

ZEPHIR4

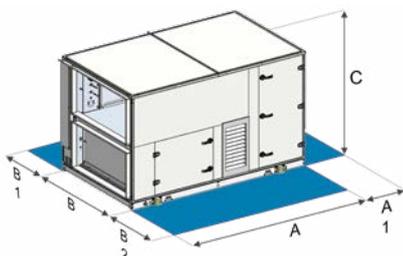
Make-up unit, full fresh air, with return/exhaust and thermodynamic heat recovery.
 Reversible heat pump technology. Outdoor installation.
 Air flow from 2300 to 19000 m³/h



Heat pump	Air cooled	Outdoor installation	R-32	FREE-COOLING	Active Thermodynamic Recovery	Electronically commutated fan	Electronic expansion valve	Full inverter DC	Constant Airflow	Variable Airflow	Modbus	Silent	Certified structure
VRF management	INTELLIAIR	Clivet Eye monitoring											

- ✓ Full inverter
- ✓ Efficient energy recovery of ejected air with low ventilation absorption thanks to active thermodynamic recovery.
- ✓ High mechanical performance structure (T2 / TB2)
- ✓ Extended operating range (-20°C in heating mode)
- ✓ Maximum filtration efficiency (standard iFD electronic filters) with low ventilation consumption
- ✓ Fixed-point control of temperature and humidity supply conditions in both heating and cooling modes
- ✓ Modulating re-heating, free heat from condenser
- ✓ Additional available capacity for indoor air conditioning
- ✓ No contamination between supply and exhaust air
- ✓ Smart Freecooling and Indoor Air Quality management
- ✓ All primary air devices already on board, for a simplified system design
- ✓ Compliant with VRF centralizers and Clivet supervision systems (Clivet EYE, INTELLIAIR)

Dimensions and connections



Size	CPAN-iY	Size 1	Size 2	Size 3	Size 4
A - Length	mm	2680	2680	3190	3190
B - Width	mm	1650	1650	2250	2250
C - Height	mm	1580	1850	1850	2260
A1	mm	1000	1000	1000	1000
B1	mm	1000	1000	1000	1000
B2	mm	1000	1000	1000	1000
Operating weight	kg	860	975	1260	1600

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.

Versions and configurations

ENERGY RECOVERY:

RTA Active thermodynamic recovery (Standard)

OPERATION:

RCM Refrigeration circuit with capacity modulation (Standard)

FCE Enthalpy free-cooling (Standard)

INSTALLATION:

IO Outdoor installation

RPRC Compressors vane refrigerant leak detector (Standard)

AEREAULIC CIRCUIT

FG4EE G4 class air filters on outdoor and exhaust air (Standard)

FELIFD Electronic filters with ifd technology (ISO 16890 ePM1 90%) (Standard)

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

PSTAF Clogged filter differential pressure switch on extract and delivery (Standard)

PCOSME Constant airflow in supply and exhaust (Standard)

CONNECTIVITY:

CMSC9 Serial communication module for Modbus supervisor (Standard)

Technical data

Size		CPAN-iY	Size 1	Size 2	Size 3	Size 4
Standard airflow						
Nominal air flow		m ³ /h	5000	7000	10000	15000
Max external static pressure (supply)		Pa	720	740	830	740
Max external static pressure (extraction)		Pa	780	980	810	980
Use with fixed-point supply control (CS)						
Cooling						
Total cooling capacity	(1)	kW	42,1	59,3	85,2	127,0
Re-heating capacity	(1)	kW	10,7	15,2	22,5	33,4
Compressor power input	(1)	kW	8,8	12,4	16,0	23,6
EERc	(1)	-	5,99	6,01	6,72	6,82
Cooling capacity (EN 14511-2022)	(2)	kW	42,2	59,5	85,4	127,4
EER (EN 14511-2022)	(2)	-	4,49	4,54	5,01	5,06
Heating						
Heating capacity	(3)	kW	22,8	32,0	45,7	68,5
Compressor power input	(3)	kW	2,1	3,3	5,1	6,9
COPc	(3)	-	11,00	9,83	9,05	9,92
Heating capacity (EN 14511-2022)	(2)	kW	22,7	31,8	45,5	68,1
COP (EN 14511-2022)	(2)	-	8,54	8,03	7,45	8,03
Operation at maximum available capacity (MC)						
Cooling						
Total cooling capacity	(4)	kW	43,1	60,7	86,1	129,0
Compressor power input	(4)	kW	15,0	22,1	29,4	42,7
EERc	(4)	-	2,87	2,75	2,93	3,01
Heating						
Heating capacity	(5)	kW	40,4	56,5	80,7	121,0
Compressor power input	(5)	kW	7,9	11,1	15,5	23,4
COPc	(5)	-	5,13	5,09	5,22	5,17
Operation at maximum comfort (XC)						
Cooling						
Total cooling capacity	(6)	kW	42,1	59,3	85,2	127,0
Re-heating capacity	(6)	kW	10,7	15,2	22,5	33,4
Compressor power input	(6)	kW	7,3	10,4	13,3	19,6
EERc	(6)	-	7,20	7,23	8,08	8,20
Heating						
Heating capacity	(7)	kW	26,3	36,9	52,7	79,0
Compressor power input	(7)	kW	2,79	4,06	6,15	8,50
COPc	(7)	-	9,44	9,09	8,56	9,30
Refrigeration circuits		Nr	2	2	2	2
No. of compressors		Nr	2	2	2	2
Type of compressors	(8)	-	ROT	ROT	SCROLL	SCROLL
Type of supply fan	(9)	-	RAD/EC	RAD/EC	RAD/EC	RAD/EC
Number of supply fans		Nr	1	1	1	2
Type of exhaust fan	(9)	-	RAD/EC	RAD/EC	RAD/EC	RAD/EC
Number of exhaust fans		Nr	1	1	2	2
Standard power supply		V	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Sound power level	(10)	dB(A)	80	82	85	88
Minimum air flow		m ³ /h	2300	5000	7000	10000
Maximum air flow		m ³ /h	6000	9000	13000	19000

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) Data according to EN 14511-2022 and external static pressure 50Pa
 (3) 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.
 (4) Outdoor air temperature: 35°C D.B./ 24°C W.B.; Exhaust air temperature: 26°C D.B. Supply air humidity ratio: 11g/kg

(5) 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.
 (6) Outdoor air temperature: 35°C D.B./ 24°C W.B.; Exhaust air temperature: 26°C D.B. Supply air temperature: 26°C D.B.
 (7) Outdoor air temperature: 7°C D.B./6.0°C W.B. Exhaust air temperature: 20°C D.B./ 13.8°C W.B.; Supply air temperature: 22°C D.B.
 (8) ROT = Rotary compressor; SCROLL = Scroll compressor
 (9) RAD = Radial fan; EC = Electronically Commutated
 (10) 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.

Accessories

F7B	High efficiency F7 air filter (ISO 16890 ePM1 60%)	MDMTUX	Management of ambient temperature and humidity probes
F9B	High efficiency F9 air filter (ISO 16890 ePM1 80%)	MDMADX	Advanced monitoring and ambient probes management
PVARC	Variable air flow on supply and exhaust with CO ₂ probe	IOTX	Industrial IoT module for functions and services on cloud platform
PVARC2	Variable air flow on supply and exhaust with CO ₂ probe	VRFG	VRF gateway
PVARCV	Variable air flow on supply and exhaust with CO ₂ +VOC probe	CONTA2	Energy meter
PVARCV2	Variable air flow on supply and exhaust with double CO ₂ +VOC probe	CHMET	Cooling and heating capacity meter
PVARP	Variable air flow on supply and exhaust air with supply pressure probe	SIX	Service interface (cable of 1,5 metres)
PVMS	Variable air flow on supply and exhaust by an external signal	PREAEX	External device management to pre-handle the renewal air
PVARCX	Variable air flow on supply and exhaust with remote CO ₂ probe	CEA	Copper/aluminium exchanger on outdoor air with acrylic lining
MHSEX	Immersed electrodes steam humidifying module	CCA	Copper/aluminium exchanger on exhaust air with acrylic lining on exhaust air
R5	Upward return	CPHGMA	Hot gas re-heating Cu/Al coil with capacity modulation and acrylic lining
RSSX	Remote supply air sensor	AMMX	Spring antivibration mounts
EHR	Requested heating elements	AMMSX	Anti-seismic anti-vibration kit
PUE	External humidifier management with 0-10V signal	AMMBX	Spring antivibration mounts for unit and humidifying module
CMSC11	Serial communication module for BACnet-IP supervisor	AMMUX	Anti-seismic spring antivibration mounts for unit and humidifying module
CMSC12	Serial communication module for BACnet-IP supervisor	PTCO	Set up for shipping via container
DESM	Smoke detector	RPRCMX	Remote supply refrigerant leak detector, additional to the detector standard provided in the compressors
NCRC	Remote control with user interface: not required		
MDMTX	Management of ambient temperature probes		

Accessories whose code ends with "X" are supplied separately