

CLIVETPACK2

Packaged air-conditioning unit
Roof Top water-cooled reversible heat pump
Capacity from 51 to 412 kW



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Heat pump
- 
Water cooled
- 
Outdoor installation
- 
R-410A
- 
Hermetic Scroll
- 
FREE-COOLING
- 
THOR (Thermodynamic Overboost Recovery)
- 
Electronically commutated Fan
- 
Constant Airflow
- 
Variable Airflow
- 
INTELLIAIR
- 
ErP compliant

- ✓ High part load efficiency
- ✓ Smart Freecooling management
- ✓ Enhanced air filtration with low ventilation consumption
- ✓ Thermodynamic recovery
- ✓ Suitable for closed or open loop water systems
- ✓ Compliant with main communication protocols
- ✓ Many available configurations suitable for the most different project situation
- ✓ All component included on board for an enhanced installation
- ✓ Remote and centralized system monitoring through INTELLIAIR

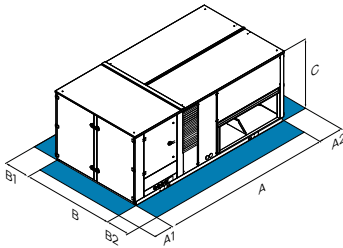
Versions and configurations

CONFIGURATION:

- CAK
Configuration with single fan section for full recirculation
- CBK
Configuration with single fan section for recirculation and fresh air

- CCK
Configuration with double fan section for recirculation, fresh and exhaust air
- CCKP
Configuration with double fan section with fresh air and THOR thermodynamic recovery

Dimensions and connections



CAUTION!
For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the blue areas.
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.
CAK Configuration with single fan section for full recirculation

Size	CRH-XHE2	14.2	16.4	20.4	25.4	30.4	33.4	40.4	44.4
CAK A - Length	mm	3560	3560	4155	4155	4155	4155	4155	4155
CAK B - Width	mm	2300	2300	2300	2300	2300	2300	2300	2300
CAK C - Height	mm	1405	1405	1405	1405	1405	1705	1705	1705
CAK A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CBK Operating weight	kg	1396	1456	1530	1549	1559	1602	1636	1641

Size	CRH-XHE2	49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
CAK A - Length	mm	3910	3910	4900	4900	4900	5520	5520	5520
CAK B - Width	mm	2300	2300	2300	2300	2300	2300	2300	2300
CAK C - Height	mm	2250	2250	2250	2250	2250	2250	2250	2250
CAK A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CBK Operating weight	kg	2080	2397	2613	2672	3074	3245	3461	3987

Technical data

Size	CRH-XHE2	14.2	16.4	20.4	25.4	30.4	33.4	40.4	44.4
Cooling capacity (EN 14511:2022)	(1) kW	50,6	65,6	82,1	92,2	102,7	120,6	152,5	162,1
Sensible capacity	(1) kW	38,5	48,9	62,9	69,8	77,4	88,9	106,0	114,0
Compressor power input	(1) kW	9,1	13,0	15,4	17,4	19,1	21,2	26,6	28,8
EER (EN 14511:2022)	(1) -	5,06	4,57	4,94	4,89	4,88	5,45	5,66	5,31
Heating capacity (EN 14511:2022)	(2) kW	56,6	77,4	91,0	104,0	93,5	109,0	136,5	150,9
Compressor power input	(2) kW	9,9	15,5	18,2	20,4	23,8	27,7	30,1	33,3
COP (EN 14511:2022)	(2) -	4,71	4,19	4,24	4,33	3,74	3,86	4,50	4,35
Refrigeration circuits	Nr	2	2	2	2	2	2	2	2
No. of compressors	Nr	2	4	4	4	4	4	4	4
Type of compressors	(3) -	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Nominal supply airflow	m³/h	9000	11500	13500	15000	17000	18500	21000	23000
Airflow range	m³/h	8500-13000	8500-13000	12000-20000	12000-20000	12000-20000	16000-25000	16000-25000	16000-25000
Type of supply fan	(4) -	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
Number of supply fans	Nr	1	1	2	2	2	2	2	2
Max. static pressure supply fan	(5) Pa	510	390	510	510	510	510	440	380
Water flow (Source side)	(6) l/s	2,87	3,80	4,69	5,28	5,88	6,79	8,53	9,16
Standard power supply	V	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Directive Erp (Energy related Products)									
SEER - AVERAGE Climate	(7) -	5,12	5,22	5,51	5,46	5,35	6,15	6,99	6,58
η _{s,c}	(7)	196,8	200,7	212,4	210,2	206,1	238,1	271,6	255,3
SCOP - AVERAGE Climate	(7) -	3,99	4,26	4,03	4,59	4,32	4,66	5,38	4,79
η _{s,h}	(7)	151,6	162,4	153,2	175,6	164,8	178,4	207,2	183,6

Size	CRH-XHE2	49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
Cooling capacity (EN 14511:2022)	(1) kW	173,2	183,6	213,5	252,4	278,8	334,5	361,1	387,2
Sensible capacity	(1) kW	124	134	143	163	186	239	258	277
Compressor power input	(1) kW	30,8	33,1	39,9	45,4	52,4	61,7	66,3	72,1
EER (EN 14511:2022)	(1) -	5,18	4,89	4,94	5,10	4,78	4,96	4,87	4,90
Heating capacity (EN 14511:2022)	(2) kW	165,5	179,3	198,3	235,9	264,7	316,8	346,2	378,3
Compressor power input	(2) kW	38,0	41,0	48,1	53,2	60,5	66,8	75,0	82,6
COP (EN 14511:2022)	(2) -	4,13	4,00	3,92	4,48	4,03	4,38	4,31	4,22
Refrigeration circuits	Nr	2	2	2	2	2	2	2	2
No. of compressors	Nr	4	4	4	4	4	4	4	4
Type of compressors	(3) -	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Nominal supply airflow	m³/h	26000	29000	33000	37000	44000	51000	56000	60000
Airflow range	m³/h	22000-34000	22000-34000	29000-47000	29000-47000	29000-47000	38000-60000	38000-60000	38000-60000
Type of supply fan	(4) -	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
Number of supply fans	Nr	3	3	4	4	4	6	6	6
Max. static pressure supply fan	(5) Pa	630	540	660	570	360	620	540	460
Water flow (Source side)	(6) l/s	9,40	10,0	11,70	13,80	15,40	18,40	19,80	21,30
Standard power supply	V	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Directive Erp (Energy related Products)									
SEER - AVERAGE Climate	(7) -	6,29	5,07	5,61	6,07	5,47	5,80	5,17	5,31
η _{s,c}	(7)	243,7	195,0	216,6	234,9	210,7	224,0	198,9	204,5
SCOP - AVERAGE Climate	(7) -	4,92	4,52	4,04	4,73	4,31	4,54	4,55	4,60
η _{s,h}	(7)	188,8	172,8	153,6	181,2	164,4	173,6	174,0	176,0

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

Performance refers to operation at full recirculation (CAK config.)

(1) Data referred to the following conditions: Ambient air at 27°C/19°C W.B. Water to internal exchanger 30/35°C

(2) Data referred to the following conditions: Ambient temperature 20°C DB; Exchanger water outlet 10°C

(3) SCROLL = Scroll compressor

(4) RAD = ventilador radial; EC = Electronically Commutated

(5) Net outside static pressure to win the outlet and intake onboard pressure drops

(6) Nominal water capacity determined in function of the cooling power

(7) Data calculated according to the EN 14825:2022

Accessories

THR	Exhaust air THOR thermodynamic energy recovery (CCKP version)	2WVM	2-way modulating valve
FC	Thermal FREE-COOLING	LTEMP1	Application for low outdoor temperature
FCE	Enthalpy FREE-COOLING	CPHG	Hot gas re-heating coil
M3	Downward air supply	HSE3	3 kg/h immersed electrodes steam humidifier (size 14.2+30.4)
M5	Upflow air supply	HSE5	5 kg/h immersed electrodes steam humidifier (size 14.2+30.4)
R3	Downward air return	HSE8	3 kg/h electrode boiler steam humidifier (size 14.2+110.4)
SER	Outdoor air damper manually set	HSE9	15 kg/h immersed electrodes steam humidifier (size 14.2+110.4)
SERM	Outdoor air motorized on/off damper	HWS	Water to waste evaporating wet-deck humidifier
SERMD	Modulating motorized outdoor air damper	MHP	High and low pressure gauges
PVAR	Variable airflow	CMSC9	Serial communication module for Modbus supervisor
PCOSM	Constant supply airflow	CMSC10	Serial communication module for LonWorks supervisor
PAQC	Air quality probe for CO ₂ rate check	CMSC11	Serial communication module for BACnet-IP supervisor
PAQCV	Air quality sensor for CO ₂ and VOC rate check	CTERM	Remote keypad for indoor temperature and humidity control
VENH	High static pressure fans	CSOND	Temperature and humidity ambient control with built-in probes
F7	High efficiency F7 air filter (ISO 16890 ePM1 55%)	PM	Phase monitor
FIFD	Electronic filter with iFD technology (ISO 16890 ePM1 90%)	PFCC	Power factor correction capacitors (cosφ > 0.95)
PSAF	Differential pressure switch for dirty air filters	DML	Demand Limit
EH12	9 kW electric heaters (size 14.2+16.4)	DESM	Smoke detector
EH14	12 kW electric heaters (size 14.2+30.4)	SFSTC	Progressive compressor start-up device
EH17	18 kW electric heaters (size 14.2+44.4)	PCM0	Sandwich panels of the handling zone in M0 fire reaction class
EH20	24 kW electric heaters (size 20.4+110.4)	AMRX	Rubber antivibration mounts
EH24	36 kW electric heaters (size 33.4+110.4)	RCX	Roof curb
EH28	48 kW electric heaters (size 49.4+110.4)	PTCO	Set up for shipping via container
ACPC	Hydraulic pipework arrangement for loop with constant flow-rate		
ACPV	Hydraulic pipework arrangement for loop with variable flow-rate		
ACPM	Hydraulic pipework arrangement for system with disposable water		
ACIS	Antifreeze heater protection on the water side exchanger		
IFWX	Steel mesh filter on the water side		
CHW2	Two-rows hot water coil		
CHWER	Energy recovery from food refrigeration		
3WVM	3-way modulating valve		

Accessories whose code ends with "X" are supplied separately