

ZEPHIR³

Make-up air unit, full fresh air

With return/exhaust and thermodynamic heat recovery

Reversible heat pump technology

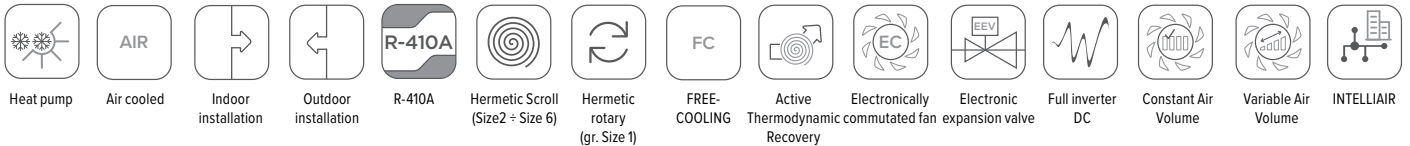
Indoor or outdoor installation

Air flow rate from 278 to 3900 l/s
(from 1000 to 14000 m³/h)

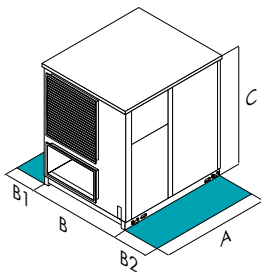


- ✓ Inverter compressors
- ✓ Constant supply of temperature and humidity, both in cooling and heating mode both in cooling and heating mode.
- ✓ Additional available capacity for indoor air conditioning
- ✓ Efficient exhaust air energy recovery and low ventilation consumption thanks to the active thermodynamic recovery
- ✓ Enhanced air filtration (Electronic Filter iFD as std) with low ventilation consumption
- ✓ No contamination between supply and exhaust air
- ✓ Modulating re-heating, free heat from condenser
- ✓ Smart Freecooling and Indoor Air Quality management
- ✓ All primary air devices already on board, for a simplified system design
- ✓ Remote and centralized system monitoring through INTELLIAIR

functions and features



dimensions and clearances



Size	▶▶ CPAN-XHE3	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6
A - Length	mm	1895	1895	2465	2465	2465	2465
B - Width	mm	950	950	1735	1735	2025	2330
C - Height	mm	1025	1625	1810	2260	2260	2260
B1	mm	700	700	700	700	700	700
B2	mm	1200	1200	1200	1200	1200	1200
Operating weight	kg	320	450	1070	1285	1450	1670

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.

CAUTION!

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

Size	▶▶ CPAN-XHE3	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6
Operation with constant supply temperature							
Standard airflow							
Nominal air flow	l/s	361	611	1278	2000	2638	3333
Nominal air flow	m ³ /h	1300	2200	4600	7200	9500	12000
Max external static pressure (supply)	Pa	630	630	630	600	420	630
Max external static pressure (extraction)	Pa	630	630	630	630	540	630
Cooling							
Total cooling capacity	(1) kW	10,6	17,5	38,7	58,4	79	95,9
Re-heating capacity	(1) kW	2,7	4,2	10,9	14,9	21,3	22,9
Compressor power input	(1) kW	2,9	4,9	11,1	15,7	20,4	23,2
EERc	(1) -	4,57	4,41	4,47	4,67	4,91	5,12
Heating							
Heating capacity	(2) kW	5,9	10,0	21,0	32,9	43,4	54,9
Compressor power input	(2) kW	0,7	1,4	2,5	4,2	5,8	8,8
COPc	(2) -	8,38	7,45	8,28	7,80	7,55	6,26
Operation at maximum available capacity							
Standard airflow							
Nominal air flow	l/s	361	611	1278	2000	2638	3333
Nominal air flow	m ³ /h	1300	2200	4600	7200	9500	12000
Max external static pressure (supply)	Pa	630	630	630	600	420	630
Max external static pressure (extraction)	Pa	630	630	630	630	540	630
Cooling							
Total cooling capacity	(3) kW	10,6	17,5	38,7	58,4	79,0	95,9
Compressor power input	(3) kW	3,3	5,5	12,5	17,7	22,9	26,1
Additional available capacity to space	(3) kW	3,6	5,7	14,0	19,8	27,7	30,9
EERc	(3) -	3,25	3,18	3,10	3,31	3,45	3,68
Heating							
Heating capacity	(4) kW	10,5	17,8	37,1	58,2	76,8	96,9
Compressor power input	(4) kW	2,3	3,8	7,1	11,2	14,4	18,3
Additional available capacity to space	(3) kW	4,4	7,5	15,6	24,4	32,3	40,7
COPc	(4) -	4,61	4,72	5,21	5,20	5,33	5,29
Operation with high airflow							
Maximum air flow							
Nominal air flow	l/s	528	972	1944	2556	3194	3889
Nominal air flow	m ³ /h	1900	3500	7000	9200	11500	14000
Max external static pressure (supply)	Pa	630	470	630	455	345	615
Max external static pressure (extraction)	Pa	630	530	630	535	400	630
Cooling							
Total cooling capacity	(5) kW	9,2	18,2	31,9	45,1	62,0	80,6
Compressor power input	(5) kW	1,6	3,4	4,5	7,0	13,8	17,8
EERc	(5) -	5,89	5,38	7,15	6,48	4,50	4,51
Heating							
Heating capacity	(6) kW	6,0	11,1	22,1	29,1	36,3	44,2
Compressor power input	(6) kW	0,5	1,3	2,5	3,1	3,4	5,4
COPc	(6) -	11,1	8,46	8,94	9,36	10,70	8,14
Refrigeration circuits	Nr	1	1	2	2	2	2
No. of compressors	Nr	1	1	2	2	3	3
Type of compressors	(7) -	ROT	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Type of supply fan	(8) -	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
Number of supply fans	Nr	1	1	1	1	1	2
Type of exhaust fan	(8) -	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
Number of exhaust fans	Nr	1	1	1	1	1	2
Standard power supply	V	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Sound power level	(9) dB(A)	77	77	79	79	80	83
Minimum air flow	m ³ /h	1000	1600	3300	5200	7500	9500
Maximum air flow	(10) m ³ /h	1900	3500	7000	9200	11500	14000

Erp (Energy Related Products) European Directive, that includes the Commission delegated Regulation (EU) No 2016/2281 also known as Ecodesign Lot21, does not report this Product category. DB = dry bulb; WB = wet bulb; EERc = Thermodynamic efficiency of the system in cooling; COPc = Thermodynamic efficiency of the system in heating

(1) Outdoor air temperature: 35°C D.B./ 24°C W.B.; Exhaust air temperature: 26°C D.B. Supply air humidity ratio: 11g/kg; Supply air temperature: 24°C D.B.

(2) Outdoor air temperature: 7°C D.B./6.0°C W.B. Exhaust air temperature: 20°C D.B./ 12°C W.B.; Supply air temperature: 20°C D.B.

(3) Outdoor air temperature: 35°C D.B./ 24°C W.B.; Exhaust air temperature: 26°C D.B. Supply air humidity ratio: 11g/kg

(4) Outdoor air temperature: 7°C D.B./6.0°C W.B.; Exhaust air temperature: 20°C D.B./12°C W.B.; Supply air temperature: 30°C D.B.

(5) Outdoor air temperature: 35°C D.B./ 24°C W.B.; Exhaust air temperature: 26°C D.B. Supply air temperature: 22°C D.B.

(6) Outdoor air temperature: 7°C D.B./6.0°C W.B. Exhaust air temperature: 20°C D.B./ 12°C W.B.; Supply air temperature: 16°C D.B.

(7) ROT = rotary compressor; SCROLL = scroll compressor

(8) RAD = radial fan; EC = Electronically Commutated

(9) 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.

(10) In case of use with high air flow only the maximum flow rate value is possible

versions and configurations

ENERGY RECOVERY:

RTA Active thermodynamic recovery (Standard)

VERSION:

RECH Hydronic recovery device for extended operating range
EPWRC EXTRAPOWER-C (with additional chilled water heat exchanger)
EPWRH EXTRAPOWER-H (with additional hot water heat exchanger, without electronic filters)

OPERATION:

RCM Refrigeration circuit with capacity modulation (Standard)

RE-HEATING COIL:

CPHGM Hot gas re-heating coil with capacity modulation (Standard)

UNIT INSTALLATION:

IO Outdoor installation (Standard)
II Indoor installation

accessories

CCA Copper/aluminium exchanger on exhaust air with acrylic lining
CEA Copper/aluminium exchanger on outdoor air with acrylic lining
PVARC Variable air flow on supply and exhaust with CO₂^{probe}
PVARCV Variable air flow on supply and exhaust with CO₂+VOC probe
PVARP Variable air flow on supply and exhaust air with supply pressure probe
MHSEX immersed electrodes steam humidifying module
MOB Serial port RS485 with Modbus protocol
LON TP/FT serial port with LonWorks protocol
BACIP BACnet-IP serial communication module
VRFG Vrf gateway

VSXSA Modification of the supply humidity ratio setpoint "X_SA" by an external signal: enable/disable via external contact or setpoint changing via Modbus and BACnet-IP protocol
DESM Smoke detector
AMRX Rubber antivibration mounts
AMRUX Rubber antivibration mounts for unit and humidification module
RSSX Remote supply air sensor
PTCO Set up for shipping via container
F7B High efficiency F7 air filter (ISO 16890 ePM1 60%)

Accessories whose code ends with "X" are supplied separately