



GUIDE 2025
PRODUCTS AND SYSTEMS
APPLIED

2025



OFFICIAL
AIR CONDITIONING &
AIR QUALITY PARTNER



This document is dedicated to those looking for specialized advanced heating, air conditioning, air renewal and air purification solutions.

Solutions able to increase the comfort level in the places where we live, work and spend our free time.

Complete year round systems, focused on substantial energy savings and less dependency on the fossil fuels used by traditional HVAC solutions, such as natural gas or oil.

INSPIRING SOLUTIONS

This Guide is printed every year and presents all Clivet's products with the aim of providing a basis for decisions and evaluations.

More detailed information, updated regularly, is available in the "SYSTEMS AND PRODUCTS" area at www.clivet.com and on Clivet Apps, where they can be downloaded free of charge.

To keep up to date with Clivet news, follow us on our social networks:





CLIVET. INSPIRING SOLUTIONS

HYDRONIC SYSTEM

PACKAGED SYSTEM

PRIMARY AIR SYSTEM

WLHP SYSTEM

TERMINAL UNITS AND AHU

DIGITAL SOLUTIONS

NATURAL COMFORT

Over 35 years of expertise in heat pumps.

Clivet has been leading the way in heat pump innovation since 1989. We were among the first to recognise the technology's potential for efficient and sustainable comfort – and our dedication to innovation hasn't wavered since.

Purpose-built solutions.

Clivet engineer its solutions from the ground up to offer specialised systems designed for a diverse range of applications and environments. Boasting the widest range of heat-pump solutions, our flexible, adaptable approach ensures a perfect fit for your specific requirements.

Crafted in Europe.

As a European company from the start, we understand the unique needs and demands of this market. Our heat pump solutions are designed with your comfort in mind, considering everything from climate variations to specific building requirements.

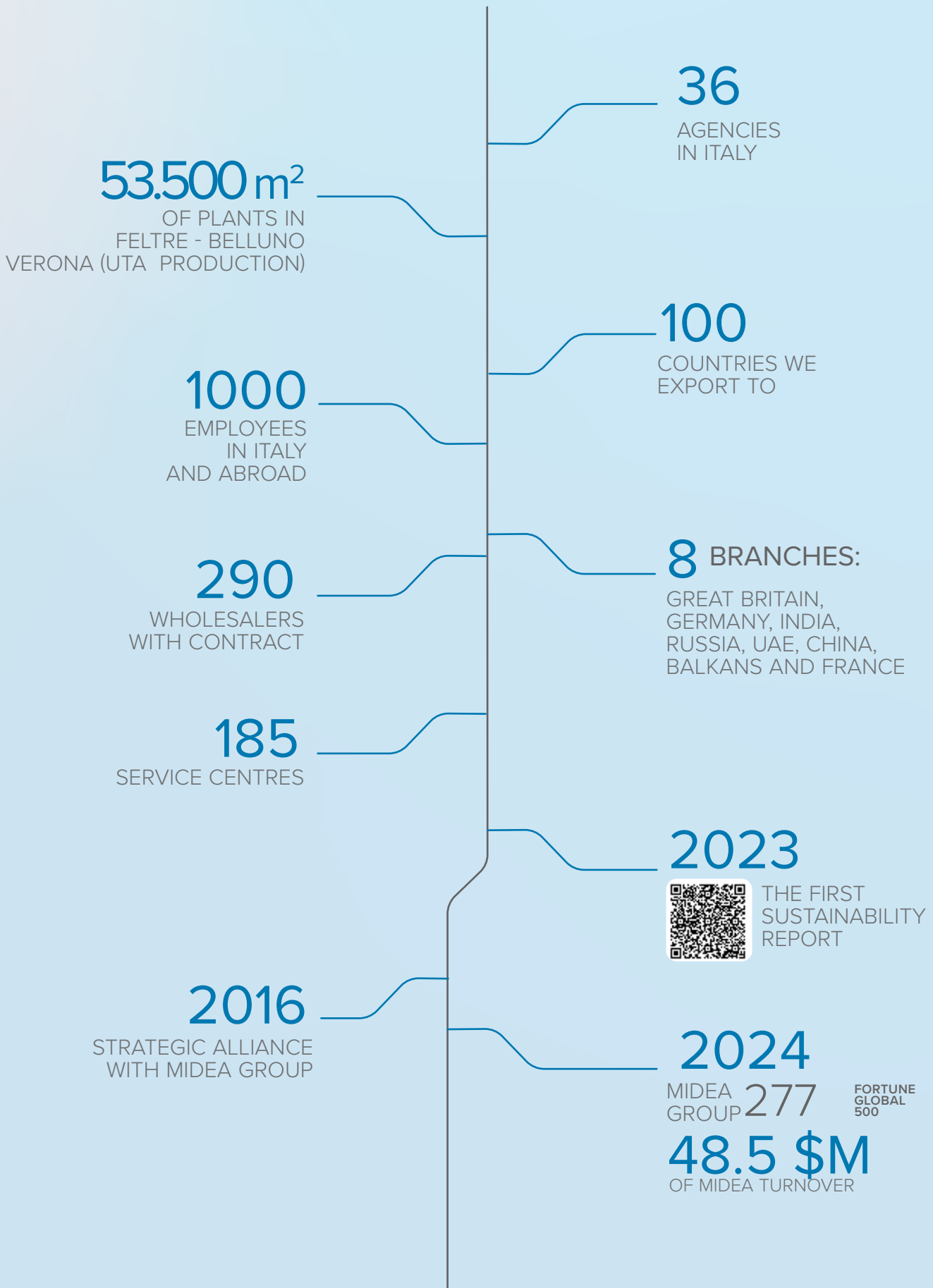
A simplified product experience

Clivet systems streamline every step, from simplified design and installation to effortless operation and control. Engineered for efficiency from the ground up, Clivet delivers unparalleled ease of use, lower operating costs, and a lasting commitment to sustainability.

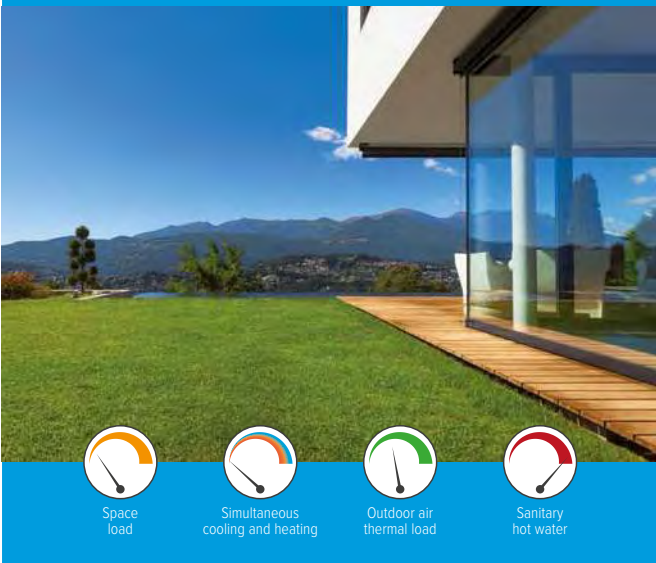


COMFORT FOR THE
PLANET & PEOPLE

OUR NUMBERS



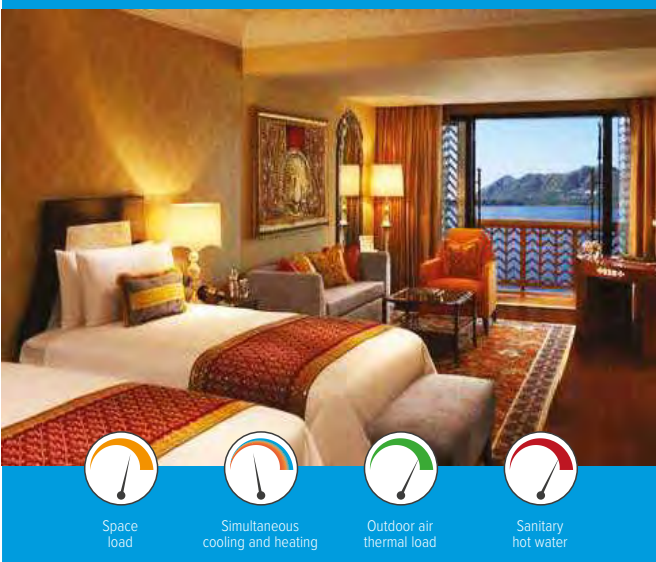
Residential



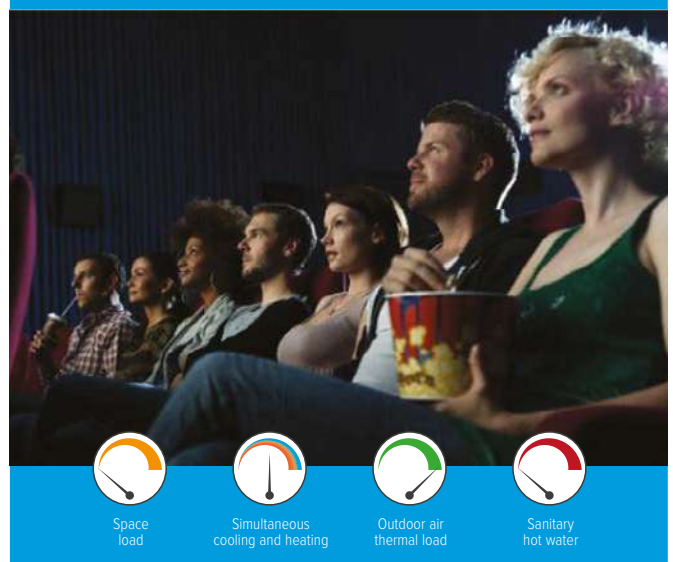
Offices



Hotels



Cinemas



SPECIALISED SYSTEMS

for any application
and climate condition

Today, buildings have to deliver an elevated and constant standard of well-being, regardless of the outside conditions.

Not all buildings are alike: depending on their use, there are considerable differences in terms of load intensity, simultaneous requests for hot and chilled water, domestic hot water production and air renewal.

That is why Clivet has created a series of specialised system solutions for applications that meet the specific needs of different buildings by optimising the overall efficiency in relation to traditional systems (boiler, chiller, AHU).

Clivet's specialised systems simplify the design and installation work, improve the control of the entire system, reduce the environmental impact and, at the same time, optimise the initial investment, reduce running costs, increasing the building's energy rating and therefore its value on the market.

Public buildings



Space load



Simultaneous cooling and heating



Outdoor air thermal load



Sanitary hot water

Shopping centres



Space load



Simultaneous cooling and heating

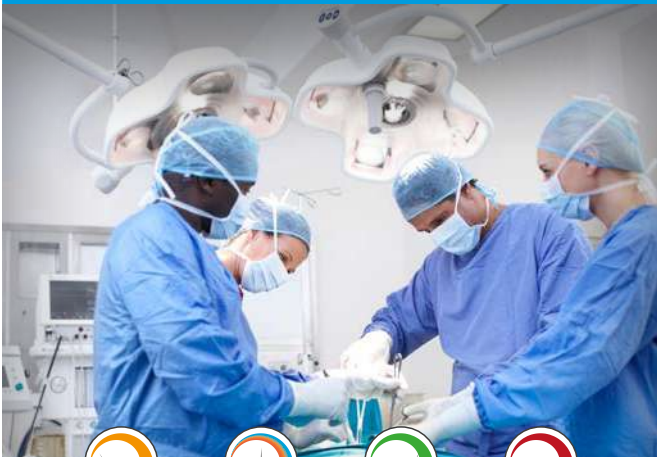


Outdoor air thermal load



Sanitary hot water

Hospitals



Space load



Simultaneous cooling and heating



Outdoor air thermal load



Sanitary hot water

Industry



Space load



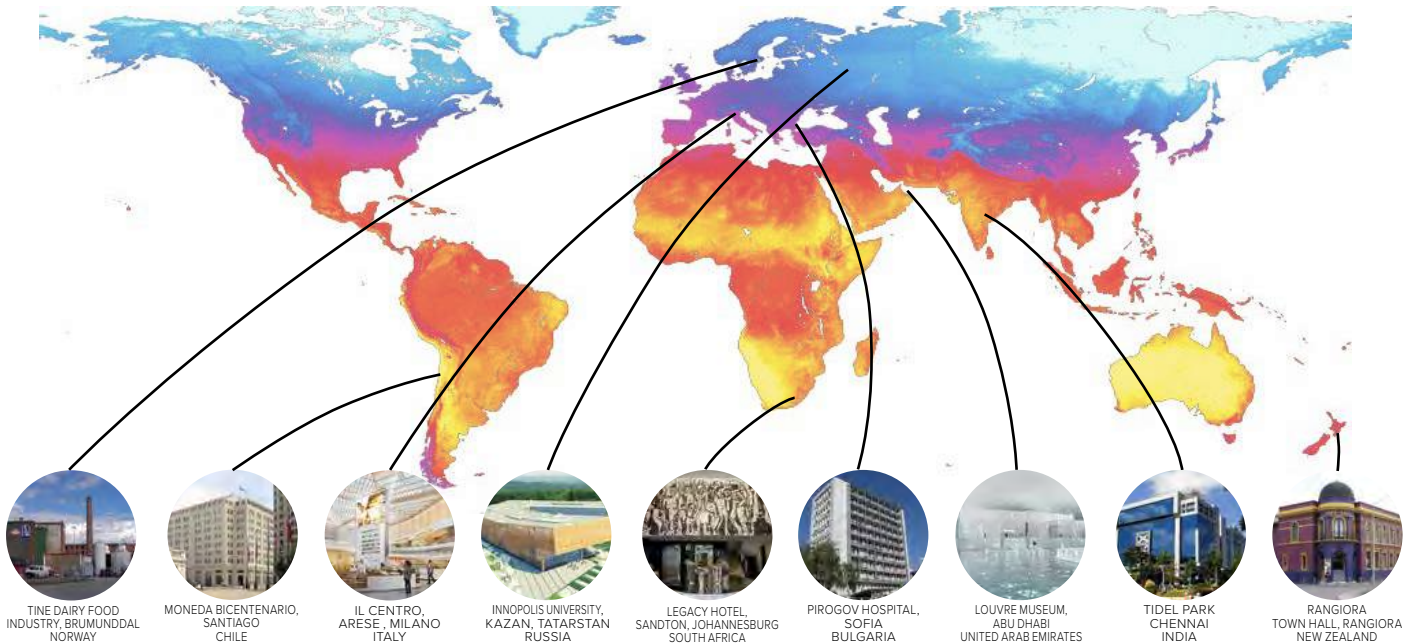
Simultaneous cooling and heating

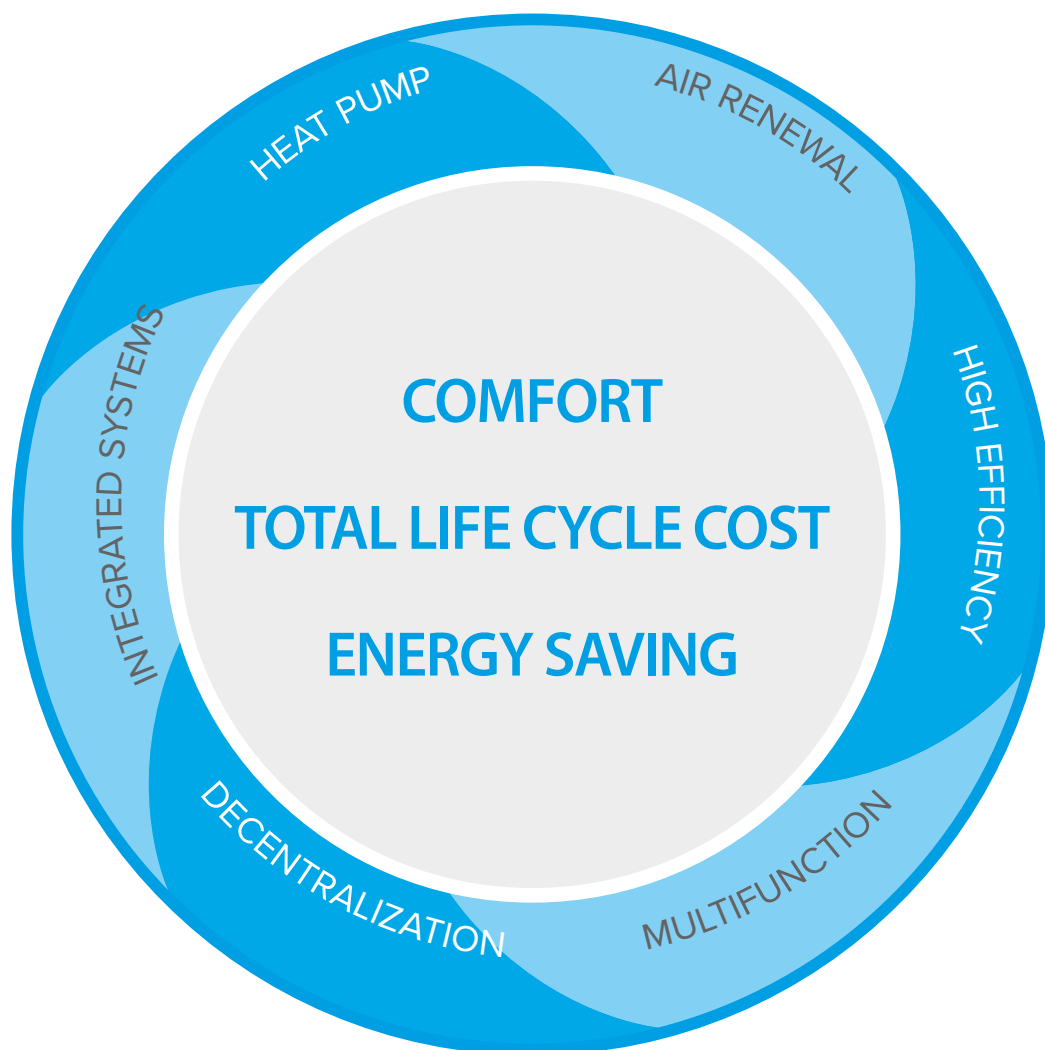


Outdoor air thermal load



Sanitary hot water





CLIVET PRINCIPLES

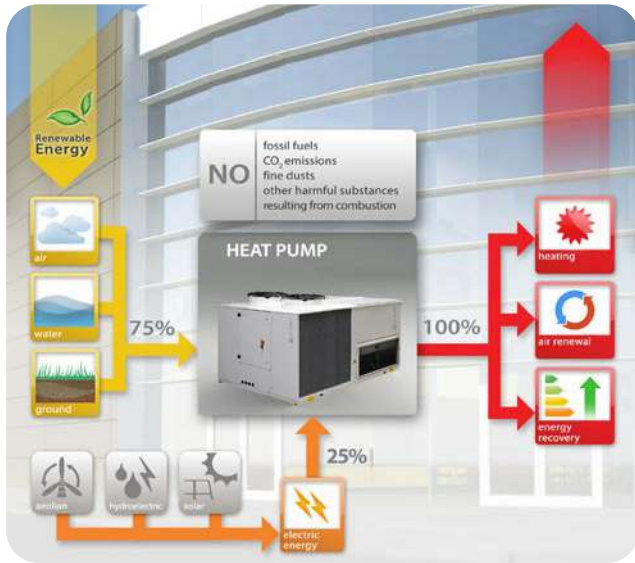
for the building
evaluation

All Clivet systems are based on six key principles that make Clivet's products and systems unique.

These principles are the basis for making application-specific systems, which have always been part of Clivet's DNA.

They represent the foundation on which Clivet has built its new way of looking at systems, thereby becoming the reference for sustainable systems of the future.

Heat pump technology



Heat pumps are the technology of the future since they are significantly more efficient than traditional combustion systems:

- ✓ **Reductions of 50% in Primary Energy, CO₂ and Running Costs**
- ✓ **Extensive use of Renewable Energy**

Thanks to heat pumps, Clivet's systems guarantee:

- ✓ A single system for both heating and cooling
- ✓ Controlled mechanical ventilation with innovative thermodynamic recovery
- ✓ Free production of domestic hot water in summer
- ✓ Simultaneous heating and cooling to fulfil simultaneous loads

CLIVET

Importance of air renewal

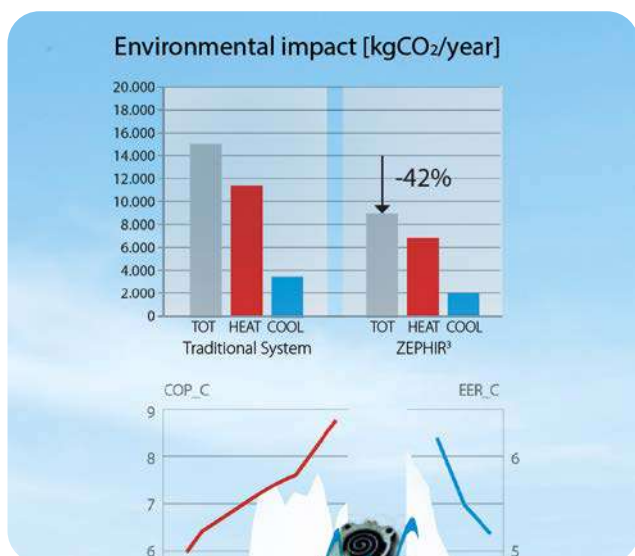


The quality of air inside modern airtight buildings is undermined by a number of pollutants. The controlled mechanical ventilation system is essential to creating a more liveable environment.

Clivet's stand-alone system with thermodynamic energy recovery dedicated to ventilation has the following benefits:

- ✓ It recovers energy both in winter and in summer
- ✓ Reduces the load of outdoor air with a more efficient system and provides more energy for the rooms
- ✓ Reduces the capacity of the main generators by limiting their operation to seasonal peaks
- ✓ Dehumidifies in summer

High Seasonal efficiency



ZEPHIR³, Office Building in London, case study

Seasonal efficiency ensures the best way of understanding how energy is used when choosing the system to ensure year-round comfort.

Every application has different needs which vary depending on multiple factors, including different indoor and outdoor climatic conditions, crowding and thermal loads.

Clivet makes systems designed to meet the specific needs of every single application, thereby optimising the use of the system's resources to reach top seasonal efficiency levels thanks to:

- ✓ One systemic solution
- ✓ Use of the most favourable resources
- ✓ Full control over the system
- ✓ Continuous capacity modulation

Multifunction

CLIVET



Clivet's multifunction systems include all the functions to ensure year-round comfort. They optimise the solution based on the needs of the various applications and integrate it in specialised products and in complete dedicated systems:

- ✓ Heating
- ✓ Cooling
- ✓ Domestic hot water
- ✓ Air renewal and purification
- ✓ Dehumidification

Decentralization



Example of floor-based decentralisation

In developing Clivet products and systems one aspect that was given great attention was how to rationalise the choices in terms of design and construction, which could affect the system's running costs and environmental impact for its entire life cycle.

Many years ago, Clivet successfully developed the principle of generating energy as close as possible to where it needs to be used:

- ✓ Modular systems that are active only where and when required
- ✓ Reduction or complete elimination of auxiliary consumption (for instance, pumping energy)
- ✓ Stand-alone system
- ✓ Easy to maintain and handle
- ✓ Adapts to the needs of the system

Integrated systems



Clivet designs its systems by integrating all the services required for each application.

The system's elements, optimised and industrially processed to work together, guarantee the highest efficiency and reliability.

- ✓ Simplified design and installation
- ✓ Lower investment costs
- ✓ Quality of the systems
- ✓ Guaranteed performance

In residential, commercial and industrial buildings, the air conditioning system is the main source of energy consumption, accounting for almost half of the building's total consumption. There is an increasing need for an energy transition as the effect of climate change is growing.

Clivet has decided to play a key role by designing and promoting new technological solutions to improve the efficiency of buildings and significantly reduce its carbon footprint for increasingly sustainable installations.

The optimisation system for the commercial and industrial sector

Optimising the operation of HVAC systems allows the efficiency of the plants to be maximised in the various working conditions, guaranteeing the reduction of energy consumption and ensuring continuity of operation in the production and distribution of thermo-cooling energy.

Clivet's **INTELLIPLANT** solution manages all the elements of medium and large hydronic systems, guaranteeing the best operating conditions for the lowest possible energy consumption.

Developed entirely by Clivet specialists, Intelliplant makes it possible to achieve the maximum efficiency of the system and the units it interfaces with, thanks to algorithms derived from Clivet know-how that make better use of the machine control logics than the most common generalist solutions on the market.



The control system for the residential sector

A comfortable living environment is important to ensure your health and wellbeing.

Control4 NRG coordinates all the components of your system, optimising the performance and operation of the units and generating the right amount of energy only where and when needed... to ensure that everyone is happy.

Control4 NRG is designed to integrate with the most advanced technologies used for the production of renewable energy, acquiring the energy produced by the photovoltaic system and the energy used by the air conditioning system and organising the display of energy profiles and self-consumption levels.

Control4 NRG ensures Class A operation according to the most stringent requirements concerning the energy rating of buildings.



The cloud-based remote monitoring and management system for all Clivet systems

Clivet Eye is the Cloud-based monitoring system for remote management from smartphones, tablets and PCs of air conditioning, heating, air renewal and domestic hot water production units and systems.

The Clivet Eye interface allows you to access your system remotely. It combines the immediacy and ease of use of an app with advanced "data analytics" functions that can be used with a PC and are typical of a control environment designed for professional use.

Clivet Eye's map allows you to identify where Systems are and access them in real time, easily and intuitively highlighting the related operating conditions.

Event notifications promptly warn of any System malfunctions.





CLIVET COMBINES THE BEST TECHNOLOGY

with an excellent product quality and performance certification system

The innovation for which Clivet has always stood out, is supported by an industrial framework that has adopted the standards envisaged by ISO 9001, since 1996, guaranteeing a quality management system designed to control company processes so that they are targeted at improving the efficacy and efficiency of the organisation, as well as at client satisfaction.

In 2021 the Innovation Centre, Clivet's new centre for technological innovation, was officially opened with two new test rooms where Clivet can carry out functional, performance, acoustic, vibration and stress tests, with air temperatures from -20°C to $+60^{\circ}\text{C}$, for units up to 2.5 MW with new refrigerants with a low environmental impact. Customers can attend the tests both at the Innovation Centre and online.

Clivet uses latest generation sheet metal folding, press and cutting machines for the mechanical production of its components. High product quality standards are also guaranteed by the use of patented electronic controls.

Clivet only uses non-toxic and low environmental impact alloys for soldering, insulation and gases that comply with the strictest European standards, and the best components available on the market.



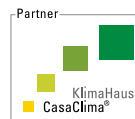
They optimise the solution based on the needs of the **various applications** and integrate it in specialised products and in complete dedicated systems:



With the aim of providing Customer satisfaction, Clivet S.p.A. has supplemented and certified its Quality, Environment and Safety Management Systems, in accordance with the ISO 9001, ISO 14001 and ISO 45001 International Standards.



Clivet is committed in promoting the green building principles and has become a member of GBC Italia. This organization collaborates with **GBC Italia**, the U.S. nonprofit organization that promotes worldwide the **LEED®** system of independent certification.



In 2015, Clivet became a partner of **CasaClima**, as a result, Clivet is now part of a network of companies renowned for their technical expertise and constant focus on sustainable home management.

Where applicable.

<https://www.agenziacasaclima.it/en>



KEYMARK is a mark recognized in many European countries for the provision of incentives for the installation of heat pumps for room heating and the production of domestic hot water.

The countries that recognize the mark and the Certified Products are available on

www.heatpumpkeymark.com

Where applicable.



Clivet participates in the EUROVENT “Liquid Chilling Packages and Hydronic Heat Pumps”, “Rooftops”, “Air Handling Units”, “Fan Coil Units” and “VRF” Certification programmes. The products concerned feature in the EUROVENT guide to certified products and on the website www.eurovent-certification.com. The programmes cover up to the limits set by the purpose of each programme.

Where applicable.



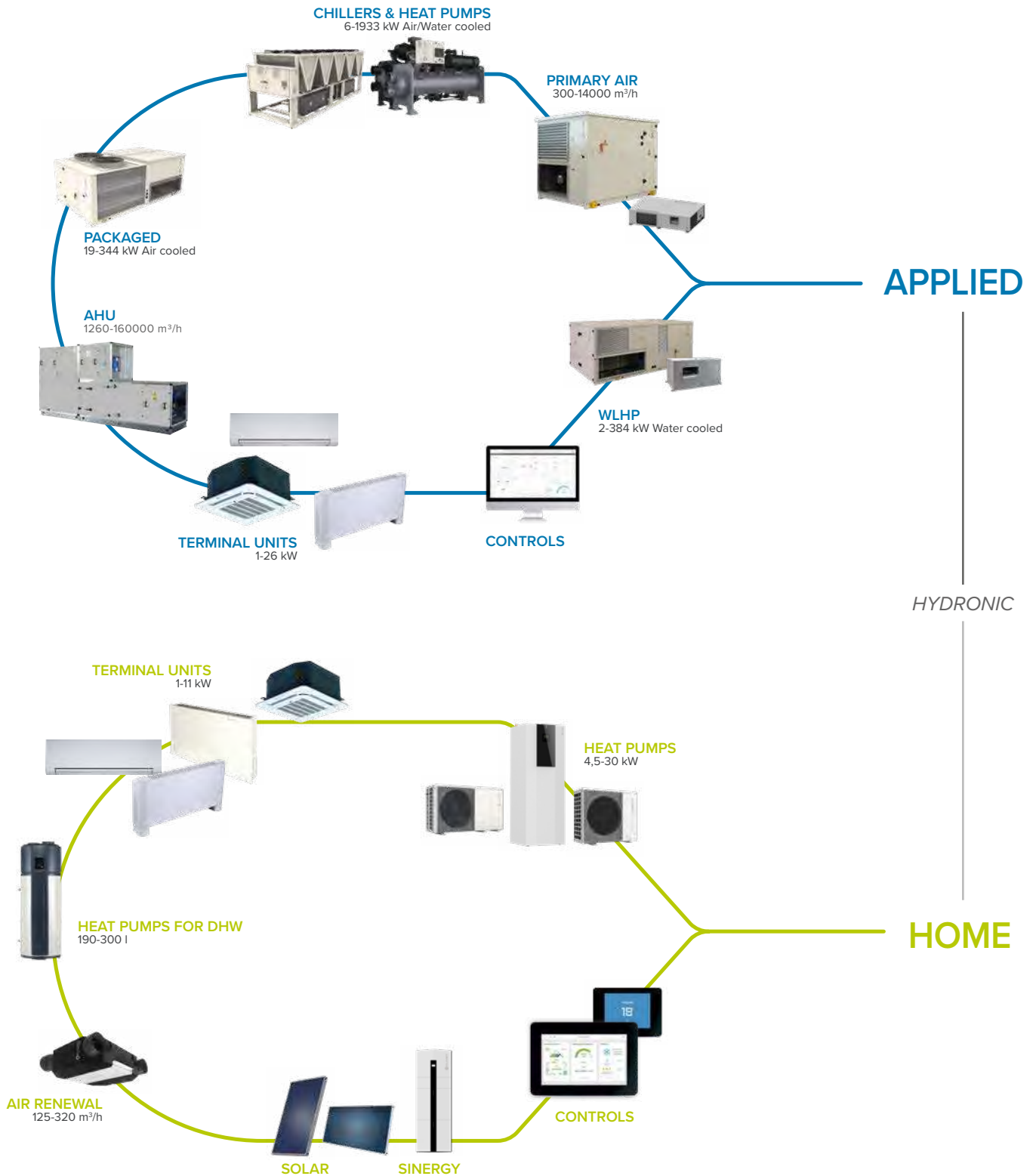
The wide range of Clivet products and complete systems comply with the requirements of the implementing measures for ErP (Energy related Products) Directives 2009/125/EC (Eco-design) and 2010/30/EU (Energy labelling), whose purpose is to reduce the energy consumption of products for heating, cooling, ventilation and hot water production, encouraging the user towards energy-efficient choices.

Directives 2009/125/EC and 2010/30/EU include the following Regulations: (EU) 206/2012, (EU) 626/2011; (EU) 811/2013, (EU) 812/2013, (EU) 813/2013, (EU) 814/2013; (EU) 1253/2014, (EU) 1254/2014; (EU) 2016/2281.

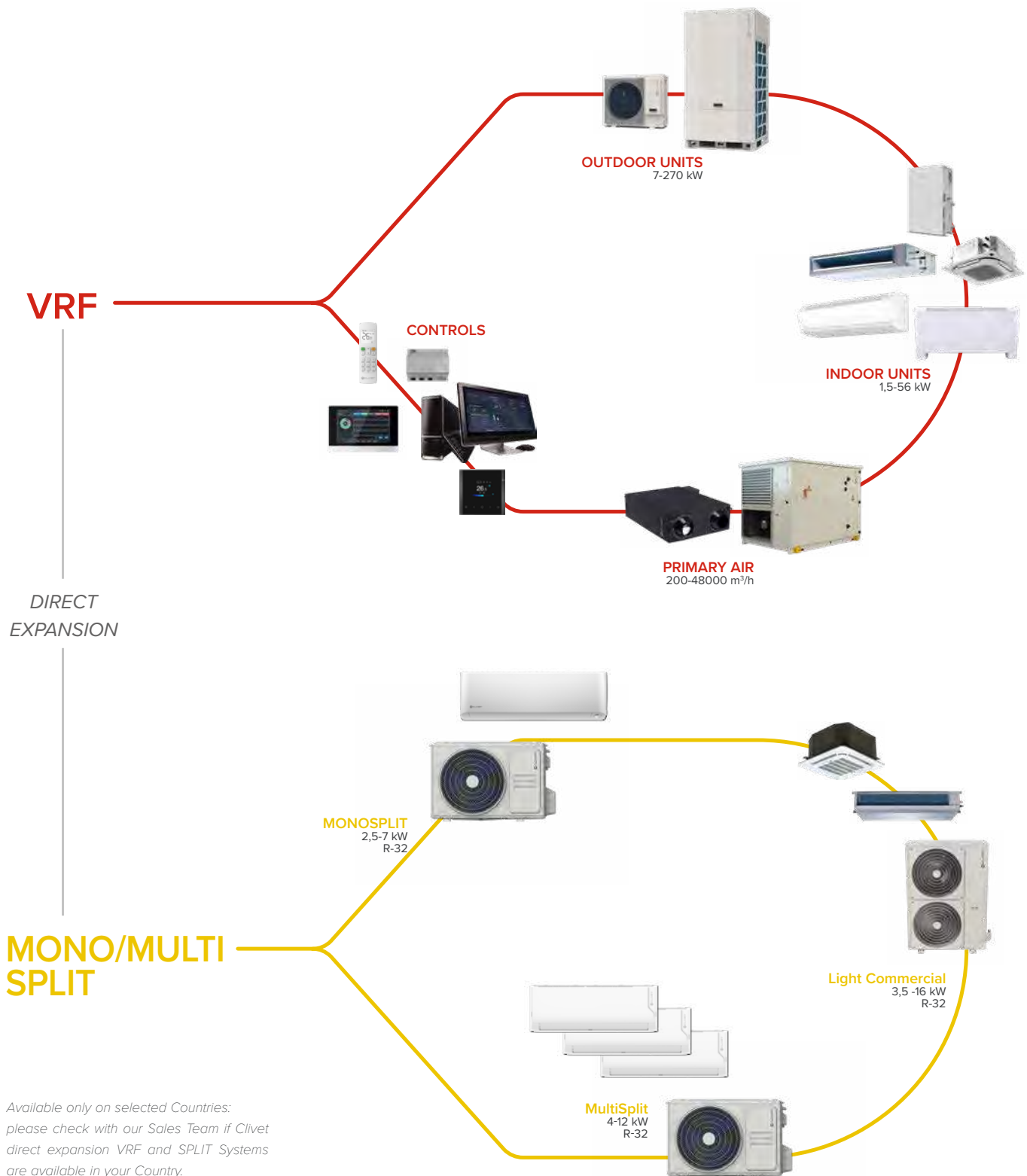


Clivet is involved in the BEYOND GREEN project to promote sustainability and the circular economy together with the other members of SAFE, the consortium system for the circular economy which works to raise public awareness regarding environmental issues, management and valorisation waste, education and training on environmental protection, research on environmental protection.

ALL TECHNOLOGIES FOR A COMPLETE PROPOSAL

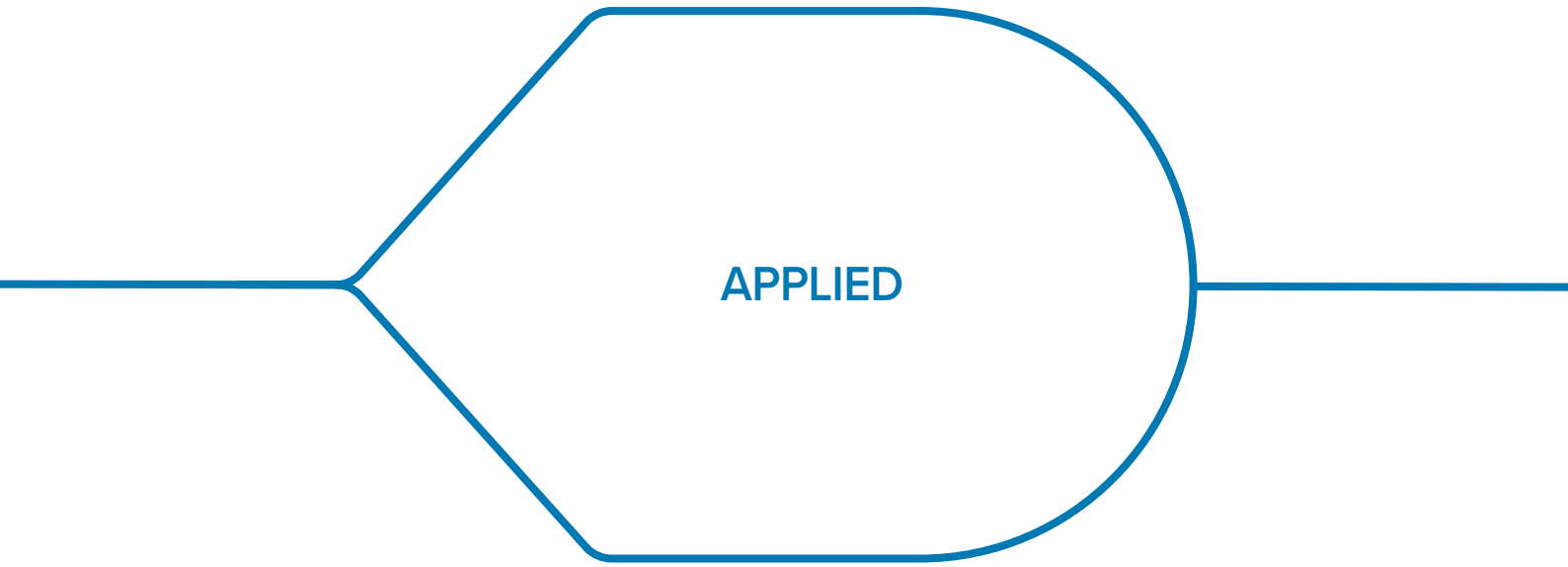


Heating, cooling,
air renewal and
domestic hot water production



Available only on selected Countries:
please check with our Sales Team if Clivet
direct expansion VRF and SPLIT Systems
are available in your Country.





Small and Medium Commercial

HYDRONIC

	SHEEN EVO 2.0 ELFOENERGY SHEEN EVO LARGE EVO	THUNDER ELFOENERGY STORM EVO	ELFOENERGY MAGNUM HW ELFOENERGY DUCT MEDIUM
Capacities (A35/W7)	24 ÷ 252 kW	34 ÷ 85 kW	34 ÷ 150 kW
ErP compliance (heat pumps only)			
Products	 	 	
	WSAT-YSi WiSAT-YEE1 		WSAT-YES
Chillers			
	WSAT-YSi WiSAT-YEE1 		WSAT-YES
High Temperature Chillers External Air			
	WiSAT-YEE1 FC 		WSAT-YES FC
Free Cooling Chillers			
	WiSAN-YSE1 WiSAN-YEE1 		WiSAN-P WSAN-YES
Heat pumps			
	WiSAN-YSE1 WiSAN-YEE1 		WiSAN-P WSAN-XEM HW
Heat pumps High temperature water			
	WiSAN-YEE1 PL 		
Polyvalent heat pumps			
			WSN-XEE
Ducted units			

Large Commercial and Industry

SPINCHILLER⁴
SPINCHILLER³

SCREWLINE⁴⁻ⁱ
SCREWLINE³

215 ÷ 1260 kW

204 ÷ 1523 kW



WSAT-YSC4



WDAT-iZ4



WDAT-iK4



WSAT-YSC4



WDAT-iZ4



WDAT-iK4



WSAT-XSC3 FC



WDAT-SL3 FC



WSAN-YSC4



WSAN-YSC4 PL



WDAN-iK4 MF



HYDRONIC

Small and Medium Commercial

ELFOENERGY GROUND

EELFOENERGY GROUND MEDIUM²

Capacities (A35/W7)

6 ÷ 33 kW

34 ÷ 250 kW

ErP compliance
(heat pumps only)



Products



Chillers

WSH-XEE2



Heat pumps with inversion
on the water circuit

WSH-XEE2

WSHH-LEE1 (Only heat)



Heat pumps with inversion on
the refrigeration circuit

WSHN-EE

WSHN-XEE2



Polyvalent heat pumps

WSHN-XEE2 MF



Condenserless units

Large Commercial and Industry

SPINCHILLER³

SCREWLINE⁴-i SCREWLINE⁴

Centrifugal Chiller

211 ÷ 394 kW

340 ÷ 1499 kW

808 ÷ 1933 kW



-



WSH-XSC3

WDH-iK4



WDH-SB4

WCH-iZ



WCH-i



WSH-XSC3

WDH-iK4



WDH-SB4

WSHN-XSC3

WiDHN-KLS1 PL

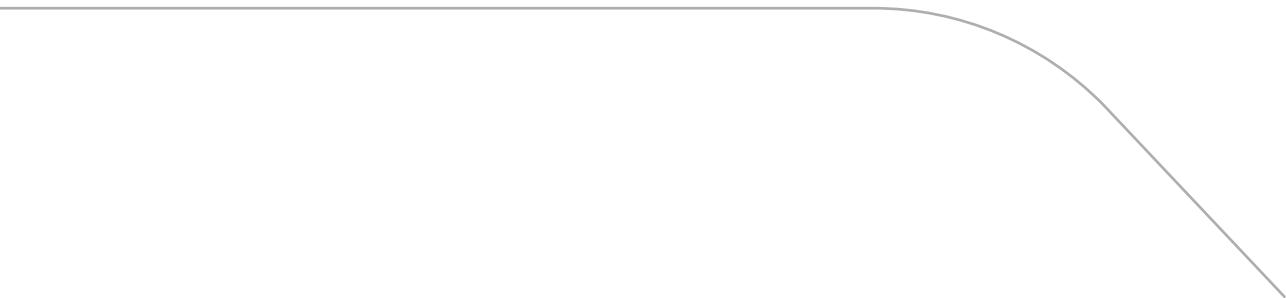


MDE-SL3

HYDRONIC



HYDRONIC



HYDRONIC System

System components

SERIES	SIZE FROM	TO	BRAND NAME.	PAGE
Liquid chillers and Heat pumps - air source - axial fans				
WiSAN-P	14.1	30.2	THUNDER	24
WiSAN-YSE1	10.1	55.2	SHEEN EVO 2.0	26
WSAT-YSi	16.2	55.2	ELFOENERGY SHEEN EVO	28
WiSAT-YEE1/WiSAN-YEE1	45.4	90.4	LARGE EVO	30
WiSAN-YEE1 PL	20.2	85.4	LARGE EVO PL	NEW 32
WiSAT-YEE1 FC	45.4	90.4	LARGE EVO FC	34
WSAT-YES/WSAN-YES	18.2	35.2	ELFOENERGY STORM EVO	36
WSAT-YES FC	18.2	35.2	ELFOENERGY STORM EVO FC	38
WSAN-XEM HW	35.4	60.4	ELFOENERGY MAGNUM HW	40
WSAT-YSC4/WSAN-YSC4	80.3	240.6	SPINCHILLER ⁴	42
WSAN-YSC4 PL	90.4	265.6	SPINCHILLER ⁴ PL	46
WSAN-YSC4	260.8	480.12	SPINCHILLER ⁴	48
WSAT-YSC4	265.6	350.8	SPINCHILLER ⁴	50
WSAT-XSC3 FC	90.4	160.4	SPINCHILLER3 FC	52
WDAN-iK4 MF	220.2	420.2	SCREWLINE ⁴ -I MF	54
WDAT-iZ4	120.1	580.2	SCREWLINE ⁴ -I	56
WDAT-iK4	120.1	580.2	SCREWLINE ⁴ -I	58
WDAT-SL3 FC	200.2	580.2	SCREWLINE ³ FC	60
Liquid chillers and Heat pumps - air source - centrifugal fans				
WSN-XEE	122	402	ELFOENERGY DUCT MEDIUM	62
Water chillers and Heat pumps - water source				
WSHN-EE	17	121	ELFOENERGY GROUND	64
WSH-XEE2/WSHN-XEE2	12.2	80.2	ELFOENERGY GROUND MEDIUM ²	66
WSHH-LEE1	19.2	80.2	ELFOENERGY GROUND MEDIUM ² HW	68
WSHN-XEE2 MF	12.2	80.2	ELFOENERGY GROUND MEDIUM ² MF	70
WSH-XSC3/WSHN-XSC3	70.4	120.4	SPINCHILLER ³	74
WiDHN-KSL1 PL	140.2	360.2	SCREWLINE ⁴ -I PL	NEW 78
WDH-iK4	120.1	540.2	SCREWLINE ⁴ -I	80
WDH-SB4	220.2	580.2	SCREWLINE ⁴	82
WCH-iZ	230	450	CHILLER CENTRIFUGO HFO	84
WCH-i	250	550	CHILLER CENTRIFUGO	86
Liquid chillers and Heat pumps - air source - centrifugal fans				
MDE-SL3	120.1	580.2	SCREWLINE ³	88

THUNDER

Reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 34,9 to 72,7 kW



- ✓ Full inverter technology with scroll compressors
- ✓ High-temperature solution with modular approach
- ✓ Natural and environmentally friendly refrigerant R290 - GWP = 3
- ✓ High full load and seasonal efficiency with compact dimensions
- ✓ Hot water up to 75°C and wide operating range from -20°C to +42°C
- ✓ Three acoustic levels: standard, silenced and super-silenced
- ✓ Modular design for up to 16 units in parallel (reduced installation space, enhanced system efficiency)



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



compliant
ErP

functions and features



Heat pump



Air cooled



Outdoor installation



R-290



Hermetic Scroll



Full inverter



Electronic expansion valve

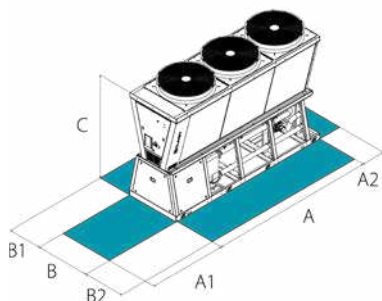


Control4 NRG management



Intelliplant

dimensions and clearances



Size	▶▶ WiSAN-P	14.1	16.1	18.1	19.1	20.1	25.2	30.2
A - Length	mm	2384	2384	2384	2384	2384	3402	3402
B - Width	mm	1094	1094	1094	1094	1094	1094	1094
C - Height	mm	2240	2240	2240	2240	2240	2240	2240
A1	mm	1200	1200	1200	1200	1200	1200	1200
A2	mm	500	500	500	500	500	500	500
B1	mm	500	500	500	500	500	500	500
B2	mm	500	500	500	500	500	500	500
Operating weight	kg	709	709	757	757	757	1021	1021

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

TYPE OF FANS:

VENDC DC high efficiency fan (Standard)

ACOUSTIC CONFIGURATION:

SC Acoustic configuration with compressor soundproofing (Standard)
LN Silenced acoustic configuration
EN Super-silenced acoustic configuration

technical data

Size		▶▶ WISAN-P	14.1	16.1	18.1	19.1	20.1	25.2	30.2
♦ Cooling capacity (EN 14511:2022)	(1)	kW	34,9	38,5	49,9	54,0	58,2	67,8	72,7
Total power input (EN 14511:2022)	(1)	kW	12,3	13,7	19,4	22,0	24,8	23,7	27,5
EER (EN 14511:2022)	(1)	-	2,84	2,81	2,58	2,46	2,35	2,86	2,64
SEER	-	-	5,36	5,20	4,73	4,58	4,36	5,47	5,30
$\eta_{s,c}$	-	%	211,0	205,0	186,0	180,0	171,0	216,0	209,0
♦ Heating capacity (EN 14511:2022)	(2)	kW	39,9	45,2	55,1	61,5	68,5	78,6	85,9
Total power input (EN 14511:2022)	(2)	kW	12,8	14,7	17,2	19,7	23,4	25,0	28,5
COP (EN 14511:2022)	(2)	-	3,11	3,08	3,19	3,13	2,92	3,14	3,01
Refrigeration circuits	-	Nr				1			
No. of compressors	-	Nr			1			2	
Type of compressors	-	-				SCROLL INVERTER			
Refrigerant	-	-				R-290			
Standard airflow	-	l/s	10556	10556	10556	10556	10556	14722	14722
Standard power supply	-	V				400/3/50			
Sound pressure level (SC)	(3)	dB(A)	75	75	77	77	78	78	79
Sound power level (LN)	(3)	dB(A)	73	73	74	74	74	74	75
Sound pressure level (EN)	(3)	dB(A)	69	69	69	69	69	69	69
Directive ErP (Energy Related Products)									
ErP Energy Class - AVERAGE Climate - W35	-	-	A+++	A+++	A++	A++	A++	A+++	A+++
ErP Energy Class - AVERAGE Climate - W55	-	-	A++	A++	A++	A++	A++	A++	A++
SCOP - AVERAGE Climate - W35	(4)	-	4,51	4,45	4,29	4,23	4,15	4,70	4,54
$\eta_{s,h}$	(4)	%	177	175	169	166	163	185	179
SCOP - AVERAGE Climate - W55	(4)	-	3,54	3,51	3,39	3,38	3,36	3,63	3,60
$\eta_{s,h}$	(4)	%	139	137	133	132	131	142	141

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B. /6 (°C) W.B.

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

HYDRONIC

accessories

HYGU1VI User side hydronic assembly with 1 inverter pump

1+1HYGU1VI Hydropack user side with 1+1 inverter pump

ACIMP Steel inertial storage tank

IFWX Steel mesh strainer on the water side

AMODX Water fittings for modular unit

CCKMUX Pipe plug kit for modular units

PGFC Finned coil protection grill

PGFCX Finned coil protection grill

CCCA Copper / aluminium condenser coil with acrylic lining

CCCA1 Condenser coil with Aluminium Energy Guard DCC treatment

3DHW Three-way valve for domestic hot water

3DHWX Three-way valve for domestic hot water

VSAX automatic vent valve

TRAMBX Remote user keypad to control the main functions of the unit

AVIBX Anti-vibration mount support

AMMSX Anti-seismic spring antivibration mounts

IOTX IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

SHEEN EVO 2.0

Reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 24,1 to 128 kW



- ✓ Full inverter technology with scroll or rotary compressors
- ✓ High temperature solution for harsh climates
- ✓ Refrigerant R32 - GWP = 675
- ✓ Excellence version with very high seasonal efficiency, Premium version with high seasonal efficiency, with extremely compact dimensions
- ✓ Hot water up to 60°C, chilled water down to 0°C, operation at -20°C
- ✓ Two acoustic levels: standard and super-silenced
- ✓ Compatible with Control4 NRG, photovoltaic system, solar thermal system and Smart Grid
- ✓ Available in the Hybrid version in combination with a condensing boiler for instant DHW production

DC INVERTER

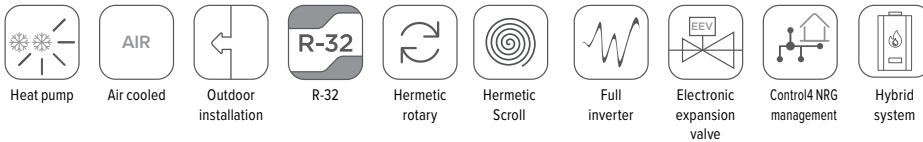


Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

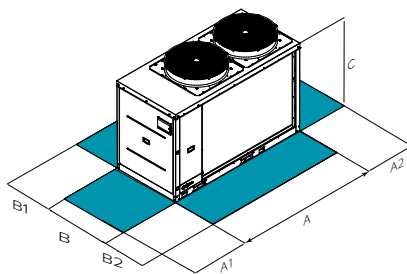


compliant ErP

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		▶▶ WiSAN-YSE1	10.1	12.1	14.1	16.2	18.2	22.2	30.2	35.2	43.2	45.2
SC-EXC	A - Length	mm	1960	1960	1960	2304	2304	2304	3330	3330	3906	3906
SC-EXC	B - Width	mm	1005	1005	1005	1060	1060	1060	1100	1100	1184	1184
SC-EXC	C - Height	mm	1340	1340	1340	1480	1480	1480	1510	1510	1750	1750
SC-EXC	A1	mm	800	800	800	800	800	800	800	800	800	800
SC-EXC	A2	mm	800	800	800	800	800	800	800	800	800	800
SC-EXC	B1	mm	800	800	800	800	800	800	800	800	1300	1300
SC-EXC	B2	mm	800	800	800	800	800	800	800	800	1300	1300
SC-EXC	Operating weight	kg	323	323	323	500	500	500	830	830	1143	1143

Size		▶▶ WiSAN-YSE1	10.1	12.1	14.1	16.2	18.2	22.2	30.2	35.2	40.2	45.2	50.2	55.2
SC-PRM	A - Length	mm	1960	1960	1960	2304	2304	2304	3330	3330	3330	2832	2832	2832
SC-PRM	B - Width	mm	1005	1005	1005	1060	1060	1060	1100	1100	1100	1184	1184	1184
SC-PRM	C - Height	mm	1340	1340	1340	1480	1480	1480	1510	1510	1510	1750	1750	1750
SC-PRM	A1	mm	800	800	800	800	800	800	800	800	800	800	800	800
SC-PRM	A2	mm	800	800	800	800	800	800	800	800	800	800	800	800
SC-PRM	B1	mm	800	800	800	800	800	800	800	800	800	1300	1300	1300
SC-PRM	B2	mm	800	800	800	800	800	800	800	800	800	1300	1300	1300
SC-PRM	Operating weight	kg	323	323	323	500	500	500	830	830	830	862	862	862

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.

versions and configurations

TYPE OF FANS:

VEND DC high efficiency fan (Standard)

ENERGY RECOVERY:

D Partial or total energy recovery (Size 43.2÷55.2)

ACOUSTIC CONFIGURATION:

SC Acoustic configuration with compressor soundproofing (Standard)

EN Super-silenced acoustic configuration

technical data

Size	►► WiSAN-YSE1	10.1	12.1	14.1	16.2	18.2	22.2	30.2	35.2	43.2	45.2		
SC-EXC	◆ Cooling capacity (EN 14511:2022)	(1) kW	24,1	26,6	30,3	43,8	49,7	56,8	70,1	80,2	94,6	107	
SC-EXC	Total power input (EN 14511:2022)	(1) kW	7,50	9,11	10,6	14,1	16,4	19,9	22,9	28,0	30,4	34,8	
SC-EXC	EER (EN 14511:2022)	(1) -	3,21	2,93	2,87	3,10	3,03	2,85	3,06	2,86	3,12	3,06	
SC-EXC	SEER	(4) -	4,81	4,65	4,53	4,32	4,32	4,25	4,24	4,23	4,95	4,93	
SC-EXC	η_{sc}	(4) %	189,4	183,0	178,2	169,8	169,8	167,0	166,6	166,2	195,0	194,2	
SC-EXC	◆ Heating capacity (EN 14511:2022)	(2) kW	24,3	28,8	34,2	50,5	54,7	63,4	74,9	85,2	98,2	107	
SC-EXC	Total power input (EN 14511:2022)	(2) kW	7,29	8,81	10,7	14,2	15,6	19,1	21,5	26,4	29,1	32,1	
SC-EXC	COP (EN 14511:2022)	(2) -	3,33	3,27	3,20	3,55	3,51	3,32	3,48	3,23	3,37	3,34	
SC-EXC	Refrigeration circuits	Nr	1										
SC-EXC	No. of compressors	Nr	1				2						
SC-EXC	Type of compressors	-	ROTARY INVERTER				SCROLL INVERTER						
SC-EXC	Refrigerant	-	R-32										
SC-EXC	Standard power supply	V	400/3~/50										
SC-EXC	Sound power level	(3) dB(A)	73	74	75	75	76	78	78	81	82	83	
EN-EXC	Sound power level	(3) dB(A)	69	71	72	71	71	72	73	75	77	78	
Directive ErP (Energy Related Products)													
ErP Energy Class - AVERAGE Climate - W35	-	-	A+++	A+++	A+++	A+++	A+++	A++	A++	A++	-	-	
ErP Energy Class - AVERAGE Climate - W55	-	-	A++	A++	A++	A++	A++	A++	A++	A++	-	-	
SCOP - AVERAGE Climate - W35	(4) -	-	4,54	4,49	4,44	4,46	4,46	4,41	4,33	4,29	4,65	4,60	
η_{SH}	(4) %	-	179,0	177,0	175,0	175,0	175,0	173,0	170,0	169,0	183,0	181,0	
SCOP - AVERAGE Climate - W55	(4) -	-	3,24	3,22	3,19	3,24	3,21	3,19	3,20	3,19	3,42	3,38	
η_{SH}	(4) %	-	127,0	126,0	125,0	127,0	125,0	125,0	125,0	125,0	134,0	132,0	

Size	►► WiSAN-YSE1	10.1	12.1	14.1	16.2	18.2	22.2	30.2	35.2	40.2	45.2	50.2	55.2
SC-PRM	◆ Cooling capacity (EN 14511:2022)	(1) kW	25,2	27,6	32,2	45,7	52,1	60,7	74,3	86,2	94,2	111	121
SC-PRM	Total power input (EN 14511:2022)	(1) kW	8,35	10,1	11,8	15,4	18,1	22,0	25,6	31,5	35,8	40,8	46,4
SC-PRM	EER (EN 14511:2022)	(1) -	3,03	2,74	2,73	2,96	2,88	2,75	2,91	2,73	2,63	2,71	2,51
SC-PRM	SEER	(4) -	4,50	4,40	4,24	4,04	4,09	4,07	3,96	3,91	3,87	4,67	4,54
SC-PRM	η_{sc}	(4) %	177,0	173,0	166,6	158,5	160,6	159,8	155,4	153,4	151,8	183,8	178,6
SC-PRM	◆ Heating capacity (EN 14511:2022)	(2) kW	27,0	29,8	35,7	52,5	57,9	66,6	78,5	91,2	102	117	129
SC-PRM	Total power input (EN 14511:2022)	(2) kW	8,41	9,32	11,3	15,8	17,6	21,2	23,5	29,9	35,5	36,6	43,9
SC-PRM	COP (EN 14511:2022)	(2) -	3,21	3,20	3,15	3,33	3,29	3,14	3,34	3,05	2,88	3,21	3,18
SC-PRM	Refrigeration circuits	Nr	1										
SC-PRM	No. of compressors	Nr	1				2						
SC-PRM	Type of compressors	-	ROTARY INVERTER				SCROLL INVERTER						
SC-PRM	Refrigerant	-	R-32										
SC-PRM	Standard power supply	V	400/3~/50										
SC-PRM	Sound power level	(3) dB(A)	75	76	77	77	78	80	80	83	83	84	85
EN-PRM	Sound power level	(3) dB(A)	72	73	73	73	73	74	76	77	78	79	80
Directive ErP (Energy Related Products)													
ErP Energy Class - AVERAGE Climate - W35	-	-	A++	A++	A++	A++	A++	A++	A++	A++	-	-	-
SCOP - AVERAGE Climate - W35	(4) -	-	4,29	4,23	4,11	4,22	4,19	4,17	4,12	4,08	4,13	4,11	4,07
η_{SH}	(4) %	-	169,0	166,0	161,0	166,0	165,0	164,0	162,0	160,0	162,0	161,0	160,0

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B. /6 (°C) W.B.

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

HYGU1	Hydronic assembly with 1 ON/OFF pump
HYGU1V1	Hydronic unit on user side with an integrated inverter pump
ACC	Storage tank
IFWX	Steel mesh strainer on the water side
IFWI	Steel mesh strainer on the water side include in the packaging
REMAU	Additional board for advanced function management
PGFC	Finned coil protection grill
PGFCX	Finned coil protection grill
CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
TCDC	Condensate collection pan with electric heater

CMSC13	Serial communication module for Modbus TCP/IP, BACnet IP, BACnet MSTP superviso
VACS	DHW switching valve
VACSX	Switching valve for DHW production
HYGU1V	Hydronic unit on user side with one inverter pump (sizes 43.2 to 55.2)
HYGU2	Hydronic unit on user side with 2 on-off pumps (sizes 43.2 to 55.2)
HYGU2V	Hydronic unit on user side with 2 inverter pumps (sizes 43.2 to 55.2)
AVIBX	Anti-vibration mount support
AMMSX	Anti-seismic spring antivibration mounts
AVIBI	Anti-vibration mount support
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

ELFOENERGY SHEEN EVO

Liquid chiller

Air cooled

Outdoor installation

Capacity from 43,0 to 130 kW



- ✓ Full inverter technology with scroll or rotary compressors
- ✓ First investment driven and refurbishment applications
- ✓ Refrigerant R32 - GWP = 675
- ✓ High seasonal efficiency
- ✓ Low water temperature down to -8°C
- ✓ Three acoustic configurations: standard, silenced and super-silenced
- ✓ Modular operation management, up to 16 units in cascade



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



compliant
ErP

HYDRONIC

functions and features



Cooling only



Air cooled



Outdoor installation



R-32



Hermetic rotary



Hermetic Scroll



Full inverter

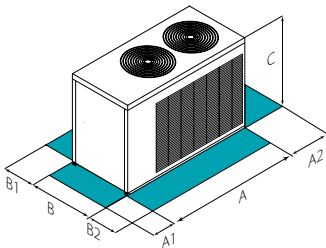


Electronic expansion valve



Control4 NRG management

dimensions and clearances



Size	▶▶ WSAT-YSi	16.2	20.2	24.2	30.2	35.2	40.2	45.2	50.2	55.2
A - Length	mm	2280	2280	2280	3300	3300	3300	2832	2832	2832
B - Width	mm	1060	1060	1060	1100	1100	1100	1184	1184	1184
C - Height	mm	1320	1320	1320	1510	1510	1510	1750	1750	1750
A1	mm	800	800	800	800	800	800	800	800	800
A2	mm	800	800	800	800	800	800	800	800	800
B1	mm	800	800	800	800	800	800	1300	1300	1300
B2	mm	800	800	800	800	800	800	1300	1300	1300
Operating weight	kg	470	470	470	680	680	680	771	771	771

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

TYPE OF FANS:

VEND DC high efficiency fan (Standard)

technical data

Size	▶▶ WSAT-YSi	16.2	20.2	24.2	30.2	35.2	40.2	45.2	50.2	55.2	
♦ Cooling capacity (EN 14511:2022)	(1) kW	43,0	54,0	64,9	76,0	86,8	97,7	110	120	130	
Total power input (EN 14511:2022)	(1) kW	13,0	17,2	23,8	23,4	28,7	35,7	36,7	41,3	46,4	
EER (EN 14511:2022)	(1) -	3,31	3,14	2,72	3,25	3,02	2,74	3,00	2,90	2,80	
SEER	(3) -	4,97	4,81	4,65	5,37	5,15	4,95	5,10	5,02	4,97	
$\eta_{s,c}$	(3) %	195,8	189,5	182,9	212,0	203,2	195,2	201,4	198,2	196,0	
Refrigeration circuits	Nr					1					
No. of compressors	Nr					2					
Type of compressors	-	ROTARY INVERTER				SCROLL INVERTER					
Refrigerant	-					R-32					
Standard airflow	l/s	6944	6944	6944	10417	10417	10417	13900	13900	13900	
Standard power supply	V					400/3N~/50					
Sound power level	(2) dB(A)	80	81	82	82	83	84	84	84	85	

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C
 (2) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

(3) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

HYGU1	Hydronic assembly with 1 ON/OFF pump	SNATEX	Non atex main switch for remote external installation
HYGU1V	Hydronic unit on user side with one inverter pump (sizes 45.2 to 55.2)	SNB	On board main switch
HYGU2	Hydronic unit on user side with 2 on-off pumps (sizes 45.2 to 55.2)	AVIBI	Anti-vibration mount support
HYGU2V	Hydronic unit on user side with 2 inverter pumps (sizes 45.2 to 55.2)	AVIBX	Anti-vibration mount support
ACC	Storage tank	AMMSX	Anti-seismic spring antivibration mounts
IFWX	Steel mesh strainer on the water side	PGFC	Finned coil protection grill
IFWI	Steel mesh strainer on the water side include in the packaging (available only with options: ASING)	PGFCX	Finned coil protection grill
REMAU	Additional board for advanced function management (size 45.2÷55.2)	CCME	Microchannel e-coated coil
REMAUX	Advanced remote control module for auxiliary controls of shoen/storm units	IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately



LARGE EVO

Liquid chiller

WiSAT-YEE1: cooling only
 WiSAN-YEE1: Reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 110 to 252 kW

- ✓ Full inverter technology with scroll or rotary compressors
- ✓ High temperature solution for harsh climates
- ✓ Refrigerant R32 - GWP = 675
- ✓ High seasonal efficiency with extremely compact dimensions
- ✓ Hot water up to 60°C, chilled water down to -8°C, operation at -20°C
- ✓ Three acoustic configurations: standard, silenced and super-silenced
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated hydronic assembly, system tank and partial heat recovery



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



compliant
ErP

HYDRONIC

functions and features



Cooling only
(WiSAT-YEE1)



Heat pump
(WiSAN-YEE1)



Air cooled



Outdoor
installation



R-32



Hermetic
rotary



Hermetic
Scroll



Full
inverter



Electronic
expansion
valve

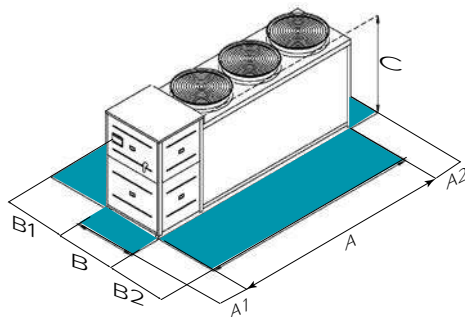


Control4NRG
management



Intelliplant

dimensions and clearances



Size	►►	WiSAT-YEE1	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4	90.4
SC-EXC	A - Length	mm	3310	3310	3310	3310	4300	4300	4300	4300	4300	4300
SC-EXC	B - Width	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC	C - Height	mm	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
SC-EXC	A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC-EXC	A2	mm	800	800	800	800	800	800	800	800	800	800
SC-EXC	B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-EXC	B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-EXC	Operating weight	kg	894	894	904	904	1154	1154	1154	1180	1180	1180

Size	►►	WiSAT-YEE1	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4	90.4
SC-PRM	A - Length	mm	3310	3310	3310	3310	4300	4300	4300	4300	4300	4300
SC-PRM	B - Width	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM	C - Height	mm	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
SC-PRM	A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC-PRM	A2	mm	800	800	800	800	800	800	800	800	800	800
SC-PRM	B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-PRM	B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-PRM	Operating weight	kg	894	894	894	904	1154	1154	1180	1180	1180	1180

CAUTION!

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

Size	►►	WiSAN-YEE1	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4
A - Length	mm		3310	3310	3310	3310	4300	4300	4300	4300	4300
B - Width	mm		1200	1200	1200	1200	1200	1200	1200	1200	1200
C - Height	mm		1900	1900	1900	1900	1900	1900	1900	1900	1900
A1	mm		1000	1000	1000	1000	1000	1000	1000	1000	1000
A2	mm		800	800	800	800	800	800	800	800	800
B1	mm		1350	1350	1350	1350	1350	1350	1350	1350	1350
B2	mm		1350	1350	1350	1350	1350	1350	1350	1350	1350
Operating weight	kg		966	966	1009	1009	1250	1250	1352	1352	1352

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.

versions and configurations

TYPE OF FANS:

VENDC DC high efficiency fan (Standard)

ENERGY RECOVERY:

- Energy recovery: not required (Standard)
- D** Partial energy recovery

ACOUSTIC CONFIGURATION:

- SC** Acoustic configuration with compressor soundproofing (Standard)
- LN** Silenced acoustic configuration
- EN** Super-silenced acoustic configuration

technical data

Size		▶▶ WisAT-YEE1	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4	90.4	
SC-EXC	♦ Cooling capacity (EN 14511:2022)	(1) kW	110	118	133	142	156	169	183	196	209	226	
SC-EXC	Total power input (EN 14511:2022)	(1) kW	34,2	38,5	46,1	50,3	50,0	54,6	64,0	59,4	65,5	74,2	
SC-EXC	EER (EN 14511:2022)	(1) -	3,22	3,08	2,89	2,82	3,12	3,09	2,86	3,31	3,19	3,04	
SC-EXC	SEER	(4) -	5,07	5,05	4,94	4,93	5,25	5,24	5,19	5,34	5,31	5,28	
SC-EXC	η_{sc}	(4) %	200,0	199,0	194,0	194,0	207,0	207,0	205,0	211,0	210,0	208,0	
SC-EXC	Refrigeration circuits	Nr	2										
SC-EXC	No. of compressors	Nr	4										
SC-EXC	Type of compressors	-	ROTARY INVERTER					*	SCROLL INVERTER				
SC-EXC	Refrigerant	-	R-32										
SC-EXC	Standard power supply	V	400/3N~/50										
SC-EXC	Sound power level	(3) dB(A)	84	84	84	84	85	85	85	88	89	89	
LN-EXC	Sound power level	(3) dB(A)	81	81	81	81	82	82	82	84	85	85	
EN-EXC	Sound power level	(3) dB(A)	78	78	78	78	79	79	79	80	81	81	

Size		▶▶ WisAT-YEE1	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4	90.4	
SC-PRM	♦ Cooling capacity (EN 14511:2022)	(1) kW	125	135	143	155	174	192	211	226	241	252	
SC-PRM	Total power input (EN 14511:2022)	(1) kW	44,2	49,2	53,5	58,8	62,4	73,2	71,6	78,1	80,3	86,0	
SC-PRM	EER (EN 14511:2022)	(1) -	2,83	2,74	2,67	2,64	2,79	2,63	2,94	2,90	3,00	2,93	
SC-PRM	SEER	(4) -	4,76	4,71	4,70	4,77	4,91	4,90	5,06	5,03	5,06	5,05	
SC-PRM	η_{sc}	(4) %	188,0	185,0	185,0	188,0	193,0	193,0	199,0	198,0	199,0	199,0	
SC-PRM	Refrigeration circuits	Nr	2										
SC-PRM	No. of compressors	Nr	4										
SC-PRM	Type of compressors	-	ROTARY INVERTER					*	SCROLL INVERTER				
SC-PRM	Refrigerant	-	R-32										
SC-PRM	Standard power supply	V	400/3N~/50										
SC-PRM	Sound power level	(3) dB(A)	86	86	86	87	87	90	91	91	91	91	
LN-PRM	Sound power level	(3) dB(A)	83	83	83	84	84	87	88	88	88	88	
EN-PRM	Sound power level	(3) dB(A)	80	80	80	81	81	84	85	85	85	85	

Size		▶▶ WisAN-YEE1	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4	
♦ Cooling capacity (EN 14511:2022)	(1) kW	115	127	139	152	164	176	196	215	233		
Total power input (EN 14511:2022)	(1) kW	44,0	51,0	56,3	66,5	66,8	75,2	73,6	85,8	99,0		
EER (EN 14511:2022)	(1) -	2,61	2,49	2,47	2,29	2,46	2,34	2,66	2,51	2,35		
SEER	(4) -	4,51	4,51	4,38	4,37	4,48	4,45	4,48	4,45	4,42		
η_{sc}	(4) %	177,4	177,4	171,4	172,0	176,2	175,0	176,2	175,0	173,8		
♦ Heating capacity (EN 14511:2022)	(2) kW	118	130	150	170	190	210	230	250	268		
Total power input (EN 14511:2022)	(2) kW	37,7	43,2	47,3	55,1	60,0	67,7	70,5	79,7	88,7		
COP (EN 14511:2022)	(2) -	3,13	3,01	3,17	3,09	3,17	3,10	3,26	3,14	3,02		
Refrigeration circuits	Nr	2										
No. of compressors	Nr	4										
Type of compressors	-	ROTARY INVERTER					*	SCROLL INVERTER				
Refrigerant	-	R-32										
Standard power supply	V	400/3N~/50										
SC-Sound power level	(3) dB(A)	85	85	86	86	88	88	89	89	89		
LN-Sound power level	(3) dB(A)	81	81	82	82	84	84	85	85	85		
EN-Sound power level	(3) dB(A)	77	77	78	78	80	80	81	81	81		

Directive ErP (Energy Related Products)

SCOP - AVERAGE Climate - W35	(4) -	4,16	4,12	4,15	4,07	4,19	4,15	4,22	4,16	4,11
η_{sh}	(4) %	163,0	162,0	163,0	160,0	165,0	163,0	166,0	163,0	161,0
SCOP - AVERAGE Climate - W55	(4) -	2,97	2,88	2,96	2,88	2,93	2,87	2,99	2,95	2,93
η_{sh}	(4) %	116,0	112,0	115,0	112,0	114,0	112,0	117,0	115,0	114,0

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C
 (2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B. /6 (°C) W.B.
 (3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation
 * ROTARY/SCROLL INVERTER

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

- 1PM** Hydropack with 1 pump
- 1PMV** Hydropack user side with nr.1 inverter pump
- 1PMH** Hydropack with nr.1 high static pressure pump
- 1PMVH** Hydropack user side with nr.1 high static pressure inverter pump
- 1P1SB** Hydropack user side with 1+1 on-off pump
- 1PAP+S** 1 high head pump + 1 stand-by pump
- 1P1SBV** Hydropack on user side with one inverter pump and one stand-by pump with dedicated inverter
- 1PAPSV** Hydropack on user side with one high head inverter pump and one stand-by pump with dedicated inverter
- ACC** Storage tank
- IFWX** Steel mesh strainer on the water side
- ABU** Flush hydraulic connections
- CMSC13** Serial communication module for Modbus TCP/IP, BACnet IP, BACnet MSTP superviso
- REMAU** Additional board for advanced function management

- RPR** Refrigerant leak detector
- AVIBX** Anti-vibration mount support
- AMMSX** Anti-seismic spring antivibration mounts
- PGFC** Finned coil protection grill
- PGFCX** Finned coil protection grill
- PGCCH** Anti-hail protection grilles
- PGCCHX** Anti-hail protection grilles
- IOTX** IoT industrial module for cloud based interoperability & services

Only WisAT-YEE1:

- CCME** Microchannel coil

Only WisAN-YEE1:

- CCCA** Copper / aluminium condenser coil with acrylic lining
- CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- VACS** DHW switching valve: required
- TCDC** Condensate collection pan with electric heater

NEW PRODUCT



LARGE EVO PL

Polyvalent reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 51,7 to 238 kW

- ✓ Full inverter technology with scroll or rotary compressors
- ✓ Polyvalent technology configurable for 4-pipe
- ✓ Refrigerant R32 - GWP = 675
- ✓ Hot water up to 60°C, chilled water down to -8°C, operation at -20°C
- ✓ Double independent circuits for high reliability
- ✓ Three sound levels: standard, silent and super-silent
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated hot side and cold side hydronic assemblies



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

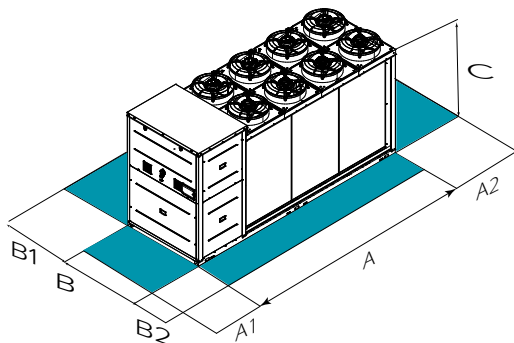


compliant
ErP

functions and features

Heat pump	AIR	Outdoor installation	R-32	Hermetic rotary	Hermetic Scroll	Full inverter	Electronic expansion valve	Control4NRG management	Intelliplant

dimensions and clearances



Size	▶▶ WiSAN-YEE1 PL	20.2	25.2	30.2	35.2	40.2	45.2	50.2	55.4	60.4	65.4	70.4	75.4	80.4	85.4
A - Length	mm	2510	2510	3230	3230	3230	3905	3905	4060	4060	4400	4400	5195	5195	5195
B - Width	mm	1395	1395	1395	1395	1395	1395	1395	1545	1545	1545	1545	1545	1545	1545
C - Height	mm	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920
A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
A2	mm	800	800	800	800	800	800	800	800	800	800	800	800	800	800
B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
Operating weight	kg	978	978	1300	1300	1300	1492	1492	1586	1586	2012	2012	2160	2160	2160

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

TYPE OF FANS:

VENDC DC high efficiency fan (Standard)

ENERGY RECOVERY:

R Total energy recovery (Standard)

STRUCTURAL CONFIGURATION:

4T Configuration for 4-pipe system

ACOUSTIC CONFIGURATION:

SC Acoustic configuration with compressor soundproofing (Standard)

LN Silenced acoustic configuration

EN Super-silenced acoustic configuration

technical data

Size		WISAN-YEE1 PL	20.2	25.2	30.2	35.2	40.2	45.2	50.2	55.4	60.4	65.4	70.4	75.4	80.4	85.4
Cooling 100% - Heating 0%																
Cooling capacity (EN 14511:2022)	(1)	kW	51,7	61,6	71,1	81,5	91,4	111	124	136	149	162	181	200	219	238
Total power input (EN 14511:2022)	(1)	kW	16,9	22,3	22,7	27,7	33,4	36,6	43,0	47,8	55,1	53,3	63,4	66,0	75,9	87,8
EER (EN 14511:2022)	(1)	-	3,07	2,77	3,13	2,94	2,74	3,02	2,87	2,85	2,70	3,05	2,85	3,03	2,88	2,70
SEER	(6)	-	4,25	4,23	4,48	4,45	4,44	4,62	4,60	4,38	4,35	4,65	4,64	4,62	4,61	4,59
$\eta_{s,c}$	(6)	%	167,1	166,3	176,2	175,0	174,6	181,6	180,8	172,1	170,9	183,0	182,6	181,9	181,5	180,7
Cooling 0% - Heating 100%																
Heating capacity (EN 14511:2022)	(2)	kW	64,5	72,8	80,5	92,3	104	120	137	154	173	192	211	231	253	280
Total power input (EN 14511:2022)	(2)	kW	20,7	24,3	24,0	28,5	33,2	36,9	42,4	48,0	55,8	58,6	66,5	69,3	78,5	90,4
COP (EN 14511:2022)	(2)	-	3,12	3,00	3,36	3,24	3,15	3,26	3,22	3,22	3,10	3,27	3,18	3,34	3,23	3,10
Cooling 100% - Heating 100%																
Cooling capacity (EN 14511:2022)	(3)	kW	53,0	62,2	69,8	80,2	88,0	108	116	134	149	166	176	189	208	226
Heating capacity (EN 14511:2022)	(3)	kW	70,6	84,0	92,0	108	119	144	156	178	200	218	232	246	274	303
Total power input (EN 14511:2022)	(3)	kW	17,7	22,1	22,4	27,7	31,9	36,9	41,5	45,0	51,7	53,0	57,4	58,4	68,0	78,5
TER (EN 14511:2022)	(4)	-	6,98	6,60	7,23	6,78	6,50	6,83	6,55	6,94	6,75	7,25	7,11	7,44	7,09	6,74
Refrigeration circuits		Nr					2				4					
No. of compressors		Nr					2				4					
Type of compressors		-	ROTARY INVERTER				SCROLL INVERTER									
Refrigerant		-					R32									
Standard power supply		V					400/3~/50									
SC-Sound power level	(5)	dB(A)	83	83	85	85	85	87	87	88	88	89	89	91	91	91
LN-Sound power level	(5)	dB(A)	79	79	81	81	81	83	83	84	84	85	85	87	87	87
EN-Sound power level	(5)	dB(A)	75	75	77	77	77	79	79	80	80	81	81	83	83	83
Directive ErP (Energy Related Products)																
SCOP - AVERAGE Climate - W35	(6)	-	4,16	4,15	4,17	4,12	4,10	4,16	4,14	4,08	4,06	4,13	4,12	4,08	4,06	4,04
$\eta_{s,H}$	(6)	%	163,0	163,0	164,0	162,0	161,0	163,0	163,0	160,0	159,0	162,0	162,0	160,0	160,0	159,0
SCOP - AVERAGE Climate - W55	(6)	-	2,95	3,06	3,04	3,08	3,17	3,07	3,18	3,07	3,12	3,17	3,19	3,01	3,11	3,27
$\eta_{s,H}$	(6)	%	115,0	119,0	119,0	120,0	124,0	120,0	124,0	120,0	122,0	124,0	125,0	117,0	121,0	128,0

(1) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 12/7°C; Entering external exchanger air temperature = 35°C

(2) Data compliant to Standard EN 14511:2022 referred to the following conditions: Hot side water temperature = 40/45°C; Entering external exchanger air temperature = 7°C D.B./6°C W.B.

(3) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 7°C; Hot side water temperature = 45°C

(4) TER = (Cooling capacity + Heating capacity) / (Total power input)

(5) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

(6) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤ 70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤ 400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
ABU	Flush hydraulic connections
1PMCS	Hydropack on cold use side with 1 on-off pump
1PMCSV	Hydropack on cold use side with 1 inverter pump
1+1PMCS	Hydropack cooling side with 1 + 1 on-off pump
1+1PMCSV	Hydropack cooling side with 1 + 1 inverter pump
1PMHS	Hydropack on hot use side with 1 on-off pump
1PMHSV	Hydropack on hot use side with 1 inverter pump
1+1PMHS	Hydropack heating side with 1 + 1 on-off pump
1+1PMHSV	Hydropack heating side with 1 + 1 inverter pump
CMSC9	Serial communication module for Modbus supervisor
CMSC10	Serial communication module for LonWorks supervisor
CMSC11	Serial communication module for BACnet-IP supervisor

PFGP	Soundproofing paneling of the pumping unit
IFWX	Steel mesh strainer on the water side
RCMRX	Remote control via microprocessor control
PSX	Mains power supply
RPR	Refrigerant leak detector
AVIBX	Anti-vibration mount support
AMMSX	Anti-seismic spring antivibration mounts
PGFC	Finned coil protection grill
PGFCX	Finned coil protection grill
PGCCH	Anti-hail protection grilles
PGCCHX	Anti-hail protection grilles
TCDC	Condensate collection pan with electric heater
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

LARGE EVO FC

Liquid chiller with FREE-COOLING

Air cooled
Outdoor installation

Capacity from 115 to 233 kW



- ✓ Full inverter technology with scroll or rotary compressors
- ✓ Solution for cold climates, versatile applications with modular concept
- ✓ Refrigerant R32 - GWP = 675
- ✓ Operation down to -25°C outdoor air temperature, low water temperature down to -8°C
- ✓ Direct Free cooling active at air temperatures above 0°C
- ✓ Two acoustic levels: standard and super-silenced
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated hydronic assembly and system tank



HYDRONIC

functions and features



Cooling only



Air cooled



Outdoor installation



R-32



Hermetic rotary



Hermetic Scroll



Full inverter



FREE-COOLING



Electronic expansion valve

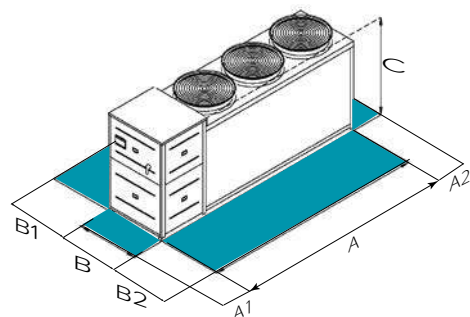


Control4 NRG management



Intelliplant

dimensions and clearances



Size	▶▶WiSAT-YEE1 FC	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4	90.4
A - Length	mm	3310	3310	3310	4300	4300	4300	4300	4300	4300	4300
B - Width	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
C - Height	mm	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
A2	mm	800	800	800	800	800	800	800	800	800	800
B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
Operating weight	kg	1337	1337	1337	1826	1826	1826	1886	1886	1886	1886

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

TYPE OF FANS:

VENDC DC high efficiency fan (Standard)

FREE-COOLING:

FCD Direct FREE-COOLING

ACOUSTIC CONFIGURATION:

SC Acoustic configuration with compressor soundproofing (Standard)

EN Super-silenced acoustic configuration

ENERGY RECOVERY:

- Energy recovery: not required (Standard)

D Partial energy recovery

technical data

Size		►► WISAT-YEE1 FC	45.4	50.4	55.4	60.4	65.4	70.4	75.4	80.4	85.4	90.4
Free-Cooling Off												
Cooling capacity	(1)	kW	112	124	139	151	165	183	198	210	227	244
Total power input	(1)	kW	30,5	34,4	39,8	38,4	43,0	51,4	51,4	56,4	63,5	72,2
EER at full load	(1)	-	3,67	3,59	3,49	3,93	3,84	3,56	3,85	3,73	3,58	3,38
SEER	(4)	-	4,72	4,71	4,71	4,94	4,93	4,88	4,93	4,91	4,83	4,81
η_{sc}	(4)	%	186	185	185	195	194	192	194	193	190	189
Direct Free-cooling on												
Cooling capacity - EXC / PRM	(2)	kW	112	124	139	151	165	183	198	210	227	244
ZET - EXC		°C	1,2	0,4	-0,6	2,1	1,4	0,5	-0,2	-0,8	-1,7	-2,5
ZET - PRM		°C	0,6	-0,2	-1,4	1,1	0,2	-0,9	-1,8	-2,6	-3,5	-4,7
Refrigeration circuits		Nr					2					
No. of compressors		Nr					4					
Type of compressors		-	ROTARY INVERTER				SCROLL INVERTER					
Refrigerant		-					R-32					
Standard airflow		l/s	14500	14500	14500	21750	21750	21750	21750	21750	21750	21750
Standard power supply		V	400/3~/50									
Sound pressure level (SC)	(3)	dB(A)	84	84	84	87	87	88	89	89	89	89
Sound pressure level (EN)	(3)	dB(A)	78	78	78	81	81	82	84	84	84	84

(1) Data referred to the following conditions: internal exchanger water = 16/10°C; glycol 30%; entering external exchanger air temperature 30°C

(2) Free-Cooling only data (compressors OFF) referred to the following conditions: internal exchanger water temperature = 16/10°C; entering external exchanger air temperature = ZET; glycol 30%

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

1PM Hydropack with 1 pump

1PMV Hydropack user side with nr.1 inverter pump

1PMH Hydropack with nr.1 high static pressure pump

1PMVH Hydropack user side with nr.1 high static pressure inverter pump

1P1SB Hydropack user side with 1+1 on-off pump

1PAP+S 1 high head pump + 1 stand-by pump

1P1SBV Hydropack on user side with one inverter pump and one stand-by pump with dedicated inverter

1PAPSV Hydropack on user side with one high head inverter pump and one stand-by pump with dedicated inverter

ACC Storage tank

IFWX Steel mesh strainer on the water side

CMSC13 Serial communication module for Modbus TCP/IP, BACnet IP, BACnet MSTP superviso

REMAU Additional board for advanced function management

RPR Refrigerant leak detector

AVIBX Anti-vibration mount support

AMMSX Anti-seismic spring antivibration mounts

PGFC Finned coil protection grill

PGFCX Finned coil protection grill

PGCCH Anti-hail protection grilles

PGCCHX Anti-hail protection grilles

IOTX IoT industrial module for cloud based interoperability & services

CCME Microchannel coil

Accessories whose code ends with "X" are supplied separately



ELFOENERGY STORM EVO

Liquid chiller

WSAT-YES: cooling only
 WSAN-YES: Reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 53,1 to 85,1 kW

- ✓ Full inverter technology with scroll or rotary compressors
- ✓ Application versatility with modular concept
- ✓ Refrigerant R32 - GWP = 675
- ✓ High full load and seasonal efficiency with compact dimensions
- ✓ Domestic hot water up to 55°C, low water temperature down to -8°C
- ✓ Three acoustic levels: standard, silenced and super-silenced
- ✓ Modular operation management, up to 16 units in cascade
- ✓ Available in hybrid version in combination with boiler



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

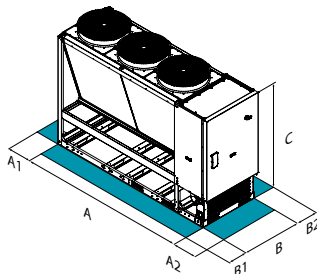


compliant
ErP

functions and features

Cooling only (WSAT-YES)	Heat pump (WSAN-YES)	Air cooled	Outdoor installation	R-32	Hermetic rotary	Hermetic Scroll	Full inverter	Electronic expansion valve	Control4 NRG management	Hybrid system

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	▶▶ WSAT-YES	18.2	20.2	25.2	30.2	35.2
A - Length	mm	2364	2364	3220	3220	3220
B - Width	mm	1130	1130	1130	1130	1130
C - Height	mm	2155	2155	2155	2155	2155
A1	mm	800	800	800	800	800
A2	mm	800	800	800	800	800
B1	mm	500	500	500	500	500
B2	mm	500	500	500	500	500
Operating weight	kg	575	575	725	725	725

Size	▶▶ WSAN-YES	18.2	20.2	25.2	30.2	35.2
A - Length	mm	2364	2364	3220	3220	3220
B - Width	mm	1130	1130	1130	1130	1130
C - Height	mm	2155	2155	2155	2155	2155
A1	mm	800	800	800	800	800
A2	mm	800	800	800	800	800
B1	mm	500	500	500	500	500
B2	mm	500	500	500	500	500
Operating weight	kg	590	590	796	796	796

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.

versions and configurations

TYPE OF FANS:

VENDC DC high efficiency fan (Standard)

technical data

Size	▶▶ WSAT-YES	18.2	20.2	25.2	30.2	35.2
♦ Cooling capacity (EN 14511:2022)	(1) kW	53,1	59,2	72,2	77,5	85,1
Total power input (EN 14511:2022)	(1) kW	171	19,8	22,5	24,3	27,5
EER (EN 14511:2022)	(1) -	3,10	2,99	3,21	3,19	3,10
SEER	(4) -	4,85	4,84	4,89	4,81	4,74
$\eta_{s,c}$	(4) %	190,8	190,6	192,6	189,5	186,4
Refrigeration circuits	Nr			1		
No. of compressors	Nr			2		
Type of compressors	-	ROTARY INVERTER		SCROLL INVERTER		
Refrigerant	-			R-32		
Standard airflow	l/s	6889	6889	10333	10333	10333
Standard power supply	V			400/3N ^o /50		
Sound power level	(3) dB(A)	82	82	81	84	85
Size	▶▶ WSAN-YES	18.2	20.2	25.2	30.2	35.2
♦ Cooling capacity (EN 14511:2022)	(1) kW	53,3	58,9	72,0	77,7	85,0
Total power input (EN 14511:2022)	(1) kW	18,0	20,3	22,8	25,0	29,2
EER (EN 14511:2022)	(1) -	2,95	2,90	3,15	3,10	2,91
SEER	(4) -	4,57	4,51	4,64	4,62	4,50
$\eta_{s,c}$	(4) %	179,8	177,4	182,6	181,8	177,0
♦ Heating capacity (EN 14511:2022)	(2) kW	53,0	66,0	79,3	84,7	91,0
Total power input (EN 14511:2022)	(2) kW	16,5	20,6	23,8	25,7	28,0
COP (EN 14511:2022)	(2) -	3,21	3,20	3,33	3,29	3,25
Refrigeration circuits	Nr			1		
No. of compressors	Nr			2		
Type of compressors	-	ROTARY INVERTER		SCROLL INVERTER		
Refrigerant	-			R-32		
Standard airflow	l/s	6889	6889	10333	10333	10333
Standard power supply	V			400/3N ^o /50		
Sound power level	(3) dB(A)	82	82	81	84	85
Directive ErP (Energy Related Products)						
ErP Energy Class - AVERAGE Climate - W35	-	A++	A++	A++	A++	-
SCOP - AVERAGE Climate - W35	(4) -	4,04	4,03	4,08	4,07	4,06
$\eta_{s,h}$	(4) %	159	158	160	160	159

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B./6 (°C) W.B.

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

HYDRONIC

accessories

HYGU1V	User side hydronic group with 1 inverter pump
ACIMP	Steel inertial storage tank
AMODX	Steel mesh strainer on the water side
CCKMUX	Pipe plug kit for modular units
AVIBI	Anti-vibration mount support
AVIBX	Anti-vibration mount support
REMAUX	Advanced remote control module for auxiliary controls of sheen/storm units
IFWI	Steel mesh strainer on the water side include in the packaging (available only with options: ASING)
IFWX	Steel mesh strainer on the water side

IFWCX	Steel mesh strainer on the water side for units in modular configuration (available only with options: AMODX)
PGFC	Finned coil protection grill
PGFCX	Finned coil protection grill
IOTX	IoT industrial module for cloud based interoperability & services

Only WSAT-YES:

CCME Microchannel e-coated coil

Only WSAN-YES:

CCCA Copper / aluminium condenser coil with acrylic lining
CCCA1 Condenser coil with Aluminium Energy Guard DCC treatment
3DHW Three-way valve for domestic hot water

Accessories whose code ends with "X" are supplied separately



ELFOENERGY STORM EVO FC

Liquid chiller with FREE-COOLING

Air cooled

Outdoor installation

Capacity from 57,4 to 89,7 kW

- ✓ Full inverter technology with scroll or rotary compressors
- ✓ Solution for cold climates, versatile applications with modular concept
- ✓ Refrigerant R32 - GWP = 675
- ✓ High full load and seasonal efficiency with compact dimensions
- ✓ Operation down to -25°C outdoor air temperature, low water temperature down to 5°C
- ✓ Direct Free cooling active at air temperatures above 0°C
- ✓ Modular design to connect up to 16 units in parallel, compatible with chiller version
- ✓ Integrated hydronic assembly and system tank



compliant
ErP



functions and features



Cooling only



AIR



Outdoor installation



R-32



Hermetic rotary



Hermetic Scroll



Full inverter



FREE-COOLING

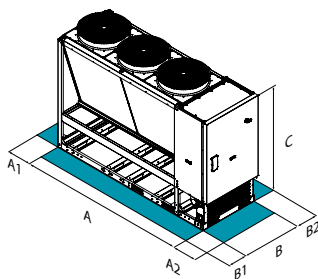


Electronic expansion valve



Control4 NRG management

dimensions and clearances



Size	▶▶WSAT-YES FC	18.2	20.2	25.2	30.2	35.2
A - Length	mm	2364	2364	3220	3220	3220
B - Width	mm	1130	1130	1130	1130	1130
C - Height	mm	2155	2155	2155	2155	2155
A1	mm	800	800	800	800	800
A2	mm	800	800	800	800	800
B1	mm	500	500	500	500	500
B2	mm	500	500	500	500	500
Operating weight	kg	659	659	850	850	850

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

TYPE OF FANS:

VENDC DC high efficiency fan (Standard)

FREE-COOLING:

FCD Direct FREE-COOLING

technical data

Size	▶▶ WSAT-YES FC	18.2	20.2	25.2	30.2	35.2
Free-Cooling Off						
Cooling capacity	(1) kW	57,4	63,9	75,9	81,5	89,7
Total power input	(1) kW	16,8	19	22,1	23,6	26,2
EER at full load	(1) -	3,42	3,36	3,43	3,45	3,42
SEER	(4) -	4,48	4,51	4,56	4,48	4,41
η_{sc}	(4) %	176,2	177,4	179,4	176,2	173,4
Direct Free-cooling on						
Cooling capacity	(2) kW	42,2	43,5	71	71,9	72,5
Total power input	(2) kW	1,7	1,7	2,5	2,5	2,5
EER at full load	(2) -	24,8	25,6	28,4	28,8	29
Refrigeration circuits	Nr			1		
No. of compressors	Nr			2		
Type of compressors	-	ROTARY INVERTER		SCROLL INVERTER		
Refrigerant	-			R-32		
Standard airflow	l/s	6889	6889	10333	10333	10333
Standard power supply	V			400/3N~/50		
Sound power level	(3) dB(A)	82	82	81	84	85

(1) Data referred to the following conditions: internal exchanger water temperature = 15/10 °C; glycol 30%; entering external exchanger air temperature 30°C

(2) Free-Cooling only data (compressors OFF) referred to the following conditions: internal exchanger water temperature = 15/10°C; entering external exchanger air temperature = 2°C D.B./1°C W.B.; glycol 30%

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

HYGU1V	User side hydronic group with 1 inverter pump
ACIMP	Steel inertial storage tank
IFWX	Steel mesh strainer on the water side
AVIBX	Anti-vibration mount support
AVIBI	Anti-vibration mount support
AMODX	Steel mesh strainer on the water side
CCME	Microchannel e-coated coil
CCKMUX	Pipe plug kit for modular units
PGFC	Finned coil protection grill

PGFCX	Finned coil protection grill
REMAUX	Advanced remote control module for auxiliary controls of sheen/storm units
SNB	On board main switch
IFWI	Steel mesh strainer on the water side include in the packaging (available only with options: ASING)
IFWCX	Steel mesh strainer on the water side for units in modular configuration (available only with options: AMODX)
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

ELFOENERGY MAGNUM HW

Reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 86,0 to 150 kW



- ✓ Double independent circuits for high reliability with scroll compressors
- ✓ High water temperature solution for residential centralized systems
- ✓ Refrigerant R410A - GWP = 2088
- ✓ High full load and seasonal efficiency
- ✓ Domestic hot water up to 65°C
- ✓ Operation down to -20°C of outdoor air temperature with hot water at 55°C
- ✓ Partial energy recovery and user side DHW switching valve
- ✓ Integrated hydronic assembly and system tank

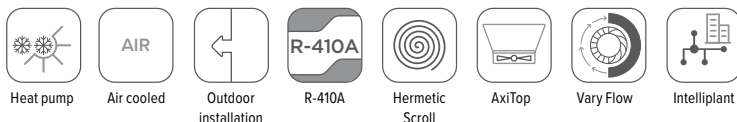


Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

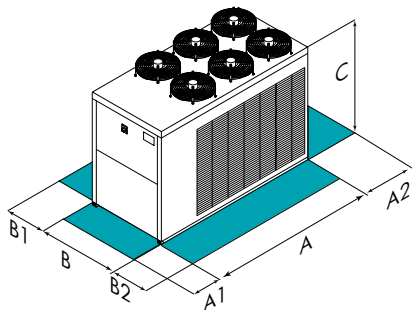


compliant
ErP

functions and features



dimensions and clearances



Size	▶▶WSAN-XEM HW	35.4	40.4	45.4	50.4	55.4	60.4
A - Length	mm	3400	3400	3400	3400	4400	4400
B - Width	mm	1812	1812	1812	1812	1812	1812
C - Height	mm	1800	1800	1800	1800	1800	1800
A1	mm	1300	1300	1300	1300	1300	1300
A2	mm	750	750	750	750	750	750
B1	mm	1100	1100	1100	1100	1100	1100
B2	mm	1100	1100	1100	1100	1100	1100
Operating weight	kg	1285	1418	1441	1444	1735	1739

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:

- Energy recovery: not required (Standard)
- D** Partial energy recovery

technical data

Size	▶▶ WSAN-XEM HW		35.4	40.4	45.4	50.4	55.4	60.4
♦ Cooling capacity (EN 14511:2022)	(1)	kW	86,0	98,6	110	118	131	150
Total power input (EN 14511:2022)	(1)	kW	31,3	35,3	37,3	41,6	48,3	54,6
EER (EN 14511:2022)	(1)	-	2,74	2,80	2,95	2,84	2,72	2,74
SEER	(4)	-	2,93	3,35	3,50	3,31	3,28	3,09
η_{sc}	(4)	%	114,2	131,0	137,0	129,4	128,2	120,6
♦ Heating capacity (EN 14511:2022)	(2)	kW	109	123	133	143	165	184
Total power input (EN 14511:2022)	(2)	kW	31,7	34,8	37,8	41,6	48,1	54,5
COP (EN 14511:2022)	(2)	-	3,43	3,52	3,53	3,45	3,42	3,38
Refrigeration circuits		Nr				2		
No. of compressors		Nr				4		
Type of compressors		-				SCROLL		
Refrigerant		-				R-410A		
Standard airflow		l/s	16000	15567	15567	15567	20733	20733
Water flow-rate (User side)		l/s	5,25	5,91	6,43	6,92	7,95	8,89
Standard power supply		V				400/3N~/50		
Sound power level	(3)	dB(A)	86	86	86	86	88	88
Directive ErP (Energy Related Products)								
SCOP - AVERAGE Climate - W35	(4)	-	3,57	3,95	3,90	3,88	3,57	3,64
η_{sh}	(4)	%	140	155	153	152	140	143
SCOP - AVERAGE Climate - W55	(4)	-	3,03	3,19	3,15	3,22	3,12	3,04
η_{sh}	(4)	%	118	125	123	126	122	119

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B. /6 (°C) W.B.

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

VARYP	VARYFLOW + (2 inverter pumps)
HYG1	Hydronic assembly with 1 ON/OFF pump
HYG2	Hydronic assembly with 2 ON/OFF pumps
VACSUX	User side DHW switching valve
ACC	Storage tank
CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
SFSTR	Disposal for inrush current reduction
MF2	Multi-function phase monitor
CMSC10	Serial communication module for LonWorks supervisor
CMSLWX	LonWorks serial communication module
CMSC8	Serial communication module for BACnet supervisor

BACX	BACnet serial communication module
CMSC9	Serial communication module for Modbus supervisor
CMMBX	Serial communication module to supervisor (Modbus)
PFCP	Power factor correction capacitors (cosfi > 0.9)
PGFC	Finned coil protection grill
PGFCX	Finned coil protection grill
MHP	High and low pressure gauges
MHPX	High and low pressure gauges
IFWX	Steel mesh strainer on the water side
RCTX	Remote control
AVIBX	Anti-vibration mount support
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

WSAT-YSC4 WSAN-YSC4

80.3÷240.6

SPINCHILLER⁴

Liquid chiller

WSAT-YSC4: cooling only
 WSAN-YSC4: Reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 215 to 675 kW



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



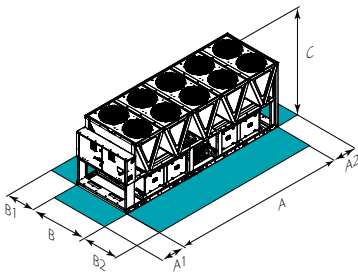
ErP compliant

- ✓ Scroll compressors, EC axial fans and two independent circuits for high reliability
- ✓ High full load and seasonal efficiency (Excellence version), high seasonal efficiency and compact dimensions (Premium version)
- ✓ Refrigerant R32 - GWP = 675
- ✓ Domestic hot water up to 55°C, low water temperature down to -12°C
- ✓ Plate heat exchanger or shell & tube exchanger
- ✓ Three acoustic configurations
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated hydronic assembly, system tank, partial heat recovery and total heat recovery (only for chiller)

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.

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.

SC-EXC Compressors soundproofing (SC)-Excellence

SC-PRM Compressors soundproofing (SC)-Premium

Size		▶▶ WSAT-YSC4										
		80.3	100.4	115.4	130.4	155.5	170.5	185.5	210.6	225.6	240.6	
SC-EXC	A - Length	mm	2925	2925	4175	4175	5417	5417	5417	6680	6680	6680
SC-EXC	B - Width	mm	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228
SC-EXC	C - Height	mm	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535
SC-EXC	A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC	A2	mm	700	700	700	700	700	700	700	700	700	700
SC-EXC	B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC	B2	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
SC-EXC	Operating weight	kg	1879	1898	2345	2494	2979	3152	3314	3810	3943	4100

Size		▶▶ WSAT-YSC4									
		90.3	110.4	130.4	145.4	170.5	185.5	210.6	225.6	240.6	
SC-PRM	A - Length	mm	2925	2925	2925	4175	4175	4175	5417	5417	5417
SC-PRM	B - Width	mm	2228	2228	2228	2228	2228	2228	2228	2228	2228
SC-PRM	C - Height	mm	2535	2535	2535	2535	2535	2535	2535	2535	2535
SC-PRM	A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM	A2	mm	700	700	700	700	700	700	700	700	700
SC-PRM	B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM	B2	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250
SC-PRM	Operating weight	kg	1893	2000	2116	2576	2763	2938	3396	3563	3684

Size		▶▶ WSAN-YSC4												
		80.3	90.4	100.4	110.4	120.4	130.4	145.4	160.4	185.5	210.6	225.6	240.6	
SC-EXC	A - Length	mm	3118	4114	4114	4114	4114	5091	5091	5091	6066	6066	7045	7045
SC-EXC	B - Width	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	
SC-EXC	C - Height	mm	2520	2520	2520	2520	2520	2520	2520	2520	2520	2520	2520	
SC-EXC	A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
SC-EXC	A2	mm	700	700	700	700	700	700	700	700	700	700	700	
SC-EXC	B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
SC-EXC	B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
SC-EXC	Operating weight	kg	2300	2631	2652	2772	2890	3295	3438	3594	4097	4199	4761	4861

Size		▶▶ WSAN-YSC4											
		90.3	100.3	110.4	120.4	130.4	145.4	160.4	185.5	210.6	225.6	240.6	
SC-PRM	A - Length	mm	3118	3118	3118	3118	4114	4114	4114	5091	5091	6066	6066
SC-PRM	B - Width	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	
SC-PRM	C - Height	mm	2520	2520	2520	2520	2520	2520	2520	2520	2520	2520	
SC-PRM	A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
SC-PRM	A2	mm	700	700	700	700	700	700	700	700	700	700	
SC-PRM	B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
SC-PRM	B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
SC-PRM	Operating weight	kg	2320	2445	2345	2562	2893	3018	3143	3779	3867	4310	4435

technical data

Size			WSAT-YSC4	80.3	100.4	115.4	130.4	155.5	170.5	185.5	210.6	225.6	240.6
ST/SC-EXC	◆ Cooling capacity (EN 14511:2022)	(1)	kW	222	267	314	364	423	472	520	573	624	675
ST/SC-EXC	Total power input (EN 14511:2022)	(1)	kW	69,4	85,5	99,8	115	135	149	167	184	200	218
ST/SC-EXC	EER (EN 14511:2022)	(1)	-	3,20	3,12	3,15	3,17	3,15	3,16	3,11	3,12	3,12	3,10
ST/SC-EXC	SEER	(4)	-	4,70	4,67	4,78	4,75	4,92	5,00	4,96	4,94	4,96	4,90
ST/SC-EXC	$\eta_{s,c}$	(4)	%	185,2	183,8	188,3	187,1	193,6	197,0	195,5	194,6	195,4	193,1
ST/SC-EXC	Refrigeration circuits		Nr						2				
ST/SC-EXC	No. of compressors		Nr	3		4			5			6	
ST/SC-EXC	Type of compressors		-						SCROLL				
ST/SC-EXC	Refrigerant		-						R-32				
ST/SC-EXC	Standard power supply		V						400/3~/50				
ST-EXC	Sound power level	(3)	dB(A)	90	91	92	93	94	95	95	96	96	97
SC-EXC	Sound power level	(3)	dB(A)	87	88	89	90	90	91	91	92	92	93
EN-EXC	Sound power level	(3)	dB(A)	84	84	86	86	86	87	88	88	88	89

Size			WSAT-YSC4	90.3	110.4	130.4	145.4	170.5	185.5	210.6	225.6	240.6
ST/SC-PRM	◆ Cooling capacity (EN 14511:2022)	(1)	kW	232	291	333	384	443	483	537	590	644
ST/SC-PRM	Total power input (EN 14511:2022)	(1)	kW	84,5	102	124	139	156	179	199	209	233
ST/SC-PRM	EER (EN 14511:2022)	(1)	-	2,74	2,85	2,70	2,77	2,84	2,70	2,70	2,82	2,76
ST/SC-PRM	SEER	(4)	-	4,38	4,48	4,46	4,47	4,65	4,64	4,61	4,69	4,62
ST/SC-PRM	$\eta_{s,c}$	(4)	%	172,3	176,1	175,4	175,8	183,0	182,5	181,2	184,7	181,9
ST/SC-PRM	Refrigeration circuits		Nr						2			
ST/SC-PRM	No. of compressors		Nr	3		4			5		6	
ST/SC-PRM	Type of compressors		-						SCROLL			
ST/SC-PRM	Refrigerant		-						R-32			
ST/SC-PRM	Standard power supply		V						400/3~/50			
ST-PRM	Sound power level	(3)	dB(A)	90	91	92	93	94	94	95	96	96
SC-PRM	Sound power level	(3)	dB(A)	87	88	89	89	90	90	91	92	92
EN-PRM	Sound power level	(3)	dB(A)	84	86	86	87	87	88	89	89	89

Size			WSAN-YSC4	80.3	90.4	100.4	110.4	120.4	130.4	145.4	160.4	185.5	210.6	225.6	240.6
SC-EXC	◆ Cooling capacity (EN 14511:2022)	(1)	kW	215	240	265	290	320	355	390	430	500	555	610	655
SC-EXC	Total power input (EN 14511:2022)	(1)	kW	72,9	76,4	84,7	94,9	106	114	128	143	163	188	198	218
SC-EXC	EER (EN 14511:2022)	(1)	-	2,95	3,14	3,13	3,05	3,02	3,11	3,04	3,00	3,06	2,96	3,08	3,01
SC-EXC	SEER	(4)	-	4,45	4,79	4,74	4,81	4,84	4,86	4,78	4,72	4,88	4,84	4,89	4,86
SC-EXC	$\eta_{s,c}$	(4)	%	175,0	188,5	186,6	189,4	190,4	191,3	188,1	186,0	192,1	190,7	192,6	191,5
SC-EXC	◆ Heating capacity (EN 14511:2022)	(2)	kW	225	255	280	310	335	375	415	455	530	585	640	685
SC-EXC	Total power input (EN 14511:2022)	(2)	kW	69,9	78,8	85,6	95,2	103	114	125	137	160	178	199	211
SC-EXC	COP (EN 14511:2022)	(2)	-	3,22	3,24	3,27	3,26	3,26	3,29	3,32	3,31	3,32	3,28	3,22	3,24
SC-EXC	Refrigeration circuits		Nr						2						
SC-EXC	No. of compressors		Nr	3				4			5		6		
SC-EXC	Type of compressors		-						SCROLL						
SC-EXC	Refrigerant		-						R-32						
SC-EXC	Standard power supply		V						400/3~/50						
SC-EXC	Sound power level	(3)	dB(A)	87	88	89	89	89	91	91	91	92	92	93	93
EN-EXC	Sound power level	(3)	dB(A)	84	85	86	86	86	86	87	87	88	89	90	90

Directive ErP (Energy Related Products)

SCOP - AVERAGE Climate - W35	(4)	-		3,73	3,90	3,92	4,10	4,08	4,05	4,00	4,10	-	-	-	-
$\eta_{s,H}$	(4)	%		146	153	154	161	160	159	157	161	-	-	-	-

Size			WSAN-YSC4	90.3	100.3	110.4	120.4	130.4	145.4	160.4	185.5	210.6	225.6	240.6
SC-PRM	◆ Cooling capacity (EN 14511:2022)	(1)	kW	235	255	275	300	335	370	405	480	530	585	630
SC-PRM	Total power input (EN 14511:2022)	(1)	kW	83,7	94,1	102	116	119	136	155	172	200	207	227
SC-PRM	EER (EN 14511:2022)	(1)	-	2,80	2,71	2,70	2,59	2,81	2,72	2,61	2,80	2,65	2,83	2,77
SC-PRM	SEER	(4)	-	4,26	4,24	4,35	4,37	4,55	4,57	4,33	4,64	4,62	4,66	4,64
SC-PRM	$\eta_{s,c}$	(4)	%	167,2	166,7	171,0	171,6	178,9	179,9	170,1	182,8	181,8	183,4	182,5
SC-PRM	◆ Heating capacity (EN 14511:2022)	(2)	kW	240	265	285	315	350	385	420	500	555	610	655
SC-PRM	Total power input (EN 14511:2022)	(2)	kW	76,4	85,5	92,3	102	112	124	134	157	175	191	206
SC-PRM	COP (EN 14511:2022)	(2)	-	3,15	3,10	3,09	3,09	3,12	3,10	3,13	3,19	3,17	3,18	3,18
SC-PRM	Refrigeration circuits		Nr						2					
SC-PRM	No. of compressors		Nr	3			4				5		6	
SC-PRM	Type of compressors		-						SCROLL					
SC-PRM	Refrigerant		-						R-32					
SC-PRM	Standard power supply		V						400/3~/50					
SC-PRM	Sound power level	(3)	dB(A)	87	88	88	88	90	90	90	91	91	92	92
EN-PRM	Sound power level	(3)	dB(A)	85	86	86	86	86	87	87	88	89	90	90

Directive ErP (Energy Related Products)

SCOP - AVERAGE Climate - W35	(4)	-		3,47	3,64	3,83	3,87	3,80	3,64	3,82	3,91	-	-	-
$\eta_{s,H}$	(4)	%		136	143	150	152	149	143	150	153	-	-	-

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B. /6 (°C) W.B.

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

versions and configurations

VERSION:

EXC	Excellence (Standard)
PRM	Premium

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFB	Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)
--------------	---

ENERGY RECOVERY:

-	Energy recovery: not required (Standard)
D	Partial energy recovery
R	Total energy recovery (WSAT-YSC4 only)

EVAPORATOR

 EVPHE	Plate heat exchanger (Standard)
EVFTP	Shell and tube evaporator PED test

ACOUSTIC CONFIGURATION:

ST	Standard acoustic configuration (WSAT-YSC4 only)
SC	Acoustic configuration with compressor soundproofing (Standard)
EN	Super-silenced acoustic configuration

LOW TEMPERATURE (WSAT-YSC4 ONLY):

-	Energy recovery: not required (Standard)
B	Water low temperature

accessories

1PM	Hydropack with 1 pump
1PMV	Hydropack user side with nr.1 inverter pump
1PMH	Hydropack with nr.1 high static pressure pump
1PMVH	Hydropack user side with nr.1 high static pressure inverter pump
2PM	Hydropack user side with 2 pumps
2PMV	Hydropack user side with no.2 of inverter pumps
2PMH	Hydropack user side with nr.2 high static pressure pump
2PMVH	Hydropack lato utilizzo con n°2 pompe ad inverter alta prevalenza
IVFDT	Inverter driven variable flow-rate user side control depending on the temperature differential
IFWX	Steel mesh strainer on the water side
CSVX	Couple of manually operated shut-off valves
ACC	Storage tank
AMMX	Spring antivibration mounts
AMMSX	Anti-seismic spring antivibration mounts
CONTA2	Energy meter
RCMRX	Remote control via microprocessor control
PSX	Mains power supply
CMSC10	Serial communication module for LonWorks supervisor
CMSC9	Serial communication module for Modbus supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
SCP4	Set-point compensation with 0-10 V signal
SPC1	Set point compensation with 4-20 mA signal
ECS	ECOSHARE function for the automatic management of a group of units
PFCP	Power factor correction capacitors (cosfi > 0.9)
SFSTR	Disposal for inrush current reduction

RE-25	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
MHP	High and low pressure gauges
SDV	Cutoff valve on compressor supply and return
RPRI	Refrigerant leak detector in the casing
DML4-20	Demand limit with 4-20 mA
DML0-10	Demand limit with 0-10 V
PFGP	Soundproofing paneling of the pumping unit
PSWSA	Differential pressure switch water side with antifreeze protection
IOTX	IoT industrial module for cloud based interoperability & services

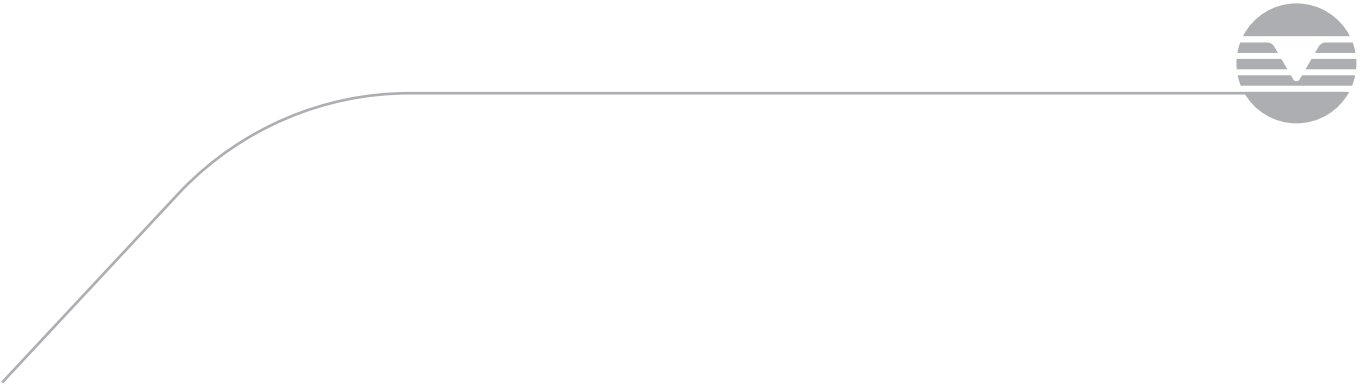
Only WSAT-YSC4:

PPBM	Microchannel coils protection panels
PGCC	Finned coil protection grilles and compressor compartment
CCME	Microchannel e-coated coil
RE-39	Electrical panel antifreeze protection for min. outdoor temperature down to -39°C
IVFEDT	Variable flow-rate control of the inverter pump external to the unit depending on the temperature differential

Only WSAN-YSC4:

CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
PGCCH	Anti-hail protection grilles
PGFC	Finned coil protection grill

Accessories whose code ends with "X" are supplied separately



SPINCHILLER⁴ PL

Polyvalent reversible heat pump

Air cooled

Outdoor installation

Capacity from 225 to 664 kW



- ✓ Scroll compressors, EC axial fans and two independent circuits for high reliability
- ✓ Polyvalent technology configurable for 4-pipe
- ✓ Refrigerant R32 - GWP = 675
- ✓ Domestic hot water up to 55°C
- ✓ Plate exchanger
- ✓ Two acoustic configurations: standard and super-silenced
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated hot side and cold side hydronic assemblies



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



compliant
ErP

HYDRONIC

functions and features



Heat pump



AIR



Outdoor installation



R-32



Hermetic Scroll



Electronic expansion valve



ECOBREEZE

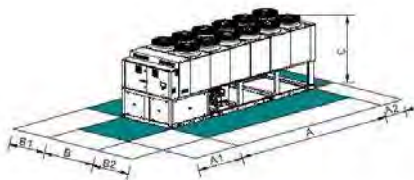


HydroPack



Intelliplant

dimensions and clearances



Size		▶▶ WSAN-YSC4 PL	90.4	100.4	110.4	120.4	130.4	145.4	160.4	175.4	215.6	230.6	250.6	265.6
SC-EXC	A - Length	mm	4114	4114	4114	4114	4114	5091	5091	5091	6066	6066	7033	7045
SC-EXC	B - Width	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
SC-EXC	C - Height	mm	2530	2530	2530	2530	2530	2530	2530	2530	2530	2530	2530	2530
SC-EXC	A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC	A2	mm	700	700	700	700	700	700	700	700	700	700	700	700
SC-EXC	B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC	B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC	Operating weight	kg	2604	2805	2911	3027	3151	3698	3903	4042	4480	4677	5590	5875

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.

SC-EXC Compressors soundproofing (SC)-Excellence

CAUTION!

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

versions and configurations

VERSION:

EXC Excellence (Standard)

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFB Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)

ENERGY RECOVERY:

R Total energy recovery (Standard)

STRUCTURAL CONFIGURATION:

4T Configuration for 4-pipe system

EVAPORATOR

EVPHE Plate heat exchanger (Standard)

ACOUSTIC CONFIGURATION:

SC Acoustic configuration with compressor soundproofing (Standard)

EN Super-silenced acoustic configuration

technical data

Size				▶▶	WSAN-YSC4 PL	90.4	100.4	110.4	120.4	130.4	145.4	160.4	175.4	215.6	230.6	250.6	265.6
Cooling 100% - Heating 0%																	
SC-EXC	Cooling capacity (EN 14511:2022)	(1)	kW	225	250	276	307	336	366	409	449	532	573	627	664		
SC-EXC	Total power input (EN 14511:2022)	(1)	kW	72,4	84,9	96,5	108	119	126	141	156	195	210	217	237		
SC-EXC	EER (EN 14511:2022)	(1)	-	3,11	2,95	2,87	2,85	2,83	2,90	2,90	2,87	2,73	2,73	2,89	2,81		
SC-EXC	SEER	(4)	-	4,82	4,70	4,61	4,74	4,80	4,82	4,68	4,65	4,88	4,91	4,94	4,94		
SC-EXC	η_{sc}	(4)	%	190,0	185,0	182,0	187,0	189,0	190,0	184,0	183,0	192,0	193,0	195,0	195,0		
Cooling 0% - Heating 100%																	
SC-EXC	Heating capacity (EN 14511:2022)	(2)	kW	231	258	285	317	349	376	419	463	554	599	648	694		
SC-EXC	Total power input (EN 14511:2022)	(2)	kW	71,8	80,1	89,3	97,5	106	115	128	140	172	182	199	213		
SC-EXC	COP (EN 14511:2022)	(2)	-	3,22	3,23	3,19	3,25	3,31	3,27	3,27	3,31	3,23	3,29	3,26	3,25		
Cooling 100% - Heating 100%																	
SC-EXC	Cooling capacity (EN 14511:2022)	(3)	kW	221	250	280	315	346	374	418	465	555	601	642	687		
SC-EXC	Heating capacity (EN 14511:2022)	(3)	kW	287	326	365	409	448	483	542	598	720	777	832	890		
SC-EXC	Total power input (EN 14511:2022)	(3)	kW	66,7	76,2	85,6	94,5	103	111	124	134	167	178	191	205		
SC-EXC	TER (EN 14511:2022)	(4)	-	7,61	7,56	7,54	7,65	7,73	7,75	7,72	7,92	7,66	7,74	7,71	7,69		
SC-EXC	Refrigeration circuits		Nr							2							
SC-EXC	No. of compressors		Nr					4						6			
SC-EXC	Type of compressors		-														
SC-EXC	Refrigerant		-														
SC-EXC	Standard power supply		V														
SC-EXC	Sound power level	(5)	dB(A)	90	90	90	91	91	92	92	93	93	93	94	94		
EN-EXC	Sound power level	(5)	dB(A)	85	85	85	86	87	88	88	89	89	90	90	91		
Directive ErP (Energy Related Products)																	
SCOP - AVERAGE Climate - W35		(6)	-	3,88	3,91	3,86	3,93	4,01	3,89	3,94	3,93	3,96	3,95	3,97	3,99		
η_{SH}		(6)	%	152,0	153,0	151,0	154,0	157,0	153,0	155,0	154,0	155,0	155,0	156,0	157,0		

(1) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 12/7°C; Entering external exchanger air temperature = 35°C
 (2) Data compliant to Standard EN 14511:2022 referred to the following conditions: Hot side water temperature = 40/45°C; Entering external exchanger air temperature = 7°C D.B./6°C W.B.
 (3) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 7/7°C; Hot side water temperature = 7/45°C
 (4) TER = (Cooling capacity + Heating capacity) / (Total power input)
 (5) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

(6) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

CCCA Copper / aluminium condenser coil with acrylic lining
CCCA1 Condenser coil with Aluminium Energy Guard DCC treatment
IVFCDT Variable flow rate control heating side by inverter according to the temperature differential
IVFHDT Variable flow-rate control on hot use side by inverter based on the temperature difference
IVFCDTS Variable flow control heating side by inverter according to the temperature differential with pressure drop sensor
IVFHDT S Variable flow control heating side by inverter according to the temperature differential with pressure drop sensor
IVFCDTF Variable flow rate control cooling side by inverter according to the temperature differential with a flow meter
IVFHDT F Variable flow control heating side by inverter according to the temperature differential with pressure drop sensor
PFGP Soundproofing paneling of the pumping unit
CSVX Couple of manually operated shut-off valves
IFWX Steel mesh strainer on the water side
CMSC10 Serial communication module for LonWorks supervisor
CMSC9 Serial communication module for Modbus supervisor
CMSC11 Serial communication module for BACnet-IP supervisor
RCMRX Remote control via microprocessor control
CONTA3 M-bus total electricity meter
CONTA4 Total electricity meters and m-bus pump group
RE-25 Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
DML4-20 Demand limit with 4-20 mA
DML0-10 Demand limit with 0-10 V
ECS ECOSHARE function for the automatic management of a group of units

RPRI Refrigerant leak detector in the casing
SFSTR Disposal for inrush current reduction
PFCC Power factor correction capacitors (cosfi > 0.95)
SPC1 Set-point compensation with 4-20 mA
SCP4 Set-point compensation with 0-10 V
PSX Mains power supply
AMMX Spring antivibration mounts
AMMSX Anti-seismic spring antivibration mounts
PGFC Finned coil protection grill
PGCCH Anti-hail protection grilles
PSWSA Differential pressure switch water side with antifreeze protection
2PMCS Hydropack cooling side with 2 on-off pumps
2PMCS2V Hydropack on cold user side with 2 pumps and 2 inverters
1+1PMCS Hydropack cooling side with 1 + 1 on-off pump
1+1PMCSV Hydropack cooling side with 1 + 1 inverter pump
2PMHS Hydropack heating side with 2 on-off pumps
2PMHS2V Hydropack on hot user side with 2 pumps and 2 inverters
1+1PMHS Hydropack heating side with 1 + 1 on-off pump
1+1PMHSV Hydropack heating side with 1 + 1 inverter pump
FMCHX Cooling and heating side flow meters
RDVS Switching valve with dual safety valves
MISTER1 Indirect energy meter through pressure drops and unit probes temperature differential
MISTER2 Direct energy meter by flow rate and temperature differential with unit probes (available only with options: FMCHX)
IOTX IoT industrial module for cloud based interoperability & services

SPINCHILLER⁴

Reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 670 to 1260 kW



- ✓ Four independent circuits for high reliability with scroll compressors and EC Axial fans
- ✓ High full load and seasonal efficiency (Excellence version), high seasonal efficiency and compact dimensions (Premium version)
- ✓ Refrigerant R32 - GWP = 675
- ✓ Domestic hot water up to 55°C
- ✓ Plate heat exchanger or shell & tube exchanger
- ✓ Two acoustic configurations
- ✓ Modular operation management, up to 4 units in cascade
- ✓ Integrated hydronic assembly, system tank and partial heat recovery



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



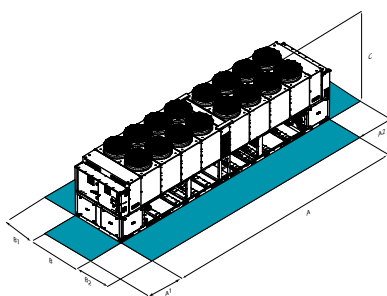
compliant
ErP

HYDRONIC

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	▶▶ WSAN-YSC4	260.8	290.8	320.8	345.9	370.10	420.12	450.12
SC-EXC A - Length	mm	10150	10150	10150	11122	12094	12094	13070
SC-EXC B - Width	mm	2250	2250	2250	2250	2250	2250	2250
SC-EXC C - Height	mm	2520	2520	2520	2520	2520	2520	2520
SC-EXC A1	mm	1500	1500	1500	1500	1500	1500	1500
SC-EXC A2	mm	1500	1500	1500	1500	1500	1500	1500
SC-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200
SC-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200
SC-EXC Operating weight	kg	6786	7072	7384	7809	8636	8838	9280

Size	▶▶ WSAN-YSC4	260.8	290.8	315.9	345.9	370.10	420.12	450.12	480.12
SC-PRM A - Length	mm	8200	8200	9172	9172	10150	10150	12094	12094
SC-PRM B - Width	mm	2250	2250	2250	2250	2250	2250	2250	2250
SC-PRM C - Height	mm	2520	2520	2520	2520	2520	2520	2520	2520
SC-PRM A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM B1	mm	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM B2	mm	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC Operating weight	kg	5856	6232	7111	7156	7752	7940	8842	9092

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.

SC-EXC Compressors soundproofing (SC)-Excellence
 SC-PRM Compressors soundproofing (SC)-Premium

versions and configurations

VERSION:

EXC	Excellence (Standard)
PRM	Premium

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFB	Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)
--------------	---

ENERGY RECOVERY:

-	Energy recovery: not required (Standard)
D	Partial energy recovery

EVAPORATOR

EVPHE	Plate heat exchanger (Standard)
EVFTP	Shell and tube evaporator PED test

ACOUSTIC CONFIGURATION:

SC	Acoustic configuration with compressor soundproofing (Standard)
EN	Super-silenced acoustic configuration

technical data

Size			WSAN-YSC4	260.8	290.8	320.8	345.9	370.10	420.12	450.12
SC-EXC	♦ Cooling capacity (EN 14511:2022)	(1)	kW	710	780	860	930	1000	1111	1211
SC-EXC	Total power input (EN 14511:2022)	(1)	kW	228	256	286	306	326	376	405
SC-EXC	EER (EN 14511:2022)	(1)	-	3,12	3,05	3,01	3,03	3,06	2,96	2,99
SC-EXC	SEER	(4)	-	4,82	4,75	4,70	4,81	4,86	4,83	4,84
SC-EXC	η_{sc}	(4)	%	189,8	187,0	185,0	189,4	191,4	190,2	190,6
SC-EXC	♦ Heating capacity (EN 14511:2022)	(2)	kW	750	830	910	985	1060	1169	1269
SC-EXC	Total power input (EN 14511:2022)	(2)	kW	228	250	274	297	319	356	389
SC-EXC	COP (EN 14511:2022)	(2)	-	3,29	3,32	3,32	3,32	3,33	3,28	3,26
SC-EXC	Refrigeration circuits		Nr				4			
SC-EXC	No. of compressors		Nr	8	8	8	9	10	12	12
SC-EXC	Type of compressors		-				SCROLL			
SC-EXC	Refrigerant		-				R-32			
SC-EXC	Standard power supply		V				400/3~/50			
SC-EXC	Sound power level	(3)	dB(A)	94	94	94	95	95	95	96
EN-EXC	Sound power level	(3)	dB(A)	89	90	90	91	91	92	92

Size			WSAN-YSC4	260.8	290.8	315.9	345.9	370.10	420.12	450.12	480.12
SC-PRM	♦ Cooling capacity (EN 14511:2022)	(1)	kW	670	740	815	885	960	1060	1171	1260
SC-PRM	Total power input (EN 14511:2022)	(1)	kW	238	272	290	327	343	400	414	454
SC-PRM	EER (EN 14511:2022)	(1)	-	2,82	2,72	2,81	2,71	2,80	2,65	2,83	2,77
SC-PRM	SEER	(4)	-	4,56	4,56	4,59	4,56	4,62	4,60	4,64	4,63
SC-PRM	η_{sc}	(4)	%	179,4	179,3	180,4	179,3	181,9	181,2	182,8	182,0
SC-PRM	♦ Heating capacity (EN 14511:2022)	(2)	kW	700	770	850	920	1000	1109	1219	1309
SC-PRM	Total power input (EN 14511:2022)	(2)	kW	224	248	269	291	314	350	382	411
SC-PRM	COP (EN 14511:2022)	(2)	-	3,12	3,10	3,16	3,16	3,19	3,17	3,19	3,18
SC-PRM	Refrigeration circuits		Nr				4				
SC-PRM	No. of compressors		Nr	8	8	9	9	10	12	12	12
SC-PRM	Type of compressors		-				SCROLL				
SC-PRM	Refrigerant		-				R-32				
SC-PRM	Standard power supply		V				400/3~/50				
SC-PRM	Sound power level	(3)	dB(A)	93	93	93	94	94	94	95	95
EN-PRM	Sound power level	(3)	dB(A)	89	90	91	91	91	92	93	93

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B. /6 (°C) W.B.

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

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.

accessories

CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
MHP	High and low pressure gauges
SDV	Cutoff valve on compressor supply and return
PFGP	Soundproofing paneling of the pumping unit
IVFDT	Inverter driven variable flow-rate user side control depending on the temperature differential
ACC	Storage tank
CSVX	Couple of manually operated shut-off valves
IFWX	Steel mesh strainer on the water side
CMSC10	Serial communication module for LonWorks supervisor
CMSC9	Serial communication module for Modbus supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
RCMRX	Remote control via microprocessor control
CONTA2	Energy meter
RE-25	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
DML4-20	Demand limit with 4-20 mA
DML0-10	Demand limit with 0-10 V

ECS	ECOSHARE function for the automatic management of a group of units
RPRI	Refrigerant leak detector in the casing
SFSTR	Disposal for inrush current reduction
PFCP	Power factor correction capacitors (cosfi > 0.9)
PFCC	Power factor correction capacitors (cosfi > 0.95)
SPC1	Set-point compensation with 4-20 mA
SCP4	Set-point compensation with 0-10 V
PSX	Mains power supply
AMMX	Spring antivibration mounts
AMMSX	Anti-seismic spring antivibration mounts
PGFC	Finned coil protection grill
PGCCH	Anti-hail protection grilles
2PM	Hydropack user side with 2 pumps
2PMV	Hydropack user side with no.2 of inverter pumps
1P1SB	Hydropack user side with 1+1 on-off pump
1P1SBV	Hydropack user side with 1+1 inverter pump
PSWSA	Differential pressure switch water side with antifreeze protection
RDVS	Switching valve with dual safety valves
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

SPINCHILLER⁴

Liquid chiller

Air cooled

Outdoor installation

Capacity from 720 to 939 kW



- ✓ Scroll compressors, microchannel coils and two independent circuits for high reliability
- ✓ Excellence version with very high seasonal efficiency, Premium version with high seasonal efficiency, with extremely compact dimensions
- ✓ Refrigerant R32 - GWP = 675
- ✓ Operation down to +50°C outdoor air temperature, low water temperature down to -8°C
- ✓ Plate heat exchanger or shell & tube exchanger
- ✓ Three acoustic configurations
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated hydronic assembly, system tank and partial heat recovery



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



ErP compliant

functions and features



Cooling only



Air cooled



Outdoor installation



R-32



Hermetic Scroll



Electronic expansion valve



ECOBREEZE

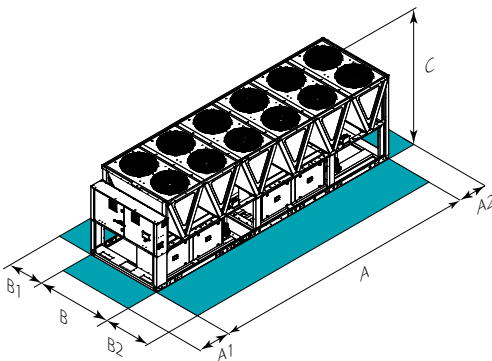


HydroPack



Intelliplant

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	▶ WSAT-YSC4	265.6	290.7	310.7	350.8
SC-EXC A - Length	mm	6665	6665	6665	7919
SC-EXC B - Width	mm	2228	2228	2228	2228
SC-EXC C - Height	mm	2538	2538	2538	2538
SC-EXC A1	mm	1500	1500	1500	1500
SC-EXC A2	mm	700	700	700	700
SC-EXC B1	mm	1200	1200	1200	1200
SC-EXC B2	mm	2250	2250	2250	2250
SC-EXC Operating weight	kg	3954	4147	4192	4801

Size	▶ WSAT-YSC4	265.6	290.7	310.7	350.8
SC-PRM A - Length	mm	6665	6665	6665	7919
SC-PRM B - Width	mm	2228	2228	2228	2228
SC-PRM C - Height	mm	2538	2538	2538	2538
SC-PRM A1	mm	1500	1500	1500	1500
SC-PRM A2	mm	700	700	700	700
SC-PRM B1	mm	1200	1200	1200	1200
SC-PRM B2	mm	2250	2250	2250	2250
SC-PRM Operating weight	kg	3954	4147	4192	4801

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.

SC-EXC Compressors soundproofing (SC)-Excellence
 SC-PRM Compressors soundproofing (SC)-Premium

versions and configurations

VERSION:

EXC	Excellence (Standard)
PRM	Premium

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFB	ECOBREEZE type outdoor section fans consumption reduction device (Standard in the Excellence version)
CREFP	Variable speed outdoor section fans consumption reduction device (phase cutting) (Standard in the Premium version)

ENERGY RECOVERY:

-	Energy recovery: not required (Standard)
D	Partial energy recovery

EVAPORATOR

EVPH	Plate heat exchanger (Standard)
EVFTP	Shell and tube evaporator PED test

ACOUSTIC CONFIGURATION:

ST	Standard acoustic configuration
SC	Acoustic configuration with compressor soundproofing (Standard)
EN	Super-silenced acoustic configuration

technical data

Size		▶▶ WSAT-YSC4	265.6	290.7	310.7	350.8
ST/SC-EXC	♦ Cooling capacity (EN 14511:2022)	(1) kW	720	780	814	939
ST/SC-EXC	Total power input (EN 14511:2022)	(1) kW	232	259	279	314
ST/SC-EXC	EER (EN 14511:2022)	(1) -	3,10	3,01	2,92	3,00
ST/SC-EXC	SEER	(3) -	5,28	5,26	5,23	5,22
ST/SC-EXC	η_{sc}	(3) %	208,2	207,4	206,2	205,8
ST/SC-EXC	Refrigeration circuits	Nr			2	
ST/SC-EXC	No. of compressors	Nr	6		7	8
ST/SC-EXC	Type of compressors	-			SCROLL	
ST/SC-EXC	Refrigerant	-			R-32	
ST/SC-EXC	Standard power supply	V			400/3~/50	
ST-EXC	Sound power level	(2) dB(A)	97	97	98	98
SC-EXC	Sound power level	(2) dB(A)	94	94	95	95
EN-EXC	Sound power level	(2) dB(A)	90	90	91	91

Size		▶▶ WSAT-YSC4	265.6	290.7	310.7	350.8
ST/SC-PRM	♦ Cooling capacity (EN 14511:2022)	(1) kW	720	780	814	939
ST/SC-PRM	Total power input (EN 14511:2022)	(1) kW	232	259	279	314
ST/SC-PRM	EER (EN 14511:2022)	(1) -	3,10	3,01	2,92	3,00
ST/SC-PRM	SEER	(3) -	5,03	5,01	4,98	4,94
ST/SC-PRM	η_{sc}	(3) %	198,2	197,4	196,2	194,6
ST/SC-PRM	Refrigeration circuits	Nr			2	
ST/SC-PRM	No. of compressors	Nr	6		7	8
ST/SC-PRM	Type of compressors	-			SCROLL	
ST/SC-PRM	Refrigerant	-			R-32	
ST/SC-PRM	Standard power supply	V			400/3~/50	
ST-PRM	Sound power level	(2) dB(A)	97	97	98	98
SC-PRM	Sound power level	(2) dB(A)	94	94	95	95
EN-PRM	Sound power level	(2) dB(A)	90	90	91	91

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C
 (2) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

(3) Data calculated according to the EN 14825:2018 Regulation

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.

accessories

2PM	Hydropack user side with 2 pumps
2PMV	Hydropack user side with no.2 of inverter pumps
1P1SB	Hydropack user side with 1+1 on-off pump
1P1SBV	Hydropack on user side with one inverter pump and one stand-by pump with dedicated inverter
IVFDT	Inverter driven variable flow-rate user side control depending on the temperature differential
IFWX	Steel mesh strainer on the water side
CSVX	Couple of manually operated shut-off valves
ACC	Storage tank
AMMX	Spring antivibration mounts
AMMSX	Anti-seismic spring antivibration mounts
CONTA2	Energy meter
RCMRX	Remote control via microprocessor control
PSX	Mains power supply
CMSC10	Serial communication module for LonWorks supervisor
CMSC9	Serial communication module for Modbus supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
SCP4	Set-point compensation with 0-10 V
SPC1	Set-point compensation with 4-20 mA

ECS	ECOSHARE function for the automatic management of a group of units
PFCC	Power factor correction capacitors (cosfi > 0.95)
SFSTR	Disposal for inrush current reduction
RE-25	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
RE-39	Electrical panel antifreeze protection for min. outdoor temperature down to -39°C
SDV	Cutoff valve on compressor supply and return
RPRI	Refrigerant leak detector in the casing
DML4-20	Demand limit with 4-20 mA
DML0-10	Demand limit with 0-10 V
PFGP	Soundproofing paneling of the pumping unit
PSWSA	Differential pressure switch water side with antifreeze protection
PBPM	Microchannel coils protection panels
PGCC	Finned coil protection grilles and compressor compartment
CCME	Microchannel e-coated coil
RDVS	Switching valve with dual safety valves
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

SPINCHILLER³ FC

Liquid chiller with FREE-COOLING

Air cooled

Outdoor installation

Capacity from 299 to 509 kW



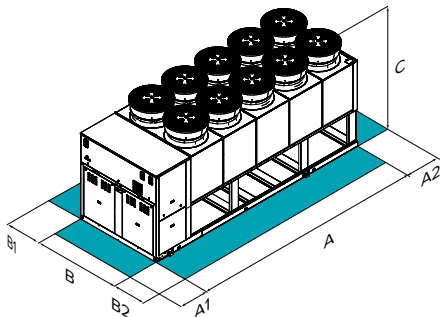
- ✓ Double independent circuits for high reliability with scroll compressors
- ✓ Solution for cold climates and industrial application
- ✓ Refrigerant R410A - GWP = 2088
- ✓ Operation down to -39°C outdoor air temperature, low water temperature down to -8°C
- ✓ Direct Free-cooling and No-glycol Free-cooling
- ✓ Two acoustic configurations
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated hydronic assembly and partial recovery



functions and features

Cooling only	Air cooled	Outdoor installation	R-410A	Hermetic Scroll	Electronic expansion valve	AxiTop	FREE-COOLING	HydroPack	Intelliplant

dimensions and clearances



Size	▶▶ WSAT-XSC3 FC	90.4	100.4	110.4	120.4	140.4	160.4
A - Length	mm	4543	4543	4543	4543	5518	5518
B - Width	mm	2243	2243	2243	2243	2243	2243
C - Height	mm	2668	2668	2668	2668	2668	2668
A1	mm	1500	1500	1500	1500	1500	1500
A2	mm	700	700	700	700	700	700
B1	mm	1200	1200	1200	1200	1200	1200
B2	mm	1200	1200	1200	1200	1200	1200
Operating weight	kg	3940	3994	4037	4105	4593	4645

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

VERSION:

EXC Excellence (Standard)

LOW TEMPERATURE:

- Low temperature: not required (Standard)

B Water low temperature

ACOUSTIC CONFIGURATION:

SC Acoustic configuration with compressor soundproofing (Standard)

EN Super-silenced acoustic configuration

FREE-COOLING:

FCD Direct FREE-COOLING (Standard)

FCI No-glycol FREE-COOLING

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFP Device for fan consumption reduction of the external section at variable speed (phase-cutting) (standard in the SC acoustic config.)

CREFB Device for fan consumption reduction of the external section, ECOBREEZE type (standard in the EN acoustic config.)

TYPE FAN EXTERNAL SECTION:

AXIX High efficiency diffuser for axial fan - AxiTop (Standard)

NAXI High efficiency diffuser for axial fan - AxiTop: not required

technical data

Size				WSAT-XSC3 FC	90.4	100.4	110.4	120.4	140.4	160.4
Free-Cooling Off										
SC-EXC	Cooling capacity	(1)	kW		299	325	361	397	452	509
SC-EXC	Total power input	(1)	kW		79,5	86,8	96,6	110	123	139
SC-EXC	EER at full load	(1)	-		3,76	3,75	3,74	3,62	3,68	3,65
SC-EXC	SEER	(4)	-		4,64	4,65	4,62	4,56	4,66	4,65
SC-EXC	η_{sc}	(4)	%		182,6	183,0	181,8	179,4	183,4	183,0
Direct Free-cooling on										
SC-EXC	Cooling capacity	(2)	kW		278	284	294	304	425	439
SC-EXC	Total power input	(2)	kW		9,8	9,9	9,9	10,1	13	13,3
SC-EXC	EER at full load	(2)	-		28,43	28,83	29,85	30,16	32,77	33,08
SC-EXC	Refrigeration circuits		Nr					2		
SC-EXC	No. of compressors		Nr					4		
SC-EXC	Type of compressors		-					SCROLL		
SC-EXC	Refrigerant		-					R-410A		
SC-EXC	Standard power supply		V					400/3~/50		
SC-EXC	Sound power level	(3)	dB(A)		92	92	92	92	92	93
EN-EXC	Sound power level	(3)	dB(A)		87	87	87	87	88	89

(1) Data referred to the following conditions: internal exchanger water temperature = 15/10 °C; glycol 30%; entering external exchanger air temperature 30°C

(2) Free-Cooling only data (compressors OFF) referred to the following conditions: internal exchanger water temperature = 15/10°C; entering external exchanger air temperature = 2°C D.B./1°C W.B.; glycol 30%

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

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.

accessories

2PM	Hydropack user side with 2 pumps
3PM	Hydropack load side with 3 pumps
2PMV	Hydropack user side with no.2 of inverter pumps
3PMV	Hydropack user side with no.3 of inverter pumps
IVFDT	Inverter driven variable flow-rate user side control depending on the temperature differential
IFWX	Steel mesh strainer on the water side
CSVX	Couple of manually operated shut-off valves
CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
AMMX	Spring antivibration mounts
PGFC	Finned coil protection grill
PGCCH	Anti-hail protection grilles
CONTA2	Energy meter
RPRPDI	Refrigerant leak detector with pump down function in the casing
RCMRX	Remote control via microprocessor control
PSX	Mains power supply
CMSC10	Serial communication module for LonWorks supervisor
CMSC9	Serial communication module for Modbus supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
SCP4	Set-point compensation with 0-10 V
SPC2	Set-point compensation with outdoor air temperature probe
ECS	ECOSHARE function for the automatic management of a group of units

PFCP	Power factor correction capacitors (cosfi > 0.9)
SFSTR	Disposal for inrush current reduction
MHP	High and low pressure gauges
SDV	Cutoff valve on compressor supply and return
WGLY	Unit supplied without glycol solution (FCI only)
A550	550 l. storage tank (FCD only)
A700	700 l. storage tank (FCD only)
A900	900 l. storage tank (FCD only)
PSPS	Set up for single power supply (260.6÷360.6)
RE-20	Electrical panel antifreeze protection for min. outdoor temperature down to -20°C
RE-25	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
RE-30	Electrical panel antifreeze protection for min. outdoor temperature down to -30°C
RE-35	Electrical panel antifreeze protection for min. outdoor temperature down to -35°C
RE-39	Electrical panel antifreeze protection for min. outdoor temperature down to -39°C
CBS	Overload circuit breakers (260.6÷360.6)
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

SCREWLINE^{4-I} MF

Polyvalent reversible heat pump

Air cooled

Outdoor installation

Capacity from 522 to 989 kW



- ✓ Screw compressors with inverter technology and EC Axialfans type
- ✓ Polyvalent technology configurable for 4-pipe
- ✓ Double independent circuits for high reliability
- ✓ Refrigerant R513A - GWP = 631
- ✓ High full load and seasonal efficiency (Excellence version) for all 3 acoustic versions
- ✓ Domestic hot water up to 60°C, low water temperature down to -8°C
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated hot side and cold side hydronic assemblies

Screw INVERTER



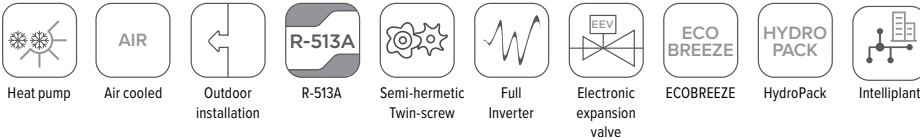
Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



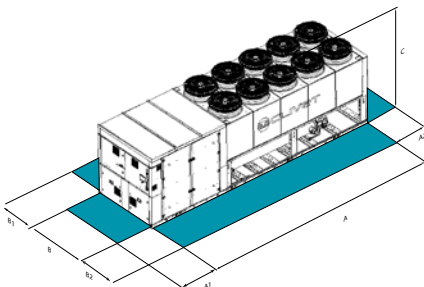
compliant
ErP

HYDRONIC

functions and features



dimensions and clearances



Size	▶▶ WDAN-iK4 MF	220.2	240.2	260.2	280.2	320.2	340.2	420.2
A - Length	mm	7756	7756	8725	9700	10680	10755	10755
B - Width	mm	2228	2228	2228	2228	2228	2228	2228
C - Height	mm	2538	2538	2538	2538	2538	2538	2538
A1	mm	1500	1500	1500	1500	1500	1500	1500
A2	mm	700	700	700	700	700	700	700
B1	mm	1200	1200	1200	1200	1200	1200	1200
B2	mm	1200	1200	1200	1200	1200	1200	1200
Operating weight	kg	7869	7869	9197	9708	10207	10516	11875

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

VERSION:

EXC Excellence (Standard)

ENERGY RECOVERY:

R Total energy recovery (Standard)

ACOUSTIC CONFIGURATION:

SC Acoustic configuration with compressor soundproofing (Standard)

LN Silenced acoustic configuration

EN Super-silenced acoustic configuration

CONFIGURATION:

4T Configuration for 4-pipe system

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFB Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)

LOW TEMPERATURE:

- Low temperature: not required (Standard)

B Water low temperature

technical data

Size	▶▶ WDAN-iK4 MF		220.2	240.2	260.2	280.2	320.2	340.2	420.2	
Cooling 100% - Heating 0%										
SC-EXC	Cooling capacity (EN 14511:2022)	(1)	kW	522	544	574	633	721	792	989
SC-EXC	Total power input (EN 14511:2022)	(1)	kW	183	193	190	206	240	266	351
SC-EXC	EER (EN 14511:2022)	(1)	-	2,85	2,82	3,02	3,07	3,01	2,98	2,82
SC-EXC	SEER	(6)	-	5,10	5,08	5,08	5,17	5,12	5,05	5,05
SC-EXC	η_{sc}	(6)	%	200,8	200,1	200,1	203,7	201,7	198,8	198,9
Cooling 0% - Heating 100%										
SC-EXC	Heating capacity (EN 14511:2022)	(2)	kW	504	509	538	632	697	777	908
SC-EXC	Total power input (EN 14511:2022)	(2)	kW	163	165	168	205	229	252	300
SC-EXC	COP (EN 14511:2022)	(2)	-	3,09	3,09	3,20	3,09	3,05	3,08	3,03
Cooling 100% - Heating 100%										
SC-EXC	Cooling capacity (EN 14511:2022)	(3)	kW	522	544	574	633	718	791	989
SC-EXC	Heating capacity (EN 14511:2022)	(3)	kW	668	695	728	805	917	1013	1266
SC-EXC	Total power input (EN 14511:2022)	(3)	kW	162	169	173	192	222	248	309
SC-EXC	TER (EN 14511:2022)	(4)	-	7,33	7,35	7,54	7,48	7,36	7,28	7,30
SC-EXC	Refrigeration circuits		Nr				2			
SC-EXC	No. of compressors		Nr				2			
SC-EXC	Type of compressors		-				SCREW INVERTER			
SC-EXC	Refrigerant		-				R-513A			
SC-EXC	Standard power supply		V				400/3~/50			
SC-EXC	Sound power level	(5)	dB(A)	97	97	99	99	101	100	101
LN-EXC	Sound power level	(5)	dB(A)	90	91	91	92	92	92	94
EN-EXC	Sound power level	(5)	dB(A)	86	86	88	88	89	89	88
Directive ErP (Energy Related Products)										
SC-EXC	SCOP - AVERAGE Climate - W35	(6)	-	4,03	4,03	4,12	-	-	-	-
SC-EXC	η_{sH}	(6)	%	158	158	162	-	-	-	-

(1) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 12/7°C; Entering external exchanger air temperature = 35°C

(2) Data compliant to Standard EN 14511:2022 referred to the following conditions: Hot side water temperature = 40/45°C; Entering external exchanger air temperature = 7°C D.B./6°C W.B.

(3) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 7/7°C; Hot side water temperature = 45°C

(4) TER = (Cooling capacity + Heating capacity) / (Total power input)

(5) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

(6) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

SPC1	Set-point compensation with 4-20 mA
SCP4	Set-point compensation with 0-10 V
SPC2	Set-point compensation with outdoor air temperature probe
IVFCDT	Variable flow rate control heating side by inverter according to the temperature differential
IVFHDT	Variable flow-rate control on hot use side by inverter based on the temperature difference
IVFCDTs	Variable flow control heating side by inverter according to the temperature differential with pressure drop sensor
IVFHDTs	Variable flow control heating side by inverter according to the temperature differential with pressure drop sensor
IVFCDTF	Variable flow rate control cooling side by inverter according to the temperature differential with a flow meter
IVFHDTF	Variable flow control heating side by inverter according to the temperature differential with pressure drop sensor
CONTA3	M-bus total electricity meter
CONTA4	Total electricity meters and m-bus pump group
IFWX	Steel mesh strainer on the water side
CSVX	Couple of manually operated shut-off valves
AMMX	Spring antivibration mounts
AMMSX	Anti-seismic spring antivibration mounts
RCMRX	Remote control via microprocessor control
PSX	Mains power supply
CMSC9	Serial communication module for Modbus supervisor
CMSC10	Serial communication module for LonWorks supervisor
CMSC11	Serial communication module for BACnet-IP supervisor

RPRI	Refrigerant leak detector in the casing
FMCHX	Cooling and heating side flow meters
RE-25	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
ECS	ECOSHARE function for the automatic management of a group of units
FC2	EMC filtering to reduce conducted compressor emissions
PGFC	Finned coil protection grill
PGCCH	Anti-hail protection grilles
RDVS	Switching valve with dual safety valves
CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
1+1PMHSV	Hydropack heating side with 1 + 1 inverter pump
2PMHSV	Hydropack cooling side with 2 inverter pumps
1+1PMHS	Hydropack heating side with 1 + 1 on-off pump
2PMHS	Hydropack heating side with 2 on-off pumps
1+1PMCSV	Hydropack cooling side with 1 + 1 inverter pump
2PMCSV	Hydropack heating side with 2 inverter pumps
1+1PMCS	Hydropack cooling side with 1 + 1 on-off pump
2PMCS	Hydropack cooling side with 2 on-off pumps
MISTER1	Indirect energy meter through pressure drops and unit probes temperature differential
MISTER2	Direct energy meter by flow rate and temperature differential with unit probes (available only with options: FMCHX)
MISTER3	Direct energy meter via m-bus (available only with options: FMCHX)
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

SCREWLINE^{4-I}

Liquid chiller
Air cooled
Outdoor installation
Capacity from 204 to 1055 kW



- ✓ Screw compressors with inverter technology, Microchannel coils and EC Axial fans type
- ✓ Quite zero environmental impact solution, with one or two independent circuits for high reliability
- ✓ Refrigerant R1234ze - GWP = 7
- ✓ High full load and seasonal efficiency (Excellence version)
- ✓ Operation down to 50°C outdoor air temperature, low water temperature down to -2°C
- ✓ Three acoustic configurations
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated hydronic assembly and partial recovery

Screw INVERTER



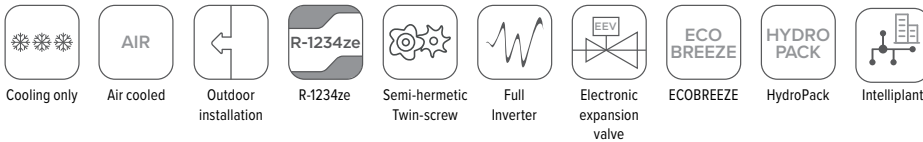
Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



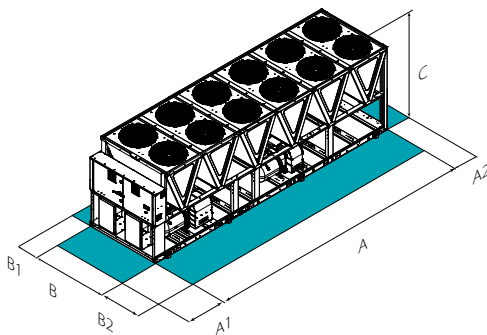
compliant
ErP

HYDRONIC

functions and features



dimensions and clearances



Size	▶▶ WDAT-iZ4	120.1	160.1	200.1	240.1	290.1	250.2	280.2	320.2	360.2	400.2	440.2	480.2	540.2	580.2
ST/SC-EXC A - Length	mm	2925	2925	4175	4175	5425	5425	5425	5425	6675	6675	7925	7925	9175	10425
ST/SC-EXC B - Width	mm	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228
ST/SC-EXC C - Height	mm	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535
ST/SC-EXC A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
ST/SC-EXC A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
ST/SC-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
ST/SC-EXC B2	mm	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700
ST-EXC Operating weight	kg	2623	2761	3924	3929	4284	4850	4861	4867	6254	6264	6686	7183	7595	9141
SC/EN-EXC Operating weight	kg	2794	2933	4179	4184	4539	5260	5271	5277	6714	6724	7146	7693	8105	9652

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.

ST-EXC Acoustic standard configuration (ST) - Excellence
SC-EXC Compressors soundproofing (SC)-Excellence
EN-EXC Supersilenced acoustic configuration (EN) - Excellence

CAUTION!

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

versions and configurations

VERSION:

EXC Excellence (Standard)

LOW TEMPERATURE:

- Low temperature: not required (Standard)
B Water low temperature

ACOUSTIC CONFIGURATION:

ST Standard acoustic configuration (Standard)
SC Acoustic configuration with compressor soundproofing
EN Super-silenced acoustic configuration

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFB Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)

ENERGY RECOVERY:

- Energy recovery: not required (Standard)
D Partial energy recovery

technical data

Size	▶▶ WDAT-iz4	120.1	160.1	200.1	240.1	290.1	250.2	280.2	320.2	360.2	400.2	440.2	480.2	540.2	580.2		
ST/SC-EXC	♦ Cooling capacity (EN 14511:2022)	(1)	kW	204	256	360	420	510	423	483	539	630	710	789	880	965	1055
ST/SC-EXC	Total power input (EN 14511:2022)	(1)	kW	64,4	85,2	115	142	167	134	156	180	212	241	263	301	322	348
ST/SC-EXC	EER (EN 14511:2022)	(1)	-	3,16	3,00	3,12	2,96	3,06	3,16	3,10	3,00	2,97	2,95	3,00	2,92	3,00	3,04
ST/SC-EXC	SEER	(3)	-	5,15	5,13	5,17	5,14	5,20	5,42	5,38	5,36	5,42	5,37	5,39	5,37	5,33	5,35
ST/SC-EXC	η_{sc}	(3)	%	202,9	202,3	203,6	202,8	205,1	214,0	212,1	211,4	214,0	211,6	212,5	211,9	210,3	210,9
ST/SC-EXC	Refrigeration circuits		Nr			1										2	
ST/SC-EXC	No. of compressors					1										2	
ST/SC-EXC	Type of compressors								SCREW INVERTER								
ST/SC-EXC	Refrigerant								R-1234ze								
ST/SC-EXC	Standard power supply		V						400/3~/50								
ST-EXC	Sound power level	(2)	dB(A)	97	97	97	97	99	100	101	101	102	103	103	103	104	104
SC-EXC	Sound power level	(2)	dB(A)	93	94	94	94	96	96	97	98	98	99	100	100	100	101
EN-EXC	Sound power level	(2)	dB(A)	89	90	90	90	92	92	93	94	94	96	96	96	96	96

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C
 (2) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

(3) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

1PM Hydropack with 1 pump
1PMV Hydropack user side with nr.1 inverter pump
1PMH Hydropack with nr.1 high static pressure pump
1PMVH Hydropack user side with nr.1 high static pressure inverter pump
2PM Hydropack user side with 2 pumps
2PMV Hydropack user side with no.2 of inverter pumps
2PMH Hydropack user side with nr.2 high static pressure pump
2PMVH Hydropack lato utilizzo con n°2 pompe ad inverter alta prevalenza
IVFDT Inverter driven variable flow-rate user side control depending on the temperature differential
IFWX Steel mesh strainer on the water side
CSVX Couple of manually operated shut-off valves
AMMX Spring antivibration mounts
AMMSX Anti-seismic spring antivibration mounts
CONTA2 Energy meter
RCMRX Remote control via microprocessor control
PSX Mains power supply

Accessories whose code ends with "X" are supplied separately

CMSC9 Serial communication module for Modbus supervisor
CMSC10 Serial communication module for LonWorks supervisor
CMSC11 Serial communication module for BACnet-IP supervisor
RPRI Refrigerant leak detector in the casing
SCP4 Set-point compensation with 0-10 V signal
SPC2 Set-point compensation with outdoor air temperature probe
PPBM Microchannel coils protection panels
CCME Microchannel e-coated coil
MHP High and low pressure gauges
RE-25 Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
ECS ECOSHARE function for the automatic management of a group of units
FC2 EMC filtering to reduce conducted compressor emissions
PGCC Finned coil protection grilles and compressor compartment
RDVS Switching valve with dual safety valves
REGBT Device for the condensing coil partialization
IOTX IoT industrial module for cloud based interoperability & services

SCREWLINE^{4-I}

Liquid chiller
Air cooled
Outdoor installation
Capacity from 281 to 1422 kW



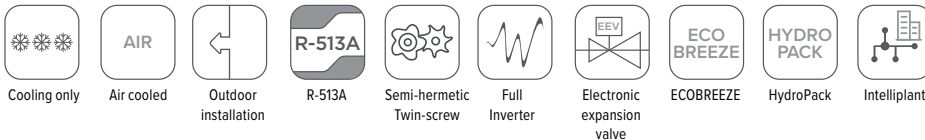
Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



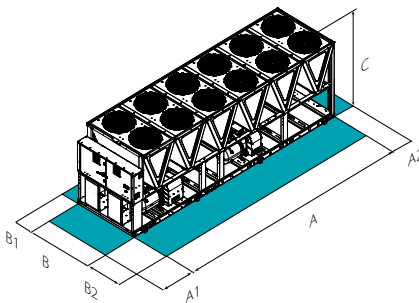
ErP compliant

- ✓ Screw compressors with inverter technology, Microchannel coils and EC Axial fans type
- ✓ Low environmental impact solution, with one or two independent circuits for high reliability
- ✓ Refrigerant R513A - GWP = 631
- ✓ High full load and seasonal efficiency (Excellence version), high seasonal efficiency and compact dimensions (Premium version)
- ✓ Operation down to 50°C outdoor air temperature, low water temperature down to -8°C
- ✓ Three acoustic configurations
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated hydronic assembly and partial recovery

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	WDAT-iK4	120.1	160.1	200.1	240.1	250.2	280.2	320.2	340.2	360.2	400.2	440.2	480.2	540.2	580.2
ST-EXC A - Length	mm	4175	4175	5425	6675	7925	7925	7925	9175	10425	10425	10425	12923	12923	12923
ST-EXC B - Width	mm	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228
ST-EXC C - Height	mm	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535
ST-EXC A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
ST-EXC A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
ST-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
ST-EXC B2	mm	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700
ST-EXC Operating weight	kg	3024	3167	4253	4683	5627	6071	6075	6880	7934	7950	7956	9285	9289	9295
SC/EN-EXC Operating weight	kg	3229	3372	4508	4938	6037	6481	6485	7340	8394	8410	8416	9795	9799	9805

Size	WDAT-iK4	120.1	160.1	200.1	240.1	250.2	280.2	320.2	340.2	360.2	400.2	440.2	480.2	540.2	580.2
ST-PRM A - Length	mm	2925	2925	4175	5425	5424	5424	5424	6675	7924	7924	7924	10425	10425	10425
ST-PRM B - Width	mm	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228	2228
ST-PRM C - Height	mm	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535
ST-PRM A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
ST-PRM A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
ST-PRM B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
ST-PRM B2	mm	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700
ST-PRM Operating weight	kg	2673	2793	3860	4255	4862	4867	5305	6249	6696	6696	7468	8571	8581	8592
SC/EN-PRM Operating weight	kg	2858	2998	4115	4510	5272	5277	5715	6709	7156	7156	7928	9081	9091	9102

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.

ST-EXC Acoustic standard configuration (ST) - Excellence
SC-EXC Compressors soundproofing (SC)-Excellence
EN-EXC Supersilenced acoustic configuration (EN) - Excellence
ST-PRM Standard acoustic configuration (ST) - Premium
SC-PRM Compressors soundproofing (SC)-Premium
EN-PRM Supersilenced acoustic configuration (EN) - Premium

versions and configurations

VERSION:

EXC	Excellence (Standard)
PRM	Premium

LOW TEMPERATURE:

-	Low temperature: not required (Standard)
B	Water low temperature

ACOUSTIC CONFIGURATION:

ST	Standard acoustic configuration (Standard)
SC	Acoustic configuration with compressor soundproofing
EN	Super-silenced acoustic configuration

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

CREFB	Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)
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ENERGY RECOVERY:

-	Energy recovery: not required (Standard)
D	Partial energy recovery

technical data

Size		▶▶ WDAT-iK4	120.1	160.1	200.1	240.1	250.2	280.2	320.2	340.2	360.2	400.2	440.2	480.2	540.2	580.2	
ST/SC-EXC	♦ Cooling capacity (EN 14511:2022)	(1)	kW	294	374	505	602	593	669	741	811	900	991	1089	1204	1325	1422
ST/SC-EXC	Total power input (EN 14511:2022)	(1)	kW	93,9	120	163	194	181	210	238	253	284	318	364	387	441	485
ST/SC-EXC	EER (EN 14511:2022)	(1)	-	3,13	3,11	3,10	3,11	3,27	3,19	3,12	3,21	3,17	3,11	2,99	3,11	3,01	2,93
ST/SC-EXC	SEER	(3)	-	5,13	5,12	5,11	5,12	5,36	5,38	5,37	5,39	5,34	5,31	5,35	5,34	5,30	5,31
ST/SC-EXC	η _{s,c}	(3)	%	202,3	202,0	201,3	201,7	211,3	212,2	211,9	212,6	210,5	209,6	211,0	210,6	209,0	209,5
ST/SC-EXC	Refrigeration circuits		Nr		1							2					
ST/SC-EXC	No. of compressors		Nr		1							2					
ST/SC-EXC	Type of compressors		-														
ST/SC-EXC	Refrigerant		-														
ST/SC-EXC	Standard power supply		V														
ST-EXC	Sound power level	(2)	dB(A)	97	97	97	98	101	101	102	102	102	103	103	104	104	104
SC-EXC	Sound power level	(2)	dB(A)	93	94	94	95	97	98	98	98	100	100	100	101	101	101
EN-EXC	Sound power level	(2)	dB(A)	89	90	90	91	93	94	94	94	96	96	96	97	97	97

Size		▶▶ WDAT-iK4	120.1	160.1	200.1	240.1	250.2	280.2	320.2	340.2	360.2	400.2	440.2	480.2	540.2	580.2	
ST/SC-PRM	♦ Cooling capacity (EN 14511:2022)	(1)	kW	281	341	473	576	550	614	681	753	836	910	1006	1120	1240	1338
ST/SC-PRM	Total power input (EN 14511:2022)	(1)	kW	97,1	131	173	201	194	225	261	271	297	328	378	400	447	496
ST/SC-PRM	EER (EN 14511:2022)	(1)	-	2,89	2,61	2,73	2,87	2,83	2,73	2,61	2,78	2,81	2,78	2,66	2,80	2,78	2,70
ST/SC-PRM	SEER	(3)	-	4,96	4,84	4,80	4,89	4,95	4,92	4,87	4,99	4,88	4,91	4,90	4,97	4,97	4,97
ST/SC-PRM	η _{s,c}	(3)	%	195,4	190,7	189,1	192,5	194,9	193,8	191,7	196,4	192,1	193,5	192,8	195,8	195,8	195,8
ST/SC-PRM	Refrigeration circuits		Nr		1							2					
ST/SC-PRM	No. of compressors		Nr		1							2					
ST/SC-PRM	Type of compressors		-														
ST/SC-PRM	Refrigerant		-														
ST/SC-PRM	Standard power supply		V														
ST-PRM	Sound power level	(2)	dB(A)	97	97	97	98	100	101	101	102	102	102	103	103	104	104
SC-PRM	Sound power level	(2)	dB(A)	93	94	94	95	97	97	98	98	98	99	100	100	100	101
EN-PRM	Sound power level	(2)	dB(A)	89	90	90	91	93	93	94	94	94	95	96	96	96	97

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C
 (2) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

(3) Data calculated according to the EN 14825:2018 Regulation

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.

accessories

1PM	Hydropack with 1 pump
1PMV	Hydropack user side with nr.1 inverter pump
1PMH	Hydropack with nr.1 high static pressure pump
1PMVH	Hydropack user side with nr.1 high static pressure inverter pump
2PM	Hydropack user side with 2 pumps
2PMV	Hydropack user side with no.2 of inverter pumps
2PMH	Hydropack user side with nr.2 high static pressure pump
2PMVH	Hydropack lato utilizzo con n°2 pompe ad inverter alta prevalenza
IVFDT	Inverter driven variable flow-rate user side control depending on the temperature differential
IFWX	Steel mesh strainer on the water side
CSVX	Couple of manually operated shut-off valves
AMMX	Spring antivibration mounts
AMMSX	Anti-seismic spring antivibration mounts
CONTA2	Energy meter
RCMRX	Remote control via microprocessor control
PSX	Mains power supply

CMSC9	Serial communication module for Modbus supervisor
CMSC10	Serial communication module for LonWorks supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
RPRI	Refrigerant leak detector in the casing
SCP4	Set-point compensation with 0-10 V signal
SPC2	Set-point compensation with outdoor air temperature probe
PPBM	Microchannel coils protection panels
CCME	Microchannel e-coated coil
MHP	High and low pressure gauges
RE-25	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
ECS	ECOSHARE function for the automatic management of a group of units
FC2	EMC filtering to reduce conducted compressor emissions
PGCC	Finned coil protection grilles and compressor compartment
RDVS	Switching valve with dual safety valves
REGBT	Device for the condensing coil partialization
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

SCREWLINE³ FC

Liquid chiller with FREE-COOLING

Air cooled

Outdoor installation

Capacity from 520 to 1523 kW

It can only be sold in an industrial application



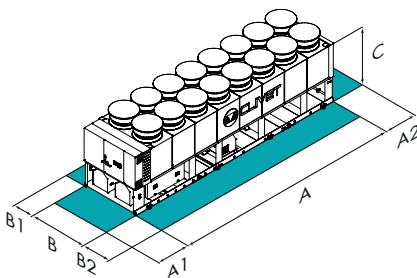
- ✓ Double independent circuits for high reliability with screw compressors
- ✓ Solution for cold climates and industrial application
- ✓ Refrigerant R134a - GWP = 1430
- ✓ Operation down to -39°C outdoor air temperature, low water temperature down to -8°C
- ✓ Direct Free-cooling and No-glycol Free-cooling
- ✓ Two acoustic configurations
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated hydronic assembly and partial recovery

HYDRONIC

functions and features

Cooling only	Air cooled	Outdoor installation	R-134a	Semi-hermetic Twin-screw	Electronic expansion valve	AxiTop	FREE-COOLING	HydroPack	Intelliplant

dimensions and clearances



Size	▶▶ WDAT-SL3 FC	200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
SC-FCD-EXC A - Length	mm	5316	5316	6468	6468	6468	7265	7265	8241	8241	9217	9217	11166	11166	11166
SC-FCD-EXC B - Width	mm	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246
SC-FCD-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-FCD-EXC A1	mm	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535
SC-FCD-EXC A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
SC-FCD-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-FCD-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-FCD-EXC Operating weight	kg	6102	6134	7214	7255	7344	8112	8163	9213	9710	11012	11074	12035	12169	12245

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.

SC-FCD-EXC Compressors soundproofing (SC)-Direct FREE-COOLING-Excellence

CAUTION!

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

versions and configurations

VERSION:

EXC Excellence (Standard)

LOW TEMPERATURE:

- Low temperature: not required (Standard)
- B** Water low temperature

ENERGY RECOVERY:

- Energy recovery: not required (Standard)
- D** Partial energy recovery

ACOUSTIC CONFIGURATION:

- SC** Acoustic configuration with compressor soundproofing (Standard)
- EN** Extremely low noise acoustic configuration (sizes 200.2=500.2)

FREE-COOLING:

- FCD** Direct FREE-COOLING (Standard)
- FCI** No-glycol FREE-COOLING

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- CREFF** Device for fan consumption reduction of the external section at variable speed (phase-cutting) (standard in the SC acoustic config.)
- CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type (standard in the EN acoustic config.)

TYPE FAN EXTERNAL SECTION:

- AXIX** High efficiency diffuser for axial fan - AxiTop (Standard)
- NAXI** High efficiency diffuser for axial fan - AxiTop: not required

technical data

Size		▶▶	WDAT-SL3 FC	200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
Free-Cooling Off																	
SC-EXC	Cooling capacity	(1)	kW	520	557	579	624	685	746	825	900	961	1049	1164	1311	1409	1523
SC-EXC	Total power input	(1)	kW	144	155	163	175	194	211	236	248	270	297	338	369	406	441
SC-EXC	EER at full load	(1)	-	3,61	3,59	3,55	3,56	3,53	3,53	3,5	3,62	3,56	3,53	3,44	3,55	3,47	3,45
SC-EXC	SEPR - FCD	(4)	-	6,09	6,16	6,16	6,24	6,20	6,10	6,11	6,00	6,00	6,07	6,12	6,16	6,12	6,26
SC-EXC	SEPR - FCI	(4)	-	5,76	5,84	5,90	5,86	6,02	5,84	6,00	5,93	5,81	6,05	5,90	5,87	5,83	5,96
Direct Free-cooling on																	
SC-EXC	Cooling capacity	(2)	kW	403	411	519	527	536	649	663	684	695	814	835	1066	1080	1093
SC-EXC	Total power input	(2)	kW	13	13	16	16	16	19	20	22	23	25	26	31	32	32
SC-EXC	EER at full load	(2)	-	31,1	31,4	32,6	32,8	33	33,8	33,8	30,5	30,5	32	32,2	34	34,1	33,8
SC-EXC	Refrigeration circuits		Nr	2													
SC-EXC	No. of compressors		Nr	2													
SC-EXC	Type of compressors		-	SCREW													
SC-EXC	Refrigerant		-	R-134a													
SC-EXC	Standard power supply		V	400/3~/50													
SC-EXC	Sound power level	(3)	dB(A)	98	98	98	98	98	98	98	100	100	102	104	105	106	106
EN-EXC	Sound power level	(3)	dB(A)	94	94	94	94	94	94	94	95	96	98	100	-	-	-

(1) Data referred to the following conditions: internal exchanger water temperature = 15/10 °C; glycol 30%; entering external exchanger air temperature 30°C

(2) Free-Cooling only data (compressors OFF) referred to the following conditions: internal exchanger water temperature = 15/10°C; entering external exchanger air temperature = 2°C D.B./1°C W.B.; glycol 30%

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

(4) Data calculated according to the EN 14825:2018 Regulation

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.

accessories

- 2PM** Hydropack user side with 2 pumps
- 3PM** Hydropack load side with 3 pumps
- CSVX** Couple of manually operated shut-off valves
- CCCA** Copper / aluminium condenser coil with acrylic lining
- CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- AMMX** Spring antivibration mounts
- PGCC** Finned coil protection grilles and compressor compartment
- PGCCH** Anti-hail protection grilles
- CONTA2** Energy meter
- RCMRX** Remote control via microprocessor control
- PSX** Mains power supply
- CMSC9** Serial communication module for Modbus supervisor
- CMSC10** Serial communication module for LonWorks supervisor
- CMSC11** Serial communication module for BACnet-IP supervisor
- SCP4** Set-point compensation with 0-10 V signal
- SPC2** Set-point compensation with outdoor air temperature probe

- SPC1** Set point compensation with 4-20 mA signal
- ECS** ECOSHARE function for the automatic management of a group of units
- PFCP** Power factor correction capacitors (cosφ > 0.9)
- SFSTR2** Progressive compressor start-up device
- CBS** Overload circuit breakers
- WOGLY** Unit supplied without glycol solution (FCI only)
- RE-20** Electrical panel antifreeze protection for min. outdoor temperature down to -20°C
- RE-25** Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
- RE-30** Electrical panel antifreeze protection for min. outdoor temperature down to -30°C
- RE-35** Electrical panel antifreeze protection for min. outdoor temperature down to -35°C
- RE-39** Electrical panel antifreeze protection for min. outdoor temperature down to -39°C
- IOTX** IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

ELFOENERGY DUCT MEDIUM

Reversible heat pump

Air cooled

Indoor installation

Capacity from 33,9 to 98,9 kW



- ✓ Scroll compressors with high available head Plug-fans
- ✓ Ductable solution for small and medium-sized buildings air conditioning
- ✓ Refrigerant R410A - GWP = 2088
- ✓ High efficiency with compact dimensions
- ✓ Versatility with the different solutions for supply and return of air
- ✓ Operation down to -10°C of outdoor air temperature with hot water at 55°C
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated hydronic assembly and partial recovery



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



compliant
ErP

functions and features



Heat pump



Air cooled



Indoor installation



R-410A



Hermetic Scroll



Electronic expansion valve

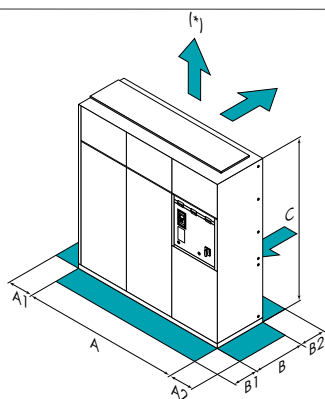


Electronically commutated Fan



Intelliplant

dimensions and clearances



Size	▶▶ WSN-XEE	122	162	182	222	262	302	352	402
A - Length	mm	1450	1450	1874	1874	2650	2650	2650	2650
B - Width	mm	780	780	780	780	780	780	780	780
C - Height	mm	1996	1996	1996	1996	1996	1996	1996	1996
A1	mm	100	100	100	100	100	100	100	100
A2	mm	500	500	500	500	500	500	500	500
B1	mm	1000	1000	1000	1000	1000	1000	1000	1000
B2	mm	1300	1300	1300	1300	1300	1300	1300	1300
Operating weight	kg	501	555	620	626	732	770	874	904

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

LOW TEMPERATURE:

- Low temperature: not required (Standard)
- B** Water low temperature

CONFIGURATION:

- EV** Vertical air expulsion (Standard)
- EO** Horizontal exhaust air

ENERGY RECOVERY:

- Energy recovery: not required (Standard)
- D** Partial energy recovery

technical data

Size	WSN-XEE	122	162	182	222	262	302	352	402
◆ Cooling capacity (EN 14511:2022)	(1) kW	33,9	41,0	47,6	54,5	64,5	75,0	86,3	98,9
Total power input (EN 14511:2022)	(1) kW	15,9	17,7	20,5	24,9	27,5	31,5	37,4	41,6
EER (EN 14511:2022)	(1) -	2,13	2,32	2,32	2,19	2,35	2,38	2,31	2,38
SEER	(4) -	2,63	3,10	3,17	3,08	3,36	3,31	3,32	3,40
$\eta_{s,c}$	(4) %	102,3	121,1	124,0	120,0	131,5	129,5	129,9	133,0
◆ Heating capacity (EN 14511:2022)	(2) kW	41,0	48,3	59,0	68,0	80,0	92,4	103	112
Total power input (EN 14511:2022)	(2) kW	13,3	15,5	18,7	21,4	25,1	28,7	32,6	36,8
COP (EN 14511:2022)	(2) -	3,09	3,12	3,16	3,17	3,19	3,22	3,17	3,05
Refrigeration circuits	Nr	1							
No. of compressors	Nr	2							
Type of compressors	-	SCROLL							
Refrigerant	-	R-410A							
Standard airflow	l/s	4444	4444	5000	5000	6667	7500	7500	7500
Max external static pressure	Pa	510	510	390	390	570	390	390	390
Water flow-rate (User side)	l/s	1,62	1,96	2,28	2,61	3,08	3,57	4,12	4,72
Standard power supply	V	400/3~/50							
Sound power in the duct	(3) dB(A)	84	84	87	87	84	87	87	87
Directive ErP (Energy Related Products)									
ErP Energy Class - AVERAGE Climate - W35	-	A+	A+	A+	A++	A+	A+	-	-
SCOP - AVERAGE Climate - W35	(4) -	3,25	3,31	3,51	3,94	3,75	3,36	3,50	3,80
$\eta_{s,h}$	(4) %	127	129	137	155	147	131	137	149

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor heat exchanger inlet air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; Outdoor heat exchanger inlet air temperature 7 D.B. /6 (°C) W.B.

(3) Sound power measured in accordance with UNI EN ISO 9614 and Eurovent 8/1 standards for ducted unit with available pressure equal to 120 Pa

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

1PUB	Low static pressure single pump	MHP	High and low pressure gauges
1PUA	High static pressure single pump	SDV	Cutoff valve on compressor supply and return
1PUHE	High efficiency single inverter pump for primary circuit.	SCP4	Set-point compensation with 0-10 V signal
IFWX	Steel mesh strainer on the water side	SPC2	Set-point compensation with outdoor air temperature probe
ABU	Flush hydraulic connections	CSVX	Couple of manually operated shut-off valves
CCCA	Copper / aluminium condenser coil with acrylic lining	MF2	Multi-function phase monitor
AMRX	Rubber antivibration mounts	CONTA2	Energy meter
PGFC	Finned coil protection grill	ECS	ECOSHARE function for the automatic management of a group of units
CMSC9	Serial communication module for Modbus supervisor	RCMRX	Remote control via microprocessor control
CMSC10	Serial communication module for LonWorks supervisor	PSX	Mains power supply
CMSC11	Serial communication module for BACnet-IP supervisor	STSOL	Additional lifting brackets
PFCC	Power factor correction capacitors (cosφ > 0.95)	OHE	Limit extension kit in heating up to -10°C (W.B.)
SFSTR	Disposal for inrush current reduction	VACSUX	User side DHW switching valve
FANQE	Electrical panel ventilation	IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

ELFOENERGY GROUND

Reversible heat pump
 Water cooled
 Indoor installation
Capacity from 6,23 to 33,1 kW



- ✓ Scroll compressor and plate heat exchangers
- ✓ First investment driven and refurbishment applications
- ✓ Refrigerant R410A - GWP = 2088
- ✓ Versatile applications with double set-point and boiler control kits
- ✓ Domestic hot water up to 60°C, low water temperature down to -8°C
- ✓ Energy saving with set-point compensation according to outside enthalpy or air temperature
- ✓ Integrated source and user side hydronic assemblies and three-way valve

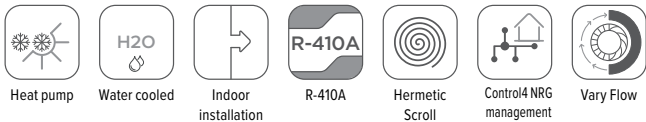


Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

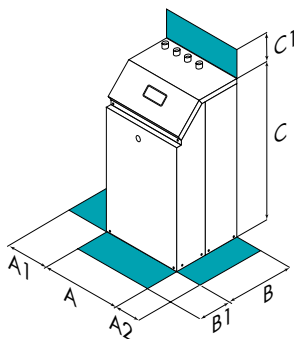


compliant
ErP

functions and features



dimensions and clearances



Size	▶▶ WSHN-EE	17	21	31	41	51	61	71	81	91	101	121
A - Length	mm	402	402	402	402	402	573	573	573	573	573	573
B - Width	mm	602	602	602	602	602	604	604	604	604	604	604
C - Height	mm	785	785	785	785	785	858	858	858	858	858	858
A1	mm	150	150	150	150	150	150	150	150	150	150	150
A2	mm	150	150	150	150	150	150	150	150	150	150	150
B1	mm	600	600	600	600	600	600	600	600	600	600	600
C1	mm	300	300	300	300	300	300	300	300	300	300	300
Operating weight	kg	81	83	86	90	98	115	129	147	163	164	170

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

LOW TEMPERATURE:

- Low temperature: not required (Standard)
- B** Water low temperature
- BS** Water low temperature source side

VOLTAGE:

- 400TN** Supply voltage 400/3N~/50
- 230M** Supply voltage 230/1/50 (sizes 17÷51)

HYDRONIC ASSEMBLY SOURCE SIDE:

- Hydronic assembly source side: not required (Standard)
- HYGS** Hydronic assembly source side (sizes 17÷91)

technical data

Size	▶▶ WSHN-EE	17	21	31	41	51	61	71	81	91	101	121
Unit for radiant panels												
W10/W35												
♦ Heating capacity (EN 14511:2022)	kW	6,95	7,49	9,50	12,0	16,0	19,5	24,7	26,7	30,8	36,2	41,2
Total power input (EN 14511:2022)	kW	1,35	1,47	1,83	2,34	3,10	3,83	4,81	5,21	6,04	7,09	8,01
COP (EN 14511:2022)	-	5,15	5,10	5,19	5,11	5,16	5,10	5,13	5,12	5,10	5,11	5,14
W35/W18												
♦ Cooling capacity (EN 14511:2022)	kW	8,37	9,05	10,8	14,0	17,8	22,1	27,1	29,8	33,8	38,1	42,8
Total power input (EN 14511:2022)	kW	1,51	1,70	2,01	2,49	3,32	4,30	5,28	5,65	6,46	7,46	8,39
EER (EN 14511:2022)	-	5,52	5,32	5,37	5,64	5,35	5,14	5,13	5,27	5,22	5,11	5,10
Terminal units												
W10/W45												
♦ Heating capacity (EN 14511:2022)	kW	6,68	7,27	8,83	11,5	15,6	18,9	23,6	25,1	29,3	34,2	38,7
Total power input (EN 14511:2022)	kW	1,59	1,73	2,43	3,01	3,96	4,82	5,94	6,62	7,46	8,85	9,76
COP (EN 14511:2022)	-	4,19	4,19	3,63	3,81	3,94	3,92	3,97	3,79	3,93	3,87	3,97
W35/W7												
♦ Cooling capacity (EN 14511:2022)	kW	6,23	6,57	8,05	10,8	13,2	16,3	20,7	22,3	25,8	29,5	33,1
Total power input (EN 14511:2022)	kW	1,54	1,67	2,04	2,47	3,37	4,21	5,09	5,23	6,25	7,39	8,15
EER (EN 14511:2022)	-	4,04	3,93	3,95	4,39	3,93	3,87	4,07	4,27	4,13	4,00	4,06
SEER	(2)	-	2,35	2,41	2,69	3,01	3,16	3,17	3,55	3,70	3,69	3,66
η _{s,c}	(2)	%	85,9	88,3	99,6	112,4	118,3	118,9	134,0	140,1	139,8	138,5
Radiators												
W10/W55												
♦ Heating capacity (EN 14511:2022)	kW	6,36	7,07	8,57	10,9	14,8	17,4	22,3	23,6	27,9	31,9	36,7
Total power input (EN 14511:2022)	kW	2,06	2,15	3,23	3,82	5,03	6,11	7,47	8,35	9,05	11,0	11,8
COP (EN 14511:2022)	-	3,09	3,29	2,66	2,85	2,94	2,85	2,99	2,83	3,08	2,91	3,11
Refrigeration circuits	Nr						1					
No. of compressors	Nr						1					
Type of compressors							SCROLL					
Refrigerant							R-410A					
Water flow-rate (User side)	(1) l/s	0,29	0,31	0,38	0,51	0,63	0,77	0,96	1,06	1,22	1,39	1,56
Useful pump discharge head	(1) kPa	58	58	56	47	39	62	54	50	44	155	132
Water flow (Source side)	(1) l/s	0,35	0,38	0,46	0,61	0,78	0,95	1,18	1,28	1,50	1,71	1,91
Standard power supply	V		230/1~/50				400/3N~/50					
Sound power level	(3) dB(A)	57	57	57	58	58	60	63	64	65	66	67
Directive ErP (Energy Related Products)												
ErP Energy Class - AVERAGE Climate - W35	-	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
ErP Energy Class - AVERAGE Climate - W55	-	A+++	A+++	A++	A++	A++	A++	A++	A++	A++	A++	A++
SCOP - AVERAGE Climate - W35	(2)	-	5,66	5,77	6,01	6,04	5,93	5,92	5,86	5,80	5,45	6,28
η _{s,H}	(2)	%	223	228	237	239	234	234	231	229	215	248
SCOP - AVERAGE Climate - W55	(2)	-	4,14	4,15	3,79	3,93	4,04	3,94	4,05	3,88	4,12	3,92
η _{s,H}	(2)	%	158	158	144	149	154	150	154	147	157	149

(1) Data referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

External exchanger water temperature = 30/35°C. Performances according to EN 14511:2022

W10/W35 water at the user side heat exchanger 30/35°C; inlet water at the source side heat exchanger 10°C

W10/W45 water at the user side heat exchanger 40/45°C; inlet water at the source side heat exchanger 10°C

W10/W55 water at the user side heat exchanger 45/55°C; inlet water at the source side heat exchanger 10°C

W35/W18 water at the user side heat exchanger 23/18°C; inlet water at the source side heat exchanger 30/35°C

W35/W7 water at the user side heat exchanger 12/7°C; inlet water at the source side heat exchanger 30/35°C

(2) Data calculated according to the EN 14825:2018 Regulation

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013. Sound power level are not Eurovent certified.

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

- 3WV** Three-way valve
- IVMSX** Source side 2-way modulating valve
- IVWX** Water side motorized valve
- AMRX** Rubber antivibration mounts
- CMMBX** Serial communication module to supervisor (Modbus)
- PBLC1X** Service keypad (cable from 1,5 metres)
- PMX** Phase monitor
- SCP3X** Set point compensation according to the outside enthalpy
- SPCX** Set-point compensation with outdoor air temperature probe
- SFSTR4N** Disposal for inrush current reduction, for unit 400/3/50+N
- KDT3VX** Double temperature control kit, set point compensation with 4-20mA, 3
- kDT3V** Double temperature control kit, set point compensation with 4-20mA, 3
- 3DHWX** Three-way valve for domestic hot water
- SFSTR1** Disposal for inrush current reduction, for unit 230/1/50 (sizes 17÷51)

- KTFL1X** 1" water side hose kit (sizes 17÷71)
- KTFL2X** 1 1/4" water side hose kit
- CACXSX** Domestic hot water kit control
- ACS300X** 300-litre domestic hot water storage tank (sizes 17÷41)
- ACS500X** 500-litre domestic hot water storage tank (sizes 17÷81)
- ACS55X** 500-litre domestic hot water storage tank (sizes 17÷81)
- ACS35X** 300-litre domestic hot water storage tank (sizes 17÷41)
- KVMSP1X** Kit for management of radiant panels with connections of 1"(sizes 17÷51)
- KVMSP2X** Kit for management of radiant panels with connections of 1 1/4"
- KSAX** 100-litre circuit breaker
- KVICX** Boiler control kit (sizes 17÷81)
- KITERAX** Electronic wall-mounting room thermostat
- IOTX** IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately



ELFOENERGY GROUND MEDIUM²

Liquid chiller

- WSH-XEE2: cooling only
- WSHN-XEE2: Reversible heat pump
- Water cooled
- Indoor installation
- Capacity from 34,5 to 250 kW**

- ✓ Scroll compressors and plate heat exchangers
- ✓ Solution for multi-family and commercial buildings
- ✓ Refrigerant R410A - GWP = 2088
- ✓ Solution for multi-family and commercial buildings
- ✓ Domestic hot water up to 60°C, low water temperature down to -8°C
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated source and user side hydronic assemblies and partial recovery



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

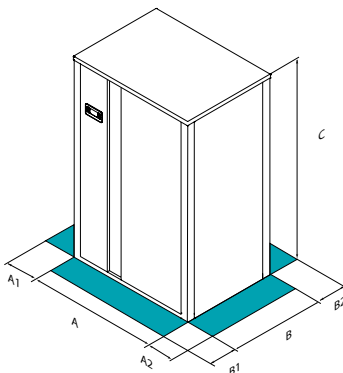


compliant
ErP

functions and features

Cooling only (WSH-XEE2)	Heat pump (WSHN-XEE2)	Water cooled	Indoor installation	R-410A	Hermetic Scroll	Electronic expansion valve	Vary Flow	Intelligent

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	▶▶ WSH-XEE2	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2
A - Length	mm	837	837	837	837	1110	1110	1110	1110	1110	1110	1110	1110
B - Width	mm	607	607	607	607	885	885	885	885	885	885	1035	1035
C - Height	mm	1483	1483	1483	1483	1910	1910	1910	1910	1910	1910	1910	1910
A1	mm	100	100	100	100	150	150	150	150	150	150	150	150
A2	mm	100	100	100	100	150	150	150	150	150	150	150	150
B1	mm	500	500	500	500	500	500	500	500	500	500	500	500
B2	mm	300	300	300	300	350	350	350	350	350	350	350	350
Operating weight	kg	212	276	295	308	421	510	557	572	700	733	771	809

Size	▶▶ WSHN-XEE2	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2
A - Length	mm	837	837	837	837	1110	1110	1110	1110	1110	1110	1110	1110
B - Width	mm	607	607	607	607	885	885	885	885	885	885	1035	1035
C - Height	mm	1483	1483	1483	1483	1910	1910	1910	1910	1910	1910	1910	1910
A1	mm	100	100	100	100	150	150	150	150	150	150	150	150
A2	mm	100	100	100	100	150	150	150	150	150	150	150	150
B1	mm	500	500	500	500	500	500	500	500	500	500	500	500
B2	mm	300	300	300	300	350	350	350	350	350	350	350	350
Operating weight	kg	223	290	309	322	441	519	580	581	728	743	808	820

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.

versions and configurations

VERSION:

GW Groundwater version (Standard)
GEO Version for Geothermal application

ENERGY RECOVERY:

- Energy recovery: not required (Standard)
D Partial energy recovery

OPERATION (WSH-XEE2 ONLY):

OCO Cooling-only operation (Standard)
OHO Heating-only operation
OHI Operation with water circuit change-over

technical data

Size	▶▶ WSH-XEE2	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2
◆ Cooling capacity (EN 14511:2022)	(1) kW	35,6	49,8	59,3	68,4	84,2	109	124	147	173	197	222	250
Total power input (EN 14511:2022)	(1) kW	7,50	10,6	12,5	15,7	17,5	23,7	26,8	31,8	38,1	43,2	48,6	55,3
EER (EN 14511:2022)	(1) -	4,75	4,68	4,74	4,36	4,82	4,59	4,61	4,62	4,54	4,56	4,57	4,52
SEER	(4) -	5,36	5,25	5,30	5,25	5,59	5,77	5,87	5,72	5,38	5,38	5,51	5,30
η _{sc}	(4) %	206,4	202,0	204,0	202,0	215,6	222,8	226,8	220,8	207,2	207,2	212,4	204,0
◆ Heating capacity (EN 14511:2022)	(2) kW	41,3	57,6	68,4	80,7	96,5	125	143	169	200	228	256	289
Total power input (EN 14511:2022)	(2) kW	9,54	13,3	15,7	19,3	21,8	29,0	32,8	39,0	46,5	52,4	59,2	67,1
COP (EN 14511:2022)	(2) -	4,33	4,35	4,35	4,19	4,44	4,31	4,34	4,32	4,29	4,36	4,33	4,30
Refrigeration circuits	Nr	1											
No. of compressors	Nr	2											
Type of compressors	-	SCROLL											
Refrigerant	-	R-410A											
Standard power supply	V	400/3~/50											
Sound power level	dB(A)	60	64	65	64	64	74	74	74	77	77	79	80
Size	▶▶ WSHN-XEE2	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2
◆ Cooling capacity (EN 14511:2022)	(1) kW	34,5	48,6	58,0	68,1	82,3	102	120	139	168	187	218	241
Total power input (EN 14511:2022)	(1) kW	7,42	10,5	12,4	15,4	17,5	23,8	26,9	32,0	38,1	43,0	48,7	55,1
EER (EN 14511:2022)	(1) -	4,65	4,61	4,67	4,41	4,69	4,29	4,45	4,34	4,42	4,34	4,47	4,37
SEER	(4) -	5,38	4,78	5,01	4,97	5,30	5,18	5,36	5,37	5,16	5,05	5,25	4,97
η _{sc}	(4) %	207,1	183,0	192,6	191,0	204,2	199,3	206,5	206,9	198,3	194,0	201,9	190,9
◆ Heating capacity (EN 14511:2022)	(2) kW	40,3	56,6	66,8	79,2	93,6	119	139	162	195	217	251	278
Total power input (EN 14511:2022)	(2) kW	9,47	13,2	15,8	19,1	21,3	28,4	32,3	38,4	45,8	52,0	58,1	65,6
COP (EN 14511:2022)	(2) -	4,25	4,28	4,24	4,15	4,40	4,18	4,29	4,22	4,25	4,18	4,32	4,25
Refrigeration circuits	Nr	1											
No. of compressors	Nr	2											
Type of compressors	-	SCROLL											
Refrigerant	-	R-410A											
Standard power supply	V	400/3~/50											
Sound power level	dB(A)	60	64	65	64	64	74	74	74	77	77	79	80
Directive ErP (Energy Related Products)													
ErP Energy Class - AVERAGE Climate - W35	-	A+++	A+++	-									
ErP Energy Class - AVERAGE Climate - W55	-	A+++	A+++	A+++									
SCOP - AVERAGE Climate - W35	(4)	5,69	5,45	5,47	4,85	5,97	5,67	5,84	5,68	5,68	5,55	5,63	5,45
η _{SH}	(4)	225	215	216	191	231	219	226	219	219	214	217	210
SCOP - AVERAGE Climate - W55	(4)	4,51	4,35	4,36	4,40	4,83	4,60	4,69	4,67	4,64	4,61	4,69	4,65
η _{SH}	(4)	172	166	166	168	185	176	180	179	178	176	180	178

(1) Data calculated according to EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

(2) Data calculated according to EN 14511:2022 referred to the following conditions: Water to internal exchanger = 40/45°C; Water temperature to external exchanger = 10/7°C

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

Sound power level are not Eurovent certified.

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

SDV Cutoff valve on compressor supply and return
MOBMAG Larger units
MF2 Multi-function phase monitor
RCTX Remote control
CMSC10 Serial communication module for LonWorks supervisor
CMSC8 Serial communication module for BACnet supervisor
CMSC9 Serial communication module for Modbus supervisor
CMMBX Serial communication module to supervisor (Modbus)
CMSLWX LonWorks serial communication module
BACX Serial communication module for BACnet supervisor
SPCX Set-point compensation with outdoor air temperature probe
IFWX Steel mesh strainer on the water side
SFSTR Disposal for inrush current reduction
PFCP Power factor correction capacitors (cosfi > 0.9)
AVIBX Anti-vibration mount support
IOTX IoT industrial module for cloud based interoperability & services

Only WSH-XEE2:

VS2MC Cooling side 2-way modulating valve
VS2MCX Cooling side 2-way modulating valve
VS3MC Cooling side 3-way modulating valve
VS3MCX Cooling side 3-way modulating valve
VARYC VARYFLOW + (cooling side 2 inverter pumps)
VS2MH Heating side 2-way modulating valve
VS2MHX Heating side 2-way modulating valve
VS3MH Heating side 3-way modulating valve
VS3MHX Heating side 3-way modulating valve
VARYH VARYFLOW + (heating side 2 inverter pumps)
VACSHX Heating side DHW switching valve

Only WSHN-XEE2:

VACSUX User side DHW switching valve
VARYU VARYFLOW + (user side 2 inverter pumps)
VS2M Source side 2-way modulating valve
VS2MX Source side 2-way modulating valve
VS3M Source side 3-way modulating valve
VS3MX Source side 3-way modulating valve
VARYS VARYFLOW + (source side 2 inverter pumps)

Accessories whose code ends with "X" are supplied separately

ELFOENERGY GROUND MEDIUM² HW

No reversible heat pump
 Water cooled
 Indoor installation
Capacity from 73,4 to 278 kW



- ✓ Scroll compressors and plate heat exchangers
- ✓ High water temperature solution for residential centralized systems
- ✓ Refrigerant R134a - GWP = 1430
- ✓ Heating-only operation
- ✓ Hot water up to 78°C
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated source and user side hydronic assemblies



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



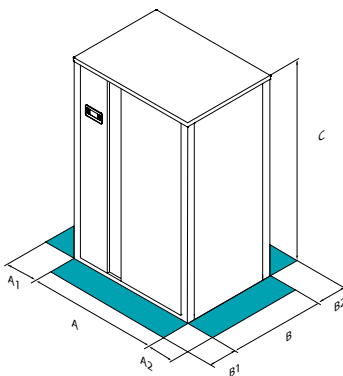
compliant
ErP

HYDRONIC

functions and features



dimensions and clearances



Size	▶▶ WSHH-LEE1	19.2	22.2	27.2	35.2	40.2	45.2	60.2	80.2
A - Length	mm	854	854	854	854	854	1110	1110	1110
B - Width	mm	652	652	672	672	672	930	930	930
C - Height	mm	1483	1483	1483	1483	1483	1910	1910	1910
A1	mm	300	300	300	300	300	500	500	500
A2	mm	300	300	300	300	300	500	500	500
B1	mm	500	500	500	500	500	500	500	500
B2	mm	300	300	300	300	300	350	350	350
Operating weight	kg	347	367	398	417	420	702	754	831

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

OPERATION:

OHO Heating-only operation

technical data

Size		▶ WSHH-LEE1	19.2	22.2	27.2	35.2	40.2	45.2	60.2	80.2
♦ Heating capacity (EN 14511:2022)	(1)	kW	73,4	83,0	96,8	122	144	184	224	278
Total power input (EN 14511:2022)	(1)	kW	16,9	18,1	20,8	28,0	34,3	44,6	54,7	66,8
COP (EN 14511:2022)	(1)	-	4,33	4,60	4,64	4,37	4,21	4,13	4,10	4,16
Refrigeration circuits		Nr				1				
No. of compressors		Nr				2				
Type of compressors		-				SCROLL				
Refrigerant		-				R-134a				
Water flow-rate (User side)		l/s	2,24	2,53	2,95	3,72	4,40	5,62	6,84	8,49
Water flow (Source side)		l/s	2,75	3,16	3,69	4,57	5,34	6,78	8,25	10,3
Standard power supply		-				400/3~/50				
Sound power level	(2)	dB(A)	70	70	71	74	76	78	78	80
Directive ErP (Energy Related Products)										
ErP Energy Class - AVERAGE Climate - W55	(3)	-	A+++	A+++	A+++	A+++	-	-	-	-
SCOP - AVERAGE Climate - W55	(3)	-	4,48	4,65	4,65	4,61	4,57	4,45	4,45	4,52
η _{SH}	(3)	%	171,0	178,0	178,0	176,0	175,0	170,0	170,0	173,0

(1) Performance data calculated in accordance with EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 45/40°C. External exchanger water temperature = 70/78°C
 (2) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.
 Sound power level are not Eurovent certified.

(3) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

HYDRONIC

accessories

SDV	Cutoff valve on compressor supply and return
MF2	Multi-function phase monitor
RCTX	Remote control
CMSC10	Serial communication module for LonWorks supervisor
CMSC8	Serial communication module for BACnet supervisor
CMSC9	Serial communication module for Modbus supervisor
CMMBX	Serial communication module to supervisor (Modbus)
CMSLWX	LonWorks serial communication module
BACX	Serial communication module for BACnet supervisor

SPCX	Set-point compensation with outdoor air temperature probe
IFWX	Steel mesh strainer on the water side
SFSTR	Disposal for inrush current reduction
PFCC	Power factor correction capacitors (cosfi > 0.95)
AVIBX	Anti-vibration mount support
MOBMAG	Larger units
VARYS	VARYFLOW + (cooling side 2 inverter pumps)
VARYU	VARYFLOW + (heating side 2 inverter pumps)
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

ELFOENERGY GROUND MEDIUM² MF

Polyvalent reversible heat pump
 Water cooled
 Indoor installation
Capacity from 34,3 to 241 kW



- ✓ Scroll compressors and plate heat exchangers
- ✓ Polyvalent technology configurable for 4-pipe or 2-pipe systems for maximum versatility
- ✓ Refrigerant R410A - GWP = 2088
- ✓ High efficiency thanks to total heat recovery
- ✓ Domestic hot water up to 60°C, low water temperature down to 4°C
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated source side, user side and recovery side hydronic assemblies



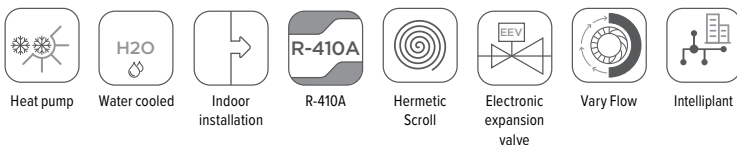
Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



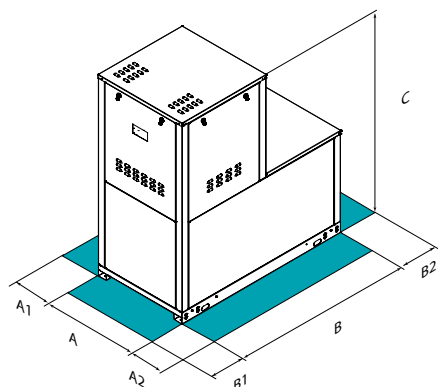
compliant
ErP

HYDRONIC

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	▶▶ WSHN-XEE2 MF	12.2	16.2	19.2	22.2	27.2
A - Length	mm	900	900	900	900	900
B - Width	mm	1700	1700	1700	1700	1700
C - Height	mm	1870	1870	1870	1870	1870
A1	mm	100	100	100	100	100
A2	mm	100	100	100	100	100
B1	mm	700	700	700	700	700
B2	mm	700	700	700	700	700
Operating weight	kg	403	471	491	497	550

Size	▶▶ WSHN-XEE2 MF	35.2	40.2	45.2	50.2	60.2	70.2	80.2
A - Length	mm	1100	1100	1100	1100	1100	1100	1100
B - Width	mm	1700	1700	1700	1700	1700	1700	1700
C - Height	mm	1870	1870	1870	1870	1870	1870	1870
A1	mm	100	100	100	100	100	100	100
A2	mm	100	100	100	100	100	100	100
B1	mm	700	700	700	700	700	700	700
B2	mm	700	700	700	700	700	700	700
Operating weight	kg	656	721	754	901	941	1045	1056

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.

versions and configurations

VERSION:

GW	Groundwater version (Standard)
GEO	Version for Geothermal application

CONFIGURATION:

4T	Configuration for 4-pipe system (Standard)
2T	Configuration for 2-pipe system

ENERGY RECOVERY:

R	Total energy recovery (Standard)
----------	----------------------------------

technical data

Size		WSHN-XEE2 MF	12.2	16.2	19.2	22.2	27.2		
Cooling 100% - Heating 0%									
Cooling capacity (EN 14511:2022)	(1)	kW	34,3	48,0	57,2	66,2	81,0		
Total power input (EN 14511:2022)	(1)	kW	7,69	10,9	12,7	15,8	17,8		
EER (EN 14511:2022)	(1)	-	4,46	4,42	4,51	4,20	4,56		
SEER	(6)	-	5,30	4,85	4,84	4,85	5,05		
η_{sc}	(6)	%	204,0	186,2	185,7	186,0	194,1		
Cooling 0% - Heating 100%									
Heating capacity (EN 14511:2022)	(2)	kW	40,4	56,8	67,2	79,8	94,0		
Total power input (EN 14511:2022)	(2)	kW	9,42	13,2	15,6	19,0	21,1		
COP (EN 14511:2022)	(2)	-	4,29	4,32	4,31	4,20	4,46		
Cooling 100% - Heating 100%									
Cooling capacity (EN 14511:2022)	(3)	kW	31,2	43,7	52,0	60,9	73,6		
Heating capacity (EN 14511:2022)	(3)	kW	40,5	56,6	67,1	79,4	94,7		
Total power input (EN 14511:2022)	(3)	kW	9,37	12,9	15,1	18,4	21,1		
TER (EN 14511:2022)	(4)	-	7,65	7,77	7,87	7,61	7,96		
Refrigeration circuits		Nr			1				
No. of compressors		Nr			2				
Type of compressors		-			SCROLL				
Refrigerant		-			R-410A				
Standard power supply		V			400/3~/50				
Sound power level	(5)	dB(A)	60	64	65	64	64		
Directive ErP (Energy Related Products)									
ErP Energy Class - AVERAGE Climate - W35		-	A+++	A+++	-	-	-		
ErP Energy Class - AVERAGE Climate - W55		-	A+++	A+++	A+++	-	-		
SCOP - AVERAGE Climate - W35	(6)	-	5,69	5,45	5,47	4,85	5,97		
η_{sh}	(6)	%	225,0	215,0	216,0	191,0	231,0		
SCOP - AVERAGE Climate - W55	(6)	-	4,56	4,42	4,42	4,46	4,89		
η_{sh}	(6)	%	174,0	169,0	169,0	170,0	188,0		
Size		WSHN-XEE2 MF	35.2	40.2	45.2	50.2	60.2	70.2	80.2
Cooling 100% - Heating 0%									
Cooling capacity (EN 14511:2022)	(1)	kW	105	119	142	154	190	214	241
Total power input (EN 14511:2022)	(1)	kW	23,8	26,9	31,9	34,5	43,2	48,9	55,4
EER (EN 14511:2022)	(1)	-	4,42	4,43	4,45	4,47	4,40	4,38	4,35
SEER	(6)	-	5,17	5,31	5,29	5,06	4,92	5,00	4,82
η_{sc}	(6)	%	203,7	209,2	208,4	199,5	193,7	197,2	189,7
Cooling 0% - Heating 100%									
Heating capacity (EN 14511:2022)	(2)	kW	120	139	163	179	219	253	280
Total power input (EN 14511:2022)	(2)	kW	28,2	32,0	38,1	40,8	51,5	57,6	65,0
COP (EN 14511:2022)	(2)	-	4,25	4,34	4,28	4,39	4,25	4,39	4,31
Cooling 100% - Heating 100%									
Cooling capacity (EN 14511:2022)	(3)	kW	95,0	108	128	139	174	194	219
Heating capacity (EN 14511:2022)	(3)	kW	123	140	165	180	225	252	284
Total power input (EN 14511:2022)	(3)	kW	28,2	32,1	37,9	40,8	50,8	57,5	65,2
TER (EN 14511:2022)	(4)	-	7,73	7,73	7,74	7,82	7,85	7,76	7,71
Refrigeration circuits		Nr				1			
No. of compressors		Nr				2			
Type of compressors		-				SCROLL			
Refrigerant		-				R-410A			
Standard power supply		V				400/3~/50			
Sound power level	(5)	dB(A)	74	74	74	77	77	79	80
Directive ErP (Energy Related Products)									
SCOP - AVERAGE Climate - W35	(6)	-	5,67	5,84	5,68	5,78	5,55	5,63	5,45
η_{sh}	(6)	%	219,0	226,0	219,0	223,0	214,0	217,0	210,0
SCOP - AVERAGE Climate - W55	(6)	-	4,60	4,69	4,67	4,71	4,61	4,69	4,65
η_{sh}	(6)	%	176,0	180,0	179,0	180,0	176,0	180,0	178,0

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 12/7°C; Source side water temperature = 30/35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Hot side water temperature = 40/45°C; Source side water temperature = 10/7°C

(3) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 7/7°C; Hot side water temperature = 45/45°C

(4) TER = (Cooling capacity + Heating capacity) / (Total power input)

(5) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

Sound power level are not Eurovent certified.

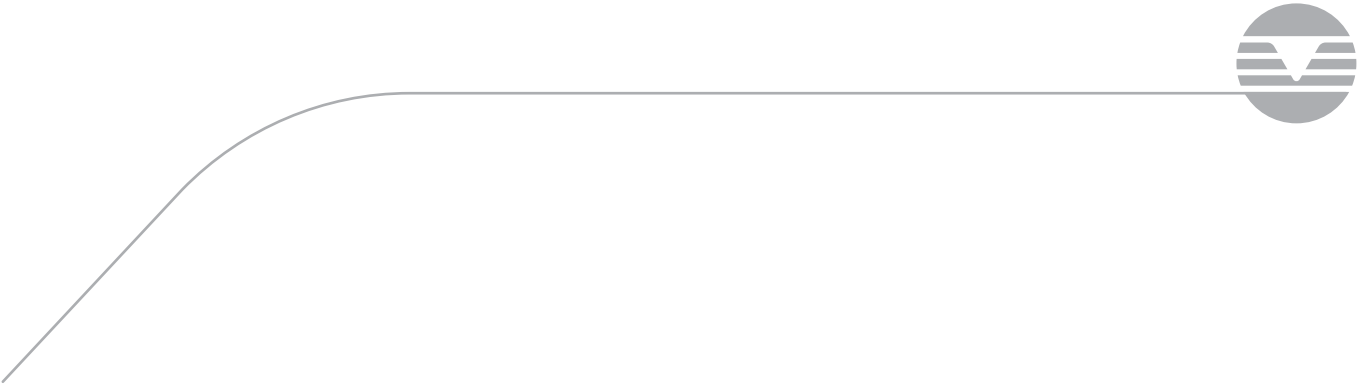
(6) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

VARYU	VARYFLOW + (user side 2 inverter pumps)	SPCX	Set-point compensation with outdoor air temperature probe
VS2M	Source side 2-way modulating valve	IFWX	Steel mesh strainer on the water side
VS2MX	Source side 2-way modulating valve	SFSTR	Disposal for inrush current reduction
VS3M	Source side 3-way modulating valve	PFCP	Power factor correction capacitors (cosfi > 0.9)
VS3MX	Source side 3-way modulating valve	AVIBX	Anti-vibration mount support
VARYS	VARYFLOW + (source side 2 inverter pumps)	RCTX	Remote control
VARYR	VARYFLOW + (recovery side 2 inverter pumps)	BACX	BACnet serial communication module
VACSRX	Total recovery side DHW switching valve	CMMBX	Serial communication module to supervisor (Modbus)
SDV	Cutoff valve on compressor supply and return	CMSLWX	LonWorks serial communication module
CMSC10	Serial communication module for LonWorks supervisor	IOTX	IoT industrial module for cloud based interoperability & services
CMSC8	Serial communication module for BACnet supervisor		
CMSC9	Serial communication module for Modbus supervisor		

Accessories whose code ends with "X" are supplied separately



SPINCHILLER³

Liquid chiller

WSH-XSC3: cooling only
 WSHN-XSC3: Reversible heat pump
 Water cooled
 Indoor installation
Capacity from 211 to 394 kW



- ✓ Double independent circuits for high reliability with scroll compressors and plate heat exchangers
- ✓ Solution for multi-family and commercial buildings
- ✓ Refrigerant R410A - GWP = 2088
- ✓ Double independent circuits for high reliability with scroll compressors and plate heat exchangers
- ✓ Solution for multi-family and commercial buildings
- ✓ Domestic hot water up to 60°C, low water temperature down to -8°C
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated source and user side hydronic assemblies and partial recovery



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



compliant
ErP

HYDRONIC

functions and features



Cooling only
(WSH-XSC3)



Heat pump
(WSHN-XSC3)



Water cooled



Indoor
installation



R-410A



Hermetic
Scroll



Electronic
expansion
valve



HydroPack

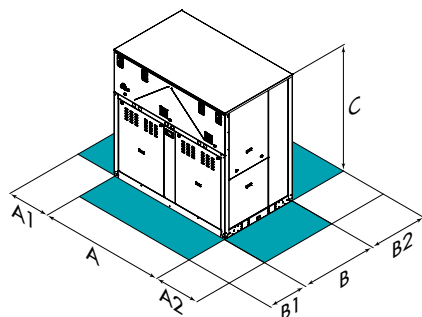


Vary Flow



Intelliplant

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	▶▶ WSH-XSC3	70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4
A - Length	mm	2234	2234	2234	2234	2234	2234	2234	2234
B - Width	mm	1132	1132	1132	1132	1132	1132	1132	1460
C - Height	mm	2210	2210	2210	2210	2210	2210	2210	2210
A1	mm	500	500	500	500	500	500	500	500
A2	mm	500	500	500	500	500	500	500	500
B1	mm	800	800	800	800	800	800	800	800
B2	mm	1000	1000	1000	1000	1000	1000	1000	1000
EN Operating weight	kg	1246	1268	1336	1356	1419	1692	1751	1935

Size	▶▶ WSHN-XSC3	70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4
A - Length	mm	2234	2234	2234	2234	2234	2234	2234	2234
B - Width	mm	1134	1134	1134	1134	1134	1134	1134	1460
C - Height	mm	2210	2210	2210	2210	2210	2210	2210	2210
A1	mm	500	500	500	500	500	500	500	500
A2	mm	500	500	500	500	500	500	500	500
B1	mm	800	800	800	800	800	800	800	800
B2	mm	1000	1000	1000	1000	1000	1000	1000	1000
EN Operating weight	kg	1242	1264	1322	1343	1406	1583	1651	1924

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.

EN Super-silenced (EN)

versions and configurations

ACOUSTIC CONFIGURATION:

EN	Super-silenced acoustic configuration (Standard)
GEO	Version for Geothermal application

ENERGY RECOVERY:

-	Energy recovery: not required (Standard)
D	Partial energy recovery

LOW TEMPERATURE (WSH-XSC3 ONLY):

-	Low temperature: not required (Standard)
B	Water low temperature

OPERATION (WSH-XSC3 ONLY):

OCO	Cooling-only operation (Standard)
OHO	Heating-only operation
OHI	Operation with water circuit change-over

technical data

Size		▶▶ WSH-XSC3	70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4
◆ Cooling capacity (EN 14511:2022)	(1)	kW	217	231	248	268	292	319	350	394
Total power input (EN 14511:2022)	(1)	kW	46,4	50,4	53,3	58,4	61,9	68,2	75,5	83,6
EER (EN 14511:2022)	(1)	-	4,68	4,59	4,65	4,58	4,71	4,68	4,64	4,72
SEER	(4)	-	6,16	6,24	6,18	6,06	6,01	5,73	5,65	5,91
$\eta_{s,c}$	(4)	%	238,6	241,7	239,1	234,3	232,4	221,3	217,9	228,2
◆ Heating capacity (EN 14511:2022)	(2)	kW	249	266	285	309	333	366	401	453
Total power input (EN 14511:2022)	(2)	kW	56,8	61,5	64,2	71,5	76,3	83,5	92,6	103
COP (EN 14511:2022)	(2)	-	4,39	4,32	4,44	4,32	4,36	4,38	4,33	4,41
Refrigeration circuits	-	Nr	2							
No. of compressors	-	Nr	4							
Type of compressors	-	-	SCROLL							
Refrigerant	-	-	R-410A							
Water flow-rate (User side)	-	l/s	10,3	11,0	11,8	12,7	13,9	15,2	16,6	18,8
Water flow (Source side)	-	l/s	12,7	13,5	14,4	15,6	16,9	18,6	20,4	22,9
Standard power supply	-	V	400/3~/50							
EN Sound power level	(3)	dB(A)	81	82	83	83	83	84	85	86

Size		▶▶ WSHN-XSC3	70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4
◆ Cooling capacity (EN 14511:2022)	(1)	kW	211	225	242	262	283	313	342	390
Total power input (EN 14511:2022)	(1)	kW	48,5	52,6	55,5	61,1	65,5	71,6	79,1	88,0
EER (EN 14511:2022)	(1)	-	4,35	4,28	4,36	4,29	4,33	4,37	4,32	4,44
SEER	(4)	-	5,95	5,89	5,84	5,90	5,92	5,65	5,40	5,92
$\eta_{s,c}$	(4)	%	229,9	227,8	225,7	228,0	228,8	217,9	207,9	228,6
◆ Heating capacity (EN 14511:2022)	(2)	kW	243	259	278	301	327	358	393	445
Total power input (EN 14511:2022)	(2)	kW	58,4	63,2	66,8	73,4	78,9	86,5	94,8	106
COP (EN 14511:2022)	(2)	-	4,17	4,10	4,17	4,10	4,14	4,14	4,14	4,20
Refrigeration circuits	-	Nr	2							
No. of compressors	-	Nr	4							
Type of compressors	-	-	SCROLL							
Refrigerant	-	-	R-410A							
Water flow-rate (User side)	-	l/s	10,0	10,7	11,5	12,5	13,5	14,9	16,3	18,6
Water flow (Source side)	-	l/s	12,4	13,3	14,3	15,5	16,7	18,4	20,2	22,9
Standard power supply	-	V	400/3~/50							
EN Sound power level	(3)	dB(A)	81	82	83	83	83	84	85	86

Directive ErP (Energy Related Products)

SCOP - AVERAGE Climate - W35	(4)	-	6,09	6,09	6,13	6,05	5,89	6,22	6,07	-
$\eta_{s,H}$	(4)	%	241	241	242	239	233	246	240	-
SCOP - AVERAGE Climate - W55	(4)	-	4,72	4,67	4,72	4,67	4,41	4,77	4,70	-
$\eta_{s,H}$	(4)	%	181	179	181	179	168	183	180	-

(1) Performance data calculated in accordance with EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; External exchanger water temperature = 10/7°C

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013. Sound power level are not Eurovent certified.

(4) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

AP	Rear water fittings
SDV	Cutoff valve on compressor supply and return
MHP	High and low pressure gauges
MF2	Multi-function phase monitor
SFSTR	Disposal for inrush current reduction
RCMRX	Remote control via microprocessor control
ACIE	Antifreeze heater for internal exchanger protection
EHCS	Source side antifreeze electric heaters
CMSC10	Serial communication module for LonWorks supervisor
CMSC9	Serial communication module for Modbus supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
SCP4	Set-point compensation with 0-10 V signal
SPC2	Set-point compensation with outdoor air temperature probe
CSVX	Couple of manually operated shut-off valves
IFWX	Steel mesh strainer on the water side
PFCP	Power factor correction capacitors (cosfi > 0.9)
AVIBX	Anti-vibration mount support
CONTA2	Energy meter
RPRPDI	Refrigerant leak detector with pump down function in the casing
ECS	ECOSHARE function for the automatic management of a group of units
PSX	Mains power supply
IVFDI	Inverter driven variable flow-rate user side control depending on the temperature differential
IOTX	IoT industrial module for cloud based interoperability & services

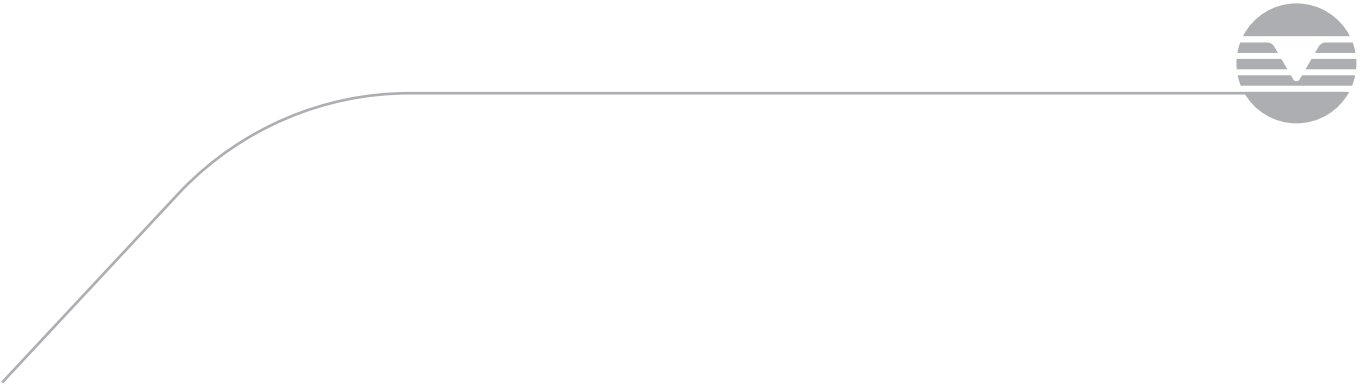
Only WSH-XSC3:

HYGC1	Cooling side hydronic assembly with 1 ON/OFF pump
HYGC2	Cooling side hydronic assembly with 2 ON/OFF pumps
VS2MC	Cooling side 2-way modulating valve
VS2MCX	Cooling side 2-way modulating valve
VS3MCX	Cooling side 3-way modulating valve
VARYC	VARYFLOW + (cooling side 2 inverter pumps)
2PMC	Hydropack cooling side with 2 pumps
V2MCP	Cooling side 2-way modulating valve for high DP
V2MCPX	Cooling side 2-way modulating valve for high DP
HYGH1	Heating side hydronic assembly with 1 ON/OFF pump
HYGH2	Heating side hydronic assembly with 2 ON/OFF pumps
VARYH	VARYFLOW + (heating side 2 inverter pumps)
VS2MH	Heating side 2-way modulating valve
VS2MHX	Heating side 2-way modulating valve
VS3MHX	Heating side 3-way modulating valve
2PMH	Hydropack heating side with 2 pumps
V2MHP	Heating side 2-way modulating valve for high DP
V2MHPX	Heating side 2-way modulating valve for high DP

Only WSHN-XSC3:

HYGU1	User side hydronic assembly with 1 ON/OFF pump
HYGU2	User side hydronic assembly with 2 ON/OFF pumps
VARYU	VARYFLOW + (user side 2 inverter pumps)
HYP2U	Hydropack user side with 2 pumps
HYGS1	Source side hydronic assembly with 1 ON/OFF pump
HYGS2	Source side hydronic assembly with 2 ON/OFF pumps
VARYS	VARYFLOW + (source side 2 inverter pumps)
VS2M	Source side 2-way modulating valve
VS2MX	Source side 2-way modulating valve
VS3MX	Source side 3-way modulating valve
HYP2S	Hydropack source side with 2 pumps
V2MSP	Source side 2-way modulating valve for high DP
V2MSPX	Source side 2-way modulating valve for high DP

Accessories whose code ends with "X" are supplied separately



NEW PRODUCT



Screw INVERTER



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



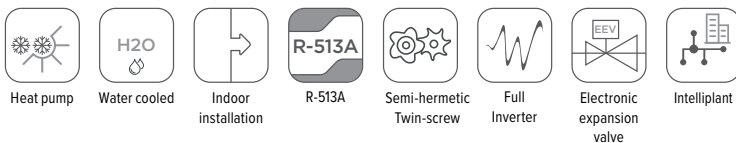
compliant
ErP

SCREWLINE⁴-I PL

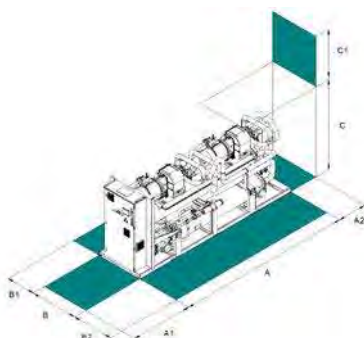
Polyvalent reversible heat pump
Water cooled
Indoor installation
Capacity from 440 to 945 kW

- ✓ Screw compressors with inverter technology and shell & tube heat exchanger
- ✓ Polyvalent technology configurable for 4-pipe
- ✓ Double independent circuits for high reliability
- ✓ Refrigerant R513A - GWP = 631
- ✓ High full load and seasonal efficiency
- ✓ Domestic hot water up to 55°C, low water temperature down to 4°C
- ✓ Two acoustic configurations: standard and super-silenced
- ✓ Modular operation management, up to 7 units in cascade

functions and features



dimensions and clearances



Size	▶▶ WiDHN-KSL1 PL	140.2	185.2	220.2	260.2	320.2	360.2
A - Length	mm	5172	5172	5172	5172	5752	5752
B - Width	mm	1543	1543	1543	1543	1543	1543
C - Height	mm	2156	2156	2156	2156	2363	2363
A1	mm	1500	1500	1500	1500	1500	1500
A2	mm	700	700	700	700	700	700
B1	mm	700	700	700	700	700	700
B2	mm	1000	1000	1000	1000	1000	1000
Operating weight	kg	5417	5417	7022	7022	9168	9168

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

VERSION:

EXC Excellence (Standard)

ACOUSTIC CONFIGURATION:

ST Standard acoustic configuration (Standard)

EN Super-silenced acoustic configuration

technical data

Size	▶▶ WIDHN-KSL1 PL		140.2	185.2	220.2	260.2	320.2	360.2
Cooling 100% - Heating 0%								
Cooling capacity (EN 14511:2022)	(1)	kW	440	531	621	709	840	945
Total power input (EN 14511:2022)	(1)	kW	97,4	123	138	165	193	230
EER (EN 14511:2022)	(1)	-	4,51	4,33	4,51	4,30	4,36	4,10
SEER	(6)	-	7,72	7,50	7,85	7,56	7,75	7,53
η_{sc}	(6)	%	300,9	292,2	306,2	294,4	301,8	293,1
Cooling 0% - Heating 100%								
Heating capacity (EN 14511:2022)	(2)	kW	500	600	700	801	944	1048
Total power input (EN 14511:2022)	(2)	kW	120	149	163	190	215	246
COP (EN 14511:2022)	(2)	-	4,18	4,02	4,31	4,23	4,39	4,25
Cooling 100% - Heating 100%								
Cooling capacity (EN 14511:2022)	(3)	kW	401	481	560	640	754	860
Heating capacity (EN 14511:2022)	(3)	kW	518	629	719	826	963	1107
Total power input (EN 14511:2022)	(3)	kW	119	151	162	189	211	251
TER (EN 14511:2022)	(4)	-	7,70	7,33	7,88	7,77	8,12	7,84
Refrigeration circuits		Nr				2		
No. of compressors		Nr				2		
Type of compressors		-				SCREW INVERTER		
Refrigerant		-				R-513A		
Standard power supply		V				400/3~/50		
Sound power level	(5)	dB(A)	97	97	98	98	101	101
Directive ErP (Energy Related Products)								
SCOP - AVERAGE Climate - W35	(6)	-	6,77	6,43	6,74	6,53	6,75	6,69
$\eta_{s,H}$	(6)	%	262,9	249,3	261,5	253,4	262,0	259,6
SCOP - AVERAGE Climate - W55	(6)	-	4,44	4,33	4,58	4,50	4,67	4,59
$\eta_{s,H}$	(6)	%	169,5	165,2	175,2	172,1	178,7	175,5

(1) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 12/7°C; Source side water temperature = 30/35°C

(2) Data calculated in compliance with Standard EN 14511:2022 referred to the following conditions: Hot side water temperature = 40/45°C, Source side water temperature = 10/7°C

(3) Data compliant to Standard EN 14511:2022 referred to the following conditions: Cold side water temperature = 7°C; Hot side water temperature = 45°C

(4) TER = (Cooling capacity + Heating capacity) / (Total power input)

(5) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

Sound power level are not Eurovent certified.

(6) Data calculated according to the EN 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

HYDRONIC

accessories

RCMRX	Remote control via microprocessor control
PSX	Mains power supply
CONTA3	Modbus total electric energy meters
CONTA4	Total electricity meters and m-bus pump group
CMSC9	Serial communication module for Modbus supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
SCP4	Set-point compensation with 0-10 V signal
SPC1	Set point compensation with 4-20 mA signal
SPC2	Set-point compensation with outdoor air temperature probe
ECS	ECOSHARE function for the automatic management of a group of units

IVMSX	Source side 2-way modulating valve
IVMS3X	Source side 3-way modulating valve
CSVX	Couple of manually operated shut-off valves
IFWX	Steel mesh strainer on the water side
RPR	Refrigerant leak detector
AMMSX	Anti-seismic spring antivibration mounts
AMMX	Spring antivibration mounts
AMRX	Rubber antivibration mounts
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

SCREWLINE⁴-I

Liquid chiller
 Water cooled
 Indoor installation
Capacity from 340 to 1440 kW



Screw INVERTER



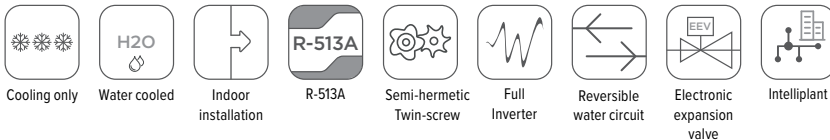
Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



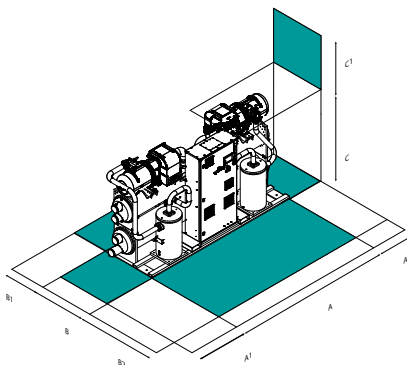
ErP compliant

- ✓ Screw compressors with inverter technology and spray shell & tube evaporator
- ✓ Low environmental impact solution, with one or two independent circuits for high reliability
- ✓ Refrigerant R513A - GWP = 631
- ✓ High seasonal efficiency with SEER values up to 8.60
- ✓ 3 operating modes: Cooling only, Heating only, Operation with water circuit change-over
- ✓ Two acoustic configurations: standard and super-silenced
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Condenser water temperature up to 65°C with high water temperature version (HWT), evaporator water temperature down to -8°C

functions and features



dimensions and clearances



Size	▶▶ WDH-iK4	120.1	160.1	200.1	220.1	240.1	270.1	290.1	250.2	280.2	320.2	360.2	400.2	480.2	540.2
A - Length	mm	2639	2639	2902	2902	3527	3527	4187	4083	4083	4233	4384	4651	4651	4651
B - Width	mm	1195	1195	1400	1400	1400	1400	1450	1195	1195	1195	1450	1495	1495	1495
C - Height	mm	2103	2103	2293	2293	2293	2293	2375	2194	2194	2214	2375	2498	2498	2498
A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
B1	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
B2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
C1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Operating weight	kg	3241	3328	4217	4207	4849	4884	5013	5484	5694	6475	7241	9225	9177	9225

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

VERSION:

EXC Excellence (Standard)

LOW TEMPERATURE:

- Low temperature: not required (Standard)

B Water low temperature

OPERATION:

OCO Cooling-only operation (Standard)

OHO Heating-only operation

OHI Operation with water circuit change-over

ACOUSTIC CONFIGURATION:

ST Standard acoustic configuration (Standard)

EN Super-silenced acoustic configuration

HIGH WATER TEMPERATURE VERSION:

HWT High water temperature

technical data

Size		WDH-iK4	120.1	160.1	200.1	220.1	240.1	270.1	290.1	250.2	280.2	320.2	360.2	400.2	480.2	540.2
♦ Cooling capacity (EN 14511:2022)	(1)	kW	340	416	520	611	689	759	830	704	800	899	1065	1280	1355	1440
Total power input (EN 14511:2022)	(1)	kW	66,8	81,0	102	119	138	150	166	138	156	177	209	249	270	289
EER (EN 14511:2022)	(1)	-	5,08	5,13	5,11	5,13	5,00	5,06	5,00	5,10	5,12	5,08	5,11	5,13	5,02	4,98
SEER	(4)	-	8,41	8,46	8,53	8,57	8,55	8,60	8,57	8,59	8,38	8,47	8,56	8,38	8,44	8,53
η_{sc}	(4)	%	328,4	330,4	333,2	334,8	334,0	336	334,8	335,6	327,2	330,8	334,4	327,2	329,6	333,2
♦ Heating capacity (EN 14511:2022)	(2)	kW	385	463	582	683	775	854	934	795	894	1006	1191	1431	1508	1680
Total power input (EN 14511:2022)	(2)	kW	88,9	104	129	152	179	193	213	186	205	232	270	323	348	390
COP (EN 14511:2022)	(2)	-	4,33	4,45	4,52	4,49	4,33	4,43	4,39	4,26	4,35	4,34	4,41	4,43	4,33	4,30
Refrigeration circuits		Nr				1							2			
No. of compressors		Nr				1							2			
Type of compressors		-								SCREW INVERTER						
Refrigerant		-								R-513A						
Water flow-rate (User side)		l/s	16,1	19,7	24,6	29,0	32,7	36,0	39,4	33,4	38,0	42,7	50,5	60,7	64,3	68,3
Water flow (Source side)		l/s	19,5	23,8	29,8	35,0	39,6	43,5	47,7	40,3	45,8	51,6	61,0	73,2	77,9	82,9
Standard power supply		V								400/3~/50						
ST Sound power level	(3)	dB(A)	94	96	97	97	97	98	98	100	101	101	102	102	102	103
EN Sound power level	(3)	dB(A)	91	93	94	94	94	95	95	97	98	98	99	99	99	100

(1) Performance data calculated in accordance with EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

(2) HWT Version: Performance data calculated in accordance with EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; External exchanger water temperature = 10/7°C

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013. Sound power level are not Eurovent certified.

(4) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

AMRX Rubber antivibration mounts

RCMRX Remote control via microprocessor control

PSX Mains power supply

CONTA2 Energy meter

CMSC9 Serial communication module for Modbus supervisor

CMSC10 Serial communication module for LonWorks supervisor

CMSC11 Serial communication module for BACnet-IP supervisor

SCP4 Set-point compensation with 0-10 V signal

SPC1 Set point compensation with 4-20 mA signal

SPC2 Set-point compensation with outdoor air temperature probe

ECS ECOSHARE function for the automatic management of a group of units

IVMSX Source side 2-way modulating valve

MHP High and low pressure gauges

SDV Cutoff valve on compressor supply and return

CO3P 3-step condenser

AACT Opposing evaporator water connections

AAR DX evaporator water connections

CDR DX condenser water connections

CDCT Opposing condenser water connections

EV3P 3-step evaporator

ISS Condenser insulation

IM 20 mm thickness insulation for increased evaporator

EHCS Source side antifreeze electric heaters

EHWP User side water piping antifreeze electric heaters

IFU2X Steel mesh filter on cold side

IFS2X Steel mesh filter on hot side

RPR Refrigerant leak detector

FC2 EMC filtering to reduce conducted compressor emissions

AMMSX Anti-seismic spring antivibration mounts

AMMX Spring antivibration mounts

IOTX IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

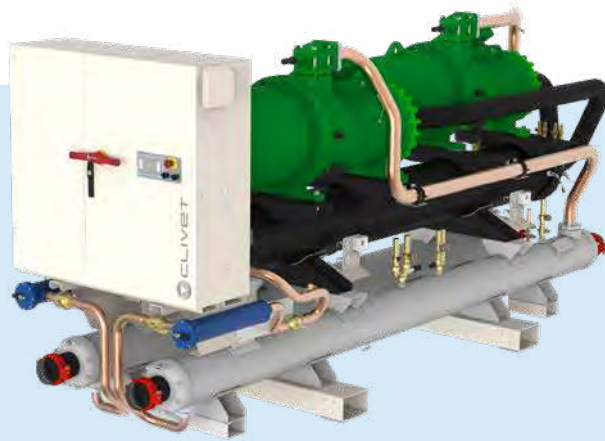
SCREWLINE⁴

Liquid chiller

Water cooled

Indoor installation

Capacity from 572 to 1499 kW



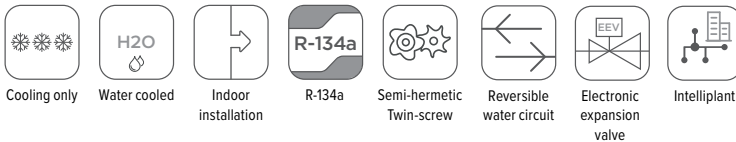
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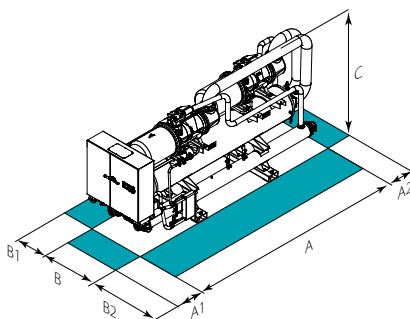
compliant
ErP

- ✓ Double independent circuits for high reliability with screw compressors
- ✓ First investment driven and refurbishment applications
- ✓ Refrigerant R134a - GWP = 1430
- ✓ 3 operating modes: Cooling only, Heating only, Operation with water circuit change-over
- ✓ Two acoustic configurations: standard and super-silenced
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated partial and total recovery
- ✓ Condenser water temperature up to 65°C with heating only version (OHO), evaporator water temperature down to -8°C

functions and features



dimensions and clearances



Size	▶▶ WDH-SB4	220.2	240.2	280.2	320.2	360.2	440.2	500.2	540.2	580.2
A - Length	mm	4766	4766	4766	4785	4785	5028	5147	5147	5147
B - Width	mm	1408	1408	1408	1408	1408	1408	1408	1408	1408
C - Height	mm	2033	2033	2033	2183	2183	2182	2308	2308	2308
A1	mm	1470	1470	1470	1470	1470	1470	1470	1470	1470
A2	mm	700	700	700	700	700	700	700	700	700
B1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
B2	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
Operating weight	mm	4099	4119	4156	5854	5874	6004	6453	6681	6761

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

VERSION:

EXC Excellence (Standard)

LOW TEMPERATURE:

- Low temperature: not required (Standard)
B Water low temperature

OPERATION:

OCO Cooling-only operation (Standard)
OHO Heating-only operation
OHI Operation with water circuit change-over

ACOUSTIC CONFIGURATION:

ST Standard acoustic configuration (Standard)
EN Super-silenced acoustic configuration

ENERGY RECOVERY:

- Energy recovery: not required (Standard)
D Partial energy recovery
R Total energy recovery

HIGH WATER TEMPERATURE VERSION:

HWT High water temperature

technical data

Size		►► WDH-SB4	220.2	240.2	280.2	320.2	360.2	440.2	500.2	540.2	580.2
◆ Cooling capacity (EN 14511:2022)	(1)	kW	572	613	706	867	978	1124	1299	1369	1499
Total power input (EN 14511:2022)	(1)	kW	109	120	138	164	188	213	244	273	304
EER (EN 14511:2022)	(1)	-	5,25	5,11	5,11	5,27	5,20	5,29	5,32	5,02	4,93
SEER	(4)	-	6,43	6,53	6,52	6,47	6,38	6,43	6,44	6,38	6,38
η_{sc}	(4)	%	254,3	258,2	257,8	255,9	252,3	254,4	254,5	252,3	252,3
◆ Heating capacity (EN 14511:2022)	(2)	kW	716	768	939	1033	1179	1454	1592	1740	1858
Total power input (EN 14511:2022)	(2)	kW	144	155	189	206	237	293	322	351	379
COP (EN 14511:2022)	(2)	-	4,97	4,95	4,97	5,00	4,97	4,96	4,94	4,96	4,90
Refrigeration circuits		Nr					2				
No. of compressors		Nr					2				
Type of compressors		-					SCREW				
Refrigerant		-					R-134a				
Water flow-rate (User side)		l/s	27,2	29,2	33,6	41,2	46,5	53,4	61,7	65,1	71,2
Water flow (Source side)		l/s	32,7	35,1	40,4	49,4	55,9	64,0	73,9	78,7	86,3
Standard power supply		V					400/3~/50				
ST Sound power level	(3)	dB(A)	99	100	100	101	101	103	103	105	105
EN Sound power level	(3)	dB(A)	95	96	96	98	98	100	100	101	101

(1) Performance data calculated in accordance with EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

(2) HWT Version: Performance data calculated in accordance with EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 40/45°C; External exchanger water temperature = 10/7°C

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013. Sound power level are not Eurovent certified.

(4) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

SPC1 Set point compensation with 4-20 mA signal

SCP4 Set-point compensation with 0-10 V signal

SPC2 Set-point compensation with outdoor air temperature probe

IVMSX Source side 2-way modulating valve

CONTA2 Energy meter

IFWX Steel mesh strainer on the water side

AMRX Rubber antivibration mounts

RCMRX Remote control via microprocessor control

PSX Mains power supply

SFSTR2 Progressive compressor start-up device

PFCP Power factor correction capacitors (cosfi > 0.9)

CMSC9 Serial communication module for Modbus supervisor

CMSC10 Serial communication module for LonWorks supervisor

CMSC11 Serial communication module for BACnet-IP supervisor

RPR Refrigerant leak detector

ECS ECOSHARE function for the automatic management of a group of units

CBS Overload circuit breakers

RDVS Switching valve with dual safety valves

MHP High and low pressure gauges

CO2P 2 pass condenser

IOTX IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

CHILLER CENTRIFUGO HFO

Liquid chiller
 Water cooled
 Indoor installation
Capacity from 808 to 1599 kW



- ✓ Patented horizontal back to back centrifugal compressor with inverter regulation
- ✓ Solution for large commercial and industrial buildings, with quite zero environmental impact
- ✓ Refrigerant R1234ze - GWP = 7
- ✓ Very high full load and seasonal efficiency with SEER values up to 9.64
- ✓ Falling film evaporator, economizer, oil recovery system
- ✓ Low noise operation and almost total absence of vibrations
- ✓ Compact size: length measure less than 4 meters
- ✓ Condenser water temperature up to 40°C, evaporator water temperature down to 4°C

HYDRONIC

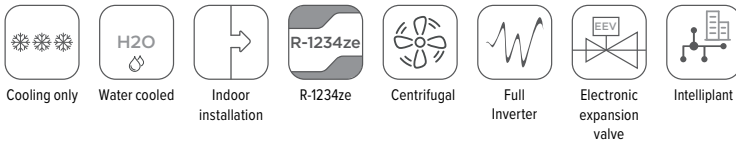


Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

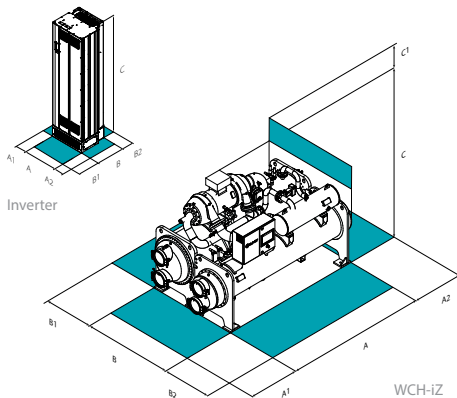


compliant
ErP

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	▶▶ WCH-iZ	230	270	300	350	380	420	450
Unit dimensions								
A - Length	mm	3820	3870	3770	3770	3770	3810	3810
B - Width	mm	1760	1760	1940	1940	1970	1970	1970
C - Height	mm	2128	2128	2170	2170	2170	2170	2170
A1	mm	1200	1200	1200	1200	1200	1200	1200
A2	mm	1200	1200	1200	1200	1200	1200	1200
B1	mm	1000	1000	1000	1000	1000	1000	1000
B2	mm	1200	1200	1200	1200	1200	1200	1200
C1	mm	1200	1200	1200	1200	1200	1200	1200
Operating weight	kg	5700	5785	6269	6469	7546	7546	7648

Size	▶▶ WCH-iZ	230	270	300	350	380	420	450
Inverter dimensions								
A - Length	mm	420	420	420	420	420	420	602
B - Width	mm	378	378	378	378	378	378	514
C - Height	mm	1100	1100	1100	1100	1100	1100	2043
B1	mm	600	600	600	600	600	600	800
C1	mm	225	225	225	225	225	225	225
Operating weight	kg	125	125	125	125	125	125	300

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.

versions and configurations

HOT GAS BY PASS:

- Hot gas by pass: not required (Standard)
- B** Hot gas by pass

technical data

Size	►► WCH-iZ	230	270	300	350	380	420	450
Cooling								
♦ Cooling capacity (EN 14511:2022)	(1) kW	808	949	1069	1229	1353	1476	1599
Total power input (EN 14511:2022)	(1) kW	144	169	185	212	227	249	272
EER (EN 14511:2022)	(1) -	5,61	5,61	5,78	5,81	5,97	5,92	5,87
SEER	(4) -	8,00	8,49	8,49	8,90	9,30	9,48	9,64
$\eta_{s,c}$	(4) %	312,0	331,8	331,6	347,9	364,0	371,3	377,6
Refrigeration circuits	Nr				1			
No. of compressors	Nr				1			
Type of compressors	(3) -				CFGi			
Refrigerant	-				R-1234ze			
Water flow-rate (User side)	l/s	38,4	45,1	50,8	58,4	64,3	70,2	76,0
Water flow (Source side)	-	45,6	53,6	60,1	69,0	75,7	82,6	89,6
Standard power supply	V				400/3~/50			
Sound power level	(2) dB(A)	99	101	99	99	101	100	100

(1) Data calculated according to EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

(2) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013. Sound power level are not Eurovent certified.

(3) CFGi = Inverter driven centrifugal compressor

(4) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

- EV2R** Two-stage evaporator and right connections
- EV10P** One-stage evaporator and opposing connections
- EV30P** Three-stage evaporator and opposing connection
- EV16** Evaporator water pressure 16 bar
- IS40** Insulation for evaporator with thickness of 40mm
- CO2R** Two-stage condenser and right connections
- CO10P** One-stage condenser and opposing connections
- CO30P** Three-stage condenser and opposing connection
- CO16** Condenser water pressure 16 bar
- AMMX** Spring antivibration mounts
- AMRX** Rubber antivibration mounts
- AMMSX** Anti-seismic spring antivibration mounts

- 2VBYX** ON/OFF motorized by-pass valve
- CSIC** Shielded connection cables between inverter and compressor: length 4.5 metres
- RPR** Refrigerant leak detector
- QSGX** Main switch cabinet: shipped separately
- CCSQX** Connection cables from electrical panel with main switch (QS6X) to inverter and unit electrical panel
- EVMAG** Larger size evaporator
- COMAG** Increased condenser
- CTAS** Larger size compressor
- IOTX** IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

CENTRIFUGAL CHILLER

Liquid chiller
 Water cooled
 Indoor installation
Capacity from 878 to 1933 kW



- ✓ Patented horizontal back to back centrifugal compressor with inverter regulation
- ✓ Solution for large commercial and industrial buildings
- ✓ Refrigerant R134a - GWP = 1430
- ✓ Very high full load and seasonal efficiency with SEER values up to 9.06
- ✓ Falling film evaporator, economizer, oil recovery system
- ✓ Low noise operation and almost total absence of vibrations
- ✓ Compact size: length measure less than 4 meters
- ✓ Condenser water temperature up to 40°C, evaporator water temperature down to 4°C

HYDRONIC



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com

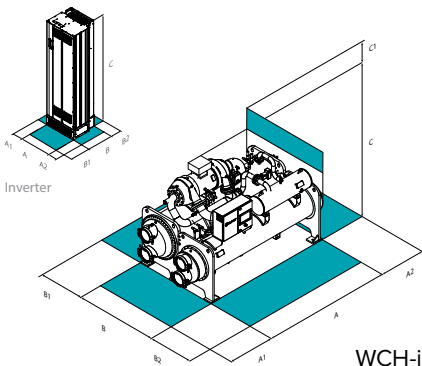


compliant
ErP

functions and features

Cooling only	Water cooled	Indoor installation	R-134a	Centrifugal	Full Inverter	Electronic expansion valve	Intelligent

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	▶▶ WCH-i	250	300	350	400	450	500	550
Unit dimensions								
A - Length	mm	3820	3870	3870	3770	3810	3810	3770
B - Width	mm	1760	1760	1760	1970	1970	1970	1970
C - Height	mm	2130	2130	2130	2170	2170	2170	2170
A1	mm	1200	1200	1200	1200	1200	1200	1200
A2	mm	1200	1200	1200	1200	1200	1200	1200
B1	mm	1000	1000	1000	1000	1000	1000	1000
B2	mm	1200	1200	1200	1200	1200	1200	1200
C1	mm	1200	1200	1200	1200	1200	1200	1200
Operating weight	kg	5780	5852	6020	7264	7688	7940	8364

Size	▶▶ WCH-i	250	300	350	400	450	500	550
Inverter dimensions								
A - Length	mm	420	420	420	420	420	602	602
B - Width	mm	378	378	378	378	378	514	514
C - Height	mm	1100	1100	1100	1100	1100	2043	2043
B1	mm	600	600	600	600	600	800	800
C1	mm	225	225	225	225	225	225	225
Operating weight	kg	125	125	125	125	125	300	300

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.

versions and configurations

HOT GAS BY PASS:

- Hot gas by pass: not required (Standard)
- B** Hot gas by pass

technical data

Size	▶▶ WCH-i	250	300	350	400	450	500	550
Cooling								
♦ Cooling capacity (EN 14511:2022)	(1) kW	878	1054	1230	1405	1581	1757	1933
Total power input (EN 14511:2022)	(1) kW	156	182	211	236	262	292	326
EER (EN 14511:2022)	(1) -	5,62	5,80	5,82	5,97	6,03	6,01	5,93
SEER	(4) -	7,66	7,99	8,36	8,82	8,97	9,01	9,06
$\eta_{s,c}$	(4) %	298,2	311,7	326,5	344,6	350,6	352,4	354,3
Refrigeration circuits	Nr				1			
No. of compressors	Nr				1			
Type of compressors	(3) -				CFGi			
Refrigerant	-				R-134a			
Water flow-rate (User side)	l/s	41,7	50,1	58,5	66,8	75,1	83,5	91,9
Water flow (Source side)	-	49,5	59,2	69,0	78,5	88,2	98,1	108,0
Standard power supply	V				400/3~/50			
Sound power level	(2) dB(A)	99	99	100	99	99	100	100

(1) Data calculated according to EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

(2) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013. Sound power level are not Eurovent certified.

(3) CFGi = Inverter driven centrifugal compressor

(4) Data calculated according to the EN 14825:2018 Regulation

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.

HYDRONIC

accessories

EV2R	Two-stage evaporator and right connections	AMMSX	Anti-seismic spring antivibration mounts
EV10P	One-stage evaporator and opposing connections	2VBYX	ON/OFF motorized by-pass valve
EV30P	Three-stage evaporator and opposing connection	CSIC	Shielded connection cables between inverter and compressor: length 4.5 metres
EV16	Evaporator water pressure 16 bar	QSGX	Electrical panel with main switch
IS40	Insulation for evaporator with thickness of 40mm	CCSQX	Connection cables from electrical panel with main switch (QS6X) to inverter and unit electrical panel
CO2R	Two-stage condenser and right connections	EVMAG	Larger size evaporator
CO10P	One-stage condenser and opposing connections	COMAG	Increased condenser
CO30P	Three-stage condenser and opposing connection	CTAS	Larger size compressor
CO16	Condenser water pressure 16 bar	IOTX	IoT industrial module for cloud based interoperability & services
AMMX	Spring antivibration mounts		
AMRX	Rubber antivibration mounts		

Accessories whose code ends with "X" are supplied separately

SCREWLINE³

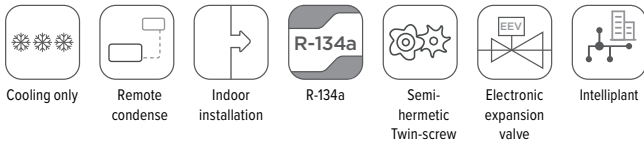
Liquid chiller
 Condenserless
 Indoor installation
Capacity from 300 to 1427 kW

HYDRONIC

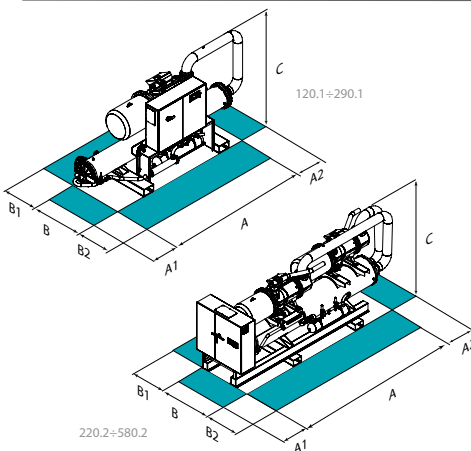


- ✓ Screw compressors and shell & tube evaporator
- ✓ Solution for cold climates in combination with remote condensers
- ✓ One or two independent circuits for high reliability
- ✓ Refrigerant R134a - GWP = 1430
- ✓ All sensitive components are protected against the atmospheric agents
- ✓ Two acoustic configurations: standard and super-silenced
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Condensing temperature up to 65°C, low water temperature down to -8°C

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	►► MDE-SL3	120.1	140.1	160.1	180.1	200.1	220.1	250.1	270.1	290.1
A - Length	mm	4210	4210	4210	4189	4189	4189	4189	4324	4324
B - Width	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
ST-EXC C- Height	mm	1558	1558	1558	1642	1642	1642	1642	1657	1657
EN-EXC C- Height	mm	1573	1573	1573	1750	1750	1750	1750	1750	1750
A1	mm	700	700	700	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700	700	700	700
B1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
B2	mm	1160	1160	1160	1160	1160	1160	1160	1160	1160
ST-EXC Operating weight	kg	2073	2152	2229	2821	2832	2843	2895	2981	3012
EN-EXC Operating weight	kg	2237	2345	2422	3044	3055	3066	3118	3204	3235

Size	►► MDE-SL3	220.2	240.2	260.2	280.2	300.2	320.2	340.2	360.2	400.2	440.2	470.2	500.2	540.2	580.2
A - Length	mm	4638	4638	4638	4638	4638	4638	4992	4992	5006	5006	5006	5077	5077	5077
B - Width	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
ST-EXC C- Height	mm	1790	1790	1790	1790	1790	1790	1995	1995	2010	2010	2010	2145	2145	2145
EN-EXC C- Height	mm	1900	1900	1900	1900	1900	1900	2121	2121	2121	2121	2121	2239	2239	2239
A1	mm	1410	1410	1410	1410	1410	1410	1410	1410	1410	1410	1410	1410	1410	1410
A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
B1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
B2	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
ST-EXC Operating weight	kg	3390	3422	3497	3587	3681	3745	4448	4675	4763	4784	4832	5680	5817	5876
EN-EXC Operating weight	kg	3830	3862	3966	4013	4107	4171	5010	5267	5388	5445	5493	6318	6455	6514

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.

ST-EXC Standard (ST)-Excellence
 EN-EXC Supersilenced (EN)-Excellence

versions and configurations

LOW TEMPERATURE:

- Low temperature: not required (Standard)
- B** Water low temperature

VERSION:

- EXC** Excellence (Standard)

ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration (Standard)
- EN** Super-silenced acoustic configuration

UNIT INSTALLATION:

- II** Indoor installation (Standard)

DOUBLE SET POINT:

- Double set point: not required (Standard)
- DSP** Double set point

technical data

Size		►► MDE-SL3	120.1	140.1	160.1	180.1	200.1	220.1	250.1	270.1	290.1
ST/EN-EXC	◆ Cooling capacity	(1) kW	300	364	401	466	508	566	620	683	728
ST/EN-EXC	Compressor power input	(1) kW	69,1	82,4	90,5	105	114	128	140	154	165
ST/EN-EXC	Total power input	(1) kW	69,6	82,9	91,0	105	114	128	140	154	165
ST/EN-EXC	EER	(2) -	4,35	4,42	4,43	4,44	4,46	4,42	4,43	4,44	4,42
ST/EN-EXC	Refrigeration circuits	Nr					1				
ST/EN-EXC	No. of compressors	Nr					1				
ST/EN-EXC	Type of compressors	-					SCREW				
ST/EN-EXC	Refrigerant	-					R-134a				
ST/EN-EXC	Standard power supply	V					400/3~/50				
ST-EXC	Sound power level	(3) dB(A)	91	95	96	98	98	99	101	101	101
EN-EXC	Sound power level	(3) dB(A)	85	89	90	92	92	93	95	95	95

Size		►► MDE-SL3	220.2	240.2	260.2	280.2	300.2	320.2	340.2	360.2	400.2	440.2	470.2	500.2	540.2	580.2
ST/EN-EXC	◆ Cooling capacity	(1) kW	550	585	642	720	757	794	848	899	997	1115	1159	1231	1344	1427
ST/EN-EXC	Compressor power input	(1) kW	128	137	150	164	173	181	195	208	228	255	267	280	307	329
ST/EN-EXC	Total power input	(1) kW	128	138	151	165	174	182	196	209	228	256	268	281	308	329
ST/EN-EXC	EER	(2) -	4,30	4,26	4,27	4,38	4,37	4,39	4,34	4,31	4,38	4,37	4,34	4,39	4,38	4,34
ST/EN-EXC	Refrigeration circuits	Nr							2							
ST/EN-EXC	No. of compressors	Nr							2							
ST/EN-EXC	Type of compressors	-							SCREW							
ST/EN-EXC	Refrigerant	-							R-134a							
ST/EN-EXC	Standard power supply	V							400/3~/50							
ST-EXC	Sound power level	(3) dB(A)	94	94	96	99	99	99	100	101	102	103	104	104	105	105
EN-EXC	Sound power level	(3) dB(A)	88	88	91	93	93	93	94	95	96	98	98	98	99	99

The units are shipped with a sealed charge of nitrogen. (sizes 220.2-580.2)
 (1) Data referred to the following conditions: Internal exchanger water = 12/7°C; Condensing temperature = 45°C
 (2) EER referred only to compressors

(3) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

HYDRONIC

accessories

- AMRX** Rubber antivibration mounts
- RCMRX** Remote control via microprocessor control
- PSX** Mains power supply
- CONTA2** Energy meter
- CMSC9** Serial communication module for Modbus supervisor
- CMSC10** Serial communication module for LonWorks supervisor
- CMSC11** Serial communication module for BACnet-IP supervisor
- SCP4** Set-point compensation with 0-10 V signal

- SPC1** Set point compensation with 4-20 mA signal
- SPC2** Set-point compensation with outdoor air temperature probe
- ECS** ECOSHARE function for the automatic management of a group of units
- PFCP** Power factor correction capacitors (cosφ > 0.9)
- SFSTR2** Progressive compressor start-up device
- CBS** Overload circuit breakers
- IOTX** IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

Medium attendance applications

	SMARTPack ²	CLIVETPack ³ⁱ	CLIVETPack ³
Air flow	3200 ÷ 10500 m ³ /h (19 ÷ 42 kW)	8500-34000 m ³ /h (59 ÷ 155 kW)	29000 ÷ 60000 m ³ /h (191 ÷ 344 kW)
ErP compliance			
Products			
AIR	CKN-XHE2i 7.1-14.2	CSRN-iY 20.2-56.4	CSRN-Y 60.4-120.4
Heat pump			
	✓	✓	✓
Electronically controlled ventilation and variable air flow			
	✓	✓	✓
Free Cooling			
	✓		
Thermodynamic energy recovery			
		✓	✓
REVO thermodynamic energy recovery			
	✓	✓	✓
Electronic filtration			

PACKAGED

Scroll Compressor, Refrigerant R-410A

Scroll/Rotary inverter Compressor, Refrigerant R-32

Tandem Scroll Compressors, Refrigerant R-410A

Tandem Scroll Compressors, Refrigerant R-32

Full inverter

High attendance applications

Full fresh air applications

CLIVETPack¹

CLIVETPack² FFA

4000 ÷ 25000 m³/h
(40 ÷ 119 kW)

3000 ÷ 9000 m³/h
(40 ÷ 90 kW)



CSNX-iY 20.2-40.4

CSRN-XHE2 FFA 12.2-24.4



PACKAGED

PACKAGED



PACKAGED System

System components

SERIES	SIZE FROM	TO	BRAND NAME.	PAGE
Autonomous air-conditioners / Heat pumps - air source - roof top for medium attendance applications				
CKN-XHE2i	7.1	142.2	SMARTPACK ²	94
CSRN-iY	20.2	56.4	CLIVETPAC ³ⁱ	96
CSRN-Y	60.4	120.4	CLIVETPACK ³	98
Autonomous air-conditioners / Heat pumps - air source - roof top for high attendance applications				
CSNX-iY	20.2	40.4	CLIVETPACK ³ⁱ	102
Autonomous air-conditioners / Heat pumps - air source - roof top for full fresh air applications				
CSRN-XHE2 FFA	12.2	24.4	CLIVETPACK ² FFA	104

SMARTPACK²

Packaged air-conditioning unit
 CKN-XHE2i: Reversible heat pump
 Air cooled
 Roof Top
Capacity from 19 to 42 kW



- ✓ Full inverter
- ✓ High part load efficiency
- ✓ Extended working limit (-15°C in heating mode)
- ✓ Enhanced air filtration with low ventilation consumption
- ✓ Thermodynamic recovery
- ✓ Smart Freecooling and Defrosting management
- ✓ All component included on board for an enhanced installation
- ✓ Remote and centralized system monitoring through INTELLIAIR



Clivet participates in the ECP Programme for "Rooftops". Check ongoing validity of certificate on: www.eurovent-certification.com

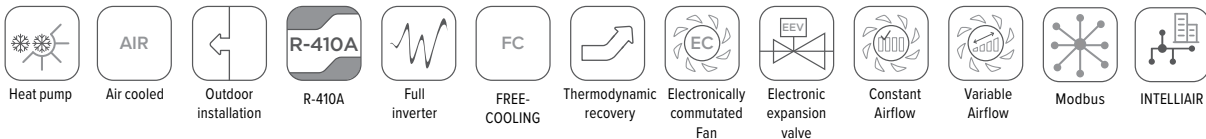


compliant
ErP

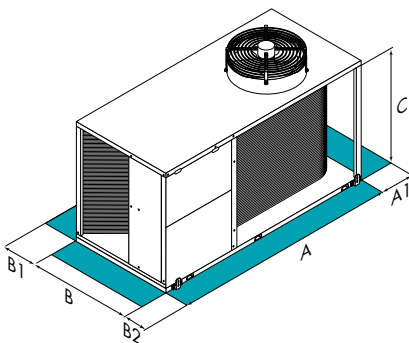


Control keypad standard supplied. Main functions:
 unit on/off
 unit main information
 daily/weekly programming
 temperature set-point modification
 humidity set-point modification
 manual or automatic summer/winter switching

functions and features



dimensions and clearances



Size	▶▶ CKN-XHE2i	7.1	10.1	14.2
A - Length	mm	2250	2250	2610
B - Width	mm	1150	1150	1590
C - Height	mm	1210	1510	1660
A1	mm	1000	1000	1000
B1	mm	1000	1000	1000
B2	mm	1000	1000	1000
CAK/CBK Operating weight	kg	416	496	635
CCK Operating weight	kg	434	520	670

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 Full recirculation (CAK)
 CBK Recirculation and renewal air (CBK)
 CCK Configuration with double fan section for recirculation, fresh and exhaust air

CAUTION!

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

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

technical data

Size	▶▶ CKN-XHE2i	7.1	10.1	14.2
♦ Cooling capacity	(1) kW	20,2	30,0	45,2
Sensible capacity	(1) kW	16,8	24,9	37,9
Compressor power input	(1) kW	5,4	8,7	11,8
♦ Cooling capacity (EN 14511:2022)	(9) kW	19,0	28,4	42,1
EER (EN 14511:2022)	(9) -	3,08	2,88	2,97
♦ Heating capacity	(2) kW	20,2	28,3	42,8
Compressor power input	(2) kW	4,9	7,2	10,0
♦ Heating capacity (EN 14511:2022)	(10) kW	20,5	29,1	43,1
COP (EN 14511:2022)	(10) -	3,26	3,25	3,28
Refrigeration circuits	Nr	1	1	1
No. of compressors	Nr	1	1	2
Type of compressors	(3) -	ROT	SCROLL	ROT
Nominal supply airflow	m ³ /h	4000	6000	9000
Airflow range	m ³ /h	3200-5000	4300-6800	6400-10500
Type of supply fan	(4) -	RAD/EC	RAD/EC	RAD/EC
Number of supply fans	Nr	1	1	1
Max. static pressure supply fan	(5) Pa	380	680	510
Type of exhaust fan	(4) -	RAD/EC	RAD/EC	RAD/EC
Number of exhaust fans	(6) Nr	1	1	1
Type of external fan	(4) -	AX/EC	AX/EC	AX/EC
Standard power supply	V	400/3~/50 +N	400/3~/50 +N	400/3~/50 +N
Sound power level outside	(7) dB(A)	83	85	88
Directive ErP (Energy Related Products)				
SEER - AVERAGE Climate	(8) -	4,58	4,37	4,48
η _{s,c}	(8) %	180,2	171,9	176,2
SCOP - AVERAGE Climate	(8) -	3,22	3,20	3,27
η _{s,h}	(8) %	125,8	125,0	127,8

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 data are referred to operation with 30% of outdoor and exhaust air; (configuration CCK)

(1) Ambient air at 27°C/19°C W.B. Entering external exchanger air temperature 35°C

(2) Ambient temperature 20°C DB. Outside temperature 7°C DB/6°C WB

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

(4) RAD = Radial fan; AX = Axial Fan; EC = Electronically Commutated

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

(6) Configuration for outdoor air supply with exhaust and extraction; (only with CCK configuration)

(7) Sound pressure levels are referred to units operating at nominal load in nominal conditions. Measurements are carried out accordingly to EN 12101-1 at nominal standard conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

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

(9) Capacity in total recirculation according to EN 14511:2022, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C; EER according to EN 14511:2022

(10) Capacity in total recirculation according to EN 14511:2022, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.; COP according to EN 14511:2022

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accessories

FCE Enthalpy FREE-COOLING
PAQC SAir quality probe for CO₂ rate check
PAQCV Air quality sensor for CO₂ and VOC rate check
SER Outdoor air damper manually set (CBK version)
SERM Outdoor air motorized on/off damper (CBK version)
SFCM Modulating motorized free-cooling damper (available only with options: CCK)
PCOSM Constant supply airflow
PVAR Variable airflow
GC01 Condensing gas heating module with modulating control 35 kW
GC08 Condensing gas heating module with modulating control 44kW
GC09 Condensing gas heating module with modulating control 65kW
GC10 Condensing gas heating module with modulating control 82kW
PGFC Finned coil protection grill
PGCCH Anti-hail protection grilles
F7 High efficiency F7 air filter (ISO 16890 ePM1 55%)
F9 High efficiency F9 air filter (ISO 16890 ePM1 80%)
FES Electronic filters (ISO 16890 ePM1 90%)
PSAF Differential pressure switch for dirty air filters
CHW2 Two-rows hot water coil
3WVM 3-way modulating valve

EH10 6 kW electric heaters
EH12 9 kW electric heaters
EH15 13.5 kW electric heaters
EH17 18 kW electric heaters
EH20 24 kW electric heaters
CPHG Hot gas re-heating coil
HSE3 3 kg/h immersed electrodes steam humidifier
HSE5 5 kg/h immersed electrodes steam humidifier
HSE8 8 kg/h immersed electrodes steam humidifier
AMRX Rubber antivibration mounts
UVC UV-C germicidal lamps
PCMO Sandwich panels of the handling zone in M0 fire reaction class
VENH High static pressure fans
CSOND Temperature and humidity ambient control with built-in probes
CTT Temperature control with thermostat
PTAAX Remote ambient air temperature sensor
IOTX IoT industrial module for cloud based interoperability & services
PTCO Set up for shipping via container
LBPF Packed in a wooden box + fumigation

Accessories whose code ends with "X" are supplied separately

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

CLIVETPACK³ⁱ

Packaged air-conditioning unit

CSRN-iY: Reversible heat pump

Air cooled

Roof Top

Capacity from 59 to 155 kW



- ✓ Refrigerant R32
- ✓ Full inverter
- ✓ Evolution of Energy recovery concept
- ✓ Energy recovery through enthalpy wheel
- ✓ Enhanced air filtration with low ventilation consumption
- ✓ Extended working limit (-15°C in heating mode)
- ✓ Reliability and increased efficiency ensured by double refrigerant circuit
- ✓ Remote and centralized system monitoring through INTELLIAIR



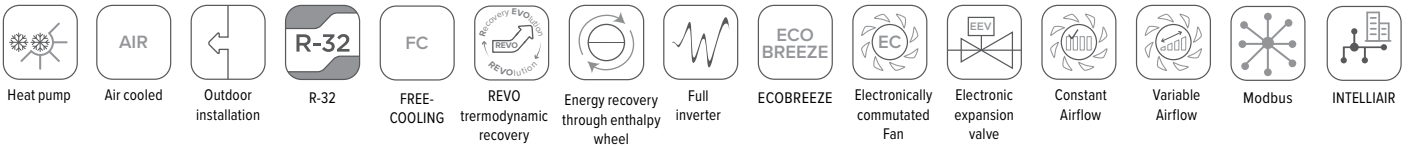
Clivet participates in the ECP Programme for "Rooftops". Check ongoing validity of certificate on: www.eurovent-certification.com



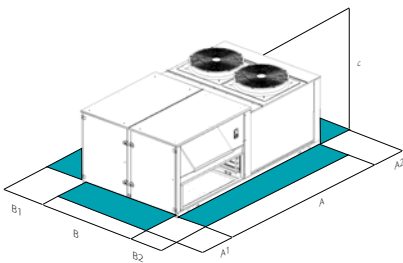
ErP compliant

PACKAGED

functions and features



dimensions and clearances



Size	▶▶ CSRN-iY	20.2	28.2	40.4	56.4
A - Length	mm	3190	3970	3970	5315
B - Width	mm	2300	2300	2300	2300
C - Height	mm	1480	1510	1910	1920
A1	mm	2000	2000	2000	2600
A2	mm	1500	1500	1500	1500
B1	mm	1500	1500	1500	1500
B2	mm	1500	1500	1500	1500
CAK Operating weight	kg	1087	1187	1678	2296
CBK Operating weight	kg	1087	1187	1678	2296
CBK-G Operating weight	kg	1103	1203	1714	2345
CCK-REVO Operating weight	kg	1158	1258	1744	2386

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
 CCK Configuration with double fan section for recirculation, fresh and exhaust air
 CCK-REVO Configuration with double fan section with fresh air and REVO trermodynamic recovery

CAUTION!

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

versions and configurations

CONFIGURATION:

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

- CBK-G** Configuration with double fan section for recirculation, fresh and exhaust air
CCK-REVO Configuration with double fan section with fresh air and REVO thermodynamic recovery

technical data

Size	►► CCSR-iY	20.2	28.2	40.4	56.4
CCK-REVO ♦ Cooling capacity	(1) kW	65,9	85,8	129,0	170,5
CCK-REVO Sensible capacity	(1) kW	55,9	72,2	99,5	155,8
CCK-REVO Compressor power input	(1) kW	18,1	21,6	38,0	49,6
CCK-REVO ♦ Cooling capacity (EN 14511:2022)	(9) kW	59,0	76,4	116,2	152
CCK-REVO EER (EN 14511:2022)	(9) -	2,86	2,82	2,67	2,68
CCK-REVO ♦ Heating capacity	(2) kW	61,0	78,5	126,0	163,7
CCK-REVO Compressor power input	(2) kW	12,6	15,7	30,1	38,0
CCK-REVO ♦ Heating capacity (EN 14511:2022)	(10) kW	58,0	75,3	119,7	159,0
CCK-REVO COP (EN 14511:2022)	(10) -	3,73	3,65	3,19	3,31
CCK-REVO Refrigeration circuits	Nr	2	2	2	2
CCK-REVO No. of compressors	Nr	2	2	4	4
CCK-REVO Type of compressors	(3) -	ROT	SCROLL	ROT	SCROLL
CCK-REVO Nominal supply airflow	m ³ /h	13000	17000	23000	32000
CCK-REVO Airflow range	m ³ /h	8500-14000	13000-20500	17000-26000	22000-34000
CCK-REVO Type of supply fan	(4) -	RAD/EC	RAD/EC	RAD/EC	RAD/EC
CCK-REVO Number of supply fans	Nr	1	2	2	3
CCK-REVO Max. static pressure supply fan	(5) Pa	330	450	410	300
CCK-REVO Type of exhaust fan	(4) -	RAD/EC	RAD/EC	RAD/EC	RAD/EC
CCK-REVO Number of exhaust fans	(6) Nr	1	2	2	2
CCK-REVO Type of external fan	(4) -	AX/EC	AX/EC	AX/EC	AX/EC
CCK-REVO Standard power supply	V	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Sound power level outside	(7) dB(A)	88	89	88	90
Directive ErP (Energy Related Products)					
SEER - AVERAGE Climate	(8) -	4,92	4,70	4,85	4,52
η _{sc}	(8) %	193,8	185,0	191,0	177,8
SCOP - AVERAGE Climate	(8) -	3,91	3,79	3,81	3,93
η _{sh}	(8) %	153,4	148,6	149,4	154,2

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.

Performances are referred to operation with 30% fresh and exhaust air with thermodynamic recovery REVO (CCK-REVO)

- (1) Ambient air at 27°C/19°C W.B. Entering external exchanger air temperature 35°C D.B. / 24°C W.B.
 (2) Ambient air at 20°C D.B. / 12°C W.B., Entering external exchanger air temperature 7°C D.B. / 6°C W.B.
 (3) ROT = rotary compressor; SCROLL = scroll compressor
 (4) RAD = Radial fan; AX = Axial Fan; EC = Electronically Commutated
 (5) Net outside static pressure to win the outlet and intake onboard pressure drops

(6) Only for double fan section configuration with fresh air and REVO thermodynamic recovery (CCK-REVO)

(7) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

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

(9) Capacity in total recirculation according to EN 14511:2022, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C; EER according to EN 14511:2022

(10) Capacity in total recirculation according to EN 14511:2022, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.; COP according to EN 14511:2022

accessories

- FC** Thermal FREE-COOLING (CBK-G, CCK-REVO version)
FCE Enthalpy FREE-COOLING (CBK-G, CCK-REVO version)
REVO REVO exhaust air thermodynamic energy recovery (CCK-REVO version)
CHW2 Two-rows hot water coil
CHWER Energy recovery from food refrigeration
3WVM 3-way modulating valve
2WVM 2-way modulating valve
EH12 9 kW electric heaters (size 20.2)
EH14 12 kW electric heaters (size 20.2-28.2)
EH17 18 kW electric heaters (size 20.2-28.2-40.4)
EH20 24 kW electric heaters (size 28.2-40.4-56.4)
EH24 36 kW electric heaters (size 40.4-56.4)
EH28 48 kW electric heaters (size 56.4)
GC01X Condensing gas heating module with modulating control 35 kW (sizes 20.2-28.2)
GC08X Condensing gas heating module with modulating control 44 kW (size 20.2-28.2)
GC09X Condensing gas heating module with modulating control 65 kW (size 20.2-28.2-40.4)
GC10X Condensing gas heating module with modulating control 82 kW (size 28.2-40.4-56.4)
GC11X Condensing gas heating module with modulating control 100 kW (size 28.2-40.4-56.4)
GC12X Condensing gas heating module with modulating control 130 kW (size 40.4-56.4)
GC13X Condensing gas heating module with modulating control 160 kW (size 56.4)
EWX Enthalpy wheel energy recovery module (CBK-G version)
AMRX Rubber antivibration mounts
AMRMX Rubber antivibration mounts for unit and gas module
AMRUVX Rubber antivibration mounts for unit and UV-C Lamps module
AMREWX Rubber antivibration mounts for unit and enthalpy wheel module
RCX Roof curb
PGFC Finned coil protection grill
PGCCH Anti-hail protection grilles
PCMO Sandwich panels of the handling zone in MO fire reaction class
CPHG Hot gas re-heating coil
M3 Downward air supply
M5 Upflow air supply
R3 Downward air return
NSERG Gravity exhaust air damper: not required (CBK-G version)
SERM Outdoor air motorized on/off damper (CBK version)
SER Outdoor air damper manually set (CBK version)

- SERMD** Modulating motorized outdoor air damper (optional for CBK, standard for CCK and CCKP)
VENH High static pressure fan
PVAR Variable airflow
PCOSM Constant supply airflow
PVARDP Variable airflow with pressure probe on the unit
PVMV 4-20mA signal for supply and exhaust air flow rate modulation
PAQC Air quality probe for CO₂ rate check (CBK, CBK-G, CCK-REVO version)
PAQCV Air quality sensor for CO₂ and VOC rate check (CBK, CBK-G, CCK-REVO version)
PPAQC External CO₂ signal management (CBK, CBK-G, CCK-REVO version)
F7 High efficiency F7 air filter (ISO 16890 ePM1 55%)
F9 High efficiency F9 air filter (ISO 16890 ePM1 80%)
FIFD Electronic filter with iFD technology (ISO 16890 ePM1 90%)
PSAF Differential pressure switch for dirty air filters
HSE3 3 kg/h immersed electrodes steam humidifier (size 20.2-28.2)
HSE5 5 kg/h immersed electrodes steam humidifier (size 20.2-28.2)
HSE8 8 kg/h immersed electrodes steam humidifier
HSE9 15 kg/h immersed electrodes steam humidifier
PUE External humidifier management with 0-10V signal
LTEMP1 Application for low outdoor temperature
EXFLOWC Application in spaces with forced air exhaust at variable flow and exhaust section (CCK-REVO version)
UVCX UV-C lamp module with germicidal effect
CMS13X Serial communication module for Modbus TCP/IP, BACnet IP, BACnet MSTP superviso
CTT Temperature control with thermostat
CSOND Temperature and humidity ambient control with built-in probes
MDMTX Management of ambient temperature probes
MDMTUX Management of ambient temperature and humidity probes
IOTX IoT industrial module for cloud based interoperability & services
DESM Smoke detector
CONTA2 Energy meter
CHMET Cooling and Heating Capacity Meter
DML Demand Limit
PTCO Set up for shipping via container

Accessories whose code ends with "X" are supplied separately

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

CLIVETPACK³

Packaged air-conditioning unit

CSRN-Y: Reversible heat pump

Air cooled

Roof Top

Capacity from 191 to 344 kW



- ✓ Refrigerant R32
- ✓ Evolution of Energy recovery concept
- ✓ Energy recovery through enthalpy wheel
- ✓ Enhanced air filtration with low ventilation consumption
- ✓ Extended working limit (-15°C in heating mode)
- ✓ Reliability and increased efficiency ensured by double refrigerant circuit
- ✓ Remote and centralized system monitoring through INTELLIAIR



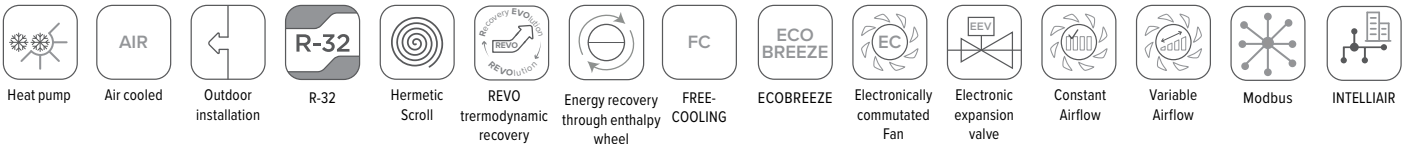
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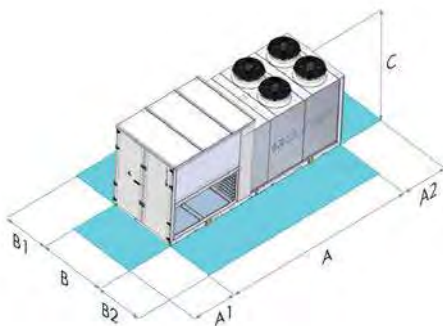
ErP compliant

PACKAGED

functions and features



dimensions and clearances



Size	►► CSRN-Y	60.4	70.4	80.4	90.4	100.4	120.4
A - Length	mm	6300	6300	6300	8050	8050	8050
B - Width	mm	2300	2300	2300	2300	2300	2300
C - Height	mm	2250	2250	2250	2250	2250	2250
A1	mm	1500	1500	1500	1500	1500	1500
A2	mm	1500	1500	1500	1500	1500	1500
B1	mm	1500	1500	1500	1500	1500	1500
B2	mm	1500	1500	1500	1500	1500	1500
CAK Operating weight	kg	2605	2643	2643	3536	3536	3750
CBK Operating weight	kg	2605	2643	2643	3536	3536	3750
CBK-G Operating weight	kg	2605	2643	2643	3536	3536	3750
CCK-REVO Operating weight	kg	2745	2783	2783	3728	3728	3942

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
 CCK Configuration with double fan section for recirculation, fresh and exhaust air
 CCK-REVO Configuration with double fan section with fresh air and REVO trerodynamic recovery

CAUTION!

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

versions and configurations

CONFIGURATION:

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

CBK-G Configuration with double fan section for recirculation, fresh and exhaust air

CCK-REVO Configuration with double fan section with fresh air and REVO thermodynamic recovery

technical data

Size		►► CSRN-Y	60.4	70.4*	80.4*	90.4*	100.4*	120.4*	
CCK-REVO	◆ Cooling capacity	(1)	kW	209	234	265	296	324	378
CCK-REVO	Sensible capacity	(1)	kW	159	179	207	226	247	282
CCK-REVO	Compressor power input	(1)	kW	47,9	54,0	64,7	65,8	73,6	95,1
CCK-REVO	◆ Cooling capacity (EN 14511:2022)	(9)	kW	191,0	213,9	240,7	270,3	296,0	344,0
CCK-REVO	EER (EN 14511:2022)	(9)	-	3,40	3,40	3,20	3,45	3,42	3,14
CCK-REVO	◆ Heating capacity	(2)	kW	199	220	248	284	309	363
CCK-REVO	Compressor power input	(2)	kW	43,5	48,7	54,6	60,0	67,7	87,6
CCK-REVO	◆ Heating capacity (EN 14511:2022)	(10)	kW	191,8	213,5	242,7	274,0	298,8	352,5
CCK-REVO	COP (EN 14511:2022)	(10)	-	3,44	3,44	3,46	3,50	3,43	3,19
CCK-REVO	Refrigeration circuits		Nr	2	2	2	2	2	2
CCK-REVO	No. of compressors		Nr	4	4	4	4	4	4
CCK-REVO	Type of compressors	(3)	-	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
CCK-REVO	Nominal supply airflow		m ³ /h	33000	37000	44000	49000	53000	58000
CCK-REVO	Airflow range		m ³ /h	29000-47000	29000-47000	29000-47000	38000-60000	38000-60000	38000-60000
CCK-REVO	Type of supply fan	(4)	-	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
CCK-REVO	Number of supply fans		Nr	4	4	4	6	6	6
CCK-REVO	Max. static pressure supply fan	(5)	Pa	870	760	580	860	810	740
CCK-REVO	Type of exhaust fan	(4)	-	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
CCK-REVO	Number of exhaust fans	(6)	Nr	2	2	2	2	2	2
CCK-REVO	Type of external fan	(4)	-	AX/AC	AX/AC	AX/AC	AX/AC	AX/AC	AX/AC
CCK-REVO	Standard power supply		V	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
CCK-REVO	Sound power level outside	(7)	dB(A)	92	94	97	95	96	98
Directive ErP (Energy Related Products)									
SEER - AVERAGE Climate		(8)	-	4,74	4,69	4,37	4,44	4,31	4,16
η _{sc}		(8)	%	186,6	184,7	171,7	174,7	169,5	163,5
SCOP - AVERAGE Climate		(8)	-	3,41	3,47	3,42	3,42	3,39	3,37
η _{sh}		(8)	%	133,5	135,8	133,9	133,9	132,5	132,0

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.

* models so marked are not Eurovent certified

Performances are referred to operation with 30% fresh and exhaust air with thermodynamic recovery REVO (CCK-REVO)

(1) Ambient air at 27°C/19°C W.B. Entering external exchanger air temperature 35°C D.B. / 24°C W.B.

(2) Ambient air at 20°C D.B. / 12°C W.B., Entering external exchanger air temperature 7°C D.B. / 6°C W.B.

(3) SCROLL = Scroll compressor

(4) RAD = Radial fan; AX = Axial Fan; EC = Electronically Commutated; AC = Alternating current

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

(6) Only for double fan section configuration with fresh air and REVO thermodynamic recovery (CCK-REVO)

(7) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

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

(9) Capacity in total recirculation according to EN 14511:2022, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C; EER according to EN 14511:2022

(10) Capacity in total recirculation according to EN 14511:2022, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.; COP according to EN 14511:2022

accessories

FC	Thermal FREE-COOLING (CBK-G, CCK-REVO version)	PVAR	Variable air flow
FCE	Enthalpy FREE-COOLING (CBK-G, CCK-REVO version)	PCOSM	Constant supply airflow
REVO	REVO exhaust air thermodynamic energy recovery (CCK-REVO version)	PVARDP	Variable airflow with pressure probe on the unit
CREFB	Device for fan consumption reduction of the external section, ECOBREEZE type	SPVAR	0-10 V signal for air flow modulation
CHW2	Two-rows hot water coil	PAQC	Air quality probe for CO ₂ rate check (CBK, CBK-G, CCK-REVO version)
CHWER	Energy recovery from food refrigeration	PAQCV	Air quality sensor for CO ₂ and VOC rate check (CBK, CBK-G, CCK-REVO version)
3WVM	3-way modulating valve	PAQC2	Double air quality probe for CO ₂ rate check (CBK, CBK-G, CCK-REVO version)
2WVM	2-way modulating valve	PAQCV2	Double air quality probe for CO ₂ and VOC rate check (CBK, CBK-G, CCK-REVO version)
EH20	24 kW electric heaters	PPAQC	External CO ₂ signal management
EH24	36 kW electric heaters	F7	High efficiency F7 air filter (ISO 16890 ePM1 55%)
EH28	48 kW electric heaters	F9	High efficiency F9 air filter (ISO 16890 ePM1 80%)
GC10X	Condensing gas heating module with modulating control 82 kW (sizes 60.4÷80.4)	FIFD	Electronic filter with iFD technology (ISO 16890 ePM1 90%)
GC11X	Condensing gas heating module with modulating control 100 kW (sizes 60.4÷80.4)	PSAF	Differential pressure switch for dirty air filters
GC12X	Condensing gas heating module with modulating control 130 kW (sizes 90.4÷120.4)	HSE8	8 kg/h immersed electrodes steam humidifier
GC13X	Condensing gas heating module with modulating control 164 kW	HSE9	15 kg/h immersed electrodes steam humidifier
GC06X	Condensing gas heating module with modulating control 200 kW	PUE	External humidifier management with 0-10V signal
GC07X	Condensing gas heating module with modulating control 300 kW (sizes 90.4÷120.4)	LTEMP1	Application for low outdoor temperature
EWX	Enthalpy wheel energy recovery module (CBK-G version)	EXFLOWC	Application in spaces with forced air exhaust at variable flow and exhaust section (CCK-REVO version)
AMRX	Rubber antivibration mounts	UVCX	UV-C lamp module with germicidal effect
AMRMX	Rubber antivibration mounts for unit and gas module	BRCI	Sloping drain pan
AMRUVX	Rubber antivibration mounts for unit and UV-C Lamps module	LON	TP/FT serial port with LonWorks protocol
AMREWX	Rubber antivibration mounts for unit and enthalpy wheel module	BACIP	BACnet-IP serial communication module
RCX	Roof curb	BACMSTP	BACnet-MSTP serial communication module
PGFC	Finned coil protection grill	SFSTR	Disposal for inrush current reduction
PGCCH	Anti-hail protection grilles	NCRC	Remote control with user interface: not required
PCMO	Sandwich panels of the handling zone in M0 fire reaction class	CSOND	Temperature and humidity ambient control with built-in probes
CPHG	Hot gas re-heating coil	MDMTX	Management of ambient temperature probes
M3	Downward supply	MDMTUX	Management of ambient temperature and humidity probes
M5	Upward supply	MDMADX	Advanced monitoring and management ambient probes
R3	Downward air return	IOTX	IoT industrial module for cloud based interoperability & services
SER	Outdoor air damper manually set (CBK version)	SIX	Service interface (cable of 1,5 metres)
SERM	Outdoor air motorized on/off damper (CBK version)	PFCC	Power factor correction capacitors (cosφ > 0.95)
SFCM	Modulating motorised FREE-COOLING damper (Optional for CBK, Standard for CBK-G and CCK-REVO)	DESM	Smoke detector
NSERG	Gravity exhaust air damper: not required (CBK-G version)	CONTA2	Energy meter
VENH	High static pressure fan	CHMET	Cooling and Heating Capacity Meter
		PTCO	Set up for shipping via container

Accessories whose code ends with "X" are supplied separately

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



CLIVETPACK³ⁱ

Packaged air-conditioning unit

CSNX-iY: Reversible heat pump

Air cooled

Roof Top

Capacity from 40 to 119 kW



- ✓ Specifically designed for crowded buildings
- ✓ Refrigerant R32
- ✓ Full inverter
- ✓ Evolution of Energy recovery concept
- ✓ Evolution of Energy recovery concept
- ✓ Extended working limit (-15°C in heating mode)
- ✓ Reliability and increased efficiency ensured by double refrigerant circuit
- ✓ Remote and centralized system monitoring through INTELLIAIR



Clivet participates in the ECP Programme for "Rooftops". Check ongoing validity of certificate on: www.eurovent-certification.com



compliant
ERP

PACKAGED

functions and features



Heat pump



AIR



Outdoor installation



R-32



FREE-COOLING



REVO
termodynamic recovery



Full inverter



ECOBREEZE



Electronically commutated Fan



Electronic expansion valve



Constant Airflow



Variable Airflow

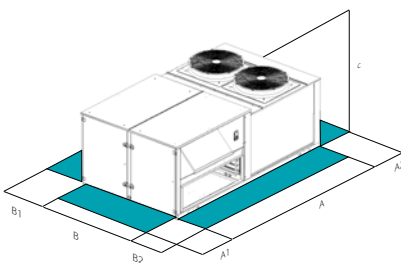


Modbus



INTELLIAIR

dimensions and clearances



Size	▶ CSNX-iY	20.2	28.2	40.4
A - Length	mm	2650	3550	3970
B - Width	mm	2300	2300	2300
C - Height	mm	1480	1510	1910
A1	mm	1500	1500	2000
A2	mm	1500	1500	1500
B1	mm	1500	1500	1500
B2	mm	1500	1500	1500
CCK-REVO Operating weight	kg	968	1119	1744

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.

CCK-REVO Configuration with double fan section with fresh air and REVO termodynamic recovery

CAUTION!

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

versions and configurations

CONFIGURATION:

CCK-REVO Configuration with double fan section with fresh air and REVO thermodynamic recovery

technical data

Size	CSNX-iY	20.2	28.2	40.4	
CCK-REVO	◆ Cooling capacity	(1) kW	48,7	90,1	146,0
CCK-REVO	Sensible capacity	(1) kW	35,0	63,8	104,0
CCK-REVO	Compressor power input	(1) kW	10,8	23,0	42,4
CCK-REVO	◆ Cooling capacity (EN 14511:2022)	(8) kW	39,3	73,4	119,2
CCK-REVO	EER (EN 14511:2022)	(8) -	3,04	2,66	2,52
CCK-REVO	◆ Heating capacity	(2) kW	44,5	77,6	130,0
CCK-REVO	Compressor power input	(2) kW	9,2	16,0	29,0
CCK-REVO	◆ Heating capacity (EN 14511:2022)	(9) kW	41,0	73,7	120,6
CCK-REVO	COP (EN 14511:2022)	(9) -	3,16	3,01	3,00
CCK-REVO	Refrigeration circuits	Nr	2	2	2
CCK-REVO	No. of compressors	Nr	2	2	4
CCK-REVO	Type of compressors	(3) -	ROT	SCROLL	ROT
CCK-REVO	Nominal supply airflow	m ³ /h	6000	10500	19000
CCK-REVO	Airflow range	m ³ /h	4000-8000	7000-13500	13000-25000
CCK-REVO	Type of supply fan	(4) -	RAD/EC	RAD/EC	RAD/EC
CCK-REVO	Number of supply fans	Nr	1	1	2
CCK-REVO	Max. static pressure supply fan	(5) Pa	690	440	470
CCK-REVO	Type of exhaust fan	(4) -	RAD/EC	RAD/EC	RAD/EC
CCK-REVO	Number of exhaust fans	Nr	1	1	2
CCK-REVO	Type of external fan	(4) -	AX/EC	AX/EC	AX/EC
CCK-REVO	Standard power supply	V	400/3~/50	400/3~/50	400/3~/50
CCK-REVO	Sound power level outside	(6) dB(A)	83	89	88
Directive ErP (Energy Related Products)					
SEER - AVERAGE Climate	(7) -	4,67	4,94	4,57	
η _{s,c}	(7) %	183,8	194,6	179,8	
SCOP - AVERAGE Climate	(7) -	3,53	3,95	3,75	
η _{s,h}	(7) %	138,2	155,0	146,6	

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.

Performances are referred to operation with 30% fresh and exhaust air with thermodynamic recovery REVO (CCK-REVO)

(1) Ambient air at 27°C/19°C W.B. Entering external exchanger air temperature 35°C D.B. / 24°C W.B.

(2) Ambient air at 20°C D.B. / 12°C W.B. Entering external exchanger air temperature 7°C D.B. / 6°C W.B.

(3) ROT = Rotary compressor; SCROLL = Scroll compressor

(4) RAD = Radial fan; AX = Axial Fan; EC = Electronically Commutated

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

(6) 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 conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013

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

(8) Capacity in total recirculation according to EN 14511-2022, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C; EER according to EN 14511-2022

(9) Capacity in total recirculation according to EN 14511-2022, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.; COP according to EN 14511-2022

accessories

FC	Thermal FREE-COOLING (Standard)	PVARDP	Variable airflow with pressure probe on the unit
FCE	Enthalpy FREE-COOLING	PVMV	4-20mA signal for supply and exhaust air flow rate modulation
REVO	REVO exhaust air thermodynamic energy recovery (standard)	PAQC	Air quality probe for CO ₂ rate check
CHW2	Two-rows hot water coil	PAQCV	Air quality sensor for CO ₂ and VOC rate check
3WVM	3-way modulating valve	PAQC2	Double air quality probe for CO ₂ rate check
2WVM	2-way modulating valve	PAQCV2	Double air quality probe for CO ₂ and VOC rate check
EH10	6 kW electric heaters (size 20.2)	PPAQC	External CO ₂ signal management
EH12	9 kW electric heaters (size 20.2)	F7	High efficiency F7 air filter (ISO 16890 ePM1 55%)
EH15	13.5 kW electric heaters (size 20.2-28.2)	F9	High efficiency F9 air filter (ISO 16890 ePM1 80%)
EH17	18 kW electric heaters (size 28.2-40.4)	FIFD	Electronic filter with iFD technology (ISO 16890 ePM1 90%)
EH20	24 kW electric heaters (size 28.2-40.4)	PSAF	Differential pressure switch for dirty air filters
EH24	36 kW electric heaters (size 40.4)	HSE3	3 kg/h immersed electrodes steam humidifier (size 20.2)
GC01X	Condensing gas heating module with modulating control 35 kW (size 20.2-28.2)	HSE5	5 kg/h electrode boiler steam humidifier (size 20.2-28.2)
GC08X	Condensing gas heating module with modulating control 44 kW (size 20.2-28.2)	HSE8	8 kg/h immersed electrodes steam humidifier
GC09X	Condensing gas heating module with modulating control 65 kW (size 28.2-40.4)	HSE9	15 kg/h immersed electrodes steam humidifier (size 28.2-40.4)
GC10X	Condensing gas heating module with modulating control 82 kW (size 28.2-40.4)	PUE	External humidifier management with 0-10V signal
GC11X	Condensing gas heating module with modulating control 100 kW (size 40.4)	LTEMP1	Application for low outdoor temperature
GC12X	Condensing gas heating module with modulating control 130 kW (size 40.4)	EXFLOWC	Application in spaces with forced air exhaust at variable flow and exhaust section
AMRX	Rubber antivibration mounts	UVCX	UV-C lamp module with germicidal effect
AMRMX	Rubber antivibration mounts for unit and gas module	CMSC13X	Serial communication module for Modbus TCP/IP, BACnet IP, BACnet MSTP superviso
AMRUVX	Rubber antivibration mounts for unit and UV-C Lamps module	CTT	Temperature control with thermostat
RCX	Roof curb	CSOND	Temperature and humidity ambient control with built-in probes
PGFC	Finned coil protection grill	MDMTX	Management of ambient temperature probes
PGCCH	Anti-hail protection grilles	MDMTUX	Management of ambient temperature and humidity probes
PCMO	Sandwich panels of the handling zone in M0 fire reaction class	MDMADX	Advanced monitoring and management ambient probes
CPHG	Hot gas re-heating coil	IOTX	IoT industrial module for cloud based interoperability & services
M3	Downward air supply	DESM	Smoke detector
M5	Upflow air supply	CONTA2	Energy meter
ML	Sideward supply	CHMET	Cooling and Heating Capacity Meter
R3	Downward air return	DML	Demand Limit
SERMD	Modulating motorized outdoor air damper (standard)	PTCO	Set up for shipping via container
VENH	High static pressure fan		
PVAR	Variable airflow		
PCOSM	Constant supply airflow		

Accessories whose code ends with "X" are supplied separately

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

CLIVETPACK² FFA

Packaged air-conditioning unit

CSRN-XHE2 FFA: Reversible heat pump

Air cooled

Roof Top

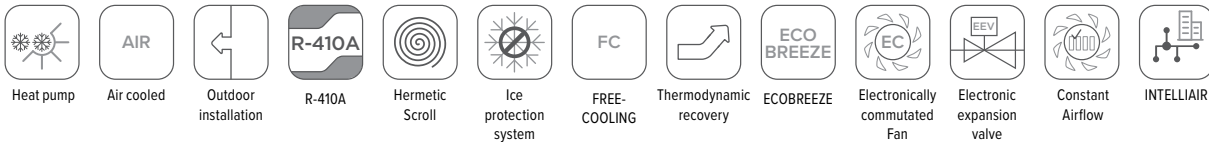
Capacity from 40 to 90 kW



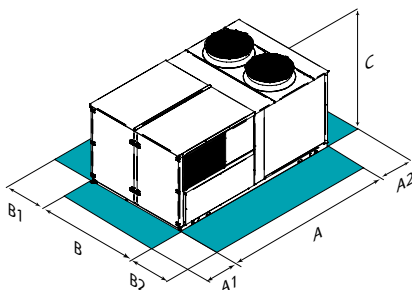
- ✓ Specifically designed for 100% fresh air conditioning application
- ✓ No contamination between supply and exhaust air
- ✓ High part load efficiency
- ✓ Smart Freecooling and Defrosting management
- ✓ Enhanced air filtration with low ventilation consumption
- ✓ Thermodynamic recovery
- ✓ Compliant with main communication protocols (Modbus, Bacnet and Lonworks)
- ✓ Many available configurations suitable for the most different project situation
- ✓ Interaction with third part extraction systems
- ✓ All component included on board for an enhanced installation
- ✓ Remote and centralized system monitoring through INTELLIAIR

PACKAGED

functions and features



dimensions and clearances



Size	► CSRN-XHE2-FFA	12.2	16.2	20.4	22.4	24.4
CBFFA A - Length	mm	2090	2090	3110	3110	3110
CBFFA B - Width	mm	2300	2300	2300	2300	2300
CBFFA C - Height	mm	1560	1560	1650	1650	1650
CBFFA A1	mm	1500	1500	1500	1500	1500
CBFFA A2	mm	1500	1500	1500	1500	1500
CBFFA B1	mm	1500	1500	1500	1500	1500
CBFFA B2	mm	1500	1500	1500	1500	1500
CBFFA Operating weight	kg	1273	1297	1358	1393	1427
CCFFA Operating weight	kg	1401	1425	1560	1595	1629

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.

CBFFA Configuration for fresh air supply only
CCFFA Configuration for fresh air supply with extraction and exhaust

CAUTION!

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

versions and configurations

CONFIGURATION:

CBFFA Configuration for fresh air supply only (Standard)

CCFFA Configuration pour introduction d'air neuf avec extraction et expulsion

technical data

Size		▶▶ CSRN-XHE2-FFA	12.2	16.2	20.4	22.4	24.4	
CBFFA	♦ Cooling capacity	(1)	kW	39,8	49,5	76,1	83,4	90,4
CBFFA	Sensible capacity	(1)	kW	21,5	27,8	38,3	43,3	48,0
CBFFA	Compressor power input	(1)	kW	9,4	12,9	20,0	21,7	23,3
CBFFA	EER	(1)	-	4,23	3,84	3,81	3,84	3,88
CBFFA	♦ Heating capacity	(2)	kW	39,6	50,0	73,2	81,4	89,5
CBFFA	Compressor power input	(2)	kW	9,9	11,9	17,2	18,2	20,7
CBFFA	COP	(2)	-	4,00	4,20	4,26	4,47	4,32
CBFFA	Refrigeration circuits		Nr	2	2	2	2	2
CBFFA	No. of compressors		Nr	2	2	4	4	4
CBFFA	Type of compressors	(3)	-	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
CBFFA	Nominal supply airflow		m ³ /h	3400	4500	6000	7000	8000
CBFFA	Airflow range		m ³ /h	3000-4000	4000-5300	5300-6500	6400-7600	7300-9000
CBFFA	Type of supply fan	(4)	-	RAD/EC	RAD/EC	RAD/EC	RAD/EC	RAD/EC
CBFFA	Number of supply fans		Nr	1	1	1	1	1
CBFFA	Max. static pressure supply fan	(5)	Pa	675	470	775	730	650
CBFFA	Type of external fan	(4)	-	AX/AC	AX/AC	AX/AC	AX/AC	AX/AC
CBFFA	Standard power supply		V	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
CBFFA	Sound power level outside	(6)	dB(A)	83	85	84	85	87

Performance refers to operation with 80% of expelled and outdoor air

(1) Ambient air at 27°C D.B./19°C W.B. Outdoor air temperature: 35°C D.B./ 24°C W.B; EER referred only to compressors

(2) Ambient temperature 20°C DB. Outside temperature 7°C DB/6°C WB; COP referred only to compressors

(3) SCROLL = Scroll compressor

(4) RAD = Radial fan; AX = Axial Fan; EC = Electronically Commutated; AC = Alternating current

(5) Available net pressure to overcome the supply

(6) 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.

CBFFA Configuration for fresh air supply only

accessories

RE1	Thermodynamic heat recovery system (CCFFA version)	GC10X	Condensing gas heating module with modulating control 82 kW (sizes 20.4÷24.4)
M3	Downward air supply	LTEMP1	Application for low outdoor temperature
M5	Upflow air supply	PGFC	Finned coil protection grill
R3	Downward air return	PGCCH	Anti-hail protection grilles
PCOSM	Constant supply airflow	CPHG	Hot gas re-heating coil
PCOSME	Constant airflow in supply and exhaust (CCFFA version)	HSE5	5 kg/h immersed electrodes steam humidifier (sizes 12.2÷16.2)
CREFB	Device for fan consumption reduction of the external section, ECOBREEZE type	HSE8	8 kg/h immersed electrodes steam humidifier
VENH	High static pressure fans	HSE9	15 kg/h immersed electrodes steam humidifier (sizes 20.4÷24.4)
F7	High efficiency F7 air filter (ISO 16890 ePM1 55%)	MHP	High and low pressure gauges
F9	High efficiency F9 air filter (ISO 16890 ePM1 80%)	CMSC9	Serial communication module for Modbus supervisor
FIFD	Electronic filter with iFD technology (ISO 16890 ePM1 90%)	CMSC10	Serial communication module for LonWorks supervisor
PSAF	Differential pressure switch for dirty air filters	CMSC11	Serial communication module for BACnet-IP supervisor
EH12	9 kW electric heaters (sizes 12.2÷16.2)	CTERM	Remote keypad for indoor temperature and humidity control
EH15	13,5 kW electric heaters (sizes 12.2÷16.2)	PM	Phase monitor
EH17	18 kW electric heaters (sizes 20.4÷24.4)	PFCC	Power factor correction capacitors (cosφ > 0.95)
EH22	27 kW electric heaters (sizes 20.4÷24.4)	SFSTC	Progressive compressor start-up device
CHW2	Two-rows hot water coil	PTAAX	Remote ambient air temperature sensor
3WVM	3-way modulating valve	PTUAX	Remote ambient air temperature and humidity probe
2WVM	2-way modulating valve	IOTX	IoT industrial module for cloud based interoperability & services
GC01X	Condensing gas heating module with modulating control 35kW (sizes 12.2÷16.2)	PCMO	Sandwich panels of the handling zone in M0 fire reaction class
GC08X	Condensing gas heating module with modulating control 44 kW (size 12.2÷16.2)	PTCO	Set up for shipping via container
GC09X	Condensing gas heating module with modulating control 65 kW	AMRX	Rubber antivibration mounts
		AMRMX	Rubber antivibration mounts for unit and gas module
		RCX	Roof curb

Accessories whose code ends with "X" are supplied separately

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

Commercial

FRESH LARGE EVO

Air flow
Capacity (A35)

300 ÷ 2500 m³/h
2 ÷ 8 kW

Products



PRIMARY AIR



Recovery thermodynamic



Electronic filtration iFD



Free Cooling



Active dehumidification



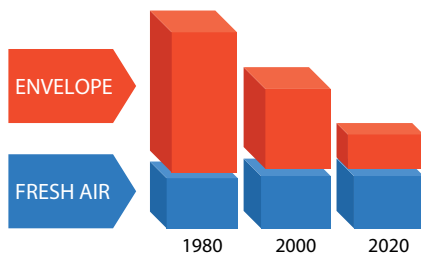
EC Fans



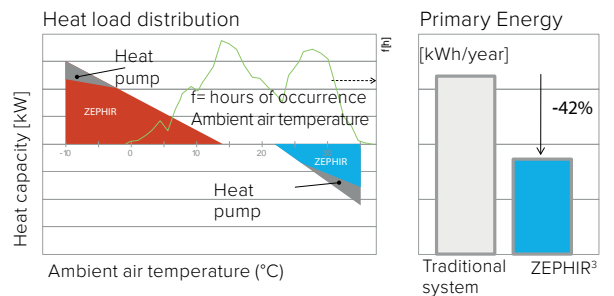
Variable Airflow



1. CENTRAL AIR RENEWAL



2. HIGH ENERGY EFFICIENCY



Commercial

ZEPHIR³

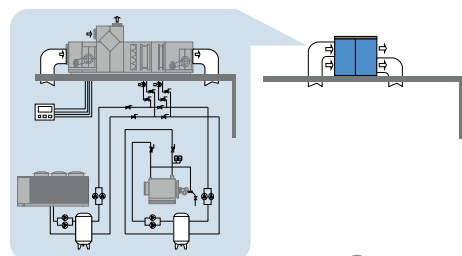
1000 ÷ 14000 m³/h
10 ÷ 96 kW

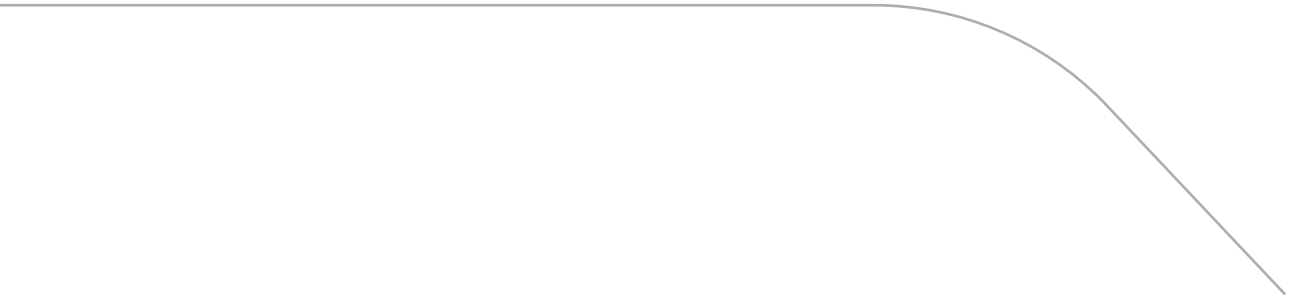


3. 99% PURIFIED AIR



4. SIMPLIFIES THE SYSTEM





PRIMARY AIR

PRIMARY AIR System

System components

SERIES	SIZE FROM	TO	BRAND NAME.	PAGE
Make-up air packaged unit, full fresh air with supply/exhaust section and thermodynamic heat recovery				
CISDN-Y EF 1 S	Size 1	Size 2	FRESH LARGE EVO	110
CPAN-XHE3	Size 1	Size 6	ZEPHIR ³	112

FRESH LARGE EVO

Make-up air unit, full fresh air

With return/exhaust and thermodynamic heat recovery

Reversible heat pump

Indoor installation

Air flow rate from 300 to 2500 m³/h

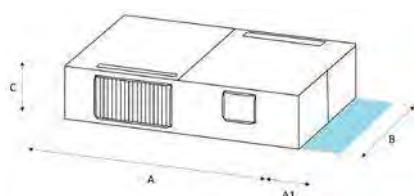


- ✓ Refrigerant R32
- ✓ Full inverter
- ✓ Extended working limit (up to -20°C in heating mode)
- ✓ Additional available capacity for indoor air conditioning
- ✓ Efficient exhaust air energy recovery and low ventilation consumption thanks to the active thermodynamic recovery
- ✓ Enhanced air filtration with low ventilation consumption
- ✓ No contamination between supply and exhaust air
- ✓ Smart Freecooling and Indoor Air Quality
- ✓ All primary air devices already on board, for a simplified system design
- ✓ Compatible with VRF and Clivet monitoring systems (Control4 NRG, Clivet Eye, INTELLIAIR)
- ✓ EPP structure for maximum acoustic comfort and thermal insulation

functions and features



dimensions and clearances



Size	▶▶ CiSDN-Y EF 1 S	Size 1	Size 2	Size 3
A - Length	mm	1743	1743	1743
B - Width	mm	1220	1220	1220
C - Height	mm	310	410	590
A1	mm	500	500	500
Operating weight	kg	96	126	138

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

INSTALLATION:

II Indoor installation (Standard)

CONNECTIVITY:

CMSC9 Serial communication module for Modbus supervisor (Standard)

AERUALIC CIRCUIT

FM5S Filter on outdoor air M5 (ISO 16890 ePM10 65%) (Standard)

FM5R Return air filter M5 (ISO 16890 ePM10 65%) (Standard)

HYDRAULIC CIRCUIT:

CDP Condensate drain pump on board (Standard)

technical data

Size	▶▶ CiSDN-Y EF 1 S	Size 1	Size 2	Size 3
Standard airflow				
Nominal air flow	m ³ /h	500	1000	2000
Max external static pressure (supply)	Pa	250	425	300
Max external static pressure (extraction)	Pa	215	390	230
Cooling				
♦ Cooling capacity	(1) kW	1,9	3,6	7,4
Sensible cooling capacity	(1) kW	1,9	3,6	7,2
EERc	(1) -	8,43	5,76	7,83
♦ Cooling capacity (EN 14511:2022)	(2) kW	1,9	3,5	7,1
EER (EN 14511:2022)	(2) -	6,83	4,49	4,17
♦ Maximum cooling capacity	(3) kW	4,4	8,3	15,0
Heating				
♦ Heating capacity	(1) kW	2,3	4,5	9,3
COPc	(1) -	6,94	6,60	7,12
♦ Heating capacity (EN 14511:2022)	(2) kW	2,3	4,6	9,6
COP (EN 14511:2022)	(2) -	6,09	5,42	4,68
♦ Maximum heating capacity	(3) -	3,9	7,8	15,6
Refrigeration circuits	Nr	1	1	1
No. of compressors	Nr	1	1	1
Type of compressors	(4) -	ROT	ROT	ROT
Type of supply fan	(5) -	CFG/EC	CFG/EC	CFG/EC
Number of supply fans	Nr	1	1	1
Type of exhaust fan	(5) -	CFG/EC	CFG/EC	CFG/EC
Number of exhaust fans	Nr	1	1	1
Standard power supply	V	230/1~/50	230/1~/50	230/1~/50
Sound power level	(6) dB(A)	62	65	72
Minimum air flow	m ³ /h	300	700	1400
Maximum air flow	m ³ /h	720	1500	2500

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. Cooling working conditions: indoor air temperature 27°C D.B./19°C W.B., outdoor air temperature 35°C D.B./24°C W.B.

Heating working conditions: indoor air temperature 20°C D.B./12°C W.B., outdoor air temperature 7°C D.B./6°C W.B.

(1) Supply air temperature in cooling 24°C, supply air temperature in heating 20°C

(2) Data according to EN 14511-2022 and external static pressure 50Pa

(3) Supply air humidity ratio 11g/kg in cooling and supply air temperature 30°C in heating

(4) ROT = rotary compressor

(5) CFG = Centrifugal fan; EC = Electronically commutated

(6) Sound power 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 conditions.

accessories

FC Thermal free-cooling (Standard)

PCOSME Constant airflow in supply and exhaust (Standard)

PVARC Variable air flow on supply and exhaust with CO₂ probe

PVARCV Variable air flow on supply and exhaust with CO₂+VOC probe

PPAQC External CO₂ signal management

F7B High efficiency F7 air filter (ISO 16890 ePM1 60%)

FELIFD Electronic filter with iFD technology (ISO 16890 ePM1 90%)

FG3CX Prefiltration for duct installation G3 (ISO 16890 Coarse 40%)

CRC Remote control with user interface (Standard)

IOTX IoT industrial module for cloud based interoperability & services

CUE1 External humidifier control with ON-OFF control

MEAX Absorbed energy meter

ASOFX Kit of antivibration mounts for ceiling installation

APAVX Kit of antivibration mounts for floor installation

Accessories whose code ends with "X" are supplied separately

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

ZEPHIR³

Make-up air unit, full fresh air

With return/exhaust and thermodynamic heat recovery

Reversible heat pump technology

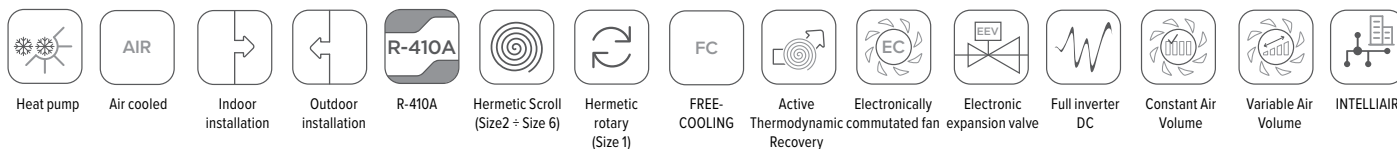
Indoor or outdoor installation

Air flow rate from 1000 to 14000 m³/h

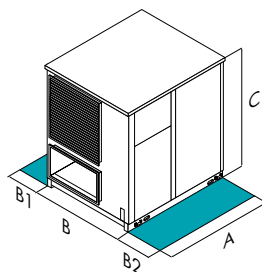


- ✓ Inverter compressors
- ✓ Constant supply of temperature and humidity, both in cooling and heating mode both in cooling and heating mode.
- ✓ Additional available capacity for indoor air conditioning
- ✓ Efficient exhaust air energy recovery and low ventilation consumption thanks to the active thermodynamic 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.

technical data

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

Water loop applications

	VERSATEMP EQV-X	VERSATEMP EVH-X	VERSATEMP EVH-X SPACE
Capacities (A27/W35)	2,1 ÷ 4,1 kW	2,3 ÷ 4,2 kW	8 ÷ 31 kW
ErP compliance			
Vertical cased			
Vertical uncased			
Horizontal uncased			
Outdoor installation			
Heating	✓	✓	✓
Cooling	✓	✓	✓
Thermodynamic energy recovery			

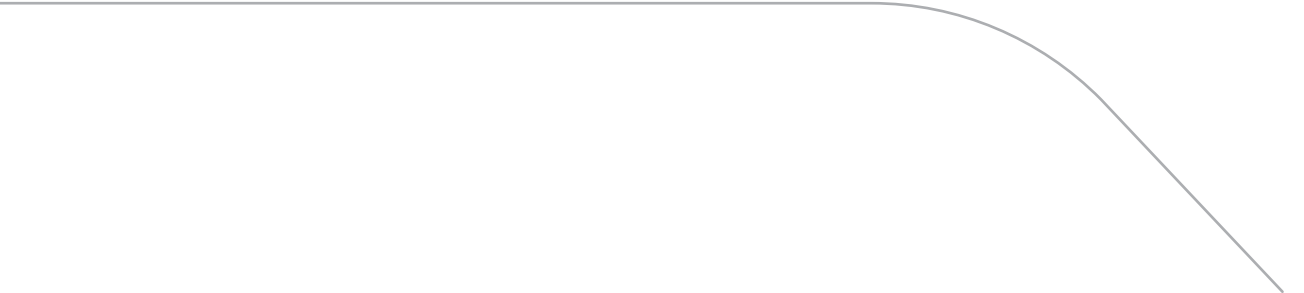
Medium attendance applications

CLIVETPack²

CRH-XHE2

9000-60000 m³/h - 51 ÷ 387 kW





WLHP

WLHP System

System components

SERIES	SIZE FROM	TO	BRAND NAME.	PAGE
Packaged heat pump - water source - internal vertical installation, with or without casing				
EQV-X	5	21	VERSATEMP	120
Packaged heat pump - water source - internal, horizontal, ductable installation				
EVH-X	5	17	VERSATEMP	122
EVH-X SPACE	2.1	12.1	VERSATEMP	124
Packaged heat pump - water source - roof top for medium attendance applications				
CRH-XHE2	14.2	110.4	CLIVETPACK ²	126

VERSATEMP

Direct expansion high efficiency air conditioner

Reversible heat pump

Water cooled

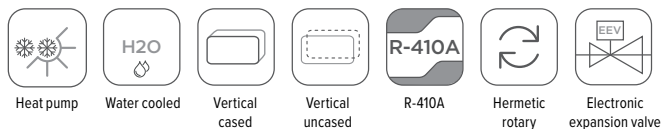
Vertical indoor installation either cased or uncased

Capacity from 2,1 to 4,1 kW

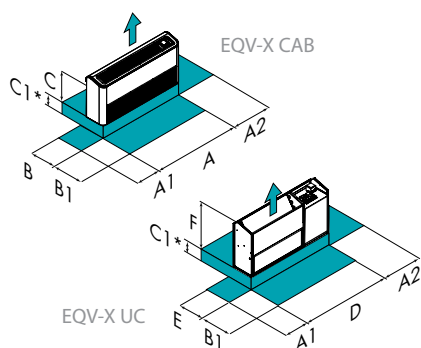


- ✓ Reversible heat pump
- ✓ High efficiency in all the operating conditions
- ✓ Vertical indoor installation either cased or uncased
- ✓ Elegant design and low noise operation
- ✓ Specific hydraulic circuit components for different plant solutions
- ✓ Compliant with main communication protocols
- ✓ Compliant with main communication protocols

functions and features



dimensions and clearances



Size	EQV-X	5	7	9	15	17	21
A - Length	mm	1050	1200	1200	1350	1350	1350
B - Width	mm	240	240	240	240	240	240
C - Height	mm	520	520	520	520	520	520
D - Length	mm	945	1095	1095	1245	1245	1245
E - Width	mm	225	225	225	225	225	225
F - Height	mm	490	490	490	490	490	490
A1	mm	200	200	200	200	200	200
A2	mm	100	100	100	100	100	100
B1	mm	500	500	500	500	500	500
C1	mm	100	100	100	100	100	100
Operating weight	kg	55	61	61	64	64	68

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.

(*) Only for units with floor air inlet

CAUTION!

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

versions and configurations

CONFIGURATION:

UC	Uncased version (without casing) (Standard)
CAB	Configuration with fairing for cased applications

RETURN:

R3	Floor air inlet (Standard)
RF	Front air inlet

technical data

Size	EQV-X	5	7	9	15	17	21
♦ Cooling capacity	(1) kW	2,08	2,39	2,88	3,38	3,75	4,11
Sensible capacity	(1) kW	1,47	1,69	2,12	2,55	2,64	3,05
Compressor power input	(1) kW	0,43	0,56	0,61	0,71	0,77	0,84
Total power input	(1) kW	0,49	0,62	0,67	0,81	0,87	0,96
EER	(1) -	4,19	3,78	4,2	4,09	4,22	4,2
♦ Heating capacity	(2) kW	2,54	3,05	3,55	4,29	4,78	5,1
Compressor power input	(2) kW	0,47	0,63	0,7	0,77	0,92	1,04
Total power input	(2) kW	0,53	0,69	0,76	0,87	1,02	1,16
COP	(2) -	4,91	4,49	4,71	5,05	4,72	4,49
No. of compressors	(3) Nr	1	1	1	1	1	1
Type of compressors	-	ROT	ROT	ROT	ROT	ROT	ROT
Supply air flow rate	(4) m ³ /h	380	460	455	750	750	830
Type of supply fan	(5) -	CFG	CFG	CFG	CFG	CFG	CFG
Water flow (Source side)	l/s	0,12	0,14	0,17	0,19	0,21	0,24
Standard power supply	(6) V	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50
Sound pressure level	dB(A)	41	41	41	45	45	47
Directive Erp (Energy related Products)							
SEER	(7) -	3,99	4,13	4,08	4,02	3,95	4,22
η _{s,c}	(7) -	151,6	157,2	155,2	152,8	150	160,8
SCOP	(7) -	4,15	3,8	3,85	3,8	4,02	3,84
η _{s,H}	(7) -	158	144	146	144	152,8	145,6

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.

Values read in compliance with EN14511:2022 and including the required system fan motor and water pump capacity for overcoming pressure drops inside the unit. DB = dry bulb; WB = wet bulb
 (1) Ambient air 27°C D.B./19°C W.B. Exchanger water temperature 30°C / 35°C
 (2) Ambient air at 20°C D.B./15°C W.B. Water temperature at plate exchanger 20°C input; The water temperature at the exchanger output is read in relation to the flow of water being chilled.

(3) ROT = rotary compressor

(4) CFG = Centrifugal fan

(5) Water flow calculated in relation to the performances in cooling

(6) The sound levels are referred to unit operating at a full load in nominal conditions.

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

accessories

CONT	Electronic room control with display, installed in a visible position on the unit with fairing
CONTX	Electronic room control with display, for installation on the uncased unit
CWMX	Electronic room control with display, for wall installation
CIWMX	Electronic room control with display, for wall installation
MIPC	Hydraulic pipework arrangement for loop with constant flow rate with manual valves
MIPV	Hydraulic pipework arrangement for loop with variable flow rate with 2 way ON-OFF valve
REQV	Constant flow retrofit water connections for EQV, VV, VM units
V2MODX	2-way modulating valve for disposable water system
KFVMX	Two ways modulating valve fixing kit for disposable water system
DAOJX	Air supply duct with flexible connection
GOJX	Air supply grille with flexible connection
FCVBX	Water balancing valve
PFHCX	200 mm flexible pipes for the connection to the water circuit + drop conduit

PFHC1X	500 mm flexible pipes for the connection to the water circuit + drop conduit
IFWX	Steel mesh strainer on the water side
CDPX	Condensate drain pump
CDPA	Condensate drain pump, built-in
FXVFX	Painted plinths for floor fixing
FXVFHX	Floor mounted painted feet kit with front grille
FXPFX	Zinc-coated plinths for floor fixing on uncased unit
FXPMX	Increased zinc-coated plinths for floor fixing on uncased unit
BACKV	Painted rear panel for cased version
MOBA	RS485 serial port with Modbus protocol, built-in
MOBX	Modbus RS485 serial port kit
CMSLWX	LonWorks serial communication module
BACX	BACnet serial communication module
CSVX	Couple of manually operated shut-off valves

Accessories whose code ends with "X" are supplied separately

VERSATEMP

Direct expansion high efficiency air conditioner

Reversible heat pump

Water cooled

Horizontal indoor installation uncased

Capacity from 2,3 to 4,2 kW



- ✓ Reversible heat pump
- ✓ Internal and horizontal installation, ductable
- ✓ High efficiency in all the operating conditions
- ✓ Quiet Operation
- ✓ Specific hydraulic circuit components for different plant solutions
- ✓ Compliant with main communication protocols
- ✓ Compliant with main communication protocols



compliant
ErP

functions and features



Heat pump



Water cooled



Horizontal:
uncased



R-410A

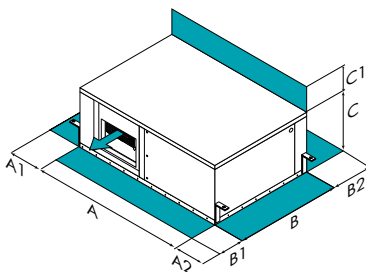


Hermetic
rotary



Electronic
expansion valve

dimensions and clearances



Size	▶▶ EVH-X	5	7	9	11	15	17
A - Length	mm	1034	1034	1034	1034	1034	1034
B - Width	mm	513	513	513	513	513	513
C - Height	mm	361	361	361	386	386	386
A1	mm	100	100	100	100	100	100
A2	mm	350	350	350	350	350	350
B1	mm	350	350	350	350	350	350
B2	mm	350	350	350	350	350	350
C1	mm	100	100	100	100	100	100
Operating weight	kg	71	73	74	77	81	82

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.

technical data

Size	▶ EVH-X		5	7	9	11	15	17
A27/19 W30								
◆ Cooling capacity	(1)	kW	2,26	2,83	3,16	3,45	3,87	4,16
Sensible cooling capacity		kW	1,91	2,41	2,75	2,93	3,22	3,5
Total power input		kW	0,54	0,66	0,74	0,77	0,85	0,92
EER (EN 14511:2022)		-	4,22	4,27	4,28	4,5	4,54	4,51
A20 W20								
◆ Heating capacity	(2)	kW	2,76	3,38	3,85	4,15	4,5	4,92
Total power input		kW	0,55	0,65	0,77	0,82	0,94	1,06
COP (EN 14511:2022)		-	4,99	5,2	4,97	5,05	4,81	4,66
A20 W15								
◆ Heating capacity	(3)	kW	2,46	2,97	3,33	3,66	3,98	4,42
Total power input		kW	0,55	0,63	0,72	0,8	0,89	1,02
COP (EN 14511:2022)		-	4,42	4,6	4,47	4,59	4,4	4,3
No. of compressors		Nr	1	1	1	1	1	1
Type of compressors	(4)	-	ROT	ROT	ROT	ROT	ROT	ROT
Supply air flow rate		m³/h	533	533	612	684	800	800
Type of supply fan	(5)	-	CFG	CFG	CFG	CFG	CFG	CFG
Number of supply fans		Nr	1	1	1	1	1	1
Max. static pressure supply fan		Pa	40	40	40	40	40	40
Water flow (Source side)		l/s	0,13	0,16	0,18	0,2	0,22	0,24
Standard power supply		V	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50
Sound pressure level	(7)	dB(A)	33	33	34	34	34	35
Directive Erp (Energy related Products)								
SEER	(8)	-	3,75	4,06	3,9	4,1	4,05	4,18
η _{s,c}	(8)	-	142	154,4	148	156	154	159,2
SCOP	(8)	-	3,41	3,9	3,63	3,77	3,97	4,05
η _{s,H}	(8)	-	128,4	148	137,2	142,8	150,8	154

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.

Values read in compliance with EN14511:2022 and including the required system fan motor and water pump capacity for overcoming pressure drops inside the unit.

(1) Ambient air 27°C D.B./19°C W.B. Exchanger water temperature 30°C / 35°C

(2) Ambient air 20°C D.B. Exchanger inlet water temperature 20°C. The water temperature at the exchanger output is read in relation to the flow of water being chilled.

(3) Ambient air 20°C D.B. Exchanger inlet water temperature 15°C. The water temperature at the exchanger output is read in relation to the flow of water being chilled.

(4) ROT = rotary compressor

(5) CFG = Centrifugal fan

(6) Water flow calculated in relation to the performances in cooling

(7) Sound levels refer to the unit at full load installed on the ceiling, ducted, with minimum, standard and maximum air flow rate of the fan. Available static pressure 40 Pa. In accordance with the UNI-EN ISO 3744 regulation, the average sound pressure level refers to a distance of 1 m from the outer surface of a ducted unit installed on the ceiling. Measurements are made in accordance to the UNI EN ISO 9614-2, with units installed over two sound reflective surfaces

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

accessories

CWMX	Electronic room control with display, for wall installation
CIWMX	Electronic room control with display, for wall installation
V2MODX	2-way modulating valve for disposable water system
V2ONX	2-way ON-OFF valve for variable flow-rate loop
TPF	Filter-holder frame with lateral and bottom exhaust
AMMX	Spring antivibration mounts
DAOJX	Air supply duct with flexible connection
DAIX	Return air duct
DAOIX	Air discharge and intake duct
FCVBX	Water balancing valve
VIFWX	Steel mesh strainer and hand shut-off valve

PFHCX	200 mm flexible pipes for the connection to the water circuit + drop conduit
PFHC1X	500 mm flexible pipes for the connection to the water circuit + drop conduit
CDPX	Condensate drain pump
MOBA	RS485 serial port with Modbus protocol, built-in
MOBX	Modbus RS485 serial port kit
CMSLWX	LonWorks serial communication module
BACX	BACnet serial communication module
VIMANX	Hand shut-off valve
BPH2OX	Shut-off valve for by-pass (water side)

Accessories whose code ends with "X" are supplied separately

VERSATEMP

Packaged air-conditioning unit

Reversible heat pump
Water cooled
Horizontal indoor installation
Ductable

Capacity from 4,8 to 30,8 kW



- ✓ Reversible heat pump
- ✓ Internal and horizontal installation, ductable
- ✓ High efficiency in all the operating conditions
- ✓ Air supply available in line or with angle at 90°.
- ✓ Specific hydraulic circuit components for different plant solutions
- ✓ Compliant with main communication protocols
- ✓ Compliant with main communication protocols



compliant
ErP

functions and features



Heat pump



Water cooled



Horizontal:
uncased



R-410A

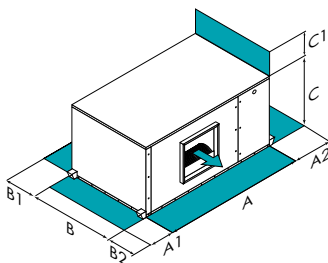


Hermetic rotary
(size 2.1-5.1)



Hermetic Scroll
(size 7.1-12.1)

dimensions and clearances



Size	▶▶ EVH-X SPACE	2.1	3.1	5.1	7.1	10.1	12.1
A - Length	mm	962	962	1167	1167	1467	1467
B - Width	mm	692	692	802	802	927	927
C - Height	mm	490	490	590	590	705	705
A1	mm	800	800	800	800	800	800
A2	mm	800	800	800	800	800	800
B1	mm	800	800	800	800	800	800
B2	mm	800	800	800	800	800	800
C1	mm	10	10	10	10	10	10
Operating weight	kg	98	103	138	151	200	225

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

APPLICATION

W	Water Loop Heat Pump application (Standard)
PW	Once-through water application

technical data

Size		EVH-X SPACE	2.1	3.1	5.1	7.1	10.1	12.1
♦ Cooling capacity	(1)	kW	4,81	8,46	11,2	17,9	25,9	30,8
Sensible capacity	(1)	kW	3,74	6,44	8,84	13,9	20	22,4
Compressor power input	(1)	kW	0,96	1,61	2,27	3,07	4,74	5,36
EER	(1)	-	3,59	4,05	3,58	4,17	4,24	3,97
♦ Heating capacity	(2)	kW	7,06	9,83	13,5	22,1	32,3	36,4
Compressor power input	(2)	kW	1,46	1,99	2,56	4,02	6,04	6,23
COP	(2)	-	4,01	4,1	3,97	4,17	4,42	4,23
Refrigeration circuits		Nr	1	1	1	1	1	1
No. of compressors		Nr	1	1	1	1	1	1
Type of compressors		-	ROT	ROT	ROT	SCROLL	SCROLL	SCROLL
Supply air flow rate		m ³ /h	1000	1500	2800	3800	4900	6000
Type of supply fan	(3)	-	CFG	CFG	CFG	CFG	CFG	CFG
Number of supply fans		Nr	1	1	1	1	1	1
Max. static pressure supply fan	(4)	Pa	250	270	290	310	220	410
Water flow (Source side)		l/s	0,27	0,47	0,64	1	1,47	1,72
Standard power supply		V	230/1~/50	230/1~/50	230/1~/50	400/3~/50+N	400/3~/50+N	400/3~/50+N
Sound pressure level	(5)	dB(A)	37	42	44	49	47	50
Directive Erp (Energy related Products)								
SEER	(6)		3,28	3,93	3,57	4,23	4,47	3,97
η _{sc}	(6)		123,1	149,1	134,9	161,3	170,8	150,9
SCOP	(6)		3,81	3,82	3,81	3,91	4,08	4,01
η _{sh}	(6)		144,4	144,8	144,4	148,4	155,2	152,4

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.

- (1) Ambient air 26°C DB / 19°C WB; Exchanger inlet water 30°C; Exchanger water outlet 35°C
 (2) Ambient temperature 20°C; Exchanger water outlet 10°C
 (3) CFG = Centrifugal fan

- (4) Max available static pressure with standard electrofan at min speed and nominal air flow; According to the variability of the voltage also the value of capacity and head pressure
 (5) Sound levels refer to units with full load under nominal test conditions. The sound pressure is measured at 1 m from the external surface of the unit in open field conditions
 (6) Data calculated according to the EN 14825:2022

accessories

APFLX	Filter holder with access from the lower side
CDPX	Condensate drain pump
VIFWX	Steel mesh strainer and hand shut-off valve
FCVBX	Water balancing valve
V20NX	2-way ON-OFF valve for variable flow-rate loop
BPH20X	Shut-off valve for by-pass (water side)
V2MANX	Two-way manually actuated valves for constant water flow loop
V2MODX	2-way modulating valve for disposable water system

FLOX	Water control flow switch
MOBX	Modbus RS485 serial port kit
CSMSLWX	LonWorks serial communication module
BACX	BACnet serial communication module
CWMX	Electronic room control with display, for wall installation
CIWMX	Electronic room control with display, for wall installation
AMMX	Spring antivibration mounts
PCFMO	Panels with M0 reaction to fire class

Accessories whose code ends with "X" are supplied separately

CLIVETPACK²

Packaged air-conditioning unit

Reversible heat pump

Water cooled

Roof Top

Capacity from 51 to 412 kW



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

functions and features



Heat pump



Water cooled



Outdoor
installation



R-410A



Hermetic
Scroll



FREE-
COOLING



THOR
(Thermodynamic
Overboost
Recovery)



Electronically
commutated
Fan



Electronic
expansion
valve



Constant
Airflow

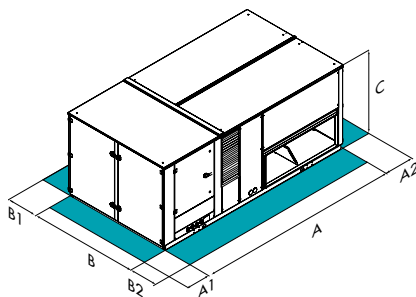


Variable
Airflow



INTELLIAIR

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	▶▶ 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
CAK	B - Width	mm	2300	2300	2300	2300	2300	2300	2300
CAK	C - Height	mm	1405	1405	1405	1405	1405	1705	1705
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	1396	1456	1530	1549	1559	1602	1636

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
CAK	B - Width	mm	2300	2300	2300	2300	2300	2300	2300
CAK	C - Height	mm	2250	2250	2250	2250	2250	2250	2250
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	2080	2397	2613	2672	3074	3245	3461

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

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

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	-	m ³ /h	9000	11500	13500	15000	17000	18500	21000	23000
Airflow range	-	m ³ /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 _{sc}	(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 _{sh}	(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	-	m ³ /h	26000	29000	33000	37000	44000	51000	56000	60000
Airflow range	-	m ³ /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	6	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 _{sc}	(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 _{sh}	(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

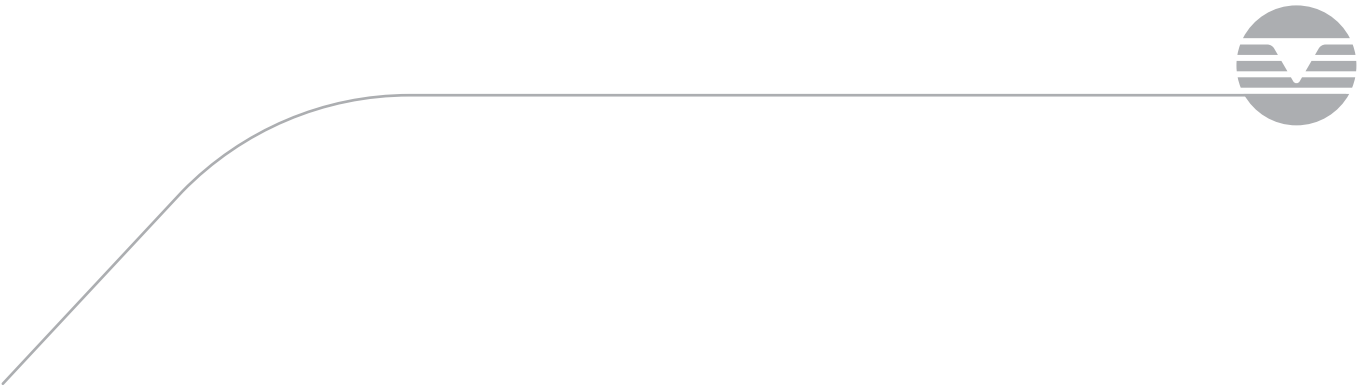
(6) Nominal water capacity determined in function of the cooling power

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

accessories

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

Accessories whose code ends with "X" are supplied separately



Commercial



AURA

ELFOSpace BOX3

MOOD

Capacities (A27/W7)

1,5 ÷ 8,2 kW

3 ÷ 11 kW

2,7 ÷ 4,9 kW

ErP compliance
(heat pumps only)



Vertical cased



Horizontal cased



Vertical uncased



Horizontal uncased



2 pipe



4 pipe



DC Motor



High head

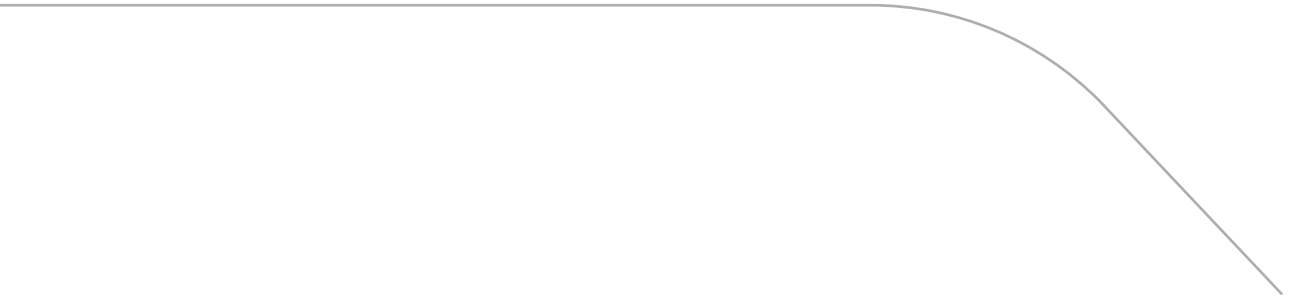


RS485 Connection



Commercial and Industrial

	SAHU	AQX	CLA
Air flow rate	1500÷15000 m ³ /h	1260÷160000 m ³ /h	1260÷160000 m ³ /h
			
Product		 	
Size	8	32, 50 mm pitch	32, 50 mm pitch
Frame / Panels	Thermal cut / Double wall 40 mm thick	Thermal cut / Double wall 50/60 mm thick	Thermal cut / Double wall 50/60 mm thick
Fans / Motors	Centrifugal units with belt drive and pulley, and EC fan plug	Centrifugal and Plug fan / Asynchronous, Inverter, EC electronic control	Centrifugal and Plug fan / Asynchronous, Inverter, EC electronic control
Exchangers	Water / Direct expansion	Water / High pressure hot water / Steam / Direct expansion	Water / High pressure hot water / Steam / Direct expansion
Heat recovery section		Crossover flows / Rotary / Run-Around	Crossover flows / Rotary / Run-Around
Versions	Horizontal / Vertical	Hygienic / With controls	Hygienic / With controls



FANCOILS - UTA

System components

SERIES	SIZE FROM	TO	BRAND NAME.	PAGE
Water terminal units				
CFF	1	12	AURA	134
CFFA	1	12	AURA	138
CFK	007.0	041.0	ELFOSPACE BOX3	142
CFW-2	1	5	MOOD	146
Air handling units				
SAHU	1	8	SAHU	148
AQX	1	32	-	150
CLA	1	32	-	152

AURA

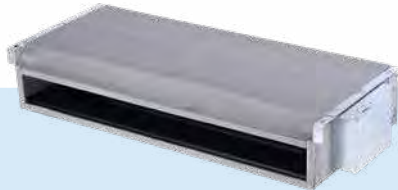
Water terminal unit

By water

DC fan

Reversible hydraulic connections on site

Capacity from 1,5 to 8,2 kW



CFFU
uncased



CFFC
cased



Clivet participates in the ECP Programme for "Fan Coil". Check ongoing validity of certificate on www.eurovent-certification.com



- ✓ Compact and quiet, with an elegant design suitable for any room
- ✓ Cased and uncased installation, vertical and horizontal, bottom and front return
- ✓ Versions for 2-pipe and 4-pipe systems
- ✓ DC technology for energy savings up to 70%
- ✓ Reversible hydraulic connections on site

functions and features



Cool & heat



Vertical
cased



Vertical:
uncased



Horizontal:
cased



Horizontal:
uncased



Water

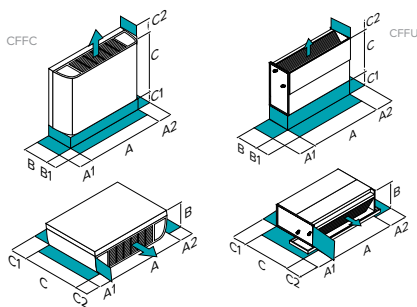


Control4 NRG
management



DC Motor

dimensions and clearances



Size			1	2	3	4	5	6	8	9	10	12	
CFFC (cased)	DIMENSIONS	TO	mm	790	790	1020	1020	1240	1240	1240	1360	1360	1360
		B	mm	200	200	200	200	200	200	200	200	200	200
		C	mm	495	495	495	495	495	495	495	495	495	591
	CLEARANCES	A1	mm	150	150	150	150	150	150	150	150	150	150
		A2	mm	150	150	150	150	150	150	150	150	150	150
		C1 (R3 only)	mm	90	90	90	90	90	90	90	90	90	90
WEIGHT	CFFC CC2 R3	kg	18	18,5	21,5	22	-	26,5	26,5	-	29,5	34,5	
	CFFC CC4 R3	kg	-	-	22,5	-	27	-	-	30	-	-	
CFFU (uncased)	DIMENSIONS	TO	mm	628	628	858	858	1078	1078	1078	1198	1198	1198
		B	mm	200	200	200	200	200	200	200	200	200	200
		C	mm	455	455	455	455	455	455	455	455	455	551
	CLEARANCES	A1	mm	150	150	150	150	150	150	150	150	150	150
		A2	mm	150	150	150	150	150	150	150	150	150	150
		C1	mm	90	90	90	90	90	90	90	90	90	90
WEIGHT	CFFU CC2 R3	kg	11,8	12,1	13,9	14,8	-	18,2	18,2	-	20,8	24,3	
	CFFU CC4 R3	kg	-	-	15,3	-	18,7	-	-	21,3	-	-	

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.

versions and configurations

VERSION:

CCFC	Cased version for vertical and horizontal installation
CCFU	Uncased version for vertical and horizontal installation

TYPE OF SYSTEM:

CC2	2-pipe (Standard)
CC4	4-pipe

RETURN:

R3	Return from the bottom (vertical installation / from the back (horizontal installation) (Standard)
RF	Air return from the front (vertical installation) / from the bottom (horizontal installation)

HYDRAULIC CONNECTIONS

SX	Pipes connection on the left (Standard)
DX	Right side fittings

BUILT-IN VALVES

-	not required (Standard)
3V2	3-way ON/OFF valves for 2-pipe version
3V4	3-way ON/OFF valves for 4-pipe version

BUILT-IN THERMOSTAT:

NOHMI	not required (Standard)
HMIDM	KJRP-75 control mounted on board

technical data

Size	CFE	1*	2	3*	4	6	8*	10*	12*
2 pipe									
High speed									
Air flow rate	m ³ /h	255	255	400	425	595	800	1190	1300
♦ Cooling capacity	(1) kW	1,5	1,95	2,35	2,85	3,9	4,85	6,35	8,25
Sensible capacity	(1) kW	1,14	1,42	1,79	2,06	2,9	3,63	4,98	6,12
Water flow-rate	(1) l/h	260	330	400	490	670	830	1090	1430
Water pressur drop	(1) kPa	13,94	27,2	13,33	26,01	37,4	54,33	32,77	71,43
♦ Heating capacity	(2) kW	1,57	2,05	2,6	2,95	4	5,25	7,05	8,7
Water flow-rate	(2) l/h	270	350	450	510	700	910	1220	1510
Water pressur drop	(2) kPa	15,1	25,34	14,31	24,38	36,52	53,44	37,61	62,61
Total power input	W	15	19	16	18	28	47	87	106
Medium speed									
Air flow rate	m ³ /h	170	210	315	300	450	600	875	980
♦ Cooling capacity	(1) kW	1,06	1,66	1,94	2,13	3,2	3,92	5,19	6,65
Sensible capacity	(1) kW	0,77	1,19	1,44	1,51	2,35	2,85	3,98	4,82
Water flow-rate	(1) l/h	180	280	340	370	550	670	900	1140
Water pressur drop	(1) kPa	8,21	20,88	9,98	15,06	25,91	36,81	21,75	46,17
Heating capacity	(2) kW	1,07	1,75	2,11	2,15	3,22	4,09	5,61	6,81
Water flow-rate	(2) l/h	190	300	370	370	560	710	980	1180
Water pressur drop	(2) kPa	7,63	19,65	10,33	13,65	25,34	36,54	25,47	41,06
Total power input	W	9	14	11	11	17	25	44	51
Low speed									
Air flow rate	m ³ /h	150	150	190	190	310	420	530	680
♦ Cooling capacity	(1) kW	0,92	1,21	1,19	1,41	2,43	2,93	3,62	4,84
Sensible capacity	(1) kW	0,66	0,85	0,86	0,96	1,72	2,08	2,68	3,42
Water flow-rate	(1) l/h	160	210	210	240	420	510	630	830
Water pressur drop	(1) kPa	6,16	12,2	4,59	7,41	15,37	21,77	11,43	25,39
♦ Heating capacity	(2) kW	0,92	1,25	1,34	1,42	2,39	3,04	3,83	4,85
Water flow-rate	(2) l/h	160	220	230	240	410	530	670	830
Water pressur drop	(2) kPa	5,84	10,25	4,5	6,64	14,22	20,47	12,5	21,68
Total power input	W	8	9	7	8	10	13	18	22
Standard power supply	V/n°/Hz	220-240/1/50							
Type of supply fan	(3)	CFG							
No. of supply fan	-	1	1	2	2	2	2	3	3
H Sound pressure level	(4) dB(A)	34	39	29	32	40	45	50	50
M Sound pressure level	(4) dB(A)	24	33	24	23	34	39	43	43
L Sound pressure level	(4) dB(A)	21	25	18	19	30	30	31	33
H Sound power level	(4) dB(A)	47	52	43	46	52	59	62	63
M Sound power level	(4) dB(A)	36	46	37	37	45	51	56	57
L Sound power level	(4) dB(A)	34	38	29	29	36	43	46	47

Airflow with free outlet (0 Pa static pressure)

(1) Entering exchanger water 7°C (temperature differential 5°C) - Ambient air 27°C D.B. / 19°C W.B.
 (2) Entering exchanger water 45°C (temperature differential 5°C) - Ambient air 20°C

(3) CFG = Centrifugal fan

(4) Sound levels tested in anechoic chamber and referring to units for 2-pipe systems. The sound pressure level refers to 1 m from the external surface of the unit operating in the open field

* RF version available while stocks last

technical data

Size	CFF	3*	5*	9*	
4 pipe					
High speed					
Air flow rate		m ³ /h	425	595	1190
♦ Cooling capacity	(1)	kW	2,7	3,8	6,05
Sensible capacity	(1)	kW	1,9	2,8	4,8
Water flow-rate	(1)	l/h	460	650	1040
Water pressur drop	(1)	kPa	16,97	39,17	53,66
♦ Heating capacity	(2)	kW	2,3	2,88	4,6
Water flow-rate	(2)	l/h	200	250	390
Water pressur drop	(2)	kPa	28,16	55,37	132,32
Total power input		W	20	29	92
Medium speed					
Air flow rate		m ³ /h	280	461	887
♦ Cooling capacity	(1)	kW	1,94	3,18	5
Sensible capacity	(1)	kW	1,3	2,3	3,88
Water flow-rate	(1)	l/h	330	550	860
Water pressur drop	(1)	kPa	9,73	28,35	36,96
Heating capacity	(2)	kW	1,78	2,49	3,95
Water flow-rate	(2)	l/h	150	210	340
Water pressur drop	(2)	kPa	18,45	43	104,19
Total power input		W	11	17	46
Low speed					
Air flow rate		m ³ /h	158	324	564
♦ Cooling capacity	(1)	kW	1,1	2,32	3,43
Sensible capacity	(1)	kW	0,7	1,61	2,53
Water flow-rate	(1)	l/h	190	400	590
Water pressur drop	(1)	kPa	3,51	16,91	19,07
♦ Heating capacity	(2)	kW	1,22	2	3,02
Water flow-rate	(2)	l/h	100	170	260
Water pressur drop	(2)	kPa	10,08	29,2	63,73
Total power input		W	8	11	19
Standard power supply		V/n°/Hz	220-240/1/50		
Type of supply fan	(3)	-	CFG		
No. of supply fan		-	2	2	3
H Sound pressure level	(4)	dB(A)	32	40	50
M Sound pressure level	(4)	dB(A)	23	34	43
L Sound pressure level	(4)	dB(A)	19	30	31
H Sound power level	(4)	dB(A)	46	52	62
M Sound power level	(4)	dB(A)	37	45	56
L Sound power level	(4)	dB(A)	29	36	46

Airflow with free outlet (0 Pa static pressure)

(1) Entering exchanger water 7°C (temperature differential 5°C) - Ambient air 27°C D.B. / 19°C W.B.
 (2) Entering exchanger water 65°C (temperature differential 10°C) - Ambient air 20°C

(3) CFG = Centrifugal fan

(4) Sound levels tested in anechoic chamber and referring to units for 2-pipe systems. The sound pressure level refers to 1 m from the external surface of the unit operating in the open field

* RF version available while stocks last

accessories

3V2SX/3V2DX Three-way valve kit for 2-pipe type "on/off" system
 (3V2SX for left side fittings / 3V2DX for right side fittings)

3V4SX/3V4DX Three-way valve kit for 4-pipe type "on/off" system
 (3V4SX for left side fittings / 3V4DX for right side fittings)

COADX Pair of adapters 3/4 F Eurokonus > 1/2 female (for 2-pipe units) **PREVIEW**

BRVHX Auxiliary condensate collection tray ausiliaria for vertical/horizontal installation

KPDX Plinth kit

CCM09 Wired centraliser with weekly scheduler

KJR90X KJR-90D electronic room control for wall installation

PROL5X 5-metre extension lead for connecting the KJR-90D electronic wall-mounted room controller **PREVIEW**

CCM30-BX Touch-key indoor units' centralized controller

KJR150X Indoor units' group controller

HMIFDCX KJRP-75A electronic wired control for on-board or wall-mounted assembly (for DC versions)

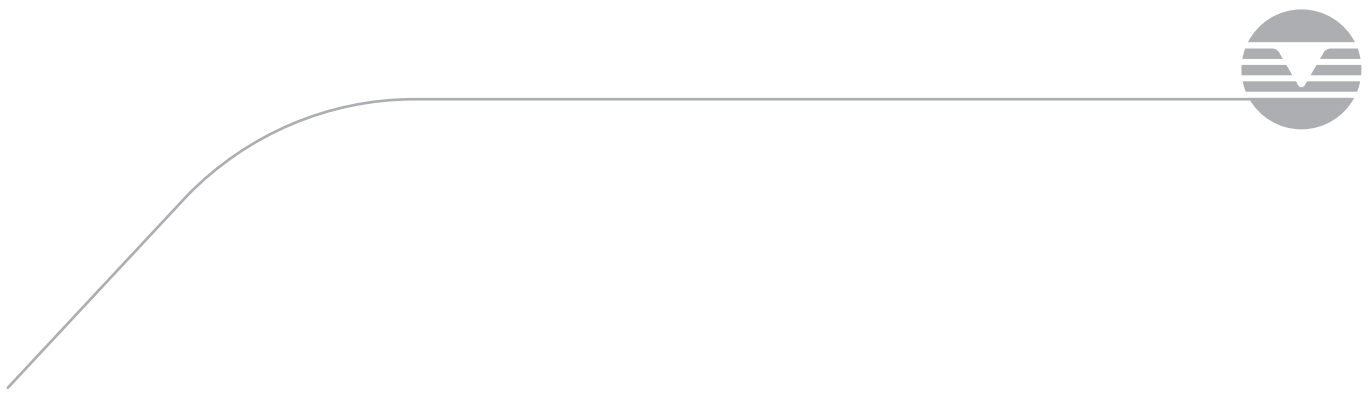
EXTENX KJRP-75 wired control connection cable extension (2m)

CCM-180A/WS Central controller for wall mounting weekly timer 6.2"

CCM-270A/WS Central controller for wall mounting weekly timer 10.1"

KCMDX Motor connection cables for units with connections on the right (for DC versions and size 9-10-12)

Accessories whose code ends with "X" are supplied separately



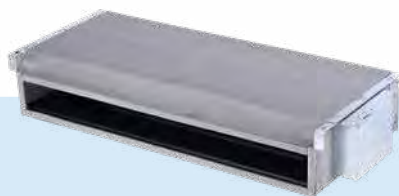
AURA

Water terminal unit

By water

Reversible hydraulic connections on site

Capacity from 1,6 to 8,2 kW



CFFAU
uncased



CFFAC
cased

- ✓ Compact and quiet, with an elegant design suitable for any room
- ✓ Cased and uncased installation, vertical and horizontal, bottom and front return
- ✓ Versions for 2-pipe and 4-pipe systems
- ✓ Can be easily managed by external control systems
- ✓ Reversible hydraulic connections on site



Clivet participates in the ECP Programme for "Fan Coil". Check ongoing validity of certificate on www.eurovent-certification.com



functions and features



Cool & heat



Vertical cased



Vertical uncased



Horizontal: cased



Horizontal: uncased

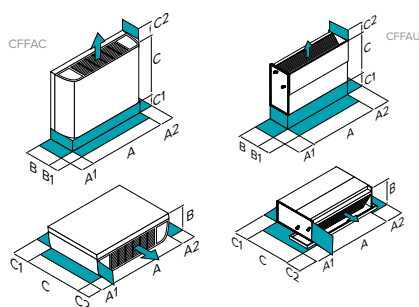


Water



Control4NRG management

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		CFFA	1	2	3	4	5	6	8	9	10	12
CFFAC (cased)	DIMENSIONS	A - Length	mm 790	790	1020	1020	1240	1240	1240	1360	1360	1360
		B - Width	mm 200	200	200	200	200	200	200	200	200	200
		C - Height	mm 495	495	495	495	495	495	495	495	495	591
	CLEARANCES	A1	mm 150	150	150	150	150	150	150	150	150	150
		A2	mm 150	150	150	150	150	150	150	150	150	150
		C1 (R3 only)	mm 90	90	90	90	90	90	90	90	90	90
WEIGHT	CFFAC CC2 R3	kg 16,3	16,7	20	20,8	-	25,4	26,3	-	28,5	34	-
	CFFAC CC4 R3	kg -	-	21,3	-	25,9	-	-	29	-	-	-
CFFAU (uncased)	DIMENSIONS	A - Length	mm 628	628	858	858	1078	1078	1078	1198	1198	1198
		B - Width	mm 200	200	200	200	200	200	200	200	200	200
		C - Height	mm 455	455	455	455	455	455	455	455	455	551
	CLEARANCES	A1	mm 150	150	150	150	150	150	150	150	150	150
		A2	mm 150	150	150	150	150	150	150	150	150	150
		C1	mm 90	90	90	90	90	90	90	90	90	90
WEIGHT	CFFAU CC2 R3	kg 11,6	12	13,9	14,8	-	18,2	18,8	-	21,7	25,2	-
	CFFAU CC4 R3	kg -	-	15,3	-	18,7	-	-	22,2	-	-	-

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.

versions and configurations

VERSION:

- CFFAC** Cased version for vertical and horizontal installation
CFFAU Uncased version for vertical and horizontal installation

TYPE OF SYSTEM:

- CC2** 2-pipe (Standard)
CC4 4-pipe

RETURN:

- R3** Return from the bottom (vertical installation / from the back (horizontal installation) (Standard)
RF Air return from the front (vertical installation) / from the bottom (horizontal installation)

HYDRAULIC CONNECTIONS

- SX** Pipes connection on the left (Standard)
DX Right side fittings

BUILT-IN VALVES

- not required (Standard)
3V2 3-way ON/OFF valves for 2-pipe version
3V4 3-way ON/OFF valves for 4-pipe version

BUILT-IN THERMOSTAT:

- NOHMI** not required (Standard)
HMIAM KJRP-86R control mounted on board

technical data

Size	CFFA	1*	2	3*	4	6	8*	10*	12*
2 pipe									
High speed									
Air flow rate	m ³ /h	255	255	400	425	595	800	1150	1300
♦ Cooling capacity	(1) kW	1,65	2,25	2,65	3,05	4,2	5,35	6,75	8,25
Sensible capacity	(1) kW	1,25	1,65	2,05	2,23	3,05	3,96	5,09	6,08
Water flow-rate	(1) l/h	280	390	450	520	720	920	1160	1410
Water pressur drop	(1) kPa	15,75	33,19	18,03	26,71	41,15	61,48	40,26	64,72
♦ Heating capacity	(2) kW	1,85	2,35	3,05	3,15	4,3	5,7	7,15	8,5
Water flow-rate	(2) l/h	320	400	520	540	740	980	1230	1460
Water pressur drop	(2) kPa	15,13	33,19	17,56	23,31	37,2	60,89	42,16	61,96
Total power input	W	35	40	47	47	51	91	110	118
Medium speed									
Air flow rate	m ³ /h	165	192	273	284	450	574	885	1132
♦ Cooling capacity	(1) kW	1,22	1,85	2,02	2,26	3,38	4,25	5,8	7,52
Sensible capacity	(1) kW	0,88	1,35	1,5	1,61	2,43	3,08	4,36	5,53
Water flow-rate	(1) l/h	210	320	350	390	580	730	1000	1290
Water pressur drop	(1) kPa	9,33	22,37	11,18	15,66	27,07	41,44	29,2	55,03
Heating capacity	(2) kW	1,29	1,87	2,24	2,28	3,43	4,36	5,81	7,6
Water flow-rate	(2) l/h	220	320	380	390	590	750	1000	1300
Water pressur drop	(2) kPa	8,22	22,37	10,28	12,57	24,5	37,73	28,68	47,46
Total power input	W	17	24	26	26	32	54	89	104
Low speed									
Air flow rate	m ³ /h	142	139	180	184	319	404	591	836
♦ Cooling capacity	(1) kW	1,09	1,4	1,4	1,58	2,48	3,31	4,24	5,87
Sensible capacity	(1) kW	0,78	1	1,02	1,08	1,73	2,34	3,12	4,21
Water flow-rate	(1) l/h	190	240	240	270	430	570	730	1010
Water pressur drop	(1) kPa	7,37	4,64	5,48	8,42	15,71	26,62	16,15	34,88
♦ Heating capacity	(2) kW	1,13	1,42	1,52	1,6	2,52	3,31	4,3	5,9
Water flow-rate	(2) l/h	190	240	260	280	430	570	740	1020
Water pressur drop	(2) kPa	6,64	4,64	5,43	6,11	13,75	21,79	14,66	28,84
Total power input	W	14	15	14	14	19	35	64	82
Standard power supply	V/n°/Hz	220-240/1/50							
Type of supply fan	(3)	CFG							
No. of supply fan	-	1	1	2	2	2	2	3	3
H Sound pressure level	(4) dB(A)	35	42	34	34	40	47	50	50
M Sound pressure level	(4) dB(A)	24	35	24	25	35	40	44	45
L Sound pressure level	(4) dB(A)	21	27	18	19	31	31	33	37
H Sound power level	(4) dB(A)	47	53	46	47	52	59	62	63
M Sound power level	(4) dB(A)	35	47	37	38	45	51	56	58
L Sound power level	(4) dB(A)	34	39	31	32	37	43	46	50

Airflow with free outlet (0 Pa static pressure)

(1) Entering exchanger water 7°C (temperature differential 5°C) - Ambient air 27°C D.B. / 19°C W.B.
 (2) Entering exchanger water 45°C (temperature differential 5°C) - Ambient air 20°C

(3) CFG = Centrifugal fan

(4) Sound levels tested in anechoic chamber and referring to units for 2-pipe systems. The sound pressure level refers to 1 m from the external surface of the unit operating in the open field

* RF version available while stocks last

technical data

Size	CFFA	3*	5*	9*	
4 pipe					
High speed					
Air flow rate		m ³ /h	425	595	1150
♦ Cooling capacity	(1)	kW	2,89	4,09	6,4
Sensible capacity	(1)	kW	2,05	2,94	4,9
Water flow-rate	(1)	l/h	500	700	1100
Water pressur drop	(1)	kPa	21,38	47,7	63,05
♦ Heating capacity	(2)	kW	2,45	2,95	4,65
Water flow-rate	(2)	l/h	210	250	400
Water pressur drop	(2)	kPa	31,95	58,17	135,21
Total power input		W	47	51	110
Medium speed					
Air flow rate		m ³ /h	284	430	885
♦ Cooling capacity	(1)	kW	2,05	3,35	5,59
Sensible capacity	(1)	kW	1,39	2,38	4,25
Water flow-rate	(1)	l/h	350	570	960
Water pressur drop	(1)	kPa	11,95	33,04	48,47
Heating capacity	(2)	kW	1,7	2,5	4,09
Water flow-rate	(2)	l/h	150	210	350
Water pressur drop	(2)	kPa	16,83	43,35	111,75
Total power input		W	26	32	89
Low speed					
Air flow rate		m ³ /h	184	319	591
♦ Cooling capacity	(1)	kW	1,25	2,35	4
Sensible capacity	(1)	kW	0,84	1,6	2,95
Water flow-rate	(1)	l/h	210	400	690
Water pressur drop	(1)	kPa	4,99	18,22	27,23
♦ Heating capacity	(2)	kW	1,19	2	3,19
Water flow-rate	(2)	l/h	100	170	270
Water pressur drop	(2)	kPa	9,52	29,2	70,91
Total power input		W	14	19	64
Standard power supply		V/n°/Hz	220-240/1/50		
Type of supply fan	(3)	-	CFG		
No. of supply fan		-	2	2	3
H Sound pressure level	(4)	dB(A)	34	40	50
M Sound pressure level	(4)	dB(A)	25	33	44
L Sound pressure level	(4)	dB(A)	19	24	33
H Sound power level	(4)	dB(A)	47	52	62
M Sound power level	(4)	dB(A)	38	45	56
L Sound power level	(4)	dB(A)	32	37	46

Airflow with free outlet (0 Pa static pressure)

(1) Entering exchanger water 7°C (temperature differential 5°C) - Ambient air 27°C D.B. / 19°C W.B.
 (2) Entering exchanger water 65°C (temperature differential 10°C) - Ambient air 20°C

(3) CFG = Centrifugal fan

(4) Sound levels tested in anechoic chamber and referring to units for 2-pipe systems. The sound pressure level refers to 1 m from the external surface of the unit operating in the open field

* RF version available while stocks last

accessories

3V2SX/3V2DX Three-way valve kit for 2-pipe type "on/off" system
 (3V2SX for left side fittings / 3V2DX for right side fittings)

3V4SX/3V4DX Three-way valve kit for 4-pipe type "on/off" system
 (3V4SX for left side fittings / 3V4DX for right side fittings)

COADX Pair of adapters 3/4 F Eurokonus > 1/2 female (for 2-pipe units) *PREVIEW*

BRVHX Auxiliary condensate collection tray for vertical/horizontal installation

KPDX Plinth kit

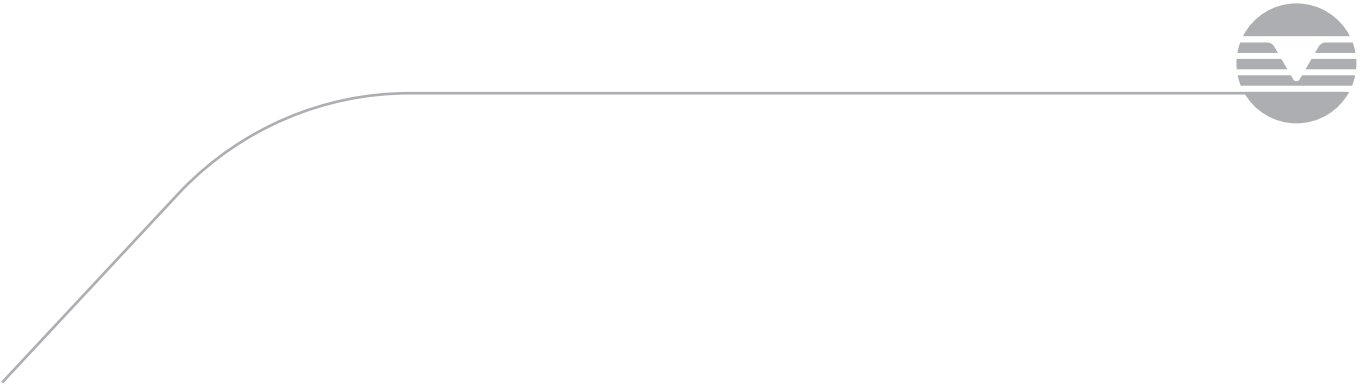
DCPRX Power interface to control 4 Fancoils for 2-4 systems

HMIFACX KJRP-86R wired controller for on-board or wall installation

BOXX Wall installation with concealed box KJRP-86R

HIDI9X Electro-mechanical thermostat for semi-uncased wall installation with display and built-in temperature probe

Accessories whose code ends with "X" are supplied separately



ELFOSPACE BOX3

Water terminal unit

By water

Remote control and condensate drain pump supplied as standard

Capacity from 2,98 to 11,19 kW



- ✓ Two modules (600 x 600 and 800 x 800) for perfect architectural integration
- ✓ Versions for 2-pipe and 4-pipe systems
- ✓ DC technology for energy savings up to 70%
- ✓ Remote control and condensate drain pump supplied as standard



Clivet participates in the ECP Programme for "Fan Coil". Check ongoing validity of certificate on www.eurovent-certification.com

functions and features



Cool & heat



Cassette



Water

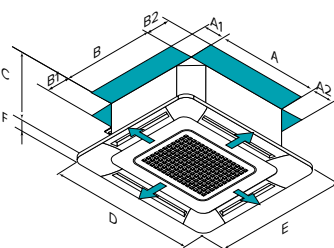


DC Motor



Control4 NRG management

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	CFK	007.0	011.0	015.0	021.0	031.0	041.0
CC2 A - Length	mm	575	575	575	840	840	840
CC2 B - Width	mm	575	575	575	840	840	840
CC2 C - Height	mm	261	261	261	230	300	300
CC2 D - Length	mm	647	647	647	950	950	950
CC2 E - Width	mm	647	647	647	950	950	950
CC2 F - Height	mm	50	50	50	45	45	45
CC2 A1	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC2 A2	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC2 B1	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC2 B2	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC2 Operating weight	kg	16,5+2,5	16,5+2,5	16,5+2,5	23+6	27+6	27+6
CC4 A - Length	mm	575	575	575	840	840	840
CC4 B - Width	mm	575	575	575	840	840	840
CC4 C - Height	mm	261	261	261	300	300	300
CC4 D - Length	mm	647	647	647	950	950	950
CC4 E - Width	mm	647	647	647	950	950	950
CC4 F - Height	mm	50	50	50	45	45	45
CC4 A1	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC4 A2	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC4 B1	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC4 B2	mm	>1000	>1000	>1000	>1000	>1000	>1000
CC4 Operating weight	kg	16,7+2,5	16,7+2,5	16,7+2,5	27,5+6	30+6	30+6

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.

CC2 2 pipes

CC4 4 pipes

versions and configurations

COIL CONFIGURATION:

CC2	Coil configuration for 2-pipe system (Standard)
CC4	Coil configuration for 4-pipe system

STANDARD CONFIGURATION:

IRPCB	R05 infrared remote control (Standard)
R05	R05 infrared remote control (Standard)
VEC	High efficiency EC fan (Standard)
XYE	XYE communication port (Standard)

technical data

Size		CFK	007.0	011.0	015.0	021.0	031.0	041.0
2 pipe								
High speed								
Air flow rate		m ³ /h	535	610	781	1175	1581	1871
◆ Cooling capacity	(1)	kW	2,98	3,96	4,2	5,93	7,87	10,7
Sensible capacity	(1)	kW	2,49	3,2	3,45	5	6,68	9,04
Water flow-rate	(1)	l/h	513	681	722	1020	1354	1925
Water pressur drop	(1)	kPa	10	11,5	12,3	23,8	22,3	36,6
◆ Heating capacity	(2)	kW	2,61	4,08	4,95	6,06	9,16	8,98
Water flow-rate	(2)	l/h	449	702	851	1042	1576	1732
Water pressur drop	(2)	kPa	12,1	12,7	9,4	25,9	28,8	49,2
Total power input		W	15	37	43	41	85	137
Medium speed								
Air flow rate		m ³ /h	429	477	611	987	1371	1415
◆ Cooling capacity	(1)	kW	2,53	3,26	3,48	5,3	7,12	8,82
Sensible capacity	(1)	kW	2,08	2,57	2,74	4,34	5,95	7,03
Water flow-rate	(1)	l/h	435	561	599	912	1225	1517
Water pressur drop	(1)	kPa	7	8,2	8,6	19,1	18,1	22,7
Heating capacity	(2)	kW	2,31	3,34	3,99	5,72	8,54	9,37
Water flow-rate	(2)	l/h	397	574	686	985	1469	1612
Water pressur drop	(2)	kPa	8,5	8,6	8,2	20,1	24	31,2
Total power input		W	9	15	28	30	59	58
Low speed								
Air flow rate		m ³ /h	322	381	494	768	1236	1198
◆ Cooling capacity	(1)	kW	2	2,76	3,01	4,4	6,67	7,48
Sensible capacity	(1)	kW	1,59	2,1	2,31	3,52	5,5	5,97
Water flow-rate	(1)	l/h	344	475	518	757	1147	1287
Water pressur drop	(1)	kPa	5	6,5	7,4	13,6	16,3	16,4
◆ Heating capacity	(2)	kW	2,24	2,73	3,26	5,32	7,9	8,68
Water flow-rate	(2)	l/h	385	470	561	915	1359	1493
Water pressur drop	(2)	kPa	5,3	6	6,1	19,9	20,7	23,3
Total power input		W	5	9	21	20	45	39
4 pipe								
High speed								
Air flow rate		m ³ /h	493	669	673	1184	1642	1708
◆ Cooling capacity	(1)	kW	2,16	2,78	2,77	4,96	7,98	8,04
Sensible capacity	(1)	kW	1,86	2,4	2,33	4,15	6,68	6,58
Water flow-rate	(1)	l/h	372	478	476	853	1373	1383
Water pressur drop	(1)	kPa	17,4	13,15	16,8	14,8	33,9	33
◆ Heating capacity	(2)	kW	3,13	3,71	3,94	6,15	9,75	9,93
Water flow-rate	(3)	l/h	269	319	339	529	839	854
Water pressur drop	(3)	kPa	23,5	24,1	26,8	25,3	42,4	48,7
Total power input		W	24	38	42	62	121	139
Medium speed								
Air flow rate		m ³ /h	395	523	526	997	1421	1297
◆ Cooling capacity	(1)	kW	1,86	2,38	2,38	4,38	7,25	6,62
Sensible capacity	(1)	kW	1,58	2	1,97	3,71	5,99	5,51
Water flow-rate	(1)	l/h	320	409	409	753	1247	1139
Water pressur drop	(1)	kPa	13,5	9,4	13,1	11,5	30	22,6
Heating capacity	(2)	kW	2,63	3,14	3,3	5,43	8,96	8,33
Water flow-rate	(3)	l/h	226	270	284	467	771	716
Water pressur drop	(3)	kPa	17,1	17,9	19,2	20,5	36,6	32,5
Total power input		W	18	35	27	44	83	70
Low speed								
Air flow rate		m ³ /h	295	415	425	783	1285	1096
◆ Cooling capacity	(1)	kW	1,49	2,05	2,07	3,64	6,7	5,84
Sensible capacity	(1)	kW	1,24	1,67	1,7	3,05	5,5	4,81
Water flow-rate	(1)	l/h	256	353	356	626	1152	1004
Water pressur drop	(1)	kPa	9,3	7	10,3	8,1	24	17,7
◆ Heating capacity	(2)	kW	2,08	2,65	2,83	4,61	8,42	7,51
Water flow-rate	(3)	l/h	179	228	243	396	724	646
Water pressur drop	(3)	kPa	11,3	13,1	14,5	14,5	32,6	27
Total power input		W	14	30	20	30	66	49
Standard power supply		V/n°/Hz	220-240/1/50					
Type of supply fan	(4)	-	CFG					
No. of supply fan		-	1					
H Sound pressure level	(5)	dB(A)	39	42	43	43	48	49
M Sound pressure level	(5)	dB(A)	33	36	38	39	44	43
L Sound pressure level	(5)	dB(A)	27	30	32	33	41	39
H Sound power level	(5)	dB(A)	51	54	55	55	60	61
M Sound power level	(5)	dB(A)	45	48	50	51	56	55
L Sound power level	(5)	dB(A)	39	42	44	45	53	51

(1) Entering exchanger water 7°C (temperature differential 5°C) - Ambient air 27°C D.B. / 19°C W.B.

(2) Entering exchanger water 45°C (temperature differential 5°C) - Ambient air 20°C

(3) Entering exchanger water 65°C (temperature differential 10°C) - Ambient air 20°C

(4) CFG = centrifugal fan

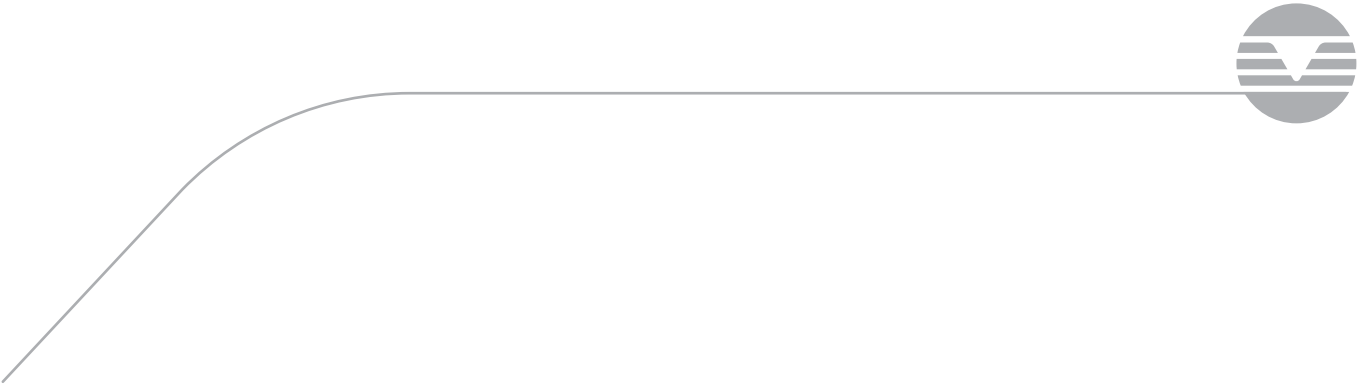
(5) Sound levels tested in anechoic chamber and referring to units for 2-pipe systems. The sound pressure level refers to 1 m from the external surface of the unit operating in the open field

accessories

- KJR90X** KJR-90D electronic room control for wall installation
- KJR150X** Indoor units' group controller
- PROL5X** 5-metre extension lead for connecting the KJR-90D electronic wall-mounted room controller *PREVIEW*
- 360PX** Touch-key indoor units' centralized controller
- CCM30BX** Touch-key indoor units' centralized controller
- CCM09** Plastic frame for air supply and return (Standard)
- CCM-180A/WS** Wired centraliser with 6.2" touchscreen display and weekly scheduler (compatible with 021.0 to 041.0)
- CCM-270A/WS** Wired centraliser with 10.1" touchscreen display and weekly scheduler (compatible with 021.0 to 041.0)
- 3V2X** Three-way valve kit for 2-pipe type "on/off" system
- 3V4X** Three-way valve kit for 4-pipe type "on/off" system
- DTX** Auxiliary condensate collection tray

Accessories whose code ends with "X" are supplied separately

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



MOOD

Water terminal unit

By water

Indoor installation, wall-mounted, cased

Capacity from 2,7 to 4,87 kW



- ✓ Compact and quiet, for residential and commercial applications
- ✓ DC technology for energy savings up to 70%
- ✓ Remote control, three-way valve and Modbus port supplied as standard



Clivet participates in the ECP Programme for "Fan Coil". Check ongoing validity of certificate on www.eurovent-certification.com

functions and features



Cool & heat



Vertical cased



Water

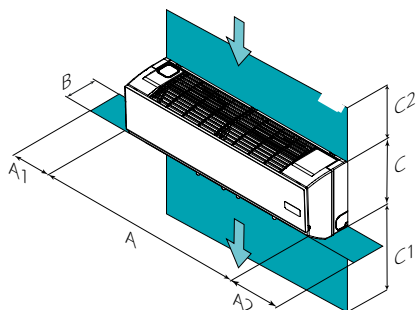


DC Motor



Control4 NRG management

dimensions and clearances



Size	CFW-2	1	2	3	4	5
A - Length	mm	916	916	916	1074	1074
B - Width	mm	233	233	233	237	237
C - Height	mm	290	290	290	317	317
A1	mm	300	300	300	300	300
A2	mm	300	300	300	300	300
C1	mm	2000÷3000	2000÷3000	2000÷3000	2000÷3000	2000÷3000
C2	mm	300	300	300	300	300
Operating weight	kg	12,7	12,7	12,7	14,9	14,9

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

STANDARD CONFIGURATION:

IRPCB	R05 infrared remote control (Standard)
R05	R05 infrared remote control (Standard)
VEC	High efficiency EC fan (Standard)

3V2	Three-way valve kit for 2-pipe "on/off" system (Standard)
CRCC	Boiler/pump potential free contacts (Standard)

technical data

Size	CFW-2	1	2	3	4	5
2 pipe						
High speed						
Air flow rate	m ³ /h	492	585	825	755	979
♦ Cooling capacity	(1) kW	2,70	2,91	3,81	3,96	4,87
Sensible capacity	(1) kW	2,15	2,33	3,18	2,66	4,11
Water flow-rate	(1) l/h	465	501	656	682	839
Water pressur drop	(1) kPa	31,6	37,2	56,8	41,2	50,7
♦ Heating capacity	(2) kW	2,12	3,23	4,3	4,84	5,26
Water flow-rate	(2) l/h	365	556	741	751	906
Water pressur drop	(2) kPa	37,5	40,6	61,9	43,7	51,7
Total power input	W	13	15	34	26	38
Medium speed						
Air flow rate	m ³ /h	454	485	689	653	849
♦ Cooling capacity	(1) kW	2,59	2,54	3,3	3,52	4,26
Sensible capacity	(1) kW	2,03	2	2,71	2,33	3,56
Water flow-rate	(1) l/h	445	437	568	606	733
Water pressur drop	(1) kPa	29	30	41	34	40
Heating capacity	(2) kW	2,02	2,77	3,65	3,81	4,68
Water flow-rate	(2) l/h	347	476	628	655	805
Water pressur drop	(2) kPa	34,9	31,5	47,5	33,8	42,8
Total power input	W	11	11	22	18	26
Low speed						
Air flow rate	m ³ /h	400	413	590	552	717
♦ Cooling capacity	(1) kW	2,39	2,19	2,88	3,08	3,79
Sensible capacity	(1) kW	1,85	1,71	2,31	2,01	3,1
Water flow-rate	(1) l/h	411	377	495	531	652
Water pressur drop	(1) kPa	25,4	23,4	33	27,1	33,7
♦ Heating capacity	(2) kW	1,86	2,42	3,09	3,26	3,96
Water flow-rate	(2) l/h	320	416	531	561	681
Water pressur drop	(2) kPa	30,2	25,1	35,7	26,3	33
Total power input	W	10	9	15	13	18
Standard power supply	V/n°/Hz	220-240/1/50				
Type of supply fan	(3)	TGZ DC				
No. of supply fan	-	1				
H Sound pressure level	(4) dB(A)	32	32	45	38	44
M Sound pressure level	(4) dB(A)	30	27	39	34	40
L Sound pressure level	(4) dB(A)	27	23	35	30	35
H Sound power level	(4) dB(A)	44	44	57	50	56
M Sound power level	(4) dB(A)	42	39	51	46	52
L Sound power level	(4) dB(A)	39	35	47	42	47

(1) Entering exchanger water 7°C (temperature differential 5°C) - Ambient air 27°C D.B. / 19°C W.B.

(2) Entering exchanger water 45°C (temperature differential 5°C) - Ambient air 20°C

(3) TGZ DC = DC Brushless tangential fan

(4) Sound levels tested in anechoic chamber and referring to units for 2-pipe systems. The sound pressure level refers to 1 m from the external surface of the unit operating in the open field

accessories

KJR90X	KJR-90D electronic room control for wall installation
KJR150X	Indoor units' group controller
PRO5X	5-metre extension lead for connecting the KJR-90D electronic wall-mounted room controller <i>PREVIEW</i>
CCM30BX	Touch-key indoor units' centralized controller

CCM09	Wired centraliser with weekly scheduler
CCM-180A/WS	Central controller for wall mounting weekly timer 6.2"
CCM-270A/WS	Central controller for wall mounting weekly timer 10.1"

Accessories whose code ends with "X" are supplied separately

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

SAHU

Air conditioning unit

By water

Uncased horizontal and vertical indoor installation

Ductable

Air flow rate from 1500 to 15000 m³/h



compliant
ErP

- ✓ available in version for 2 and 4-pipe systems with or without on-board control;
- ✓ available in direct expansion version for connection to Clivet VRF and mini VRF systems;
- ✓ standard with self-bearing sandwich paneling thickness 40mm;
- ✓ centrifugal fans with belt / pulley transmission and IE2 type with inverter, IE3 engines settable at high pressure for air distribution through ducting;
- ✓ settable with EC plug fans (IE4) with high pressure (standard with on-board control);
- ✓ 4 or 6 row water coil or 4-row direct expansion coil;
- ✓ wide choice of accessories (mixing chamber, filters, bases, antivibration mounts, etc);
- ✓ electric heater section with different power
- ✓ remote and centralized system monitoring through INTELLIAIR

functions and features



Cool & heat



Horizontal



Vertical

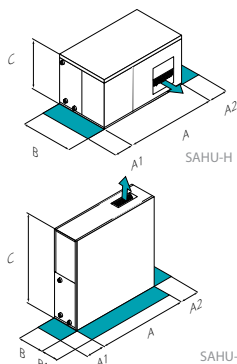


Water



INTELLIAIR

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	SAHU H / SAHU H_EC	1	2	3	4	5	6	7	8	
A - Length	mm	780	880	1120	1280	1500	1720	1890	2510	
B - Width	mm	1100	1100	1100	1300	1350	1350	1350	1350	
C - Height	mm	530	530	530	590	660	750	900	900	
A1	mm	500	500	500	500	500	500	500	500	
A2	mm	500	500	500	500	500	500	500	500	
H C4	Weight	kg	78	85	98	134	167	202	274	330
H C6	Weight	kg	81	88	102	141	176	215	292	353
H E4	Weight	kg	78	84	97	133	165	199	270	326
H_EC C4	Weight	kg	57	63	74	101	132	163	211	268
H_EC C6	Weight	kg	60	66	78	108	141	176	229	291
H_EC E4	Weight	kg	57	62	73	100	130	160	207	264

Size	SAHU V / SAHU V_EC	1	2	3	4	5	6	7	8	
A - Length	mm	780	880	1120	1280	1500	1720	1890	2510	
B - Width	mm	530	530	530	590	660	750	900	900	
C - Height	mm	1100	1100	1100	1300	1350	1570	1870	1950	
A1	mm	500	500	500	500	500	500	500	500	
A2	mm	500	500	500	500	500	500	500	500	
B1	mm	1000	1000	1000	1000	1000	1000	1000	1000	
V C4	Weight	kg	84	91	105	142	177	217	318	386
V C6	Weight	kg	87	94	109	149	186	230	336	409
V E4	Weight	kg	84	90	104	141	175	214	314	382
V_EC C4	Weight	kg	63	69	81	109	142	178	255	328
V_EC C6	Weight	kg	66	72	85	116	151	191	273	351
V_EC E4	Weight	kg	63	68	80	108	140	175	251	324

The above mentioned data are referred to standard units for the constructive configurations indicated.
The weight indicated refer to unit without water/gas inside of the coil.

versions and configurations

VOLTAGE:

400T Supply voltage 400/3~/50

VERSION:

SAHU H Horizontal air handling unit with centrifugal fan

SAHU V Vertical air handling unit with centrifugal fan

SAHU H EC Horizontal air handling unit with EC plug fan

SAHU V EC Vertical air handling unit with EC plug fan

MAIN COIL:

C4 4-row water coil

C6 6-row water coil

E4 4-row direct expansion coil

WATER FITTINGS:

DX Water fittings to the right

SX Water fittings to the left

SECONDARY HOT WATER COIL:

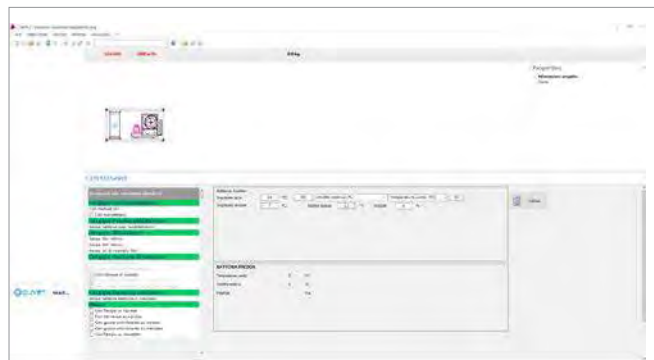
- Hot water coil: not required (Standard)

CH1 1-row hot water secondary coil

CH2 2-row hot water secondary coil

selection software

The CTAPRO air handling units selection software allows to size the units and to have immediately the complete technical offer with executive drawings and technical data sheets.



technical data

Size		SAHU	1	2	3	4	5	6	7	8	
Air flow rate		m ³ /h	1500	2090	2890	4020	5580	7750	10770	15000	
C4	Cooling capacity	(1)	kW	8,5	11,5	15,7	22,7	32,4	42,9	60,5	83,0
C4	Sensible capacity	(1)	kW	6,2	8,5	11,7	16,6	23,4	31,7	44,3	61,1
C4	Water flow-rate	(1)	l/s	0,4	0,5	0,8	1,1	1,5	2,0	2,9	4,0
C6	Cooling capacity	(1)	kW	10,3	13,8	19,4	26,6	37,9	50,3	70,9	99,2
C6	Sensible capacity	(1)	kW	7,3	10,0	13,9	19,2	27,1	36,5	51,2	71,4
C6	Water flow-rate	(1)	l/s	0,5	0,7	0,9	1,3	1,8	2,4	3,4	4,7
E4	Cooling capacity	(2)	kW	7,3	10,1	15,5	22,2	30,9	42,3	59,1	82,3
E4	Sensible capacity	(2)	kW	5,8	8,0	11,6	16,5	22,9	31,4	43,8	60,9
C4	Heating capacity	(3)	kW	9,6	13,1	18,0	24,5	35,6	48,6	67,7	93,8
C4	Water flow-rate	(3)	l/s	0,5	0,6	0,9	1,2	1,7	2,3	3,3	4,5
C6	Heating capacity	(3)	kW	10,9	14,9	20,6	28,7	40,1	54,9	76,5	106,7
C6	Water flow-rate	(3)	l/s	0,5	0,7	1,0	1,4	1,9	2,6	3,7	5,2
MAX power input (IE3 - CFG C&P)	(4)	kW	0,8	1,1	1,1	2,2	3,0	4,0	5,5	7,5	
MAX power input (IE4 - EC PLUG FAN)		kW	1,1	1,1	1,1	1,1	1,9	2,9	3,3	5,0	
Power supply		V/n°/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	
Sound pressure level	(5)	dB(A)	74	79	85	80	85	84	83	92	

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.

(1) HYDRONIC SAHU Cooling: Exchanger inlet water 7°C (temperature differential 5°C) Ambient air 27°C D.B. / 19°C W.B. - ESP = 0 Pa

(2) DIRECT EXPANSION SAHU Cooling: Indoor temperature 27°C D.B. / 19°C W.B. Evaporating temperature 8°C / Condensing temperature 46°C - ESP = 0 Pa - R410A

(3) HYDRONIC SAHU Heating: Exchanger inlet water 45°C (temperature differential 5°C), Ambient air 20°C D.B., 50% U.R., ESP = 0 Pa

(4) CFG C&P = Centrifugal with belt & pulley transmission

(5) 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

FS4 Frame with G4 efficiency filters, thickness 48 mm
FS5 Frame with M5 efficiency filters, thickness 98 mm
FS6 Frame with M6 efficiency filters, thickness 98 mm
FS7 Frame with F7 efficiency filters, thickness 98 mm
FS8 Frame with F8 efficiency filters, thickness 98 mm
FS9 Frame with F9 efficiency filters, thickness 98 mm
FS45 Frame with G4 efficiency filters, thickness 48 mm + M5 th. 98 mm
FS46 Frame with G4 efficiency filters, thickness 48 mm + M6 th. 98 mm
FS47 Frame with G4 efficiency filters, thickness 48 mm + F7 th. 98 mm
FS48 Frame with G4 efficiency filters, thickness 48 mm + F8 th. 98 mm
FS49 Frame with G4 efficiency filters, thickness 48 mm + F8 th. 98 mm
BAH Base for horizontal basic unit H=120 mm
BAV Base for vertical basic unit H=120 mm
BAMX Base for mixing chamber H=120 mm
MBXX Mixing chamber with dampers
AFMX Antivibration mount for mixing chamber damper

AFRX Return antivibration mount for basic unit
AFSX Supply antivibration mount for basic unit
DARX Return damper for basic unit
FLRX Return flange for basic unit
FLSX Supply flange for basic unit
EC1X Electric coil version 1
EC2X Electric coil version 2
FTB Box with terminal block for centrifugal fan wires
ETB Box with terminal block for EC plug fan wires
KT4X Spare filters - G4 th. 48 mm
KT5X Spare filters - M5 th. 98 mm
KT6X Spare filters - M6 th. 98 mm
KT7X Spare filters - F7 th. 98 mm
KT8X Spare filters - F8 th. 98 mm
KT9X Spare filters - F9 th. 98 mm

Accessories whose code ends with "X" are supplied separately

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



Air conditioning unit

For the air treatment
With modular sections
Indoor and outdoor installation

Air flow rate from 1260 to 160000 m³/h

- ✓ two types of structure and panelling, 50 mm and 60 mm, which allow thermal break classes T2/TB3 and T2/TB2 to be achieved;
- ✓ 32 standard sizes with continuous air flow coverage at frontal speed of 2.2 to 2.5m/s;
- ✓ customisation of the dimensions in height and width with a 50 mm pitch to meet the most stringent architectural constraints.
- ✓ sandwich-type double-sheet panels with injected polyurethane or mineral wool thermal and acoustic insulation in between, thermal cut between the sheets, 50 or 60 mm thick, seven different types of sheet available;
- ✓ modular structure with smooth internal surfaces to minimise dust accumulation and facilitate cleaning and disinfection;
- ✓ for indoor or outdoor installation with protective roof;
- ✓ wide range of air filtration solutions from coarse filters, medium filters with rigid or floppy pockets, absolute, electronic, activated carbon, high and very high efficiency filters;
- ✓ germicidal and virucidal solutions with UV-C lamps or photocatalytic oxidation modules;
- ✓ static, rotary, run-around heat recovery units;
- ✓ water, direct expansion, steam, thermal oil, electric heat exchangers;
- ✓ adiabatic humidification systems, self-generated or network steam, water spray, washers;
- ✓ internal condensate collection tanks with anti-condensate insulation, with inclination towards the discharge, made of aluminium or stainless steel;
- ✓ centrifugal fan sections with belt and pulley drive, plug-fan radial with brushless EC motors, electric fans;
- ✓ without control systems or complete with probes, actuators, wiring, electrical panel with control system and unit management logic
- ✓ remote and centralized system monitoring through INTELLIAIR



Clivet participates in the ECP Programme for "Air Handling Units". Check ongoing validity of certificate on www.eurovent-certification.com



compliant ErP

functions and features



Heating-Cooling



Indoor inst.



Outdoor inst.

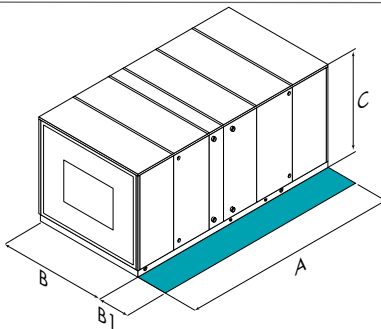


Free-cooling



INTELLIAIR

dimensions and clearances



CAUTION!

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

(*) Length A depends on the specific configuration.

(**) Operating weight depends on the specific configuration.

(***) Height without base. Standard base = 120 mm

Dimensions refer to model with 50 mm structure, add 20 mm to the indicated dimensions to obtain the 60 mm structure.

The above data refer to standard units.

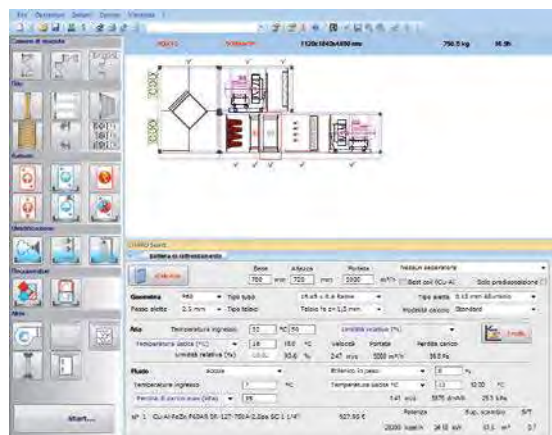
Size	AQX	1	2	3	4	5	6	7	8	9	10	11
A - Length	mm						(*)					
B - Width	mm	770	820	920	870	920	1020	970	1020	1170	1120	1220
C - Height (***)	mm	570	570	620	720	720	720	820	820	820	920	920
B1 - Servicing space												
for inspection	mm	800	800	800	800	800	800	800	800	800	800	800
coil removal	mm	964	1034	1024	1024	1094	1187	1194	1214	1324	1284	1394
Operating weight	kg						(**)					

Size	AQX	12	13	14	15	16	17	18	19	20	21	22
A - Length	mm						(*)					
B - Width	mm	1220	1370	1370	1570	1570	1620	1770	1820	2070	2120	2220
C - Height (***)	mm	1070	1070	1170	1170	1320	1420	1420	1520	1520	1670	1770
B1 - Servicing space												
for inspection	mm	800	800	800	800	800	800	800	800	800	800	800
coil removal	mm	1524	1504	1574	1734	1744	1774	1894	2094	2324	2264	2524
Operating weight	kg						(**)					

Size	AQX	23	24	25	26	27	28	29	30	31	32
A - Length	mm						(*)				
B - Width	mm	2370	2470	2620	2820	3170	3570	4020	4570	5170	5870
C - Height (***)	mm	1920	2020	2120	2270	2270	2270	2270	2270	2270	2270
B1 - Servicing space											
for inspection	mm	800	800	800	800	800	800	800	800	800	800
coil removal	mm	2524	2594	2744	3074	3444	3874	4364	4924	5564	6304
Operating weight	kg						(**)				

selection software

The air handling units selection software allows to size the units and to have immediately the complete technical offer with executive drawings, technical data sheets and list of main components and materials used.



Hygienic air handling units

The AQX H version is available for applications that require high hygienic standards (pharmaceutical, hospital, food and microelectronic sectors). It guarantees maximum cleanliness and ease of maintenance in compliance with DIN 1946-4 and VDI 6022-1 standards. For more details, refer to the dedicated brochure by scanning the following QR code.



technical data

Size	AQX	1	2	3	4	5	6	7	8	9	10	11
Air flow rate	(1) l/s	414	473	544	624	714	816	938	1073	1223	1404	1602
	m ³ /h	1490	1700	1960	2250	2570	2940	3380	3860	4400	5050	5770

Size	AQX	12	13	14	15	16	17	18	19	20	21	22
Air flow rate	(1) l/s	1838	2111	2412	2760	3159	3630	4156	4752	5445	6245	7156
	m ³ /h	6620	7600	8680	9940	11370	13070	14960	17110	19600	22480	25760

Size	AQX	23	24	25	26	27	28	29	30	31	32
Air flow rate	(1) l/s	8190	9383	10751	12315	14101	16167	18513	21191	24276	27821
	m ³ /h	29480	33780	38700	44330	50760	58200	66650	76290	87390	100160

(1) Air passage speed on the heat exchange coils 2.5 m/s

accessories

The air treatment units of the AQX series are available with a vast range of accessories that can be selected directly with the selection software.

A few of the most common accessories are listed below:

- ✓ Weatherproof roof and control protection technical compartment;
- ✓ Weatherproof covers on the external air inlets and outlets
- ✓ Safety device for moving components
- ✓ Spotlights and viewing panel for inspection
- ✓ Inverters on the fan motors

Other accessories not found in the basic selection can be assessed on request.



Air conditioning unit

For the air treatment
With modular sections
Indoor and outdoor installation

Air flow rate from 1260 to 160000 m³/h

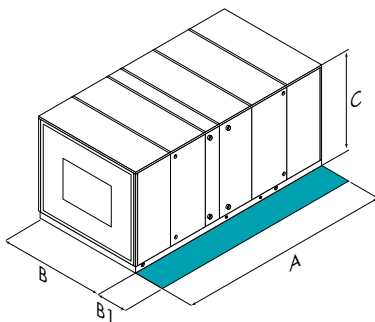
- ✓ two types of structure and panelling, 50 mm and 60 mm, which allow thermal break classes T2/TB3 and T2/TB2 to be achieved;
- ✓ 32 standard sizes with continuous air flow coverage at frontal speed of 2.2 to 2.5m/s;
- ✓ customisation of the dimensions in height and width with a 50 mm pitch to meet the most stringent architectural constraints.
- ✓ sandwich-type double-sheet panels with injected polyurethane or mineral wool thermal and acoustic insulation in between, thermal cut between the sheets, 50 or 60 mm thick, seven different types of sheet available;
- ✓ modular structure with smooth internal surfaces to minimise dust accumulation and facilitate cleaning and disinfection;
- ✓ for indoor or outdoor installation with protective roof;
- ✓ wide range of air filtration solutions from coarse filters, medium filters with rigid or floppy pockets, absolute, electronic, activated carbon, high and very high efficiency filters;
- ✓ germicidal and virucidal solutions with UV-C lamps or photocatalytic oxidation modules;
- ✓ static, rotary, run-around heat recovery units;
- ✓ water, direct expansion, steam, thermal oil, electric heat exchangers;
- ✓ adiabatic humidification systems, self-generated or network steam, water spray, washers;
- ✓ internal condensate collection tanks with anti-condensate insulation, with inclination towards the discharge, made of aluminium or stainless steel;
- ✓ centrifugal fan sections with belt and pulley drive, plug-fan radial with brushless EC motors, electric fans;
- ✓ without control systems or complete with probes, actuators, wiring, electrical panel with control system and unit management logic
- ✓ remote and centralized system monitoring through INTELLIAIR



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.

(*) Length A depends on the specific configuration.

(**) Operating weight depends on the specific configuration.

(***) Height without base. Standard base = 120 mm

Dimensions refer to model with 50 mm structure, add 20 mm to the indicated dimensions to obtain the 60 mm structure.

The above data refer to standard units.

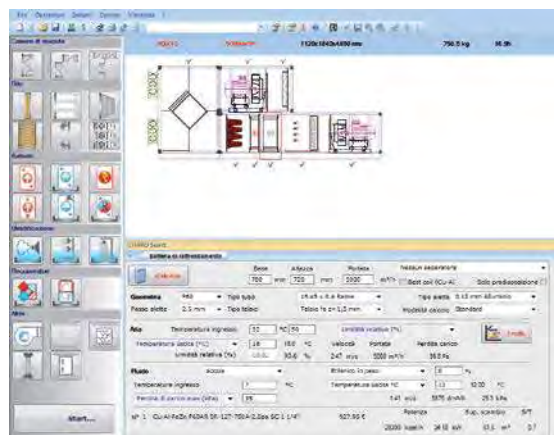
Size	CLA	1	2	3	4	5	6	7	8	9	10	11
A - Length	mm						(*)					
B - Width	mm	770	820	920	870	920	1020	970	1020	1170	1120	1220
C - Height (***)	mm	570	570	620	720	720	720	820	820	820	920	920
B1 - Servicing space												
for inspection	mm	800	800	800	800	800	800	800	800	800	800	800
coil removal	mm	964	1034	1024	1024	1094	1187	1194	1214	1324	1284	1394
Operating weight	kg						(**)					

Size	CLA	12	13	14	15	16	17	18	19	20	21	22
A - Length	mm						(*)					
B - Width	mm	1220	1370	1370	1570	1570	1620	1770	1820	2070	2120	2220
C - Height (***)	mm	1070	1070	1170	1170	1320	1420	1420	1520	1520	1670	1770
B1 - Servicing space												
for inspection	mm	800	800	800	800	800	800	800	800	800	800	800
coil removal	mm	1524	1504	1574	1734	1744	1774	1894	2094	2324	2264	2524
Operating weight	kg						(**)					

Size	CLA	23	24	25	26	27	28	29	30	31	32
A - Length	mm						(*)				
B - Width	mm	2370	2470	2620	2820	3170	3570	4020	4570	5170	5870
C - Height (***)	mm	1920	2020	2120	2270	2270	2270	2270	2270	2270	2270
B1 - Servicing space											
for inspection	mm	800	800	800	800	800	800	800	800	800	800
coil removal	mm	2524	2594	2744	3074	3444	3874	4364	4924	5564	6304
Operating weight	kg						(**)				

selection software

The air handling units selection software allows to size the units and to have immediately the complete technical offer with executive drawings, technical data sheets and list of main components and materials used.



technical data

Size	CLA	1	2	3	4	5	6	7	8	9	10	11
Air flow rate	(1) l/s	414	473	544	624	714	816	938	1073	1223	1404	1602
	m ³ /h	1490	1700	1960	2250	2570	2940	3380	3860	4400	5050	5770

Size	CLA	12	13	14	15	16	17	18	19	20	21	22
Air flow rate	(1) l/s	1838	2111	2412	2760	3159	3630	4156	4752	5445	6245	7156
	m ³ /h	6620	7600	8680	9940	11370	13070	14960	17110	19600	22480	25760

Size	CLA	23	24	25	26	27	28	29	30	31	32
Air flow rate	(1) l/s	8190	9383	10751	12315	14101	16167	18513	21191	24276	27821
	m ³ /h	29480	33780	38700	44330	50760	58200	66650	76290	87390	100160

(1) Air passage speed on the heat exchange coils 2.5 m/s

accessories











The air treatment units of the CLA series are available with a vast range of accessories that can be selected directly with the selection software.

A few of the most common accessories are listed below:

- ✓ Weatherproof roof and control protection technical compartment;
- ✓ Weatherproof covers on the external air inlets and outlets
- ✓ Safety device for moving components
- ✓ Spotlights and viewing panel for inspection
- ✓ Inverters on the fan motors

Other accessories not found in the basic selection can be assessed on request.

All applications

	Control4 NRG	INTELLIPLANT	INTELLIPLANT CORE	INTELLIAIR	CLIVET EYE
					
					
Chiller, Heat pump	✓	✓	✓		✓
Multifunction unit		✓	✓		✓
Air renewal unit	✓			✓	✓
Packaged and UTA	NEW			✓	✓
Number of centralised hydronic units that can be connected	1	10	8		1
Number of room units that can be connected	50			20	1
System dashboard	✓	✓	✓	✓	
Energy management	✓	✓		✓	
Energy dashboard, reports and charts	✓	✓		✓	
Installation layout		✓	✓	✓	
Event Diagnostics	✓	✓	✓	✓	✓
Preventive diagnostics		✓	✓	✓	
Compatibility with Control4 NRG		✓	✓	✓	✓
Compatibility with INTELLIPLANT	✓			✓	
Compatibility with servizi Cloud	✓	✓	✓	✓	✓

DIGITAL Solutions

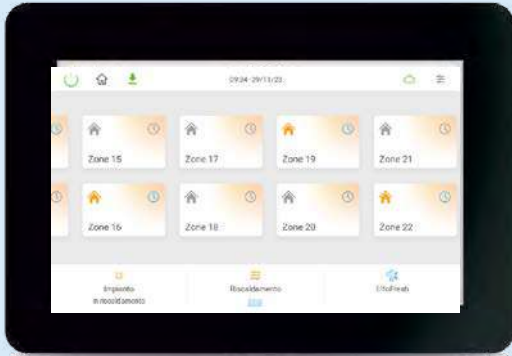
System components

SERIES	SIZE FROM	TO	BRAND NAME.	PAGE
Control systems				
CONTROL4 NRG	-	-	CONTROL4 NRG	156
INTELLIPLANT	-	-	INTELLIPLANT	158
INTELLIPLANT CORE	-	-	INTELLIPLANT CORE	160
INTELLIAIR	-	-	INTELLIAIR	162
Monitoring systems				
Clivet Eye	-	-	Clivet Eye	164

CONTROL4 NRG

CONTROL4 NRG

Energy assistant for the air conditioning system for Smart Office and commercial & industrial applications



- ✓ It manages up to 24 elements simultaneously
- ✓ Management of scenarios with different operating conditions and related programming bands
- ✓ Class A control according to European standard EN15232
- ✓ Scalable system for potential system expansions and integration of additional appliance control and self-consumption
- ✓ Energy management with power consumption and self-consumption data display
- ✓ Option for remote monitoring and control of systems from a PC or APP
- ✓ Compatible for interfacing with INTELLIPLANT systems

The whole system at your fingertips

Control4 NRG is a centralised supervision and management system for hydronic systems used for cooling, heating, domestic hot water production and air quality control in residential buildings and small businesses.

It enables the centralised management of systems made with compatible Clivet units, intelligently controlling all the system elements in order to obtain optimal comfort with maximum efficiency.



In synergy with renewable energy sources

Control4 NRG guarantees top system performance thanks to the Class A energy classification according to the strictest requirements for energy classification of buildings in compliance with the European standard UNI EN15232 (Energy performance of buildings - Impact of building automation, controls and technical building management).

Check self-consumption levels and decide when to switch on or off the air conditioning system according to the availability of energy from the photovoltaic system.



In synergy with renewable energy sources

Control4 NRG is designed to integrate with the most advanced renewable energy technologies for a cleaner, more sustainable future.

It captures the energy produced by your photovoltaic system as well as that of your air conditioning system, and displays the energy profiles in a simple and intuitive way.



Comfort and air quality

Control4 NRG manages room comfort both in traditional systems with seasonal reversibility (2-pipe configurations) and in new generation energy saving systems with heat recovery, which provide simultaneous and independent energy production in heating and cooling mode (4-pipe configuration).

Control4 NRG manages room comfort also thanks to the management of air renewal systems, ensuring that healthy environments are kept in line with the most stringent regulatory requirements on the well-being and health of people.

Control4 NRG and Clivet's Zephir renewal units also make it possible to replace the hydronic system mid-season to fulfil the heating requirements, thus ensuring more energy saving.



Ideal for all sectors

The system offers the utmost flexibility of use due to a number of climate zones available in both heating and cooling modes, its integration with substitute energy sources, energy consumption management and remote management from a PC or dedicated APP.



Offices



Shops



Restaurants

Remote control and access

The Clivet Eye APP allows remote access to the Control4 NRG system, enables monitoring of operating temperatures and access to the main system functions. Also available via WEB-APP from a PC or tablet. An internet connection is required.

Clivet Eye is ideal for all users who want to safely and efficiently manage the comfort of their office or business for the well-being of the people who work there.



HID-TSmart

HID-TSmart evolves the thermostat concept with a new generation device from which you can access all the information you need for efficient room management.



HID-TSmart is not only a smart thermostat, it is also an extension of CONTROL4 NRG that can provide information on the main system operating parameters simply and immediately: it allows you to acquire information on the temperature, relative humidity, energy consumption, energy produced by the photovoltaic system and charging level of the Clivet SINERGY electric water tank. It is enhanced with area control that allows you to set the system mode and ventilation level.

INTELLIPLANT

INTELLIPLANT

Optimisation system for centralised hydronic systems



INTELLIPLANT is the innovative technological solution designed to optimise the central heating/cooling plant of medium and large capacity systems, ensuring efficiency and reliability in any application, from comfort applications to more complex applications for industrial processes that require continuity of operation under any operating condition.

INTELLIPLANT optimises centralised systems by using the control algorithms of the devices which are involved in the production and distribution of thermal energy, as well as an advanced diagnostics survey engine which makes it possible to determine their state of maintenance.

Control and optimisation

INTELLIPLANT identifies the best activation sequence for units by starting them according to their performance curves, fulfilling the energy requirements of the system with minimum power consumption. INTELLIPLANT also optimises pumping units to ensure the distribution of fluids through the primary and secondary circuits by managing the variable flow-rates while reducing energy consumption.

The benefits from these control strategies are:

- ✓ high system efficiency levels
- ✓ reduction of waste from the over-production of energy
- ✓ better stabilisation of the system with reduced thermal and mechanical stress on the units.



Preventive diagnostics

INTELLIPLANT evolves the concept of maintenance, from conventional scheduled maintenance to "Condition Based Maintenance", i.e. maintenance tailored to each specific system based on its operating status.

The benefits from this model are:

- ✓ reduction of the amount of interventions and field trips
- ✓ better management of maintenance personnel
- ✓ lower maintenance costs
- ✓ reduction of system downtime due to sudden failures
- ✓ increased system productivity
- ✓ longer service life of thermal energy generation and distribution devices.



Energy under control

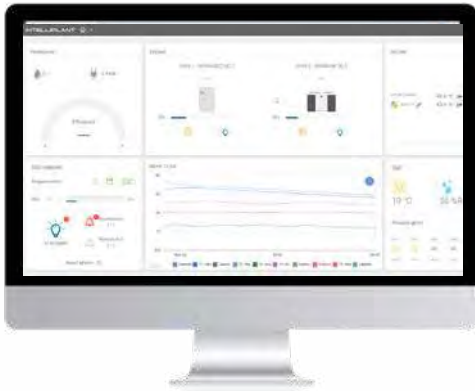
INTELLIPLANT has dedicated pages and reports to allow the plant's energy consumption to be monitored and controlled, with functions to:

- ✓ analyse and normalise the energy consumption of the devices in the plant
- ✓ identify critical issues and eliminate waste
- ✓ increase the level of comfort
- ✓ increase the continuity of system operation
- ✓ promote activities to increase the overall efficiency of the systems.



Functions and features

Clivet's Cloud-based service offers the option of remotely connecting to the INTELLIPLANT system and accessing its functions from any PC, smartphone and tablet with a web browser, without needing to install a dedicated APP.



System dashboard



Unit dashboard

INTELLIPLANT provides the user with a wide range of graphical pages that combine the most significant plant and unit operating parameters to ensure total control of mechanical systems both locally and remotely.

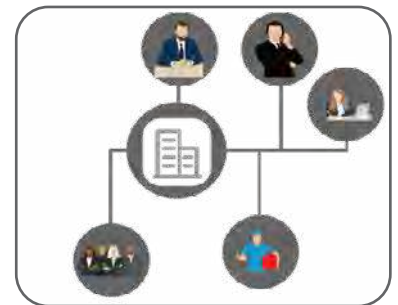
All of the pages can be viewed on a PC or smart device.

The main pages include:

- ✓ System dashboard, with the most significant general system operating data
- ✓ Unit dashboard, with all the operating variables of the individual units
- ✓ Energy dashboard, with system and individual unit efficiency indices
- ✓ Maintenance dashboard, with operating values of system components and their operating status
- ✓ Commissioning page, to facilitate system start-up and calibration operations.

INTELLIPLANT is a solution for all professionals involved in the design, management and operation of technological systems:

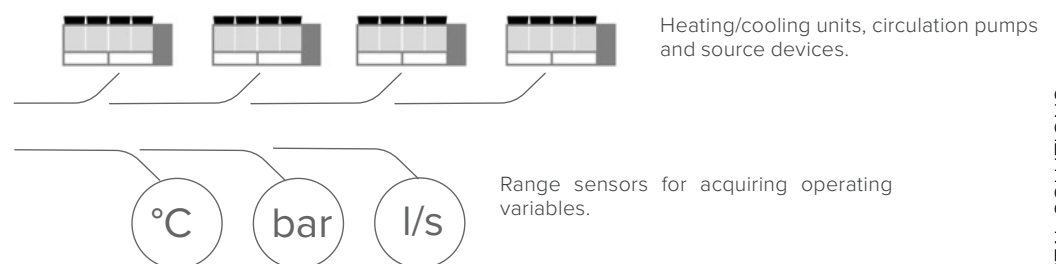
- ✓ HVAC system consultants and designers
- ✓ Building and Facility Managers
- ✓ Energy Managers
- ✓ ESCO
- ✓ Service Managers and maintenance technicians
- ✓ Builders and installers
- ✓ System investors and owners



INTELLIPLANT is a flexible, modular and expandable solution to better meet the most stringent structural, application and installation requirements in full compliance with safety standards and regulations.



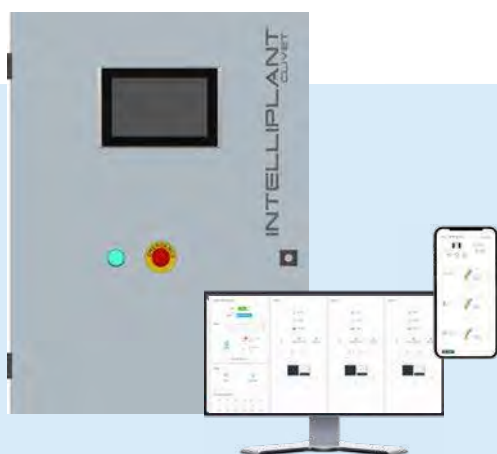
INTELLIPLANT acquires in-situ all the information needed to keep the entire system running efficiently, such as temperatures, water flow-rates and operating pressures, right down to the most direct operating parameters of each individual heating/cooling unit.



INTELLIPLANT CORE

INTELLIPLANT CORE

Optimisation system for centralised hydronic systems



- ✓ Monitoring and control of hydronic chiller units, reversible heat pumps and multifunctional units
- ✓ Workload distribution: The heating and cooling load is equally distributed between the various units, making the most of their operation in partial load mode.
- ✓ Centralised management: Professional multi-site cloud platform for unified and simplified control. This allows the various systems to be monitored and managed from a single interface

System manager

The INTELLIPLANT system allows you to efficiently and continuously manage the hydronic units on the local operator panel and on the remote interface on a computer, smartphone or tablet. INTELLIPLANT CORE consists of a main control panel that manages the connection to the various hydronic units (chillers, reversible heat pumps and multifunctional units) equipped with both serial and Ethernet communication. Thanks to the values acquired in real time from the system, advanced control logics enable efficient management of thermal loads based on real system demand, constantly monitoring the system conditions and selecting unit activation, either based on the most performing activation sequence or by balancing the operating hours.

- ✓ Monitoring and control of hydronic chiller units, reversible heat pumps and multifunctional units
- ✓ Primary circuit management of 2-pipe and 4-pipe systems with Clivet air source units with integrated hydronic unit
- ✓ Integration with BMS/BAS through open protocols
- ✓ Management of operating parameters such as temperature and seasonal mode change
- ✓ Scheduled and manual system switch-on

Management

Safety and professionalism

The INTELLIPLANT CORE system ensures centralised multi-site monitoring via a cloud platform that adheres to data protection privacy levels in accordance with the most stringent interpretations of the GDPR (Global Data Protection Regulation).

Aimed at operators such as facility managers, system operators and plant managers.

Graphic interface

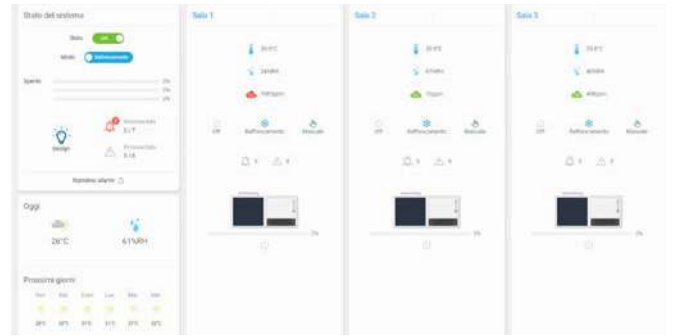
Plant schematic



The page offers a customised graphic representation where each area can be checked:

- ✓ operation status;
- ✓ real-time values of key operating parameters such as temperature and humidity;
- ✓ presence of alarms that must be promptly reported to the system supervisor/manager

Plant dashboard



The main page of the system provides an overview with reports for all areas:

- ✓ system operational status and quick action buttons;
- ✓ percentage and mode of operation of individual units, broken down by areas;
- ✓ maintenance status resulting from the preventive analysis of each individual unit;
- ✓ priority and second-level alarms;
- ✓ current day's weather and forecast for the next 7 days;

In detail, the user can access all parameters specific to the area or individual units and their operating parameters.

Unit



The following basic information is displayed for each unit:

- ✓ graphical model of the unit with dynamic representation of the operating state;
- ✓ operating status of the unit and buttons for quick actions;
- ✓ details of component status (fans, compressors, etc.);
- ✓ list of parameters and their values in real time.

Predictive maintenance



INTELLIPLANT helps to develop the concept of maintenance from traditional "scheduled routine maintenance" to the more advanced idea of "condition based maintenance", i.e. maintenance customised per event according to its operational status, applicable to the most significant situations affecting refrigeration thermal unit components.

INTELLIAIR

INTELLIAIR

Air conditioning supervision system



- ✓ Local and remote visibility via dedicated Cloud platform
- ✓ Ventilation optimisation with air quality acquisition
- ✓ Advanced scheduler for the activation of energy profiles
- ✓ Diagnostic survey system for preventive maintenance management
- ✓ Integration with BMS/BAS for alarm notification and supervision

Focus on comfort

INTELLIAIR is Clivet's specialised solution for the supervision and control of air conditioning systems in all applications where comfort and energy efficiency are paramount. Thanks to the integration with autonomous rooftop air conditioning units, a high level of consumption optimisation in air handling can be achieved while ensuring the utmost comfort in the rooms.

The INTELLIAIR supervision solution is perfect for:

- ✓ shopping centres
- ✓ multiplex cinemas, theatres, auditoriums
- ✓ commercial premises and areas
- ✓ Ho.Re.Ca sector

The high energy savings with INTELLIAIR are ensured by the automated management of independent areas, through the programming of targeted energy profiles to eliminate inefficiencies that can occur in centralised systems, without sacrificing comfort.

Highly adaptable

INTELLIAIR consists of a pre-wired and pre-assembled hardware and software system inside a control box suitable for installation in a control room or dedicated technical room. A 10" touchscreen panel on the control box allows the operator to consult all pages containing information on the system to be monitored.

Everything under control

Communication between INTELLIAIR, Clivet air conditioning units and field devices is via RS-485 serial line with RTU Modbus communication protocol, which simplifies wiring and ensures long operating distances. Furthermore, communication can be provided based on Ethernet protocol to extend the application range to Clivet units with TCP/IP Modbus communication protocol.

In addition to temperature and humidity control, comfort is even more advanced due to the full integration of high-tech sensors that monitor the air quality index for every single area.



TEMPERATURE



HUMIDITY



AIR QUALITY

z-IAQ air quality sensors



VOC

Volatile organic compounds

CO

Carbon monoxide

NO₂

Nitrogen dioxide

CO₂

Carbon dioxide

CH₄

Natural methane gas

dB

Ambient noise

%RH

Relative humidity

°C

Temperature

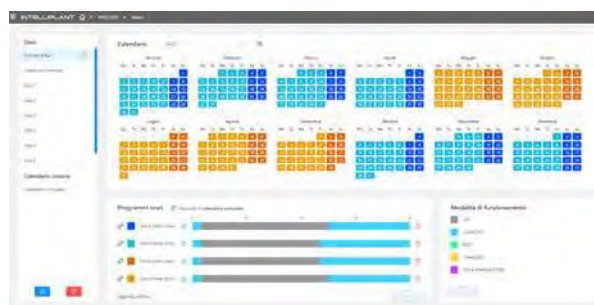
INTELLIAIR is designed to provide full compatibility with all BMS/BAS, thereby ensuring total transparency when viewing the system even by these systems.

INTELLIAIR provides an intuitive dashboard that easily displays all the information on the system's operating mode on cards that automatically adjust to the size of the screen on the local operator panel and on the remote interface.

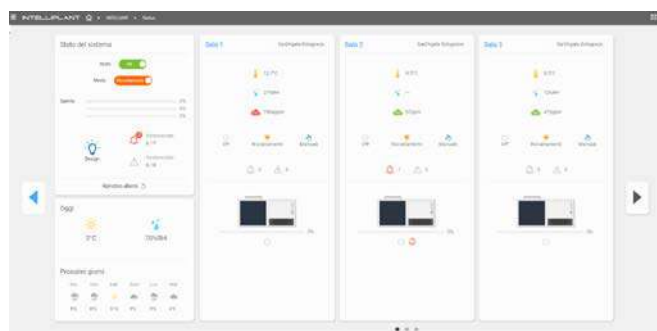
Comfort planning

Programming is one of the most important features of INTELLIAIR for automatic system operation. With the scheduler, you can program the right comfort in the different zones of the building throughout the year so as to maintain their comfort independently of the others, thus eliminating the waste and inefficiency that can occur in centralised systems. The main features are:

- ✓ Daily/annual programming of temperature, humidity, CO₂ setpoints
- ✓ Sharing set-points with all the units belonging to that zone
- ✓ Maintenance planning



From an overall view to the individual detail



The main system page provides direct access to the various zones and displays the following main information:

- ✓ operating status of the system and buttons for quick actions
- ✓ percentage and operating mode of single units, by area
- ✓ maintenance status following the preventive analysis of each individual unit
- ✓ priority and second-level alarms
- ✓ current day's weather and forecast for the next 7 days

In detail, the user can access all parameters specific to the area or individual units and their operating parameters.



Percentage and operating mode of single units, by area:

- ✓ 7-day scheduling of units connected to the area
- ✓ display and modification of the room temperature setpoint, relative humidity and air quality
- ✓ alarm status and specific warnings for the area
- ✓ room temperature, relative humidity and air quality trends over the last 12 hours



The following basic information is displayed for each unit:

- ✓ operating mode (heating / cooling / Auto) and performance of the unit
- ✓ operating status (comfort / Eco / off)
- ✓ current temperature, relative humidity and air quality values
- ✓ detailed component status (fans, compressors, etc.)

Clivet Eye

Clivet Eye

Monitoring and diagnostic survey system for remote management of Clivet units and systems



Clivet Eye is the monitoring system to remotely control air conditioning, heating, air renewal and hot water production units and systems for both private and professional use.

It is intended for end users and professionals for the control and preventive maintenance of heating and cooling units.

All systems at a glance

With Clivet Eye you can monitor and manage all Clivet systems located in the country, even if they are of different types.

The geographical map of Clivet Eye enables all of the systems to be quickly and constantly monitored in real-time, showing their operating conditions simply and intuitively.

Event notifications promptly warn of any system malfunctions.

Clivet Eye provides a graphic page with the location of the units and identifies their operating status with a “traffic light” system.

This makes it possible to detect the operating status of the units in advance and react promptly to avoid system breakages and shut-downs.



Unit running
No action required on site



Unit offline
Requires verification of network connection



Non-blocking fault
Requires verification of unit operating parameters to preserve system integrity and operation continuity



Blocking alarm
Requires verification of unit status to restore correct operation

Main features

- ✓ Easy control of units / systems via the App and Web Dashboard
- ✓ Prompt signalling of malfunctions through e-mail event notifications
- ✓ Programming of operating conditions through time schedules (switch-on, switch-off, changing operating set points)
- ✓ In-depth remote analyses and reset of small alarms reducing the need for on-site intervention
- ✓ Faster and more effective interventions due to prompt signalling of malfunctions via e-mail
- ✓ Analysis of the history of operating conditions
- ✓ Verification of electric and power consumption of individual units (check compatibility with individual unit model)
- ✓ Calculation of efficiencies of individual units (check compatibility with individual unit model)
- ✓ Air quality analysis (available for roof top units fitted with air quality sensors)

Advanced functions



Performance monitoring

Clivet Eye acquires the electric energy and consumption values of individual units and makes them available in graphic format on simple and intuitive interfaces.

In the desktop version, Clivet Eye also calculates the efficiency of the unit accurately, thereby allowing professionals to carry out diagnostic surveys based on actual performance conditions measured in real time.

Air quality index

Clivet Eye acquires the air quality values of air-conditioned rooms by means of Clivet roof top units.

The graphic interface displays the following values:

- ✓ temperature and humidity
- ✓ VOC index
- ✓ carbon dioxide (CO₂)
- ✓ carbon monoxide (CO)
- ✓ methane (CH₄)
- ✓ nitrogen dioxide (NO₂)
- ✓ ambient noise level (dB)

All values measured are available in real time and in chart format with the trend of changes over time.



Connectable Units



Hydronic units for chilled and hot water production, 4-pipe multifunctional units, dedicated heat pumps for high temperature hot water production



Roof top for the air conditioning of medium- and high-crowded buildings.
Independent primary air unit



Air handling unit



Who needs Clivet Eye?

Clivet Eye is intended for end users, facility managers, service centres and system managers in general who need to monitor the system remotely.



END USERS



SYSTEM MANAGERS



MAINTENANCE PERSONNEL

Index

SIZE	SIZE FROM	TO	BRAND NAME	GROUP	PAGE	SIZE	SIZE FROM	TO	BRAND NAME	GROUP	PAGE
AQX	1	32	-	FANCOILS and UTA	150	WDH-iK4	120.1	540.4	SCREWLINE ⁴ -I	HYDRONIC System	80
CFF	1	12	AURA	FANCOILS and UTA	134	WDH-SB4	220.2	580.2	SCREWLINE ⁴	HYDRONIC System	82
CFFA	1	12	AURA	FANCOILS and UTA	138	WiDHN-KSL1 PL	140.2	360.2	SCREWLINE ⁴ -I PL	HYDRONIC System	78
CFK	007.0	041.0	ELFOSPACE BOX3	FANCOILS and UTA	142	WISAN-P	14.1	30.2	THUNDER	HYDRONIC System	24
CFW-2	1	5	MOOD	FANCOILS and UTA	146	WISAN-YEE1	45.4	90.4	LARGE EVO	HYDRONIC System	30
CISDN-Y EF 1 S	Size 1	Size 2	FRESH LARGE EVO	PRIMARY AIR System	110	WISAN-YEE1 PL	20.2	85.4	LARGE EVO PL	HYDRONIC System	32
CKN-XHE2i	7.1	142.2	SMARTPACK ²	PACKAGED System	94	WISAN-YSE1	10.1	55.2	Sheen EVO 2.0	HYDRONIC System	26
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Clivet Eye	-	-	Clivet Eye	DIGITAL Solutions	164	WISAT-YEE1 FC	45.4	90.4	LARGE EVO FC	HYDRONIC System	34
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CPAN-XHE3	Size 1	Size 6	ZEPHIR ³	PRIMARY AIR System	112	WSAN-YES	18.2	35.2	ELFOENERGY STORM EVO	HYDRONIC System	36
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CSNX-iY	20.2	40.4	CLIVETPACK ³ⁱ	PACKAGED System	102	WSAN-YSC4 PL	90.4	265.6	SPINCHILLER ⁴ PL	HYDRONIC System	46
CSRN-iY	20.2	56.4	CLIVETPAC ³ⁱ	PACKAGED System	96	WSAT-YES	18.2	35.2	ELFOENERGY STORM EVO	HYDRONIC System	36
CSRN-XHE2 FFA	12.2	24.4	CLIVETPACK ² FFA	PACKAGED System	104	WSAT-YES FC	18.2	35.2	ELFOENERGY STORM EVO FC	HYDRONIC System	38
CSRN-Y	60.4	120.4	CLIVETPACK ³	PACKAGED System	98	WSAT-YSC4	80.3	240.6	SPINCHILLER ⁴	HYDRONIC System	42
EQV-X	5	21	VERSATEMP	WLHP System	120	WSAT-YSi	16.2	55.2	ELFOENERGY SHEEN EVO	HYDRONIC System	28
EVH-X	5	17	VERSATEMP	WLHP System	122	WSHH-LEE1	19.2	80.2	ELFOENERGY GROUND MEDIUM ² HW	HYDRONIC System	68
EVH-X SPACE	2.1	12.1	VERSATEMP	WLHP System	124	WSHN-EE	17	124	ELFOENERGY GROUND	HYDRONIC System	64
INTELLIAIR	-	-	INTELLIAIR	DIGITAL Solutions	162	WSHN-XEE2	12.2	80.2	ELFOENERGY GROUND MEDIUM ²	HYDRONIC System	66
INTELLIPLANT CORE-	-	-	INTELLIPLANT CORE	DIGITAL Solutions	160	WSHN-XEE2 MF	12.2	80.2	ELFOENERGY GROUND MEDIUM ² MF	HYDRONIC System	70
INTELLIPLANT	-	-	INTELLIPLANT	DIGITAL Solutions	158	WSHN-XSC3	70.4	120.4	SPINCHILLER ³	HYDRONIC System	74
MDE-SL3	120.1	580.2	SCREWLINE ³	HYDRONIC System	88	WSH-XEE2	12.2	80.2	ELFOENERGY GROUND MEDIUM ²	HYDRONIC System	66
SAHU	1	8	SAHU	FANCOILS and UTA	148	WSH-XSC3	70.4	120.4	SPINCHILLER ³	HYDRONIC System	74
WCH-i	250	550	CHILLER CENTRIFUGO	HYDRONIC System	86	WSN-XEE	122	402	ELFOENERGY DUCT MEDIUM	HYDRONIC System	62
WCH-iZ	230	450	CHILLER CENTRIFUGO HFO	HYDRONIC System	84						

Clivet, in compliance with Regulation 517/2014, informs that its products contain or function with the use of fluorinated greenhouse gases: R-32 (GWP 675), R-410A (GWP 2087,5), R-134a (GWP 1430) and R-407C (GWP 1773,85), R-513A (GWP 631), R-1234ze (GWP 7).

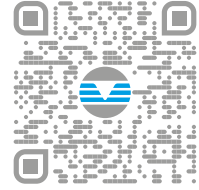
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