KXL

R-407C

900 x 900 cassette units

		Cooling capacity (W)	Heating capacity (W)
1~230V 50Hz	KXL 24	7150	7520
	KXL 30	9100	9200
	KXL 36	10100	10800
3N 400V 50Hz	KXL 30	9100	9200
	KXL 36	10400	11000
	KXL 45	12500	14200

Airwell

CASSETTES RANGE

Technical Instructions Manual
TM-KXL-A-1-GB
Cancels and replaces :

KXL

CONTENTS

PRESENTATION

These units are optimised for operating with chlorine-free **R-407C** refrigerant having no harmful effects on the ozone layer.

Refer to the corresponding manuals and always follow their recommendations when working on the units.

The **"KXL Cassettes"** range of individual air conditioners with its standard square 900 x 900 mm format and extremely silent operation is perfectly suited to suspended ceiling mounting. This series has been designed for easy servicing and offers quick access to all components after simple removal of the fascia panel.

These appliances are available in the two versions :
- **Cooling Only** version with capacities from 7150 to 12500 W.
- **Heatpump** version with capacities from 7520 to 14200 W.

1. KXL air treatment cassette
This unit allies quality with reliability and ease of installation.
It comprises :
- A low height casing (KXL 24/30 : 230 mm, KXL 36/45 : 300 mm) to be flush-fitted easily into all types of suspended ceilings.
- Three fan (ventilation) speeds.
- Treated air blowing on all 4 sides with motorised grille flaps (AUTOSWEEP).
- Integrated condensate lift pump.
- New air intake.
- RC4 infrared remote control with display (see page 33).
- Air filter.

2. Air condenser unit
Of compact design, taking up very little floor area, this unit houses the "Scroll" compressor, the fan-condenser assembly and the electrical connections and control box.

3. Refrigeration connections
Both the indoor and outdoor units are equipped with "FLARE" connectors, enabling the use of "FLARE" refrigeration pipes (refrigeration quality copper pipe equipped with nuts at both ends).

4. Accessories
a) Available as an option : supply with electric heating
KXL 24 : 1800 W
KXL 30 / 36 : 4200 W
KXL 45 : 5100 W
b) Hardwired RCW-2 type wall-mounted remote control (See page 35).

5. Documentation
Each unit is supplied with general wiring and connection diagrams and specific installation and operation instructions.
Each accessory (or kit) is accompanied by technical specifications for fitting and adjustment as required.

TECHNICAL SPECIFICATIONS

These characteristics are provided for information purposes only and are subject to change without prior notice.

Models		KXL 24	KXL 30		KXL 36		KXL 45
R-407C refrigerant		•	•	•	•	•	•
1~230V Power supply		•	•		•		
3N~400V Power supply				•		•	•
Nominal cooling capacity (1) Nominal power input in cooling only mode	W W	7150 2750	9100 3340		10100 3600	10400 3700	12500 5000
Nominal heating capacity (2) Nominal power input in heating mode Cœfficient of performance	W W W/W	7520 2620 2.87	9200 3270 2.81		10800 3840 2.81	11000 4070 2.7	14200 5260 2.7

INDOOR UNIT

Acoustic pressure at 2.5 m					
• LS Low Speed • MS Medium Speed • HS High Speed	dBA dBA dBA	38 41 44	47 50 52	42 44 46	45 47 50
Airflow					
• LS Low Speed • MS Medium Speed • HS High Speed	m^3/h m^3/h m^3/h	690 800 910	985 1120 1200	1025 1125 1220	1200 1330 1525
ST indoor unit dimensions and weights					
• Length x Depth x Height • Grille	mm mm	840x840x230 950x950x46		840x840x300 950x950x46	
• Unit weight • Grille weight	kg kg	36 6		48 6	
• Packed dimensions	mm	1011x931x333 + 1013x1013x145(grille)			

OUTDOOR UNIT

Acoustic pressure at 1 m	dBA	60	62	65	70
Airflow	m^3/h	2480	3110	4150	4345
Dimensions and weights					
• Length x Depth x Height	mm	846x302x690	900x340x860	900x350x970	
• Weight	kg	65	82	93	95
• Packed dimensions	mm	990x430x770	903x435x907	1020x985x406	

ACCESSORIES

Electric heating • Nominal capacity	W	1800	4200	4200	5100
RCW-2 wall mounted remote control		•	•	•	•

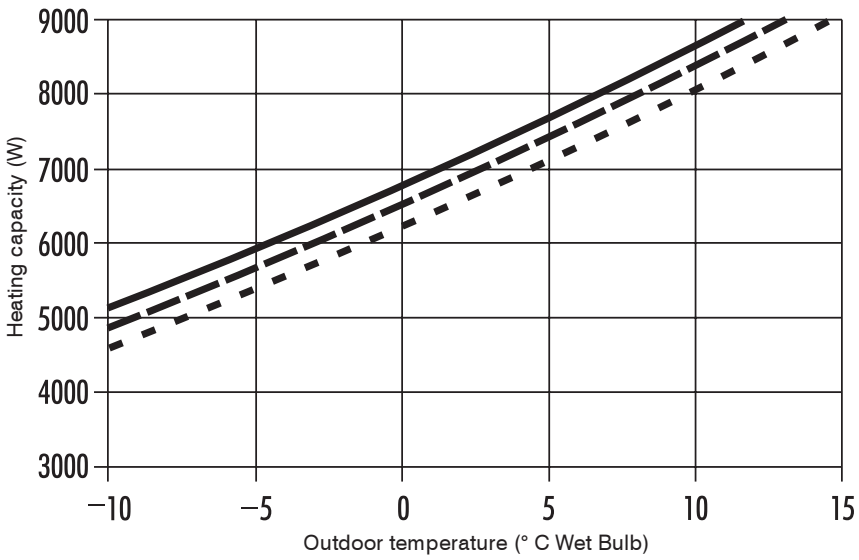
Note :

(1) International conditions :
(NF EN 255.2 / 814.2) - 27° C / 19° C wet bulb.
Outdoor air : 35° C / 24° C wet bulb.

(2) International conditions :
(NF EN 255.2 / 814.2) - 20° C / 12° C wet bulb.
Outdoor air : 7° C / 6° C wet bulb.

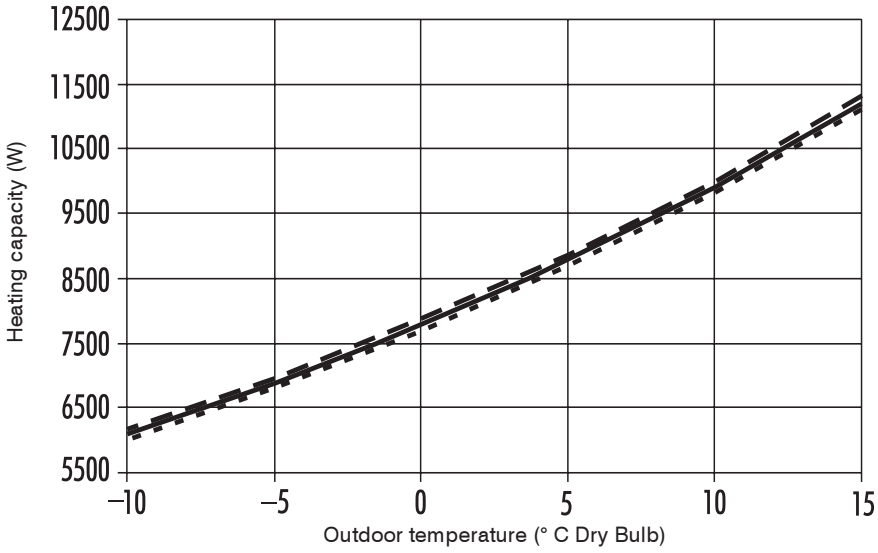
HEATING CAPACITY

KXL 24
Single phase



Indoor temperature
15° C Dry Bulb
20° C Dry Bulb
25° C Dry Bulb

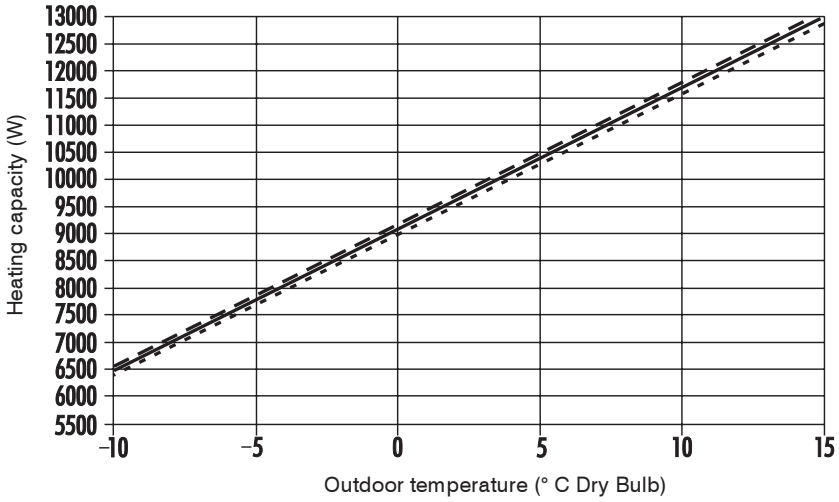
KXL 30
Single phase
Three phase



Indoor temperature
15° C Dry Bulb
18° C Dry Bulb
20° C Dry Bulb

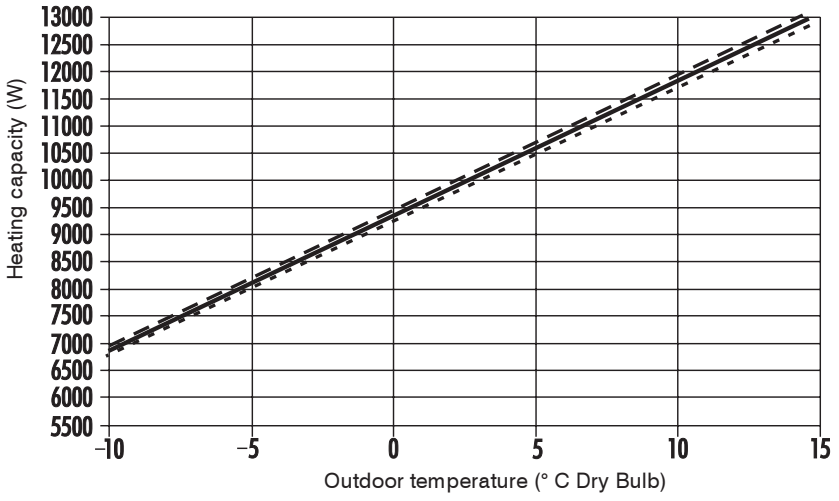
HEATING CAPACITY

KXL 36
Single phase



Indoor temperature
15° C Dry Bulb
18° C Dry Bulb
20° C Dry Bulb

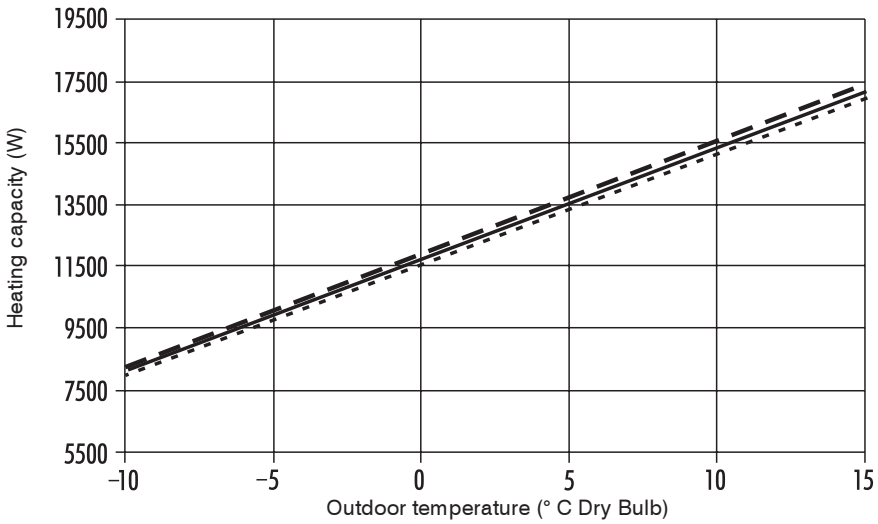
KXL 36
Three phase



Indoor temperature
15° C Dry Bulb
18° C Dry Bulb
20° C Dry Bulb

HEATING CAPACITY

KXL 45
Three phase

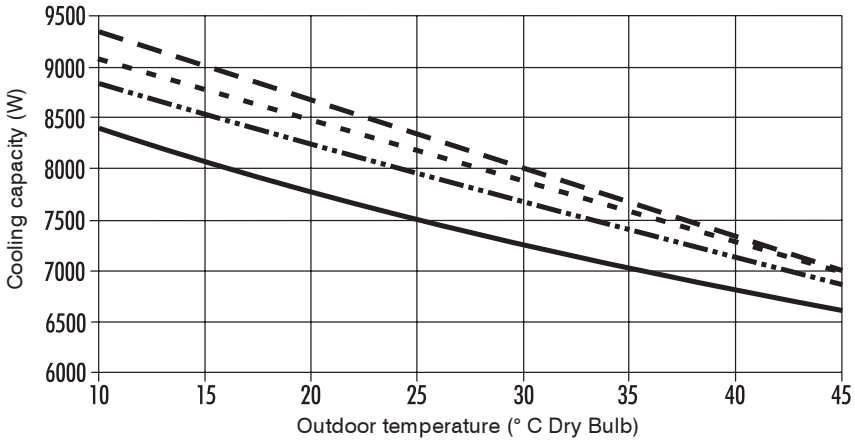


Indoor temperature
15° C Dry Bulb
18° C Dry Bulb
20° C Dry Bulb

KXL

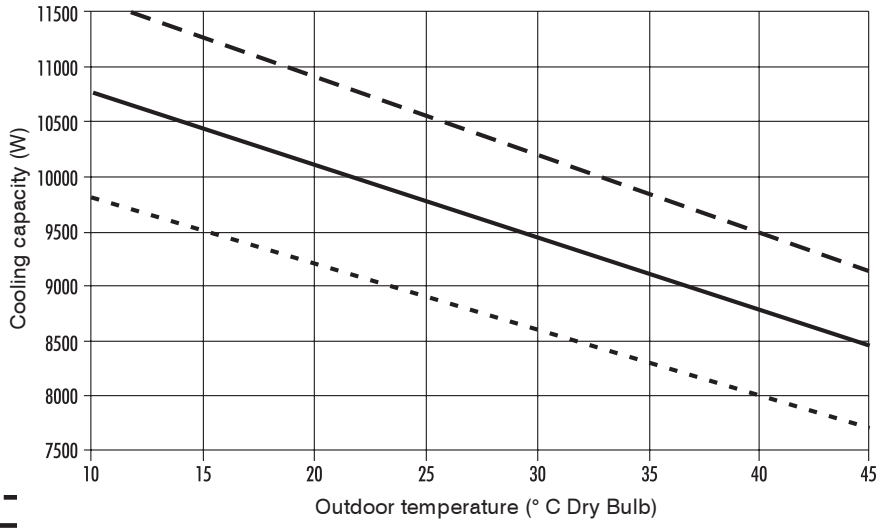
COOLING CAPACITY

KXL 24
Single phase



Indoor temperature
24° C Wet Bulb
22° C Wet Bulb
20° C Wet bulb
18° C Wet Bulb

KXL 30
Single phase
Three phase

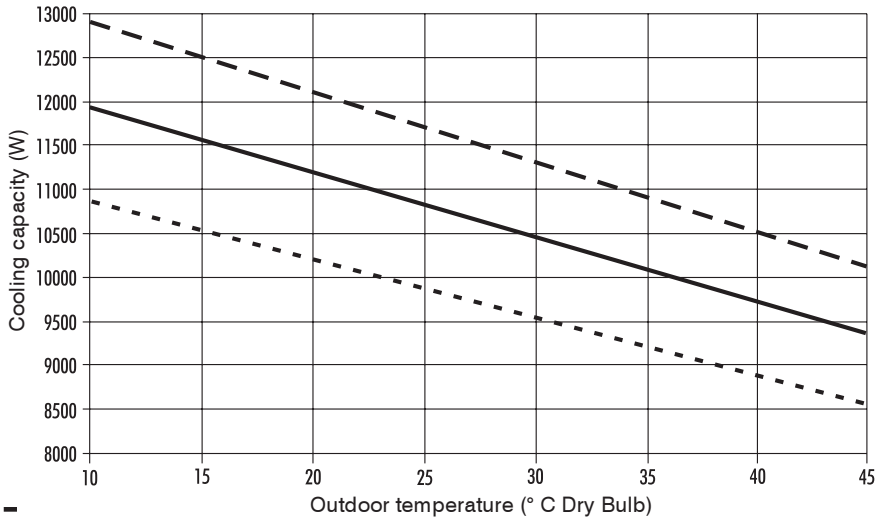


Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

KXL

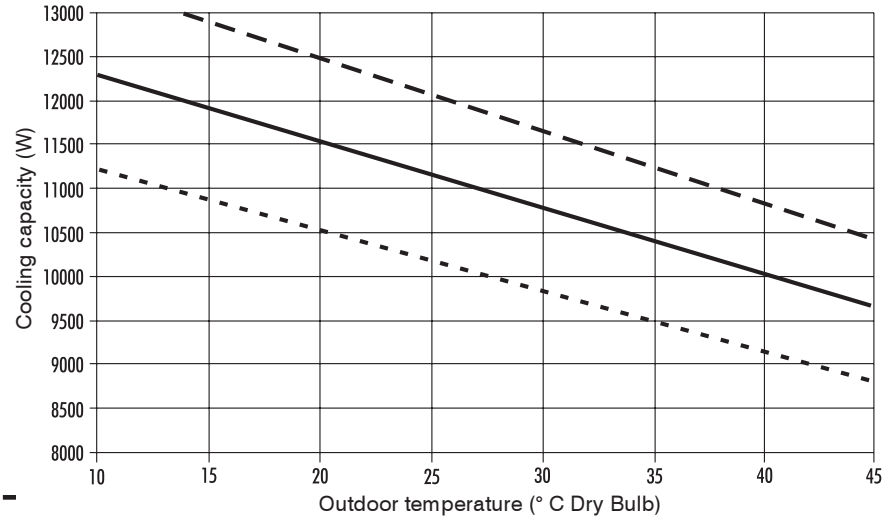
COOLING CAPACITY

KXL 36
Single phase



Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

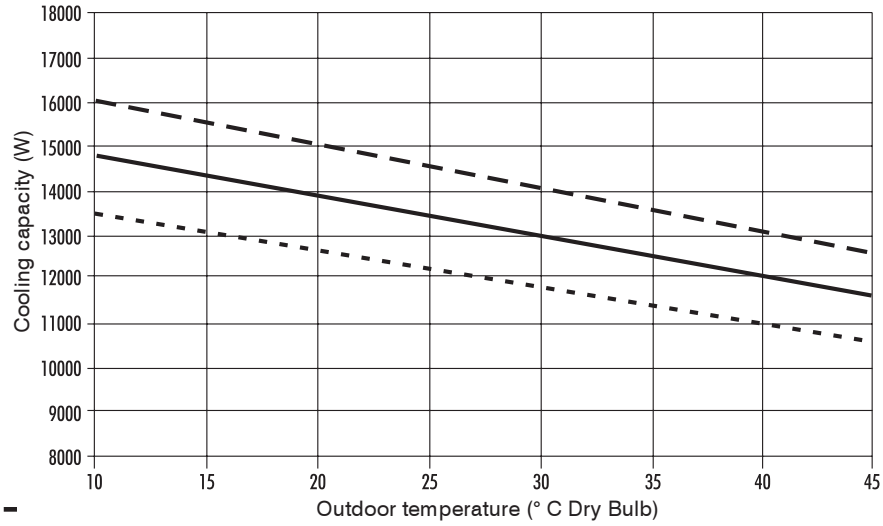
KXL 36
Three phase



Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

COOLING CAPACITY

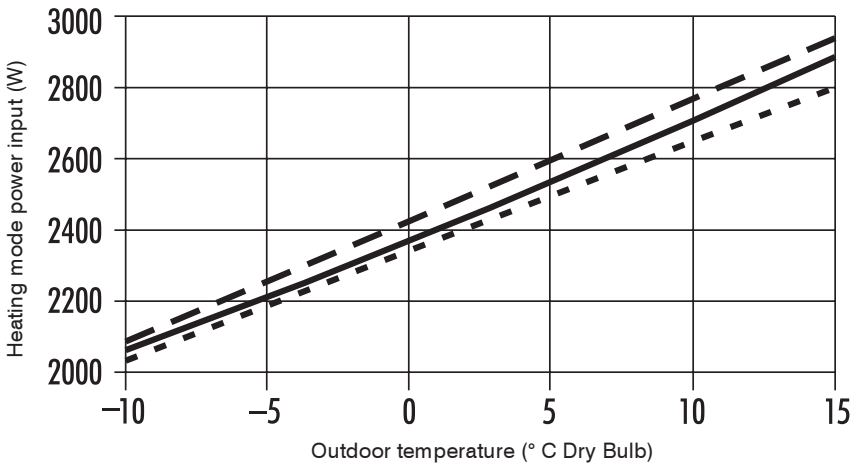
KXL 45
Three phase



Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

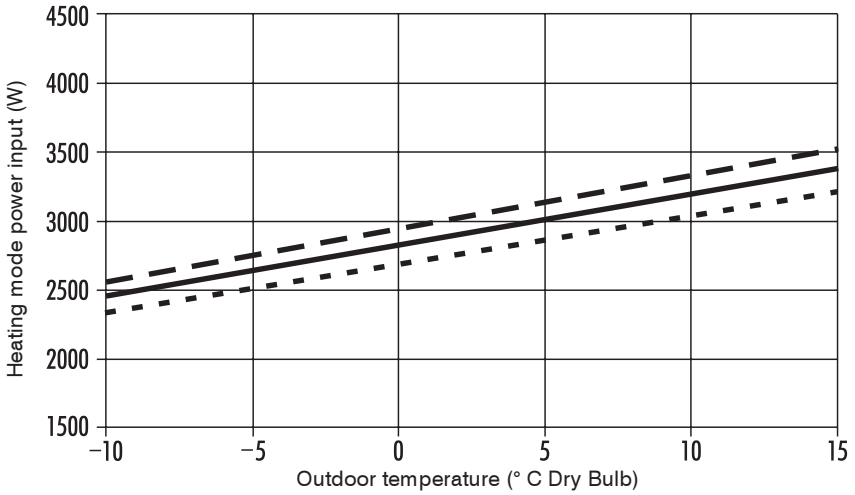
HEATING MODE POWER INPUT

KXL 24
Single phase



Indoor temperature
15° C Dry Bulb
20° C Dry Bulb
25° C Dry Bulb

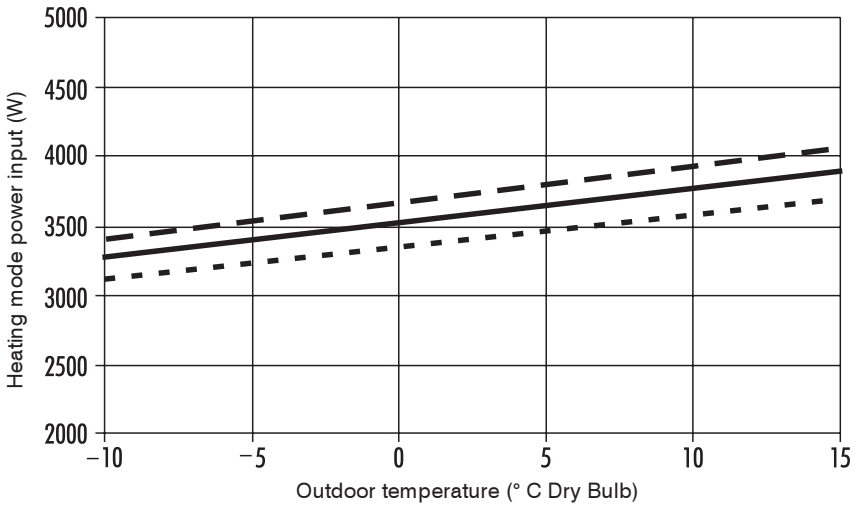
KXL 30
Single phase
Three phase



Indoor temperature
20° C Dry Bulb
18° C Dry Bulb
15° C Dry Bulb

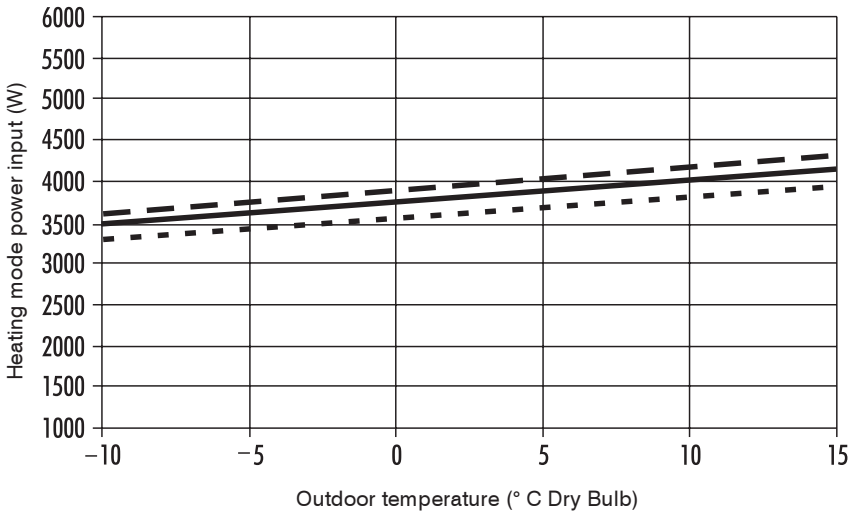
HEATING MODE
POWER INPUT

KXL 36
Single phase



Indoor temperature
20° C Dry Bulb
18° C Dry Bulb
15° C Dry Bulb

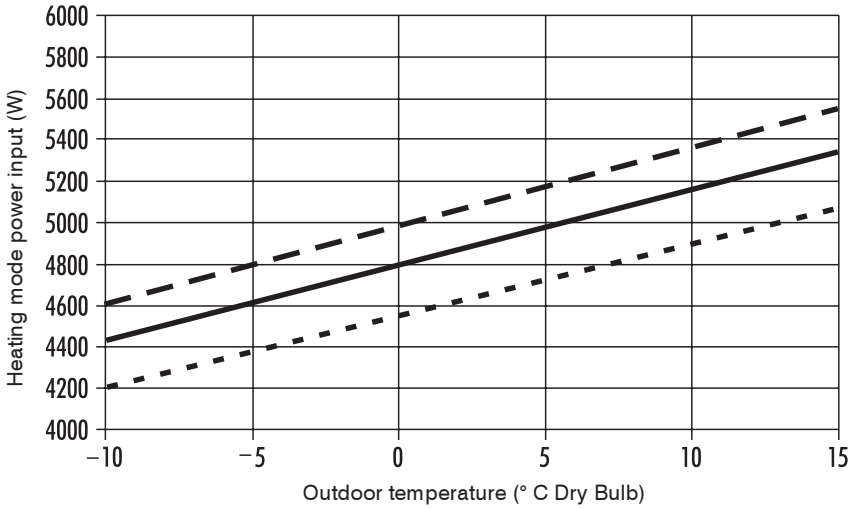
KXL 36
Three phase



Indoor temperature
20° C Dry Bulb
18° C Dry Bulb
15° C Dry Bulb

HEATING MODE
POWER INPUT

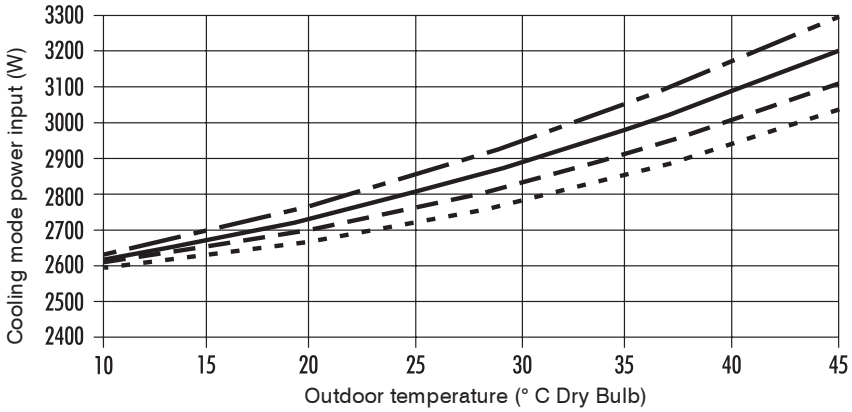
KXL 45
Three phase



Indoor temperature
20° C Dry Bulb
18° C Dry Bulb
15° C Dry Bulb

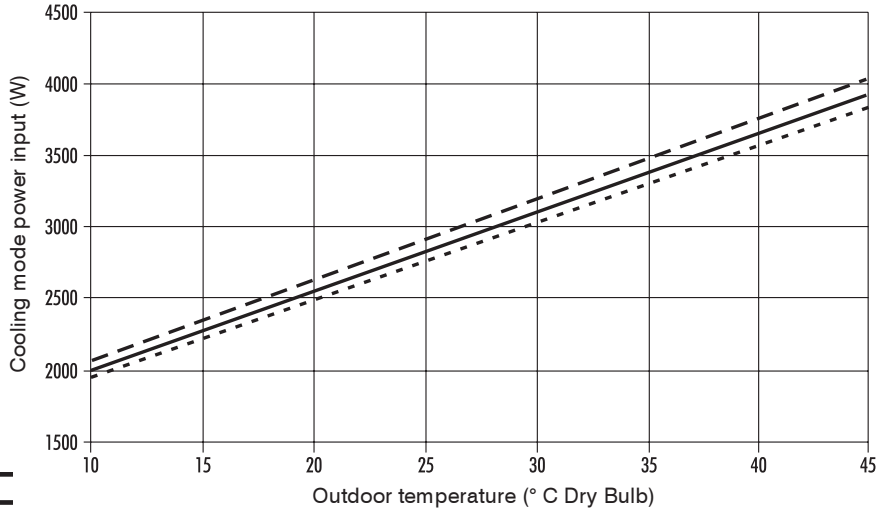
COOLING MODE POWER INPUT

KXL 24
Single phase



Indoor temperature
24° C Wet Bulb
22° C Wet Bulb
20° C Wet Bulb
18° C Wet Bulb

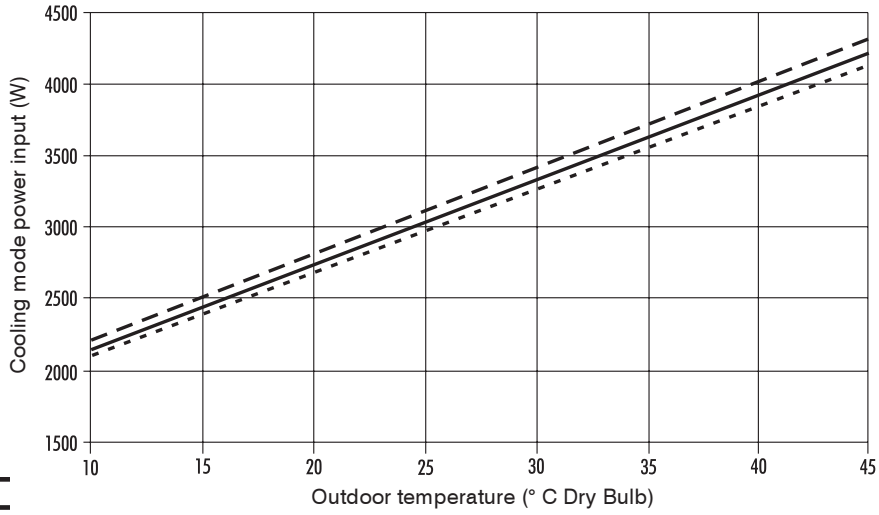
KXL 30
Single phase
Three phase



Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

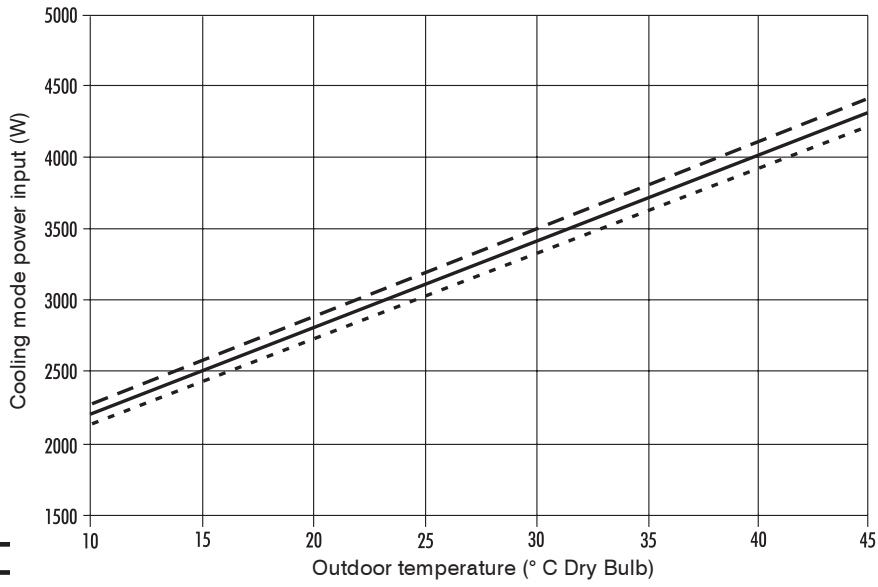
COOLING MODE POWER INPUT

KXL 36
Single phase



Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

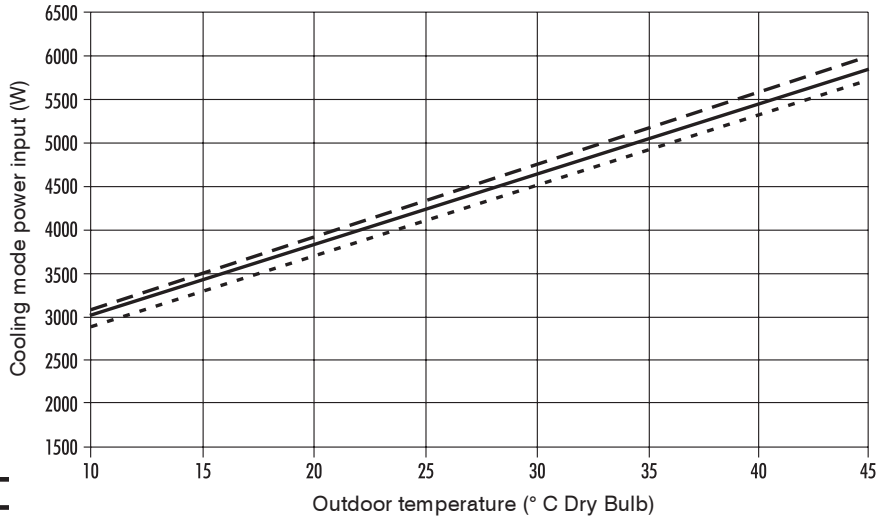
KXL 36
Three phase



Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

COOLING MODE
POWER INPUT

KXL 45
Three phase

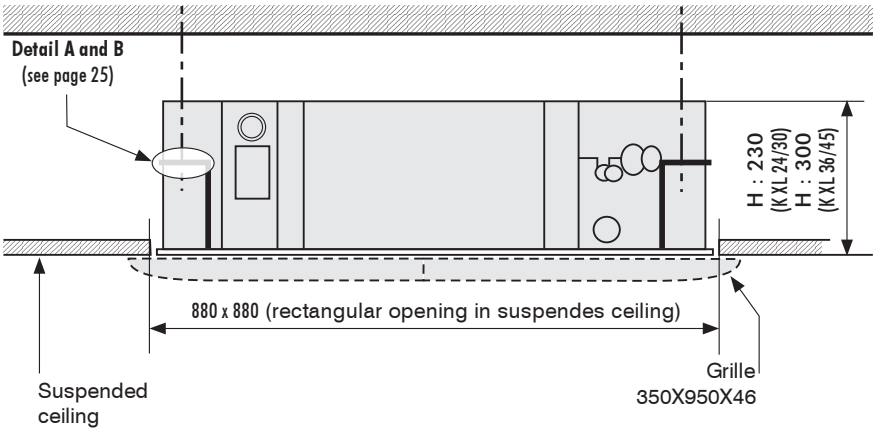


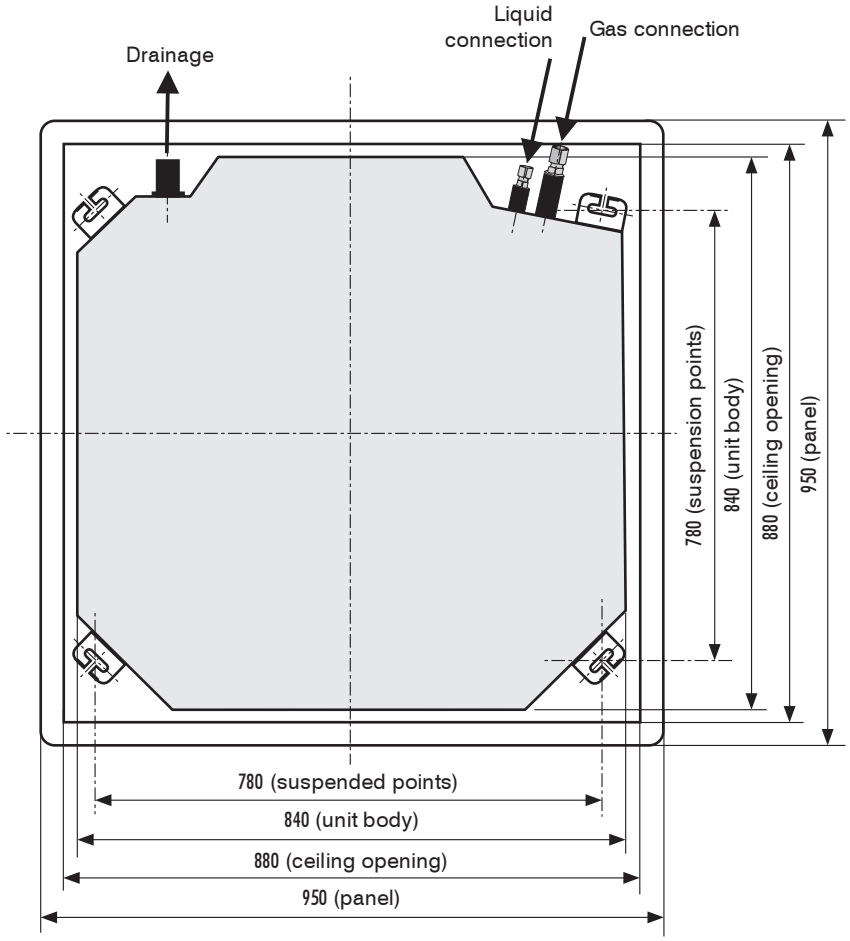
Indoor temperature
30° C Dry Bulb - 50% Relative Humidity
26° C Dry Bulb - 50% Relative Humidity
23° C Dry Bulb - 50% Relative Humidity

DIMENSIONS

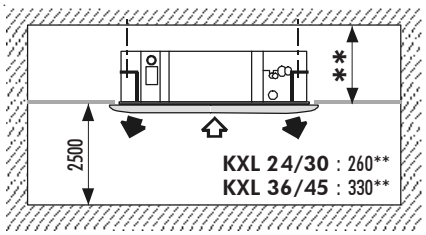
Dimensions in mm

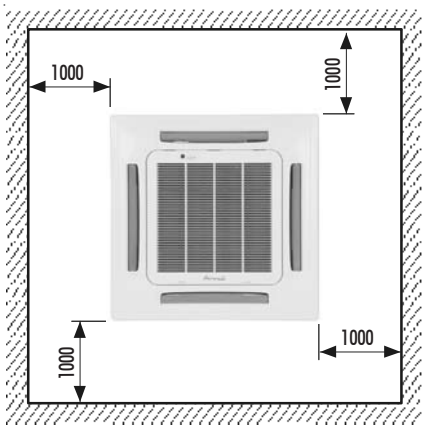
KXL 24/30/36/45
Indoor units





Free clearances





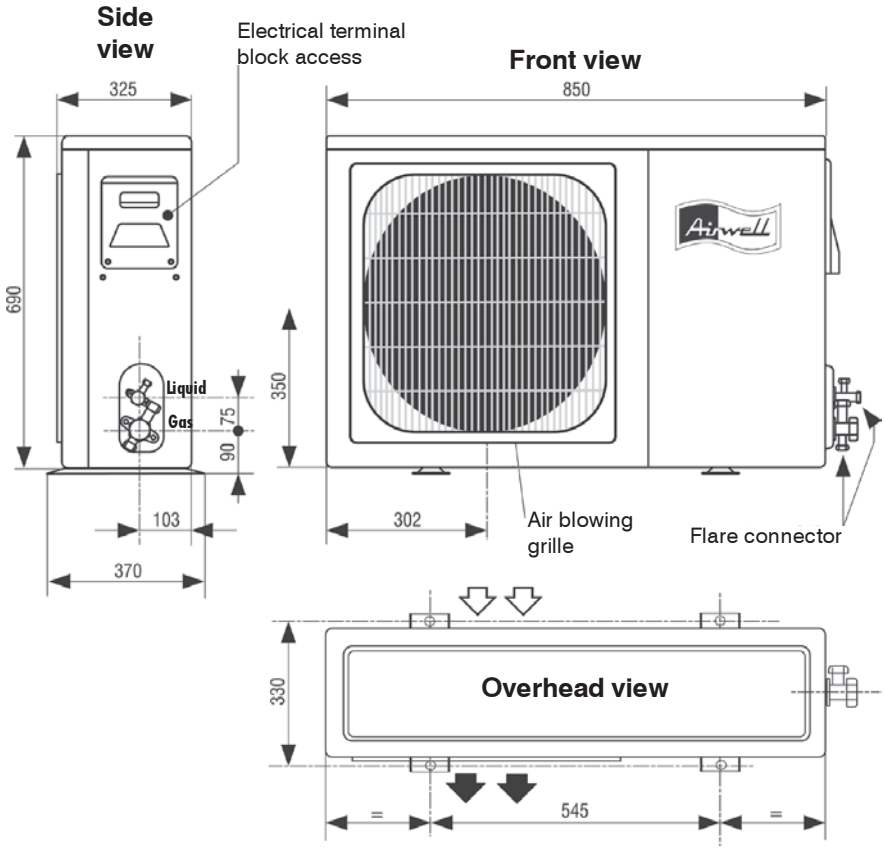
AIR INTAKE

AIR BLOWING

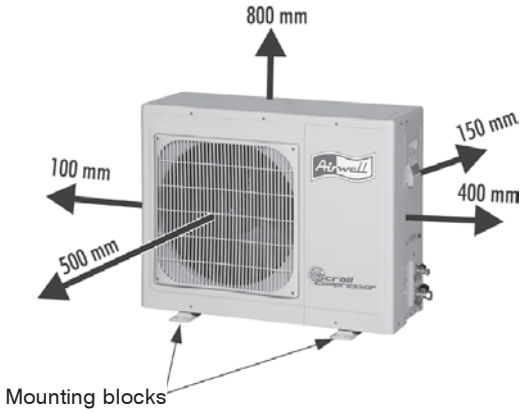
DIMENSIONS

Dimensions in mm

GC 24
Outdoor unit



Free clearances



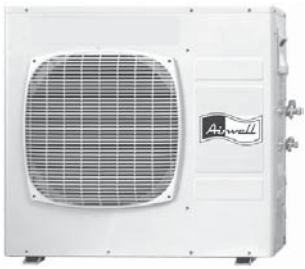
Underside (Heatpump models : 150 mm

AIR INTAKE

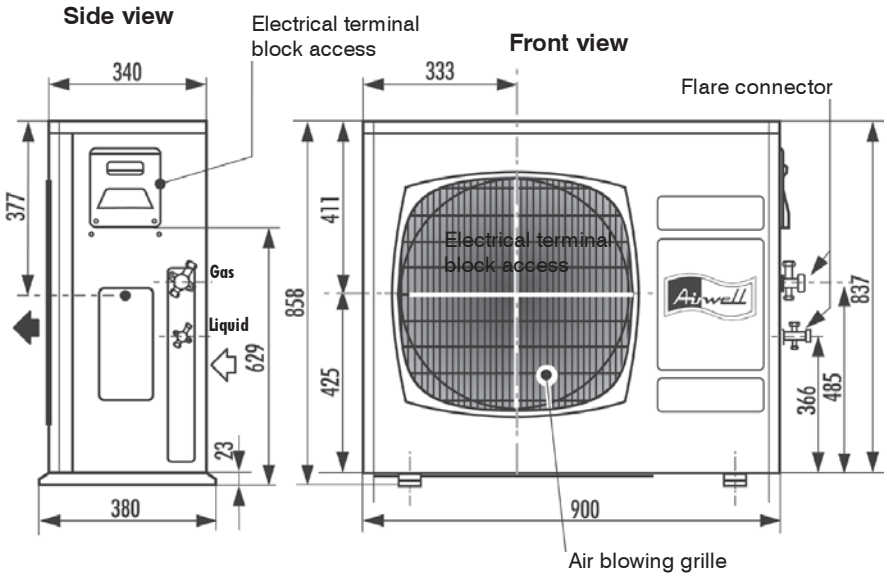
AIR BLOWING

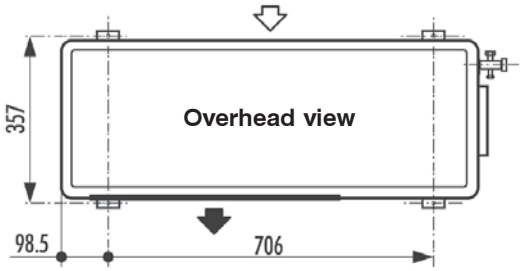
DIMENSIONS

Dimensions in mm

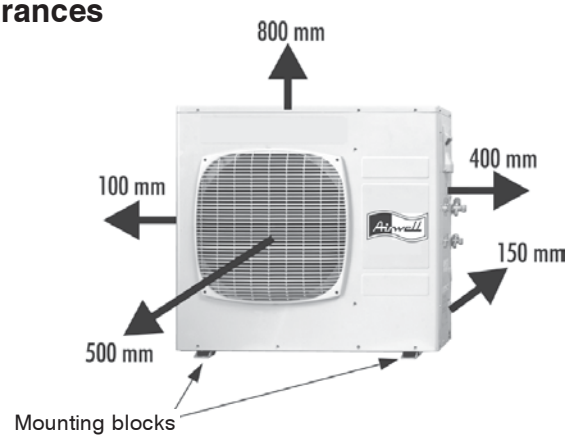


GCN 30
Outdoor unit





Free clearances



Underside (Heatpump models : 150 mm

AIR INTAKE

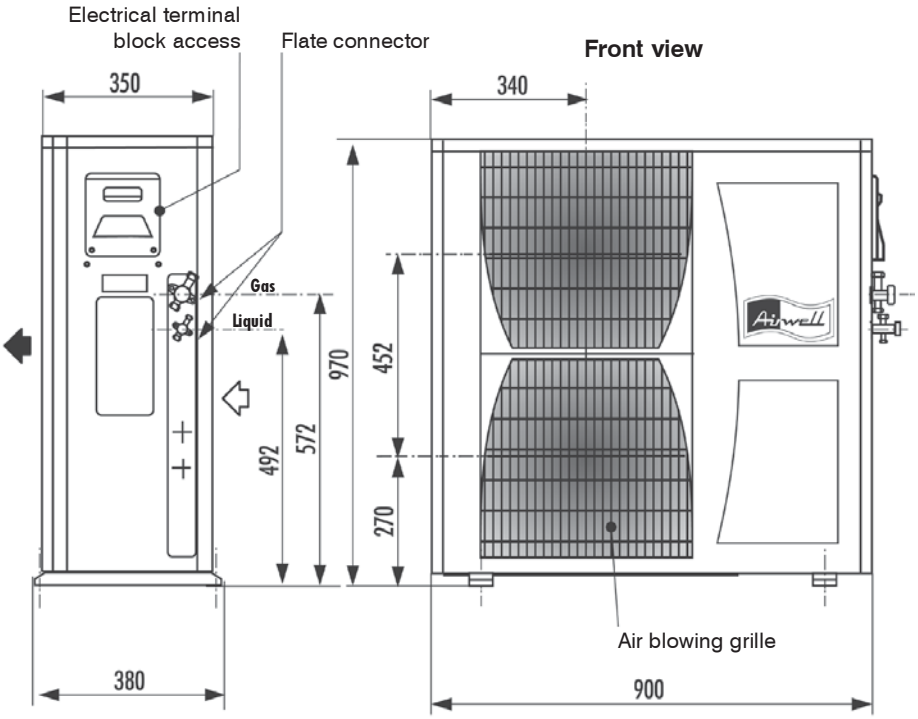
AIR BLOWING

DIMENSIONS

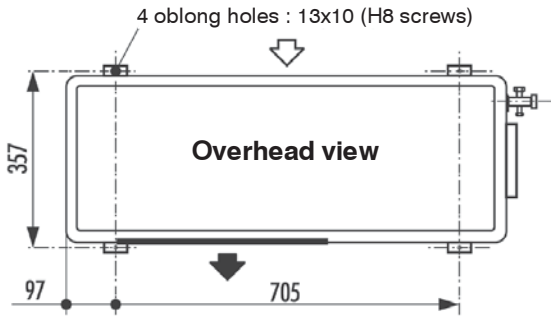
Dimensions in mm

GCN 36/45
Outdoor units

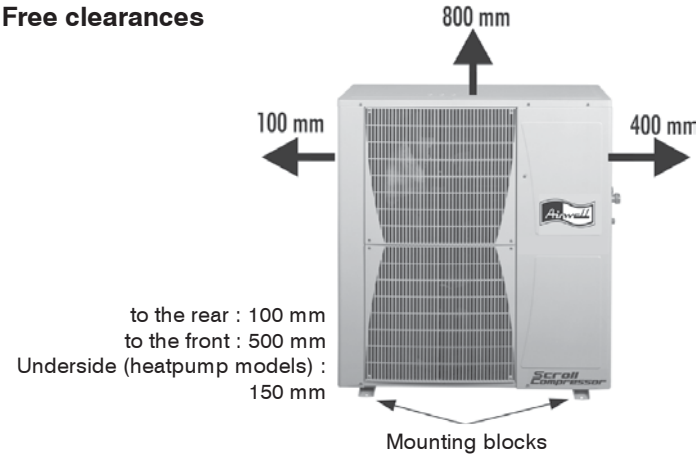
Side view



Front view



Free clearances



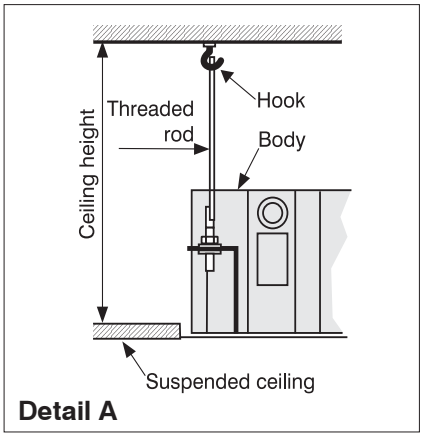
AIR INTAKE

AIR BLOWING

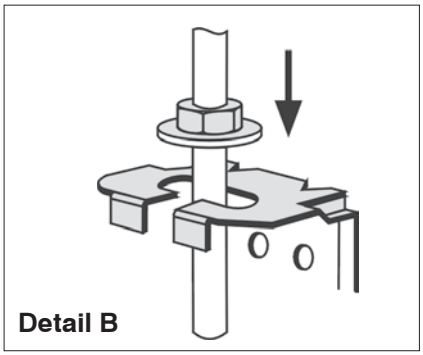
INDOOR UNIT INSTALLATION

Refer to detailed fitting instructions in the installation manual supplied with the equipment.

To flush fit the **KXL indoor unit** into a suspended ceiling, make a 880 x 880 mm opening. Drill 4 holes to a depth of 45 to 50 mm at the chosen locations in the ceiling and install the hooks supplied as accessories. The unit is attached by threaded rods. One end of each rod is attached to the lug provided on the unit's body and the other to the hook in the ceiling (see detail sketches **A** and **B** below).



Detail A

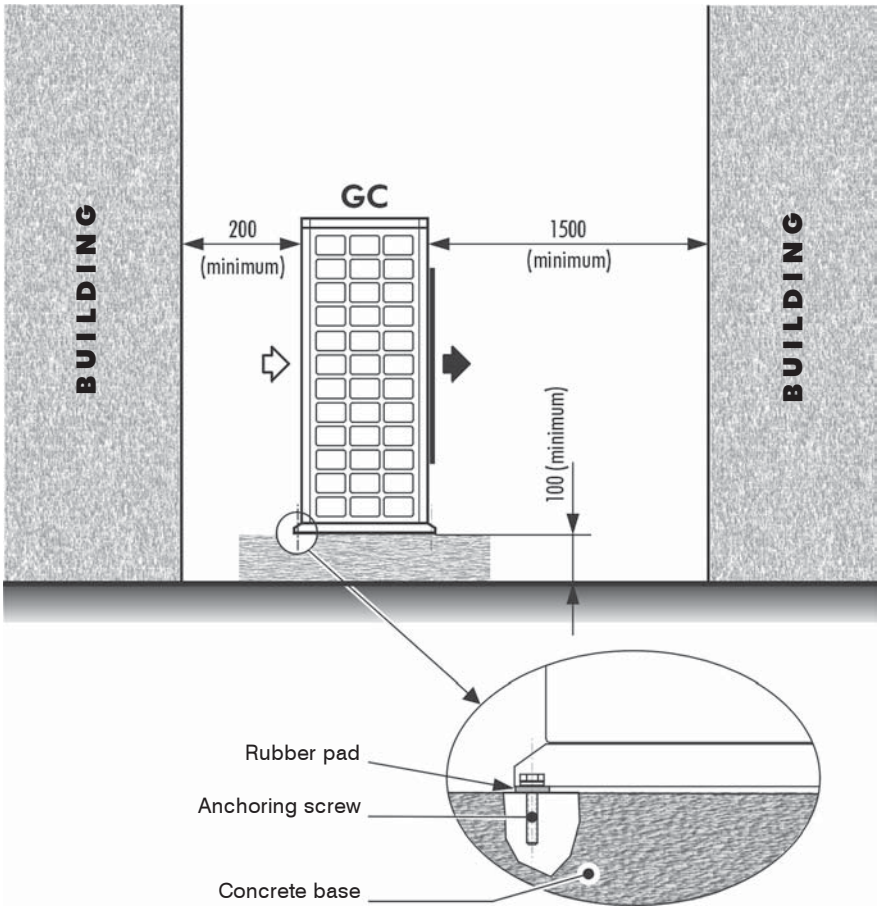

Detail B

OUTDOOR UNIT INSTALLATION

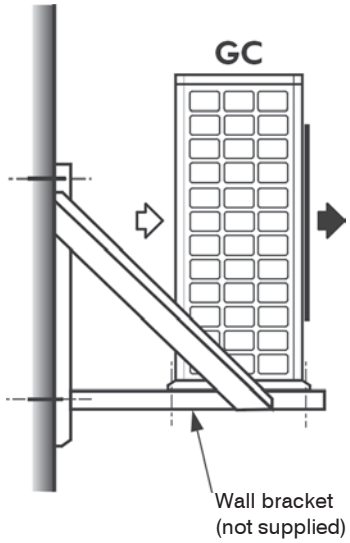
Dimensions in mm

There are two installation possibilities :

1°) Floor mounting



2°) Suspended mounting



⇨ AIR INTAKE

➡ AIR BLOWING

CONNECTIONS

The refrigeration and electrical connections to be made between the two units are comprehensively explained in the installation manual supplied with the equipment.

CONNECTION OPENINGS

- **AIR TREATMENT CABINET (ST)**
  FLARE connectors located on the side of the appliance. Electrical connection box with snap connectors located beside the FLARE connectors.
- **OUTDOOR CONDENSER UNIT (GC)**
  Refrigeration connectors and electrical connection board located on the right side of the appliance.

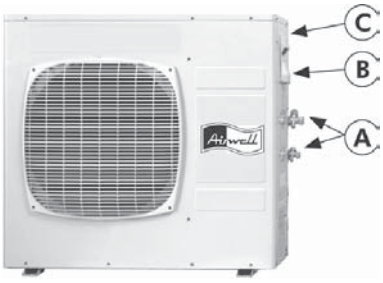
ELECTRICAL CONNECTIONS

Detailed specifications concerning, on the one hand appliance power supply characteristics and, on the other hand the various links between the two units are provided in the electrical specifications (page 32).

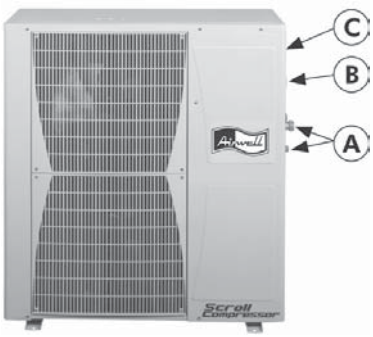
CONNECTIONS TO BE MADE ON SITE

GC 24

GCN 30



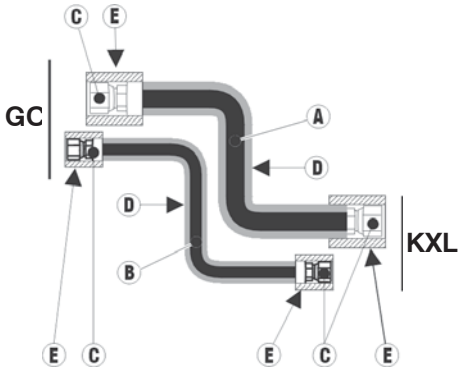
GCN 36
GCN 45



Ⓐ Refrigeration connections
Ⓑ Electrical connections
Ⓒ Mains power supply

REFRIGERATION CONNECTIONS

The cassettes are designed for refrigeration connections to the outdoor units by means of pipes with Flare connectors (refrigeration quality copper pipes with ends equipped with Flare nuts and insulated along their entire length).
Various standard pipe lengths equipped with Flare connectors are available from the factory : 2 - 5 - 8 m.



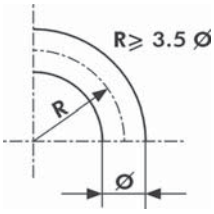
(A) "GAS" pipe
(B) "LIQUID" pipe
(C) Flare nut
(D) Pipe insulation
(E) Insulating sleeve

Tightening torque

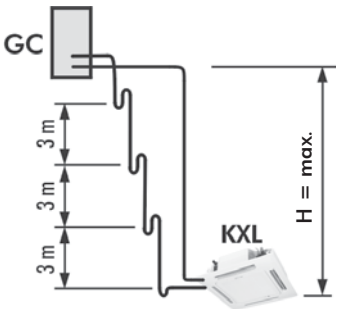
Pipe Ø	Torque
3/8" pipe	30-35 Nm
5/8" pipe	70-75 Nm
3/4" pipe	80-85 Nm

1 Newton-metre = 0,1 metre-kilo

Refrigeration pipe bending



In the event of the vertical height of the inlet pipe being greater than 8m, a siphon **MUST** be installed every 3 m along the pipe run when the condenser unit is installed above the air treatment cabinet. A siphon is not required if the condenser unit is installed below the air treatment cabinet.



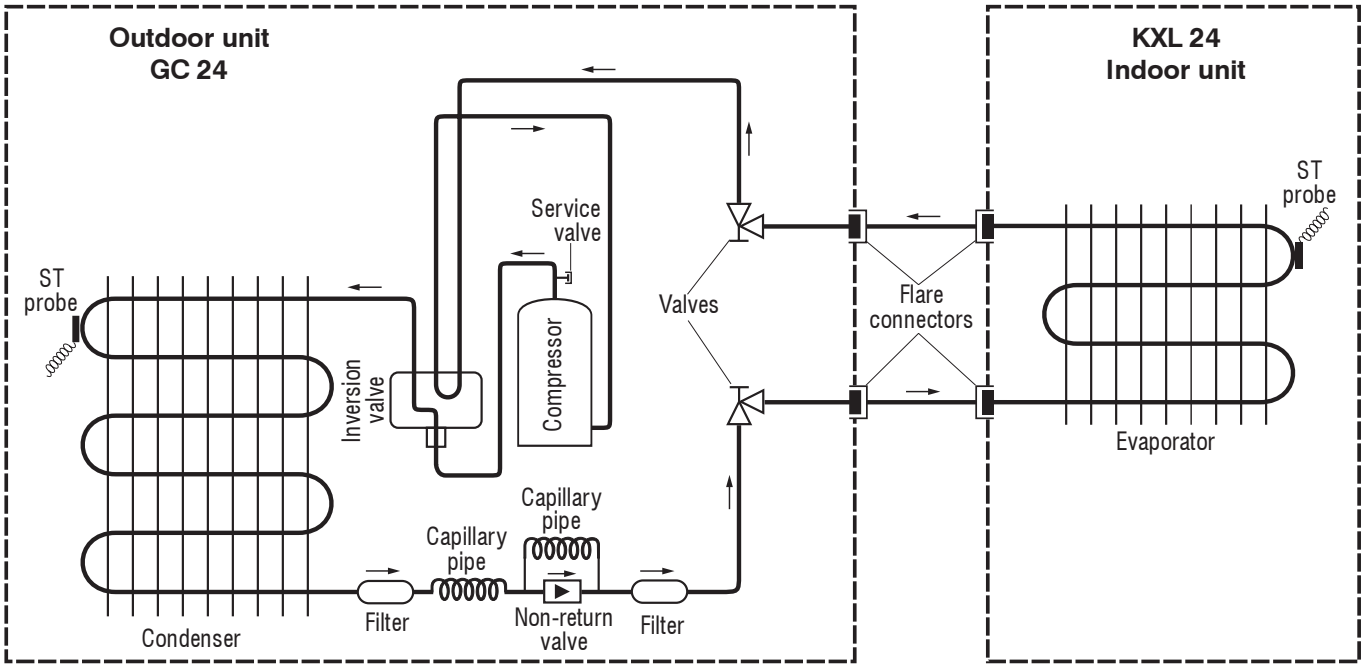
Models	Maxi. Height (m)	Max. length (m)
KXL 24	10	25
KXL 30	10	30
KXL 36	25	50
KXL 45	25	50

Refrigerant charges

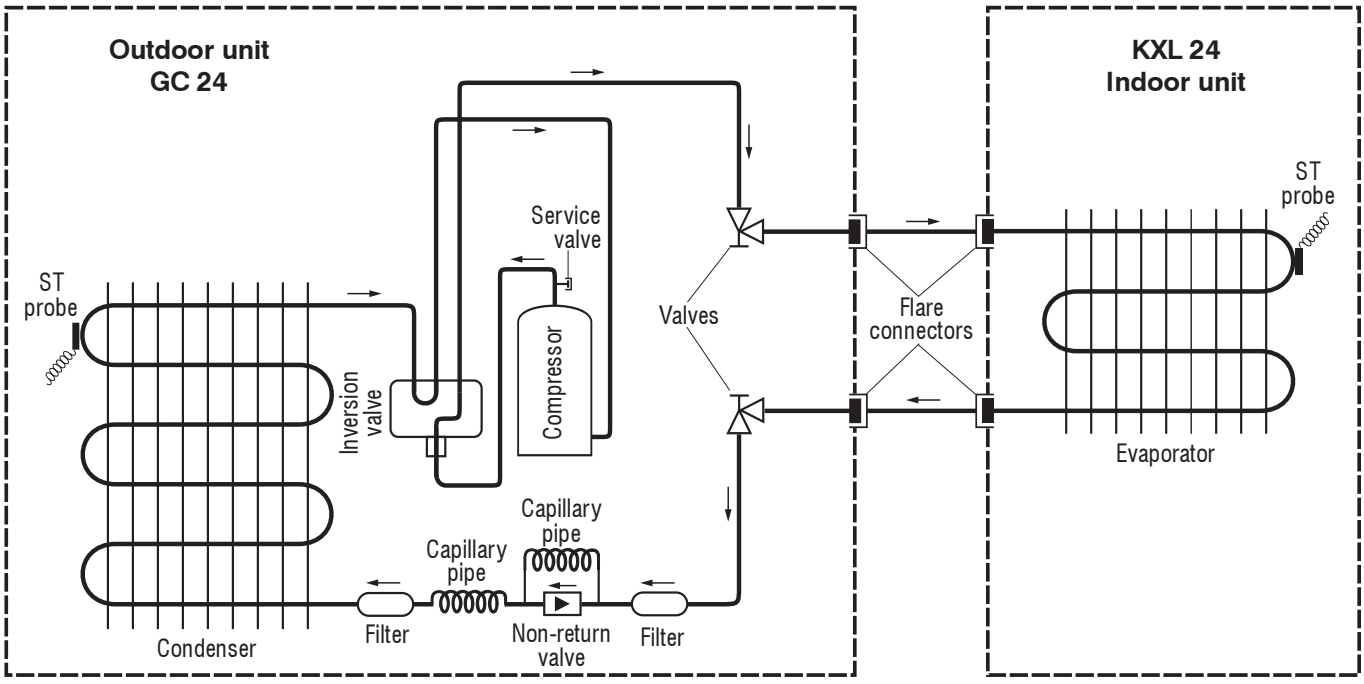
Models		KXL 24	KXL 30		KXL 36		KXL 45
		single	single	three	single	three	three
GAS pipe Ø	inch	5/8	5/8		3/4		3/4
LIQUID pipe Ø	inch	3/8	3/8		3/8		3/8
GC charge (factory filled)	g	1840	2100	2170	2500	2880	3650

REFRIGERATION DIAGRAM

Cooling mode

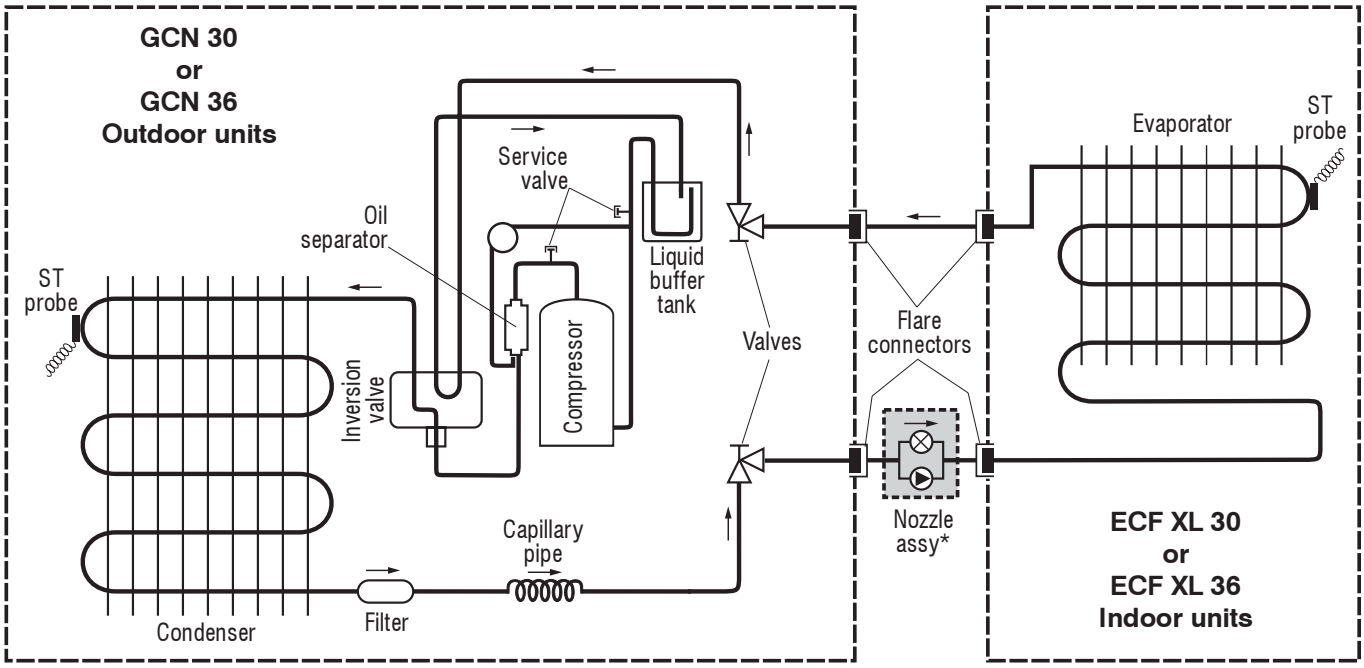


Heating mode



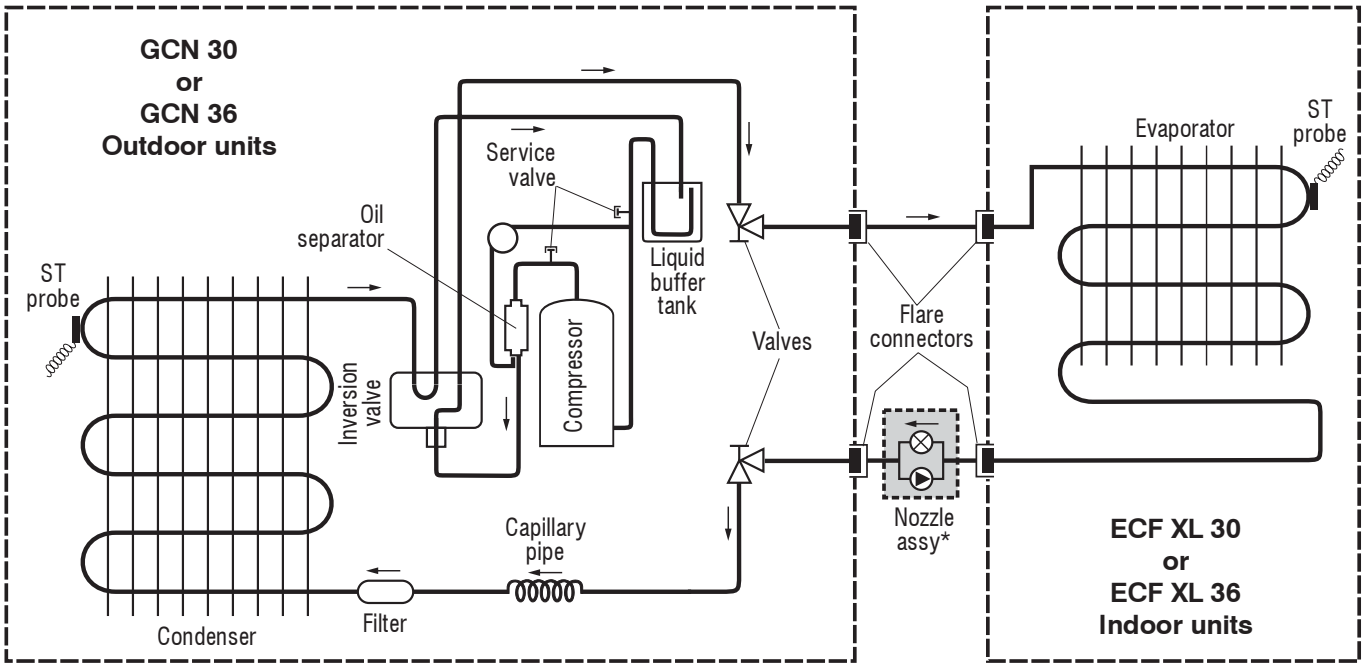
REFRIGERATION DIAGRAM

Cooling mode



*To be mounted on the indoor unit side.

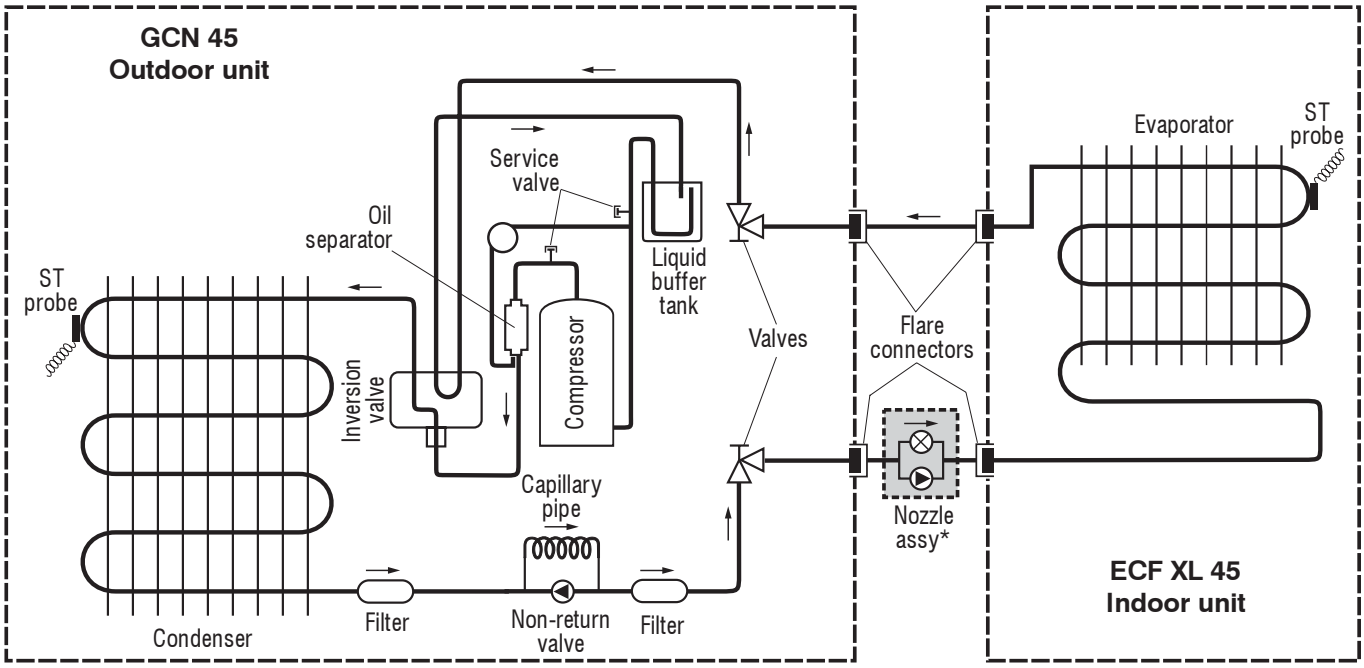
Heating mode



*To be mounted on the indoor unit side.

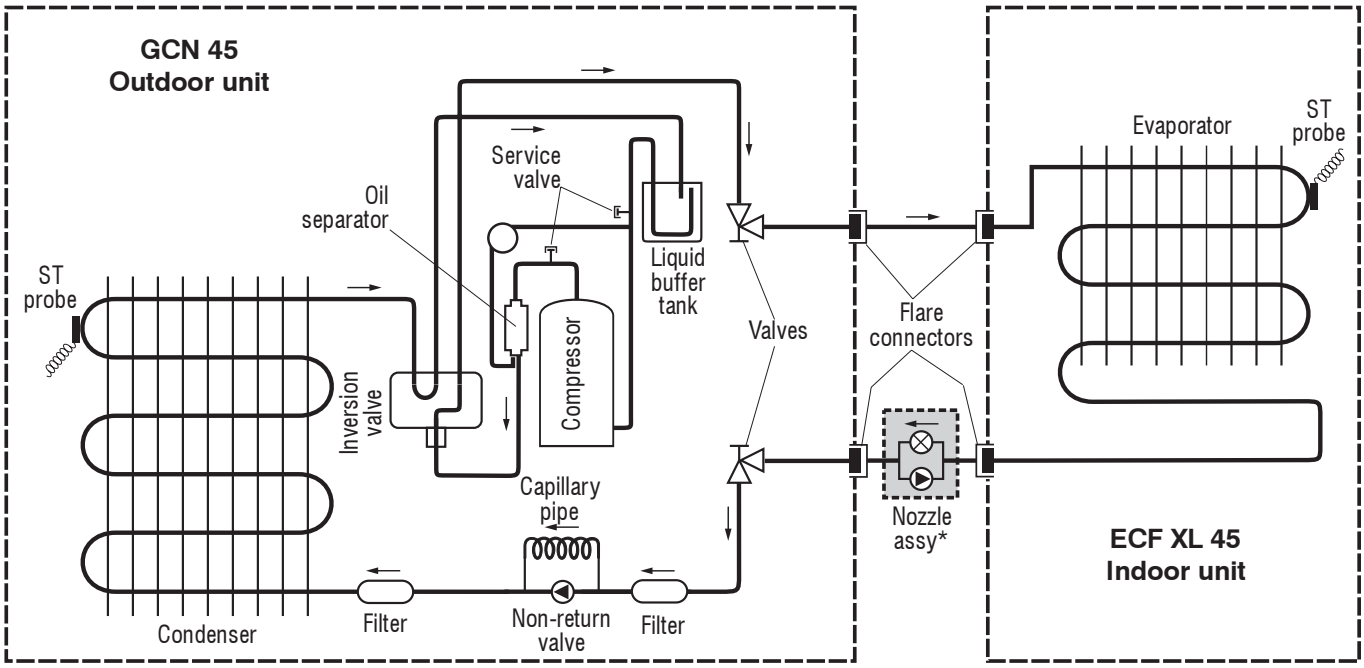
REFRIGERATION DIAGRAM

Cooling mode



*To be mounted on the indoor unit side.

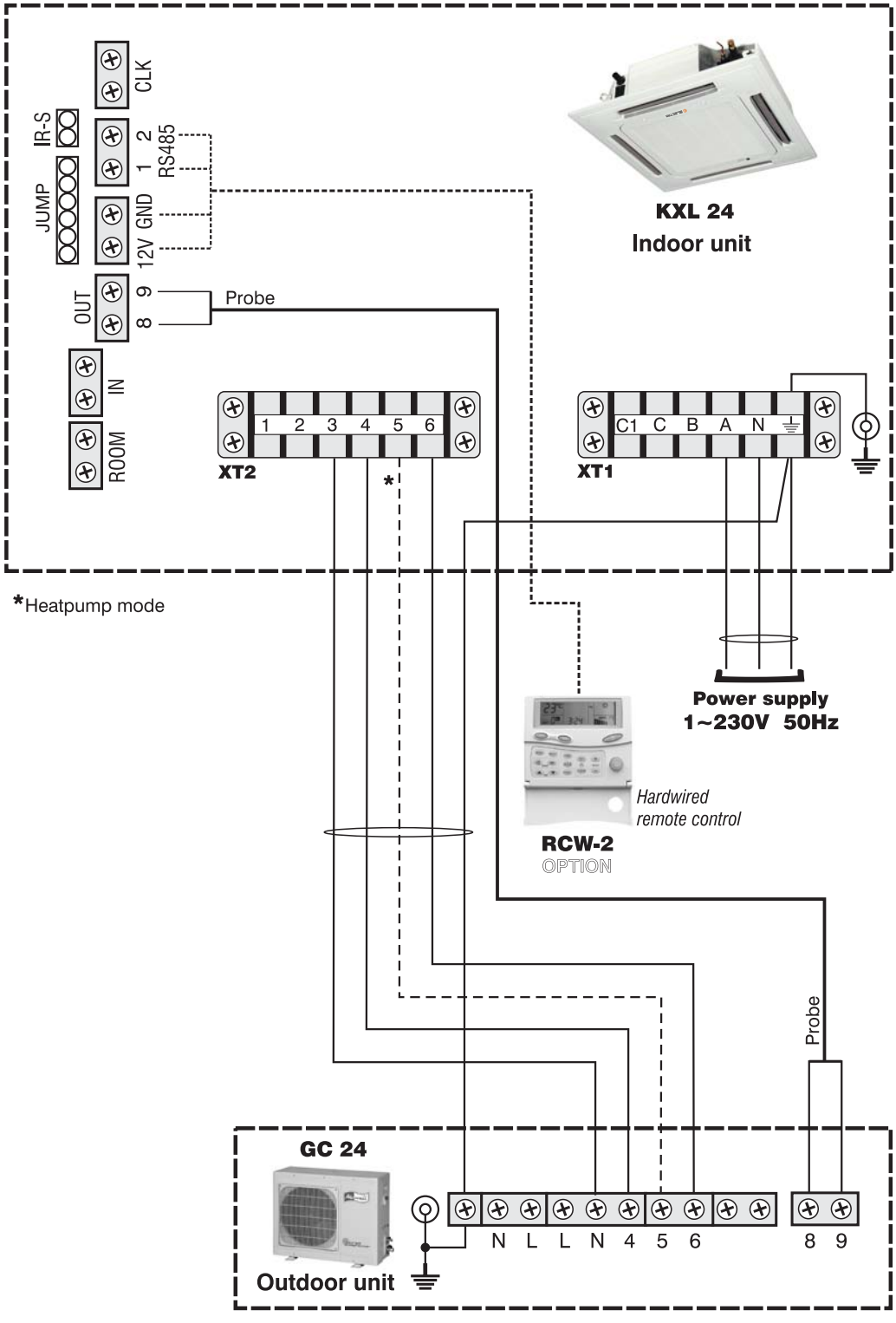
Heating mode



*To be mounted on the indoor unit side.

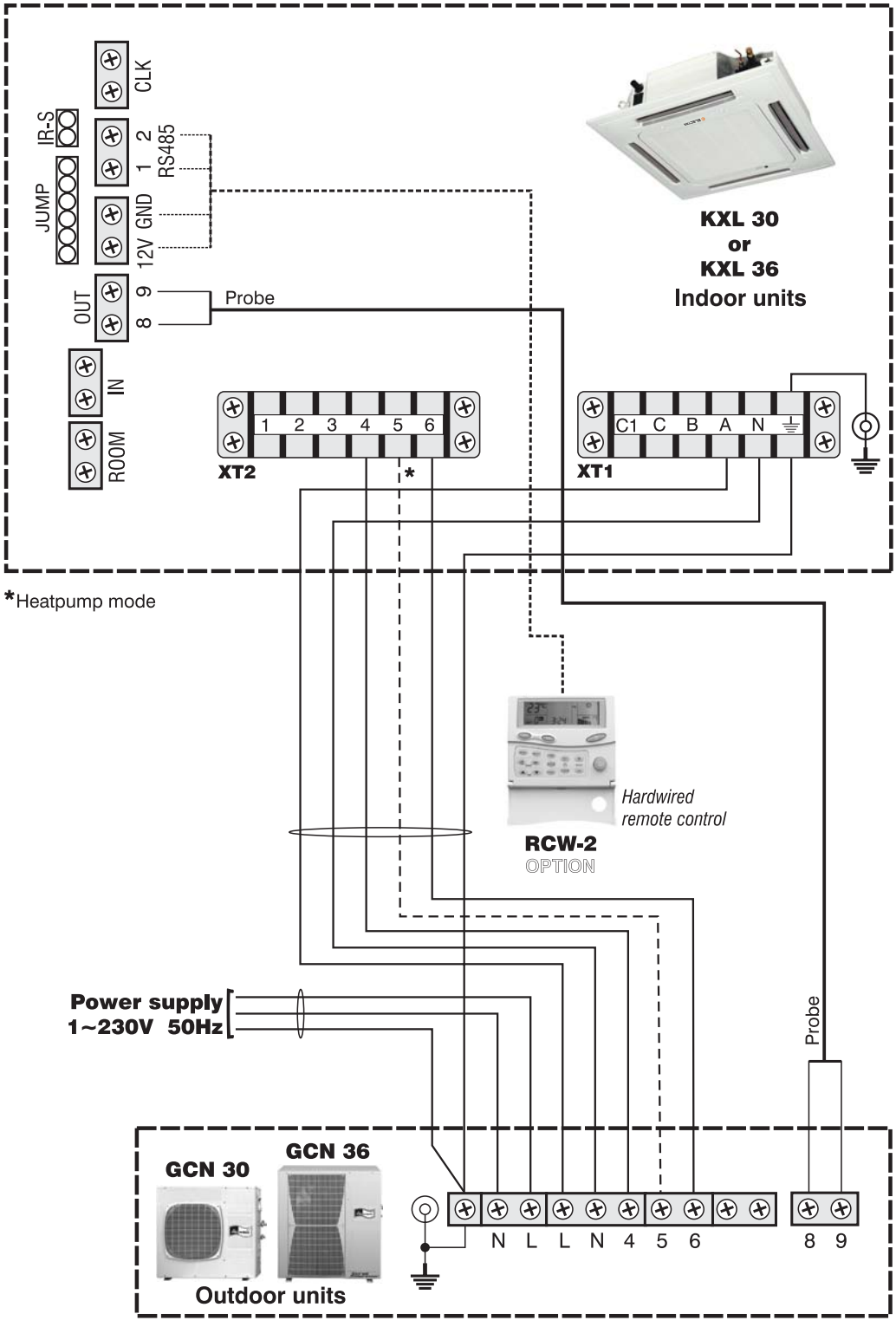
ELECTRICAL CONNECTIONS

Single phase model



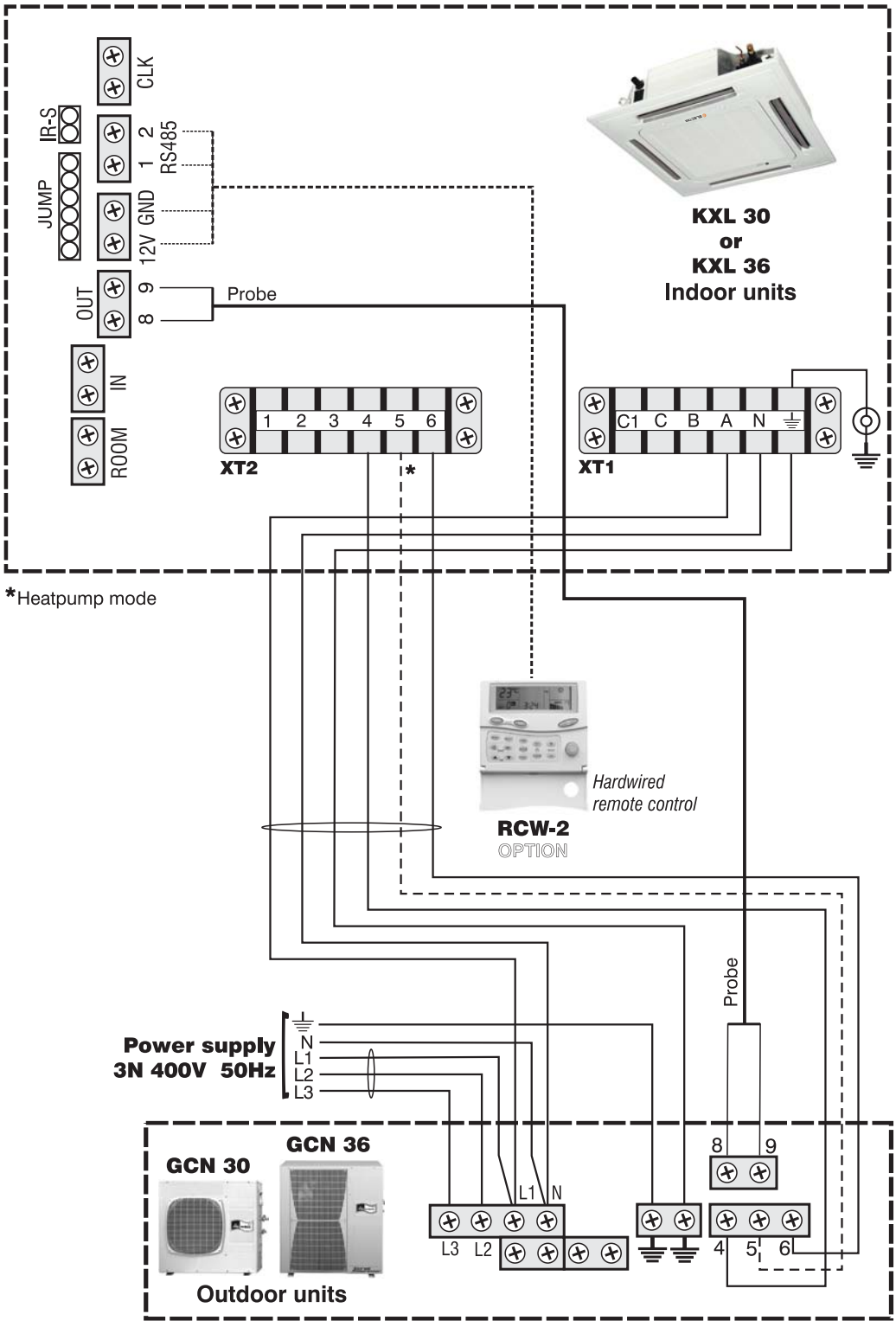
ELECTRICAL CONNECTIONS

Single phase model



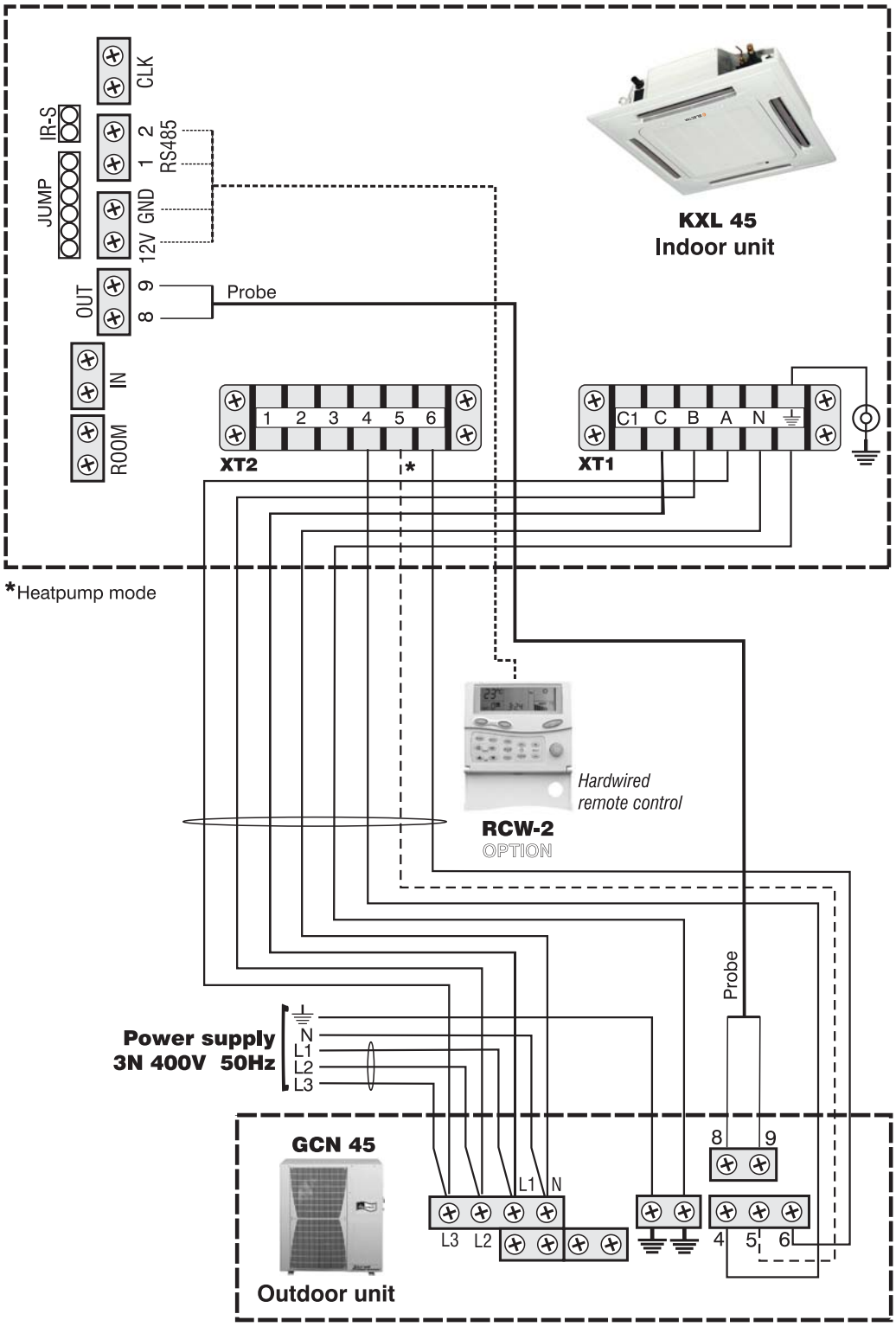
ELECTRICAL CONNECTIONS

Three phase models



ELECTRICAL CONNECTIONS

Three phase models



ELECTRICAL SPECIFICATIONS

Type of appliance		KXL 24	KXL 30	KXL 36
Power supply 1 ~ 230 V - 50 Hz		•	•	•
Nominal current	A	13	14.2	16.7
Fuse calibre	A	20	20	25
Cable section*	mm^2	3 x 1.5	3 x 2.5	3 x 2.5
Links between units				
Cable section*				
- Cooling	mm^2	4 x 1.5	5 x 2.5	5 x 2.5
- Heating	mm^2	5 x 1.5	6 x 1.5	6 x 1.5

Type of appliance			KXL 30	KXL 36	KXL 45
Power supply 3N~400 V - 50 Hz			•	•	•
Nominal current	A		10	12.1	13.5
Fuse calibre	A		16	16	16
Cable section*	mm^2		5 x 2.5	5 x 2.5	6 x 2.5
Links between units					
Cable section*					
- Cooling	mm^2		5 x 2.5	5 x 2.5	5 x 2.5
- Heating	mm^2		6 x 2.5	6 x 2.5	6 x 2.5

*** IMPORTANT**

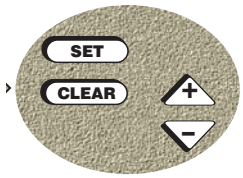
These values are provided for information purposes only. They must be checked and adjusted to comply with current standards. They may vary in relation to the mode of installation and the type of conductors used.

RC4
INFRARED
REMOTE CONTROL

RESET FUNCTION

1° Remove the battery.
2° Simultaneously press these 4 keys until the symbols disappear.
3° Replace the battery.

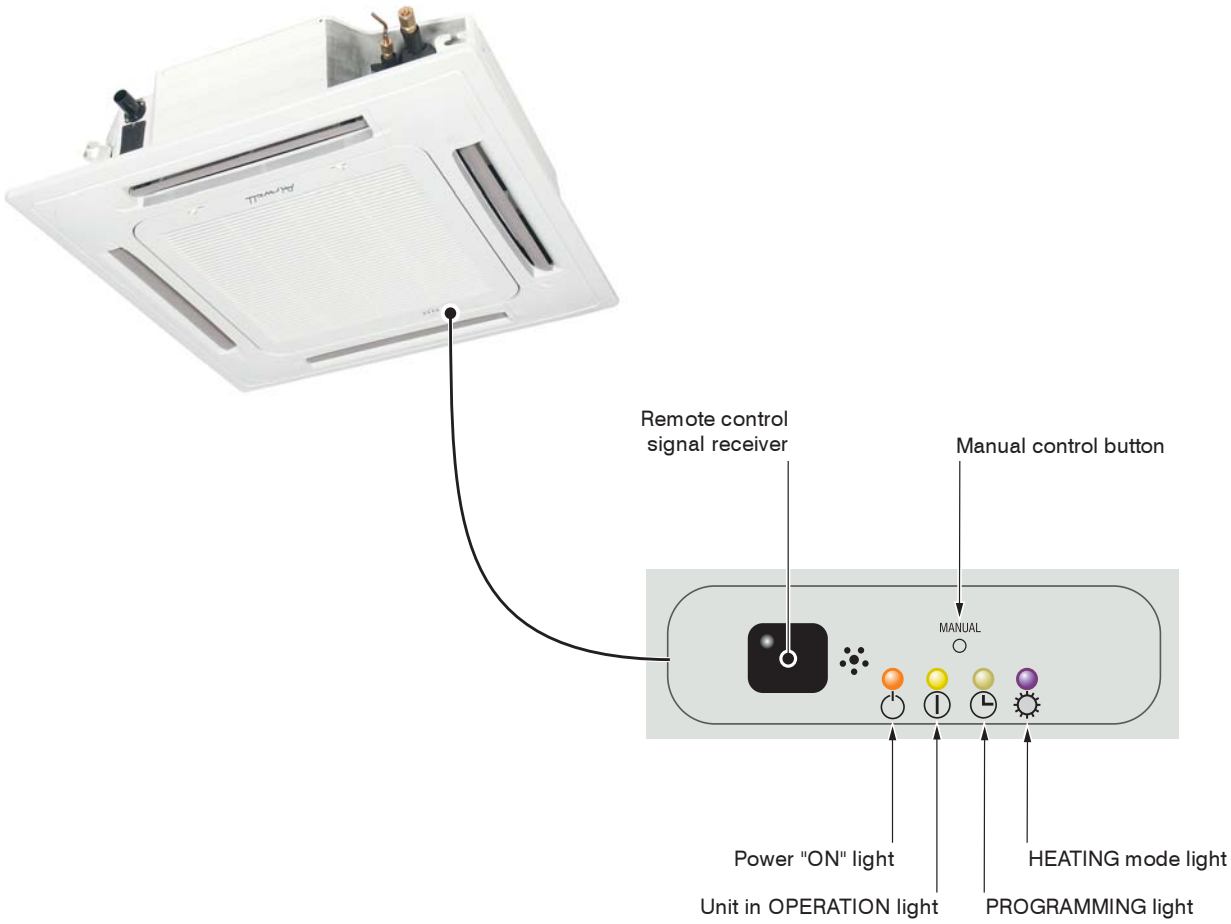
The 4 keys concerned are :



Note :
Flip open the cover/flap to gain access to the controls.

1. START / STOP key
2. Operating mode selection key : COOLING, HEATING, AUTOMATIC COOLING/HEATING REGULATION, VENTILATION (FAN), DEHUMIDIFICATION
3. I FEEL key : local temperature sensing
4. VENTILATION (FAN) SPEED or AUTOMATIC VENTILATION selection key
5. Key for raising ambient temperature
6. Key for lowering ambient temperature
7. SLEEP key
8. AUTOSWEEP function control key
9. AUTOSWEEP function control key
10. PROGRAMMING mode selection key
11. "+" key for raising set temperature and increasing operating time
12. "—" key for lowering set temperature and decreasing operating time
13. Liquid crystal display
14. I FEEL sensor
15. Infrared signal emitter
16. ROOM key : ambient temperature display
17. SET key for setting the PROGRAMMING STOP and/or START times
18. CLEAR key for erasing the timer parameters
19. LOCK key

USE OF THE FASCIA-MOUNTED
THE CONTROL PANEL



RCW-2 WALL MOUNTED INFRARED REMOTE CONTROL (accessory)

A wall mounted hardwired remote control is available as an accessory. It groups together all the air conditioning management functions of your air conditioner (refer to description below).

① Display screen.
② Keys for raising and lowering the set temperature.
③ Ventilation (fan) mode selection :
- Low speed.
- Medium speed.
- High speed.
- AUTO Automatic ventilation (fan) speed selection..

④ ON / Standby.
⑤
- SET Accessing the time setting mode.
- + Advancing the time setting.
- − Retarding the time setting.
- CLEAR Clearing memory of programmed time settings in programming mode
- LOCAL Day of the week selection key or sending "I feel" local temperature setting.
- PROG Programming mode key.
- "Copy" key, enabling zone parameters to be duplicated for other zones.
- MODE Operating mode selection.
- NIGHT Day /Night key.
- ▼ Current zone setting : next zone.
- ▲ Current zone setting : previous zone.
- AUTOSWEEP control key.
- AUTOSWEEP control key.

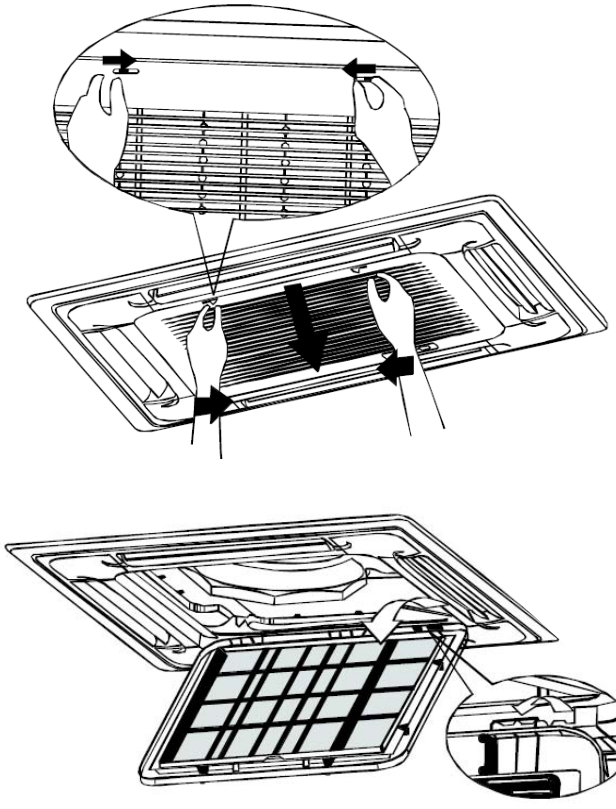
FILTRATION

Cleaning the air filter

- The air filter prevents dust and other airborne particles penetrating inside the unit. If the unit is in operation for extended periods, the filter should be cleaned every two weeks.
- If the dust build-up is too thick to be cleaned, the filter must be replaced with a new filter (supplied as an accessory).

WARNING

- Servicing operations must only be performed by qualified maintenance personnel.
- Always switch off the mains power supply before making any electrical connections or cleaning the air filter.
- Do not use air or water at a temperature above 50°C for cleaning the air filter or the front panel.

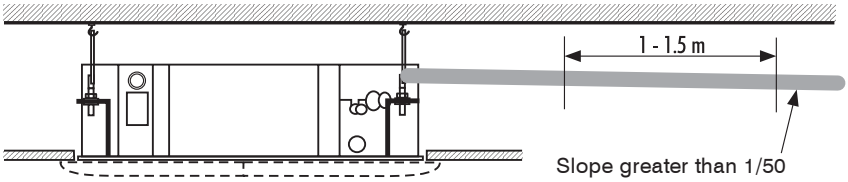


CONDENSATES DRAINAGE

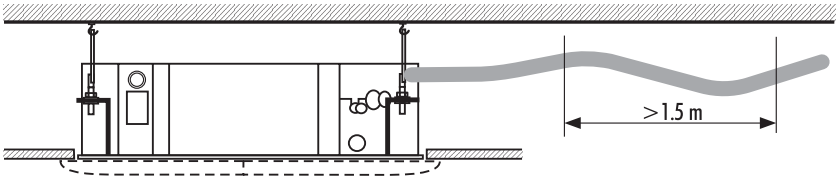
Refer to the detailed installation instructions in the installation manual supplied with the equipment.

On its upper part, the air treatment unit is equipped with a factory-fitted condensates lift pump.

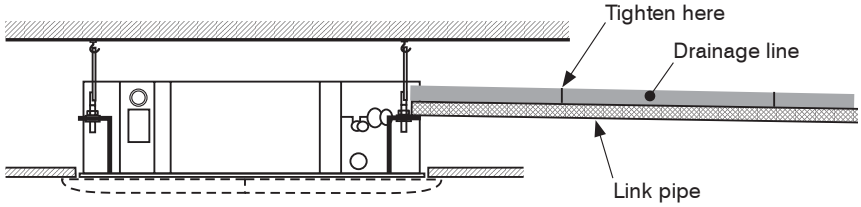
- A condensates drainage pipe has to be installed, in accordance with best practices, to provide gravity drainage from the outlet pipe with a downward slope. A siphon must be integrated in the drainage line.
- Polyurethane pipe (37 to 39 mm ext. diameter and 32 mm int. diameter) can be used for the drainage line.
- To prevent water returning to the air conditioner when it is not in operation, the drainage line should be directed downwards and away from the unit (outlet side) at a slope greater than 1/50. Any excess lift heights or possibilities of water stagnating must be avoided.



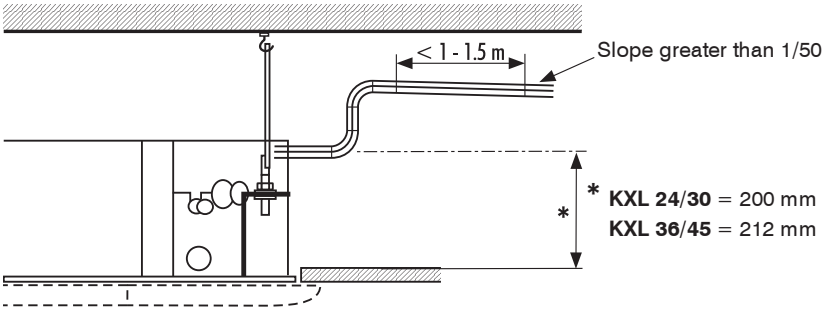
- The drainage pipe must be attached and supported at 1 to 1.5 m intervals to avoid any sagging and condensates water build-ups.



- The drainage pipe can also be strapped to the link pipe.



- The end of the drainage pipe must be at least 50 mm above the ground or above the bottom of the floor drainage channel and must not be submersed in water. If the condensates water is channelled directly into the building drainage system a siphon must be fitted by creating a "U" bend in the pipe to ensure that no unpleasant odours infiltrate the room.



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