



FINTEK
REDESIGN YOUR FEELINGS

INSTALLATION MANUAL USE AND MAINTENANCE OF CONDENSING UNITS FH20 SERIES WATER PUMP MONOSPLIT AND MULTISPLIT

MONOSPLIT WALL 9-12-18-24

MULTISPLIT 216-220-224-324-327-428-436-542

LCAC SERIES 12-18-24-30-36-42



CONDENSED AIR CONDITIONING
TO WATER WITHOUT EXTERNAL UNIT



MADE IN ITALY

1 - GENERAL INFORMATION

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	USER: Information, paragraph, chapter of the manual that interests the user or user.		DANGER: Draw attention to actions that, if not properly performed, can cause serious injury.
	INSTALLER: Information, paragraph, chapter of the manual that interests the installer.		PROHIBITION: Draw attention to actions that impose a ban.
	TECHNICAL ASSISTANCE CENTER: Information, paragraph, chapter of the manual that concerns the technical assistance center.		TENSION HAZARD: Draw attention to actions that, if not properly performed, may cause serious injury or death to the people exposed.
	IMPORTANT: Draw attention to technical information or practical advice that make it possible to use the equipment more effectively and economically.		HIGH TEMPERATURE HAZARD: Draw attention to actions that, if not properly performed, can cause serious injury to people caused by the high temperature of the components.
	OBLIGATION: Draw attention to actions that impose an obligation in order to obtain the proper functioning of the machine.		

1.2 PERMITTED USE

These appliances were made for heating and/or cooling the air. A different application, not expressly authorized by the manufacturer, is to be considered improper and therefore not allowed. The Company excludes any contractual and non-contractual liability for damage caused to people, animals or things, by installation, adjustment and maintenance errors, by improper use or by a partial or superficial reading of the information contained in this manual. Furthermore, in the constant effort to improve the products, it reserves the right to modify the data expressed at any time and without notice and declines all responsibility for any inaccuracies contained in this file, if due to printing or transcription errors.

Read this file carefully, the execution of all work must be carried out by experienced and qualified personnel, familiar with the relevant regulations in force in the various countries.

The validity of the guarantee expires if the above-mentioned instructions are not respected

The documentation supplied with the unit must be delivered to the end customer (user) to keep it carefully for any future maintenance or assistance.

When the goods are delivered by the carrier, check the integrity of both the packages and the units. If damage or lack of components is found, indicate it on the delivery note upon receipt of the unit: please check all parts, in order to verify that the transport has not caused damage, any damage must be reported to the carrier, placing the reserve clause in the packing slip, specifying the type of damage, and also inform, by fax or recommendation within 8 days from the date of receipt of the goods, a formal complaint to the company. The symbol of the crossed out bin on the appliance indicates that the product at the end of its useful life must be collected separately from other waste. The user must therefore transfer the end-of-life equipment to the appropriate centers for the separate collection of electronic and electrotechnical waste, or return it to the retailer when purchasing a new equipment of an equivalent type, on a one-to-one basis. Adequate separate collection for the subsequent start of the equipment released for recycling, treatment and environmentally compatible disposal helps to avoid possible negative effects on the environment and health and favors the reuse and/or recycling of the materials of which the equipment is composed. The abusive disposal of the product by the user involves the application of the administrative sanctions provided for by current legislation.



INFORMATION TO USERS

Pursuant to article 13 of Legislative Decree No. 151 of 25 July 2005" Implementation of Directives 2002/95/EC 2002/96/EC and 2003/108/EC, relating to the reduction of the use of dangerous substances in electrical and electronic equipment, as well as the disposal of waste".

1 - GENERAL INFORMATION

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1.3 REMARKS

Keep the manual in a dry place, to avoid deterioration, for at least 10 years for future references. Read carefully and completely all information contained in this manual.

Pay particular attention to the rules of use accompanied by the words '**DANGER**', '**PROHIBITION**' or '**OBLIGATION**' because, if not observed, they may cause damage to the machine and/or to people and things.

For anomalies not covered by this manual, promptly contact the FINTEK srl Support Service. The manufacturer declines all responsibility for any damage due to improper use of the machine, to a partial or superficial reading of the information contained in this manual.

The appliance must be installed in such a way as to make maintenance and/or repair operations possible.

In any case, the warranty for the device does not cover the costs due to staircases, scaffolding or other lifting systems that are necessary to carry out warranty interventions.

The manufacturer does not issue drawings or specifications of connection systems.

Any exception to the requirements contained in the following manual must be validated in writing from the manufacturer's technical assistance.



1.4 BASIC SAFETY RULES

Recall that the use of products that use electricity and water involves compliance with certain fundamental safety rules such as:

Children and unassisted disabled people are prohibited from using the device.

It is forbidden to touch the device if you are barefoot and have wet or damp parts of your body.

Any cleaning operation is prohibited without first disconnecting the power supply network by setting the general system switch to 'off'.

It is forbidden to modify safety or control devices without the authorization and instructions of the manufacturer of the device.

It is forbidden to pull, disconnect, twist electrical cables that come out of the appliance, even if it is disconnected from the power supply network.

It is forbidden to open the access doors to the internal parts of the appliance if the system is not turned off using the general switch.

It is forbidden to climb with your feet on the device, sit and/or place any type of object on it.

It is forbidden to spray or throw water directly on the appliance.

It is forbidden to disperse, abandon or leave packaging material (cardboard, braces, plastic bags, etc.) within the reach of children as it may be a potential source of danger.



Respect the safe distances between the machine and other equipment or structures to ensure sufficient access space to the unit for maintenance and/or assistance operations as indicated in this booklet (see chapter technical spaces).



Power supply to the unit: it must take place with electrical cables with a section appropriate to the unit's power and the supply voltage values must correspond to those indicated for the respective machines; all machines must be connected to the ground in accordance with the regulations in force in the various countries.



Hydraulic connection must be carried out as per instructions in order to ensure the proper functioning of the unit. If the unit is not in operation during the winter period, it is necessary to empty the hydraulic circuit.



Move the unit with the utmost care, avoiding turning it upside down and overlapping obstacles that could damage it.



The tampering, removal and deterioration of the identification plates makes it difficult to install, maintain and request spare parts.

1 - GENERAL INFORMATION

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1.5 RECEIPT OF THE PRODUCT AND HANDLING

The equipment is supplied on wooden pallets protected by cardboard packaging

Also included are:

- Manual, installation, use and maintenance, complete with warranty conditions and CE declaration
- anti-vibration feet, water filter, gas fittings for indoor unit (in models where necessary)
- ventilation unit documentation (inside its own packaging)
- connection diagram (adhesive label placed on the inside of the inspection panel)



The Use and Maintenance booklet is an integral part of the equipment; it is recommended that you read it and store it carefully.
Remove the packaging only with equipment placed in the installed position. Once the packaging is removed, the handling must be carried out by qualified personnel equipped with equipment appropriate to the weight of the structure. The manipulation of the condenser is only allowed with equipment maintained in an upright position.



Do not disperse parts of the packaging in the environment, or leave them within the reach of children as potential sources of danger.
Dispose of packaging according to the regulations in force in the country.



Check upon receipt that there is no transport and/or handling damage and that the required accessories are present inside the packaging.

2 - DEVICE DESCRIPTION

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2.1 CONSTRUCTIVE DESCRIPTION

- The structure is made of galvanized sheet coated with epoxy powders.
- The 9-12-18-24 models are equipped with hermetic ROTARY compressors, while in the higher models, SCROLL or Twin Rotary compressors are used, suitable for operation with R32 refrigerant. The compressor is mounted on rubber supports or springs to eliminate vibrations transmitted to the chassis.
- The refrigerant circuit is made entirely of copper and insulated where necessary with a closed-cell foam tube; the joints soldered with high-strength alloy. The circuit is complete with: dehydrator filter, laminating organ, high pressure switch with automatic reset, low pressure switch with automatic reset and reverse cycle valve. All models are controlled by a new electronic control unit, which adjusts all the functions of the device by signaling any type of safety intervention on a light display.

2.2 BEFORE PROCEEDING WITH THE INSTALLATION

Before installing the equipment, carefully read and keep the user manual and the manufacturer's general conditions set out below.

1. Make sure that the equipment meets the needs of the system.
2. Check that the incoming water flow is sufficient for the system to function properly both during the cooling phase and during the heating phase (see technical data).
3. Check that the temperature of the incoming water falls within the parameters indicated in the technical data: minimum temperature for the heating function (in winter) not lower than 12° but it also works with water at a temperature lower than 9° with limited power, maximum temperature for the cooling function (in summer) not exceeding 29°C.
4. Check that the refrigerating (which connect the condenser with the fan unit) and hydraulic (water loading and unloading line) pipes are correct according to the manufacturer's requirements (see technical data).
5. Install the water filter (optional and recommended) to protect the exchanger (water inlet).
6. In the case of impurities in the water, perform periodic maintenance on the filter.
7. Make sure that the correct voltage reaches the electrical connection terminals (see identification plate applied to the appliance). An incorrect voltage would irreparably compromise the main components of the equipment.
8. If you should activate alarms, consult the user manual or contact the support service.
9. Do not force the machine to operate for any reason by tampering with or altering the safety inside it.
10. Start-ups cannot be carried out with systems that are not complete, temporary or carried out in a precarious manner.
11. The connections to the machine (hydraulic and electrical) must be carried out by experienced and competent personnel and must comply with all safety and health protection standards in force at the time and in the country in which it operates.
12. Technical documentation (diagrams and user manual) must be kept in good condition in an easily accessible place for quick consultation in case of need.
13. The equipment must not be used for purposes that do not correspond to the characteristics for which it was built.
14. Respect the technical spaces indicated in this manual to ensure good access to machine maintenance.
15. In the event of damage to the equipment caused by non-compliance with the points indicated above or with the information contained in this booklet, the manufacturer reserves the right to partially or completely cancel the warranty.
16. For any clarification on this matter, please contact our technical department.

3-INSTALLATION

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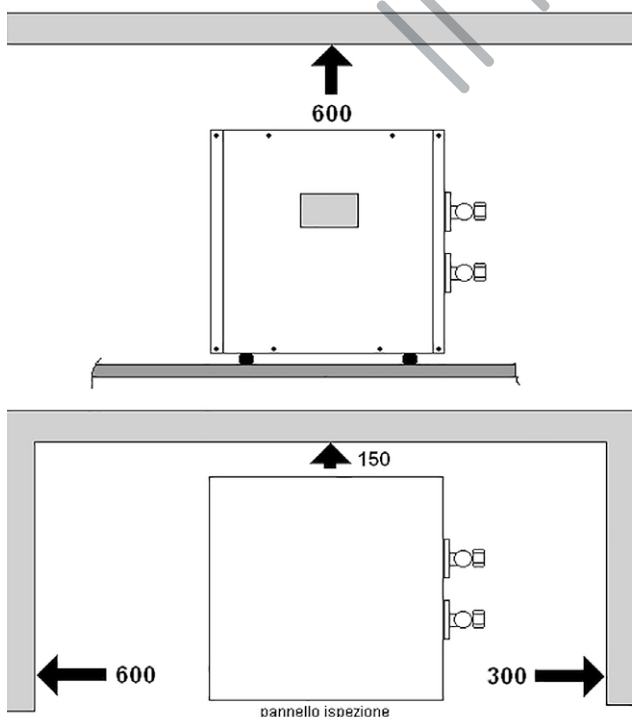
3.1 INSTALLATION LOCATION

The installation location must be agreed with the customer, paying attention to the following points:

- The equipment must be placed in a technical compartment of appropriate dimensions and in accordance with the regulations in force in the countries where it will be installed.
- The condenser must not be installed outdoors, nor in dusty places, saline-prone environments, near heat sources and in the presence of sulfide gas.
- The surface on which it will be placed must be able to support its weight, the anti-vibration feet that the machine is equipped with **MUST NOT BE DISASSEMBLED** except in the case of the use of spring antivibrators for installations with wall brackets. Always consider an area to avoid the annoyance of the noise of the compressor and water
- The front panel must be inspectable, so the front space must be such as to allow the operator all the necessary operations during installation, maintenance and assistance (checks, adjustments, coolant charging).
- In the case of multiple installations (2 or more) do not overlap the condensers.
- The installation must allow specialized and authorized personnel to be able to intervene, in the event of maintenance, easily respecting both the safety distances between the units and other equipment and the technical spaces indicated below:
- Our units must be installed in accordance with the spaces indicated in the installation manual to guarantee both their accessibility on both sides and the possibility of carrying out maintenance or repair operations. In fact, the components of the units must be accessible and removable in conditions of complete safety for both people and things.

For this reason, if what is indicated in the installation manual is not respected, the cost necessary to reach and repair the units (under SAFE CONDITIONS, as required by current regulations) with harnesses, staircases, scaffolding or any other lifting system will NOT be considered under warranty and will be charged to the end customer.

Attention in case of installation on a bracket (WALL FIXING), the supplied rubber feet (mounted on the machine base) must be replaced with anti-vibration dampers with M6 threaded pin to be screwed on the base and on a bracket (anti-vibration springs are recommended).



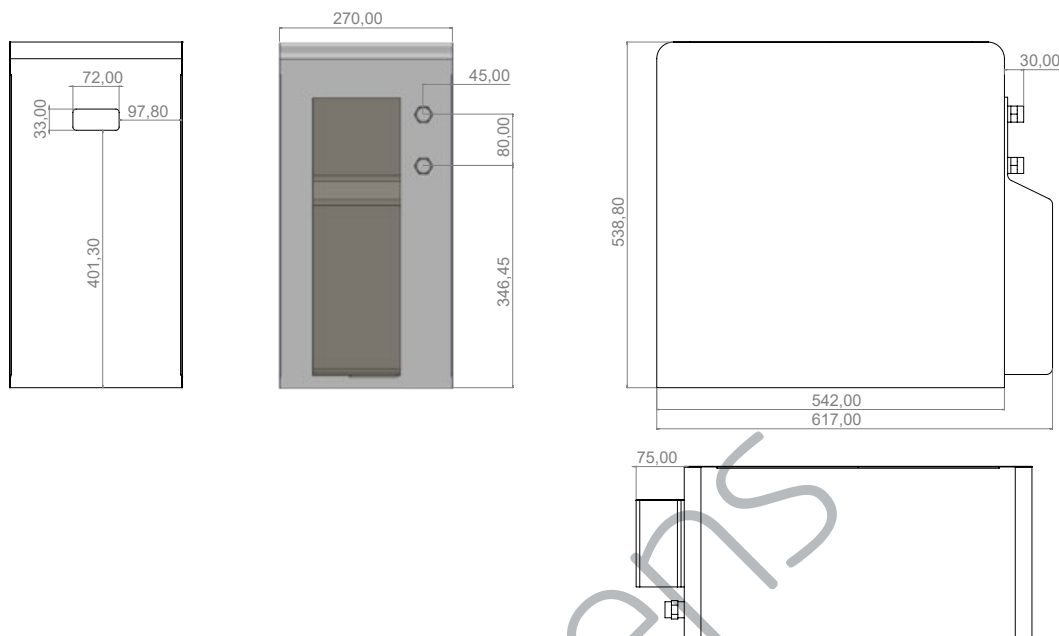
- A** - 1/2" F Water Outlet connection
- B** - 3/4" F Water Inlet connectio
- C** - 1/4" 3/8" Gas Connectors
- D** - Terminal block
- E** - Card Access Panel

DIMENSIONS

MONO: 2.64Kw – 3.52 Kw – 5.28Kw

MULTI: 216-220

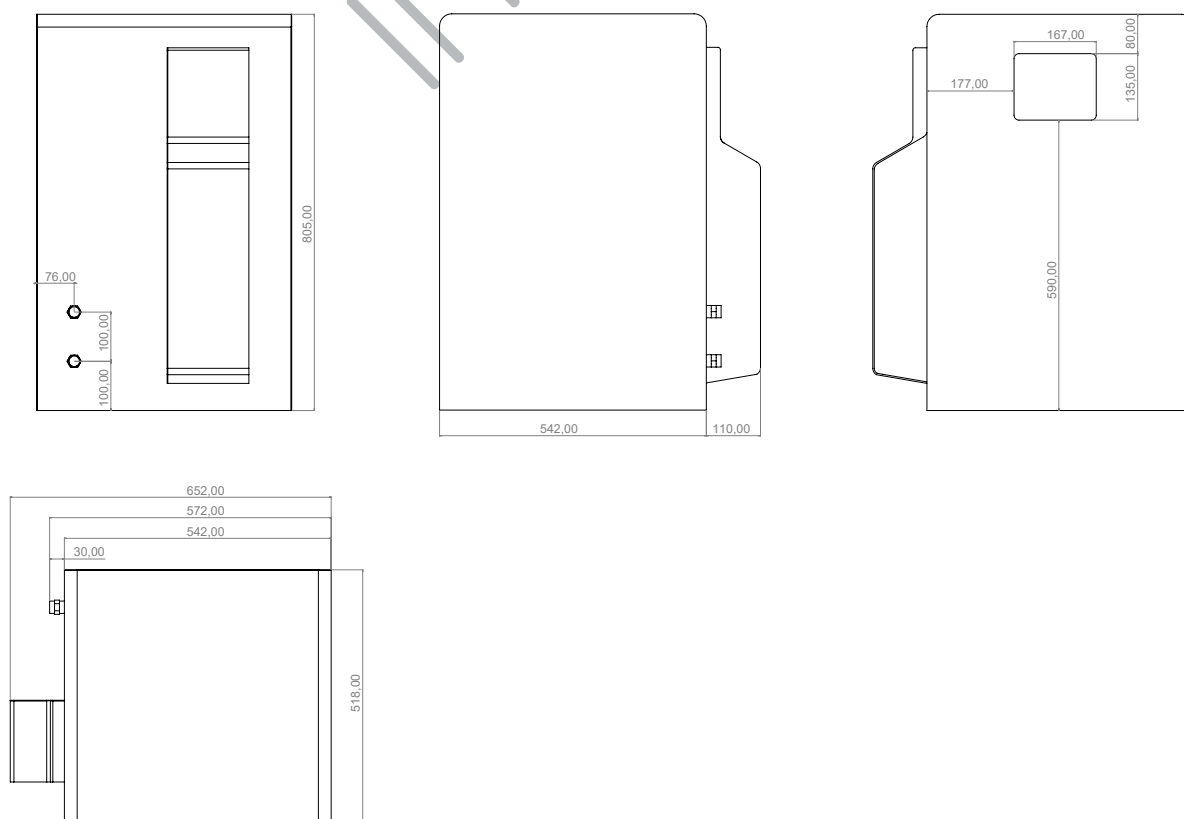
Frame size Length Height Depth mm 540 - 540 -275



MONO: 7.03 Kw – 9.0 Kw – 10.5 Kw – 14.4 Kw – 15.3 Kw

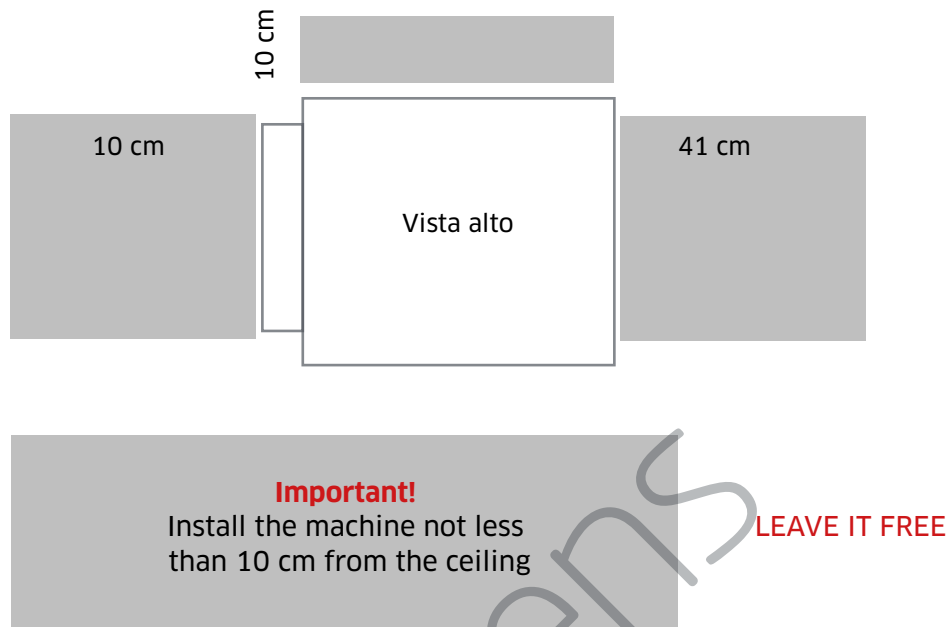
MULTI: 324 – 327 – 428 – 436 - 542

Frame size Length Height Depth mm 600 - 810 -600



POSITIONING

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During the preparation phase, it is very important to choose a positioning that allows easy maintenance.

Looking head-on at the condenser (where are the gas faucets and the water connections) is located on the left side of the unit the panel for accessing the cards electronic and to the condensation control module (where mounted), on the right side is housing the valve that controls the flow of water.

It is suggested to leave room for maneuver in order to allow adjustments on the valves of the water (right side) and to be able to intervene on the card side for a possible diagnosis or condensation control setting.

It is important that the back of the machine is left at least 10 cm from the wall in order to allow the fan (mounted rear) to expel the heat generated by card sink.

3 - INSTALLATION

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3.2 HYDRAULIC CIRCUITS AND REFRIGERATORS

The installer is responsible for the correct choice and application of the components in accordance with current national regulations and what is recommended below.

3.3 HYDRAULIC CONNECTIONS

The hydraulic connections are made on the connections located on the right side of the machine. The fittings

Plumbers are marked with a label indicating the flow: IN WATER 3/4 Female and OUT WATER 1/2" Female. In case of network pressure >1.5 BAR, it is recommended to install a pressure reducer to avoid annoying sound of water through the valve. Always provide a 500 micron water inlet filter and a shutoff tap on the water inlet, use pipes with an internal diameter corresponding to the diameter of the condenser fittings because otherwise operating anomalies may occur (the warranty expires if suitable pipes are not used). Special cooling water, or temperatures lower than 9°, must be conditioned with appropriate conditions treatment systems and agreed with the technical department. For the connection of hydraulic pipes, yes It is not recommended to use extensible stainless steel tubes because they generate annoying resonances in the environment

The lack of the filter causes the warranty to expire

In models where the total condensation control system has not been installed, you may hear blows when the machine stops. In order to solve this problem caused by the hydraulic system external to the machine, we suggest installing a system: Anti-Strike Strike. On the water inlet pipe.

The reference values may be considered those shown in the following table.

PH	6-8
Total hardness	less than 50 ppm
Alkalinity M	less than 50 ppm
Minor total iron	by 0.3 ppm
Electrical conductivity	less than 200 mV/cm (25°C)
Chlorine ions	less than 50 ppm
Sulfuric acid ions	less than 50 ppm
Sulfur ions	none
Ammonia ions	none
Silicon ions	less than 30 ppm

3.4 REFRIGERATOR CONNECTIONS

The refrigerator connections are made on the connections located on the right side of the machine. The connections for the refrigerating lines are of the 'flare' type. Attention if the evaporating unit connections are different from the condenser connections, use reduction fittings (to be mounted on the fan unit) and KEEP the diameter of the refrigerating pipes the same as the condenser connections.

3.5 CONNECTIONS BETWEEN EVAPORATOR UNIT AND CONDENSING UNIT

The indoor unit must be connected to the condenser by means of Flare connections with a refrigerator-grade copper tube provided at the ends with Flare nuts and insulated along the entire length. It's absolutely

It is essential to respect the diameters provided for on the condensing units under penalty of forfeiting the warranty. In the case of the use of evaporating units with refrigerating connections other than those provided on the condensing units, use reduction fittings (be careful to mount these connections on the evaporating unit).

3.6 TUBE PREPARATION

Use only "refrigerated" grade copper tubes with a diameter appropriate to each model. The 'gas' tube and the 'liquid' tube must be strictly insulated with a minimum thickness of 6 mm insulator. Insert the flare nuts on the ends of the tubes before preparing them with a countertop tool. The separately insulated tubes with their fittings can then be connected to the condensate evacuation tube and to electrical cables by means of clamps.

3.7 PIPE ROUTE

The bending radius of the tubes must be equal to or greater than three and a half times the diameter at the axis of the tube. Do not bend the tubes more than 3 consecutive times and do not make more than 10 bends on the total length of the connection. If there is a difference in height between evaporating unit and condensing unit greater than 5 m, it will be mandatory to set up a siphon every 3 m. The siphon must have as narrow a radius of curvature as possible.

3.8 AIR EXTRACTION IN THE REFRIGERATING HOSES AND EVAPORATING UNIT

The charge of R410A/R32 is contained exclusively in the condensing unit. The fan unit can contain a small amount of neutral gas. Therefore, after making the connections, it will be mandatory to extract the air contained in these connections and in the indoor units.



ATTENTION WHEN TIGHTENING THE VALVES IT IS ESSENTIAL TO USE A REVERSE WRENCH.

3 - INSTALLATION

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3.9 ASSEMBLY PROCEDURE

The condenser **MUST BE INSTALLED** in an accessible position for any safe technical interventions, otherwise the CATs (technical assistance centers) may refuse the intervention.

THE CONDENSER MUST NOT BE INSTALLED OUTSIDE BECAUSE DURING THE WINTER PERIOD IT MAY SUFFER DAMAGE TO THE HYDRAULIC CIRCUIT.

ALWAYS HAVE AN INSPECTABLE FILTER ON THE WATER INLET (≤500 microns mesh).

! ATTENTION THE HYDRAULIC FITTINGS (IN and OUT) ARE PROTECTED BY PLASTIC PLUGS (internal and external) that must be removed before hydraulic connections.

- Connect the connecting tubes to the condensing unit and to the indoor unit.
- Connect the vacuum pump to the connection (suction), start and make sure that the hand of the indicator drops to – 0.1 Mpa (-760 mm. Hg). Before disconnecting the vacuum pump, check that the vacuum indicator remains stable for >15 minutes.
- Close the service valve and disconnect the vacuum pump.
- Remove the plugs from the 'GAS' and 'LIQUID' valves and open them with a hexagonal wrench to release the R410A contained in the group, then reassemble the plugs.
- Check the tightness of the connections. Use an electronic leak detector or a leak detection spray solution for this purpose.

Model	2.64	3.52	5.28	7.02 9.0	10.5	14.4	15.35	Multi 2 single compressor (all models)	Multi 3	2.64/2.64/2.64 2.64/2.64/3.5 2.64/2.64/5.28 2.64/3.5/3.5 3.5/3.5 3.5/3.5	2.64/2.64/2.64 2.64/2.64/2.64 3.5/ 3.5 3.5 3.5/3.5/3.5
Maximum total refrigerator line length (meters)	20	20	20	20	25	25	25	20+20	15+15	20+15	20+20

NOTE: for dual bi-compressor models, consider the corresponding mono model for each line (both for length and for additional load).

Model	2.64	3.52	5.28	7.02 9.0	10.5	14.4	15.35	2.64 2.64 3.5 3.5	5.28 5.28 7.02 7.02	2.64/2.64/2.64 2.64/2.64/3.5 2.64/2.64/5.28 2.64/3.5/3.5 3.5/3.5 3.5/3.5	2.64/2.64/2.64 2.64/2.64/2.64 3.5/3.5 3.5 3.5/3.5/3.5
UI>EU altitude difference (UI<EU) max (meters)	10	10	10	10	10	10	10	8	8	5	5

If there is a difference in height between the evaporating unit and the condensing unit greater than 3 m, it will be mandatory to set up a **siphon for every 3 m of cooling line.**

3.10 ADJUSTMENT OF THE REFRIGERANT CHARGE

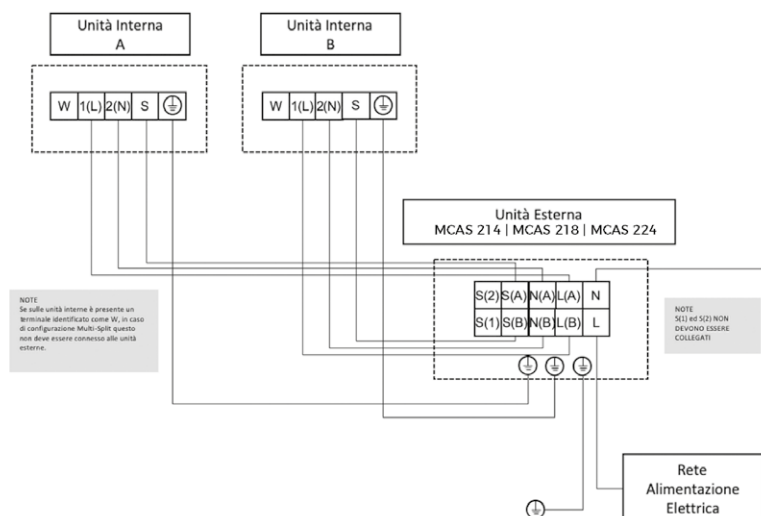
Depending on the connection length per single route, it may be necessary to refill the R410A charge (the capacitors are precharged for a 7-meter line). This operation must be carried out by qualified personnel and according to the perfect workmanship of the refrigeration technician. The complete charge is entered through the service valve of the condenser's Flare connection (large connection).

If the cooling line is smaller than 5 m. "drain" the excess amount of refrigerant. All interventions on refrigeration circuits imply compliance with recommendations relating to the disposal of R410A in the environment (according to local regulations).

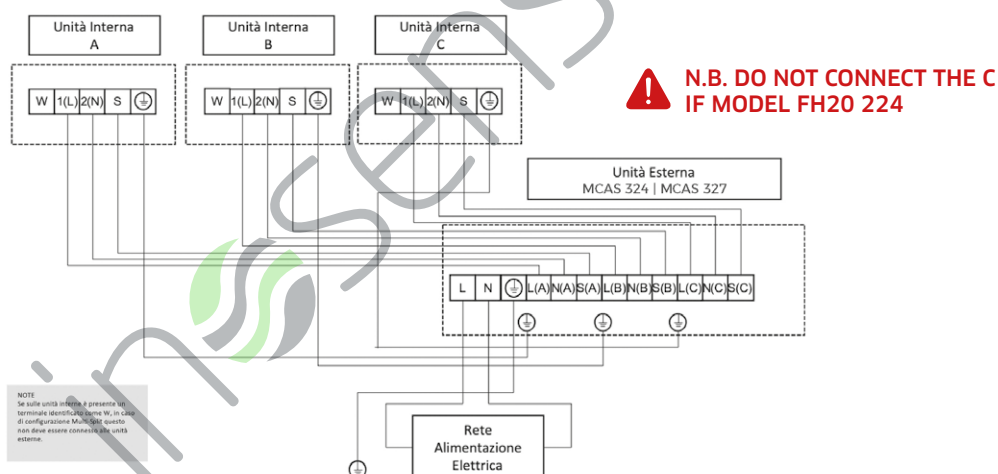
Model	2.64	3.52	5.28	7.02 9.0	10.5	14.4	15.35	2.64 2.64 3.5 3.5	2.64/2.64 5.28/5.28 7.02/7.02	2.64/2.64/3.5 2.64/2.64/5.28	2.64/2.64/2.64/2.64 2.64/2.64/3.5/3.5 3.5/3.5/3.5/3.5
Grams per meter of refrigeration line	15	15	15	20	20	20	30	15 15	15 20 20	15 (2.64/2.64) 15 (3.5)	15 (2.64/2.64) 15 (3.5/3.5)

4 - WIRING DIAGRAM FOR MULTISPLIT MODELS

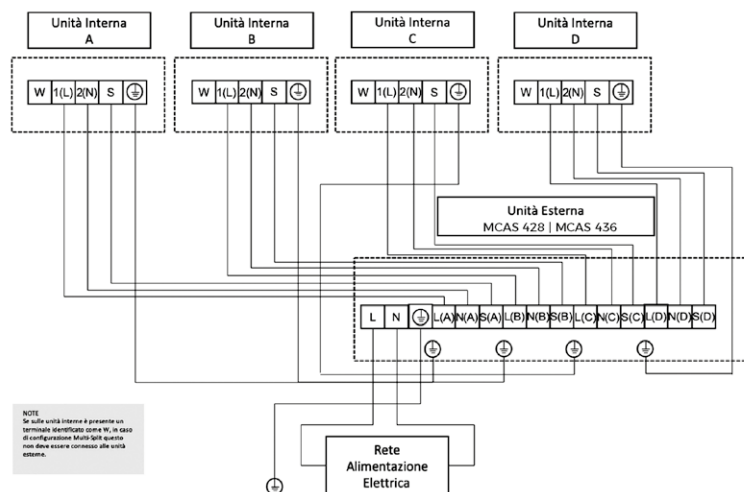
FH20 216
FH20 220



FH20 224
FH20 324
FH20 327



FH20 428
FH20 436
FH20 542



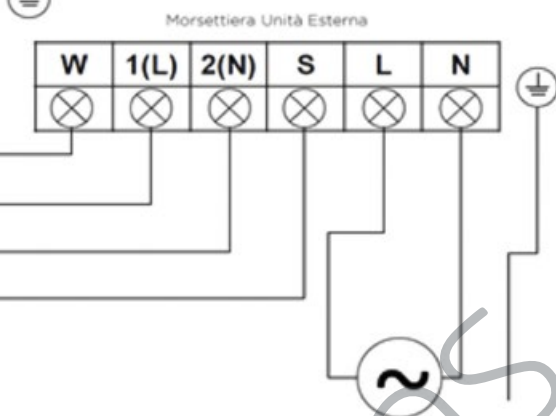
NOTA: per il modello MCAS 542 lo schema è analogo a quanto indicato sopra, con la presenza di un'ulteriore serie di morsetti E con le connessioni per l'unità interna E.

NOTE: for the MCAS 542 model the diagram is similar to that indicated above, with the presence of a further series of terminals E with the connections for the indoor unit E.

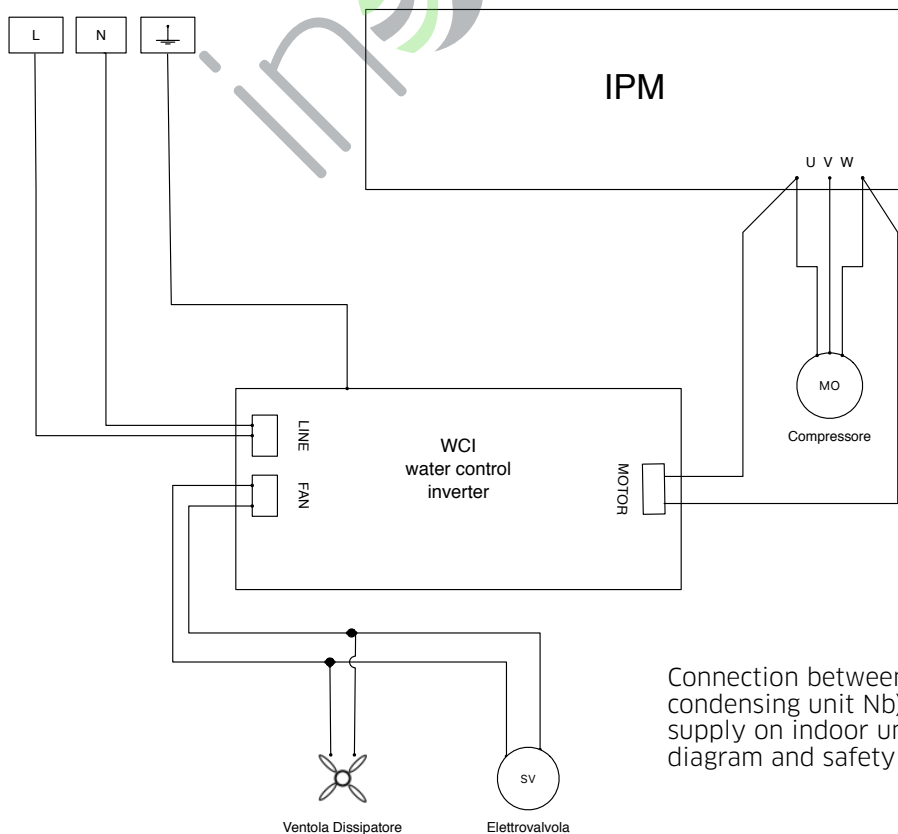


WIRING DIAGRAM FOR WALL MODELS

NOTE: Do not make connections other than those indicated. Use suitable section conductors for wiring



VALVE WIRING DIAGRAM AND ELECTRIC DISSIPATOR WIRING DIAGRAM

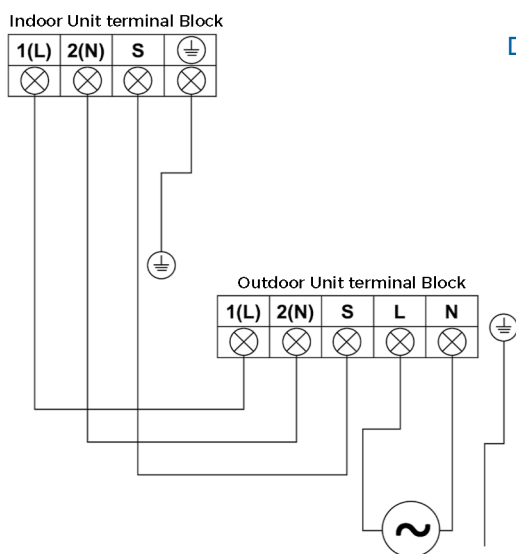


Connection between indoor unit and condensing unit Nb) 220 V 50 Hz power supply on indoor unit WCI connection diagram and safety chain

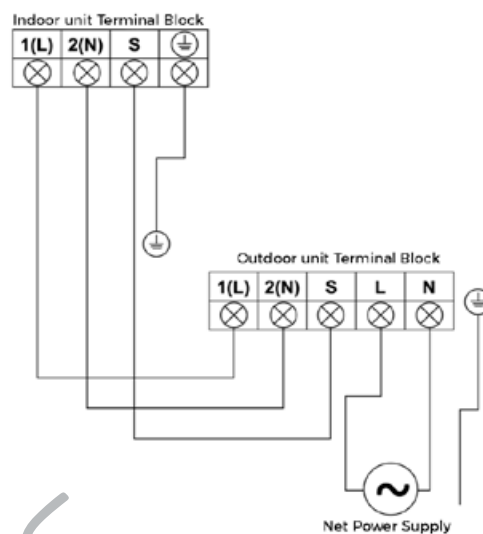
LCAC wiring diagram (cassettes, ductable, pav. Ceiling, console)

Models 12000 - 18000 btu/h

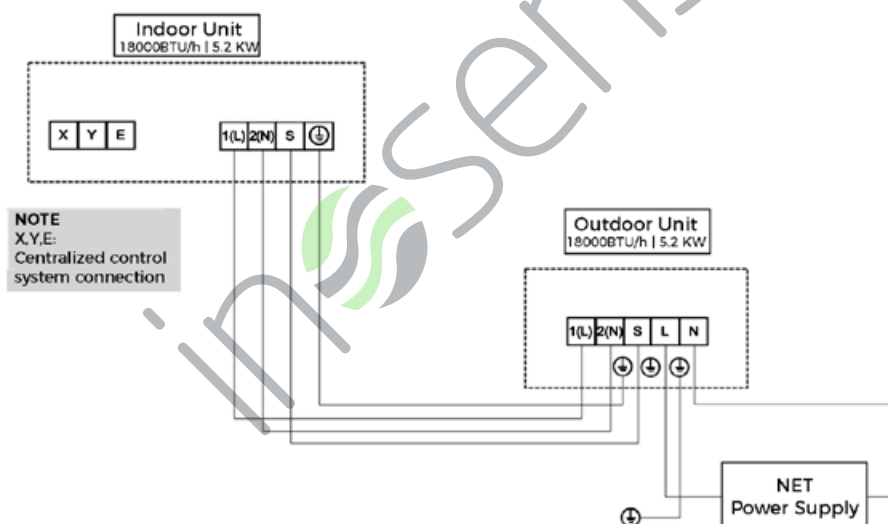
CASSETTE



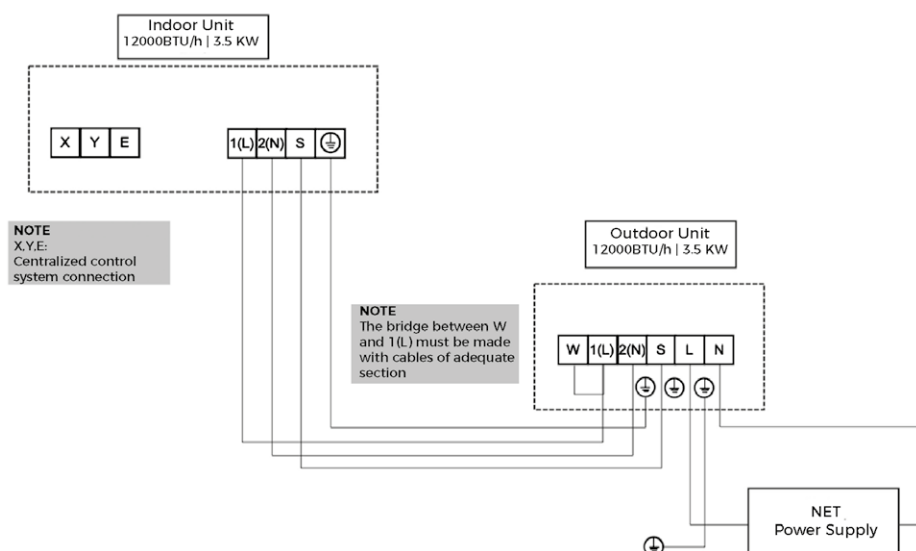
DUCT



CEILING



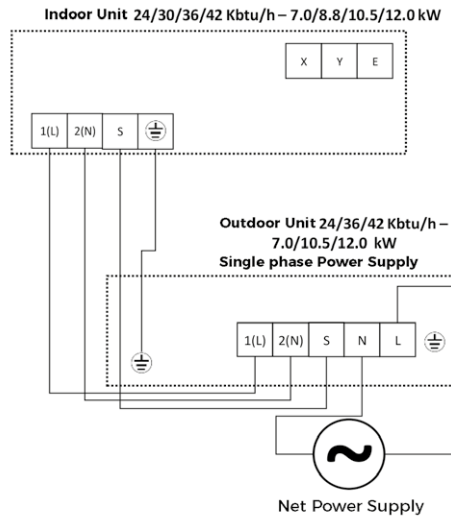
CONSOLE



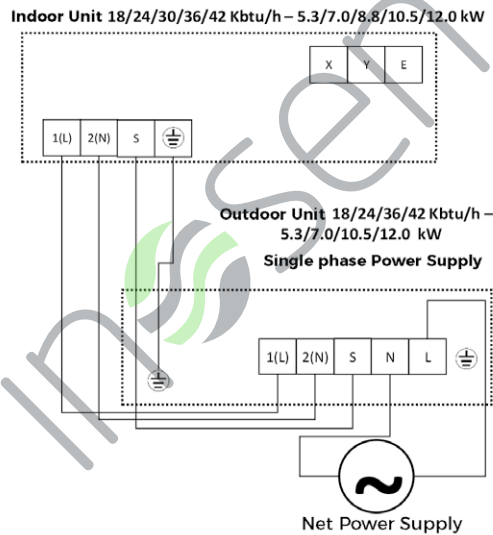
LCAC wiring diagram (cassettes, ductable, pav. Ceiling, console)

Models 24/30/36/42 Single-phase

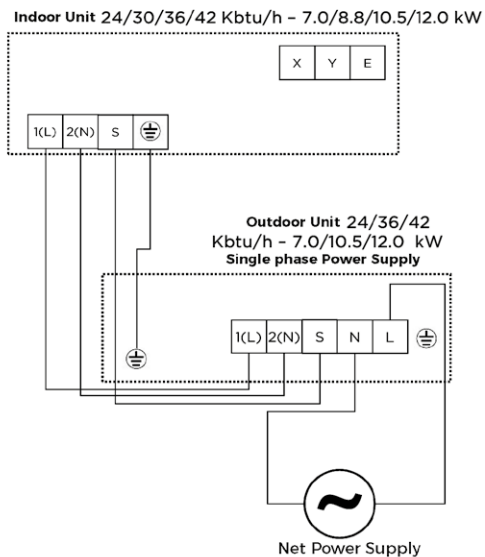
CASSETTE



CEILING

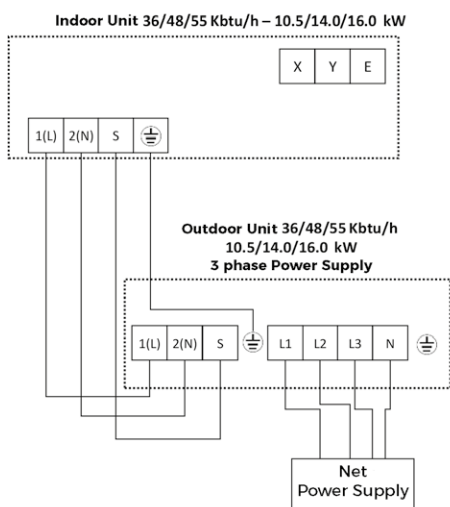


DUCT

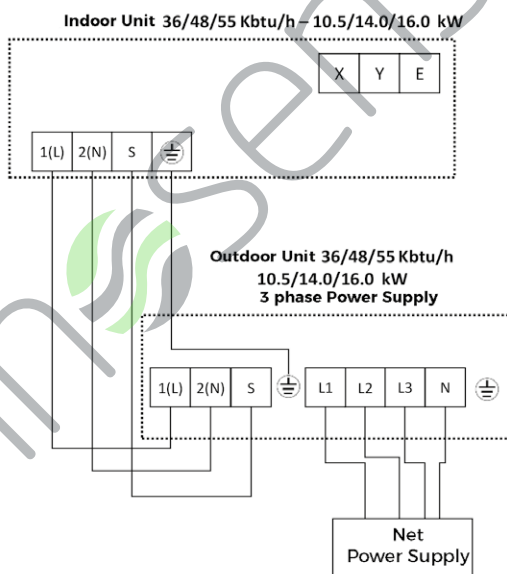


LCAC wiring diagram (cassettes, ductable, pav. Ceiling, console) Models 36/42/48/60 Three-phase

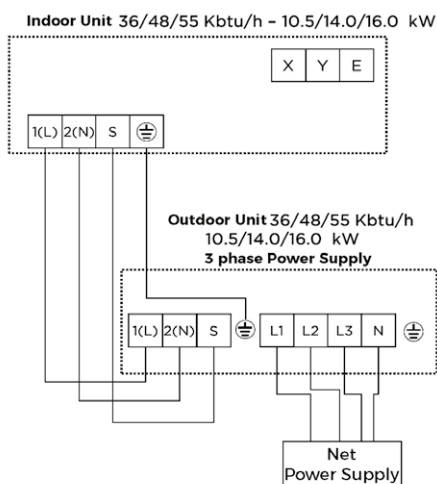
CASSETTE



CEALING



DUCT



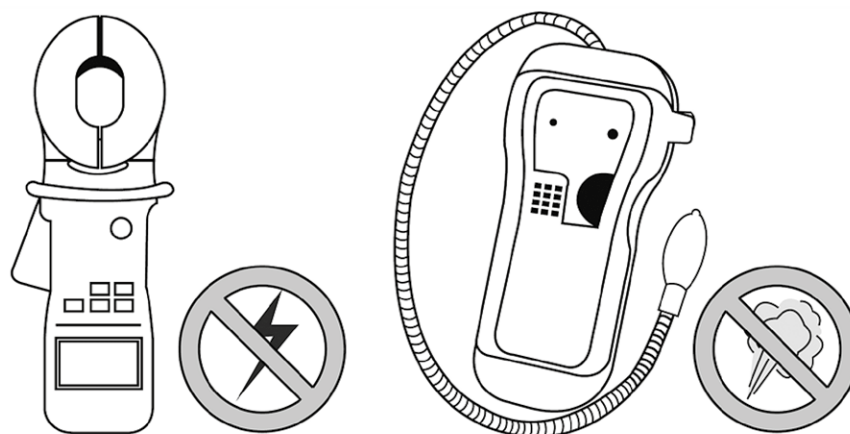
5 - ERROR CODES REPORTED BY THE INTERNAL UNIT

SPY BUY	TIMER SPY	DISPLAY	ERROR OR FAULT
1 times	OFF	E0	Indoor unit EEPROM parameter error
2 times	OFF	E1	Indoor/outdoor unit communication error
4 times	OFF	E3	The indoor fan speed is operating outside the normal range
5 times	OFF	E4	Indoor room temperature sensor T1 is in open circuit or is short-circuited
6 times	OFF	E5	Evaporator coil temperature sensor T2 is in open circuit or is short-circuited
7 times	OFF	EC	Coolant leakage detected
1 times	ON	F0	Overcurrent protection
2 times	ON	F1	Outdoor ambient temperature sensor T4 is in open circuit or in shot circuit
3 times	ON	F2	Condenser coil temperature sensor T3 is in open circuit or is short-circuited
4 times	ON	F3	Compressor discharge temperature sensor T3 is in open circuit or has short circuited
5 times	ON	F4	Outdoor unit EEPROM parameter error
6 times	ON	F5	The outdoor fan speed is operating outside the normal range
1 times	FLASH	p0	IPM malfunction or IGBT overcurrent protection
2 times	FLASH	p1	Overvoltage or over low voltage protection
3 times	FLASH	p2	IPM module high temperature protection
5 times	FLASH	p4	Inverter compressor drive error

QUICK TABLE FOR IDENTIFYING THE COMPONENT TO REPLACE

Part to replace	Error code						
	E0	E1	E3	E4	E5	EC	F0
Indoor PCB	✓	✓	✓	✓	✓	✓	✗
Outdoor PCB	✗	✓	✗	✗	✗	✗	✓
Reactor	✗	✓	✗	✗	✗	✗	✗
Indoor fan motor	✗	✗	✓	✗	✗	✗	✗
Outdoor fan motor	✗	✗	✗	✗	✗	✗	✗
Temperature sensor	✗	✗	✗	✓	✓	✗	✗
T2 sensor	✗	✗	✗	✗	✗	✓	✗
Additional coolant	✗	✗	✗	✗	✗	✗	✗
Compressor	✗	✗	✗	✗	✗	✗	✓
IPM Board	✗	✗	✗	✗	✗	✗	✗
Outdoor unit	✗	✗	✗	✗	✗	✗	✓
Display board	✗	✗	✗	✗	✗	✗	✗

Part to replace	Error code								
	F1	F2	F3	F4	F5	P0	P1	P2	P4
Indoor PCB	✗	✗	✗	✗	✗	✗	✗	✗	✗
Outdoor PCB	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reactor	✗	✗	✗	✗	✗	✗	✓	✗	✗
Indoor fan motor	✗	✗	✗	✗	✗	✗	✗	✗	✗
Outdoor fan motor	✗	✗	✗	✗	✓	✗	✗	✗	✗
Temperature sensor	✓	✓	✗	✗	✗	✗	✗	✗	✗
T2 sensor	✗	✗	✗	✗	✗	✗	✗	✗	✗
Additional coolant	✗	✗	✗	✗	✗	✗	✗	✗	✗
Compressor	✗	✗	✗	✗	✗	✓	✗	✗	✓
IPM Board	✗	✗	✗	✗	✗	✓	✓	✗	✓
Outdoor unit	✗	✗	✗	✗	✗	✗	✗	✗	✗



6 - SAFETY AND LOSS CONTROL

Checks and checks

At the end of the installation, ensure that all cables have been installed in accordance with the legal provisions in force in the installation territory.

Before starting the product, check the grounding

Measure ground resistance by sight and using a ground resistance meter.

If this requirement is not respected, there is a risk that electric shocks and fires may develop.

THE ELECTRICAL WIRING OF THE PRODUCT MUST BE MADE IN ACCORDANCE WITH THE REGULATIONS IN FORCE AT THE PLACE OF INSTALLATION AND MUST BE CARRIED OUT BY QUALIFIED AND AUTHORIZED PERSONNEL.

Refrigerant leakage control

Conduct a check for the absence of refrigerant leaks from the connections with the product operating in heating mode. Check the absence of leaks by verifying the connections using soapy water or using an electronic leak detector suitable for the type of coolant used in the equipment.

Before running the function test

Perform the functional test only after completing the following steps:

Electrical safety checks: Make sure that the unit's electrical wiring has been properly installed, is safe, and is working properly.

Make sure that the Gas and Liquid Side valves are fully open.

First start

The first start of the product must be carried out in cooling mode, regardless of the environmental conditions at the time of installation.

Use the 'Forced Cooling' function to activate the product in cooling mode even in the presence of low ambient temperatures.

To activate the function, press the AUTOCOOL button on the front panel of the unit twice. When operating in this mode, the display of the indoor unit and that of the external unit show the characters FC.

The test operates by putting into operation all the indoor units connected in cooling mode with the internal fan at maximum speed and the compressor in a forced work cycle.

The test is automatically interrupted 30 minutes after starting, returning the product to a pre-defined working condition. The local command is disabled during the test.

Electrical safety check

Perform the electrical safety check after the installation is complete.

1. Insulation resistance – insulation resistance must be greater than 2W
2. Grounding – as soon as the grounding work is finished, measure the ground resistance by means of visual detection and with a ground resistance tester. Make sure that the ground resistance is less than 4W
3. Electrical dispersion control – during the test test and after the installation is complete, use an electrical probe and a multimeter to perform an electrical dispersion test. Turn off the unit immediately in case of leakage. Evaluate different solutions until the unit is working properly.

GAS LEAKAGE CONTROL

1. Soapy water method – apply a soap and water solution or neutral liquid detergent to the joints of the indoor unit or condenser with a soft brush to look for leaks at the connection points and in the piping. If bubbles appear, a leak is occurring in the tubes.
2. Leak detector – use the leak detector to search for leaks

MAINTENANCE INFORMATION

1. Area Controls

Before starting to work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of flammability is minimized. For repairs to the refrigeration system, the following precautions should be taken before starting work.

2. Work procedures

The work must be carried out according to a controlled procedure in order to minimize the risk of the presence of flammable gases or vapors during the execution of the work.

3. General work area

All those involved in maintenance operations and other work that take place in the area must be educated on the nature of the work performed. Work in tight spaces must be avoided. The area around the work space must be isolated. Ensure that conditions within the area have been made safe by controlling flammable materials.

4. Check for the presence of refrigerant

The area must be checked with a refrigerant detector before and during work to ensure that the technician is informed about the presence of potentially flammable atmospheres. Make sure that the leak detection equipment used is suitable for use with flammable refrigerants, i.e., spark-free, properly sealed and inherently safe.

5. Presence of fire extinguisher

If any work is to be done with the coolant or any associated part, there must be a fire extinguisher ready for use. Have a dry powder or carbon dioxide fire extinguisher in the charging area.

6. No source capable of triggering flames

No person who performs work connected to a refrigeration system involving pipes that contain or contain flammable refrigerant should use any source capable of triggering flames that may pose the risk of fire or explosion. All possible sources capable of triggering flames, including cigarettes, must be kept away from the place where installation, repair, removal and disposal operations are carried out during which flammable refrigerant may be released into the surrounding space. Before starting work, check that in the surrounding area

There are no flammable hazards to the equipment or risk of triggering flames. Display the 'NO SMOKING' sign.

7. Ventilated area

Make sure that the area is outdoors or is properly ventilated before conducting any operation. Constant ventilation must be maintained throughout the entire time the work is carried out. The ventilation should safely disperse any refrigerant leakage and preferably expel it externally into the atmosphere.

8. Checks for refrigeration equipment

In the case of replacement of electrical components, they must be fit for purpose and to the correct specifications. Always follow the maintenance and service guidelines provided by the manufacturer. If in doubt, consult the manufacturer's technical department for assistance. The following checks must be carried out on plants that use flammable refrigerants:

- the size of the charge corresponds to the size of the room where the parts containing coolant are installed;
- the machines and ventilation outlets work properly and are not obstructed
- if an indirect refrigerant circuit is used, the secondary circuits must be checked for the presence of coolant
- the marking on the equipment continues to be visible and readable
- markings and marks that are not legible must be corrected
- coolant pipes or other components are installed in a position that avoids exposure to any substance that

may corrode components that contain refrigerant, unless the components are constructed of materials that are resistant to corrosion or are protected against corrosion.

9. Checks on electrical devices

The repair and maintenance of electrical components must include initial safety checks and component inspection procedures. If there is a fault that could compromise safety, no electrical supply should be connected to the circuit until the problem is resolved. If the fault cannot be corrected immediately but it is necessary to continue the operation, a temporary solution must be undertaken. This must be reported to the owner of the equipment so that all parties are notified.

Initial security checks must include:

- that the capacitors are discharged: this must be done safely to avoid the possibility of sparks;
- that there are no electrical components in tension and cables exposed during the charging, recovery or purging of the system;
- that there is continuity of grounding.

10. Repairs on sealed components

10.1 When repairing sealed components, the electrical supply must be disconnected from the equipment being worked on before removing any sealed cover, etc. If it is absolutely necessary to have an electrical supply during maintenance, a leak detector must be permanently placed at the most critical point to warn in the event of potentially dangerous situations.

10.2 Pay particular attention to the following to ensure that when working on electrical components, the structure is not altered in such a way as to influence protection levels. This must include damage to the cables, excessive number of connections, terminals that do not comply with the original specifications, damage to the seals, incorrect assembly of the glands, etc.

- Make sure that the appliance is securely mounted
- Make sure that the welded seals or components are not degraded so that they no longer serve the purpose of preventing the entry of flammable atmospheres. The replacement parts must comply with the manufacturer's specifications.

Note: The use of silicone sealant may inhibit the effectiveness of certain types of leakage detection equipment.

Intrinsically safe components do not need to be isolated before working on them.

11. Maintaining intrinsically safe components

Do not add permanent inductance or capacitance into the circuit without making sure that the voltage and current limits allowed for the equipment in use are not exceeded. Intrinsically safe components are the only type of components that can work in contact with flammable gases without presenting risks. The test apparatus must be correctly evaluated. Replace components only with parts specified by the manufacturer. Other parts could trigger a refrigerant fire in the atmosphere if it leaks.

12. Wiring

Check that the wiring is not subject to wear, corrosion, excessive pressure, vibration, sharp edges, or other adverse environmental effects. The control must also consider the effects of the passage of time or of continuous vibrations from sources such as compressors or fans.

13. Detection of flammable refrigerants

Under no circumstances should potential sources capable of triggering flames be used to search for or detect refrigerant leaks. A halide flashlight (or any other detector that uses an open flame) should not be used.

14. Methods for detecting losses

The following methods for detecting leaks are considered acceptable for systems containing flammable refrigerants.

Electronic leak detectors must be used in the case of flammable refrigerants, but the sensitivity may not be adequate or may require recalibration. (The sensing equipment must be recalibrated in an area without refrigerant.) Make sure that the detector is not a potential source capable of triggering flames and is suitable for the refrigerant being detected. The equipment for detecting leaks must be set to a percentage of the LFL of the refrigerant and must be calibrated with respect to the refrigerant used and the appropriate percentage of gas allowed (25%).

MONO WALL MOUNTED XTREME

			MIW9000ES	MIW12000ES	MIW18000ES	MIW24000ES
			FH209P	FH2012P	FH2018P	FH2024P
Power supply	Volt - Hertz - Phase		220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	1.03-2.64-3.22	1.38-3.52-4.31	3.39-5.28-5.90	2,11-7,03-8,21
	Absorbed Electrical Power	W (Min-Nom-Max)	80-636-1100	120-902-1650	560-1550-2050	420-2578-3200
	Current	A (Nom)	2,8	3,9	6,8	11
	Theoretical Load (PDesignC)	kW	2,6	3,3	5,3	7
	SEER		8,5	8,5	7	6,4
	Energy efficiency class		A+++	A+++	A++	A++
	Annual Energy Consumption	kWh/a	107	136	265	383
Heating	Capacity	kW (Min-Nom-Max)	0.82-2.93-3.37	1.07-3.81-4.38	3.10-5.57-5.85	1.55-7.33-8.21
	Absorbed Electrical Power	W (Min-Nom-Max)	70-673-990	110-969-1480	780-1682-2000	300-2168-3100
	Current	A (Nom)	2,9	4,2	7,3	9,4
	Theoretical Load (PDesignH)	kW (Cold - Medium - Hot Season)	2.6-2.5	2.6-2.6	4.2-4.5	4.9-5.3
	SCOP	(Cold-Medium-Hot Season)	4.2-5.2	4.3-5.8	4.0-5.1	4.0-5.1
	Energy efficiency class	(Cold-Medium-Hot Season)	A+ - A+++	A+ - A+++	A+ - A+++	A+ - A+++
	Annual Energy Consumption	kWh/a (Medium Season)	867-673	847-628	1470-1235	1715-1455
Energy efficiency	E.E.R./C.O.P.	W/W	4.15/4.35	3.90/3.93	3.40/3.76	3.33/3.76
Indoor Unit	Dimensions (Length Width Height)	mm	835-208-295	835-208-295	969-320-241	1083-336-244
	Net weight	Kg	8,7	8,7	11,2	13,6
	Air Flow (Min-Med-Max)	m3/h	300-360-510	310-370-520	500-600-800	610-770-1090
	Sound Pressure (Min-Med- Max)	dB (A)	21-22-29-37	21-22-33-38	20-31-37-41	21-34-37-46
	Sound Power (Max)	dB (A)	56	60	56	62
H2O condenser	Dimensions (Length Width Height)	mm	540-270-540	540-270-540	540-270-540	600-600-800
	Net weight	Kg	30	30	35	52
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m3/h	0,2	0,2	0,25	0,35
	Water Saver Water Consumption	m3/h	0.08-0.2	0.08-0.3	0.15-0.25	0.21-0.3
	Sound Power (Max)	dB (A)	25	25	25	32
	Compressor type		ROTARY	ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	6.35 - 1/4	6.35 - 1/4	6.35 - 1/4	9.52 - 3/8
	Gas Side Piping	mm/ inc	9.52 - 3/8	9.52 - 3/8	12.7 - 1/2	15.88 - 5/8
	Piping Length (Preload)	M	5	5	5	5
	Equivalent piping length (Max)	M	25	25	30	50
	Coolant increase	g/m	12	12	12	24
	Level Difference (Max)	M	10	10	20	25
Refrigerator Fluid	Type of Coolant		R32	R32	R32	R32
	GWP		675	675	675	675
	Preloaded Quantity	Kg	0,62	0,62	1,1	1,45
	Equivalent CO2 emissions	Ton.	0,42	0,42	0,74	0,98
	Test pressure (High/ Low Side)	MPa	4.3/1.7	4.3/1.7	4.6/1.7	4.6/1.7
Electrical Connections	Main Power Supply		External Unit	External Unit	External Unit	External Unit
	Indoor-Outdoor Unit Connection	No. of conductors	4P + Ground	4P + Ground	4P + Ground	4P + Ground
	Maximum Absorbed Electrical Power	W	2150	2150	2500	3700
	Maximum Current	UNTO	10	10	13	19
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°	8°-27*°
		Cooling (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°	8° - 30°

MONO WALL MOUNTED EVOLUTION

			MIW9000FA	MIW12000FA	MIW18000FA	MIW24000FA
			FH2O9P	FH2O12P	FH2O18P	FH2O24P
Power supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	1.03-2.64-3.22	2.17-3.52-4.31	3.39-5.28-5.90	2,11-7,03-8,21
	Absorbed Electrical Power	W (Min-Nom-Max)	80-739-1100	120-1089-1650	560-1550-2050	420-2578-3200
	Current	A (Nom)	3,2	4,7	6,8	11
	Theoretical Load (PDesignC)	kW	2,8	3,6	5,3	7
	SEER		7,4	7	7	6,4
	Energy efficiency class		A++	A++	A++	A++
	Annual Energy Consumption	kWh/a	132	182	265	383
Heating	Capacity	kW (Min-Nom-Max)	0.82-2.93-3.37	1.07-3.81-4.38	3.10-5.57-5.85	1.55-7.33-8.21
	Absorbed Electrical Power	W (Min-Nom-Max)	70-771-990	110-1027-1480	780-1682-2000	300-2168-3100
	Current	A (Nom)	3,3	4,5	7,3	9,4
	Theoretical Load (PDesignH)	kW (Cold-Medium-Hot Season)	2.5-2.5	2.5-2.5	4.2-4.5	4.9-5.3
	SCOP	(Cold-Medium-Hot Season)	4.1-5.3	4.2-5.5	4.0-5.1	4.0-5.1
	Energy efficiency class	(Cold-Medium-Hot Season)	A+-A+++	A+-A+++	A+-A+++	A+-A+++
	Annual Energy Consumption	kWh/a (Medium-Warm Season)	854-691	833-638	1470-1235	1715-1455
Energy efficiency	E.E.R./C.O.P.	W/W	3.60/3.80	3.23/3.71	3.40/3.76	3.33/3.76
Indoor Unit	Dimensions (Length Width Height)	mm	726-210-291	835-208-295	969-320-241	1083-336-244
	Net weight	Kg	8	8,7	11,2	13,6
	Air Flow (Min-Med-Max)	m3/min	330-460-520	350-400-530	500-600-800	610-770-1090
	Sound Pressure (Min-Med- Max)	dB (A)	22-32-37	22-32-37	31-37-41	34-37-46
	Sound Power (Max)	dB (A)	54	56	56	62
H2O condenser	Dimensions (Length Width Height)	mm	720-270-495	720-270-495	874-330-554	955-342-673
	Net weight	Kg	30	30	35	52
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m3/h	0,2	0,2	0,2	0,2
	Water Saver Water Consumption	m3/h	0.08-0.2	0.08-0.3	0.15-0.25	0.21-0.3
	Sound Power (Max)	dB (A)	62	62	65	67
	Compressor type		ROTARY	ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Piping	mm/ inc	6.35 - 1/4	6.35 - 1/4	6.35 - 1/4	9.52 - 3/8
	Gas Side Piping	mm/ inc	9.52 - 3/8	9.52 - 3/8	12.7 - 1/2	15.88 - 5/8
	Piping Length (Preload)	M	5	5	5	5
	Equivalent piping length (Max)	M	25	25	30	50
	Coolant increase	g/m	12	12	12	24
	Level Difference (Max)	M	10	10	20	25
	Type of Coolant		R32	R32	R32	R32
Refrigerator Fluid	GWP		675	675	675	675
	Preloaded Quantity	Kg	0,6	0,65	1,1	1,45
	Equivalent CO2 emissions		0,41	0,44	0,74	0,98
	Test pressure (High/ Low Side)	MPa	4.3/1.7	4.3/1.7	4.6/1.7	4.6/1.7
Electrical Connections	Main Power Supply		External Unit	External Unit	External Unit	External Unit
	Indoor-Outdoor Unit Connection	No. of conductors	4P + Ground	4P + Ground	4P + Ground	4P + Ground
	Maximum Absorbed Electrical Power	W	2150	2150	2500	3700
	Maximum Current	A	10	10	13	19
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27°*	8°-27°*	8°-27°*	8°-27°*
		Cooling (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°	8° - 30°

MONO CASSETTE COMPACT

			FH2012C	FH2018C
			MICA12BB	MICA18BB
Indoor Unit Power Supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Power Supply Outdoor Unit		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	0.85-3.52-4.11	2.90-5.28-5.59
	Absorbed Electrical Power	W (Min-Nom-Max)	168-1010-1434	720-1633-2088
	Current	A (Nom)	4.5	7.2
	Theoretical Load (PDesignC)	kW	3.5	5.3
	SEER		6.6	6.3
	Energy efficiency class		A++	A++
Heating	Annual Energy Consumption	kWh/a	186	294
	Capacity	kW (Min-Nom-Max)	0.47-3.81-4.31	2.37-5.57-6.10
	Absorbed Electrical Power	W (Min-Nom-Max)	124-1019-1376	700-1540-1930
	Current	A (Nom)	4.7	6.8
	Theoretical Load (PDesignH)	kW (Medium Season)	2.7-3.3	4.2-5.4
	SCOP	(Medium Season)	4.1-5.1	4.0-4.8
Energy efficiency	Energy efficiency class	(Medium Season)	A+ - A+++	A+ - A++
	Annual Energy Consumption	kWh/a (Medium Season)	922-906	1470-1575
Indoor Unit	E.E.R./C.O.P.	W/W	3.48/3.74	3.23/3.62
	Dimensions (Length Width Height)	mm	570-570-260	570-570-260
	Net weight	Kg	16.3	16.3
	Air Flow (Min-Med-Max)	m ³ /h	420-510-620	500-620-720
	Sound Pressure (Min-Med-Max)	dB (A)	25-33-36-41	29-35-40-43
	Sound Power (Max)	dB (A)	57	59
Decorative panel	Dimensions (Length Width Height)	mm	647-647-50	647-647-50
	Net weight	Kg	2.5	2.5
H2O condenser	Dimensions (Length Width Height)	mm	540-270-540	540-270-540
	Net weight	Kg	30	30
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m ³ /h	0.2	0.2
	Water Saver Water Consumption	m ³ /h	0.08-0.2	0.08-0.3
	Sound Power (Max)	dB (A)	25	25
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	6.35 - 1/4	6.35 - 1/4
	Gas Side Piping	mm/ inc	9.52 - 3/8	12.7 - 1/2
	Piping Length Covered by Preload	M	5	5
	Recommended minimum piping length	M	3	3
	Equivalent piping length (Max)	M	25	30
	Coolant increase	g/m	12	12
Refrigerator Fluid	Level Difference (Max)	M	10	20
	Type of Coolant		R32	R32
	GWP		675	675
	Preloaded Quantity	Kg	0.72	1.15
	Equivalent CO2 emissions	Ton.	0.486	0.777
	Test pressure (High/Low Side)	MPa	4.3/1.7	4.3/1.7
Electrical Connections	U.I. power connection	No. of conductors	Outdoor unit	Outdoor unit
	Indoor-Outdoor Unit Connection	No. of conductors	3 + Ground	3 + Ground
	Maximum Absorbed Electrical Power	W	1850	2950
	Maximum Current	A	9	13.5
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27°	8°-27°
		Cooling (Min-Max)° C	8° - 30°	8° - 30°

MONO CASSETTE SLIM

MICA24BB
MICA30BB
MICA36BB
FH2024C
FH2030C
FH2036C

Indoor Unit Power Supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Power Supply Outdoor Unit		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	3.30-7.03-7.91	2.23-8.79-9.38	2.70-10.55-11.43
	Absorbed Electrical Power	W (Min-Nom-Max)	780-2320-2748	190-2750-3000	900-3950-4200
	Current	A (Nom)	10.2	12	17.5
	Theoretical Load (PDesignC)	kW	7	8.8	10.5
	SEER		6.2	6.6	6.7
	Energy efficiency class		A++	A++	A++
	Annual Energy Consumption	kWh/a	395	467	549
Heating	Capacity	kW (Min-Nom-Max)	2.81-7.62-8.94	2.70-9.38-9.73	2.78-11.14-12.30
	Absorbed Electrical Power	W (Min-Nom-Max)	610-1900-2700	430-2450-2550	800-3000-3950
	Current	A (Nom)	8.5	11	13.5
	Theoretical Load (PDesignH)	kW (Medium Season)	6.0-6.3	7.4-7.6	8.5-10.1
	SCOP	(Medium Season)	4.0-5.1	4.2-5.1	4.0-5.1
	Energy efficiency class	(Medium Season)	A+ - A+++	A+ - A+++	A+ - A+++
	Annual Energy Consumption	kWh/a (Medium Season)	2100-1729	2467-2086	2975-2773
Energy efficiency	E.E.R./C.O.P.	W/W	3.28/4.01	3.54/3.83	3.33/3.71
Indoor Unit	Dimensions (Length Width Height)	mm	830-830-205	830-830-245	830-830-245
	Net weight	Kg	21.6	24.6	27.2
	Air Flow (Min-Med-Max)	m3/h	1000-1140-1300	1400-1550-1720	1380-1550-1700
	Sound Pressure (Min-Med-Max)	dB (A)	27-40-43-46	39-44-47-50	39-45-48-50
	Sound Power (Max)	dB (A)	59	63	64
Decorative panel	Dimensions (Length Width Height)	mm	950-950-55	950-950-55	950-950-55
	Net weight	Kg	6	6	6
H2O condenser	Dimensions (Length Width Height)	mm	600-600-800	600-600-800	600-600-800
	Net weight	Kg	52	54.6	59
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m3/h	0.4	0.5	0.55
	Water Saver Water Consumption	m3/h	0.21-0.46	0.25 - 0.56	0.32 - 0.6
	Sound Power (Max)	dB (A)	32	32	33
	Compressor Type		ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm	9.52 -3/8	9.52 -3/8	9.52 -3/8
	Gas Side Piping	mm	15.88 - 5/8	15.88 - 5/8	15.88 - 5/8
	Lengths. Precast Cover Piping	M	5	5	5
	Recommended minimum piping length	M	3	3	3
	Lengths. Piping equivalent (Max)	M	50	50	75
	Coolant increase	g/m	24	24	24
	Level Difference (Max)	M	25	25	30
Refrigerator Fluid	Type of Coolant		R32	R32	R32
	GWP		675	675	675
	Preloaded Quantity	Kg	1.5	2	2.4
	Test pressure (High/Low Side)	MPa	4.6/1.7	4.6/1.7	4.6/1.7
	Equivalent CO2 emissions	ton	1.013	1.35	1.62
Electrical Connections	Main power supply		Outdoor unit	Outdoor unit	Outdoor unit
	Indoor-Outdoor Unit Connection	No. of conductors	3 + Ground	3 + Ground	3 + Ground
	Maximum Absorbed Electrical Power	W	3700	4500	5000
	Maximum Current	A	19	20	22.5
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°
		Cooling (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°

MONO DUCT

			MICK12DK	MICK18DK	MICK24DK
			FH2O12C	FH2O18C	FH2O24C
Indoor Unit Power Supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Power Supply Outdoor Unit		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	0.53-3.52-3.99	2.55-5.28-5.86	3.28-7.03-8.16
	Absorbed Electrical Power	W (Min-Nom-Max)	155-1053-1373	710-1530-2150	750-2190-2960
	Current	A (Nom)	4.8	7.1	10.2
	Theoretical Load (PDesignC)	kW	3.5	5.4	7.1
	SEER		6.3	6.5	6.2
	Energy efficiency class		A++	A++	A++
	Annual Energy Consumption	kWh/a	197	291	401
Heating	Capacity	kW (Min-Nom-Max)	1.00-3.81-4.39	2.20-5.57-6.15	2.81-7.62-8.49
	Absorbed Electrical Power	W (Min-Nom-Max)	302-1038-1390	740-1510-1760	640-1900-2580
	Current	A (Nom)	4.5	6.8	9.2
	Theoretical Load (PDesignH)	kW (Medium Season)	2.7-3.4	4.3-5.2	5.4-6.0
	SCOP	(Medium Season)	4.0-5.1	4.0-5.1	4.0-5.1
	Energy efficiency class	(Medium Season)	A+ - A+++	A+ - A+++	A+ - A+++
	Annual Energy Consumption	kWh/a (Medium Season)	945-933	1505-1434	1890-1647
Energy efficiency		E.E.R./C.O.P.	3.34/3.8	3.45/3.79	3.28/4.01
Indoor Unit	Dimensions (Length Width Height)	mm	700-506-200	880-674-210	1100-774-249
	Net weight	Kg	17.8	24.4	32.3
	Air Flow (Min-Med-Max)	m3/h	300-480-600	515-706-911	825-1035-1229
	Nominal Fan Pressure	Pa	25	25	25
	Fan pressure Control range	Pa (Min-Max)	0-60	0-100	0-125
	Sound Pressure (Min-Med-Max)	dB (A)	23-29-31-35	26-34-38-41	27-37-40-42
	Sound Power (Max)	dB (A)	58	58	62
H2O condenser	Dimensions (Length Width Height)	mm	540-270-540	540-270-540	600-600-800
	Net weight	Kg	30	30	52
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m3/h	0.2	0.2	0.4
	Water Saver Water Consumption	m3/h	0.08-0.2	0.08-0.3	0.21-0.46
	Sound Power (Max)	dB (A)	25	25	32
	Compressor type		ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	6.35 - 1/4	6.35 - 1/4	9.52 - 3/8
	Gas Side Piping	mm/ inc	9.52 - 3/8	12.7 - 1/2	15.88 - 5/8
	Piping Length Covered by Preload	M	5	5	5
	Recommended minimum piping length	M	3	3	3
	Equivalent piping length (Max)	M	25	30	50
	Coolant increase	g/m	12	12	24
	Level Difference (Max)	M	10	20	25
Refrigerator Fluid	Type of Coolant		R32	R32	R32
	GWP		675	675	675
	Preloaded Quantity	Kg	0.72	1.15	1.5
	Equivalent CO2 emissions	Ton.	0.486	0.777	1.013
	Test pressure (High/Low Side)	MPa	4.3/1.7	4.3/1.7	4.6/1.7
Electrical Connections	EU power connection	No. of conductors	Outdoor unit	Outdoor unit	Outdoor unit
	Indoor-Outdoor Unit Connection	No. of conductors	3 + Ground	3 + Ground	3 + Ground
	Maximum Absorbed Electrical Power	W	1850	2950	3700
	Maximum Current	A	9	13.5	19
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°
		Cooling (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°

MONO DUCT

			MICK30DK	MICK36DK	MICK36DK
			FH2030C	FH2036C	FH2036CT
Indoor Unit Power Supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Power Supply Outdoor Unit		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	380-415V 50Hz 3 Phase
Cooling	Capacity	kW (Min-Nom-Max)	2.23-8.79-9.85	2.75-10.55-11.14	2.73-10.55-11.78
	Absorbed Electrical Power	W (Min-Nom-Max)	190-2500-3050	900-3950-4150	890-4000-4200
	Current	A (Nom)	11	17.5	6.5
	Theoretical Load (PDesignC)	kW	8.8	10.5	10.6
	SEER		6.5	6.2	6.1
	Energy efficiency class		A++	A++	A++
	Annual Energy Consumption	kWh/a	474	593	608
Heating	Capacity	kW (Min-Nom-Max)	2.70-9.38-10.02	2.78-11.72-12.78	2.78-11.72-12.84
	Absorbed Electrical Power	W (Min-Nom-Max)	430-2250-2450	800-3250-3950	780-3250-4000
	Current	A (Nom)	10	14.5	5.3
	Theoretical Load (PDesignH)	kW (Medium Season)	8.0-8.2	8.4-9.8	8.8-10.0
	SCOP	(Medium Season)	4.0-5.1	4.0-5.1	4.0-5.1
	Energy efficiency class	(Medium Season)	A+ - A+++	A+ - A+++	A+ - A+++
	Annual Energy Consumption	kWh/a (Medium Season)	2800-2251	2940-2690	3080-2745
Energy efficiency	E.E.R./C.O.P.	W/W	3.52/4.17	3.28/3.90	3.27/3.88
Indoor Unit	Dimensions (Length Width Height)	mm	1360-774-249	1360-774-249	1360-774-249
	Net weight	Kg	40.5	40.5	40.5
	Air Flow (Min-Med-Max)	m3/h	1500-1800-2100	1500-1800-2100	1500-1800-2100
	Fan pressure (Nom)	Pa	37	37	37
	Fan pressure (Min-Max)	Pa	0-142	0-142	0-142
	Sound Pressure (Si-Min-Med-Max)	dB (A)	41-45-47-50	42-46-48-50	43-46-48-50
	Sound Power (Max)	dB (A)	64	61	61
H2O condenser	Dimensions (Length Width Height)	mm	600-600-800	600-600-800	600-600-800
	Net weight	Kg	54.6	59	1
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m3/h	0.5	0.55	0.6
	Water Saver opt* min max	m3/h	0.25 - 0.56	0.32 - 0.6	0.32 - 0.6
	Sound Power (Max)	dB (A)	32	33	33
	Compressor type		ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	9.52 -3/8	9.52 -3/8	9.52 -3/8
	Gas Side Piping	mm/ inc	15.88 - 5/8	15.88 - 5/8	15.88 - 5/8
	Piping Length Covered by Preload	M	5	5	5
	Recommended minimum piping length	M	3	3	3
	Equivalent piping length (Max)	M	50	75	75
	Coolant increase	g/m	24	24	24
	Level Difference (Max)	M	25	30	30
Refrigerator Fluid	Type of Coolant		R32	R32	R32
	GWP		675	675	675
	Preloaded Quantity	Kg	2	2.4	2.4
	Equivalent CO2 emissions	Ton.	1.35	1.62	1.62
	Test pressure (High/Low Side)	MPa	4.6/1.7	4.6/1.7	4.6/1.7
Electrical Connections	Main power supply		Outdoor unit	Outdoor unit	Outdoor unit
	Indoor-Outdoor Unit Connection	No. of conductors	3 + Ground	3 + Ground	3 + Ground
	Maximum Absorbed Electrical Power	W	4500	5000	5000
	Maximum Current	A	20	22.5	10
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°
		Cooling (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°

MONO DUCT

			MICK42DK	MICK48DK	MICK60DK
			FH2O42C	FH2O48CT	FH2O60CT
Indoor Unit Power Supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Power Supply Outdoor Unit		Volt - Hertz - Phase	220-240V 50Hz Single Phase	Three-phase 380-415V 50Hz	380-415V 50Hz 3 Phase
Cooling	Capacity	kW (Min-Nom-Max)	2.93-12.02-12.31	3.52-14.07-15.53	4.10-15.24-17.29
	Absorbed Electrical Power	W (Min-Nom-Max)	680-4200-4500	880-4800-6000	1030-5250-6650
	Current	A (Nom)	18.8	8.4	9.6
	Theoretical Load (PDesignC)	kW	12.1	14	15.3
	SEER		6.1	6.1	6.1
	Energy efficiency class		A++	A++	A++
	Annual Energy Consumption	kWh/a	700	812	900
Heating	Capacity	kW (Min-Nom-Max)	3.37-13.48-14.07	4.10-16.12-18.17	4.40-18.17-20.52
	Absorbed Electrical Power	W (Min-Nom-Max)	750-3450-4100	950-4500-5700	950-5150-6600
	Current	A (Nom)	15.5	8	9.5
	Theoretical Load (PDesignH)	kW (Medium Season)	9.5-10.2	11.5-11.5	12.5
	SCOP	(Medium Season)	4.0-5.1	3.8-5.0	12.8
	Energy efficiency class	(Medium Season)	A+ - A+++	A - A++	A+ - A+++
	Annual Energy Consumption	kWh/a (Medium Season)	3350-2800	4323-3220	4390-3514
Energy efficiency	E.E.R./C.O.P.	W/W	3.26/3.91	3.25/3.74	3.30/3.75
Indoor Unit	Dimensions (Length Width Height)	mm	1200-874-300	1200-874-300	1200-874-300
	Net weight	Kg	47.6	47.6	47.4
	Air Flow (Min-Med-Max)	m3/h	1680-2040-2400	1680-2040-2400	1405-915-365
	Fan pressure (Nom)	Pa	50	50	50
	Fan pressure (Min-Max)	Pa	0-160	0-160	0-160
	Sound Pressure (Si-Min-Med-Max)	dB (A)	43-48-49-52	42-47-49-50	42-47-49-53
	Sound Power (Max)	dB (A)	67	66	66
H2O condenser	Dimensions (Length Width Height)	mm	600-600-800	600-600-1000	600-600-1000
	Net weight	Kg	62	92	
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	1
	Water consumption	m3/h	0.58	0.65	12.7 - 1/2 Female
	Water Saver opt* min max	m3/h	0.32 - 0.7	0.49-0.7	0.52 - 0.99
	Sound Power (Max)	dB (A)	33	35	40
	Compressor type		ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	9.52 -3/8	9.52 -3/8	9.52 -3/8
	Gas Side Piping	mm/ inc	15.88 - 5/8	15.88 - 5/8	15.88 - 5/8
	Piping Length Covered by Preload	M	5	5	5
	Recommended minimum piping length	M	3	3	3
	Equivalent piping length (Max)	M	75	75	75
	Coolant increase	g/m	24	24	24
	Level Difference (Max)	M	30	30	30
Refrigerator Fluid	Type of Coolant		R32	R32	R32
	GWP		675	675	675
	Preloaded Quantity	Kg	2.8	2.9	3
	Equivalent CO2 emissions	Ton.	1.89	1.958	2.025
	Test pressure (High/Low Side)	MPa	4.6/1.7	4.6/1.7	4.6/1.7
Electrical Connections	Main power supply		Outdoor unit	Outdoor unit	Outdoor unit
	Indoor-Outdoor Unit Connection	No. of conductors	3 + Ground	3 + Ground	3 + Ground
	Maximum Absorbed Electrical Power	W	5000	6900	7500
	Maximum Current	A	22.5	13	14
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°
		Cooling (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°

MONO CONSOLLE

MICA12BB
FH2012P

Indoor Unit Power Supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase
Power Supply Outdoor Unit		Volt - Hertz - Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	0.77-3.52-3.81
	Absorbed Electrical Power	W (Min-Nom-Max)	14-1171-1844
	Current	A (Nom)	5.1
	Theoretical Load (PDesignC)	kW	3.5
	SEER		7.7
	Energy efficiency class		A++
	Annual Energy Consumption	kWh/a	ND
Heating	Capacity	kW (Min-Nom-Max)	0.46-3.81-4.34
	Absorbed Electrical Power	W (Min-Nom-Max)	149-1100-1496
	Current	A (Nom)	4.8
	Theoretical Load (PDesignH)	kW (Medium Season)	3.6
	SCOP	(Medium Season)	4.3
	Energy efficiency class	(Medium Season)	A+
	Annual Energy Consumption	kWh/a (Medium Season)	ND
Energy efficiency	E.E.R./C.O.P.	W/W	3.01/3.46
Indoor Unit	Dimensions (Length Width Height)	mm	700-210-600
	Net weight	Kg	14.8
	Air Flow (Min-Med-Max)	m3/h	370-480-512
	Sound Pressure (Min-Med-Max)	dB (A)	35-42-43
	Sound Power (Max)	dB (A)	55
H2O condenser	Dimensions (Length Width Height)	mm	540-270-540
	Net weight	Kg	30
	Water Piping	mm/ inc	12.7 - 1/2 Female
	Min-max water consumption*	m3/h	0.2
	Water Saver Water Consumption	m3/h	0.08-0.2
	Sound Power (Max)	dB (A)	25
	Compressor type		ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	6.35 - 1/4
	Gas Side Piping	mm/ inc	9.52 - 3/8
	Piping Length Covered by Preload	M	5
	Recommended minimum piping length	M	3
	Equivalent piping length (Max)	M	25
	Coolant increase	g/m	12
	Level Difference (Max)	M	10
Refrigerator Fluid	Type of Coolant		R32
	GWP		675
	Preloaded Quantity	Kg	0.87
	Equivalent CO2 emissions	Ton.	0.588
	Test pressure (High/Low Side)	MPa	4.3/1.7
Electrical Connections	U.I. power connection	No. of conductors	From outdoor unit
	EU power connection	No. of conductors	2P + Ground
	Indoor-Outdoor Unit Connection	No. of conductors	3P + Ground
	Maximum Absorbed Electrical Power	W	1900
	Maximum Current	A	8.3
Operating Limits	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32
		Heating (Min-Max)° C	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27*°
		Cooling (Min-Max)° C	8° - 30°

MONO CEILING FLOOR

			MICK18FC	MICK24FC	MICK36FC
			FH2O18C	FH2O24C	FH2O36C
Indoor Unit Power Supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Power Supply Outdoor Unit		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	2.71-5.28-5.86	3.22-7.03-7.77	2.73-10.55-11.43
	Absorbed Electrical Power	W (Min-Nom-Max)	670-1450-2027	747-2300-2930	900-3900-4250
	Current	A (Nom)	6	10.5	17
	Theoretical Load (PDesignC)	kW	5.4	7.2	10.5
	SEER		6.2	6.1	6.4
	Energy efficiency class		A++	A++	A++
	Annual Energy Consumption	kWh/a	305	413	574
Heating	Capacity	kW (Min-Nom-Max)	2.42-5.57-6.30	2.72-7.62-8.29	2.78-11.72-12.78
	Absorbed Electrical Power	W (Min-Nom-Max)	540-1500-1640	650-2050-2850	800-3350-3950
	Current	A (Nom)	6.6	9.5	15
	Theoretical Load (PDesignH)	kW (Medium Season)	4.0-5.1	5.5-5.8	8.6-10.2
	SCOP	(Medium Season)	4.0-5.1	4.0-5.1	4.1-5.1
	Energy efficiency class	(Medium Season)	A+ - A+++	A+ - A+++	A+ - A+++
	Annual Energy Consumption	kWh/a (Medium Season)	1400-1400	1925-1592	2937-2800
Energy efficiency	E.E.R./C.O.P.	W/W	3.64/3.71	3.30/3.72	3.25/3.80
Internal Unit	Dimensions (Length Width Height)	mm	1068-675-235	1068-675-235	1650-675-235
	Net weight	Kg	28	28	41.5
	Air Flow (Min-Med-Max)	m3/h	723-839-958	853-1023-1192	1504-1728-1955
	Sound Pressure (Si-Min-Med-Max)	dB (A)	24-37-41-44	32-43-46-49	37-44-49-50
	Sound Power (Max)	dB (A)	59	55	65
H2O condenser	Dimensions (Length Width Height)	mm	540-270-540	600-600-800	600-600-800
	Net weight	Kg	30	52	54.6
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m3/h	0.2	0.4	0.5
	Water Saver Water Consumption	m3/h	0.08-0.3	0.21-0.46	0.25 - 0.56
	Sound Power (Max)	dB (A)	25	32	32
	Compressor type		ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	6.35 - 1/4	9.52 -3/8	9.52 -3/8
	Gas Side Piping	mm/ inc	12.7 - 1/2	15.88 - 5/8	15.88 - 5/8
	Piping Length Covered by Preload	M	5	5	5
	Recommended minimum piping length	M	3	3	3
	Equivalent piping length (Max)	M	30	50	75
	Coolant increase	g/m	12	24	24
	Level Difference (Max)	M	20	25	30
Refrigerator Fluid	Type of Coolant		R32	R32	R32
	GWP		675	675	675
	Preloaded Quantity	Kg	1.15	1.5	2.4
	Equivalent CO2 emissions	Ton.	0.777	1.013	1.62
	Test pressure (High/Low Side)	MPa	4.3/1.7	4.6/1.7	4.6/1.7
Electrical Connections	Main power supply		Outdoor unit	Outdoor unit	Outdoor unit
	Indoor-Outdoor Unit Connection	No. of conductors	3+Earth	3+Earth	3+Earth
	Maximum Absorbed Electrical Power	W	2950	3700	5000
	Maximum Current	UNTO	13.5	19	22.5
Operating Limits	Internal Temperatures	Cooling (Min-Max)°	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)°	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)°	8°-27*°	8°-27*°	8°-27*°
		Heating (Min-Max)°	8° - 30°	8° - 30°	8° - 30°

MONO CEILING FLOOR

			MIFC36PS	MIFC48PS	MIFC60PS
			FH2O36CT	FH2O48CT	FH2O60CT
Indoor Unit Power Supply		F-V-Hz	Single phase 220-240V 50Hz	Single phase 220-240V 50Hz	Single phase 220-240V 50Hz
Power Supply Outdoor Unit		F-V-Hz	Three-phase 380-415V 50Hz	Three-phase 380-415V 50Hz	Three-phase 380-415V 50Hz
Cooling	Capacity	kW (Min-Nom-Max)	2.73-10.55-11.78	3.52-14.07-15.24	4.10-15.83-16.71
	Absorbed Electrical Power	W (Min-Nom-Max)	890-4000-4300	900-5000-5950	1100-5650-6650
	Current	A (Nom)	6.3	8.8	9.7
	Theoretical Load (PDesignC)	kW	10.5	14	15.5
	SEER		6.2	6.1	6.1
	Energy efficiency class		A++	A++	A++
	Annual Energy Consumption	kWh/a	820	820	890
Heating	Capacity	kW (Min-Nom-Max)	2.81-11.72-12.78	4.10-16.12-17.00	4.40-18.17-19.64
	Absorbed Electrical Power	W (Min-Nom-Max)	780-3350-3950	1000-5100-6050	1050-6050-7100
	Current	A (Nom)	5.4	8.9	10.5
	Theoretical Load (PDesignH)	kW (Medium Season)	8.6-10.2	11.2-11.7	11.9-12.6
	SCOP	(Medium Season)	4.0-5.1	3.9-5.1	4.0-5.1
	Energy efficiency class	(Medium Season)	A+ - A+++	A - A+++	A+ - A+++
	Annual Energy Consumption	kWh/a (Medium Season)	4100-3211	4100-3211	4150-3459
Energy efficiency	E.E.R./C.O.P.	W/W	3.30/3.87	3.29/3.75	3.36/3.73
Indoor Unit	Dimensions (L-W-W)	mm	1650-675-235	1650-675-235	1650-675-235
	Net weight	Kg	41.5	41.7	42.3
	Air Flow (Min-Med-Max)	m3/h	1504-1728-1955	1600-1850-2100	1650-1950-2200
	Sound Pressure (Si-Min-Med-Max)	dB (A)	39-45-48-51	36-45-50-53	38-47-51-54
	Sound Power (Max)	dB (A)	65	67	67
H2O condenser	Dimensions (L-W-W)	mm	600-600-800	600-600-1000	600-600-1000
	Net weight	Kg	62	92	93
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Water consumption	m3/h	0.58	0.65	0.8
	Water Saver Water Consumption	m3/h	0.32 - 0.7	0.49-0.7	0.52 - 0.99
	Sound Power (Max)	dB (A)	33	35	40
	Compressor type		ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	9.52 -3/8	9.52 -3/8	9.52 -3/8
	Gas Side Piping	mm/ inc	15.88 - 5/8	15.88 - 5/8	15.88 - 5/8
	Piping Length Covered by Preload	M	5	5	5
	Recommended minimum piping length	M	3	3	3
	Equivalent piping length (Max)	M	75	75	75
	Coolant increase	g/m	24	24	24
Refrigerator Fluid	Level Difference (Max)	M	30	30	30
	Type of Coolant		R32	R32	R32
	GWP		675	675	675
	Preloaded Quantity	Kg	2.4	2.9	3
	Equivalent CO2 emissions	Ton.	1.62	1.62	2.025
Electrical Connections	Test pressure (High/Low Side)	MPa	4.6/1.7	4.6/1.7	4.6/1.7
	Main power supply		Outdoor unit	Outdoor unit	Outdoor unit
	Indoor-Outdoor Unit Connection	No. of conductors	3 + Ground	3 + Ground	3 + Ground
	Maximum Absorbed Electrical Power	W	5000	6900	7500
Operating Limits	Maximum Current	A	10	13	14
	Indoor Temperatures	Cooling (Min-Max)° C	+16 - +32	+16 - +32	+16 - +32
		Heating (Min-Max)° C	14 - +30	14 - +30	14 - +30
	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°
		Cooling (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°

MULTI SYSTEM

			FH20-216	FH20-220	FH20 224 - FH20-324	FH20-327
Power supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
Cooling	Capacity	kW (Min-Nom-Max)	1.47-4.10-4.98	2.29-5.28-5.71	1.99-6.15-6.68	3.11-7.91-8.5
	Absorbed Electrical Power	W (Min-Nom-Max)	100-1270-1600	690-1635-2000	180-1905-2200	230-2450-3250
	Current	A (Nom)	5.8	7.3	9	11.2
	Theoretical Load (PDesignC)	kW	4.1	5.3	6.1	7.9
	SEER		6.9	6.3	6.7	6.1
	Energy efficiency class		A++	A++	A++	A++
	Annual Energy Consumption	kWh/a	210	300	319	453
Heating	Capacity	kW (Min-Nom-Max)	1.61-4.40-4.69	2.40-5.57-5.74	1.99-6.45-6.59	2.34-8.21-8.50
	Absorbed Electrical Power	W (Min-Nom-Max)	220-1185-1650	600-1500-1750	350-1740-1850	310-2210-2900
	Current	A (Nom)	5.4	6.6	8.1	10.1
	Theoretical Load (PDesignH)	kW (Medium Season)	3.8-4.1	4.5-5.0	5.2-5.5	5.5-6.1
	SCOP	(Medium Season)	4.0-5.1	4.0-5.1	4.0-5.1	4.0-5.1
	Energy efficiency class	(Medium Season)	A+ A+++	A+ A+++	A+ A+++	A+ A+++
	Annual Energy Consumption	kWh/a (Medium Season)	1330-1125	1570-1377	1820-1510	1925-1675
Energy efficiency	E.E.R./C.O.P.	W/W	3.23/3.71	3.23/3.71	3.23/3.71	3.23/3.73
H2O condenser	Dimensions (Length Width Height)	mm	540*270-540	540*270*540	600*600*840	600*600*800
	Net weight	Kg	32	35	43.3	48
	Sound power	dB (A)	33	33	35	35
	Water Piping	mm/ inc	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female	12.7 - 1/2 Female
	Min-max water consumption*	m3/h	0.21 - 0.27	0.25 - 0.32	0.32 - 0.45	0.43 - 0.52
	Water Saver Water Consumption	m3/h	0.13 - 0.27	0.15 - 0.32	0.21 - 0.48	0.25. 0.61
	Compressor type		ROTARY	ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Restrictions	Liquid Side Tubing	mm/ inc	6.35 (X2) - 1/4 (X2)	6.35 (X2) - 1/4 (X2)	6.35 (X2) - 1/4 (X2)	6.35 (X3) - 1/4 (X3)
	Gas Side Piping	mm/ inc	9.52 (X2) - 3/8 (X2)	9.52 (X2) - 3/8 (X2)	9.52 (X2) - 3/8 (X2)	9.52 (X3) - 3/8 (X3)
	Piping length covered by preload (Overall)	M	15	15	22.5	22.5
	Recommended Minimum Piping Length (Single Branch)	M	3	3	3	3
	Maximum Equivalent Piping Length (Overall)	M	40	40	60	60
	Maximum Equivalent Pipeline Length (Single pipe branch)	M	25	25	30	30
	Coolant increase	g/m	12	12	12	12/24
	Maximum Level Difference (Outdoor unit in a position higher than indoor units)	M	10	10	10	10
	Maximum Level Difference (Outdoor unit located lower than indoor units)	M	15	15	15	15
	Maximum Level Difference difference (Difference in elevation between indoor units)	M	10	10	10	10
Refrigerator Fluid	Type of Coolant		R32	R32	R32	R32
	GWP		675	675	675	675
	Preloaded Quantity	Kg	1.1	1.25	1.5	1.85
	Equivalent CO2 emissions	ton	0.743	0.844	1013	1249
	Test pressure (High/ Low Side)	MPa	4.3/1.7	4.3/1.7	4.6/1.7	4.6/1.7
Electrical Connections	Main Power Supply		External Unit	External Unit	External Unit	External Unit
	External Unit Connection - Each Indoor Unit	No. of conductors	3P + Ground	3P + Ground	3P + Ground	3P + Ground
	Maximum Absorbed Electrical Power	W	2750	3050	3910	4100
	Maximum Current	A	12	13	17	18
Operating Limits	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°	8°-27*°
		Heating (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°	8° - 30°

MULTI SYSTEM

			FH2O-428	FH2O-436	FH2O-542
Power supply		Volt - Hertz - Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase	220-240V 50Hz Single Phase
	Capacity	kW (Min-Nom-Max)	2.51-8.21-10.26	2.74-10.55-11.29	3.17-12.31-12.31
Cooling	Absorbed Electrical Power	W (Min-Nom-Max)	130-2500-3450	212-3270-4125	220-3805-4600
	Current	A (Nom)	11	15	17.8
	Theoretical Load (PDesignC)	kW	8.2	10.5	12.3
	SEER		7.2	6.5	6.1
	Energy efficiency class		A++	A++	A++
	Annual Energy Consumption	kWh/a	399	565	710
Heating	Capacity	kW (Min-Nom-Max)	1.61-8.79-10.26	3.60-10.55-10.83	3.60-12.31-12.31
	Absorbed Electrical Power	W (Min-Nom-Max)	280-2400-3100	525-2845-3684	550-3315-4100
	Current	A (Nom)	10.5	13.5	14
	Theoretical Load (PDesignH)	kW (Medium Season)	6.7	9.2	9.5
	SCOP	(Medium Season)	4	4	3.8
	Energy efficiency class	(Medium Season)	A+	A+	UNTO
	Annual Energy Consumption	kWh/a (Medium Season)	2345	3220	3500
Energy efficiency	E.E.R./C.O.P.	W/W	3.23/3.71	3.23/3.71	3.24/3.71
H2O condenser	Dimensions (Length Width Height)	mm	600*600*800	600*600*800	600*600*800
	Net weight	Kg	62.1	68.8	74.1
	Sound power	dB (A)	37	37	42
	Min-max water consumption*	m ³ /h	0.43 - 0.48	0.55 - 0.62	0.58 - 0.72
	Water Saver opt* min max	m ³ /h	0.25 - 0.49	0.31 - 0.62	0.31 - 0.7
	Compressor type		ROTARY	ROTARY	ROTARY
Refrigerator Circuit Dimensions and Re- strictions	Liquid Side Tubing	mm/ inc	6.35 (X4) - 1/4 (X4)	6.35 (X4) - 1/4 (X4)	6.35 (X5) - 1/4 (X5)
	Gas Side Piping	mm/ inc	9.52 (X3) - 3/8 (X3) + 12.7 (X1) - 1/2 (X1)	9.52 (X3) - 3/8 (X3) + 12.7 (X1) - 1/2 (X1)	9.52 (X4) - 3/8 (X4) + 12.7 (X1) - 1/2 (X1)
	Piping length covered by preload (Overall)	M	30	30	37.5
	Recommended Minimum Piping Length (Single Branch)	M	3	3	3
	Maximum Equivalent Piping Length (Overall)	M	80	80	80
	Maximum Equivalent Pipeline Length (Single pipe branch)	M	35	35	35
	Coolant increase	g/m	12/24	12/24	12/24
	Maximum Level Difference (Outdoor unit in a position higher than indoor units)	M	10	10	10
	Maximum Level Difference (Outdoor unit located lower than indoor units)	M	15	15	15
	Maximum Level Difference difference (Difference in elevation between indoor units)	M	10	10	10
Refrigerator Fluid	Type of Coolant		R32	R32	R32
	GWP		675	675	675
	Preloaded Quantity	Kg	2.1	2.1	2.9
	Equivalent CO2 emissions	ton	1.418	1.418	1.958
	Test pressure (High/ Low Side)	MPa	4.3/1.7	4.3/1.7	4.6/1.7
Electrical Connections	Main Power Supply		External Unit	External Unit	External Unit
	External Unit Connection - Each Indoor Unit	No. of conductors	3P + Ground	3P + Ground	3P + Ground
	Maximum Absorbed Electrical Power	W	4150	4600	4700
	Maximum Current	A	19	21.5	22
Operating Limits	Water Temperatures	Cooling (Min-Max)° C	8°-27*°	8°-27*°	8°-27*°
		Heating (Min-Max)° C	8° - 30°	8° - 30°	8° - 30°

8.1 WARRANTY CONDITIONS

DURATION AND CONDITIONS OF VALIDITY OF THE MANUFACTURER'S WARRANTY

FINTEK s.r.l. via Tonso di Gualtiero 46, Faetano RSM, guarantees the equipment purchased by you in Italy and in the Republic of San Marino and the Vatican for defects deriving from the manufacturing process which could occur within 12 months from the date of purchase of the equipment , or 24 months if the end user is a private consumer (natural person).

OBJECT OF THE WARRANTY

The warranty is expressly limited to the replacement of components recognized as defective by the Manufacturer-Producer, with the exclusion of any right to compensation for damages of any kind. This warranty extension provides for the elimination of defects or lack of conformity recognized as such by the Manufacturer-Producer through direct examination at the manufacturing factory.

Anything recognized as defective will be repaired or replaced. The warranty is expressly limited to the repair-replacement of components with the exclusion of labour.

The replacement-repair of the defective part does not extend the guarantee.

FINTEK srl is not liable for any damages, direct or indirect, to people or things deriving from the appliance, except as provided for by mandatory provisions of the law.

WARRANTY CONDITIONS

The warranty is valid only under the following conditions:

- That the machine is installed in the national territory (Italy)
- That all installation and connection operations to the energy networks (electricity/water) have been carried out in a workmanlike manner and according to the indications given in the use and installation instruction booklet included in the packaging of the appliance.
- That all operations of use of the equipment and periodic maintenance are carried out according to the indications given in the user instruction booklet.
- That any intervention is carried out at the manufacturer's headquarters or by technical assistance centers authorized by the manufacturer (if present in the area) and that original spare parts are used.
- That the user is in possession of the tax document proving the date of purchase and the name of the seller/installer. The invoice, tax receipt or delivery note indicating the model and serial number purchased are the only valid documents for acknowledging the guarantee of a product.

DISCLAIMER

Technical interventions that become necessary as a result of: events that determine the glaciation of the exchanger and consequent damage to other components are excluded from the warranty services; incorrect or incomplete installation and/or connection to power supply systems; PLC memory leak. Therefore, if a technical intervention is carried out by a T.A.T. (Technical Assistance Centre), in relation to what is indicated, the costs of the intervention and any spare parts will be borne entirely by the end user.

Ulteriori informazioni su questo testo di originePer avere ulteriori informazioni sulla traduzione è necessario il testo di origine

Invia commenti

Riquadri laterali

Failure to pay for the intervention, as well as breach of contract, will also constitute condition of forfeiture of the guarantee.

The warranty is void for defects or damage to the product deriving from:

- transport or handling
- incomplete, incorrect or non-compliant installation with installation standards and/or good practice
- interventions by unqualified personnel or in any case without the explicit written authorization of the Manufacturer
- tampering or improper use or bad maintenance
- electricity/water supply other than that prescribed
- accidental damage of any nature or in any case not attributable to manufacturing defects
- damage caused by lightning, voltage fluctuations (these phenomena can cause damage to the PLC)
- for damages caused by accidental and unintentional interruption of the water supply
- for damages caused by failure to install components/accessories explicitly requested by the manufacturer (e.g. water filter, etc.)
- for damages caused by failure to observe the use and maintenance instructions given in the manual supplied with the equipment
- non-payment of the entire amount or fraction of it, relating to the purchase of the unit.
- non-payment of previous interventions pertaining to the customer.

COMMITMENT TO REMEDY THE DEFECT

As far as the original defect is proven, the Manufacturer will arrange for the shipment of the repaired or to be replaced piece at its own expense within the times compatible with the availability of the same. It is the customer's responsibility to ship the defective piece, if requested in writing and in the manner prescribed by FINTEK, to allow verification of the traceability of the cause of the defect if it falls within the warranty coverage; otherwise all costs will be charged to the client/requester of the intervention itself.

The assistance/repair of the equipment is guaranteed at the manufacturer's premises or, upon written request, at the user's through the Authorized Assistance Centers (where present in Italy). Exceptionally, the repair can be carried out by technicians who are not part of the T.A.C. authorized but only and exclusively with the written authorization of the manufacturer. The right of recourse is not recognized to the Seller and to the end user.

The END USER must activate this guarantee, within 10 days from the date of installation, by filling in the appropriate GUARANTEE ACTIVATION FORM which can be downloaded from our website. website www.finteksr.com under Technical assistance and sending it by mail to assistenza@finteksr.com by fax to nr.0549901950. Failure to communicate the data to activate the guarantee will not give the right to the guarantee extension if provided.

The warranty can only be activated with the simultaneous presentation of the invoice, tax receipt or delivery note certifying the purchase of the product, indicating the model and serial number. In any case, FINTEK will activate the warranty procedures only upon written request from the Seller/Installer from whom the end user purchased the Product.

Any shipment of the faulty machine to the manufacturer must be agreed with the manufacturer and be carried out by the MANUFACTURER'S COURIER. In the event that the request for intervention under warranty is requested upon installation of the product, if the T.A.C. sent via the Manufacturer ascertains that the intervention does not concern Product defects but was requested following incorrect execution of the installation, the intervention costs will be borne by the end user as indicated in the "ASSISTANCE REQUEST FORM" published on our website www.finteksr.com under Technical assistance. The end user, therefore, will have to take action against the seller/installer.

The data contained in this instruction booklet are not binding and can be changed by manufacturer without notice.

Reproduction, even partial, PROHIBITED.

ASSISTANCE REQUEST

First of all, thank you for purchasing one of our products.

If you feel that your product needs assistance, kindly proceed with filling in the online form to open the technical assistance procedure via the following link:

www.fintek srl.com/assistance-technical

FOR THE OPENING OF THE INTERVENTION AND FOR ITS CORRECT MANAGEMENT IT IS FUNDAMENTAL THAT AT THE TIME OF THE REQUEST THE EXACT MODEL AND SERIAL NUMBER OF THE UNIT FOR WHICH ASSISTANCE IS REQUESTED BE COMMUNICATED.

In fact, only in this way, our intervention management system will be able to immediately define if the unit is still within the manufacturer's warranty period.

In the absence of one of these two data, the toll-free number will not be able to open the intervention.

The interventions requested in a different way from the one mentioned above will suffer delays in management, will not be traceable by the system and therefore will not be managed in an optimal manner.

If, on the other hand, you need exhaustive and timely information on our products, contact our office by selecting key 2 and you will be put in touch with our assistance centre!

Our contacts:

By telephone

+39 0549 901950 > Internal assistance

E-mail

climaassistance@fintek srl .com

insens

ENERGY EFFICIENCY STATEMENT

We certify that the products listed below meet the requirements of article 9 paragraph 2 bis - Annex H - of the Ministerial Decree of 19 February 2007, already amended by the Ministerial Decree of October 26, 2007 and coordinated with Ministerial Decree of 7 April 2008, implementing the 2008 Financial Law ("Building Decree") referred to by Law 220 of 13 December 2010 as well as by Legislative Decree 63 of 4 June 2013, Legislative Decree 90 of 3 August 2013, L 147 of December 27, 2013, L 208 of December 28, 2015, L 232 of December 11, 2016, L 205 of December 27, 2017, L 145 of December 30, 2018, L 160 of December 27, 2019 and L 178 of 30 December 2020.

Reversible heat pump models equipped with an Air/Air speed variator (inverter)

RESIDENTIAL LINE

Product description	Indoor unit	Outdoor unit	E.E.R.	C.O.P.
WALL UNIT	MSAGBU-09HRFN8 FAST/EASY 09	UES MONO 09/FH20 09ISP	4.00	4.35
	MSAGBU-12HRFN8 FAST/EASY 12	UES MONO 12/FH20 12ISP	3.40	3.80
	MSAGCU-18HRFN8 FAST/EASY 18	UES MONO 18/FH20 18ISP	3.40	3.76
	MSAGDU-24HRFN8 FAST/EASY 24	UES MONO 24/FH20 24ISP	3.33	3.76

MULTI LINE

External Unit	Configuration (Nominal Indoor Unit Capacity Kw)					E.E.R.	C.O.P.
MCA 214 FH20216	Unit A	Unit B	Unit C	Unit D	Unit E		
	2.64	2.64	-	-	-	3.23	3.81
	2.64	3.52	-	-	-	3.23	3.82
External Unit	Configuration (Nominal Internal Unit Capacity Kbtu/h)					E.E.R.	C.O.P.
MCAS 218 FH20 220	Unit A	Unit B	Unit C	Unit D	Unit E		
	2.64	2.64	-	-	-	3.24	3.71
	2.64	3.52	-	-	-	3.24	3.71
	2.64	5.28	-	-	-	3.25	3.71
	3.52	3.52	-	-	-	3.25	3.71
External Unit	Configuration (Nominal Internal Unit Capacity Kbtu/h)					E.E.R.	C.O.P.
MCAS 224 MCASA 321 FH20 224 FH20 324	Unit A	Unit B	Unit C	Unit D	Unit E		
	2.64	2.64	-	-	-	3.50	3.71
	2.64	3.52	-	-	-	3.51	3.71
	2.64	5.28	-	-	-	3.51	3.71
	3.52	3.52	-	-	-	3.41	3.71
	2.64	2.64	-	-	-	3.51	3.73
	2.64	2.64	12	-	-	3.45	3.74

External Unit	Configuration (Nominal Internal Unit Capacity Kbtu/h)					E.E.R.	C.O.P.
MCAS 327 FH20 327	Unit A	Unit B	Unit C	Unit D	Unit E		
	2.64	2.64	-	-	-	3.29	3.82
	2.64	3.52	-	-	-	3.29	3.81
	2.64	5.28	-	-	-	3.25	3.73
	3.52	3.52	-	-	-	3.24	3.79
	3.52	5.28	-	-	-	3.25	3.73
	2.64	2.64	2.64	-	-	3.23	3.73
	2.64	2.64	3.52	-	-	3.25	3.72
	2.64	3.52	3.52	-	-	3.25	3.71
	3.52	3.52	3.52	-	-	3.25	3.73
External Unit	Configuration (Nominal Internal Unit Capacity Kbtu/h)					E.E.R.	C.O.P.
MCAS 428 FH20 428	Unit A	Unit B	Unit C	Unit D	Unit E		
	2.64	2.64	-	-	-	3.75	3.81
	2.64	3.52	-	-	-	3.75	3.81
	2.64	5.28	-	-	-	3.66	3.78
	12	3.52	-	-	-	3.72	3.78
	12	5.28	-	-	-	3.66	3.71
	18	5.28	-	-	-	3.66	3.71
	2.64	2.64	2.64	-	-	3.64	3.71
	2.64	2.64	3.52	-	-	3.65	3.71
	2.64	2.64	5.28	-	-	3.65	3.71
	2.64	3.52	3.52	-	-	3.63	3.71
	2.64	3.52	5.28	-	-	3.65	3.71
	12	3.52	3.52	-	-	3.65	3.71
	2.64	2.64	2.64	2.64	-	3.65	3.72
	2.64	2.64	2.64	3.52	-	3.65	3.73

COMMERCIAL LINE

Indoor unit	Condensing unit	E.E.R.	C.O.P.
CA12MS CZ12MS FC12MS CS12MS	UES 12 MONO -FH20 12	4,14	4
CA18MS CZ18MS FC18MS CS18MS	UES 18 MONO -FH20 18	3,32	3,71
CA24MS CZ24MS FC24MS CS24MS	UES 24 MONO -FH20 24	3,46	3,72
CA30MS CZ30MS FC30MS CS30MS	UES 30 MONO -FH20 30	3,3	4,14
CA36MS CZ36MS FC36MS CS36MS	FH20 36 FH2036T	3,3	4,14
CA48MS	FH20 48	5,1	3,71

The values of E.E.R. and C.O.P. refer to the conditions listed in the UNI EN 14511 standards.

DICHIARAZIONE DI CONFORMITÀ
DECLARATION OF CONFORMITY
DÉCLARATION DE CONFORMITÉ
KONFORMITÄTSERKLÄRUNG



Io firmatario della presente, dichiaro che la macchina in oggetto è conforme a quanto prescritto dalle direttive:

I declare that the appliance in question is in conformity with what has been prescribed in directives:

Je soussigné déclare que la machine en question est conforme aux prescriptions des directives:

Ich hierunter unterschrieben erklärt, dass die o.g. Maschinen folgenden Richtlinien entsprechen:

LVD	2014/35/EU
EMC	2004/30/EU
RoHS	2011/65/EC
WEEE	2012/19/EU
REACH	1907/2006
ECODESIGN	2009/125/EC
ENERGY LABELLING	2010/30/EU

MODELS:

MONOSPLIT: FH20 - UES 009-012-018-024 SP FH20+UES 09-12-18-24-30-36- only Fh20
36T-48T-60T (CA CZ FC CS) MULTISPLIT: FH20 216-220-324-327-428-436-542 VRV FH20 +MCAS
214-218-224 321-327-428

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES:

EN 60335-1:2012
EN 60335-2-40:2003 + A1:2006 + A2:2009 + A11:2004 + A12:2005 + A13:2012
EN 62233:2008

ELECTROMAGNETIC COMPATIBILITY:

EN 55014-1:2006 + A1:2009 + A2:2011 EN55014-2:1997 + A1:2001 + A2:2008 EN
61000-3-2:2014 EN 61000-3-3:2013

PERFORMANCE COMMISSION REGULATION (EU)

EN14511 206/2012 626/2011

FINTEK SRL
Ing. Chinaglia Nicola



WARRANTY CERTIFICATE FOR WATER COOLED UNITS AND U.E.S. SERIES

WARRANTY CONDITIONS

Fintek srl guarantees its products for a period of 1 year from the date of purchase if intended for professional use, 24 months* in the private sphere. The purchase must be proven by a fiscally valid document issued by the retailer (receipt, invoice or delivery note) which identifies the product purchased and the date of purchase and/or delivery. For the lack of conformity manifested in the first 6 months of the date of the product, Fintek srl undertakes to repair the defect at no cost to the consumer.

** From the seventh to the twenty-fourth month, the consumer will have to bear the cost of the fixed home call fee.*

DATE

FINTEK s.r.l.

Via Tonso di Gualtiero 46,
47986 Faetano (RSM) Italia

Phone : +378 0549901950 r.a
commercialeitalia@finteksrl.com.

www.finteksrl.com

REGULATIONS ON CONDENSED WATER UNITS AND U.E.S. SERIES

Fintek srl guarantees assistance on products branded by Fintek srl or distributed by it for brands it owns installed on the national territory including Italy, RSM and Vatican City, for manufacturing defects if they are defective in materials or manufacturing. The guarantee consists in carrying out technical interventions with the customer or at our service centers, hereinafter referred to as C.A.T., of technical interventions aimed at restoring the functionality of the product.

1) EFFECTIVE DATE AND DURATION

1.1. The warranty starts from the date of purchase of the product by the customer and lasts 24 months. If there is a change of owner/user, the warranty will be transferred to the new owner/user without any change for the remaining period.

1.2. Carrying out one or more repairs during the warranty period does not change the expiration date of the warranty itself.

1.3. The warranty is subject to the notification by registered letter with return receipt of the defect found within 8 days from the date of receipt of the product or its installation. In the event of non-payments agreed upon per order, the guarantee is considered void,

2. REPAIRS

The warranty lasts 24 months and includes:

2.1. For the first month, the replacement of the unit if conditions occur under which it is impossible to intervene on site or the C.A.T. Request the return of the air conditioning unit for this event, the original packaging is required, a mandatory condition.

2.2. After the sixth month, the unit will not be replaced, but only the repair. The same may take place on site or at authorized service centers, for this case the original packaging is necessary, a mandatory condition.

2.3. The warranty is valid only if the installation was carried out in a "workmanlike manner" (in accordance with law 46 of 5/3/90) and scrupulously following the instructions of the installation manual supplied with the product.

2.4. Interventions due to poor or incorrect installation by the user or customer, tampering, remote control failures and electric shocks are not covered by warranty. However, they provide for the repair and the costs will be fully charged to the customer.

2.5. In areas accidentally not covered by a service service, the asset may be requested to be delivered for repair to the nearest service center. The cost of transportation is not included in the guarantee.

2.6. During transport, it is necessary to have the original packaging. The lack of them may be a cause of non-acceptance of the product.

3. ACTIVATION/VALIDITY

In order to take advantage of the guarantee, the buyer must:

A) Contact the reseller customer or send an e-mail to the following address: assistenzaclima@finteksrl.com or by consulting the center closest to the customer's address on the website www.finteksrl.com/assistenza, issuing your details no. Telephone number and address. Our operators or later the local technical assistance center will contact the customer within 36/48 after the report.

B) During the contact phase, the customer must provide proof of purchase (invoice, receipt, tax receipt).

4. VALIDITY OF THE GUARANTEE

4.1.1 The 24-month warranty is valid only for private and domestic users and therefore does not cover deterioration or damage caused by the operation of the equipment under working conditions outside the manufacturers' specifications. It also does not cover any damage or deterioration caused by poor or incorrect installation.

The buyer waives any claim for compensation against Fintek srl for any damage of any kind, direct or indirect, even if the causes were due to defects in the construction of the material. Any compensation for damage to people or property attributable to the misuse or non-use of the devices is also excluded and waived.

4.1.2 Interventions due to poor or incorrect installation by the user or customer, tampering (replacements of components and accessories not approved by Fintek srl), interventions carried out by unauthorized or unqualified personnel, remote control faults and failure to comply with environmental regulations, neglect, lightning, floods, fires, acts of war, electrical shocks, are not covered by warranty use of detergents or additives not suitable for cleaning internal plastic parts and exchangers, the lack of periodic maintenance of the same, the failure to replace electrostatic filters, shocks or falls of foreign bodies, acts of vandalism in general, instant power supply outside the number plate values. However, they provide for repair at costs entirely borne by the customer

4.1.3 Products that are sent to Authorized Fintek srl or C.A.T. If they are functional or do not have a tamper-proof seal, are excluded from the warranty. In this case, the costs will be charged to the customer.

4.1.4 Furthermore, the warranty does not cover damage resulting from failure to comply with the instructions contained in the user and installation manual, due to inexperience and to all this not attributable to the direct liability of Fintek srl.

4.1.5 Products not equipped with a heat pump that bear illegible, abrasive, altered serial numbers without proof of purchase are also excluded from the warranty.

4.1.6 The formation of rust and stains on steel due to the use of aggressive detergents are also excluded. It should also be noted that in the event of functional defects complained by the user and not found as such during verification by the technician, the intervention will be fully borne by the consumer

4.1.7 Any interventions carried out that are not covered by a 24-month warranty are the responsibility of the customer and must be adjusted in advance after a repair quote accepted by the customer. In the event of a refusal, Fintek srl may exercise the right of retention pursuant to art. 2756 of the Italian Civil Code until complete satisfaction.

4.1.8 Products purchased through online channels are guaranteed as in point 2. Repairs do not use the on-site assistance service (which can be provided for a fee) but the units must be sent to the unique online repair service centers (searchable on the website www.finteksrl.com/assistance) complete with the original packaging. If replaced the first month of use before recovery, the unit must contain all the accessories supplied with remote control, instructions, CD Rom, grids, no scratches, abrasions, penalty of charge for the missing accessories.

4.1.9 The material must always be accepted subject to verification of the contents to the courier and report any defects, defects or breaks, even simply of the cardboard within 8 days of taking the material

4.1.10 Any dispute relating to the application, interpretation, execution of this contract will be referred to the jurisdiction of the court of the Republic of San Marino (RSM).

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**THE PRODUCT HAS BEEN BUILT
ACCORDING TO THE LISTED
STANDARDS**

EN 60335-1, EN 60335-2 - 40,
EN 551014

AND HAVE THE NECESSARY
REQUIREMENTS ACCORDING TO
THE DIRECTIVES IN ANNEX 1
EN50366

LOW VOLTAGE DIRECTIVE 2006/95/EC
EN55014-1
EN61000-3-2
EN61000-3-3
EN55014-2

**THE MACHINES COMPLY WITH THE
DIRECTIVES OF THE EUROPEAN
ECONOMIC COMMUNITY**

89/392 EEC , EN 60204 PR EN 378

THEY HAVE THE REQUIREMENTS
LISTED IN ANNEX 1 OF THE
DIRECTIVES

89/392 EEC INCLUDING
AMENDMENTS 91/368 EEC AND 93 /44
EEC

THE MACHINES ARE MARKED WITH
THE MARK OF CONFORMITY

TEST DATE _____

TEST DURATION _____

TEST OUTCOME _____

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Scopri i video di presentazione dei nostri condizionatori e tanto altro sul nostro canale YouTube

<http://bit.ly/fintekvideo>



FINTEK
REDESIGN YOUR FEELINGS

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