

Packaged air-conditioning unit

CSRT-XHE2: cooling only

CSRN-XHE2: heat pump

Air cooled

Roof Top

Capacity from 155 to 375 kW

CLIVETPack²

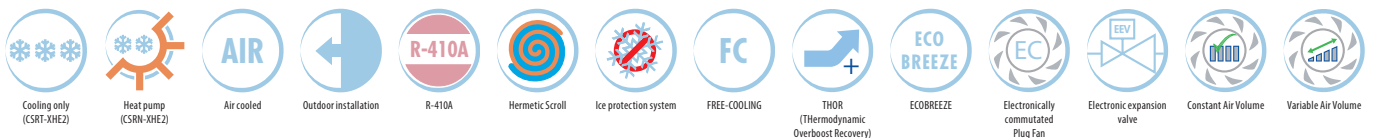
The packaged air-conditioners of the **CSRT-XHE2** and **CSRN-XHE2** series are the technological evolution of Rooftop units developed by Clivet for air-handling purposes. Designed for the air-conditioning of medium-sized and large surfaces with average crowding levels, such as supermarkets, commercial areas, manufacturing areas, railway stations and airports.

► **Versatile use:** the wide series of versions, options and accessories allow for a flexible selection and unique integration, regardless of the intended use and weather outdoors.

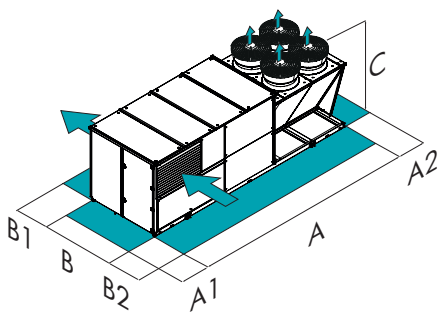
► **Easy to position and install:** the units have an exceptionally compact design and they are also perfect for crowded coverings, they allow for the air supply and return to be horizontal or from below. The units, pre-tested by the manufacturer, start-up immediately thanks to our 'packaged' approach, which includes anything necessary for the system, only requiring the connection to the mains and aerulic network.

► **Sturdiness and energy savings:** thanks to the high efficiency of the refrigeration circuit optimized for operation at partial load, the free-cooling, the standard supplied heat recovery on all models with an air exhaust system, the optional electronic filtering system, the automatic control of the air flow and the variable air flow function, energy consumption levels and, as a result, running costs, are considerably lower.

functions and features



dimensions and clearances



Size – CSRT-XHE2		49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
A - Length	mm	5070	5070	6670	6670	6670	8510	8510	8510
B - Width	mm	2326	2326	2326	2326	2326	2326	2326	2326
C - Height	mm	2410	2410	2410	2410	2410	2410	2410	2410
A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP Operating weight	kg	2313	2630	2851	3043	3460	3637	3882	4414
Size – CSRN-XHE2		49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
A - Length	mm	5070	5070	6670	6670	6670	8510	8510	8510
B - Width	mm	2326	2326	2326	2326	2326	2326	2326	2326
C - Height	mm	2410	2410	2410	2410	2410	2410	2410	2410
CCKP A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP Operating weight	kg	2400	2724	2966	3158	3583	3784	4029	4571
CAK/CBK Operating weight	kg	2189	2512	2688	2880	3305	3430	3674	4217
CCK Operating weight	kg	2304	2628	2839	3031	3457	3622	3867	4411

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

CCKP Configuration with single fan section for full reculation

CAK Full re-circulation (CAK)-Gas module

CBK Recirculation and renewal air (CBK)-Gas module

CCK Configuration with dual fan section for recycling, fresh air mixing and discharge-Gas module

versions and configurations

CONFIGURATION (CSRN-XHE2 ONLY):

- **CAK** Configuration with single fan section for full reculation (Standard)
- **CBK** Configuration with single fan section for recycling and fresh air mixing

- **CCK** Configuration with dual fan section for recycling, fresh air mixing and discharge
- **CCKP** Configuration with dual ventilating section with renewal air and THOR thermodynamic recovery

technical data

Size – CSRT-XHE2				49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
CCKP	► Cooling capacity	(1)	kW	175	186	220	242	280	336	356	376
CCKP	Sensible capacity	(1)	kW	12,7	139	160	180	202	247	256	274
CCKP	Compressor power input	(1)	kW	41,1	45,1	50,1	59,0	65,1	76,4	85,1	95,3
CCKP	EER	(1)	-	4,26	4,12	4,40	4,10	4,29	4,40	4,18	3,95
CCKP	Refrigeration circuits		Nr	2	2	2	2	2	2	2	2
CCKP	No. of compressors		Nr	4	4	4	4	4	4	4	4
CCKP	Type of compressors	(2)	-	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
CCKP	Supply airflow		l/s	7222	8056	9167	10278	12222	14167	15556	16667
CCKP	Type of supply fan	(3)	-	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of supply fans		Nr	3	3	4	4	4	6	6	6
CCKP	Fan diameter		mm	560	560	560	560	560	560	560	560
CCKP	Max. static pressure supply fan	(4)	Pa	760	690	740	650	540	760	690	580
CCKP	Exhaust airflow	(5)	l/s	2167	2417	2750	3083	3667	4250	4667	5000
CCKP	Type of exhaust fan	(5)	-	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of exhaust fans	(5)	Nr	2	2	2	2	2	2	2	2
CCKP	Max. exhaust static pressure	(5)	Pa	880	850	620	610	590	560	530	510
CCKP	Standard airflow		l/s	12500	12500	23333	23333	23333	35000	35000	35000
CCKP	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
CCKP	Sound pressure level	(6)	dB(A)	72	72	72	73	74	76	77	78

Size – CSRN-XHE2				49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
CCKP	► Cooling capacity	(1)	kW	175	186	220	242	280	336	356	376
CCKP	Sensible capacity	(1)	kW	129	139	160	180	202	247	256	274
CCKP	Compressor power input	(1)	kW	41,1	45,1	50,1	59,0	65,1	76,4	85,1	95,3
CCKP	EER	(1)	-	4,26	4,12	4,40	4,10	4,29	4,40	4,18	3,95
CCKP	► Heating capacity	(7)	kW	176	187	218	241	279	330	353	382
CCKP	Compressor power input	(7)	kW	32,8	36,5	40,3	46,3	53,0	62,1	67,3	75,0
CCKP	COP	(7)	-	5,38	5,11	5,42	5,21	5,27	5,32	5,25	5,10
CCKP	Refrigeration circuits		Nr	2	2	2	2	2	2	2	2
CCKP	No. of compressors		Nr	4	4	4	4	4	4	4	4
CCKP	Type of compressors	(2)	-	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
CCKP	Supply airflow		l/s	7222	8056	9167	10278	12222	14167	15556	16667
CCKP	Type of supply fan	(3)	-	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of supply fans		Nr	3	3	4	4	4	6	6	6
CCKP	Fan diameter		mm	560	560	560	560	560	560	560	560
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CCKP	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
CCKP	Sound pressure level	(6)	dB(A)	72	72	72	73	74	76	77	78

Notes

Performances are referred to the operating with 30% of exhaust and outdoor air with THOR thermodynamic recovery (CCKP)

- (1) Ambient air at 27°C D.B./19°C W.B. Entering external exchanger air temperature 35°C; EER referred only to compressors
- (2) SCROLL = scroll compressor
- (3) RAD = radial fan
- (4) Net outside static pressure to win the outlet and intake onboard pressure drops

- (5) Configuration with double fan section for recirculation, fresh air, exhaust, thermodynamic recovery (CCK) and configuration with double fan section with renewal air and THOR thermodynamic recovery (CCKP)

- (6) The sound levels are referred to unit operating at full load in nominal conditions. The sound pressure level is referred at a distance of 1 m. from the ducted unit surface operating in free field conditions. External static pressure 50 Pa. (standard UNI EN ISO 9614-2)

- (7) Ambient air at 20°C D.B. external exchanger entering air 7°C/6°C W.B. COP referred only to compressors CCKP Configuration with single fan section for full reculation



accessories

► GH	Gas module: required	► 3WVM	Modulating three-way valve
► THR	THERMOREC exhaust air thermodynamic energy recovery (CCKP version)	► 2WVM	Two-way modulating valve
► REC	Exhaust air thermodynamic energy recovery (CCK version)	■ GC02X	Condensing gas heating module with modulating control 54kW (sizes 49.4÷54.4)
► FC	Thermal FREE-COOLING	■ GC03X	Combustion heating module (sizes 49.4÷80.4)
► FCE	Enthalpy FREE-COOLING	■ GC04X	Condensing gas heating module with modulating control 96kW
► M3	Downflow version	■ GC05X	Condensing gas heating module with modulating control 150kW
► R3	Floor air inlet	■ GC06X	Condensing gas heating module with modulating control 200kW (sizes 60.4÷110.4)
► SER	Manual outdoor air damper	■ GC07X	Condensing gas heating module with modulating control 300kW (sizes 90.4÷110.4)
► SERM	Outdoor air on/off motorized damper	► LTEMP1	Application for low outdoor temperature
► SFCM	Modulating motorized FREE-COOLING damper	► CPHG	Hot gas re-heating coil
► SFCM	Modulating motorized FREE-COOLING damper and min. outdoor air motorized on-off damper	► HSE8	8 kg/h electrode boiler steam humidifier
► PVAR	Variable airflow	► HSE9	15 kg/h electrode boiler steam humidifier
► PCOSM	Constant supply airflow	► HWS	Water to waste evaporating wet-deck humidifier
► PAQC	Air quality sensor for CO ₂ p.p.m. control	► MHP	High and low pressure gauges
► PAQCV	Air quality sensor for CO ₂ and VOC p.p.m. control	► MOB	Serial port RS485 with Modbus protocol
► CREFB	Device for consumption reduction of the external section ECOBREEZE fans	► LON	Serial port RS485 with LonWorks protocol
► VENH	High static pressure fans	► BACIP	BACnet-IP serial communication module
► F7	High efficiency F7 air filter	■ SIX	Service interface (cable of 1,5 metres)
► FES	Electronic filters	► MF2	Multi-function phase monitor
► PSAF	Differential pressure switch for dirty air filters	► PFCP	Power factor correction capacitors (cosφ > 0.9)
► EH20	24 kW electric heaters	► DESM	Smoke detector
► EH24	36 kW electric heaters	► SFSTC	Progressive compressor start-up device
► EH28	48 kW electric heaters	■ CLMX	Clivet Master System
► EH72	72 kW electric heaters	► PCMO	Sandwich panels of the handling zone in M0 fire reaction class
► EH33	96 kW electric heaters	■ AMRX	Rubber antivibration mounts
► CHW2	Two-rows hot water coil	■ RCX	Roof curb
► CHWER	Energy recovery from the food refrigeration		

Key to symbols and notes

■ Accessories separately supplied

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

