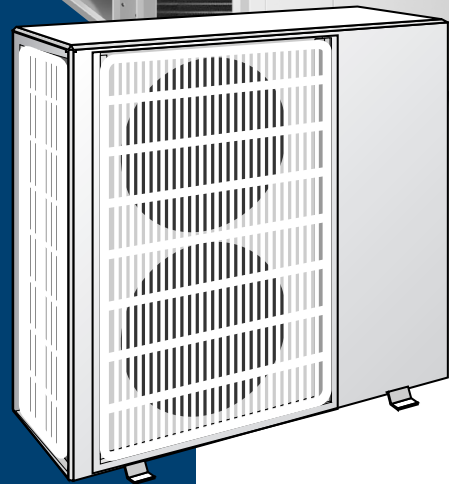
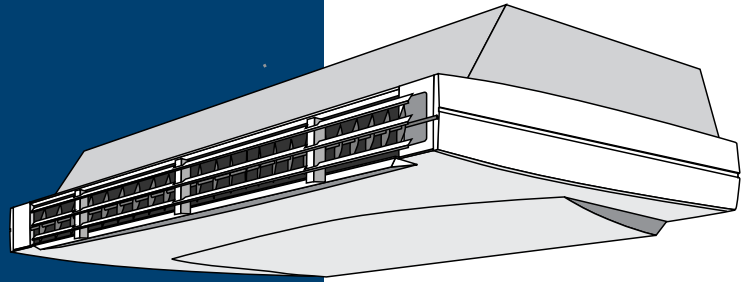


OPERATION, SERVICE
AND INSTALLATION MANUAL



PROVIDING GLOBAL SYSTEM SOLUTIONS

WING

**Congratulations you have made a wise choice with the purchase of your Lennox
air conditioning unit.**
**This product has been designed, assembled and supplied in one of our world class manufacturing facilities
and we feel sure that it will meet your expectations.**
**Lennox an international organisation with world wide distribution takes pride in supplying you with this
product.**

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LTX INDOOR UNIT IN COMBINATION, WITH AXIAL FAN OUTDOOR UNIT

MODEL	OUTDOOR UNIT	INDOOR UNIT	V / Ph / 50 Hz	NOMINAL CAPACITY W	NOMINAL CAPACITY KW
				COOLING ONLY	COOLING ONLY
WING 2,8TFK	KJF 2,8K	LTX 3	230V-1Ph	7.350	3,06
WING 3TFK	KJF 3K	LTX 3	230V -1Ph	9.500	3,85
WING 3TFK	KJF 3K		230 V - 3Ph		
WING 3TFK	KJF 3K		400 V - 3Ph		
WING 4TFK	KJF 4K	LTX 5	230 V - 3Ph	11.600	4,70
WING 4TFK	KJF 4K		400 V - 3Ph		
WING 5TFK	KJF 5K	LTX 5	230 V - 3Ph	13.500	5,60
WING 5TFK	KJF 5K		400 V - 3Ph		

LTX INDOOR UNIT IN COMBINATION, WITH CENTRIFUGAL FAN OUTDOOR UNIT

MODEL	OUTDOOR UNIT	INDOOR UNIT	V / Ph / 50 Hz	NOMINAL CAPACITY W	NOMINAL CAPACITY KW
				COOLING ONLY	COOLING ONLY
WING 2,8CFK	KCF 2,8K	LTX 3	230V-1Ph	7.130	3,07
WING 3CFK	KCF 3K	LTX 3	230V -1Ph	9.100	3,86
WING 3CFK	KCF 3K		230 V - 3Ph		
WING 3CFK	KCF 3K		400 V - 3Ph		
WING 4CFK	KCF 4K	LTX 5	230 V - 3Ph	12.100	5,17
WING 4CFK	KCF 4K		400 V - 3Ph		
WING 5CFK	KCF 5K	LTX 5	230 V - 3Ph	14.000	7,00
WING 5CFK	KCF 5K		400 V - 3Ph		

PRODUCT RANGE HEAT PUMP

HEAT PUMP R-22C

LTX INDOOR UNIT IN COMBINATION, WITH AXIAL FAN OUTDOOR UNIT

MODEL	OUTDOOR UNIT	INDOOR UNIT	V / Ph / 50 Hz	NOMINAL CAPACITY W		NOMINAL CAPACITY KW	
				COOLING ONLY	HEAT PUMP	COOLING ONLY	HEAT PUMP
WING 2,8TB	KJB 2,8	LTX 3	230V-1Ph	7.350	7.800	3,06	2,60
WING 3TB	KJB 3	LTX 3	230V -1Ph	9.250	9.000	3,70	3,00
WING 3TB	KJB 3		230 V - 3Ph				
WING 3TB	KJB 3		400 V - 3Ph				
WING 4TB	KJB 4	LTX 5	230 V - 3Ph	11.600	12.100	4,70	3,90
WING 4TB	KJB 4		400 V - 3Ph				
WING 5TB	KJB 5	LTX 5	230 V - 3Ph	13.700	14.600	5,90	5,00
WING 5TB	KJB 5		400 V - 3Ph				

LTX INDOOR UNIT IN COMBINATION, WITH CENTRIFUGAL FAN OUTDOOR UNIT

MODEL	OUTDOOR UNIT	INDOOR UNIT	V / Ph / 50 Hz	NOMINAL CAPACITY W		NOMINAL CAPACITY KW	
				COOLING ONLY	HEAT PUMP	COOLING ONLY	HEAT PUMP
WING 2,8CB	KCB 2,8S	LTX 3	230V-1Ph	7.130	8.150	3,07	2,77
WING 3CB	KCB 3S	LTX 3	230V -1Ph	9.100	10.220	3,86	3,40
WING 3CB	KCB 3S		230 V - 3Ph				
WING 3CB	KCB 3S		400 V - 3Ph				
WING 4CB	KCB 4S	LTX 5	230 V - 3Ph	12.100	13.500	5,17	4,33
WING 4CB	KCB 4S		400 V - 3Ph				
WING 5CB	KCB 5S	LTX 5	230 V - 3Ph	14.000	17.400	7,00	6,40
WING 5CB	KCB 5S		400 V - 3Ph				

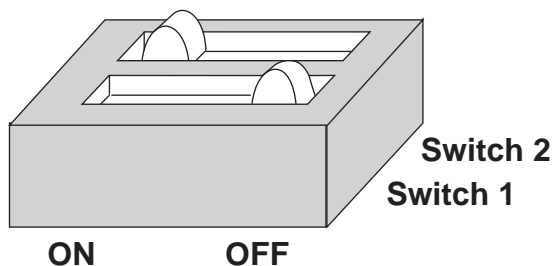
SYSTEM CONFIGURATION (INDOOR UNIT)

IMPORTANT

**Prior of making the electrical connections,
set the switch for heat pump unit or for cooling only unit.**

This unit is valid for operating as a cold only or heat pump application.

The unit should be configured prior to making the electrical connections, by setting the configuration switch as follows:



MODEL	SWITCH	
	1	2
COOLING ONLY (*)	OFF	ON
HEAT PUMP	ON	ON

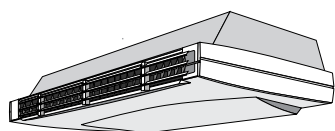
(*) Configuration from factory..

Check page 8 for more information about the situation of this switch.

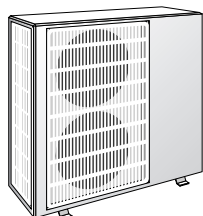
NOTE:

If errors are made during the configuration of the system, switch off the main power supply, set configuration switch in the correct position and then switch the power on.

GENERAL DESCRIPTION



INDOOR
UNIT LTX



OUTDOOR UNIT
KJF/KJB



OUTDOOR UNIT
KCF/KCB

The ceiling air conditioner SPLIT, on version cooling only and heat pump, are units air condensed. The indoor unit with direct air supply, realise function of cooling , heating dehumidification, cleaning air of the sites. Also the option to incorporate with maximum facilities a heating resistance on units cooling only and also on heat pump units.

The indoor unit can be combine with outdoor units provide with axial fan (KJF/ KJB) for outside installation or with outdoor unit provide with centrifugal fan (KCF/ KCB) for installation inside buildings.

CABINE

The outdoor unit is made on electrozincated steel with epoxy painted finish, able to work outdoors under the worst conditions. its dimensions and features allow the unit to be positioned in almost any location. It incorporate thermal acoustic insulation. The indoor unit is finished in a decorative plastic with thermal acoustic insulation.

HEAT EXCHANGER

Made of cooper tubes and aluminium fins. Coils have been designed and manufactured to ensure maximum efficiency. The L shaped outside unit heat exchanger makes this unit compact an highly efficiency.

COMPRESSOR

An hermetically sealed compressor, with internal thermal protection. It is mounted on vibration absorbent blocks both on the inside and outside, statically an dynamically balanced. In all cases the compressors are acoustically isolated, resulting in low noise.

FANS

The indoor units includes centrifugal motor fan of three speed, with exceptional features on noise level Depending on outdoor type, it includes one or two axial motor fan (units KJF/KJB), or one centrifugal fan (units KCF/ KCB),with exceptional features in noise level and flow .

AIR SWEEP

The indoor unit (LTX) have an automatic dispositive to distribute horizontal air flow.

COOLING CIRCUIT

Made of welded dehydrated copper pipe with service port on the suction and liquid lines. Coupling valves on outdoor unit and flare connexion on indoor unit to facilitate the refrigerant connexion. A muffler in the compressor discharge line eliminates noise and pulsation of the discharge line. The unit includes filter dryer and expansion system. It has unidirectional and reversing valves of 4 pipes for unit in heat pump.

ELECTRIC CIRCUIT

The indoor unit electrical panel includes a printed board, which control the operating of the unit, defrosting timer thermostat and system of reversing on heat pump cycle. The unit is controlled from an infrared remote controller.

OPTIONS

OUTDOOR UNIT

- Heating electrical heater.

OUTDOOR UNIT TYPE KJF/KJB

- Supporting with braxkets(depends on units)
- Winter control.

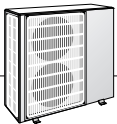
OUTDOOR UNIT TYPE KCF/KCB

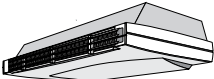
- Winter control
- Main switch (depends on models)
- Grille external air

SPECIFICATIONS COOLING ONLY

OUTDOOR UNIT WITH AXIAL FAN

R-407C

MODEL			WING 2,8TFK	WING 3TFK	WING 4TFK	WING 5TFK
Cooling capacity	(*)	W	7.350	9.500	11.600	13.500
OUTDOOR UNIT			KJF 2,8K	KJF 3K	KJF 4K	KJF 5K
COMPRESSOR	Nº / Type		1 / ALT.	1 / ALT.	1 / ALT.	1 / ALT.
FAN						
Air flow outdoor unit		m3/h.	3.100	5.100	5.400	5.400
REFRIGERANT	Type / R-407C	gr. (1)	1650	2500	2600	2600
EXPANSIÓN			Capillary	Capillary	Capillary	Capillary
WEIGHT		Kg	78	85	96	98
DIMENSIONS						
Height		mm.	781	1035	1035	1035
Width		mm.	973	973	973	973
Depth		mm.	333	333	333	333
PACKING DIMENSIONS		mm.	845 x 1060 x 385	1085 x 1275 x 385		
REFRIGERANT COUPLING						
Liquid pipe			3/8"	3/8"	3/8"	1/2"
Gas pipe			5/8"	3/4"	3/4"	3/4"

INDOOR UNIT			LTX 3	LTX 3	LTX 5	LTX 5
FAN						
Air flow indoor unit		m3/h.				
		Max.	1.300	1.300	2.100	2.100
		Min.	1.100	1.100	1.800	1.800
WEIGHT		Kg	40	40	57	57
DIMENSIONS						
Height		mm.	267	267	312	312
Width		mm.	1.409	1.409	1.719	1.719
Depth		mm.	656	656	756	756
PACKING DIMENSIONS		mm.	310 x 1430 x 680		352 x 1749 x 776	
REFRIGERANT COUPLING						
Liquid pipe			3/8"	3/8"	1/2" (2)	1/2"
Gas pipe			3/4"	3/4" (2)	3/4"	3/4"

(*) Air entry temperature into the indoor unit 27°C DB/19 °C WB

(*) Air entry temperature into the outdoor unit 35°C DB

(1) Charge of refrigerant, factory charged on outdoor unit. See page 22, to calculate model refrigerant charge.

(2) Use the coupling fittings included in indoor unit for refrigerant connection with outdoor unit.

DB.- Dry Bulb


WB.- Wet Bulb

SPECIFICATIONS COOLING ONLY

OUTDOOR UNIT WITH CENTRIFUGAL FAN

R-407C

MODEL		WING 2,8CFK	WING 3CFK	WING 4CFK	WING 5CFK	
Cooling capacity	(*)	W	7.180	9.100	12.100	14.000

OUTDOOR UNIT			KCF 2,8K	KCF 3K	KCF 4K	KCF 5K
COMPRESSOR	Nº / Type		1 / ALT.	1 / ALT.	1 / ALT.	1 / ALT.
FAN						
Air flow outdoor unit	m3/h.		2.500	2.500	3.400	5.000
Available pressure	Pa		40	40	50	50
REFRIGERANT	Type / R-407C	gr. (1)	2255	2350	3070	4950
EXPANSIÓN			Capillary	Capillary	Capillary	Capillary
WEIGHT	Kg		89	91	125	140
DIMENSIONS						
Height	mm.		505	505	525	575
Width	mm.		1050	1050	1300	1300
Depth	mm.		750	750	855	855
PACKING DIMENSIONS	mm.		630 x 1140 x 850		775 x 1330 x 865	
REFRIGERANT COUPLING						
Líquid pipe			3/8"	3/8"	3/8"	1/2"
Gas pipe			5/8"	3/4"	3/4"	3/4"

INDOOR UNIT			LTX 3	LTX 3	LTX 5	LTX 5
FAN						
Air flow indoor unit	m3/h.	Max.	1.300	1.300	2.100	2.100
		Min.	1.100	1.100	1.800	1.800
WEIGHT	Kg		40	40	57	57
DIMENSIONS						
Height	mm.		267	267	312	312
Width	mm.		1.409	1.409	1.719	1.719
Depth	mm.		656	656	756	756
PACKING DIMENSIONS	mm.		310 x 1430 x 680		352 x 1749 x 776	
REFRIGERANT COUPLING						
Líquid pipe			3/8"	3/8"	1/2" (2)	1/2"
Gas pipe			3/4" (2)	3/4"	3/4"	3/4"

(*) Air entry temperature into the indoor unit 27°C DB/19 °C WB

(*) Air entry temperature into the outdoor unit 35°C DB

(1) Charge of refrigerant, factory charged on outdoor unit. See page 22, to calculate model refrigerant charge.

(2) Use the coupling fittings included in indoor unit for refrigerant connection with outdoor unit.

DB.- Dry Bulb


WB.- Wet Bulb

SPECIFICATIONS HEAT PUMP

OUTDOOR UNIT WITH AXIAL FAN

R-22

MODEL			WING 2,8TB	WING 3TB	WING 4TB	WING 5TB
Cooling capacity	(*)	W	7.350	9.250	11.600	13.700
Heating capacity	(**)	W	7.800	9.000	12.100	14.600

OUTDOOR UNIT			KJB 2,8	KJB 3	KJB 4	KJB 5
COMPRESSOR	N ^a / Type		1 / ALT.	1 / ALT.	1 / ALT.	1 / ALT.
FAN	Air flow outdoor unit	m ³ /h.	3.100	3.100	5.400	5.600
REFRIGERANT	Type / R-22	gr.	1775	2500	2800	3500
EXPANSIÓN			Capillary	Capillary	Capillary	Restrictor
WEIGHT		Kg	81	83	99	129
DIMENSIONS		mm.				
	Height		781	781	1035	1330
	Width		973	973	973	1005
	Depth		333	333	333	386
PACKING DIMENSIONS		mm.	845 x 1060 x 385		1085 x 1275 x 385	1495 x 1057 x 430
REFRIGERANT COUPLING						
	Líquid pipe		3/8"	3/8"	3/8"	1/2"
	Gas pipe		5/8"	3/4"	3/4"	3/4"

INDOOR UNIT			LTX 3	LTX 3	LTX 5	LTX 5
FAN	Air flow indoor unit	m ³ /h.				
		Max.	1.300	1.300	2.100	2.100
		Min.	1.100	1.100	1.800	1.800
WEIGHT		Kg	40	40	57	57
DIMENSIONS		mm.				
	Height		267	267	312	312
	Width		1.409	1.409	1.719	1.719
	Depth		656	656	756	756
PACKING DIMENSIONS		mm.	310 x 1430 x 680		352 x 1749 x 776	
REFRIGERANT COUPLING						
	Líquid pipe		3/8"	3/8"	1/2" (2)	1/2"
	Gas pipe		3/4" (2)	3/4"	3/4"	3/4"

(*) Air entry temperature into the indoor unit 27°C DB/19 °C WB

(*) Air entry temperature into the outdoor unit 35°C DB

(**) Air entry temperature into the indoor unit 20°C DB/12 °C WB

(**) Air entry temperature into the outdoor unit 7°C DB/6°CWB

(1) Charge of refrigerant, factory charged on outdoor unit. See page 22, to calculate model refrigerant charge

(2) Use the coupling fittings included in indoor unit for refrigerant connection with outdoor unit..

DB.- Dry Bulb
WB.- Wet Bulb

SPECIFICATIONS HEAT PUMP

R-22

OUTDOOR UNIT WITH CENTRIFUGAL FAN

MODEL			WING 2,8CB	WING 3CB	WING 4CB	WING 5CB
Cooling capacity	(*)	W	7.180	9.100	12.100	14.000
Heating capacity	(**)	W	8.150	10.220	13.500	17.400

OUTDOOR UNIT			KCB 2,8S	KCB 3S	KCB 4S	KCB 5S
COMPRESSOR	N ^a / Type		1 / ALT.	1 / ALT.	1 / ALT.	1 / ALT.
FAN						
Air flow outdoor unit	m ³ /h.		2.500	2.500	3.400	5.000
Available pressure	Pa		40	40	50	50
REFRIGERANT	Type / R-22	gr. (1)	2425	2525	3400	5300
EXPANSIÓN			Capillary	Capillary	Capillary	Capillary
WEIGHT		Kg	92	94	135	150
DIMENSIONS						
Height		mm.	505	505	525	575
Width		mm.	1050	1050	1300	1300
Depth		mm.	750	750	855	855
PACKING DIMENSIONS		mm.	630 x 1140 x 850		775 x 1330 x 865	
REFRIGERANT COUPLING						
Líquid pipe			3/8"	3/8"	3/8"	1/2"
Gas pipe			5/8"	3/4"	3/4"	3/4"

INDOOR UNIT			LTX 3	LTX 3	LTX 5	LTX 5
FAN						
Air flow indoor unit	m ³ /h.	Max.	1.300	1.300	2.100	2.100
		Min.	1.100	1.100	1.800	1.800
WEIGHT		Kg	40	40	57	57
DIMENSIONS						
Height		mm.	267	267	312	312
Width		mm.	1.409	1.409	1.719	1.719
Depth		mm.	656	656	756	756
PACKING DIMENSIONS		mm.	310 x 1430 x 680		352 x 1749 x 776	
REFRIGERANT COUPLING						
Líquid pipe			3/8"	3/8"	1/2" (2)	1/2"
Gas pipe			3/4" (2)	3/4"	3/4"	3/4"

(*) Air entry temperature into the indoor unit 27°C DB/19 °C WB

(*) Air entry temperature into the outdoor unit 35°C DB

(**) Air entry temperature into the indoor unit 20°C DB/12 °C WB

(**) Air entry temperature into the outdoor unit 7°C DB/6°CWB

(1) Charge of refrigerant, factory charged on outdoor unit. See page 22, to calculate model refrigerant charge

(2) Use the coupling fittings included in indoor unit for refrigerant connection with outdoor unit..

DB.- Dry Bulb
WB.- Wet Bulb