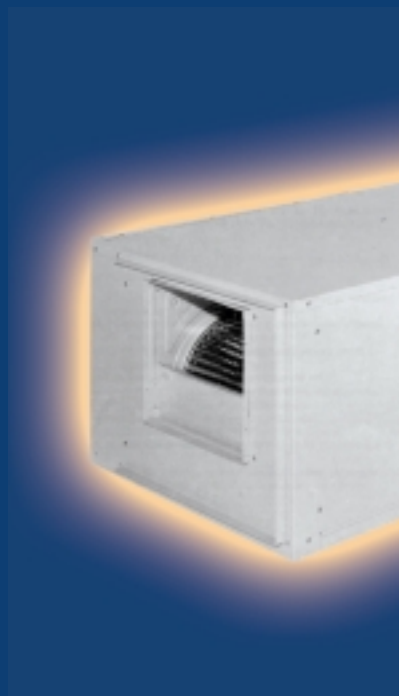


APPLICATION GUIDE



PROVIDING **GLOBAL SYSTEM** SOLUTIONS

FLATAIR
FLW- K

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Congratulations you have made a wise choice. 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.

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PRODUCT RANGE

MODEL	V / Ph / 50 Hz	NOMINAL CAPACITY W	POWER INPUT KW
FLW 2K	230 V - 1Ph	6.050	1,57
FLW 2,5K	230 V - 1Ph	7.600	2,26
FLW 2,8K	230 V - 1Ph	8.650	2,90
FLW 3K	230 V - 1Ph	10.750	3,38
	230 V - 3Ph		
	400 V - 3Ph		
FLW 4K	230 V - 3Ph	14.600	4,37
	400 V - 3Ph		
FLW 5K	230 V - 3Ph	16.350	5,36
	400 V - 3Ph		
FLW 7K	230 V - 3Ph	19.350	7,40
	400 V - 3Ph		

GENERAL INFORMATION

The air conditioner, horizontal compact, water condensed type FLW, are specially design for small and average installation, office, house etc..

On standard version you are able to incorporate electrical heater, hot water coil for use in heat.

CABINET

The cabinet is made of electrozincd steel with epoxy painted finish and finished on polyester powder. Its compact dimensions and features allow the unit to be positioned in almost any location.

Internally the unit incorporate thermal acoustic insulation to reduce sound level.

EXCHANGER

Made of copper tubing with aluminium swirl fins, they are designed and specially dimensioned to obtain the maximum output

COMPRESSOR

One compressor of the hermetically sealed type cooled with internal thermal insulation. It is mounted on vibration-absorbent blocks both on the inside and outside, statically and dynamically balanced. In all cases the compressors are acoustically isolated, resulting in silent operation.

FAN

The units include a centrifugal three speed motor fan, with a motor directly fitted (except FLW 7K with belts-pully), with high performance on air flow.

CONDENSER

The unit includes condenser plate, compact and resistant made on inoxidable steel, specially selected for this type of unit.

AIR FILTER

A polypropylene washable air filter is incorporated in the unit it is accessible for maintenance

COOLING CIRCUIT

Made of welded dehumidifying copper tube with access connections. Includes dehydrator filter, liquid recipient expansion system and H.P on all models and L.P on models 3,4,5 and 7.

ELECTRIC CIRCUIT

The electrical panel includes a printed board, necessary for installation, main switch in all models, and plate circuit board ready to control the unit, and incorporate defrosting timer thermostat. the function of the unit is controlled by cable thermostat.

REMOTE CONTROL

Digital remote controller by cable at 24V, digital selector temperature which permit to choose the following function:

- Selection ON/OFF
- Three functions mode: cool, heat and fan operating.
- Two options fan operating: AUTO (automatic) which Select turn on and stop automatically fan mode temperature. On mode ON the fan doesn't stop even when temperature is selected.
- Selector three steps fan, except for model FLW 7K, only one step.

OPTIONS

- Electrical heater mounted on fan discharge.
- Hot water coil.
- Presostatic valves regulating water flow
- Digital thermostat programmable.

SPECIFICATIONS

MODEL		FLW 2K	FLW 2,5K	FLW 2,8K	FLW 3K	FLW 4K	FLW 5K	FLW 7K	
Nominal cooling capacity	W (*)	6050	7600	8650	10750	14600	16350	19350	
Nominal absorber capacity	Kw	1,57	2,26	2,90	3,38	4,37	5,36	7,40	
Air flow (max./min.)	m ³ /h	1550/600	1400/800	2350/1000	2250/1200	3100/1500	3100/1800	4500/2250	
Available static pressure. (1)	Pa	140	100	120	100	120	120	210	
Nominal air flow	l/h	1310	1700	2000	2430	3260	3730	4600	
Water pressure drop	KPa	15	19	23	38	20	28	40	
Net weight	Kg	74	78	100	105	150	150	165	
Sound pressure level (LP)(2)	dB(A)	49	50	52	53	57	58	60	
Dimensions	H	(mm)	440	440	440	440	480	480	480
	W	(mm)	490	490	620	620	700	700	700
	L	(mm)	790	790	1080	1080	1500	1500	1500
Hydraulic connections		3/4" G	3/4" G	3/4" G	3/4" G	1" G	1" G	1" G	

(*) Interchange air temperature inlet : 27°C DB / 19°C WB

Water temperature inlet/outlet : 30°C / 35°C

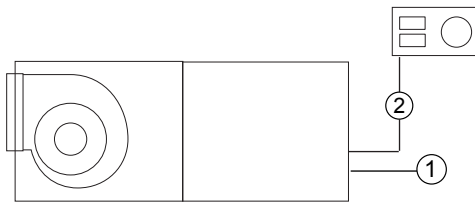
(1) With minimum air flow admissible □

(2) Radiated sound level for unit 2 meter distance wit duct in aspiration and air discharge, normal absorption in accordance with local and capacity of the unit.

ELECTRICAL SPECIFICATIONS

		FLW 2K	FLW 2,5K	FLW 2,8K	FLW 3K	FLW 4K	FLW 5K	FLW 7K	
Voltage		230V /1Ph				230V / 400V 3Ph			
NOMINAL TOTAL INPUT POWER									
Compressor	Kw.	1,42	2,08	2,50	2,98	3,82	4,76	6,20	
Indoor Fan	Kw.	0,15	0,18	0,40	0,40	0,55	0,60	1,20	
TOTAL	Kw.	1,57	2,26	2,90	3,38	4,37	5,36	7,40	
RUNNING CURRENT									
Rated current	A	9,1	13,0	15,0	17,4				
					10,0/5,8	13,0/7,5	16,0/9,3	21,2/12,2	
Starting current	A	12,0	16,0	19,0	23,0				
					16,0/10,0	20,0/12,0	24,0/14,0	30,0/18,0	
Starting current	A	53	65	91	90				
					78/39	106/53	117/60	135/67	

ELECTRICAL CONNECTIONS

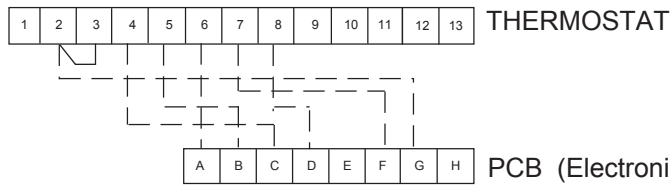


- ① Power supply
- ② Thermostat connection

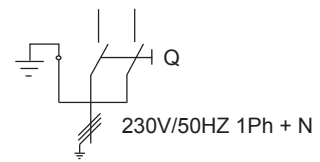
FOR ELECTRICAL CONNECTION REFER TO WIRING DIAGRAM IN THE UNIT

MODEL	VOLTAGE 50Hz	N° OF WIRES X SECTION	
		①	②
FLW 2K-2,5K-2,8K	230 V / 1Ph	3 X 4mm ²	6 X 1,5mm ²
FLW 3K	230 V / 1Ph	3 X 4mm ²	6 X 1,5mm ²
	230 V / 3Ph	4 X 4mm ²	6 X 1,5mm ²
	400 V / 3Ph	5 X 2,5mm ²	6 X 1,5mm ²
FLW 4K-5K	230 V / 3Ph	4 X 6mm ²	6 X 1,5mm ²
	400 V / 3Ph	5 X 4mm ²	6 X 1,5mm ²
FLW 7K	230 V / 3Ph	4 X 10mm ²	5 X 1,5mm ²
	400 V / 3Ph	5 X 6mm ²	5 X 1,5mm ²

FLW 2K-2,5K-2,8K-3K

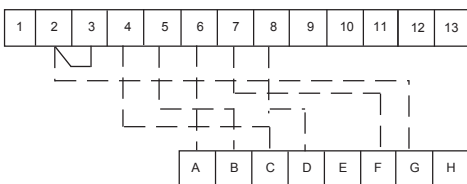


Power supply



FLW 3K-4K-5K

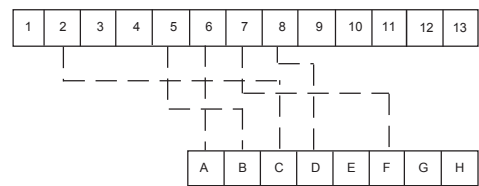
THERMOSTAT



PCB (Electronic plate control)

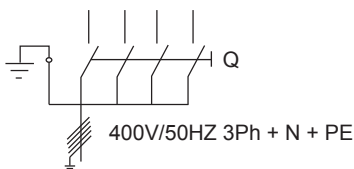
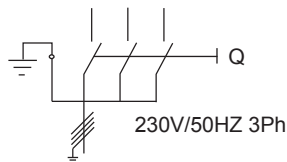
FLW 7K

THERMOSTAT

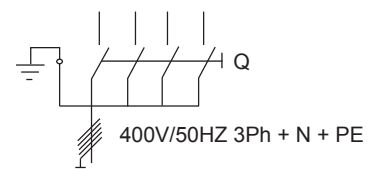
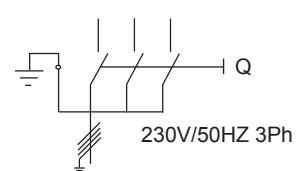


PCB (Electronic plate control)

Power supply



Power supply



Q : Main switch

FAN SPECIFICATIONS

FLW 2K			AVAILABLE STATIC PRESSURE Pa.							
			0	20	40	60	80	100	120	140
AIR FLOW	m ³ /h	HIGH SPEED	1550	1450	1350	1250	1150	1000	800	600
		MEDIUM SPEED	1175	1160	1140	1050	950	790	600	---
		LOW SPEED	675	660	650	640	625	---	---	---

Units leave factory connected in medium and low speed.

FLW 2,5K			AVAILABLE STATIC PRESSURE Pa.							
			0	20	40	60	80	100	120	140
AIR FLOW	m ³ /h	HIGH SPEED	1400	1300	1150	1075	950	800	---	---
		MEDIUM SPEED	1100	1050	1000	925	800	---	---	---
		LOW SPEED	---	---	---	---	---	---	---	---

Units leave factory connected in medium and low speed.

FLW 2,8K			AVAILABLE STATIC PRESSURE Pa.							
			0	20	40	60	80	100	120	140
AIR FLOW	m ³ /h	HIGH SPEED	2350	2200	2050	1900	1700	1350	1000	---
		MEDIUM SPEED	2200	2075	1950	1800	1550	1250	---	---
		LOW SPEED	1860	1840	1750	1650	1375	1050	---	---

Units leave factory connected in medium and low speed.

FLW 3K			AVAILABLE STATIC PRESSURE Pa.							
			0	20	40	60	80	100	120	140
AIR FLOW	m ³ /h	HIGH SPEED	2250	2150	2000	1800	1500	1220	---	---
		MEDIUM SPEED	2100	2000	1875	1675	1400	---	---	---
		LOW SPEED	1850	1820	1700	1525	1260	---	---	---

Units leave factory connected in medium and low speed.

FLW 4K			AVAILABLE STATIC PRESSURE Pa.							
			0	20	40	60	80	100	120	140
AIR FLOW	m ³ /h	HIGH SPEED	3100	2850	2650	2450	2250	2050	1800	---
		MEDIUM SPEED	2450	2300	2150	1975	1800	1600	---	---
		LOW SPEED	1900	1800	1700	1600	1500	---	---	---

Units leave factory connected in medium and low speed.

FLW 5K			AVAILABLE STATIC PRESSURE Pa.							
			0	20	40	60	80	100	120	140
AIR FLOW	m ³ /h	HIGH SPEED	3100	2850	2650	2450	2250	2050	1800	---
		MEDIUM SPEED	2450	2300	2150	1975	1800	---	---	---
		LOW SPEED	1900	1800	---	---	---	---	---	---

Units leave factory connected in medium and low speed.

FLW 7K			AVAILABLE STATIC PRESSURE Pa.							
			0	30	60	90	120	150	180	210
AIR FLOW	m ³ /h	HIGH SPEED	4500	4200	3900	3600	3300	3000	2750	2500
		OPEN PULLEY 1-1/2 TURN	4060	3750	3450	3200	2900	2650	2300	---
		OPEN PULLEY 3 TURN	3750	3400	3100	2800	2550	2250	---	---

Units leave factory with open pulley (1-1/2 V)

COOLING CAPACITY

FLW 2K

FLW 2,5K

INLET AIR TEMPERATURE TO INDOOR UNIT	COOLING CAPACITY IN kW	CONDENSING TEMPERATURE						CONDENSING TEMPERATURE					
		30°C	35°C	40°C	45°C	50°C	55°C	30°C	35°C	40°C	45°C	50°C	55°C
21°C DB	TOTAL	5,72	5,44	5,16	4,88	4,59	4,30	7,16	6,87	6,57	6,27	5,96	5,64
15°C WB	SENSIBLE	4,18	4,04	3,90	3,76	3,62	3,48	5,16	5,01	4,86	4,71	4,56	4,41
24°C DB	TOTAL	6,21	5,92	5,62	5,32	5,02	4,71	7,74	7,43	7,12	6,80	6,47	6,14
17°C WB	SENSIBLE	4,49	4,35	4,21	4,07	3,93	3,79	5,52	5,37	5,22	5,07	4,92	4,77
27°C DB	TOTAL	6,75	6,44	6,12	5,80	5,48	5,15	8,37	8,04	7,71	7,37	7,03	6,68
19°C WB	SENSIBLE	4,79	4,65	4,51	4,37	4,23	4,09	5,87	5,72	5,57	5,42	5,27	5,12
29°C DB	TOTAL	7,33	7,00	6,66	6,32	5,98	5,62	9,04	8,69	8,34	7,99	7,62	7,25
21°C WB	SENSIBLE	4,83	4,69	4,54	4,40	4,26	4,12	5,89	5,74	5,59	5,44	5,29	5,14
32°C DB	TOTAL	7,95	7,60	7,24	6,88	6,51	6,13	9,76	9,39	9,02	8,64	8,25	7,86
23°C WB	SENSIBLE	5,12	4,97	4,83	4,69	4,55	4,40	6,22	6,07	5,92	5,77	5,62	5,47

FLW 2,8K

FLW 3K

INLET AIR TEMPERATURE TO INDOOR UNIT	COOLING CAPACITY IN kW	CONDENSING TEMPERATURE					CONDENSING TEMPERATURE						
		30°C	35°C	40°C	45°C	50°C	55°C	30°C	35°C	40°C	45°C	50°C	55°C
21°C DB	TOTAL	8,07	7,74	7,40	7,05	6,71	6,36	9,88	9,50	9,11	8,72	8,33	7,93
15°C WB	SENSIBLE	6,20	6,04	5,88	5,72	5,55	5,39	7,42	7,23	7,05	6,86	6,67	6,48
24°C DB	TOTAL	8,77	8,41	8,04	7,68	7,30	6,93	10,74	10,34	9,92	9,51	9,09	8,66
17°C WB	SENSIBLE	6,70	6,53	6,37	6,20	6,04	5,87	8,00	7,81	7,62	7,43	7,24	7,05
27°C DB	TOTAL	9,52	9,13	8,74	8,34	7,94	7,53	11,68	11,24	10,80	10,36	9,91	9,45
19°C WB	SENSIBLE	7,17	7,01	6,84	6,67	6,50	6,34	8,57	8,37	8,18	7,99	7,80	7,60
29°C DB	TOTAL	10,32	9,91	9,49	9,06	8,63	8,19	12,70	12,23	11,76	11,28	10,79	10,30
21°C WB	SENSIBLE	7,21	7,04	6,87	6,70	6,53	6,36	8,63	8,43	8,24	8,04	7,85	7,65
32°C DB	TOTAL	11,19	10,74	10,29	9,83	9,36	8,88	13,80	13,29	12,78	12,27	11,74	11,21
23°C WB	SENSIBLE	7,66	7,49	7,32	7,15	6,97	6,80	9,17	8,97	8,77	8,57	8,38	8,18

FLW 4K

FLW 5K

INLET AIR TEMPERATURE TO INDOOR UNIT	COOLING CAPACITY IN kW	CONDENSING TEMPERATURE						CONDENSING TEMPERATURE					
		30°C	35°C	40°C	45°C	50°C	55°C	30°C	35°C	40°C	45°C	50°C	55°C
21°C DB	TOTAL	13,70	13,10	12,52	11,94	11,37	10,81	14,96	14,45	13,93	13,39	12,83	12,27
15°C WB	SENSIBLE	10,23	9,93	9,64	9,36	9,09	8,83	11,13	10,88	10,62	10,36	10,09	9,82
24°C DB	TOTAL	14,86	14,23	13,60	12,98	12,37	11,77	16,19	15,65	15,10	14,53	13,93	13,33
17°C WB	SENSIBLE	11,00	10,70	10,41	10,13	9,85	9,59	11,96	11,70	11,45	11,18	10,91	10,64
27°C DB	TOTAL	16,11	15,44	14,77	14,11	13,45	12,80	17,52	16,95	16,36	15,75	15,12	14,47
19°C WB	SENSIBLE	11,75	11,45	11,16	10,87	10,59	10,32	12,75	12,50	12,24	11,98	11,70	11,43
29°C DB	TOTAL	17,47	16,74	16,03	15,32	14,61	13,91	18,96	18,36	17,73	17,08	16,41	15,71
21°C WB	SENSIBLE	11,81	11,51	11,21	10,92	10,64	10,36	12,80	12,55	12,30	12,03	11,76	11,48
32°C DB	TOTAL	18,91	18,14	17,37	16,61	15,85	15,09	20,51	19,87	19,21	18,51	17,79	17,04
23°C WB	SENSIBLE	12,52	12,22	11,92	11,63	11,34	11,06	13,57	13,32	13,06	12,79	12,52	12,24

Nominal capacity established on following conditions:

- Air inlet temperature : 27°C DB/19°C WB
- Inlet/outlet water temperature: 30°C/35°C
- Condensing Temperature between 40 and 45°C depending on models

DB: Dry bulb
WB: Wet bulb

COOLING CAPACITY

FLW 7K

INLET AIR TEMPERATURE TO INDOOR UNIT	COOLING CAPACITY IN kW	CONDENSING TEMPERATURE					
		30°C	35°C	40°C	45°C	50°C	55°C
21°C DB	TOTAL	18,46	17,81	17,15	16,47	15,78	15,07
15°C WB	SENSIBLE	13,65	13,33	13,01	12,67	12,34	12,00
24°C DB	TOTAL	19,97	19,29	18,59	17,86	17,12	16,35
17°C WB	SENSIBLE	14,65	14,33	14,00	13,67	13,33	12,98
27°C DB	TOTAL	21,61	20,89	20,14	19,36	18,56	17,74
19°C WB	SENSIBLE	15,62	15,30	14,97	14,63	14,28	13,93
29°C DB	TOTAL	23,38	22,61	21,81	20,98	20,12	19,24
21°C WB	SENSIBLE	15,69	15,36	15,03	14,69	14,34	13,99
32°C DB	TOTAL	25,28	24,46	23,61	22,72	21,80	20,84
23°C WB	SENSIBLE	16,61	16,29	15,95	15,61	15,26	14,90

DB: Dry bulb
WB: Wet bulb

Nominal capacity established on following conditions:

- Air inlet temperature : 27°C DB/19°C WB
- Inlet/outlet water temperature: 30°C/35°C
- Condensing Temperature between 40 and 45°C depending on models

Data based on following air flow	MODEL FLW						
	2K	2,5K	2,8K	3K	4K	5K	7K
AIR FLOW M ³ /H	1100	1200	1900	2000	2300	2500	3500

COEFFICIENTS OF CORRECTION OF COOLING CAPACITY

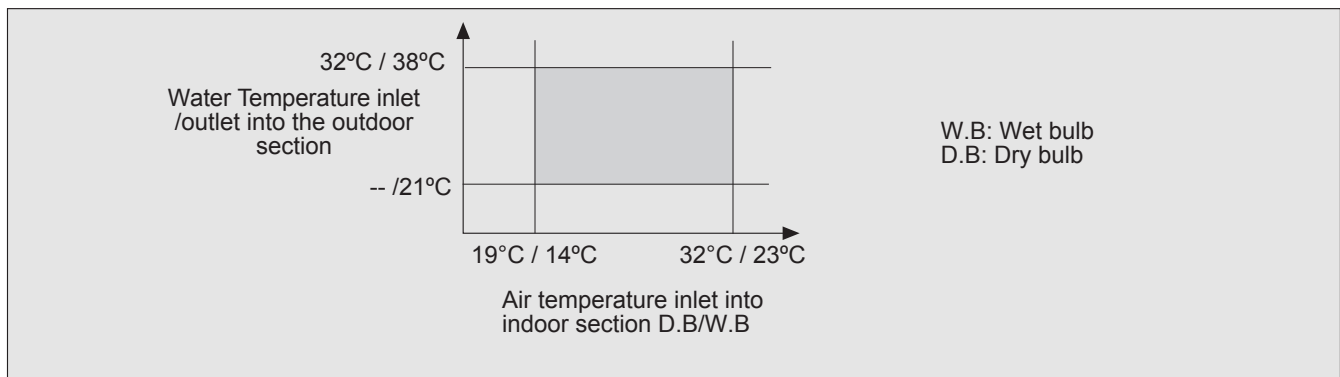
Data of cooling capacity rated on tables are calculated for nominal air flow, for minimum /maximum air flow, you must follow the following table

AIR FLOW	FLW 2K		
	MAX	NOMINAL	MIN.
TOTAL CAPACITY	1,05	1	0,89
SENSIBLE CAPACITY	1,15	1	0,77

AIR FLOW	FLW 2,5K			FLW 2,8K			FLW 3K		
	MAX	NOMINAL	MIN.	MAX.	NOMINAL	MIN	MAX.	NOMINAL	MIN.
TOTAL CAPACITY	1,03	1	0,92	1,03	1	0,90	1,02	1	0,91
SENSIBLE CAPACITY	1,07	1	0,84	1,09	1	0,77	1,05	1	0,80

AIR FLOW	FLW 4K			FLW 5K			FLW 7K		
	MAX.	NOMINAL	MIN.	MAX.	NOMINAL	MIN	MAX	NOMINAL	MIN
TOTAL CAPACITY	1,04	1	0,92	1,03	1	0,94	1,03	1	0,92
SENSIBLE CAPACITY	1,13	1	0,83	1,09	1	0,87	1,11	1	0,82

OPERATING LIMITS



WATER CONDENSER CONSUMPTION AND PRESSURE DROP

Normally, the water condense is used across a cooling tower with water temperature around 30°C, and water flow available to work the unit with condensation temperature between 40 and 45°C.

You are able not to use a cooling tower when the unit is near a river etc.. with enough flow and enough quality of the water. The use of the water must be used always across a previous Analysis of water. If the water inlet temperature is below 20°C, It is then necessary to use a regulation valve (Option) to maintain condensing temperature value between 40 and 45 °C.

Depending inlet water temperature and condensation temperature needed you will be able to calculate water consumption following the table below.

TABLE OF WATER CONSUMPTION ON UNITS FLW (L/H) (*)

UNIT	DIFFERENCES BETWEEN: CONDENSATION TEMPERATURE AND INLET WATER TEMPERATURE (°C)							
	10	15	20	25	30	35	40	45
FLW 2K	2280	850	500	360	275	225	185	160
FLW 2,5K	2900	1100	650	470	360	300	245	210
FLW 2,8K	3450	1250	750	550	420	340	280	245
FLW 3K	4100	1500	900	650	500	360	350	300
FLW 4K	5550	2050	1200	850	600	470	470	400
FLW 5K	6250	2300	1400	1000	800	640	540	470
FLW 7K	7500	2900	1700	1300	1000	800	680	590

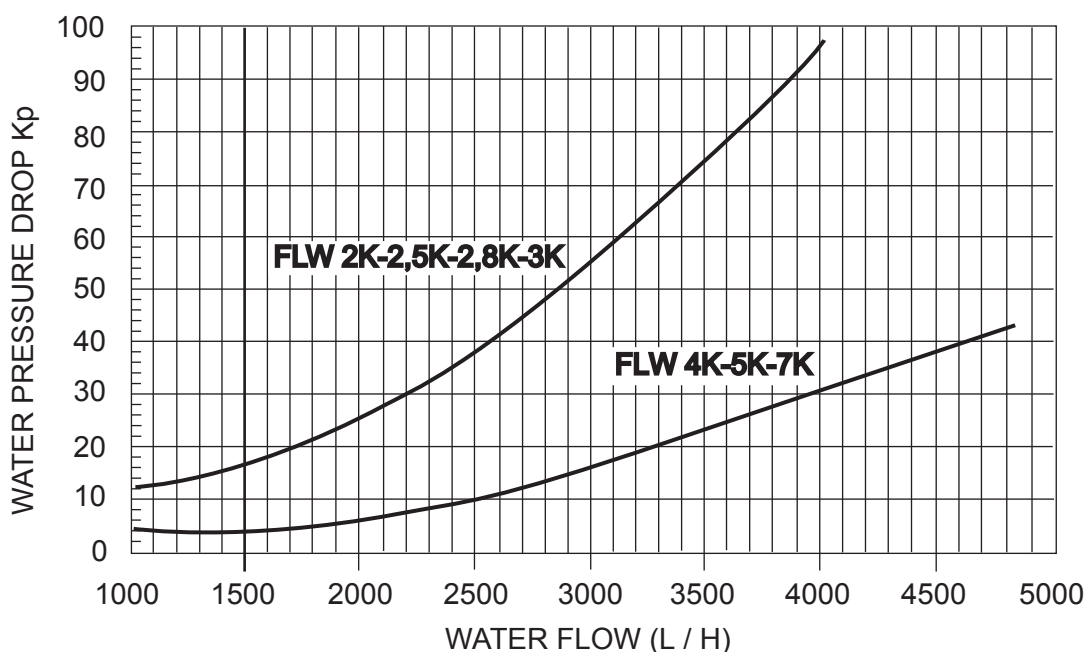
(*) Indoor inlet temperature
27°C WB / 19°C DB

COEFFICIENTS FOR DIFFERENT AIR INLET TEMPERATURE.

For different air inlet temperature multiply the consumption by the coefficient of this table.

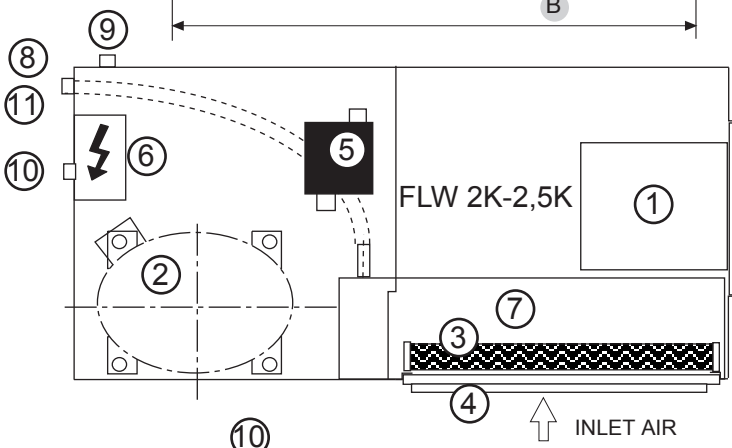
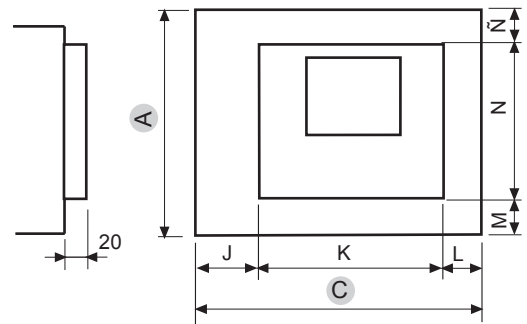
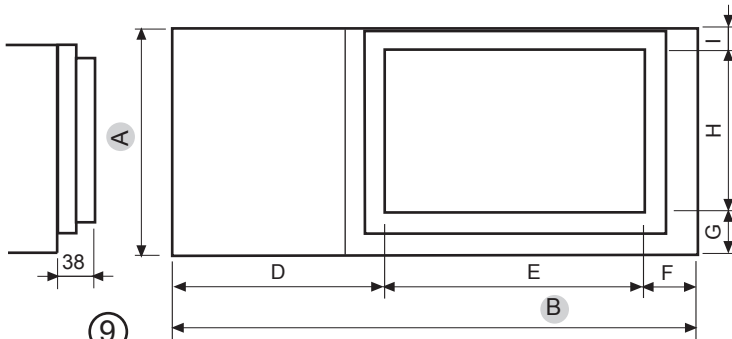
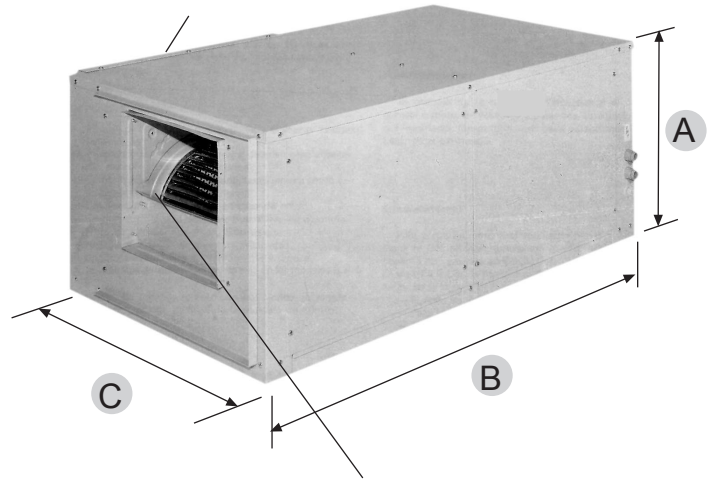
	INDOOR AIR INLET TEMPERATURE (DB/WB)				
	21/15	24/17	27/19	29/21	32/23
Coefficients of water consumption	0,87	0,93	1	1,07	1,14

PRESSURE DROP ON WATER CONDENSER



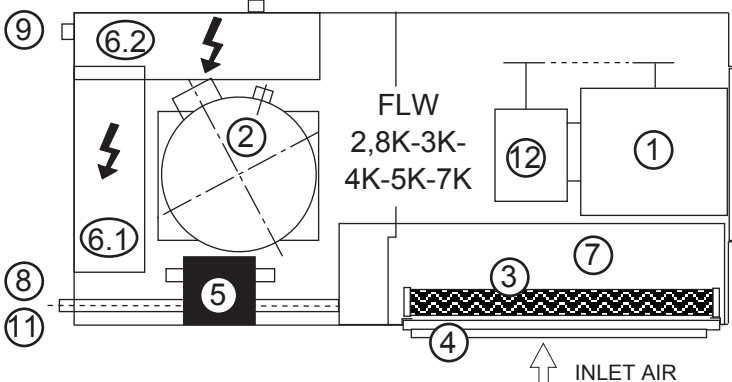
DIMENSIONS

	2K - 2,5K	2,8K - 3K	4K - 5K - 7K
A	440	440	480
B	790	1080	1500
C	490	620	700
D	335	540	545
E	410	490	910
F	45	50	45
G	35	25	25
H	385	395	435
I	20	20	20
J	55	120	145
K	405	480	515
L	30	20	40
M	40	30	30
N	380	395	435
Ñ	20	15	15



OUTLET AIR

INLET AIR



OUTLET AIR

INLET AIR

- ① MOTOR FAN
- ② COMPRESSOR
- ③ COIL
- ④ AIR FILTER
- ⑤ WATER EXCHANGER
- ⑥.1 ELECTRICAL BOX FLW 2,8-3
- ⑥.2 ELECTRICAL BOX FLW 4-5-7
- ⑦ DRAIN PAN
- ⑧ INLET/OUTLET WATER CONNECTIONS
- ⑨ POWER SUPPLY
- ⑩ MAIN SWITCH
- ⑪ DRAINAGE TUBE
- ⑫ MOTOR (ONLY MODEL 7)

DIAMETER DRAINAGE TUBE

FLW 2K-2,5K	FLW 2,8K-3K-4K-5K-7K
16 mm	27 mm

INSTALLATION

PRE-INSTALLATION

Prior to install the equipment make sure of the following points:

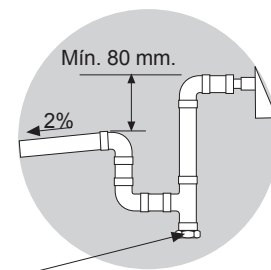
- Leave enough space for access to air supply, water section, power supply and outlet condense.
- The water section must have the correspondent valves.
- Easy extraction of the air filter.
- Easy access to lateral panel for easy accessibility to all services of the unit.
- Unit must be mounted with springs.
- The electrical section must be done following legal normative
- Check that the tension is the same as installation place.
- Check the water condense quality, across analysis.
- Keep in mind water inlet temperature of the unit. Temperature below 20°C you will need a water regulation pressostatic valve (element as option) to maintain condensation temperature value between 40 and 45°C.
- Depending on water entry temperature, you have to calculate the water flow following the consumption table.
- Check that air flow needed correspond for duct installation.
- Keep in mind power supply for maximum consumption for each unit.

INSTALLATION

- All installation must be carried out by qualified personnel
- Make sure that the unit is completely disconnected from the power supply before carrying out any type of work on the unit.

Hydraulic circuit:

- Make sure that the water connections are correct, inlet water (down side), outlet water (upper side)
 - Fit a water filter in the outlet water connection, the step of the mesh should not be less than 0.5mm, which avoid welded and dirty get to the unit.
 - If quality of water is not good, may be necessary to install a decalcified
 - Install cut off valves at inlet and outlet water connections, because of in case of repairs, the hydraulic circuit can be independent.
 - Install an adequate water pump, and all the elements necessities for the installation.
- Air flow:
- All models include three fan speed motor fan.
 - Make the motor fan connections for the fan speed required to adequate the air flow needed for the installation
- Drainage tube:
- Use the flexible tube connected to the tray as a drainage tube.
Cause a siphon with this tube in order to avoid the inlet of scents from the installation to the unit.
 - Install a siphon from the drainage tube of tray with a difference in height of 80 mm to prevent these from not evacuating due to the negative pressure created by the fans. The pipe will have a 2% slope to make it easier for the condensates to drain off.



Tapón para registro y limpieza

SERVICE AND MAINTENANCE

- The unit under supply, have rotating objects and high temperature into the pipe. Make sure to turn off electrically the unit before to access for maintenance or revision.
- Air filter: Clean the filter (maximum each 6 months), but the clean of the filter depend on the ambient where the units is working.
- Water filter: Realise a clean of the filter.
- Security elements: The unit include electrical elements of security(Internal thermal protection on the compressor and motor fan, external thermal protection on the compressor and motor three phase) and cooling elements of security like high and low pressostat pressure with electrical rearm. If limits of function of the unit is out of conditions of work, some protections will be display.

LOCALISATION OF PROBLEMS

PROBLEMS	CAUSES
<ul style="list-style-type: none"> • Cut low pressure (Electrical rearm) (*) • Cooling capacity low. • Freeze on coil 	<ul style="list-style-type: none"> • Air in temperature very low • Defect on refrigerant charge. Test that the refrigerant is correct. • Air filter dirty • low air flow. • Water temperature is too low
<ul style="list-style-type: none"> • Cut high pressure (Electrical rearm) (*) • High consumption • Thermal compressor protection cut 	<ul style="list-style-type: none"> • High water temperature • Low air flow

(*) Rearm electrically the unit turning off/on, after repair the cause which produce a cut on high and low pressure.

OPTIONS

HOT WATER COIL TECHNICAL DATA

DIFFERENCES BETWEEN WATER INLET TEMPERATURE AND COIL AIR INLET (°C)	FLW -2K -2,5K		
	60	50	40
CAPACITY IN KW FOR WATER FLOW OF 250 L/H .	5,10	4,25	3,40
PRESSURE AIR DROP = 15 Pa.			
PRESSURE WATER DROP = 20K Pa			
DATA CALCULATED FOR AIR FLOW = 1100 m ³ /h			

DIFFERENCES BETWEEN WATER INLET TEMPERATURE AND COIL AIR INLET (°C)	FLW -2,8K - 3K		
	60	50	40
CAPACITY IN KW FOR WATER FLOW OF 350 L/H .	7,70	6,50	5,20
PRESSURE AIR DROP = 20 Pa.			
PRESSURE WATER DROP = 40K Pa			
DATA CALCULATED FOR AIR FLOW = 2000 m ³ /h			

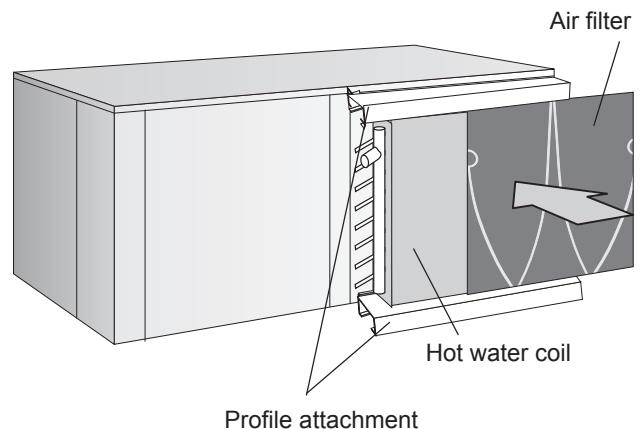
DIFFERENCES BETWEEN WATER INLET TEMPERATURE AND COIL AIR INLET (°C)	FLW -4K -5K		
	60	50	40
CAPACITY IN KW FOR WATER FLOW OF 600 L/H .	12,40	10,30	8,30
PRESSURE AIR DROP = 13 Pa.			
PRESSURE WATER DROP = 50K Pa			
DATA CALCULATED FOR AIR FLOW = 2500 m ³ /h			

DIFFERENCES BETWEEN WATER INLET TEMPERATURE AND COIL AIR INLET (°C)	FLW 7K		
	60	50	40
CAPACITY IN KW FOR WATER FLOW OF 600 L/H .	13,60	11,30	9,00
PRESSURE AIR DROP = 18 Pa.			
PRESSURE WATER DROP = 50K Pa			
DATA CALCULATED FOR AIR FLOW = 3500 m ³ /h			

INSTALLATION

This option kit has a hot water coil with two profile attachment for coil to the unit
 Make sure to install the hot water coil to the aspiration of the unit, then:

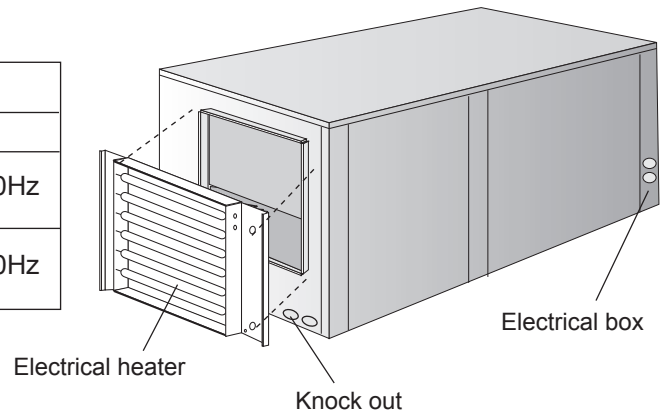
- Dismantle the air filter attachment.
- Fix the profile attachment across screw to the aspiration.
- Fix the hot water coil to the profile attachment. Put the new air filter across the profiles.



OPTIONS

ELECTRICAL HEATER

	Power	Voltage
FLW 2K - 2,5K	5 Kw 1 Step	230 V 1Ph -50Hz
FLW 2,8K - 3K	6 Kw 1Step 9 Kw 1Step	230 V /400 V 3Ph -50Hz
FLW 4K - 5K - 7K	9 Kw 1Step 12 Kw 1 Step	230 V /400 V 3Ph -50Hz



INSTALLATION

- The electrical should be installed into the impulsion fan of the unit.
- Fix the screw following the figure.
- Take out the knock out, and take the electrical supply of the electrical heater to the electrical box of the unit.

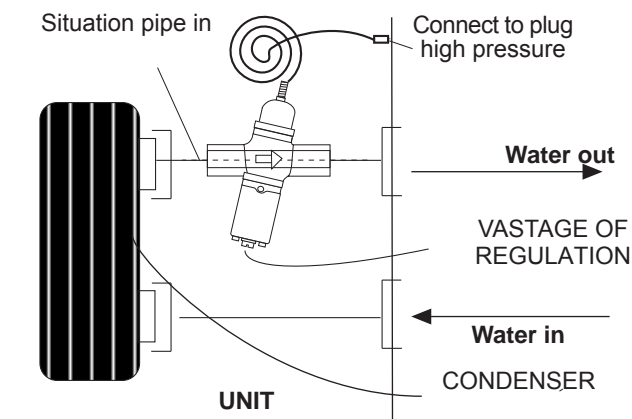
PRESOSTATIC VALVES

If water inlet temperature is below 20°C we recommend to maintain level condensation temperature in (40 a 45°C)

FUNCTION

The presostatic valve maintains some values of the condensation pressure regulating the water flow which enters into the condenser.

When the condensation pressure is up, the valve opens and water enters. and when pressure is low the valve closes.



INSTALLATION

- Substitute the out pipe of the exchanger plate into the unit for a presostatic valve.
- Keep in mind the row indicated in the valve.
- The vantage regulation must be above for easy access to the regulation.
- Connect the capillary tube of the valve to the plug of high pressure in the pipe of the unit.

REGULATION PRESOSTATIC VALVES

- Connect a manometer of high pressure (30 bar) near the refrigerating circuit of the unit.
- Turn over the vantage in the head of the valve (right the valve open, left the valve close) regulating the water flow which enters into the unit.
- You must leave the unit working during 10 minutes and see the indication of the manometer. If the condensation pressure temperature is approximately 45°C the valve is correctly regulated. If not restart the regulation described before.



Abrasive surfaces



Low temperature



High temperature



Risk of injury with moving objects



Electrical voltage



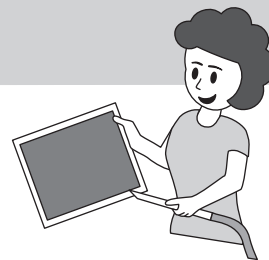
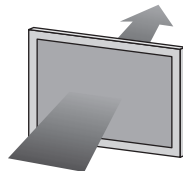
Risk of injury with rotating objects

ATTENTION - WARNING

Electrical shock hazard can cause injury or death. Before attempting to perform any service or maintenance on the unit, turn OFF the electrical power.

FILTER CLEANING

Check the air filter and make sure it is not blocked with dust or dirt



If the filter is dirty, wash it in a bowl neutral soap and water, drying it in the shade before inserting it in the unit

STANDARD GUIDELINES TO LENNOX EQUIPMENT

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The data published in the operating instructions is based on the latest information available. We reserve the right to make modifications without notice.

We reserve the right to modify our products without obligation to modify previously supplied goods.

These operating instructions contain useful and important information for the smooth operation and maintenance of your equipment.

The instructions also includes guidelines on how to avoid accidents and serious damage before commissioning the equipment and during its operation and how to ensure smooth and fault-free operation. Read the operating instructions carefully before starting the equipment, familiarise yourself with the equipment and handling of the installation and carefully follow the instructions. It is very important to be properly trained in handling the equipment. These operating instructions must be kept in a safe near the equipment.

Like most equipment, the unit requires regular maintenance. This section concerns the maintenance personnel and management.

If you have any queries or would like to receive further information on any aspect relating to your equipment, do not hesitate to contact us.