EN/FR

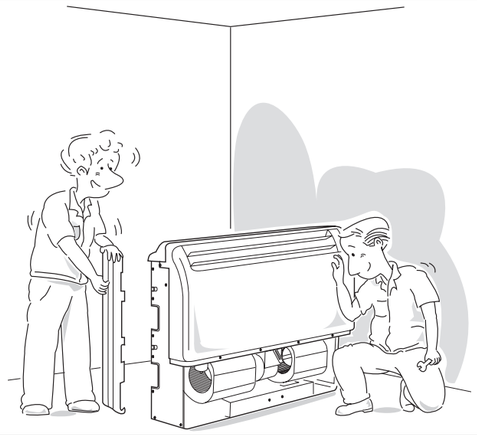
YORK®

ENGLISH

035T83035-001

INSTALLATION & OWNER'S MANUAL

MINISPLIT FLOOR/CEILING AIR CONDITIONER
MODELS : MCC-MCH 09-65 T17



REQUIRED TOOLS

1. Screw Driver
2. Hexagonal Wrench
3. Torque Wrench
4. Spanner
5. Reamer
6. Hole Core Drill
7. Tape Measure
8. Thermometer
9. Manifold Guage
10. Gas Leak Detector
11. Vacuum Pump
12. Pipe Clamp
13. Pipe Cutter
14. Flare Tool Set
15. Electrical Circuit Tester

EXTENDED PARTS

1. Refrigerant Pipe

Models	MCC-MCH/BOC-BOH			
	09	12	18, 25, 35	45, 55, 65
Liquid size	1/4"	1/4"	3/8"	3/8"
Gas size	3/8"	1/2"	5/8"	3/4"

2. Pipe Insulation Material (Polyethylene foam 9 mm thick)
3. Vinyl Tape
4. Putty

SAFETY PRECAUTIONS

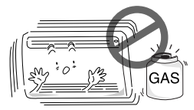
- Please read this installation manual carefully before starting installation of the unit.
- This air conditioning system contains refrigerant under pressure, rotating parts and electrical connection which may be dangerous and can cause injury. Installation and maintenance of this air conditioning system should only be carried out by trained and qualified personnel.
- After unpacking, please check the unit carefully for possible damage.
- Before undertaking any work on the unit, make sure that the power supply has been disconnected.

CAUTIONS FOR INSTALLATION

- Do not store or unpack the unit in a wet area or expose to rain or water.

It may cause the unit to short circuit and may result electric shocks or fire.

- Do not install in a place where flammable gas may leak.



It may cause fire.

- Do not conduct installation in wet area or in the rain.

It is a high risk to cause the electrical shocks.

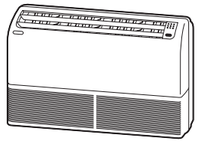
- This system is designed for domestic or residential use only.

If used in certain environments, such as a manufacturing workplace, the equipment may not function efficiently.

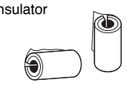
PART LIST

INDOOR UNIT

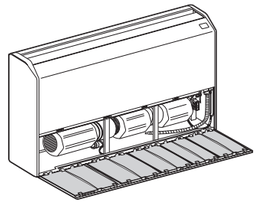
■ **MCC-MCH 09-25**



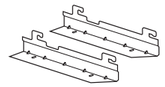
INSTALLATION ACCESSORIES

Description	Qty	USE
Cover Plate 	2	
Tapping Screw (Ø4x10) 	2	
Tapping Screw (Ø4x20) 	6	For indoor side pipe joint (small pipe)
Wall Bracket 	2	Bracket for wall installation
Coupler Heat Insulator 	2	For indoor side pipe joint
Nylon Fastener	1	For drain hose
Drain Hose 	1	
Insulation (Drain hose) 	1	Adhesive type
VT Wire 	1	For drain hose (280 mm)
Remote Control 	1	
Installation & Owner's manual and User's guide 	2	
Connection Cable 5 m. 	1	

■ **MCC-MCH 35-65**



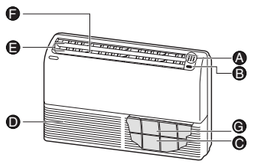
INSTALLATION ACCESSORIES

Description	Qty
Bracket 	2
Rubber, Screw and Bolt 	16
Remote Control 	1
Installation & Owner's manual and User's guide 	2
Connection Cable 5 m. 	1

NAME OF PARTS

INDOOR UNIT

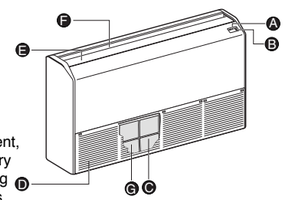
■ **MCC-MCH 09-25**



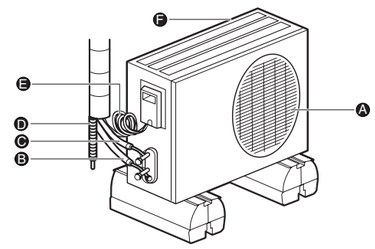
- Ⓐ Indicator Lamp
- Ⓑ Remote Control Receiver
- Ⓒ Filter
- Ⓓ Front Grille
- Ⓔ Louver Horizontal Blades
- Ⓕ Flap Vertical Blades
- Ⓖ Bio Screen (for Master Gold Only)

To maintain the BIO SCREEN environment, the BIO SCREEN should be replace every 3 to 6 months depending on the operating environment. To order replacement filters please contact your nearest YORK stockist and ask for replacement part number 026T51017-000 for MC 09-65 www.york-minisplit.com

■ **MCC-MCH 35-65**



OUTDOOR UNIT



- Ⓐ Air Outlet
- Ⓑ Refrigerant Piping
- Ⓒ Refrigerant Piping
- Ⓓ Additional Drain Hose
- Ⓔ Connecting Cable
- Ⓕ Air Inlet

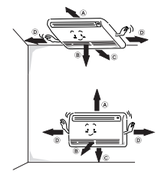
PREPARATION BEFORE INSTALLATION

- Before doing any work, check the interior power supply cord and the main breaker capacity are sufficient and the installation area is sufficient and complies with the requirements.
- Check that the power supply available agrees with nameplate voltage.
- Electrical work, wiring and cables must be performed in compliance with national and local wiring codes and standard.
- Do not use the extension cables. In the case extended cables are needed, use the terminal block.

SELECTION OF THE LOCATION

■ **Select a place which provides the space around the units as shown in the diagram below.**

INDOOR UNIT



Dimension (cm)	MCC-MCH							
	09	12	18	25	35	45	55	65
A	50	50	50	50	50	50	50	50
B	80	80	80	80	80	80	80	80
C	5	5	5	5	5	5	5	5
D	20	20	20	20	20	20	20	20

OUTDOOR UNIT

Dimension (cm)	BOC-BOH							
	09	12	18	25	35	45	55	65
A	40	40	40	40	40	40	40	40
B	20	20	20	20	20	20	20	20
C	20	20	20	20	20	20	20	20
D	60	60	60	60	60	60	60	60

INSTALLATION

INSTALLATION SITE

■ **To install the air conditioner in the following types of environments, consult the shop.**

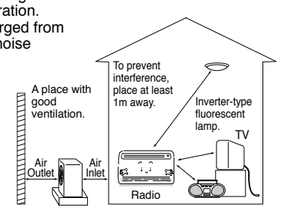
- Places with an oily ambient or where steam or soot occurs.
- Salty or corrosive environments such as coastal areas.
- Places where sulfide gas occurs such as hot springs.

The drain from the outdoor unit must be discharged to a place of good drainage.

CONSIDER NUISANCE TO YOUR NEIGHBOURS FROM NOISES

■ **For installation choose a place as described below.**

- A place solid enough to bear the weight of the unit and which does not amplify the operation noise or vibration.
- A place from where the air discharged from the outdoor unit or the operation noise will not annoy your neighbours.



ELECTRICAL WORK

- For power supply, be sure to use a separate power circuit dedicated to the air conditioner.

SYSTEM RELOCATION

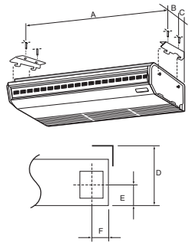
- Relocating the air conditioner requires specialized knowledge and skills. Please consult the shop where you bought the air conditioner if relocation is necessary for moving or remodelling.

DRILLING MEASUREMENT

■ Indoor Unit

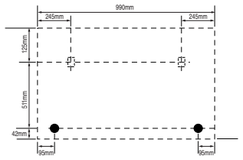
Drill the hole to fixing unit follow the diagram below.

Ceiling Installation Drilling

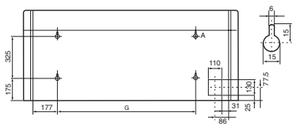


Dimensions (mm)	MCC-MCH			
	35	45	55	65
A	1,402	1,402	1,692	1,692
B	201	201	201	201
C	145	145	145	145
D	215	215	215	215
E	115	115	115	115
F	88	88	88	88

Floor Installation Drilling
Model MCC-MCH 09, 12, 18, 25
Drain hose drilling measurment floor case.

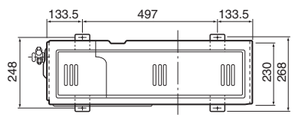


Model MCC-MCH 35, 45, 55, 65
Drain hose drilling measurment floor case.

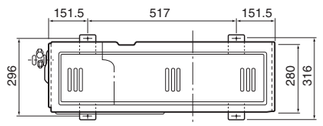


Dimensions (mm)	MCC-MCH			
	35	45	55	65
G	1,122	1,122	1,442	1,442

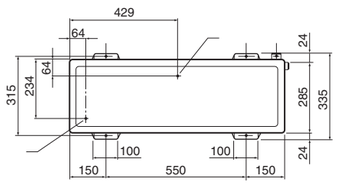
■ Outdoor Unit



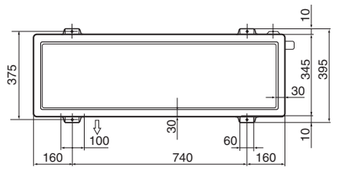
BO 09-12



BO 18

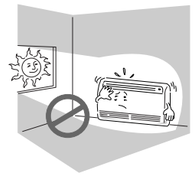


BO 25-45



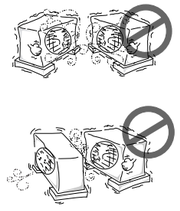
BO 55-65

INSTALLATION IN THE FOLLOWING PLACES MAY RESULT IN TROUBLE



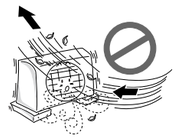
Installation of the indoor unit in direct sun light.

Installation in the unit in wrong direction.



Installation of outdoor units too close or, blowing discharged air into each other.

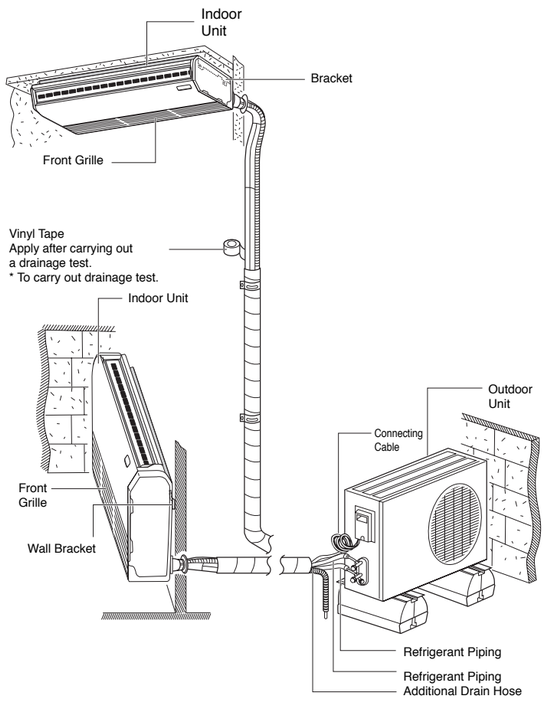
Installation of the indoor unit in a place where there is an obstacle near the air inlet or outlet.



Installation of the outdoor unit in a place exposed regularly to a strong wind.

Installation of the indoor unit at too high > 30 cm a position.

INSTALLATION DIAGRAM



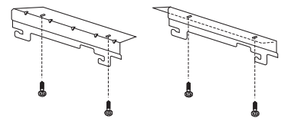
INSTALLATION PROCEDURE

Cautions

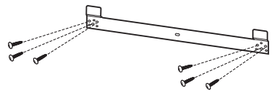
- Piping must be performed by qualified personnel according to good refrigeration system practices.
- Piping materials and insulation materials must be refrigerant quality.
- Select the pipe diameters according to the size of unit and cut the pipe to design length by pipe cutter.
- Check that no foreign bodies are inside the pipe.
- Connect the pipe correctly.
- Do not apply the excessive torque.
- Connect the electric cable correctly.
- Use an appropriate bending tool to form curves and avoid over-tightening the refrigerant tubes.

INDOOR UNIT

Bracket Fixing
1. Measure and mark the hole position.
2. Drill a hole and mount bracket.

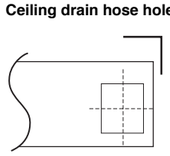


Wall Bracket Fixing
1. Measure and mark the hole position.
2. Drill a hole and mount bracket.

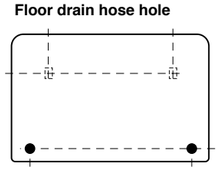


Drain Hose Drilling
1. Measure and mark the hole position.
2. Drill a hole at a slight downward slant toward the outdoor side.

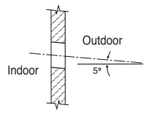
Ceiling drain hose hole



Floor drain hose hole

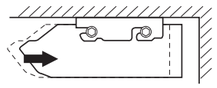


Note : When installing the refrigerant pipes from others side. A hole must be place to allow fall towards the outdoor unit.

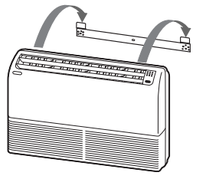


■ Indoor Unit Fixing

Ceiling Case
1. Lift the indoor unit to the bracket.
2. Push the indoor unit to lock at the bracket.

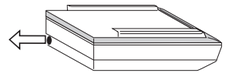


Floor Case
1. Tighten the bolt to lock indoor unit to bracket floor case.
2. Lift the indoor unit, and hang it to the wall bracket.
3. Make sure that the unit is correctly hung in place by sliding it to the left and to the right.

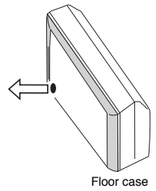


■ Drain Hose

Drain hose can pass through the indoor unit follow figure below.

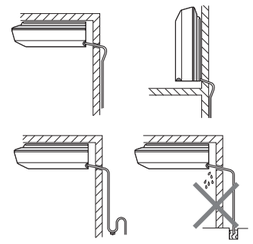


Ceiling case



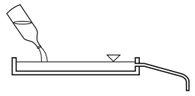
Floor case

After fixing the indoor unit, open front grille and then insert refrigerant pipe, drain hose and electric cable from outdoor through the wall into the unit case, then connect drain hose together and arrange it.



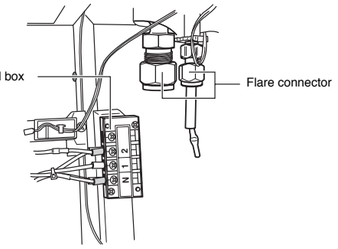
Note : Do not put the drain hose end into water.

Verification of condensate water drainage:
Fill the drain pan with water and observe evacuation.



■ Unit Coupling

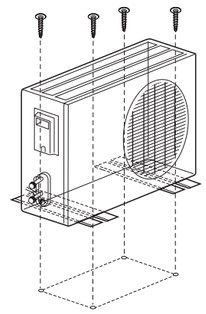
1. Connect electric cable to terminal box.
2. Connect refrigerant pipe to flare connector.



OUTDOOR UNIT

■ Unit Fixing

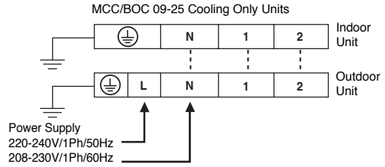
1. Measure and mark the hole position.
2. Drill the hole and fix the outdoor unit.



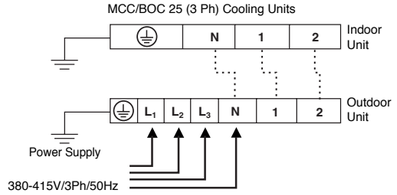
■ Unit Coupling

Connect electric cable to terminal box follow electric diagram below.

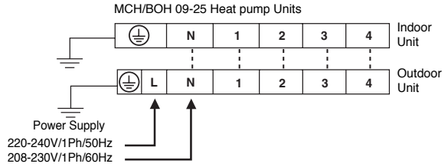
MCC/BOC 09-25 Cooling Only Units



MCC/BOC 25 (3 Ph) Cooling Units

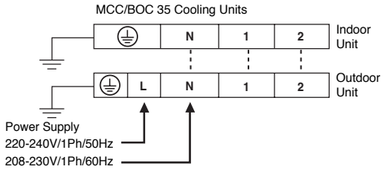


MCH/BOH 09-25 Heat pump Units

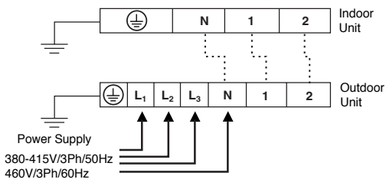


MCH/BOH 25 (3 Ph) Heat pump Units

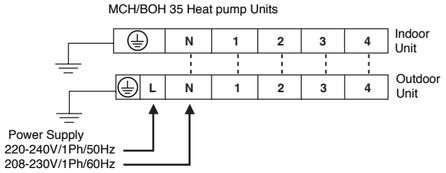
MCC/BOC 35 Cooling Units



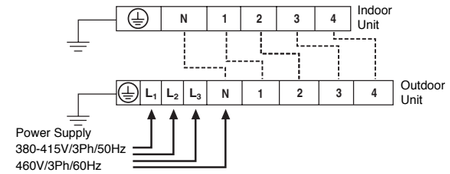
MCC/BOC 35-65 (3 Ph) Cooling Units

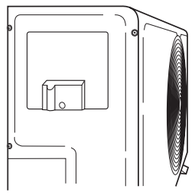


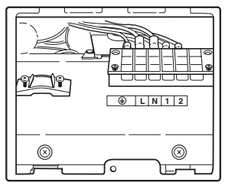
MCH/BOH 35 Heat pump Units



MCH/BOH 35-65 (3 Ph) Heat pump Units







For further detail on wiring of these units, see the diagrams pasted inside each unit.

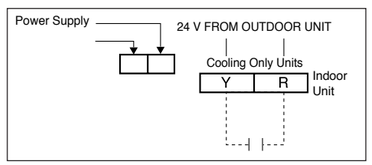
Cautions

- Never modify the unit by removing any of the safety guards or by bypassing any of the safety interlock switches.
- Connect the connecting cable correctly and connect the connecting cable to terminal as identified with their respective marks.
- Do not scratch the conductive core & inner insulator of power supply cables and do not deform or smash on the surface of cables.

■ Vertical Discharge Condensing Unit (H*DA, H*DB, H*RA)

The indoor unit and interconnecting wiring voltage is 220 volts. Where the outdoor unit requires a different operating voltage such as 24 volts one of the following solutions can be applied.

1. The coil of the relay switching the compressor and reversing valves should be changed to a 220V coil.
2. A transformer should be installed to supply 24 volts and a relay installed with a 220 volts coil to switch the 24 volts required by the outdoor units. The transformer should be energised at all times and not switched by the start signal from the indoor unit. Switching the transformer directly will cause electronic noise which may cause malfunction of the electronics.



■ Wiring Sizes

Unit size		09	12	18	25	35	45	55	65
Power supply	mm²	3x2.5		3x4		5x2.5	5x4		
Interconnection (Indoor/Outdoor)	Cooling mm² Heating mm²	3x2.5 + Ground 5x2.5 + Ground							
Fuse (Slow-Blow)	A	10		16	20	10	16		

Or as required to meet national and local codes.

Notes

- Terminals N and 1 (see diagrams above) correspond to power supply to the indoor unit coming from the outdoor unit.
- Compressor power supply is established by terminal 2.
- Power supply to the 4-way valve is established by terminal 3.
- Outdoor fan power supply is connected to terminal 4.
- For further details on wiring of these units, see the diagrams pasted inside each unit.

■ Maximum Piping Lengths

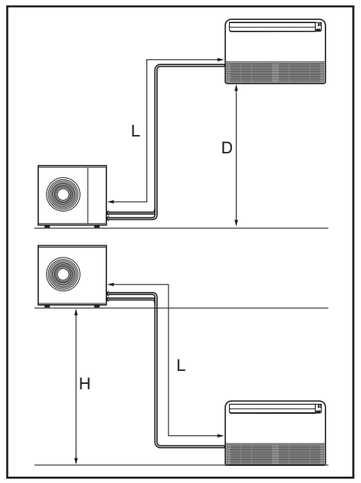
Unit size	09	12	18	25	35	45	55	65
D (m)	12	15	15	22	22	26	26	26
L (m)	15	18	18	25	25	30	30	30
H (m)	10	12	12	20	20	24	24	24

Note : Where the difference in elevation between the indoor unit and the outdoor unit is greater than 5 meters, install an oil trap every 5 meters.

The suction line must have a 2% gradient up to the compressor on horizontal sections.
Where piping lengths are unusually long and include a large number of oil traps, it may be necessary to adjust to compressor charge.

Refrigerant charge to be added per extra metre of piping length when more than 7.5 meters.

Unit size	MCC-MCH/BOC-BOH								
	07	09	12	18	25	35	45	55	65
g/m	15	15	15	40	40	40	60	60	60

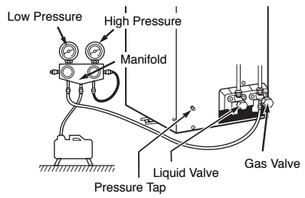


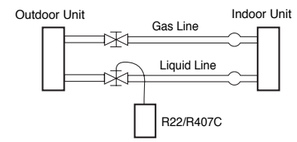
■ Refrigerant Piping Connections (FLARE Connections)

To avoid alteration of unit capacities, check that piping lengths and changes in elevation are kept to a strict minimum.

Before connection the refrigerant lines, follow the procedures below (if precharged connection lines are not supplied):

– Select copper pipe diameters according to the size of unit to be installed.
– Install the refrigeration lines, checking that no foreign bodies get inside the piping.
– Install the flare connectors and flare the ends of the pipes.





This unit is shipped complete with a charge of R22/R407C refrigerant that will be sufficient for an interconnecting piping length of 7.5 meters.

TEST OPERATION

CHECK THIS ITEM BEFORE START OPERATION

Outdoor

Check the flare nut connections, valve stem cap connections and service cap connections for gas leak with a leak detector or soap water.

Indoor

- Check the unit is firmly fixed.
- Check the connecting pipes are tighten securely.
- Check the pipe insulation.
- Check the drainage.
- Check the connection of the grounding wire.

TROUBLE SHOOTING GUIDE

Problem	Probable cause	Remedy
A. The air conditioner does not run.	1. Power Failure. 2. Fuse blown or circuit breaker open. 3. Voltage is too low. 4. Faulty contactor or relay. 5. Electrical connections loose. 6. Thermostat adjustment too low (in heating mode) or too high (in cooling mode). 7. Faulty Capacitor. 8. Incorrect wiring, terminal loose. 9. Pressure switch tripped.	1. Wait for Power resume. 2. Replace the fuse or reset the breaker. 3. Find the cause and fix it. 4. Replace the faulty component. 5. Retighten the connection. 6. Check Thermostat setting. 7. Find the cause then replace Capacitor. 8. Check and retighten. 9. Find the cause before reset.
B. The outdoor fan runs but the compressor will not start.	1. Motor winding cut or grounded. 2. Faulty Capacitor.	1. Check the wiring and the compressor winding resistance. 2. Find the cause then replace Capacitor.
C. There is insufficient heating or cooling.	1. There is a gas leak. 2. Liquid and gas line insulated together. 3. The room was probably very hot (cool) when you started the system.	1. Remove charge, repair, evacuate and recharge. 2. Insulate them separately. 3. Wait while unit has enough time to cool the room.
D. The compressor run continuously.	1. Thermostat adjustment too low (in heating mode) or too high (in cooling mode). 2. Faulty fan. 3. Refrigerant charge too low, leak. 4. Air or incondensables in refrigerant circuit.	1. Check Thermostat setting. 2. Check condenser air circulation. 3. Find leak, repair and recharge. 4. Remove charge, evacuate and recharge.
E. The compressor starts but shuts down quickly.	1. Too much or too little refrigerant. 2. Faulty compressor. 3. Air or incondensables in refrigerant circuit. 4. Changeover valve damaged or blocked open (heat pump unit).	1. Remove charge, evacuate and recharge. 2. Determine the cause and replace compressor. 3. Remove charge, evacuate and recharge. 4. Replace it.
F. Clicking sound is heard from the air conditioner.	In heating or cooling operation any plastic parts may expand or shrink due to a sudden temperature change in this event, a clicking sound may occur.	In heating or cooling operation any plastic parts may expand or shrink due to a sudden temperature change in this event, a clicking sound may occur.

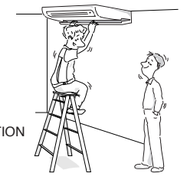
NORMAL FUNCTION OF THE AIR CONDITIONER

The following symptoms do not indicate air conditioner malfunction.

1. The system does not operate

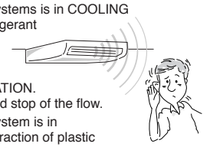
- The system does not restart immediately after the ON/OFF button is pressed.
  If the OPERATION lamp lights, the system is in normal condition.
  The safety device operates to prevent overload of the system.
  After 3 minutes, the system will turn on again automatically.
- The system does not restart immediately when TEMPERATURE SETTING changed.
  If the OPERATION lamp lights, the system is in normal condition.
  If the timer light is flashing operation is being delayed by the safety device. It does not restart immediately because the compressor has been stopped and requested to start within the delay period.
  A safety device operates to prevent overload of the system.
  After 3 minutes, the system will turn on again automatically.
- The system does not start immediately after the power supply is turned on.
  Wait one minute until the microcomputer is prepared for operation.

1.1 White mist comes out of a unit



- When humidity is high during cooling operation.
  (In dusty locations or after construction work)
  If the inside of an indoor unit is contaminated, the temperature distribution inside a room may become uneven. It is necessary to clean the inside of the indoor unit. The unit should be cleaned by a qualified service person familiar with the unit.
- When the system is changed over to HEATING OPERATION or after DEFROST OPERATION. Moisture generated on the coil by the DEFROST becomes vapour and exists.

1.2 Noise of air conditioners

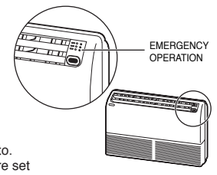


- A continuous flow “Shuh” sound is heard when the systems is in COOLING or DEFROST OPERATION. This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- A “Shuh” sound which is heard at the start or immediately after operation. It may also be heard at the start or immediately after a DEFROST OPERATION.
  This is the noise of refrigerant caused by the start and stop of the flow.
- A “Pishi-pishi” squeaking sound is heard when the system is in operation or just after operation. Expansion and contraction of plastic parts caused by temperature change makes this noise.

1.3 Dust from the units

- Dust may blow out from the unit when starting after long off cycles. Dust absorbed by the unit blows out.
- The units give off odours. The unit absorbs the smell of rooms, furniture, cigarettes, etc., and then emits them.

EMERGENCY OPERATION



- Units are equipped with a switch to run emergency operation mode. Pushing the emergency switch turns the unit on; pushing it again turns it off (toggle action).
  During emergency operation, the remote controller cannot be used and the power LED light will flash at intervals, while the other LED lights will indicate the operation of the Diagnostic Codes.
  In Emergency Operation and cooling units the temperature will be set at 24°C and the fan on Auto. Heating units will switch to auto mode at a temperature set point of 24°C and the fan will run on auto mode.
- After a power failure the unit restarts automatically in the same mode as before the failure, when power is resumed.

PROTECTION FUNCTION

Auto Restart Function

- The unit will automatically restart after loss of the electrical power supply. When power is restored; the unit operation will restart according to all parameters set before the loss of power.

ANTI-ICE and ANTI-OVERHEAT

- This feature is used to prevent the indoor unit from freezing during cool or dry operation and overheating in heat mode. During execution of anti-ice operation and anti-overheating, the compressor will stop operating and the fan will continue to run until the coil temperature reaches predetermined set points, at which time the unit will resume normal operation.

Low Voltage

- The feature is used to protect against any damage to the unit caused by fluctuation of voltage. If voltage is lower than the lower limit for approximately 10 seconds or longer, compressor operation will be temporarily stopped. Normal operation will resume when the voltage returns above the set limit for a minimum of 10 seconds. If the time elapsed is less than 3 minutes then the compressor start up will be delayed until 3 minutes has passed.

Filter Care and Filter Alarm

- Replace Air Purifying filter if fitted.
- The filters should be cleaned regularly, i.e, once a month, or more frequently depending on conditions. The control is equipped with a filter alarm; After a certain numbers of hours of operation, flashing lights will indicate that it is time to clean the filter. The alarm is reset by pressing the filter button or the transmitter.

MAINTENANCE

The units are designed to operate for long periods of time with a minimum of maintenance. However, the following operation must be performed regularly.

	Maintenance Operations	Recommended Frequency
Air filter	Clean	Every month or more often if necessary
Unit casing	Clean	Every month or more often if necessary
Drain pan and evacuation piping	Clean and check for obstructions	Each season before start up*
Indoor/outdoor coils	Clean	Each season before start up*
Compressor	No need	

* This operation must be carried out by qualified personnel only.

BEFORE MAINTENANCE

⚠ **Turn off the main breaker or disconnect the main power supply.**

Notes

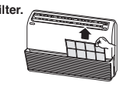
- Don’t spill water : There is a danger of electric shock.
- Don’t used petrol, paint thinner, benzene or polishing agents : They may deform or scratch the unit.

CLEANING THE UNIT

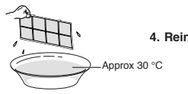
Wipe the unit with a soft dry cloth only.
If the unit is very dirty, wipe it with a cloth soaked in warm water (Not more than 40°C).

CLEANING THE AIR FILTER

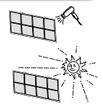
1. Remove the air filter.
Open front grille and pull fillter outward front grille.



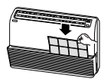
2. Cleaning
If the fillter is very dirty, clean it with water (approx 30°C).



3. Drying
Drying the air filter by hair drying or direct sunlight.



4. Reinstall the air filter.



TECHNICAL SPECIFICATION

R22 - 50 Hz

Models			Indoor Unit	MCC-MCH (T)								
				09	12	18	25	35		45	55	65
			Outdoor Unit	BOC-BOH								
				09	12	18	25	35		45	55	65
Power Consumption			kw	1.02	1.27	1.84	2.59	3.73	3.77	4.79	5.37	6.28
Running Current			A	4.70	5.87	8.61	11.78	17.24	7.54	9.77	12.42	13.82
Max. Starting Current			A	21	28	43	70	79	42	55	55	66
Refrigerant Type				R22								
Refrigerant Charge (BOC/BOH)			gr	800/1,000	1,140/1,160	1,620	1,650/1,600	2,800/2,500		3,450	4,100	6,400
Indoor Unit	Power Supply		V/Ph/Hz	220-240/1/50								
			Ph	1	1	1	1	1		1	1	1
	Fan	Air Flow	m^3/h	490	580	750	790	1,350		1,600	2,100	2,362
		Input Power	W	48	63	74	77	178		178	2x178	2x178
		Running Current	A	0.21	0.28	0.32	0.34	0.89		0.89	2x0.89	2x0.89
	Dimension	Height	mm	655	655	655	655	658		658	658	658
		Width	mm	990	990	990	990	1,548		1,548	1,845	1,845
		Depth	mm	199	199	199	199	205		205	240	240
	Weight		kg	26	26	27	29	40		46.5	62	64
	System Operation Control			Wireless Control with LCD Display								
Outdoor Unit	Power Supply		V/Ph/Hz	220-240/1/50 or 380-415/3/50								
			Ph	1	1	1	1	1	3	3	3	3
	Compressor	Qty		1	1	1	1	1	1	1	1	1
		Compressor Type		Rotary						Scroll		
	Dimension	Height	mm	492	492	590	696	900		1,142	1,142	1,142
		Width	mm	764	764	820	850	850		850	1,060	1,060
		Depth	mm	230	230	280	285	285		285	345	345
	Weight	Cooling	kg	36	38	56	65	76		87	109	129
		Heating	kg	37	39	58	67	77		88	111	131
	Piping	Type		Flare + Nuts								
		Pipe Suction	inch	3/8	1/2	5/8	5/8	5/8		3/4	3/4	3/4
		Pipe Liquid	inch	1/4	1/4	3/8	3/8	3/8		3/8	3/8	3/8

TECHNICAL SPECIFICATION

■ R22 - 60 Hz

Models			Indoor Unit	MCC-MCH (T)							
				09	12	18	25	35		45	55
			Outdoor Unit	BOC-BOH							
				09	12	18	25	35		45	55
Power Consumption			kw	1.05	1.26	2.07	2.70	3.83	3.79	4.99	6.06
Running Current			A	4.77	5.90	9.78	12.99	17.25	7.85	8.95	11.80
Max. Starting Current			A	21.5	29	47	61	81	48	47	58
Refrigerant Type				R22							
Refrigerant Charge (BOC/BOH)			gr	800/1,090	1,140/1,160	1,800/1,800	1,650/1,600	2,800/2,500		3,000/3,000	3,800/3,800
Indoor Unit	Power Supply		V/Ph/Hz	208-230/1/60							
			Ph	1	1	1	1	1		1	1
	Fan	Air Flow	m^3/h	505	600	725	850	1,450		1,770	2,895
		Input Power	W	51	68	110	138	245		245	2x245
		Running Current	A	0.22	0.30	0.48	0.60	1.07		1.07	2x1.07
	Dimension	Height	mm	655	655	655	655	658		658	658
		Width	mm	990	990	990	990	1,548		1,548	1,845
		Depth	mm	199	199	199	199	205		205	240
	Weight		kg	26	26	27	29	40		46.5	62
	System Operation Control			Wireless Control with LCD Display							
Outdoor Unit	Power Supply		V/Ph/Hz	208-230/1/60 or 460/3/60							
			Ph	1	1	1	1	1	3	3	3
	Compressor	Qty		1	1	1	1	1	1	1	1
		Compressor Type		Rotary				Reciprocating			
	Dimension	Height	mm	492	492	590	696	900		1,142	1,142
		Width	mm	764	764	820	850	850		850	1,060
		Depth	mm	230	230	280	285	285		285	345
	Weight	Cooling	kg	36	38	56	65	76		87	109
		Heating	kg	37	39	58	67	77		88	111
	Piping	Type		Flare + Nuts							
		Pipe Suction	inch	3/8	1/2	5/8	5/8	5/8		3/4	3/4
		Pipe Liquid	inch	1/4	1/4	3/8	3/8	3/8		3/8	3/8

■ R407C - 50 Hz

Models			Indoor Unit	MCC-MCH (T)							
				09G	12G	18G	25G	35G		45G	55G
			Outdoor Unit	BOC-BOH							
				09G	12G	18G	25G	35G		45G	55G
Power Consumption			kw	0.99	1.26	1.84	2.68	3.64	3.52	4.90	5.49
Running Current			A	4.56	5.81	8.6	12.56	17.23	6.93	11.48	12.56
Max. Starting Current			A	21	28	43	74	91	44	55	55
Refrigerant Type				R407C							
Refrigerant Charge (BOC/BOH)			gr	720/1,000	1,140/1,160	1,620	1,650/1,600	2,100		3,450	4,100
Indoor Unit	Power Supply		V/Ph/Hz	220-240/1/50							
			Ph	1	1	1	1	1		1	1
	Fan	Air Flow	m^3/h	490	580	750	790	1,350		1,600	2,100
		Input Power	W	37	49	71	74	105		139	2x148
		Running Current	A	0.17	0.22	0.31	0.32	0.48		0.64	2x0.66
	Dimension	Height	mm	655	655	655	655	658		658	658
		Width	mm	990	990	990	990	1,548		1,548	1,845
		Depth	mm	199	199	199	199	205		205	240
	Weight		kg	26	26	27	29	46.5		46.5	62
	System Operation Control			Wireless Control with LCD Display							
Outdoor Unit	Power Supply		V/Ph/Hz	220-240/1/50 or 380-415/3/50							
			Ph	1	1	1	1	1	3	3	3
	Compressor	Qty		1	1	1	1	1	1	1	1
		Compressor Type		Rotary						Scroll	
	Dimension	Height	mm	492	492	590	696	900		1,142	1,142
		Width	mm	764	764	820	850	1,060		1,060	1,060
		Depth	mm	230	230	280	285	345		345	345
	Weight	Cooling	kg	35	36	38	59	89		109	109
		Heating	kg	36	37	39	60	91		111	111
	Piping	Type		Flare + Nuts							
		Pipe Suction	inch	3/8	1/2	5/8	5/8	5/8		3/4	3/4
		Pipe Liquid	inch	1/4	1/4	3/8	3/8	3/8		3/8	3/8

Remark: The above design and specifications are subject to change without prior notice for product improvement.

DE - COMMISSIONING DISMANTLING & DISPOSAL

This product contains refrigerant under pressure, rotating parts, and electrical connections which may be a danger and cause injury!
All work must only be carried out by competent persons using suitable protective clothing and safety precautions.

Read the Manual

Risk of electric shock

Unit is remotely controlled and may start without warning

1. Isolate all sources of electrical supply to the unit including any control system supplies switched by the unit. Ensure that all points of electrical and gas isolation are secured in the OFF position. The supply cables and gas pipework may then be disconnected and removed. For points of connection refer to unit installation instructions.
2. Remove all refrigerant from each system of the unit into a suitable container using a refrigerant reclaim or recovery unit. This refrigerant may then be re-used, if appropriate, or returned to the manufacturer for disposal. **Under No circumstances should refrigerant be vented to atmosphere.** Where appropriate, drain the refrigerant oil from each system into a suitable container and dispose of according to local laws and regulations governing disposal of oily wastes.
3. Packaged unit can generally be removed in one piece after disconnection as above. Any fixing down bolts should be removed and then unit lifted from position using the points provided and equipment of adequate lifting capacity. Reference MUST be made to the unit installation instructions for unit weight and correct methods of lifting. Note that any residual or spilt refrigerant oil should be mopped up and disposed of as described above.
4. After removal from position the unit parts may be disposed of according to local laws and regulations.

YORK®
YORK® International Corporation

EN/CT

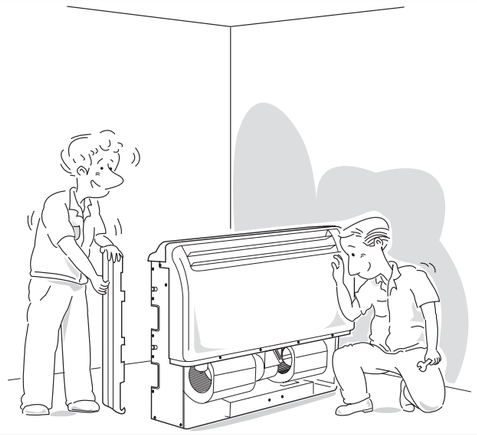
YORK®

ENGLISH

035T83040-001

INSTALLATION & OWNER'S MANUAL

MINISPLIT FLOOR/CEILING AIR CONDITIONER
MODELS : MCC-MCH 09-65 T17



REQUIRED TOOLS

1. Screw Driver
2. Hexagonal Wrench
3. Torque Wrench
4. Spanner
5. Reamer
6. Hole Core Drill
7. Tape Measure
8. Thermometer
9. Manifold Guage
10. Gas Leak Detector
11. Vacuum Pump
12. Pipe Clamp
13. Pipe Cutter
14. Flare Tool Set
15. Electrical Circuit Tester

EXTENDED PARTS

1. Refrigerant Pipe

Models	MCC-MCH/BOC-BOH			
	09	12	18, 25, 35	45, 55, 65
Liquid size	1/4"	1/4"	3/8"	3/8"
Gas size	3/8"	1/2"	5/8"	3/4"

2. Pipe Insulation Material (Polyethylene foam 9 mm thick)
3. Vinyl Tape
4. Putty

SAFETY PRECAUTIONS

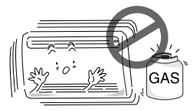
- Please read this installation manual carefully before starting installation of the unit.
- This air conditioning system contains refrigerant under pressure, rotating parts and electrical connection which may be dangerous and can cause injury. Installation and maintenance of this air conditioning system should only be carried out by trained and qualified personnel.
- After unpacking, please check the unit carefully for possible damage.
- Before undertaking any work on the unit, make sure that the power supply has been disconnected.

CAUTIONS FOR INSTALLATION

- Do not store or unpack the unit in a wet area or expose to rain or water.

It may cause the unit to short circuit and may result electric shocks or fire.

- Do not install in a place where flammable gas may leak.



It may cause fire.

- Do not conduct installation in wet area or in the rain.

It is a high risk to cause the electrical shocks.

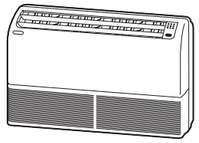
- This system is designed for domestic or residential use only.

If used in certain environments, such as a manufacturing workplace, the equipment may not function efficiently.

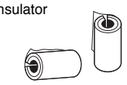
PART LIST

INDOOR UNIT

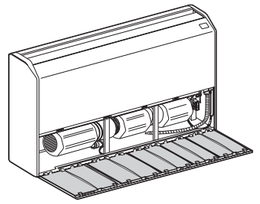
■ **MCC-MCH 09-25**



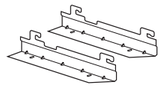
INSTALLATION ACCESSORIES

Description	Qty	USE
Cover Plate 	2	
Tapping Screw (Ø4x10) 	2	
Tapping Screw (Ø4x20) 	6	For indoor side pipe joint (small pipe)
Wall Bracket 	2	Bracket for wall installation
Coupler Heat Insulator 	2	For indoor side pipe joint
Nylon Fastener	1	For drain hose
Drain Hose 	1	
Insulation (Drain hose) 	1	Adhesive type
VT Wire 	1	For drain hose (280 mm)
Remote Control 	1	
Installation & Owner's manual and User's guide 	2	
Connection Cable 5 m. 	1	

■ **MCC-MCH 35-65**



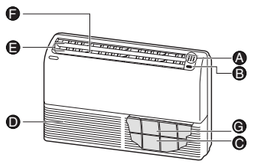
INSTALLATION ACCESSORIES

Description	Qty
Bracket 	2
Rubber, Screw and Bolt 	16
Remote Control 	1
Installation & Owner's manual and User's guide 	2
Connection Cable 5 m. 	1

NAME OF PARTS

INDOOR UNIT

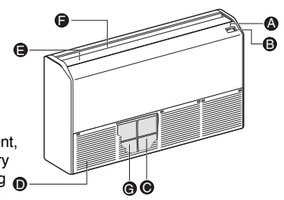
■ **MCC-MCH 09-25**



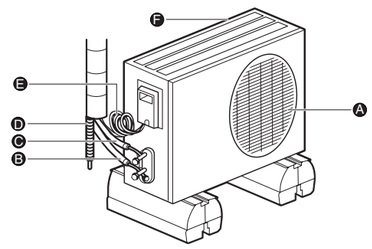
- Ⓐ Indicator Lamp
- Ⓑ Remote Control Receiver
- Ⓒ Filter
- Ⓓ Front Grille
- Ⓔ Louver Horizontal Blades
- Ⓕ Flap Vertical Blades
- Ⓖ Bio Screen (for Master Gold Only)

To maintain the BIO SCREEN environment, the BIO SCREEN should be replace every 3 to 6 months depending on the operating environment. To order replacement filters please contact your nearest YORK stockist and ask for replacement part number 026T51017-000 for MC 09-65 www.york-minisplit.com

■ **MCC-MCH 35-65**



OUTDOOR UNIT



- Ⓐ Air Outlet
- Ⓑ Refrigerant Piping
- Ⓒ Refrigerant Piping
- Ⓓ Additional Drain Hose
- Ⓔ Connecting Cable
- Ⓕ Air Inlet

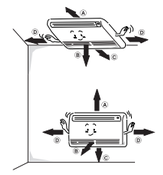
PREPARATION BEFORE INSTALLATION

- Before doing any work, check the interior power supply cord and the main breaker capacity are sufficient and the installation area is sufficient and complies with the requirements.
- Check that the power supply available agrees with nameplate voltage.
- Electrical work, wiring and cables must be performed in compliance with national and local wiring codes and standard.
- Do not use the extension cables. In the case extended cables are needed, use the terminal block.

SELECTION OF THE LOCATION

■ **Select a place which provides the space around the units as shown in the diagram below.**

INDOOR UNIT



Dimension (cm)	MCC-MCH							
	09	12	18	25	35	45	55	65
A	50	50	50	50	50	50	50	50
B	80	80	80	80	80	80	80	80
C	5	5	5	5	5	5	5	5
D	20	20	20	20	20	20	20	20

OUTDOOR UNIT

Dimension (cm)	BOC-BOH							
	09	12	18	25	35	45	55	65
A	40	40	40	40	40	40	40	40
B	20	20	20	20	20	20	20	20
C	20	20	20	20	20	20	20	20
D	60	60	60	60	60	60	60	60

INSTALLATION

INSTALLATION SITE

■ **To install the air conditioner in the following types of environments, consult the shop.**

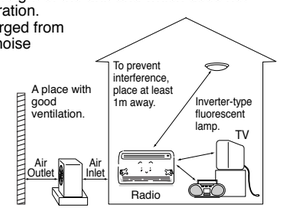
- Places with an oily ambient or where steam or soot occurs.
- Salty or corrosive environments such as coastal areas.
- Places where sulfide gas occurs such as hot springs.

The drain from the outdoor unit must be discharged to a place of good drainage.

CONSIDER NUISANCE TO YOUR NEIGHBOURS FROM NOISES

■ **For installation choose a place as described below.**

- A place solid enough to bear the weight of the unit and which does not amplify the operation noise or vibration.
- A place from where the air discharged from the outdoor unit or the operation noise will not annoy your neighbours.



ELECTRICAL WORK

- For power supply, be sure to use a separate power circuit dedicated to the air conditioner.

SYSTEM RELOCATION

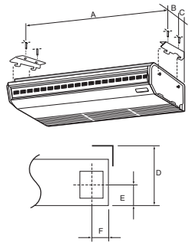
- Relocating the air conditioner requires specialized knowledge and skills. Please consult the shop where you bought the air conditioner if relocation is necessary for moving or remodelling.

DRILLING MEASUREMENT

■ Indoor Unit

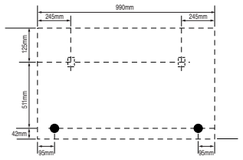
Drill the hole to fixing unit follow the diagram below.

Ceiling Installation Drilling

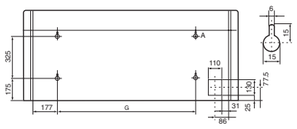


Dimensions (mm)	MCC-MCH			
	35	45	55	65
A	1,402	1,402	1,692	1,692
B	201	201	201	201
C	145	145	145	145
D	215	215	215	215
E	115	115	115	115
F	88	88	88	88

Floor Installation Drilling
Model MCC-MCH 09, 12, 18, 25
Drain hose drilling measurment floor case.

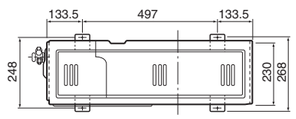


Model MCC-MCH 35, 45, 55, 65
Drain hose drilling measurment floor case.

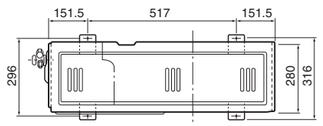


Dimensions (mm)	MCC-MCH			
	35	45	55	65
G	1,122	1,122	1,442	1,442

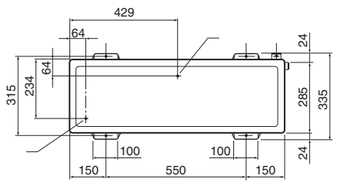
■ Outdoor Unit



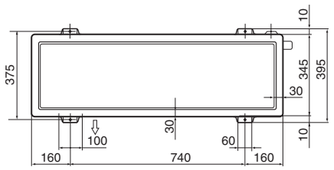
BO 09-12



BO 18

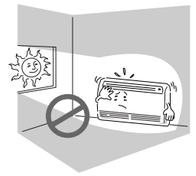


BO 25-45



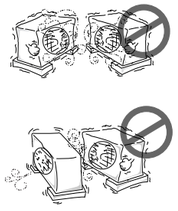
BO 55-65

INSTALLATION IN THE FOLLOWING PLACES MAY RESULT IN TROUBLE



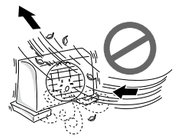
Installation of the indoor unit in direct sun light.

Installation in the unit in wrong direction.



Installation of outdoor units too close or, blowing discharged air into each other.

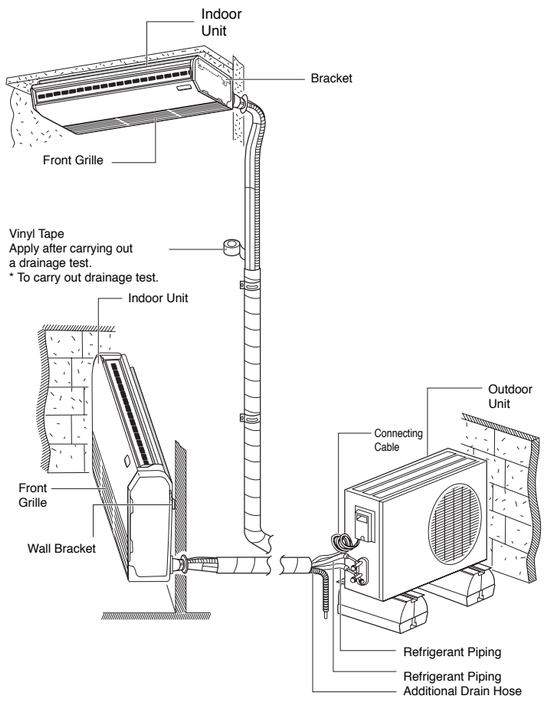
Installation of the indoor unit in a place where there is an obstacle near the air inlet or outlet.



Installation of the outdoor unit in a place exposed regularly to a strong wind.

Installation of the indoor unit at too high > 30 cm a position.

INSTALLATION DIAGRAM



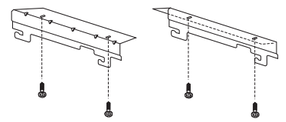
INSTALLATION PROCEDURE

Cautions

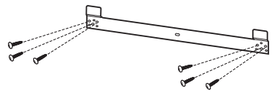
- Piping must be performed by qualified personnel according to good refrigeration system practices.
- Piping materials and insulation materials must be refrigerant quality.
- Select the pipe diameters according to the size of unit and cut the pipe to design length by pipe cutter.
- Check that no foreign bodies are inside the pipe.
- Connect the pipe correctly.
- Do not apply the excessive torque.
- Connect the electric cable correctly.
- Use an appropriate bending tool to form curves and avoid over-tightening the refrigerant tubes.

INDOOR UNIT

Bracket Fixing
1. Measure and mark the hole position.
2. Drill a hole and mount bracket.

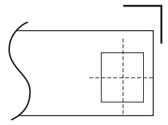


Wall Bracket Fixing
1. Measure and mark the hole position.
2. Drill a hole and mount bracket.

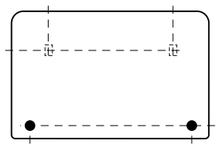


Drain Hose Drilling
1. Measure and mark the hole position.
2. Drill a hole at a slight downward slant toward the outdoor side.

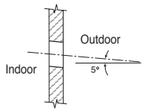
Ceiling drain hose hole



Floor drain hose hole

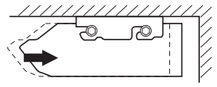


Note : When installing the refrigerant pipes from others side. A hole must be place to allow fall towards the outdoor unit.

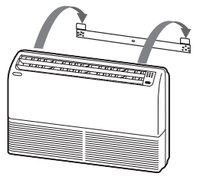


■ Indoor Unit Fixing

Ceiling Case
1. Lift the indoor unit to the bracket.
2. Push the indoor unit to lock at the bracket.

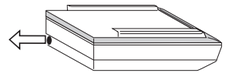


Floor Case
1. Tighten the bolt to lock indoor unit to bracket floor case.
2. Lift the indoor unit, and hang it to the wall bracket.
3. Make sure that the unit is correctly hung in place by sliding it to the left and to the right.

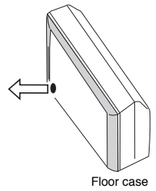


■ Drain Hose

Drain hose can pass through the indoor unit follow figure below.

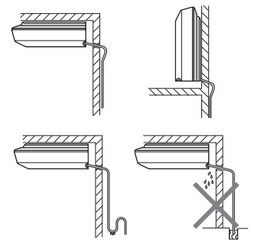


Ceiling case



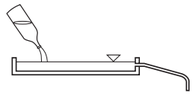
Floor case

After fixing the indoor unit, open front grille and then insert refrigerant pipe, drain hose and electric cable from outdoor through the wall into the unit case, then connect drain hose together and arrange it.



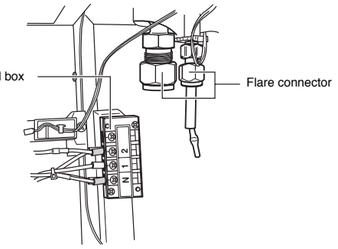
Note : Do not put the drain hose end into water.

Verification of condensate water drainage:
Fill the drain pan with water and observe evacuation.



■ Unit Coupling

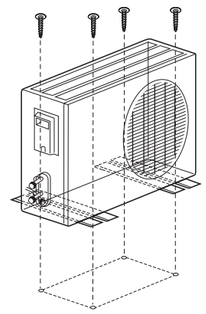
1. Connect electric cable to terminal box.
2. Connect refrigerant pipe to flare connector.



OUTDOOR UNIT

■ Unit Fixing

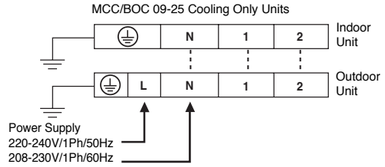
1. Measure and mark the hole position.
2. Drill the hole and fix the outdoor unit.



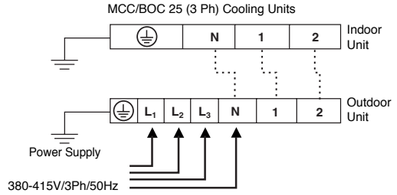
■ Unit Coupling

Connect electric cable to terminal box follow electric diagram below.

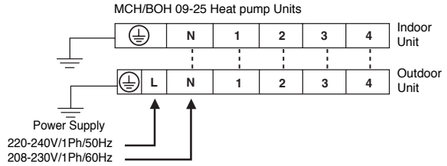
MCC/BOC 09-25 Cooling Only Units



MCC/BOC 25 (3 Ph) Cooling Units

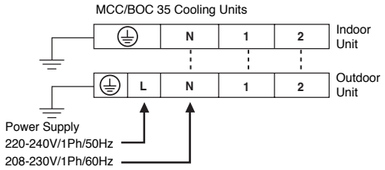


MCH/BOH 09-25 Heat pump Units

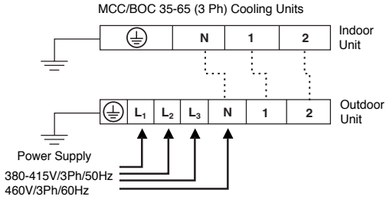


MCH/BOH 25 (3 Ph) Heat pump Units

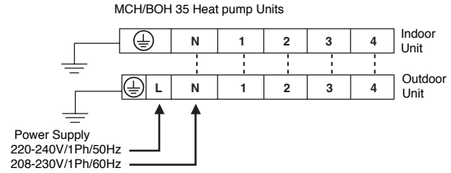
MCC/BOC 35 Cooling Units



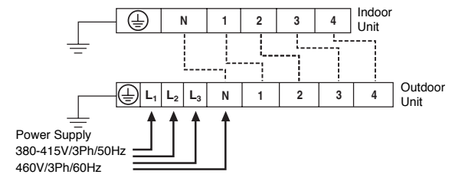
MCC/BOC 35-65 (3 Ph) Cooling Units

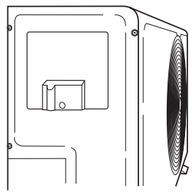


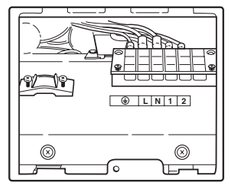
MCH/BOH 35 Heat pump Units



MCH/BOH 35-65 (3 Ph) Heat pump Units







For further detail on wiring of these units, see the diagrams pasted inside each unit.

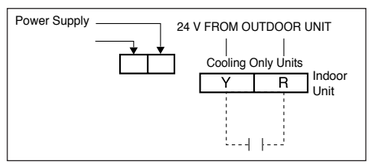
Cautions

- Never modify the unit by removing any of the safety guards or by bypassing any of the safety interlock switches.
- Connect the connecting cable correctly and connect the connecting cable to terminal as identified with their respective marks.
- Do not scratch the conductive core & inner insulator of power supply cables and do not deform or smash on the surface of cables.

■ Vertical Discharge Condensing Unit (H*DA, H*DB, H*RA)

The indoor unit and interconnecting wiring voltage is 220 volts. Where the outdoor unit requires a different operating voltage such as 24 volts one of the following solutions can be applied.

1. The coil of the relay switching the compressor and reversing valves should be changed to a 220V coil.
2. A transformer should be installed to supply 24 volts and a relay installed with a 220 volts coil to switch the 24 volts required by the outdoor units. The transformer should be energised at all times and not switched by the start signal from the indoor unit. Switching the transformer directly will cause electronic noise which may cause malfunction of the electronics.



■ Wiring Sizes

Unit size		09	12	18	25	35	45	55	65
Power supply	mm^2	3x2.5		3x4		5x2.5	5x4		
Interconnection (Indoor/Outdoor)	Cooling mm^2 Heating mm^2	3x2.5 + Ground 5x2.5 + Ground							
Fuse (Slow-Blow)	A	10		16	20	10	16		

Or as required to meet national and local codes.

Notes

- Terminals N and 1 (see diagrams above) correspond to power supply to the indoor unit coming from the outdoor unit.
- Compressor power supply is established by terminal 2.
- Power supply to the 4-way valve is established by terminal 3.
- Outdoor fan power supply is connected to terminal 4.
- For further details on wiring of these units, see the diagrams pasted inside each unit.

■ Maximum Piping Lengths

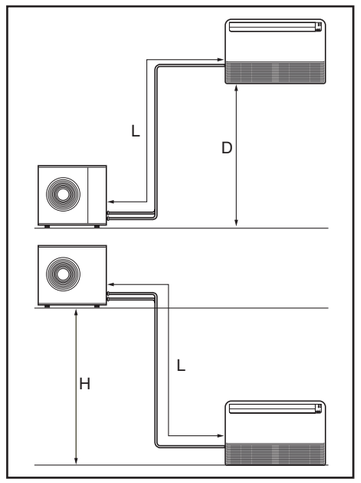
Unit size	09	12	18	25	35	45	55	65
D (m)	12	15	15	22	22	26	26	26
L (m)	15	18	18	25	25	30	30	30
H (m)	10	12	12	20	20	24	24	24

Note : Where the difference in elevation between the indoor unit and the outdoor unit is greater than 5 meters, install an oil trap every 5 meters.

The suction line must have a 2% gradient up to the compressor on horizontal sections.
Where piping lengths are unusually long and include a large number of oil traps, it may be necessary to adjust to compressor charge.

Refrigerant charge to be added per extra metre of piping length when more than 7.5 meters.

Unit size	MCC-MCH/BOC-BOH								
	07	09	12	18	25	35	45	55	65
g/m	15	15	15	40	40	40	60	60	60

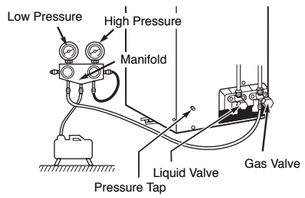


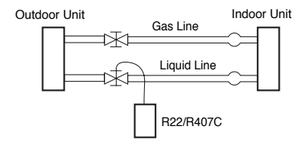
■ Refrigerant Piping Connections (FLARE Connections)

To avoid alteration of unit capacities, check that piping lengths and changes in elevation are kept to a strict minimum.

Before connection the refrigerant lines, follow the procedures below (if precharged connection lines are not supplied):

– Select copper pipe diameters according to the size of unit to be installed.
– Install the refrigeration lines, checking that no foreign bodies get inside the piping.
– Install the flare connectors and flare the ends of the pipes.





This unit is shipped complete with a charge of R22/R407C refrigerant that will be sufficient for an interconnecting piping length of 7.5 meters.

TEST OPERATION

CHECK THIS ITEM BEFORE START OPERATION

Outdoor

Check the flare nut connections, valve stem cap connections and service cap connections for gas leak with a leak detector or soap water.

Indoor

- Check the unit is firmly fixed.
- Check the connecting pipes are tighten securely.
- Check the pipe insulation.
- Check the drainage.
- Check the connection of the grounding wire.

TROUBLE SHOOTING GUIDE

Problem	Probable cause	Remedy
A. The air conditioner does not run.	1. Power Failure. 2. Fuse blown or circuit breaker open. 3. Voltage is too low. 4. Faulty contactor or relay. 5. Electrical connections loose. 6. Thermostat adjustment too low (in heating mode) or too high (in cooling mode). 7. Faulty Capacitor. 8. Incorrect wiring, terminal loose. 9. Pressure switch tripped.	1. Wait for Power resume. 2. Replace the fuse or reset the breaker. 3. Find the cause and fix it. 4. Replace the faulty component. 5. Retighten the connection. 6. Check Thermostat setting. 7. Find the cause then replace Capacitor. 8. Check and retighten. 9. Find the cause before reset.
B. The outdoor fan runs but the compressor will not start.	1. Motor winding cut or grounded. 2. Faulty Capacitor.	1. Check the wiring and the compressor winding resistance. 2. Find the cause then replace Capacitor.
C. There is insufficient heating or cooling.	1. There is a gas leak. 2. Liquid and gas line insulated together. 3. The room was probably very hot (cool) when you started the system.	1. Remove charge, repair, evacuate and recharge. 2. Insulate them separately. 3. Wait while unit has enough time to cool the room.
D. The compressor run continuously.	1. Thermostat adjustment too low (in heating mode) or too high (in cooling mode). 2. Faulty fan. 3. Refrigerant charge too low, leak. 4. Air or incondensables in refrigerant circuit.	1. Check Thermostat setting. 2. Check condenser air circulation. 3. Find leak, repair and recharge. 4. Remove charge, evacuate and recharge.
E. The compressor starts but shuts down quickly.	1. Too much or too little refrigerant. 2. Faulty compressor. 3. Air or incondensables in refrigerant circuit. 4. Changeover valve damaged or blocked open (heat pump unit).	1. Remove charge, evacuate and recharge. 2. Determine the cause and replace compressor. 3. Remove charge, evacuate and recharge. 4. Replace it.
F. Clicking sound is heard from the air conditioner.	In heating or cooling operation any plastic parts may expand or shrink due to a sudden temperature change in this event, a clicking sound may occur.	In heating or cooling operation any plastic parts may expand or shrink due to a sudden temperature change in this event, a clicking sound may occur.

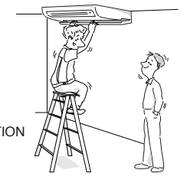
NORMAL FUNCTION OF THE AIR CONDITIONER

The following symptoms do not indicate air conditioner malfunction.

1. The system does not operate

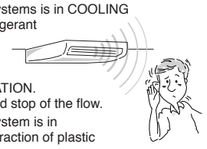
- The system does not restart immediately after the ON/OFF button is pressed.
  If the OPERATION lamp lights, the system is in normal condition.
  The safety device operates to prevent overload of the system.
  After 3 minutes, the system will turn on again automatically.
- The system does not restart immediately when TEMPERATURE SETTING changed.
  If the OPERATION lamp lights, the system is in normal condition.
  If the timer light is flashing operation is being delayed by the safety device. It does not restart immediately because the compressor has been stopped and requested to start within the delay period.
  A safety device operates to prevent overload of the system.
  After 3 minutes, the system will turn on again automatically.
- The system does not start immediately after the power supply is turned on.
  Wait one minute until the microcomputer is prepared for operation.

1.1 White mist comes out of a unit



- When humidity is high during cooling operation.
  (In dusty locations or after construction work)
  If the inside of an indoor unit is contaminated, the temperature distribution inside a room may become uneven. It is necessary to clean the inside of the indoor unit. The unit should be cleaned by a qualified service person familiar with the unit.
- When the system is changed over to HEATING OPERATION or after DEFROST OPERATION. Moisture generated on the coil by the DEFROST becomes vapour and exists.

1.2 Noise of air conditioners



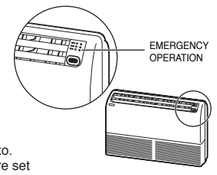
- A continuous flow “Shuh” sound is heard when the systems is in COOLING or DEFROST OPERATION. This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- A “Shuh” sound which is heard at the start or immediately after operation. It may also be heard at the start or immediately after a DEFROST OPERATION.
  This is the noise of refrigerant caused by the start and stop of the flow.
- A “Pishi-pishi” squeaking sound is heard when the system is in operation or just after operation. Expansion and contraction of plastic parts caused by temperature change makes this noise.

1.3 Dust from the units

- Dust may blow out from the unit when starting after long off cycles. Dust absorbed by the unit blows out.
- The units give off odours. The unit absorbs the smell of rooms, furniture, cigarettes, etc., and then emits them.

EMERGENCY OPERATION

- Units are equipped with a switch to run emergency operation mode. Pushing the emergency switch turns the unit on; pushing it again turns it off (toggle action). During emergency operation, the remote controller cannot be used and the power LED light will flash at intervals, while the other LED lights will indicate the operation of the Diagnostic Codes.
  In Emergency Operation and cooling units the temperature will be set at 24°C and the fan on Auto. Heating units will switch to auto mode at a temperature set point of 24°C and the fan will run on auto mode.



- After a power failure the unit restarts automatically in the same mode as before the failure, when power is resumed.

PROTECTION FUNCTION

Auto Restart Function

- The unit will automatically restart after loss of the electrical power supply. When power is restored; the unit operation will restart according to all parameters set before the loss of power.

ANTI-ICE and ANTI-OVERHEAT

- This feature is used to prevent the indoor unit from freezing during cool or dry operation and overheating in heat mode. During execution of anti-ice operation and anti-overheating, the compressor will stop operating and the fan will continue to run until the coil temperature reaches predetermined set points, at which time the unit will resume normal operation.

Low Voltage

- The feature is used to protect against any damage to the unit caused by fluctuation of voltage. If voltage is lower than the lower limit for approximately 10 seconds or longer, compressor operation will be temporarily stopped. Normal operation will resume when the voltage returns above the set limit for a minimum of 10 seconds. If the time elapsed is less than 3 minutes then the compressor start up will be delayed until 3 minutes has passed.

Filter Care and Filter Alarm

- Replace Air Purifying filter if fitted.
- The filters should be cleaned regularly, i.e, once a month, or more frequently depending on conditions. The control is equipped with a filter alarm; After a certain numbers of hours of operation, flashing lights will indicate that it is time to clean the filter. The alarm is reset by pressing the filter button or the transmitter.

MAINTENANCE

The units are designed to operate for long periods of time with a minimum of maintenance. However, the following operation must be performed regularly.

	Maintenance Operations	Recommended Frequency
Air filter	Clean	Every month or more often if necessary
Unit casing	Clean	Every month or more often if necessary
Drain pan and evacuation piping	Clean and check for obstructions	Each season before start up*
Indoor/outdoor coils	Clean	Each season before start up*
Compressor	No need	

* This operation must be carried out by qualified personnel only.

BEFORE MAINTENANCE

⚠ **Turn off the main breaker or disconnect the main power supply.**

Notes

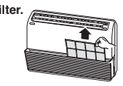
- Don’t spill water : There is a danger of electric shock.
- Don’t used petrol, paint thinner, benzene or polishing agents : They may deform or scratch the unit.

CLEANING THE UNIT

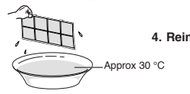
Wipe the unit with a soft dry cloth only.
If the unit is very dirty, wipe it with a cloth soaked in warm water (Not more than 40°C).

CLEANING THE AIR FILTER

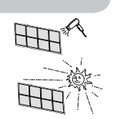
1. Remove the air filter.
Open front grille and pull fillter outward front grille.



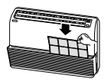
2. Cleaning
If the fillter is very dirty, clean it with water (approx 30°C).



3. Drying
Drying the air filter by hair drying or direct sunlight.



4. Reinstall the air filter.



TECHNICAL SPECIFICATION

R22 - 50 Hz

Models			Indoor Unit	MCC-MCH (T)								
				09	12	18	25	35		45	55	65
			Outdoor Unit	BOC-BOH								
				09	12	18	25	35		45	55	65
Power Consumption			kw	1.02	1.27	1.84	2.59	3.73	3.77	4.79	5.37	6.28
Running Current			A	4.70	5.87	8.61	11.78	17.24	7.54	9.77	12.42	13.82
Max. Starting Current			A	21	28	43	70	79	42	55	55	66
Refrigerant Type				R22								
Refrigerant Charge (BOC/BOH)			gr	800/1,000	1,140/1,160	1,620	1,650/1,600	2,800/2,500		3,450	4,100	6,400
Indoor Unit	Power Supply		V/Ph/Hz	220-240/1/50								
			Ph	1	1	1	1	1		1	1	1
	Fan	Air Flow	m^3/h	490	580	750	790	1,350		1,600	2,100	2,362
		Input Power	W	48	63	74	77	178		178	2x178	2x178
		Running Current	A	0.21	0.28	0.32	0.34	0.89		0.89	2x0.89	2x0.89
	Dimension	Height	mm	655	655	655	655	658		658	658	658
		Width	mm	990	990	990	990	1,548		1,548	1,845	1,845
		Depth	mm	199	199	199	199	205		205	240	240
	Weight		kg	26	26	27	29	40		46.5	62	64
	System Operation Control			Wireless Control with LCD Display								
Outdoor Unit	Power Supply		V/Ph/Hz	220-240/1/50 or 380-415/3/50								
			Ph	1	1	1	1	1	3	3	3	3
	Compressor	Qty		1	1	1	1	1	1	1	1	1
		Compressor Type		Rotary						Scroll		
	Dimension	Height	mm	492	492	590	696	900		1,142	1,142	1,142
		Width	mm	764	764	820	850	850		850	1,060	1,060
		Depth	mm	230	230	280	285	285		285	345	345
	Weight	Cooling	kg	36	38	56	65	76		87	109	129
		Heating	kg	37	39	58	67	77		88	111	131
	Piping	Type		Flare + Nuts								
		Pipe Suction	inch	3/8	1/2	5/8	5/8	5/8		3/4	3/4	3/4
		Pipe Liquid	inch	1/4	1/4	3/8	3/8	3/8		3/8	3/8	3/8

TECHNICAL SPECIFICATION

■ R22 - 60 Hz

Models			Indoor Unit	MCC-MCH (T)							
				09	12	18	25	35		45	55
			Outdoor Unit	BOC-BOH							
				09	12	18	25	35		45	55
Power Consumption			kw	1.05	1.26	2.07	2.70	3.83	3.79	4.99	6.06
Running Current			A	4.77	5.90	9.78	12.99	17.25	7.85	8.95	11.80
Max. Starting Current			A	21.5	29	47	61	81	48	47	58
Refrigerant Type				R22							
Refrigerant Charge (BOC/BOH)			gr	800/1,090	1,140/1,160	1,800/1,800	1,650/1,600	2,800/2,500		3,000/3,000	3,800/3,800
Indoor Unit	Power Supply		V/Ph/Hz	208-230/1/60							
			Ph	1	1	1	1	1		1	1
	Fan	Air Flow	m^3/h	505	600	725	850	1,450		1,770	2,895
		Input Power	W	51	68	110	138	245		245	2x245
		Running Current	A	0.22	0.30	0.48	0.60	1.07		1.07	2x1.07
	Dimension	Height	mm	655	655	655	655	658		658	658
		Width	mm	990	990	990	990	1,548		1,548	1,845
		Depth	mm	199	199	199	199	205		205	240
	Weight		kg	26	26	27	29	40		46.5	62
	System Operation Control			Wireless Control with LCD Display							
Outdoor Unit	Power Supply		V/Ph/Hz	208-230/1/60 or 460/3/60							
			Ph	1	1	1	1	1	3	3	3
	Compressor	Qty		1	1	1	1	1	1	1	1
		Compressor Type		Rotary				Reciprocating			
	Dimension	Height	mm	492	492	590	696	900		1,142	1,142
		Width	mm	764	764	820	850	850		850	1,060
		Depth	mm	230	230	280	285	285		285	345
	Weight	Cooling	kg	36	38	56	65	76		87	109
		Heating	kg	37	39	58	67	77		88	111
	Piping	Type		Flare + Nuts							
		Pipe Suction	inch	3/8	1/2	5/8	5/8	5/8		3/4	3/4
		Pipe Liquid	inch	1/4	1/4	3/8	3/8	3/8		3/8	3/8

■ R407C - 50 Hz

Models			Indoor Unit	MCL-MCM (T)							
				09	12	18	25	35		45	55
			Outdoor Unit	BOL-BOM							
				09	12	18	25	35		45	55
Power Consumption			kw	0.99	1.26	1.84	2.68	3.64	3.52	4.90	5.49
Running Current			A	4.56	5.81	8.6	12.56	17.23	6.93	11.48	12.56
Max. Starting Current			A	21	28	43	74	91	44	55	55
Refrigerant Type				R407C							
Refrigerant Charge (BOL/BOM)			gr	720/1,000	1,140/1,160	1,620	1,650/1,600	2,100		3,450	4,100
Indoor Unit	Power Supply		V/Ph/Hz	220-240/1/50							
			Ph	1	1	1	1	1		1	1
	Fan	Air Flow	m^3/h	490	580	750	790	1,350		1,600	2,100
		Input Power	W	37	49	71	74	105		139	2x148
		Running Current	A	0.17	0.22	0.31	0.32	0.48		0.64	2x0.66
	Dimension	Height	mm	655	655	655	655	658		658	658
		Width	mm	990	990	990	990	1,548		1,548	1,845
		Depth	mm	199	199	199	199	205		205	240
	Weight		kg	26	26	27	29	46.5		46.5	62
	System Operation Control			Wireless Control with LCD Display							
Outdoor Unit	Power Supply		V/Ph/Hz	220-240/1/50 or 380-415/3/50							
			Ph	1	1	1	1	1	3	3	3
	Compressor	Qty		1	1	1	1	1	1	1	1
		Compressor Type		Rotary						Scroll	
	Dimension	Height	mm	492	492	590	696	900		1,142	1,142
		Width	mm	764	764	820	850	1,060		1,060	1,060
		Depth	mm	230	230	280	285	345		345	345
	Weight	Cooling	kg	35	36	38	59	89		109	109
		Heating	kg	36	37	39	60	91		111	111
	Piping	Type		Flare + Nuts							
		Pipe Suction	inch	3/8	1/2	5/8	5/8	5/8		3/4	3/4
		Pipe Liquid	inch	1/4	1/4	3/8	3/8	3/8		3/8	3/8

Remark: The above design and specifications are subject to change without prior notice for product improvement.

DE - COMMISSIONING DISMANTLING & DISPOSAL

This product contains refrigerant under pressure, rotating parts, and electrical connections which may be a danger and cause injury!
All work must only be carried out by competent persons using suitable protective clothing and safety precautions.

Read the Manual

Risk of electric shock

Unit is remotely controlled and may start without warning

1. Isolate all sources of electrical supply to the unit including any control system supplies switched by the unit. Ensure that all points of electrical and gas isolation are secured in the OFF position. The supply cables and gas pipework may then be disconnected and removed. For points of connection refer to unit installation instructions.
2. Remove all refrigerant from each system of the unit into a suitable container using a refrigerant reclaim or recovery unit. This refrigerant may then be re-used, if appropriate, or returned to the manufacturer for disposal. **Under No circumstances should refrigerant be vented to atmosphere.** Where appropriate, drain the refrigerant oil from each system into a suitable container and dispose of according to local laws and regulations governing disposal of oily wastes.
3. Packaged unit can generally be removed in one piece after disconnection as above. Any fixing down bolts should be removed and then unit lifted from position using the points provided and equipment of adequate lifting capacity. Reference MUST be made to the unit installation instructions for unit weight and correct methods of lifting. Note that any residual or spilt refrigerant oil should be mopped up and disposed of as described above.
4. After removal from position the unit parts may be disposed of according to local laws and regulations.

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