Brivis

Ducted Reverse Cycle Inverter

R410A

INSTALLATION, START-UP, MAINTENANCE INSTRUCTIONS
&
USER OPERATING GUIDE

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING & USING THIS PRODUCT

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CONTENTS PAGE

1. PRECAUTIONS

- **Please read "PRECAUTIONS" carefully before installation.**
- **Please ensure compliance with all local and national laws and regulations regarding this product.**
- **Please note that the following precautions include important safety items.**
- **Please retain this and the owners manual in a safe place for future reference.**

The safety precautions listed here are divided into two categories. Important safety information is listed and must be read carefully

WARNING

Failure to observe a warning may result in death.

CAUTION

Failure to observe a caution may result in injury or damage to the equipment.

After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained regularly. Contact Brivis Service on 1300 BRIVIS (1300 274847) for assistance

WARNING

Please ensure that only trained and qualified service personnel install, repair or service this equipment
Improper installation, repair or maintenance may result in electric shock, electrical short-circuit, refrigerant or water leaks, fire, personal injury and/or other damage to the equipment.

Installation must be strictly in accordance with these installation instructions. If installation is incorrect, water leaks, electrical shock or fire may result.

When installing the system in smaller enclosed spaces, take all necessary measures to ensure that refrigerant concentration cannot exceed allowable safety limits in the event of a refrigerant leak.
Contact your installer or Brivis for more information.

Use the appropriate attached accessories and parts for the installation.
Use of incorrect parts or accessories may result in personal injury and/or equipment damage.

Install the equipment at an appropriate site secure enough to withstand the full operating weight of the equipment.
Failure to install the equipment securely may result in personal injury and/or equipment damage.

The Fan Coil Unit must be installed at least 2.5m above floor.

The appliance must not be installed in inappropriate areas such as bathrooms, kitchens or laundries.

Before accessing the unit swicthboard or electrical terminals ensure all power is disconnected and/or turned off

The appliance must be positioned so that all electrical connections or service areas are fully accessible.

When installing this equipment, all relevant local and national wiring and plumbing standards and regulations must be strictly adhered to. An independent circuit is required.
If the electrical circuit is insufficient or defective, personal injury and/or equipment damage may result.

Appropriately specified and sized cables must be used, ensure all connections are tight. Clamp all cables sufficiently so that they cannot be pulled loose or disconnected.
If the connections or fixings are not secure, the electrical terminals may overheat and fail.

Electrical cable routing must be properly arranged so that the control board cover is able to be fixed properly.
If the control board cover is not fixed properly, it may cause the electrical connections to overheat and fail, resulting in personal injury or property damage.

If any electrical cables are damaged, they must be replaced by a suitably qualified and trained service person in order to avoid any potential hazards.

A correctly specified and sized circuit breaker must be installed in accordance with all local and national wiring standards. A dedicated, independent electrical circuit is required for the system.

Interconnecting refrigerant pipe must be installed in strict accordance with good industry piping practices. New, clean and sealed refrigeration grade R410a certified copper pipe must must be used. All refrigerant pipe must be insulated individually.

Do not modify the length of any power supply cord or use extension cords. Do not connect this equipment electrically via double adaptors or multi-outlet powerboards.
It may cause fire or electrical shock.

Carry out the specified installation work after taking into account the site specific conditions such as installation and service access, strong prevailing winds, physical obstructions and personal safety.

If a refrigerant leak occurs during installation, ventilate the area immediately.
Toxic gas may be produced if the refrigerant comes into contact with a naked flame.

Interconnecting refrigerant pipe cannot become very hot during operation, please ensure all electrical cables, drains and other items are kept clear of the refrigerant pipes.

After completing the installation works, thoroughly check the refrigerant circuit for leaks.
Toxic gas may be produced if the refrigerant leaks into the air conditioned space and comes into contact with a source of fire, such as a heater, cooktop or range.

CAUTION

Ground/Earth the air conditioner.
Incomplete or inappropriate grounding or earthing may result in equipment malfunction, damage or potential electrical shock.

An appropriately sized circuit breaker must be installed.
A separate and dedicated circuit is required. Failure to install in accordance with these requirements may result in electrical shock

Connect the outdoor unit wiring first, then connect the indoor unit. Do not connect the unit to the power source until all electrical wiring and refrigerant piping is complete.

Install the condensate drain to ensure proper drainage to waste. Condensate drain must be trapped and insulated as as required to prevent condensation.
Ensure that an auxillary, separately drained safety tray is installed under the indoor unit.
Improper condensate drain connection may result in water leaks, property damage and may void the manufacturers warranty.

Install the indoor and outdoor units, power supply wiring and interconnecting wiring away from televisions or radios in order to prevent interference and/or noise.
Depending on site specific conditions, the prescribed 1 metre separation may not be sufficient to eliminate interference.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or a lack of knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

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

Don't install this air conditioner in the following locations:

- Overly corrosive environments i.e coastal or industrial
- Areas of insufficient or unstable power supply
- Areas where strong electromagnetic fields exist
- In transport applications, mobile homes, caravans, buses boats or other vehicles
- Close to flammable materials or gases
- Other sites with specific adverse conditions

2. INSTALLATION INFORMATION

- **Please read the entire Installation Manual prior to installation. This product must be installed by suitably qualified personnel.**
- **When installing the indoor unit and interconnecting refrigerant pipe, please strictly follow the instructions in this manual.**
- **If the air conditioner is installed in contact with metal parts, it must be electrically insulated in accordance with the relevant electrical standards.**
- **Only after a thorough check of the entire system should power to the equipment be switched on.**
- **Due to our policy of continuous improvement, details, data or specifications may change without notice.**

INSTALLATION SEQUENCE

- Select the appropriate location for the indoor and outdoor units
- Install the indoor unit
- Install the outdoor unit
- Install the interconnecting refrigerant pipe
- Install and connect the condensate drain
- Install the indoor, outdoor and interconnecting wiring
- Thoroughly check of the entire system
- Test run and commissioning

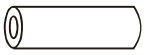
Brivis DRCi Model Numbering

Model	Indoor	Outdoor
05	DINLR05Z71	DONSR05Z71
07	DINLR07Z71	DONSR07Z71
09	DINLR09Z71	DONSR09Z71
11	DINLR11Z71	DONSR11Z71
14	DINLR14Z71	DONSR14Z71
17	DINLR17Z71	DONSR17Z71

3. ACCESSORIES

Please check that the following fittings are available.

Table 3-1

	NAME	SHAPE	QUANTITY
Pipe & Fittings	1. Soundproof / insulation sheath		2
Condensate Drain Fittings	2. Drain joint		1
	3. Seal ring		1
Manual	4. Installation, Start-up, Maintenance Instruction & User Operating Guide		1

4. INSPECTING & HANDLING THE UNITS

Upon delivery, the packaging and equipment should be thoroughly checked, and any damage advised immediately to Brivis.

When handling the equipment, please consider and take into account the follow:

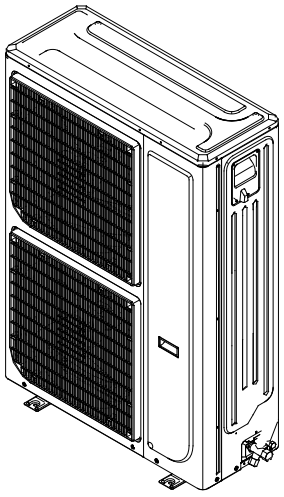
1  Fragile, handle the unit with care.

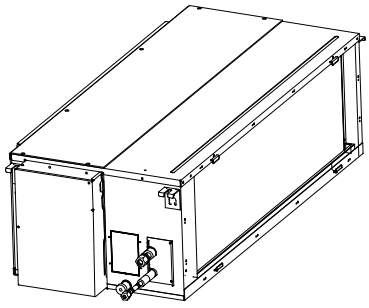
 Keep the units upright in the correct configuration to prevent any internal damage to the electrical or refrigeration circuits

2 Before moving the units, decide upon the most appropriate path along which to take the equipment to their final installation position

3 To prevent any unnecessary damage, keep the unit in its original packaging for as long as possible before removing

4 Be careful when lifting the units, pay particular attention to the physical size and weight of the units, as well as the centre of gravity, and final installation position.





5 INDOOR UNIT INSTALLATION

5.1 Installation position

The indoor unit should be installed in a location that fulfills the following requirements:

- There is sufficient room for the installation and maintenance.
- The ceiling is horizontal, and its structure can support the full operating weight of the unit.
- The supply and return air positions are unimpeded, and the unit is not exposed to adverse ambient conditions.
- The airflow direction is as direct as possible.
- The interconnecting refrigerant pipe and condensate drain can be installed and routed correctly and easily.
- There is no direct radiation from any external heat sources

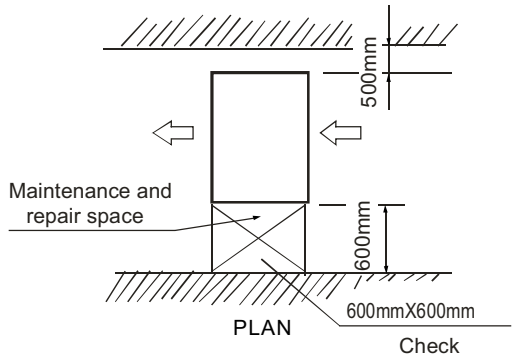


Fig.5-1

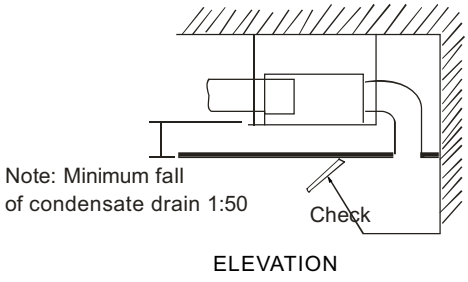


Fig.5-2

CAUTION

Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 metre away from televisions and radios. This is to prevent image interference and noise in those electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if 1 metre is observed.)

5.2 Installing the Indoor Unit

1 Installing ø10 hanging bolts. (4 bolts)

- Please refer to the following schematics for the measurement distances for the hanging arrangement.
- Please install with Ø10 hanging screw bolts.
- If the ceiling configuration differs from the detail noted in this manual please ensure that the installation is suitable for the specific site.
  - Check the type of the ceiling being used, and isolate the roof mountings from possible vibration.
- When choosing where to site the unit, be careful to determine the position and direction of the refrigerant pipe and the drains. Make sure that the refrigerant pipe, drain pipes, indoor and outdoor wiring can be routed and positioned adequately before hanging the unit. Once the unit is successfully installed, fit of the refrigerant and connections.
- Installation of the hanging screw bolts
  - Mount off the roof beam.
  - Strengthen roof beams as required to support full operating weight of the machine.
- Securely mount the hanging screw bolts, and inspect for tightness. It is recommended the the indoor unit be installed with an incline towards the condensate drain of at least 10 - 20mm to assist proper drainage.

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NOTE

Confirm the minimum drain fall is at least 1:50

5.3 Timber construction

Put the mounting timber traversely over the roof beams, and then install the hanging bolts (Refer to Fig. 5.3)

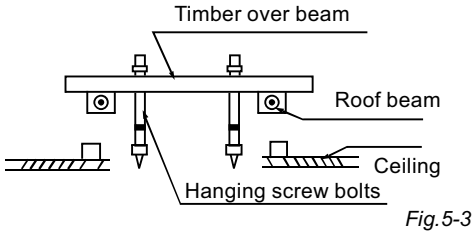


Fig.5-3

5.4 New concrete bricks

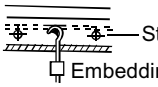
Inlaying or embedding the screw bolts. (Refer to Fig. 5-4)

(Blade shape insertion) (Slide insertion)

Fig.5-4

5.5 For Original concrete bricks

Use embedding screw bolt, crook and thread harness. (Refer to Fig.5-5)



(Pipe hanging and embedding screw bolt)

Fig.5-5

5.6 Steel roof beam structure

Install and directly mount the supporting steel angle. (Refer to Fig.5-6)

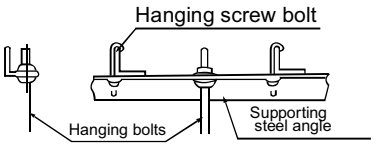


Fig.5-6

5.7 Hanging the Indoor Unit

(1) Hang the indoor unit onto the hanging screw bolts as shown.

(2) Install the indoor unit flat and level by using a spirit level: uneven installation may cause condensate leaks.

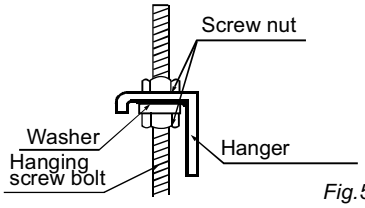


Fig.5-7

5.8 Installation diagram for the Indoor Unit

■ **Return Air screen and flexible duct connections**

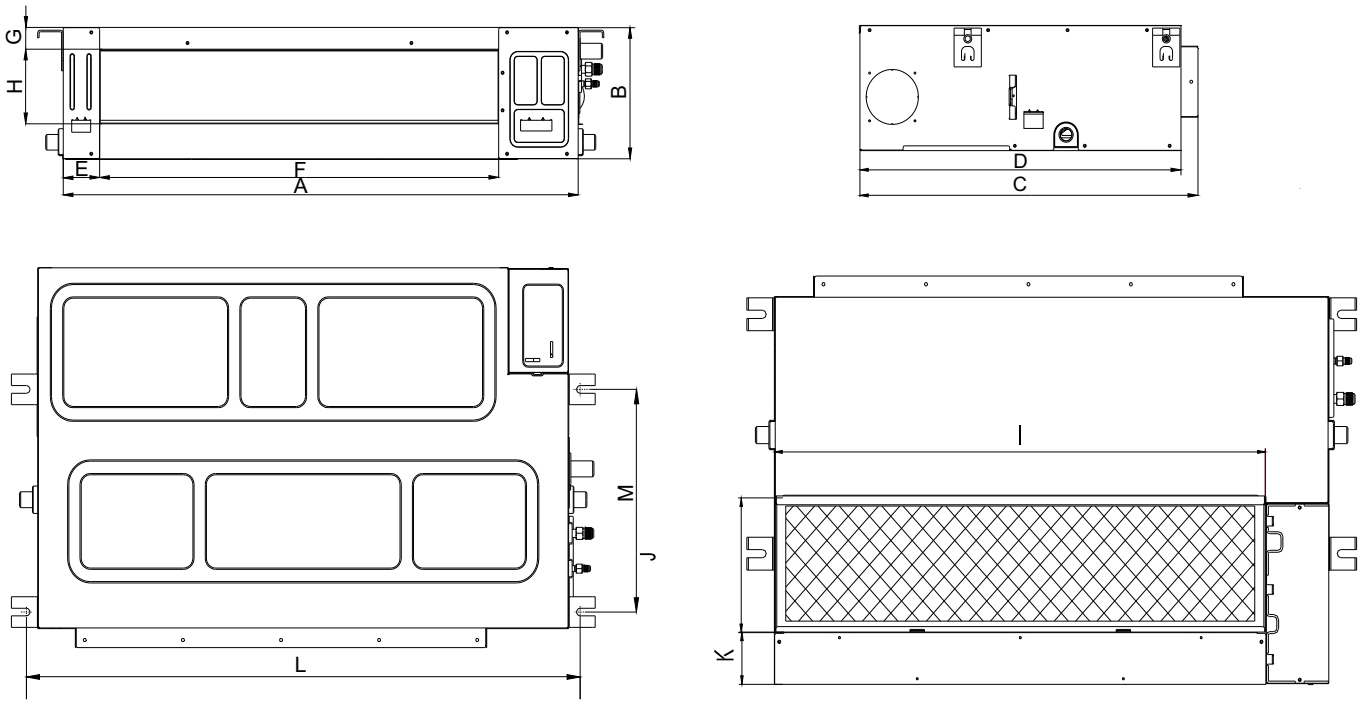
1. Install the return air screen according to the installation manual.
2. Install flexible connections to the supply and return air spigots.

■ **Duct Connection**

- The external static pressure of the unit varies according to the unit size, the length, type and configuration of the duct system, and supply air quantity.

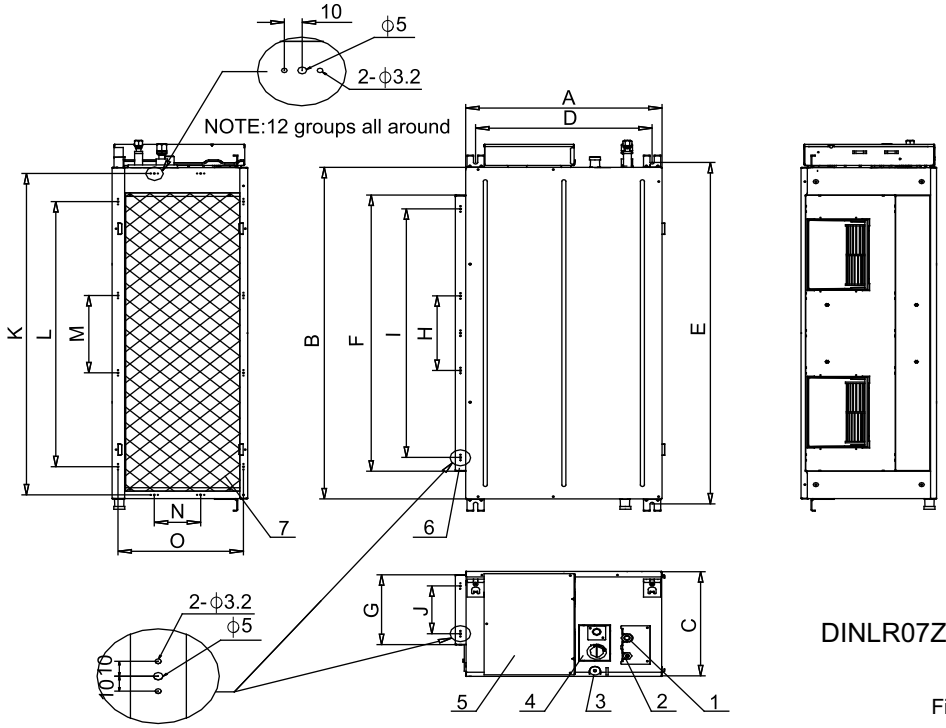
  Please refer to the specification tables for details.

■ Fig. 5-8, 5.9 and 5.10 show the dimensional positioning of the units ceiling mounting holes.



DINLR05Z71 Fig. 5-8

Model	Outline dimension(mm)				Air outlet opening size				Air return opening size			Mounting lugs	
	A	B	C	D	E	F	G	H	I	J	K	L	M
05	90	270	635	570	65	713	35	179	815	260	20	960	350



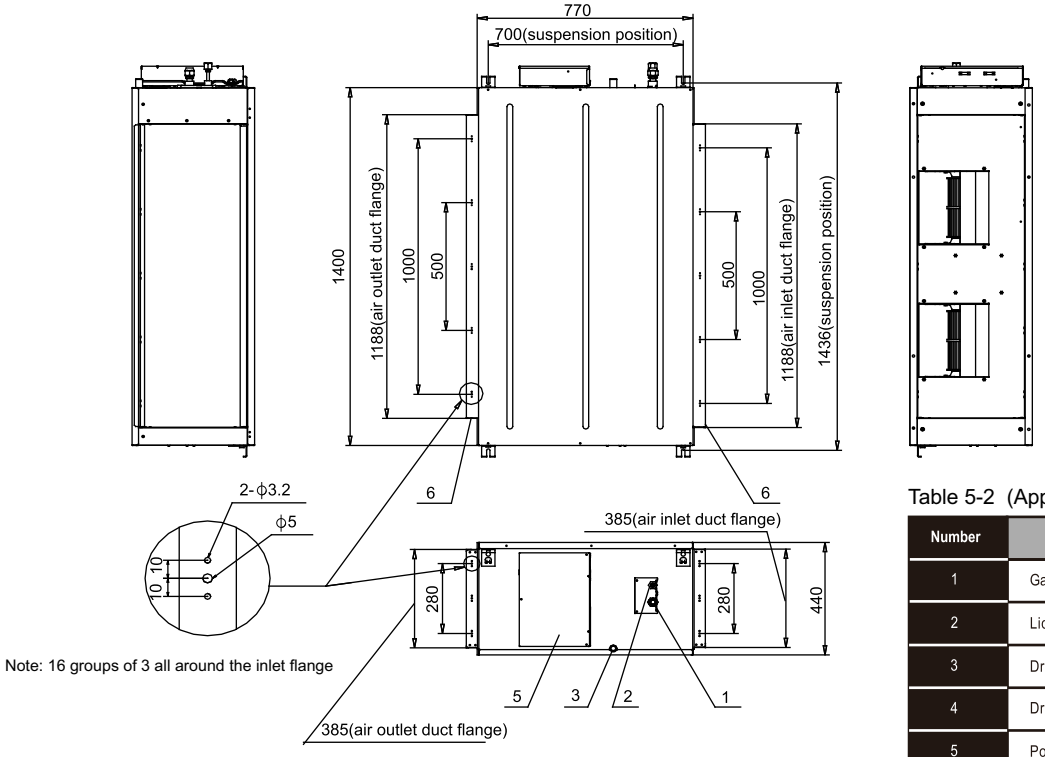
Note: 14 groups of 3 all around the inlet flange

DINLR07Z71 - DINLR14Z71

Fig. 5-9

Table 5-1 unit：mm

MODEL	Outline dimension			Mounting lugs		Air outlet opening size (symmetry of air outlet opening)					Air inlet opening size (symmetry of air inlet opening)				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
07	450	1100	270	397	1146	1054	185	220	960	120	1061	875	315	110	226
09, 11, 14	550	1200	380	495	1236	1000	253	270	900	170	1145	925	325	130	334
17	Fig. 5-10														



Note: 16 groups of 3 all around the inlet flange

DINLR17Z71

Fig. 5-10

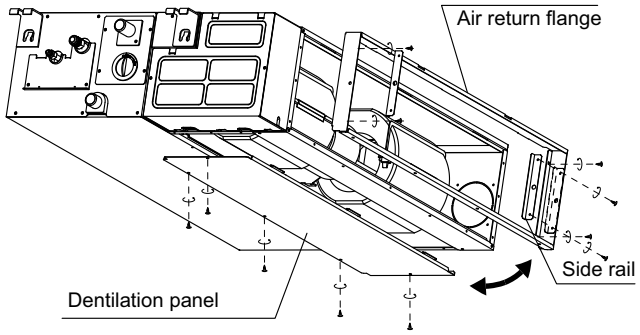
Table 5-2 (Applicable to Systems 07-17)

Number	Name	Description
1	Gas pipe connection	ϕ 15.9 (07-11) ϕ 19.0 (14-17)
2	Liquid pipe connection	ϕ9.5
3	Drain pipe connection	OD ϕ25 ID ϕ20
4	Drain pipe connection	Not Applicable
5	Power supply connection	————
6	Air discharge flange	————
7	Air filter	Optional

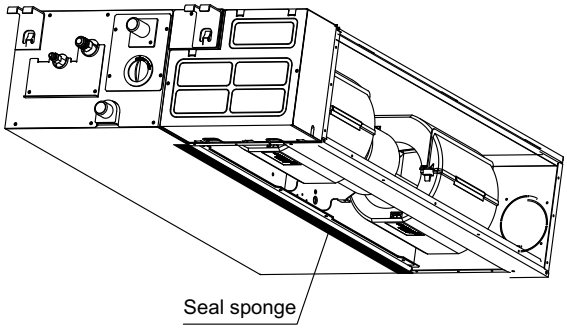
5.9 Indoor unit configuration/maintenance

DINLR05Z71

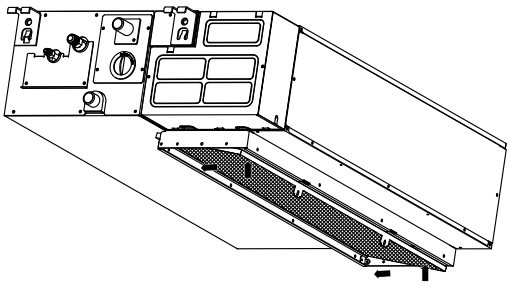
1. To change from rear return air to bottom return air. Remove access panel and flange and disconnect side rails.



2. Adhere attached seal sponge as indicated, then change the return air configuration to as shown.



3. When installing the filter (if applicable), insert into flange and push up into place.



4. Ensure that the filter is fastened correctly in the fixing blocks on the flange.

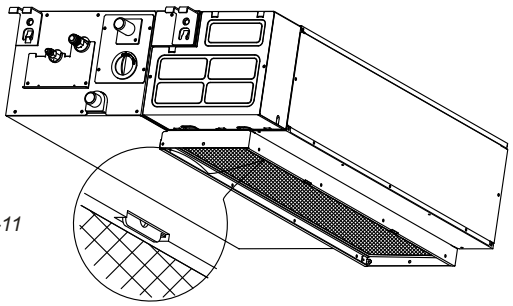


Fig.5-11

DINLR07Z71 - DINLR17Z71

Method A:Remove the front side plate from the top

1.Remove the top cover as shown in Fig.5-12

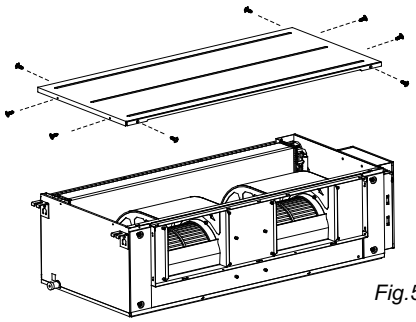


Fig.5-12

2.Loosen the four bolts and two screws which used to fasten the front side plate, Fig.5-13

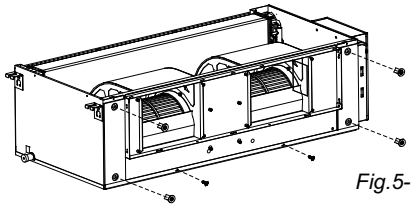


Fig.5-13

3.Remove the cord of motor, take off the front side plate and repair the motor. Fig.5-14

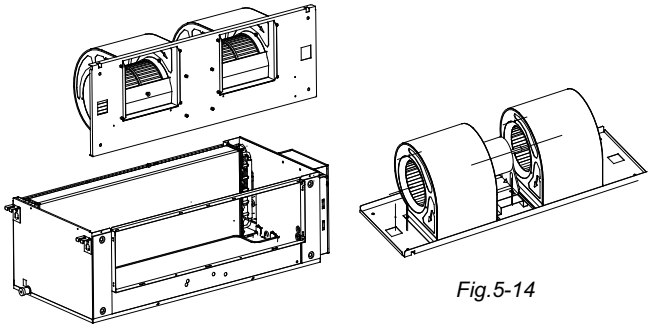


Fig.5-14

Method B: Remove the front side plate from the bottom

1.Remove the bottom base as shown in Fig.5-15

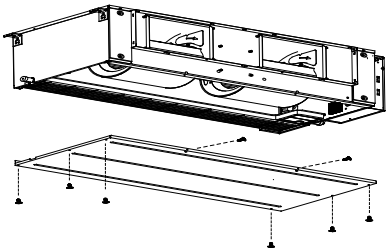


Fig.5-15

2.Loosen the four bolts and two screws which used to fasten the front side plate(Be careful, the front side plate may fall down) Fig.5-16

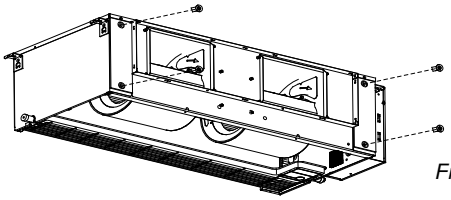


Fig.5-16

3.Remove the cord of motor, take off the front side plate and repair the motor, see Fig.5-17

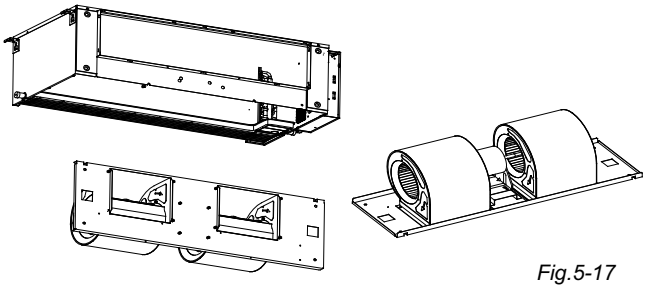


Fig.5-17

Method C:Repair it directly(only applicable to plastic scroll and fan wheel) Fig.5-18

1. **Take off the chassis assembly and filter .**
2. **Take off the volute.**
3. **Take off the motor.**

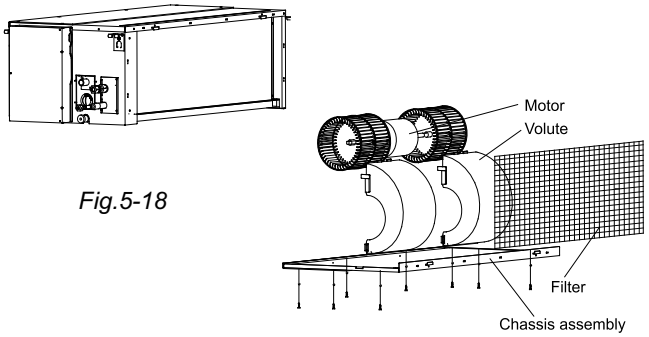


Fig.5-18

5.10 Duct Design

1. Return and supply air grilles should be separated sufficiently to prevent air recirculation.
2. The Return air screen supplied with the unit is not a filter. Separate, adequate air filtration must be provided in addition to this screen in the duct work system. Inadequate or blocked filters may damage the system and void warranty

- Key points of the duct connection

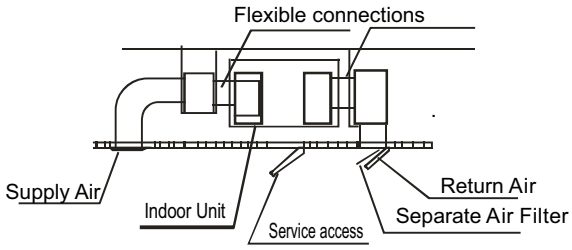


Fig.5-19

NOTE

1. Ductwork must be supported independently of the indoor unit.
2. When connecting the ducts, use flexible connections to isolate any possible vibration.
3. When installing the indoor unit, ensure adequate space and access for service and maintenance.
4. Adjust fan motor speed to match supply air quantity and external static pressure requirements
5. Ensure adequate noise suppression in applications where acoustic performance is critical. Also, provide a minimum of 1m of straight duct from the unit before the first branch take of.

WARNING

The maximum external static pressure limits should not be exceeded. Condensate leaks may occur.

6. OUTDOOR UNIT INSTALLATION

6.1 Installation position

■ **The outdoor unit shall be installed in a location that satisfies the following requirements:**

- There is sufficient room for installation and maintenance.
- The condenser air path is not blocked or impeded, and cannot be adversely affected by strong prevailing winds.
- It must be in a dry and well ventilated place.
- The supporting structure is flat, horizontal and can withstand the full operating weight of the outdoor unit. The base must be free of vibration.
- Positioned so as to prevent operating noise interference to others.
- Easy installation of interconnecting refrigerant pipes and wiring.
- Arrange condenser air discharge to be free, unimpeded, and not blocked or obstructed.
- Away from any potential fire risks, or flammable materials.
- The refrigerant pipe length or height difference between outdoor and indoor does not exceed the maximum allowable limits.
- For installations prone or exposed to strong prevailing winds or breezes such as coastal areas, please ensure that the unit is sited appropriately, by placing it lengthwise along the wall to reduce any negative impact on the condenser fans *(Refer Fig.6-1)*
- If possible, do not install the unit where it is exposed to direct sunlight, this will negatively impact cooling performance.
- In heating mode, the outdoor unit will produce condensate water. This condensate needs to be properly drained to waste in accordance with all applicable local and national plumbing regulations.
- Select unit location where it will not be subject to the accumulation of snow, leaves or other seasonal debris. This may negatively impact the performance and longevity of the units.
- Locate the outdoor unit as close as possible to the indoor unit to reduce performance losses.
- If possible, please remove and obstacles nearby to prevent the system performance being negatively impacted by compromised condenser air circulation.
- The minimum distance between the outdoor unit and walls/ obstacles described in the installation chart does not correlate directly to installations in enclosed spaces. In these cases at least two of the three sides should remain open (M, N, P). *(Refer to Fig. 6-5)*

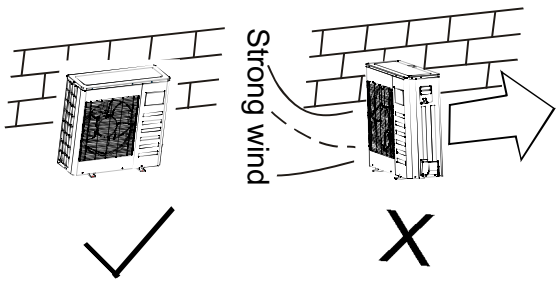


Fig.6-1

NOTE

All pictures and diagrams in this manual are indicative for explanatory purposes only. There may be differences between these and the products supplied, depending on the model. Actual unit specifications should be reviewed.

Table 6-1 mm

MODEL	A	B	C	D	E	F	H	REMARK
05	845	560	335	360	312	324	700	Fig.6-2
07	900	590	333	355	302	315	860	
09	900	590	333	355	302	315	860	
11	990	624	366	396	340	345	966	
14	938	600	376	400	340	392	1369	Fig.6-3
17	938	600	376	400	340	392	1369	

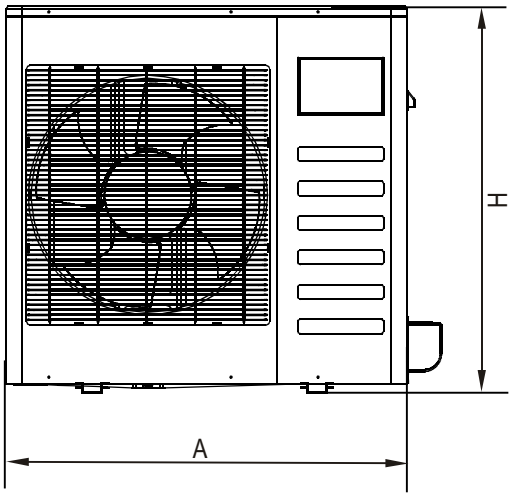


Fig.6-2

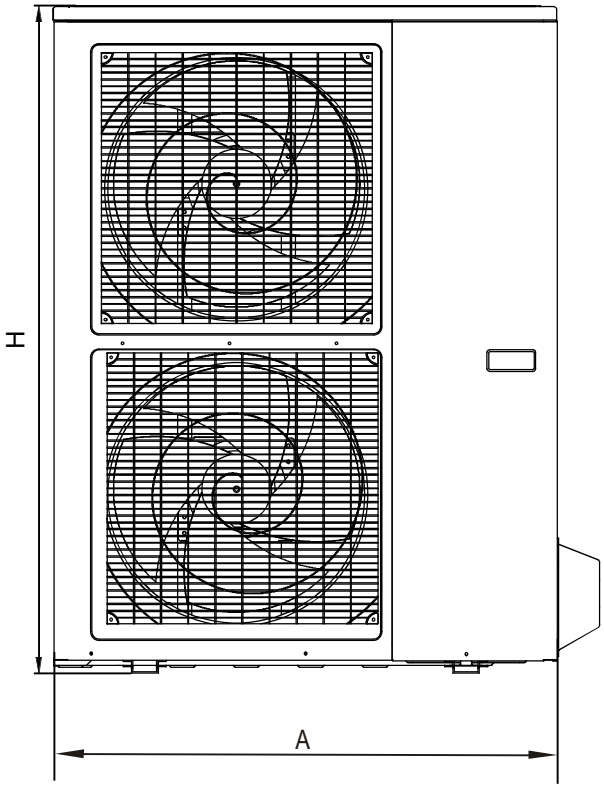


Fig.6-3

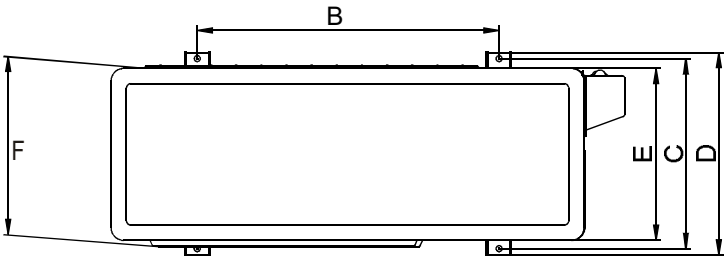


Fig.6-4

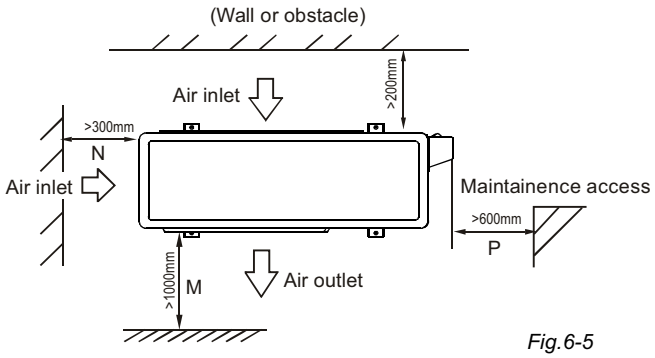


Fig.6-5

NOTE

All pictures and diagrams in this manual are indicative for explanatory purposes only. There may be differences between these and the products supplied, depending on the model. Actual unit specifications should be reviewed.

6.2 Moving and installation

- The unit centre of gravity is offset, so please be careful when lifting unit by hand or with slings.
- Do not hold or lift the unit by the condenser grilles. Equipment damage or personal injury may result.
- Do not touch the condenser fans by hand or other objects.
- Do not lay the unit down, or lean over more than 45° from vertical.
- Mount on a firm, stable base in accordance with the specification of the outdoor units. *(Refer to Fig. 6-6)*
- Fasten the mounting feet securely with bolts to prevent the unit from moving, or falling in strong winds. *(Refer to Fig. 6-6)*

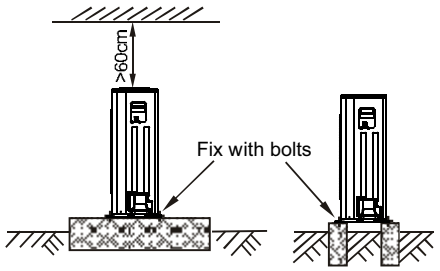


Fig.6-6

NOTE

All pictures and diagrams in this manual are indicative for explanatory purposes only. There may be differences between these and the products supplied, depending on the model. Actual unit specifications should be reviewed.

7. INSTALLING THE REFRIGERANT PIPE

Review the installation with reference to the height difference between the indoor and outdoor units, the length of refrigerant pipe, and the number of bends to meet the following requirements:

(Number of bends to be less than 10)

Table 7-1

MODEL		05	07	09	11	14	17
Max height difference (m)	Outdoor unit is above	20	25	25	30	30	30
	Outdoor unit is below	15	20	20	25	25	25
Maximum pipe length (m)		30	50	50	65	65	65

7.1 Refrigerant pipe connection procedure

CAUTION

All field piping must be provided by a licensed refrigeration mechanic and must comply with all of the relevant local and national codes.

Do not let air, dust or other impurities enter the refrigeration circuit during the installation.

The interconnecting pipe should not be installed until the indoor and outdoor units have been installed.

Keep the interconnecting refrigerant pipe dry, do not let moisture in during installation.

Be sure to fully insulate refrigeration liquid and suction lines. The electronic expansion device is housed in the outdoor unit, insulate both lines individually to prevent condensation.

1 Drill a hole in the wall suitable for the size of the pipes and wiring, then mount the necessary fittings such as wall brackets, conduits or their covers.

2 Bind the insulated refrigerant pipes and wiring cables together with tape.
Pass the insulated refrigerant pipes through the hole. Be careful to prevent damage to the refrigerant pipes and wiring.

3 Connect the refrigerant pipes to the indoor and outdoor units. Refer to “How to connect the refrigerant pipes" for details.

4 Evacuate the refrigeration system with a vacuum pump. Refer to "How to evacuate the refrigeration system" for details.

5 Open the isolation valves of the outdoor unit to allow the refrigerant to flow between the indoor and outdoor units through the refrigeration circuit.

6 Check the refrigeration circuit thoroughly for leaks. Check all joints with a leak detector or soapy water.

7 Be sure to cover any joints of the interconnecting pipe with insulation, and secure with tape to prevent any condensation.

CAUTION

Be sure to insulate all of the exposed pipe of the refrigeration circuit individually on the suction and liquid side. Incomplete or insufficient insulation will result in condensation and possible equipment and/or property damage.

■ How to connect the refrigerant pipes

1 Flaring

- Cut the pipe with an approved pipe cutter *(Refer to Fig. 7-1)*

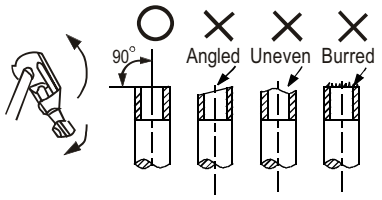
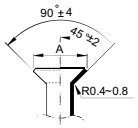


Fig.7-1

- Place a flare nut onto the pipe and flare the pipe.
- Refer to Table 7-2 for the flare dimensions.

Table 7-2

Pipe size	Tightening torque	Flare dimension A min (mm)	max	Flare shape
Ø6.35	14.2～17.2 N.m (144～176 kgf.cm)	8.3	8.7	
Ø9.53	32.7～39.9 N.m (333～407 kgf.cm)	12.0	12.4	
Ø12.7	49.5～60.3 N.m (504～616 kgf.cm)	15.4	15.8	
Ø16.0	61.8～75.4 N.m (630～770 kgf.cm)	18.6	19.0	
Ø19.0	97.2～118.6 N.m (990～1210 kgf.cm)	22.9	23.3	

2 Connect the indoor unit first, then connect the outdoor unit

- Bend the refrigerant pipe correctly to prevent damage.

Bend the pipe with a bending spring or approved pipe bending tool

minimum radius 100mm

Fig.7-2

- The bending angle should not exceed 90°
- The preference is to place any bends in the middle of the pipe. The larger the bending radius the better, as it reduces the internal pressure drop.
- Do not bend the pipe any more than is necessary.
- When connecting the flare nut, coat the flare internally and externally with an approved oil, and tighten by hand, 3-4 turns before tightening firmly.

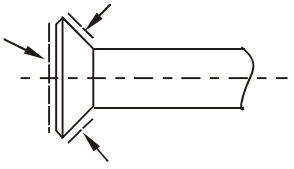


Fig.7-3

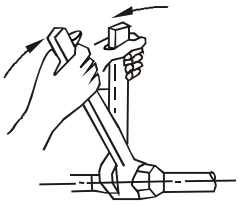


Fig.7-4

CAUTION

Excessive tightening torque will the damage the flare. Too little tightening torque may cause a refrigerant leak. Please determine the correct tightening torque in accordance with Table 7-2.

After the connection work is complete, be sure to check the system thoroughly for leaks.

How to evacuate the refrigeration system

• Isolation valve operation

1. Opening the isolation valves

1. Remove the cap with a spanner and turn the valve stem counter-clockwise with a correctly sized allen key.
2. Turn the valve until it stops. Do not apply excessive force to the isolation valve, doing so may damage the valve; it is not a back seat version. Always use the correct tools.
3. Replace the cap and tighten securely.

2. Closing the isolation valves

1. Remove the cap with a spanner and turn the valve stem clockwise with the correctly sized allen key.
2. Securely tighten the valve until the shaft contacts the main body seal
3. Replace the cap and tighten securely.

For the correct tightening torque, refer to the table below

Table 7-3

Tightening torque N•M (Turn clockwise to close)				
Stop Valve size	Shaft (valve body)		Cap (valve lid)	Maintenance nut
Ø6.35	5.4～6.6	Allen key 4 mm	13.5～16.5	11.5～13.9
Ø9.53				
Ø12.70	8.1～9.9		18～22	
Ø15.88	13.5～16.5	Allen key 6 mm	23～27	
Ø22.22	27～33	Allen key 10 mm	36～44	
Ø25.40				

CAUTION

Always use an appropriate charging hose for service port connection.

After tightening the cap, check that no refrigerant leaks are present.

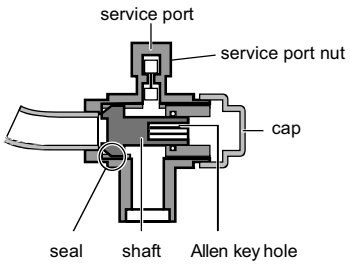


Fig.7-5

• Using the vacuum pump

1 Loosen and remove the service port nuts of valves A and B, and connect the charging hose of the manifold valve to the service port of the isolation valve A. Ensure that the isolation valves A and B are both closed (Fig. 7-6).

2 Connect the charging hose to the vacuum pump.

3 Open the Lo-side valve of the manifold completely.

4 Turn the vacuum pump on. At the start of pumping, loosen the service valve nut of isolation valve B a little to check for air entering (the sound of the vacuum pump will change, and the manifold gauge reads below zero). Then close the service valve.

5 When evacuation is complete, close the Lo-side valve of the manifold gauge completely and turn off the vacuum pump. Let the system hold for 15 minutes or more, and check that the pressure does not rise, suggesting a system leak.

6 Loosen and remove the cap of the isolation valves A and B to open stop valve A and B completely, then fasten the cap.

7 Disassemble the charge hose from the service port of the isolation valve A, and fasten the nut.

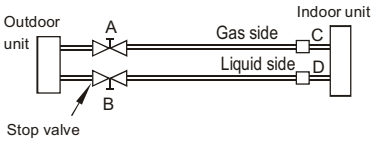


Fig.7-6

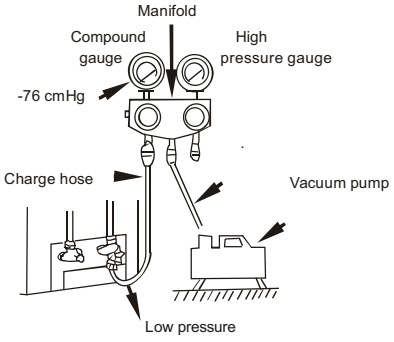


Fig.7-7

7.2 Additional refrigerant charge

CAUTION

Refrigerant cannot be added until the field wiring has been completed.

Refrigerant may only be added after performing a leak test and system evacuation.

When charging the system, care must be taken to ensure that the maximum permissible charge is not exceeded. Excessive charge may lead to liquid slugging and equipment damage.

Ensure that appropriate refrigerant is used to charge the system. Inappropriate or contaminated substances may cause equipment damage.

Refrigerant containers should be opened slowly to avoid injury.

Always use protective gloves and protect your eyes when charging refrigerant.

- The outdoor unit is pre-charged with refrigerant for a 10m pipe run. Please calculate the additional refrigerant required according to the diameter and length of the **liquid line** pipe of the indoor/outdoor connection.

Table 7-4

D(mm) / R(g) / L(m)	Ø 6.35	Ø 9.53	Ø12.7
Less than 10m (One-way)	——	——	——
Additional Refrigerant Over 10m (One-way)	11g/m	30g/m	60g/m

R (g) Additional refrigerant required
L (m) Length of the refrigerant pipe (one way)
D (mm) Liquid line pipe diameter

7.3 Leak testing

Check all the joints with a leak detector or soapy water. (See Fig. 7-8 as reference)

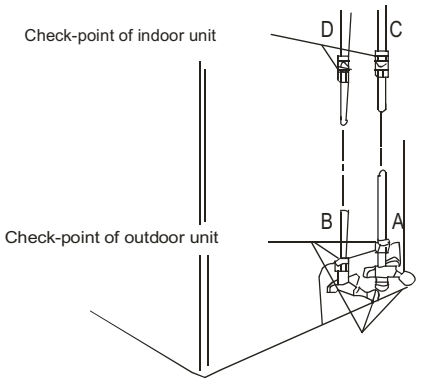


Fig.7-8

NOTE

In the figure above
A.....Low side isolation valve
B.....High side isolation valve
C,D..Joints of the interconnecting pipe to the indoor unit.

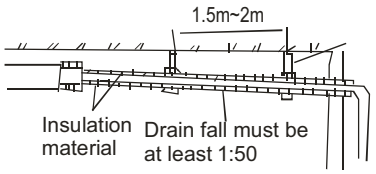
8. CONNECT THE CONDENSATE DRAIN

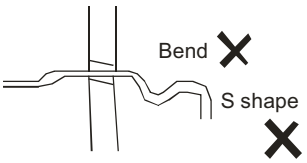
8.1 Install the condensate drain - Indoor Unit

Please use appropriate pipe materials and insulation when installing the condensate pipe.

CAUTION

- The condensate drain of the indoor unit must be insulated to eliminate sweating. Refrigerant connections must also be insulated.
- PVC adhesive must be used to connect the condensate drain pipe. Once installed, thoroughly check for leaks.
- When installing the indoor unit, please ensure that no pressure is applied to any indoor unit pipe connections, it may cause leaks.
- Ensure the condensate drain fall is at least 1:50, and an appropriate condensate drain trap is fitted (field supplied by others).
- The total length of the condensate drain shall not exceed 20m. On long runs, the condensate drain must be adequately supported to prevent low points and/or blockages.
- Refer to the following figures for installation examples.





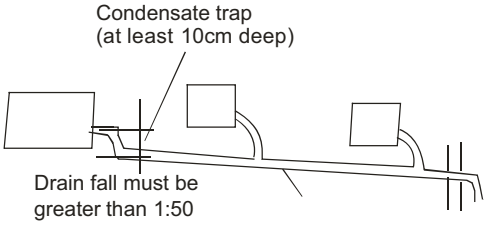


Fig.8-1

8.2 Condensate Drain test

- **Check whether the condensate drain is clear.**
- **Where possible, please test the condensate drain before the ceiling is installed.**

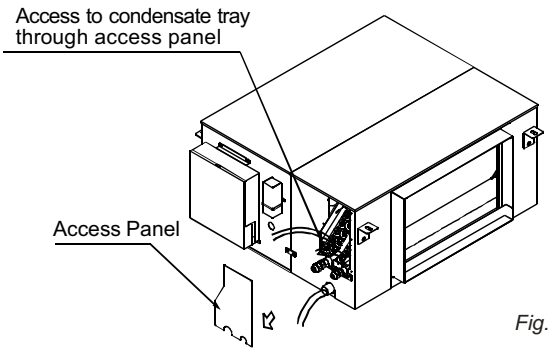


Fig.8-2

(DINLR07Z71 example)

8.3 Installing the outdoor unit drain

Fit the seal into the drain joint, then insert the drain joint into the base pan hole of the outdoor unit. Rotate it 90° to lock securely. Connect the drain joint to the drain pipe (field supplied) Drain to waste in accordance with local plumbing regulations. Drain is required to remove water produced during heating mode *(Refer Fig.8-3)*

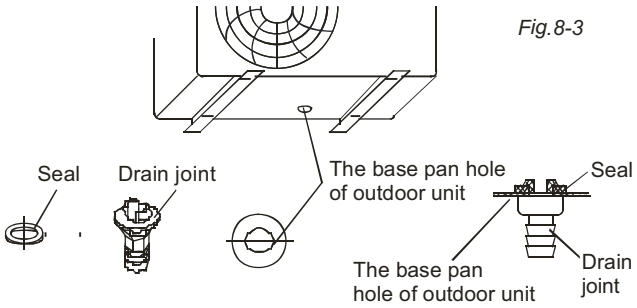


Fig.8-3

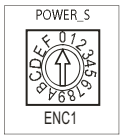
9. SYSTEM SETTINGS

- **The system capacity (power) and the fan speed settings (static pressure) are set on the Fan Coil Unit PCB.**

9.1 Capacity code setting - ENC1

The capacity of the indoor unit has been factory set in accordance with the table below. <u>This setting must not be changed.</u>

Capacity code



■ **Table 9-1**

ENC1	Toggle switch Code	Model
NOTE: The capacity has been factory set This setting must not be changed	4	DINLR05Z71
	5	DINLR07Z71
	7	DINLR09Z71
	8	DINLR11Z71
	9	DINLR14Z71
	9	DINLR17Z71

9.2 Fan speed setting - ENC2

- **The factory toggle switch setting for ENC2 is "0". Adjust the fan setting as required to suit the application. Refer to Tables 9-2, 9-3 & 9-4 for toggle switch settings Also refer to section 9-3 "Fan performance charts" for air quantity and static pressure information .**

■ **Table 9-2 Fan Speed Setting - DINLR05Z71**

FOR SETTING POWER

ENC1							
CODE	4	5	7	8	9	A	B
Power	53	71	90	105	140	160	175
FACTORY SETTING	ACCORDING TO RELATED MODEL.						

FOR MAIN-SLAVE SETTING

SW1	ON 1 2	ON 1 2	ON 1 2	ON 1 2
MODE	MAIN NO SLAVE	MAIN	MAIN	SLAVE
FACTORY SETTING	✓			

FOR SETTING NETADDRESS

S1+S2		ON 1 2		ON 1 2		ON 1 2		ON 1 2
CODE	0~F		0~F		0~F		0~F	
NETADDRESS	0~15		16~31		32~47		48~63	
FACTORY SETTING	✓							

FOR SETTING FAN MOTOR CONTROL THEN NO POWER REQUEST

SW2	ON 1	ON 1
MODE	FAN OFF	FAN ON
FACTORY SETTING	✓	

FOR SETTING STATIC PRESSURE

ENC2					
Code	0	1	2	3	4
HIGH STATIC PRESSURE	0~50	51~80	81~120	121~150	>150
MIDDLE STATIC PRESSURE	0~25	26~37	38~50	51~100	>100
FACTORY SETTING	✓				

FOR TEMP. COMPENSATION

SW6	ON 1 2	ON 1 2	ON 1 2	ON 1 2
DUCT TYPE	3℃	4℃	6℃	According to E Function
CEILING AND FLOOR TYPE	1℃	4℃	6℃	
FOR SETTING CEILING TYPE OR FLOOR TYPE	FLOOR TYPE	CEILING TYPE		
FACTORY SETTING	✓			

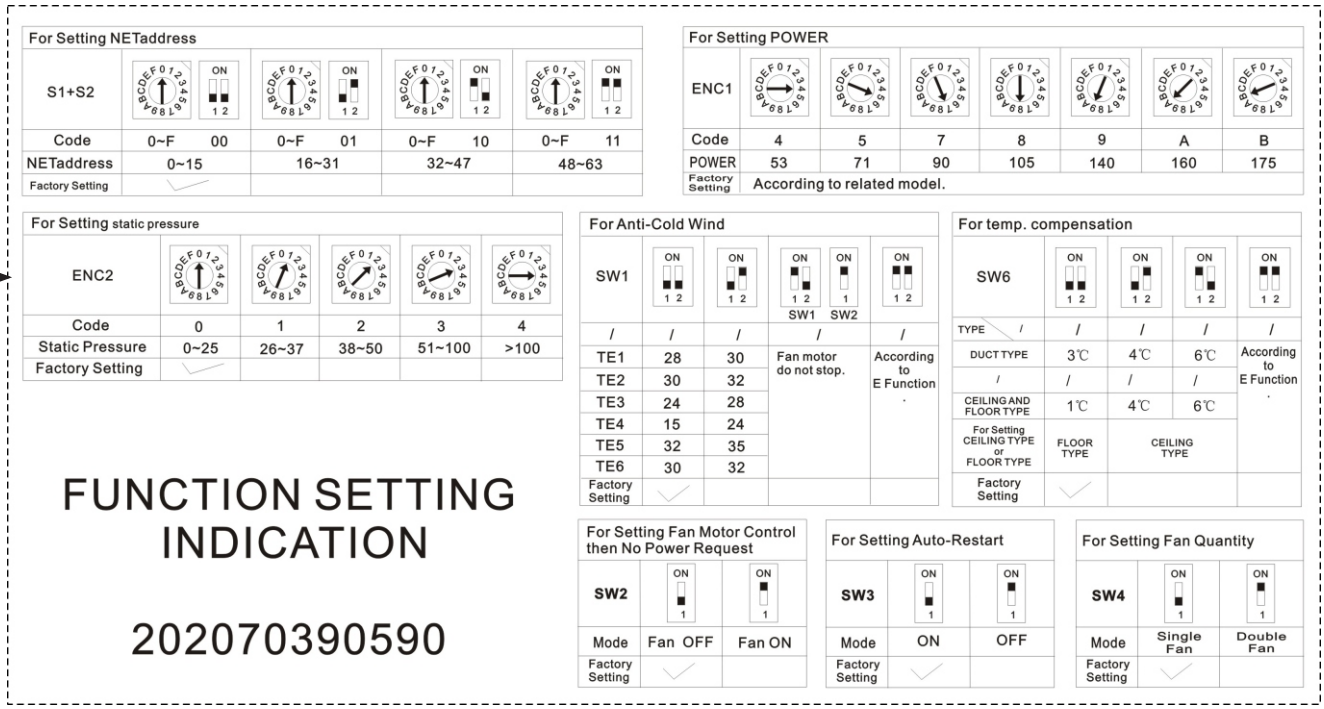
FOR SETTING AUTO-RESTART

SW3	ON 1	ON 1
AUTO-RESTART	ACTIVE	INACTIVE
FACTORY SETTING	✓	

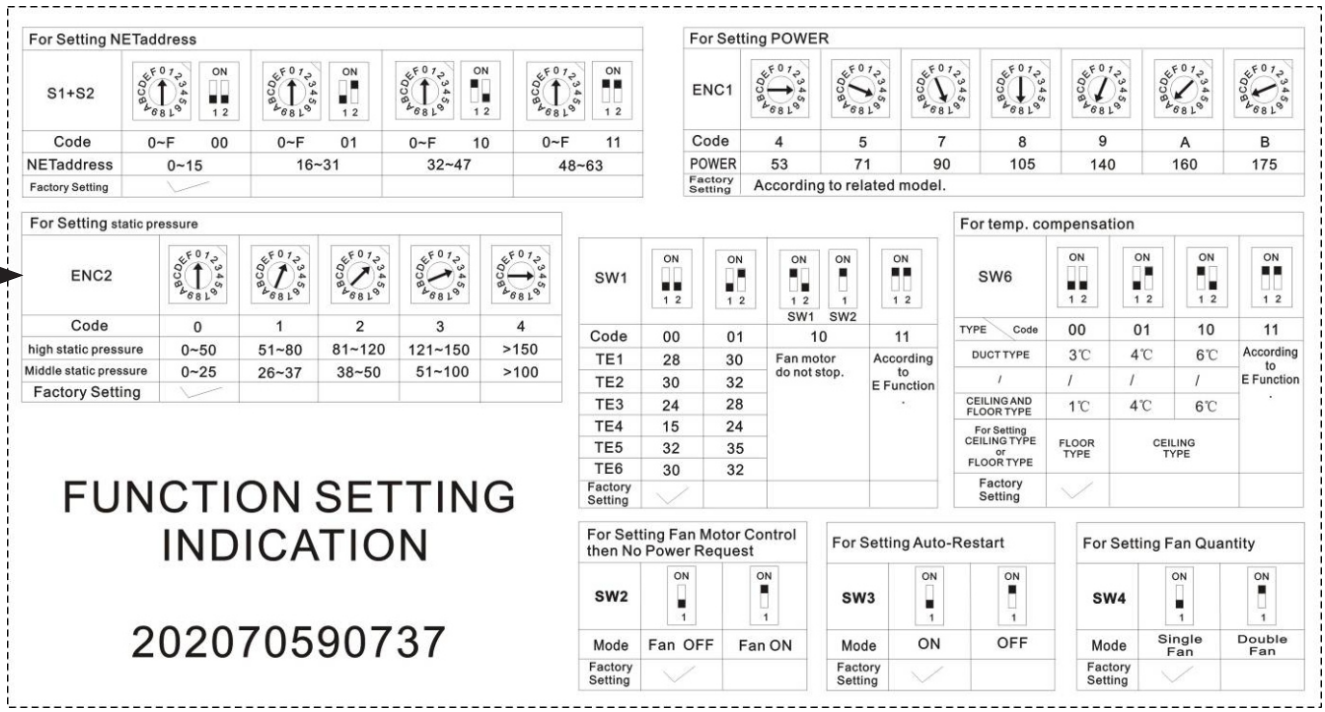
202070290383

FUNCTION SETTING INDICATION

■ Table 9-3 Fan Speed Setting - DINLR07Z71, DINLR09Z71

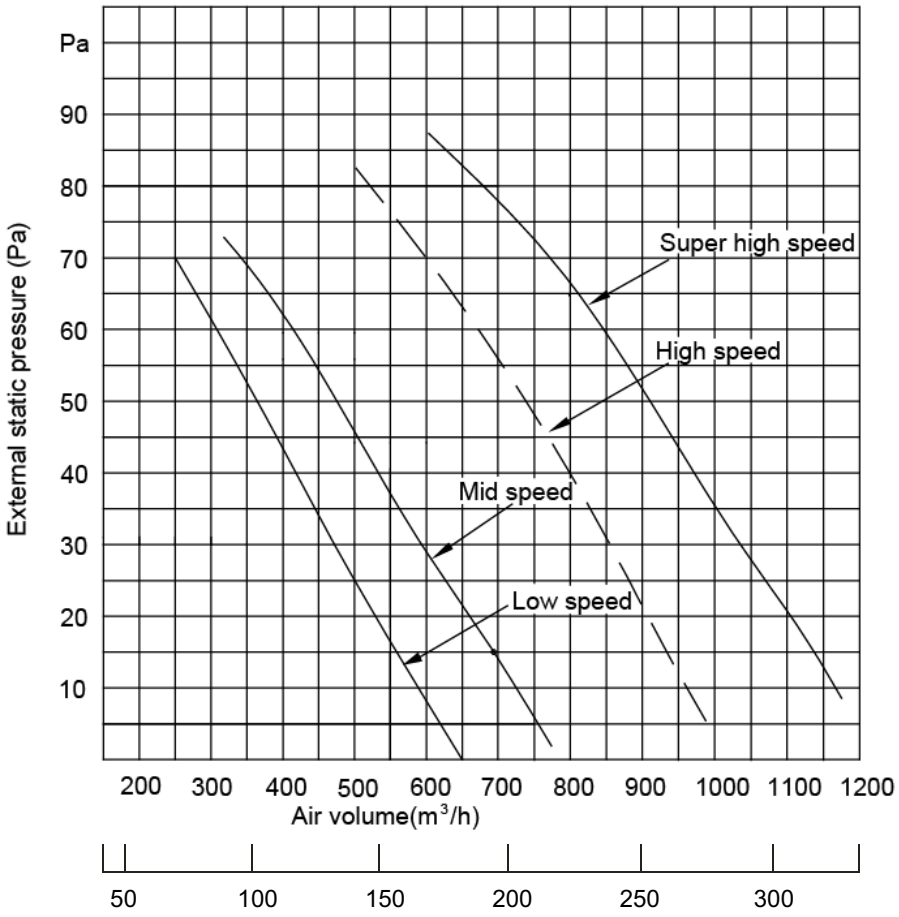


■ Table 9-4 Fan Speed Setting - DINLR11Z71, DINLR14Z71, DINLR17Z71

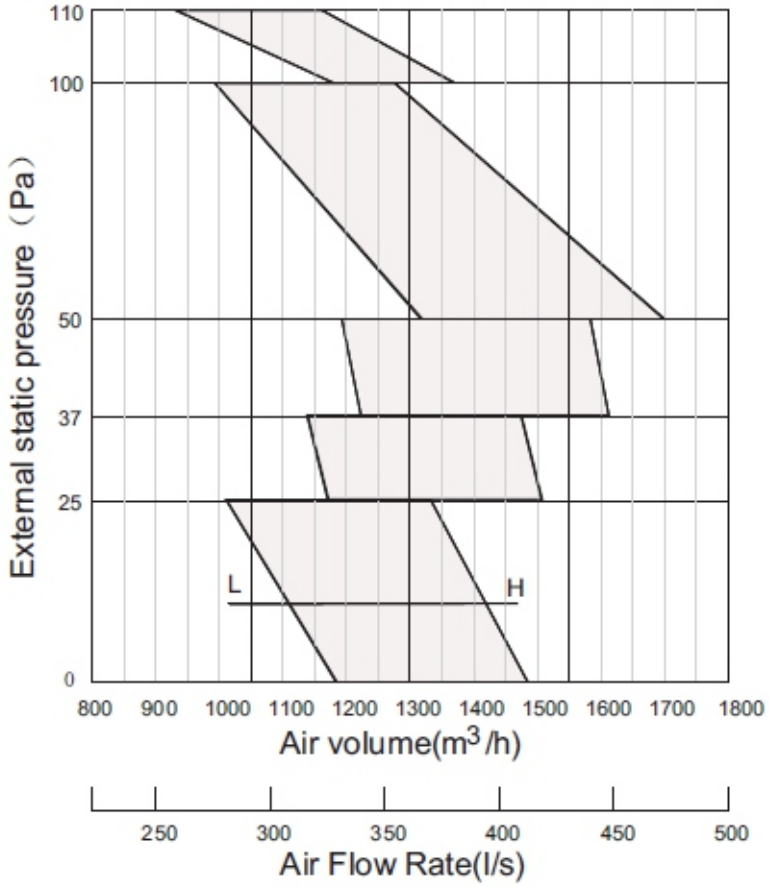


9.3 Fan performance charts

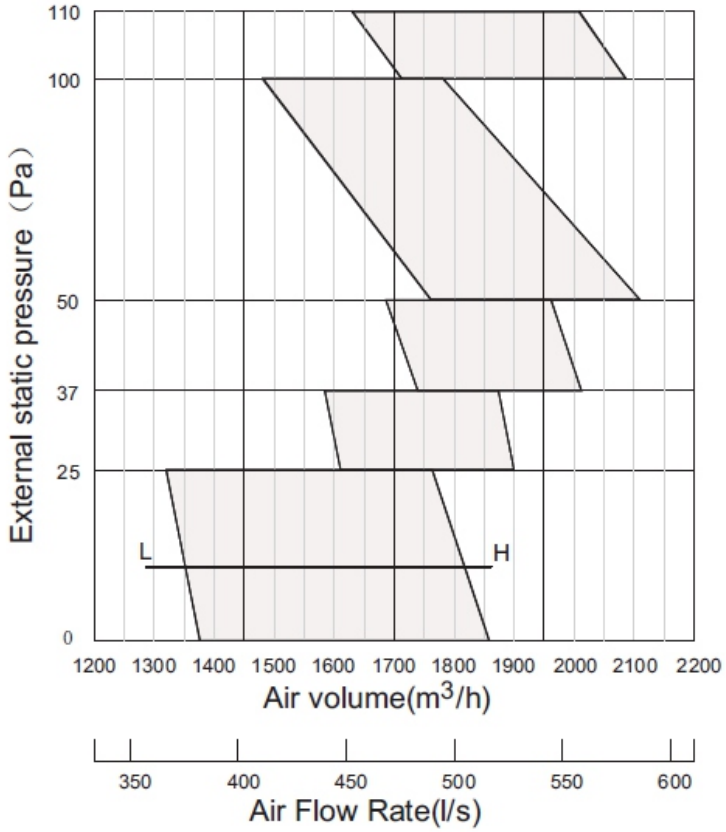
DINLR05Z71 - Mid Static



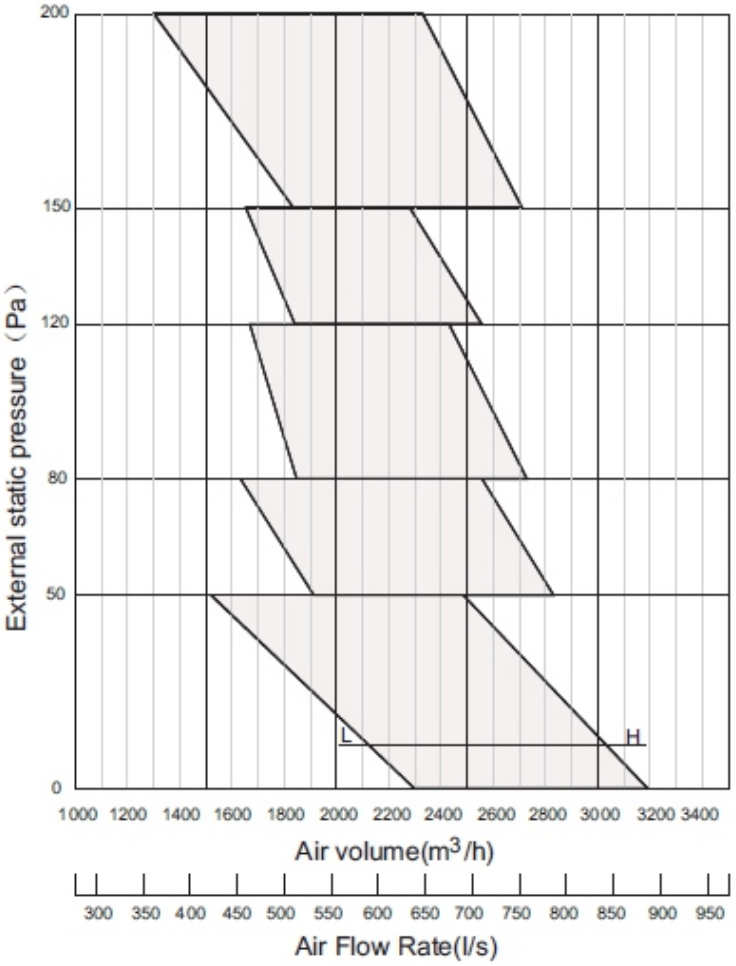
DINLR07Z71



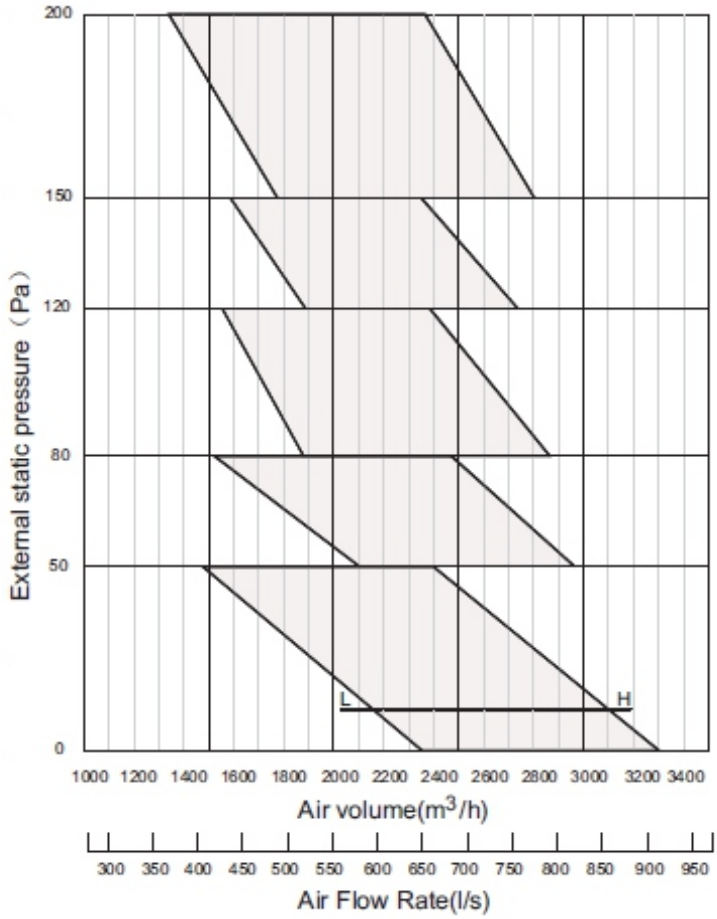
DINLR09Z71



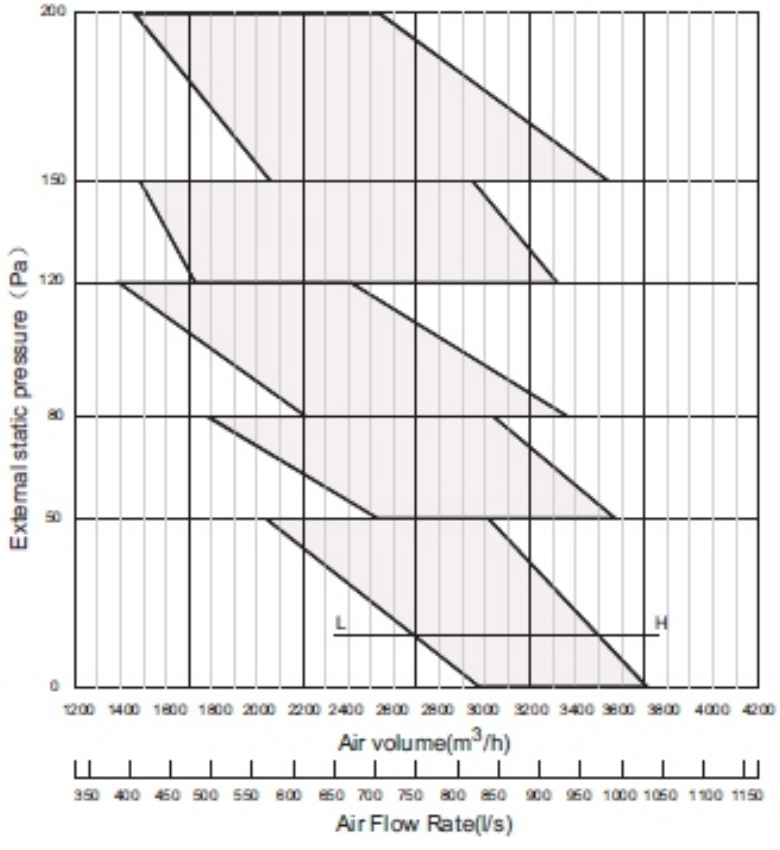
DINLR11Z71



DINLR14Z71



DINLR17Z71



10. REFRIGERATION CIRCUIT SCHEMATIC DIAGRAM

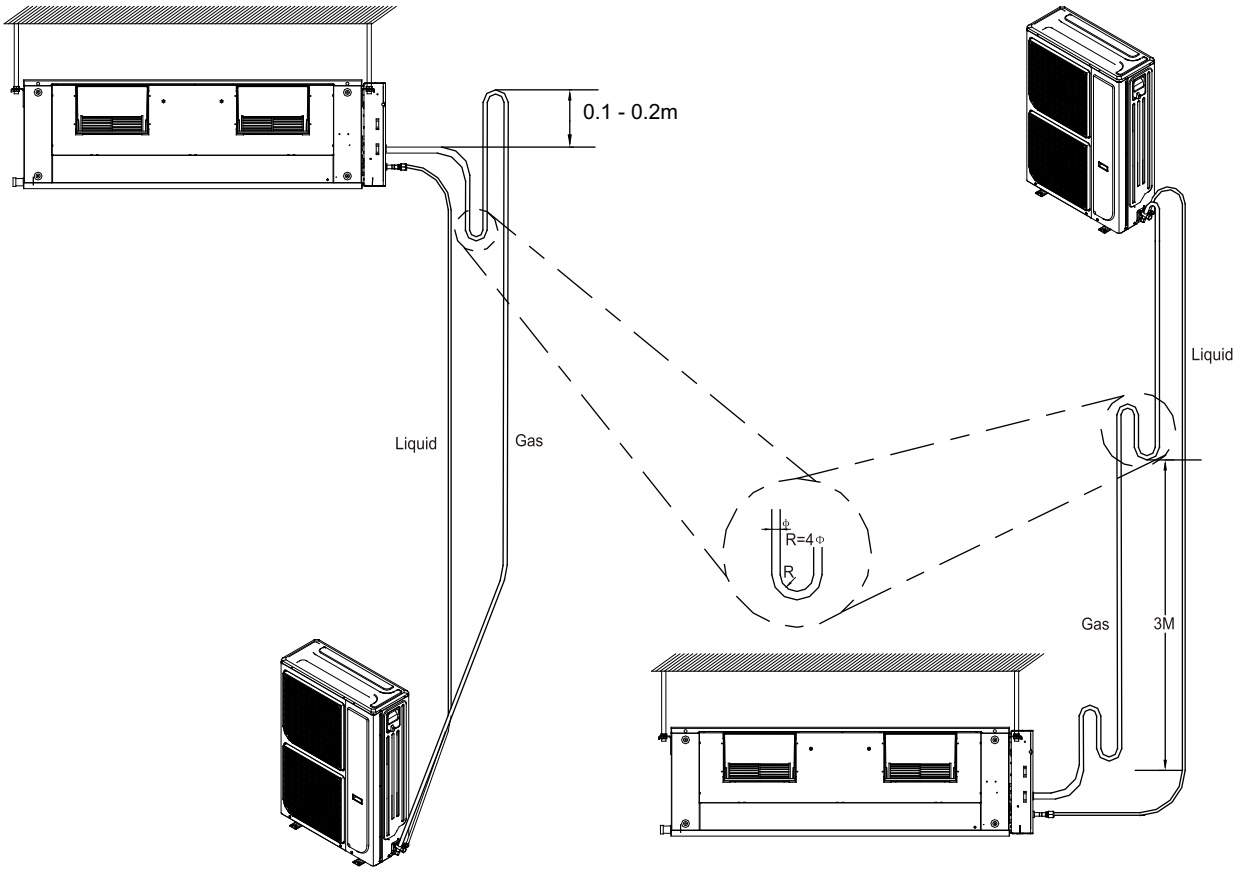


Fig. 10-1

11. WIRING

CAUTION

The system shall be installed in accordance with all local and national wiring regulations.

The air conditioner shall use a separate power supply with adequately rated voltage.

The external power supply to the air conditioner should be earthed appropriately. This earthing applies to both the indoor and outdoor units.

All wiring should be carried out by suitably qualified and trained personnel in accordance with the circuit diagrams.

A dedicated and appropriately sized circuit breaker must be used in accordance with local and national wiring standards.

Be sure to separate the power wiring and the control wiring sufficiently to avoid interference.

Do not turn on the mains power until you have checked the wiring circuit carefully after wiring.

NOTE

Remark per EMC Directive 89/336/EEC
To prevent wiring/control/interference issues during compressor start up, the following installation conditions apply.

1 The unit power supply must be connected directly to the mains power distribution board. The distribution supply must be of a low impedance, normally the required impedance requires a circuit breaker.
2 No other equipment can be connected to this power circuit.
3 For detailed installation compliance please refer to the local electricity supplier to see if there are any restrictions for this type of product.
4 For electrical details of the unit please refer to the rating plate on the product.
5 If you have any questions, please contact Brivis Service.
6 If any wiring cables are damaged, they must be replaced by a suitably trained and qualified technician strictly in accordance with all local and national regulations .
7 The appliance must be installed in strict accordance with all local and national wiring regulations.

11.1 Connecting the wiring cables

- Undo the screws of the access panel cover of the outdoor unit. Pull in the direction of the arrow to pull the access panel down and then out to remove the access panel. This allows access to the compressor compartment and electrical board. *(Refer to Fig.11-1)*
- Connect the appropriate cables to the terminals as identified with their respective matched numbers on the terminal blocks of indoor and outdoor units.
- Re-install the access panel.

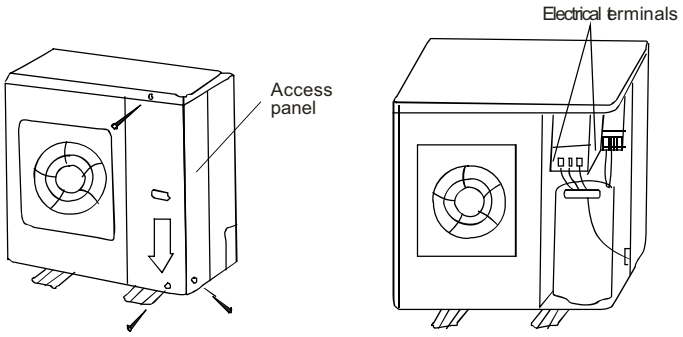


Fig.11-1

11.2 Power Specifications *(Refer to Table 11-1)*

11.3 Wiring Diagrams *(Refer to Fig.11-2~Fig.11-3)*

11.4 Outdoor Units

Undo the screws of the access panel cover of the outdoor unit. Remove the access panel as required to gain access to electricals

NOTE

Please be careful not to scratch the surface of the unit.

NOTE

All the pictures in this manual are indicative for explanation only. They may be different from the air conditioner supplied depending on the model. Actual dimensions should be reviewed.

Fig.11-1 is indicative only, based on one type of outdoor unit. Actual unit supplied may be different.

Power Specifications

Table 11-1

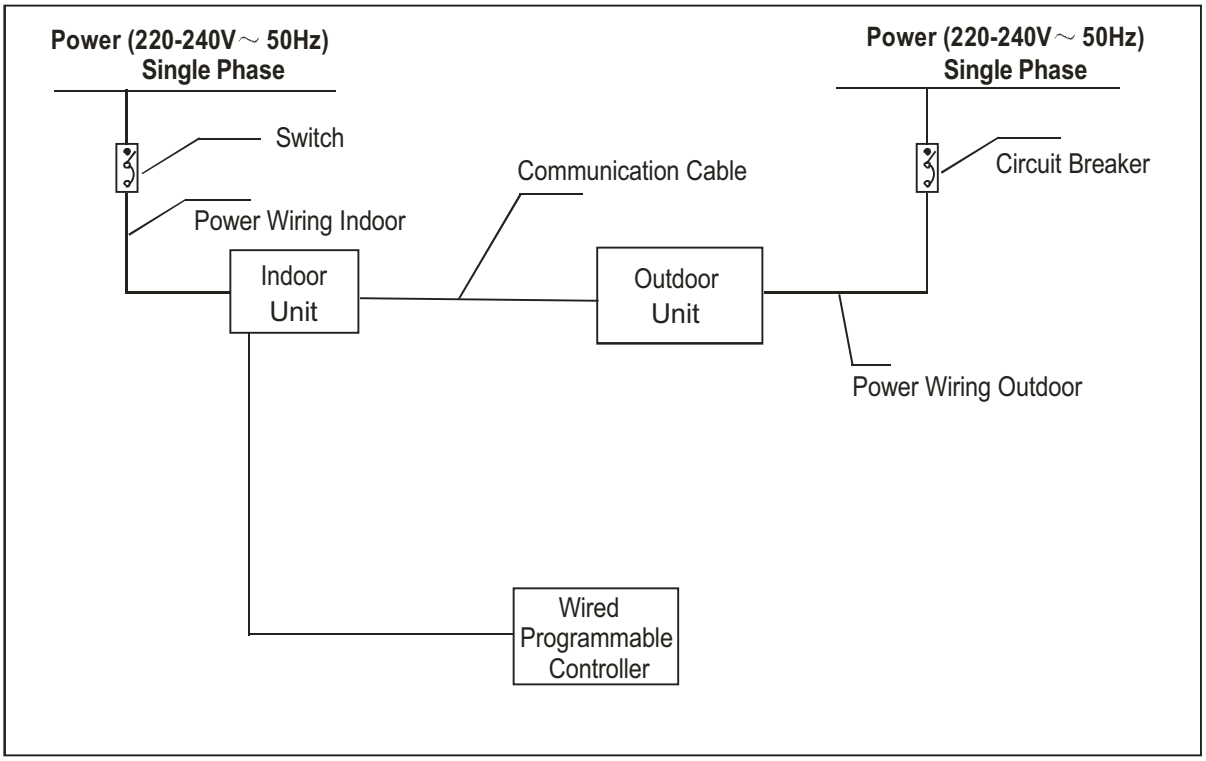
TYPE			SYSTEM					
			05	07	09	11	14	17
INDOOR UNIT	Power Supply	V-Ph-Hz	220~240-1-50					
	Max. Input Current	A	0.91	1.29	4.46	4.46	4.46	4.46
	Rated Input	W	90	150	700	700	700	700
OUTDOOR UNIT	Power Supply	V-Ph-Hz	220~240-1-50					
	Max. Input Power	W	3200	4050	4050	4800	5600	6000
	Max. Input Current	A	14.5	18.5	18.5	22.0	28.0	30.0
	Min. Circuit Breaker Size	A	25	25	25	25	32	32

CAUTION

An appropriately sizedcircuit breaker must be installed in accordance with all local and national wiring regulations .

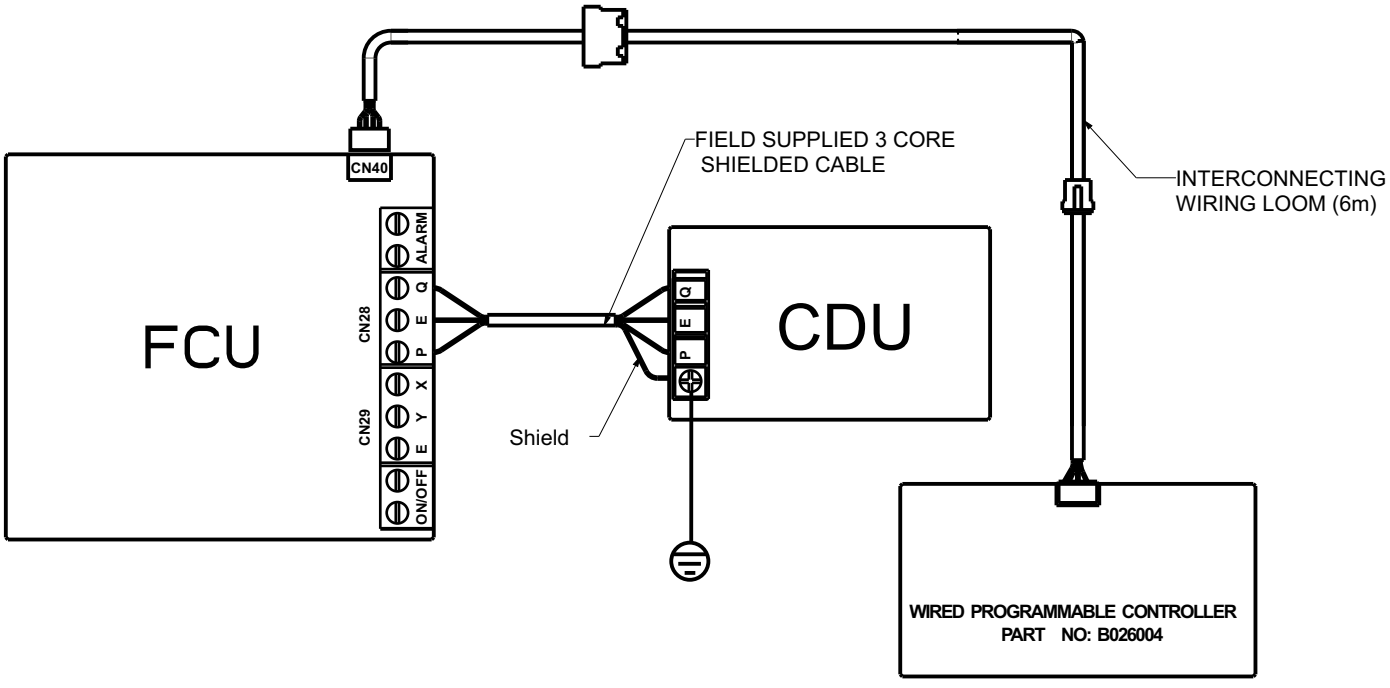
■ Wiring circuit schematic diagram

■ **Fig. 11-2**



■ Programmable thermostat and interconnecting communication cables

■ **Fig. 11-3**



NOTE

12. TEST OPERATION

1 The test operation must be carried out after the entire installation has been completed.

2 Please confirm the following points before the test operation:

- The indoor unit and outdoor unit are installed properly.
- Refrigerant piping and wiring are correctly completed.
- The refrigerant pipe system is leak tested.
- Drains and drainage are clear and unimpeded.
- Pipe insulation is complete.
- The system has been earthed correctly.
- The length of the refrigerant pipe and any added refrigerant quantities have been recorded.
- The power and voltage of the site are alligned with the rating of the airconditioner.
- There are no obstacles impeding inlets or outlets of the outdoor or indoor units.
- The condensing unit suction and liquid isolation valves are both open.
- The crankcase heaters have been energised prior to start up .

3 Test operation.

Set the air conditioner to "COOLING" mode with the controller, and check the following points of operation.

- 1) The indoor unit:
  a. Whether the switch on the controller is operational
  b. Whether the buttons on the controller work correctly.
  c. Whether the air flow is evident from the outlets.
  d. Whether the room temperature is set correctly.
  e. Whether the indicator lights are working normally.
  f. Whether the temporary button works correctly.
  g. Whether the condensate drain is running normally.
  h. Whether there is any vibration or abnormal noise during operation.
  i. Whether the air conditioner heats correctly in HEATING mode.
- 2) The outdoor unit:
  a. Whether there is any vibration or abnormal noise during operation.
  b. Air pathways on the inlet and outlet sides are free and unimpeded by any foreign matter or any obstacles.
  c. Whether any of the refrigerant has leaked.

4 Once the system is fully commissioned, please discuss and advise the user on all aspects of the system including:
  a. Systems configuration and design conditions.
  b. Thermostat and controls operation.
  c. Maintenance requirements (filters, regular servicing)

CAUTION

An inbuilt protection feature prevents the unit from restarting for approximately 3 minutes immediately after it has been shut down.

13. OWNERS MANUAL

USER GUIDE

OPERATION, MAINTENANCE AND WARRANTY

Welcome to high efficiency year-round comfort.

Congratulations on your excellent choice and sound investment in a Brivis Ducted Reverse Cycle Inverter Home Comfort System. Please also take the time to read the contents of this Operating Manual, register your product warranty and retain this document for future reference.

Your new Brivis system represents both the latest in engineering developments and the culmination of many years of experience by one of the most reputable manufacturers of home comfort systems.

Your new unit is among the most reliable home comfort products available today. To achieve the performance and efficiency expected from your new system, please ensure the Installer is a qualified tradesperson, that the Installer has commissioned the unit and instructed you on its operation.

To assure its dependability, spend just a few minutes with this booklet now. Learn about the operation of your system and the small amount of maintenance it takes to keep it operating at its peak efficiency. With minimal care, your Brivis system will provide you and your family with satisfying home comfort - both now and for many years to come.

WARNING

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

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

Do not place articles on or against this appliance

Do not use or store flammable materials near this appliance

Do not spray aerosols in the vicinity of this appliance while it is in operation

Do not modify this appliance

Improper installation, adjustment, alteration, service, maintenance, or use, can cause explosion, fire, electric shock, or other conditions which may cause personal injury or property damage. Refer to this document or and or other accompanying manuals.

For assistance or additional information consult Brivis, a qualified installer or authorized service agency. The qualified installer or agency should use only factory authorised components or accessories if and when servicing this product.

Important Information

To better protect your investment and to eliminate unnecessary service calls, please familiarise yourself with the following:

Your ducted system should never be operated without a clean filter properly installed. Plan to inspect the filter periodically. A clogged filter will increase operating costs and shorten the life of the unit. Supply-air and return-air registers (grilles) should not be blocked or obstructed. Restricted airflow lessens the unit's efficiency and life span.

Outdoor (condenser / compressor) units must have unrestricted airflow. Do not cover the unit, lean any thing against it, or stand upon it. Do not allow grass clippings, leaves, or other debris to accumulate around or on top of the unit. Maintain a minimum of 300mm clearance between the outdoor unit and tall grass, shrubs, vines etc.

Your Thermostat / Controller is the control centre for your system. Please familiarise yourself with its specific operation, as the information following is of a general nature.

Attempting to control the system by other means - for instance, switching the electrical supply power ON and OFF, may cause damage to the unit.

Thermostat 'jiggling' causes rapid-cycling, which is potentially dangerous to the compressor and may blow the protective fuse or circuit breaker device at the mains power supply. Do not adjust the temperature on the thermostat for any reason for at least five (5) minutes after the compressor has shut off.

You may find that you can maintain greater personal comfort by running the FAN continuously. 'Air pockets' can form due to the structure of the building, placement of registers etc. These air pockets may create cool or warm spots. Continuous FAN operation helps minimise any temperature differences.

Systems equipped with electronic air cleaners or humidifiers accessories offer the added benefit of having the air continuously cleaned year round, and humidified during the winter season.

Your system removes humidity from your home during the cooling season. The Indoor unit has a (primary) condensate connected to your drainage system; but an overflow (secondary) drain should also be installed. If water is observed in the overflow drain - it may be clogged, and your installer or Brivis should be contacted for inspection.

Operating Your System

The operation of your systems is controlled by the indoor Thermostat / Controller.

Simply adjust the Controller to maintain the indoor temperature at the level you select, subject to it being within the design conditions of the system. Typical settings are 24^{O}C and 20^{O}C for Cooling and Heating respectively.

The Brivis Inverter System will automatically modulate the outdoor unit capacity in response to the demand of the conditioned space, to help ensure rapid cool down or warm up times, as well as providing more constant temperature control.

Please refer to the Operating Instructions accompanying your Thermostat / Controller.

Cooling Cycle

When operating in the COOL mode, your system will run until the indoor temperature is lowered to the level you have selected (within design conditions). On extremely hot days, your system will run for longer periods at a time and have shorter 'off' periods than on moderate days.

The following typical conditions add extra heat and/or humidity to your home causing your system to work longer to maintain comfortable conditions:

Entrance (external) doors are frequently opened and closed

Operating laundry appliances or running showers

More than the usual lights or electrical appliances operating

More than the usual number of people

Window furnishings open on sunny side of home

System operating at or outside the original system design conditions as specified by your Installer

Heating Cycle

In HEAT mode, the system will provide warmth until the temperature is raised to the level you have selected. The unit will operate for longer periods to maintain a comfortable environment on colder days and nights than on moderate ones.

Defrost Cycle: When the system provides heating to your home and the outdoor temperature drops below 7.2^{O}C, moisture may begin to freeze on the surface of the outdoor coil. If allowed to build up, this ice would impede the airflow across the coil and reduce the amount of heat absorbed from the outside air. To maintain energy efficient operation, your Brivis Heat Pump has an automatic defrost cycle.

The defrost controls will automatically start when there is sufficient ice to interfere with normal heating operation. During defrost, the Indoor Fan will not be running. After the ice is melted, or after a maximum of 10 minutes in defrost mode, the unit will automatically resume normal heating operation.

Do not be alarmed if steam or fog appears at the Outdoor Unit during the defrost cycle. Water vapour from the melting ice may condense into a mist in the cold outdoor air.

Zoned Systems

Some home comfort systems are designed to operate on a zoned basis only – i.e. they are not designed to heat and or cool the entire home or space at one time. Generally, a zoned system will be designed by your Installer for your specific requirements. Your particular zoning configuration and the basis of design should be specified and detailed by your Installer. With zoned systems, always observe the following:

The Return Air grille(s) are generally in the 'Common Zone', and need to be part of the conditioned space at all times

Close off all doors to areas that are not being conditioned – i.e. effectively isolate unconditioned spaces

Set your zoning configuration with your zone controls before starting your Brivis system

Do not attempt to shut down more zones than the minimum as specified by your installer, as this may lead to system shut down

Do not attempt to heat or cool more zones than the maximum specified by your installer as this will prevent the system from being able to maintain design conditions

NOTE: The type of zoned system you have will have been specified by your installer.

This should include information on the total number of zones, the minimum and maximum number recommended to operate at one time to maintain design conditions, and the actual design conditions (Indoor Temperature Control settings at specified Outdoor Ambient conditions for both Heating and Cooling).

Performing Routine Maintenance

With proper maintenance and care, your Brivis system will operate economically and dependably. Maintenance can be accomplished easily by referring to the following general directions.

However, before performing maintenance, consider these important safety precautions:

DISCONNECT ALL ELECTRICAL POWER TO HEAT PUMP BEFORE REMOVING ACCESS PANELS TO PERFORM SERVICE OR MAINTENANCE – NOTE: THERE MAY BE MORE THAN ONE ELECTRICAL ISOLATING SWITCH

- ALTHOUGH SPECIAL CARE HAS BEEN TAKEN TO MINIMISE SHARP EDGES IN THE CONSTRUCTION OF YOUR UNIT, BE EXTREMELY CAREFUL WHEN HANDLING PARTS OR REACHING INTO THE UNIT

Checking The Air Filter

Filters are supplied and fitted by your installer and are not part of the Brivis system. A dirty air filter will cause excessive strain on the compressor and fan blower motor. This can cause the compressor to overheat and automatically shut down. In the extreme, the components will fail and will need to be replaced.

To avoid inefficient or failed operation of your unit, CHECK THE FILTER AT LEAST EVERY 3 TO 4 WEEKS. Replace filters(s) when necessary, or clean them if they are the reusable type. Disposable filters should be replaced by similar, new filters of the same grade and dimensions.

Reusable (permanent) type filters should be washed in a solution of cold to tepid water and very mild detergent, then rinsed and thoroughly dried. THE FILTER MUST BE COMPLETELY DRY BEFORE BEING REPLACED.

To avoid prolonged shutdown of your system while a filter is being cleaned, you may wish to have an extra filter on hand. This would allow you to rotate between the two with minimal downtime for your comfort system. Extra filters are available from your Installer or a Brivis Spare Parts outlets.

Should you have any questions about the removal and/or cleaning of you filter(s), PLEASE contact your Installer for assistance.

If grass clippings, leaves, shrubbery and debris are kept away from the Outdoor Unit, minimal care should be sufficient to keep the system functioning properly. However, if the outdoor coil becomes dirty, use a soft brush or vacuum and soft brush attachment to clean the exterior surface. If dirt is trapped deep within the coil, contact your Installer or Brivis for service.

Unit Support

The indoor Fan Coil Unit (FCU) should be located in a position and in such a manner as specified in the Installation Instructions. The FCU should be maintained at a position that ensures condensate drainage from the unit. In an attic space, ideally the unit will be easily and safely accessible from the ceiling access panel, have a suitable catwalk and platform, and if necessary a service light.

The outdoor Condensing Unit (CDU) requires adequate support to ensure it is level. CDUs generate condensate water in the heating mode; depending on local codes this may need to be discharged in a prescribed manner.

Non–Brivis Field Supplied Accessories

Your home comfort system may include field-supplied accessories that do not form part of this regular maintenance cycle. These may include: ductwork, fittings, filters, grilles, zone motors, auxiliary heaters, third party controls and other non-Brivis supplied items.

These items may also require attention in accordance with the Original Equipment Manufacturer's (OEM) recommendations. Your installer can provide details in this regard, and should be consulted for any warranty or service matters for these items. Whilst they are an integral part of your home comfort system, these non-Brivis items are not covered by your Brivis Product Warranty.

Third party controls and zoning systems that interfere with the correct operation of your Brivis Heat Pump system, and any consequential damages to Brivis equipment as a result of such incorrect operation, will not be covered by Brivis Warranty.

Service, Maintenance and Warranty

To ensure continuing high performance and to minimise the possibility of premature equipment failure, periodic maintenance should be performed on the air conditioning equipment. It is recommended the unit be maintained by a qualified person as follows:

The minimum maintenance requirements for this equipment are as follows:

Monthly

Inspect and clean Return Air Filters.
Replace throwaway type filters when they become clogged with dust and lint or clean cleanable type filters monthly

Yearly

Inspect indoor coil, internal drip tray and condensate drain. Clean when necessary
Inspect the heater's fan motor and wheel for cleanliness and alignment. Clean and align the motor assembly where applicable
Inspect outdoor coil. Clean when necessary.
Inspect the outdoor unit. Ensure air flow is not disturbed by any obstacle around it.
Inspect outdoor fans and motors. Ensure that fan blades are clean and adequately balanced
Inspect the unit cabinet and insulation for damage and corrosion. Repair where necessary. Check for vibration and excessive noise. Correct where necessary
Inspect refrigerant tubing for oil accumulations. If oil is detected, leak test refrigerant tubing using an electronic leak detector or liquid soap solution
Check refrigerant charge by measurement of superheat and sub cooling. Where necessary, adjust charge to achieve optimum performance
Check the tightness of electrical connections

Brivis Customer Care Program

Brivis products are renowned for providing years of trouble free performance. To be at their most efficient performance, like most things, they need a little care. So to ensure that every Brivis unit is always in perfect condition we have established the Brivis Care Program for our valued customers.

When you are a member of our Care Program you will receive a courtesy contact regarding maintenance service to your unit. This service includes cleaning the unit and ensuring that the system is operating at maximum efficiency. Not only does this guarantee peak performance, it also allows any minor problems to be detected early. This ensures that the system will always be ready when you need it.

Brivis Customer Care Program Membership

The Brivis Customer Care Program is designed to help you get the most out of your new unit.

We may contact you before each winter or summer season with some preferential offers for preventative maintenance services which will keep your Brivis unit in great condition!

Please note: Preventative Maintenance Services are chargeable and not covered under your product warranty. Your unit must have reasonable and safe access and be installed inline with the installation instructions supplied with the unit. An extra charge may apply if Brivis is required to allocate two service personnel to attend, in accordance with OH & S requirements.

Please register your warranty details on line at brivis.com.au

For your records:

Name _

Site Address _

_ State _ _ _ _ _ _ _ _ _ _ _ _ _ _ _Postcode _ _ _ _ _ _ _ _ _

Equipment Details:

Model No (s) Indoor _ Outdoor _

Serial No (s) Indoor_ Outdoor _

Date of purchase / installation_ _

Installer Name _

Installer Contact Details _

Privacy Notification

Brivis Climate Systems Pty Ltd is the registered owner of the Brivis brand. Brivis will collect "personal information'' from you when you complete your warranty and maintenance registration form. This personal information is collected under the guidance of the Privacy Information Protection Act 1998. The purpose of collecting this information is to:

- Process your request for us to provide service activities for you
- Register your purchase of equipment for warranty
- Register your request for a survey/quotation for Heating Ventilation Air Conditioning goods and services

The intended recipients of the information are:

- Employees of Brivis
- Federal and State Governments who may require the information for administration purposes

While the supply of the information by you is voluntary, if you cannot provide or do not wish to provide the information sought, Brivis may not be able to provide the services you request. If you have already provided information but have changed your mind and do not want the information used, you may make application for access or amendment for that information not to be used.

You have a right of access to, and correction of, the information concerning yourself in accordance with the relevant procedures under the Act.

Enquiries concerning this matter can be addressed to the Business Practices Officer of Brivis, who can be contacted on 1300 BRIVIS.

Bonus offer
when you
register your
product online
brivis.com.au

Terms of Warranty – Australia and New Zealand

Brivis Climate Systems Pty. Ltd. ABN 64 096 079 088, AU24752 61 Malcolm Rd, Braeside, VIC 3195.

1. Definitions

The terms listed below shall have the following meanings:

1. **"Authorised Service Representative"** means an independent service contractor authorised by Brivis or Brivis service personnel.
2. **"Brivis"** means Brivis Climate Systems Pty Ltd ABN 64 096 079 088 and any related company.
3. **"Certificate(s) of Compliance"** means certificate(s) issued by licensed personnel including plumbers, refrigeration mechanics, electricians or other relevant trades people to certify that any prescribed works comply with applicable regulatory requirements.
4. **"Certificate(s) of Occupancy"** means certificate(s) issued by the local council which certifies that a home can be occupied.
5. **"Installation Site"** means the site at which the Product is originally installed.
6. **"Normal Business Hours"** means 8:30am to 5:00pm week days excluding public holidays.
7. **"Operating Instructions"** means the user manual or other documentation which provides detailed instructions on the proper operation and maintenance of the Product.
8. **"Other Applications"** means any Product used for non-Residential and Light Commercial Applications. Other Applications may include but are not limited to factory, IT/Server room, telephone exchange, processing area (e.g. bakery, kitchen, warehouse, swimming pool, agricultural facilities such as a nursery) and any Product which has been installed, for whatever purpose as a retrofit component to an existing system.
9. **"Purchaser"** means the end user of the Product, the person named as owner in the Warranty certificate, the holder of the Proof of Purchase or the holder of a property transfer document where the Product is included as part of the chattels.
10. **"Product"** means the equipment purchased by the Purchaser and described in Section 2 of this document.
11. **"Proof of Purchase"** means a Tax Invoice or Receipt in respect of the Product. In the case of new constructions, a Certificate of Occupancy or a Certificate of Compliance that details the date of installation or commissioning will suffice.
12. **"Qualified Installer"** means the qualified installation contractor who is responsible for performing the installation work in the manner prescribed by local and statutory regulations, including compliance with any relevant Australian Standards, and to Brivis specifications.
13. **"Residential & Light Commercial Applications"** means any Product for use in both residential and light commercial applications. For example, homes, offices, hotels, apartments, nursing homes, hospitals, health care premises, shopping centres, and retail stores, where the Product is solely used for purpose of human comfort under standard operating conditions.

2. Terms of Warranty

2.1 Subject to the Terms of Warranty set out in this document, effective from the date of purchase by the Purchaser, the Product is warranted to be free from defects in materials and factory workmanship for the period set out in the table below:

	PRODUCT GROUP	PARTS	LABOUR
Residential & Light Commercial	Evaporative Coolers & Ducted Gas Heaters (excluding Compact Classic Series)	5 YEARS	5 YEARS
	Ducted Gas Heaters - Compact Classic Series	3 YEARS	3 YEARS
	Refrigerated Airconditioning Products	5 YEARS	5 YEARS
	Ducted Gas Heaters - Heat Exchangers & Burners Evaporative Coolers - Structural components only	10 YEARS	N/A
Other Applications	All Product Groups	1 YEAR	1 YEAR
Aftermarket	Spare Parts	1 YEAR	N/A

2.2 Brivis will determine in its sole discretion, which classification the Product fits into and the corresponding Warranty that shall apply.

2.3 An Authorised Service Representative will repair or replace, at its option, the Product or any part of the Product that its examination shows to be defective. The repair or replacement shall be performed during Normal Business Hours by an Authorised Service Representative. Repair by persons other than an Authorised Service Representative may void the Warranty.

2.4 The Warranty of the Product requires that, in addition to all other conditions, the Purchaser conducts regular and/or preventative maintenance as may be specified by Brivis (e.g. Operating Instructions) and required by the level of usage and the usage environment, including the use of correct and uncontaminated refrigerants and lubricants.

3. Conditions of Warranty

3.1 The Purchaser may only obtain the benefit of the Warranty if the Purchaser:

a) maintains and services the Product in accordance with the instructions set out in the service section of the relevant Operating Instructions, Service or Owner's Manual;

b) complies with clause **Error! Reference source not found.** below (titled "Purchaser's Responsibilities");

c) notifies Brivis within 30 days of a defect developing, that a claim is being made under this Warranty; and

d) provides, in support of the claim made under this Warranty, a Proof of Purchase.

3.2 This document represents the only Warranty given by Brivis and no other person or organisation is authorised by Brivis to offer any alternative.

4. Exclusions

4.1 This Warranty does NOT cover:

a) damage, problems or failure resulting from improper operation and/or inadequate maintenance by the Purchaser (refer Purchaser's Responsibilities section below);

b) damage, problems or failure resulting from improper or faulty installation. The Product must be installed by a Qualified Installer in accordance with applicable regulations. Where applicable,

c) damage, problems or failure caused by factors external to the Product including, but not limited to, faulty or poor external electrical wiring, incorrect or faulty power supply, voltage fluctuations, over voltage transients or electromagnetic interference, inadequate or faulty gas, drainage services, or water services, including water pressure, and non potable water;
d) damage, problems or failure caused by acts of God, fire, wind, lightning, flood, storm, vandalism, earthquake, war, civil insurrection, misuse, abuse, negligence, accident, pests, animals, pets, vermin, insects, spiders or entry of foreign objects or matter into the Product such as dirt, debris, soot or moisture;
e) damage, problems or failure caused by weather including, but not limited to, hail, salt or other corrosive substances;
f) Product which has been installed in a portable or mobile building, structure or application including, but not limited to, a caravan or boat;
g) Product which is being re-installed at a location other than the original site;
h) any consumable item supplied with the Product including, but not limited to, an air filter, battery, fan belt, igniter or cooler pad;
i) installation of third-party components that may be attached to the Product. These include, but are not limited to, control wiring, ducting, return air filter(s) grille, register, diffuser, zone motors, controls/thermostats, pipe work and fabricated or added components. These items remain solely the responsibility of the Qualified Installer;
j) installations where electrics/electronics may be subjected to moisture/chemicals (e.g. swimming pools or nurseries);
k) any repair, which is needed as a result of an accident, misuse, abuse or negligence;
l) Product that is utilised in an environment (indoor and outdoor) outside its specified operating range; and
m) fair wear and tear to the Product.

5. Limitations

5.1 Product fitness for purpose and overall system design, sizing and application are not the responsibility of Brivis. This includes but is not limited to the heat load calculations, airflow and system balancing.
5.2 This Warranty does not apply to any Product installed at an Installation Site which is outside Australia or New Zealand.
5.3 Except where inconsistent with the purchaser's statutory rights and the rights given by this Warranty, all of the warranties and all liabilities of Brivis for any direct, special, indirect or consequential loss or damage, any damage or expense for personal injury or any loss or destruction of property arising directly or indirectly from the use or inability to use the Product or any of its parts and servicing the Product, are expressly excluded.

6. Travel, Transport & Access Costs

6.1 The Purchaser must pay freight charges, in-transit insurance expenses and travelling costs for repairs/replacements under this Warranty, that are required to be performed 100km or more from the nearest Brivis branch or Authorised Service Representative.
6.2 Subject to clause 6.3, Brivis will pay freight charges, in-transit insurance expenses and travelling costs for repairs/replacements that are required to be performed less than 100km from the nearest Brivis branch or Authorised Service Representative. In this circumstance:
a) Brivis will arrange for such repairs/replacements and make any payment directly to the third party to provide the freight, in-transit insurance or travel services; or

b) if Brivis considers appropriate, it will authorise the Purchaser in writing to pay for the relevant freight charges, in-transit insurance expenses or travelling costs and then, upon provision by the Purchaser to Brivis of a tax invoice showing those costs have been incurred, reimburse the Purchaser for such costs which are within the terms of the authorisation. If the Purchaser pays for the relevant freight charges, in-transit insurance expenses or travelling costs without written authorisation from Brivis, Brivis will not reimburse the Purchaser for such costs.

6.3 The Purchaser must pay all costs and expenses in respect of:

a) making the Product accessible for service. For example, restricted access or working at heights, or the labour cost for an additional person due to OHS requirements;
b) providing a safe working environment for installation, service, maintenance or repair of the product;
c) any surcharge applicable in respect of supplying replacement parts outside Normal Business Hours; and
d) any other costs and expenses in relation to claiming the Warranty that is not covered by clause 6.2.

7. Purchaser's Responsibilities

7.1 The Purchaser must operate and maintain the Product in accordance with the Operating Instructions and service maintenance schedule, including conducting an appropriate number of services to the unit during the Warranty period, based on usage and the usage environment including but not limited to;

a) regularly cleaning the air filter(s) and replacing them where necessary;
b) replacing expired batteries or other consumables as required;
c) ensuring that the condensate drain is kept clean and clear of obstructions;
d) ensuring that outdoor units have unrestricted airflow and adequate clearances;
e) ensuring that additional corrosion protection is applied to the Product if it is installed in a corrosive environment, for example, close to the sea.

8. Statutory Rights

8.1 The benefits given by this Warranty are in addition to other rights and remedies of the consumer under a law in relation to the goods or services to which the Warranty relates.

8.2 Australian purchasers have their benefit of statutory rights and nothing in these terms of Warranty has the effect of excluding, restricting or modifying those rights. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

8.3 For New Zealand purchasers nothing in these terms of Warranty is intended to limit the rights you may have under the Consumer Guarantees Act 1993. The Consumer Guarantees Act 1993 does not apply if the Product is acquired for the purpose of a "business" (as defined in the Act).

Effective October 2013

For Australian Warranty Claims call 1300 Brivis (1300 274 847)
or send to Brivis Warranty Claims 61 Malcolm Road, Braeside VIC 3195.
For New Zealand Warranty Service call 0800 WARMAIR (0800 9276 247) - Brivis only.
The PURCHASER WILL BE CHARGED for work done or a service call(s) if:-
the problem is not covered by these Terms of Warranty;
there is nothing wrong with the product (e.g. instructing Purchaser on the operation of the Product and/or controls); or if the Purchaser is unable to provide Proof of Purchase validating that the Product is within the Warranty period. We recommend that you read the operating instructions, and in particular the troubleshooting section of the Operating Instructions, before you make a Warranty service call. Proof of Purchase must be presented.

NOTES

For all your Sales and Service enquiries call us on **1300 BRIVIS** (1300 274 847)

www.brivis.com.au

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Brivis Climate Systems Pty. Ltd.
ABN 64 096 079 088
AU24752