

CLIVETPACK2 FFA

Roof Top air-cooled reversible heat pump
Capacity from 40 to 90 kW



Heat pump



Air cooled

Outdoor
installation

R-410A

Ice
protection
systemFREE-
COOLINGThermodynamic
recovery

ECOBREEZE

Electronically
commutated
FanConstant
Airflow

INTELLIAIR

- ✓ Specifically designed for 100% fresh air conditioning application
- ✓ No contamination between supply and exhaust air
- ✓ High part load efficiency
- ✓ Smart Freecooling and Defrosting management
- ✓ Enhanced air filtration with low ventilation consumption
- ✓ Thermodynamic recovery
- ✓ Compliant with main communication protocols (Modbus, Bacnet and Lonworks)
- ✓ Many available configurations suitable for the most different project situation
- ✓ Interaction with third part extraction systems
- ✓ All component included on board for an enhanced installation
- ✓ Remote and centralized system monitoring through INTELLIAIR

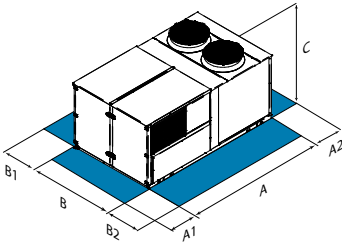
Versions and configurations

CONFIGURATION:

CBFFA Configuration for fresh air supply only (Standard)

CCFFA Configuration for fresh air supply with extraction and exhaust

Dimensions and connections



CAUTION!
For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the blue areas.

Size	CSRN-XHE2-FFA		12.2	16.2	20.4	22.4	24.4
CBFFA	A - Length	mm	2090	2090	3110	3110	3110
CBFFA	B - Width	mm	2300	2300	2300	2300	2300
CBFFA	C - Height	mm	1560	1560	1650	1650	1650
CBFFA	A1	mm	1500	1500	1500	1500	1500
CBFFA	A2	mm	1500	1500	1500	1500	1500
CBFFA	B1	mm	1500	1500	1500	1500	1500
CBFFA	B2	mm	1500	1500	1500	1500	1500
CBFFA	Operating weight	kg	1273	1297	1358	1393	1427
CCFFA	Operating weight	kg	1401	1425	1560	1595	1629

The above mentioned data are referred to standard units for the constructive configurations indicated. For all the other configurations, refer to the relative Technical Bulletin.

CBFFA Configuration for fresh air supply only
CCFFA Configuration for fresh air supply with extraction and exhaust

Technical data

Size	CSRN-XHE2-FFA		12.2	16.2	20.4	22.4	24.4
CBFFA	Cooling capacity	(1) kW	39,8	49,5	76,1	83,4	90,4
CBFFA	Sensible capacity	(1) kW	21,5	27,8	38,3	43,3	48,0
CBFFA	Compressor power input	(1) kW	9,4	12,9	20,0	21,7	23,3
CBFFA	EER	(1) -	4,23	3,84	3,81	3,84	3,88
CBFFA	Heating capacity	(2) kW	39,6	50,0	73,2	81,4	89,5
CBFFA	Compressor power input	(2) kW	9,9	11,9	17,2	18,2	20,7
CBFFA	COP	(2) -	4,00	4,20	4,26	4,47	4,32
CBFFA	Refrigeration circuits	Nr	2	2	2	2	2
CBFFA	No. of compressors	Nr	2	2	4	4	4
CBFFA	Type of compressors	(3) -	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
CBFFA	Nominal supply airflow	m³/h	3400	4500	6000	7000	8000
CBFFA	Airflow range	m³/h	3000-4000	4000-5300	5300-6500	6400-7600	7300-9000
CBFFA	Type of supply fan	(4) -	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
CBFFA	Number of supply fans	Nr	1	1	1	1	1
CBFFA	Max. static pressure supply fan	(5) Pa	675	470	775	730	650
CBFFA	Type of external fan	(4) -	AX/AC	AX/AC	AX/AC	AX/AC	AX/AC
CBFFA	Standard power supply	V	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Sound power level outside	(6) dB(A)		83	85	84	85	87

Performance refers to operation with 80% of expelled and outdoor air
 (1) Ambient air at 27°C D.B./19°C W.B. Outdoor air temperature: 35°C D.B./ 24°C W.B; EER referred only to compressors
 (2) Ambient temperature 20°C DB. Outside temperature 7°C DB/6°C WB; COP referred only to compressors
 (3) SCROLL = Scroll compressor
 (4) RAD = Radial fan; AX = Axial Fan; EC = Electronically Commutated

(5) Available nett pressure to overcome the supply
 (6) Sound pressure levels are referred to units operating at nominal load in nominal conditions. Measurements are carried out accordingly to UNI EN ISO 9614-1 at nominal standard.

CBFFA Configuration for fresh air supply only

Accessories

RE1	Thermodynamic heat recovery system (CCFFA version)	PGCCH	Anti-hail protection grilles
M3	Downward air supply	CPHG	Hot gas re-heating coil
M5	Upflow air supply	HSE5	5 kg/h immersed electrodes steam humidifier (size 12.2+16.2)
R3	Downward air return	HSE8	8 kg/h immersed electrodes steam humidifier (size 12.2+16.2)
PCOSM	Constant supply airflow	HSE9	15 kg/h immersed electrodes steam humidifier (size 20.4+24.4)
PCOSME	Constant airflow in supply and exhaust (CCFFA version)	MHP	High and low pressure gauges
CREFB	Device for fan consumption reduction of the external section, ECOBREEZE type (sizes 20.4+24.4)	CMSC9	Serial communication module for Modbus supervisor
VENH	High static pressure fans	CMSC10	Serial communication module for LonWorks supervisor
F7	High efficiency F7 air filter (ISO 16890 ePM1 55%)	CMSC11	Serial communication module for BACnet-IP supervisor
F9	High efficiency F9 air filter (ISO 16890 ePM1 80%)	CTERM	Remote keypad for indoor temperature and humidity control
FIFD	Electronic filter with iFD technology (ISO 16890 ePM1 90%)	PM	Phase monitor
PSAF	Differential pressure switch for dirty air filters	PFCC	Power factor correction capacitors (cosfi > 0.95)
EH12	9 kW electric heaters (size 12.2+16.2)	SFSTC	Progressive compressor start-up device
EH15	13,5 kW electric heaters (sizes 12.2+16.2)	PTAAX	Remote ambient air temperature sensor
EH17	18 kW electric heaters (size 20.4+24.4)	PTUAX	Remote ambient air temperature and humidity probe
EH22	27 kW electric heaters (sizes 20.4+24.4)	IOTX	IoT industrial module for cloud based interoperability & services
CHW2	Two-rows hot water coil	PCM0	Sandwich panels of the handling zone in M0 fire reaction class
3WVM	3-way modulating valve	PTCO	Set up for shipping via container
2WVM	2-way modulating valve	AMRX	Rubber antivibration mounts
GC01X	Condensing gas heating module with modulating control 35 kW (sizes 12.2+16.2)	AMRMX	Rubber antivibration mounts for unit and gas module
GC08X	Condensing gas heating module with modulating control 44 kW (sizes 12.2+16.2)	RCX	Roof curb
GC09X	Condensing gas heating module with modulating control 65kW		
GC10X	Condensing gas heating module with modulating control 82 kW (sizes 20.4+24.4)		
LTEMP1	Application for low outdoor temperature		
PGFC	Finned coil protection grilles		

Accessories whose code ends with "X" are supplied separately

For compatibility between the various accessories, please refer to the dedicated Technical Bulletin or our website in the Systems and Products section.