EN

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Translation from original

MLG

250FS - 350FS - 500FS

Installation manual

R32 INVERTER WI FI COLD PLASMA MULTISPLIT

MULTISPLIT - CONSOLE

Cooling capacity 2,7 kW ÷ 5,2 kW

Heating capacity 2,8 kW ÷ 5,3 kW

AERMEC

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Dear customer,
Thank you for choosing an AERMEC product. It is the fruit of many years of experience and special design studies and has been made of the highest grade materials and with cutting edge technology.
In addition, all our products bear the CE mark indicating that they meet the requirements of the European Machine Directive regarding safety. The quality level is being constantly monitored, so AERMEC products are synonymous with Safety, Quality and Reliability.

The data may undergo modifications considered necessary for the improvement of the product, at any time and without the obligation for any notice thereof.

Thank you once again.
AERMEC S.p.A

COMPANY CERTIFICATIONS

SAFETY CERTIFICATIONS

This marking indicates that this product should not be disposed with other household wastes throughout the EU.
To prevent possible harm to the environment or human health from uncontrolled disposal of Waste Electrical and Electronic Equipment (WEEE), please return the device using appropriate collection systems, or contact the retailer where the product was purchased. Please contact your local authority for further details.
Illegal dumping of the product by the user entails the application of administrative sanctions provided by law

GAS R32 - WARNINGS

GAS R32 GENERAL WARNINGS

WARNING

Please read this manual carefully before using the unit.

WARNING

Please read this manual carefully before installing the unit.

WARNING

Please read this manual carefully before repairing or performing maintenance on the unit.

WARNING

This unit contains flammable R32 gas.

WARNINGS FOR R32 REFRIGERANT GAS

- The unit uses eco-friendly R32 refrigerant gas.
- The refrigerant gas is odourless.
- R32 refrigerant gas is flammable, but only in the presence of flames.
- There is a chance of explosion but only if a certain concentration is reached in the air.
- Smoking near the unit is prohibited.
- Provide signage prohibiting smoking near the unit.
- The flammability of the gas is very low.
- Keep the room where the unit is installed well ventilated.
- Do not pierce or burn the unit.
- The unit cannot be placed near ignition sources such as open flames, electric heaters, etc.
- All repairs or extraordinary maintenance operations must be carried out by specialised technicians or qualified personnel.
- Leak test must be done after the installation.

R32 GAS ADVANTAGES

- Compared to common refrigerants, R32 is a non-polluting refrigerant. It causes no damage to the ozone layer and does not add to the greenhouse effect.
- R32 has excellent thermodynamic features that lead to high energy efficiency.

WARNINGS FOR MAINTENANCE OR REPAIR

THESE PROCEDURES MAY ONLY BE FOLLOWED BY SPECIALISED TECHNICIANS OR QUALIFIED PERSONNEL.

Please follow the steps below:

1. Turn off the unit and disconnect it from the electrical power supply.
2. Drain the refrigerant gas
3. Extract the remaining gas.
4. Clean with Nitrogen N2.
5. Ensure that there are not naked flames.
6. The refrigerant must be recycled in the special tanks.

FILLING R32 REFRIGERANT GAS

THESE PROCEDURES MAY ONLY BE FOLLOWED BY SPECIALISED TECHNICIANS OR QUALIFIED PERSONNEL.

- Make sure that other types of refrigerant do not contaminate the R32.
- The gas tank must be kept in a vertical position during filling.
- Apply the specified label to the unit after filling.
- Do not add more refrigerant gas than necessary.
- Once filling is finished, carry out the leak detection operations before testing its functioning.
- A second check for gas leaks must be performed once all of the previous operations are completed.

DISPOSAL OF R32 COOLANT GAS

THESE PROCEDURES MAY ONLY BE FOLLOWED BY SPECIALISED TECHNICIANS OR QUALIFIED PERSONNEL.

- Do not dispose of it in areas with a risk of formation of explosive mixtures with the air. The gas must be disposed of in a suitable torch with an anti-flame-return device. Contact the supplier if you need instructions for use.

SAFETY STANDARDS FOR TRANSPORTATION AND STORAGE

- Using a suitable gas detector, check that there are no gas leaks in the environment before opening the packaging of the unit.
- Ensure there are no ignition sources near the unit.
- Smoking near the unit is prohibited.
- The transportation and the storage must be done according to the current national regulations.

WARNING:

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture.

Should repair be necessary, contact your nearest authorized Service Centre.

Any repairs carried out by unqualified personnel may be dangerous.

The appliance shall be stored in a room without continuously operating ignition sources. (for example: open flames , an operating gas appliance or an operating electric heater.)

Do not pierce or burn.

Appliance filled with flammable gas R32. For repairs,strictly follow manufacturer's instructions only.

Be aware that refrigerants not contain odour. Read specialist's manual.

Refer to the minimum room area table.

QUALIFICATION REQUIREMENT FOR INSTALLATION AND MAINTENANCE

- All the operators who are engaging in the refrigeration system should bear the valid certification awarded by the authoritative organization and the qualification for dealing with the refrigeration system recognized by the company or the institution where this operation is carried out. If it needs other technician to maintain and repair the appliance, they should be supervised by the person who bears the qualification for using the flammable refrigerant.
- The unit must be installed in a room that is larger than the minimum room area.
- Maintenance must be done in a room that is larger than the minimum room area.
- Check whether the maintenance area is well-ventilated. The continuous ventilation status should be kept during the operation.
- The unit can be repaired only with the method suggested by the manufacturer.

WARNINGS DURING WELDING OPERATIONS

If it is necessary to cut or weld the pipes of the refrigeration system, please follow the points below:

- Operations must be carried out by specialised technicians or qualified personnel.
- Shut down the unit and cut off power supply.
- Discharge the refrigerant following the required procedures; the gas must be disposed of in a suitable torch with an anti-flame-return device.
- Make sure that there isn't any naked flame near the outlet of the vacuum pump and it's well-ventilated.

MINIMUM ROOM AREA TABLE

	Charge amount (kg)	≤1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5
Minimum room area (m^2)	floor location	4	14,5	16,8	19,3	22	24,8	27,8	31	34,3	37,8	41,5	45,4	49,4	53,6
	window mounted	4	5,2	6,1	7	7,9	8,9	10	11,2	12,4	13,6	15	16,3	17,8	19,3
	wall mounted	4	4	4	4	4	4	4	4	4	4,2	4,6	5	5,5	6
	ceiling mounted	4	4	4	4	4	4	4	4	4	4	4	4	4	4

WARNINGS

WARNING: Strictly observe the warnings below. Failure to observe them, could result in injuries to people or damages to properties or to the unit.

WARNING: Strictly observe the warnings below. Failure to observe them, could result in injuries to people or damages to properties or to the unit.

WARNING: Please read this manual carefully before using the unit.

WARNING: Please read this manual carefully before installing the unit.

WARNING: Please read this manual carefully before repairing or performing maintenance on the unit.

PURPOSE OF THE UNIT:
Split-system air conditioners are designed solely for the purpose of air conditioning indoor rooms of a certain size and with the conditions of use appropriate to the installed output. **DO NOT USE THESE UNITS FOR OTHER PURPOSES.**
The heat pump versions can be operated for heating or cooling purposes.

The split air conditioners consist of the following:
- **Indoor unit**
  it is the element that distributes the air to the ambient to be air conditioned. Indoor installation

- **Outdoor unit**
  it is the element that dissipates into the outdoor ambient the heat taken from the indoor ambient (cooling mode) or absorbs from the outdoor ambient to provide heat to the indoor ambient (heating mode). Outdoor installation.

WARNING
Connect the supply unit 8 hours before performing any type of operation. Otherwise, damages to the compressor may occur.

WARNINGS FOR THE INSTALLER

- The unit and its accessories must only be installed and wired by professionals with the necessary technical qualifications in installation, conversion, extension and maintenance of the systems and who are trained to perform operational and safety checks on these systems. In this manual, these will generally be referred to as "Personnel with specific technical skills".
- This air conditioner must be installed according to national plant engineering regulations. Particular attention must be paid to safety guidelines and to ensuring that the wiring is correctly connected: incorrect wiring connection could result in supply cables, plug or power socket overheating, which could present a fire risk.
- Ensure that the air conditioner is connected to the power supply or to a power socket with the correct voltage and frequency. Using power supplies with the incorrect voltage and frequency could damage the unit and consequently risk starting a fire. The voltage must be stable, without major fluctuations.
- Install on a solid surface which can bear the weight of the air conditioner. Check the support is securely installed and the unit is absolutely stable after operating for a long time. If it is not securely fixed, the unit could fall and cause injuries.
- To ensure good drainage, the condensate discharge pipes must be correctly installed, following the installation instructions.
- In case of a refrigerant gas leak, immediately ventilate the room.
- Do not install the unit in a location where it could be affected by inflammable gas leaks or deposits of materials which are inflammable, explosive, poisonous, corrosive or hazardous substances. Do not use naked flames near the units. Risk of fire or explosion. Install the unit in a location with minimal levels of dust, fumes, humidity and corrosive agents in the air.
- Do not install in laundries.
- When installing the unit, allow sufficient technical clearance around the unit for maintenance.
- When installing the unit, take note of the unit's dimensions and weight. Respect the dimensions stipulated in this manual with regards to the refrigerant line length, the height difference between the units, and the siphons to install along the refrigerant lines.
- Make sure nothing can obstruct the air flow into and out of the indoor unit.
- Do not make any modifications to the unit! Do not attempt to repair the unit alone, this is extremely dangerous! Incorrect operations could cause electric shocks, water leaks, fires etc. Contact your After Sales Service, these operations must only be carried out by "Personnel with the specific technical skills".
- Ensure that the power supply and the installed output are adequately scaled to supply the air conditioner correctly.
- Before operating the air conditioner, ensure that the electric cables, condensate discharge pipes and cooling connections have been correctly installed to avoid the risk of water leaks, refrigerant gas leaks and electric shocks.
- The additional charge must be performed using the same type of refrigerant gas.
- The air conditioner must be correctly earthed. Do not connect the earth cable to the gas or water pipes, to the lightning conductor, or to the earth cable of the telephone. Incorrect earthling/ grounding could cause electric shocks.
- Once started, the air conditioner must not be switched off for at least 5 minutes to prevent the return of oil to the compressor.
- Do not turn on the air conditioner with wet hands. Risk of electric shocks.

- Periodically check that the installation conditions of the unit have not been altered: have the system checked by "Personnel with specific technical skills".
- The unit and the isolator switch must be turned off before carrying out maintenance work or cleaning.
- Do not place objects on the unit and do not climb on top of it. Objects or individuals may fall as a result: risk of damage or injury.
- After completing the electrical wirings, carry out a test. This operation must only be carried out by "Personnel with specific technical skills".
- After carrying out the electrical connections, please reinstall the electrical panel.
- If the supply cable is damaged, replace it to prevent possible dangers. Replace the supply cable only with a cable of the type reported in the manual. This operation must only be carried out by "Personnel with specific technical skills".
- To protect the unit against short circuits, mounted on the supply line of thermomagnetic isolator switch with a minimum contact separation of at least 3mm in all poles.
- Do not connect the power supply to a multiple socket, as this may cause malfunctioning.
- This air conditioner must be installed according to national plant engineering regulations. Particular attention must be paid to safety guidelines and to ensuring that the wiring is correctly connected: incorrect wiring connection could result in supply cables, plug or power socket overheating, which could present a fire risk.
- Only replace the fuses with others identical to the original ones.
- For the power supply, use undamaged cables with a section that is suitable for the load.
- Stranded cables can be used only with a cable terminal. Ensure the strands of the wires are inserted well.
- Take care when stretching the supply and connection cables around the units: the cables must not be subject to mechanical stress. The cables must be protected.
- Do not make connections on the power supply cable: use a longer cable. Junctions can cause overheating and/or fires.
- If the power cable is damaged, it can be replaced by the manufacturer or by the technical assistance service or a person with a similar qualification, so as to prevent any risks.
- Do not leave any cables in direct contact with the refrigerant pipes as they could reach high temperatures and moving parts, such as the fans.
- If the units are installed in a location exposed to electromagnetic interference, shielded twisted pair cables must be used for the communication connections between the units.
- To avoid communication errors between the units, ensure that the communication line cables are correctly connected to their respective terminals.
- After completing the electrical wirings, carry out a test. This operation must only be carried out by "Personnel with specific technical skills".
- During test operations, make sure that the front panel is completely closed, as shown in the following example.
- The wiring diagrams are subject to a continuous update. Therefore, it is mandatory to refer to those on the machine.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and necessary knowledge if they are supervised or have received instructions concerning use of the appliance in a safe way and understand the hazards involved. Children should not play with the appliance.
- Cleaning and maintenance intended to be performed by the user should not be performed by children without supervision.
- Do not dismantle or repair the unit while it is in operation.
- Do not obstruct the air flow in and out of the indoor and outdoor units. A reduction in the air flow reduces the effectiveness of the air conditioner, and causes breakdowns and malfunctions.
- Do not spray or throw water directly onto the unit. Water may cause electric shocks or damage to the unit.
- Do not drop the remote control and do not press the keys with pointed objects: this could damage the remote control.
- Do not throw water onto the remote control, or wet it in any way, as this may damage it.
- Do not pull or deform the supply cable. If the cable is pulled or used inappropriately, the unit could be damaged and there is a risk of electric shock.
- Adjust the room temperature correctly to obtain a comfortable environment.
- Never place objects under the indoor unit as they could get wet. Water may drip from the indoor unit when the level of humidity exceeds 80%, or when the condensate discharge pipe is blocked.
- Switch off the power supply if the air conditioner is not to be used for a long time. When the power supply switch is turned on, electricity is consumed even if the system is not operating.
- Do not leave the doors or windows open for long periods when the air conditioner is operating. The yield in Heating or Cooling mode is reduced if doors or windows are kept open.
- Position devices such as TV, radio, stereo, etc. at a distance of at least 1 metre from the indoor unit and the remote control. There may be some audio and video interference.
- The air conditioner has an AUTO RESTART function which stores the settings in the memory.
- If there is a power cut, when the power is restored the air conditioner will restart with the settings previously stored in the memory.

- When one of the following phenomena occur, switch the unit off and disconnect it from the power supply, then contact your local Aftersales Service (interventions must only be carried out by "Personnel with specific technical skills"):
  - The power cable is overheated or damaged.
  - The unit emits an anomalous sound while operating.
  - A circuit power failure is frequently triggered.
  - The air conditioner gives off a burning smell.
  - The internal unit leaks.
- The installation position must ensure an appropriate absorption of vibrations and noise exclusion. Ensure that the air and noise coming from the unit do not disturb your neighbours.
- Do not under any circumstances insert your fingers or any object into the unit. This could cause damage as the internal fans rotate at high speed.
- Do not leave any cables in direct contact with the refrigerant pipes as they could reach high temperatures and moving parts, such as the fans.
- The outdoor unit must be installed so as to ensure that air discharged from the unit itself is not recirculated and there is sufficient space around the machine for operations and maintenance.
- The installation site must be well-ventilated so that the outdoor unit can take in and discharge sufficient quantities of air. Ensure that there are no obstacles near the outdoor unit's air inlets or outlets. Remove any obstacles which may be blocking the intake or discharge of air.
- The installation position must ensure that the external parts are not covered by snow and it not subject to the effects produced by fumes from fuel and oils.
- Avoid direct exposure of the unit to solar radiation: it is recommended to install protection.
- The installation site must guarantee drainage of rainwater and water produced during the defrosting cycle.
- The site of installation must be positioned so that the discharge air outlet is not exposed to strong winds and the air discharged must be free to disperse into the atmosphere.
- To prevent disturbances, the units' supply cables must be place at a distance of more than one metre from electronic equipment, such as TVs, radios, etc. (in case of cables with a heavy load, 1 metre distance might not be enough).
- In case of installations where there are other sources of heat, ensure a suitable air exchange.
- The wired panel must be connected to the unit before powering on the unit. Failure to do so, will prevent the wired panel from operating.

PRECAUTIONS FOR USE

- Ensure the equipment is not used by children or disabled people without suitable supervision; also note that the unit should not be used by children as a toy.
- Only use the remote control to adjust the air flow; do not force the fins into position with your hands.
- Do not direct the air jet straight at your body. Avoid heating or cooling the air excessively. This may cause health problems.
- Do not direct the air flow straight at animals and plants.
- Periodically check that the installation conditions of the unit have not been altered, and have the system checked by a qualified engineer.
- Do not remove the protection grilles. Do not insert your hands, or any objects, into the sockets or air vents.
- In the event of issues with the air conditioner (e.g. burning smell), disconnect the unit from the power supply using the isolator switch or the electric plug (if fitted). If the problem persists, the unit may be damaged and could cause electric shocks or fires. Contact your local After Sales Service.
- Do not use sprays or insecticides on the unit: risk of fire.
- Air the room. We recommend that the room where the air conditioner is installed is periodically aired, especially if many people occupy the room or if there is equipment that uses gas. Insufficient ventilation may result in a lack of oxygen.
- If the air conditioner is being used in a room where there are children, elderly or disabled people or bedridden patients, ensure that the room temperature is appropriate.
- Do not use the air conditioner to store food or to dry clothes.
- If the relative humidity is above 80% (with the doors and windows open) and the air conditioner has been operating in Cooling or Dehumidification mode for a long time, condensate water will probably form on the outlet of the indoor unit. This could cause unwanted dripping.
- Do not under any circumstances insert your fingers or any object into the unit. This could cause damage as the internal fans rotate at high speed.
- Do not use the main switch or the plug to switch the air conditioner on or off. Use the remote control to switch the air conditioner on or off, or if the remote control is not working, use the emergency control on the unit.
- When you want to switch the unit on or off via the emergency button, press the button using an insulating object other than metal.
- Energy saving advice: Do not leave the doors and windows open while the unit is operating. The effectiveness of the air conditioner is reduced, and energy is wasted.
- When operating in Cooling mode, the temperature selected must not be more than 5°C below the outdoor temperature, for optimum comfort and energy saving.

- When heating, select a moderate temperature.
- Limit the room's exposure to direct sunlight using blinds or by leaving the windows ajar.
- Do not place hot devices, flames or other heat sources near the unit. The effectiveness of the air conditioner is reduced, and energy is wasted.
- Clean the air filters once a fortnight.
- Be sure to disconnect the power supply when the unit is not being used for a long period of time. Disconnect the isolator switch from the power supply.
- When taking out the filters, be careful not to touch the coil as this may lead to injury.
- When the unit has a fault and not working, please contact your local After Sales Service and provide the following information that is available on the characteristics plate:

1. Name of the unit (model, version, serial number and date of production).
2. Error code, explaining what happened before and after the error warning.

DISCLAIMER

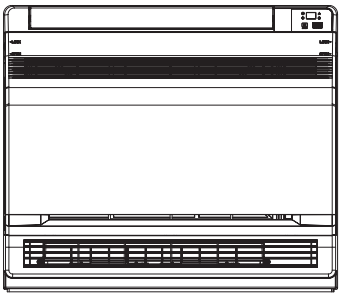
AERMEC DOES NOT ASSUME ANY RESPONSIBILITY FOR DAMAGES TO THE UNIT OR WARRANTY LOSS IN CASE:

1. The unit is used improperly.
2. Attempts to modify, alter or repair the unit were made without following the previously mentioned instructions.
3. The unit that could have suffered from damages during transport, has not been checked.
4. The unit is operated / repaired without following the previously mentioned instructions.
5. Spare parts from third-party manufacturers are used.
6. Occurrence of natural disasters, force majeur or hostile environments.
7. The unit is damaged by corrosive gases in the atmosphere.

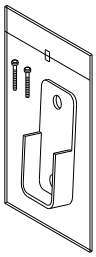
UNIT TYPE

Indoor units in split-system air conditioners for CONSOLE installation are designed to be installed on walls indoors. The air filter is easily accessible to enable regular cleaning. Air conditioners for CONSOLE installation are supplied complete with a remote control.

Indoor unit



Remote control holder



Remote control

NOTES ON OPERATION

DEFROSTING THE OUTDOOR UNIT

When the outside temperature is low but there is a high level of humidity, and the unit is operating in Heating mode, the condensate formed on the exchange surfaces of the outdoor unit tends to freeze, reducing the heating capacity. The unit control prevents this phenomenon by activating the automatic defrosting function. When this function is active, the fans of the indoor and outdoor units could switch off and the unit could suspend the hot air flow for a few minutes.

WARNING: During defrosting, the frost on the outdoor unit melts and forms water: it is necessary to provide an adequate water drainage system.

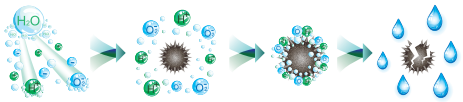
PREVENTING COLD AIR JETS

In Heating mode, ventilation on the indoor unit is inhibited for a specific technical time to allow the exchanger to reach the ideal temperature for heating; it is therefore normal to notice a delay between switching on the unit and activation of the ventilation.
The delay can be noticed under the following conditions:
1. Switching on Heating
2. After defrosting
3. Heating at low temperatures

CHARACTERISTICS

- Every indoor unit comes with a remote control and remote control holder.
- Fan with DC inverter technology.
- Regenerable air filter easy to remove and clean.
- Timer for programming switch-off and switch-on.
- Auxiliary emergency command integrated into the unit.
- Indoor unit front panel with LED display and indicator lights.
- 5-speed fan, to meet every possible need.
- **Auto** function for a continuous speed variation.
- **Turbo** function to attain the desired temperature as quickly as possible.
- **Sleep** night time function well-being program.
- **X-fan** prolonged ventilation function, prevent the formation of mould.
- **Anti-freeze** function that allows you to keep an inside minimum temperature of 8 °C in winter.
- **iFeel** function for activating the ambient temperature probe inside the remote control, for improved comfort.
- Air Purifiers (Cold Plasma) is able to reduce pollutants.
- Standard Wi-Fi module.

AIR PURIFIER (COLD PLASMA)
Capable of reducing pollutants breaking down their molecules using electric discharges, causing the splitting of the water molecules in the air into positive and negative ions. These ions neutralise the molecules of the gaseous pollutants obtaining products that are normally present in clean air. The device is able to eliminate 90% of the bacteria. The result is clean, ionised air that has no bad odours.



AIR PURIFICATION SYSTEM (COLD PLASMA)

SMART APP (EWPE)
The system is fitted with the WI-FI module as standard; using this module and the app for iOS and Android devices (available free on Apple Store and Google Play, the system can be directly controlled from a distance on your smartphone or tablet. Remote control is possible via Cloud, using a wireless router connected to the Internet.

http://global.ewpeinfo.com/EwpeSmart/

ACCESSORIES

	250FS	350FS	500FS
WRCA	•	•	•
CC2*	•	•	•

Legend
- • Compatible
- – Not compatible

*** The accessory CC2 version 01 is compatible with the indoor units of the MLG_FS serie, from version 01.**

TECHNICAL DATA

		MLG250FS	MLG350FS	MLG500FS
Nominal cooling performances				
Cooling capacity (1)	kW	2,70	3,50	5,20
Moisture removed	l/h	0,8	1,2	3,8
Nominal heating performances				
Heating capacity (2)	kW	2,80	3,75	5,33
Electric data				
Rated power input (3)	W	50	50	50
Indoor unit				
Type of fan	Type		Centrifugo inverter	
Air flow rate				
Minimum	m^3/h	280	360	320
Maximum	m^3/h	430	520	650
Sound power				
Minimum	dB(A)	38,0	41,0	45,0
Maximum	dB(A)	48,0	50,0	55,0
Sound pressure (4)				
Minimum	dB(A)	26,0	31,0	35,0
Maximum	dB(A)	36,0	40,0	45,0
Indoor unit				
Condensate Discharge Diameter	mm	28,0	28,0	28,0
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")
Diameter of refrigerant gas connections	mm (inch)	9,52 (3/8")	9,52 (3/8")	12,7 (1/2")
Power supply				
Indoor unit power supply			220-240V ~ 50Hz	

(1) Cooling (EN-14511 and EN-14825) ambient air temperature 27 °C D.B. / 19 °C W.B.; outside air temperature 35 °C; max speed; length of refrigerant lines 5 m.
(2) Heating (EN-14511 and EN-14825) ambient air temperature 20 °C D.B.; outside air temperature 7 °C D.B. / 6 °C W.B.; max speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40.
(4) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

INSTALLATION

NOTES FOR INSTALLATION OF UNIT

WARNINGS CONCERNING INSTALLATION

- The unit and its accessories must only be installed and wired by professionals with the necessary technical qualifications in installation, conversion, extension and maintenance of the systems and who are trained to perform operational and safety checks on these systems. In this manual, these will generally be referred to as "Personnel with specific technical skills".
- Check that the power supply is disconnected before carrying out any operations on the unit.
- Incorrect installation can result in water leaks, electrocution or fires.
- After a prolonged period of use, check that the installation conditions of the unit have not been altered, and have the system checked by a qualified engineer.
- Do not make any modifications to the unit! Do not attempt to repair the unit alone, this is extremely dangerous!
- Incorrect operations could cause electric shocks, water leaks, fires etc.
- Contact your local dealer or After Sales Service: these operations must only be carried out by "Personnel with the specific technical skills".

INSTALLATION AND TRANSPORT

- Transportation must be carried out by experts.
- The unit and its accessories must only be installed and wired by professionals with the necessary technical qualifications in installation, conversion, extension and maintenance of the systems and who are trained to perform operational and safety checks on these systems. In this manual, these will generally be referred to as "Personnel with specific technical skills".
- For the installation, be sure to use only the accessories and parts specified; failure to observe this precaution may result in electric shocks, electric discharge or fires.
- When carrying out the installation, take into consideration strong winds, typhoons and earthquakes. Incorrect installation could cause the device to fall, and lead to accidents.
- If the unit needs to be moved to another place, consult your local retailer or the After Sales Service beforehand; this should only be carried out by "Personnel with specific technical skills".
- To ensure good drainage, the condensate discharge pipes must be correctly installed, following the installation instructions. Adopt the most suitable measures to avoid heat dispersion and the consequent formation of condensate. Incorrect installation of the pipes can result in water leaks, wetting furniture and other items in the room.

NOISE

- Choose a well-ventilated area, to avoid reduced performance or increased noise.
- Choose a position where the hot air or noise emitted from the outdoor unit will not disturb your neighbours.
- Never place objects near the air outlet or the unit, as this could reduce performance or increase the noise level.
- If abnormal noises are heard during operation, contact the local After Sales Service immediately.

INSTALLATION POSITION

- Install on a solid surface which can bear the weight of the air conditioner.
- Check the support is securely installed and the unit is absolutely stable after operating for a long time. If it is not securely fixed, the unit could fall and cause injuries.
- Have the installation checked periodically, 3-4 times a year, by "Personnel with specific technical skills".
- Avoid places that can be reached by children, and keep it away from animals and plants. If unit installation in places like these cannot be avoided, you are advised to fit some form of protection.
- Avoid places within the reach of children.
- Avoid exposure to other heat sources or to direct sunlight.
- Install the indoor unit away from TV, radio and other electrical equipment.
- Do not install the unit in a location where it could be affected by inflammable gas leaks. This could start a fire. Install the unit in a location with minimal levels of dust, fumes and humidity in the air.
- In salty coastal areas, or in areas near sulphurous hot springs, contact the retailer before installation to ensure the unit can be safely used.
- Do not install in laundries.
- The unit must be positioned so that the plug is accessible.

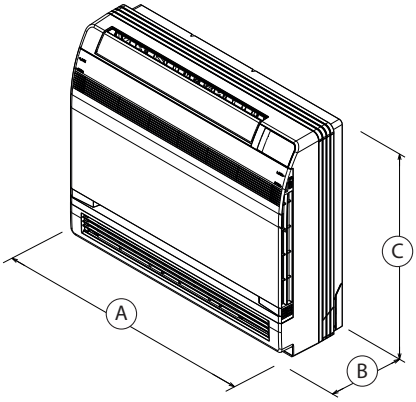
WIRING

- The unit and its accessories must only be installed and wired by professionals with the necessary technical qualifications in installation, conversion, extension and maintenance of the systems and who are trained to perform operational and safety checks on these systems. In this manual, these will generally be referred to as "Personnel with specific technical skills".
- Ensure that the installation is wired in compliance with the laws and standards in force, and with the instructions in this manual.
- To protect the unit against short circuits, fit a thermomagnetic isolator switch to the power line with a minimum contact gap of 3mm on both poles.
- Check the earth cable is connected to the earthing system of the building itself.
- For the power supply, use undamaged cables with a section that is suitable for the load (for information on sections refer to the table provided in this manual).
- Do not make connections on the power supply cable: use a longer cable. Junctions can cause overheating and/or fires. Do not repair damaged cables: replace them with new cables with a suitable section. Have repairs carried out by "Personnel with specific technical skills".
- The wiring diagrams are subject to continuous updates, so it is essential to use those on the machine as your reference.
- Ensure that the air conditioner is connected to the power supply or to a power socket with the correct voltage and frequency. Using power supplies with the incorrect voltage and frequency could damage the unit and consequently risk starting a fire. The voltage must be stable, without major fluctuations.
- The installation must be carried out in compliance with the national standards relating to electrical systems, wiring and safety.

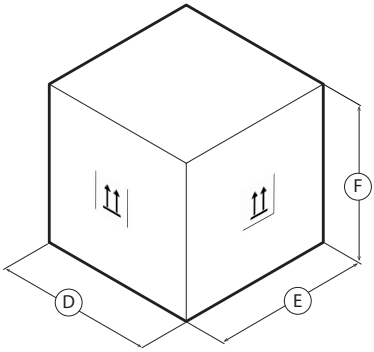
EARTHING:
Check the earth cable is connected to the earthing system of the building itself. Ensure that a suitable differential switch is installed for earthing purposes. Do not connect the earth cable to the gas or water pipes, to the lightning conductor, or to the earth cable of the telephone. The earth cable must comply with the national electric safety standards.

WARNING:
- **Water pipes:** Some parts of the water pipes are made of plastic materials and are not suitable for earthing.
- **Gas pipes:** If there is an accidental electrical discharge from the air conditioner, it could easily cause a fire or even an explosion.

DIMENSIONS AND WEIGHTS



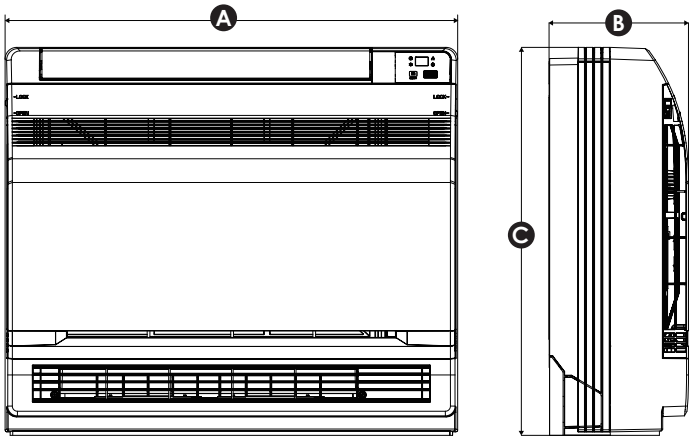
MLG_FS				
Without package	**A (mm)**	**B (mm)**	**C (mm)**	**Net weight (kg)**
MLG250FS	700	215	600	15,5
MLG350FS	700	215	600	15,5
MLG500FS	700	215	600	15,5



Carton Box Example

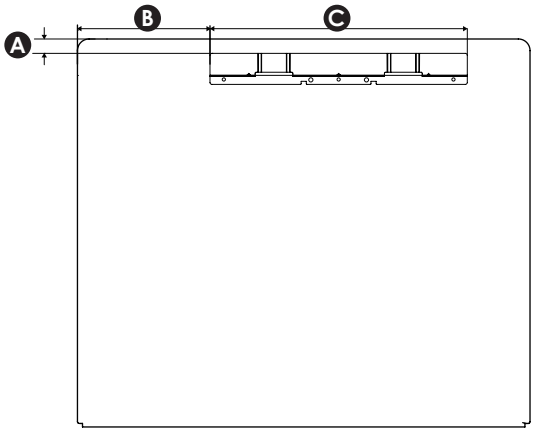
With package	**D (mm)**	**E (mm)**	**F (mm)**	**Gross weight (kg)**
MLG250FS	788	283	697	18,5
MLG350FS	788	283	697	18,5
MLG500FS	788	283	697	18,5

TECHNICAL DIMENSIONS



MLG_FS	A (mm)	B (mm)	C (mm)
MLG250FS	700	215	600
MLG350FS	700	215	600
MLG500FS	700	215	600

TECHNICAL DIMENSIONS - JIG KIT

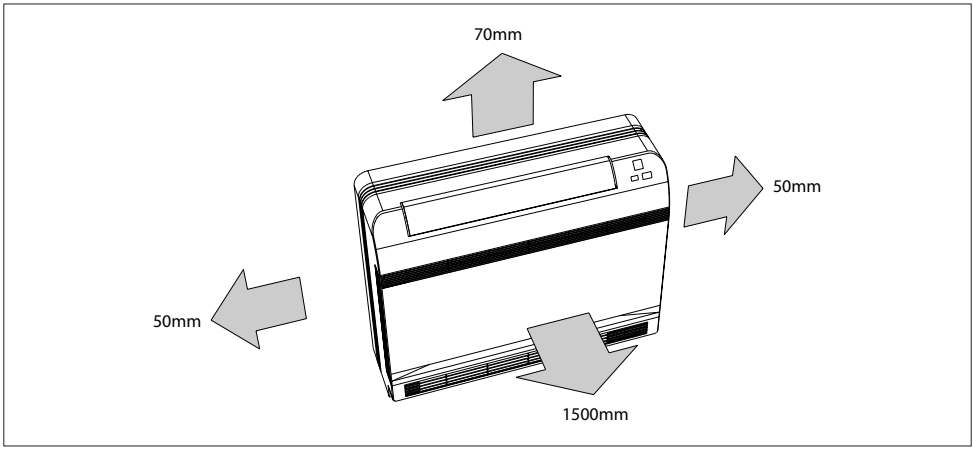


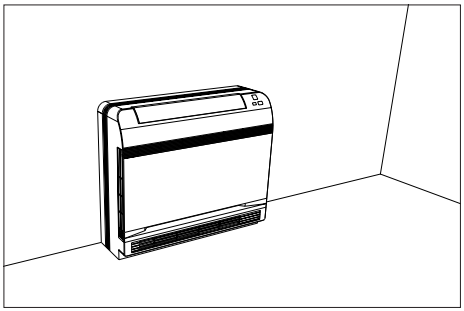
MLG_FS	A (mm)	B (mm)	C (mm)
MLG250FS	22	205	398
MLG350FS	22	205	398
MLG500FS	22	205	398

MINIMUM CLEARANCES FOR INDOOR UNIT

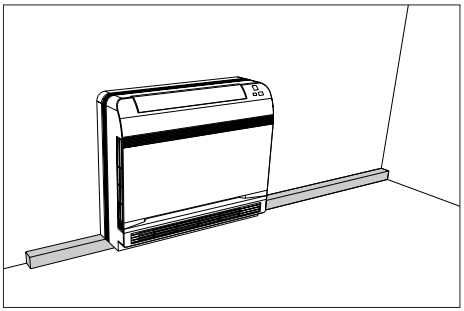
CHOOSING THE INSTALLATION AREA FOR THE INDOOR UNIT

- There must be no obstacles near the air discharge outlets and air suction inlets of the indoor unit, so that the air can circulate freely.
- Ensure the installation complies with the minimum technical clearances.
- The position where the unit will be located must be resistant, and capable to support 4 times the weight of the indoor unit, and must not increase the noise level or vibrations produced during operation.
- The installed unit must be leveled.
- The site of the installation must allow easy condensate drainage and easy connection to the outdoor unit.
- Ensure there is adequate space for care and maintenance.
- Use the installation jig kit to determine the spots to be drilled.
- When you install the suspension bars make sure that the anchor points to the ceiling and the bar can support at least 4 times the weight of the unit. If this is not the case, ensure that the location is strengthened before installing the unit.
- Installation in dusty or smoky environments (kitchens with cookers, etc.) can clog the heat exchanger and the condensate discharge pump, resulting in reduced performance and the risk of condensate water overflow.
- Install the unit far away from cookers to avoid the intake of fumes into the air conditioner.
- Install the unit further than 1m away from other electrical appliances such as TVs, radios, audio equipment, etc.
- Do not install the unit in a location where it could be affected by inflammable gas leaks.
- Do not install the unit near a laundry, bathroom, shower or swimming pool.
- To avoid problems with the air conditioner, avoid installation in locations:
- Where there is a lot of oil.
- Where there is an acid base.
- Where the power supply is irregular.

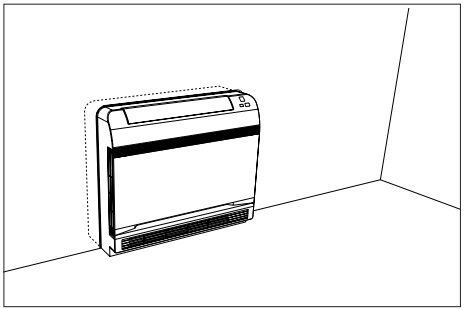




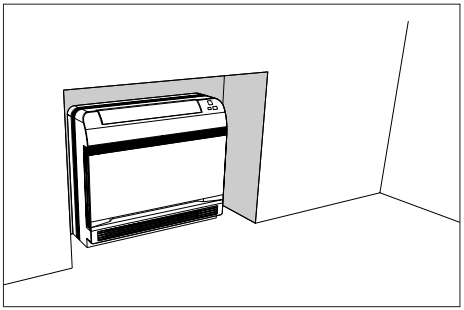
Floor installation



Wall mounting (with support)



Installing semi-recessed



Niche installation

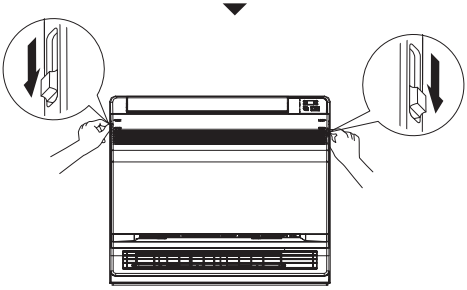
INSTALLATION OF THE INDOOR UNIT

To install the unit you must follow the following steps

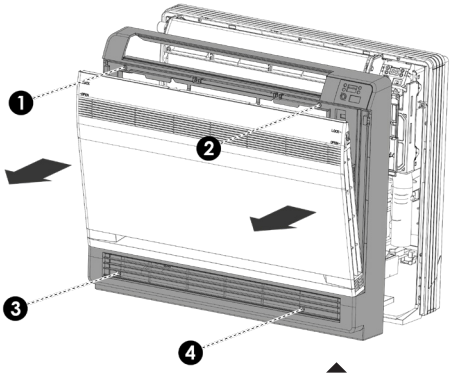
Open the front panel to access the screws holding the front grille;
Remove the 4 screws holding the front grille;
Remove the front grille;
Remove the 3 screws and remove the upper edge
Remove the 2 screws for each of the side edges and remove them
Remove the upper edge and subsequently the side edges;

Now the unit is ready to be attached to the brackets and the wall with 4 screws, as shown in the following paragraph; after installing the unit you will need to reassemble the parts in a manner contrary retracing transactions for disassembly.

(1) Open the front panel

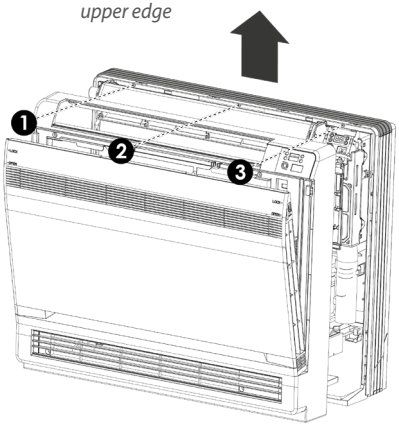


(2) Remove the 4 screws

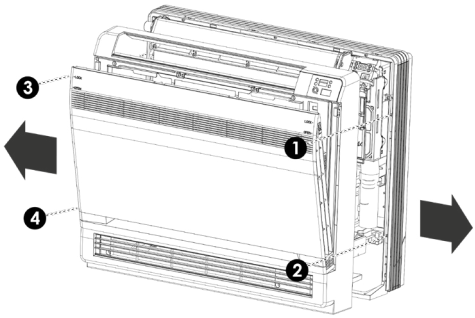


(3) Remove the front grille

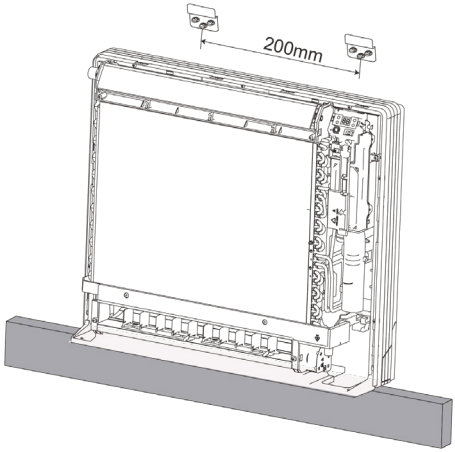
(4) Remove upper edge



(5) Remove the side edges



Wall installation

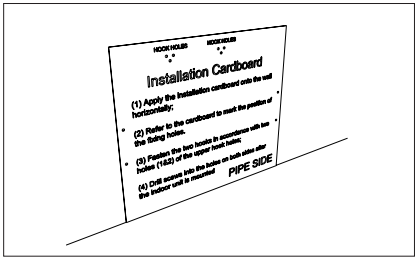


1. Choose the mounting position on the wall.
2. Find the points where drill the wall using as a reference the cardboard template supplied. Mark the wall and remove the template (A).
3. Choose the screw anchors as a function of the type of wall and of the load which will have to withstand.
4. Run on the wall holes to proper diameter dowels to be used.
5. The unit provides input connections in 4 directions:

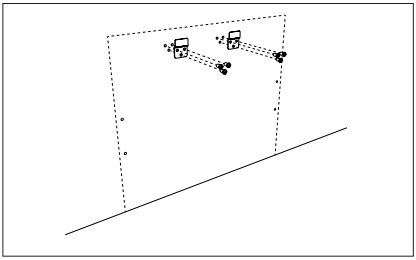
- Rear left, the connections have to pass through the wall, it requires a service hole on the wall.
- Left (remove the push on the left side of the unit and the side edge), the connections must be protected with a cable duct in views.
- Rear right, the connections have to cross the wall and requires a service hole on the wall.
- Right (remove the push on the right side of the unit and the side edge), the connections must be protected with a cable duct in views.

6. Service hole (if the installation requires it), diameter 55-65mm (for power supply line and communication with the external unit, condensate and copper tubes), made according to the type of installation required and based on distances specified in the schemes at the bottom.
7. The hole should have a slight outward slope.
8. Place a pipe sleeve in the hole to protect the service lines that you have to scroll through.
9. Fix the wall brackets (B).
10. Hook the indoor unit to the supports and secure it with 4 screws and wall plugs (C)
11. Make all connections, from the point where they must be connected to the indoor unit to the outdoor unit through the service hole.
12. Seal the service hole with material appropriate to the type of wall.
13. Make all connections as shown in the chapters (on the manual of outdoor unit).
14. Make sure that the air filters are in position.

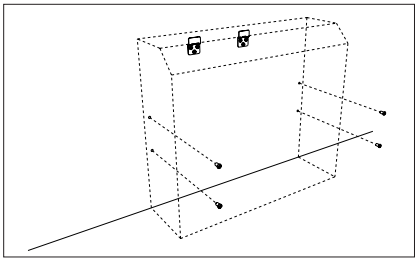
A



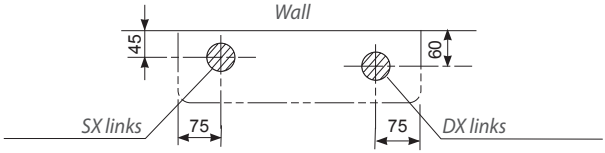
B

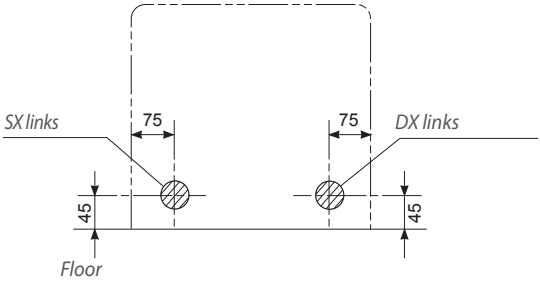


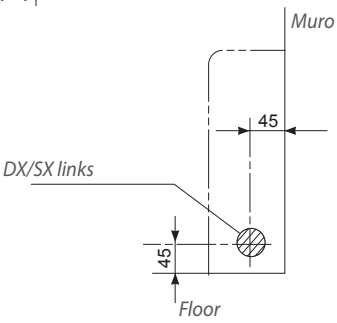
C

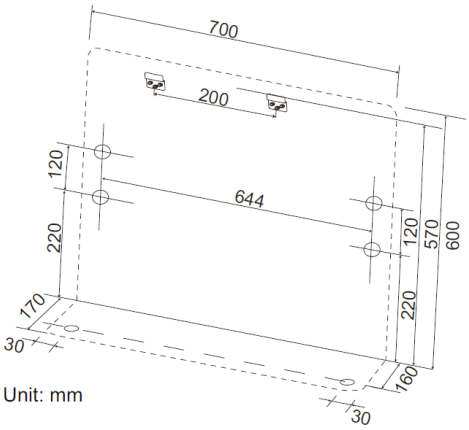


Position for drilling holes of service:

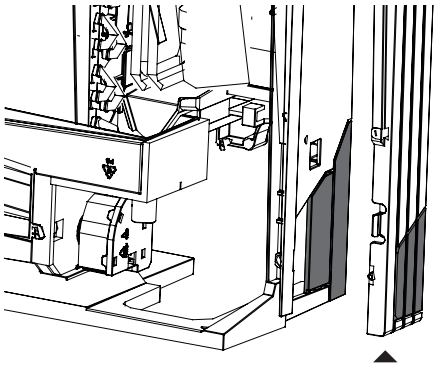








Unit: mm



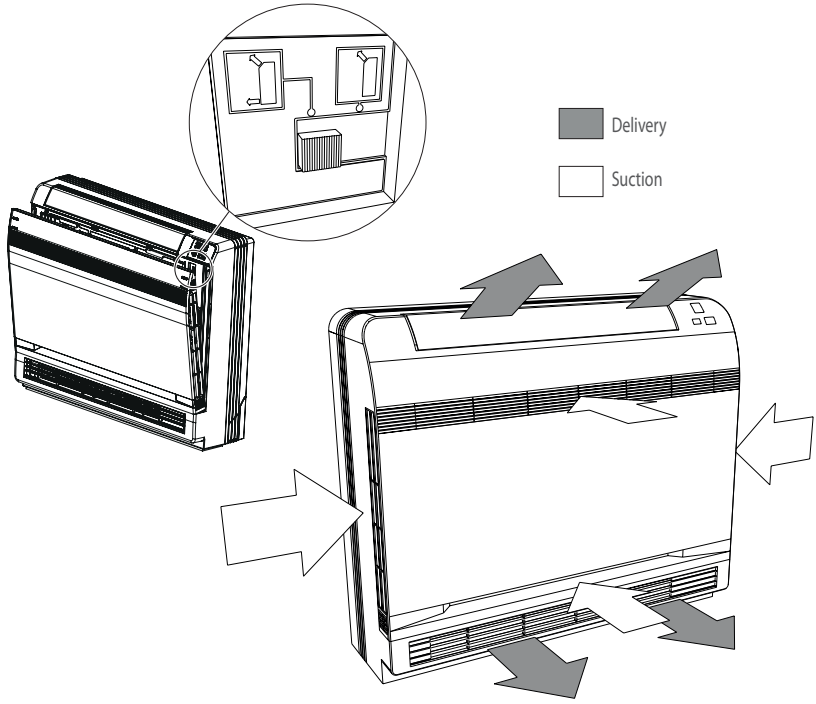
pre-cut side
(right and left sides)

SELECTION OF AIR DELIVERY

This type of unit draws air laterally and enters the environment through two turns distinct, one high and one low; but you can rule out Lower discharge through the following steps:

Open the front panel;
Use the selector outlet (located on the left enables the double-locked, right single upper delivery)

CAUTION:
You should not change the flow manifold as the unit is specifically designed for optimum performance using the double-locked.
The unit is set up by default to use the double-locked.



FITTING THE REFRIGERANT LINES

To prepare the copper pipes, proceed as follows:

1. Measure the inner and outer pipe precisely.
2. Use a pipe which is slightly longer than the measurement taken.
3. Cut the copper pipes to measure using the pipe cutter and smooth the ends with a pipe reamer (Fig. A);
4. Insulate the pipes and fit conical nuts before fitting collars to the ends of the pipes (Fig. B);
5. To fit the conical collars at 45° use a bevel edging tool (Fig. C);
6. Deburr the inside of the refrigerant pipe.
7. During reaming, the end of the pipe must be above the reamer to prevent the ingress of dust into the pipe.
8. Ensure that the inside of the pipe is clean and free of any swarf.
9. Check the conical surface is in line with the pipe, and that it is smooth, without fractures and of uniform thickness (Fig. D).

To make the cooling connections, proceed as follows:

1. Feed the lines, the condensate discharge pipe and the electric cables through the hole in the wall, aligning the ends of the lines with the couplings on the units (the lines are fitted on site, before feeding them through the hole, seal the end with tape to prevent the ingress of dirt).
2. Shape the refrigerant lines until they are aligned with the couplings on the outdoor unit.
3. (You are advised to avoid bending the refrigerant lines with a radius of less than 100mm, so as not to crush the pipe section).
4. If the difference in height between the indoor unit and the outdoor unit exceeds 3 metres (H1 - H2), and the outdoor unit is positioned above the indoor unit, it is recommended to provide a siphon or a loop on the gas pipe to facilitate the return of lubricating oil to the compressor.
5. Before connecting the pipes to the unit, check the position is correct.
6. Remove the protection from the ends of the refrigerant lines.
7. Clean the joint surfaces so the tightening surfaces are in perfect contact.
8. Lubricate the connections inside and out with a thin layer of engine oil.
9. Connect and tighten the pipes to the outdoor unit; use a wrench and counter-wrench to avoid subjecting the machine structure to torsion (Fig. F).
10. Connect and tighten the refrigerant lines on the indoor unit; use a wrench and counter-wrench to avoid subjecting the pipes to torsion (Fig. E).
11. Respect the tightening torque indicated in the table.

External Pipe Diameter	Pipe thickness	Tightening Torque
inch (mm)	mm	Nm
1/4″ (6,35)	0,5-1,0	15~20
3/8″ (9,52)	0,5-1,0	30~40
1/2″ (12,7)	0,5-1,0	45~55
5/8″ (15,9)	0,5-1,0	60~65
3/4″ (19,05)	0,5-1,0	70~75
7/8″ (22,2)	0,5-1,0	80~85

The thickness of the pipe must withstand a pressure of 6,0 MPa.

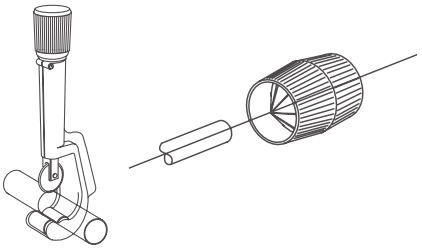


Fig. A

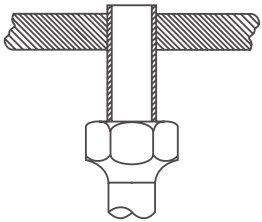


Fig. B

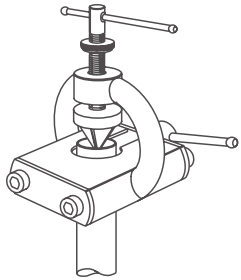


Fig. C

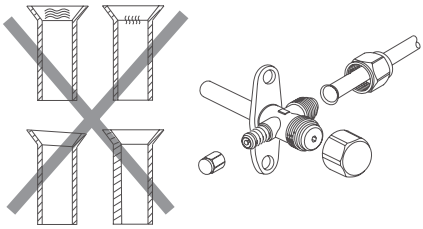


Fig. D

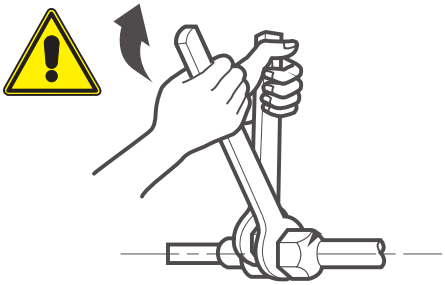


Fig. E

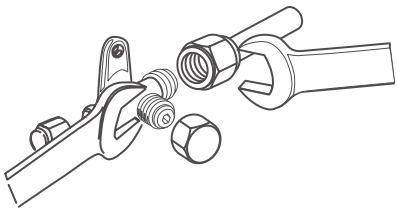
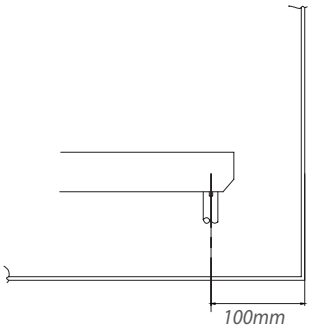


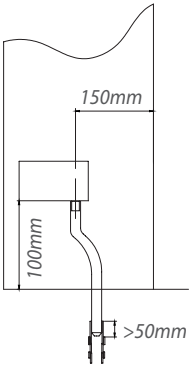
Fig. F

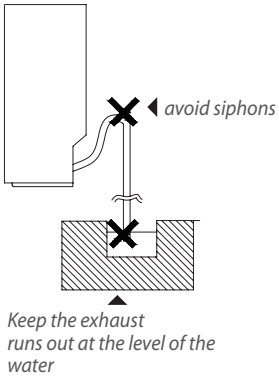
CONDENSATE DRAIN

- The outlet direction of the condensate discharge hose can be chosen according to the plant requirements of the indoor unit.
- The diameter of the condensate discharge hose must be the same as - or greater than - the diameter of the connection pipe.
- Insert the flexible condensate discharge hose completely in the condensate discharge connection.
- Seal the connections and wrap with insulating material to prevent the formation of condensate on the external surfaces of the pipe.
- Do not bend the condensate discharge hose.
- The condensate discharge hose must be as short as possible and the drop angle must be at least 1 or 2% to prevent the formation of air bubbles.
- Make sure that the condensate water flows correctly, the connection of the condensate discharge hose must not leak.
- The hose, couplings and the entire condensate circuit must be dimensioned to ensure correct disposal of all water produced by the indoor units.
- To avoid malfunctions or injury during the condensate discharge test procedure, take great care not to wet any of the unit's electrical components.
- When the condensate discharge hose is used by several units, the common hose must remain approximately 100 mm lower than the condensate discharge outlet of each unit. In this case, use a thicker hose.

Diameter condensate drain (mm)	Ø	28







Keep the exhaust runs out at the level of the water

ELECTRICAL WIRINGS

- Before carrying out any work, switch off the power supply to the air conditioner.
- All the parts and materials supplied on site must comply with the local laws and regulations.
- All the connection lines must comply with the electrical wiring diagram. Incorrect connection could cause the air conditioner to malfunction or suffer damage. The wiring diagrams are subject to continuous updates, so it is essential to use those on the machine as your reference.
- The unit and its accessories must only be installed and wired by professionals with the necessary technical qualifications in installation, conversion, extension and maintenance of the systems and who are trained to perform operational and safety checks on these systems. In this manual, these will generally be referred to as "Personnel with specific technical skills".
- In the specific case of electrical wirings, the following must be checked:

1. Measurement of the electrical system insulation strength.
2. Continuity of the protection wires.

- To protect the unit against short circuits, mounted on the supply line of an thermomagnetic isolator switch (IG) with a minimum contact separation of at least 3mm in all poles. Respect the measurements given in the table.
- Check the earth cable is connected to the earthing system of the building itself.
- Ensure that the installation is wired in compliance with the laws and standards in force, and with the instructions in this manual.
- If the power supply cables, earth cables, communication cables or wired panel cables are damaged, they must be replaced with cables with the same specifications. Have repairs carried out by "Personnel with specific technical skills".
- Ensure that the air conditioner is connected to the power supply or to a power socket with the correct voltage and frequency as indicated on the data plate. Using power supplies with the incorrect voltage and frequency could damage the unit and consequently risk starting a fire. The voltage must be stable, without major fluctuations.
- The available electric power should be sufficient to supply the air conditioner.
- The power supply cable should be safe and secure, in order to avoid damage caused by pulling out the cable terminal.
- Do not make junctions on the power supply cable: use a longer cable. Replacement cables must have the same specifications. Junctions can cause overheating and/or fires. Have repairs carried out by "Personnel with specific technical skills".
- All the power supply lines must use terminals with wire-end ferrules or single-wire terminals. Stranded cables without wire-end ferrules could cause electrical bridges.
- Do not leave any cables in contact with the cooling pipe, the compressor or moving parts such as the fans.
- Do not modify the circuits inside the air conditioner. The manufacturer cannot be held responsible for any damage or malfunction due to incorrect line connections.
- Before accessing the terminals all of the power supply circuits need to be connected.
- The air conditioner is a Class I electrical appliance, so it is essential to provide a reliable earthing connection.
- The yellow and green wire in the air conditioner and the earth wire cannot be used for other purposes. The cable cannot be secured with a screw through the wire as this could result in an electric shock.
- The user must provide a safe earthing connection. Check the earth cable is connected to the earthing system of the building itself.
- Check a suitable differential switch is installed for earthing electrical discharge. Do not connect the earth cable to the following components:

1. Water pipes
2. Gas pipes
3. Drain pipes
4. Lightning conductor
5. Telephone earth cable
6. Other locations considered unsafe by "Personnel with specific technical skills".

NOTE:

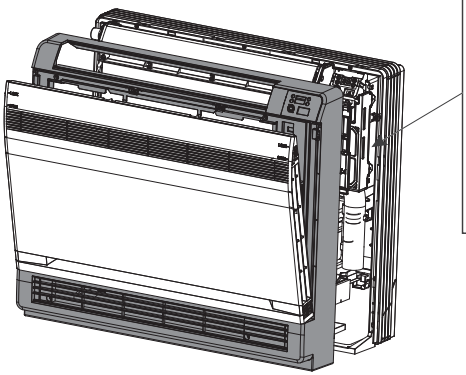
- Circuit Breaker and Power Cord Specifications are selected according to the Rated Power Input (Rated Current Input) of the Unit. Rated Power Input (Rated Current Input) is "Maximum" Power Input ("Maximum" Current Input) of the Unit according to EN 60335-1 and EN 60335-2-40.
- Reference conditions of the power supply cable section calculation (according to the standard IEC 60364-5-52):
- Cable in conduit on a wall with Ambient;
- Temperaure 40 °C;
- Working Conductor Temperature 90 °C;
- Max Lenght 15 m;
- The Circuit Breaker Specifications are based on Ambient Temperature 40 °C If Opearting Conditions are different please calculate and adjust Circuit Breaker Capacity according to the Circuit Breaker Specification provide by manufacturer;
- The Circuit Breaker must have magnet trip function and thermal trip function so that the system can be protected from short circuit and overload D-Type Thermal Magnetic Circuit Breaker is advice to be used;
- The Circuit Breaker must have a contact separation of at least 3 mm in all poles;

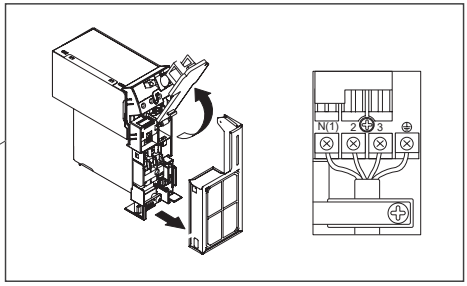
POWER CONNECTION

- Each indoor unit must be connected to the electrical power supply line, as shown in the connection diagrams.
- Power cable: use a cable with the characteristics shown in the table of this manual.
- To protect the unit against short circuits, always fit the power switch pole breaker with minimum contact distance of at least 3mm in all poles.

WARNING:

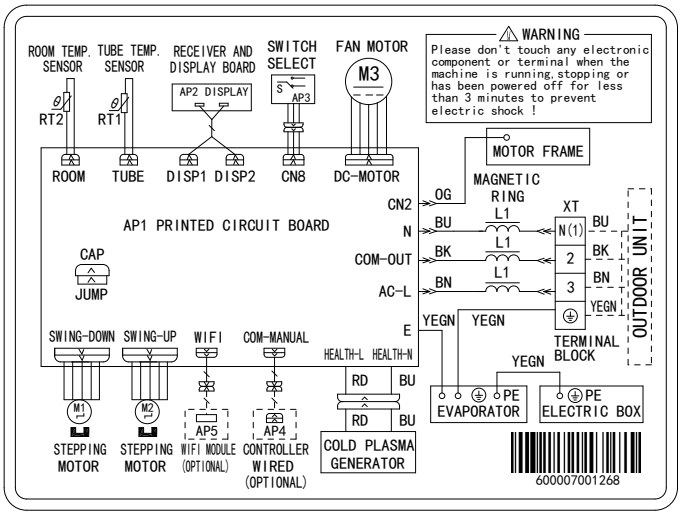
- **All the cables related to serial links should be kept separate from the power supply cables to avoid electromagnetic interference.**





WIRING DIAGRAM

MLG250FS - MLG350FS - MLG500FS



WIRING DIAGRAMS LEGEND

CODE	DESCRIPTION
OUTDOOR UNIT	External drive
EVAPORATOR	Cooil
Connecting cable	Connecting cable
BU	Blue
BK	Black
BN	Brown
WH	White
RD	Red
YEGN	Yellow green
XT - terminal block	terminal block
XT1	
N	Neutral
L	Inductance
L1	
PE	Earthing
AP2 - Receiver and display board	Display card and infrared receiver
AP1 - Printed circuit board	main board
AP3- select switch	Switch selzione single or double throw
Cold plasma generator	Air ionizing
M3 - Fan motor	Fan motor
M1 - stepping motor (DOWN)	Motor oscillating fins (bottom side)
M2 - stepping motor (UP)	Motor oscillating fins (high side)
RT2 - Room temp. sensor	Room temperature sensor
RT1 - Tube temp. sensor	Cooil temperature sensor
CN2	-

ATTENTION:
For the need of installation refer necessarily to the wiring diagram supplied with the unit

ROUTINE CHECKS FOLLOWING INSTALLATION

ITEMS TO CHECK	POSSIBLE ANOMALY	NOTES
Is the unit firmly fixed?	The unit could fall, vibrate or make noise.	
Was the unit checked for refrigerant leaks?	Insufficient output.	
Is the thermal insulation sufficient?	It could cause condensate and dripping water.	
Does the unit correctly discharge the condensate water?	It could cause condensate and dripping water.	
Does the power supply voltage correspond to the one indicated on the label?	Electrical operating anomalies or damage to the components that could burn.	
Was the cable and pipe connection done correctly and reliably?	Electrical operating anomalies or damage to the components that could burn.	
Was the unit connected to a reliable earth connection?	Risk of electrocution. Damage to components.	
Were the electric cables of the type and section indicated in the manual used?	It may cause electrical operating anomalies or damage to the components that could burn.	
Are the air intakes and deliveries of the indoor and outdoor units unobstructed?	Insufficient output.	
Were the lengths of the connection pipes and the load of refrigerant adjusted?	Insufficient output. Impossible to verify the quantity of refrigerant added.	

MAINTENANCE

GENERAL NOTES

- **Disconnect the power supply before cleaning the unit.**
- **Disconnect the power supply when the air conditioner is off.**
- **Do not pour water directly to the unit may cause an electrical shock.**
- **Clean the cabinet with a soft, dry cloth or a cloth slightly dampened with water or detergent (do not use solvents).**

CLEANING THE FRONT PANEL

Remove the front panel. Clean the dirty side of the panel with a cloth dampened with warm water. Do not immerse the panel in water, so as not to damage the electrical circuit.

CLEANING THE AIR FILTER

WARNING! Do not touch the coil fins while cleaning, these can cut the skin.

1. Remove the air filter
2. Lift the front panel with two hands.
3. Pull down to remove the air filters.

Cleaning the air filter:
1. Use a vacuum cleaner
2. If heavily soiled, use a mild detergent and water
3. Dry the filter by exposing it to direct sunlight
4. Replace the filter when it is dry

Reinstall the air filter:
1. Replace the filters.
2. Close the panel.

NOTES:
- Do not clean with hot water.
- Do not dry the flame.
- Do not operate the air conditioner without the air filter.
- Do not use brushes or tools drives.

CHECK BEFORE STARTING

- Check to make sure that the inlet and outlet are not obstructed by objects on both units, external and internal.
- Check to make sure that the cable ground connection is connected and not damaged.
- Check to make sure the air filter is clean.
- Make sure that the remote control batteries are exhausted.
- Make sure that the indoor and outdoor units are not damaged and that they are securely fastened.

MAINTENANCE AFTER USE

- Disconnect the power supply.
- Clean the filter and the indoor unit.
- Clean the outdoor unit and remove any obstructions from the battery.
- Restore and repaint any rusty surfaces on the outdoor unit.

WARNING:
- **This equipment is not intended for use by persons (including children) with reduced physical or sensory impairment, or lack of experience and knowledge, unless an individual is responsible for the supervision and safety of people above provide them with the necessary instructions and supervision.**
- **The device should not be used by children as a game.**
- **Instruct the customer on how to use the system, showing him / her the included manual.**
- **Make sure that the power user falls within the tolerance (+ / -10%).**

TROUBLESHOOTING

Anomaly	Possible causes
The unit cannot be started.	• The power supply is not connected. • Check if the power supply cable is damaged. • Check for anomalies on the power supply. • Voltage is too low.
The units stops after operating a while.	• The indoor or outdoor unit's air inlet/outlet are clogged. • In cooling mode the unit stops its operation because the outdoor temperature is above the limit.
Poor cooling effect.	• Air filter is dirty or clogged. • There are too many heat source or people inside the room. • Windows or doors are opened. • There are obstacles blocking the air intake or outlet. • The set temperature is too high. • There is refrigerant leakage. • The performance of room temperature sensor becomes worse.
Poor heating effect	• Air filter is dirty or clogged. • Windows or doors are opened. • There are obstacles blocking the air intake or outlet. • The set temperature is too low. • There is refrigerant leakage. • The outdoor ambient temperature is lower than the maximum limit. • The performance of room temperature sensor becomes worse.
Odours are emitted	• There's an odor source in the room, it's recommended to eliminate the source and clean the filter.
Remote control is not working	• Check if the voltage of the batteries of the wired controller is enough; or change them. • Is the remoter controller in the signal receiving range? Or is it blocked by obstacles? • If the indoor unit does not have the receiver, point the remote controller to the wired controller.

ERROR CODE LIST

CODE	DESCRIPTION
A5	Outdoor condenser inlet pipe temperature sensor is open/short- circuited
A7	Outdoor condenser outlet pipe temperature sensor is open/short- circuited
b5	Liquid valve temperature sensor is open/short-circuited
b7	Gas valve temperature sensor is open/short-circuited
C5	Malfunction protection of jumper cap
dd	Wrong connection of communication cable or expansion valve malfunction detection mode
dn	Wrong connection of communication cable or expansion valve malfunction
E1	High pressure protection for the system
E2	Freeze protection
E3	Low pressure protection for the system
E4	High discharge temperature protection of compressor
E5	Complete unit overcurrent protection
E6	Communication malfunction of indoor unit and outdoor unit
E7	Mode conflict
E8	Overload protection
E9	Cold blow protection
EE	Memory chip malfunction
En	Module current protection with limiting frequency or lowing down frequency
EU	Module temperature protection with limiting frequency or lowing down frequency
F0	shortage of freon or blockage protection for the system
F1	Indoor ambient temperature sensor is open/short- circuited
F2	Indoor evaporator temperature sensor is open/short-circuited
F3	Outdoor ambient temperature sensor is open/short- circuited
F4	Outdoor condenser middle pipe temperature sensor is open/short- circuited
F5	Outdoor discharge temperature sensor is open/short- circuited
F6	Overload with limiting frequency or lowing down frequency
F7	Oil return in cooling mode
F8	Complete unit current protection with limiting frequency or lowing down frequency
F9	Overhigh discharge with limiting frequency or lowing down frequency
FH	Freeze protection with limiting frequency or lowing down frequency
Fo	Refrigerant recovery mode
H1	Defrosting or oil return in heating mode
H3	Compressor heat overload protection
H5	Module current protection
H6	No feedback of indoor motor

CODE	DESCRIPTION
H7	Compressor losing of synchronism
HE	Compressor demagnetization protection
L3	-
LA	-
Lc	Compressor start failure
LE	Compressor blockage
LF	Overspeed
LP	Indoor unit and outdoor unit do not match
P0	Drive module reset
P0	Min cooling or heating
P1	Rating cooling or heating
P2	Max cooling or heating
P3	Middle cooling or heating
P5	Phase current overcurrent protection
P6	Drive board communication malfunction
P7	Module temperature sensor is open/short-circuited
P8	Module temperature protection
P9	AC contactor protection
Pd	Sensor connection protection
PE	Temperature drift protection
PF	Drive board ambient temperature sensor malfunction
PU	Capacitor charging malfunction
U1	Compressor phase current circuit detection malfunction
U3	DC busbar voltage drop malfunction
U5	Complete unit current detection malfunction
U7	4-way valve commutation malfunction
U8	Zero-cross detection circuit malfunction

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