

Packaged air-conditioning unit

CSRT-XHE2: cooling only
 CSRN-XHE2: heat pump
 Air cooled
 Roof Top

Capacity from 155 to 376 kW

CLIVETPack²

The packaged air-conditioning units 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.

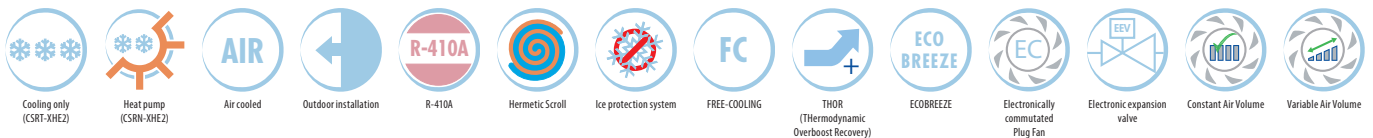
► **Easy to position and install:** the units have an exceptionally compact design and they are also perfect for crowded coverings, they allow for the air supply and return to be horizontal or from below. The units, pre-tested by the manufacturer, start-up immediately thanks to our 'packaged' approach,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

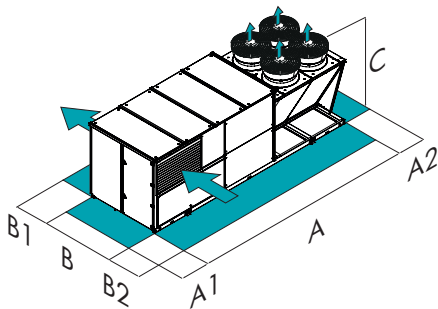


PACKAGED

functions and features



dimensions and clearances



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

Size – CSRT-XHE2		49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4	
CAK	A - Length	mm	5070	5070	6670	6670	6670	8510	8510	8510
CAK	B - Width	mm	2326	2326	2326	2326	2326	2326	2326	2326
CAK	C - Height	mm	2410	2410	2410	2410	2410	2410	2410	2410
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	2102	2418	2573	2765	3181	3283	3528	4059
CAK	Operating weight	kg	2102	2418	2573	2765	3181	3283	3528	4059
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	
CAK	A - Length	mm	5070	5070	6670	6670	6670	8510	8510	8510
CAK	B - Width	mm	2326	2326	2326	2326	2326	2326	2326	
CAK	C - Height	mm	2410	2410	2410	2410	2410	2410	2410	
CAK	A1	mm	1500	1500	1500	1500	1500	1500	1500	
CAK	A2	mm	1500	1500	1500	1500	1500	1500	1500	
CAK	B1	mm	1500	1500	1500	1500	1500	1500	1500	
CAK	B2	mm	1500	1500	1500	1500	1500	1500	1500	
CBK	Operating weight	kg	2102	2418	2573	2765	3181	3283	3528	4059
CAK	Operating weight	kg	2102	2418	2573	2765	3181	3283	3528	4059
CCK	Operating weight	kg	2217	2533	2725	2916	3333	3477	3720	4252
CCKP	Operating weight	kg	2313	2630	2851	3043	3460	3637	3882	4414

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

versions and configurations

CONFIGURATION:

- ▶ **CAK** Configuration with single fan section for full recirculation (Standard)
- ▶ **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

TYPE FAN EXTERNAL SECTION:

- ▶ **AXI** High efficiency diffuser for axial fan - AxiTop (Standard)

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	174	185	220	241	279	334	355	375
CCKP	Sensible capacity	(1) kW	128	138	160	180	202	244	256	273
CCKP	Compressor power input	(1) kW	41,5	45,5	50,6	59,6	65,5	76,8	85,7	96,3
CCKP	EER	(1) -	4,20	4,07	4,34	4,05	4,25	4,35	4,14	3,89
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	630	540	660	570	360	620	540	460
CCKP	Type of exhaust fan	(3) -	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of exhaust fans	(5) Nr	2	2	2	2	2	2	2	2
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
CCKP	Max. static pressure supply fan	(4) Pa	630	540	660	570	360	620	540	460
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	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 double fan section with fresh air and THOR thermodynamic recovery



accessories

- ▶ **THR** Exhaust air THOR thermodynamic energy recovery (CCKP version)
 - ▶ **REC** Exhaust air thermodynamic energy recovery (CCK version)
 - ▶ **FC** Thermal FREE-COOLING
 - ▶ **FCE** Enthalpy FREE-COOLING
 - ▶ **M3** Downflow supply
 - ▶ **M5** Upward supply air
 - ▶ **R3** Floor air inlet
 - ▶ **SER** Outdoor air damper manually set
 - ▶ **SERM** Outdoor air motorized on/off damper
 - ▶ **SFCM** Modulating motorized FREE-COOLING damper
 - ▶ **SFCEM** Modulating motorized FREE-COOLING damper and min. outdoor air motorized on-off damper
 - ▶ **PVAR** Variable airflow
 - ▶ **PCOSM** Constant supply airflow
 - ▶ **PAQC** Air quality probe for CO₂ rate check
 - ▶ **PAQCV** Air quality sensor for CO₂ and VOC rate check
 - ▶ **CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type
 - ▶ **VENH** High static pressure fans
 - ▶ **F7** High efficiency F7 air filter
 - ▶ **FES** Electronic filters
 - ▶ **PSAF** Differential pressure switch for dirty air filters
 - ▶ **EH20** 24 kW electric heaters
 - ▶ **EH24** 36 kW electric heaters
 - ▶ **EH28** 48 kW electric heaters
 - ▶ **CHW2** Two-rows hot water coil
 - ▶ **CHWER** Energy recovery from food refrigeration
 - ▶ **3WVM** Modulating three-way valve
 - ▶ **2WVM** Modulating 2-way valve
 - ▶ **GD14X** Gas heating module with 2-stage control 74kW (sizes 49.4÷54.4)
 - ▶ **GD16X** Gas heating module with 2-stage control 147kW
 - ▶ **GD15X** Gas heating module with 2-stage control 100kW (sizes 49.4÷80.4)
 - ▶ **GD17X** Gas heating module with 2-stage control 200kW (sizes 60.4÷110.4)
 - ▶ **GD18X** Gas heating module with 2-stage control 300kW (sizes 90.4÷110.4)
 - ▶ **GC09X** Condensing gas heating module with modulating control 65kW (sizes 49.4÷54.4)
 - ▶ **GC12X** Condensing gas heating module with modulating control 130kW (sizes 49.4÷54.4, 90.4÷110.4)
 - ▶ **GC10X** Condensing gas heating module with modulating control 82kW (sizes 49.4÷80.4)
 - ▶ **GC13X** Condensing gas heating module with modulating control 164kW (sizes 60.4÷110.4)
 - ▶ **GC11X** Condensing gas heating module with modulating control 100kW (sizes 49.4÷80.4)
 - ▶ **GC06X** Condensing gas heating module with modulating control 200kW (sizes 60.4÷110.4)
 - ▶ **GC07X** Condensing gas heating module with modulating control 300kW (sizes 90.4÷110.4)
 - ▶ **LTEMP1** Application for low outdoor temperature
 - ▶ **CPHG** Hot gas re-heating coil
 - ▶ **HSE8** 8 kg/h immersed electrodes steam humidifier
 - ▶ **HSE9** 15 kg/h immersed electrodes steam humidifier
 - ▶ **HWS** Water to waste evaporating wet-deck humidifier
 - ▶ **MHP** High and low pressure gauges
 - ▶ **MOB** Serial port RS485 with Modbus protocol
 - ▶ **LON** Serial port RS485 with LonWorks protocol
 - ▶ **BACIP** BACnet-IP serial communication module
 - ▶ **SIX** Service interface (cable of 1,5 metres)
 - ▶ **MF2** Multi-function phase monitor
 - ▶ **PFCP** Power factor correction capacitors (cosφ > 0.9)
 - ▶ **DESM** Smoke detector
 - ▶ **CLMX** Clivet Master System
 - ▶ **PCMO** Sandwich panels of the handling zone in M0 fire reaction class
 - ▶ **AMRX** Rubber antivibration mounts
 - ▶ **AMRMX** Rubber antivibration mounts for unit and gas module
 - ▶ **RCX** Roof curb
 - ▶ **CECA** Copper / aluminium evaporator coil with acrylic lining
 - ▶ **CCCA** Copper / aluminium condenser coil with acrylic lining
- CSRT-XHE2 only:**
- ▶ **RCAW** Active winter thermodynamic recovery on expelled air

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.

