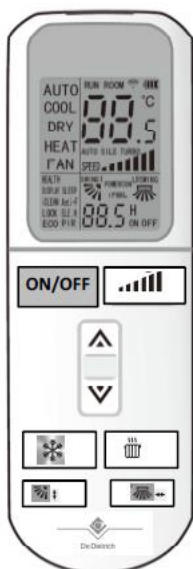


Indoor unit = UME 20 / 25 / 35 / 50 / 70

Outdoor unit = MOSE 20 / 25 / 35 / 50 / 70



Installation and service manual

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What is R32?

R32 = Difluoromethane (Category A2L slightly flammable)



R32 is the main alternative to F-gas. This fluid is interesting in that its GWP (Global Warming Potential) is just 675 T CO2 eq.

- It has no effect on the ozone layer.
- 5 to 10 % better performing than R410A.
- Less fluid required for identical power output (20 to 30 % less fluid compared to R410A).
- A completely pure fluid which is easier to recycle.
- A GWP of just 675 T CO2 eq.

R32 only has a flammability risk if the three conditions below are met:

Refrigerant leak + oxygen + combustion source

If the concentration level in the room remains below the lower flammable limit as per EN378 :2017.

Consequently, the installer must ensure the minimum surface areas and volumes in relation to the charge

- Flammable limit by volume:
1 m³ = max. 0.307 kg of R32
- By volume, the toxicity risk indicates:
1 m³ = max. 0.300 kg of R32

The sparks generated by the relays or switches on household appliances and static electricity do not produce enough energy to ignite R32.

It is not recommended to start up an air conditioner containing R32 near to a flame.

Auto combustion is only possible from 648 °C, and there is no risk of explosion.

Implications for the installer:

- Establishments open to the general public require only fluids in flammability class 1. R32 therefore cannot currently be used in ERPs (article CH35).
- Traditional dudgeon connections can be used with R32 to connect the indoor unit to the outdoor unit.
- R32 requires different tools to those for traditional R410 installations
- A pressure gauge with a dedicated R32 scale.
- An R32 fluid recovery station.
- An R32 fluid recovery vessel.
- A leak detector.

- Leak test: the equipment holder has a leak test performed by an operator with a qualification certificate.
- Operators and holders take all necessary measures to perform periodic leak tests, the frequency of which is determined not by the charge expressed in kg but in tonnes CO2 equivalent (T CO2 eq), and therefore by the type of fluid used. The thresholds used are now:

Equipment capacity	Test frequency without detector	Test frequency with detector
Between 5 and 50 tonnes CO2 equivalent	Every year	Every 2 years

	MAx. charge threshold (kg) for a test	GWP of the fluid for 1 kg in T CO2 eq
R32	7.4	675
R-134a	3.5	1430
R-407C	2.8	1770
R-410A	2.4	2088

Reducing the amount of HFC fluids available on the market

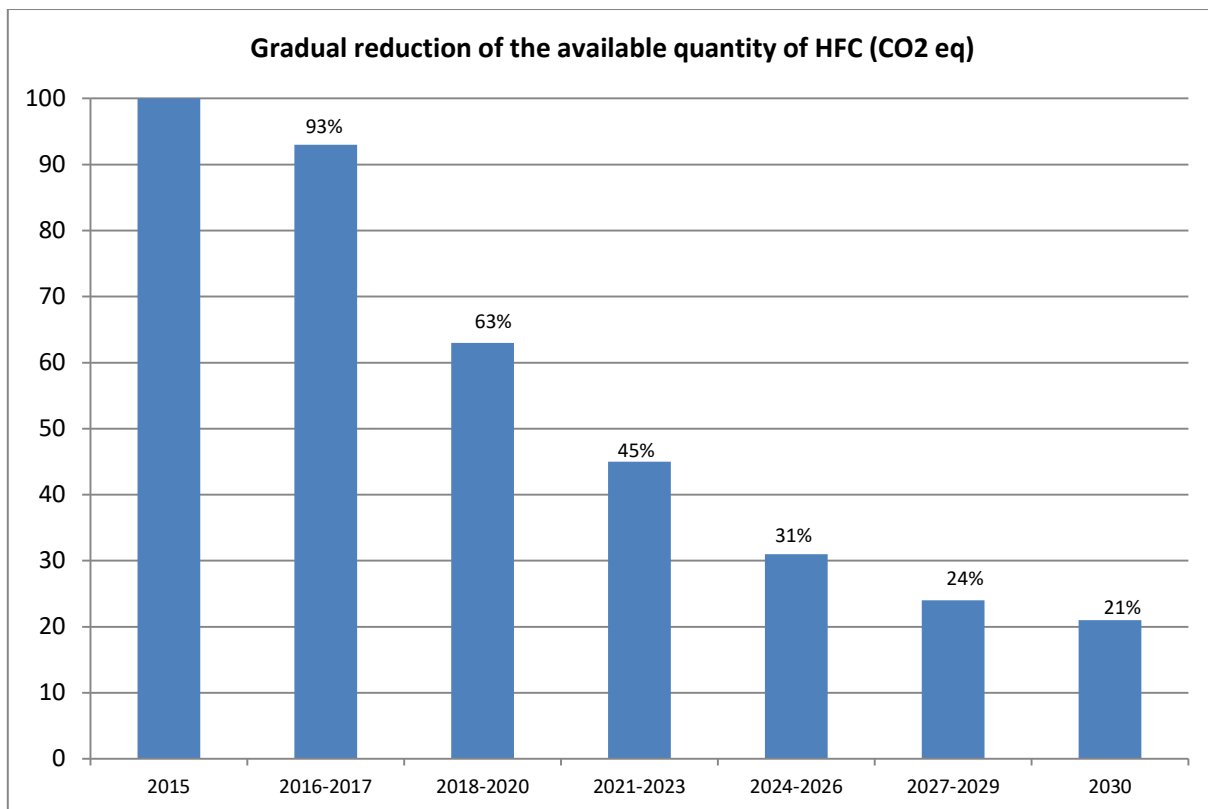
European regulation 517/2014 governing "F-gas" refrigerant fluids is intended to reduce refrigerant fluids with a high GWP. The GWP is an indicator that reveals a fluid's impact on global warming. This indicator is expressed in CO2 equivalent. The higher the GWP, the greater the effect on global warming. GWP of the main fluids on the market:

Fluid	GWP (for 1 kg of fluid)
R32	675
R-134A	1430
R-407C	1770
R-410A	2088

Example: in global warming terms, 1 kg of R410 is equivalent to 2088 kg of CO2

The regulatory context in detail:

F-gas has caused a gradual reduction in the amount of HFC fluids placed on the market. This gradual reduction began in 2016, with a 7 % drop compared to 2015 (base year). In 2018, the figure is 37 %, which will have an even bigger impact on the HVAC market. Fluids with a high GWP will be the first to be affected (R410A, R407C), hence the urgent need for alternative solutions with fluids that cause less global warming.



The fluids are classified in three flammability groups (EN 378):

- Group 1: non-flammable.
- Group 2: low flammability (fluid concentration > 3.5 % of the room volume).
- Group 3: high flammability (fluid concentration < 3.5 % of the room volume).

Fluid	Flammability class
R410A	1
R134A	1
R407C	1
R32	2
R600a	3
R290	3

Acronym for the indicator:

GWP: Global Warming Potential.





The indicator measures a fluid's impact on global warming.

The GWP values are based on EU regulation no. 517/2014 and the IPCC report.

Warning

The air conditioner uses **R32**, which is a flammable refrigerant fluid.

- The volume of the room for use or storage must be smaller than **the flammability limit**.
- Do not attempt to accelerate defrosting (e.g. with a thermal stripper).
- Do not look for leaks with a metal-halide lamp.
- The air conditioner must not be placed near to an ignition source (e.g. naked flame, gas appliance, electric heater, etc.)
- Caution: **R32** is odourless.
- The method used to store the air conditioner must be able to prevent damage (paper, cardboard).
- Carry out a safety check before carrying out maintenance or repairs on air conditioners using R32 refrigerant to avoid the risk of incidents.
- Please read the instructions carefully before installing, using or maintaining the air conditioner.

Symbol	Note	Explanation
	Warning	This symbol shows that the appliance uses a flammable refrigerant. If the refrigerant is in contact with an external ignition source, there is a risk of fire.
	Caution	This symbol shows that the user manual should be read carefully.
	Caution	This symbol shows that the equipment must be handled by a technician following the installation manual.
	Caution	This symbol shows that the information is available in the user or installation manual

Safety instructions

Danger

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children must not be allowed to play with the appliance. Cleaning and user maintenance should not be carried out by children without adult supervision.

Danger

In the event of a refrigerant fluid leakage:

Switch off the appliance.

Open the windows.

Do not use a naked flame, do not smoke, do not operate electrical contacts.

Avoid contact with the refrigerant fluid (risk of frost burn).

Locate the probable leak and have it sealed immediately by a qualified technician.

Danger of electrocution

Before carrying out any work, switch off the air conditioner's power supply.

Caution

The air conditioner must be installed by a qualified professional in accordance with prevailing local and national regulations.

Warning

Do not touch the refrigerant connection pipes with your bare hands while the air conditioner is running. Danger of burn or frost injury.

Caution

Only genuine spare parts may be used.

Warning

Only qualified professionals are permitted to work on the air conditioner.

Important

Insulate the pipes to reduce heat losses to a minimum.

Caution

The system must satisfy each point in the rules (DTU, EN and others, etc.) that govern works and interventions in individual homes, blocks of flats or other buildings.

Caution

The air conditioner must be grounded.

Earthing must comply with the prevailing installation standards.

Earth the appliance before making any electrical connections.

For the type and calibre of the protective equipment: refer to the section entitled Recommended Cable Cross-sections in the Installation and Service Manual.

Caution

If a power cord comes with the appliance and it turns out to be damaged, it must be replaced by the manufacturer, its after sales service or persons with similar qualifications in order to avoid danger.

Caution

To avoid risks associated with accidental resetting of the thermal circuit breaker, this appliance must not be powered through an external switch, such as a timer, or be connected to a circuit which is regularly switched on and off by the electricity provider.

Important

This manual is also available on our website

Note

Keep the air conditioner accessible at all times.

Important

Never remove or cover the labels and data plates affixed to appliances.

Labels and data plates must be legible throughout the entire lifetime of the appliance. Immediately replace damaged or illegible instructions and warning stickers.

Important

Remove the casing only to perform maintenance and repair work. Put the casing back in place after maintenance and repair work.

Important

Keep this document close to the place where the appliance is installed.

Caution

Do not make any modifications to the air conditioner without the written consent of the manufacturer.

Warning

In accordance with the NFC C15-100 electrical safety standard, only qualified professionals are permitted access to the inside of the appliance.

Warning

Ensure correct earthing.

Install the heat pump on a solid, stable structure able to support its weight.

Do not install the air conditioner in a location with an atmosphere which is very high in salt.

Do not install the air conditioner in a location that could become covered with snow.

Warning

Refrigerant fluid

Only use R32 refrigerant fluid to fill the system.

Use tools and pipe components especially designed for use with R32 refrigerant fluid.

Use copper pipes deoxidised with phosphorus to carry the refrigerant fluid.

Use beading to guarantee the tightness of the connections.

Store the refrigerant connection pipes away from dust and humidity (risk of damage to the compressor).

Cover both ends of the pipes until the beading process.

Do not use a load cylinder.

Manufacturer's liability

Our products are manufactured in compliance with the requirements of the various applicable directives. Products are delivered with the CE marking and all the necessary documents. Quality is always our primary focus, and we constantly strive to improve our products. We therefore reserve the right to change the specifications mentioned in this document.

As the manufacturer, we cannot be held liable in the following cases:

- Failure to observe the installation instructions for the appliance.
- Failure to observe the appliance instructions.
- Overdue or inadequate maintenance of the appliance.

Installer's liability

The installer is liable for the installation and initial commissioning of the appliance. The installer must follow the instructions below:

- Read and follow the instructions given in the manuals provided with the appliance.
- Install the appliance in compliance with the applicable legislation and standards.
- Perform initial commissioning and all necessary checks.
- Explain the installation to the user.
- If maintenance is necessary, warn the user of the obligation to check the appliance and keep it in good working order.
- Hand over all manuals to the user.

R32 refrigerant fluid

Emergency number: INRS/ORFILA poison control centre +330145425959

Effects harmful to health:

The vapours are heavier than air and may lead to asphyxia owing to reduced oxygen levels.

Liquefied gas: contact with the liquid may cause serious frost burn and eye injuries.

Flammability risk as per the concentration in air.

R32 (difluoromethane CH₂F₂) is a methane molecule that has 2 chlorine atoms in place of 2 hydrogen atoms.

Because it is used PURE and not mixed with other substances, R32 also has the advantage of not breaking down in the refrigerant circuit, which can cause a loss of efficiency.

Name	Proportion	CE number	CAS number
Difluoromethane R32	100%	200-839-4	75-10-5

First aid	<p>If inhaled:</p> <ul style="list-style-type: none"> -Remove the subject from the contaminated area and to fresh air. -In case of sickness: contact a doctor. <p>In case of skin contact:</p> <ul style="list-style-type: none"> -Treat frost burn like an ordinary burn. Rinse with plenty of warm water, do not remove clothing (risk of sticking to the skin). -If burns occur, contact a doctor immediately. <p>In case of eye contact:</p> <ul style="list-style-type: none"> -Rinse with water immediately, holding the eyelids apart (at least 15 minutes). -Consult an ophthalmologist immediately.
Fire prevention measures	<ul style="list-style-type: none"> -Suitable extinguishing agents: all extinguishing agents can be used. -Unsuitable extinguishing agents: none known. In the event of fire nearby, use the appropriate extinguishing agents. -Pressure elevation: in the presence of air, a flammable mixture may form under certain temperature and pressure conditions. -Effect of heat: release of toxic and corrosive vapours. -Special intervention methods: cool the volumes exposed to heat with water spray. -firefighter protection: <ul style="list-style-type: none"> -Full self-contained breathing apparatus. -Full body protection.
In case of accidental dispersal	<p>Individual precautions:</p> <ul style="list-style-type: none"> -Avoid contact with eyes and skin. -Do not intervene without suitable protective equipment. -Do not breathe vapour. -Evacuate the danger zone. -Stop the leak. -Eliminate all ignition sources. -Mechanically ventilate the spillage zone. <p>Cleaning/decontamination: allow any residual product to evaporate.</p> <p>In case of eye contact: rinse with water immediately, holding the eyelids apart (at least 15 minutes).</p> <p>Consult an ophthalmologist immediately.</p>
Handling	<ul style="list-style-type: none"> -Technical measures: ventilation -Precautions to be taken -No smoking. -Prevent the build-up of electrostatic charges. -Work in a well ventilated place.
Personal protection	<ul style="list-style-type: none"> -Respiratory protection: <ul style="list-style-type: none"> -If ventilation is insufficient: AX type cartridge mask. -In confined spaces: self-contained breathing apparatus. -Hand protection: protective gloves in leather or nitrile rubber. -Skin protection: clothing made mostly of cotton. -Industrial hygiene: do not drink, eat or smoke in the workplace.
Disposal recommendations	<p>! Important</p> <p>Disposal must comply with applicable local and national regulations.</p> <ul style="list-style-type: none"> -Product waste: consult the manufacturer or the supplier for information on recovery or recycling. -Soiled packaging: reuse after decontamination. Destroy in authorised installations.
Regulations	-Regulation (EU) no. 517/2014 of the European Parliament and of the Council of 16th April

	2014 on fluorinated greenhouse gases and repealing regulation (EC) no. 842/2006. -Installations Classified for Environmental Protection (ICPE) France no. 1185.
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Technical data

- **Conditions for use.**

Operating temperature range; the air conditioner switches off outside of this value.

Cooling mode	Outdoor	> 52 °C
	Indoor	< 16 °C
Heating mode	Outdoor	> 30 °C
		< -15 °C
	Indoor	> 30 °C

- **The various models available**

	UME 20	EH970	7722443
	UME 25	EH868	7692774
	UME 35	EH869	7692775
	UME 50	EH870	7692776
	UME 70	EH871	7692777
	WiFi kit (option)	EH873	7692780
	MOSE 20	EH869	7722442
	MOSE 25	EH 864	7692770
	MOSE 35	EH 865	7692771
	MOSE 50	EH 866	7692772
	MOSE 70	EH 867	7692773
	Air con split WH EMSM 20	EH970+EH969	7723121
	Air con split WH EMSM 25	EH868+EH864	7695152
	Air con split WH EMSM 35	EH869+EH865	7695153
	Air con split WH EMSM 50	EH870+EH866	7695154
	Air con split WH EMSM 70	EH871+EH867	7695155

- Estimation of cooling capacities for comfort air conditioning*

Customer:
Address:
Post code:

Date:
Reviewed by:
Tel.:

	Parameters		x	Coefficient	=	Watt
Floor (1)						
Insulated	m ²		x	6	=	
Uninsulated	m ²		x	15	=	
Not to be taken into account for areas which are directly on the floor or above a cellar						
Ceiling (1)						
Insulated	m ²		x	4	=	
Uninsulated	m ²		x	10	=	
Below a roof, multiply the coefficient by 2						
External walls						
Sunlit, insulated	m ²		x	8	=	
Sunlit, uninsulated	m ²		x	20	=	
Not sunlit, insulated	m ²		x	6	=	
Not sunlit, uninsulated	m ²		x	10	=	
Internal partitions (1)						
	m ²		x	15	=	
Windows						
In the shade	m ²		x	45	=	
Sunlit:						
__ Without awnings	m ²		x	160	=	
__ With awnings	m ²		x	80	=	
Number of occupants						
	no.		x	150	=	
Heat gain (2)						
Electrical appliances, lights, motors	Watt		x	1	=	
Others	Watt		x	1	=	
Air renewal						
	m ³ /h		x	4	=	
Total cooling balance						

(1) Do not take into account if the partitions are in contact with an air-conditioned location.

(2) Only take into account the effective outputs at the hottest times of day

* **Note:** This balance corresponds to approximately 5 to 6 °C cooling compared to the outdoor temperature. For a higher value, it is recommended to create a detailed balance.

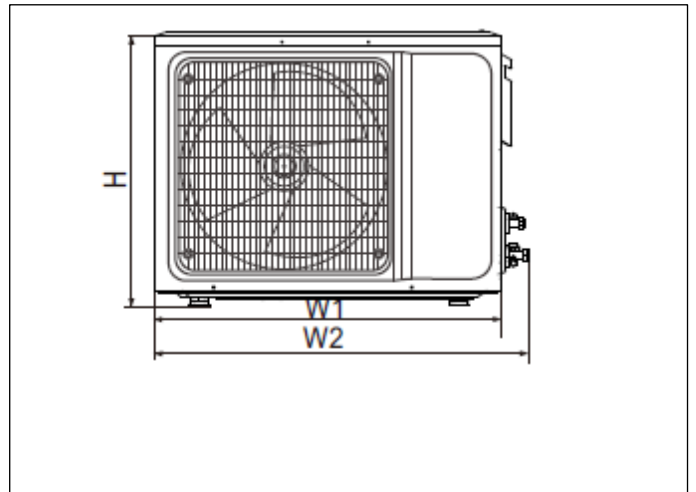
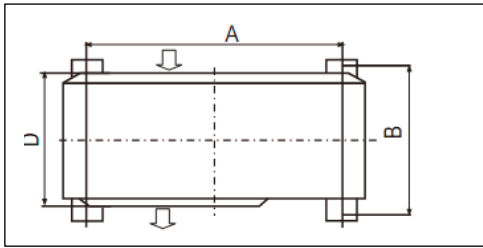
- Technical specifications for the indoor unit

Name	UME 20	UME 25	UME 35	UME 50	UME 70
BTU	7500BTU	9000BTU	12000BTU	18000BTU	24000BTU
Voltage	220 V-240 V	220 V-240 V	220 V-240 V	220 V-240 V	220 V-240 V
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Cooling capacity (BTU/H)	7506(3855~9212)	8701(3412~11260)	12283(4094~12966)	18083(6483~18766)	23986(9895~24908)
Cooling capacity (kW)	2.20(1.13~2.70)	2.55(1.00~3.30)	3.60(1.20~3.80)	5.30(1.90~5.50)	7.03(2.90~7.30)
Heating capacity (BTU/H)	8018(3343~8530)	9042(3753~11260)	12624(3412~12966)	18425(4777~19107)	24054(7165~27296)
Heating capacity (kW)	2.35(0.98~2.50)	2.65(1.10~3.30)	3.70(1.00~3.80)	5.40(1.40~5.60)	7.05(2.10~8.00)
Nominal output (W)	40(12~68)	40(12~68)	40(12~68)	63(16~88)	63(16~88)
Air flow rate Turbo mode (m3/h)	740	740	740	1150	1300
Air flow rate High speed (m3/h)	650	650	650	1000	1150
Air flow rate Medium speed (m3/h)	580	580	580	930	1030
Air flow rate Low speed (m3/h)	490	490	490	850	900
Silent Mode air flow rate	350	350	350	600	640
Aeraulic pressure drop (Mpa)	4.3	4.3	4.3	4.3	4.3
Weight (kg)	9	9	9	12.5	15
Net dimension	803*301*197	803*301*197	803*301*197	970*314*235	1100*327*235
Package dimensions	870*370*285	870*370*285	870*370*285	1045*385*320	1180*400*320
Refrigerant connections	(1/4-3/8)	(1/4-3/8)	(1/4-3/8)	(1/4-1/2)	(1/4-5/8)

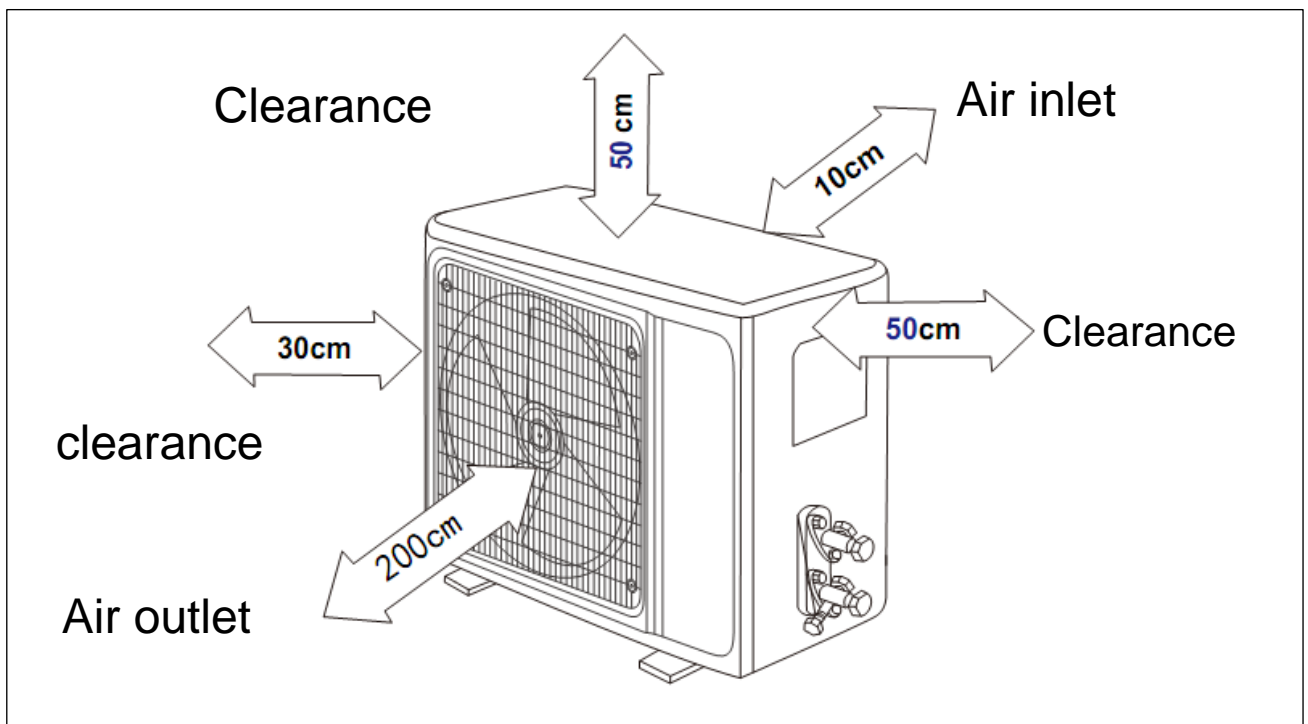
• **Technical specifications for the outdoor unit**

DDT model name	MOSE 20	MOSE 25	MOSE 35	MOSE 50	MOSE 70
BTU	7500BTU	9000BTU	12000BTU	18000BTU	24000BTU
Voltage	220 V-240 V	220 V-240 V	220 V-240 V	220 V-240 V	220 V-240 V
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Cooling capacity (kW)	2.20	2.50	3.30	5.3	6.8
Heating capacity (kW)	2.60	2.60	2.70	4.3	5.6
Annual input electrical power, cooling (kWh/y)	130	135	187	299	377
Annual input electrical power, heating (kWh/y)	850	868	897	1467	1914
GWP	675	675	675	675	675
Cooling capacity (BTU/H)	7506(3855~9212)	8701(3412~11260)	12283(4094~12966)	18083(6483~18766)	23986(9895~24908)
Cooling capacity (kW)	2.20(1.13~2.70)	2.55(1.00~3.30)	3.60(1.20~3.80)	5.30(1.90~5.50)	7.03(2.90~7.30)
Heating capacity (BTU/H)	8018(3343~8530)	9042(3753~11260)	12624(3412~12966)	18425(4777~19107)	24054(7165~27296)
Heating capacity (kW)	2.35(0.98~2.50)	2.65(1.10~3.30)	3.70(1.00~3.80)	5.40(1.40~5.60)	7.05(2.10~8.00)
Cooling intensity (A)	3.00(0.60~5.40)	3.40(0.60~6.40)	4.90(0.60~7.10)	7.36(0.90~7.70)	10.30(1.60~12.80)
Heating intensity (A)	2.80(0.90~5.20)	3.20(0.90~6.20)	4.50(0.90~6.00)	6.95(1.40~8.80)	10.50(1.90~11.50)
Electrical output in cooling mode (kW)	0.67(0.10~1.24)	0.78(0.100~1.440)	1.10(0.100~1.600)	1.650(0.210~1.730)	2.195(0.370~2.900)
Electrical output in heating mode (kW)	0.64(0.20~1.20)	0.72(0.200~1.400)	1.02(0.200~1.350)	1.500(0.310~2.000)	1.960(0.440~2.600)
SEER in cooling mode	6.1	6.5	6.18	6.2	6.3
SEER energy class	A++	A++	A++	A++	A++
SCOP in heating mode	4.0	4.2	4.22	4.1	4.1
SCOP energy class	A+	A+	A+	A+	A+
Maximum current (A)	8.00	8.00	9.50	12.00	16.00
Max output (kW)	1.50	1.50	1.90	2.90	3.70
Max discharge pressure (Mpa/bar)	4.3/43	4.3/43	4.3/43	4.3/43	4.3/43
Max. suction pressure (Mpa/bar)	1.2/12	1.2/12	1.2/12	1.2/12	1.2/12
Refrigerant	R32	R32	R32	R32	R32
Quantity of refrigerant (kg)	0.53	0.58	0.68	1.28	1.44
Air flow rate (m3/h)	1800	1800	1800	2700	3200
OU noise level (sound pressure Lp) (dB)	50	50	50	53	53
OU noise level (sound power Lw) (dB)	62	60	58	62	62
Weight (kg)	25	27	27	35	45
Net dimension	720*540*260	720*540*260	720*540*260	802*535*298	900*681*343
Package dimensions	850*615*365	850*615*365	850*615*365	920*615*395	1020*755*430
Refrigerant connections	(1/4-3/8)	(1/4-3/8)	(1/4-3/8)	(1/4-1/2)	(1/4-5/8)
Compressor model	KSN98D32UFZ	KSN98D32UFZ	KSN98D32UFZ	KSM135D23UFZ	GTD186UKQA9LT6
Max pre-charged length (between IU/OU) (m)	7	7	7	7	7
Max length (between IU/OU) (m)	20	20	20	25	25
Height difference (m) -- *IU on top or OU on top*	10	10	10	15	15
Additional charge per metre of tubing (g)	15	15	15	25	30
Power cable cross section	3G1.5	3G1.5	3G1.5	3G1.5	3G2.5
Circuit breaker	C16A	C16A	C16A	C16A	C20A
IU/OU connection cable cross section	5G1.5	5G1.5	5G1.5	5G1.5	5G2.5
Installation of bolts to secure the OU (A "mm")	539	539	539	546	632
Installation of bolts to secure the OU (B "mm")	285	285	285	325	355
Outdoor temperature limit in cooling mode	16~52 °C	16~52 °C	16~52 °C	16~52 °C	16~52 °C
Outdoor temperature limit in heating mode	-15~30 °C	-15~30 °C	-15~30 °C	-15~30 °C	-15~30 °C

Outdoor unit dimensions



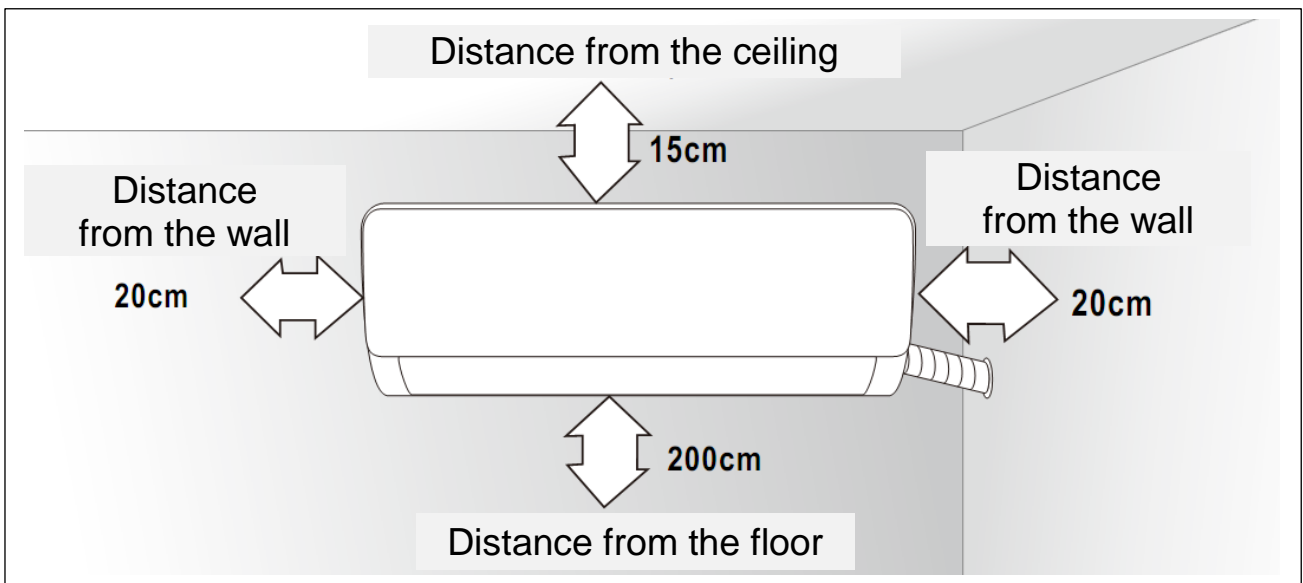
In mm	A	B	D	H	W1	W2
MOSE20	539	285	290	546	723	800
MOSE 25	539	285	290	546	723	800
MOSE 35	539	285	290	546	723	800
MOSE 50	546	325	315	545	806	872
MOSE 70	632	355	353	700	930	951



Indoor Unit dimensions

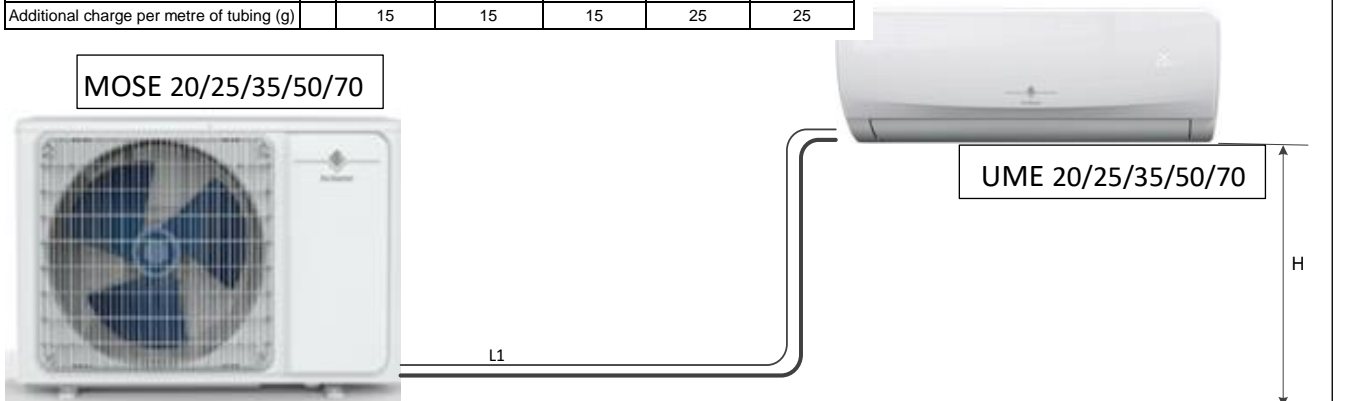


In mm	Width	Height	Depth
UME 20	800	300	198
UME25	800	300	198
UME35	800	300	198
UME50	970	314	235
UME70	1100	327	235



Installation

		MOSE20	MOSE 25	MOSE 35	MOSE 50	MOSE 70
Max length (between IU/OU) (m)	L1	20	20	20	25	25
Height difference (m) (IU on top or OU on top)	H	10	10	10	15	15
Max pre-charged length (between IU/OU) (m)		7	7	7	7	7
Additional charge per metre of tubing (g)		15	15	15	25	25

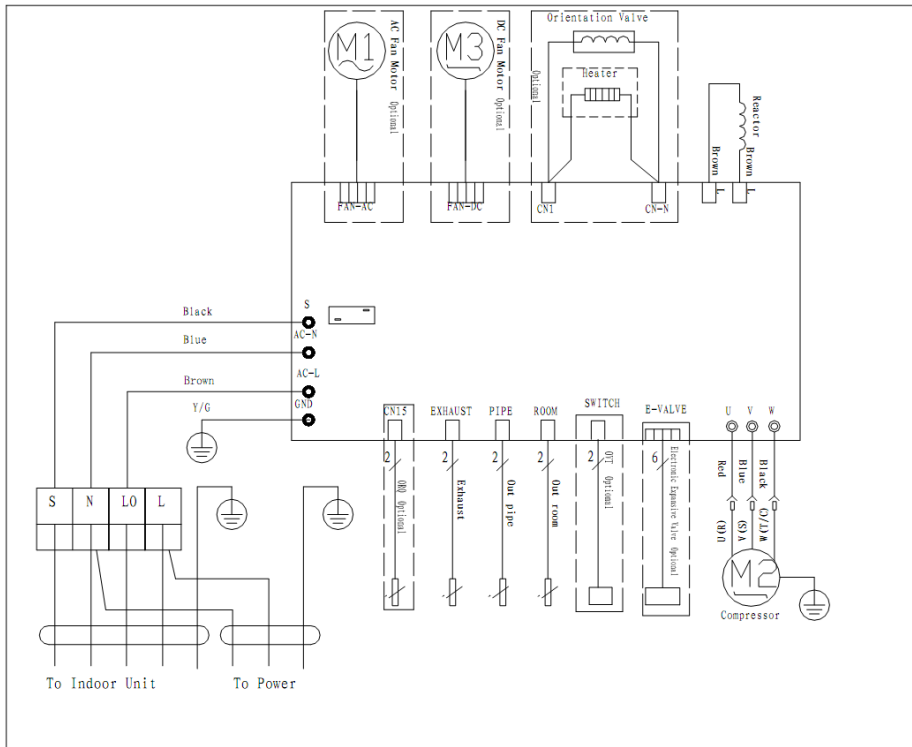


Electrical diagram

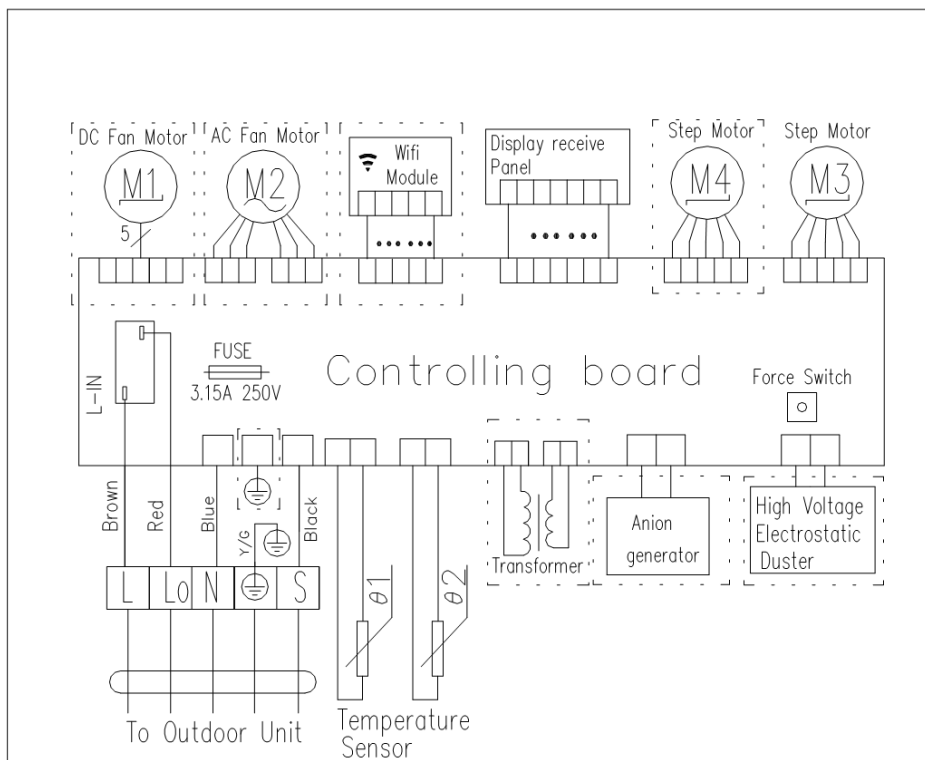
Only qualified professionals may carry out electrical connections, always with the power off.

Earth the appliance before making any electrical connections in accordance with standard NFC 15-100

MOSE 20/ 25 / 35 / 50 /70 outdoor unit



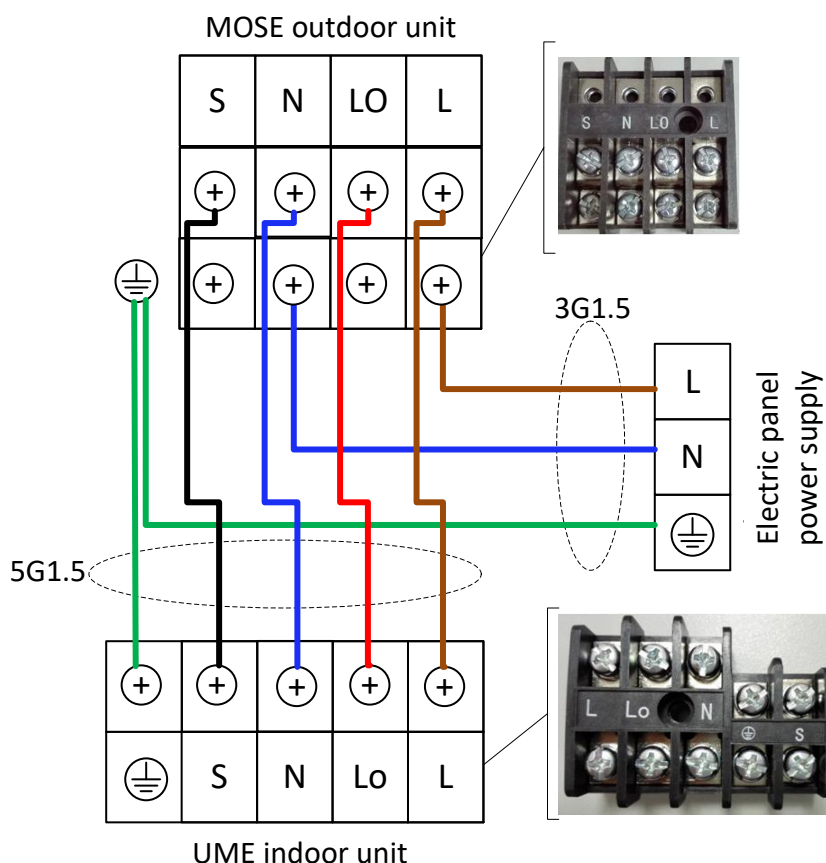
UME 20/25 / 35 / 50 / 70 indoor unit



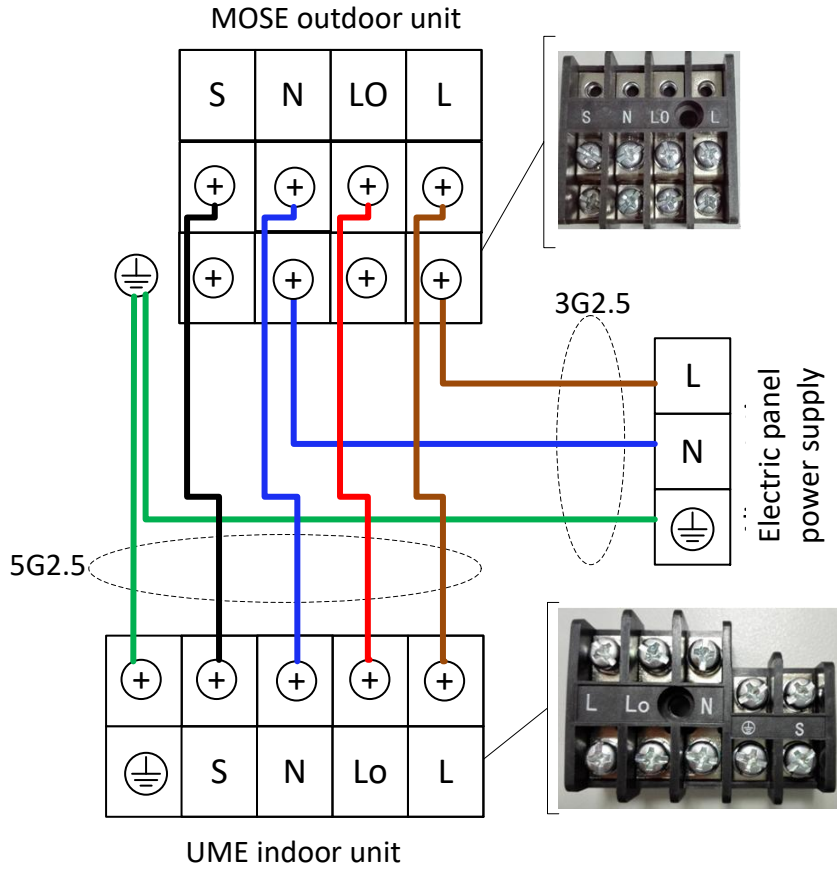
Please find attached the connection for the **EMSM** mono-split:

EMSM	20	25	35	50	70
Voltage/Frequency/Phase V~/Hz/ph	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1
Power cable cross section	3G1.5	3G1.5	3G1.5	3G1.5	3G2.5
Circuit breaker	C16A	C16A	C16A	C16A	C20A
Cross section of connecting cable between the indoor and outdoor units	5G1.5	5G1.5	5G1.5	5G1.5	5G2.5

EMSM 20/25/35/50



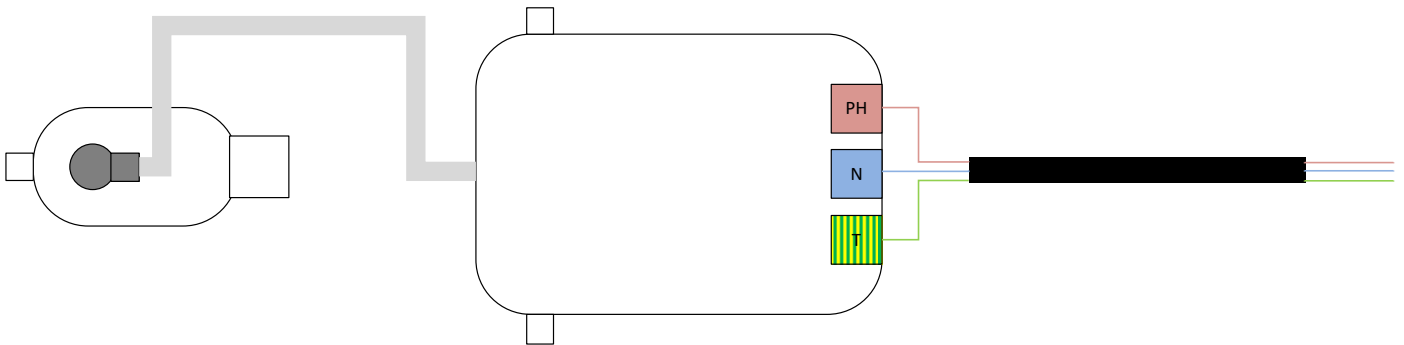
EMSM 70



Wiring units with a drainage pump

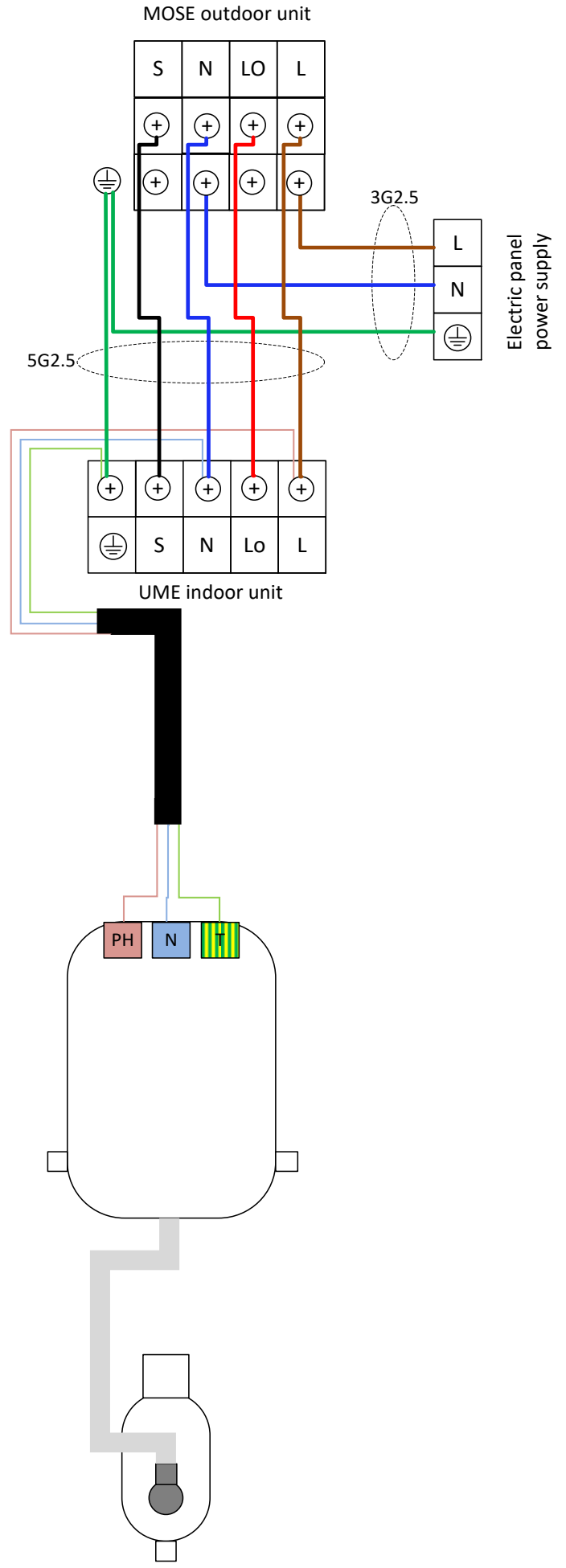
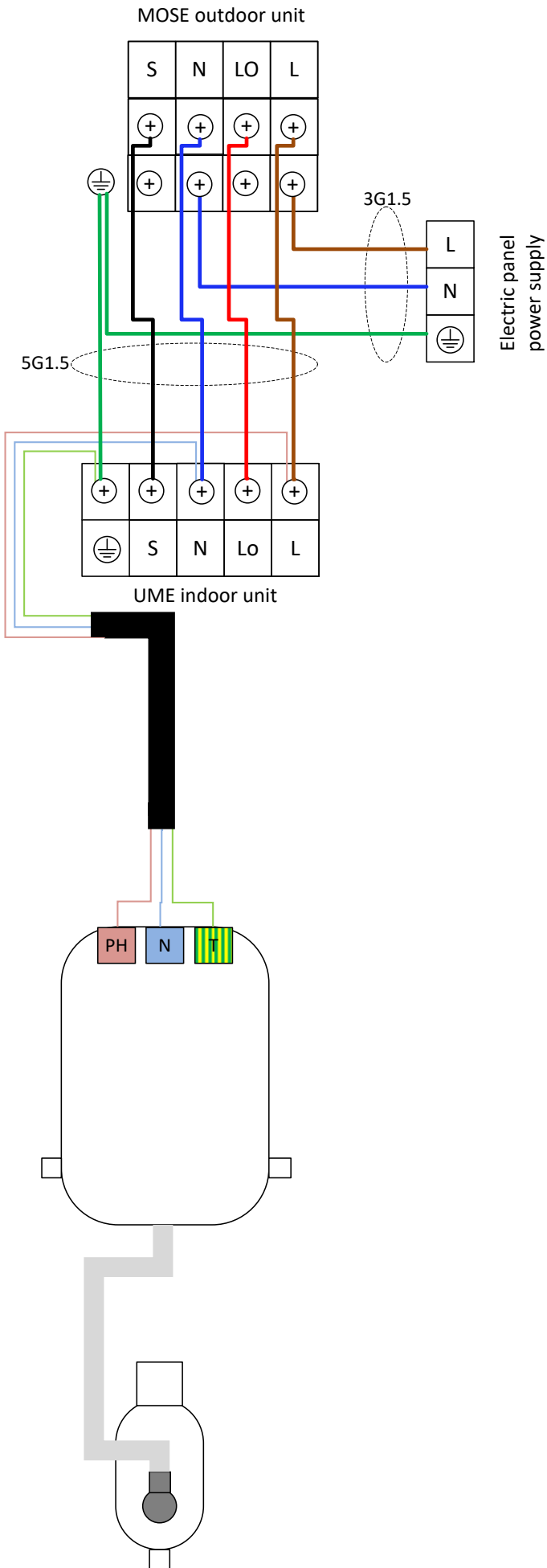
It is possible to connect a condensate drainage pump to our indoor units (diagram below).

Diagram of a mini drainage pump



EMSM 20/25/35/50

EMSM 70



Power table

These power tables are for the CLIM'UP EMSM 25/35/50/70 mono-splits, depending on the outdoor temperature:

CLIM'UP EMSM 20							
Cooling capacity (W)							
Indoor temperature (°C)		Outdoor temperature (°C) (DB)					
DB	WB	25	30	35	40	45	50
22	15	2475	2292	2200	2112	1964	1800
24	17	2620	2435	2336	2243	2140	2000
27	19	2780	2605	2500	2400	2290	2185
29	21	2920	2748	2638	2532	2350	2290
32	23	3066	2897	2780	2669	2477	2358

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 20				
Heating capacity (W)				
Indoor temperature (°C)		Outdoor temperature (°C)		
DB	WB	15	20	25
-15	-16	1588	1455	1360
-10	-12	1830	1702	1600
-7	-8	1975	1866	1742
-1	-2	2000	1905	1814
2	1	2070	1980	1900
7	6	2705	2605	2505
10	9	2860	2758	2652
15	12	3023	2936	2800

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 25							
Cooling capacity (W)							
Indoor temperature (°C)		Outdoor temperature (°C) (DB)					
DB	WB	25	30	35	40	45	50
22	15	2522	2392	2262	2196	2002	1950
24	17	2678	2548	2444	2314	2184	2080
27	19	2860	2730	2600	2470	2340	2236
29	21	3016	2886	2756	2652	2496	2366
32	23	3172	3042	2938	2808	2652	2548

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 25				
Heating capacity (W)				
Outdoor temperature (°C)		Indoor temperature (°C)		
DB	WB	15	20	25
-15	-16	1728	1593	1485
-10	-12	1917	1782	1674
-7	-8	2052	1944	1809
-1	-2	2133	1998	1890
2	1	2187	2052	1944
7	6	2808	2700	2592
10	9	2970	2862	2727
15	12	3132	3024	2889

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 35							
Cooling capacity (W)							
Indoor temperature (°C)		Outdoor temperature (°C) (DB)					
DB	WB	25	30	35	40	45	50
22	15	3395	3220	3045	2960	2695	2625
24	17	3605	3430	3290	3115	2940	2800
27	19	3850	3675	3500	3325	3150	3010
29	21	4060	3885	3710	3570	3360	3185
32	23	4270	4095	3955	3780	3570	3430

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 35				
Heating capacity (W)				
Outdoor temperature (°C)		Indoor temperature (°C)		
DB	WB	15	20	25
-15	-16	2304	2124	1980
-10	-12	2556	2376	2232
-7	-8	2736	2592	2412
-1	-2	2844	2664	2520
2	1	2916	2736	2592
7	6	3744	3600	3456
10	9	3960	3816	3636
15	12	4176	4032	3852

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 50							
Cooling capacity (W)							
Indoor temperature (°C)		Outdoor temperature (°C) (DB)					
DB	WB	25	30	35	40	45	50
22	15	5529	5244	4959	4572	4389	4275
24	17	5871	5586	5358	5073	4788	4560
27	19	6270	5985	5700	5415	5130	4902
29	21	6612	6327	6042	5814	5472	5187
32	23	6954	6669	6441	6156	5814	5586

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 50				
Heating capacity (W)				
Outdoor temperature (°C)		Indoor temperature (°C)		
DB	WB	15	20	25
-15	-16	3776	3481	3245
-10	-12	4189	3894	3658
-7	-8	4484	4248	3953
-1	-2	4661	4366	4130
2	1	4779	4484	4248
7	6	6136	5900	5664
10	9	6490	6254	5959
15	12	6844	6608	6313

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 70							
Cooling capacity (W)							
Indoor temperature (°C)		Outdoor temperature (°C) (DB)					
DB	WB	25	30	35	40	45	50
22	15	7042	6679	6316	6070	5590	5445
24	17	7478	7115	6824	6461	6098	5808
27	19	7986	7623	7260	6897	6534	6244
29	21	8422	8059	7696	7405	6970	6607
32	23	8857	8494	8204	7841	7405	7115

DB = dry bulb = very moist air/WB = wet bulb = very dry air

CLIM'UP EMSM 70				
Heating capacity (W)				
Outdoor temperature (°C)		Indoor temperature (°C)		
DB	WB	15	20	25
-15	-16	4704	4337	4043
-10	-12	5219	4851	4557
-7	-8	5586	5292	4925
-1	-2	5807	5439	5145
2	1	5954	5586	5292
7	6	7644	7350	7056
10	9	8085	7791	7424
15	12	8526	8232	7865

DB = dry bulb = very moist air/WB = wet bulb = very dry air

Note: these measurements are based on the unit's nominal output.

Using and installing the WIFI option

Step 1

For UME 20/25/35 units, the WIFI module is installed on a detachable panel of the indoor unit.



For UME 50/70 units, the WIFI module is installed inside the filter support block.



Step 2

For an Android mobile: download the QR code




For IOS mobile: Not accessible

Step 3

At initial WIFI connection or when the box is replaced

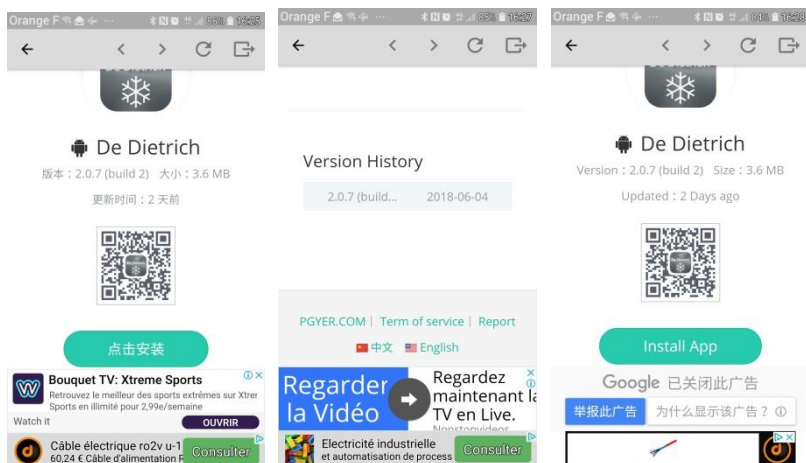
The WIFI must be reset:

Press the  button 8 times when the board beeps twice, the system is validated.



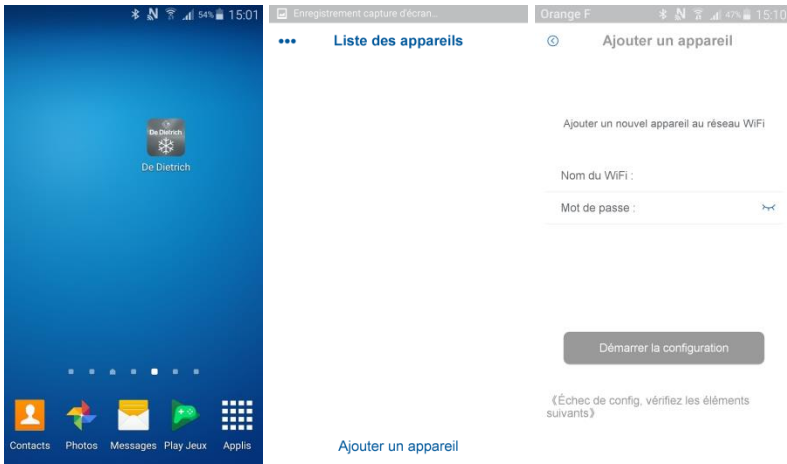
Step 4

To make the text readable, change the link to English and press "Install App"



Step 5

Open the "DeDietrich" application → "Add appliance" on your mobile → Enter the WIFI name and password (BOX)



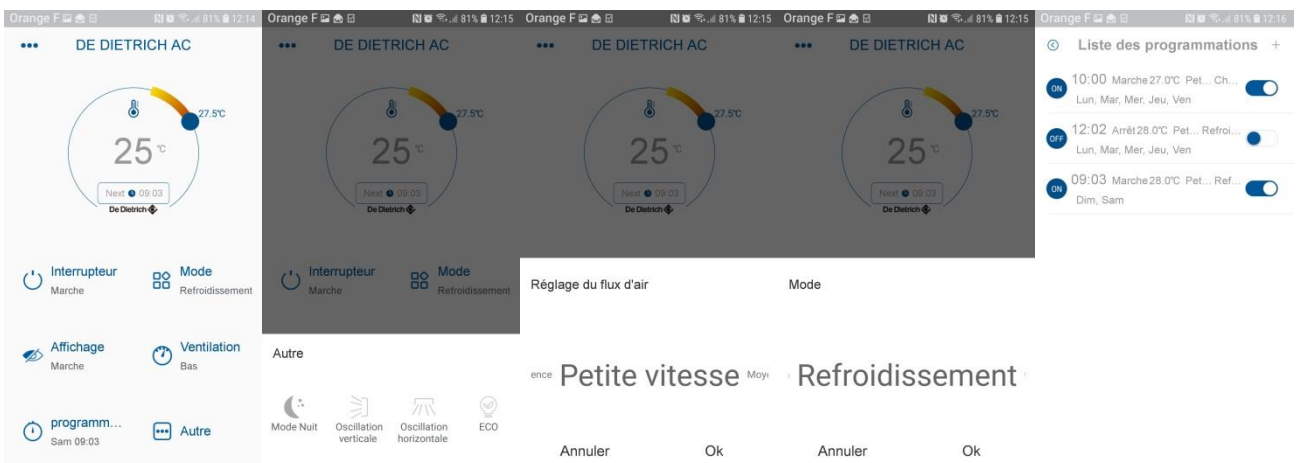
Step 6

Once configuration is complete, the air conditioner will appear in the app

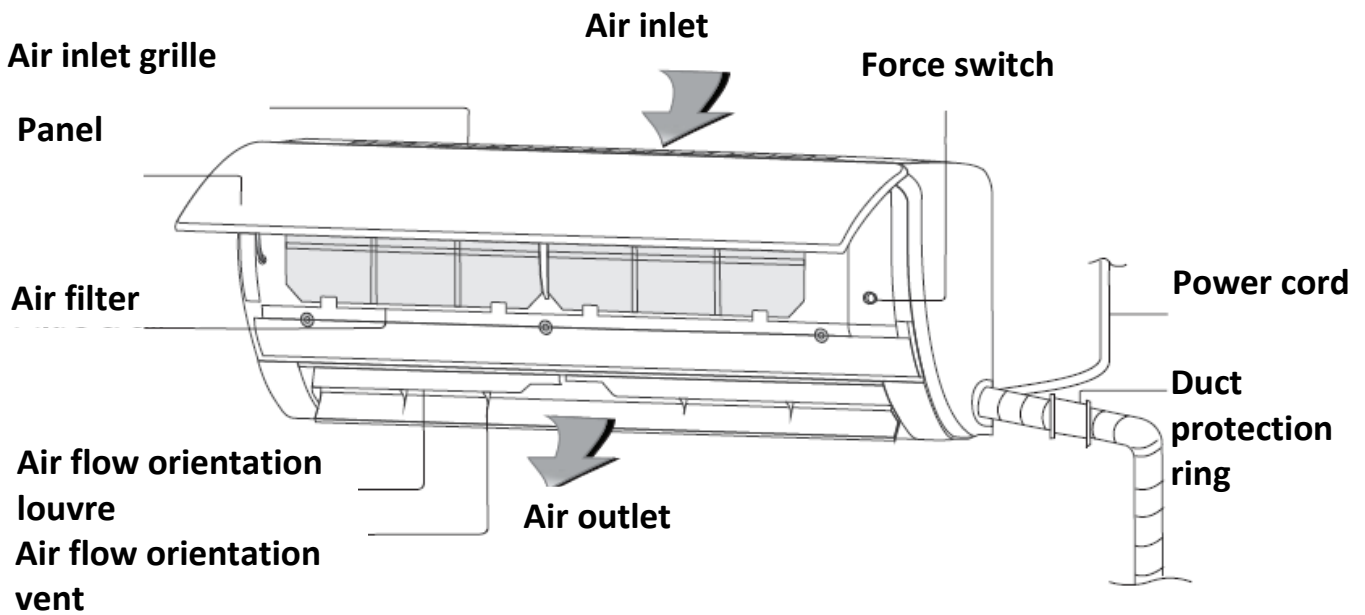


Step 7

Press "appliance" to access WIFI control

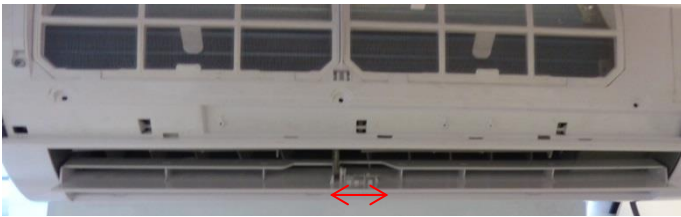


Indoor Unit

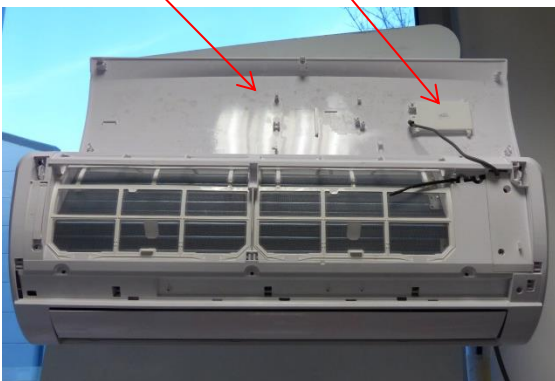


Removing the filter block for better access to the electrical and refrigerant connections.

A: remove the shutter by sliding the clip



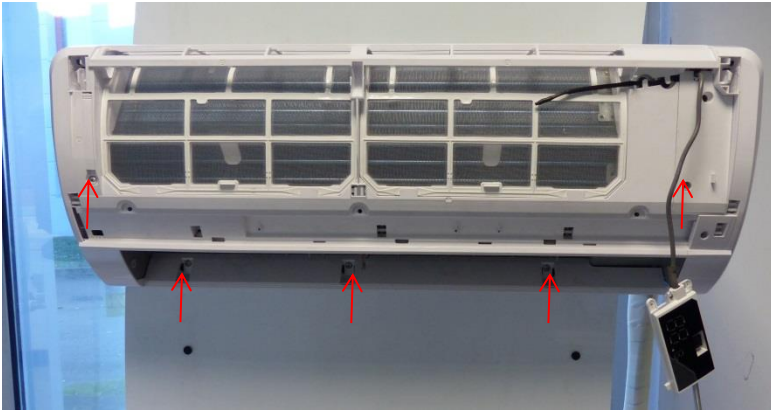
B: Remove the panel and the display



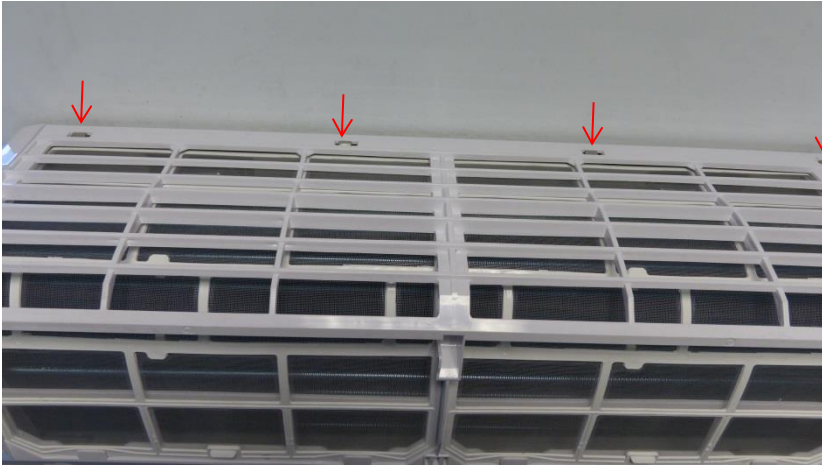
C: Remove the covers to access the Phillips-head screws



D: Remove the four Phillips-head screws



E: Detach the four lugs located above the filter block



F: Unit without filter block



G: Filter block:



H: For better access to electrical and fluid connections and condensate discharge. The unit can be moved 10 cm away from the wall.



Note: Schematic diagram

- Notes for cooling/heating.

In cooling mode, with high relative humidity (80 %), droplets of condensation may form at the air outlet of the indoor unit.

In heating mode, the indoor unit fan starts up when the coil is warm to avoid blowing cool air.

During defrosting, the air conditioner will stop heating for approximately 5-12 minutes.

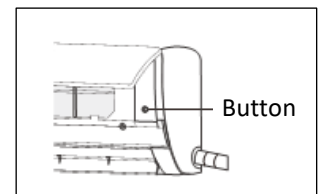
During defrosting, steam may be emitted from the outdoor unit. This is caused by defrosting, and is not a fault.

- Emergency mode.

If the remote control is broken or the batteries are weak, press the button

If the indoor unit is OFF, the unit will switch to auto mode when the button is pressed.

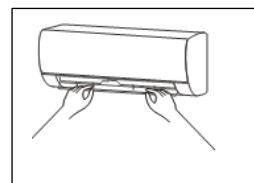
If the indoor unit is ON, the unit will switch to OFF mode when the button is pressed.



- Air direction.

Up/down switching is motorised

Right/left switching is manual



- Cleaning.

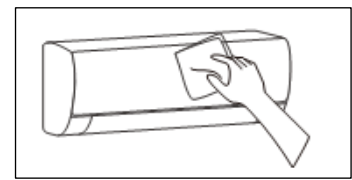
To prepare for cleaning, switch off the power and wait 5 minutes before carrying out any work to avoid the risk of electric shock.

Do not rinse using large amounts of water

Do not use petrol, diesel or detergent type products to clean.

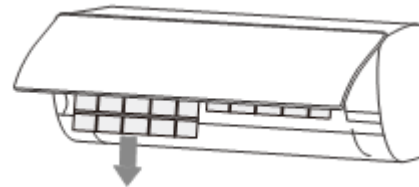
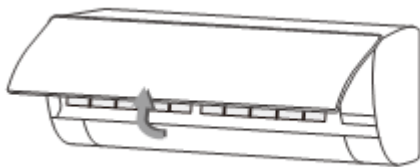
Clean the filters regularly

Clean the unit using water at a temperature below 40 °C



- Cleaning the filters

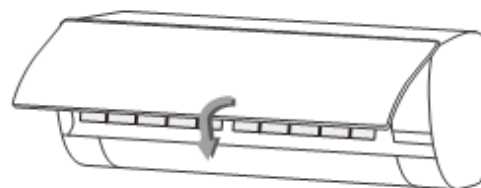
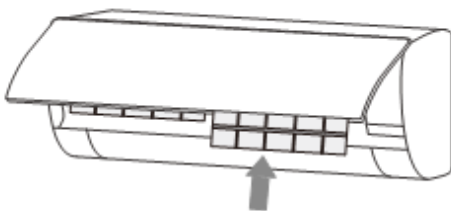
Open the panel and engage the stay



Remove the filters and vacuum clean them or wash with water at a temperature below 45° C



Refit the filters



- Check prior to use

Make sure that the air inlet and outlet are not blocked or obstructed.

Make sure that the condensate discharge is not blocked.

Make sure that the remote control batteries are OK

Make sure that there is no damage on the indoor and outdoor units

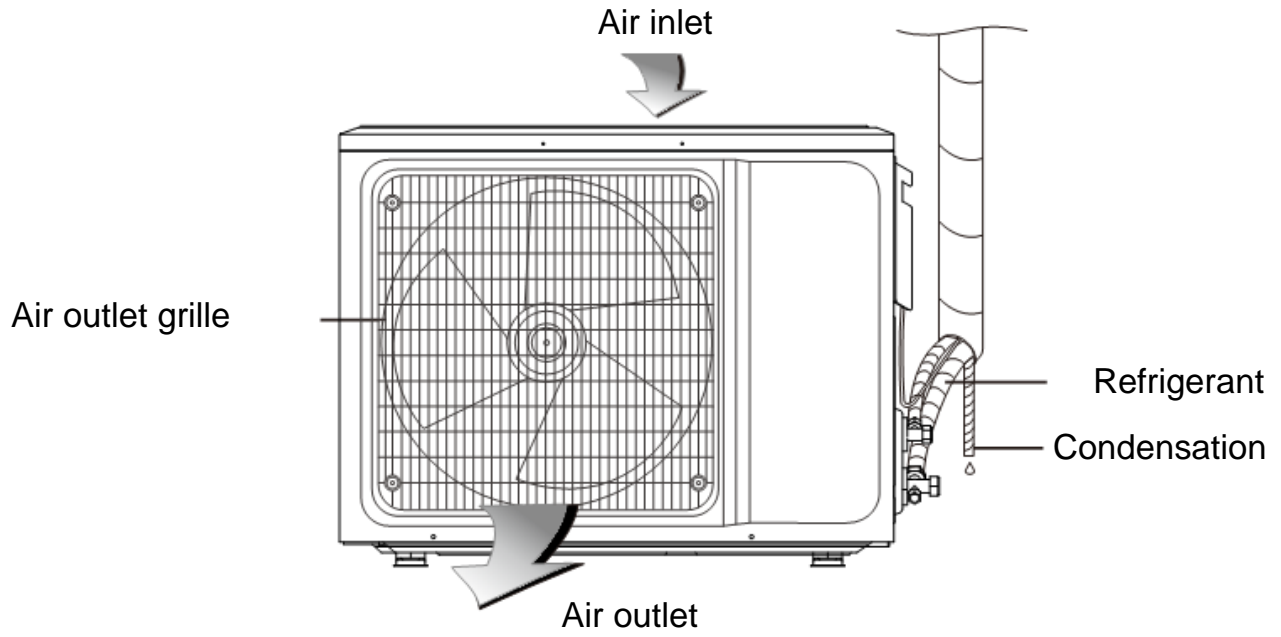
- Maintenance after use

Replace the batteries if necessary

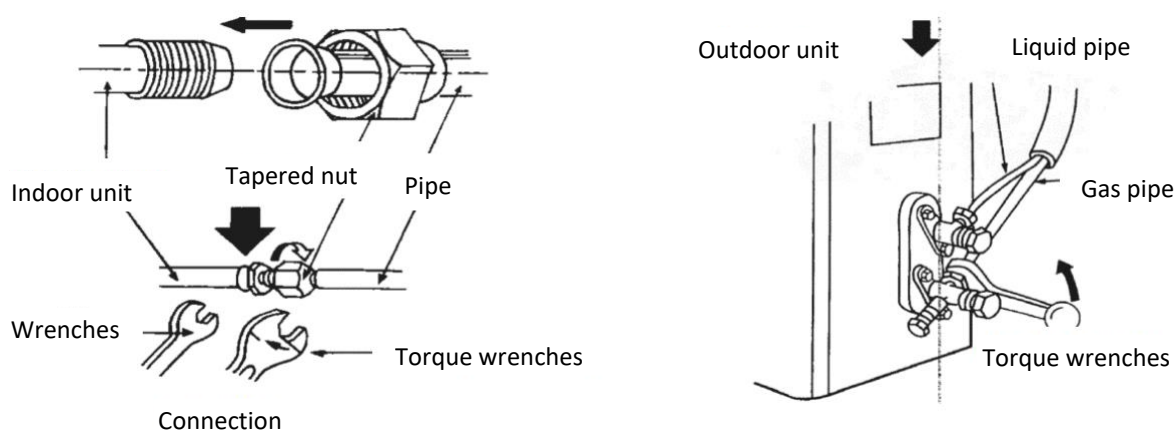
Clean the filters

Remove any debris from around the outdoor unit (leaves, etc.)

Outdoor Unit



Refrigerant connection



Torque load		
External diameter of the pipe (mm/inch)	External diameter of the cone fitting (mm)	Torque load (N.m)
Ø 6.35 – 1/4	17	14 - 18
Ø 9.52 – 3/8	22	34 - 42
Ø 12.7 – 1/2	26	49 - 61
Ø 15.88 – 5/8	29	69 - 82

- Leak test

- Check that the valve on the outdoor unit closes.
- Connect the pressure gauge and the nitrogen canister to the Schrader type valve, then gradually pressurise the refrigerant connection pipes and the indoor module to 35 bar, in 5 bar increments.
- Check the leak-tightness of all the connections using a leak detector aerosol. If leaks occur, repeat the steps in order and check the leak-tightness again.
- Release the pressure and discharge the nitrogen.

- Creating a vacuum

- Check that the stop valve is closed.
- Connect the vacuum gauge and the vacuum pump to the valve's service connector.
- Create the vacuum in the indoor module and the refrigerant connection pipes.
- Check the pressure against the recommendation table below:

Outdoor temperature	°C	>20	10	0	-10
Absolute pressure target	Pa	1000	600	250	200
	bar	0.01	0.006	0.0025	0.002
Vacuum creation time once the target pressure has been reached	h	1	1	2	3

- Close the valve between the vacuum gauge/vacuum pump and the stop valve.
- Open the valves immediately after switching off the vacuum pump.

Troubleshooting

Do not have the air conditioning system repaired by an unqualified person, as there are risks associated with the electrics and R32 refrigerant. Always contact a professional

The fault code appears on the panel of the indoor unit in place of the temperature

Error code	Problem
E1	Room temperature sensor fault
E2	Fault on the refrigerant sensor in the OU
E3	Fault on the refrigerant sensor in the IU
E4	IU fan fault (motor PG)
E5 (5E)	Communication error between IU and OU
F0	OU fan fault (motor DC)
F1	Inverter PCB fault (IPM)
F2	OU protection PCB fault (PFC)
F3	Compressor fault
F4	Discharge sensor fault
F5	Compressor overcurrent fault
F6	Outside air sensor fault
F7	High or low voltage fault
F8	Communication fault
F9	OU EEPROM fault
FA	Inlet sensor fault
P4	Electrical overload in cooling mode
P5	Electrical overload in heating mode
P6	IU overheating protection in heating mode
P7	IU frost protection in cooling mode
P8	OU overcurrent protection

Work at height

- To avoid the risks of working at height, follow the procedure below in the order indicated:

- Wherever possible, organise work, processes and equipment so as to avoid working at height (e.g. levelling mechanism, telescopic equipment, etc.)
- If the risk remains, note that the law requires temporary work at height to be carried out from an **operating surface designed to prevent falls from height**.
- Where work cannot be carried out from an operating surface, equipment will be selected so as to guarantee safe working conditions.
- **The means of access is the responsibility of the installer or the maintenance company, which should take all necessary measures to enable technicians to work safely and in accordance with the labour code.**

Acoustic integration of air conditioners

Definitions:

The acoustic performance of the following outdoor units:

- Acoustic performance L_w expressed in dBA:
It characterises the noise emission capacity of the source independently of its environment. It allows the appliances to be compared.
- Sound pressure L_p expressed in dBA:
This is the value perceived by the human ear, and depends on parameters such as the distance from the source, the size and the type of walls in the building. The regulations are based on this value.

Noise nuisance:

Regulations concerning neighbourhood noise can be found in the decree of 31/08/2006 and in standard NF S 31-010. Noise nuisance is defined by the emergence, which is the difference between the sound pressure level measured when the appliance is switched off and the level measured when the appliance is operating in the same location.

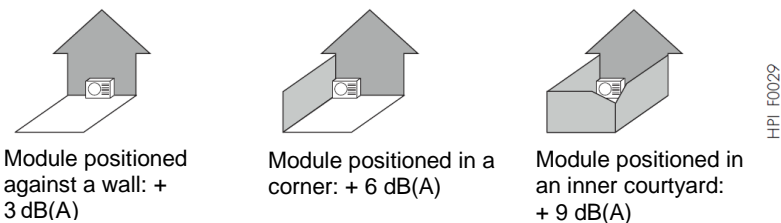
The maximum authorised difference is:

- Day (7 am - 10 pm): 5 dB(A)
- Night (10 pm - 7 am): 3 dB(A)

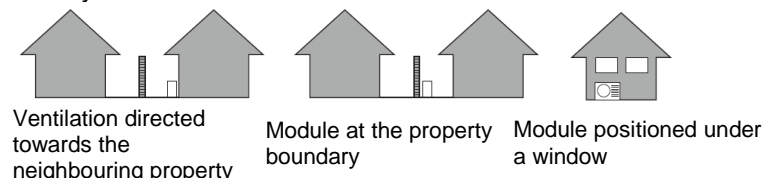
Recommendations for acoustic integration of the outdoor module:

Do not place it close to where people sleep.

Avoid placing it close to a terrace, and do not install the module opposite a wall. The increase in the noise level due to the installation configuration is shown in the diagrams below:



The layouts shown below are forbidden:



To limit noise nuisance and the transmission of vibrations, we recommend:

- Installing the outdoor module on a metal frame or an inertia base. This base must weigh at least twice as much as the module, and it must be separate from the building. In all cases, anti-vibration mounts must be installed to reduce the transmission of vibrations.
- The use of suitable sleeves for routing refrigerant connections through walls.
- The use of flexible, anti-vibration materials for mountings.
- The installation on refrigerant connections of vibration damping devices such as loops, bends or elbows.

It is also recommended to install an acoustic attenuation device, for example:

- Sound-absorbent wall material to be installed on the wall behind the module.
- A sound barrier: the surface of the barrier must be a sound barrier: the surface of the barrier must be positioned as close as possible to it, while allowing air to circulate freely. The barrier must be made from a suitable material such as acoustic bricks, concrete blocks covered with absorbent material. It is also possible to use natural barriers, such as banks of earth.

BDR THERMEA France

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F-67580 Mertzwiller



Better performance

Less pollution

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