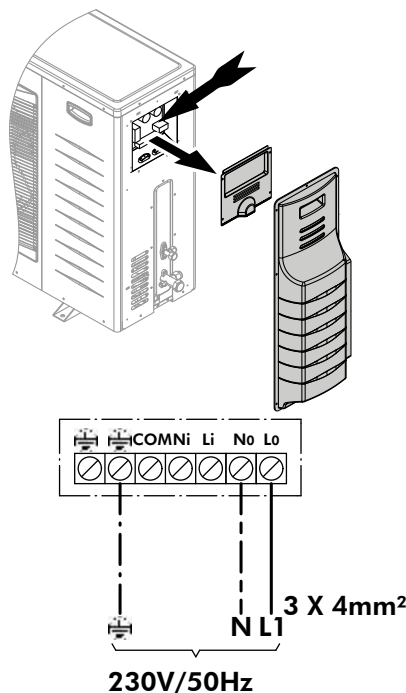
Thread the cables through the cable openings built in to the unit.

Install cable and fittings corresponding to the cable section in order to ensure a good contact. Connect the cables as indicated.

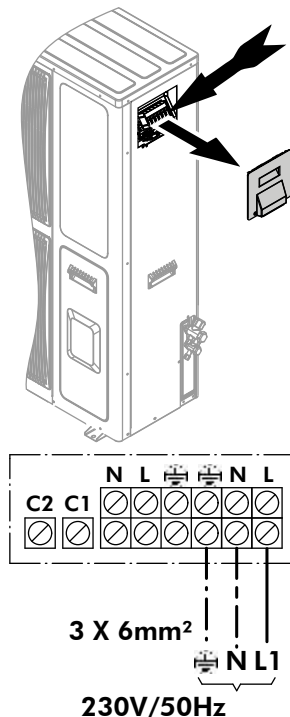
AWAU-YVD005-H11



AWAU-YVD008-H11



**AWAU-YVD012-H11
AWAU-YVD014-H11**



15.2. INDOOR UNIT

Remove the indoor unit casing

Thread the cables through the cable openings built in to the unit.

Allow sufficient cable for the electrical panel to be moved.

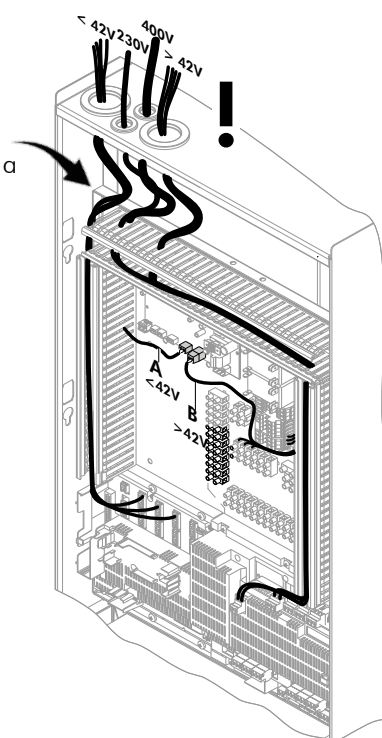
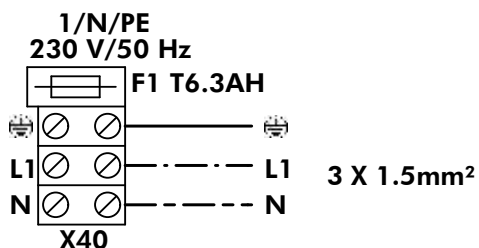
Install cable and fittings corresponding to the cable section in order to ensure a good contact. Connect the cables as indicated.

Connect:

- The power supply cable.
- The outdoor unit interconnection cable
- The electric heating power supply cable (depending on the unit)

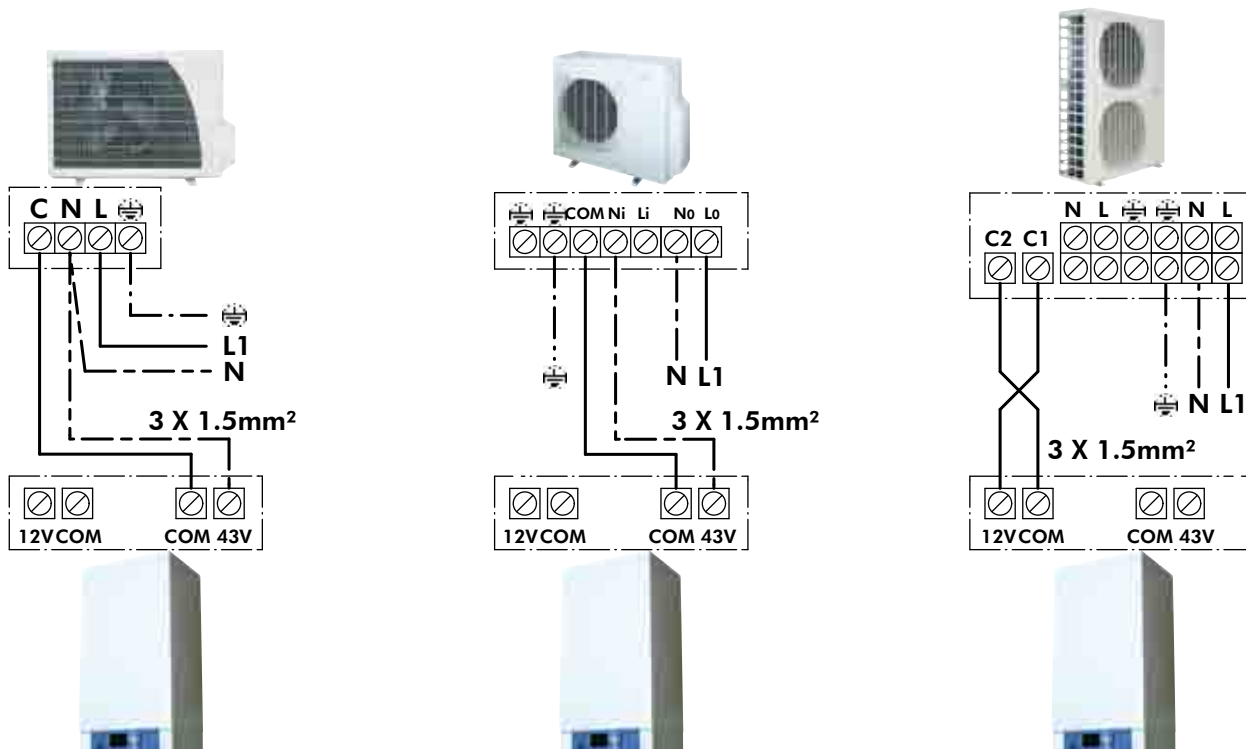
A: Type AWSI-HVD012_14-R11 and AWSI-HVD012_14-H11
Routing the BUS cable inside the LV area < 42 V

B: Type AWSI-HVD005_08-R11 and AWSI-HVD005_08-H11
Routing the BUS cable inside the voltage area 230 V~

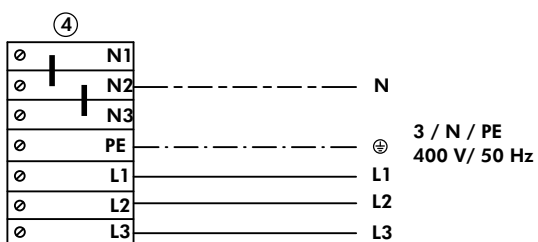


15.3. CONNECTIONS BETWEEN OUTDOOR AND INDOOR UNITS

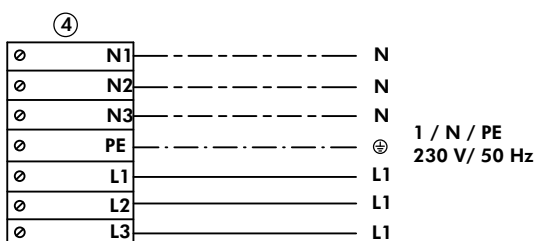
Inside the indoor unit there is an interface board, used for the communication line between outdoor and indoor units, according following wiring instruction.



15.4. ELECTRIC HEATER CONNECTION



Phase asymmetrical 3 / N / PE 400 V / 50 Hz:
Recommended power cable
5 x 2.5 mm²

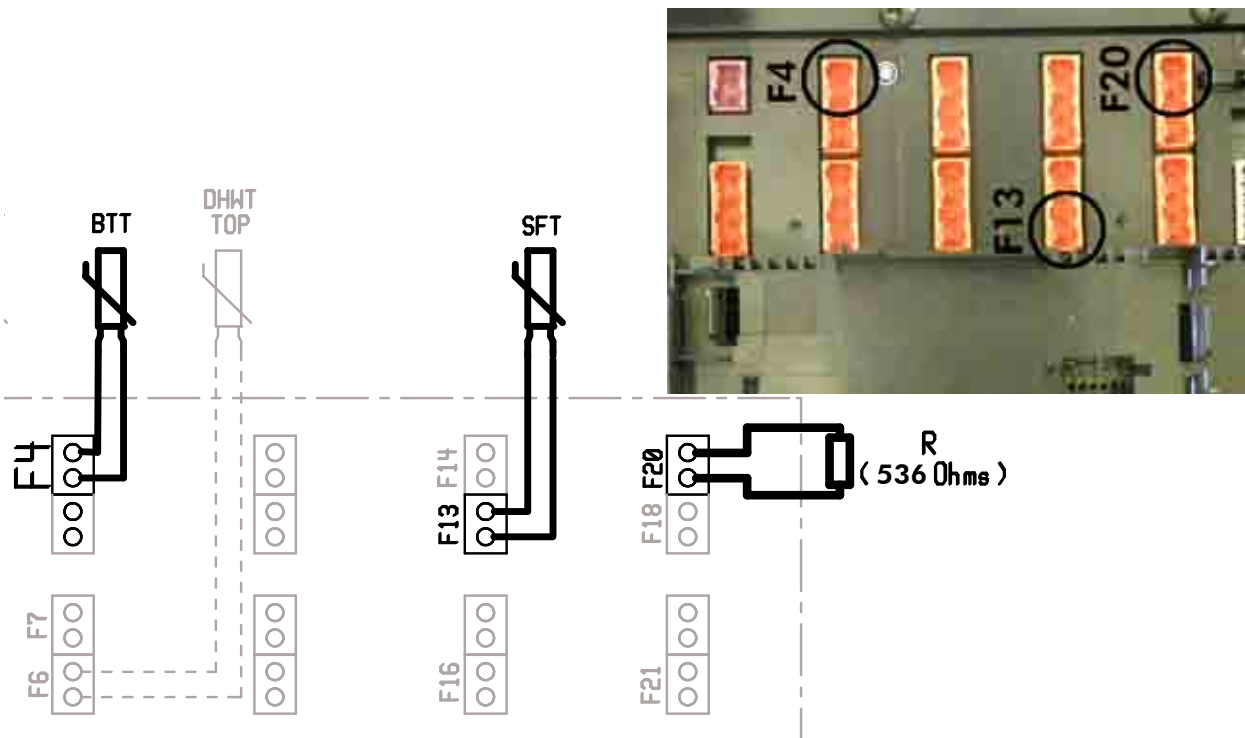
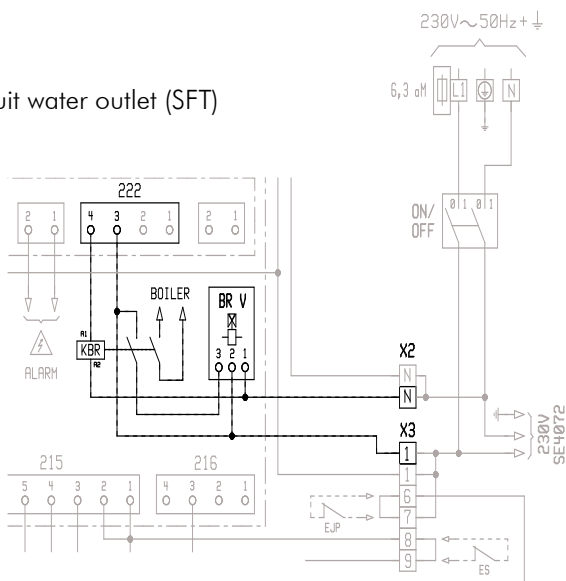
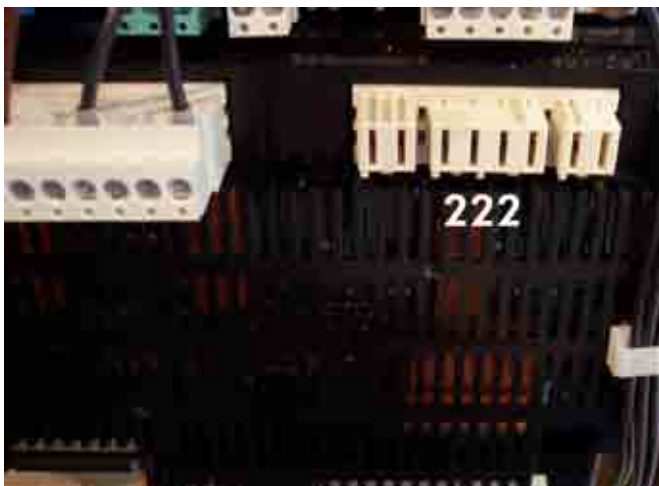


Single phase 1 / N / PE 230 V / 50 Hz
Recommended power cable
7 x 2.5 mm²

15.5. ELECTRICAL CONNECTIONS FOR A BOILER RELIEF INSTALLATION

The boiler relief function involves the installation and connection of the following elements:

- BRV zone valve
- KBR relay
- Resistance R
- Buffer tank temperature probe (BTT)
- Temperature probe installed on the heating circuit water outlet (SFT)



The BTT probe measures the temperature near the mixing tank.

The SFT probe measures the heating circuit water outlet temperature.

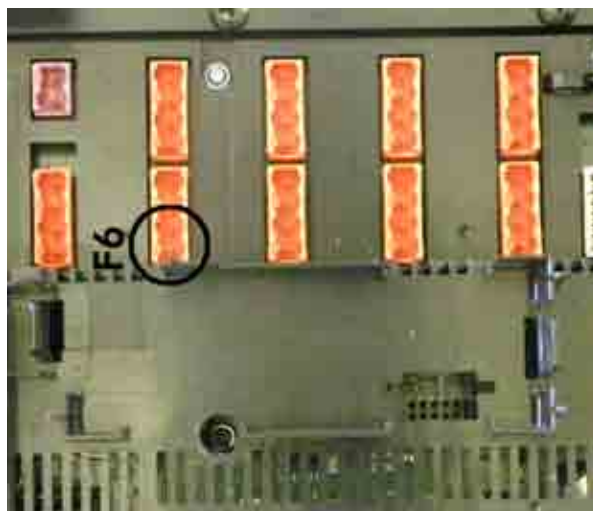
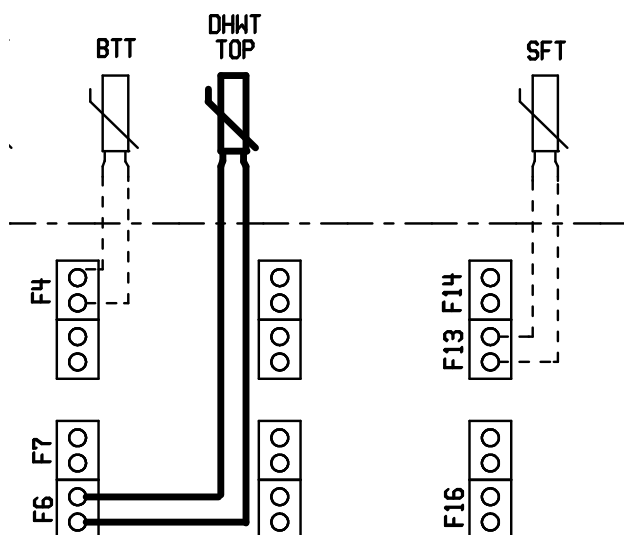
15.6. DOMESTIC HOT WATER PROBE FITTING

Installation of the the Domestic Hot Water function involves replacing the existing temperature probe in the Domestic Hot water tank with a special probe required for the **Aqu@Scop Advance Split DCI**.

1. Open the access hatch situated on the upper part of the tank.
2. Remove the heat protection.



3. Take out the existing temperature probe.
4. Insert the new probe in the glove finger.
5. Refit the heat protection and close the access hatch.
6. Connect the probe on the indoor unit.



16. COMMISSIONING

16.1. PRE-START CHECK LIST

Before commissioning the system, you must carry out a certain number of installation checks to ensure that the appliance will operate in the best possible conditions. The following list of checks is not exhaustive and only serves as a minimum reference guide.

16.1.1. APPLIANCE POSITIONING

- Check free clearances around the unit, including the exchanger air intake and outlet, and access for maintenance work.
- Check unit assembly in accordance with specifications.
- Check presence and tightness of all screws and bolts.
- Check that the rubber anti-vibration pads are in place.
- Check that the unit is level and that condensates drain freely away from the unit.
- Check that there is no possibility of blown air being recycled through the fans due to wind exposure.
- In arduous climates (sub-zero temperature, snow, high humidity), check that the appliance is raised 10 cm off ground.
- Check that the ambience terminal is located correctly (frequently occupied area, 1.5 m above ground level, etc.).

16.1.2. ELECTRICAL CHECK

- Electrical installation has been carried out according to unit wiring diagram and the Supply Authority Regulations.
- Check the circuit breaker setting or the fuse rating on the mains power supply.
- Supply voltages as specified on unit wiring diagram.
- Check the tightness of wire to component connections.
- The cables and wires are clear of or protected from pipework and sharp edges.
- Check the electrical grounding of the appliance.

16.1.3. HYDRAULIC CHECKS

- Check the presence and the direction of flow of the water filter and the sludge pot (if installed) upstream of the unit. Rinse out the filter after the first two hours of system operation.
- Check that the external water circuit components are installed correctly in accordance with manufacturer's recommendations and that the water inlet and outlet connections have been made correctly.
- Check that the water quality complies with stated standards.
- Check that the hydraulic circuit is filled properly and that the fluid flows freely without any signs of leakage or air bubbles.
- Adjust water flow in accordance with the specifications.
- Check the presence and position of the stop cocks to isolate the appliance for maintenance.
- Check the presence of the air bleed valve.
- Check the protection of the installation against freezing conditions (thermal insulation, percentage of ethylene glycol in the water circuit if required...).
- Check that the bleed valve in the appliance has been opened.

16.1.4. REFRIGERATING CIRCUIT CHECKS



- **Before start up the unit it is mandatory to check that all valves on the refrigerant connection between Outdoor and Indoor unit are full open. If unit is started with valve closed there is a risk to damage the outdoor unit.**
- Check the absence of gas leaks.

17. REGULATION

17.1. USER INTERFACE

The front part of the instrument acts as a system interface to perform all the operations associated with its use, and notably to:

- Set the operating values.
- Manage alarm situations.
- Check the state of the inputs/outputs

The selected option is displayed on a white background.



The dialogue line guides you through the instructions to follow.

17.1.1. KEYPAD



To go back to the previous step in the Menu or stop the current setting.



To scroll through the Menu or set of values.



To confirm the selection or record the selected setting.



To display Help messages corresponding to the selected Menu option.




To open the "Extended Menu".

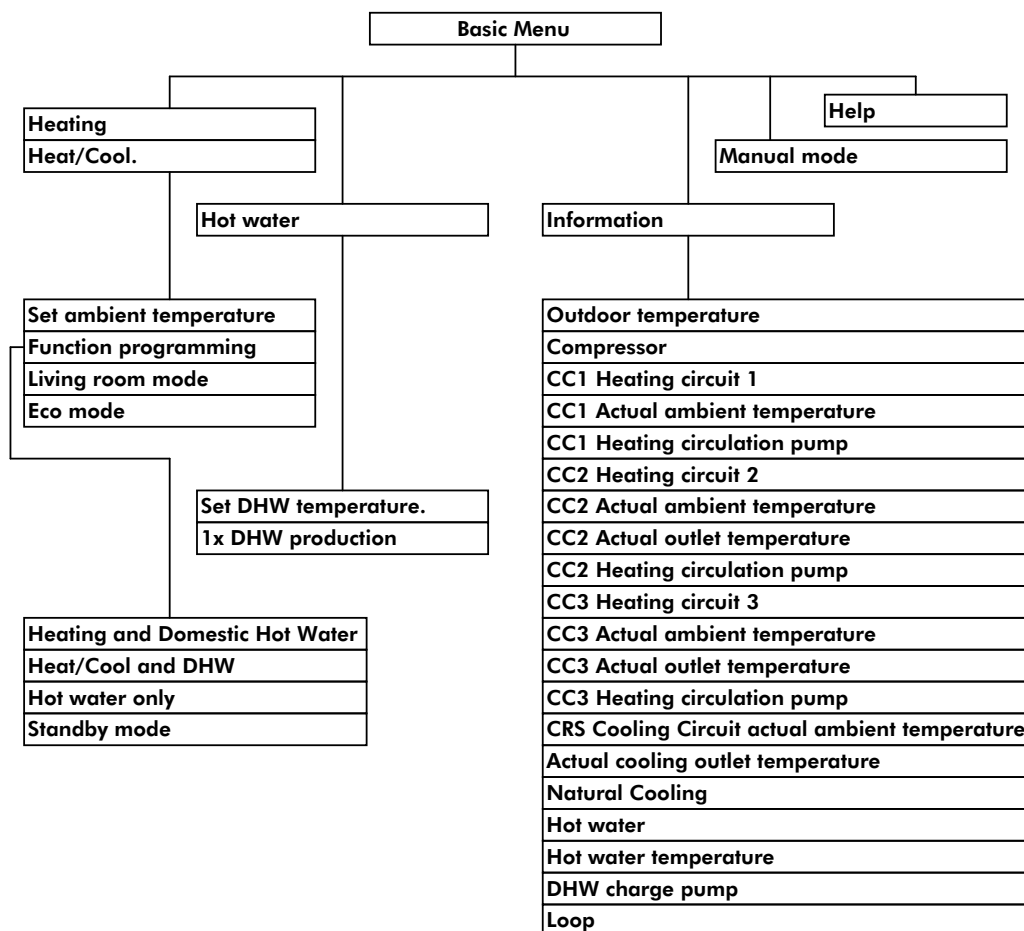
17.2. MENUS

There are two levels of control available to you: the "Basic Menu" and the "Extended Menu".

17.2.1. BASIC MENU

To open the "Basic Menu ":

- The screensaver is active: press any key.
- At any point in the Menu, press  several times to return to the "Basic Menu".



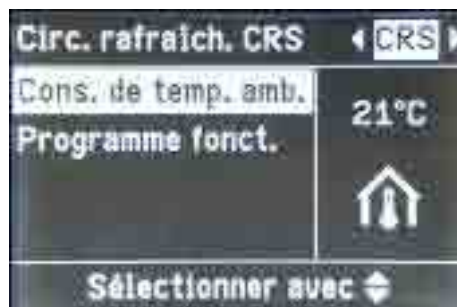
You can complete and consult the most frequently used settings in the "Basic Menu":

- Set the heating circuit(s) ambient temperature.
- Set the heating circuit(s) operating programme.
- Set the heating circuit(s) "Living space" function.
- Set the heating circuit(s) "Energy savings" function.
- Set Domestic Hot Water temperature
- Engage one Domestic Hot Water production sequence
- Engage manual operation
- Consult information
 - ✓ Temperatures, e.g. outdoor probe
 - ✓ Pumps, compressor and Cooling function operating mode
 - ✓ Annual performance coefficients
- Consult comments, warnings and fault messages

17.2.1.1. SET AMBIENT TEMPERATURE



Change from CC2 (Heating) or CRS (Cooling) circuit.



Adjust the set temperature for the CC1 circuit.

17.2.1.2. OPERATING PROGRAMME



The symbol shows the current programme.

To change the programme:

- Select another programme and confirm with OK.

17.2.1.3. LIVING ROOM MODE

This function enables you to alter the ambient temperature of a heating/cooling circuit for a few hours, for example, when guests stay later in the evening. With this function it is not necessary to alter the regulation settings.

The rooms are heated or cooled to the desired temperature.

Hot water is heated to the normal set hot water temperature. The DHW loop pump is engaged.

In the absence of any settings other than those made by your heating engineer, Domestic Hot Water is initially heated to the set temperature before Heating/Cooling is directed to the rooms.



The symbol indicates the current mode.

1. Adjust the set temperature.
2. Confirm with OK.
 - Living Room mode is activated.
 - Press OK again to deactivate Living Room mode.

Except from Living Room mode:

- Automatic, after 8h.
- Automatic at a programmed switchover.
- Shut down by the Living Room mode user.

17.2.1.4. ENERGY SAVINGS MODE

To save energy, you can lower the ambient temperature during normal Heating mode, e.g. when you leave your home for a few hours.



Confirm with OK.

- Energy Savings mode is activated.
- Press OK again to deactivate Energy Savings mode.

17.2.1.5. DOMESTIC HOT WATER



Adjust the set temperature and confirm with OK.



1 Press OK once to turn off.

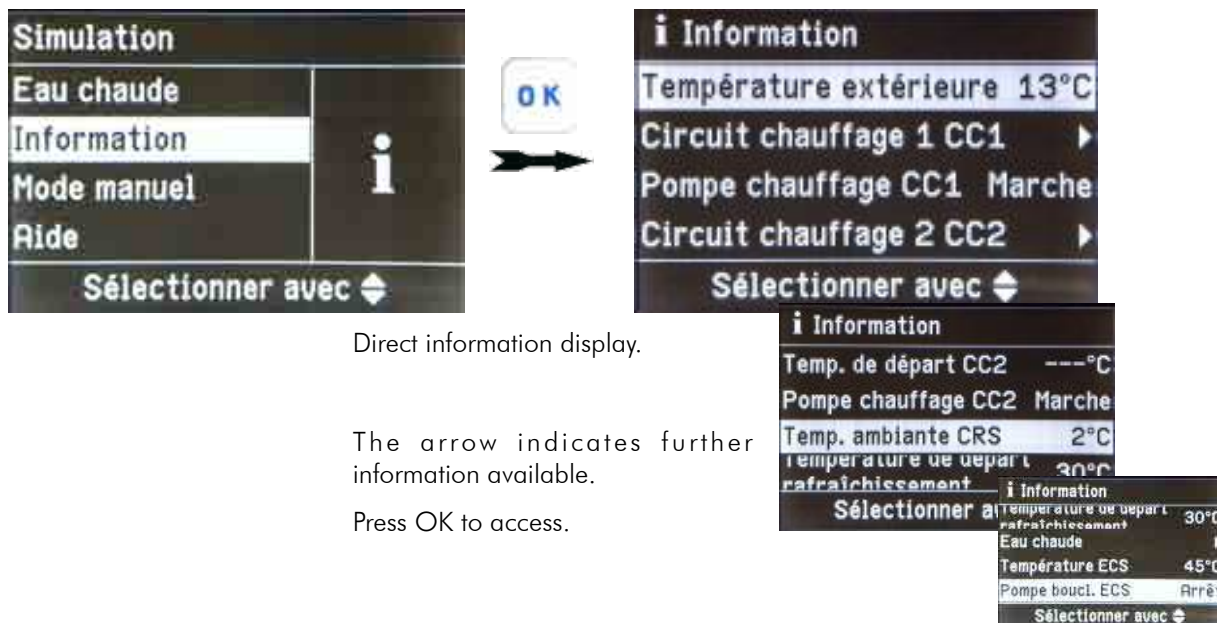
1 Press OK again to restart.

Symbolises DHW production activation.

In this case, the water is heated once to the N°2 set temperature.

17.2.1.6. INFORMATION

Depending on the components connected and the settings, you can consult the temperatures, settings, operating modes and operating mode at any point.

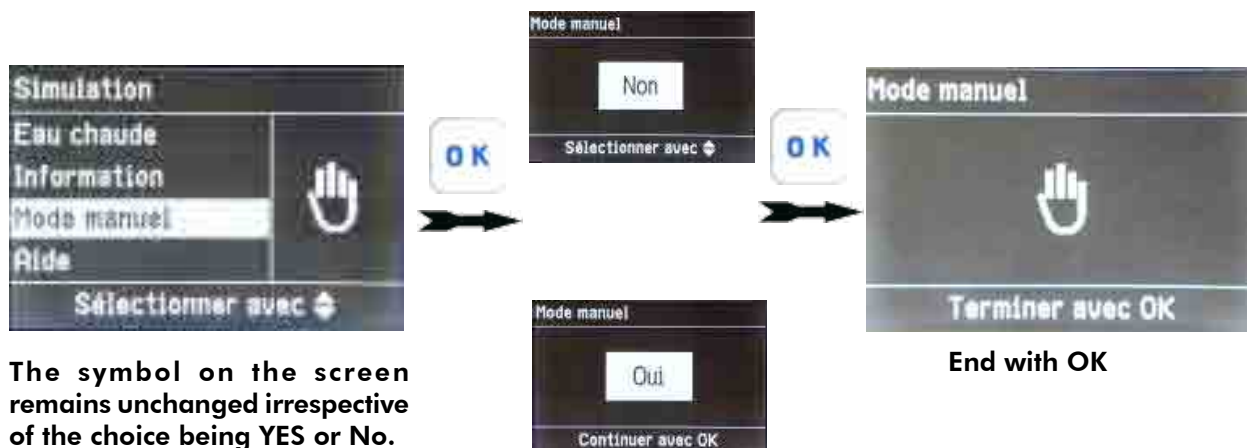


Direct information display.

The arrow indicates further information available.

Press OK to access.

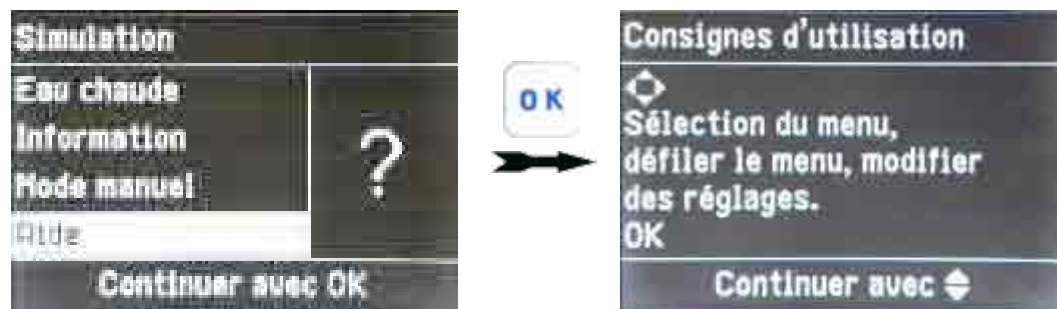
17.2.1.7. MANUAL MODE



The symbol on the screen remains unchanged irrespective of the choice being YES or No.

End with OK

17.2.1.8. HELP



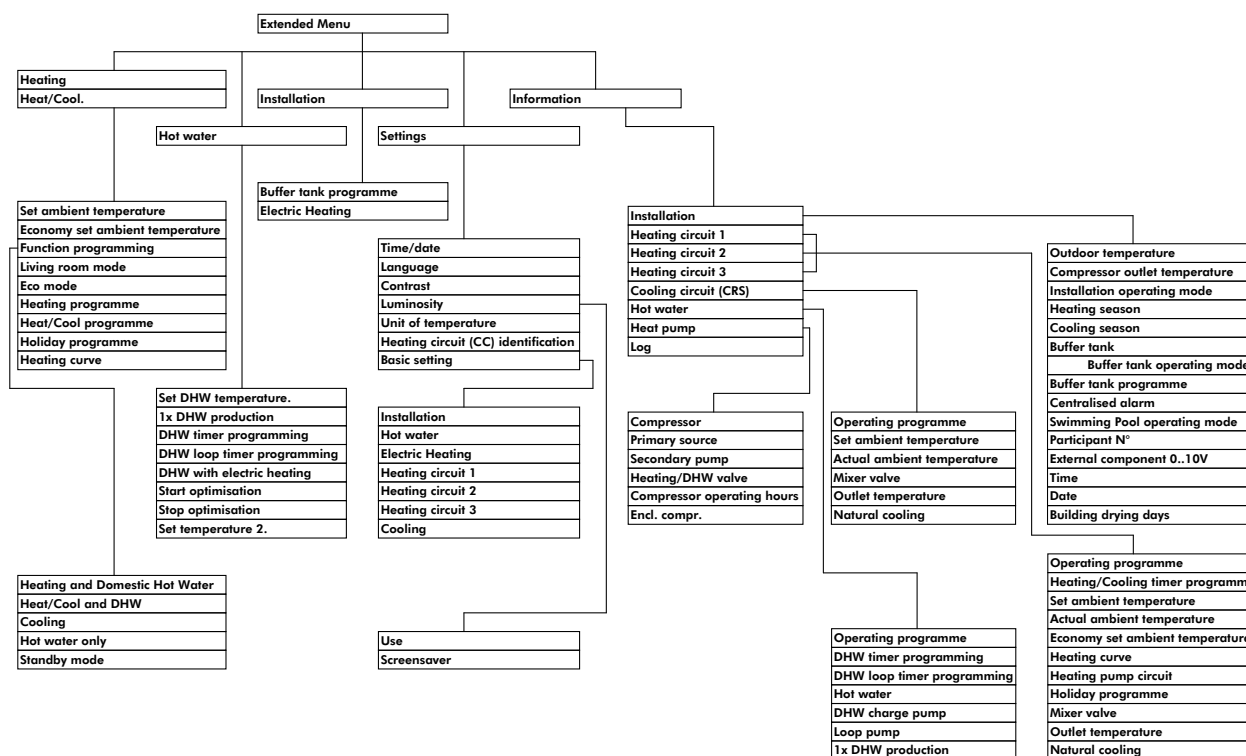
The "Help" section provides the user with information on the control panel's button functions.

17.2.2. EXTENDED MENU

To open the "Extended Menu":

The screensaver is activated: Press any key then press **MENU**.

At any point in the Menu, press **MENU** several times to return to the "Basic Menu".



In the "Extended Menu" you can adjust and consult the settings of the heat pump's rarely used functions, such as the Holiday programme and timer settings.

- Heating circuit(s) reduced set temperature.
- Heating circuit(s) heating programming.
- Heating circuit(s) "Holiday" function programming.
- Heating circuit(s) heating curve.
- DHW programming
- DHW loop programming
- Start optimisation
- Stop optimisation
- DHW N°2 set temperature
- Buffer tank programming
- At installation (temperatures), Heating and DHW circuits programming, PAC operating mode, log.
- Date / time, language, contrast, luminosity, unit of temperature, heating circuit name, basic settings.

17.2.2.1. REDUCED MODE SET AMBIENT TEMPERATURE



Choose the circuit on which the setting is to be made.



Adjust the set temperature (ECO) for the CC1 Heating circuit.



17.2.2.2. DAILY PROGRAMMING



Start by defining the days of the week covered by the programming:

- From Monday to Sunday
- From Monday to Friday
- From Saturday to Sunday
- Monday

To set the same time periods for every day of the week excluding Monday:

- Select the "Monday-Sunday" range and set the times.
- Then select "Monday" and set the corresponding times.

Timer settings for room Heating/Cooling are broken down into time periods. For each time period, select the operating mode ("Economy", "Normal", "Fixed Value"). The factory settings correspond to room heating 24 hours a day (a time period from 0h00 to 24h00 for every day of the week in "Normal" operating mode).

In total, you can select 8 different time periods. For each time period, enter the start and end time. Outside the time periods, the rooms are neither heated nor cooled and only the heat pump anti-freezing protection is activated.

You can adjust the time as you wish. Note that once you have set the timer your heat pump needs a certain time to heat or cool the rooms to the desired temperature.

1. Select the part of the week or the day.
2. Select a time period between **1** and **8**. The chosen time period is represented by a white strip on the timer diagram.
3. Set the time period start and end times. The length of the white strip changes accordingly on the timer diagram.
4. Select the desired operating mode. The operating modes are represented by different bar heights on the timer diagram.



If several time periods overlap, the operating mode with the tallest bar takes priority.



Cancelling a time period

Set identical start and end times.

For the start time, select a time before 00h00. For the selected time period the screen displays "- - : - -".

The various operating modes indicate the way in which the rooms will be heated/cooled by a heating/cooling circuit.

➤ Normal

The rooms are heated/cooled to the normal ambient temperature. The start temperature is automatically adapted to the outdoor temperature.

➤ Economy

The rooms are heated to the reduced ambient temperature. The start temperature is adapted automatically to the outdoor temperature

➤ Fixed value

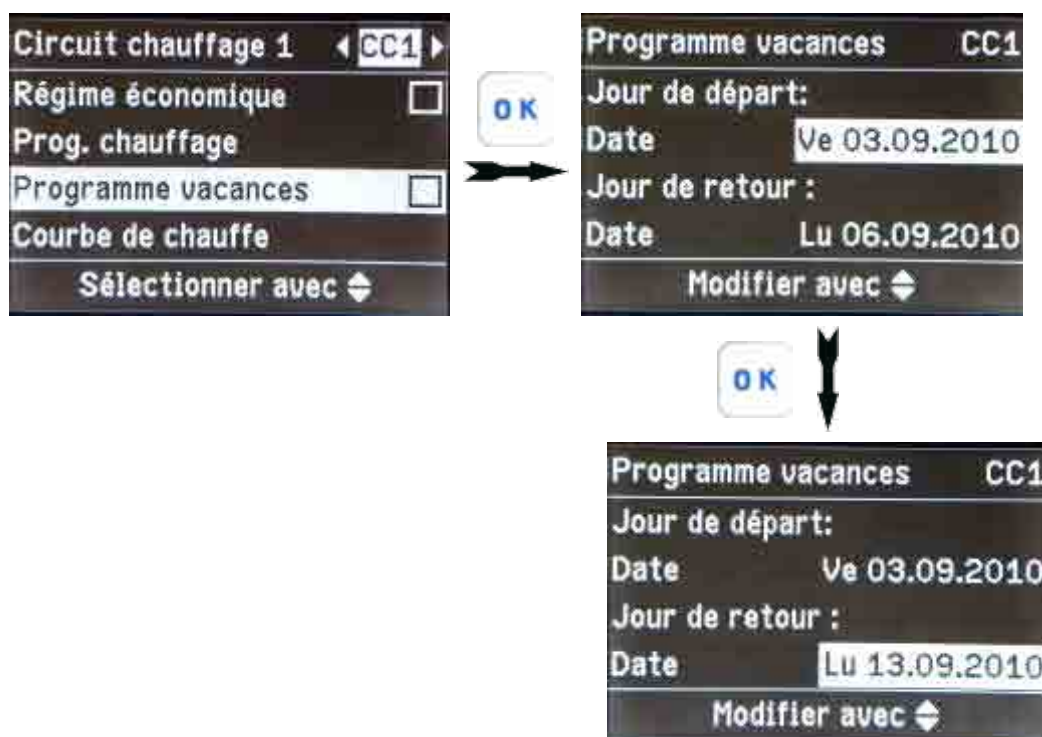
The rooms are heated irrespective of the outdoor temperature with the maximum admissible start temperature and cooled with the minimum start temperature.

17.2.2.3. HOLIDAY PROGRAMMING

To save energy during an extended absence, e.g. holidays, you can activate the "Holiday Programme". In this case, the heat pump regulation works to ensure that the Holiday Programme acts on all the heating circuits.

Depending on the chosen operating programme, the Holiday Programme can have different repercussions:

- "Heating and Domestic Hot Water" or "Heating/Cooling and DHW":
 - ✓ The rooms are heated to the reduced (Economy) ambient temperature.
 - ✓ Cooling via a Heating circuit is stopped and an independent Cooling circuit continues to cool the rooms.
 - ✓ Domestic Hot Water production is stopped, only the anti-freeze protection aquastat on the Domestic Hot Water tank is active.
- "Hot water only" operating mode programme:
 - ✓ For all the Heating circuits, only the antifreeze protection aquastat on the heat pump, on the Domestic Hot Water tank and the primary water buffer tank (accessory) is active.



It is possible to cancel or modify the programme at a later date.



17.2.2.4. HEATING CURVE MODIFICATION

The way in which your heat pump provides Heating is influenced by the slope and the parallel of the heating curve selected.

Factory settings:

- Slope: 0.6
- Heating curve parallel: 0
- Normal (set) ambient temperature: 20° C
- Economy/reduced (set) ambient temperature: 16° C



SLOPE ADJUSTMENT



Correction coefficient (Factory setting: 0.6).

The slope correction can be viewed directly on the graph.



Confirm OK

PARALLEL ADJUSTMENT



Correction coefficient (Factory setting: 0).

The parallel correction can be viewed directly on the graph.



Confirm OK

17.2.2.5. DHW PROGRAMMING

To engage Domestic Hot Water production, the operating programme must be set accordingly for at least one heating circuit. (Refer to § OPERATING PROGRAMME).

Timer programming for Domestic Hot Water production is split into time periods. Select an operating mode ("Upper", "Normal", "2nd temp"*) for each time period. The factory settings correspond to Domestic Hot Water production 24 hours a day (a time period from 0h00 to 24h00 for every day of the week in "Normal" operating mode).

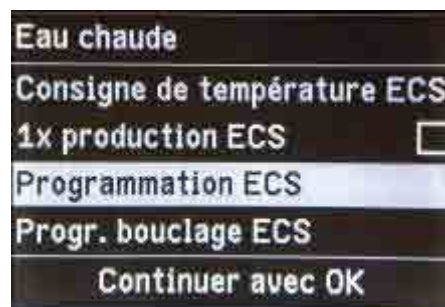
* "2nd temp" = Use for legionnaires' disease protection function

In total, you can select 8 different time periods. For each time period, enter the start and end time. The water is not heated outside the time periods.

You can adjust the timer programming as you wish. Note that after setting the timer your heat pump needs a certain time to heat the Domestic Hot Water tank to the desired temperature.

You can advance the Heating start and end times accordingly, or use the functions "Start optimisation" and "Stop optimisation".

1. Select the part of the week or the day.
2. Select a time period between **1** and **8**. The chosen time period is represented by a white strip on the timer diagram.
3. Set the time period start and end times. The length of the white strip changes accordingly on the timer diagram.
4. Select the desired operating mode. The operating modes are represented by different bar heights on the timer diagram.



If several time periods overlap, the operating mode with the tallest bar takes priority.

Cancelling a time period

Set identical start and end times.

For the start time, select a time before 00h00. For the selected time period the screen displays "- : - : -".

The various operating modes indicate the way in which the hot water tank will be heated.

- **Normal**
The entire volume of water in the hot water tank is heated to the normal hot water temperature.
- **Upper**
La partie haute du ballon d'eau chaude (env. 50 litres) est chauffée à la température d'eau chaude normale, par ex. si le besoin en eau chaude est faible. (Fonction inactive sur ce modèle).
- **2nd temp.** (legionnaires' disease protection function)
The entire volume of water in the tank is heated to the second set temperature, e.g. to ensure Legionnaires' disease protection.

17.2.2.6. START OPTIMISATION

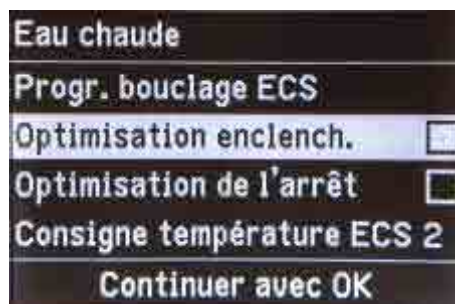
Start time optimisation guarantees that the hot water is already at the desired temperature at the beginning of a time period.

Comment:

This function is only active if the timer has been programmed.

Example:

You need hot water for the shower from 06h00 in the morning. Set the start of the time period at 06h00. With the start optimisation function, Domestic Hot Water production will start automatically a little earlier in order to ensure that hot water at the desired temperature is available at 06h00 precisely.



17.2.2.7. STOP OPTIMISATION

Stop optimisation guarantees that all the water in the hot water tank is heated to the desired temperature at the end of a "Normal" operating mode time period.

Comment:

This function is only active if the timer has been programmed.

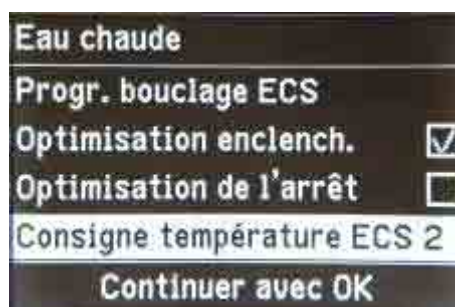


17.2.2.8. SECOND DHW SET TEMPERATURE

You have the possibility of indicating a second hot water temperature (2nd set temp.) for Domestic Hot Water production, independently of the normal hot water temperature.(example for legionnaires' disease protection function).

As part of hot water time programming, by selecting the "2nd set temp" operating mode the water is heated to this set temperature.

The "2nd set temperature" is the set temperature only for Domestic Hot Water production and for Manual mode.



17.2.2.9. INFORMATION

Information is categorised by groups.

- Installation
- N° 1 Heating circuit (CC)
- N° 2 Heating circuit (CC)
- Cooling circuit (CRS)
- Hot water
- Solar
- Heat pump
- Log

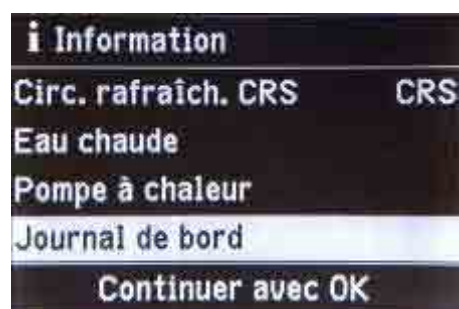
All information for the various groups are listed in the overview in the § EXTENDED MENU.



17.2.2.10. LOG

The log is a table which contains the following information for each ("Calendar Week") CW.

- **T.in**
Average heat pump inlet water temperature
- **T.out**
Average heat pump outlet water temperature
- **HP1**
Heat pump operating hours ("Heat Pump")
- **HP2**
No function
- **AC**
No function
- **NC**
"Natural cooling" function operating hours



i Journal de bord						
CW	T.in	T.out	HP1	HP2	AC	NC
12	7,2	4,3	123	0	0	15
13	7,8	4,7	113	0	0	12
14	7,5	4,5	103	0	0	18
15	7,0	3,3	93	0	0	10
16	6,9	3,1	97	0	0	11
17	6,8	3,0	89	0	0	12
18	7,2	4,4	133	0	0	5

Sélectionner avec

17.3. MESSAGE SCREENS

For special events or operating conditions involving your heat pump or heating installation, the heat pump regulation system displays comments, warning or fault messages.

The corresponding symbol flashes on the screen alongside the clear text message.



Comment:
You should take account of the information, but the system is totally operational.



Warning:
Limited operation, the cause must be eliminated.



Fault:
The installation is no longer operating. Eliminate the fault as quickly as possible.

By pressing the **HELP** key, more information appears about the displayed message.

You can scroll through the list of messages. For each message, the top line indicates whether it is a comment, a warning message or a fault message.

By pressing the **HELP** XX key, the following information is displayed for the selected message:

- Date and time of the first occurrence of the message.
- Comments on the pump's and the heating installation's behaviour.
- Advice about measures you can take yourself before contacting your installer.

Note that the text of the message and the code are located on the right. These details enable the technician to be better prepared and could possibly save you additional callout costs.

To cancel all the messages, follow the instructions on the Menu or displayed on the screen. If you do not wish to cancel the messages, press **R**.

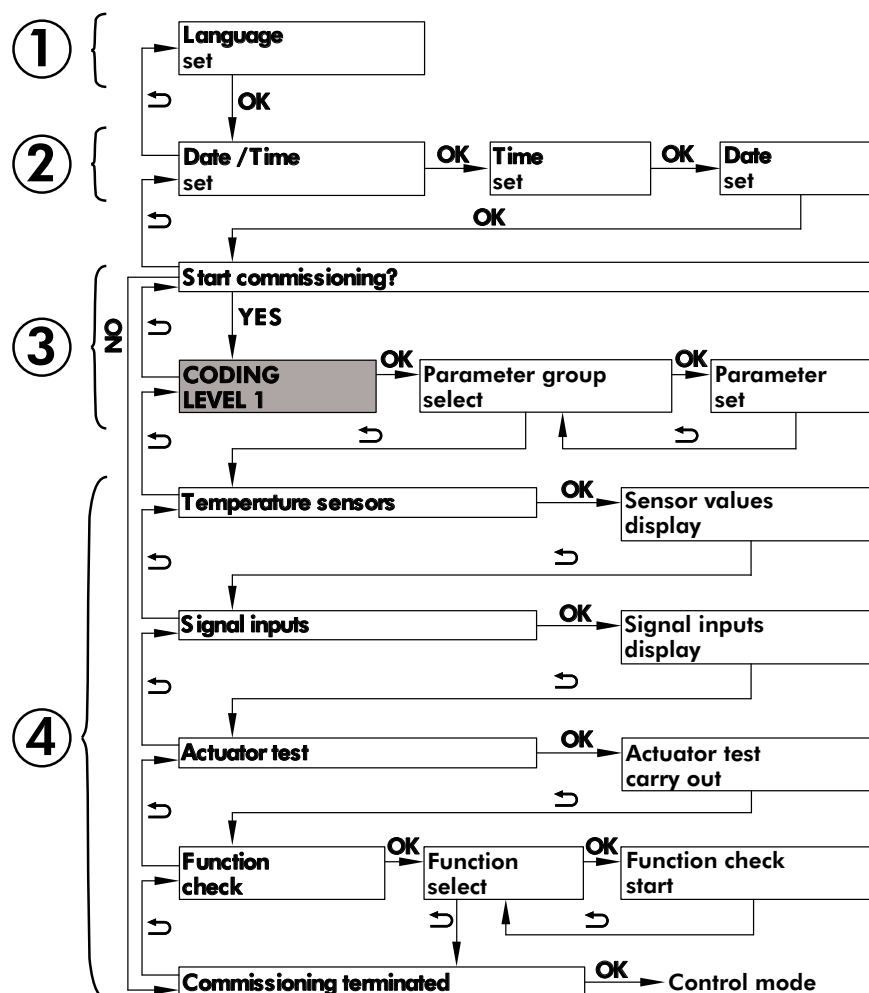
18. STARTING THE APPLIANCE

After checking all the electrical connections and making any rectifications as required, proceed with starting up the installation.

18.1. SIMPLIFIED START-UP OR COMMISSIONING PROCEDURE

Various parameters have to be **set** and **checked** as part of the initial appliance start-up procedure.

There is a special menu on the indoor unit regulator to complete this procedure. This menu is activated when the electrical power supply to the unit is switched on by maintaining continuous pressure on the **MENU** MENU key, or when power is switched on for the very first time, or by pressing the **OK** and **MENU** keys simultaneously.



The initial settings required by the regulator are:

- Screen display language ①
- Date ②
- Time ②

The following step ③ (**CODING LEVEL 1**) consists of defining all the constituent components of the installation and their operation. This step is indispensable for commissioning.

Once the Coding Level I parameters are set, the technician performs for tests before proceeding with actual appliance start-up ④:

- Temperature probes test
- Input signals test
- Tests of the various installation components (water circulation pump, powered valves, electrical resistances ...)
- Functions tests, one by one (Heating, Domestic Hot Water, Cooling...)

18.1.1. CODING LEVEL 1

List of the various groups of parameters and their associated code prefixes.

Parameter	Code
Installation definition	70..
Compressor	50..
External heat generator	7B..
Domestic Hot Water	60..
Back-up electric heating	79..
Internal hydraulic circuit	73..
Buffer tank	72..
Heating circuit 1	20..
Heating circuit 2	30..
Cooling	71..
Time	7C..
Function	88..



Use the arrows to select the group of parameters to be set.

Confirm with the button

18.1.1.1. INSTALLATION DEFINITION

Refer to the parameter summary tables in § "12.2. STANDARD CIRCUITS", page 15

HYDRAULIC LAYOUT

Parameter 7000

This parameter provides the regulation system with details of the type of hydraulic installation put in place.

Set the hydraulic layout N° in accordance with the indications on the following chart.

Refer to the parameter summary tables in § "12.2. STANDARD CIRCUITS", page 15, to define the system layout N°.



Elements	System layout N°						
	0	1	2	3	4	5	6
Heating							
Direct circuit	-	X	X	-	-	X	X
Mixed circuit	-	-	-	X	X	X	X
Hot water tank	X	-	X	-	X	-	X
Buffer tank	-	○	○	X	X	X	X
Boiler	-	○*	○*	○	○	○	○
Cooling							
Direct circuit		○	○			○	○
Mixed circuit				○	○	○	○
Separate circuit	○	○	○	○	○	○	○

- X** Element selected.
- Element can be added.
- Not relevant.

* Always installed with a buffer tank.

18.1.1.2. PARAMETERS TO BE DEFINED AT COMMISSIONING

PARAMETER	CODE	DESCRIPTION	SETTINGS	
INSTALLATION DEFINITION	HYDRAULIC LAYOUT	7000	This parameter provides information for the regulation system on the type of hydraulic installation put in place.	Consult the § "12.2. STANDARD CIRCUITS", page 15 and "18.1.1.1. INSTALLATION DEFINITION", page 50
	REMOTE AMBIENT TEMPERATURE PROBE	701B	Confirms presence or absence of the water temperature probe (SFT) downstream of the buffer tank The probe is only present with the boiler substitution function. If the boiler substitution function is not present, "Status 1 - probe absent" must be entered.	0 (probe absent) 1 (probe present) *
COMPRESSOR	OUTDOOR UNIT CAPACITY CODE	5030	Matching the indoor unit to the outdoor unit	4 ("four" pour 5kW) 8 (for 8kW) 12 (for 12kW) 14 (for 14kW)
EXTERNAL HEAT GENERATOR	EXTERNAL HEAT GENERATOR ACTIVATION	7B00	Activation of the boiler substitution function or the electric heating back-up function.	0 (function deactivated) * 1 (function activated)
	PRIORITY ALLOCATED TO THE ELECTRIC RESISTANCE OR THE BOILER FOR BACK-UP HEATING	7B01	Priority allocated to the boiler over the electric resistance.	0 (Electric resistance has priority) 1 (Boiler has priority)
	BIVALENCE AMBIENCE TEMPERATURE	7B02	Bivalence point temperature setting.	Factory setting at 10° (adjustment between - 50° C to 50° C) (100 = 10° C)
	EXTERNAL HEAT GENERATOR ACTIVATION FOR DHW PRODUCTION	7B0D	DHW production is provided by the PAC alone, or DHW production is also provided by the boiler as a back-up.	0 (without back-up) * 1 (back-up activated)
DOMESTIC HOT WATER	SET AMBIENT TEMPERATURE	6000	Set DHW temperature. (Value registered by the probe integrated in the tank)	Adjustment between 10° C and + 70° C (100 = 10° C))
	GLOBAL BACK-UP ACTIVATION FOR DHW PRODUCTION	6014	Back-up validation for DHW production (boiler or electric resistances).	0 (sans appoint) * 1 (appoint électrique ou chaudière activé)
	ELECTRIC BACK-UP ACTIVATION FOR DHW PRODUCTION	6015	DHW production is provided by the PAC alone, or DHW is also provided by the electric back-up.	0 (without back-up) * 1 (back-up activated)
ELECTRIC HEATING BACK-UP	ELECTRIC HEATING SYSTEM ACTIVATION	7900	Electric back-up activation.	0 (without back-up) 1 (back-up activated)*
	ROOM ELECTRIC HEATING ACTIVATION	7902	Room heating is provided by the PAC alone, or room heating is also provided by the electric back-up.	0 (without back-up) * 1 (back-up activated)
	ELECTRIC HEATING SYSTEM BIVALENCE TEMPERATURE	790B	Electric backup bivalence temperature point setting .	Factory setting at 10° (adjustment between - 50° C to 50° C) (100 = 10° C)
	ELECTRIC HEATING SYSTEM MAXIMUM CAPACITY	7907	Determines the maximum capacity of the electric heating backup system.	1 3kW 2 6kW 3 9kW
BUFFER TANK	BUFFER TANK (PROBE PRESENCE)	7200	Confirms presence or absence of the buffer tank temperature probe (BTT) on the water outlet.	0 (probe absent) 1 (probe present) *

* : Factory setting

PARAMETER		CODE	DESCRIPTION	SETTINGS
CIRCUIT HEATING 1	AMBIENT TEMPERATURE	2000	Ambient temperature setting for normal operating conditions (normal set temperature).	Adjustment between 10° C and + 30° C (100 = 10° C)
	REMOTE CONTROL	2003	Ambience terminal activation. An ambience terminal can be installed on each of the heating circuits.	0 (without terminal) 1 (with a terminal)*
	HEATING CURVE SLOPE	2006	This parameter changes the slope of the heating curve	Adjustment between 0 and 3.5 Factory setting: 0.6
	HEATING CURVE PARALLEL	2007	This parameter offsets the entire heating curve from a fixed value.	Adjustment between -15° C and +40° C Factory setting: 0° C
	MAXIMUM OUTLET TEMPERATURE	200E	Maximum authorised outlet temperature, irrespective of the value calculated by the regulation system (water law).	Adjustment between 10° C and + 70° C (100 = 10° C) Recommended settings: Under-floor heating: 45° C Radiators 70° C
CIRCUIT HEATING 2	AMBIENT TEMPERATURE	3000	Ambient temperature setting for normal operating conditions (normal set temperature).	Adjustment between 10° C and + 30° C (100 = 10° C)
	REMOTE CONTROL	3003	Ambience terminal activation. An ambience terminal can be installed on each of the heating circuits.	0 (without terminal) 1 (with a terminal)*
	HEATING CURVE SLOPE	3006	This parameter changes the slope of the heating curve	Adjustment between 0 and 3.5 Factory setting: 0.6
	HEATING CURVE PARALLEL	3007	This parameter offsets the entire heating curve from a fixed value.	Adjustment between -15° C and +40° C Factory setting: 0° C
	MAXIMUM OUTLET TEMPERATURE	300E	Maximum authorised outlet temperature, irrespective of the value calculated by the regulation system (water law).	Adjustment between 10° C and + 70° C (100 = 10° C) Recommended settings: Under-floor heating: 45° C Radiators 70° C
COOLING	COOLING MODE	7100	Enables selection of the way in which the circuit selected for cooling is configured.	0 no Cooling mode. 1 direct Cooling with NC box accessory without mixer valve. 2 direct Cooling with NC box accessory with mixer valve. 3 not used.
	COOLING CIRCUIT	7101	Enables selection of which circuit is going to be used for the cooling mode.	1 Circuit A1 (direct) used for Cooling mode. 2 Circuit M2 (mixed) used. 3 Setting value not used. 4 Independent circuit used for Cooling mode.
	AMBIENT TEMPERATURE	7102	Setting the set cooling temperature for the independent circuit.	Adjustment between 10° C and + 30° C (100 = 10° C)
	COOLING FUNCTION ACTIVATION	71FE	Confirm once to activate Cooling mode (it will change to 1).	
FUNCTION	CONTROL LOCK	8800	Restricts user access to the Menus.	0 Access to Basic menu and Expanded Menu. 1 No access to Basic menu and Expanded Menu. Only Manual operation authorised. 2 Basic Menu access authorised, no access to expanded Menu.

* : Factory setting

19. OPERATING CHECK LIST

19.1. GENERAL

Check for any unusual noises or vibration in the running components, particularly the indoor fan drive system.

19.2. OPERATING VOLTAGE:

1. Recheck voltage at unit supply terminals.

19.3. CONTROL

1. Verify all sensor inputs, using the controller display.

19.4. FAN & DRIVE

1. Check that the fans rotate freely without rubbing.

19.5. COMPRESSOR AND REFRIGERATION SYSTEM

1. Checking operation: Start the **Aqu@Scop Advance Split DCI**. Check for any abnormal noises or vibrations.

19.6. FINAL CHECK

1. All panels and fan guards are in place and secured.
2. The ground wires of the panels are correctly connected.
3. Unit clean and free of remainder installation material.

20. FINAL TASKS

If needed, fix the cables and the pipes on the wall with clamping collars.

Operate the heat pump in the presence of the user and explain all functions.

21. IN CASE OF WARRANTY - MATERIAL RETURN PROCEDURE

Material must not be returned without permission of our After Sales Department.

To return the material, contact your nearest sales office and ask for a "return voucher". The return voucher shall be sent with the returned material and shall contain all necessary information concerning the problem encountered.

The return of the part is not an order for replacement. Therefore, a purchase order must be entered through your nearest distributor or regional sales office. The order should include part name, part number, model number and serial number of the unit involved.

Following our personal inspection of the returned part, and if it is determined that the failure is due to faulty material or workmanship, and in warranty, credit will be issued on customer's purchase order. All parts shall be returned to our factory, transportation charges prepaid.

22. ORDERING SERVICE AND SPARE PARTS ORDER

The part number, the order confirmation and the unit serial number indicated on the name plate must be provided whenever service works or spare parts are ordered.

For any spare part order, indicate the date of unit installation and date of failure. Use the part number provided by our service spare parts, if it not available, provide full description of the part required.

23. MAINTENANCE

The user is responsible for ensuring that the appliance is in a proper working condition and that technical installation as well as the regular maintenance operations are performed by properly trained technicians and in accordance with the instructions contained in this manual.



Some alarms can only be cancelled by switching the **Aqu@Scop Advance Split DCI** to **OFF**.

Generally, an alarm means that there is an anomaly present on the appliance. We **strongly** recommend that you refrain from repeatedly resetting an alarm without rectifying its cause in order to avoid the risk of **causing irrevocable damage** to one or several components.

23.1. REGULAR MAINTENANCE

These units have been designed for minimum maintenance through the use of permanently lubricated components. However, there are operational maintenance requirements that require regular attention to ensure optimum performance.

Maintenance must be performed by appropriately experienced personnel only.

WARNING : Isolate unit from power supply before working on unit.

23.2. GENERAL INSPECTION

Carry out a visual inspection of the complete installation in service.

Check the general cleanness of the installation, and check if the condensate evacuation is not blocked.

23.3. REFRIGERATION CIRCUIT

Clean the heat exchanger using a special product for aluminium-copper heat exchangers, and rinse with water. Do not use hot water or steam, as this could cause the pressure of the refrigerant to rise.

Check that the surface of the aluminium fins of the heat exchanger is not damaged by impacts or scratches, and clean with an appropriate tool if necessary.

The refrigeration system is hermetically sealed and should require no regular maintenance. However, it is recommended to leak test the refrigerant system and check the general operating conditions and control devices on a regular basis. The operating pressures should be checked particularly as they are an excellent guide for maintenance.

23.4. ELECTRICAL SECTION

Check that the main power supply cable is not damaged or altered in such a way as to affect the insulation.

The contact surfaces of relays and contactors should be inspected regularly by an electrician and replaced as judged necessary. On these occasions the control box should be blown out with compressed air to remove any accumulation of dust or other contaminants.

Check the earth grounding connection.

CAUTION



BEFORE CARRYING OUT ANY OPERATION ON THE EQUIPMENT, CHECK THAT THE ELECTRICAL POWER SUPPLY IS SWITCHED OFF AND THAT IT CANNOT BE SWITCHED ON INADVERTENTLY.

23.5. SERVICING CHECKLIST

23.5.1. CASING

1. Clean the outer panels.
2. Remove the panels.
3. Check that the insulation is not damaged. Repair as required.

23.5.2. REFRIGERATION CIRCUIT

1. Check the absence of gas leaks.
This equipment must be subjected to regular tightness checks conducted by qualified personnel. Please refer to national requirements to determine the frequency of these checks.
2. Check that the copper tubes or the capillary tubes do not rub against any metal or vibrate.
3. Check that the compressor do not generate any abnormal noises or vibrations.
4. Check the compressor discharge temperature.

23.5.3. COILS

1. Clean the fin surfaces as required.
2. Check the condition of the fans and the fan motors.

23.5.4. ELECTRICAL EQUIPMENT

1. Check nominal current draw and the condition of the fuses.
2. Check the tightness of the screw terminals.
3. Perform a visual check of the condition of the contacts.
4. Check the general tightness of all cable connections.

Replace the panels and add any missing screws.

23.5.5. HYDRAULIC CIRCUIT

1. Check that the hydraulic circuit is filled properly and that the fluid flows freely without any signs of leakage or air bubbles.
2. Check the cleanness of the filter.

24. LIST OF SETTINGS

PARAMETER ADDRESS	DESCRIPTION
2000	Standard room temperature
2001	Reduced room temperature
2006	Remote control
200A	Heating curve level
200B	Heating curve slope
200E	Influence room temperature hook-up
2022	Room temperature hook-up
5000	Max. correction flow temperature heating circuit
5030	Max. flow temperature heating circuit
600E	Room temperature in party mode
6014	Enable compressor
7320	Output compressor stage 1
7907	Set DHW temperature
7B01	Min. DHW temperature
7B02	Max. DHW temperature
7B0D	Hysteresis DHW temperature heat pump
7C00	Hysteresis DHW temperature instant. heating water heater
7C01	Start optimisation for DHW heating
7C02	Stop optimisation for DHW heating
7C04	Set DHW temperature 2
7C06	Temperature sensor at bottom of DHW cylinder
6014	Enable booster heaters for DHW heating
6015	Enable electric heaters for DHW heating
6016	Priority DHW heating with combi cylinder
6017	Start attempts for DHW after high pressure shutdown
6020	Operating mode cylinder primary pump
701B	System scheme
701C	Language
7101	Temperature differential for calculating the heating limit
7102	Temperature differential for calculating the cooling limit
7204	External extension
7208	System components for external changeover
7300	Operating status for external changeover
7303	Duration of external changeover
730C	Effect of external demand on heat pump/heating circuits
730D	Effect of ext. blocking on heat pump/heating circuits
7320	Vitocom 100
7902	Effect of external blocking on pumps/compressor
7907	Common flow temperature sensor system
701C	Operating status after message A9, C9
7100	Cooling function
7101	Cooling circuit
7102	Set room temperature separate cooling circuit

PARAMETER ADDRESS	DESCRIPTION
7103	Min. flow temperature cooling
7104	Influence room temperature hook-up cooling circuit
7110	Cooling curve level
7111	Cooling curve slope
71FE	Active cooling function on site
7200	Enable buffer cylinder/low loss header
7202	Temp. in operating status fixed value for buffer cyl
7203	Hysteresis temperature heating buffer cylinder
7204	Max. temperature buffer cylinder
7208	Temp. limit op. status fixed value for buffer cylinder
7300	Heat pump for drying a building
7303	Time program for screed drying
730C	Flow temperature for external demand
730D	Enable three-way diverter valve heating/DHW
7320	Operating mode primary pump
7340	Operating mode secondary pump
7900	Enable instantaneous heating water heater
7902	Enable instant. heating water heater for central heating
7907	Max. output instantaneous heating water heater
790A	Output for instant. Heating water heater at power-OFF
790B	Dual mode temp. instant. heating water heater
7B00	Enable external heat source
7B01	Priority ext. heat source/ instant. heating water heater
7B02	Dual mode temperature external heat source
7B0D	Enable external heat source for DHW heating
7C00	Automatic changeover summertime - wintertime
7C01	Start summertime - month
7C02	Start summertime - week
7C03	Start summertime - day
7C04	Start wintertime - month
7C05	Start wintertime - week
7C06	Start wintertime - day

25. ALARM LIST AVAILABLE ON THE DISPLAY

Fault number	Fault text
00	No faults
01	System error
02	RAZ after data error
03	Configuration error
05	Cooling circuit fault
06	Cooling circuit 2 fault
07	Cooling circuit message
08	Cooling circuit 2 message
0A	Outdoor unit fault
0B	Outdoor unit alarm
0C	Outdoor unit feedback
10	Outdoor probe
18	Outdoor probe
20	Second. outlet probe
21	Second. inlet probe
22	Second. 2 inlet probe
28	Second. outlet probe
29	Second. inlet probe
2A	Second. 2 inlet probe
30	Primary outlet probe
31	Primary inlet probe
32	Evap. temp. probe
33	Hot gas temp.
34	Hot gas 2 temp.
38	Primary outlet probe
39	Primary inlet probe
3A	Evap. temp. probe
3B	Hot gas temp.
3C	Hot gas 2 temp.
40	Heating circuit (CC2) outlet probe
41	Heating Circuit (CC3) outlet probe
43	Install. outlet probe
44	Cooling outlet probe
48	Heating Circuit (CC2) outlet probe
49	Heating Circuit (CC3) outlet probe
4B	Install. outlet probe
4C	Cooling outlet probe
50	Upper DHW probe
52	Lower DHW probe
54	Solar DHW probe
58	Upper DHW probe
5A	Lower DHW probe
5C	Solar DHW probe
60	Buffer tank temp. probe
63	Ext. heat gen. temp. probe
68	Buffer tank temp. probe
6B	Ext. heat gen. temp. probe
70	Heating circuit (CC1) amb. temp. probe
71	Heating Circuit (CC2) amb. temp. probe
72	Heating Circuit (CC3) amb. temp. probe
73	Cooling Circuit (CRS) amb. temp. probe
78	Heating Circuit (CC1) amb. temp. probe
79	Heating Circuit (CC2) amb. temp. probe

Fault number	Fault text
7A	Heating Circuit (CC3) amb. temp. probe
7B	Cooling Circuit (CRS) amb. temp. probe
92	Solar panel temp. probe
93	Solar inlet temp. probe.
9A	Solar panel temp. probe
9B	Solar outlet temp. probe.
A4	Non-return valve
A6	Secondary pump
A7	Solar circuit pump
A8	HC1 heating circuit pump
A9	Heat pump
AB	Back-up elec. heating
AD	Heating/DHW mixer valve
AE	Upper/Lower DHW probes
AF	DHW charge pump
B0	Appliance description
B1	Refrigerant circuit 1 KM bus
B2	Refrigerant circuit 2 KM bus
B4	AN converter
B5	EEPROM
B7	Outdoor unit KM bus
B9	Solar regulation KM bus
BA	Heating Circuit (CC) mixer valve KM bus
BB	Cooling mixer valve KM bus
BC	Heating circuit (CC1) distribution control KM bus
BD	Heating circuit (CC2) distribution control KM bus
BE	Heating circuit (CC3) distribution control KM bus
BF	Communication module
C2	Mains power supply
C5	Off-peak load shedding
C9	Refrigerating circuit (HP)
CA	Primary safety device
CB	Primary outlet temperature
CC	Coding pin
CD	Vitocom KM bus
CE	Extension KM bus
CF	Communication module
D1	Compressor safety
D3	Low pressure
D4	HP regulation
D6	Flow controller
DA	2nd compressor safety
DB	Refrigerant circuit (HP) 2
DC	Low pressure 2
DD	HP regulation 2
E0	LON participant
E1	External heat generator
E2	PAC cascade
F0	Compressor cooling circuit.
F1	Compressor 2 cooling circuit
F2	Parameter. 5030/5130
FF	Restarting



Generally, an alarm means that there is an anomaly with the appliance. We strongly **advise against** repeatedly resetting an alarm at the risk of causing **irreparable damage** to one or several components.

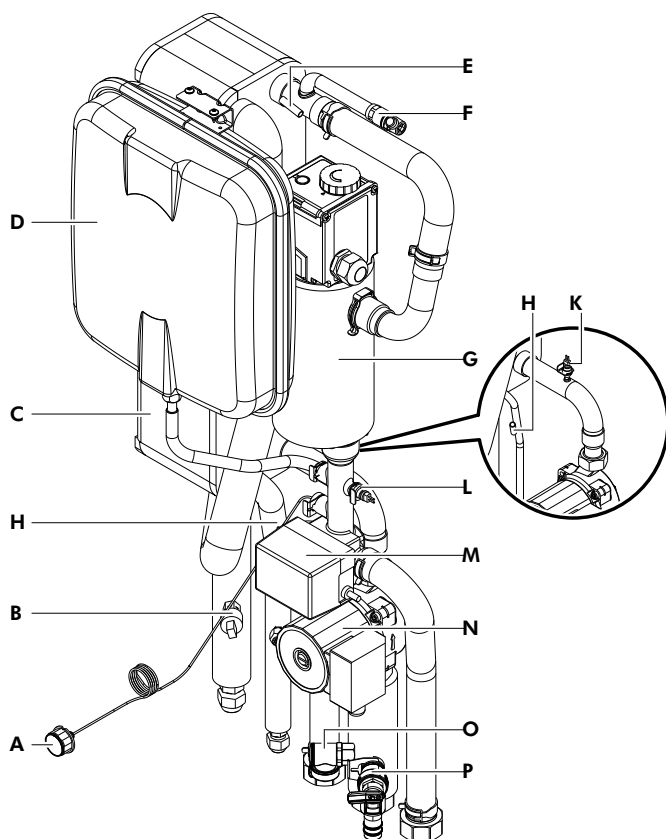
26. FAULTY DIAGNOSIS GUIDE

26.1. STEPS IF THE ROOM TEMPERATURE IS TOO LOW

1. Vent the heating circuits.
2. Check throughput of affected heating circuits. Recommended temperature differential between heating flow and return approx. 8 K.
3. Hydraulically balance the connected heating circuits.
4. Check the outside temperature sensor.
5. Increase the set room temperature for standard mode and match the heating curves.
6. Enable heating operation via the inte-gral instantaneous heating waterheater (if installed)

26.2. OVERVIEW OF INTERNAL COMPONENTS

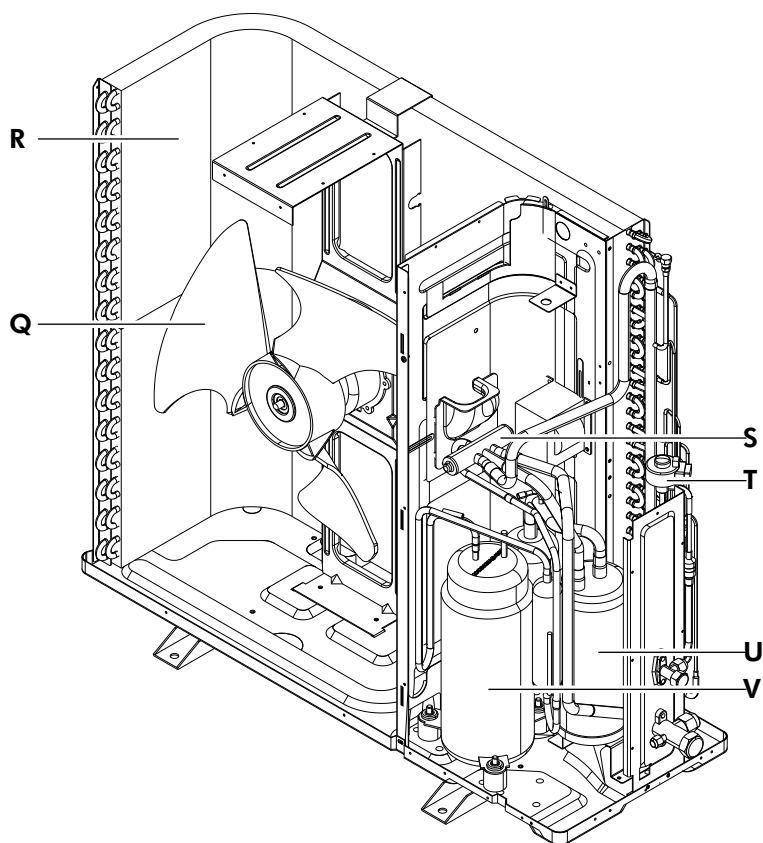
26.2.1. INDOOR UNIT



- A** Pressure gauge
- B** Pressure sensor (for condensate pressure during heating mode or evaporation pressure in cooling mode)
- C** Condenser (heating mode) / evaporator (cooling mode)
- D** Expansion vessel
- E** Flow temperature sensor, secondary circuit
- F** Air vent valve, secondary circuit
- G** Instantaneous heating water heater (if installed)
- H** Temperature sensor: Liquid gas (heating mode) / hot gas (cooling mode)
- K** Flow temperature sensor, secondary circuit
- L** Return temperature sensor, secondary circuit
- M** 3-way diverter valve, heating/DHW
- N** Secondary pump
- O** Fill valve, secondary circuit
- P** Safety valve (3 bar)

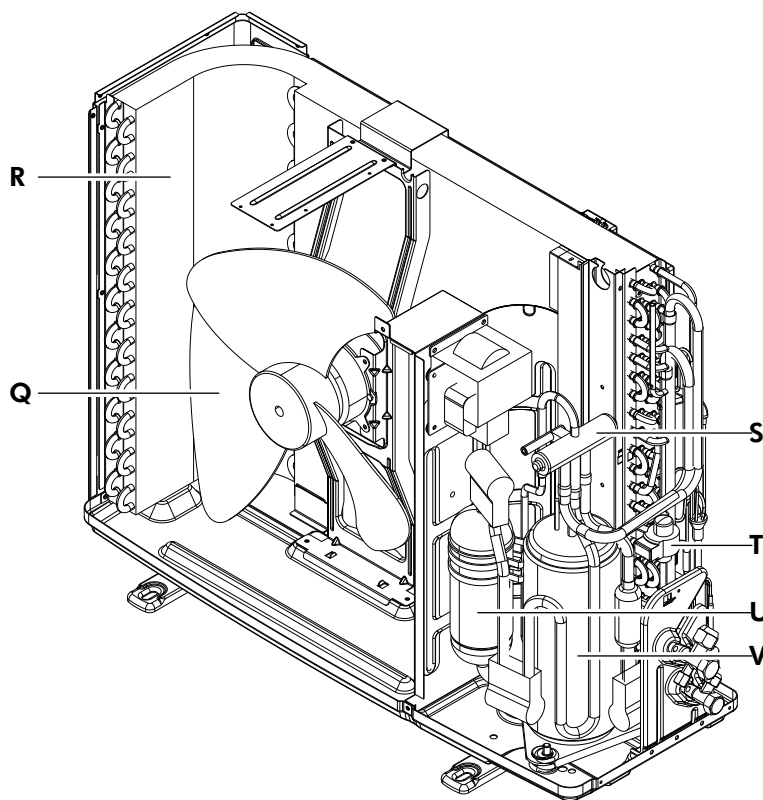
26.2.2. OUTDOOR UNIT

26.2.2.1. AWAU-YVD005-H11



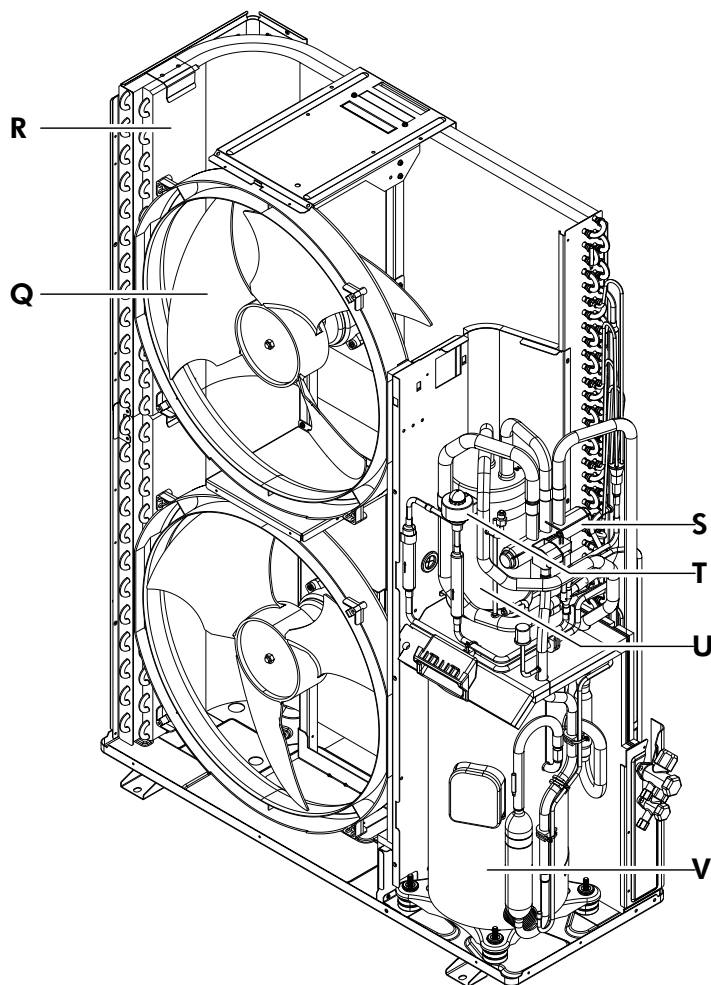
- Q** Fan
- R** Condenser (cooling mode) / evaporator (heating mode)
- S** 4-way diverter valve heating/cooling
- T** Electronic expansion valve (EEV)
- U** Liquid separator
- V** Compressor

26.2.2.2. AWAU-YVD008-H11



- Q** Fan
- R** Condenser (cooling mode) / evaporator (heating mode)
- S** 4-way diverter valve heating/cooling
- T** Electronic expansion valve (EEV)
- U** Liquid separator
- V** Compressor

26.2.2.3. AWAU-YVD012-H11 - AWAU-YVD014-H11



- Q** Fan
- R** Condenser (cooling mode) / evaporator (heating mode)
- S** 4-way diverter valve heating/cooling
- T** Electronic expansion valve (EEV)
- U** Liquid separator
- V** Compressor

26.3. DRAINING THE HEAT PUMP ON THE PRIMARY/SECONDARY SIDE

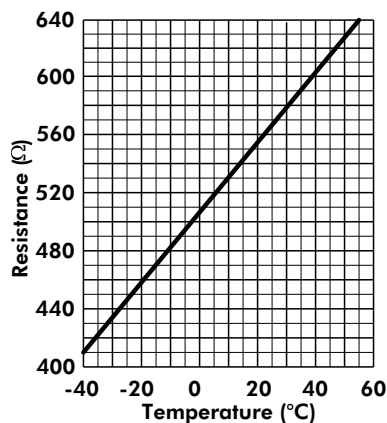
1. Close on-site BDF valve.
2. Drain heat pump at drain valve on primary/secondary side

26.4. CHECKING SENSORS

Chek that:

- the sensor connections to the controller and sensor PCB.
- the position of the sensors in the heatpump.

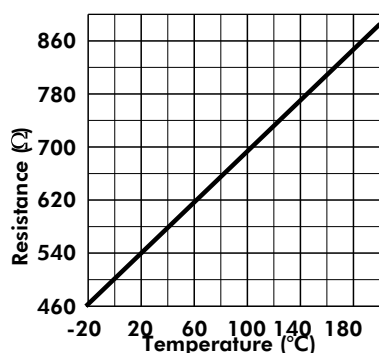
26.4.1. TEMPERATURE SENSORS TYPE NI 500



Capturing element: "Ni 500"

- Outside temperature sensor (F0)
- Flow temperature sensor, cooling circuit (direct heating circuit A1 or separate cooling circuit) (F14)
- Room temperature sensors

26.4.2. TEMPERATURE SENSORS TYPE PT 500



Capturing element "Pt 500"

- Buffer temperature sensor (F4)
- Top (F6) and bottom (F7) cylinder temperature sensors
- Flow temperature sensor, system(F13)
- Flow temperature sensor, solar circuit(F18)
- Boiler temperature sensor, external heat source (F20)
- Return temperature sensor, solar cir-cuit (F21)

26.5. CHECKING THE FUSES

Fuse locations:

- Fuse F1 is located on the power terminal of the heat pump control unit.
- Fuse F3 is located on the main PCB.
- Fuse F101 is located on the AVI PCB.

Fuses F1 and F3:

- 6.3 AH (slow), 250 V~
- Max. power loss ≤ 2.5 W

Fuse F101:

- 0.2 AL (slow)



**POWER SUPPLY MUST BE SWITCHED OFF
BEFORE STARTING WORK IN THE ELECTRIC CONTROL BOX**

APPENDIX
ANNEXE
ANLAGE
ALLEGATO
ANEXO

APPENDIX

DIMENSIONS.....	III
REFRIGERATION AND HYDRAULIC LINKS DIAGRAM	VII
WATER FLOW CALCULATION GRAPH	XI
WIRING DIAGRAM.....	XII

ANNEXE

DIMENSIONS.....	III
SCHÉMA FRIGORIFIQUE ET HYDRAULIQUE.....	VII
ABAQUE DE CALCUL DE DÉBIT D'EAU	XI
SCHEMAS ELECTRIQUES.....	XII

ANLAGE

ABMESSUNGEN.....	III
KÜHL- UND HYDRAULIKDIAGRAMM	VII
BERECHNUNGSKURVE DER WASSERDURCHFLUSSMENGE.....	XI
STROMLAUFPLANS	XII

ALLEGATO

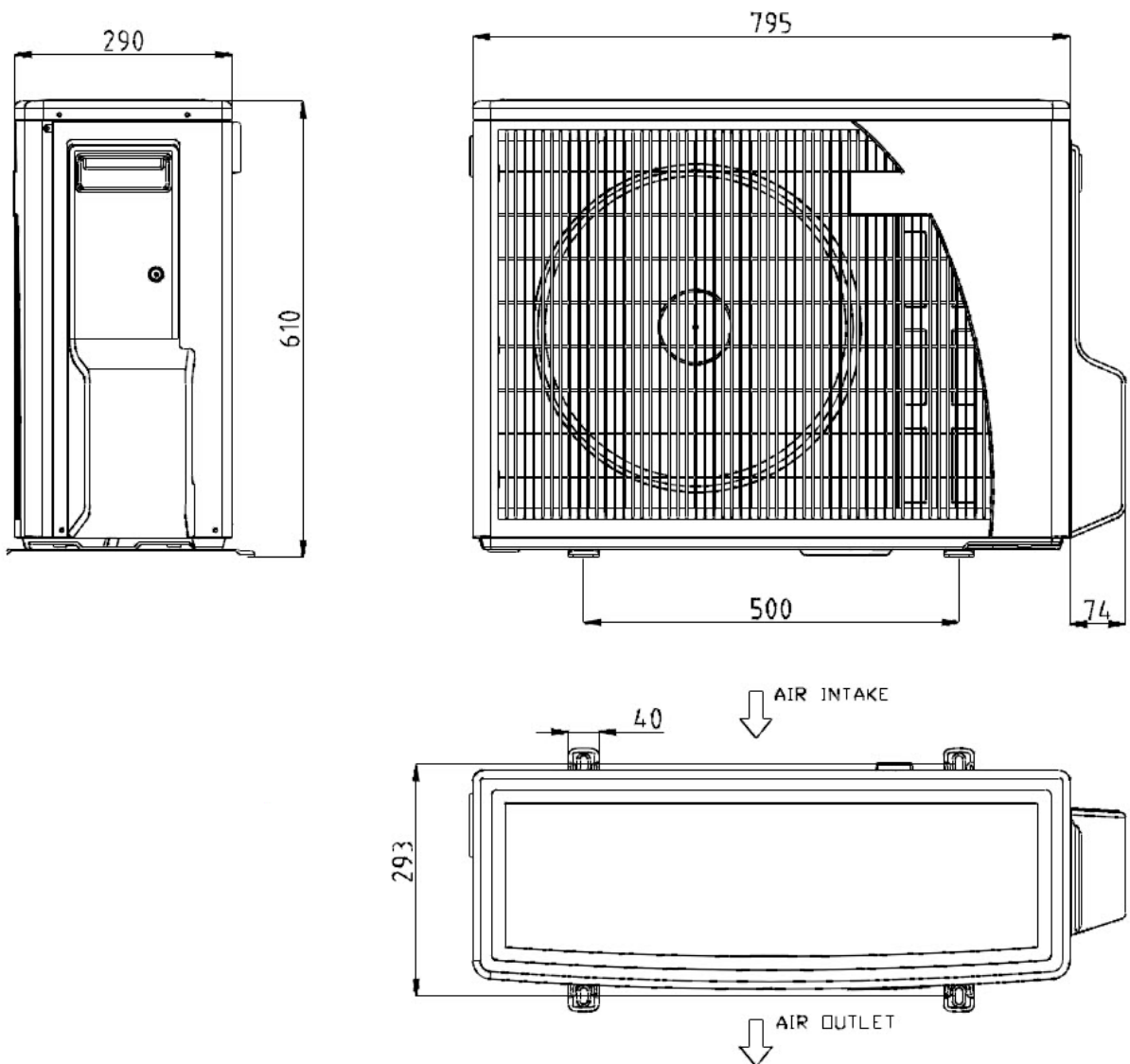
DIMENSIONI	III
SCHEMA FRIGORIFERO ED IDRAULICO	VII
ABACO DI CALCOLO DELLA PORTATA DELL'ACQUA.....	XI
SCHEMA ELETRICO.....	XII

ANEXO

DIMENSIONES.....	III
ESQUEMA FRIGORÍFICO E HIDRÁULICO	VII
ÁBACO DE CÁLCULO DE CAUDAL DE AGUA.....	XI
ESQUEMA ELECTRICO	XII

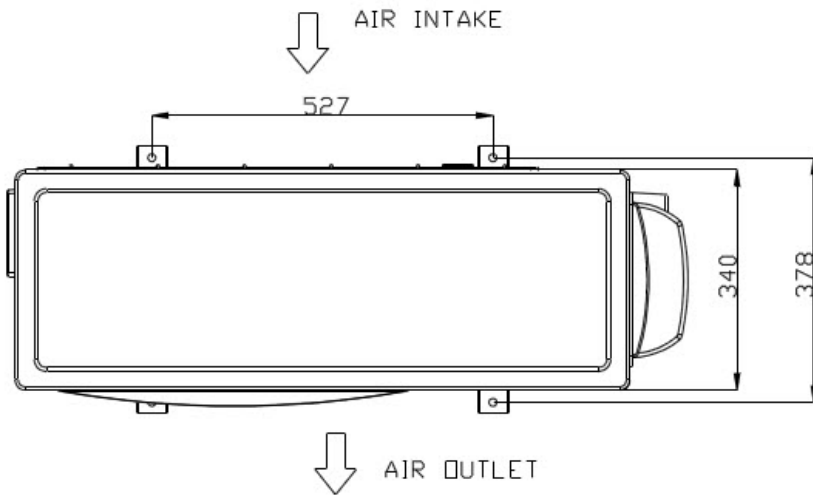
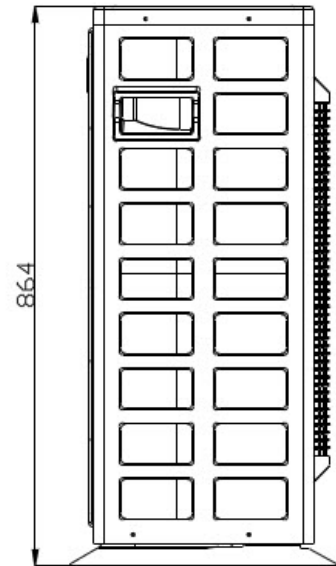
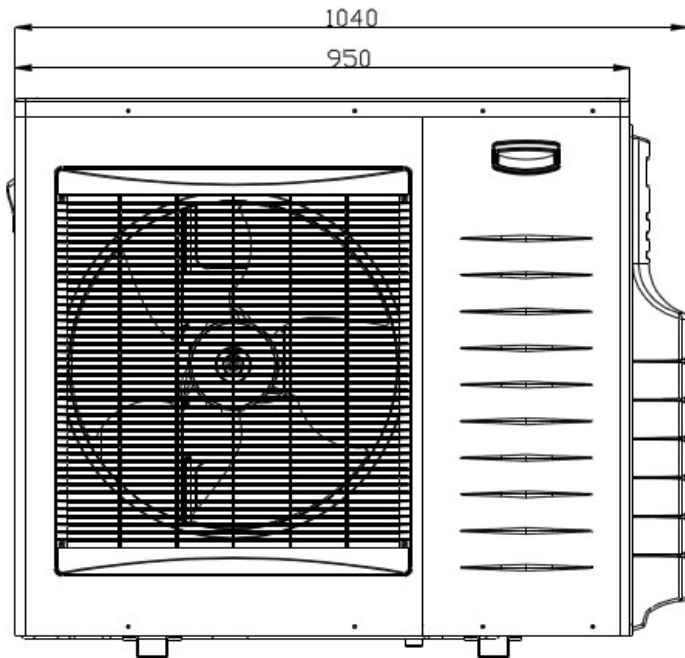
DIMENSIONS
DIMENSIONS
ABMESSUNGEN
DIMENSIONI
DIMENSIONES

AWAU YVD005-H11



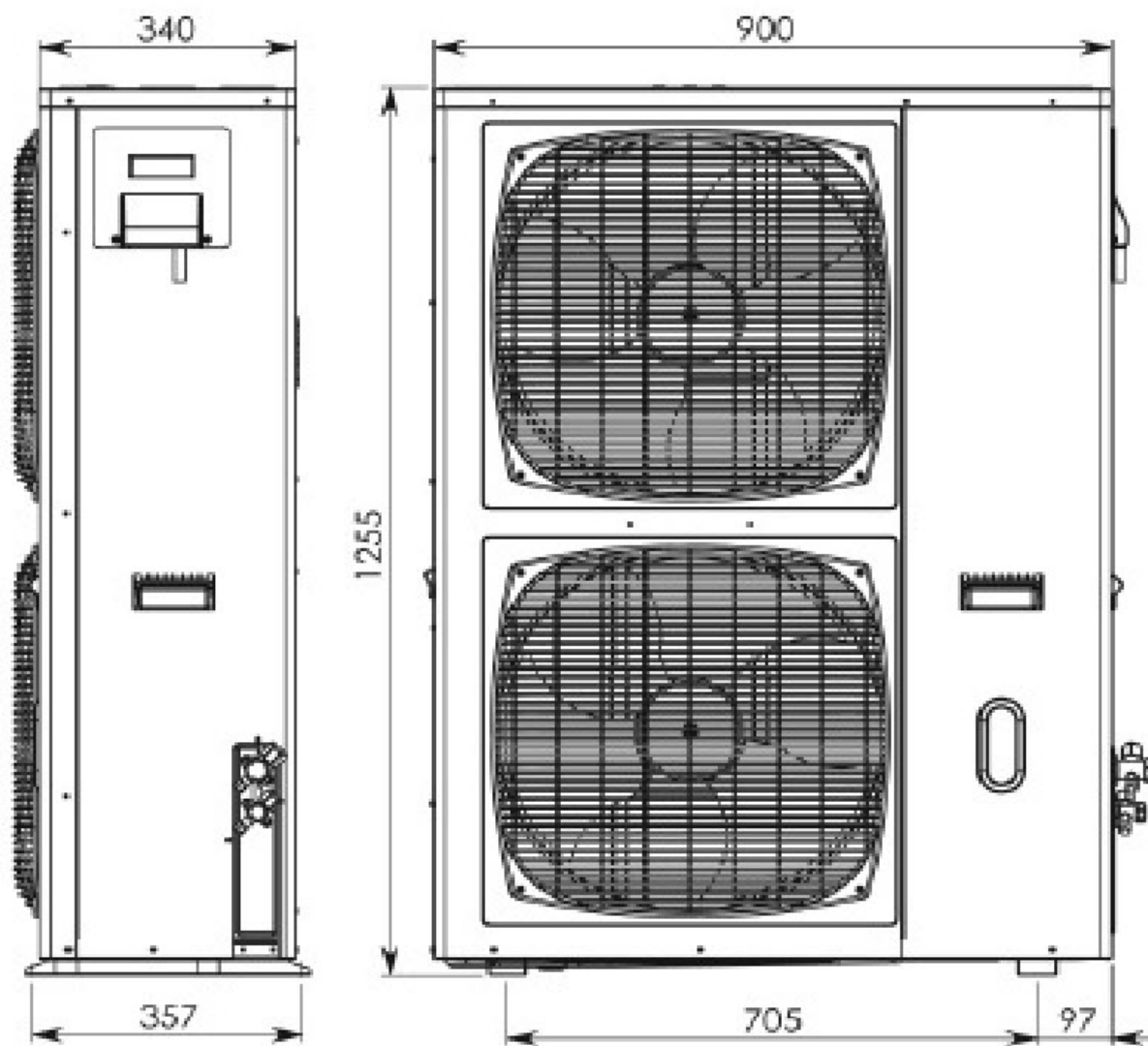
APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

AWAU YVD008-H11



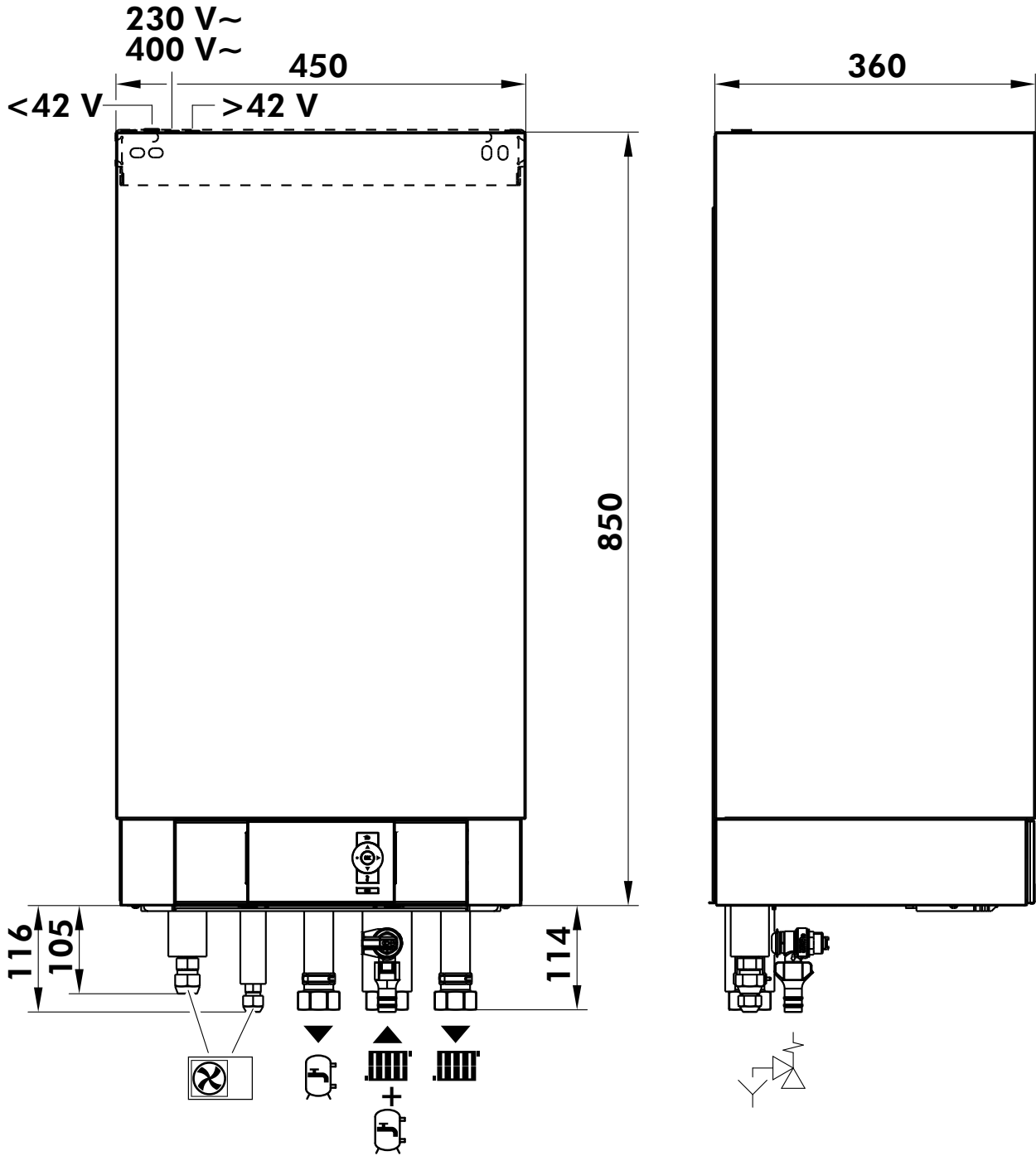
APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

AWAU YVD012-H11 / AWAU YVD014-H11



APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

AWSI-HVD005_08-R11 / AWSI-HVD005_08-H11
AWSI-HVD012_14-R11 / AWSI-HVD012_14-H11



REFRIGERATION AND HYDRAULIC LINKS DIAGRAM

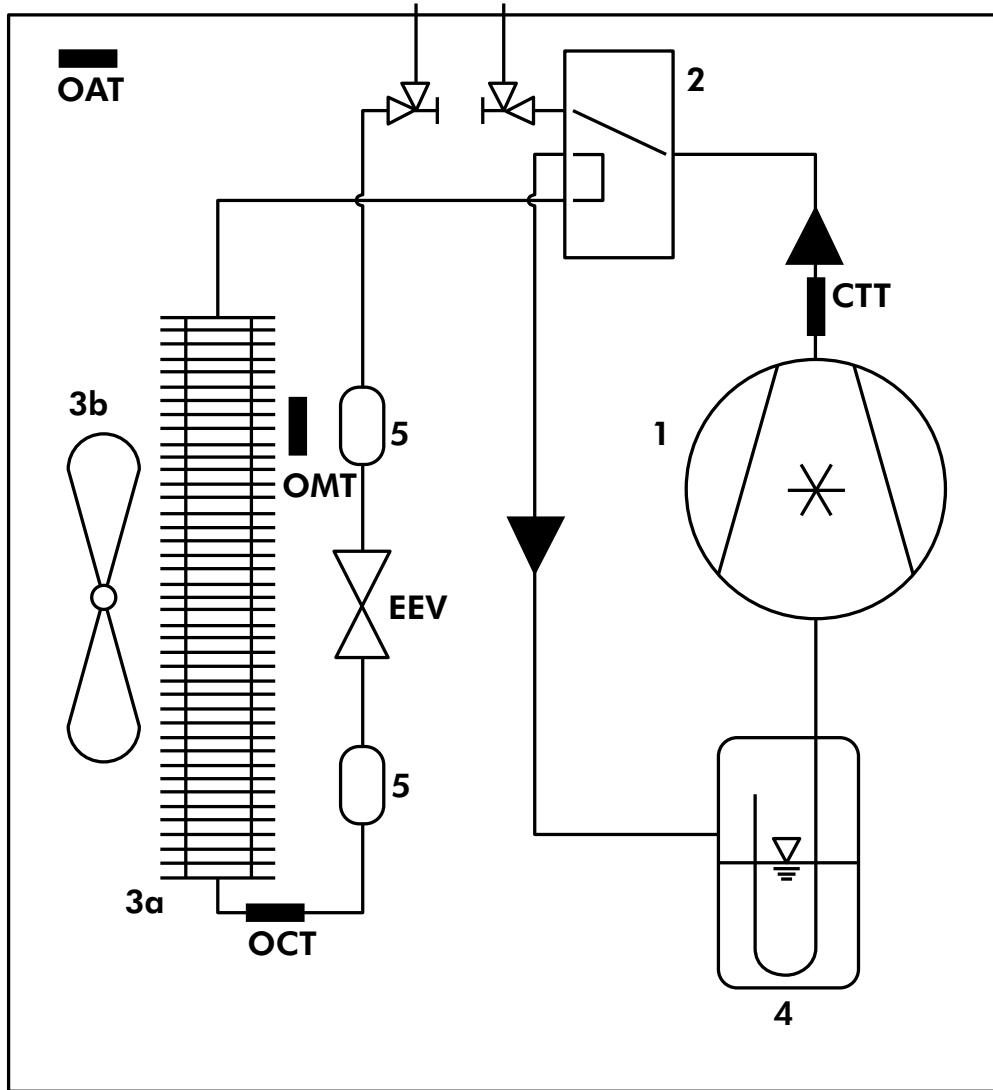
SCHÉMA FRIGORIFIQUE ET HYDRAULIQUE

KÜHL- UND HYDRAULIKDIAGRAMM

SCHEMA FRIGORIFERO ED IDRAULICO

ESQUEMA FRIGORÍFICO E HIDRÁULICO

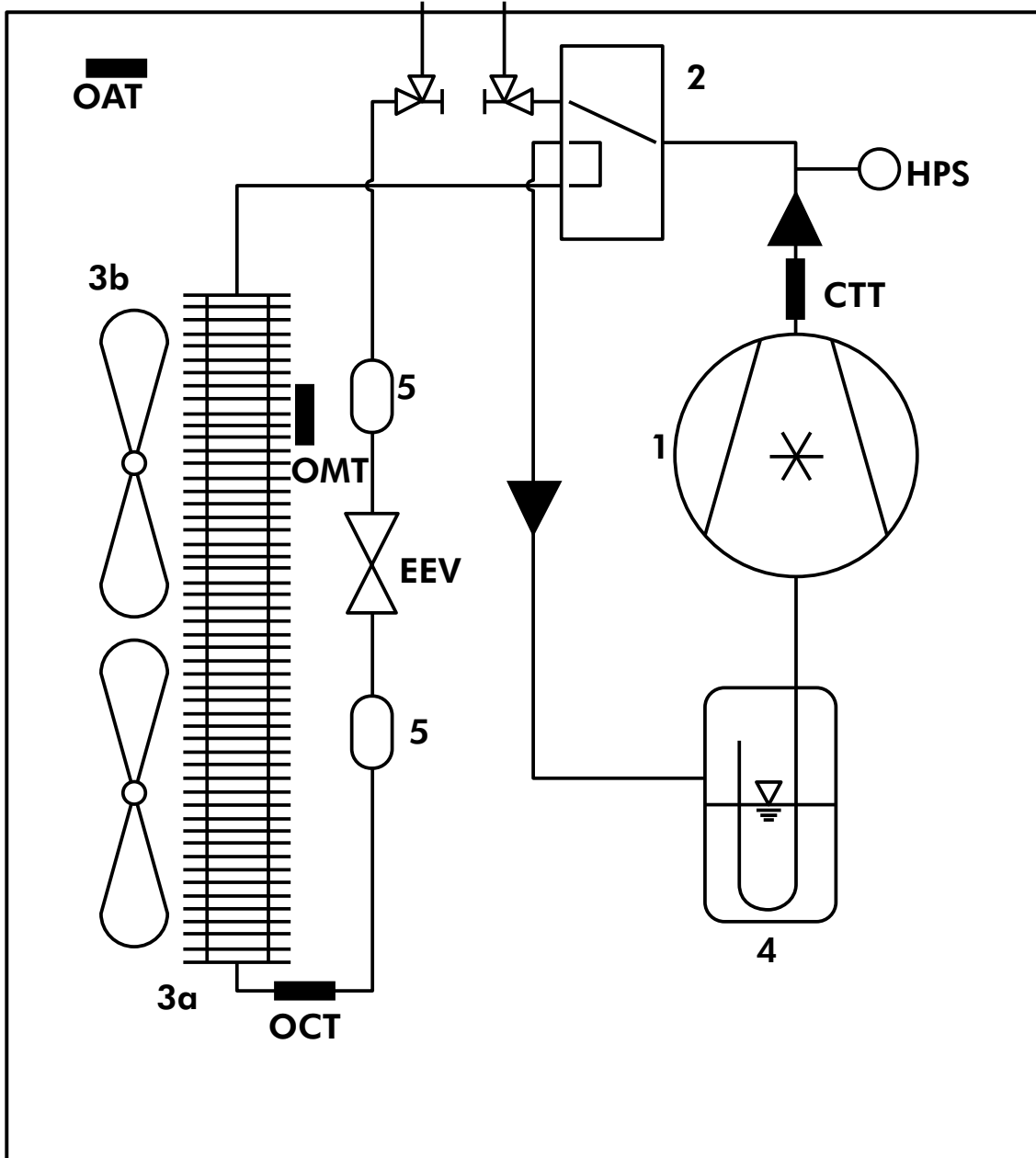
AWAU YVD005-H11 / AWAU YVD008-H11



	GB	F	D	I	E
1	Compressor	Compresseur	Kompressor	Compressore	Compresor
2	Switchover valve	Vanne d'inversion	Umschaltventil	Valvola di inversione	Válvula de inversión
3a	Finned heat exchanger	Echangeur à ailettes	Flügeltauscher	Scambiatore ad alette	Intercambiador de aletas
3b	Fans	ventilateurs	Ventilatoren	Ventilatori	Ventiladores
4	Liquid tank	Réservoir liquide	Flüssigkeitstank	Serbatoio liquido	Depósito líquido
5	Filter	Filtre	Filter	Filtro	Filtro
EEV	Electronic relief valve	Détendeur électronique	Elektronisches Reduzierventil	Valvola di espansione elettronica	Descompresor electrónico
OCT	Outdoor battery temperature	Température batterie extérieure	Temperatur externe Batterie	Temperatura batteria esterna	Temperatura batería exterior
OMT	Outdoor battery core temperature	Température milieu batterie extérieure	Temperatur Milieu externe Batterie	Temperatura ambiente batteria esterna	Temperatura medio batería exterior
OAT	Outdoor air temperature	Température air extérieur	Temperatur Außenluft	Temperatura aria esterna	Temperatura aire exterior
CTT	Compressor outlet temperature	Température de refoulement du compresseur	Temperatur der Kompressorförderung	Temperatura di mandata del compressore	Temperatura de descarga del compresor

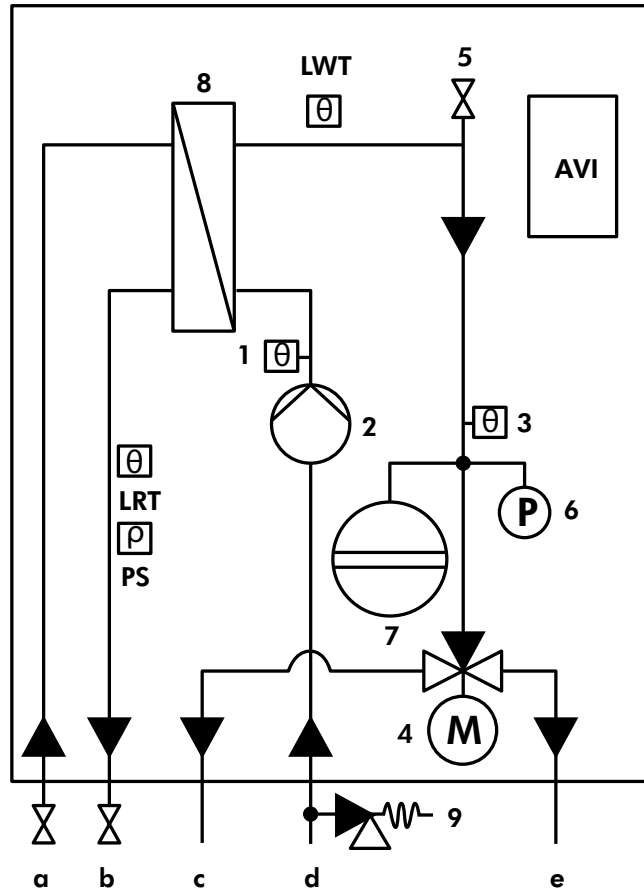
APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

AWAU YVD012-H11 / AWAU YVD014-H11



	GB	F	D	I	E
1	Compressor	Compresseur	Kompressor	Compressore	Compresor
2	Switchover valve	Vanne d'inversion	Umschaltventil	Valvola di inversione	Válvula de inversión
3a	Finned heat exchanger	Echangeur à ailettes	Flügeltauscher	Scambiatore ad alette	Intercambiador de aletas
3b	Fans	ventilateurs	Ventilatoren	Ventilatori	Ventiladores
4	Liquid tank	Réservoir liquide	Flüssigkeitstank	Serbatoio liquido	Depósito líquido
5	Filter	Filtre	Filter	Filtro	Filtro
EEV	Electronic relief valve	Détendeur électronique	Elektronisches Reduzierventil	Valvola di espansione elettronica	Descompresor electrónico
OCT	Outdoor battery temperature	Température batterie extérieure	Temperatur externe Batterie	Temperatura batterie esterna	Temperatura batería exterior
OMT	Outdoor battery core temperature	Température milieu batterie extérieure	Temperatur Milieu externe Batterie	Temperatura ambiente batteria esterna	Temperatura medio batería exterior
OAT	Outdoor air temperature	Température air extérieur	Temperatur Außenluft	Temperatura aria esterna	Temperatura aire exterior
CTT	Compressor outlet temperature	Température de refoulement du compresseur	Temperatur der Kompressorförderung	Temperatura di mandata del compressore	Temperatura de descarga del compresor
HPS	HP pressostat	Pressostat HP	HD-Druckwächter	Pressostato HP	Presostato AP

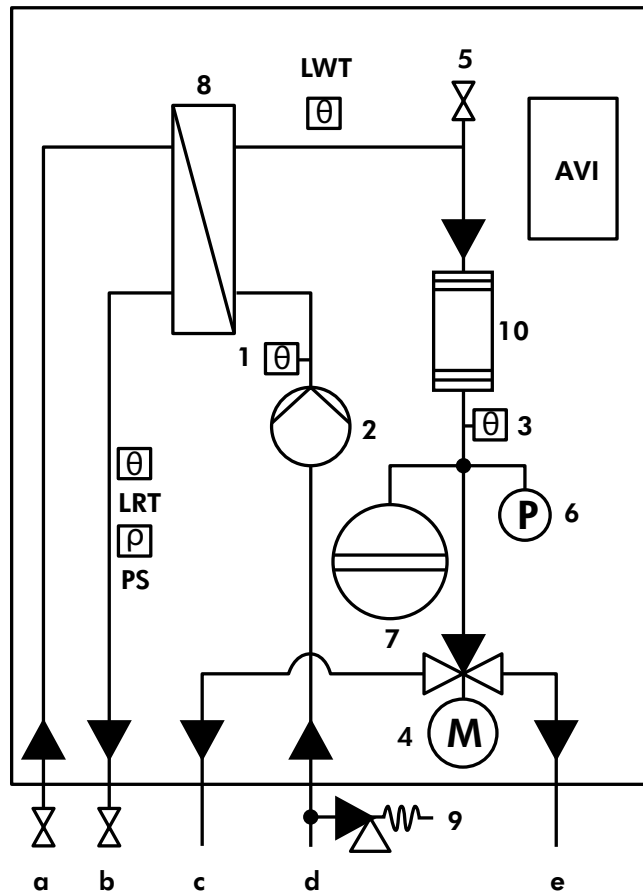
AWSI-HVD005_08_12_14-R11



	GB	F	D	I	E
1	Temperature probe (inlet hot water)	Sonde de température (eau chaude retour)	Temperatursonde (Warmwasserrücklauf)	Sonda di temperatura (acqua calda ritorno)	Sonda de temperatura (agua caliente retorno)
2	Pump	Pompe	Pumpe	Pompa	Bomba
3	Temperature probe (outlet hot water)	Sonde de température (eau chaude départ)	Temperatursonde (Warmwasserabgang)	Sonda di temperatura (acqua calda mandata)	Sonda de temperatura (agua caliente salida)
4	3-way valve (Domestic Hot Water/ Heating)	Vanne 3 voies (eau chaude sanitaire/ chauffage)	3-Wege-Ventil (Sanitäres Warmwasser/Heizung)	Valvola a 3 vie (acqua calda sanitaria/ riscaldamento)	Válvula 3 vías (agua caliente sanitaria/ calefacción)
5	Manual air bleed valve	Purgeur d'air manuel	Manueller Entlüfter	Valvola di sfianto dell'aria manuale	Purgador de aire manual
6	Water pressure gauge	Manomètre d'eau	Wassermanometer	Manometro dell'acqua	Manómetro de agua
7	Expansion tank	Vase d'expansion	Expansionsgefäß	Vaso di espansione	Vaso de expansión
8	Indoor plate heat exchanger	Échangeur à plaques intérieur	Innen-Plattentauscher	Scambiatore a piastre interno	Intercambiador de placas interior
9	Safety valve	Soupape de sécurité	Sicherheitsventil	Valvola di sicurezza	Válvula de seguridad
AVI	Interface board	Carte d'interface	Schnittstellenkarte	Scheda di interfaccia	Tarjeta de interfaz
LWT	Temperature probe (outlet water temp., AVI board kit)	Sonde de température (temp. sortie d'eau, kit carte AVI)	Temperatursonde (Temp. Wasserausgang, Bausatz Karte AVI)	Sonda di temperatura (temp. uscita acqua, kit scheda AVI)	Sonda de temperatura (temp. salida de agua, kit tarjeta AVI)
LRT	Temperature probe (refrigerant inlet temp., AVI board kit)	Sonde de température (temp. aspiration réfrigérant, kit carte AVI)	Temperatursonde (Temp. Kühlmittelansaugung, Bausatz Karte AVI)	Sonda di temperatura (temp. aspirazione refrigerante, kit scheda AVI)	Sonda de temperatura (temp. aspiración refrigerante, kit tarjeta AVI)
PS	Pressure transducer (liquid pipe, AVI board kit)	Transducteur de pression (ligne liquide, kit carte AVI)	Drucktransducer (Flüssigkeitsleitung, Bausatz Karte AVI)	Trasduttore di pressione (linea liquido, kit scheda AVI)	Transductor de presión (línea líquido, kit tarjeta AVI)
a & b	Refrigerant	Réfrigérant	Kühlmittel	Refrigerante	Refrigerante
c	Outlet Domestic Hot Water	Départ eau chaude sanitaire	Abgang sanitäres Warmwasser	Mandata acqua calda sanitaria	Salida agua caliente sanitaria
d	Inlet water	Retour eau	Wasserrücklauf	Ritorno acqua	Retorno agua
e	Outlet Heating water	Départ eau chauffage	Abgang Heizwasser	Mandata acqua riscaldamento	Salida agua calefacción

APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

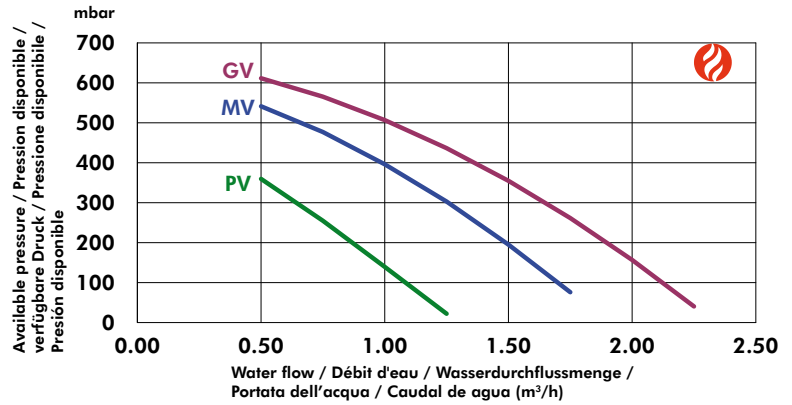
AWSI-HVD005_08_12_14-H11



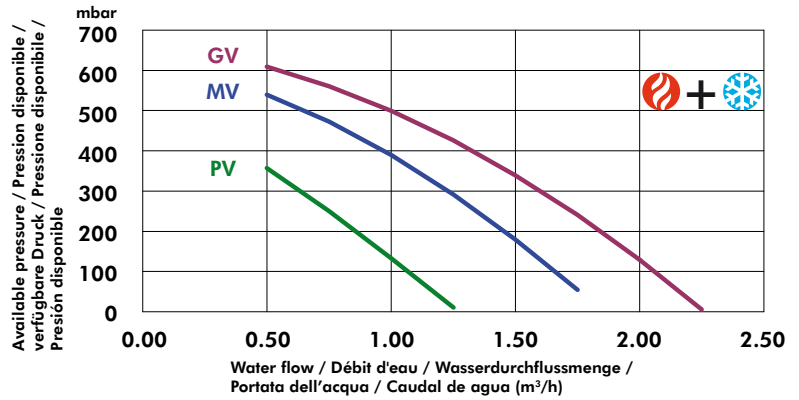
	GB	F	D	I	E
1	Temperature probe (inlet hot water)	Sonde de température (eau chaude retour)	Temperatursonde (Warmwasserrücklauf)	Sonda di temperatura (acqua calda ritorno)	Sonda de temperatura (agua caliente retorno)
2	Pump	Pompe	Pumpe	Pompa	Bomba
3	Temperature probe (outlet hot water)	Sonde de température (eau chaude départ)	Temperatursonde (Warmwasserabgang)	Sonda di temperatura (acqua calda mandata)	Sonda de temperatura (agua caliente salida)
4	3-way valve (Domestic Hot Water/ Heating)	Vanne 3 voies (eau chaude sanitaire/ chauffage)	3-Wege-Ventil (Sanitäres Warmwasser/Heizung)	Valvola a 3 vie (acqua calda sanitaria/ riscaldamento)	Válvula 3 vías (agua caliente sanitaria/ calefacción)
5	Manual air bleed valve	Purgeur d'air manuel	Manueller Entlüfter	Valvola di sfogo dell'aria manuale	Purgador de aire manual
6	Water pressure gauge	Manomètre d'eau	Wassermanometer	Manometro dell'acqua	Manómetro de agua
7	Expansion tank	Vase d'expansion	Expansionsgefäß	Vaso di espansione	Vaso de expansión
8	Indoor plate heat exchanger	Échangeur à plaques intérieur	Innen-Plattentauscher	Scambiatore a piastre interno	Intercambiador de placas interior
9	Safety valve	Soupape de sécurité	Sicherheitsventil	Valvola di sicurezza	Válvula de seguridad
10	Back-up electric heating	Appoint chauffage électrique	Zusatz Elektroheizung	Dispositivo integrativo riscaldamento elettrico	Complemento calentamiento eléctrico
AVI	Interface board	Carte d'interface	Schnittstellenkarte	Scheda di interfaccia	Tarjeta de interfaz
LWT	Temperature probe (outlet water temp., AVI board kit)	Sonde de température (temp. sortie d'eau, kit carte AVI)	Temperatursonde (Temp. Wasserausgang, Bausatz Karte AVI)	Sonda di temperatura (temp. uscita acqua, kit scheda AVI)	Sonda de temperatura (temp. salida de agua, kit tarjeta AVI)
LRT	Temperature probe (refrigerant inlet temp., AVI board kit)	Sonde de température (temp. aspiration réfrigérant, kit carte AVI)	Temperatursonde (Temp. Kühlmittelansaugung, Bausatz Karte AVI)	Sonda di temperatura (temp. aspirazione refrigerante, kit scheda AVI)	Sonda de temperatura (temp. aspiración refrigerante, kit tarjeta AVI)
PS	Pressure transducer (liquid pipe, AVI board kit)	Transducteur de pression (ligne liquide, kit carte AVI)	Drucktransducer (Flüssigkeitsleitung, Bausatz Karte AVI)	Trasduttore di pressione (linea liquido, kit scheda AVI)	Transductor de presión (línea líquido, kit tarjeta AVI)
a & b	Refrigerant	Réfrigérant	Kühlmittel	Refrigerante	Refrigerante
c	Outlet Domestic Hot Water	Départ eau chaude sanitaire	Abgang sanitäres Warmwasser	Mandata acqua calda sanitaria	Salida agua caliente sanitaria
d	Inlet water	Retour eau	Wasserrücklauf	Ritorno acqua	Retorno agua
e	Outlet Heating water	Départ eau chauffage	Abgang Heizwasser	Mandata acqua riscaldamento	Salida agua calefacción

WATER FLOW CALCULATION GRAPH
 ABAQUE DE CALCUL DE DÉBIT D'EAU
 BERECHNUNGSKURVE DER WASSERDURCHFLUSSMENGE
 ABACO DI CALCOLO DELLA PORTATA DELL'ACQUA
 ÁBACO DE CÁLCULO DE CAUDAL DE AGUA

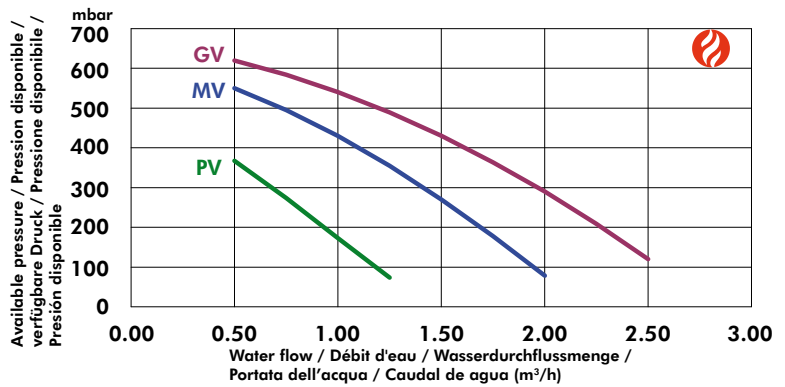
AWSI-HVD005_08-R11



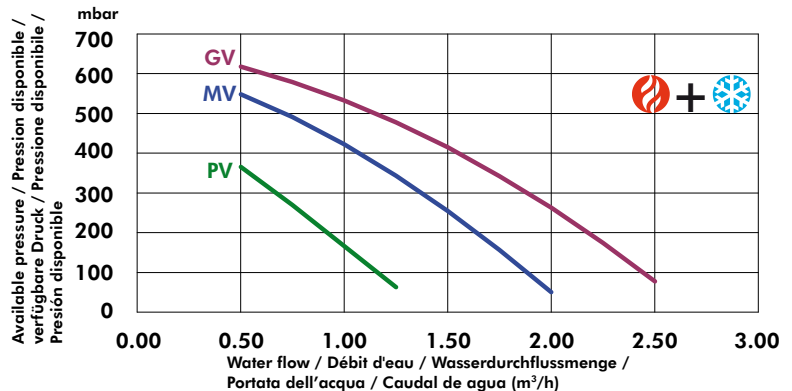
AWSI-HVD005_08-H11



AWSI-HVD012_14-R11



AWSI-HVD012_14-H11



APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

WIRING DIAGRAM SCHEMAS ELECTRIQUES STROMLAUFPLANS SCHEMA ELETRICO ESQUEMA ELECTRICO

TAKE CARE!

These wiring diagrams are correct at the time of publication. Manufacturing changes can lead to modifications. Always refer to the diagram supplied with the product.

ATTENTION

Ces schémas sont corrects au moment de la publication. Les variantes en fabrication peuvent entraîner des modifications. Reportez-vous toujours au schéma livré avec le produit.

ACHTUNG!

Diese Stromlaufplans sind zum Zeitpunkt der Veröffentlichung gültig. In Herstellung befindliche Varianten können Änderungen mit sich bringen. In jedem Fall den mit dem Produkt gelieferten Stromlaufplan hinzuziehen.

ATTENZIONE !

Questi schemi sono corretti al momento della pubblicazione. Le varianti apportate nel corso della fabbricazione possono comportare modifiche. Far sempre riferimento allo schema fornito con il prodotto.

ATENCIÓN !

Esto esquemas son correctos en el momento de la publicación. Pero las variantes en la fabricación pueden ser motivo de modificaciones. Remítase siempre al esquema entregado con el producto.

**POWER SUPPLY MUST BE SWITCHED OFF BEFORE STARTING TO
WORK IN THE ELECTRIC CONTROL BOXES!**

**MISE HORS TENSION OBLIGATOIRE AVANT TOUTE INTERVENTION
DANS LES BOITIERS ELECTRIQUES.**

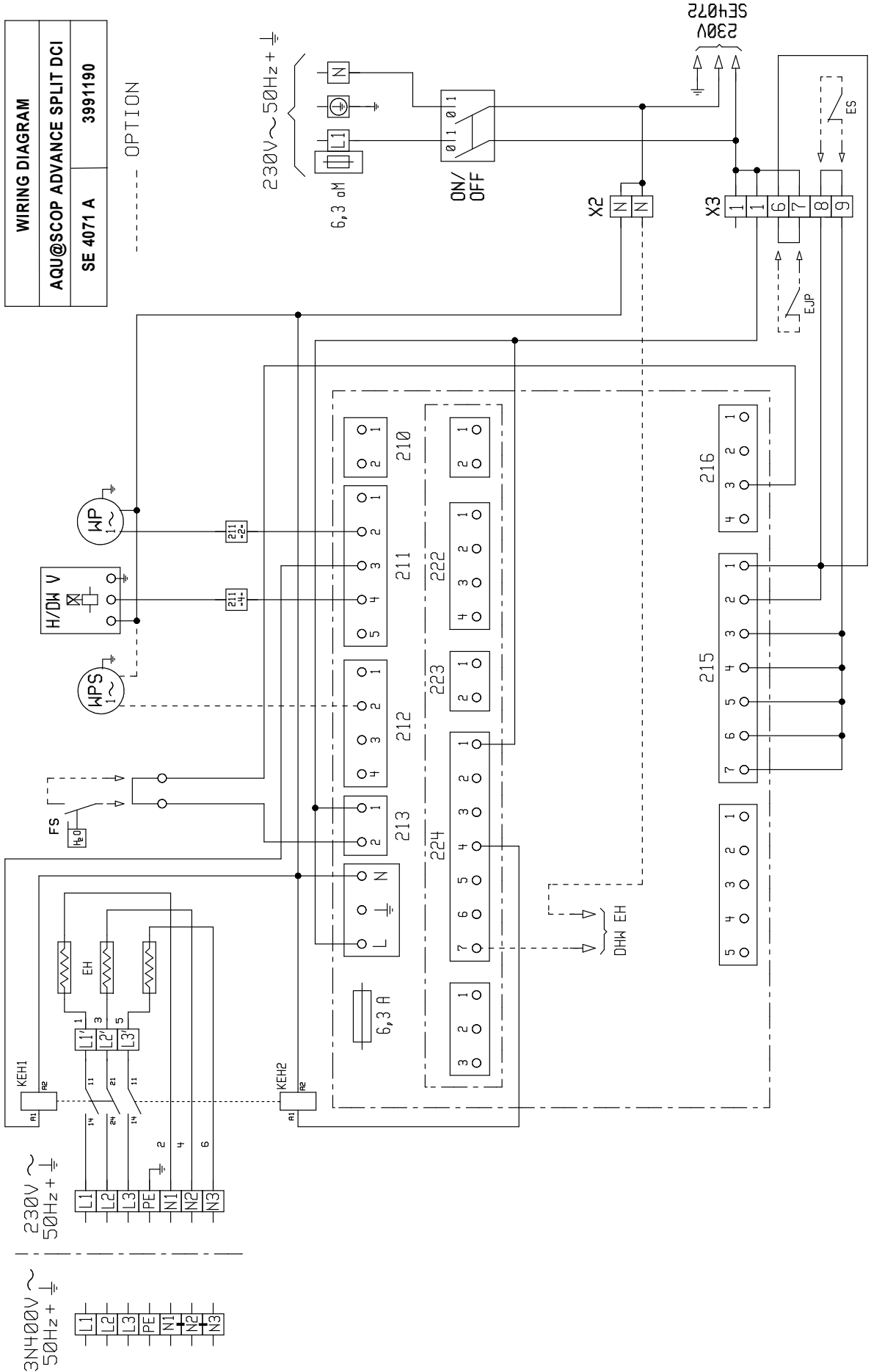
**VOR JEDEM EINGRIFF AN DEN ANSCHLUßKÄSTEN UNBEDINGT
DAS GERÄT ABSCHALTEN!**

**PRIMA DI OGNI INTERVENTO SULLE CASSETTE ELETTRICHE
ESCLUDERE TASSATIVAMENTE L'ALIMENTAZIONE !**

**PUESTA FUERA DE TNESIÓN OBLIGATORIA ANTES DE CUALQUIER
INTERVENCIÓN EN LAS CAJAS ELÉCTRICAS!**



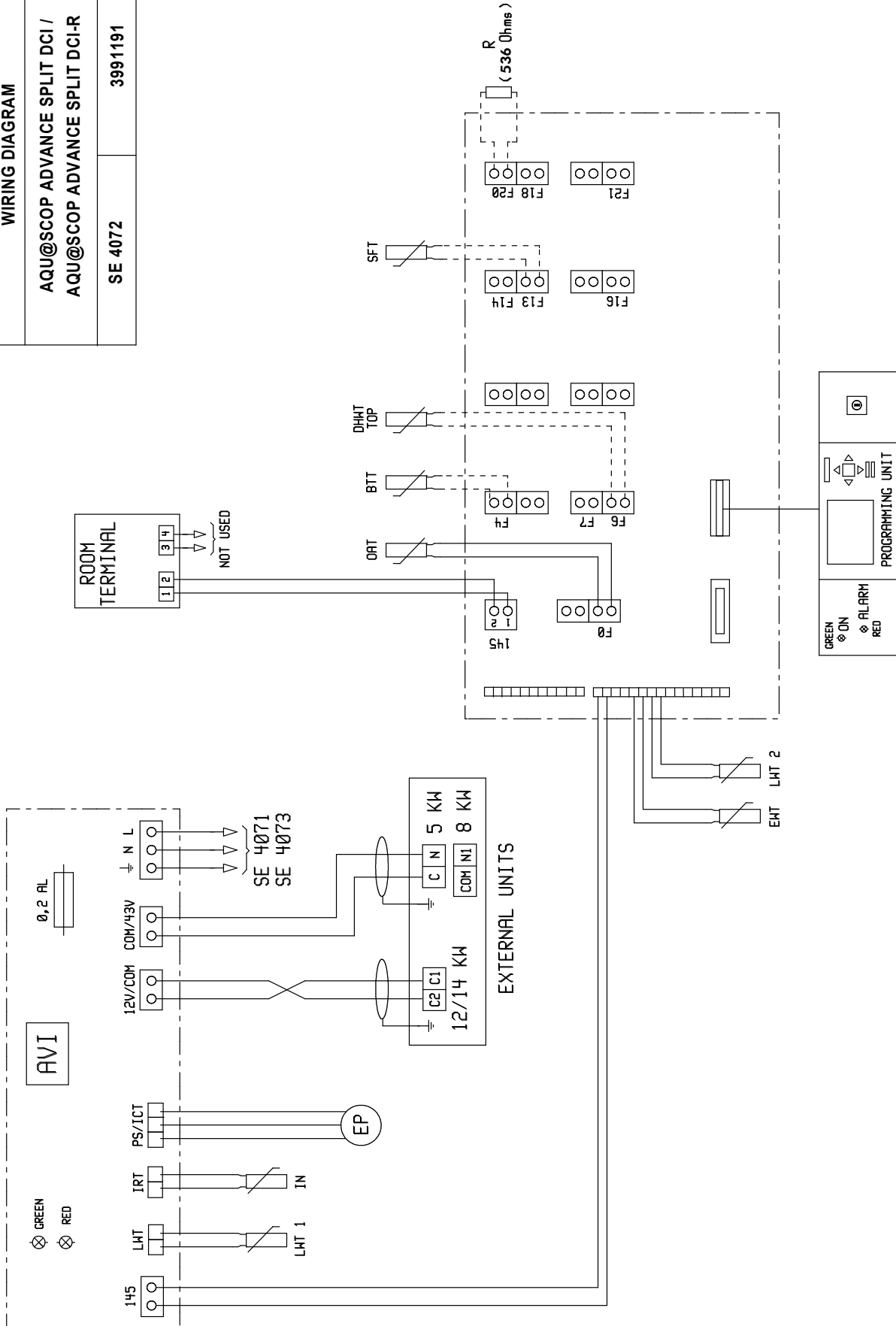
AWSI-HVD005_08_12_14-R11



APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

AWSI-HVD005_08_12_14-R11
 AWSI-HVD005_08_12_14-H11

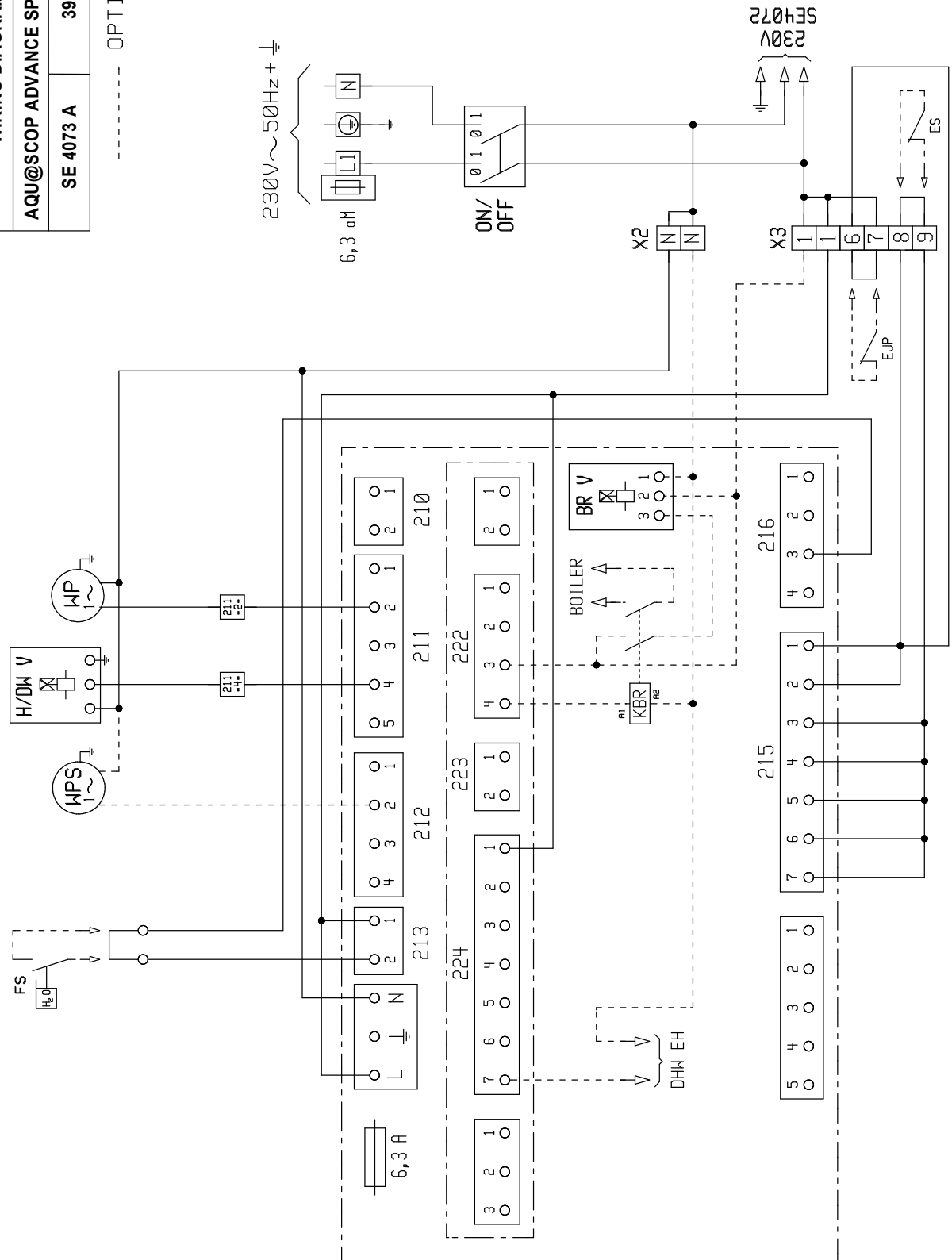
WIRING DIAGRAM	
AQU@SCOP ADVANCE SPLIT DCI / AQU@SCOP ADVANCE SPLIT DCI-R	
SE 4072	3991191



AWSI-HVD005_08_12_14-H11

WIRING DIAGRAM	
AQU@SCOP ADVANCE SPLIT DCI-R	
SE 4073 A	3991192

----- OPTION



AWAU YVD005-H11

ATTENTION !! HIGH VOLTAGE CONNECTORS



NO	PROBLEM
1	OCT IS SHORTED/DISCONNECTED
2	CTT IS SHORTED/DISCONNECTED
3	HST IS SHORTED/DISCONNECTED
4	OAT IS SHORTED/DISCONNECTED
5	OMT IS SHORTED/DISCONNECTED
6	RGT IS SHORTED/DISCONNECTED
7	RLT IS SHORTED/DISCONNECTED
8	HIGH PRESSURE PROTECTION
9	RESERVED
10	RESERVED
11	COMP IPM FAULT/IPM DRIVER PIN/COMP CURRENT SENSOR FAULT
12	NO WATER FLOW
13	RESERVED
14	DC UNDER VOLTAGE/DC OVER VOLTAGE
15	AC UNDER VOLTAGE/AC OVER VOLTAGE/ZERO CROSSING DETECTION
16	MISMATCH BETWEEN IDU & ODU MODELS/MISSING ODU CONFIGURATION/ UNDEFINED ODU MODEL/HW TYPE AND ODU MODEL MISMATCH
17	NO COMMUNICATION
18	SYSTEM OVER POWER
19	PFC CURRENT SENSOR
20	HEAT SINK OVER HEATING
21	DEICING
22	COMPRESSOR OVER HEATING
23	COMPRESSOR OVER CURRENT
24	NO OFAN FEEDBACK
25	OFAN IPM FAULT/OFAN IPM DRIVER PIN
26	COMPRESSOR LOCK
27	INDOOR COIL DEFROST
28	RESERVED
29	INDOOR SENSOR FAULT
30	OUTDOOR/INDOOR COIL OVERHEATING
31	OPERATION CONDITIONS EXCEEDED

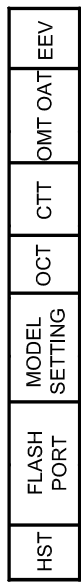
ODU DIAGNOSTICS AND FAULT CODING METHOD

The display uses 3-seven segments. The default presentation will be alternating among:



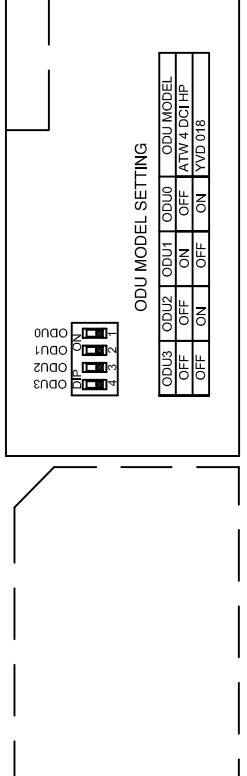
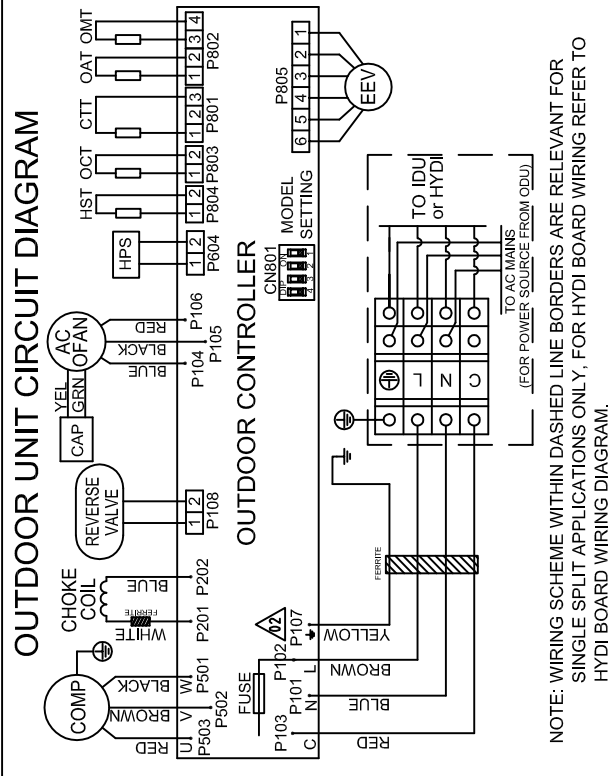
The navigation through the menu can be performed by RC8 (Press both "SPT-" and "SPT+" more than 5 seconds to enter or exit technician mode)

REMOTE CONTROL	FUNCTION
(FAN)	SELECT
(SPT-)	DOWN
(SPT+)	UP
(OPER/STBY)	ESCAPE



DANGER!! HIGH DC VOLTAGE

DO NOT TOUCH WHILE POWER LED IS ON AND 3 MINUTES AFTER POWER OFF

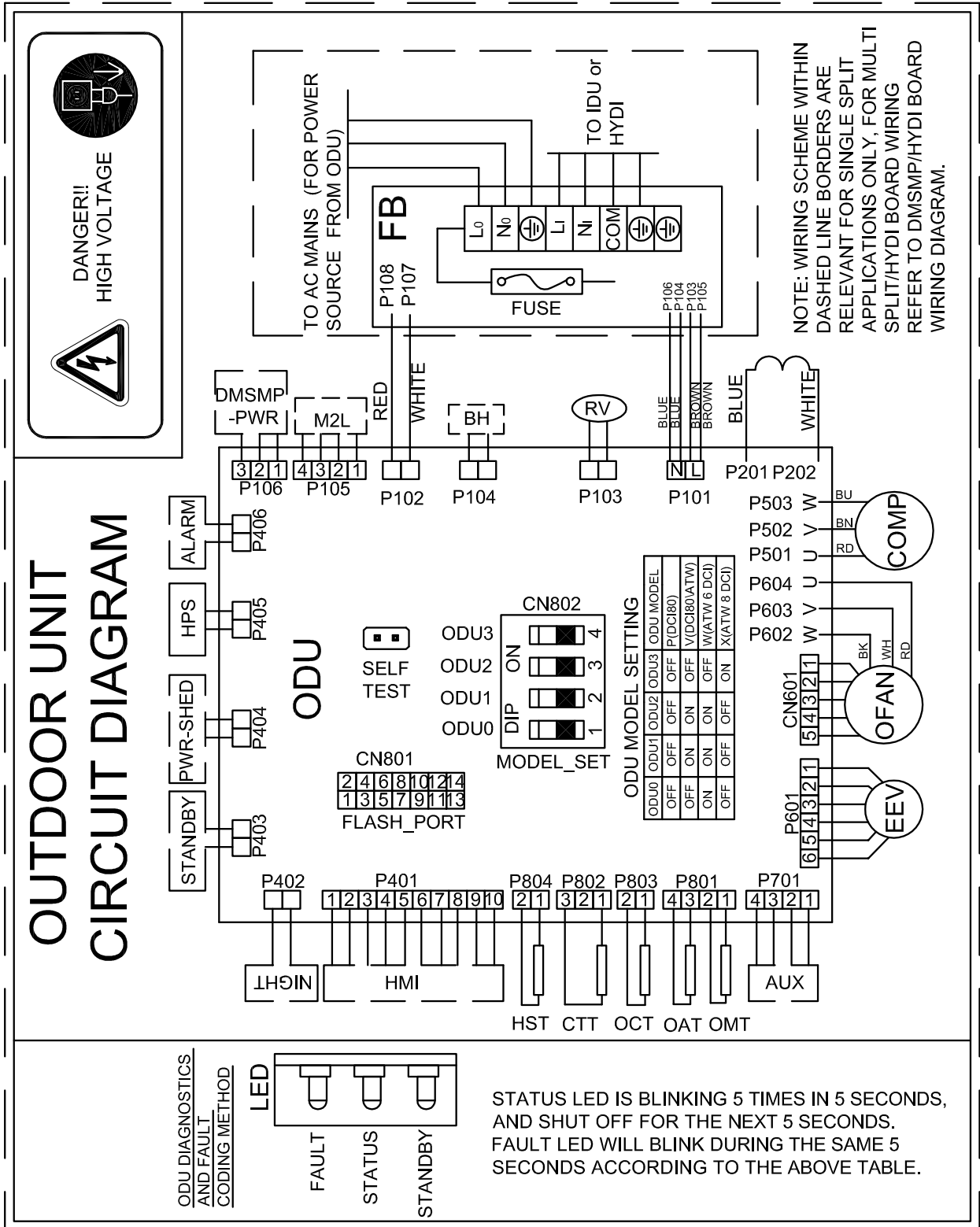


NOTE: WIRING SCHEME WITHIN DASHED LINE BORDERS ARE RELEVANT FOR SINGLE SPLIT APPLICATIONS ONLY. FOR HYDI BOARD WIRING REFER TO HYDI BOARD WIRING DIAGRAM.

ODU MODEL SETTING

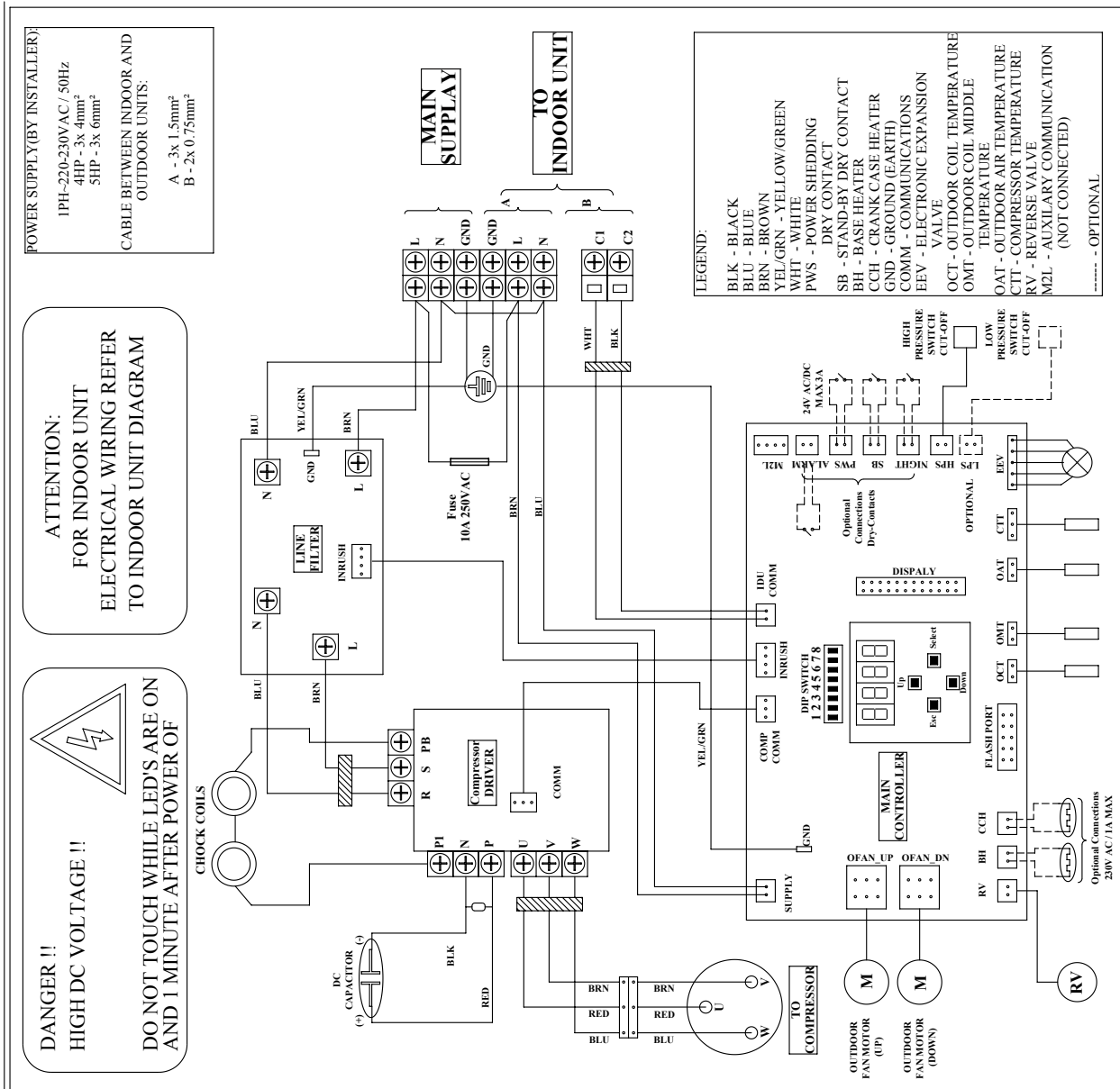
ODU3	ODU2	ODU1	ODU0	ODU MODEL
OFF	OFF	ON	OFF	ATW 4 DC1HP
OFF	ON	OFF	ON	YVD 018

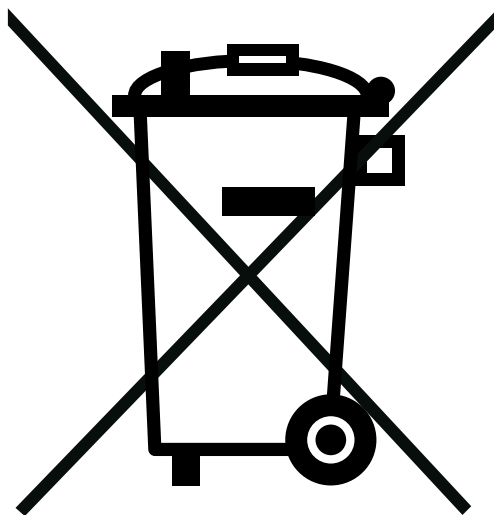
AWAU YVD008-H11



APPENDIX / ANNEXE / ANLAGE / ALLEGATO / ANEXO

AWAU YVD012-H11 / AWAU YVD014-H11





English

The meaning of the above logo representing a crossed-out wheeled bin is that this unit must not be disposed of as unsorted municipal waste but should be collected separately as WEEE (Waste Electrical and Electronic Equipment).

The presence of hazardous substances in electrical and electronic equipment or an improper use of such equipments or of parts thereof as well as the hazards of not separating WEEE from unsorted domestic waste, may affect the environment and human health.

As an End User, you are required to place WEEE in a collection separate from that for unsorted domestic waste. Please contact a point of sale or installer to find out the collection system available at your local community. You may return your old air conditioning unit for free to the point of sale or the installer when purchasing a new one.

As an End User, it is your role to contribute to the reuse, recycling and other forms of recovery of such wastes so as to reduce the disposal of waste. This will help preserve your environment.

Français

Le logo ci-dessus représentant une "poubelle barrée" signifie qu'il ne faut pas se débarrasser de cet appareil comme d'un déchet classique mais que celui-ci doit être collecté séparément en tant que DEEE (Déchet d'Équipement Électrique et Électronique).

La présence de substances dangereuses dans les équipements électriques et électroniques, l'utilisation inappropriée de tels équipements ou partie de tels équipements ainsi que le danger représentant la collecte non centralisée de matériels DEEE peuvent être préjudiciables à l'environnement et à la santé publique.

En tant qu'utilisateur final, il vous est demandé de collecter les DEEE séparément des déchets ordinaires. Vous êtes priés de prendre contact avec votre revendeur ou votre installateur pour qu'il vous indique le mode de collecte de votre commune. Lors du renouvellement de votre appareil, vous avez la possibilité de rendre votre ancien appareil gratuitement à votre installateur ou votre revendeur qui se chargera d'en assurer la collecte.

En tant qu'utilisateur final, il est de votre devoir de participer à la réutilisation, au recyclage, et à toute autre forme de récupération de tels déchets afin d'en diminuer la quantité. Cela contribuera à la préservation de l'environnement.

Deutsch

Die Bedeutung des Logos mit der durchgestrichenen Mülltonne besteht darin, dass es sich bei diesem Gerät nicht um Hausmüll (Wertstoffmüll oder Restmüll) handelt.

Dieses Gerät ist nach der Elektro- und Elektronikgerätegesetz (ElektroG (WEEE) zu sammeln und zu entsorgen.

Durch das Vorhandensein von gefährlichen Substanzen in elektrischen oder elektronischen Bauteilen kann die missbräuchliche Verwendung solcher Teile oder das Entsorgen solcher Geräte über den Hausmüll zu nicht unerhebliche Umwelt- und/ oder Gesundheitsschäden führen.

Sie als Endkunde sind angehalten, Geräte, welche unter die ElektroG (WEEE) fallen, separat vom Hausmüll zu entsorgen. Bitte informieren Sie den Händler, Installateur oder Ihre Stadt- oder Gemeindeverwaltung, um einen Entsorgungsbetrieb in Ihrer Nähe ausfindig zu machen. Eine Möglichkeit besteht darin, das Gerät kostenlos bei Ihrem Händler oder Installateur abzugeben, wenn Sie sich ein neues Gerät kaufen.

Als Endkunde beteiligen Sie sich so an der Wiederverwendung, Rückgewinnung oder Wiederverwertung von derartigen Rohstoffen. Sie helfen, Müll zu vermeiden und leisten so Ihren Beitrag zu einer sauberen Umwelt.

Italiano

Il significato del logo qui sopra rappresentato indica che il apparecchio non deve essere rottamato come rifiuto nella spazzatura indifferenziata, ma deve essere smaltito separatamente in base alle direttive WEEE (Waste Electrical and Electronic Equipment - rifiuti elettrici ed elettronici), in accordo con il decreto legislativo n.151/2005.

A causa della presenza di sostanze tossiche nella componentistica elettrica o elettronica, uno smaltimento di queste o di parti di esse nei rifiuti non riciclabili, può avere effetti nocivi sull'ambiente e sulla salute umana.

Il Cliente è tenuto a separare i prodotti o parte di essi etichettati in base alle normative WEEE dai rifiuti domestici solidi. Per ulteriori informazioni si contatti un punto vendita o un installatore per conoscere il punto di raccolta più vicino alla propria città. Il Cliente può smaltire gratuitamente il vecchio apparecchio presso il punto vendita o l'installatore contestualmente all'acquisto di un nuovo apparecchio.

Qualora il punto vendita o l'installatore non si prendano carico delle incombenze necessarie allo smaltimento del vecchio apparecchio secondo la normativa prevista, potranno essere soggetti ad un'ammenda compresa tra i 150 ed i 400 euro per ogni unità. E' compito del Cliente provvedere al riutilizzo, al riciclo e ad altre forme di riduzione degli sprechi in modo tale da ridurre la quantità di rifiuti da smaltire. Questa normativa viene introdotta a sostegno di politiche ambientali.

Il mancato rispetto della legislazione vigente prevede quattro sanzioni pecuniarie comprese tra 25,82 euro e 619,74 euro.

Español

El significado de este logo que representa un cubo de basura con ruedas tachado, es que esta unidad no debe ser desechada como residuo doméstico sin clasificar, sino que deberá ser recogida de forma separada como RAEE (residuos aparatos eléctricos y electrónicos). La presencia de sustancias peligrosas en los aparatos eléctricos y electrónicos o un uso impropio de tales aparatos o de partes de los mismos, así como los peligros de no separar RAEE de los residuos domésticos sin clasificar, puede afectar al medio ambiente y a la salud.

Como usuario final, se le requiere para que ponga los RAEE en una recogida distinta de los residuos domésticos sin clasificar. Por favor, contacte con un punto de venta o instalador para averiguar el sistema de recogida disponible en su comunidad. Puede devolver gratis su antigua unidad al punto de venta o instalador cuando compre una unidad.

Como usuario final, su papel es contribuir a la reutilización, reciclado y otras formas de recuperación de dichos residuos para reducir la eliminación de basura. Esto ayudará a mantener el medio ambiente.

AIRWELL INDUSTRIE FRANCE

Route de Verneuil
27570 Tillières-sur-Avre
FRANCE

☎ : +33 (0)2 32 60 61 00

☎ : +33 (0)2 32 32 55 13



As part of our ongoing product improvement programme, our products are subject to change without prior notice. Non contractual photos.

Dans un souci d'amélioration constante, nos produits peuvent être modifiés sans préavis. Photos non contractuelles.

In dem Bemühen um ständige Verbesserung können unsere Erzeugnisse ohne vorherige Ankündigung geändert werden. Fotos nicht vertraglich bindend.

A causa della politica di continua miglioria posta in atto dal costruttore, questi prodotti sono soggetti a modifiche senza alcun obbligo di preavviso. Le foto pubblicate non danno luogo ad alcun vincolo contrattuale.

Con objeto de mejorar constantemente, nuestros productos pueden ser modificados sin previo aviso. Fotos no contractuales.



VI.P.N.: 5601388