



*GUIDE NON EU 2021*  
PRODUCTS AND SYSTEMS  
**APPLIED**





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](http://www.clivet.com), [www.clivetlive.com](http://www.clivetlive.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

LIGHT COMMERCIAL

WLHP SYSTEM

TERMINAL UNITS AND AHU

AUXILIARY SYSTEMS

DIGITAL SOLUTIONS

ALWAYS READY FOR THE FUTURE

# INSPIRING SOLUTIONS

For over 30 years of working on the design, manufacturing and distribution of air conditioning and handling systems, combining high efficiency with minimal environmental impact, Clivet has developed solutions to ensure sustainable comfort and the well-being of people and the environment.

Designing and developing year-round air conditioning solutions with innovative technologies are part of Clivet's DNA, which means the company has always been ready for the future.

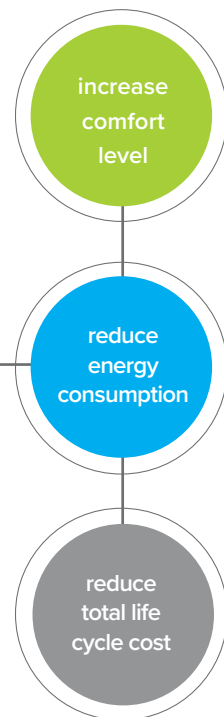


## COMFORT FOR THE PLANET & PEOPLE

### OUR VALUES

IN THE RESIDENTIAL, COMMERCIAL AND INDUSTRIAL SECTORS

Increasing comfort, saving energy and providing customers with the best value for the entire life cycle of the system: these are the values that inspire our systems for the residential, services and industrial sectors.



## OUR NUMBERS

**50.000 m<sup>2</sup>**  
OF PLANTS IN FELTRE,  
BELLUNO - ITALY

**35**  
AGENCIES  
IN ITALY

**640**  
EMPLOYEES  
IN ITALY  
AND ABROAD

**90**  
COUNTRIES WE  
EXPORT TO

**160**  
SERVICE CENTRES

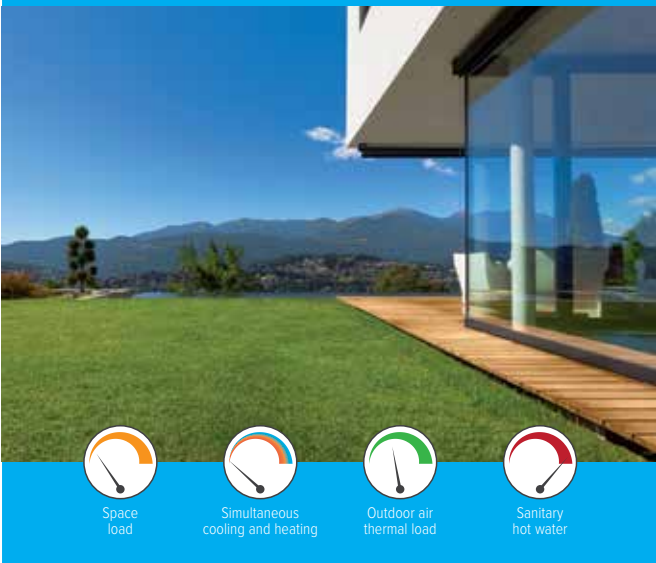
**7 BRANCHES:**  
GREAT BRITAIN,  
GERMANY, INDIA,  
RUSSIA, UAE,  
CHINA, BALKANS

**2015**  
CLIVET LIVE IS BORN

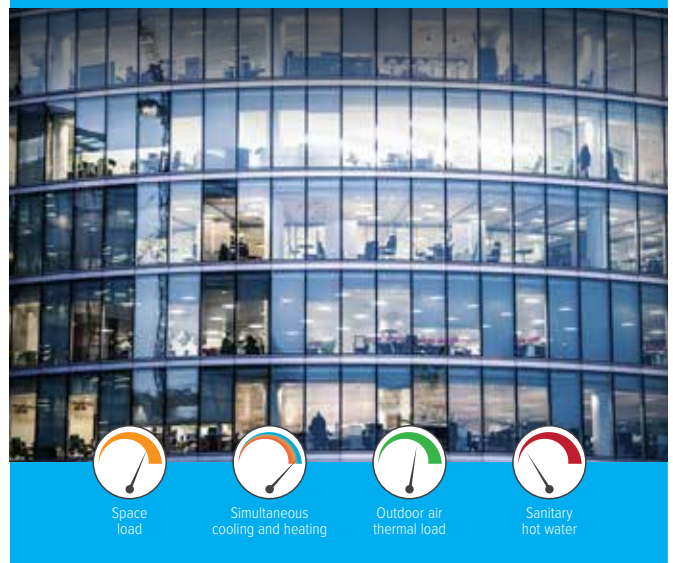
**2016**  
A GROUP  
COMPANY OF  


**2020**  
MIDEA GROUP #307 FORTUNE  
GLOBAL 500  
**40.440 \$M**  
OF MIDEA TURNOVER

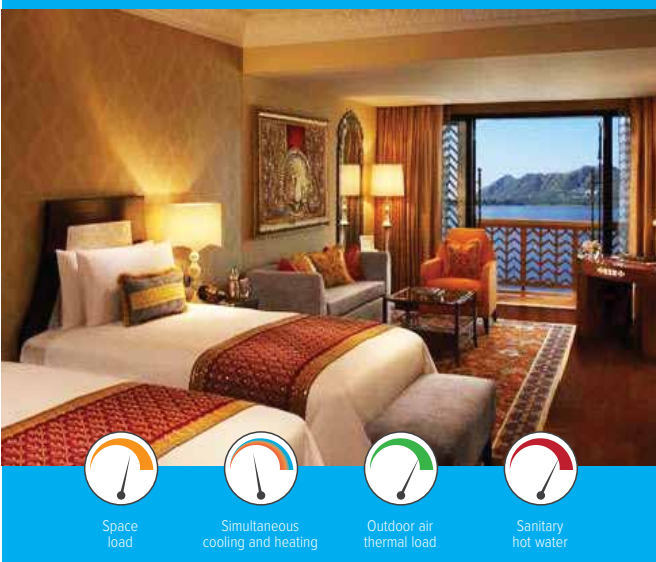
## Residential



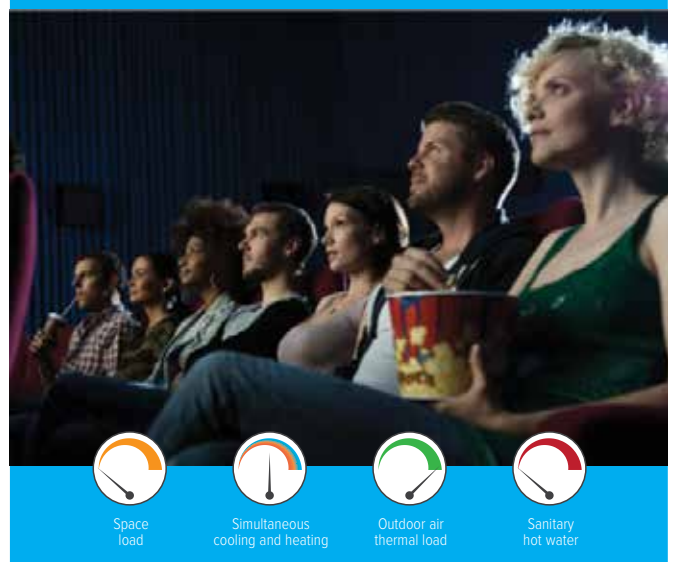
## Offices



## Hotels



## Cinemas



# SPECIALISED SYSTEMS

for any application and climate

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



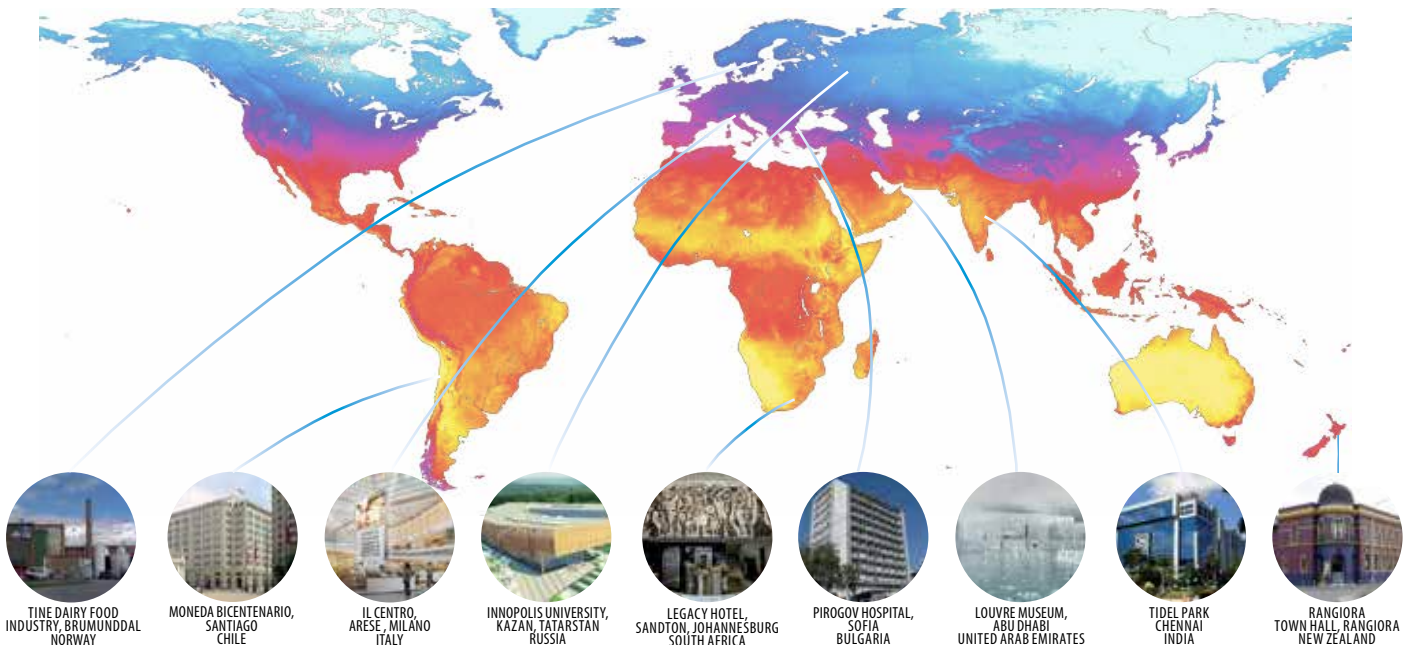
Simultaneous cooling and heating

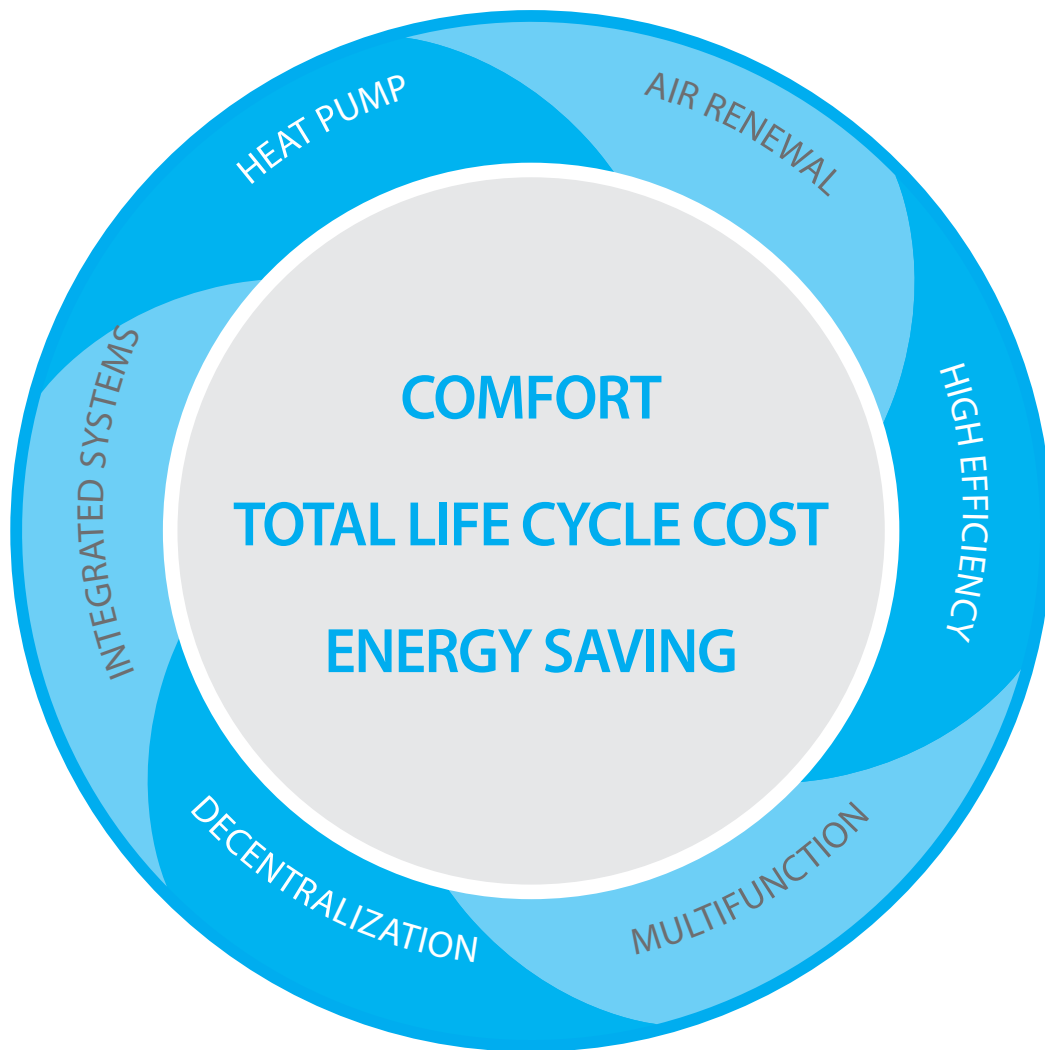


Outdoor air thermal load



Sanitary hot water





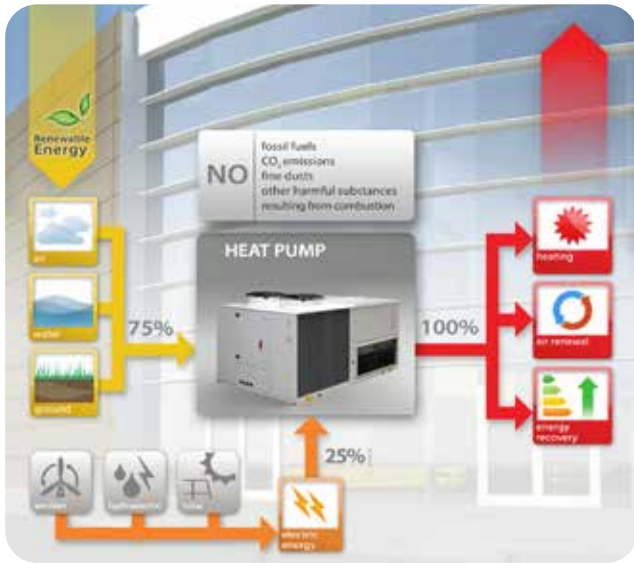
## CLIVET PRINCIPLES for the building evaluation

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, CO<sub>2</sub> 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

## Importance of air renewal



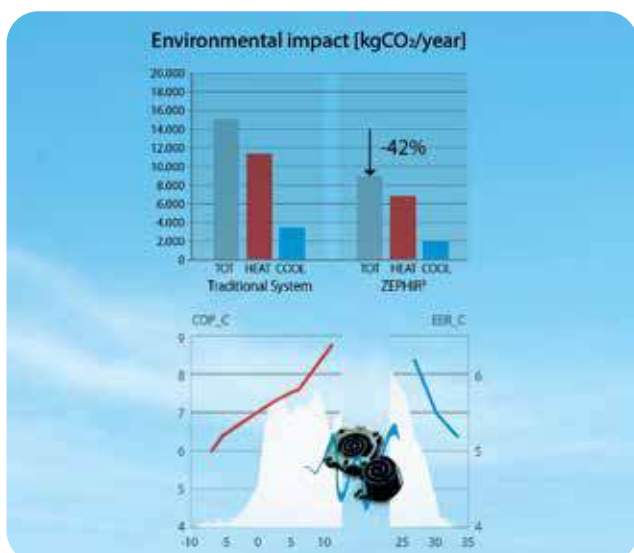
The quality of air inside modern airtight buildings is undermined by a number of pollutants.

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



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

ZEPHIR<sup>3</sup>, Office Building in London, case study

# 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 2019 the Clivet Digital Solutions division was born, offering products and solutions dedicated to the management and monitoring of air conditioning systems for all sectors, from residential to tertiary to industrial.

## 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

Correct thermoregulation of the entire air conditioning, heating, cooling, domestic hot water production, air renewal and purification and distribution of heat and cold is fundamental for total comfort inside our homes.

With **ELFOControl<sup>3</sup> EVO** Clivet offers a control system that with a simple touch on the screen allows you to control the individual elements of the system, managing up to 12 different climate zones.



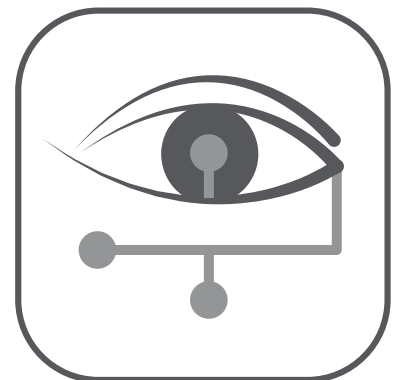
## The cloud-based remote monitoring and management system for all Clivet systems

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

With Clivet Eye you can monitor and manage all the Clivet systems located throughout the territory, even if they are of different types.

The Clivet Eye geographic map allows fast, constant and real time supervision of all the systems, highlighting their operating conditions in a simple and intuitive way.

Event notifications promptly warn of the presence of any anomalies in the functioning of the System.





## 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.

The works for the construction of the new Clivet innovation center are proceeding including a test room to test units up to 2000 kW with new generation refrigerant gases with air temperatures from  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  and water temperatures from  $+4$  to  $+60^{\circ}\text{C}$ . Witness tests and two floors of offices

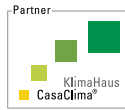
Clivet uses latest generation sheet metal folding, press and cutting machines for the mechanical production of its components.

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.



Clivet products comply with applicable product directives, as required in all EU countries, in order to guarantee an appropriate level of safety.



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.



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 9001:2015, ISO 14001:2015 and ISO 45001:2018 International Standards.



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



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](http://www.heatpumpkeymark.com)



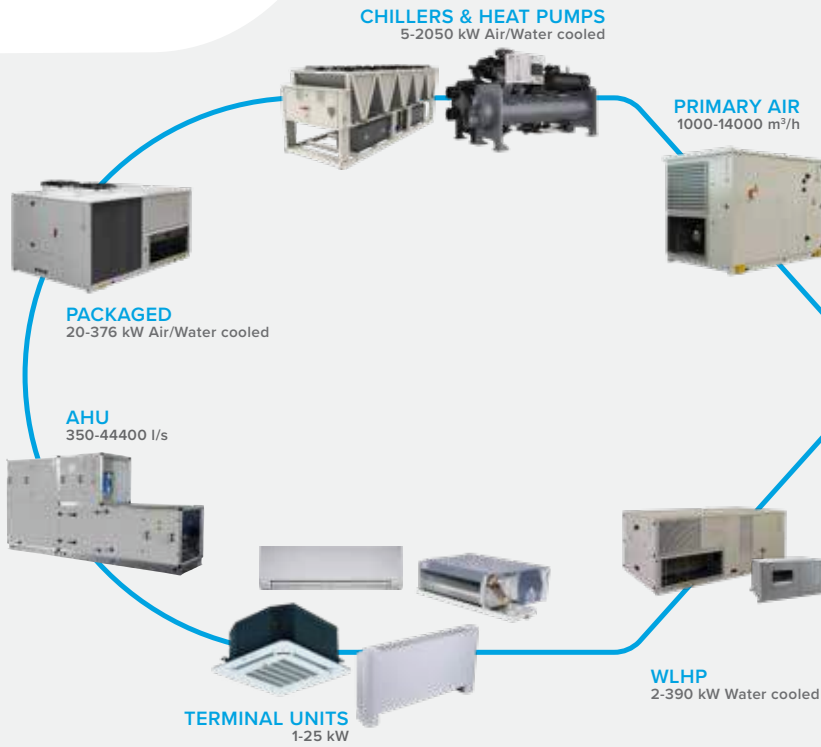
Clivet participates in the EUROVENT "Liquid Chilling Packages and Heat Pumps", "Rooftops", "Air Handling Units" and "VRF" Certification programmes. The products concerned feature in the EUROVENT guide to certified products and on the website [www.eurovent-certification.com](http://www.eurovent-certification.com). The programmes apply to water chillers up to 2000 kW, to rooftops up to 100 kW, to air handling units and to VRF up to 100 kW.



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.

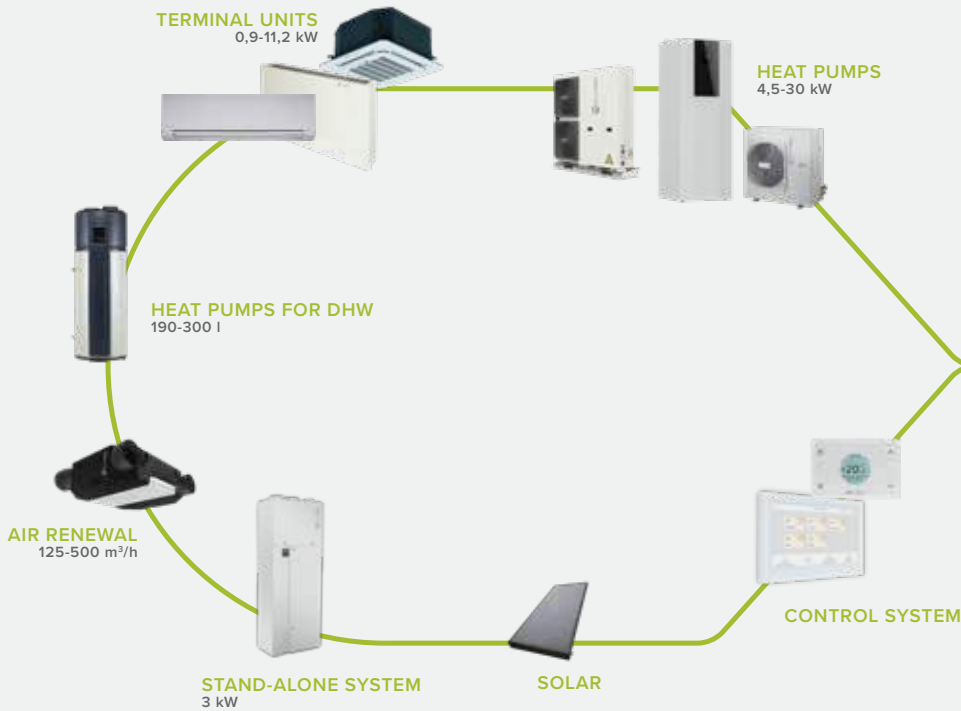
Directives 2009/125/EC and 2010/30/EU include the following Regulations: (EU) 206/2012, (EU) 626/2011; (EU) 811/2013, (EU) 812/2013, (EU) 813/2013, (EU) 814/2013; (EU) 1253/2014, (EU) 1254/2014; (EU) 2016/2281.

# ALL TECHNOLOGIES FOR A COMPLETE PROPOSAL



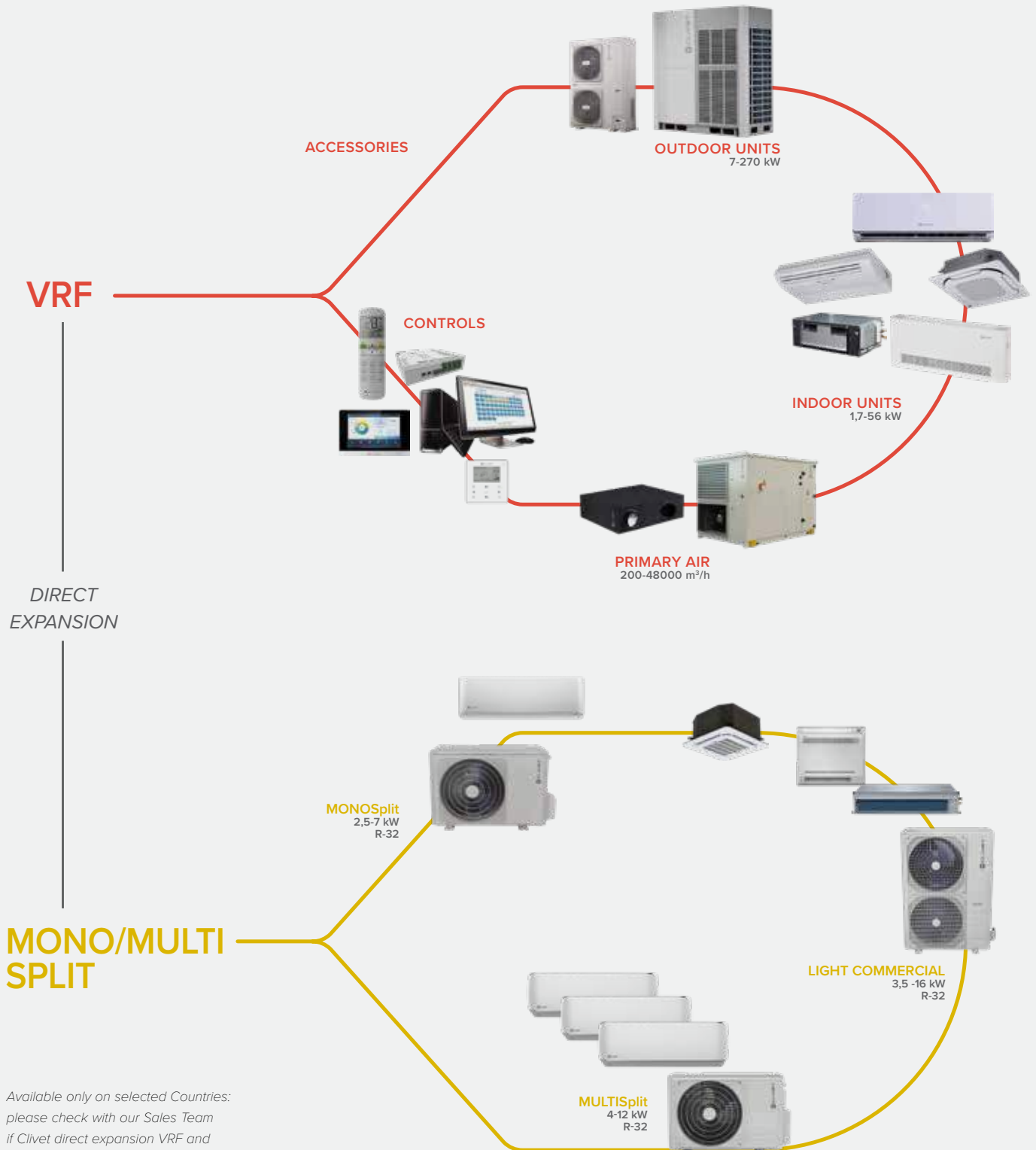
**APPLIED**

HYDRONIC



**HOME**

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

	ELFOEnergy EDGE EVO/ SHEEN EVO  ELFOEnergy EXTENDED INVERTER	ELFOEnergy MEDIUM / LARGE <sup>2</sup>  ELFOEnergy VULCAN MEDIUM  ELFOEnergy DUCT MEDIUM	ELFOEnergy STORM EVO  ELFOEnergy MAGNUM
Capacity (A35/W7)	4 ÷ 98 kW	20 ÷ 216 kW	50 ÷ 354 kW
ErP compliance (heat pumps only)			
Products	   	   	   
Chillers	WSAT-YSi -DC INVERTER WSAT-XIN -DC INVERTER 	WSAT-XEE  	WSAT-YES -DC INVERTER WSAT-XIN -DC INVERTER WSAT-XEM  
High Temperature Chillers External Air			WSAT-YES -DC INVERTER WSAT-XEM 
Free Cooling Chillers		WSAT-XEE FC  	WSAT-YES FC -DC INVERTER
Heat pumps	WSAN-XIN -DC INVERTER WSAN-YMi -DC INVERTER WSAN-YSi -DC INVERTER 	WSAN-XEE	WSAN-YES -DC INVERTER WSAN-XIN -DC INVERTER WSAN-XEM
High temperature water Heat pumps		WBAN	WSAN-XEM HW
Multi-function Heat pumps			WSAN-XIN MF -DC INVERTER WSAN-XEM MF
Ducted units		WSN-XEE (heat pump)	

# Large Commercial and Industry

REMOTEX

SPINchiller<sup>4</sup>

SPINchiller<sup>3</sup>

SCREWLine<sup>4</sup>-i

SCREWLine<sup>3</sup>-i

SCREWLine<sup>3</sup>

237 ÷ 680 kW

216 ÷ 1350 kW

204 ÷ 1523 kW



MSRT-XSC3

WSAT-YSC4   
  
 WSAT-XSC3

WDAT-iZ4   
  
 WDAT-iK4   
  
 WDAT-iL3   
  
 WDAT-SL3

MSRT-XSC3

WSAT-YSC4   
 WSAT-XSC3

WDAT-iZ4   
  
 WDAT-iK4   
  
 WDAT-SL3

WSAT-XSC3 FC

WDAT-SL3 FC

MSRN-XSC3

WSAN-YSC4   
  
 WSAN-XSC3

WSAN-XSC3 MF

Small and Medium Commercial

HYDRONIC

ELFOENERGY Ground

ELFOENERGY Ground Medium<sup>2</sup>

Capacities (A35/W7)

6 ÷ 33 kW

34 ÷ 356 kW

ErP compliance  
(heat pumps only)



Products



WSH-XEE2

Chillers



Heat pumps  
with inversion on the  
water circuit

WSH-XEE2



Heat pumps with  
inversion on the  
refrigeration circuit

WSHN-EE

WSHN-XEE2



Multi-function  
heat pump

WSHN-XEE2 MF



Condenserless units

# Large Commercial and Industry

SPINchiller<sup>3</sup>

SCREWLine<sup>4</sup>-i

SCREWLine<sup>4</sup>

Centrifugal Chiller

210 ÷ 395 kW

340 ÷ 1520 kW

800 ÷ 1930 kW



WSH-XSC3

WDH-iK4



WDH-SB3

WCH-iZ



WCH-i



WSH-XSC3

WDH-iK4



WDH-SB3

WSHN-XSC3

MSE-XSC3

MDE-SL3



Inverter centrifugal Compressor,  
Refrigerant R-134a



Inverter centrifugal Compressor,  
Refrigerant R-1234ze

# HYDRONIC System

## System components

SERIES	SIZE FROM	TO	NAME	PAGE
<b>Water chillers and Heat pumps - air source - axial fans</b>				
WSAN-YMi	21	141	ELFOEnergy Edge EVO	24
WSAT-XIN / WSAN-XIN	141	171	ELFOEnergy Extended Inverter	26
WSAT-YSi / WSAN-YSi	10.1	40.2	ELFOEnergy Sheen EVO	New 28
WSAT-YES / WSAN-YES	18.2	35.2	ELFOEnergy Storm EVO	New 30
WSAT-YES FC	18.2	35.2	ELFOEnergy Storm EVO FC	New 32
WSAN-XEE	82	302	ELFOEnergy Medium	34
WSAT-XEE / WSAN-XEE	352	802	ELFOEnergy Large <sup>2</sup>	36
WBAN	82	302	ELFOEnergy Vulcan Medium	40
WSAT-XIN / WSAN-XIN	18.2	45.2	ELFOEnergy Magnum	42
WSAT-XEM / WSAN-XEM	50.4	120.4	ELFOEnergy Magnum	44
WSAN-XIN MF	18.2	45.2	ELFOEnergy Magnum MF	46
WSAN-XEM MF	50.4	120.4	ELFOEnergy Magnum MF	48
WSAN-XEM HW	35.4	60.4	ELFOEnergy Magnum HW	50
WSAT-YSC4 / WSAN-YSC4	80.3	240.6	SPINchiller <sup>4</sup>	New 52
WSAT-XSC3 / WSAN-XSC3	260.6	480.8	SPINchiller <sup>3</sup>	56
WSAN-XSC3 MF	90.4	480.8	SPINchiller <sup>3</sup> MF	60
WSAT-XSC3 FC	90.4	360.6	SPINchiller <sup>3</sup> FC	64
MSRT-XSC3+CEV-XT / MSRN-XSC3+CEV-XN	90.4	240.4	Remotex	66
WDAT-iZ4	120.1	580.2	SCREWLine <sup>4</sup> -i	New 70
WDAT-iK4	120.1	580.2	SCREWLine <sup>4</sup> -i	New 72
WDAT-iL3	250.2	580.2	SCREWLine <sup>3</sup> -i	74
WDAT-SL3	200.2	580.2	SCREWLine <sup>3</sup>	76
WDAT-SL3 FC	200.2	580.2	SCREWLine <sup>3</sup> FC	78
<b>Water chillers and Heat pumps - air source - centrifugal fans</b>				
WSN-XEE	122	402	ELFOEnergy Duct Medium	80
<b>Water chillers and Heat pumps - water source</b>				
WSHN-EE	17	121	ELFOEnergy Ground	82
WSH-XEE2 / WSHN-XEE2	12.2	120.2	ELFOEnergy Ground Medium <sup>2</sup>	84
WSH-XEE2 HW	19.2	80.2	ELFOEnergy Ground Medium <sup>2</sup> HW	New 86
WSHN-XEE2 MF	12.2	80.2	ELFOEnergy Ground Medium <sup>2</sup> MF	88
WSH-XSC3 / WSHN-XSC3	70.4	120.4	SPINchiller <sup>3</sup>	92
WDH-SB3	220.2	580.2	SCREWLine <sup>3</sup>	96
WDH-iK4	120.1	540.2	SCREWLine <sup>4</sup> -i	New 98
WCH-iZ	230	450	Centrifugal Chiller	New 100
WCH-i	250	550	Centrifugal Chiller	102
<b>Condenserless water chillers - air source</b>				
MSE-XSC3	90.4	160.4	SPINchiller <sup>3</sup>	104
MDE-SL3	120.1	580.2	SCREWLine <sup>3</sup>	106

## ELFOEnergy Edge EVO

**Reversible heat pump**

Air cooled

Outdoor installation

**Capacity from 4,85 to 29,5 kW**



- **SEASONAL EFFICIENCY:** Guaranteed by DC Inverter technology applied to the compressor and fans, which can modulate its speed to the energy needs required. This solution allows a further reduction in consumption and a significant improvement of the seasonal efficiency.
- **ADVANCED TECHNOLOGY:** Hydrophilic battery for a guarantee of efficiency in all conditions, electronic expansion valve to optimize the operation of the cooling circuit with DC inverter compressor and fans. The unit can be equipped with a standard DC Inverter circulator, providing further energy savings through the modulation of water flow depending on the building thermal load and pressure drop.
- **EXTENDED OPERATING RANGE:** ELFOEnergy Edge Evo is able to meet the strictest requirements in terms of operating temperatures, with great efficiency. In cooling, its operation is guaranteed even with very low outside temperatures (from 46°C to -5°C), ideal for the requirements of IT applications. In heating, its operation is guaranteed down to external air temperatures of -25°C producing hot water of up to 60°C.
- **DOMESTIC HOT WATER ALL YEAR ROUND:** ELFOEnergy Edge Evo is able to produce domestic hot water at 60°C both in winter with outdoor temperatures down to -20°C and in summer with outdoor temperatures up to 43°C



Unit listed on  
www.eurovent-certification.com



ErP  
compliant



### functions and features



Heat pump



Air cooled



Outdoor  
installation



R-32



Hermetic rotary



Full InverterDC

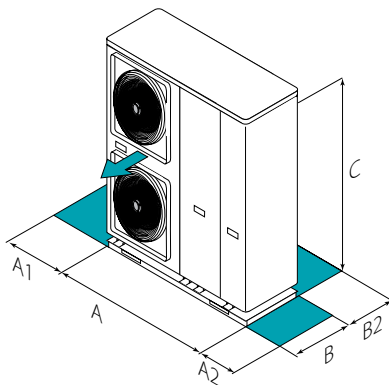


Electronic  
expansion  
valve



ELFOControl<sup>3</sup>  
EVO

### 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-YMi	21	31	41	61	71	81	91	101	121	141
A - Length	mm	1210	1210	1210	1404	1404	1404	1129	1129	1129	1129
B - Width	mm	402	402	402	405	405	405	440	440	440	440
C - Height	mm	945	945	945	1414	1414	1414	1558	1558	1558	1558
A1	mm	400	400	400	400	400	400	300	300	300	300
A2	mm	400	400	400	400	400	400	600	600	600	600
B2	mm	300	300	300	300	300	300	300	300	300	300
230/1/50 Operating weight	kg	99	99	99	158	158	158	-	-	-	-
400/3/50+N Operating weight	kg	-	-	-	172	172	172	177	177	177	177

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

### VOLTAGE:

**230M** Supply voltage 230/1/50 (Standard)

**400TN** Supply voltage 400/3/50+N (sizes 61÷141only)

**IBH** Back-up electric heater (sizes 61÷81 only)  
(only available with Direct Shipping)

## technical data

Size	WSAN-YMi	21	31	41	61	71	81	
230/1/50	▶ Cooling capacity (EN 14511:2018)	(1) kW	4,85	6,30	7,95	10,9	12,9	13,8
230/1/50	Total power input (EN 14511:2018)	(1) kW	1,63	2,27	3,15	3,74	4,64	5,21
230/1/50	EER (EN 14511:2018)	(1) -	2,98	2,77	2,53	2,92	2,78	2,65
230/1/50	SEER	(4) -	4,71	4,99	4,92	4,85	4,73	4,54
230/1/50	$\eta_{s,c}$	(4) %	185,4	196,6	193,8	191,0	186,2	178,6
230/1/50	▶ Heating capacity (EN 14511:2018)	(2) kW	4,80	6,70	8,60	12,4	14,1	16,2
230/1/50	Total power input (EN 14511:2018)	(2) kW	1,33	1,88	2,50	3,52	4,06	4,72
230/1/50	COP (EN 14511:2018)	(2) -	3,60	3,57	3,44	3,53	3,47	3,43
230/1/50	Water flow-rate (User Side)	l/s	0,23	0,30	0,35	0,52	0,62	0,66
230/1/50	Useful pump discharge head	kPa	59,9	50,5	37,9	79,7	66,6	61,1
230/1/50	Sound pressure level	(3) dB(A)	49	52	55	54	55	56
230/1/50	Refrigeration circuits				1			
230/1/50	No. of compressor				1			
230/1/50	Type of compressor				ROTARY INVERTER			
230/1/50	Standard air flow	l/s	3050	3050	3050	6150	6150	6150
<b>Directive ErP (Energy Related Products)</b>								
230/1/50	ErP Energy Class - AVERAGE Climate - W35		A+++	A+++	A+++	A++	A++	A++
230/1/50	ErP Energy Class - AVERAGE Climate - W55		A++	A++	A++	A++	A++	A++
230/1/50	SCOP - AVERAGE Climate - W35	(4)	4,48	4,49	4,51	4,30	4,35	4,30
230/1/50	$\eta_{s,H}$	(4) %	176,0	176,0	177,0	169,0	168,0	169,0
230/1/50	SCOP - AVERAGE Climate - W55	(4)	3,23	3,24	3,22	3,23	3,26	3,27
230/1/50	$\eta_{s,H}$	(4) %	127,0	127,0	126,0	126,0	128,0	128,0

Size	WSAN-YMi	61	71	81	91	101	121	141	
400/3/50+N	▶ Cooling capacity (EN 14511:2018)	(1) kW	10,9	12,9	13,8	17,0	21,0	26,0	29,5
400/3/50+N	Total power input (EN 14511:2018)	(1) kW	3,72	4,62	5,19	5,57	7,12	9,63	11,6
400/3/50+N	EER (EN 14511:2018)	(1) -	2,93	2,80	2,66	3,05	2,95	2,70	2,55
400/3/50+N	SEER	(4) -	4,85	4,73	4,54	4,70	4,70	4,66	4,49
400/3/50+N	$\eta_{s,c}$	(4) %	191,0	186,2	178,6	185,0	185,0	183,4	176,6
400/3/50+N	▶ Heating capacity (EN 14511:2018)	(2) kW	12,4	14,1	16,2	18,0	22,0	26,0	30,0
400/3/50+N	Total power input (EN 14511:2018)	(2) kW	3,45	3,99	4,70	5,14	6,47	8,39	10,3
400/3/50+N	COP (EN 14511:2018)	(2) -	3,59	3,54	3,45	3,50	3,40	3,10	2,90
400/3/50+N	Water flow-rate (User Side)	l/s	0,52	0,62	0,66	0,81	1,00	1,05	1,10
400/3/50+N	Useful pump discharge head	kPa	79,7	66,6	61,1	102	94,6	78,8	59,4
400/3/50+N	Sound pressure level	(3) dB(A)	54	56	56	55	58	60	62
400/3/50+N	Refrigeration circuits				1				
400/3/50+N	No. of compressor				1				
400/3/50+N	Type of compressor				ROTARY INVERTER				
400/3/50+N	Standard air flow	l/s	6150	6150	6150	10650	10650	11200	11200
<b>Directive ErP (Energy Related Products)</b>									
400/3/50+N	ErP Energy Class - AVERAGE Climate - W35		A++	A++	A++	A+++	A+++	A+++	A++
400/3/50+N	ErP Energy Class - AVERAGE Climate - W55		A++	A++	A++	A++	A++	A+	A+
400/3/50+N	SCOP - AVERAGE Climate - W35	(4)	4,30	4,35	4,30	4,60	4,53	4,50	4,19
400/3/50+N	$\eta_{s,H}$	(4) %	169	168	169	181	178	177	165
400/3/50+N	SCOP - AVERAGE Climate - W55	(4)	3,23	3,26	3,27	3,21	3,22	3,14	3,14
400/3/50+N	$\eta_{s,H}$	(4) %	126,0	128,0	128,0	125,0	126,0	123,0	123,0

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Entering external exchanger air temperature = 35°C
- (2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C; External exchanger air temperature 7 D.B./6 (°C) W.B.
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

- (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 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

## accessories

<b>IBHX</b>	Backup electric heater	<b>ACS3SX</b>	300-litre domestic hot water storage tank with solar coil (size 21÷51)
<b>KTFLX</b>	Hose kit for connection to the chiller/heat pump	<b>ACS5SX</b>	500-litre domestic hot water storage tank with solar coil
<b>KSAX</b>	100-litre circuit breaker	<b>3DHWX</b>	Three-way valve for domestic hot water
<b>QERAX</b>	Connection electrical panel of the DHW storage heater	<b>TANKX</b>	Buffer tank
<b>ACS200X</b>	200-litre domestic hot water storage tank	<b>KTCAMX</b>	Piping kit for the connection to the buffer tank on supply water side
<b>ACS300X</b>	300-litre domestic hot water storage tank (size 21÷51)	<b>KTCARX</b>	Piping kit for the connection to the buffer tank on return water side
<b>ACS500X</b>	500-litre domestic hot water storage tank	<b>T1BX</b>	Probe for auxiliary heating source T1B
<b>ACS2SX</b>	200-litre domestic hot water storage tank with solar coil		

Accessories whose code ends with "X" are supplied separately



## ELFOEnergy Extended Inverter

### Water chiller

WSAT-XIN: cooling only  
 WSAN-XIN: reversible heat pump  
 Air cooled  
 Outdoor installation  
**Capacity from 32,4 to 49,2 kW**

- **SEASONAL EFFICIENCY:** Guaranteed by DC Inverter technology applied to the compressor, which can modulate its speed to the energy needs required. This solution allows a further reduction in consumption and a significant improvement of the seasonal efficiency.
- **MAXIMUM SILENCE:** ELFOEnergy Extended Inverter is at the top of its class, thanks to the optimized profile of the fan, and through the modulation of the fan and compressor depending on the external conditions and building thermal load.
- **COMPACT SIZE:** The continued research in product industrialization, has allowed to realize a very compact unit, a decisive factor to meet the requirements of flexibility to suit the characteristics of each building.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant



## functions and features



Cool only  
 (WSAT-XIN)



Heat pump  
 (WSAN-XIN)



Air cooled



Outdoor  
 installation



R-410A



Hermetic Scroll



Full inverter  
 DC

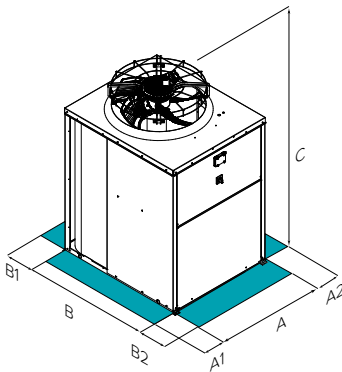


ELFOControl<sup>®</sup>  
 EVO



Intelliplant  
 (WSAN-XIN)

## 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-XIN	141	151	161	171
A - Length	mm	1341	1341	1341	1341
B - Width	mm	1159	1159	1146	1146
C - Height	mm	1520	1520	1770	1770
A1	mm	1000	1000	1000	1000
A2	mm	1000	1000	1000	1000
B1	mm	1000	1000	1000	1000
B2	mm	1000	1000	1000	1000
Operating weight	kg	300	320	390	390

Size	WSAN-XIN	141	151	161	171
A - Length	mm	1341	1341	1341	1341
B - Width	mm	1159	1159	1146	1146
C - Height	mm	1520	1520	1770	1770
A1	mm	1000	1000	1000	1000
A2	mm	1000	1000	1000	1000
B1	mm	1000	1000	1000	1000
B2	mm	1000	1000	1000	1000
Operating weight	kg	310	330	400	400

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:

**EXC** Excellence

VOLTAGE:

**400TN** Supply voltage 400/3/50+N

## technical data

Size	WSAT-XIN	141	151	161	171
▶ Cooling capacity (EN14511:2018)	(1) kW	32,4	36,4	43,2	48,1
Total power input (EN14511:2018)	(1) kW	10,2	12,2	14,4	16,4
EER (EN14511:2018)	(1) -	3,18	2,99	3,00	2,93
SEER	(4) -	5,83	5,94	5,61	5,66
$\eta_{sc}$	(4) %	230,2	234,4	221,5	223,5
Refrigeration circuits	Nr		1		
No. of compressors	Nr		1		
Type of compressors	-		SCROLL INVERTER		
Standard airflow	l/s	4694	5139	5649	5833
Water flow-rate (User Side)	l/s	1,55	1,74	2,06	2,30
Useful pump discharge head	kPa	122	112	98	83
Standard power supply	V		400/3/50+N		
Sound pressure level	(3) dB(A)	69	70	73	73

Size	WSAN-XIN	141	151	161	171
▶ Cooling capacity (EN14511:2018)	(1) kW	32,5	38,2	43,6	49,2
Total power input (EN14511:2018)	(1) kW	12,2	14,4	16,2	19,1
EER (EN14511:2018)	(1) -	2,67	2,66	2,69	2,58
SEER	(4) -	5,39	5,17	5,34	5,22
$\eta_{sc}$	(4) %	212,5	203,8	210,6	205,8
▶ Heating capacity (EN14511:2018)	(2) kW	31,9	36,7	43,0	49,3
Total power input (EN14511:2018)	(2) kW	9,88	11,5	13,6	15,7
COP (EN14511:2018)	(2) -	3,23	3,20	3,17	3,14
Refrigeration circuits	Nr		1		
No. of compressors	Nr		1		
Type of compressors	-		SCROLL INVERTER		
Standard airflow	l/s	4694	5648	6672	6861
Water flow-rate (User Side)	l/s	1,55	1,83	2,08	2,35
Useful pump discharge head	kPa	122	107	97	79
Standard power supply	V		400/3/50+N		
Sound pressure level	(3) dB(A)	69	70	73	73
<b>Directive ErP (Energy Related Products)</b>					
ErP Energy Class - AVERAGE Climate - W35		A+	A+	A+	A+
SCOP - AVERAGE Climate - W35	(4)	3,21	3,20	3,21	3,22
$\eta_{sh}$	(4) %	125,0	125,0	125,0	126,0

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Entering eExternal exchanger air temperature = 35°C
- (2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C. External exchanger air temperature 7 D.B. /6 (°C) W.B.
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with

- respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C
- (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

- AMRX** Rubber antivibration mounts
- HEDIF** Diffuser for high efficiency axial fan (sizes 141÷171)
- RCTX** Remote control
- CMSC2X** Serial communication module with RS485 serial converter kit
- KSAX** 100-litre circuit breaker
- PGFCX** Finned coil protection grill (sizes 141÷171)

- KTFLX** Hose kit for connection to the chiller/heat pump.
- KG4UPX** Management kit up to 4 units in parallel by the two set point available for each unit

### Only WSAN-XIN:

- CMACSX** Domestic hot water module
- 3DHWX** Three-way valve for domestic hot water

Accessories whose code ends with "X" are supplied separately

### NEW PRODUCT

HYDRONIC



Unit listed on  
www.eurovent-certification.com



ErP  
compliant



## ELFOEnergy Sheen EVO

### Water chiller

WSAT-YSi: cooling only

WSAN-YSi: reversible heat pump

Air cooled

Outdoor installation

Capacity from 22,3 to 98,0 kW

The **ELFOEnergy Sheen EVO** chillers and heat pumps are high efficiency packaged units for outdoor installation with the ecological R-32 refrigerant.

■ **SEASONAL EFFICIENCY:** guaranteed by DC Inverter technology applied to the compressor and fans, which can modulate its speed to the energy needs required. This solution allows a further reduction in consumption and a significant improvement of the seasonal efficiency.

■ **EXTENDED OPERATING RANGE:** ELFOEnergy Sheen Evo is able to meet the strictest requirements in terms of operating temperatures, with great efficiency. In cooling, its operation is guaranteed even with very low outside temperatures (from 48°C to -20°C). In heating mode it is also possible to produce hot water at 54°C down to -4°C outside air.

### functions and features



Cool only  
(WSAT-YSi)



Heat pump  
(WSAN-YSi)



Air cooled



Outdoor  
installation



R-32



Hermetic  
rotary



Hermetic  
Scroll



Full  
InverterDC

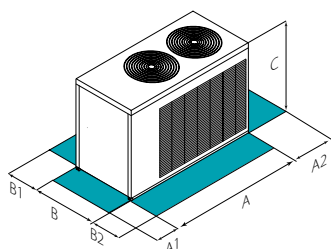


Electronic  
expansion  
valve



ELFOControlP  
EVO

### 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-YSi	16.2	20.2	24.2	30.2	35.2	40.2
A - Length	mm	2204	2204	2204	3221	3221	3221
B - Width	mm	1043	1043	1043	1089	1089	1089
C - Height	mm	1320	1320	1320	1510	1510	1510
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
Operating weight	kg	470	470	470	680	680	680

Size	WSAN-YSi	10.1	12.1	14.1	16.2	18.2	22.2
A - Length	mm	1876	1876	1876	2218	2218	2218
B - Width	mm	1005	1005	1005	1057	1057	1057
C - Height	mm	1176	1176	1176	1339	1339	1339
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
Operating weight	kg	300	300	300	480	480	480

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)

## technical data

Size	WSAT-YSi	16.2	20.2	24.2	30.2	35.2	40.2
▶ Cooling capacity (EN14511:2018)	(1) kW	43,0	54,0	65,0	76,0	87,0	98,0
Total power input (EN14511:2018)	(1) kW	13	17,2	23,6	23,4	28,3	35,1
EER (EN14511:2018)	(1) -	3,30	3,14	2,76	3,25	3,07	2,79
SEER	(4) -	4,97	4,81	4,65	5,37	5,15	4,95
$\eta_{sc}$	(4) %	196,0	189,0	183,0	212,0	203,0	195,0
No. of compressors	Nr				2		
Refrigeration circuits	Nr				1		
Type of compressors			ROTARY INVERTER			SCROLL INVERTER	
Standard airflow	l/s	6944	6944	6944	10417	10417	10417
Standard power supply	V				400/3/50+N		
Sound pressure level	(3) dB(A)	65	66	67	66	68	69

Size	WSAN-YSi	10.1	12.1	14.1	16.2	18.2	22.2
▶ Cooling capacity (EN14511:2018)	(1) kW	22,3	25,8	29,0	42,0	48,0	55,0
Total power input (EN14511:2018)	(1) kW	7,38	9,08	10,36	15,61	18,25	20,83
EER (EN14511:2018)	(1) -	3,02	2,84	2,80	2,69	2,63	2,64
SEER	(4) -	4,63	4,64	4,63	4,00	3,99	4,01
$\eta_{sc}$	(4) %	182,0	183,0	182,0	157,0	157,0	157,0
▶ Heating capacity (EN14511:2018)	(2) kW	24,3	27,1	31,4	48,6	54,0	62,0
Total power input (EN14511:2018)	(2) kW	7,36	8,28	10,00	14,64	16,55	20,00
COP (EN14511:2018)	(2) -	3,30	3,27	3,20	3,32	3,26	3,10
No. of compressors	Nr		1			2	
Refrigeration circuits	Nr				1		
Type of compressors				ROTARY INVERTER			
Standard airflow	l/s	12500	12500	12500	24000	24000	24000
Standard power supply	V				400/3/50+N		
Sound pressure level	(3) dB(A)	59	60	60	68	69	70
<b>Directive ErP (Energy Related Products)</b>							
ErP Energy Class - AVERAGE Climate - W35		A++	A++	A++	A++	A++	A++
SCoP - AVERAGE Climate - W35	(4)	4,30	4,25	4,24	3,91	3,90	3,87
$\eta_{sH}$	(4) %	169,0	167,0	167,0	153,0	153,0	152,0

- (1) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C
- (2) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 40/45°C - Entering external exchanger air temperature = 7°C D.B./6°C W.B
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature 35°C

- (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 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

## accessories

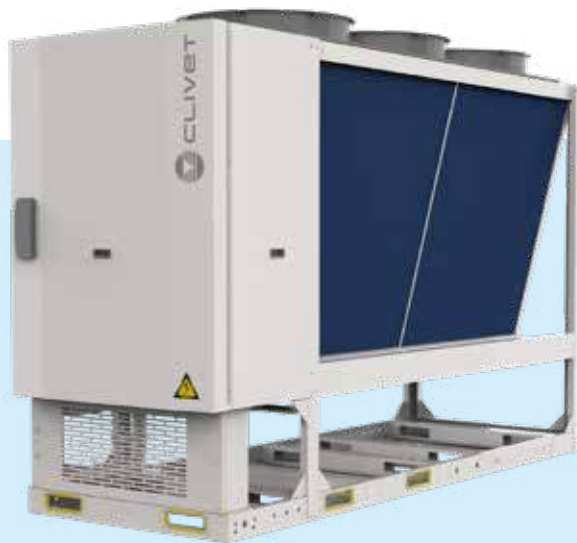
- HYG1** Hydronic assembly with 1 ON/OFF pump
- HYGU1V** User side hydronic group with 1 inverter pump
- ACC** Storage tank
- IFWX** Steel mesh strainer on the water side

- AVIBX** Anti-vibration mount support
- Only WSAN-YSi:**
- VACS** DHW switching valve

Accessories whose code ends with "X" are supplied separately

## NEW PRODUCT

HYDRONIC



## ELFOEnergy Storm EVO

### Water chiller

WSAT-YES: cooling only

WSAN-YES: reversible heat pump

Air cooled

Outdoor installation

Capacity from 53,3 to 85,0 kW

The **ELFOEnergy Storm EVO** chillers and heat pumps are high efficiency packaged units for outdoor installation with the ecological R-32 refrigerant. Thanks to the highest energy efficiency over the entire operating cycle, the domestic hot water production and high configurability, they are suitable for residential and tertiary applications.

■ **ADVANCED TECHNOLOGY:** the new R-32 refrigerant, DC Inverter technology for the compressor and fans, a specially-conceived design for modularity that allows to hydraulically connect up to 4 units and manage up to 16 units in a local network, are some of the construction features.

■ **EXTENDED OPERATING RANGE:** in cooling, its operation is guaranteed even with very low outside temperatures (from 52°C to -20°C), ideal for the needs of IT applications. In heating, its operation is guaranteed down to external air temperatures of -15°C producing hot water of up to 55°C. The two silent and super silent modes also ensure a greater acoustic comfort in the desired hours.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant



## functions and features



Cool only  
(WSAT-YES)



Heat pump  
(WSAN-YES)



Air cooled



Outdoor  
installation



R-32



Hermetic rotary



Hermetic Scroll



Full Inverter  
DC

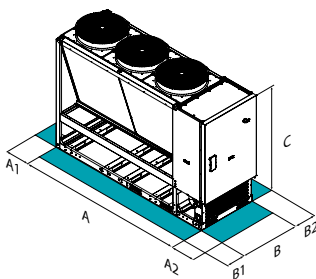


Electronic  
expansion valve



ELFOControl<sup>3</sup>  
EVO

## 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	2152	2152	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	2337	2337	3190	3190	3190
B - Width	mm	1130	1130	1130	1130	1130
C - Height	mm	2152	2152	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	580	580	780	780	780

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 (EN14511:2018)	(1) kW	53,1	59,2	72,2	77,5	85,1
Total power input (EN14511:2018)	(1) kW	16,7	19,9	22,9	25,2	29,1
EER (EN14511:2018)	(1) -	3,10	3,00	3,21	3,20	3,10
SEER	(4) -	4,85	4,84	4,89	4,81	4,74
$\eta_{sc}$	(4) %	191,0	191,0	193,0	190,0	186,0
No. of compressors	Nr			2		
Refrigeration circuits	Nr			1		
Type of compressors		ROTARY INVERTER		SCROLL INVERTER		
Standard airflow	l/s	6889	6889	10333	10333	10333
Standard power supply	V			400/3/50+N		
Sound pressure level	(3) dB(A)	64	65	62	65	67

Size	WSAN-YES	18.2	20.2	25.2	30.2	35.2
▶ Cooling capacity (EN14511:2018)	(1) kW	53,3	58,9	72,0	77,7	85,0
Total power input (EN14511:2018)	(1) kW	18,1	20,3	22,9	25,1	29,2
EER (EN14511:2018)	(1) -	2,95	2,90	3,15	3,10	2,91
SEER	(4) -	4,57	4,51	4,64	4,62	4,50
$\eta_{sc}$	(4) %	170,0	177,0	183,0	182,0	177,0
▶ Heating capacity (EN14511:2018)	(2) kW	53,0	66,0	79,3	84,7	91,0
Total power input (EN14511:2018)	(2) kW	16,5	20,8	23,8	25,7	28,00
COP (EN14511:2018)	(2) -	3,21	3,17	3,33	3,29	3,25
No. of compressors	Nr			2		
Refrigeration circuits	Nr			1		
Type of compressors		ROTARY INVERTER		SCROLL INVERTER		
Standard airflow	l/s	6889	6889	10333	10333	10333
Standard power supply	V			400/3/50+N		
Sound pressure level	(3) dB(A)	65	65	66	67	67
<b>Directive ErP (Energy Related Products)</b>						
ErP Energy Class - AVERAGE Climate - W35		A++	A++	A++	-	-
SCOP - AVERAGE Climate - W35	(4)	4,04	4,03	4,08	4,07	4,06
$\eta_{sc}$	(4) %	159,0	158,0	160,0	160,0	159,0

- (1) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C
- (2) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 40/45°C - Entering external exchanger air temperature = 7°C D.B./6°C W.B
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

- (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 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

## accessories

**HYGU1V** User side hydronic assembly with 1 inverter pump

**ACIMP** Steel inertial storage tank

**IFWX** Steel mesh strainer on the water side

**AVIBX** Anti-vibration mount support

**PGFC** Finned coil protection grill

**AMODX** Water fittings for modular unit

### Only WSAT-YES:

**CCME** Microchannel e-coated coil

**CCKMUX** Pipe plug kit for modular units

### Only WSAN-YES:

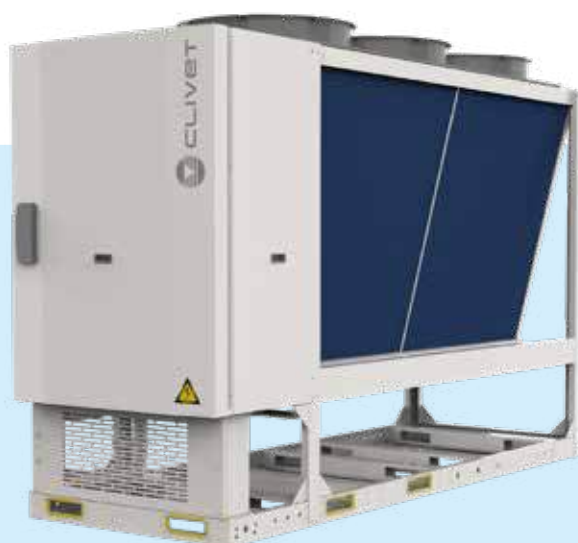
**CCCA** Copper / aluminium condenser coil with acrylic lining

**CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment

**3DHW** Built-in 3-way valve for domestic hot water on the unit

Accessories whose code ends with "X" are supplied separately

## NEW PRODUCT



ErP  
compliant



## ELFOEnergy Storm EVO FC

**Liquid chiller with FREE-COOLING**  
Air cooled  
Outdoor installation  
**Capacity from 50,4 to 80,8 kW**

The **Storm EVO FREE-COOLING** enables high-level savings on the management costs of the system in applications which also require cooled water during the cold season such as industrial processes, data centres, telecommunications, technological applications and shopping centres.

■ **SIGNIFICANT ENERGY SAVINGS:** when the fresh air temperature is lower than the return water temperature of the system, the FREE-COOLING system recovers coolness from the external setting and reduces compressor operations until they are completely stilled. In this way the requested cooling capacity is supplied at no cost.

■ **ADVANCED TECHNOLOGY:** in addition to the new R-32 refrigerant, DC Inverter technology for the compressor and fans, it presents a specially conceived design for modularity that allows to hydraulically connect up to 4 units and manage up to 16 units in a local network. They can be also combined with cooling only units of Storm EVO series.

## functions and features



Cool only  
(WSAT-YES)



Air cooled



Outdoor  
installation



R-32



Hermetic  
rotary



Hermetic  
Scroll



FREE-  
COOLING



Full Inverter  
DC

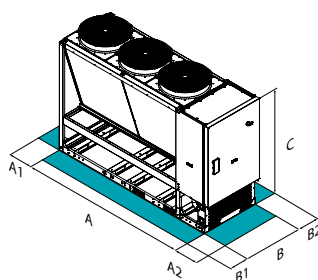


Electronic  
expansion valve



ELFOControl<sup>3</sup>  
EVO

## 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 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	2152	2152	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.

## versions and configurations

### TYPE OF FANS:

**VENDC** DC high efficiency fan (Standard)

### FREE-COOLING:

**FCD** Direct FREE-COOLING (Standard)

**FCI** No-glycol FREE-COOLING

## technical data

Size	WSAT-YES FC	18.2	20.2	25.2	30.2	35.2
<b>Free-Cooling Off</b>						
Cooling capacity	(1) kW	57,4	63,9	75,9	81,5	89,7
Total power input	(1) kW	15,1	17,3	19,6	21,1	23,7
EER at full load	(1) -	3,80	3,69	3,87	3,86	3,78
SEER	(4) -	4,48	4,51	4,56	4,48	4,41
$\eta_{s,c}$	(4) %	176,4	177,4	179,4	176,1	173,6
<b>Free-Cooling diretto on</b>						
Cooling capacity	(2) kW	51,4	53,0	83,5	84,6	86,3
Total power input	(2) kW	1,68	1,68	2,51	2,51	2,51
EER at full load	(2) -	30,60	31,55	33,25	33,71	34,39
Refrigeration circuits	Nr			1		
No. of compressors	Nr			2		
Type of compressors	-	ROTARY INVERTER		SCROLL INVERTER		
Standard power supply	V			400/3/50+N		
Sound pressure level	(3) dB(A)	64	65	62	65	67
Sound pressure level	(3) dB(A)	82	82	81	84	85

(1) Data referred to the following conditions: internal exchanger water = 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) The sound levels refer to standard unit with Axitop (no accessories) at full load, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measures are according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification, which provides for a

tolerance of 3 dB(A) on the sound power level, which is the only acoustic data to be considered binding. If unit is set without Axitop, the sound power level presents an increase up to 3 dB(A). Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

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

## accessories

**HYGU1V** User side hydronic assembly with 1 inverter pump

**ACIMP** Steel inertial storage tank

**IFWX** Steel mesh strainer on the water side

**AVIBX** Anti-vibration mount support

**PGFCX** Finned coil protection grill

**AMODX** Water fittings for modular unit

**CCME** Microchannel e-coated coil

**CCKMUX** Pipe plug kit for modular units

Accessories whose code ends with "X" are supplied separately

HYDRONIC

## ELFOEnergy Medium

**Reversible heat pump**  
 Air cooled  
 Outdoor installation  
**Capacity from 24 to 72,8 kW**



Heat pumps of the **ELFOEnergy Medium** range, ideal for the small-scale commercial sector, are specifically designed for outdoor installation.

- **HIGH ENERGY EFFICIENCY:** especially during operation at partial loads, thanks to the use of two compressors of different capacity operating on a single cooling circuit
- **HYDRONIC ASSEMBLY SUPPLIED AS STANDARD:** available with pumps with non-standard available head and/or with double pump
- **STORAGE TANK NOT NORMALLY NECESSARY** but available for applications where the quantity of water in the system is below limits.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant

### functions and features



Heat pump



Air cooled



Outdoor installation



R-410A



Hermetic Scroll



ELFOControl<sup>®</sup>  
 EVO

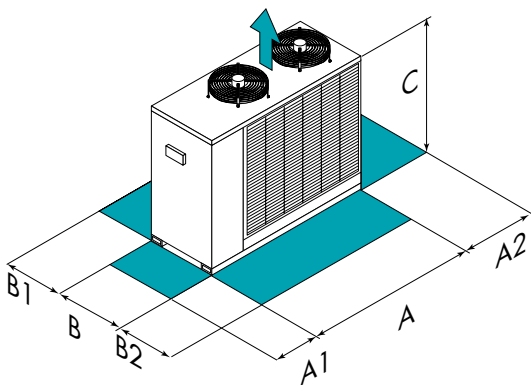


Ice protection system



Intelliplant

### dimensions and clearances



Size	WSAN-XEE	82	102	122	162	182	222	262	302
A - Length	mm	1771	1771	1771	2012	2012	2012	2406	2406
B - Width	mm	680	680	680	1100	1100	1100	1100	1100
C - Height	mm	1287	1287	1287	1599	1599	1599	1593	1593
A1	mm	700	700	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700	700	700
B1	mm	700	700	700	700	700	700	700	700
B2	mm	700	700	700	700	700	700	700	700
Operating weight	kg	315	320	370	530	550	580	675	690

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

### ENERGY RECOVERY:

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

### OPERATION:

- OHP** Operation in heat pump (Standard)
- OHO** Heating-only operation

### DOUBLE SET POINT:

- Double set point: not required (Standard)
- DSPB** Double set point for water low temperature

## technical data

Size	WSAN-XEE	82	102	122	162	182	222	262	302
▶ Cooling capacity (EN 14511:2018)	(1) kW	24,0	28,0	33,2	39,9	46,1	53,7	63,9	72,8
Total power input (EN 14511:2018)	(1) kW	9,77	11,2	13,4	15,7	18,2	21,7	25,7	29,0
EER (EN 14511:2018)	(1) -	2,46	2,49	2,48	2,55	2,54	2,47	2,49	2,51
SEER	(4)	3,47	3,66	3,56	3,28	3,46	3,55	3,65	3,65
$\eta_{s,c}$	(4) %	130,8	138,3	134,4	123,2	130,4	133,8	137,9	138,0
▶ Heating capacity (EN 14511:2018)	(2) kW	28,4	32,5	37,0	45,1	52,6	61,1	71,5	82,8
Total power input (EN 14511:2018)	(2) kW	9,42	10,7	12,1	14,5	17,0	19,7	22,8	26,2
COP (EN 14511:2018)	(2) -	3,01	3,04	3,06	3,11	3,10	3,10	3,13	3,16
Refrigeration circuits	Nr	1							
No. of compressors	Nr	2							
Type of compressors		SCROLL							
Standard airflow	l/s	2553	2545	2514	4965	4902	4778	7196	6971
Water flow-rate (User Side)	l/s	1,10	1,30	1,60	1,90	2,20	2,50	3,00	3,40
Useful pump discharge head	kPa	136	129	125	107	89	150	141	131
Standard power supply	V	400/3/50+N							
Sound pressure level	(3) dB(A)	60	60	60	64	64	65	65	65
<b>Directive ErP (Energy Related Products)</b>									
ErP Energy Class - AVERAGE Climate - W35	-	A+	A+	A+	A+	A+	A+	A+	A+
SCOP - AVERAGE Climate - W35	(4) -	3,33	3,48	3,60	3,22	3,27	3,20	3,28	3,35
$\eta_{s,h}$	(4) %	130,0	136,0	141,0	126,0	128,0	125,0	128,0	131,0

- (1) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C
- (2) Data calculated in compliance with Standard EN14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C, entering external exchanger air temperature = 7°C D.B. / 6°C W.B.
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

- (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

- CCCA** Copper / aluminium condenser coil with acrylic lining
- CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- 1PUR** Single-pump with reduced available head
- 1PUM** Single-pump with reduced available head
- 2PUS** Standard double pump
- 2PUR** Double pump with reduced available head (sizes 222÷302)
- 2PUM** Double pump with larger available head
- ACC1** Teflon steel storage device
- IFWX** Steel mesh strainer on the water side
- MHP** High and low pressure gauges
- MHPX** High and low pressure gauges
- AMRX** Rubber antivibration mounts

- PGCEX** Coil protection grilles outdoor air side
- SFSTR4N** Disposal for inrush current reduction, for unit 400/3/50+N
- PM** Phase monitor
- PMX** Phase monitor
- RCMRX** Remote control via microprocessor control
- CMMBX** Serial communication module to supervisor (Modbus)
- CMSC7** Modbus/LON WORKS serial converter kit
- CMSC9** Serial communication module for Modbus supervisor
- PCDWX** Daily and weekly programming clock
- SCP3X** Set point compensation according to the outside enthalpy
- CLSE** Free contacts for alarm
- PFCP** Power factor correction capacitors (cosφ > 0.9)

Accessories whose code ends with "X" are supplied separately

## ELFOEnergy Large<sup>2</sup>

### Water chiller

WSAT-XEE: cooling only  
 WSAN-XEE: reversible heat pump  
 Air cooled  
 Outdoor installation  
**Capacity from 84,4 to 216 kW**



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant

Liquid chillers and heat pumps of the **ELFOEnergy Large<sup>2</sup>** range, ideal for the small-scale commercial sector, are specifically designed for outdoor installation.

**ELFOEnergy Large<sup>2</sup>** is available in EXCELLENCE version.

The EXCELLENCE version offers the highest efficiency both at full and at part load.

■ **SILENT**, achieved thanks to the optimal sizing of the exchange surfaces and the use of high efficiency fans with "winglets"

■ **SYSTEM INDUSTRIALIZATION** The units can also be supplied with pump assemblies, partial heat recovery and inertial storage tank already installed on board, bringing together all the system's main components in a single solution.

### functions and features



Cooling only  
 (WSAT-XEE)



Heat pump  
 (WSAN-XEE)



AIR  
 Air cooled



Outdoor  
 installation



R-410A



Hermetic Scroll



Ice protection  
 system



FC  
 FREE-COOLING



HYDRO  
 PACK  
 HydroPack



ECO  
 BREEZE  
 ECOBREEZE

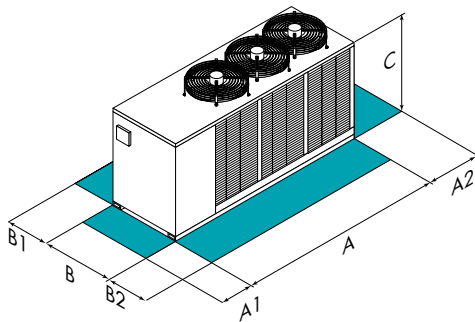


Electronic  
 expansion valve



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.

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  
 SC Compressors soundproofing (SC)

Size	WSAT-XEE	352	402	432	452	502	552	602	702	802
SC-EXC A - Length	mm	3075	3075	3075	4025	4025	4025	4025	5025	5025
SC-EXC B - Width	mm	1097	1097	1097	1097	1097	1097	1097	1097	1097
SC-EXC C - Height	mm	1805	1805	1805	1805	1805	1805	1805	1805	1805
SC-EXC A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC-EXC A2	mm	700	700	700	700	700	700	700	700	700
SC-EXC B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-EXC B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-EXC Operating weight	mm	896	933	1024	1207	1234	1256	1302	1497	1544

Size	WSAT-XEE	352	402	432	452	502	552	602	702	802
SC-PRM A - Length	mm	2710	2710	2710	2710	2710	2710	3075	4025	4025
SC-PRM B - Width	mm	1097	1097	1097	1097	1097	1097	1097	1097	1097
SC-PRM C - Height	mm	1805	1805	1805	1805	1805	1805	1805	1805	1805
SC-PRM A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC-PRM A2	mm	700	700	700	700	700	700	700	700	700
SC-PRM B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-PRM B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-PRM Operating weight	mm	778	802	892	924	963	984	1087	1295	1324

Size	WSAN-XEE	352	402	432	452	502	552	602	702	802
SC A - Length	mm	3075	3075	3075	3075	3075	4025	4025	5025	5025
SC B - Width	mm	1097	1097	1097	1097	1097	1097	1097	1097	1097
SC C - Height	mm	1805	1805	1805	1805	1805	1805	1805	1805	1805
SC A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC A2	mm	700	700	700	700	700	700	700	700	700
SC B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC Operating weight	mm	915	975	1059	1101	1126	1326	1341	1549	1564

## versions and configurations

### LOW TEMPERATURE:

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

### ACOUSTIC CONFIGURATION:

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

### VERSION (WSAT-XEE ONLY):

- EXC** Excellence (Standard)
- PRM** Premium

### ENERGY RECOVERY:

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

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)
- CREFP** Device for fan consumption reduction of the external section at variable speed (phase-cutting)

### FREE-COOLING (WSAT-XEE ONLY):

- FREE-COOLING: not required (Standard)
- FCD** Direct FREE-COOLING

## technical data

Size	WSAT-XEE	352	402	432	452	502	552	602	702	802	
SC-EXC	▶ Cooling capacity (EN14511:2018)	(1) kW	95,6	109	120	129	140	152	174	195	216
SC-EXC	Total power input(EN14511:2018)	(1) kW	30,7	34,8	38,8	40,9	45,0	49,0	55,8	62,3	69,6
SC-EXC	EER (EN14511:2018)	(1) -	3,12	3,13	3,10	3,15	3,12	3,10	3,12	3,13	3,11
SC-EXC	SEER	(4) -	4,12	4,24	4,11	4,22	4,17	4,11	4,14	4,22	4,10
SC-EXC	$\eta_{s,c}$	(4) %	161,9	166,7	161,6	165,8	163,9	161,5	162,4	165,8	161,0
SC-EXC	Refrigeration circuits	Nr					1				
SC-EXC	No. of compressors	Nr					2				
SC-EXC	Type of compressors	-					SCROLL				
SC-EXC	Standard airflow	l/s	12327	12248	12182	18373	18373	18216	18102	24227	24069
SC-EXC	Water flow-rate (User Side)	l/s	4,60	5,20	5,80	6,20	6,70	7,30	8,40	9,30	10,40
SC-EXC	Standard power supply	V					400/3/50				
SC-EXC	Sound pressure level	(3) dB(A)	67	67	68	68	68	69	69	70	70
Size	WSAT-XEE	352	402	432	452	502	552	602	702	802	
SC-PRM	▶ Cooling capacity (EN14511:2018)	(1) kW	89,8	101	111	119	130	143	159	185	203
SC-PRM	Total power input(EN14511:2018)	(1) kW	32,6	37,7	42,0	44,2	48,0	53,2	61,0	66,9	75,9
SC-PRM	EER (EN14511:2018)	(1) -	2,75	2,67	2,64	2,70	2,71	2,69	2,61	2,76	2,67
SC-PRM	SEER	(4) -	3,81	3,80	3,80	3,85	3,85	3,81	3,82	3,89	3,81
SC-PRM	$\eta_{s,c}$	(4) %	149,5	149,0	149,1	151,1	150,9	149,5	149,8	152,7	149,5
SC-PRM	Refrigeration circuits	Nr					1				
SC-PRM	No. of compressors	Nr					2				
SC-PRM	Type of compressors	-					SCROLL				
SC-PRM	Type of compressors	l/s	12474	12474	12394	12119	11871	11871	12268	18536	18536
SC-PRM	Water flow-rate (User Side)	l/s	4,30	4,80	5,30	5,70	6,20	6,90	7,60	8,90	9,70
SC-PRM	Standard power supply	V					400/3/50				
SC-PRM	Sound pressure level	(3) dB(A)	67	67	67	67	68	68	68	69	69
Size	WSAN-XEE	352	402	432	452	502	552	602	702	802	
SC	▶ Cooling capacity (EN14511:2018)	(1) kW	84,4	96,7	105	114	122	140	156	183	202
SC	Total power input(EN14511:2018)	(1) kW	32,7	36,5	41,3	43,6	48,5	51,3	60,8	66,9	76,5
SC	EER (EN14511:2018)	(1) -	2,58	2,65	2,55	2,61	2,52	2,73	2,56	2,73	2,64
SC	SEER	(4) -	3,37	3,50	3,40	3,57	3,52	3,62	3,47	3,66	3,50
SC	$\eta_{s,c}$	(4) %	131,7	137,1	133,0	140,0	137,7	141,6	135,7	143,3	136,9
SC	▶ Heating capacity (EN14511:2018)	(2) kW	101	116	127	136	147	165	183	212	234
SC	Total power input (EN14511:2018)	(2) kW	32,6	36,7	40,4	42,1	45,8	51,1	57,1	65,3	72,6
SC	COP (EN14511:2018)	(2) -	3,08	3,16	3,14	3,23	3,20	3,24	3,21	3,25	3,23
SC	Refrigeration circuits	Nr					1				
SC	No. of compressors	Nr					2				
SC	Type of compressors	-					SCROLL				
SC	Standard airflow	l/s	12497	12281	12281	12217	12105	18255	18255	24267	24267
SC	Water flow-rate (User Side)	l/s	4,10	4,60	5,10	5,50	5,90	6,70	7,40	8,70	9,70
SC	Standard power supply	V					400/3/50				
SC	Sound pressure level	(3) dB(A)	67	67	67	67	67	68	68	71	71
<b>Directive ErP (Energy Related Products)</b>											
SCOP - AVERAGE Climate - W35			3,40	3,41	3,48	3,54	3,48	3,48	3,49	3,44	3,40
$\eta_{s,H}$	(4) %		133,0	133,0	136,0	139,0	139,0	136,0	137,0	135,0	133,0

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Entering eExternal exchanger air temperature = 35°C
- (2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C. External exchanger air temperature 7 D.B. /6 (°C) W.B.
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C
- (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.

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

## accessories

<b>1PUS</b>	Standard pump
<b>1PU1SB</b>	Standard pump with emergency pump
<b>2PM</b>	Hydropack load side with 2 pumps
<b>IFWX</b>	Steel mesh strainer on the water side
<b>A300</b>	300-litre storage tank (sizes 352-602)
<b>A300RPS</b>	300-litre storage tank with primary circuit onboard (sizes 352-602)
<b>A500</b>	500 l. storage tank (sizes 702-802)
<b>A500RPS</b>	500-litre storage tank with primary circuit onboard (sizes 702-802)
<b>ABU</b>	Flush hydraulic connections
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment
<b>AMMX</b>	Spring antivibration mounts
<b>PGCCH</b>	Anti-hail protection grilles
<b>PGFC</b>	Finned coil protection grill
<b>PSX</b>	Mains power supply
<b>CONTA2</b>	Energy meter
<b>RCMRX</b>	Remote control via microprocessor control
<b>CMSC8</b>	Serial communication module for BACnet supervisor
<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>ECS</b>	ECOSHARE function for the automatic management of a group of units

<b>PFCP</b>	Disposal for inrush current reduction
<b>SFSTR</b>	Disposal for inrush current reduction
<b>MHP</b>	High and low pressure gauges
<b>PM</b>	Phase monitor
<b>MF2</b>	Multi-function phase monitor

### WSAT-XEE only:

<b>RE-20</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -20°C
<b>RE-25</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
<b>RE-30</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -30°C
<b>RE-35</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -35°C
<b>RE-39</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -39°C

<b>FANQE</b>	Electrical panel ventilation
--------------	------------------------------

<b>SDV</b>	Cutoff valve on compressor supply and return
------------	--

### WSAN-XEE only:

<b>OHE</b>	Limit extension kit in heating up to -10°C (W.B.)
------------	---

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.

## ELFOEnergy Vulcan Medium

### Reversible heat pump

Air cooled

Outdoor installation

Capacity from 21,3 to 80,3 kW



ELFOEnergy Vulcan Medium comprises a series of **high temperature** heat pumps, ideal as a one-stop heating, cooling and hot water solution for centralised systems.

- Ideal for centralised systems such as residential complexes, hotels and collective applications
- Operation with outdoor air temperature down to -18°C
- Hot water production up to 60°C at outdoor temperatures of down to -10°C
- Dual temperature management and domestic hot water production



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

### functions and features



Heat pump



Air cooled



Outdoor  
installation



R-407C



Hermetic Scroll

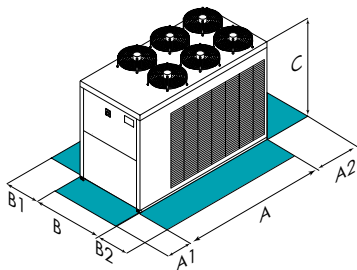


ELFOControl<sup>3</sup>  
EVO



Intelliplant

### dimensions and clearances



Size	WBAN	82	122	162	202	262	302
A - Length	mm	1928	1928	2328	2328	2932	2932
B - Width	mm	1100	1100	1100	1100	1100	1100
C - Height	mm	1474	1474	1500	1500	1500	1500
A1	mm	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700
B1	mm	700	700	700	700	700	700
B2	mm	700	700	700	700	700	700
Operating weight	kg	420	466	635	670	803	826

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

### ENERGY RECOVERY:

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

### OPERATION:

- Operating limit extension: not required (Standard)
- EOL** Operating limit extension

## technical data

Size		WBAN	82	122	162	202	262	302
▶ Cooling capacity (EN 14511:2018)	(1)	kW	21,3	32,2	39,7	53,9	65,9	80,3
Total power input (EN 14511:2018)	(1)	kW	7,79	12,5	14,9	21,9	27,6	32,1
EER (EN14511:2018)	(1)	-	2,73	2,58	2,67	2,46	2,39	2,50
SEER	(4)	-	2,68	2,70	2,79	2,69	2,60	2,74
$\eta_{s,c}$	(4)	%	104,2	105,0	108,6	104,6	101,0	106,6
▶ Heating capacity (EN 14511:2018)	(2)	kW	29,1	40,3	51,0	71,1	80,4	99,5
Total power input (EN 14511:2018)	(2)	kW	8,53	12,1	15,5	20,8	24,8	30,8
COP (EN14511:2018)	(2)	-	3,41	3,34	3,28	3,41	3,24	3,23
Refrigeration circuits		Nr				2		
No. of compressors		Nr				2		
Type of compressors		-				SCROLL		
Water flow-rate (User Side)	(1)	l/s	1,00	1,50	1,90	2,60	3,10	3,80
Useful pump discharge head	(1)	kPa	183	183	173	195	184	201
Standard power supply		V				400/3/50+N		
Sound pressure level	(3)	dB(A)	62	63	65	65	66	67
<b>Directive ErP (Energy Related Products)</b>								
ErP Energy Class - AVERAGE Climate - W35		-	A+	A+	A+	A+	A+	A+
ErP Energy Class - AVERAGE Climate - W55		-	-	A+	-	A+	-	-
SCOP - AVERAGE Climate - W35	(4)	-	3,24	3,63	3,42	3,70	3,45	3,20
$\eta_{s,h}$	(4)	%	127,0	142,0	134,0	145,0	135,0	125,0
SCOP - AVERAGE Climate - W55	(4)	-	-	2,95	-	2,99	-	-
$\eta_{s,h}$	(4)	%	-	115,0	-	117,0	-	-

- (1) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C
- (2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C, entering external exchanger air temperature = 7°C D.B. / 6°C W.B.
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

- (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

<b>1PUR</b>	Single-pump with reduced available head	<b>3DHWX</b>	Three-way valve for domestic hot water
<b>1PUM</b>	Single-pump with larger available head	<b>IS4</b>	Compressor insulation
<b>1PUHE</b>	High efficiency single inverter pump for primary circuit.	<b>PGFC</b>	Finned coil protection grill
<b>ECHP</b>	External fans with larger available head "ECOBREEZE"	<b>PGFCX</b>	Finned coil protection grill
<b>AMRX</b>	Rubber antivibration mounts	<b>PM</b>	Phase monitor
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining	<b>PMX</b>	Phase monitor
<b>SFSTR4N</b>	Disposal for inrush current reduction, for unit 400/3/50+N	<b>TCDC</b>	Condensate collection pan with electric heater
<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)	<b>CACXSX</b>	Domestic hot water kit control
<b>3DHW</b>	Built-in 3-way valve for domestic hot water on the unit	<b>TASRX</b>	Compartment for multifunction keyboard

Accessories whose code ends with "X" are supplied separately



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

## ELFOEnergy Magnum

### Water chiller

WSAT-XIN: cooling only  
WSAN-XIN: reversible heat pump  
Air cooled  
Outdoor installation  
**Capacity from 49,6 to 124 kW**

The ELFOEnergy Magnum heat pumps and liquid chillers are high efficiency packaged units for small and medium-sized applications in the services sector. Designed for outdoor installation, they ensure the highest energy efficiency over the entire operating cycle, thanks to the continuous capacity modulation that adapts the capacity supplied to the actual energy demand required by the system. ELFOEnergy Magnum is available in the EXCELLENCE version that offers the highest energy efficiency both during the seasonal cycle and under full load conditions. Benefits of ELFOEnergy Magnum.

■ **HIGH UNIT RELIABILITY** thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.

■ **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** The compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.

## functions and features



Cooling only  
(WSAT-XIN)



Heat pump  
(WSAN-XIN)



AIR  
cooled



Outdoor  
installation



R-410A



Hermetic Scroll



AxiTop



Vary Flow

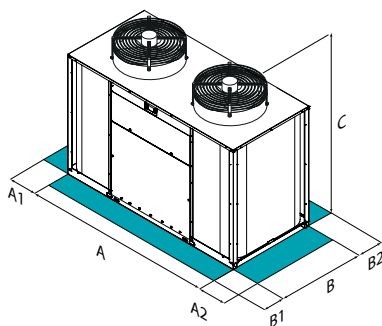


Full Inverte DC



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-XIN	35.2	40.2	45.2
A - Length	mm	3600	3600	3600
B - Width	mm	1100	1100	1100
C - Height	mm	1890	1890	1890
A1	mm	800	800	800
A2	mm	800	800	800
B1	mm	800	800	800
B2	mm	800	800	800
Operating weight	kg	813	860	923

Size	WSAN-XIN	18.2	20.2	25.2	30.2	35.2	40.2	45.2
A - Length	mm	2400	2400	2400	2400	3600	3600	3600
B - Width	mm	1100	1100	1100	1100	1100	1100	1100
C - Height	mm	1540	1540	1790	1790	1890	1890	1890
A1	mm	800	800	800	800	800	800	800
A2	mm	800	800	800	800	800	800	800
B1	mm	800	800	800	800	800	800	800
B2	mm	800	800	800	800	800	800	800
Operating weight	kg	605	620	670	695	858	897	937

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

### ENERGY RECOVERY:

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

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

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

## technical data

Size	WSAT-XIN	35.2	40.2	45.2
▶ Cooling capacity (EN14511:2018)	(1) kW	99,1	112,0	124,0
Total power input (EN14511:2018)	(1) kW	31,8	36,1	40,1
EER (EN 14511:2018)	(1) -	3,12	3,11	3,10
SEER	(4) -	4,10	4,10	4,36
$\eta_{sc}$	(4) %	161,2	161,0	171,3
Refrigeration circuits	Nr		2	
No. of compressors	Nr		2	
Type of compressors	-		ON/OFF + INVERTER SCROLL	
Supply airflow	l/s	13333	14167	14167
Water flow-rate (User Side)	l/s	4,70	5,40	5,90
Standard power supply	V		400/3/50+N	
Sound pressure level	(3) dB(A)	68	68	69

Size	WSAN-XIN	18.2	20.2	25.2	30.2	35.2	40.2	45.2
▶ Cooling capacity (EN14511:2018)	(1) kW	49,6	59,3	69,5	82,2	92,5	106,0	120,0
Total power input (EN14511:2018)	(1) kW	16,9	20,6	23,6	28,8	33,6	38,8	46,0
EER (EN 14511:2018)	(1) -	2,93	2,88	2,94	2,85	2,75	2,72	2,60
SEER	(4) -	3,34	3,43	3,47	3,63	3,76	3,73	3,82
$\eta_{sc}$	(5) %	130,5	134,1	135,6	142,4	147,6	146,2	149,9
▶ Heating capacity (EN14511:2018)	(2) kW	56,0	68,4	78,1	93,0	106	123	140
Total power input (EN14511:2018)	(2) kW	17,5	21,3	24,4	29,0	33,1	38,2	43,6
COP (EN 14511:2018)	(2) -	3,20	3,21	3,20	3,21	3,21	3,21	3,20
Refrigeration circuits	Nr				2			
No. of compressors	Nr				2			
Type of compressors	-				INVERTER + ON/OFF SCROLL			
Supply airflow	l/s	10556	10556	13056	13056	13333	14167	14167
Water flow-rate (User Side)	l/s	2,37	2,83	3,32	3,92	4,42	5,04	5,71
Standard power supply	V				400/3/50+N			
Sound pressure level	(3) dB(A)	65	65	66	66	68	68	69
<b>Directive ErP (Energy Related Products)</b>								
ErP Energy Class - AVERAGE Climate - W35	-	A+	A+	A+	A+	-	-	-
SCOP - AVERAGE Climate - W35	(4)	3,55	3,59	3,45	3,61	3,68	3,65	3,81
$\eta_{sh}$	(4) %	139,0	141,0	135,0	141,0	144,0	143,0	149,0

- (1) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C
- (2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C, entering external exchanger air temperature = 7°C D.B. / 6°C W.B.
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

- (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

- CCCA** Copper / aluminium condenser coil with acrylic lining
- CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- HYG1** Hydronic assembly with 1 ON/OFF pump
- HYG2** Hydronic assembly with 2 ON/OFF pumps
- VARYP** VARYFLOW + (2 inverter pumps)
- HYGU1V** User side hydronic assembly with 1 inverter pump
- ACC** Storage tank (sizes 35.2÷45.2)
- 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** BACnet serial communication module
- HEDIF** Diffuser for high efficiency axial fan
- MF2** Multi-function phase monitor
- SFSTR4N** Disposal for inrush current reduction, for unit 400/3/50+N
- RCTX** Remote control
- PGFC** Finned coil protection grill
- PGFCX** Finned coil protection grill
- AVIBX** Anti-vibration mount support
- IFWX** Steel mesh strainer on the water side
- PFPC** Power factor correction capacitors (cosfi > 0.9)

### WSAN-XIN only:

- VACS** DHW switching valve: required

Accessories whose code ends with "X" are supplied separately



## ELFOEnergy Magnum

### Water chiller

WSAT-XEM: cooling only  
 WSAN-XEM: reversible heat pump  
 Air cooled  
 Outdoor installation  
**Capacity from 139 to 354 kW**

The **ELFOEnergy Magnum** heat pumps and liquid chillers are high efficiency packaged units for small and medium-sized applications in the services sector. Designed for outdoor installation, they ensure the highest energy efficiency over the entire operating cycle, especially under load staging conditions that coincide with the unit's longer operating time, **thanks to the modular scroll technology** that adapts the capacity supplied to the actual energy demand required by the system.

- **DUAL ENERGY VERSION** The standard EXCELLENCE version with a class A Eurovent rating offers the highest energy efficiency both during the seasonal cycle and under full load conditions. The PREMIUM version also provides excellent performance under partial load conditions, but has a compact design which gives it an additional competitive edge.
- **HIGH UNIT RELIABILITY**, thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** The compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant

## functions and features



Cooling only  
 (WSAT-XEM)



Heat pump  
 (WSAN-XEM)



Air cooled



Outdoor  
 installation



R-410A



Hermetic  
 Scroll



AxiTop

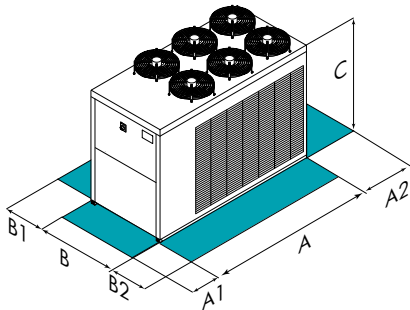


Vary Flow



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.

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-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
SC-EXC A - Length	mm	4400	4400	4400	4400	4400	4400	4400	5200	5200	5200
SC-EXC B - Width	mm	1812	1812	1812	1812	2250	2250	2250	2250	2250	2250
SC-EXC C - Height	mm	1800	1800	1800	1800	2300	2300	2300	2300	2300	2300
SC-EXC A1	mm	1300	1300	1300	1300	1500	1500	1500	1500	1500	1500
SC-EXC A2	mm	750	750	750	750	750	750	750	750	750	750
SC-EXC B1	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
SC-EXC B2	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
SC-EXC Operating weight	kg	1466	1500	1548	1630	2317	2403	2527	2924	2991	3126

Size	WSAT-XEM	70.4	80.4	90.4	100.4	110.4	120.4
SC-PRM A - Length	mm	3800	3800	4400	4400	4400	5200
SC-PRM B - Width	mm	2250	2250	2250	2250	2250	2250
SC-PRM C - Height	mm	2300	2300	2300	2300	2300	2300
SC-PRM A1	mm	1500	1500	1500	1500	1500	1500
SC-PRM A2	mm	750	750	750	750	750	750
SC-PRM B1	mm	1500	1500	1500	1500	1500	1500
SC-PRM B2	mm	1500	1500	1500	1500	1500	1500
SC-PRM Operating weight	kg	2135	2244	2328	2610	2698	3006

Size	WSAN-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
EXC A - Length	mm	4400	4400	4400	4400	4400	4400	4400	5200	5200	5200
EXC B - Width	mm	1812	1812	1812	1812	2250	2250	2250	2250	2250	2250
EXC C - Height	mm	1800	1800	1800	1800	2300	2300	2300	2300	2300	2300
EXC A1	mm	1300	1300	1300	1300	1500	1500	1500	1500	1500	1500
EXC A2	mm	750	750	750	750	750	750	750	750	750	750
EXC B1	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
EXC B2	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
EXC Operating weight	kg	1590	1604	1673	1831	2420	2540	2681	3114	3194	3338

## versions and configurations

VERSION (WSAT-XEM ONLY):

- EXC** Excellence (Standard)  
**PRM** Premium (sizes 70.4÷120.4)

ENERGY RECOVERY:

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

ACOUSTIC CONFIGURATION (WSAT-XEM ONLY):

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

## technical data

Size	WSAT-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
SC-EXC ▶ Cooling capacity (EN14511:2018)	(1) kW	143	157	170	182	197	223	260	287	317	354
SC-EXC Total power input(EN14511:2018)	(1) kW	45,8	50,2	54,5	58,4	63,0	71,5	83,7	91,6	102	114
SC-EXC EER (EN14511:2018)	(1) -	3,12	3,13	3,12	3,11	3,12	3,12	3,10	3,13	3,10	3,10
SC-EXC SEER	(4) -	4,23	4,42	4,51	4,51	4,41	4,52	4,52	4,33	4,26	4,40
SC-EXC $\eta_{sc}$	(4) %	166,4	173,9	177,3	177,3	173,5	177,7	177,7	170,0	167,4	172,9
SC-EXC Refrigeration circuits	Nr	2									
SC-EXC No. of compressors	Nr	4									
SC-EXC Type of compressors	-	SCROLL									
SC-EXC Standard airflow	l/s	20722	19917	19900	19472	23856	22947	22944	33833	33611	33833
SC-EXC Water flow-rate (User Side)	l/s	6,80	7,50	8,10	8,70	9,40	10,7	12,4	13,7	15,1	16,9
SC-EXC Standard power supply	V	400/3/50+N									
SC-EXC Sound pressure level	(3) dB(A)	69	69	69	69	68	68	68	72	72	72

Size	WSAT-XEM	70.4	80.4	90.4	100.4	110.4	120.4
SC-PRM ▶ Cooling capacity (EN14511:2018)	(1) kW	183	207	242	261	288	330
SC-PRM Total power input(EN14511:2018)	(1) kW	66,9	76,0	89,3	96,4	105	122
SC-PRM EER (EN14511:2018)	(1) -	2,74	2,73	2,71	2,71	2,73	2,71
SC-PRM SEER	(4) -	4,10	4,13	4,32	4,17	4,19	4,10
SC-PRM $\eta_{sc}$	(4) %	161,1	162,3	169,6	163,8	164,7	160,9
SC-PRM Refrigeration circuits	Nr	2					
SC-PRM No. of compressors	Nr	4					
SC-PRM Type of compressors	-	SCROLL					
SC-PRM Standard airflow	l/s	23800	23550	24450	24450	23900	34450
SC-PRM Water flow-rate (User Side)	l/s	8,70	9,90	11,5	12,4	13,7	15,8
SC-PRM Standard power supply	V	400/3/50					
SC-PRM Sound pressure level	(3) dB(A)	67	67	68	68	68	71

Size	WSAN-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
EXC ▶ Cooling capacity (EN14511:2018)	(1) kW	139	148	160	170	184	208	235	273	296	321
EXC Total power input(EN14511:2018)	(1) kW	48,7	53,6	58,4	63,7	67,6	77,0	92,7	98,1	110	126
EXC EER (EN14511:2018)	(1) -	2,85	2,76	2,73	2,66	2,72	2,70	2,54	2,79	2,69	2,55
EXC SEER	(4) -	-	-	-	-	-	-	-	-	-	-
EXC $\eta_{sh}$	(4) %	-	-	-	-	-	-	-	-	-	-
EXC ▶ Heating capacity (EN14511:2018)	(2) kW	155	167	183	194	210	239	274	313	340	378
EXC Total power input (EN14511:2018)	(2) kW	47,9	52,3	56,5	60,1	65,3	74,3	85,1	97,5	106	118
EXC COP (EN14511:2018)	(2) -	3,24	3,20	3,24	3,23	3,22	3,22	3,22	3,21	3,21	3,20
EXC Refrigeration circuits	Nr	2									
EXC No. of compressors	Nr	4									
EXC Type of compressors	-	SCROLL									
EXC Standard airflow	l/s	20300	20300	20000	20000	25000	24200	24200	35000	35000	35000
EXC Water flow-rate (User Side)	l/s	6,70	7,10	7,70	8,10	8,80	10,0	11,2	13,1	14,2	15,5
EXC Standard power supply	V	400/3/50+N									
EXC Sound pressure level	(3) dB(A)	69	69	69	69	68	68	68	72	72	72
<b>Directive ErP (Energy Related Products)</b>											
SCOP - AVERAGE Climate - W35	(4) -	3,70	3,66	3,72	3,72	3,64	3,64	3,76	3,25	3,70	3,80
$\eta_{sh}$	(4) %	145,0	143,0	146,0	146,0	143,0	143,0	147,0	127,0	145,0	149,0

- (1) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C  
 (2) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 40/45°C - Entering external exchanger air temperature = 7°C D.B./6°C W.B.  
 (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

- (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

- HYG1** Hydronic assembly with 1 ON/OFF pump  
**VARYP** VARYFLOW + (2 inverter pumps)  
**HYG2** Hydronic assembly with 2 ON/OFF pumps  
**ACC** Storage tank  
**CCCA** Copper / aluminium condenser coil with acrylic lining  
**CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment  
**HEDIF** Diffuser for high efficiency axial fan (sizes 70.4÷120.4)  
**CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type (sizes 70.4÷120.4)  
**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 (cosφ > 0.9)  
**PGFC** Finned coil protection grilles  
**PGFCX** Finned coil protection grilles  
**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

**WSAN-XEM only:**

- VACSUX** User side DHW switching valve

**WSAT-XEM only:**

- CREFO** Device for fan consumption reduction of the external section, on/off type (sizes 70.4÷120.4)  
**SDV** Cutoff valve on compressor supply and return  
**RPRPDI** Refrigerant leak detector with pump down function in the casing

## ELFOEnergy Magnum MF

**Multifunction reversible heat pump**

Air cooled

Outdoor installation

**Capacity from 49,6 to 120 kW**



The **ELFOEnergy Magnum Multifunction** heat pumps are high efficiency packaged units for small and medium-sized applications in the services sector that **can generate thermal and cooling energy simultaneously and independently**.

Designed for outdoor installation, they ensure extremely high efficiency levels during the entire operating cycle thanks to the combination of **continuous capacity modulation**, which adapts the capacity supplied to the actual energy demand required by the system, and **energy recovery**, which recovers up to 100% of the capacity supplied, further increasing efficiency.

■ **HIGH UNIT RELIABILITY** thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.

■ **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** the compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant



### functions and features



Heat pump



Air cooled



Outdoor  
installation



R-410A



Hermetic  
Scroll



Full Inverter  
DC



AxiTop

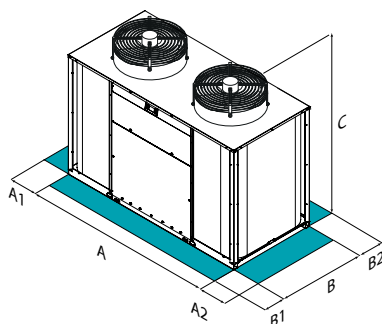


Vary Flow



Intelliplant

### dimensions and clearances



Size	WSAN-XIN MF	18.2	20.2	25.2	30.2	35.2	40.2	45.2
A - Length	mm	2400	2400	2400	2400	3600	3600	3600
B - Width	mm	1100	1100	1100	1100	1100	1100	1100
C - Height	mm	1540	1540	1790	1790	1890	1890	1890
A1	mm	800	800	800	800	800	800	800
A2	mm	800	800	800	800	800	800	800
B1	mm	800	800	800	800	800	800	800
B2	mm	800	800	800	800	800	800	800
Operating weight	kg	650	660	720	755	934	977	1093

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:

**R** Total energy recovery (Standard)

### CONFIGURATION:

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

**2T** Configuration for 2-pipe system

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

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

## technical data

Size	WSAN-XIN MF	18.2	20.2	25.2	30.2	35.2	40.2	45.2
<b>Cooling 100% - Heating 0%</b>								
Cooling capacity (EN14511:2018)	(1) kW	49,6	59,3	69,5	82,2	92,5	106	120
Total power input (EN14511:2018)	(1) kW	16,9	20,6	23,7	28,7	33,7	39,0	46,2
EER (EN14511:2018)	(1) -	2,93	2,88	2,93	2,86	2,75	2,72	2,60
SEER	(6) -	3,34	3,43	3,47	3,63	3,76	3,73	3,82
$\eta_{SH}$	(6) %	130,5	134,1	135,6	142,4	147,6	146,2	149,9
<b>Cooling 0% - Heating 100%</b>								
Heating capacity (EN14511:2018)	(2) kW	57,1	69,8	79,7	94,9	109	125	143
Total power input (EN14511:2018)	(2) kW	17,2	20,9	24,0	28,6	32,7	37,5	42,9
COP (EN14511:2018)	(2) -	3,32	3,34	3,32	3,32	3,33	3,33	3,33
<b>Cooling 100% - Heating 100%</b>								
Cooling capacity (EN14511:2018)	(3) kW	49,8	59,7	69,6	82,8	95,8	109	128
Heating capacity (EN14511:2018)	(3) kW	64,9	78,0	90,8	107	125	141	169
Total power input (EN14511:2018)	(3) kW	15,3	18,6	21,5	25,4	29,6	33,7	41,1
Overall efficiency (EN14511:2018)	(4) -	7,51	7,41	7,46	7,48	7,47	7,42	7,22
Refrigeration circuits	Nr	2						
No. of compressors	Nr	2						
Type of compressors	-	INVERTER + ON/OFF SCROLL						
Standard power supply	V	400/3/50+N						
Sound pressure level	(5) dB(A)	65	65	66	66	68	68	69
<b>Directive ErP (Energy Related Products)</b>								
ErP Energy Class - AVERAGE Climate - W35	-	A+	A+	A+	A+	-	-	-
SCOP - AVERAGE Climate - W35	(6)	3,69	3,74	3,59	3,75	3,83	3,80	3,96
$\eta_{SH}$	(6) %	145,0	147,0	141,0	147,0	150,0	149,0	155,0

- (1) Data compliant to Standard EN 14511:2018 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 14511:2018 referred to the following conditions: Hot side water temperature = 40/45 °C, Temperatura aria entrante allo scambiatore esterno = 7 °C D.B./6 °C W.B
- (3) Data compliant to Standard EN 14511:2018 referred to the following conditions: Cold side water temperature = 12/7 °C, Hot side water temperature = 40/45 °C
- (4) Overall efficiency = (Cooling capacity + Heating capacity) / (Total power input)
- (5) Sound levels refer to units with full load under nominal test conditions. The sound pressure level refers to a distance of 1 meter from the outer surface of the unit operating in open field. Noise levels are determined using the tensiometric method (UNI EN ISO

- 9614-2); Data refer to the following conditions: cold side water temperature = 12/7 °C, outdoor air temperature = 35 °C
- (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 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

## accessories

<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining	<b>CMMBX</b>	Serial communication module to supervisor (Modbus)
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment	<b>CMSLWX</b>	LonWorks serial communication module
<b>HYG1</b>	Hydronic assembly with 1 ON/OFF pump	<b>BACX</b>	BACnet serial communication module
<b>HYG2</b>	Hydronic assembly with 2 ON/OFF pumps	<b>MF2</b>	Multi-function phase monitor
<b>VARYP</b>	VARYFLOW + (2 inverter pumps)	<b>SFSTR4N</b>	Disposal for inrush current reduction, for unit 400/3/50+N
<b>HYGR1V</b>	Recovery side hydronic assembly with 1 inverter pump	<b>RCTX</b>	Remote control
<b>HYGU1V</b>	User side hydronic assembly with 1 inverter pump	<b>MHP</b>	High and low pressure gauges
<b>ACC</b>	Storage tank (sizes 35.2÷45.2)	<b>MHPX</b>	High and low pressure gauges
<b>VACSR</b>	Total recovery side DHW switching valve	<b>PGFC</b>	Finned coil protection grilles
<b>HEDIF</b>	Diffuser for high efficiency axial fan	<b>PGFCX</b>	Finned coil protection grilles
<b>CMSC10</b>	Serial communication module for LonWorks supervisor	<b>AVIBX</b>	Anti-vibration mount support
<b>CMSC8</b>	Serial communication module for BACnet supervisor	<b>IFWX</b>	Steel mesh strainer on the water side
<b>CMSC9</b>	Serial communication module for Modbus supervisor	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)

Accessories whose code ends with "X" are supplied separately

## ELFOEnergy Magnum MF

**Multifunction reversible heat pump**

Air cooled

Outdoor installation

**Capacity from 139 to 324 kW**



The **ELFOEnergy Magnum Multifunction** heat pumps are high efficiency packaged units for small and medium-sized applications in the services sector that **can generate thermal and cooling energy simultaneously and independently**.

Designed for outdoor installation, they ensure extremely high efficiency levels during the entire operating cycle **thanks to energy recovery**, which recovers up to 100% of the capacity supplied, further increasing efficiency.

Benefits of ELFOEnergy Magnum Multifunction:

- **HIGH UNIT RELIABILITY**, thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE**: the compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

### functions and features



Heat pump



AIR



Outdoor  
installation



R-410A



Hermetic  
Scroll



AxiTop

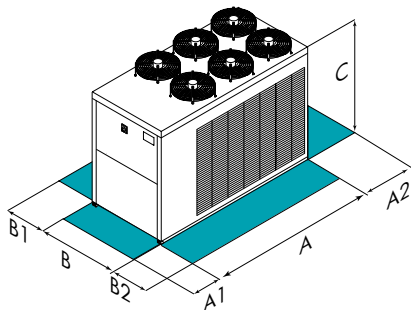


Vary Flow



Intelliplant

### dimensions and clearances



Size	WSAN-XEM MF	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
A - Length	mm	4450	4450	4450	4450	4450	4450	4450	5250	5250	5250
B - Width	mm	1812	1812	1812	1812	2250	2250	2250	2250	2250	2250
C - Height	mm	1800	1800	1800	1800	2300	2300	2300	2300	2300	2300
A1	mm	1300	1300	1300	1300	1500	1500	1500	1500	1500	1500
A2	mm	750	750	750	750	750	750	750	750	750	750
B1	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
B2	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
Operating weight	kg	1803	1825	1908	2073	2630	2750	2908	3467	3553	3694

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:

**R** Total energy recovery (Standard)

### CONFIGURATION

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

**2T** Configuration for 2-pipe system

## technical data

Size	WSAN-XEM MF	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4	
<b>Cooling 100% - Heating 0%</b>												
Cooling capacity (EN14511:2018)	(1) kW	139	148	160	170	184	208	235	273	296	321	
Total power input (EN14511:2018)	(1) kW	48,8	53,6	58,6	63,9	67,7	77,0	92,5	97,9	110	126	
EER (EN14511:2018)	(1) -	2,85	2,76	2,73	2,66	2,72	2,70	2,54	2,79	2,69	2,55	
SEER	(6) -	3,99	4,00	4,04	4,07	3,96	4,11	4,10	3,95	3,91	3,85	
$\eta_{s,H}$	(6) %	156,5	157,0	158,8	159,7	155,2	161,2	161,0	155,1	153,2	151,0	
<b>Cooling 0% - Heating 100%</b>												
Heating capacity (EN14511:2018)	(2) kW	157	170	186	196	213	243	278	321	346	387	
Total power input (EN14511:2018)	(2) kW	47,1	51,5	55,6	59,1	64,3	73,1	83,7	95,9	104	116	
COP (EN14511:2018)	(2) -	3,33	3,30	3,35	3,32	3,31	3,32	3,32	3,35	3,33	3,34	
<b>Cooling 100% - Heating 100%</b>												
Cooling capacity (EN14511:2018)	(3) kW	140	151	162	172	187	212	239	278	300	328	
Heating capacity (EN14511:2018)	(3) kW	184	198	216	230	249	284	326	371	401	447	
Total power input (EN14511:2018)	(3) kW	43,3	47,5	51,4	56,1	58,5	67,6	81,4	85,7	94,8	109	
Overall efficiency (EN14511:2018)	(4) -	7,48	7,35	7,35	7,18	7,45	7,33	6,94	7,56	7,39	7,11	
Refrigeration circuits	Nr							2				
No. of compressors	Nr							4				
Type of compressors	-	SCROLL										
Alimentazione standard	-	400/3/50+N					400/3/50					
Standard power supply	(5) dB(A)	69	69	69	69	68	68	68	72	72	72	
<b>Directive ErP (Energy Related Products)</b>												
SCOP - AVERAGE Climate - W35	(6) -	3,85	3,81	3,86	3,87	3,78	3,79	3,91	3,36	3,85	3,95	
$\eta_{s,H}$	(6) %	151,0	149,0	151,0	152,0	148,0	149,0	153,0	131,0	151,0	155,0	

- (1) Data compliant to Standard EN 14511:2018 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 14511:2018 referred to the following conditions: Hot side water temperature = 40/45°C, Temperatura aria entrante allo scambiatore esterno = 7°C D.B./6°C W.B
- (3) Data compliant to Standard EN 14511:2018 referred to the following conditions: Cold side water temperature = 12/7°C, Hot side water temperature = 40/45°C
- (4) Overall efficiency = (Cooling capacity + Heating capacity) / (Total power input)
- (5) Sound levels refer to units with full load under nominal test conditions. The sound pressure level refers to a distance of 1 meter from the outer surface of the unit operating in open field. Noise levels are determined using the tensiometric method (UNI EN ISO

- 9614-2); Data refer to the following conditions: Cold side water temperature = 12/7 °C; outdoor air temperature = 35°C
- (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 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

## accessories

<b>HYG1</b>	Hydronic assembly unit with 1 ON/OFF pump
<b>HYG2</b>	Hydronic assembly unit with 2 ON/OFF pumps
<b>VARYP</b>	VARYFLOW + (2 inverter pumps)
<b>HYGR1V</b>	Recovery side hydronic unit with 1 inverter pump
<b>ACC</b>	Storage tank
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment
<b>HEDIF</b>	Diffuser for high efficiency axial fan (sizes 70.4÷120.4)
<b>CREFB</b>	Device for fan consumption reduction of the external section, ECOBREEZE type (sizes 70.4÷120.4)
<b>SFSTR</b>	Disposal for inrush current reduction
<b>MF2</b>	Multi-function phase monitor
<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CMSLWX</b>	LonWorks serial communication module

<b>CMSC8</b>	Serial communication module for BACnet supervisor
<b>BACX</b>	BACnet serial communication module
<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>CMMBX</b>	Serial communication module to supervisor (Modbus)
<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>PGFC</b>	Finned coil protection grill
<b>PGFCX</b>	Finned coil protection grill
<b>MHP</b>	High and low pressure gauges
<b>MHPX</b>	High and low pressure gauges
<b>VACSRX</b>	Total recovery side DHW switching valve
<b>IFWX</b>	Steel mesh strainer on the water side
<b>RCTX</b>	Remote control
<b>AVIBX</b>	Anti-vibration mount support

Accessories whose code ends with "X" are supplied separately

## ELFOEnergy Magnum HW

### Reversible heat pump

Air cooled

Outdoor installation

Capacity from 85,8 to 150 kW



**ELFOEnergy Magnum HW** is a series of high temperature heat pumps, ideal for heating, cooling and hot water solution for centralised systems.

Benefits of ELFOEnergy Magnum HW:

- **EXTENDED OPERATING RANGE:** operation with outdoor air temperature down to -20°C and hot water production at 55°C. Hot water production up to 65°C at outdoor temperatures of down to -13°C.
- **HIGH UNIT RELIABILITY,** thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** The compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

### functions and features



Heat pump



Air cooled



Outdoor  
installation



R-410A



Hermetic  
Scroll



AxiTop

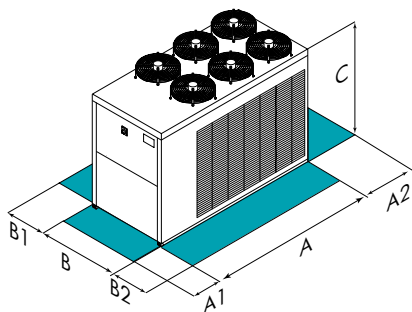


Vary Flow



Intelliplant

### 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 (EN14511:2018)	(1) kW	85,8	98,3	110	118	131	150
Total power input (EN14511:2018)	(1) kW	31,5	35,4	37,5	41,7	48,4	54,8
EER (EN 14511:2018)	(1) -	2,73	2,78	2,93	2,83	2,71	2,73
SEER	(4) -	2,93	3,35	3,50	3,31	3,28	3,09
$\eta_{s,H}$	(4) %	114,4	131,2	137,1	129,2	128,0	120,5
▶ Heating capacity (EN14511:2018)	(2) kW	109	123	134	144	165	185
Total power input (EN14511:2018)	(2) kW	31,8	34,9	37,9	41,6	48,2	54,5
COP (EN 14511:2018)	(2) -	3,43	3,52	3,53	3,45	3,42	3,39
Refrigeration circuits	Nr				2		
No. of compressors	Nr				4		
Type of compressors	-				SCROLL		
Standard airflow	l/s	16000	15567	15567	15567	20733	20733
Water flow-rate (User Side)	l/s	4,10	4,70	5,30	5,70	6,30	7,20
Standard power supply	V				400/3/50+N		
Sound pressure level	(3) dB(A)	67	67	67	67	69	69
<b>Directive ErP (Energy Related Products)</b>							
SCOP - AVERAGE Climate - W35	(4) -	3,52	3,95	3,90	3,88	3,54	3,64
$\eta_{s,H}$	(4) %	138,0	155,0	153,0	152,0	139,0	143,0
SCOP - AVERAGE Climate - W55	(4) -	3,03	3,19	3,15	3,22	3,12	3,04
$\eta_{s,H}$	(4) %	118,0	125,0	123,0	126,0	122,0	119,0

- (1) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C
- (2) Data compliant to Standard EN 14511:2018 referred to the following conditions: - Internal exchanger water temperature = 40/45°C - Entering external exchanger air temperature = 7°C D.B./6°C W.B
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect

- to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C
- (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 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

## accessories

<b>VARYP</b>	VARYFLOW + (2 inverter pumps)	<b>BACX</b>	BACnet serial communication module
<b>HYG1</b>	Hydronic assembly with 1 ON/OFF pump	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>HYG2</b>	Hydronic assembly with 2 ON/OFF pumps	<b>CMMBX</b>	Serial communication module for supervisor (Modbus)
<b>VACSUX</b>	User side DHW switching valve	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>ACC</b>	Storage tank	<b>PGFC</b>	Finned coil protection grill
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining	<b>PGFCX</b>	Finned coil protection grill
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment	<b>MHP</b>	High and low pressure gauges
<b>SFSTR</b>	Disposal for inrush current reduction	<b>MHPX</b>	High and low pressure gauges
<b>MF2</b>	Multi-function phase monitor	<b>IFWX</b>	Steel mesh strainer on the water side
<b>CMSC10</b>	Serial communication module for LonWorks supervisor	<b>RCTX</b>	Remote control
<b>CMSLWX</b>	LonWorks serial communication module	<b>AVIBX</b>	Anti-vibration mount support
<b>CMSC8</b>	Serial communication module for BACnet supervisor		

Accessories whose code ends with "X" are supplied separately

# WSAT-YSC4 WSAN-YSC4

80.3÷240.6

## NEW PRODUCT

## SPINchiller<sup>4</sup>

### Water chiller

WSAT-YSC4: cooling only

WSAN-YSC4: reversible heat pump

Air cooled

Outdoor installation

Capacity from 216 to 675 kW



The **SPINchiller<sup>4</sup>** liquid chillers and heat pumps are high efficiency packaged units with ecological refrigerant R32 for medium and big-sized applications in the services sector. Designed for outdoor installation, they ensure the highest energy efficiency over the entire operating cycle, especially under load staging conditions that coincide with the unit's longer operating time, **thanks to the modular scroll technology** that adapts the capacity supplied to the actual energy demand required by the system.

- **DUAL ENERGY VERSION:** the standard EXCELLENCE version with a class A Eurovent rating offers the highest energy efficiency both during the seasonal cycle and under full load conditions. The PREMIUM version also provides excellent performance under partial load conditions, but has a compact design which gives it an additional competitive edge.
- **HIGH UNIT RELIABILITY,** thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** the compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

## functions and features



Cooling only  
(WSAT-YSC4)



Heat pump  
(WSAN-YSC4)



Air cooled



Outdoor  
installation



R-32



Hermetic Scroll



Electronic  
expansion  
valve



Ecobreeze

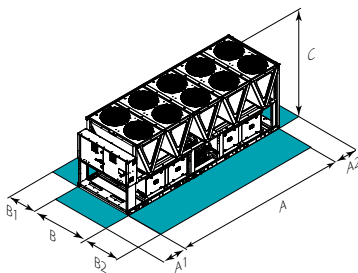


Hydropack



Intellipart

## dimensions and clearances



Size	WSAT-YSC4	80.3	100.4	115.4	140.4	155.5	175.5	190.5	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	3396	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	3176	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	2950	3925	3925	3925	3925	4900	4900	4900	5817	5817	6850	6850
SC-EXC B - Width	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
SC-EXC C - Height	mm	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535
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

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	2950	2950	2950	2950	3925	3925	3925	4900	4900	5817	5817
SC-PRM B - Width	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
SC-PRM C - Height	mm	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535	2535
SC-PRM A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM A2	mm	700	700	700	700	700	700	700	700	700	700	700
SC-PRM B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200

**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

\* PRELIMINARY DATA

## versions and configurations

### VERSION:

**EXC** Excellence (Standard)

**PRM** Premium

### ENERGY RECOVERY:

- Energy recovery: not required (Standard)

**D** Partial energy recovery

**R** Total energy recovery (ONLY WSAT-YSC4)

### ACOUSTIC CONFIGURATION:

**ST** Standard acoustic configuration (Standard)

**SC** Acoustic configuration with compressor soundproofing (Standard)

**EN** Supersilenced acoustic configuration

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

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

### EVAPORATOR:

**EVPHE** Plate heat exchanger (Standard)

**EVFTP** Shell and tube evaporator

## 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 (EN14511:2018)	(1) kW	222	267	314	364	423	472	520	573	624	675
ST/SC-EXC	Total power input (EN14511:2018)	(1) kW	69,4	85,5	99,8	115	135	149	167	184	200	218
ST/SC-EXC	EER (EN14511:2018)	(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	Standard power supply	V	400/3~50									
ST-EXC	Sound pressure level	(3) dB(A)	71	72	72	73	74	74	75	75	75	76
SC-EXC	Sound pressure level	(3) dB(A)	68	69	69	70	70	71	71	71	71	72
EN-EXC	Sound pressure level	(3) dB(A)	65	65	66	66	66	67	68	67	67	68

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 (EN14511:2018)	(1) kW	232	291	333	384	443	483	537	590	644	
ST/SC-PRM	Total power input (EN14511:2018)	(1) kW	84,5	102	124	139	156	179	199	209	233	
ST/SC-PRM	EER (EN14511:2018)	(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	Standard power supply	V	400/3~50									
ST-PRM	Sound pressure level	(3) dB(A)	71	72	73	73	74	74	75	76	76	
SC-PRM	Sound pressure level	(3) dB(A)	68	69	70	69	70	70	71	72	72	
EN-PRM	Sound pressure level	(3) dB(A)	65	67	67	67	67	68	69	69	69	

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*
ST/SC-EXC	▶ Cooling capacity (EN14511:2018)	(1) kW	216	242	263	291	321	354	389	431	501	553	607	654
ST/SC-EXC	Total power input (EN14511:2018)	(1) kW	72,7	77,3	84,6	94,8	106	114	127	144	165	187	198	219
ST/SC-EXC	EER (EN14511:2018)	(1) -	2,97	3,13	3,11	3,07	3,04	3,10	3,06	3,00	3,04	2,95	3,06	2,99
ST/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
ST/SC-EXC	$\eta_{s,c}$	(4) %	175,0	188,6	186,6	189,4	190,6	191,4	188,2	185,8	192,2	190,6	192,6	191,4
ST/SC-EXC	▶ Heating capacity (EN14511:2018)	(2) kW	220	250	275	300	330	365	405	440	515	570	625	670
ST/SC-EXC	Total power input (EN14511:2018)	(2) kW	69,2	79,4	85,4	93,2	102	115	123	134	157	175	195	209
ST/SC-EXC	COP (EN14511:2018)	(2) -	3,18	3,15	3,22	3,22	3,24	3,18	3,29	3,28	3,28	3,25	3,20	3,20
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	Standard power supply	V	400/3/50											
SC-EXC	Sound pressure level	(3) dB(A)	68	70	70	70	70	71	71	71	71	71	72	72
EN-EXC	Sound pressure level	(3) dB(A)	65	67	67	67	67	68	68	68	68	68	69	69

### Directive ErP (Energy Related Products)

SCOP - AVERAGE Climate - W35	(4) -	3,73	3,88	3,92	4,10	4,08	4,05	3,98	4,07	-	-	-	-
$\eta_{s,H}$	(4) %	146,0	152,0	154,0	161,0	160,0	159,0	156,0	160,0	-	-	-	-

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*	
ST/SC-PRM	▶ Cooling capacity (EN14511:2018)	(1) kW	231	254	277	301	333	367	403	479	530	583	630	
ST/SC-PRM	Total power input (EN14511:2018)	(1) kW	82,5	94,1	103	116	119	136	154	171	200	207	227	
ST/SC-PRM	EER (EN14511:2018)	(1) -	2,80	2,70	2,68	2,60	2,80	2,69	2,61	2,80	2,65	2,81	2,78	
ST/SC-PRM	SEER	(4) -	4,26	4,20	4,35	4,33	4,55	4,57	4,28	4,64	4,62	4,66	4,64	
ST/SC-PRM	$\eta_{s,c}$	(4) %	167,4	165,0	171,0	170,2	179,0	179,8	168,2	182,6	181,8	183,4	182,6	
ST/SC-PRM	▶ Heating capacity (EN14511:2018)	(2) kW	230	255	280	300	335	375	415	485	540	590	640	
ST/SC-PRM	Total power input (EN14511:2018)	(2) kW	74,9	83,5	91,8	98,0	110	123	133	153	173	188	203	
ST/SC-PRM	COP (EN14511:2018)	(2) -	3,07	3,06	3,05	3,06	3,05	3,06	3,13	3,17	3,12	3,13	3,15	
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	Standard power supply	V	400/3/50											
SC-PRM	Sound pressure level	(3) dB(A)	69	70	70	70	70	70	71	71	71	72	72	
EN-PRM	Sound pressure level	(3) dB(A)	66	67	67	67	67	67	67	68	68	69	69	

### Directive ErP (Energy Related Products)

SCOP - AVERAGE Climate - W35	(4) -	3,47	3,64	3,83	3,87	3,78	3,64	3,82	3,91	-	-	-
$\eta_{s,H}$	(4) %	136,0	143,0	150,0	152,0	148,0	143,0	150,0	153,0	-	-	-

- Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Entering external exchanger air temperature = 35°C
- Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C. Entering external exchanger air temperature = 7°C D.B./6°C W.B.
- Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the

- EUROVENT 8/1 certification. Data refer to the following conditions: internal water exchanger = 12/7°C; outdoor air temperature 35°C
- 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.
- \* PRELIMINARY DATA

## accessories

<b>1PM</b>	Hydropack with 1 pump	<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>1PMV</b>	Hydropack user side with nr.1 inverter pump	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>1PMH</b>	Hydropack with nr.1 high static pressure pump	<b>SFSTR</b>	Disposal for inrush current reduction
<b>1PMVH</b>	Hydropack user side with nr.1 high static pressure inverter pump	<b>RE-25</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
<b>2PM</b>	Hydropack user side with 2 pumps	<b>MHP</b>	High and low pressure gauges
<b>2PMV</b>	Hydropack user side with no.2 of inverter pumps	<b>SDV</b>	Cutoff valve on compressor supply and return
<b>2PMH</b>	Hydropack user side with nr.2 high static pressure pump	<b>AMMSX</b>	Spring antivibration mounts
<b>2PMVH</b>	Hydropack user side with nr.2 high static pressure inverter pump	<b>RPRI</b>	Refrigerant leak detector in the casing
<b>IVFDT</b>	Inverter driven variable flow-rate user side control depending on the temperature differential	<b>PPBM</b>	Microchannel coils protection panels
<b>IFWX</b>	Steel mesh strainer on the water side	<b>PGCC</b>	Finned coil protection grilles and compressor compartment
<b>CSVX</b>	Couple of manually operated shut-off valves	<b>DML4-20</b>	Demand limit with 4-20 mA signal
<b>ACC</b>	Storage tank	<b>DML0-10</b>	Demand limit with 0-10 V signal
<b>AMMX</b>	Spring antivibration mounts	<b>Only WSAT-YSC4:</b>	
<b>CONTA2</b>	Energy meter	<b>CCME</b>	E-coated microchannel coil
<b>RCMRX</b>	Remote control via microprocessor control	<b>Only WSAN-YSC4:</b>	
<b>PSX</b>	Mains power supply	<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining
<b>CMSC10</b>	Serial communication module for LonWorks supervisor	<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment
<b>CMSC9</b>	Serial communication module for Modbus supervisor	<b>PGCCH</b>	Anti-hail protection grilles
<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor		
<b>SCP4</b>	Set-point compensation with 0-10 V signal		
<b>SPC1</b>	Set-point compensation with 4-20 mA signal		

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.



## SPINchiller<sup>3</sup>

### Water chiller

WSAT-XSC3: cooling only  
 WSAN-XSC3: reversible heat pump  
 Air cooled  
 Outdoor installation  
**Capacity from 734 to 1350 kW**

The **SPINchiller<sup>3</sup>** heat pumps and liquid chillers are high efficiency packaged units for medium and big-sized applications in the services sector. Designed for outdoor installation, they ensure the highest energy efficiency over the entire operating cycle, especially under load staging conditions that coincide with the unit's longer operating time, **thanks to the modular scroll technology** that adapts the capacity supplied to the actual energy demand required by the system.

- **DUAL ENERGY VERSION:** the standard EXCELLENCE version with a class A Eurovent rating offers the highest energy efficiency both during the seasonal cycle and under full load conditions. The PREMIUM version also provides excellent performance under partial load conditions, but has a compact design which gives it an additional competitive edge.
- **HIGH UNIT RELIABILITY,** thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** the compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant

## functions and features



Cooling only  
 (WSAT-XSC3)



Heat pump  
 (WSAN-XSC3)



AIR



Outdoor  
 installation



R-410A



Hermetic Scroll



HYDRO  
 PACK



AxiTop

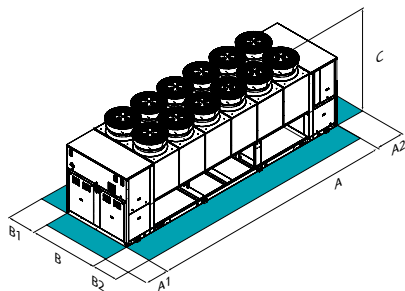


Electronic  
 expansion  
 valve



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-XSC3	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-EXC A - Length	mm	7948	7948	9900	9900	9900	9900	11989	11989	11989
SC-EXC B - Width	mm	2243	2243	2243	2243	2243	2243	2243	2243	2243
SC-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-EXC A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC A2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC Operating weight	kg	5837	5963	6692	6881	7138	7375	8768	9076	9352

Size	WSAT-XSC3	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-PRM A - Length	mm	6973	6973	7948	7948	7948	7948	10243	11989	11989
SC-PRM B - Width	mm	2243	2243	2243	2243	2243	2243	2243	2243	2243
SC-PRM C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-PRM A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM A2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM Operating weight	kg	5413	5527	5982	6119	6338	6537	7508	8592	9020

Size	WSAN-XSC3	260.8	280.8	300.8	320.8	340.8	360.8	400.8	440.8	480.8
SC-EXC A - Length	mm	9268	10243	10243	10243	11114	11989	11989	12822	12822
SC-EXC B - Width	mm	2246	2246	2246	2246	2246	2246	2246	2246	2246
SC-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-EXC A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC A2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC Operating weight	kg	6750	7175	7189	7203	7948	8693	8797	9631	9912

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

### LOW TEMPERATURE:

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

### ENERGY RECOVERY:

- Energy recovery: not required (Standard)
- D** Partial energy recovery
- R** Total energy recovery (WSAT-XSC3 only)

### ACOUSTIC CONFIGURATION:

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

### VERSION:

- EXC** Excellence (Standard)
- PRM** Premium (WSAT-XSC3 only)

### 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	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-EXC	▶ Cooling capacity (EN14511:2018)	(1) kW	734	791	852	905	961	1016	1143	1242	1350
SC-EXC	Total power input (EN14511:2018)	(1) kW	236	253	274	292	309	328	362	400	435
SC-EXC	EER (EN14511:2018)	(1) -	3,11	3,12	3,11	3,10	3,10	3,10	3,16	3,10	3,10
SC-EXC	SEER	(4) -	4,61	4,59	4,60	4,65	4,62	4,56	4,66	4,62	4,56
SC-EXC	$\eta_{s,c}$	(4) %	181,5	180,8	181,0	183,0	181,9	179,2	183,3	182,0	179,4
SC-EXC	Refrigeration circuits	Nr				2				4	
SC-EXC	No. of compressors	Nr				6				8	
SC-EXC	Type of compressors	-					SCROLL				
SC-EXC	Standard power supply	l/s	73120	72035	97494	96046	95118	94191	116663	115405	114147
SC-EXC	Water flow-rate (User side)	l/s	35,0	37,8	40,7	43,3	45,9	48,5	54,6	59,4	64,5
SC-EXC	Standard power supply	V									
SC-EXC	Sound pressure level	(3) dB(A)	73	73	75	75	75	76	75	75	76

Size		WSAT-XSC3	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-PRM	▶ Cooling capacity (EN14511:2018)	(1) kW	693	742	798	848	895	942	1058	1187	1291
SC-PRM	Total power input (EN14511:2018)	(1) kW	246	265	287	306	326	346	382	427	462
SC-PRM	EER (EN14511:2018)	(1) -	2,81	2,79	2,78	2,77	2,75	2,72	2,77	2,78	2,80
SC-PRM	SEER	(4) -	4,42	4,39	4,37	4,35	4,35	4,34	4,22	4,19	4,15
SC-PRM	$\eta_{s,c}$	(4) %	173,9	172,4	171,7	170,9	170,8	170,7	165,7	164,6	163,1
SC-PRM	Refrigeration circuits	Nr				2				4	
SC-PRM	No. of compressors	Nr				6				8	
SC-PRM	Type of compressors	-									
SC-PRM	Standard power supply	l/s	60934	60029	73120	72035	71339	70643	98941	124271	120057
SC-PRM	Water flow-rate (User side)	l/s	32,9	35,3	38,0	40,3	42,6	44,8	50,3	56,5	61,5
SC-PRM	Standard power supply	V									
SC-PRM	Sound pressure level	(3) dB(A)	72	73	74	74	75	75	76	75	76

Size		WSAN-XSC3	260.8	280.8	300.8	320.8	340.8	360.8	400.8	440.8	480.8
SC-EXC	▶ Cooling capacity (EN14511:2018)	(1) kW	692	739	785	831	888	945	1037	1115	1186
SC-EXC	Total power input (EN14511:2018)	(1) kW	256	273	288	303	326	350	378	412	453
SC-EXC	EER (EN14511:2018)	(1) -	2,70	2,70	2,73	2,75	2,72	2,70	2,74	2,70	2,62
SC-EXC	SEER	(4) -	4,16	4,21	4,20	4,19	4,20	4,20	4,21	4,19	4,11
SC-EXC	$\eta_{s,c}$	(4) %	163,3	165,3	164,9	164,5	165,1	165,0	165,2	164,4	161,4
SC-EXC	▶ Heating capacity (EN14511:2018)	(2) kW	803	852	897	942	1014	1086	1201	1292	1391
SC-EXC	Total power input (EN14511:2018)	(2) kW	246	261	275	290	314	338	369	404	435
SC-EXC	COP (EN14511:2018)	(2) -	3,27	3,26	3,26	3,25	3,23	3,22	3,25	3,20	3,20
SC-EXC	Refrigeration circuits	Nr								4	
SC-EXC	No. of compressors	Nr								8	
SC-EXC	Type of compressors	-					SCROLL				
SC-EXC	Standard power supply	l/s	86172	99614	98871	98127	111741	125354	122438	121708	120979
SC-EXC	Water flow-rate (User side)	l/s	33,0	35,3	37,5	39,7	42,4	45,2	49,5	53,3	56,7
SC-EXC	Standard power supply	V									
SC-EXC	Sound pressure level	(3) dB(A)	73	73	74	74	74	75	75	75	75

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Entering external exchanger air temperature = 35°C
- (2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C. Entering external exchanger air temperature = 7°C D.B./6°C W.B
- (3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data refer to the following conditions: internal water exchanger = 12/7 °C; outdoor air temperature 35°C

- (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

<b>CREFB</b>	Device for fan consumption reduction of the external section, ECOBREEZE type	<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>2PM</b>	Hydropack user side with 2 pumps	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>3PM</b>	Hydropack user side with 3 pumps	<b>SFSTR</b>	Disposal for inrush current reduction
<b>2PMV</b>	Hydropack user side with no.2 of inverter pumps	<b>RE-20</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -20°C
<b>3PMV</b>	Hydropack user side with no.3 of inverter pumps	<b>RE-25</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
<b>4PM</b>	Hydropack user side with 4 pumps	<b>RE-30</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -30°C
<b>6PM</b>	Hydropack user side with 6 pumps	<b>RE-35</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -35°C
<b>6PMV</b>	Hydropack user side with 6 inverter pumps	<b>RE-39</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -39°C
<b>IVFDT</b>	Inverter driven variable flow-rate user side control depending on the temperature differential	<b>MHP</b>	High and low pressure gauges
<b>IFWX</b>	Steel mesh strainer on the water side	<b>SDV</b>	Cutoff valve on compressor supply and return
<b>CSVX</b>	Couple of manually operated shut-off valves	<b>A900</b>	900 l. storage tank
<b>A550</b>	550 l. storage tank	<b>A1800</b>	1800 l. storage tank
<b>A700</b>	700 l. storage tank	<b>PM</b>	Phase monitor
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining	<b>MF2</b>	Multi-function phase monitor
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment	<b>PSPS</b>	Set up for single power supply
<b>AMMX</b>	Spring antivibration mounts		
<b>PGFC</b>	Finned coil protection grill	<b>WSAT-XSC3 only:</b>	
<b>PGCCH</b>	Anti-hail protection grilles	<b>CREFO</b>	Device for fan consumption reduction of the external section, on/off type
<b>CONTA2</b>	Energy meter	<b>REGBT</b>	Device for the condensing coil partialization
<b>RPRPDI</b>	Refrigerant leak detector with pump down function in the casing	<b>WSAN-XSC3 only:</b>	
<b>RCMRX</b>	Remote control via microprocessor control	<b>A1200</b>	1200 l. storage tank
<b>PSX</b>	Mains power supply	<b>A1400</b>	1400 l. storage tank
<b>CMSC10</b>	Serial communication module for LonWorks supervisor	<b>A1600</b>	1600 l. storage tank
<b>CMSC9</b>	Serial communication module for Modbus supervisor	<b>OHE</b>	Limit extension kit in heating up to -10°C (W.B.)
<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor		
<b>SCP4</b>	Set-point compensation with 0-10 V signal		
<b>SPC2</b>	Set-point compensation with outdoor air temperature probe		

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.



## SPINchiller<sup>3</sup> MF

**Multifunction reversible heat pump**

Air cooled

Outdoor installation

**Capacity from 259 to 1300 kW**

**SPINCHILLER<sup>3</sup> MULTIFUNCTION** is the high efficiency packaged unit for centralized systems able to produce heating and cooling energy both simultaneously and independently.

- **VERSATILE AND EFFICIENT:** thanks to the total energy recovery reversible heat pump technology, the unit meets practically every chilled water, hot water and domestic hot water system requirement automatically and with high energy efficiency in all load conditions.
- **MODULAR SCROLL TECHNOLOGY** designed for outdoor installation, SPINchiller<sup>3</sup> MF employs modular Scroll technology with several compressors on the same refrigeration circuit. It stands out for the very high SEER efficiency during the seasonal operation cycle.
- **INDUSTRIALISED SYSTEM** packaged unit can reduce the initial system costs even by 40% compared to a traditional solution with separated production, for example using chillers or boilers. Most of the routine system activities are in fact realized by Clivet inside the unit.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

### functions and features



Heat pump



Air cooled



Outdoor  
installation



R-410A



Hermetic  
Scroll



HydroPack



AxiTop

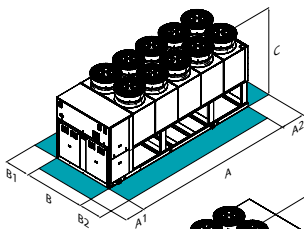


Electronic  
expansion  
valve

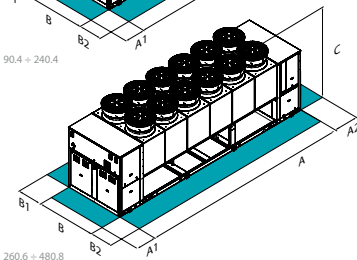


Intelliplant

### dimensions and clearances



90.4 + 240.4



260.6 + 480.8

Size	WSAN-XSC3 MF	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.8	280.8	300.8	320.8	340.8	360.8	400.8	440.8	480.8
A - Length	mm	4149	4149	4149	4149	5518	5518	6400	6400	6400	6400	9614	10940	10940	10940	11818	12822	12822	12822	12822
B - Width	mm	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2246	2246	2246	2246	2246	2246	2246	2246	2246
C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
A2	mm	700	700	700	700	700	700	700	700	700	700	1500	1500	1500	1500	1500	1500	1500	1500	1500
B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Operating weight	kg	3119	3185	3259	3362	3932	4006	4769	4830	5068	5234	7984	8640	8714	8788	9941	10820	10941	11417	11750

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)

### TYPE FAN EXTERNAL SECTION:

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

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

### CONFIGURATION:

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

**2T** Configuration for 2-pipe system

### ACOUSTIC CONFIGURATION:

**SC** Acoustic configuration with compressor soundproofing (Standard)

**EN** Extremely low noise acoustic configuration

## technical data

Size		WSAN-XSC3 MF	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.8	280.8	300.8	320.8	340.8	360.8	400.8	440.8	480.8
<b>Cooling 100% - Heating 0%</b>																					
Cooling capacity (EN14511:2018)	(1)	kW	259	275	298	340	385	434	503	545	602	650	725	770	819	868	937	1006	1090	1204	1300
Total power input (EN14511:2018)	(1)	kW	87,9	95,2	104	118	135	150	173	188	204	224	254	271	285	300	323	347	375	409	449
EER (EN14511:2018)	(1)	-	2,95	2,89	2,86	2,88	2,84	2,90	2,90	2,91	2,95	2,90	2,86	2,84	2,87	2,90	2,90	2,90	2,91	2,94	2,90
SEER	(6)	-	4,16	4,14	4,13	4,16	4,16	4,13	4,24	4,24	4,22	4,16	4,18	4,23	4,22	4,21	4,23	4,24	4,24	4,22	4,16
$\eta_{sc}$	(6)	%	163,4	162,7	162,1	163,4	163,5	162,3	166,5	166,5	165,9	163,3	164,2	166,0	165,7	165,3	166,1	166,5	166,5	165,9	163,6
<b>Cooling 0% - Heating 100%</b>																					
Heating capacity (EN14511:2018)	(2)	kW	295	326	355	395	445	492	567	627	675	728	839	890	937	984	1059	1134	1254	1350	1456
Total power input (EN14511:2018)	(2)	kW	81,9	89,5	97,0	106	121	133	156	171	187	200	227	241	253	266	289	311	342	374	400
COP (EN14511:2018)	(2)	-	3,60	3,64	3,66	3,72	3,69	3,70	3,64	3,67	3,61	3,64	3,70	3,69	3,70	3,70	3,67	3,64	3,67	3,61	3,64
<b>Cooling 100% - Heating 100%</b>																					
Cooling capacity (EN14511:2018)	(3)	kW	255	275	305	344	397	442	509	556	612	670	741	793	838	883	951	1018	1112	1224	1339
Heating capacity (EN14511:2018)	(3)	kW	331	357	396	447	513	573	658	720	794	866	961	1027	1087	1147	1231	1316	1439	1587	1733
Total power input (EN14511:2018)	(3)	kW	76,6	82,6	91,2	103	117	132	150	164	183	197	220	233	248	263	281	298	328	364	393
Overall efficiency (EN14511:2018)	(4)	-	7,65	7,64	7,69	7,66	7,76	7,68	7,80	7,76	7,70	7,79	7,75	7,80	7,75	7,71	7,77	7,83	7,79	7,72	7,81
Refrigeration circuits		Nr	2																		
No. of compressors		Nr	4																		
Type of compressors		-	SCROLL																		
Standard power supply		V	400/3~/50																		
SC-EXC Sound pressure level	(5)	dB(A)	72	72	72	72	72	73	74	74	74	75	73	73	74	74	74	75	75	75	75
EN-EXC Sound pressure level	(5)	dB(A)	66	66	66	66	66	67	69	69	69	70	67	67	68	68	69	70	70	70	70
<b>Directive ErP (Energy Related Products)</b>																					
SCOP - AVERAGE Climate - W35	(6)	-	4,08	4,10	4,12	3,95	4,16	3,94	-	-	-	-	-	-	-	-	-	-	-	-	-
$\eta_{sh}$	(6)	%	160,0	161,0	162,0	155,0	163,0	155,0	-	-	-	-	-	-	-	-	-	-	-	-	-

- (1) Data compliant to Standard EN 14511:2018 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 14511:2018 referred to the following conditions: Hot side water temperature = 40/45°C, Temperatura aria entrante allo scambiatore esterno = 7°C D.B./6°C W.B
- (3) Data compliant to Standard EN 14511:2018 referred to the following conditions: Cold side water temperature = 12/7 °C, Hot side water temperature = 40/45°C
- (4) Overall efficiency = (Heating capacity + Heating capacity) / (Total power input)
- (5) Sound levels refer to units with full load under nominal test conditions. The sound pressure level refers to a distance of 1 meter from the outer surface of the unit operating in open field. Noise levels are determined using the tensiometric method (UNI EN ISO 9614-2); Data refer to the following conditions: Cold side water temperature = 12/7 °C; outdoor air temperature = 35°C

- (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

<b>CREFB</b>	Device for fan consumption reduction of the external section, ECOBREEZE type	<b>A1800</b>	1800 l. storage tank
<b>2PM</b>	Hydropack load side with 2 pumps (sizes 90.4÷240.4, 360.8÷400.8)	<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining
<b>3PM</b>	Hydropack load side with 3 pumps (sizes 90.4÷240.4, 360.8÷400.8)	<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment
<b>2PMV</b>	Hydropack user side with no.2 of inverter pumps (sizes 90.4÷120.4)	<b>AMMX</b>	Spring antivibration mounts
<b>3PMV</b>	Hydropack user side with no.3 of inverter pumps (sizes 90.4÷240.4, 360.8÷400.8)	<b>PGFC</b>	Finned coil protection grill
<b>4PM</b>	Hydropack user side with 4 pumps	<b>PGCCH</b>	Anti-hail protection grilles
<b>6PM</b>	Hydropack user side with 6 pumps	<b>CONTA2</b>	Energy meter
<b>6PMV</b>	Hydropack user side with 6 inverter pumps	<b>RPRPDI</b>	Refrigerant leak detector with pump down function in the casing
<b>IVFDT</b>	Inverter driven variable flow-rate user side control depending on the temperature differential	<b>RCMRX</b>	Remote control via microprocessor control
<b>HYGR2V</b>	Recovery side hydronic unit with 2 inverter pumps	<b>PSX</b>	Mains power supply
<b>HYGR3V</b>	Hydronic assembly recovery side with no.3 of inverter pumps	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>HYGR6V</b>	Hydronic assembly, recovery side, with 6 inverter pumps	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>IFWX</b>	Steel mesh strainer on the water side	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>CSVX</b>	Couple of manually operated shut-off valves	<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>A550</b>	550 l. storage tank	<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>A700</b>	700 l. storage tank	<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>A900</b>	900 l. storage tank	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>A1200</b>	1200-litre storage tank	<b>SFSTR</b>	Disposal for inrush current reduction
<b>A1400</b>	1400-litre storage tank	<b>MHP</b>	High and low pressure gauges
<b>A1600</b>	1600-litre storage tank	<b>SDV</b>	Cutoff valve on compressor supply and return
		<b>OHE</b>	Limit extension kit in heating up to -10°C (W.B.)
		<b>PSPS</b>	Set up for single power supply

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.

## SPINchiller<sup>3</sup> FC

**Water chiller with FREE-COOLING**

Air cooled

Outdoor installation

**Capacity from 299 to 1114 kW**



ErP  
compliant

The **SPINchiller<sup>3</sup> FREE-COOLING** enables high-level savings on the management costs of the system in applications which also require cooled water during the cold season such as industrial processes, data centres, telecommunications, technological applications and shopping centres.

■ **SIGNIFICANT ENERGY SAVINGS:** when the fresh air temperature is lower than the return water temperature of the system, the FREE-COOLING system recovers coolness from the external setting and reduces compressor operations until they are completely stilled. In this way the requested cooling capacity is supplied at no cost.

■ **EVEN IN GLYCOL FREE VERSION:** does not require the addition of an antifreeze substance in the hydraulic circuit used. Therefore, it is particularly suitable for large-sized systems and wherever laws and regulations limit the use of antifreeze substances inside buildings.

### functions and features



Cooling only



Air cooled



Outdoor installation



R-410A



Hermetic Scroll



FREE-COOLING



HydroPack



AxiTop

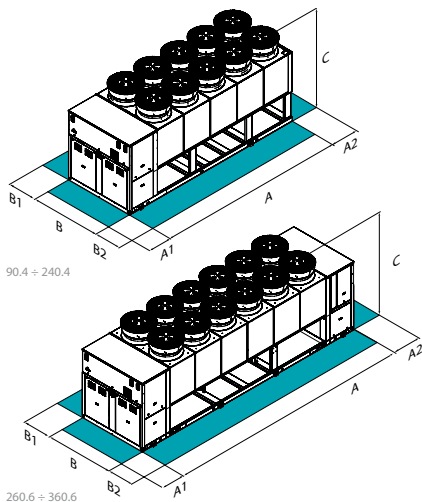


Electronic expansion valve



Intelliplant

### dimensions and clearances



Size	WSAT-XSC3 FC	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4
A - Length	mm	4543	4543	4543	4543	5518	5518	5518	6454	6454	6454
B - Width	mm	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243
C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
A2	mm	700	700	700	700	700	700	700	700	700	700
B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Operating weight	kg	3940	3994	4037	4105	4593	4645	4899	5758	5851	5899

Size	WSAT-XSC3 FC	260.6	280.6	300.6	320.6	340.6	360.6
A - Length	mm	8648	8648	10598	10598	10598	10598
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	1500	1500	1500	1500	1500	1500
B1	mm	1200	1200	1200	1200	1200	1200
B2	mm	1200	1200	1200	1200	1200	1200
Operating weight	kg	7184	7274	8632	8714	8817	8920

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

### VERSION:

- EXC** Excellence (Standard)

### ACOUSTIC CONFIGURATION:

- SC** Acoustic configuration with compressor soundproofing (Standard)
- EN** Extremely low noise 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	180.4	200.4	220.4	240.4	260.6	280.6	300.6	320.6	340.6	360.6		
<b>Free-Cooling Off</b>																				
SC-EXC Cooling capacity	(1)	kW	299	325	361	397	452	509	566	632	664	718	799	845	955	1008	1059	1114		
SC-EXC Total power input	(1)	kW	79,5	86,8	96,6	110	123	139	164	174	193	214	235	255	265	286	308	330		
SC-EXC EER at full load	(1)	-	3,76	3,75	3,74	3,62	3,68	3,65	3,46	3,64	3,45	3,36	3,40	3,31	3,61	3,53	3,44	3,38		
SC-EXC SEER	(4)	-	4,64	4,65	4,62	4,56	4,66	4,65	4,59	4,64	4,62	4,56	4,61	4,59	4,60	4,65	4,62	4,56		
SC-EXC $\eta_{sc}$	(4)	%	182,7	183,0	182,0	179,3	183,5	182,9	180,4	182,6	182,0	179,4	181,5	180,8	181,0	183,0	181,9	179,2		
<b>Free-Cooling diretto on</b>																				
SC-EXC Cooling capacity	(2)	kW	278	284	294	304	425	439	448	570	574	582	734	740	885	894	913	939		
SC-EXC Total power input	(2)	kW	9,8	9,9	9,9	10,1	13,0	13,3	13,5	16,5	16,6	16,7	20,2	20,2	26,6	26,6	26,6	26,6		
SC-EXC EER at full load	(2)	-	28,43	28,83	29,85	30,16	32,77	33,08	33,31	34,63	34,62	34,85	36,34	36,63	33,27	33,61	34,32	35,30		
SC-EXC Refrigeration circuits		Nr							2						6					
SC-EXC No. of compressors		Nr							4											
SC-EXC Type of compressors		-	SCROLL																	
SC-EXC Standard power supply		V	400/3~/50																	
SC-EXC Sound pressure level	(3)	dB(A)	71	72	72	72	72	73	74	74	74	74	73	73	74	74	74	75		
EN-EXC Sound pressure level	(3)	dB(A)	66	66	66	67	67	68	70	70	70	71	68	68	69	70	70	70		

- (1) Data referred to the following conditions: internal exchanger water = 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) The sound levels refer to standard unit with AxiTop (no accessories) at full load, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measures are according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification, which provides for a

tolerance of 3 dB(A) on the sound power level, which is the only acoustic data to be considered binding. If unit is set without AxiTop, the sound power level presents an increase up to 3 dB(A). Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature = 35°C

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

SC-EXC Compressors soundproofing (SC)-Excellence

## accessories

<b>2PM</b>	Hydropack user side with 2 pumps	<b>RCMRX</b>	Remote control via microprocessor control
<b>3PM</b>	Hydropack user side with 3 pumps	<b>PSX</b>	Mains power supply
<b>4PM</b>	Hydropack user side with 4 pumps	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>6PM</b>	Hydropack user side with 6 pumps	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>2PMV</b>	Hydropack user side with no.2 of inverter pumps	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>3PMV</b>	Hydropack user side with no.3 of inverter pumps	<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>6PMV</b>	Hydropack user side with no.6 of inverter pumps	<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>IVFDT</b>	Inverter driven variable flow-rate user side control depending on the temperature differential	<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>IFWX</b>	Steel mesh strainer on the water side	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>CSVX</b>	Couple of manually operated shut-off valves	<b>SFSTR</b>	Disposal for inrush current reduction
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining	<b>MHP</b>	High and low pressure gauges
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment	<b>SDV</b>	Cutoff valve on compressor supply and return
<b>AMMX</b>	Spring antivibration mounts	<b>WOGLY</b>	Unit supplied without glycol solution (FCI only)
<b>PGFC</b>	Finned coil protection grill	<b>A550</b>	550 l. storage tank (FCD only)
<b>PGCCH</b>	Anti-hail protection grilles	<b>A700</b>	700 l. storage tank (FCD only)
<b>CONTA2</b>	Energy meter	<b>A900</b>	900 l. storage tank (FCD only)
<b>RPRPDI</b>	Refrigerant leak detector with pump down function in the casing	<b>PSPS</b>	Set up for single power supply

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.

# MSRT-XSC3 + CEV-XT MSRN-XSC3 + CEV-XN

90.4÷240.4

90.4÷160.4

## Remotex

### Water chiller in two sections

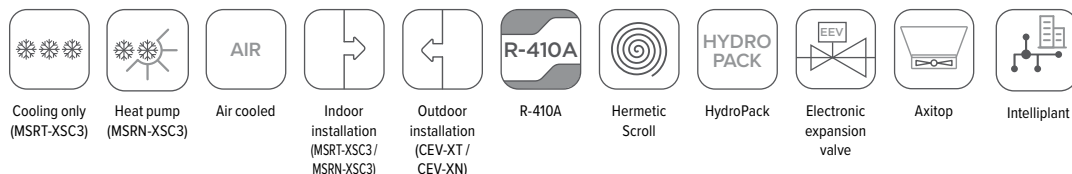
MSRT-XSC3 + CEV-XT: cooling only  
MSRN-XSC3 + CEV-XN: reversible heat pump  
Air-cooled condenser  
Internal installation  
**Capacity from 240 to 683 kW**



Remotex is the new-concept liquid cooler in two sections, which expands the possibilities for application of traditional monobloc products

- **MORE PROTECTED AND RELIABLE:** double refrigeration circuit on all models. All major system components are inside the unit, fully protected from external agents. No external water pipes: in cold climates winter draining of the system is no longer necessary to protect it from frost.
- **MORE FLEXIBLE, SPACE SAVING:** each internal section has more combinations with the external section, all standardised and specifically optimised: it consistently offers the best choice for the specific constraints of each project. Remotex is scalable: further simplification in design and implementation of technical rooms, or in change of use destination.
- **MORE EFFICIENT:** Multiscroll Technology by Clivet: seasonal efficiency for a 30% saving over traditional solutions .

## functions and features



## accessories

- |               |  |               |   |
|---------------|--|---------------|---|
| <b>D</b>      | Partial energy recovery  | <b>CMSC11</b> | Serial communication module for BACnet-IP supervisor                              |
| <b>B</b>      | Water low temperature  | <b>SCP4</b>   | Set-point compensation with 0-10 V signal   |
| <b>CREFB</b>  | Device for fan consumption reduction of the external section, ECOBREEZE type                   | <b>SPC2</b>   | Set-point compensation with outdoor air temperature probe                         |
| <b>2PM</b>    | Hydropack user side with 2 pumps   | <b>ECS</b>    | ECOSHARE function for the automatic management of a group of units                |
| <b>3PM</b>    | Hydropack user side with 3 pumps   | <b>PFCP</b>   | Power factor correction capacitors (cosfi > 0.9)                                  |
| <b>2PMV</b>   | Hydropack user side with no.2 of inverter pumps  | <b>SFSTR</b>  | Disposal for inrush current reduction   |
| <b>3PMV</b>   | Hydropack user side with no.3 of inverter pumps  | <b>RE-20</b>  | Electrical panel antifreeze protection for min. outdoor temperature down to -20°C |
| <b>IVFDT</b>  | Inverter driven variable flow-rate user side control depending on the temperature differential | <b>RE-25</b>  | Electrical panel antifreeze protection for min. outdoor temperature down to -25°C |
| <b>IFWX</b>   | Steel mesh strainer on the water side  | <b>RE-30</b>  | Electrical panel antifreeze protection for min. outdoor temperature down to -30°C |
| <b>CSVX</b>   | Couple of manually operated shut-off valves  | <b>RE-35</b>  | Electrical panel antifreeze protection for min. outdoor temperature down to -35°C |
| <b>AMRX</b>   | Rubber antivibration mounts  | <b>RE-39</b>  | Electrical panel antifreeze protection for min. outdoor temperature down to -39°C |
| <b>CONTA2</b> | Energy meter   | <b>MHP</b>    | High and low pressure gauges  |
| <b>RPRPDI</b> | Refrigerant leak detector with pump down function in the casing                                | <b>SDV</b>    | Cutoff valve on compressor supply and return                                      |
| <b>RCMRX</b>  | Remote control via microprocessor control  | <b>PTCO</b>   | Set up for shipping via container   |
| <b>PSX</b>    | Mains power supply   |               |   |
| <b>CMSC10</b> | Serial communication module for LonWorks supervisor  |               |   |
| <b>CMSC9</b>  | Serial communication module for Modbus supervisor  |               |   |

Accessories whose code ends with "X" are supplied separately

## Compact control unit

The Remotex internal section contains all functionalities and components necessary for correct operation, already optimised and tested by Clivet for maximum efficiency and reliable results. The Hydropack pumping units are also available inside the section, ready for use.



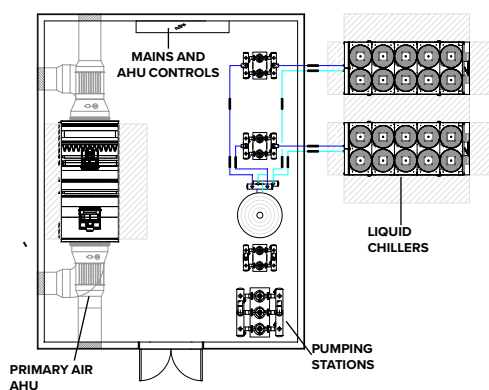
## Scalable

The simple addition of further sections adjusts the capacity produced for the actual needs of the building. Always adding less space than traditional solutions. In this way, the investment is also diluted over time.

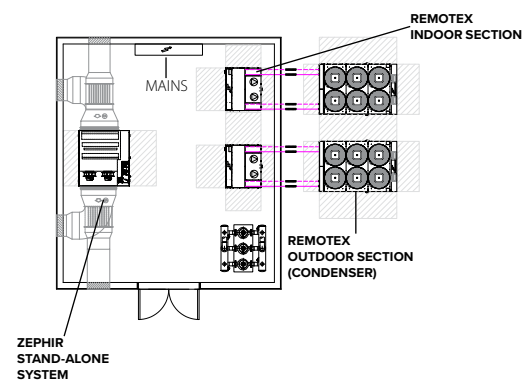


## A unique system

### TRADITIONAL DESIGN



### COMPACT AND QUIETER DESIGN WITH REMOTEX



Remotex is perfect in combination with ZEPHIR, the innovative autonomous primary air system for thermodynamic energy recovery: smaller technical rooms, maximum simplification and rapidity of plant construction, even more space and silent operation outside.

## technical data

Size	MSRT-XSC3	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4
- Refrigeration circuits	Nr	2	2	2	2	2	2	2	2	2	2
- No. of compressors	Nr	4	4	4	4	4	4	4	4	4	4
- Type of compressors	-	SCROLL									
- Standard power supply	V	400/3~/50									

### Excellence - Soundproofing (Standard)

SC-EXC	▶ Cooling capacity	(1) kW	259	278	309	346	399	441	503	561	615	683
SC-EXC	Total power input	(1) kW	80,4	91,2	99,0	110	123	141	161	174	193	210
SC-EXC	EER	(1) -	3,23	3,05	3,13	3,13	3,26	3,12	3,13	3,23	3,19	3,25
SC-EXC	SEER	(3) -	4,73	4,57	4,68	4,68	4,81	4,55	4,62	4,68	4,67	4,73
SC-EXC	$\eta_{sc}$	(3) %	186,0	179,9	184,2	184,3	189,3	179,0	181,9	184,2	183,9	186,0
SC-EXC	<b>Size</b>	<b>CEV-XT</b>	<b>90.0</b>	<b>105.0</b>	<b>115.0</b>	<b>120.0</b>	<b>145.0</b>	<b>160.0</b>	<b>180.0</b>	<b>200.0</b>	<b>210.0</b>	<b>230.0</b>
SC-EXC	No. fans	Nr	4	6	6	6	6	8	8	10	10	10
SC-EXC	Standard airflow	l/s	23553	36583	36143	35507	34218	47084	46331	58684	57754	56458
SC-EXC	Sound pressure level	(2) dB(A)	50	52	52	52	52	53	53	53	53	53

### Excellence - Supersilenced

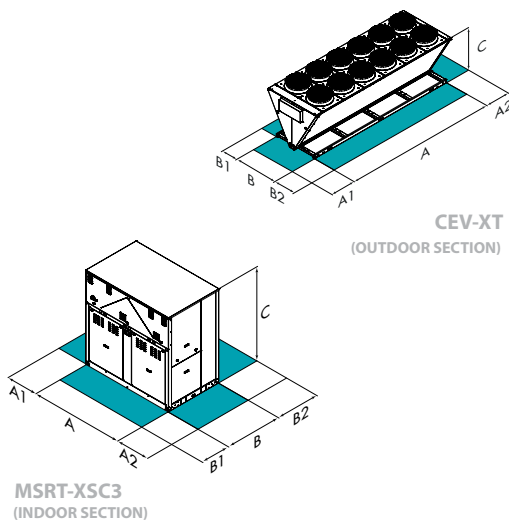
EN-EXC	▶ Cooling capacity	(1) kW	261	281	306	352	399	435	505	550	613	681
EN-EXC	Total power input	(1) kW	79,9	87,3	98,2	107	122	141	159	174	192	207
EN-EXC	EER	(1) -	3,27	3,22	3,12	3,28	3,28	3,09	3,18	3,15	3,19	3,29
EN-EXC	SEER	(3) -	4,75	4,80	4,72	4,82	4,81	4,59	4,81	4,79	4,71	4,82
EN-EXC	$\eta_{sc}$	(3) %	186,8	189,1	185,9	189,9	189,4	180,5	189,5	188,7	185,4	189,9
EN-EXC	<b>Size</b>	<b>CEV-XT</b>	<b>115.0</b>	<b>120.0</b>	<b>130.0</b>	<b>150.0</b>	<b>160.0</b>	<b>190.0</b>	<b>200.0</b>	<b>230.0</b>	<b>240.0</b>	<b>280.0</b>
EN-EXC	No. fans	Nr	6	6	6	8	8	10	10	10	12	12
EN-EXC	Standard airflow	l/s	28959	28247	27792	38367	37417	47772	46598	44348	55756	53050
EN-EXC	Sound pressure level	(2) dB(A)	46	46	46	48	48	48	48	48	49	49

- Data refer to the following conditions: internal water exchanger temperature = 12/7 °C; outdoor air temperature = 35 °C
- Sound levels refer to the external section, under nominal test conditions. The sound pressure is measured at 10 m from the external surface of the unit in open field conditions.
- 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.

SC-EXC Compressor soundproofing (SC)-Excellence  
EN-EXC Supersilenced (EN)-Excellence

## dimensions and clearances



MSRT-XSC3  
(INDOOR SECTION)

CEV-XT  
(OUTDOOR SECTION)

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

Size	MSRT-XSC3	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4
A - Length	mm	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350
B - Width	mm	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150
C - Height	mm	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210
A1	mm	700	700	700	700	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700	700	700	700	700
B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
B2	mm	500	500	500	500	500	500	500	500	500	500
Operating weight	kg	1447	1611	1668	1722	1773	1818	2034	2092	2228	2357

Size	CEV-XT	90.0	105.0	115.0	120.0	130.0	145.0
A - Length	mm	2750	3700	3700	3700	3700	3700
B - Width	mm	2230	2230	2230	2230	2230	2230
C - Height	mm	2400	2400	2400	2400	2400	2400
A1	mm	1100	1100	1100	1100	1100	1100
A2	mm	700	700	700	700	700	700
B1	mm	1500	1500	1500	1500	1500	1500
B2	mm	1500	1500	1500	1500	1500	1500
Operating weight	kg	684	836	904	922	938	1018

Size	CEV-XT	150.0	160.0	180.0	190.0	200.0	210.0	230.0	240.0	280.0
A - Length	mm	4700	4700	4700	5670	5670	5670	5670	6650	6650
B - Width	mm	2230	2230	2230	2230	2230	2230	2230	2230	2230
C - Height	mm	2400	2400	2400	2400	2400	2400	2400	2400	2400
A1	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100
A2	mm	700	700	700	700	700	700	700	700	700
B1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
B2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
Operating weight	kg	1238	1198	1356	1634	1664	1690	1820	1758	1944

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.

## technical data

Size	MSRN-XSC3	90.4	100.4	110.4	120.4	140.4	160.4
- Refrigeration circuits	Nr	2	2	2	2	2	2
- No. of compressors	Nr	4	4	4	4	4	4
- Type of compressors	-	SCROLL					
- Standard power supply	V	400/3~/50					

### Excellence - Soundproofing (Standard)

SC-EXC	▶ Cooling capacity	(1) kW	240	260	285	320	366	407
SC-EXC	Total power input	(1) kW	87,0	95,5	105	117	135	151
SC-EXC	EER	(1) -	2,76	2,73	2,71	2,73	2,71	2,70
SC-EXC	SEER	(3) -	4,13	4,07	4,03	4,00	4,11	4,10
SC-EXC	$\eta_{s,c}$	(3) %	162,3	160,0	158,1	157,0	161,3	161,0
SC-EXC	▶ Heating capacity	(4) kW	280	310	337	371	419	473
SC-EXC	Total power input	(4) kW	88,6	97,1	105	115	131	145
SC-EXC	COP	(4) -	3,16	3,19	3,21	3,23	3,20	3,26
SC-EXC	<b>Size</b>	<b>CEV-XN</b>	<b>105.0</b>	<b>105.0</b>	<b>115.0</b>	<b>130.0</b>	<b>160.0</b>	<b>170.0</b>
SC-EXC	No. fans	Nr	6	6	6	6	8	8
SC-EXC	Standard airflow	l/s	36779	36779	36143	35703	48075	47272
SC-EXC	Sound pressure level	(2) dB(A)	52	52	52	52	53	53
SC-EXC	<b>Directive ErP (Energy Related Products)</b>							
SC-EXC	SCOP - AVERAGE Climate - W35	(3) -	3,80	3,81	3,83	3,69	3,89	3,72
SC-EXC	$\eta_{s,c}$	(3) %	149,0	149,0	150,0	145,0	153,0	146,0

### Excellence - Supersilenced

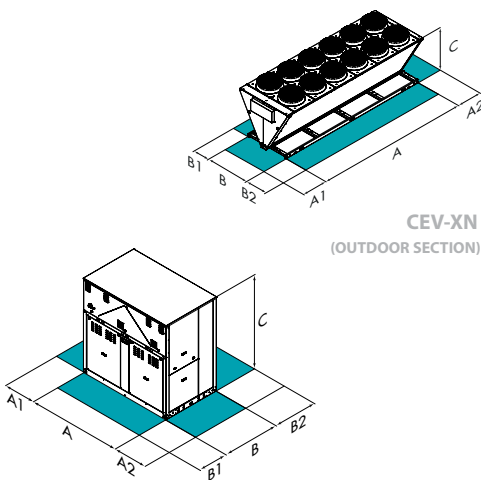
EN-EXC	▶ Cooling capacity	(1) kW	240	259	280	320	362	411
EN-EXC	Total power input	(1) kW	86,1	93,8	104	115	132	146
EN-EXC	EER	(1) -	2,79	2,76	2,70	2,78	2,74	2,81
EN-EXC	SEER	(3) -	4,18	4,16	4,04	4,17	4,14	4,20
EN-EXC	$\eta_{s,c}$	(3) %	164,2	163,5	158,5	163,6	162,7	164,9
EN-EXC	▶ Heating capacity	(4) kW	280	310	336	377	425	466
EN-EXC	Total power input	(4) kW	88,1	96,4	104	114	130	143
EN-EXC	COP	(4) -	3,18	3,22	3,22	3,30	3,28	3,26
EN-EXC	<b>Size</b>	<b>CEV-XN</b>	<b>150.0</b>	<b>150.0</b>	<b>160.0</b>	<b>180.0</b>	<b>185.0</b>	<b>190.0</b>
EN-EXC	No. fans	Nr	8	8	8	8	10	10
EN-EXC	Standard airflow	l/s	40357	40357	38374	36663	47773	52594
EN-EXC	Sound pressure level	(2) dB(A)	48	48	48	48	48	48
EN-EXC	<b>Directive ErP (Energy Related Products)</b>							
EN-EXC	SCOP - AVERAGE Climate - W35	(3) -	3,85	3,82	3,84	3,79	3,92	3,75
EN-EXC	$\eta_{s,c}$	(3) %	151,0	150,0	151,0	149,0	154,0	147,0

- Data refer to the following conditions: internal water exchanger temperature = 12/7 °C; outdoor air temperature = 35°C
- Sound levels refer to the external section, under nominal test conditions. The sound pressure is measured at 10 m from the external surface of the unit in open field conditions.
- Data calculated according to the EN 14825:2018 Regulation
- Data referred to the following conditions: Internal exchanger water temperature = 40/45°C, entering external exchanger air temperature = 7°C D.B. / 6°C W.B.

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.

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.

## dimensions and clearances



Size	MSRN-XSC3	90.4	100.4	110.4	120.4	140.4	160.4
A - Length	mm	2350	2350	2350	2350	2350	2350
B - Width	mm	1150	1150	1150	1150	1150	1150
C - Height	mm	2210	2210	2210	2210	2210	2210
A1	mm	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700
B1	mm	1200	1200	1200	1200	1200	1200
B2	mm	500	500	500	500	500	500
Operating weight	kg	1657	1807	1870	1914	1980	2068

Size	CEV-XN	105.0	115.0	130.0	150.0	160.0	170.0	180.0	185.0	190.0
A - Length	mm	3770	3770	3770	4750	4750	4750	4750	5720	5720
B - Width	mm	2230	2230	2230	2230	2230	2230	2230	2230	2230
C - Height	mm	2420	2420	2420	2420	2420	2420	2420	2420	2420
A1	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100
A2	mm	700	700	700	700	700	700	700	700	700
B1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
B2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500
Operating weight	kg	1082	1100	1174	1282	1386	1408	1532	1676	1706

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.

### MSRN-XSC3 (INDOOR SECTION)

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

## NEW PRODUCT

## SCREWLine<sup>4</sup>-i

**Water chiller**  
Air cooled  
Outdoor installation  
**Capacity from 204 to 1055 kW**

HYDRONIC



The SCREWLine<sup>4</sup>-i liquid chillers are equipped with variable-speed screw compressors driven by an **INVERTER** and filled with **HFO R-1234ze** refrigerant.

- REFRIGERANT HFO WITH REDUCED ENVIRONMENTAL IMPACT:** Clivet's constant search for solutions for sustainable comfort and environmental well-being has led to the development of the WDAT-iZ4 range of chillers with the R-1234ze refrigerant, which stands out for its nearly zero environmental impact (GWP < 1).
- INVERTER SCREW TECHNOLOGY:** each refrigeration circuit adopts one compact screw compressor with integrated inverter, for maximum reliability and durability. The WDAT-iZ4 stands out for its very high seasonal efficiency, SEER reaching values of 5,42 while guaranteeing considerable energy saving compared to both fixed-speed screw compressors and inverter-driven screw compressors. In addition, it is extremely silent at low loads.
- ECODESIGN DIRECTIVE 2021 COMPLIANT:** the WDAT-iZ4 series meets and exceeds the most stringent energy efficiency requirements imposed by the Ecodesign Directive from 2021, placing it at the top of the market, thanks to the technical solutions adopted: electronic expansion valves, shell and tube evaporator, high efficiency variable speed axial fans and aluminium microchannel condensing coils.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant



## functions and features



Cooling only



Air cooled



Outdoor installation



R-1234ze



Semi-hermetic Twin-screw



Screw Inverter



Electronic expansion valve



ECOBREEZE

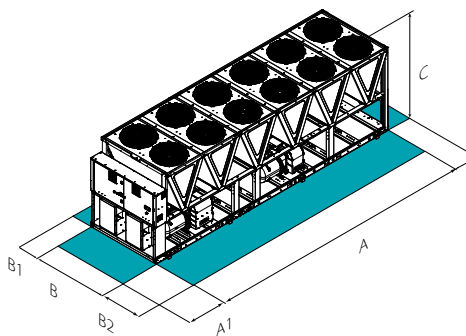


HydroPack



Intelliplant

## 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	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
ST-EXC Operating weight	kg	2623	2761	3820	3831	4147	4598	4604	4610	5956	5962	6432	6835	7279	8540
SC/EN-EXC Operating weight	kg	2794	2933	4040	4051	4368	4938	4944	4949	6347	6352	6823	7274	7718	8982

The above mentioned data are referred to standard units for the constructive configurations indicated.

ST-EXC Standard acoustic configuration (ST)-Excellence  
SC-EXC Compressor 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

### LOW TEMPERATURE:

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

### VERSION:

- EXC** Excellence (Standard)

### 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

### ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration (Standard)
- SC** Acoustic configuration with compressor soundproofing
- EN** Supersilenced acoustic configuration

## 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 (EN14511:2018)	(1) kW	204	256	360	420	510	422	482	540	630	710	790	880	965	1055
ST/SC-EXC Total power input (EN14511:2018)	(1) kW	64,7	85,4	115	142	167	134	156	180	212	241	263	301	322	348
ST/SC-EXC EER (EN14511:2018)	(1) -	3,16	3,00	3,12	2,95	3,05	3,15	3,10	3,00	2,97	2,94	3,00	2,92	3,00	3,03
ST/SC-EXC SEER	(4) -	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 $\eta_{s,c}$	(4) %	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	Nr	1					2								
ST/SC-EXC Type of compressors	(2) -	ISW													
ST/SC-EXC Standard power supply	V	400/3/50													
ST-EXC Sound pressure level	(3) dB(A)	77	78	77	77	78	78	80	81	80	81	81	81	81	82
SC-EXC Sound pressure level	(3) dB(A)	74	74	74	74	75	75	76	78	77	78	78	78	78	79
EN-EXC Sound pressure level	(3) dB(A)	69	71	70	70	71	72	72	73	72	75	75	74	74	74

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7°C; External exchanger entering air = 35°C
- (2) ISW = screw compressor with integrated inverter
- (3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Entering external exchanger air temperature = 35°C

- (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

<b>1PM</b>	Hydropack with 1 pump	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>1PMV</b>	Hydropack user side with nr.1 inverter pump	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>1PMH</b>	Hydropack with nr.1 high static pressure pump	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>1PMVH</b>	Hydropack user side with nr.1 high static pressure inverter pump	<b>RPRI</b>	Refrigerant leak detector in the casing
<b>2PM</b>	Hydropack user side with 2 pumps	<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>2PMV</b>	Hydropack user side with no.2 of inverter pumps	<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>2PMH</b>	Hydropack user side with nr.2 high static pressure pump	<b>PPBM</b>	Microchannel coils protection panels
<b>2PMVH</b>	Hydropack user side with nr.2 high static pressure inverter pump	<b>CCME</b>	E-coated microchannel coil
<b>IVFDT</b>	Inverter driven variable flow-rate user side control depending on the temperature differential	<b>MHP</b>	High and low pressure gauges
<b>IFWX</b>	Steel mesh strainer on the water side	<b>RE-25</b>	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
<b>CSVX</b>	Couple of manually operated shut-off valves	<b>EC5</b>	ECOSHARE function for the automatic management of a group of units
<b>AMMX</b>	Spring antivibration mounts	<b>FC2</b>	EMC filtering for residential-industrial environment EN 61800-3 cat C2)
<b>AMMSX</b>	Spring anti-seismic antivibration mounts	<b>PGCC</b>	Finned coil protection grilles and compressor compartment
<b>CONTA2</b>	Energy meter	<b>RDVS</b>	Switching valve with double safety valves
<b>RCMRX</b>	Remote control via microprocessor control	<b>REGBT</b>	Device for the partialisation of condensing coils
<b>PSX</b>	Mains power supply		

Accessories whose code ends with "X" are supplied separately

## NEW PRODUCT

## SCREWLine<sup>4</sup>-i

**Water chiller**

Air cooled

Outdoor installation

**Capacity from 281 to 1423 kW**



The SCREWLine<sup>4</sup>-i liquid chillers are equipped with variable-speed screw compressors driven by an **INVERTER** and filled with **R-513A** refrigerant.

- REFRIGERANT HFO WITH REDUCED ENVIRONMENTAL IMPACT:** Clivet's constant search for solutions for sustainable comfort and environmental well-being has led to the development of the WDAT-iK4 range of chillers with the R-513A refrigerant, which stands out for its low environmental impact (GWP = 631).
- INVERTER SCREW TECHNOLOGY:** each refrigeration circuit adopts one compact screw compressor with integrated inverter, for maximum reliability and durability. The WDAT-iK4 stands out for its very high seasonal efficiency, SEER reaching values of 5,33 while guaranteeing considerable energy saving compared to both fixed-speed screw compressors and inverter-driven screw compressors. In addition, it is extremely silent at low loads.
- ECODESIGN DIRECTIVE 2021 COMPLIANT:** the WDAT-iK4 series meets and exceeds the most stringent energy efficiency requirements imposed by the Ecodesign Directive from 2021, placing it at the top of the market, thanks to the technical solutions adopted: electronic expansion valves, shell and tube evaporator, high efficiency variable speed axial fans and aluminium microchannel condensing coils.



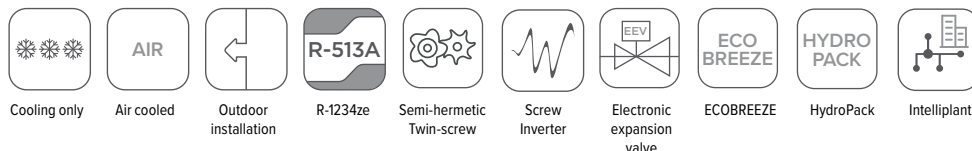
Unit listed on  
www.eurovent-certification.com



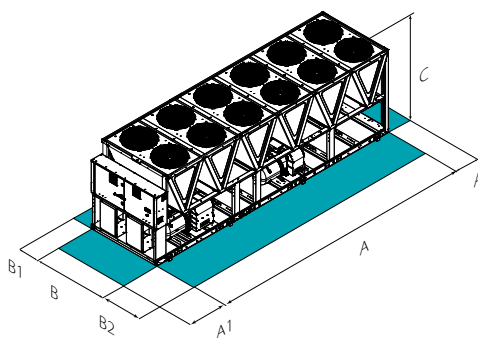
ErP  
compliant



## functions and features



## dimensions and clearances



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	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
ST-EXC Operating weight	kg	3004	3159	4162	4595	5454	5896	5912	6683	7766	7785	7793	9335	9350	9350
SC/EN-PRM Operating weight	kg	3209	3364	4417	4850	5864	6306	6322	7143	8226	8245	8253	9845	9860	9860

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	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
ST-PRM Operating weight	kg	2637	2757	3872	4164	4738	4744	5196	6107	6447	6456	7189	8287	8300	8314
SC/EN-PRM Operating weight	kg	2842	2962	4077	4419	5149	5154	5605	6562	6906	6915	7649	8797	8810	8824

**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.

## versions and configurations

### LOW TEMPERATURE:

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

### 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

### ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration (Standard)
- SC** Acoustic configuration with compressor soundproofing
- EN** Supersilenced acoustic configuration

## 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 (EN14511:2018)	(1)	kW	294	374	506	602	593	670	741	811	900	992	1089	1204	1325	1423
ST/SC-EXC Total power input (EN14511:2018)	(1)	kW	93,9	120	163	194	181	210	238	253	284	318	364	387	441	485
ST/SC-EXC EER (EN14511:2018)	(1)	-	3,13	3,11	3,10	3,10	3,27	3,19	3,12	3,21	3,17	3,11	2,99	3,11	3,01	2,93
ST/SC-EXC SEER	(4)	-	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 $\eta_{sc}$	(4)	%	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	(2)	-														
ST/SC-EXC Standard power supply		V								ISW						
ST-EXC Sound pressure level	(3)	dB(A)	77	77	77	77	79	80	80	80	80	80	81	80	81	81
SC-EXC Sound pressure level	(3)	dB(A)	73	74	73	74	76	77	77	76	78	78	78	78	78	78
EN-EXC Sound pressure level	(3)	dB(A)	69	70	69	70	72	73	73	72	74	74	74	74	74	74

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 (EN14511:2018)	(1)	kW	281	340	473	577	550	615	681	754	837	911	1007	1120	1240	1338
ST/SC-PRM Total power input (EN14511:2018)	(1)	kW	97,1	131	173	201	194	225	261	271	297	328	378	400	447	496
ST/SC-PRM EER (EN14511:2018)	(1)	-	2,89	2,61	2,73	2,87	2,83	2,74	2,61	2,78	2,82	2,78	2,66	2,80	2,78	2,70
ST/SC-PRM SEER	(4)	-	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 $\eta_{sc}$	(4)	%	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	(2)	-														
ST/SC-PRM Standard power supply		V								ISW						
ST-PRM Sound pressure level	(3)	dB(A)	78	78	77	77	79	81	80	81	81	81	81	81	82	82
SC-PRM Sound pressure level	(3)	dB(A)	74	75	74	74	76	76	77	77	76	78	78	78	78	79
EN-PRM Sound pressure level	(3)	dB(A)	70	71	70	70	72	72	73	73	72	74	74	74	74	75

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7°C; External exchanger entering air = 35°C
- (2) ISW = screw compressor with integrated inverter
- (3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Entering external exchanger air temperature = 35°C
- (4) Data calculated according to the EN 14825:2018 Regulation

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

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 user side with nr.2 high static pressure inverter pump
- 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** Spring anti-seismic 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** E-coated microchannel 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 for residential-industrial environment EN 61800-3 cat C2)
- PGCC** Finned coil protection grilles and compressor compartment
- RDVS** Switching valve with double safety valves
- REGBT** Device for the partialisation of condensing coils

Accessories whose code ends with "X" are supplied separately

## SCREWLine<sup>3</sup>-i

**Water chiller**  
 Air cooled  
 Outdoor installation  
**Capacity from 556 to 1282 kW**



The SCREWLine<sup>3</sup>-i liquid chillers are equipped with variable-speed screw compressors driven by an INVERTER and filled with R-134a refrigerant.

- **TWO INDEPENDENT CIRCUITS:** both refrigeration circuits adopt compact screw compressors with integrated inverter, for maximum reliability and durability. The WDAT-iL3 series features top-ranking seasonal efficiency. In addition, it is extremely silent at low loads.
- **EFFICIENT AND RELIABLE TECHNOLOGY:** SCREWLine<sup>3</sup>-i comes with electronic expansion valves, shell and tube evaporator and high-efficiency axial fans.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant



### functions and features



Cooling only



Air cooled



Outdoor installation



R-134a



Semi-hermetic  
 Twin-screw



Screw  
 Inverter



HydroPack



AxiTop

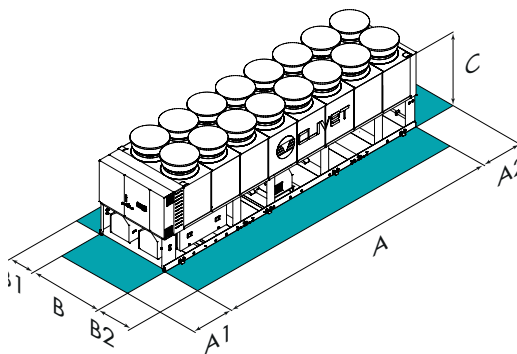


Electronic  
 expansion  
 valve



Intelliplant

### dimensions and clearances



Size	WDAT-iL3	250.2	280.2	320.2	360.2	400.2	420.2	440.2	480.2	540.2	580.2
SC-PRM A - Length	mm	4788	5760	6738	7714	8691	8691	8691	10640	10640	10640
SC-PRM B - Width	mm	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246
SC-PRM C - Height	mm	2484	2484	2484	2484	2484	2484	2484	2484	2484	2484
SC-PRM A1	mm	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535
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	mm	5058	5658	6339	7303	7738	8251	8698	9610	9610	9610

The above mentioned data are referred to standard units for the constructive configurations indicated.

SC-PRM Compressors insulation (SC)-Premium

**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

### VERSION:

- PRM** Premium (Standard)

### ACOUSTIC CONFIGURATION:

- SC** Acoustic configuration with compressor soundproofing (Standard)

### ENERGY RECOVERY:

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

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- CREFP** Device for fan consumption reduction of the external section at variable speed (phase-cutting) (Standard)
- CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type

### TYPE FAN EXTERNAL SECTION:

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

## technical data

Size	WDAT-il3	250.2	280.2	320.2	360.2	400.2	420.2	440.2	480.2	540.2	580.2	
SC-PRM	▶ Cooling capacity (EN14511:2018)	(1) kW	556	616	712	802	902	954	997	1077	1169	1282
SC-PRM	Total power input (EN14511:2018)	(1) kW	199	225	251	282	311	353	357	398	421	463
SC-PRM	EER (EN14511:2018)	(1) -	2,80	2,74	2,84	2,84	2,90	2,71	2,79	2,71	2,78	2,77
SC-PRM	SEER	(4) -	4,63	4,57	4,59	4,61	4,68	4,68	4,67	4,72	4,77	4,79
SC-PRM	$\eta_{s,c}$	(4) %	182,2	180,0	180,6	181,3	184,0	184,3	183,6	185,7	187,9	188,8
SC-PRM	Refrigeration circuits	Nr	2									
SC-PRM	No. of compressors	Nr	2									
SC-PRM	Type of compressors	(2) -	ISW									
SC-PRM	Standard power supply	V	400/3/50									
SC-PRM	Sound pressure level	(3) dB(A)	80	80	80	81	81	81	81	82	82	82

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7°C; External exchanger entering air = 35°C
- (2) ISW = screw compressor with integrated inverter
- (3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Entering external exchanger air temperature 35°C
- (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.

SC-PRM Compressors insulation (SC)-Premium

## accessories

- 2PM** Hydropack user side with 2 pumps
- 2PMV** Hydropack user side with no.2 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
- REGBT** Device for the condensing coil partialization
- AMMX** Spring antivibration mounts
- AMMSX** Spring anti-seismic antivibration mounts
- PGCC** Finned coil protection grilles and compressor compartment

- PGCCH** Anti-hail protection grilles
- TPS** Frame protective treatment
- 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

Accessories whose code ends with "X" are supplied separately

## SCREWLine<sup>3</sup>

**Water chiller**  
 Air cooled  
 Outdoor installation  
**Capacity from 484 to 1423 kW**



The SCREWLine<sup>3</sup> liquid chillers have a screw compressor with R-134a refrigerant on two separate refrigeration circuits.

- **TWO INDEPENDENT CIRCUITS:** both refrigeration circuits adopt compact screw compressors, for maximum reliability and durability.
- **EFFICIENT AND RELIABLE TECHNOLOGY:** SCREWLine<sup>3</sup> employs dual screw compressors, electronic expansion valves, shell and tube evaporator and fans with innovative AxiTop diffusers with kinetic energy recovery.

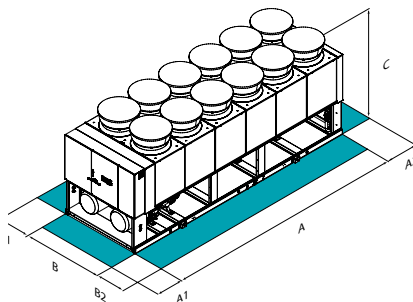


Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

### functions and features

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

### dimensions and clearances



Size	WDAT-SL3	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
ST-EXC A - Length	mm	4788	4788	5758	5758	5758	6738	6738	7714	7714	8691	8691	10640	10640	10640
ST-EXC B - Width	mm	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246
ST-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
ST-EXC A1	mm	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535
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	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
ST-EXC Operating weight	kg	4717	4715	5401	5454	5565	6088	6282	7055	7435	8013	8165	8527	9560	9790

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

**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

### ENERGY RECOVERY:

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

### ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration (Standard)
- SC** Acoustic configuration with compressor soundproofing
- EN** Extremely low noise acoustic configuration

### TYPE FAN EXTERNAL SECTION:

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

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- CREFFP** Device for fan consumption reduction of the external section at variable speed (phase-cutting) (Standard)
- CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type
- CREFO** Device for fan consumption reduction of the external section, on/off type

### VERSION:

- EXC** Excellence (Standard)

## technical data

Size		WDAT-SL3	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
ST/SC-EXC	▶ Cooling capacity (EN14511:2018)	(1) kW	484	508	549	583	635	706	780	835	898	977	1096	1213	1315	1423
ST/SC-EXC	Total power input (EN14511:2018)	(1) kW	156	164	175	186	204	226	247	267	287	313	353	388	424	454
ST/SC-EXC	EER (EN 14511:2018)	(1) -	3,10	3,10	3,14	3,14	3,11	3,13	3,16	3,13	3,13	3,12	3,10	3,13	3,10	3,13
ST/SC-EXC	SEER	(4) -	4,10	4,10	4,11	4,11	4,10	4,10	4,11	4,11	4,10	4,18	4,14	4,11	4,11	4,11
ST/SC-EXC	$\eta_{sc}$	(4) %	161,1	161,0	161,3	161,3	161,0	161,0	161,6	161,3	161,2	164,2	162,7	161,3	161,3	161,5
ST/SC-EXC	Refrigeration circuits	Nr	2													
ST/SC-EXC	No. of compressors	Nr	2													
ST/SC-EXC	Type of compressors	(2) -	DSW													
ST/SC-EXC	Standard power supply	V	400/3~/50													
ST-EXC	Sound pressure level	(3) dB(A)	81	81	81	81	80	80	80	81	82	83	85	86	87	87
SC-EXC	Sound pressure level	(3) dB(A)	77	77	77	77	77	77	77	78	79	80	82	82	83	83

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7°C; External exchanger entering air = 35°C
- (2) DSW = twin-screw compressor
- (3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; external air temperature = 35°C
- (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.

- SC-EXC Compressors insulation (SC)-Excellence
- ST-EXC Standard (ST)-Excellence

## accessories

<b>2PM</b>	Hydropack load side with 2 pumps	<b>PSX</b>	Mains power supply
<b>3PM</b>	Hydropack load side with 3 pumps	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>CSVX</b>	Couple of manually operated shut-off valves	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment	<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>REGBT</b>	Device for the condensing coil partialization	<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>AMMX</b>	Spring antivibration mounts	<b>SPC1</b>	Set point compensation with 4-20 mA signal
<b>PGCC</b>	Finned coil protection grilles and compressor compartment	<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>PGCCH</b>	Anti-hail protection grilles	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>TPS</b>	Frame protective treatment	<b>SFSTR2</b>	Progressive compressor start-up device
<b>CONTA2</b>	Energy meter	<b>CBS</b>	Overload circuit breakers
<b>RCMRX</b>	Remote control via microprocessor control		

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.

## SCREWLine<sup>3</sup> FC

### Water chiller with FREE-COOLING

Air cooled

Outdoor installation

Capacity from 520 to 1523 kW



The **SCREWLine<sup>3</sup> FREE-COOLING** enables high-level savings on the management costs of the system in applications which also require cooled water during the cold season such as industrial processes, data centres, telecommunications, technological applications and shopping centres.

■ **SIGNIFICANT ENERGY SAVINGS:** when the fresh air temperature is lower than the return water temperature of the system, the FREE-COOLING system recovers coolness from the external setting and reduces compressor operations until they are completely stilled. In this way the requested cooling capacity is supplied at no cost.

■ **EVEN IN GLYCOL FREE VERSION:** does not require the addition of an antifreeze substance in the hydraulic circuit used. Therefore, it is particularly suitable for large-sized systems and wherever laws and regulations limit the use of antifreeze substances inside buildings.

### functions and features



Cooling only



AIR



Outdoor installation



R-134a



Semi-hermetic Twin-screw



FREE-COOLING



HydroPack



AxiTop

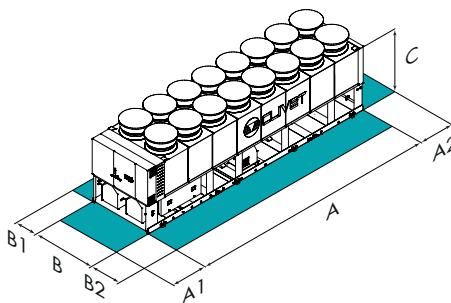


Electronic expansion valve



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-EXCCompressors 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

### LOW TEMPERATURE:

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

### VERSION:

- EXC** Excellence (Standard)

### 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** Indirect 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			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
<b>Free-cooling off</b>																	
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	3,50	3,62	3,56	3,53	3,44	3,55	3,47	3,45
SC-EXC	SEPR - FCD	(5)	-	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	(5)	-	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
<b>Direct Free-cooling on</b>																	
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	13,0	13,0	16,0	16,0	16,0	19,0	20,0	22,0	23,0	25,0	26,0	31,0	32,0	32,0
SC-EXC	EER at full load	(2)	-	31,1	31,4	32,6	32,8	33,0	33,8	33,8	30,5	30,5	32,0	32,2	34,0	34,1	33,8
SC-EXC	Refrigeration circuits		Nr	2													
SC-EXC	No. of compressors		Nr	2													
SC-EXC	Type of compressors	(3)	-	DSW													
SC-EXC	Standard power supply		V	400/3~/50													
SC-EXC	Sound pressure level	(4)	dB(A)	77	77	77	77	77	77	77	78	79	80	82	82	83	83
EN-EXC	Sound pressure level	(4)	dB(A)	73	73	73	73	73	72	73	74	74	76	78	78	-	-

- (1) Data referred to the following conditions: internal exchanger water = 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) DSW = twin-screw compressor
- (4) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements

- are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Entering external exchanger air temperature = 35°C
- (5) Data calculated according to the EN 14825:2018 Regulation

- SC-EXC Compressors soundproofing (SC)-Excellence  
EN-EXC Super-silenced (EN)-Excellence

## accessories

<b>2PM</b>	Hydropack load side with 2 pumps	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>3PM</b>	Hydropack load side with 3 pumps	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CSVX</b>	Couple of manually operated shut-off valves	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining	<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>CCCA1</b>	Condenser coil with Aluminium Energy Guard DCC treatment	<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>AMMX</b>	Spring antivibration mounts	<b>SPC1</b>	Set point compensation with 4-20 mA signal
<b>PGCC</b>	Finned coil protection grilles and compressor compartment	<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>PGCCH</b>	Anti-hail protection grilles	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>CONTA2</b>	Energy meter	<b>SFSTR2</b>	Progressive compressor start-up device
<b>RCMRX</b>	Remote control via microprocessor control	<b>CBS</b>	Overload circuit breakers
<b>PSX</b>	Mains power supply	<b>WOGLY</b>	Unit supplied without glycol solution (FCI only)

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.



## ELFOEnergy Duct Medium

**Reversible heat pump**  
 Air cooled  
 Indoor installation  
**Capacity from 34 to 99 kW**

**ELFOEnergy Duct Medium** heat pumps are indoor units with ducted condensation.

- **Versatility:** different combinations of inlet and outlet plug fans enable to connect easily the unit to the air ducts and to have high available head;
- **High energy efficiency:** ELFOEnergy Duct Medium besides being in Eurovent efficiency class A at full load grants high seasonal power efficiency thanks to the innovative cooling circuit optimized for partial;
- **Easy installation:** the units are very compact and are supplied on request with high efficiency pumps on board; therefore the available space for other purposes is increased and the installations costs are reduced.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

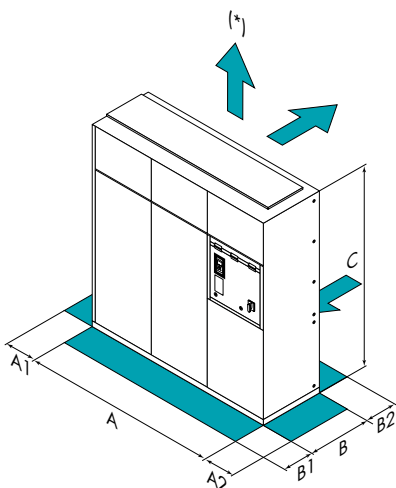


ErP  
 compliant

### functions and features

Heat pump	AIR	Indoor installation	R-410A	Hermetic Scroll	Electronically commutated Plug Fan	Electronic expansion valve	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.  
 (\*) Optional

## versions and configurations

### LOW TEMPERATURE:

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

### ENERGY RECOVERY:

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

### CONFIGURATION:

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

## technical data

Size	WSN-XEE	122	162	182	222	262	302	352	402
▶ Cooling capacity (EN14511:2018)	(1) kW	33,9	41,0	47,6	54,5	64,5	75,0	86,3	98,9
Total power input (EN14511:2018)	(1) kW	15,9	17,7	20,5	24,9	27,5	31,5	37,4	41,6
EER (EN 14511:2018)	(1) -	2,13	2,32	2,32	2,19	2,35	2,38	2,31	2,38
SEER	(5) -	2,63	3,10	3,17	3,08	3,36	3,31	3,32	3,40
$\eta_{s,c}$	(5) %	102,3	121,1	124,0	120,0	131,5	129,5	129,9	133,0
▶ Heating capacity (EN14511:2018)	(3) kW	41,0	48,3	59,0	68,0	80,0	92,4	103	112
Total power input (EN14511:2018)	(3) kW	13,3	15,5	18,7	21,4	25,1	28,7	32,6	36,8
COP (EN 14511:2018)	(3) -	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							
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	(4) dB(A)	84	84	87	87	84	87	87	87
Sound pressure level	(2) dB(A)	61	61	62	62	63	63	67	68
<b>Directive ErP (Energy Related Products)</b>									
ErP Energy Class - AVERAGE Climate - W35	-	A+	A+	A+	A++	A+	A+	-	-
SCOP - AVERAGE Climate - W35	(5) -	3,25	3,31	3,51	3,94	3,75	3,36	3,50	3,80
$\eta_{s,H}$	(5) %	127,0	129,0	137,0	155,0	147,0	131,0	137,0	149,0

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 12/7°C; Entering external exchanger air temperature = 35°C
- (2) Sound levels refer to standard units (no accessories) at full load. The sound pressure is measured at 1 m from the external surface of the ducted unit operating in an open field. (standard UNI EN ISO 9614-2); Data referred to the following conditions: Internal exchanger water temperature = 12/7°C; Outdoor air temperature = 35°C; Static available pressure 120 Pa; Please note that when the unit is installed in conditions different from nominal test conditions (e.g. near walls or obstacles in general), the sound levels may undergo substantial variations.
- (3) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C, entering external exchanger air temperature = 7°C D.B. / 6°C W.B.

- (4) 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.
- (5) 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

<b>1PUB</b>	Low static pressure single pump
<b>1PUA</b>	High static pressure single pump
<b>1PUHE</b>	High efficiency single inverter pump for primary circuit.
<b>IFWX</b>	Steel mesh strainer on the water side
<b>ABU</b>	Flush hydraulic connections
<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining
<b>AMRX</b>	Rubber antivibration mounts
<b>PGFC</b>	Finned coil protection grill
<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>PFCC</b>	Power factor correction capacitors (cosfi > 0.95)
<b>SFSTR</b>	Disposal for inrush current reduction
<b>FANQE</b>	Electrical panel ventilation

<b>MHP</b>	High and low pressure gauges
<b>SDV</b>	Cutoff valve on compressor supply and return
<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>CSVX</b>	Couple of manually operated shut-off valves
<b>MF2</b>	Multi-function phase monitor
<b>CONTA2</b>	Energy meter
<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>RCMRX</b>	Remote control via microprocessor control
<b>PSX</b>	Mains power supply
<b>STSOL</b>	Additional lifting brackets
<b>OHE</b>	Limit extension kit in heating up to -10°C (W.B.)
<b>VACSUX</b>	User side DHW switching valve

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.



## ELFOEnergy Ground

**Reversible heat pump**  
 Water cooled  
 Indoor installation  
**Capacity from 6 to 33 kW**

Geothermal energy from the ground or ground water can provide heating and cooling at considerably less expense. **ELFOEnergy Ground** unit is specially designed for use in closed or open circuit geothermal systems, while preserving all the benefits of air-cooled units, such as **efficiency, automatic adaptation, and silent operation.**

- Suitable for systems with terminal units, radiant panels or radiators
- Heating and cooling, using the heat from the ground (geothermal) or water
- Flexible operation: water to water or glycol water to water

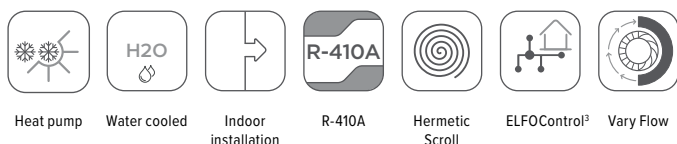


Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

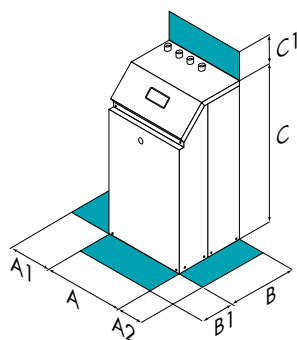


ErP  
 compliant

### 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-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
B2	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.

## versions and configurations

### LOW TEMPERATURE:

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

### VOLTAGE:

- 400TN** Supply voltage 400/3/50+N
- 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
<b>Unit for radiant panels</b>												
<b>W10/W35</b>												
▶ Heating capacity	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	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 14511:2018)	-	5,15	5,10	5,19	5,11	5,16	5,10	5,13	5,12	5,10	5,11	5,14
<b>W35/W18</b>												
▶ Cooling capacity	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	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 14511:2018)	-	5,52	5,32	5,37	5,64	5,35	5,14	5,13	5,27	5,22	5,11	5,10
<b>Terminal units</b>												
<b>W10/W45</b>												
▶ Heating capacity	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	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 14511:2018)	-	4,19	4,19	3,63	3,81	3,94	3,92	3,97	3,79	3,93	3,87	3,97
<b>W35/W7</b>												
▶ Cooling capacity	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	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 14511:2018)	-	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	3,50
$\eta_{sc}$	(2)	%	85,9	88,3	99,6	112,4	118,3	118,9	134,0	140,1	139,8	132,0
<b>Radiators</b>												
<b>W10/W55</b>												
▶ Heating capacity	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	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 14511:2018)	-	3,09	3,29	2,66	2,85	2,94	2,85	2,99	2,83	3,08	2,91	3,11
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 rate (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		400/3/50+N								
Sound pressure level (1 m)	dB(A)	43	43	44	44	45	46	49	50	51	52	53
<b>Directive ErP (Energy Related Products)</b>												
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
$\eta_{sc}$	(2)	%	223,0	228,0	237,0	239,0	234,0	234,0	231,0	229,0	215,0	248,0
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
$\eta_{sc}$	(2)	%	158,0	158,0	144,0	149,0	154,0	150,0	154,0	147,0	157,0	149,0

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

Performances according to EN 14511:2018

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

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

## accessories

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

<b>KTFL1X</b>	1" water side hose kit (sizes 17÷71)
<b>KTFL2X</b>	1 1/4" water side hose kit
<b>CACXSX</b>	Domestic hot water kit control
<b>ACS300X</b>	300-litre domestic hot water storage tank (sizes 17÷41)
<b>ACS500X</b>	500-litre domestic hot water storage tank (sizes 17÷81)
<b>ACS5SX</b>	500-litre domestic hot water storage tank with solar coil (sizes 17÷81)
<b>ACS3SX</b>	300-litre domestic hot water storage tank with solar coil (sizes 17÷41)
<b>KVMSP1X</b>	Kit for management of radiant panels with connections of 1"(sizes 17÷51)
<b>KVMSP2X</b>	Kit for management of radiant panels with connections of 1 1/4"
<b>KSAX</b>	100-litre circuit breaker
<b>KVICX</b>	Boiler control kit (sizes 17÷81)
<b>KITERAX</b>	Electronic wall-mounting room thermostat

Accessories whose code ends with \*X\* are supplied separately



## ELFOEnergy Ground Medium<sup>2</sup>

### Water chiller

WSH-XEE2: cooling only  
 WSHN-XEE2: reversible heat pump  
 Water cooled  
 Indoor installation

**Capacity from 34,4 to 356 kW**

**ELFOEnergy Ground Medium<sup>2</sup>** are water cooled water chillers and heat pumps for indoor installation, ideal for multi-family and commercial buildings.

The main features are:

- **HIGH SEASONALEFFICIENCY:** the combination of different size compressors allows to gain more control steps, to provide the energy actually required by the system, to reduce the consumption and to achieve the high seasonal efficiency.
- **PREASSEMBLED UNIT:** all major components are provided on the unit, ensuring maximum reliability and ease of installation.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** the compact construction allows to combine up to 7 units in confined spaces, realizing a high power system.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

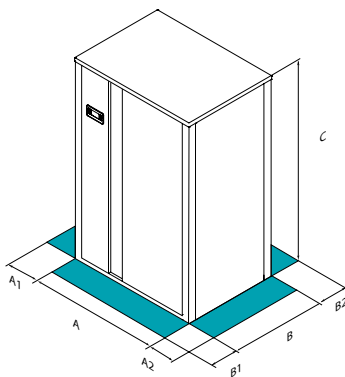


ErP  
 compliant

## functions and features

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

## dimensions and clearances



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	110.2	120.2
A - Length	mm	837	837	837	837	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110
B - Width	mm	607	607	607	607	885	885	885	885	885	885	1035	1035	1038	1038
C - Height	mm	1483	1483	1483	1483	1910	1910	1910	1910	1910	1910	1910	1910	1910	1910
A1	mm	100	100	100	100	150	150	150	150	150	150	150	150	150	150
A2	mm	100	100	100	100	150	150	150	150	150	150	150	150	150	150
B1	mm	500	500	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	350	350
Operating weight	kg	212	276	295	308	421	510	557	572	700	733	771	809	1085	1205

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	110.2	120.2
A - Length	mm	837	837	837	837	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110
B - Width	mm	607	607	607	607	885	885	885	885	885	885	1035	1035	1038	1038
C - Height	mm	1483	1483	1483	1483	1910	1910	1910	1910	1910	1910	1910	1910	1910	1910
A1	mm	100	100	100	100	150	150	150	150	150	150	150	150	150	150
A2	mm	100	100	100	100	150	150	150	150	150	150	150	150	150	150
B1	mm	500	500	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	350	350
Operating weight	kg	223	290	309	322	441	519	580	581	728	743	808	820	1119	1265

**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:

- 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	100.2	120.2
▶ Cooling capacity (EN14511:2018)	(1) kW	35,4	49,6	59,1	68,4	83,8	109	123	147	172	197	221	249	305	356
Total power input (EN14511:2018)	(1) kW	7,63	10,8	12,5	15,6	17,5	23,5	26,6	31,5	37,7	42,7	48,2	54,7	68,4	82,4
EER (EN 14511:2018)	(1) -	4,64	4,61	4,72	4,39	4,80	4,62	4,63	4,65	4,58	4,60	4,59	4,55	4,46	4,32
SEER	(4) -	5,36	5,25	5,30	5,24	5,59	5,77	5,87	5,72	5,38	5,38	5,51	5,30	5,46	5,39
$\eta_{s,c}$	(4) %	206,4	202,1	203,9	201,6	215,7	222,6	226,8	220,9	207,3	207,1	212,4	203,8	210,4	207,5
▶ Heating capacity (EN14511:2018)	(2) kW	41,4	57,8	68,6	81,0	96,7	126	143	169	200	227	257	290	355	420
Total power input (EN14511:2018)	(2) kW	9,79	13,5	15,7	19,2	21,8	28,9	32,8	38,7	46,5	52,4	59,2	66,7	83,4	101
COP (EN 14511:2018)	(2) -	4,23	4,29	4,37	4,23	4,43	4,35	4,35	4,37	4,30	4,33	4,34	4,34	4,25	4,16
Refrigeration circuits	Nr	1													
No. of compressors	Nr	2													
Type of compressors	-	SCROLL													
Standard power supply	V	400/3/50													
Sound pressure level	dB(A)	44	49	49	49	49	58	58	58	60	61	63	63	64	65

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	100.2	120.2
▶ Cooling capacity (EN14511:2018)	(1) kW	34,4	48,4	57,7	67,6	82,0	102	120	138	168	187	217	240	292	347
Total power input (EN14511:2018)	(1) kW	7,50	10,6	12,5	15,4	17,5	23,6	26,8	31,7	37,7	42,6	48,2	54,5	67,8	81,7
EER (EN 14511:2018)	(1) -	4,58	4,56	4,62	4,38	4,68	4,32	4,47	4,37	4,46	4,38	4,50	4,40	4,31	4,25
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	5,08	4,95
$\eta_{s,h}$	(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	195,1	190,1
▶ Heating capacity (EN14511:2018)	(2) kW	40,4	56,8	67,0	79,5	93,8	119	139	163	195	218	252	280	343	408
Total power input (EN14511:2018)	(2) kW	9,65	13,4	15,7	19,1	21,4	28,3	32,3	38,4	45,7	51,9	58,0	65,5	82,5	100
COP (EN 14511:2018)	(2) -	4,19	4,25	4,27	4,15	4,38	4,21	4,30	4,24	4,27	4,20	4,34	4,27	4,16	4,07
Refrigeration circuits	Nr	1													
No. of compressors	Nr	2													
Type of compressors	-	SCROLL													
Standard power supply	V	400/3/50													
Sound pressure level	dB(A)	44	49	49	49	49	58	58	58	60	61	63	63	64	65

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	5,76	5,61
$\eta_{s,h}$	(4) %	225,0	215,0	216,0	191,0	231,0	219,0	226,0	219,0	219,0	214,0	217,0	210,0	222,0	216,0
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	4,67	4,52
$\eta_{s,h}$	(4) %	172,0	166,0	166,0	168,0	185,0	176,0	180,0	179,0	178,0	176,0	180,0	178,0	179,0	173,0

- (1) Data calculated according to EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7 °C; External exchanger water = 30/35°C  
(2) Data calculated according to EN 14511:2018 referred to the following conditions Water to internal exchanger = 40/45°C; Water temperature to external exchanger = 10/7 °C; Performance data calculated in accordance with EN14511:2018;  
(3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water temperature = 12/7°C; Internal exchanger water = 30/35°C.

- (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 (sizes 12.2÷80.2)  
**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** Serial communication module for LonWorks  
**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 (sizes 12.2÷80.2)  
**PFCP** Power factor correction capacitors (cosfi > 0.9)  
**AVIBX** Anti-vibration mount support

### WSH-XEE2 only:

- VS2MC** Cooling side 2-way modulating valve (sizes 12.2÷80.2)  
**VS2MCX** Cooling side 2-way modulating valve  
**VS3MC** Cooling side 3-way modulating valve (sizes 12.2÷80.2)

- VS3MCX** Cooling side 3-way modulating valve  
**VARYC** VARYFLOW + (cooling side 2 inverter pumps)  
**VS2MH** Heating side 2-way modulating valve (sizes 12.2÷80.2)  
**VS2MHX** Heating side 2-way modulating valve  
**VS3MH** Heating side 3-way modulating valve (sizes 12.2÷80.2)  
**VS3MHX** Heating side 3-way modulating valve  
**VARYH** VARYFLOW + (heating side 2 inverter pumps)  
**VACSHX** Heating side DHW switching valve

### WSHN-XEE2 only:

- VACSUX** User side DHW switching valve  
**VARYU** VARYFLOW + (user side 2 inverter pumps)  
**HYGU1** User side hydronic assembly with 1 ON/OFF pump  
**HYGU2** User side hydronic assembly with 2 ON/OFF pumps  
**VS2M** Source side 2-way modulating valve (sizes 12.2÷80.2)  
**VS2MX** Source side 2-way modulating valve  
**VS3M** Source side 3-way modulating valve (sizes 12.2÷80.2)  
**VS3MX** Source side 3-way modulating valve  
**VARYS** VARYFLOW + (source side 2 inverter pumps)

Accessories whose code ends with \*X\* are supplied separately

## NEW PRODUCT

Available from the second half of 2021

HYDRONIC



ErP  
compliant

## ELFOEnergy Ground Medium<sup>2</sup> HW

### Water chiller

WSH-XEE2 HW: heating only

Water cooled

Indoor installation

Capacity from 75 to 282 kW

**ELFOEnergy Magnum<sup>2</sup> HW** is a series of high temperature heat pumps, ideal for heating for centralised systems.

Benefits of ELFOEnergy Magnum<sup>2</sup> HW:

- **HIGH TEMPERATURE PRODUCED WATER:** production of hot water up to +78°C.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** the compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.

## functions and features



Heating only



Water cooled



Indoor  
installation



R-134a



Hermetic  
Scroll

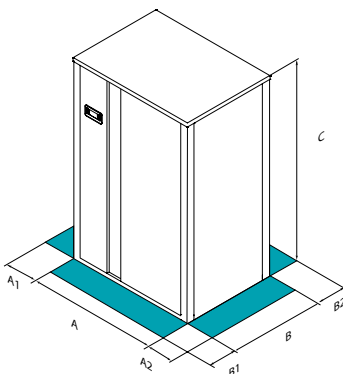


Vary Flow



Intelligiant

## dimensions and clearances



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

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.

PRELIMINARY DATA

**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		WSH-XEE2 HW	19.2	22.2	27.2	35.2	40.2	45.2	60.2	80.2
▶ Heating capacity (EN14511:2018)	(1)	kW	75,2	83,8	95,6	120	141	183	225	282
Total power input (EN14511:2018)	(1)	kW	16,8	18,1	21,4	28,6	34,7	44,3	55,1	67,3
COP	(1)	-	4,47	4,64	4,48	4,21	4,07	4,13	4,08	4,20
Refrigeration circuits		Nr					1			
No. of compressors		Nr					2			
Type of compressors		-					SCROLL			
Refrigerant		-					R-134a			
Standard power supply		V					400/3/50			
Sound pressure level	(2)	dB(A)	49	49	49	58	58	58	61	63

- (1) Data referred to the following conditions: water temperature source side = 45/40°C; water temperature user side = 70/78°C.
- (2) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Data referred to the following conditions: Water temperature source side = 45/40°C; Water temperature user side = 70/78°C.

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).

PRELIMINARY DATA

## accessories

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

<b>CMSLWX</b>	Serial communication module for LonWorks
<b>BACX</b>	Serial communication module for BACnet supervisor
<b>SPCX</b>	Set-point compensation with outdoor air temperature probe
<b>IFWX</b>	Steel mesh strainer on the water side
<b>SFSTR</b>	Disposal for inrush current reduction
<b>PFCP</b>	Power factor correction capacitors (cosφi > 0.9)
<b>AVIBX</b>	Anti-vibration mount support

Accessories whose code ends with "X" are supplied separately



## ELFOEnergy Ground Medium<sup>2</sup> MF

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

The **ELFOEnergy Ground Medium<sup>2</sup> Multifunction** heat pumps are water-condensed units for indoor installation ideal for multi-family and commercial buildings. **They can generate thermal and cooling energy simultaneously and independently.** The main features are:

- **HIGH SEASONAL EFFICIENCY:** guaranteed by the combination of several control steps, which adapt the capacity supplied to the actual energy demand required by the system, and energy recovery, which recovers up to 100% of the capacity supplied, further increasing efficiency.
- **PRE-ASSEMBLED SYSTEM:** all the main components of the system are supplied on the unit, ensuring maximum reliability and ease of installation.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** the compact construction allows to combine up to 7 units in confined spaces, realizing a high power system.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant

### functions and features



Heat pump



Water cooled



Indoor  
 installation



R-410A



Hermetic  
 Scroll

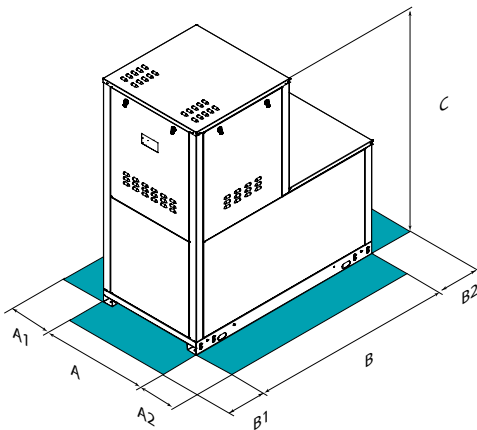


Vary Flow



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	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	55.2	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	924	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. For further information contact our Technical Department

## versions and configurations

### VERSION:

**GW** Groundwater version (Standard)  
**GEO** Version for Geothermal application

### ENERGY RECOVERY:

**R** Total energy recovery (Standard)

### CONFIGURATION:

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

## technical data

Size	WSHN-XEE2 MF		12.2	16.2	19.2	22.2	27.2		
<b>Cooling 100% - Heating 0%</b>									
Cooling capacity (EN14511:2018)	(1)	kW	34,3	48,0	57,2	66,2	81,0		
Total power input (EN14511:2018)	(1)	kW	7,69	10,9	12,7	15,7	17,8		
EER at full load (EN14511:2018)	(1)	-	4,46	4,42	4,51	4,20	4,56		
SEER	(6)	-	5,30	4,85	4,84	4,85	5,05		
$\eta_{sc}$	(6)	%	204,0	186,2	185,7	186,0	194,1		
<b>Cooling 0% - Heating 100%</b>									
Heating capacity (EN14511:2018)	(2)	kW	40,4	56,8	67,2	79,8	94,0		
Total power input (EN14511:2018)	(2)	kW	9,42	13,2	15,6	19,0	21,1		
COP at full load (EN14511:2018)	(2)	-	4,29	4,32	4,31	4,20	4,46		
<b>Cooling 100% - Heating 100%</b>									
Cooling capacity (EN14511:2018)	(3)	-	31,2	43,7	52,0	60,9	73,6		
Heating capacity (EN14511:2018)	(3)	-	40,5	56,6	67,1	79,4	94,7		
Total power input (EN14511:2018)	(3)	-	9,36	12,9	15,1	18,4	21,1		
Overall efficiency (EN14511:2018)	(4)	-	7,65	7,77	7,87	7,61	7,96		
Refrigeration circuits		Nr			1				
No. of compressors		Nr			2				
Type of compressors		-			SCROLL				
Standard power supply		V			400/3/50				
Sound pressure level	(5)	dB(A)	44	49	49	49	49		
<b>Directive ErP (Energy Related Products)</b>									
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		
$\eta_{sh}$	(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		
$\eta_{sh}$	(6)	%	174,0	169,0	169,0	170,0	188,0		
Size	WSHN-XEE2 MF		35.2	40.2	45.2	55.2	60.2	70.2	80.2
<b>Cooling 100% - Heating 0%</b>									
Cooling capacity (EN14511:2018)	(1)	kW	105	119	142	166	190	214	241
Total power input (EN14511:2018)	(1)	kW	23,7	26,9	31,8	38,2	43,1	48,8	55,3
EER at full load (EN14511:2018)	(1)	-	4,42	4,43	4,45	4,36	4,40	4,38	4,35
SEER	(6)	-	5,17	5,31	5,29	4,93	4,92	5,00	4,82
$\eta_{sc}$	(6)	%	203,7	209,2	208,4	194,2	193,7	197,2	189,7
<b>Cooling 0% - Heating 100%</b>									
Heating capacity (EN14511:2018)	(2)	kW	120	139	163	196	219	253	280
Total power input (EN14511:2018)	(2)	kW	28,2	32,0	38,2	45,3	51,5	57,6	65,0
COP at full load (EN14511:2018)	(2)	-	4,25	4,34	4,28	4,31	4,25	4,39	4,31
<b>Cooling 100% - Heating 100%</b>									
Cooling capacity (EN14511:2018)	(3)	kW	95,0	108	128	151	174	194	219
Heating capacity (EN14511:2018)	(3)	kW	123	140	165	196	225	252	284
Total power input (EN14511:2018)	(3)	kW	28,2	32,0	37,9	45,3	50,8	57,6	65,1
Overall efficiency (EN14511:2018)	(4)	-	7,73	7,73	7,74	7,65	7,85	7,76	7,71
Refrigeration circuits		Nr				1			
No. of compressors		Nr				2			
Type of compressors		-				SCROLL			
Standard power supply		V				400/3/50			
Sound pressure level	(5)	dB(A)	58	58	58	60	61	63	63
<b>Directive ErP (Energy Related Products)</b>									
SCOP - AVERAGE Climate - W35	(6)	-	5,67	5,84	5,68	5,68	5,55	5,63	5,45
$\eta_{sh}$	(6)	%	219,0	226,0	219,0	219,0	214,0	217,0	210,0
SCOP - AVERAGE Climate - W55	(6)	-	4,60	4,69	4,67	4,64	4,61	4,69	4,65
$\eta_{sh}$	(6)	%	176,0	180,0	179,0	178,0	176,0	180,0	178,0

- (1) Data calculated in compliance with Standard EN 14511:2018 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 14511:2018 referred to the following conditions: Hot side water temperature = 40/45°C; Source side water temperature = 10/7°C  
(3) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Cold side water temperature = 12/7°C; Hot side water temperature = 40/45°C  
(4) Overall efficiency = (Cooling capacity + Heating capacity) / (Total power input)

- (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 14825:2018 Regulation

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

## accessories

<b>VARYU</b>	VARYFLOW + (user side 2 inverter pumps)	<b>CMSC8</b>	Serial communication module for BACnet supervisor
<b>VS2M</b>	Source side 2-way modulating valve	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>VS2MX</b>	Source side 2-way modulating valve	<b>SPCX</b>	Set-point compensation with outdoor air temperature probe
<b>VS3M</b>	Source side 3-way modulating valve	<b>IFWX</b>	Steel mesh strainer on the water side
<b>VS3MX</b>	Source side 3-way modulating valve	<b>SFSTR</b>	Disposal for inrush current reduction
<b>VARYS</b>	VARYFLOW + (source side 2 inverter pumps)	<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>VARYR</b>	VARYFLOW + (recovery side 2 inverter pumps)	<b>AVIBX</b>	Anti-vibration mount support
<b>VACSRX</b>	Total recovery side DHW switching valve	<b>RCTX</b>	Remote control
<b>SDV</b>	Cutoff valve on compressor supply and return	<b>BACX</b>	BACnet serial communication module
<b>MF2</b>	Multi-function phase monitor	<b>CMMBX</b>	Serial communication module to supervisor (Modbus)
<b>CMSC10</b>	Serial communication module for LonWorks supervisor	<b>CMSLWX</b>	LonWorks serial communication module

Accessories whose code ends with "X" are supplied separately



### SPINchiller<sup>3</sup>

#### Water chiller

WSH-XSC3: cooling only  
 WSHN-XSC3: reversible heat pump  
 Water cooled  
 Indoor installation

**Capacity from 211 to 395 kW**

**SPINchiller<sup>3</sup>** are water cooled water chillers and heat pumps for indoor installation, ideal for multi-family and commercial buildings.

The main features are:

- **HIGH SEASONALEFFICIENCY:** the combination of different size compressors allows to gain more control steps, to provide the energy actually required by the system, to reduce the consumption and to achieve the high seasonal efficiency.
- **PREASSEMBLED UNIT:** the extensive range of options available with SPINchiller<sup>3</sup>, including the pumping units mounted on the product – even inverter-driven – make the product suitable for installation in any system.
- **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE:** the compact construction allows to combine up to 7 units in confined spaces, realizing a high power system.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

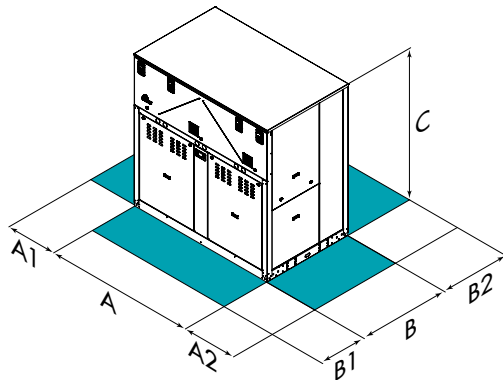


ErP  
 compliant

### functions and features

Cooling only (WSH-XSC3)	Heat pump (WSHN-XSC3)	Water cooled	Indoor installation	R-410A	Hermetic Scroll	HydroPack	Vary Flow	Electronic expansion valve	Intelliplant

### dimensions and clearances



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

**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.  
 EN Super-silenced (EN)

## versions and configurations

### ACOUSTIC CONFIGURATION:

- EN** Super-silenced acoustic configuration (Standard)  
**BN** Basic acoustic configuration

### 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

### ENERGY RECOVERY:

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

## technical data

Size	WSH-XSC3	70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4
▶ Cooling capacity (EN14511:2018)	(1) kW	217	231	248	268	292	319	350	395
Total power input (EN14511:2018)	(1) kW	46,5	50,3	53,2	58,4	61,8	68,1	75,5	83,6
EER (EN 14511:2018)	(1) -	4,67	4,59	4,65	4,59	4,72	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 (EN14511:2018)	(2) kW	249	266	285	309	333	366	401	453
Total power input (EN14511:2018)	(2) kW	56,8	61,5	64,2	71,5	76,3	83,5	92,6	103
COP (EN 14511:2018)	(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							
Water flow-rate (User Side)	l/s	10,4	11,1	11,9	12,8	14,0	15,3	16,8	18,9
Water flow rate (Source Side)	l/s	12,6	13,4	14,3	15,6	16,9	18,5	20,3	22,8
Standard power supply	V	400/3/50							
EN Sound pressure level	(3) dB(A)	63	64	65	65	65	66	68	68
Size	WSHN-XSC3	70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4
▶ Cooling capacity (EN14511:2018)	(1) kW	211	225	242	261	283	313	341	389
Total power input (EN14511:2018)	(1) kW	48,5	52,6	55,4	60,9	65,6	70,7	78,1	87,3
EER (EN 14511:2018)	(1) -	4,36	4,28	4,36	4,29	4,32	4,42	4,37	4,46
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 (EN14511:2018)	(2) kW	244	260	279	302	327	358	393	446
Total power input (EN14511:2018)	(2) kW	59,0	64,0	67,6	74,3	80,3	86,5	94,9	107
COP (EN 14511:2018)	(2) -	4,13	4,06	4,13	4,06	4,08	4,14	4,15	4,18
Refrigeration circuits	Nr	2							
No. of compressors	Nr	4							
Type of compressors	-	SCROLL							
Water flow-rate (User Side)	l/s	10,1	10,8	11,6	12,5	13,6	15,0	16,4	18,7
Water flow rate (Source Side)	l/s	12,4	13,2	14,2	15,4	16,6	18,3	20,0	22,7
Standard power supply	V	400/3/50							
EN Sound pressure level	(3) dB(A)	63	64	65	65	65	66	68	68
<b>Directive ErP (Energy Related Products)</b>									
SCOP - AVERAGE Climate - W35	(4) -	6,09	6,09	6,13	6,05	5,89	6,22	6,07	-
$\eta_{s,h}$	(4) %	241,0	241,0	242,0	239,0	233,0	246,0	240,0	-
SCOP - AVERAGE Climate - W55	(4) -	4,72	4,67	4,72	4,67	4,41	4,77	4,70	-
$\eta_{s,h}$	(4) %	181,0	179,0	181,0	179,0	168,0	183,0	180,0	-

- (1) Performance data calculated in accordance with EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7°C. External exchanger water = 30/35°C.  
(2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C. External exchanger air temperature = 10/7°C.  
(3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: internal exchanger water = 12/7 °C. external exchanger water = 30/35 °C.  
(4) Data calculated according to the EN 14825:2018 Regulation)

EN Super-silenced (EN)

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

HYDRONIC

<b>AP</b>	Rear water fittings
<b>SDV</b>	Cutoff valve on compressor supply and return
<b>MHP</b>	High and low pressure gauges
<b>MF2</b>	Multi-function phase monitor
<b>SFSTR</b>	Disposal for inrush current reduction
<b>RCMRX</b>	Remote control via microprocessor control
<b>ACIE</b>	Antifreeze heater for internal exchanger protection
<b>EHCS</b>	Source side antifreeze electric heaters
<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>CMSC8</b>	Serial communication module for BACnet supervisor
<b>SCP4</b>	Set-point compensation with 0-10 V signal
<b>SPC2</b>	Set-point compensation with outdoor air temperature probe
<b>CSVX</b>	Couple of manually operated shut-off valves
<b>IFWX</b>	Steel mesh strainer on the water side
<b>PFCP</b>	Power factor correction capacitors (cosfi > 0.9)
<b>AVIBX</b>	Anti-vibration mount support
<b>CONTA2</b>	Energy meter
<b>RPRPDI</b>	Refrigerant leak detector with pump down function in the casing
<b>ECS</b>	ECOSHARE function for the automatic management of a group of units
<b>PSX</b>	Mains power supply

### WSH-XSC3 only:

<b>HYGC1</b>	Cooling side hydronic assembly with 1 ON/OFF pump
<b>HYGC2</b>	Cooling side hydronic assembly with 2 ON/OFF pumps
<b>VS2MC</b>	Cooling side 2-way modulating valve
<b>VS2MCX</b>	Cooling side 2-way modulating valve
<b>VS3MCX</b>	Cooling side 3-way modulating valve
<b>VARYC</b>	VARYFLOW + (cooling side 2 inverter pumps)
<b>2PMC</b>	Hydropack cooling side with 2 pumps
<b>V2MCP</b>	Cooling side 2-way modulating valve for high DP

<b>V2MCPX</b>	Cooling side 2-way modulating valve for high DP
<b>HYGH1</b>	Heating side hydronic assembly with 1 ON/OFF pump
<b>HYGH2</b>	Heating side hydronic assembly with 2 ON/OFF pumps
<b>VARYH</b>	VARYFLOW + (heating side 2 inverter pumps)
<b>VS2MH</b>	Heating side 2-way modulating valve
<b>VS2MHX</b>	Heating side 2-way modulating valve
<b>VS3MHX</b>	Heating side 3-way modulating valve
<b>2PMH</b>	Hydropack heating side with 2 pumps
<b>V2MHP</b>	Heating side 2-way modulating valve for high DP
<b>V2MHPX</b>	Heating side 2-way modulating valve for high DP
<b>IVFDT</b>	Inverter driven variable flow-rate cooling side control depending on the temperature differential
<b>IVFDTH</b>	Inverter driven variable flow-rate heating side control depending on the temperature differential

### WSHN-XSC3 only:

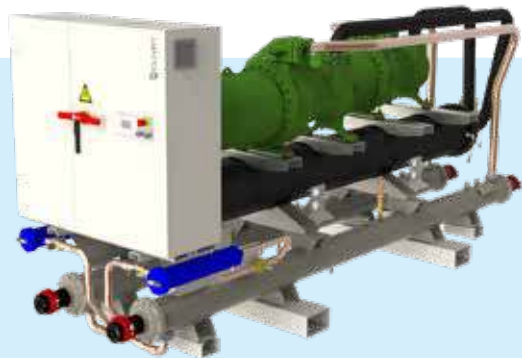
<b>IVFDT</b>	Inverter driven variable flow-rate user side control depending on the temperature differential
<b>HYGU1</b>	User side hydronic assembly with 1 ON/OFF pump
<b>HYGU2</b>	User side hydronic assembly with 2 ON/OFF pumps
<b>VARYU</b>	VARYFLOW + (user side 2 inverter pumps)
<b>HYP2U</b>	Hydropack user side with 2 pumps
<b>HYGS1</b>	Source side hydronic assembly with 1 ON/OFF pump
<b>HYGS2</b>	Source side hydronic assembly with 2 ON/OFF pumps
<b>VARYS</b>	VARYFLOW + (source side 2 inverter pumps)
<b>VS2M</b>	Source side 2-way modulating valve
<b>VS2MX</b>	Source side 2-way modulating valve
<b>VS3MX</b>	Source side 3-way modulating valve
<b>HYP2S</b>	Hydropack source side with 2 pumps
<b>V2MSP</b>	Source side 2-way modulating valve for high DP
<b>V2MSPX</b>	Source side 2-way modulating valve for high DP

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.

## SCREWLine<sup>3</sup>

**Water chiller**  
 Water cooled  
 Indoor installation  
**Capacity from 572 to 1497 kW**



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

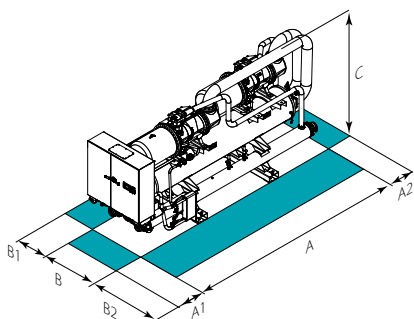
The **SCREWLine<sup>3</sup> WDH-SB3** units are water chillers with extremely high efficiency for high-powered commercial and industrial buildings. Designed for indoor installation, they guarantee maximum energy efficiency throughout the entire operating cycle.

- **MAXIMUM ENERGY SAVING:** reaches class A and stands for high efficiency at partial load.
- **RELIABLE TECHNOLOGY:** excellent energy figures originate from high performance double screw compressor complete with electronic thermostatic valve and innovative shell & tube heat exchangers optimized for operation with R-134a. All units are equipped with a double-compressor allowing more reliability, higher flexibility and low starting current.
- **HIGHLY VERSATILE APPLICATION:** is available for low temperature supply (Brine) in high dehumidification or industrial process applications. On the source side, it can easily benefit from tower, dry cooler or well water plant design.

### functions and features

Cooling only	Water cooled	Indoor installation	R-134a	Semi-hermetic Twin-screw	Reversible water circuit	Electronic expansion valve	Intelliplant

### dimensions and clearances



Size	WDH-SB3	220.2	240.2	280.2	320.2	360.2	440.2	500.2	540.2	580.2
A - Length	mm	4639	4639	4639	4639	5006	5010	5076	5076	5076
B - Width	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
C - Height	mm	2000	2000	2000	2000	2270	2270	2405	2405	2405
A1	mm	1410	1410	1410	1410	1410	1410	1410	1410	1410
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

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

### OPERATION:

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

### APPLICATION:

- T** Cooling tower application (Standard)
- P** Groundwater application

### VERSION:

- EXC** Excellence (Standard)

### ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration (Standard)
- EN** Extremely low noise acoustic configuration

### ENERGY RECOVERY:

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

## technical data

Size	WDH-SB3	220.2	240.2	280.2	320.2	360.2	440.2	500.2	540.2	580.2
▶ Cooling capacity (EN14511:2018)	(1) kW	572	612	709	844	976	1123	1305	1399	1497
Total power input (EN 14511:2018)	(1) kW	108	118	136	164	187	208	238	269	293
EER (EN 14511:2018)	(1) -	5,14	5,01	5,03	4,95	5,02	5,19	5,26	5,01	4,93
SEER	(4) -	6,11	6,20	6,23	5,92	6,09	6,23	6,36	6,15	6,26
$\eta_{sc}$	(4) %	236,4	240,0	241,2	228,8	235,6	241,2	246,4	238,0	242,4
Refrigeration circuits	Nr	2								
No. of compressors	Nr	2								
Type of compressors	(3) -	DSW								
Refrigerant	-	R-134a								
Water flowrate (User side)	l/s	27,4	29,4	34,0	40,5	46,8	53,9	62,5	67,1	71,7
Water flowrate (Source side)	-	32,5	35,0	40,5	48,4	55,7	63,8	74	80	86
Standard power supply	V	400/3/50								
ST-EXC Sound pressure level	(2) dB(A)	80	81	81	81	82	83	83	85	85
EN-EXC Sound pressure level	(2) dB(A)	76	77	77	78	78	80	80	81	81

- (1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7°C; External exchanger water = 30/35°C
- (2) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; External exchanger water = 30/35°C
- (3) DSW = twin-screw compressor
- (4) Data calculated according to the EN 14825:2018 Regulation

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

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

- AMRX** Rubber antivibration mounts
- RCMRX** Remote control via microprocessor control
- PSX** Mains power supply
- CONTA2** Energy meter
- CMSC9** Serial communication module to Modbus supervisor
- CMSC10** Serial communication module to LonWorks supervisor
- CMSC11** Serial communication module for BACnet-IP supervisor
- SCP4** Set-point compensation with signal 0-10 V
- SPC1** Set point compensation with 4-20 mA signal
- SPC2** Set-point compensation with outdoor air temperature probe
- DML0-10** Demand limit with signal 0-10V
- DML4-20** Demand limit with signal 4-20mA
- CFSCE** Potential-free contacts for compressor status and enabling
- ECS** ECOSHARE function for the automatic management of a group of units
- PFCP** Power factor correction capacitors (cosfi > 0.9)
- SFSTR2** Progressive compressor start-up device
- CBS** Overload circuit breakers
- EVE** Electronic expansion valves
- PVSX** Water flow valve
- IVMSX** Modulating valve source side

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.

## NEW PRODUCT

HYDRONIC



## SCREWLine<sup>4</sup>-i

**Water chiller**

Water cooled

Indoor installation

**Capacity from 340 to 1520 kW**

The **WDH-iK4** units are high-efficiency chillers with R-513A refrigerant ideal for medium - high powered commercial and industrial buildings. Designed for indoor installation, they guarantee maximum energy efficiency throughout the entire operating cycle

■ **REFRIGERANT HFO WITH REDUCED ENVIRONMENTAL IMPACT:** Clivet's constant search for solutions for sustainable comfort and environmental well-being has led to the development of the WDH-iK4 range of chillers with the R-513A refrigerant, which stands out for its low environmental impact (GWP = 631).

■ **ADVANCED TECHNOLOGY:** the **WDH-iK4** series is based on a combination of technologies, designed to reduce energy consumption, limit the refrigerant charge, ensure reliable and silent operation: Screw compressor with integrated inverter, Spray shell & tube evaporator, Oil recovery system.

■ **EXTREMELY HIGH ENERGY EFFICIENCY:** the use of the inverter technology allows to adapt the rotation speed of the compressor to the real request of the system. The minimum reachable modulation is equal to 12% of the total capacity, that means a very high seasonal efficiency, SEER up to 8.60.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant



## functions and features



Cooling only



Water cooled



Indoor  
installation



R-513A



Semi-hermetic  
Twin-screw



Screw  
Inverter



Reversible  
water circuit

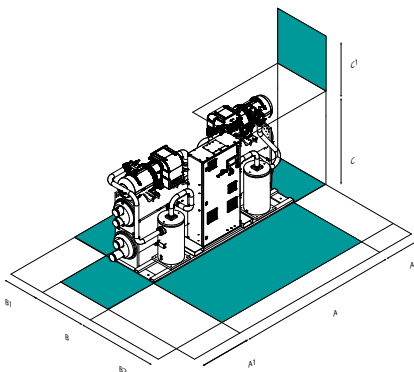


Electronic  
expansion  
valve



Intelliplant

## 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

### LOW TEMPERATURE:

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

### VERSION

- EXC** Excellence (Standard)

### OPERATION:

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

### HIGH WATER TEMPERATURE VERSION:

- HWT** High water temperature

### ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration (Standard)
- EN** Extremely low noise acoustic configuration

## 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 (EN14511:2018)	(1)	kW	340	415	520	610	690	760	830	705	800	900	1065	1280	1385	1520
Total power input (EN14511:2018)	(1)	kW	66,3	80,1	101	118	138	150	165	138	155	177	208	249	270	300
EER (EN 14511:2018)	(1)	-	5,13	5,18	5,13	5,15	5,01	5,06	5,02	5,11	5,15	5,10	5,12	5,14	5,12	5,07
SEER	(5)	-	8,41	8,46	8,53	8,57	8,55	8,60	8,57	8,59	8,38	8,47	8,56	8,38	8,51	8,58
$\eta_{sc}$	(5)	%	328,4	330,5	333,0	334,7	333,9	336,0	334,7	335,6	327,2	330,9	334,3	327,2	332,2	335,1
▶ Heating capacity (EN14511:2018)	(2)	kW	411	514	624	732	835	927	1024	820	924	1037	1221	1534	1667	1844
Total power input (EN14511:2018)	(2)	kW	88,9	110	132	156	183	202	226	180	198	219	264	338	360	405
COP (EN14511:2018)	(2)	-	4,63	4,70	4,75	4,71	4,56	4,58	4,54	4,56	4,68	4,74	4,62	4,54	4,64	4,56
Refrigeration circuits		Nr				1							2			
No. of compressors		Nr				1							2			
Type of compressors	(4)	-								ISW						
Refrigerant		-								R-513A						
Water flow-rate (User Side)		l/s	16,3	19,9	24,8	29,2	33,0	36,3	39,7	33,7	38,3	43,0	50,9	61,2	66,2	72,7
Water flow rate (Source Side)		l/s	19,4	23,6	29,5	34,7	39,4	43,3	47,4	40,1	45,5	51,2	60,6	72,7	78,8	86,7
Standard power supply		V								400/3/50						
ST Sound pressure level	(3)	dB(A)	75	77	78	78	78	79	79	81	82	82	83	83	83	84
EN Sound pressure level	(3)	dB(A)	72	74	75	75	75	76	76	78	79	79	80	80	80	81

- (1) Performance data calculated in accordance with EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7°C. External exchanger water = 30/35°C.
- (2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C. External exchanger air temperature = 10/7°C
- (3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: internal exchanger water = 12/7 °C. external exchanger water = 30/35 °C

- (4) ISW = screw compressor with integrated inverter
- (5) 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

<b>AMRX</b>	Rubber antivibration mounts	<b>AAR</b>	DX evaporator water connections
<b>RCMRX</b>	Remote control via microprocessor control	<b>CDR</b>	DX condenser water connections
<b>PSX</b>	Mains power supply	<b>CDCT</b>	Opposing condenser water connections
<b>CONTA2</b>	Energy meter	<b>EV3P</b>	3-step evaporator
<b>CMSC9</b>	Serial communication module to Modbus supervisor	<b>ISS</b>	Condenser insulation
<b>CMSC10</b>	Serial communication module to LonWorks supervisor	<b>IM</b>	20 mm thickness insulation for increased evaporator
<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor	<b>EHCS</b>	Source side antifreeze electric heaters
<b>SCP4</b>	Set-point compensation with signal 0-10 V	<b>EHWP</b>	User side water piping antifreeze electric heaters
<b>SPC1</b>	Set point compensation with 4-20 mA signal	<b>IFWX</b>	Steel mesh strainer on the water side
<b>SPC2</b>	Set-point compensation with outdoor air temperature probe	<b>RPR</b>	Refrigerant drops detector
<b>ECS</b>	ECOSHARE function for the automatic management of a group of units	<b>FC2</b>	EMC filtering for residential-industrial environment EN 61800-3 cat C2)
<b>IVMSX</b>	Modulating valve source side	<b>AMMSX</b>	Anti-seismic spring antivibration mounts
<b>MHP</b>	High and low pressure gauges	<b>AMMX</b>	Anti-vibration mount support
<b>SDV</b>	Cutoff valve on compressor supply and return		
<b>CO3P</b>	3-step condenser		
<b>AACT</b>	Opposing evaporator water connections		

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.

## NEW PRODUCT

HYDRONIC



INVERTER



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

## Centrifugal Chiller HFO

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

Centrifugal units **WCH-iZ** are high-efficiency chillers with HFO R-1234ze refrigerant ideal for high-powered commercial and industrial buildings. Designed for indoor installation, they guarantee maximum energy efficiency throughout the entire operating cycle.

■ **REFRIGERANT HFO WITH REDUCED ENVIRONMENTAL IMPACT:**

Clivet's constant search for solutions for sustainable comfort and environmental well-being has led to the development of the WDAT-iZ range of chillers with the R-1234ze refrigerant, which stands out for its nearly zero environmental impact (GWP < 1).

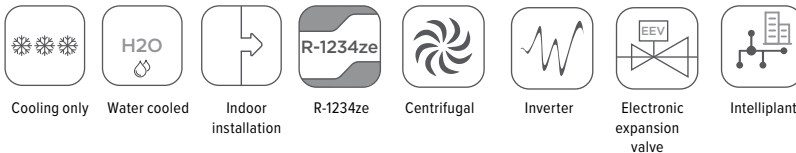
■ **ADVANCED TECHNOLOGY:**

the centrifugal WCH-iZ is based on a combination of technologies, designed to reduce energy consumption, limit the refrigerant charge, ensure reliable and silent operation. Direct drive compressor with opposed impellers, falling film evaporator, economizer, recovery oil circuit.

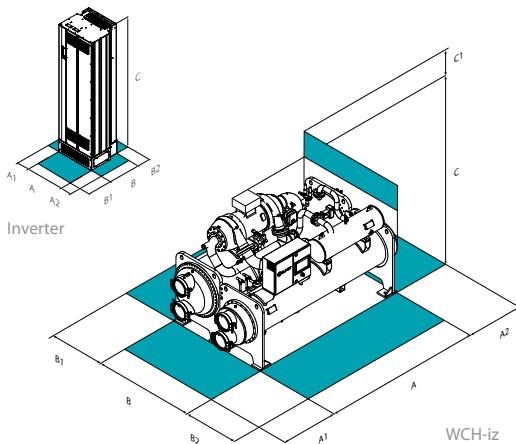
■ **EXTREMELY HIGH ENERGY EFFICIENCY:**

the use of the inverter technology allows to adapt the rotation speed of the compressor to the real request of the system. The minimum reachable modulation is equal to 15% of the total capacity, that means a very high seasonal efficiency, SEER up to 9.64.

### functions and features



### dimensions and clearances



Size	WCH-iZ	230	270	300	350	380	420	450
<b>Unit dimensions</b>								
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
<b>Dimensional inverter</b>								
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

**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

### 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
<b>Cooling</b>								
▶ Cooling capacity (EN14511:2018)	(1) kW	808	949	1069	1229	1353	1476	1599
Compressor power input (EN14511:2018)	(1) kW	144	169	184	211	226	249	272
EER (EN14511:2018)	(1) -	5,61	5,61	5,81	5,82	5,99	5,93	5,88
SEER	(4) -	8,00	8,49	8,49	8,90	9,30	9,48	9,64
$\eta_{sc}$	(4) %	312,0	331,8	331,6	347,9	364,0	371,3	377,6
Refrigeration circuits	-				1			
No. of compressors	Nr				1			
Type of compressors	(3) -				CFGi			
Refrigerant	-				R1234ze			
Water flow (User side)	l/s	38,6	45,3	51,0	58,6	64,6	70,4	76,3
Water flow (Source side)	-	45,3	53,1	59,6	68,4	75,1	81,9	88,9
Standard power supply	V				400/3/50			
Sound pressure level	(2) dB(A)	79	82	79	79	82	80	81

- (1) Data calculated according to EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7 °C. External exchanger water = 30/35°C
- (2) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water temperature = 12/7°C; Internal exchanger water = 30/35°C.
- (3) CFGi = Inverter driven centrifugal compressor

(4) Data calculated according to EN 14825:2018

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

- 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** Anti-vibration mount supports
- 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: metres 4,5 length
- RPR** Refrigerant leak detector in the casing
- QS6X** Electrical panel with main switch
- CSSQX** Connection cables from electrical panel with main switch (QS6X) to inverter and unit electrical panel

Accessories whose code ends with "X" are supplied separately

## Centrifugal Chiller

**Water chiller**  
 Water cooled  
 Indoor installation  
**Capacity from 876 to 1927 kW**



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
 compliant

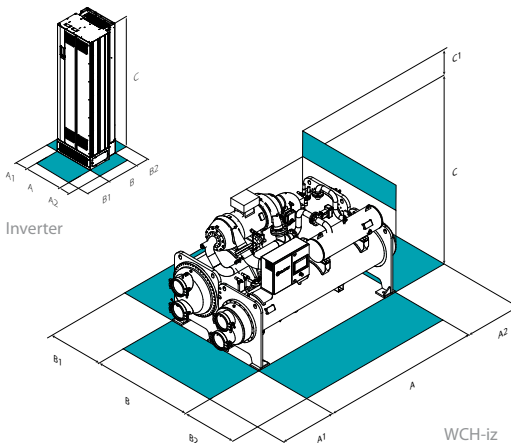
Centrifugal units **WCH-i** are high-efficiency chillers ideal for high-powered commercial and industrial buildings. Designed for indoor installation, they guarantee maximum energy efficiency throughout the entire operating cycle.

- **ADVANCED TECHNOLOGY:** the centrifugal WCH-i is based on a combination of technologies, designed to reduce energy consumption, limit the refrigerant charge, ensure reliable and silent operation. Direct drive compressor with opposed impellers, falling film evaporator, economizer, recovery oil circuit.
- **EXTREMELY HIGH ENERGY EFFICIENCY:** the use of the inverter technology allows to adapt the rotation speed of the compressor to the real request of the system. The minimum reachable modulation is equal to 15% of the total capacity, that means a very high seasonal efficiency, SEER up to 9.06.

### functions and features



### dimensions and clearances



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	2128	2128	2128	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

**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

### 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
<b>Cooling</b>								
▶ Cooling capacity (EN14511:2018)	(1) kW	876	1051	1227	1402	1577	1752	1927
Compressor power input (EN14511:2018)	(1) kW	157	183	213	234	257	288	322
EER (EN14511:2018)	(1) -	5,56	5,75	5,76	6,00	6,13	6,09	5,99
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 (User side)	l/s	42,0	50,4	58,8	67,2	75,6	84,0	92,4
Water flow (Source side)	-	49,2	58,8	68,5	77,9	87,3	97,1	107
Standard power supply	V				400/3/50			
Sound pressure level	(2) dB(A)	80	80	80	80	80	80	81

- (1) Data calculated according to EN 14511:2018 referred to the following conditions: Internal exchanger water = 12/7 °C. External exchanger water = 30/35°C
- (2) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water temperature = 12/7°C; Internal exchanger water = 30/35°C.

- (3) CFGi = Inverter driven centrifugal compressor
- (4) Data calculated according to EN 14825:2018

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

- 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** Anti-vibration mount supports
- 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: metres 4.5 length
- QS6X** Electrical panel with main switch
- CCSQX** Connection cables from electrical panel with main switch (QS6X) to inverter and unit electrical panel

Accessories whose code ends with "X" are supplied separately



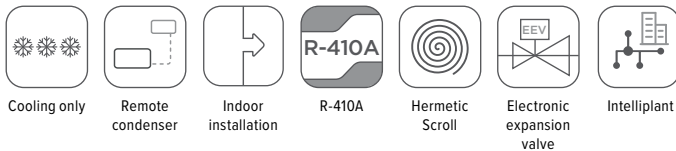
## SPINchiller<sup>3</sup>

**Water chiller**  
 Condenserless  
 Indoor installation  
**Capacity from 265 to 445 kW**

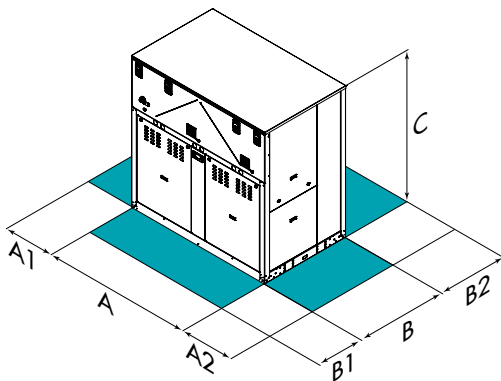
The liquid chillers in the **MSE-XSC3** range are units for indoor installation and are ideal in combination with the remote condensers. They are particularly suited in civil and industrial sector systems in the following applications:

- **EXTREMELY LOW NOISE EMISSION:** separated from the chiller, the outdoor exchange section can be selected and sized as required to reduce noise emission.
- **PARTICULARLY SEVERE CLIMATES:** the two section solution makes it possible to avoid having an outdoor water system and therefore having to perform the winter emptying needed to protect it against freezing. With MSE-XSC3, the pipes between the two sections contain a refrigerant fluid and not water.

### 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	MSE-XSC3	90.4	100.4	110.4	120.4	140.4	160.4
A - Length	mm	2350	2350	2350	2350	2350	2350
B - Width	mm	1150	1150	1150	1150	1150	1150
C - Height	mm	2210	2210	2210	2210	2210	2210
A1	mm	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700
B1	mm	1200	1200	1200	1200	1200	1200
B2	mm	500	500	500	500	500	500
Operating weight	kg	1447	1611	1668	1722	1773	1818

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

### LOW TEMPERATURE:

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

### ENERGY RECOVERY:

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

## technical data

Size	MSE-XSC3	90.4	100.4	110.4	120.4	140.4	160.4
▶ Cooling capacity	(1) kW	265	289	313	349	406	445
Compressor power input	(1) kW	75,1	82,0	90,1	101	114	128
Total power input	(1) kW	75,6	82,5	90,6	102	115	128
EER	(2) -	3,53	3,52	3,47	3,44	3,55	3,48
Refrigeration circuits	Nr				2		
No. of compressors	Nr				4		
Type of compressors	(3) -				SCROLL		
Standard power supply	V				400/3/50		
Sound pressure level	(4) dB(A)	64	64	65	66	68	68

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 temperature = 12/7°C; Condensing temperature = 50°C  
 (2) EER referred only to compressors  
 (3) SCROLL = scroll compressor

- (4) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1m. from the standard unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Condensing temperature = 50°C

## accessories

<b>AMRX</b>	Rubber antivibration mounts	<b>SFSTR</b>	Progressive compressor start-up device
<b>RCMRX</b>	Remote control via microprocessor control	<b>CVSX</b>	Couple of manually operated shut-off valves
<b>PSX</b>	Mains power supply	<b>IFWX</b>	Steel mesh strainer on the water side
<b>CONTA2</b>	Energy meter	<b>IVFDT</b>	Inverter driven variable flow-rate user side control depending on the temperature differential
<b>CMSC9</b>	Serial communication module for Modbus supervisor	<b>MHP</b>	High and low pressure gauges
<b>CMSC10</b>	Serial communication module for LonWorks supervisor	<b>SDV</b>	Cutoff valve on compressor supply and return
<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor	<b>RPR</b>	Refrigerant drops detector
<b>SCP4</b>	Set-point compensation with 0-10 V signal	<b>2PM</b>	Hydropack user side with 2 pumps
<b>ECS</b>	ECOSHARE function for the automatic management of a group of units	<b>2PMV</b>	Hydropack user side with no.2 of inverter pumps
<b>PFCP</b>	Power factor correction capacitors (cosφ > 0.9)		

Accessories whose code ends with "X" are supplied separately

## SCREWLine<sup>3</sup>

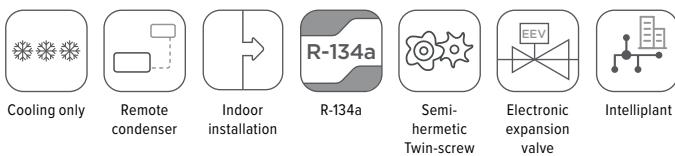
**Water chiller**  
 Condenserless  
 Indoor installation  
**Capacity from 300 to 1427 kW**



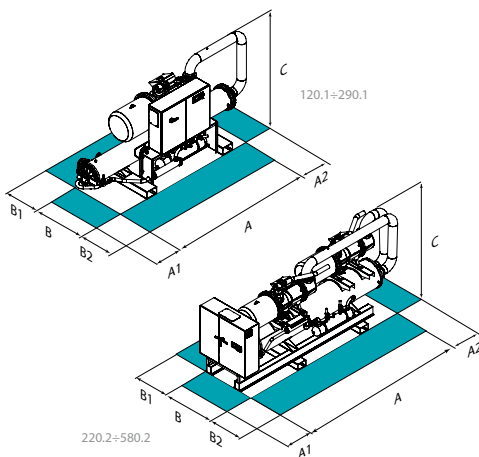
The liquid chillers in the **MDE-SL3** range are units for indoor installation and are ideal in combination with the remote condenser. They are particularly suited in civil and industrial sector systems in the following applications:

- **EXTREMELY LOW NOISE EMISSION:** separated from the chiller, the outdoor exchange section can be selected and sized as required to reduce noise emission.
- **PARTICULARLY SEVERE CLIMATES:** the two section solution makes it possible to avoid having an outdoor water system and therefore having to perform the winter emptying needed to protect it against freezing. With MDE-SL3, the pipes between the two sections contain a refrigerant fluid and not water.

### 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	4992	4992	5006	5006	5006	5077	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	1995	1995	2010	2010	2010	2145	2145	2145	2145
EN-EXC C - Height	mm	1900	1900	1900	1900	1900	2121	2121	2121	2121	2121	2239	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 Super-silenced (EN)-Excellence

## versions and configurations

### LOW TEMPERATURE:

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

### ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration (Standard)
- EN** Extremely low noise acoustic configuration

### DOUBLE SET POINT:

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

### VERSION:

- EXC** Excellence (Standard)

### UNIT INSTALLATION:

- II** Indoor installation (Standard)

## 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	(3) -	DSW								
ST/EN-EXC Standard power supply	V	400/3/50								
ST-EXC Sound pressure level	(4) dB(A)	71	76	76	79	79	80	81	82	82
EN-EXC Sound pressure level	(4) dB(A)	66	70	71	73	73	74	75	76	76

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	(3) -	DSW													
ST/EN-EXC Standard power supply	V	400/3/50													
ST-EXC Sound pressure level	(4) dB(A)	74	74	77	79	79	79	80	82	82	84	84	84	85	85
EN-EXC Sound pressure level	(4) dB(A)	69	69	71	73	73	74	74	76	76	78	79	78	79	79

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) DSW = twin-screw compressor
- (4) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard unit outer surface operating in open field. Measurements

are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Condensing temperature = 45°C

- ST-EXC Standard (ST)-Excellence
- EN-EXC Extremely low noise(EN)-Excellence

## 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 (cosfi > 0.9)
- SFSTR2** Progressive compressor start-up device
- CBS** Overload circuit breakers

Accessories whose code ends with "X" are supplied separately

# Medium attendance applications

**SMARTPack<sup>2</sup>**

**CLIVETPack<sup>2</sup>**

Air flow	3200 ÷ 10500 m <sup>3</sup> /h (20 ÷ 46 kW)	8500 ÷ 25000 m <sup>3</sup> /h (50 ÷ 160 kW)	22000 ÷ 60000 m <sup>3</sup> /h (155 ÷ 376 kW)
ErP compliance			
Products			
			CSRT-XHE2 49.4-110.4
Air source Cooling only			
	CKN-XHE2i 71-14.2	CSRN-XHE2 15.2-44.4 HSE	CSRN-XHE2 49.4-110.4
Air source Heat pumps			
		CRH-XHE2 14.2-44.4	CRH-XHE2 49.4-110.4
Water source Heat pumps			
	✓	✓	✓
Electronically controlled ventilation and variable air flow			
	✓	✓	✓
Free Cooling			
	✓	✓	✓
Thermodynamic energy recovery			
		✓	✓
THOR (THERModynamic Overboost Recovery)			
	✓	✓	✓
Electronic filtration			

PACKAGED

## High attendance applications

## Full fresh air applications

### CLIVETPack<sup>2</sup>

### CLIVETPack<sup>2</sup> FFA

4000 ÷ 20000 m<sup>3</sup>/h  
(47 ÷ 174 kW)

3000 ÷ 9000 m<sup>3</sup>/h  
(33 ÷ 90 kW)



CSNX-XHE2 12.3-44.4

CSRN-XHE2 FFA 12.2-24.4



# PACKAGED System

## System components

SERIES	SIZE FROM	TO	NAME	PAGE
<b>Autonomous air-conditioners / Heat pumps - air source - roof top for medium attendance applications</b>				
CKN-XHE2i	7.1	14.2	SMARTPack <sup>2</sup>	112
CSRN-XHE2	15.2	44.4	CLIVETPack <sup>2</sup> HSE	114
CSRT-XHE2 / CSRN-XHE2	49.4	110.4	CLIVETPack <sup>2</sup>	118
<b>Autonomous air-conditioners / Heat pumps - air source - roof top for high attendance applications</b>				
CSNX-XHE2	12.3	44.4	CLIVETPack <sup>2</sup>	122
<b>Autonomous air-conditioners / Heat pumps - air source - roof top for full fresh air applications</b>				
CSRN-XHE2-FFA	12.2	24.4	ClivetPACK <sup>2</sup> FFA	124
<b>Remote management systems</b>				
Clivet Master System				126

PACKAGED



## SMARTPack<sup>2</sup>

**Packaged air-conditioning unit**  
 CKN-XHE2i: reversible heat pump  
 Air cooled  
 Roof Top  
**Capacity from 20 to 45 kW**

**SMARTPack<sup>2</sup>** is the innovative range of FULL INVERTER high efficiency autonomous air conditioners. They allow the air treatment, purification and renewal in small and medium environments such as shops, bars, small restaurants, service stations, showrooms, outlet villages, technical rooms and production areas.

The units use efficient EC plug-fan fans in the air treatment area, axial fans with DC brushless motor with condensation control on the external section.

■ **COMPACT DESIGN:** easy to integrate in a range of different architectural contexts

■ **LOW RUNNING COSTS:** the very high efficiency at partial loads, the free-cooling, the standard energy recovery on units with exhaust air, make a drastic reduction in energy consumption during the annual operation.

■ **VERSATILE USE:** in the range of larger units and the extensive number of available versions and options make this unit extremely flexible and suitable for all situations.

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

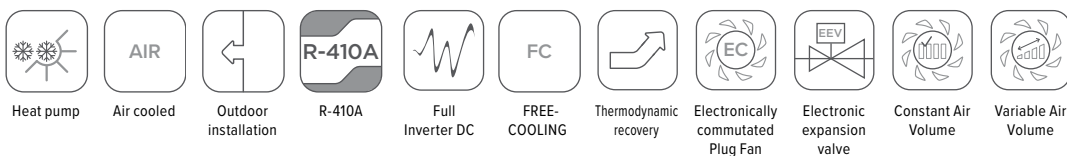


Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

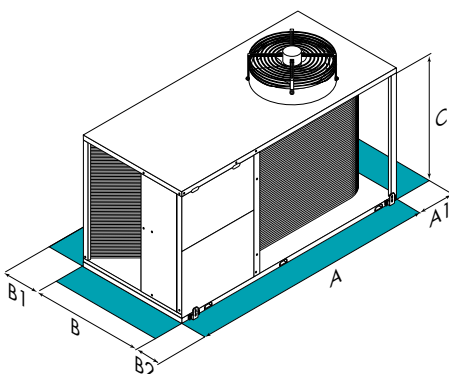


ErP  
 compliant

## functions and features



## dimensions and clearances



Size	CKN-XHE2i	7.1	10.1	14.2
A - Length	mm	2250	2250	2610
B - Width	mm	1240	1310	1750
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	464	576	818
CCK Operating weight	kg	482	600	853

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 re-circulation (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	20,6	30,4	45,7
Sensible capacity	(1)	kW	16,5	24,6	35,9
Compressor power input	(1)	kW	5,27	8,28	11,5
▶ Cooling capacity (EN14511:2018)	(9)	kW	19,0	28,4	42,1
EER (EN14511:2018)	(9)	-	3,08	2,88	2,97
▶ Heating capacity	(2)	kW	20,9	29,8	43,8
Compressor power input	(2)	kW	5,08	7,24	9,89
▶ Heating capacity (EN14511:2018)	(10)	kW	20,5	29,1	43,1
COP (EN14511:2018)	(10)	-	3,26	3,25	3,28
No. of compressors		Nr	1	1	2
Type of compressors	(7)	-	ROT	SCROLL	ROT
Sound pressure level	(6)	dB(A)	65	66	68
Refrigeration circuits		Nr	1	1	1
Supply airflow		m <sup>3</sup> /h	4000	6000	9000
Type of supply fan	(3)	-		RAD EC BRUSHLEES	
Number of supply fans		Nr	1	1	1
Fan diameter		mm	450	500	560
Max. static pressure supply fan	(4)	Pa	380	680	510
Type of exhaust fan	(5)	-	RAD EC BRUSHLEES	RAD EC BRUSHLEES	RAD EC BRUSHLEES
Number of exhaust fans	(5)	Nr	1	1	1
External section fan		-	AX DC BRUSHLESS	AX DC BRUSHLESS	AX DC BRUSHLESS
Standard power supply		V	400/3/50+N	400/3/50+N	400/3/50+N
Continuous capacity adjustment			20-100%	20-100%	20-100%
<b>Directive ErP (Energy Related Products)</b>					
SEER - AVERAGE Climate	(8)	-	4,58	4,37	4,48
η <sub>sc</sub>	(8)	%	180,2	171,9	176,2
SCOP - AVERAGE Climate	(8)	-	3,22	3,20	3,27
η <sub>sh</sub>	(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) RAD = radial fan
- (4) Net outside static pressure to win the outlet and intake onboard pressure drops
- (5) Configuration for outdoor air supply with exhaust and extraction; (only with CCK configuration)

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

(7) SCROLL = scroll compressor  
ROT = rotary compressor

(8) Data calculated according to the EN 14825:2018 Regulation  
(9) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C. EER according to EN 14511-2018.

(10) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.. COP according to EN 14511-2018.

## accessories

- |  |   |
|--|---|
| <b>FCE</b> Enthalpy FREE-COOLING                                       | <b>3WVM</b> Modulating three-way valve                        |
| <b>PAQC</b> Air quality probe for CO2 rate check                       | <b>EH09</b> 4,5 kW electric heaters                           |
| <b>PAQCV</b> Air quality sensor for CO2 and VOC rate check             | <b>EH10</b> 6 kW electric heaters                             |
| <b>SER</b> Outdoor air damper manually set (CBK version)               | <b>EH12</b> 9 kW electric heaters                             |
| <b>SERM</b> Outdoor air motorized on/off damper (CBK version)          | <b>EH15</b> 13.5 kW electric heaters                          |
| <b>SERMD</b> Modulating motorized outdoor air damper (CBK version)     | <b>EH17</b> 18 kW electric heaters                            |
| <b>PCOS</b> Constant supply airflow                                    | <b>EH20</b> 24 kW electric heaters                            |
| <b>PVAR</b> Variable airflow   | <b>CPHG</b> Hot gas re-heating coil                           |
| <b>GC01</b> Condensing gas heating module with modulating control 35kW | <b>HSE3</b> 3 kg/h electrode boiler steam humidifier          |
| <b>GC08</b> Condensing gas heating module with modulating control 44kW | <b>HSE5</b> 5 kg/h electrode boiler steam humidifier          |
| <b>GC09</b> Condensing gas heating module with modulating control 65kW | <b>HSE8</b> Immersed electrodes steam humidifier of 8 kg/h    |
| <b>GC10</b> Condensing gas heating module with modulating control 82kW | <b>MOB</b> Serial port RS485 with Modbus protocol             |
| <b>PGFC</b> Finned coil protection grill                               | <b>PM</b> Phase monitor                                       |
| <b>F7</b> High efficiency F7 air filter (ISO 16890 ePM1 55%)           | <b>PFCC</b> Power factor correction capacitors (cosfi > 0.95) |
| <b>FES</b> Electronic filters (ISO 16890 ePM1 90%)                     | <b>AMRX</b> Rubber antivibration mounts                       |
| <b>PSAF</b> Differential pressure switch for dirty air filters         | <b>UVC</b> UV-C germicidal lamps                              |
| <b>CHW2</b> Two-rows hot water coil                                    |   |

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.

## CLIVETPack<sup>2</sup> HSE

### Packaged air-conditioning unit

CSRN-XHE2: reversible heat pump

Air cooled

Roof Top

Capacity from 55 to 148 kW



**CLIVETPack<sup>2</sup> HSE** are Rooftop designed for the air-conditioning of small and medium surface environments with medium attendance such as supermarkets, shops, offices and small production areas.

The entire range is designed for maximum seasonal efficiency thanks to the double cooling circuit with tandem scroll compressors, electronically controlled fans with brushless motors, large heat exchange surfaces, microprocessor control with dedicated control.

■ **VERSATILITY OF USE:** wide range of versions and options make the unit extremely flexible and suitable for the most different project situations

■ **LOW RUNNING COSTS:** the very high efficiency at partial loads, the free-cooling, the standard energy recovery on units with exhaust air, make a drastic reduction in energy consumption during the annual operation.

■ **EASY TO POSITION AND INSTALL:** the units are exceptionally compact, allow bottom or horizontal supply and return air.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

## functions and features



Heat pump



Air cooled



Outdoor installation



R-410A



Hermetic Scroll



Ice protection system



FREE-COOLING



THOR  
(Thermodynamic Overboost Recovery)



ECOBREEZE



Electronically commutated Plug Fan



Electronic expansion valve

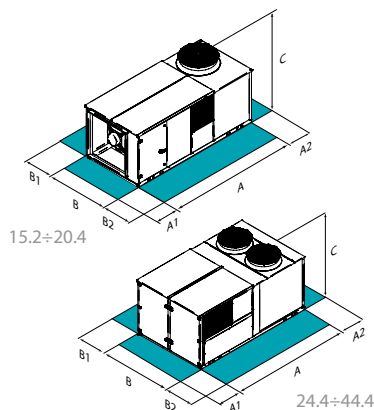


Constant Air Volume



Variable Air Volume

## dimensions and clearances



Size	CSRN-XHE2	15.2	18.2	20.4	25.4	30.4	33.4	40.4	44.4
CAK A - Length	mm	3400	3400	3725	3725	3725	3725	3725	3725
CAK B - Width	mm	1620	1620	2290	2290	2290	2290	2290	2290
CAK C - Height	mm	1610	1610	1610	1610	1610	1910	1910	1910
CAK A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CBK Operating weight	kg	881	901	1426	1461	1471	1531	1563	1568
CAK Operating weight	kg	881	901	1426	1461	1471	1531	1563	1568
CCK Operating weight	kg	1015	1036	1634	1669	1679	1788	1820	1825
CCKP Operating weight	kg	1045	1066	1681	1715	1726	1847	1879	1883

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  
 CCKP Configuration with double fan section with fresh air and THOR thermodynamic 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 (Standard)
- CBK** Configuration with single fan section for recirculation and fresh air

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

## technical data

Size		CSRN-XHE2	15.2	18.2	20.4	25.4	30.4	33.4	40.4	44.4
<b>Eurovent</b>										
CCKP	▶ Cooling capacity	(1) kW	55,1	66,0	82,7	95,0	103	119	138	148
CCKP	Sensible capacity	(1) kW	42,8	51,3	63,4	70,8	73,0	86,3	97,4	104
CCKP	Compressor power input	(1) kW	12,7	16,6	20,1	21,8	25,2	28,0	35,0	38,8
CCKP	▶ Cooling capacity (EN14511:2018)	(9) kW	45,6	53,3	68,3	78,7	86,0	103,8	121,3	128,3
CCKP	EER (EN14511:2018)	(9) -	3,06	2,85	2,82	2,86	2,86	3,17	3,73	2,90
CCKP	▶ Heating capacity	(2) kW	49,8	63,4	74,4	90,4	98,3	118	145	154
CCKP	Compressor power input	(2) kW	9,35	11,9	15,2	17,5	20,4	23,4	28,9	32,9
CCKP	▶ Heating capacity (EN14511:2018)	(10) kW	44,2	56,7	66,7	80,7	87,6	101,5	124,6	132,0
CCKP	COP (EN14511:2018)	(10) -	3,59	3,59	3,15	3,38	3,20	3,30	3,34	3,15
CCKP	Refrigeration circuits	Nr	1	1	2	2	2	2	2	2
CCKP	No. of compressors	Nr	2	2	4	4	4	4	4	4
CCKP	Type of compressors	(3) -	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
CCKP	Supply airflow	m <sup>3</sup> /h	9000	11500	13500	15000	17000	18500	21000	23000
CCKP	Type of supply fan	(4) -	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of supply fans	Nr	1	1	2	2	2	2	2	2
CCKP	Fan diameter	mm	630	630	560	560	560	630	630	630
CCKP	Max. static pressure supply fan	(5) Pa	510	390	510	510	510	510	440	380
CCKP	Type of exhaust fan	(6) -	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of exhaust fans	Nr	1	1	2	2	2	2	2	2
CCKP	Standard power supply	V	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
CCKP	Sound pressure level	(7) dB(A)	64	66	67	68	69	70	71	72
<b>Directive ErP (Energy Related Products)</b>										
CCKP	SEER - AVERAGE Climate	(8) -	3,98	3,75	3,56	3,65	3,61	3,99	4,25	3,77
CCKP	η <sub>sc</sub>	(8) %	156,1	146,8	139,2	143,2	141,4	156,8	166,9	147,7
CCKP	SCOP - AVERAGE Climate	(8) -	3,20	3,43	3,26	3,49	3,32	3,50	3,81	3,64
CCKP	η <sub>sh</sub>	(8) %	125,0	134,2	127,4	136,6	129,8	137,0	149,4	142,6

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

- (1) Ambient air at 27°C D.B./19°C W.B. Entering external exchanger air temperature 35°C;
- (2) Ambient temperature 20°C DB. Outside temperature 7°C DB/6°C WB;
- (3) SCROLL = scroll compressor
- (4) RAD = radial fan
- (5) Net outside static pressure to win the outlet and intake onboard pressure drops
- (6) Configuration with double fan section for recirculation, fresh air, exhaust, thermodynamic recovery (CCK) and configuration with double fan section with renewal air and THOR thermodynamic recovery (CCKP)

- (7) The sound levels are referred to unit operating at full load in nominal conditions. The sound pressure level is referred at a distance of 1 m. from the ducted unit surface operating in free field conditions. External static pressure 50 Pa. (standard UNI EN ISO 9614-2)
- (8) Data calculated according to the EN 14825:2018 Regulation
- (9) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C. EER according to EN 14511-2018,
- (10) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.. COP according to EN 14511-2018

CCKP Configuration with double fan section with fresh air and THOR thermodynamic recovery

## accessories

<b>REC</b>	Exhaust air thermodynamic energy recovery (CCK version)	<b>GC09X</b>	Condensing gas heating module with modulating control 65kW (sizes 20.4÷44.4)
<b>THR</b>	Exhaust air THOR thermodynamic energy recovery (CCKP version)	<b>GC08</b>	Condensing gas heating module with modulating control 44kW (sizes 15.2÷18.2)
<b>FC</b>	Thermal FREE-COOLING (CCK, CCKP version)	<b>GC08X</b>	Condensing gas heating module with modulating control 44kW (sizes 20.4÷30.4)
<b>FCE</b>	FREE-COOLING entalpico (CCK, CCKP version)	<b>GC10X</b>	Condensing gas heating module with modulating control 82kW (sizes 20.4÷44.4)
<b>M3</b>	Downward air supply	<b>GC12X</b>	Condensing gas heating module with modulating control 130kW (sizes 33.4÷44.4)
<b>M5</b>	Upflow air supply	<b>GC11X</b>	Condensing gas heating module with modulating control 100kW (sizes 20.4÷44.4)
<b>ML</b>	Sideward air supply (sizes 15.2÷18.2)	<b>LTEMP1</b>	Application for low outdoor temperature
<b>R3</b>	Downward air return	<b>CPHG</b>	Hot gas re-heating coil
<b>SER</b>	Outdoor air damper manually set (CBK version)	<b>HSE3</b>	3 kg/h immersed electrodes steam humidifier
<b>SERM</b>	Outdoor air motorized on/off damper (CBK version)	<b>HES5</b>	5 kg/h immersed electrodes steam humidifier
<b>SERMD</b>	Modulating motorized outdoor air damper (optional for CBK, standard for CCK and CCKP)	<b>HES8</b>	8 kg/h immersed electrodes steam humidifier
<b>PVAR</b>	Variable airflow	<b>HES9</b>	15 kg/h immersed electrodes steam humidifier
<b>PCOSM</b>	Constant supply airflow	<b>MHP</b>	High and low pressure gauges
<b>PAQC</b>	Air quality probe for CO2 rate check	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>PAQCV</b>	Air quality sensor for CO2 and VOC rate check	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CREFB</b>	Device for fan consumption reduction of the external section, ECOBREEZE type	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>VENH</b>	High static pressure fans	<b>CSOND</b>	Temperature and humidity ambient control with built-in probes
<b>F7</b>	High efficiency F7 air filter (ISO 16890 ePM1 55%)	<b>DML</b>	Demand Limit
<b>FES</b>	Electronic filters (ISO 16890 ePM1 90%)	<b>PM</b>	Phase monitor
<b>PSAF</b>	Differential pressure switch for dirty air filters	<b>PFCC</b>	Power factor correction capacitors (cosfi > 0.95)
<b>EH12</b>	9 kW electric heaters (sizes 15.2÷18.2)	<b>DESM</b>	Smoke detector
<b>EH14</b>	12 kW electric heaters (sizes 15.2÷30.4)	<b>SFSTC</b>	Progressive compressor start-up device
<b>EH17</b>	18 kW electric heaters	<b>CLMX</b>	Clivet Master System
<b>EH20</b>	24 kW electric heaters (sizes 20.4÷44.4)	<b>PCM0</b>	Sandwich panels of the handling zone in M0 fire reaction class
<b>EH24</b>	36 kW electric heaters (sizes 33.4÷44.4)	<b>AMRX</b>	Rubber antivibration mounts
<b>CHW2</b>	Two-rows hot water coil	<b>AMRMX</b>	Rubber antivibration mounts for unit and gas module (sizes 20.4÷44.4)
<b>CHWER</b>	Energy recovery from food refrigeration	<b>RCX</b>	Roof curb
<b>3WVM</b>	Modulating 3-way valve	<b>UVC</b>	UV-C germicidal lamps
<b>2WVM</b>	Modulating 2-way valve		
<b>GC01</b>	Condensing gas heating module with modulating control 35kW (sizes 15.2÷18.2)		
<b>GC01X</b>	Condensing gas heating module with modulating control 35kW (sizes 20.4÷30.4)		
<b>GC09</b>	Condensing gas heating module with modulating control 65kW (sizes 15.2÷18.2)		

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.

# CSRT-XHE2 CSRN-XHE2

49.4÷110.4

## CLIVETPack<sup>2</sup>

### Packaged air-conditioning unit

CSRT-XHE2: cooling only

CSRN-XHE2: heat pump

Air cooled

Roof Top

Capacity from 155 to 376 kW



ErP  
compliant

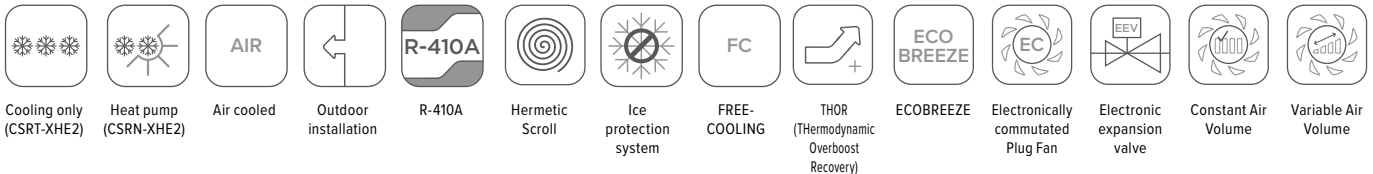
**CSRT-XHE2 and CSRN-XHE2** are Rooftop designed for the air-conditioning of surfaces such as supermarkets, commercial areas, manufacturing areas, railway stations and airports.

The entire range is designed for maximum seasonal efficiency, with particular attention to the situations at partial load, thanks to the double cooling circuit with tandem scroll compressors, electronically controlled fans with brushless motors, large heat exchange surfaces, microprocessor control with dedicated control.

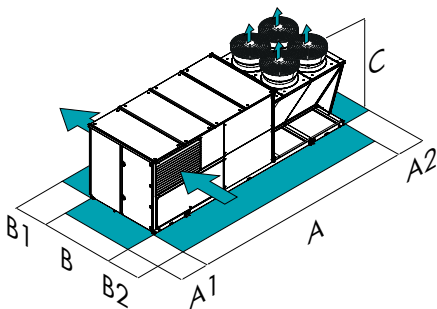
■ **VERSATILITY OF USE:** wide range of versions and options make the unit extremely flexible and suitable for the most different project situations

■ **EASY TO POSITION AND INSTALL:** the units are exceptionally compact, allow bottom or horizontal supply and return air.

## functions and features



## dimensions and clearances



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

Size	CSRT-XHE2	49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
CAK A - Length	mm	5250	5250	6670	6670	6670	8510	8510	8510
CAK B - Width	mm	2326	2326	2326	2326	2326	2326	2326	2326
CAK C - Height	mm	2410	2410	2410	2410	2410	2410	2410	2410
CAK A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CBK Operating weight	kg	2102	2418	2573	2765	3181	3283	3528	4059
CAK Operating weight	kg	2102	2418	2573	2765	3181	3283	3528	4059
CCKP Operating weight	kg	2313	2630	2851	3043	3460	3637	3882	4414

Size	CSRN-XHE2	49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
CAK A - Length	mm	5250	5250	6670	6670	6670	8510	8510	8510
CAK B - Width	mm	2326	2326	2326	2326	2326	2326	2326	2326
CAK C - Height	mm	2410	2410	2410	2410	2410	2410	2410	2410
CAK A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CBK Operating weight	kg	2189	2512	2688	2880	3305	3430	3674	4217
CAK Operating weight	kg	2189	2512	2688	2880	3305	3430	3674	4217
CCK Operating weight	kg	2304	2628	2839	3031	3457	3622	3867	4411
CCKP Operating weight	kg	2400	2724	2966	3158	3583	3784	4029	4571

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  
 CCKP Configuration with double fan section with fresh air and THOR thermodynamic recovery

## versions and configurations

### CONFIGURATION:

- CAK** Configuration with single fan section for full recirculation (Standard)
- CBK** Configuration with single fan section for recirculation and fresh air
- CCK** Configuration with double fan section for recirculation, fresh and exhaust air

- CCKP** Configuration with double fan section with fresh air and THOR thermodynamic recovery

### TYPE FAN EXTERNAL SECTION:

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

## technical data

Size		CSRT-XHE2	49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
CCKP	▶ Cooling capacity	(1) kW	174	185	220	241	279	334	355	375
CCKP	Sensible capacity	(1) kW	128	138	160	180	202	244	256	273
CCKP	Compressor power input	(1) kW	41,5	45,5	50,6	59,6	65,5	76,8	85,7	96,3
CCKP	▶ Cooling capacity (EN14511:2018)	(9) kW	151,9	161,2	191,2	209,3	239,5	291,0	304,9	325,3
CCKP	EER (EN14511:2018)	(9) -	3,24	3,12	2,53	2,78	3,11	3,19	3,02	2,88
CCKP	Refrigeration circuits	Nr	2	2	2	2	2	2	2	2
CCKP	No. of compressors	Nr	4	4	4	4	4	4	4	4
CCKP	Type of compressors	(2) -	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
CCKP	Supply airflow	m <sup>3</sup> /h	26000	29000	33000	37000	44000	51000	56000	60000
CCKP	Type of supply fan	(3) -	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of supply fans	Nr	3	3	4	4	4	6	6	6
CCKP	Fan diameter	mm	560	560	560	560	560	560	560	560
CCKP	Max. static pressure supply fan	(4) Pa	630	540	660	570	360	620	540	460
CCKP	Type of exhaust fan	(3) -	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of exhaust fans	(5) Nr	2	2	2	2	2	2	2	2
CCKP	Standard power supply	V	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
CCKP	Sound pressure level	(6) dB(A)	72	72	72	73	74	76	77	78
<b>Directive ErP (Energy Related Products)</b>										
CCKP	SEER - AVERAGE Climate	(8) -	3,99	3,77	3,95	4,19	4,35	4,84	4,28	4,04
CCKP	η <sub>sc</sub>	(8) %	156,6	147,7	155	164,6	170,9	190,4	168	158,7
Size		CSRN-XHE2	49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
CCKP	▶ Cooling capacity	(1) kW	175	186	220	242	280	336	356	376
CCKP	Sensible capacity	(1) kW	129	139	160	180	202	247	256	274
CCKP	Compressor power input	(1) kW	41,1	45,1	50,1	59,0	65,1	76,4	85,1	95,3
CCKP	▶ Cooling capacity (EN14511:2018)	(9) kW	152,5	160,8	192,5	209,6	240,2	291,9	305,9	326,3
CCKP	EER (EN14511:2018)	(9) -	3,29	3,09	3,24	3,05	3,15	3,22	3,05	2,91
CCKP	▶ Heating capacity	(7) kW	176	187	218	241	279	330	353	382
CCKP	Compressor power input	(7) kW	32,8	36,5	40,3	46,3	53,0	62,1	67,3	75,0
CCKP	▶ Heating capacity (EN14511:2018)	(10) kW	149,8	158,7	185,4	208,9	235,1	285,3	302,8	326,8
CCKP	COP (EN14511:2018)	(10) -	3,53	3,43	3,43	3,37	3,36	3,41	3,33	3,24
CCKP	Refrigeration circuits	Nr	2	2	2	2	2	2	2	2
CCKP	No. of compressors	Nr	4	4	4	4	4	4	4	4
CCKP	Type of compressors	(2) -	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
CCKP	Supply airflow	m <sup>3</sup> /h	26000	29000	33000	37000	44000	51000	56000	60000
CCKP	Type of supply fan	(3) -	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of supply fans	Nr	3	3	4	4	4	6	6	6
CCKP	Fan diameter	mm	560	560	560	560	560	560	560	560
CCKP	Max. static pressure supply fan	(4) Pa	630	540	660	570	360	620	540	460
CCKP	Type of exhaust fan	(5) -	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of exhaust fans	(5) Nr	2	2	2	2	2	2	2	2
CCKP	Standard power supply	V	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
CCKP	Sound pressure level	(6) dB(A)	72	72	72	73	74	76	77	78
<b>Directive ErP (Energy Related Products)</b>										
CCKP	SEER - AVERAGE Climate	(8) -	4,56	3,98	4,41	4,29	4,28	4,63	4,12	3,91
CCKP	η <sub>sc</sub>	(8) %	179,6	156,2	173,4	168,5	168,3	182,0	162,0	153,3
CCKP	SCOP - AVERAGE Climate	(8) -	3,65	3,42	3,39	3,35	3,38	3,35	3,30	3,40
CCKP	η <sub>sh</sub>	(8) %	143,0	133,8	132,6	131,0	132,2	131,0	129,0	133,0

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.

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

- (1) Ambient air at 27°C D.B./19°C W.B. Entering external exchanger air temperature 35°C;
- (2) SCROLL = scroll compressor
- (3) RAD = radial fan
- (4) Net outside static pressure to win the outlet and intake onboard pressure drops
- (5) Configuration with double fan section for recirculation, fresh air, exhaust, thermodynamic recovery (CCK) and configuration with double fan section with renewal air and THOR thermodynamic recovery (CCKP)
- (6) The sound levels are referred to unit operating at full load in nominal conditions. The sound pressure level is referred to a distance of 1 m. from the ducted unit surface operating in free field conditions. External static pressure 50 Pa. (standard UNI EN ISO 9614-2)

- (7) Ambient air at 20°C D.B. external exchanger entering air 7°C/6°C W.B.
- (8) Data calculated according to the EN 14825:2018 Regulation
- (9) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C. EER according to EN 14511-2018,
- (10) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.. COP according to EN 14511-2018

CCKP Configuration with double fan section with fresh air and THOR thermodynamic recovery

## accessories

<b>THR</b>	Exhaust air THOR thermodynamic energy recovery (CCKP version)	<b>GC13X</b>	Condensing gas heating module with modulating control 164kW (sizes 60.4÷110.4)
<b>REC</b>	Exhaust air thermodynamic energy recovery (CCK version)	<b>GC11X</b>	Condensing gas heating module with modulating control 100kW (sizes 49.4÷80.4)
<b>FC</b>	Thermal FREE-COOLING (standard for CCK, CCKP version)	<b>GC06X</b>	Condensing gas heating module with modulating control 200kW (sizes 60.4÷110.4)
<b>FCE</b>	FREE-COOLING entalpico (optional for CCK, CCKP version)	<b>GC07X</b>	Condensing gas heating module with modulating control 300kW (sizes 90.4÷110.4)
<b>M3</b>	Downward air supply	<b>LTEMP1</b>	Application for low outdoor temperature
<b>M5</b>	Upflow air supply	<b>CPHG</b>	Hot gas re-heating coil
<b>R3</b>	Downward air return	<b>HES8</b>	8 kg/h immersed electrodes steam humidifier
<b>SER</b>	Outdoor air damper manually set (CBK version)	<b>HES9</b>	15 kg/h immersed electrodes steam humidifier
<b>SERM</b>	Outdoor air motorized on/off damper (optional for CBK)	<b>MHP</b>	High and low pressure gauges
<b>SFCM</b>	Modulating motorized FREE-COOLING damper (standard for CCK, CCKP version)	<b>MOB</b>	Serial port RS485 with Modbus protocol
<b>SFCEM</b>	Modulating motorized FREE-COOLING damper and min. outdoor air motorized on-off damper (optional for CCK, CCKP version)	<b>LON</b>	Serial port RS485 with LonWorks protocol
<b>PVAR</b>	Variable airflow	<b>BACIP</b>	BACnet-IP serial communication module
<b>PCOSM</b>	Constant supply airflow	<b>SIX</b>	Service interface (cable of 1,5 metres)
<b>PAQC</b>	Air quality probe for CO2 rate check	<b>MF2</b>	Multi-function phase monitor
<b>PAQCV</b>	Air quality sensor for CO2 and VOC rate check	<b>PFCC</b>	Power factor correction capacitors (cosfi > 0.95)
<b>CREFB</b>	Device for fan consumption reduction of the external section, ECOBREEZE typei	<b>DESM</b>	Smoke detector
<b>VENH</b>	High static pressure fans	<b>DML</b>	Demand Limiti
<b>F7</b>	High efficiency F7 air filter (ISO 16890 ePM1 55%)	<b>CLMX</b>	Clivet Master System
<b>FES</b>	Electronic filters (ISO 16890 ePM1 90%)	<b>PCMO</b>	Sandwich panels of the handling zone in M0 fire reaction class
<b>PSAF</b>	Differential pressure switch for dirty air filters	<b>AMRX</b>	Rubber antivibration mounts
<b>EH20</b>	24 kW electric heaters	<b>AMRMX</b>	Rubber antivibration mounts for unit and gas module
<b>EH24</b>	36 kW electric heaters	<b>RCX</b>	Roof curb
<b>EH28</b>	48 kW electric heaters	<b>CECA</b>	Copper / aluminium evaporator coil with acrylic lining
<b>CHW2</b>	Two-rows hot water coil	<b>CCCA</b>	Copper / aluminium condenser coil with acrylic lining
<b>CHWER</b>	Energy recovery from food refrigeration	<b>UVC</b>	UV-C germicidal lamps
<b>3WVM</b>	Modulating three-way valve	<b>CSRT-XHE2 ONLY:</b>	
<b>2WVM</b>	Modulating 2-way valve	<b>RCAW</b>	Active winter thermodynamic recovery on expelled air
<b>GC09X</b>	Condensing gas heating module with modulating control 65kW (sizes 49.4÷54.4)		
<b>GC12X</b>	Condensing gas heating module with modulating control 130kW (sizes 49.4÷54.4, 90.4÷110.4)		
<b>GC10X</b>	Condensing gas heating module with modulating control 82kW (sizes 49.4÷80.4)		

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.

## CLIVETPack<sup>2</sup>

### Packaged air-conditioning unit

Reversible heat pump

Air cooled

Roof Top

Capacity from 47 to 174 kW



The **CSNX-XHE2** Rooftop series are units designed for the air conditioning of high attendance areas such as Congress Centers, cinemas, theaters, restaurants, bars, discoteques. The entire range is designed for maximum seasonal efficiency, with particular attention to the situations at partial load, thanks to the double cooling circuit with tandem scroll compressors, electronically controlled fans with brushless motors, large heat exchange surfaces, microprocessor control with dedicated control.

■ **VERSATILITY OF USE:** wide range of versions and options make the unit extremely flexible and suitable for the most different project situations

■ **REDUCED MANAGEMENT COSTS:** the high efficiency at partial load, the freecooling, the exhaust air energy recovery, the electrostatic air filters at low pressure drop reduce the consumptions in the annual operation.

■ **EASY TO POSITION AND INSTALL:** the units are exceptionally compact, allow bottom or horizontal supply and return air for maximum integration in buildings.



Unit listed on  
www.eurovent-certification.com



ErP  
compliant

## functions and features



Heat pump



Air cooled



Outdoor  
installation



R-410A



Hermetic  
Scroll



Ice  
protection  
system



FREE-  
COOLING



THOR  
(Thermodynamic  
Overboost  
Recovery)



ECOBREEZE



Electronically  
commutated  
Plug Fan



Electronic  
expansion  
valve

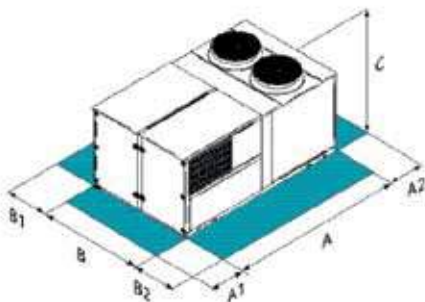


Constant Air  
Volume



Variable Air  
Volume

## dimensions and clearances



Size	CSNX-XHE2	12.3	15.3	16.4	20.4	24.4	33.4	40.4	44.4
CCKP A - Length	mm	3040	3040	4050	4050	4050	4650	4650	4650
CCKP B - Width	mm	2625	2625	2625	2625	2625	2625	2625	2625
CCKP C - Height	mm	1560	1560	1650	1650	1650	1930	1930	1930
CCKP A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CCKP Operating weight	kg	1448	1472	1607	1642	1676	1847	1879	1883

The above mentioned data are referred to standard units for the constructive configurations indicated. For all the other configurations, refer to the relative Technical Bulletin.

CCKP Configuration with double fan section with fresh air and THOR thermodynamic recovery-Small gas module

**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** 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		CSNX-XHE2	12.3	15.3	16.4	20.4	24.4	33.4	40.4	44.4	
<b>Eurovent</b>											
CCKP	▶ Cooling capacity	(1)	kW	46,3	57,1	75,4	87,6	106,7	134,4	158,3	173,9
CCKP	Sensible capacity	(1)	kW	30,5	39,5	51,4	57,2	71,2	92,7	110,4	119,8
CCKP	Compressor power input	(1)	kW	9,2	12,3	15,5	19,4	22,8	28,0	35,2	39,5
CCKP	▶ Cooling capacity (EN14511:2018)	(8)	kW	32,1	41,4	58	70,1	76,8	102,1	126,9	138,0
CCKP	EER (EN14511:2018)	(8)	-	2,58	2,60	3	2,98	2,79	3,14	3,25	3,14
CCKP	▶ Heating capacity	(2)	kW	44,2	54,8	71,5	81,1	99,2	121,1	149,5	165,7
CCKP	Compressor power input	(2)	kW	8,9	10,8	13,7	15,0	17,0	20,6	25,3	29,4
CCKP	▶ Heating capacity (EN14511:2018)	(9)	kW	35,1	43,8	60,0	69,4	84,2	101,7	123,2	135,0
CCKP	COP (EN14511:2018)	(9)	-	2,66	2,67	2,64	2,74	3,01	3,36	3,43	3,47
CCKP	Refrigeration circuits		Nr	2	2	2	2	2	2	2	2
CCKP	N° compressori		Nr	2	2	4	4	4	4	4	4
CCKP	No. of compressors	(3)	-	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
CCKP	Supply airflow		m³/h	4500	6500	8000	9000	12000	14000	16000	18000
CCKP	Type of supply fan	(4)	-	RAD	RAD	RAD	RAD	RAD	RAD	RAD	RAD
CCKP	Number of supply fans		Nr	1	1	1	1	2	2	2	
CCKP	Fan diameter		mm	500	500	560	560	630	630	630	
CCKP	Max. static pressure supply fan	(5)	Pa	830	645	585	515	300	610	565	515
CCKP	Type of exhaust fan		-	RAD	RAD	RAD	RAD	RAD	RAD	RAD	
CCKP	Number of exhaust fans	(4)	Nr	1	1	1	1	2	2	2	
CCKP	Standard power supply		V	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	
ST	Sound pressure level	(6)	dB(A)	65	66	67	68	69	70	71	72
<b>Directive ErP (Energy Related Products)</b>											
SEER - AVERAGE Climate	(7)	-	3,80	3,74	4,29	4,30	4,21	3,97	4,37	4,47	
$\eta_{sc}$	(7)	%	149,0	146,6	168,7	168,9	165,2	155,8	172,0	175,7	
SCOP - AVERAGE Climate	(7)	-	3,22	3,23	3,20	3,27	3,50	3,73	3,84	3,79	
$\eta_{sh}$	(7)	%	125,8	126,2	125,0	127,8	137,0	146,2	150,6	148,6	

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.

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

- (1) Ambient air at 27°C/19°C W.B. Entering external exchanger air temperature 35°C;
- (2) Ambient air at 20°C D.B./13,7°C W.B. external exchanger entering air 7°C / 6°C W.B.
- (3) SCROLL = scroll compressor
- (4) RAD = radial fan
- (5) Net outside static pressure to win the outlet and intake onboard pressure drops

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

- (7) Data calculated according to the EN 14825:2018 Regulation
- (8) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 27°C D.B./19°C W.B.; outdoor temperature 35°C. EER according to EN 14511-2018
- (9) Capacity in total recirculation according to EN 14511-2018, indoor air temperature 20°C; outdoor temperature 7°C D.B./6°C W.B.. COP according to EN 14511-2018

PACKAGED

## accessories

<b>THR</b>	Exhaust air THOR thermodynamic energy recovery (CCKP version)
<b>FCE</b>	Enthalpy FREE-COOLING
<b>M3</b>	Downward air supply
<b>M5</b>	Upflow air supply
<b>R3</b>	Downward air return
<b>PVAR</b>	Variable airflow
<b>CREFB</b>	Application in spaces with forced air exhaust at variable flow and exhaust section
<b>VENH</b>	High static pressure fans
<b>EXFLOWC</b>	Application in spaces with forced air exhaust at variable flow and exhaust section
<b>F7</b>	High efficiency F7 air filter (ISO 16890 ePM1 55%)
<b>FES</b>	Electronic filters (ISO 16890 ePM1 90%)
<b>PSAF</b>	Differential pressure switch for dirty air filters
<b>PAQC</b>	Air quality probe for CO2 rate check
<b>PAQCV</b>	Air quality sensor for CO2 and VOC rate check
<b>EH10</b>	6 kW electric heaters
<b>EH12</b>	9 kW electric heaters
<b>EH17</b>	18 kW electric heaters
<b>EH15</b>	13,5 kW electric heaters
<b>EH22</b>	27 kW electric heaters
<b>EH24</b>	36 kW electric heaters
<b>CHW2</b>	Two-rows hot water coil
<b>3WVM</b>	Modulating three-way valve
<b>2WVM</b>	Modulating 2-way valve
<b>GC01X</b>	Condensing gas heating module with modulating control 35kW
<b>GC08X</b>	Condensing gas heating module with modulating control 44kW
<b>GC09X</b>	Condensing gas heating module with modulating control 65kW
<b>GC10X</b>	Condensing gas heating module with modulating control 82kW
<b>GC11X</b>	Condensing gas heating module with modulating control 100kW

<b>GC12X</b>	Condensing gas heating module with modulating control 130kW
<b>LTEMP1</b>	Application for low outdoor temperature
<b>CPHG</b>	Hot gas re-heating coil
<b>HSE3</b>	3 kg/h immersed electrodes steam humidifier
<b>HSE5</b>	5 kg/h immersed electrodes steam humidifier
<b>HSE8</b>	8 kg/h immersed electrodes steam humidifier
<b>HSE9</b>	15 kg/h immersed electrodes steam humidifier
<b>MHP</b>	High and low pressure gauges
<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>CTERM</b>	Remote keypad for indoor temperature and humidity control
<b>CSOND</b>	Temperature and humidity ambient control with built-in probes
<b>DML</b>	Demand Limiti
<b>PM</b>	Phase monitor
<b>DESM</b>	Smoke detector
<b>PFCC</b>	Power factor correction capacitors (cosfi > 0.95)
<b>SFSTC</b>	Progressive compressor start-up device
<b>CLMX</b>	Clivet Master System
<b>PCMO</b>	Sandwich panels of the handling zone in M0 fire reaction class
<b>AMRX</b>	Rubber antivibration mounts
<b>AMRMX</b>	Rubber antivibration mounts for unit and gas module
<b>RCX</b>	Roof curb
<b>AXI</b>	High efficiency diffuser for axial fan - AxiTop
<b>PTAAX</b>	Remote ambient air temperature sensor
<b>PTUAX</b>	Ambient air humidity and temperature remote probe
<b>PVMEV</b>	4-20mA signal for exhaust and supply airflow modulation
<b>UVC</b>	UV-C germicidal lamps

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.

## CLIVETPack<sup>2</sup> FFA

### Packaged air-conditioning unit

CSRN-XHE2 FFA: reversible heat pump

Air cooled

Roof Top

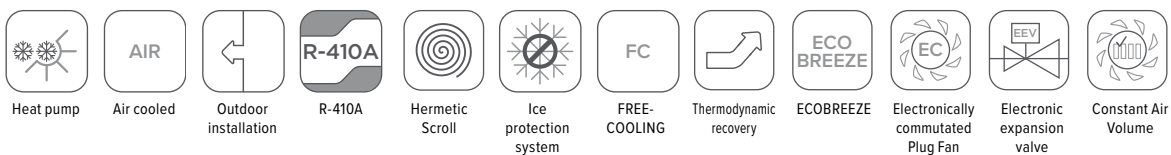
Capacity from 33 to 90 kW



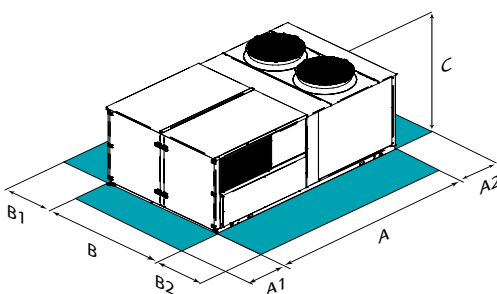
The **CLIVETPack2 FFA** (full fresh air) are rooftop units. Destined to the air-conditioning of all those environments that need full fresh air-conditioning that feature suction hoods such as kitchens, laboratories, projection rooms, etc.

- **VERSATILITY OF USE:** wide range of versions and options make the unit extremely flexible and suitable for the most different project situations
- **REDUCED MANAGEMENT COSTS:** the high efficiency at partial load, the freecooling, the exhaust air energy recovery, the electrostatic air filters at low pressure drop reduce the consumptions in the annual operation.
- **EASY TO POSITION AND INSTALL:** the units are exceptionally compact, allow bottom or horizontal supply and return air.

### 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	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
CCFFA Operating weight	kg	1401	1425	1560	1595	1629
CBFFA Operating weight	kg	1273	1297	1358	1393	1427

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

## versions and configurations

### CONFIGURATION:

**CBFFA** Configuration for fresh air supply only (Standard)

**CCFFA** Configuration for fresh air supply with extraction and exhaust

## technical data

Size	CSRN-XHE2-FFA	12.2	16.2	20.4	22.4	24.4
CBFFA ▶ Cooling capacity	(1) kW	33,1	49,5	76,1	83,4	90,4
CBFFA Sensible capacity	(1) kW	18,8	27,8	38,3	43,3	48,0
CBFFA Compressor power input	(1) kW	9,20	12,9	20,0	21,7	23,3
CBFFA EER	(1) -	3,60	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	9,90	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 Supply airflow	m <sup>3</sup> /h	3400	4500	6000	7000	8000
CBFFA Type of supply fan	(4) -	RAD	RAD	RAD	RAD	RAD
CBFFA Number of supply fans	Nr	1	1	1	1	1
CBFFA Fan diameter	mm	400	400	560	560	560
CBFFA Max. static pressure supply fan	(5) Pa	675	470	775	730	650
CBFFA Standard power supply	V	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Sound pressure level	(6) dB(A)	65	66	67	68	69

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.

- (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

(5) Available nett pressure to overcome the supply

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

CBFFA Configuration for fresh air supply only

PACKAGED

## accessories

<b>RE1</b>	Thermodynamic heat recovery system (CCFFA version)	<b>GC01X</b>	Condensing gas heating module with modulating control 35kW (sizes 12.2÷16.2)
<b>M3</b>	Downward air supply	<b>LTEMP1</b>	Application for low outdoor temperature
<b>M5</b>	Upflow air supply	<b>CPHG</b>	Hot gas re-heating coil
<b>R3</b>	Downward air return	<b>HSE8</b>	8 kg/h immersed electrodes steam humidifier
<b>DAOP</b>	Over pressure damper	<b>HSE9</b>	15 kg/h immersed electrodes steam humidifier (sizes 20.4÷24.4)
<b>PCOSM</b>	Constant supply airflow	<b>HSE5</b>	5 kg/h immersed electrodes steam humidifier (sizes 12.2÷16.2)
<b>PCOSME</b>	Constant airflow in supply and exhaust (CCFFA version)	<b>MHP</b>	High and low pressure gauges
<b>CREFB</b>	Device for fan consumption reduction of the external section, ECOBREEZE type	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>VENH</b>	High static pressure fans	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>F7</b>	High efficiency F7 air filter (ISO 16890 ePM1 55%)	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>FES</b>	Electronic filters (ISO 16890 ePM1 90%)	<b>CTERM</b>	Remote keypad for indoor temperature and humidity control
<b>PSAF</b>	Differential pressure switch for dirty air filters	<b>PM</b>	Phase monitor
<b>EH17</b>	18 kW electric heaters	<b>PFCC</b>	Power factor correction capacitors (cosφ > 0.95)
<b>EH22</b>	27 kW electric heaters (sizes 20.4÷24.4)	<b>SFSTC</b>	Progressive compressor start-up device
<b>EH12</b>	9 kW electric heaters (sizes 12.2÷16.2)	<b>CLMX</b>	Clivet Master System
<b>EH14</b>	12 kW electric heaters (sizes 12.2÷16.2)	<b>PCMO</b>	Sandwich panels of the handling zone in M0 fire reaction class
<b>CHW2</b>	Two-rows hot water coil	<b>AMRX</b>	Rubber antivibration mounts
<b>3WVM</b>	Modulating three-way valve	<b>AMRMX</b>	Rubber antivibration mounts for unit and gas module
<b>2WVM</b>	Modulating 2-way valve	<b>RCX</b>	Roof curb
<b>GC08X</b>	Condensing gas heating module with modulating control 44kW		
<b>GC09X</b>	Condensing gas heating module with modulating control 65kW		
<b>GC10X</b>	Condensing gas heating module with modulating control 82kW (sizes 20.4÷24.4)		

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.

# Clivet Master System

Control device for Packaged systems



- ✓ CENTRALISED MANAGEMENT OF PACKAGED UNITS
- ✓ UP TO 6 UNITS
- ✓ INTUITIVE INTERFACE FOR THE NON SPECIALISED USER
- ✓ ACCESS TO SENSITIVE PARAMETERS IS PASSWORD PROTECTED
- ✓ UNIT ROTATION AND OTHER GROUP LOGICS

## Our Remote Management System for units

Clivet Master System is the ideal unit remote control system for packaged climate control units. Thanks to a single control units, with built in screen display, it is possible to access in a simple and intuitive manner all information on system and climate control unit status.

Some of its main functions:

- auto-detection of units connected
- setting all parameters for the system and the individual unit
- alarms display and management
- timed operation programming
- unit rotation even for an individual zone

Clivet Master System is plugged into a dedicated switchboard and is equipped with devices for 230V single-phase power supply and for serial communication with rooftop units. Each unit must be equipped with a RS485 Modbus serial port.

Serial communication allows remote distances of up to 1000 m.



PACKAGED

## Technical data

Power supply nominal voltage:	230 / 1 / 50
Display:	8" LCD Touch Screen
Degree of protection:	IP65
Connectivity:	1 x RS485 / 1 x front USB for exporting alarms history file



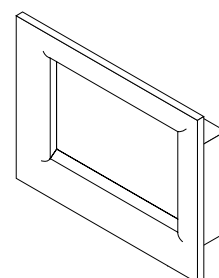
## Field of use

Operational temperature:	from 0°C to 50°C
Stocking temperature:	from -20°C to +60°C
Relative humidity:	from 10% to 90% without condensation
Installation:	The display must not be exposed to direct sunlight or sources of heat



## Dimensions and weight

Body dimensions (mm) LxHxD:	222 x 167 x 92
Frame dimensions (mm) LxHxD:	231 x 176 x 98
Weight (kg):	3.5



Commercial

ELFOFresh Large

Airflow Capacity (A35)

1200 ÷ 3300 m<sup>3</sup>/h  
6 ÷ 16 kW

Products



Thermodynamic recovery



Electronic filtering



Free Cooling



Active dehumidification

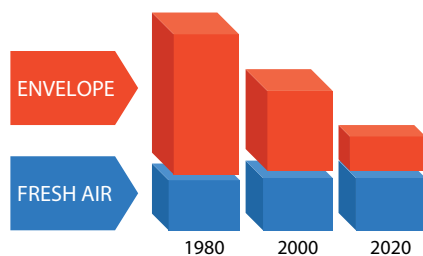


EC fans

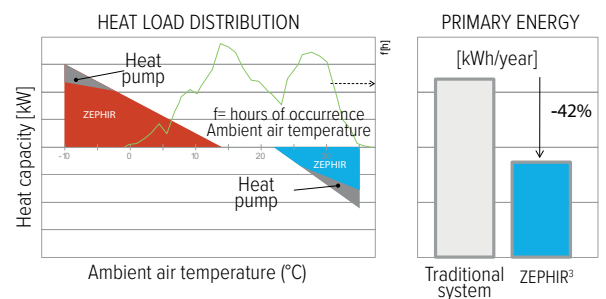


Variable airflow

1. CENTRAL AIR RENEWAL



2. HIGH ENERGY EFFICIENCY



# Commercial

## ZEPHIR<sup>3</sup>

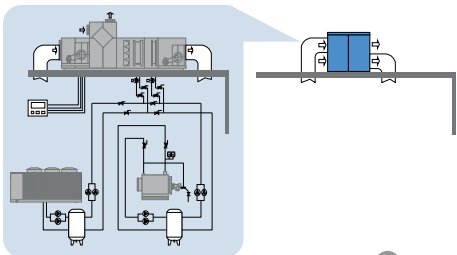
1000 ÷ 14000 m<sup>3</sup>/h  
10 ÷ 96 kW



3. 99% PURIFIED AIR



4. SIMPLIFIES THE SYSTEM



# PRIMARY AIR System

## System components

SERIES	SIZE FROM	TO	NAME	PAGE
<b>Make-up air packaged unit, full fresh air with supply/exhaust section and thermodynamic heat recovery</b>				
CPAN-XHE3	Size 1	Size 6	ZEPHIR <sup>3</sup>	132
CPAN-U	17	51	ELFOFresh Large	136



## ZEPHIR<sup>3</sup>

### Make-up air unit, full fresh air

With return/exhaust and thermodynamic heat recovery

Reversible heat pump technology

Indoor or outdoor installation

**Air flow rate from 278 to 3900 l/s  
(from 1000 to 14000 m<sup>3</sup>/h)**

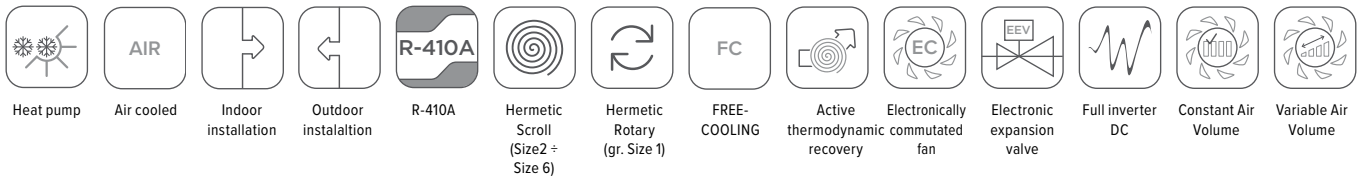
**ZEPHIR<sup>3</sup>** encases the entire primary air system in a single packaged system.

- It extracts stale air and purifies outdoor air through the high efficiency electronic filters (ISO 16890 ePM1 90%), effective against nanoparticles, PM1, bacteria, pollen and virus.

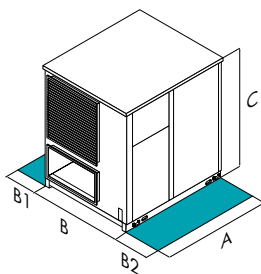
- The **active thermodynamic recovery**, based on the reversible heat pump technology, exploits stale as thermal source. It features high energy efficiency, thanks to the **variable capacity compressors** and the electronically controlled fans with variable flow capability. This way, it also gets rid of the major consumption due to high pressure drops from passive recovery units.

- ZEPHIR<sup>3</sup> eliminates components with no useful effect, such as storage tanks, pipes and pumps, also thanks to the **free modulating reheating** with hot gas recovery. Built-in controls allow operation with **constant supply temperature, at maximum available capacity, at high airflow.**

## 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	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.

# technical data

Size	CPAN-XHE3	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6
<b>Operation with constant supply temperature</b>							
<b>Standard airflow</b>							
Nominal air flow	l/s	361	611	1278	2000	2638	3333
Nominal air flow	m <sup>3</sup> /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
<b>Cooling</b>							
Total cooling capacity	(1) kW	10,6	17,5	38,7	58,4	79,0	95,9
Re-heating capacity	(1) kW	2,74	4,23	11,0	15,2	21,7	23,4
Compressor power input	(1) kW	2,91	4,92	11,1	15,7	20,4	23,2
EERc	(1) -	4,59	4,43	4,48	4,67	4,94	5,13
<b>Heating</b>							
Heating capacity	(2) kW	5,93	10,0	21,0	32,9	43,4	54,9
Compressor power input	(2) kW	0,71	1,23	2,54	4,22	5,75	8,77
COPc	(2) -	8,38	7,45	8,28	7,80	7,55	6,26
<b>Operation at the maximum available capacity</b>							
<b>Standard airflow</b>							
Nominal air flow	l/s	361	611	1278	2000	2638	3333
Nominal air flow	m <sup>3</sup> /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
<b>Cooling</b>							
Total cooling capacity	(3) kW	10,6	17,5	38,7	58,4	79,0	95,9
Compressor power input	(3) kW	3,26	5,52	12,5	17,7	22,9	26,1
Additional available capacity to space	(3) kW	3,62	5,72	14,2	20,0	28,2	31,5
EERc	(3) -	3,25	3,18	3,10	3,31	3,45	3,68
<b>Heating</b>							
Heating capacity	(4) kW	10,5	17,8	37,1	58,2	76,8	96,9
Compressor power input	(4) kW	2,28	3,77	7,10	11,2	14,4	18,3
Additional available capacity to space	(3) kW	4,41	7,47	15,6	24,4	32,3	40,7
COPc	(4) -	4,61	4,72	5,21	5,20	5,33	5,29
<b>Operation with high airflow</b>							
<b>Maximum air flow</b>							
Nominal air flow	l/s	528	972	1944	2556	3194	3889
Nominal air flow	m <sup>3</sup> /h	1900	3500	7000	9200	11500	14000
Max external static pressure (supply)	Pa	630	470	630	450	345	630
Max external static pressure (extraction)	Pa	630	630	630	530	400	630
<b>Cooling</b>							
Total cooling capacity	(5) kW	9,20	18,2	31,9	45,1	62,0	80,6
Compressor power input	(5) kW	1,56	3,38	4,46	6,97	13,8	17,8
EERc	(5) -	5,89	5,38	7,15	6,48	4,50	4,51
<b>Heating</b>							
Heating capacity	(6) kW	6,00	11,1	22,1	29,1	36,3	44,2
Compressor power input	(6) kW	0,54	1,31	2,48	3,11	3,40	5,44
COPc	(6) -	11,1	8,46	8,94	9,36	10,7	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	RAD	RAD	RAD	RAD	RAD
Number of supply fans	Nr	1	1	1	1	1	2
Fan diameter	mm	310	355	500	630	630	500
Type of exhaust fan	-	RAD	RAD	RAD	RAD	RAD	RAD
Number of exhaust fans	Nr	1	1	1	1	1	2
Standard power supply	V	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
Sound pressure level	(9) dB(A)	53	57	61	60	62	69
Minimum air flow	l/s	278	444	917	1444	2083	2639
Minimum air flow	m <sup>3</sup> /h	1000	1600	3300	5200	7500	9500
Maximum air flow	(10) l/s	528	972	1944	2556	3194	3889
Maximum air flow	(10) m <sup>3</sup> /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: 28°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
- (9) The sound pressure level is referred at a distance of 1 m from the ducted unit surface operating in free field conditions. External static pressure 50 Pa. Please note that when the unit is installed in conditions different from nominal test conditions (e.g. near walls or obstacles in general), the sound levels may undergo substantial variations. Sound levels refer to unit with standard air flow rate
- (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)

### VERSON

**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

**MCHSX** Steam-powered humidifying module

**MOB** Serial port RS485 with Modbus protocol

**LON** Serial port RS485 with LonWorks protocol

**BACIP** BACnet-IP serial communication module

**VXSXA** 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

## ELFOFresh Large

### Make-up air unit, full fresh air

With return/exhaust and thermodynamic heat recovery

Reversible heat pump

Indoor installation

**Air flow rate from 330 to 920 l/s  
(from 1200 to 3300 m<sup>3</sup>/h)**

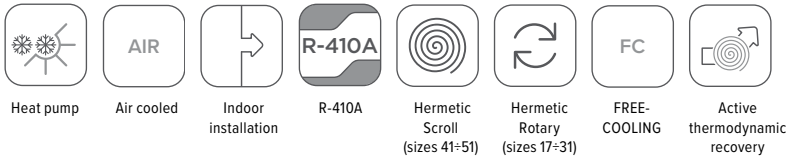


*HID-P1 room thermostat for remote wall mounting. Main functions:*  
 - manual or automatic summer/winter switching  
 - temperature setting  
 - ECO mode (automatic day/night thermoregulation).

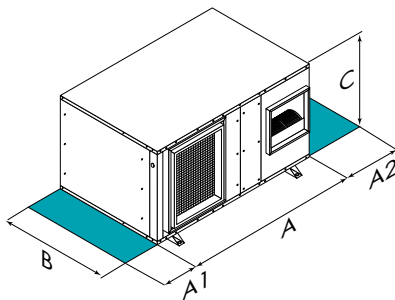
ELFOFresh Large units are designed to guarantee ideal air exchange rates in shops and offices. Their main characteristics include:

- cooling, heating and humidification of outdoor air with only minimal energy consumption thanks to Free-Cooling and an exclusive Active Thermodynamic Heat Recovery that recovers heat from extracted air and returns it to the incoming fresh air;
- it extracts stale air and purifies outdoor air through the high efficiency electronic filters (ISO 16890 ePM1 90%), effective against nanoparticles, PM1, bacteria, pollen and virus (optional).

## 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	CPAN-U	17	21	25	31	41	51
A - Length	mm	1503	1503	1503	1503	1503	1503
B - Width	mm	950	950	950	950	950	950
C - Height	mm	442	442	517	517	668	668
A1	mm	900	900	900	900	900	900
A2	mm	700	700	700	700	700	700
Operating weight	kg	135	145	175	185	215	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.

## versions and configurations

### CONFIGURATION:

- VS** Standard Version (Standard)  
**EPS** Air expulsion to the left

### INTEGRATION COIL:

- Additional coil: not required (Standard)  
**CH20** Integration water coil

## technical data

Size	CPAN-U	17	21	25	31	41	51
SM ▶ Cooling capacity	(1) kW	6,20	7,60	8,60	10,9	12,4	15,9
SM Sensible capacity	(1) kW	5,00	5,80	7,00	8,60	9,50	12,5
SM Compressor power input	(1) kW	1,70	2,10	2,20	2,90	2,80	3,80
SM EER	-	3,55	3,56	3,93	3,77	4,48	4,14
SM ▶ Heating capacity	(2) kW	6,80	8,30	9,20	11,9	13,2	16,9
SM Compressor power input	(2) kW	1,30	1,70	1,80	2,20	2,00	2,80
SM COP	-	5,19	4,92	5,22	5,34	6,47	6,06
SM Refrigeration circuits	Nr	1	1	1	1	1	1
SM No. of compressors	Nr	1	1	1	1	1	1
SM Type of compressors	(3) -	ROT	ROT	ROT	ROT	SCROLL	SCROLL
SM Supply airflow	l/s	330	390	470	610	690	920
SM Supply airflow	m <sup>3</sup> /h	1190	1400	1690	2196	2485	3310
SM Type of supply fan	(4) -	CFG	CFG	CFG	CFG	CFG	CFG
SM Number of supply fans	Nr	1	1	1	1	1	1
SM Max. static pressure supply fan	(5) Pa	190	175	300	180	270	340
SM Exhaust airflow	l/s	300	360	440	550	640	860
SM Exhaust airflow	m <sup>3</sup> /h	1200	1295	1585	1980	4095	3300
SM Number of exhaust fans	Nr	1	1	1	1	1	1
SM Max. exhaust static pressure	Pa	180	165	290	210	250	360
SM Standard power supply	V	230/1/50	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
Sound pressure level	(6) dB(A)	53	55	57	59	61	62

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.

- (1) Air inlet temperature extract heat exchange coil 27°C D.B. - 19°C W.B. Outdoor air temperature 35°C B.S. - 24°C B.U.  
 (2) Exhaust coil inlet air temperature 20°C B.S. - 12°C B.U. Outdoor air temperature 7°C DB - 6°C WB

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

(4) CFG = centrifugal fan

(5) Static pressure available on unit with electronic filters (excluding integration coil)

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

SM Standard

PRIMARY AIR

## accessories

- |  |  |
|--|--|
| <b>FES</b> Electronic filters (ISO 16890 ePM1 90%)                                 | <b>EHP9</b> 2 kW preheating electric heaters (sizes 17÷21)       |
| <b>FEG4</b> Class G4 air filters on outdoor and exhaust air (ISO 16890 Coarse 60%) | <b>EHP7</b> 3 kW preheating electric heaters (sizes 25÷31)       |
| <b>3WVM</b> Modulating three-way valve   | <b>EHP14</b> 4.5 kW preheating electric heaters (sizes 41÷51)    |
| <b>HSE3</b> 3 kg/h immersed electrodes steam humidifier (sizes 17÷21)              | <b>RCMRX</b> Remote control via microprocessor control           |
| <b>HSE5</b> 5 kg/h immersed electrodes steam humidifier (sizes 25÷31)              | <b>PBLC1X</b> Service keypad (cable from 1,5 metres)             |
| <b>HSE8</b> 8 kg/h immersed electrodes steam humidifier (sizes 41÷51)              | <b>PBLC2X</b> Local control portable keypad with cable 20 metres |
| <b>PSAF</b> Differential pressure switch for dirty air filters                     | <b>PM</b> Phase monitor (sizes 25÷51)                            |
| <b>SP1</b> RS485 remote communication serial port                                  |  |

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.

Low and medium attendance applications

	VERSATEMP EQV-X	VERSATEMP EVH-XS	VERSATEMP EVH-X	VERSATEMP EVH-X SPACE
Capacities (A27/W35)	2,1 ÷ 4,1 kW	2,1 ÷ 2,8 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 and high attendance applications

CLIVETPack<sup>2</sup>  
CRH-XHE2

51 ÷ 392 kW



# WLHP System

## System components

SERIES	SIZE FROM	TO	NAME	PAGE
<b>Packaged heat pump - water source - internal vertical installation, with or without casing</b>				
EQV-X	5	21	VERSATEMP	142
<b>Packaged heat pump - water source - internal, horizontal, ductable installation</b>				
EVH-XS	005.1	007.1	VERSATEMP	144
EVH-X	5	17	VERSATEMP	146
EVH-X SPACE	2.1	12.1	VERSATEMP	148
<b>Packaged heat pump - water source - roof top for medium attendance applications</b>				
CRH-XHE2	14.2	110.4	CLIVETPack <sup>2</sup>	150

## VERSATEMP

**Direct expansion high efficiency packaged air conditioner**

Reversible heat pump  
Water cooled

Vertical indoor installation either cased or uncased  
**Capacity from 2,1 to 4,1 kW**



User interface THTUNE (optional) available:  
- built-in  
- wall mounted  
- wall mounted on a flush mounting box.

Some of the main features are:  
- unit on/off  
- temperature measurement with built-in probe  
- main unit information display  
- manual setting of the operating mode (heat/cool) and/or of the setpoint  
- hourly and weekly programming of on/off and of the standard/economic set point  
- manually, or automatically, managing the fan speed, depending on the distance from the set-point.



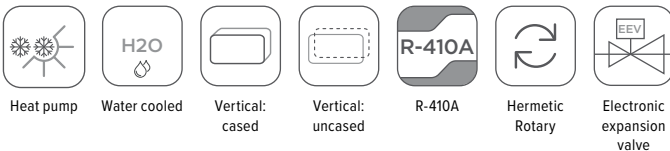
ErP compliant

**VERSATEMP EQV-X** is the high efficiency water source **packaged air conditioner** that automatically either heats or cools the ambient throughout the year, using the **water as source**.

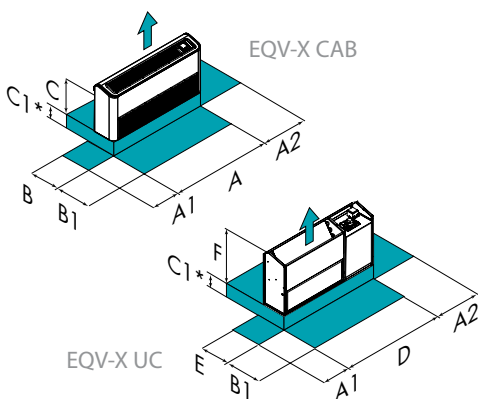
Thanks to the rotary compressor, to the electronic expansion valve, to the plate heat exchanger and to the multispeed centrifugal fan, **VERSATEMP EQV-X** stands out for its **high efficiency in all the operating conditions** and for its **reliability**. The installation is also simplified by the **specific hydraulic pipe works**, supplied already installed and tested, which are available for different solutions.

The **VERSATEMP EQV-X design** can be elegantly added to different settings both in its cased and in its uncased version, the latter being available to be integrated in the furnishing. The **low noise** operation is ensured by the insulation of the compressor compartment, by the accurate balancing of the fans and by the antivibration devices provided for all moving parts.

### 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.

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

(\*) Only for units with floor air inlet

## 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	4,20	4,09	4,22	4,20
▶ Heating capacity	(2) kW	2,54	3,05	3,55	4,29	4,78	5,10
Compressor power input	(2) kW	0,47	0,63	0,70	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 airflow	(4) l/s	106	128	126	208	208	231
Type of supply fan	(5) -	CFG	CFG	CFG	CFG	CFG	CFG
Water flow rate (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
<b>Directive Erp (Energy related Products)</b>							
SEER	(7) -	3,99	4,13	4,08	4,02	3,95	4,22
η <sub>s,c</sub>	(7) -	151,6	157,2	155,2	152,8	150,0	160,8
SCOP	(7) -	4,15	3,80	3,85	3,80	4,02	3,84
η <sub>s,H</sub>	(7) -	158,0	144,0	146,0	144,0	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 EN14511:2018 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. The sound pressure level is referred at a distance of 1m. from the external unit surface, with fairing, fitted to a wall. Please note that when the unit is installed in conditions other than nominal test conditions /for example near walls or obstacles in general) the sound levels may undergo substantial variation. Measurements are made in accordance to the UNI EN ISO 9614-2, with units installed over two sound reflective surfaces.
- (7) Data calculated according to the EN 14825:2018 Regulation

## accessories

<b>CONT</b>	Electronic room control with display, installed in a visible position on the unit with fairing	<b>PFHCX</b>	200 mm flexible pipes for the connection to the water circuit + drop conduit
<b>CONTX</b>	Electronic room control with display, for installation on the uncased unit	<b>PFHC1X</b>	500 mm flexible pipes for the connection to the water circuit + drop conduit
<b>CWMX</b>	Electronic room control with display, for wall installation	<b>IFWX</b>	Steel mesh strainer on the water side
<b>CIWMX</b>	Electronic room control with display, for wall installation in built-in box	<b>CDPX</b>	Condensate drain pump
<b>MIPC</b>	Hydraulic pipework arrangement for loop with constant flow rate with manual valves	<b>CDPA</b>	Condensate drain pump, built-in
<b>MIPV</b>	Hydraulic pipework arrangement for loop with variable flow rate with 2 way ON-OFF valve	<b>FXVFX</b>	Painted plinths for floor fixing
<b>REQV</b>	Constant flow retrofit water connections for EQV,VV,VM units	<b>FXVFHX</b>	Floor mounted painted feet kit with front grille
<b>V2MODX</b>	2-way modulating valve for disposable water system	<b>FXPFX</b>	Zinc-coated plinths for floor fixing on uncased unit
<b>KFVMX</b>	Two ways modulating valve fixing kit for disposable water system	<b>FXPMX</b>	Increased zinc-coated plinths for floor fixing on uncased unit
<b>DAOJX</b>	Air supply duct with flexible connection	<b>BACKV</b>	Painted rear panel for cased version
<b>GOJX</b>	Air supply grille with flexible connection	<b>MOBA</b>	RS485 serial port with Modbus protocol, built-in
<b>FCVBX</b>	Water balancing valve	<b>MOBX</b>	Modbus RS485 serial port kit
		<b>CMSLWX</b>	LonWorks serial communication module
		<b>BACX</b>	BACnet serial communication module
		<b>CSVX</b>	Couple of manual 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 2.1 to 2.8 kW**



**VERSATEMP EVH-XS** is the **high efficiency packaged air-conditioner** that automatically heats or cools rooms throughout the whole year, using **water as source**.

Its strength is the **reduced height** directly comparable with a horizontal fan coil, ideal for installation in offices, hotel rooms or for applications with stringent architectural constraints.

Thanks to its rotating compressor, its mechanical expansion valve, its plate exchanger and its multi-speed centrifugal fan with brushless EC motor, this unit stands out due to its **high level of efficiency in all operating conditions** and its **great reliability**.

The operating silence is ensured by the particular sound-proofing of the compressor compartment, by the accurate balancing of the fans and by the standard anti-vibration devices for all moving parts.

### functions and features



Heat pump



Water cooled



Horizontal:  
uncased

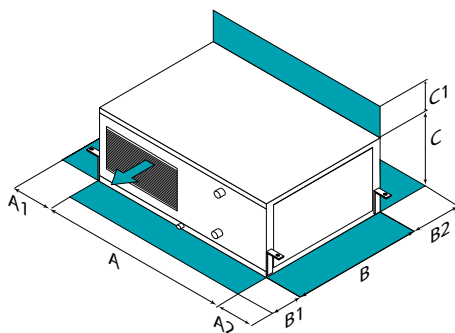


R-410A



Hermetic  
Rotary

### dimensions and clearances



Size	EVH-XS	005.1	007.1
A - Length	mm	1018	1018
B - Width	mm	594	594
C - Height	mm	254	254
A1	mm	150	150
A2	mm	500	500
B1	mm	300	300
B2	mm	500	500
C1	mm	100	100
Operating weight	kg	59	60

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-XS	005.1	007.1
▶ Cooling capacity	kW	2,06	2,84
Sensible capacity	kW	1,75	1,83
Compressor power input	kW	0,48	0,60
Total power input	kW	0,53	0,67
EER	-	4,29	4,73
▶ Heating capacity	kW	2,43	3,37
Compressor power input	kW	0,60	0,82
Total power input	kW	0,65	0,87
COP	-	4,05	4,11
No. of compressors	Nr	1	1
Type of compressors	-	ROT	ROT
Supply airflow	l/s	111	139
Type of supply fan	-	CFG	CFG
Number of supply fans	Nr	1	1
Max. static pressure supply fan	Pa	50	50
Standard power supply	V	230/1/50	230/1/50
Sound pressure level	dB(A)	42	45
<b>Directive Erp (Energy related Products)</b>			
SEER	(1) -	3,26	4,20
$\eta_{sc}$	(1) -	122,4	160,0
SCOP	(1) -	3,28	3,31
$\eta_{sh}$	(1) -	123,2	124,4

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 Lot 21.

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

## accessories

<b>CWMX</b>	Electronic room control with display, for wall installation	<b>PFHC1X</b>	500 mm flexible pipes for the connection to the water circuit + drop conduit
<b>CIWMX</b>	Electronic room control with display, for wall installation in built-in box	<b>CDPX</b>	Condensate drain pump
<b>V2MODX</b>	2-way modulating valve for disposable water system	<b>MOBA</b>	RS485 serial port with Modbus protocol, built-in
<b>V2ONX</b>	2-way ON-OFF valve for variable flow-rate loop	<b>MOBX</b>	Modbus RS485 serial port kit
<b>AMMX</b>	Spring antivibration mounts	<b>CMSLWX</b>	LonWorks serial communication module
<b>FCVBX</b>	Water balancing valve	<b>BACX</b>	BACnet serial communication module
<b>VIFWX</b>	Steel mesh strainer and hand shut-off valve	<b>VIMANX</b>	Hand shut-off valve
<b>PFHCX</b>	200 mm flexible pipes for the connection to the water circuit + drop conduit	<b>BPH2OX</b>	Shut-off valve for by-pass (water side)

Accessories whose code ends with "X" are supplied separately

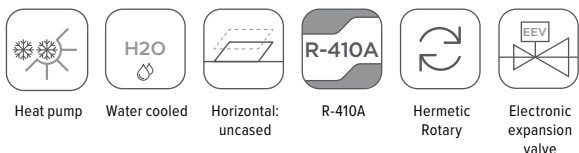
## VERSATEMP

**Direct expansion high efficiency air conditioner**  
 Reversible heat pump  
 Water cooled  
 Horizontal indoor installation uncased  
**Capacity from 2,3 to 4,2 kW**

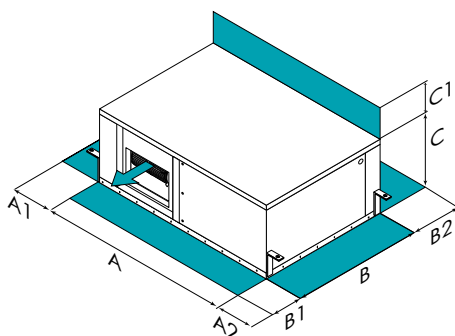


**VERSATEMP EVH-X** is the **high efficiency packaged air-conditioner** that automatically heats or cools rooms throughout the whole year, using **water as source**. Thanks to its rotating compressor, its electronic expansion valve, its plate exchanger and its multi-speed centrifugal fan, this unit stands out due to its **high level of efficiency in all operating conditions** and its **great reliability**. The operating silence is ensured by the particular sound-proofing of the compressor compartment, by the accurate balancing of the fans and by the standard anti-vibration devices for all moving parts.

### functions and features



### 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
<b>A27/19 W30</b>							
▶ 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	3,50
Total power input	kW	0,54	0,66	0,74	0,77	0,85	0,92
EER (EN 14511:2018)	-	4,22	4,27	4,28	4,50	4,54	4,51
<b>A20 W20</b>							
Heating capacity	(2) kW	2,76	3,38	3,85	4,15	4,50	4,92
Total power input	kW	0,55	0,65	0,77	0,82	0,94	1,06
COP (EN 14511:2018)	-	4,99	5,20	4,97	5,05	4,81	4,66
<b>A20 W15</b>							
▶ 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	0,80	0,89	1,02
COP (EN 14511:2018)	-	4,42	4,60	4,47	4,59	4,40	4,30
No. of compressors	Nr	1	1	1	1	1	1
Type of compressors	(4) -	ROT	ROT	ROT	ROT	ROT	ROT
Supply airflow	l/s	148	148	170	190	222	222
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 rate (Source Side)	l/s	0,13	0,16	0,18	0,20	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
<b>Directive Erp (Energy related Products)</b>							
SEER	(8) -	3,75	4,06	3,90	4,10	4,05	4,18
$\eta_{sc}$	(8) -	142,0	154,4	148,0	156,0	154,0	159,2
SCOP	(8) -	3,41	3,90	3,63	3,77	3,97	4,05
$\eta_{SH}$	(8)	128,4	148,0	137,2	142,8	150,8	154,0

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.

Values read in compliance with EN14511:2018 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 14825:2018 Regulation

## accessories

<b>CWMX</b>	Electronic room control with display, for wall installation	<b>PFHCX</b>	200 mm flexible pipes for the connection to the water circuit + drop conduit
<b>CIWMX</b>	Electronic room control with display, for wall installation in built-in box	<b>PFHC1X</b>	500 mm flexible pipes for the connection to the water circuit + drop conduit
<b>V2MODX</b>	2-way modulating valve for disposable water system	<b>CDPX</b>	Condensate drain pump
<b>V2ONX</b>	2-way ON-OFF valve for variable flow-rate loop	<b>MOBA</b>	RS485 serial port with Modbus protocol, built-in
<b>TPF</b>	Filter-holder frame with lateral and bottom exhaust	<b>MOBX</b>	Modbus RS485 serial port kit
<b>AMMX</b>	Spring antivibration mounts	<b>CMSLWX</b>	LonWorks serial communication module
<b>DAOJX</b>	Air supply duct with flexible connection	<b>BACX</b>	BACnet serial communication module
<b>DAIX</b>	Return air duct	<b>VIMANX</b>	Hand shut-off valve
<b>DAOIX</b>	Air discharge and intake duct	<b>BPH2OX</b>	Shut-off valve for by-pass (water side)
<b>FCVBX</b>	Water balancing valve		
<b>VIFWX</b>	Steel mesh strainer and hand shut-off valve		

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**



ErP  
compliant

**VERSATEMP EVH-X SPACE** is the **high efficiency packaged air-conditioner** that automatically heats or cools rooms throughout the whole year, using **water as source**.

This unit stands out due to its **high level of efficiency in all operating conditions** and its **great reliability**.

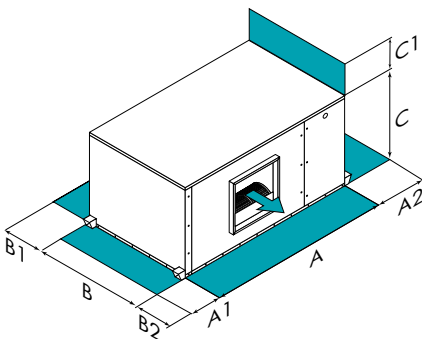
The unit for horizontal installation can be ducted with air delivery in line or at 90° with respect to the recovery to best adapt to the architectural constraints of the application served

### 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	20,0	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	4,10	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 airflow	l/s	278	416	778	1056	1351	1657
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 rate (Source Side)	l/s	0,27	0,47	0,64	1,00	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
<b>Directive Erp (Energy related Products)</b>							
SEER	(6)	3,28	3,93	3,57	4,23	4,47	3,97
η <sub>sc</sub>	(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 <sub>sh</sub>	(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 / 19.5°C WB; Exchanger inlet water 30°C; Exchanger water outlet 35°C  
 (2) Ambient temperature 20°C; Exchanger water outlet 10°C  
 (3) ROT = rotary compressor / 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. Data calculated according to the EN 14825:2018 Regulation  
 (6)

## 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

## CLIVETPack<sup>2</sup>

### Packaged air-conditioning unit

Heat pump  
Water cooled  
Roof Top

**Capacity from 51 to 392 kW**



The **CRH-XHE2** packaged air-conditioning units are installed outside the spaces being served. They come in various capacities and with a vast range of accessories. They are intended for the air-conditioning of large rooms or areas and are applied in **closed or open loop water systems**.

Designed to reduce work on site to a minimum, these units have been created for continuous operation with maximum energy saving through an extremely intelligent, advanced management of energy, supplying it only when and where needed.

**The high efficiency of the innovative refrigeration circuit**, optimized for functioning at partial loads, the free-cooling and the energy recovery of expelled air available as an option on the whole range, allow to reduce energy consumption and therefore the management costs and the emission of carbon dioxide.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
compliant

## functions and features



Heat pump



Water cooled



Outdoor  
installation



R-410A



Hermetic  
Scroll



FREE-  
COOLING



THOR  
(Thermodynamic  
Overboost  
Recovery)



Electronically  
commutated  
Plug Fan



Electronic  
expansion  
valve

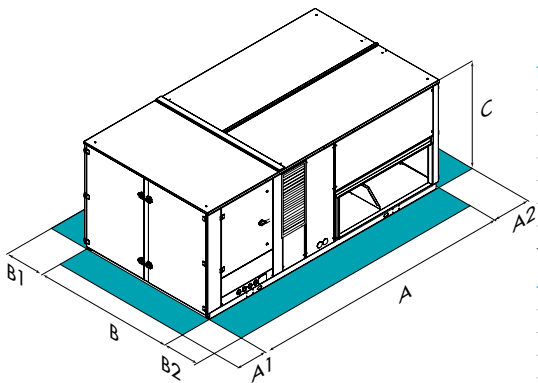


Constant Air  
Volume



Variable Air  
Volume

## dimensions and clearances



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	4155
CAK B - Width	mm	2295	2295	2300	2300	2300	2300	2300	2300
CAK C - Height	mm	1405	1405	1405	1405	1405	1705	1705	1705
CAK A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK Operating weight	kg	1396	1456	1530	1549	1559	1602	1636	1641

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	5520
CAK B - Width	mm	2296	2296	2296	2296	2296	2296	2296	2296
CAK C - Height	mm	2250	2250	2250	2250	2250	2250	2250	2250
CAK A1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK A2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B1	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK B2	mm	1500	1500	1500	1500	1500	1500	1500	1500
CAK Operating weight	kg	2080	2397	2613	2672	3074	3245	3461	3987

**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.

CAK Configuration with single fan section for full recirculation

## versions and configurations

### CONFIGURATION:

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

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

**CCK** Configuration with double fan section for recirculation, fresh and exhaust air

**CCKP** Configuration with double fan section with fresh air and THOR thermodynamic recovery

## technical data

Size		CRH-XHE2	14.2	16.4	20.4	25.4	30.4	33.4	40.4	44.4	
<b>Eurovent</b>											
▶ Cooling capacity (EN14511:2018)	(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	114	
Compressor power input	(1)	kW	9,10	13,0	15,4	17,4	19,1	21,2	26,6	28,8	
EER (EN14511:2018)	(1)	-	5,06	4,57	4,94	4,89	4,88	5,45	5,66	5,31	
▶ Heating capacity (EN14511:2018)	(2)	kW	56,6	77,4	91	104	93,5	109	136,5	150,9	
Compressor power input	(2)	kW	9,90	15,5	18,2	20,4	23,8	27,7	30,1	33,3	
COP (EN14511:2018)	(2)	-	4,71	4,19	4,24	4,33	3,74	3,86	4,5	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								
Supply airflow		m <sup>3</sup> /h	9000	11500	13500	15000	17000	18500	21000	23000	
Type of supply fan	(4)	-	RAD								
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 rate (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								
<b>Directive Erp (Energy related Products)</b>											
SEER - AVERAGE Climate	(7)	-	5,12	5,22	5,51	5,46	5,35	6,15	6,99	6,58	
η <sub>s,c</sub>	(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 <sub>s,h</sub>	(7)	-	151,6	162,4	153,2	175,6	164,8	178,4	207,2	183,6	
<b>Size</b>											
			CRH-XHE2	49.4	54.4	60.4	70.4	80.4	90.4	100.4	110.4
▶ Cooling capacity (EN14511:2018)	(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 (EN14511:2018)	(1)	-	5,18	4,89	4,94	5,1	4,78	4,96	4,87	4,9	
▶ Heating capacity (EN14511:2018)	(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 (EN14511:2018)	(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								
Supply airflow		m <sup>3</sup> /h	26000	29000	33000	37000	44000	51000	56000	60000	
Type of supply fan	(4)	-	RAD								
Number of supply fans		Nr	3	3	4	4	4	6	6	6	
Max. static pressure supply fan	(5)	Pa	630	540	660	570	360	620	540	460	
Water flow rate (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								
<b>Directive Erp (Energy related Products)</b>											
SEER - AVERAGE Climate	(7)	-	6,29	5,07	5,61	6,07	5,47	5,80	5,17	5,31	
η <sub>s,c</sub>	(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 <sub>s,h</sub>	(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 Lot2.

Performance refers to operation at full re-circulation (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 = radial fan  
 (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 14825:2018 Regulation

## accessories

<b>THR</b>	Exhaust air THOR thermodynamic energy recovery (CCKP version)	<b>IFWX</b>	Steel mesh strainer on the water side
<b>FC</b>	Thermal FREE-COOLING	<b>CHW2</b>	Two-rows hot water coil
<b>FCE</b>	Enthalpy FREE-COOLING	<b>CHWER</b>	Energy recovery from food refrigeration
<b>M3</b>	Downflow supply	<b>3WVM</b>	Modulating three-way valve
<b>M5</b>	Upward supply air	<b>2WVM</b>	Modulating 2-way valve
<b>R3</b>	Floor air inlet	<b>LTEMP1</b>	Application for low outdoor temperature
<b>SER</b>	Outdoor air damper manually set	<b>CPHG</b>	Hot gas re-heating coil
<b>SERM</b>	Outdoor air motorized on/off damper	<b>HSE3</b>	3 kg/h immersed electrodes steam humidifier (sizes 15.1÷30.2)
<b>SERMD</b>	Modulating motorized outdoor air damper	<b>HSE5</b>	5 kg/h immersed electrodes steam humidifier (sizes 15.1÷30.2)
<b>PVAR</b>	Variable airflow	<b>HSE8</b>	8 kg/h immersed electrodes steam humidifier
<b>PCOSM</b>	Constant supply airflow	<b>HSE9</b>	15 kg/h immersed electrodes steam humidifier
<b>PAQC</b>	Air quality probe for CO2 rate check	<b>MHP</b>	High and low pressure gauges
<b>PAQCV</b>	Air quality sensor for CO2 and VOC rate check	<b>CMSC9</b>	Serial communication module for Modbus supervisor
<b>VENH</b>	High static pressure fans	<b>CMSC10</b>	Serial communication module for LonWorks supervisor
<b>F7</b>	High efficiency F7 air filter (ISO 16890 ePM1 55%)	<b>CMSC11</b>	Serial communication module for BACnet-IP supervisor
<b>FES</b>	Electronic filters (ISO 16890 ePM1 90%)	<b>PM</b>	Phase monitor
<b>PSAF</b>	Differential pressure switch for dirty air filters	<b>PFCC</b>	Power factor correction capacitors (cosfi > 0.95)
<b>EH12</b>	9 kW electric heaters	<b>DML</b>	Demand Limit
<b>EH14</b>	12 kW electric heaters	<b>DESM</b>	Smoke detector
<b>EH17</b>	18 kW electric heaters	<b>SFSTC</b>	Progressive compressor start-up device
<b>EH20</b>	24 kW electric heaters	<b>CLMX</b>	Clivet Master System
<b>EH24</b>	36 kW electric heaters	<b>PCMO</b>	Sandwich panels of the handling zone in M0 fire reaction class
<b>EH28</b>	48 kW electric heaters	<b>AMRX</b>	Rubber antivibration mounts
<b>ACPC</b>	Hydraulic pipework arrangement for loop with constant flow-rate	<b>RCX</b>	Roof curb
<b>ACPV</b>	Hydraulic pipework arrangement for loop with variable flow-rate	<b>UVC</b>	UV-C germicidal lamps
<b>ACPM</b>	Hydraulic pipework arrangement for system with disposable water		
<b>ACIS</b>	Antifreeze heater protection on the water side exchanger		

Accessories whose code ends with "X" are supplied separately

Commercial

	AURA	ELFOSpace	ELFODuct MP ELFODuct HP	ELFOSpace BOX3	MOOD	ELFOSpace WALL3
Capacities (A27/W7)	1,5 ÷ 8,2 kW	1,5 ÷ 11 kW	6 ÷ 25 kW	3 ÷ 11 kW	2,7 ÷ 4,9 kW	2 ÷ 4,5 kW
ErP compliance (heat pumps only)						
Vertical cased						
Horizontal cased						
Vertical uncased						
Horizontal uncased						
2 pipes	✓	✓	✓	✓	✓	✓
4 pipes	✓	✓	✓	✓		
DC Motor	✓	✓	✓	✓	✓	✓
High head		✓				
RS485 Connection	✓	✓	✓	✓	✓	✓

# Commercial and Industrial

SAHU

AQX

AQH

Airflow	420 ÷ 4200 l/s	350 ÷ 44400 l/s	350 ÷ 44400 l/s
			



Product			
---------	--	---	--

Sizes	8	32, 50 mm pitch	32, 50 mm pitch
-------	---	-----------------	-----------------

Frame / Panels	Thermal cut / Double wall 40 mm thick	Thermal cut / 7 double-wall materials 50 mm	Thermal cut / 7 double-wall materials 60 mm
----------------	---------------------------------------	---	---

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		Crossover flows / Rotary / Run-Around	Crossover flows / Rotary / Run-Around
---------------	--	---------------------------------------	---------------------------------------

Versions	Horizontal / Vertical	Sanitizable / Adjusted	Sanitizable / Adjusted
----------	-----------------------	------------------------	------------------------

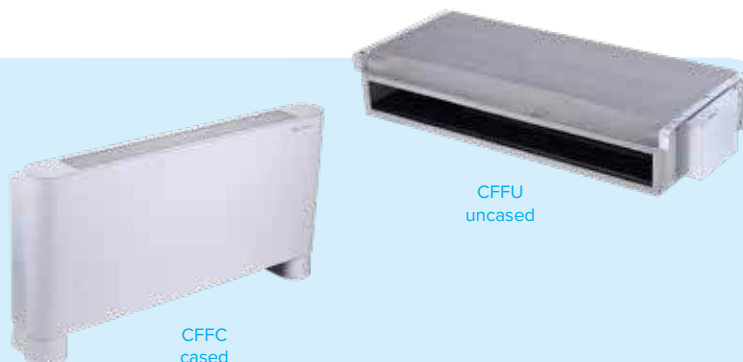
# TERMINAL Units and AHU

## System components

SERIES	SIZE FROM	TO	NAME		PAGE
<b>Water terminal units</b>					
CFF	1	12	AURA	New	158
CFFA	1	12	AURA	New	162
ELFOSPACE	003.0	051.0	ELFOSpace		166
CFK	007.0	041.0	ELFOSpace BOX3		170
CFW-2	1	5	MOOD	New	174
CFW	007.0	021.0	ELFOSpace WALL3		176
ELFODuct MP	15	71	ELFODuct		178
ELFODuct HP	015.0	071.0	ELFODuct		182
<b>Air handling units</b>					
SAHU	1	8	SAHU		186
AQX	1	32	-		190
CLA	1	32	-		192

## NEW PRODUCT

4-pipe and front air inlet version  
available within the first quarter of 2021



CFFC  
cased

CFFU  
uncased



ErP  
compliant



## AURA

### Water terminal unit

DC fan

Cased and uncased, vertical and horizontal indoor installation.

**Capacity from 1,5 to 8,2 kW**

**AURA** are the cased and uncased water terminal for installation in the commercial sector with DC motor which allows an energy saving of up to 70% compared to traditional solutions.

- Versions for 2 and 4-pipe.
- It can be installed vertically or horizontally.
- Available with downward or front air inlet.
- Designed for connection to the ELFOControl<sup>3</sup> EVO or general supervisors.
- Low noise operation and easy to clean.
- Standard water fittings to the left, moveable to the right on site.
- Compact and thin, with an elegant design and suitable for any environment.

## functions and features



Cool & heat



Vertical:  
cased



Vertical:  
uncased



Horizontal:  
cased



Horizontal:  
uncased



Water

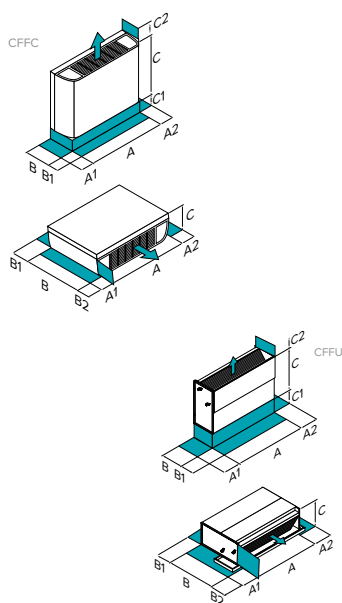


ELFOControl<sup>3</sup>  
EVO



DC Motor

## 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		CFF	1	2	3	4	5	6	7	8	9	10	11	12		
CFFC (cased)	DIMENSIONS	A - Length	mm	790	790	1010	1010	1240	1240	1240	1360	1360	1360	1360	1360	
		B - Width	mm	200	200	200	200	200	200	200	200	200	200	200	200	200
		C - Height	mm	495	495	495	495	495	495	495	495	495	495	495	591	591
	CLEARANCES	A1	mm	150	150	150	150	150	150	150	150	150	150	150	150	
		A2	mm	150	150	150	150	150	150	150	150	150	150	150	150	
		C2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
WEIGHT	C1	mm	90	90	90	90	90	90	90	90	90	90	90	90		
	CFFC CC2 R3	kg	23,5	24	27,5	28	25,5	26,5	25,5	26,5	28,5	39,5	32,5	34,5		
CFFC CC4 R3	kg	19	-	22,5	-	27	-	27	-	30	-	35	-			
	A - Length	mm	790	790	1010	1010	1240	1240	1240	1360	1360	1360	1360	1360		
CFFU (uncased)	DIMENSIONS	B - Width	mm	200	200	200	200	200	200	200	200	200	200	200	200	
		C - Height	mm	495	495	495	495	495	495	495	495	495	495	591	591	
		A1	mm	150	150	150	150	150	150	150	150	150	150	150	150	
	CLEARANCES	A2	mm	150	150	150	150	150	150	150	150	150	150	150	150	
		B1	mm	90	90	90	90	90	90	90	90	90	90	90	90	
		B2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
WEIGHT	CFFU CC2 R3	kg	11,8	12,1	13,9	14,8	17,3	18,2	17,3	18,2	19,6	20,8	23,1	24,3		
	CFFU CC4 R3	kg	12,6	-	15,3	-	18,7	-	18,7	-	21,3	-	24,8	-		

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:

**CFFC** Cased version for vertical and horizontal installation

**CFFU** Uncased version for vertical and horizontal installation

### TYPE OF FANS:

**VEC** DC high efficiency fan (Standard)

### INTAKE:

**R3** Downward air return (Standard)

**RF** Front air inlet

### COIL CONFIGURATION:

**CC2** Coil configuration for 2-pipe system (Standard)

**CC4** Coil configuration for 4-pipe system

*The following models are available on order only, please contact the sales network:*

- 2-pipe, front air inlet, cased

- 4-pipe, downward air return, cased and uncased

- 4-pipe, front air inlet, cased

### ELECTRONICS VERSION:

**CTMP1** Electronics with serial port RS485 Modbus, external control input 0/10V, 3-speed input

## technical data

Size		CFF	1	2	3	4	5	6	7	8	9	10	11	12
<b>2-pipe</b>														
<b>High speed</b>														
Airflow		m <sup>3</sup> /h	255	255	400	425	595	595	790	800	1190	1190	1360	1300
▶ Cooling capacity	(1)	kW	1,5	1,95	2,35	2,85	3,5	3,9	4,3	4,85	5,6	6,35	7,35	8,25
Sensible capacity	(1)	kW	1,14	1,42	1,79	2,06	2,65	2,9	3,25	3,63	4,62	4,98	5,87	6,12
Water flow-rate	(1)	l/h	260	330	400	490	600	670	740	830	960	1090	1270	1430
Water pressure drop	(1)	kPa	13,9	27,2	13,3	26	34,1	37,4	54,2	54,3	50,7	32,8	44,1	71,4
▶ Heating capacity	(2)	kW	1,57	2,05	2,6	2,95	3,8	4	4,7	5,25	6	7,05	8,05	8,7
Water flow-rate	(2)	l/h	270	340	450	510	610	700	750	910	1040	1220	1390	1510
Water pressure drop	(2)	kPa	15,1	25,3	14,3	24,4	35,1	36,5	54,3	53,4	55,5	37,6	46,9	62,6
Total power input		W	15	20	17	20	26	29	50	52	96	92	113	102
<b>Medium speed</b>														
Airflow		m <sup>3</sup> /h	170	210	315	300	470	450	580	600	855	875	1015	980
▶ Cooling capacity	(1)	kW	1,06	1,66	1,94	2,13	2,89	3,2	3,48	3,92	4,47	5,19	6,12	6,65
Sensible capacity	(1)	kW	0,77	1,19	1,44	1,51	2,14	2,35	2,56	2,85	3,6	3,98	4,74	4,82
Water flow-rate	(1)	l/h	180	280	340	370	500	550	600	670	770	900	1050	1140
Water pressure drop	(1)	kPa	8,21	20,88	9,98	15,06	24,63	25,91	36,22	36,81	33,38	21,75	33,7	46,17
▶ Heating capacity	(2)	kW	1,07	1,75	2,11	2,15	3,1	3,22	3,7	4,09	4,77	5,61	6,46	6,81
Water flow-rate	(2)	l/h	190	280	370	370	480	560	600	710	830	980	1120	1180
Water pressure drop	(2)	kPa	7,63	19,65	10,33	13,65	24,41	25,34	36,87	36,54	37,66	25,47	31,9	41,06
Total power input		W	9	14	12	11	17	17	25	28	44	46	53	49
<b>Low speed</b>														
Airflow		m <sup>3</sup> /h	150	150	190	190	340	310	410	420	505	530	685	680
▶ Cooling capacity	(1)	kW	0,92	1,21	1,19	1,41	2,22	2,43	2,71	2,93	3,14	3,62	4,57	4,84
Sensible capacity	(1)	kW	0,66	0,85	0,86	0,96	1,57	1,72	1,91	2,08	2,43	2,68	3,45	3,42
Water flow-rate	(1)	l/h	160	210	210	240	380	420	470	510	540	630	790	830
Water pressure drop	(1)	kPa	6,16	12,2	4,59	7,41	15,39	15,37	22,78	21,77	17,73	11,43	19,41	25,39
▶ Heating capacity	(2)	kW	0,92	1,25	1,34	1,42	2,35	2,5	2,81	3,04	3,36	3,83	4,71	4,85
Water flow-rate	(2)	l/h	160	200	230	240	380	420	450	530	590	670	820	830
Water pressure drop	(2)	kPa	5,84	10,25	4,5	6,64	14,82	14,22	22,32	20,47	19,27	12,5	18,16	21,68
Total power input		W	8	9	7	8	10	11	14	15	17	19	22	22
Standard power supply		V	220-240/1/50											
Type of supply fan	(3)	-	CFG											
No. of supply fans		-	1	1	2	2	2	2	2	2	3	3	3	3
H Sound pressure level	(4)	dB(A)	34	39	29	32	38	40	46	45	50	50	51	50
M Sound pressure level	(4)	dB(A)	24	33	24	23	32	34	38	39	42	43	44	43
L Sound pressure level	(4)	dB(A)	21	25	18	19	23	30	30	30	31	31	33	33
H Sound power level	(4)	dB(A)	47	52	43	46	52	52	59	59	64	62	63	63
M Sound power level	(4)	dB(A)	36	46	37	37	44	45	51	51	56	56	58	57
L Sound power level	(4)	dB(A)	34	38	29	29	36	36	43	43	45	46	49	47

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.

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.

## technical data

Size	CFF	1	3	5	7	9	11
<b>4-pipe</b>							
<b>High speed</b>							
Airflow	m <sup>3</sup> /h	255	425	595	800	1190	1300
▶ Cooling capacity	(1) kW	1,70	2,70	3,80	4,60	6,05	7,65
Sensible capacity	(1) kW	1,30	1,90	2,80	3,50	4,80	5,90
Water flow-rate	(1) l/h	290	460	650	790	1040	1310
Water pressure drop	(1) kPa	18,16	16,97	39,17	56,18	53,66	48,07
▶ Heating capacity	(2) kW	1,40	2,30	2,88	3,35	4,60	7,50
Water flow-rate	(2) l/h	120	200	250	290	390	640
Water pressure drop	(2) kPa	10,74	28,16	55,37	69,57	132,32	71,63
Rated power input	W	20	20	29	52	92	102
<b>Medium speed</b>							
Airflow	m <sup>3</sup> /h	206	280	461	595	887	969
▶ Cooling capacity	(1) kW	1,44	1,94	3,18	3,75	5,00	6,19
Sensible capacity	(1) kW	1,07	1,30	2,30	2,75	3,88	4,60
Water flow-rate	(1) l/h	250	330	550	640	860	1060
Water pressure drop	(1) kPa	13,74	9,73	28,35	39,04	36,96	32,56
▶ Heating capacity	(2) kW	1,23	1,78	2,49	2,88	6,95	6,44
Water flow-rate	(2) l/h	110	150	210	250	340	550
Water pressure drop	(2) kPa	8,50	18,45	43,00	54,65	104,19	56,17
Rated power input	W	14	11	17	28	46	22
<b>Low speed</b>							
Airflow	m <sup>3</sup> /h	134	158	324	417	564	661
▶ Cooling capacity	(1) kW	0,95	1,10	2,32	2,83	3,43	4,54
Sensible capacity	(1) kW	0,64	0,70	1,61	2,01	2,53	3,30
Water flow-rate	(1) l/h	160	190	400	490	590	780
Water pressure drop	(1) kPa	7,50	3,51	16,91	23,84	19,07	18,32
▶ Heating capacity	(2) kW	0,95	1,22	2,00	2,36	3,02	5,22
Water flow-rate	(2) l/h	80	100	170	200	260	450
Water pressure drop	(2) kPa	5,49	10,08	29,20	38,21	63,73	37,44
Rated power input	W	9	8	11	15	19	22
Standard power supply	V	220-240/1/50					
Type of supply fan	(3)	CFG DC					
No. of supply fans	-	1		2		3	
H Sound pressure level	(4) dB(A)	39	32	40	45	50	50
M Sound pressure level	(4) dB(A)	33	23	34	39	43	43
L Sound pressure level	(4) dB(A)	25	19	30	30	31	33
H Sound power level	(4) dB(A)	52	46	52	50	62	63
M Sound power level	(4) dB(A)	46	37	45	51	56	57
L Sound power level	(4) dB(A)	38	29	36	43	46	47

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.

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 = DC 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.

## accessories

<b>3V2X</b>	Three-way valve kit for 2-pipe type "on/off" system	<b>CCM08X</b>	BACNET gateway
<b>3V4X</b>	Three-way valve kit for 4-pipe type "on/off" system	<b>LONGW64X</b>	LONWORKS gateway
<b>BRVHX</b>	Auxiliary condensate collection tray auxiliary for vertical/horizontal installation	<b>HMIFDCX</b>	KJRP-75A electronic wired control for on-board or wall-mounted assembly (for DC versions)
<b>KDPX</b>	Plinth kit	<b>EXTENX</b>	KJRP-75 wired control connection cable extension (2m)
<b>CDPX</b>	Condensate drain pump	<b>CCM15X</b>	Data converter
<b>KJR-90DX</b>	KJR-90D electronic room control for wall installation	<b>CCM180X</b>	Central controller for wall mounting weekly timer 6.2"
<b>KJR-150AX</b>	Indoor units group controller	<b>CCM270X</b>	Central controller for wall mounting weekly timer 10.1'
<b>CCM30-BX</b>	Centralized controller with case		

Accessories whose code ends with \*X\* are separately supplied.

## NEW PRODUCT

4-pipe and front air inlet version  
available within the first quarter of 2021



## AURA

### Water terminal unit

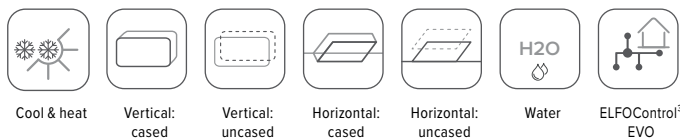
Cased and uncased, vertical and horizontal indoor installation.

**Capacity from 1,6 to 8,2 kW**

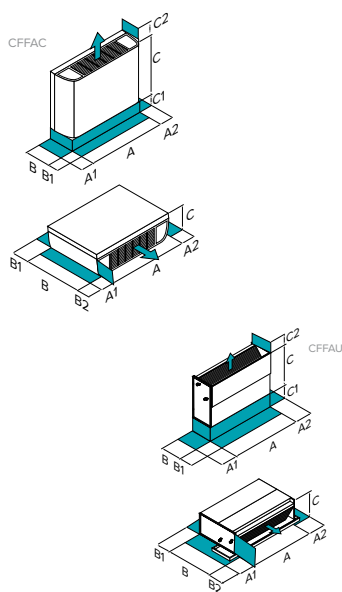
**AURA** are the cased and uncased water terminal for installation in the commercial sector.

- Versions for 2 and 4-pipe systems.
- It can be installed vertically or horizontally.
- Available with downward or front air inlet.
- Low noise operation and easy to clean.
- Standard water fittings to the left, moveable to the right on the field.

## functions and features



## dimensions and clearances



Size		CFFA	1	2	3	4	5	6	7	8	9	10	11	12		
CFFAC (cased)	DIMENSIONS	A - Length	mm	790	790	1010	1010	1240	1240	1240	1360	1360	1360	1360	1360	
		B - Width	mm	200	200	200	200	200	200	200	200	200	200	200	200	200
		C - Height	mm	495	495	495	495	495	495	495	495	495	495	495	591	591
	CLEARANCES	A1	mm	150	150	150	150	150	150	150	150	150	150	150	150	
		A2	mm	150	150	150	150	150	150	150	150	150	150	150	150	
		C2	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
WEIGHT	CFFAC CC2 R3	kg	16,3	16,7	20	20,8	24	25,4	25,5	26,3	27,3	28,5	31,7	34		
	CFFAC CC4 R3	kg	17,2	-	21,3	-	25,9	-	26,8	-	29	-	34,5	-		
CFFAU (uncased)	DIMENSIONS	A - Length	mm	790	790	1010	1010	1240	1240	1240	1360	1360	1360	1360	1360	
		B - Width	mm	200	200	200	200	200	200	200	200	200	200	200	200	
		C - Height	mm	495	495	495	495	495	495	495	495	495	495	495	591	591
	CLEARANCES	A1	mm	150	150	150	150	150	150	150	150	150	150	150	150	
		A2	mm	150	150	150	150	150	150	150	150	150	150	150	150	
		B1	mm	90	90	90	90	90	90	90	90	90	90	90	90	
WEIGHT	CFFAU CC2 R3	kg	11,6	12	13,9	14,8	17,3	18,2	17,9	18,8	20,5	21,7	24	25,2		
	CFFAU CC4 R3	kg	12,5	-	15,3	-	18,7	-	19,3	-	22,2	-	25,7	-		

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:

**CFFAC** Cased version for vertical and horizontal installation

**CFFAU** Uncased version for vertical and horizontal installation

### INTAKE:

**R3** Downward air return (Standard)

**RF** Front air inlet

### COIL CONFIGURATION:

**CC2** Coil configuration for 2-pipe system (Standard)

**CC4** Coil configuration for 4-pipe system

*The following models are available on order only, please contact the sales network:*

- 4-pipe, front air inlet, cased
- 4-pipe, downward air return, cased

### ELECTRONICS VERSION:

**TRB** Terminal block for the motor connection

## technical data

Size		CFFA	1	2	3	4	5	6	7	8	9	10	11	12
<b>2-pipe</b>														
<b>High speed</b>														
Airflow		m <sup>3</sup> /h	255	255	400	425	595	595	790	800	1190	1150	1300	1300
▶ Cooling capacity	(1)	kW	1,65	2,25	2,65	3,05	3,85	4,2	4,65	5,35	6	6,75	7,35	8,25
Sensible capacity	(1)	kW	1,25	1,65	2,05	2,23	2,91	3,05	3,58	3,96	4,83	5,09	5,63	6,08
Water flow-rate	(1)	l/h	283	386	454	523	660	720	797	917	1029	1157	1260	1414
Water pressure drop	(1)	kPa	15,75	33,19	18,03	26,71	38,23	41,15	56,85	61,48	53,79	40,26	45,43	64,72
▶ Heating capacity	(2)	kW	1,85	2,35	3,05	3,15	4,1	4,3	5,2	5,7	6,15	7,15	8,2	8,5
Water flow-rate	(2)	l/h	317	403	523	540	705	740	894	977	1054	1226	1406	1457
Water pressure drop	(2)	kPa	15,13	33,19	17,56	23,31	35,52	37,2	56,68	60,89	57,85	42,16	44,6	61,96
Total power input		W	35	40	47	47	51	51	91	91	123	110	123	118
<b>Medium speed</b>														
Airflow		m <sup>3</sup> /h	165	192	273	284	447	450	560	574	855	885	1088	1132
▶ Cooling capacity	(1)	kW	1,22	1,85	2,02	2,26	3,19	3,38	3,8	4,25	5,03	5,8	6,51	7,52
Sensible capacity	(1)	kW	0,88	1,35	1,5	1,61	2,36	2,43	2,85	3,08	3,99	4,36	4,92	5,53
Water flow-rate	(1)	l/h	209	317	346	387	546	580	652	729	862	995	1116	1289
Water pressure drop	(1)	kPa	9,33	22,37	11,18	15,66	27,11	27,07	40,02	41,44	36,96	29,2	37,06	55,03
▶ Heating capacity	(2)	kW	1,29	1,87	2,24	2,28	3,3	3,43	3,95	4,36	5,1	5,81	7,09	7,6
Water flow-rate	(2)	l/h	222	320	384	392	568	590	679	747	877	996	1216	1302
Water pressure drop	(2)	kPa	8,22	22,37	10,28	12,57	24,83	24,5	37,31	37,73	38,53	28,68	34,09	47,46
Total power input		W	17	24	26	26	32	32	54	54	98	89	109	104
<b>Low speed</b>														
Airflow		m <sup>3</sup> /h	142	139	180	184	319	319	392	404	555	591	782	836
▶ Cooling capacity	(1)	kW	1,09	1,4	1,4	1,58	2,46	2,48	2,92	3,31	3,71	4,24	5,15	5,87
Sensible capacity	(1)	kW	0,78	1	1,02	1,08	1,77	1,73	2,09	2,34	2,85	3,12	3,83	4,21
Water flow-rate	(1)	l/h	186	241	240	272	422	425	500	567	636	727	884	1007
Water pressure drop	(1)	kPa	7,37	4,64	5,48	8,42	16,96	15,71	25,31	26,62	21,16	16,15	23,29	34,88
▶ Heating capacity	(2)	kW	1,13	1,42	1,52	1,6	2,48	2,52	3	3,31	3,8	4,3	5,46	5,9
Water flow-rate	(2)	l/h	194	244	260	275	427	433	516	569	654	740	937	1015
Water pressure drop	(2)	kPa	6,64	4,64	5,43	6,11	14,91	13,75	23,25	21,79	21,1	14,66	19,98	28,84
Total power input		W	14	15	14	14	19	19	34	35	68	64	83	82
Standard power supply		V	220-240/1/50											
Type of supply fan	(3)	-	CFG											
No. of supply fans			1	1	2	2	2	2	2	2	3	3	3	3
H Sound pressure level	(4)	dB(A)	35	42	34	34	39	40	48	47	50	50	51	50
M Sound pressure level	(4)	dB(A)	24	35	24	25	32	35	39	40	43	44	46	45
L Sound pressure level	(4)	dB(A)	21	27	18	19	23	31	31	31	33	33	36	37
H Sound power level	(4)	dB(A)	47	53	46	47	52	52	59	59	64	62	63	63
M Sound power level	(4)	dB(A)	35	47	37	38	44	45	51	51	56	56	58	58
L Sound power level	(4)	dB(A)	34	39	31	32	36	37	43	43	45	46	50	50

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.

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.

## technical data

Size	CFFA	1	3	5	7	9	11
<b>4-pipe</b>							
<b>High speed</b>							
Airflow	m <sup>3</sup> /h	255	425	595	800	1150	1300
▶ Cooling capacity	(1) kW	1,95	2,89	4,09	5,05	6,40	7,65
Sensible capacity	(1) kW	1,50	2,05	2,94	3,80	4,90	5,85
Water flow-rate	(1) l/h	330	500	700	870	1100	1310
Water pressure drop	(1) kPa	27,47	21,38	47,70	71,09	63,05	50,47
▶ Heating capacity	(2) kW	0,99	1,38	1,73	2,02	2,59	4,40
Water flow-rate	(2) l/h	170	240	300	350	440	760
Water pressure drop	(2) kPa	13,28	35,78	69,44	91,92	159,32	100,73
Rated power input	W	40	47	51	91	110	118
<b>Medium speed</b>							
Airflow	m <sup>3</sup> /h	192	284	430	574	885	1132
▶ Cooling capacity	(1) kW	1,60	2,05	3,35	4,05	5,59	7,00
Sensible capacity	(1) kW	1,20	1,39	2,38	2,95	4,25	5,28
Water flow-rate	(1) l/h	280	350	570	690	960	1200
Water pressure drop	(1) kPa	19,63	11,95	33,04	47,81	48,47	43,72
▶ Heating capacity	(2) kW	0,90	1,28	1,49	1,71	2,30	4,06
Water flow-rate	(2) l/h	160	220	260	300	400	700
Water pressure drop	(2) kPa	11,30	31,27	53,45	68,51	130,72	88,06
Rated power input	W	24	26	32	54	89	104
<b>Low speed</b>							
Airflow	m <sup>3</sup> /h	139	184	319	404	591	836
▶ Cooling capacity	(1) kW	1,15	1,25	2,35	3,20	4,00	5,50
Sensible capacity	(1) kW	0,78	0,84	1,60	2,25	2,95	4,05
Water flow-rate	(1) l/h	200	210	400	550	690	940
Water pressure drop	(1) kPa	12,54	4,99	18,22	31,95	27,23	28,23
▶ Heating capacity	(2) kW	0,75	0,93	1,49	1,53	1,88	3,39
Water flow-rate	(2) l/h	130	160	260	260	320	590
Water pressure drop	(2) kPa	8,20	18,00	53,69	56,05	91,60	64,05
Rated power input	W	15	14	19	35	64	82
Standard power supply	V	220-240/1/50					
Type of supply fan	(3)	CFG					
No. of supply fans	-	1		2		3	
H Sound pressure level	(4) dB(A)	42	34	40	47	50	50
M Sound pressure level	(4) dB(A)	47	38	45	51	56	58
L Sound pressure level	(4) dB(A)	39	32	37	43	46	50
H Sound power level	(4) dB(A)	53	47	52	59	62	63
M Sound power level	(4) dB(A)	35	25	33	40	44	45
L Sound power level	(4) dB(A)	27	19	24	31	33	37

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.

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.

## accessories

<b>3V2X</b>	Three-way valve kit for 2-pipe type "on/off" system
<b>3V4X</b>	Three-way valve kit for 4-pipe type "on/off" system
<b>BRVHX</b>	Auxiliary condensate collection tray ausiliaria for vertical/horizontal installation
<b>KDPX</b>	Plinth kit

<b>CDPX</b>	Condensate drain pump
<b>BOXX</b>	Wall installation box KJRP-86A
<b>HMIFACX</b>	KJRP-86A electronic wired control for on-board or wall mounting (for AC version)

Accessories whose code ends with "X" are separately supplied.

## ELFOSpace

### Water terminal unit

Cased and uncased, vertical and horizontal indoor installation

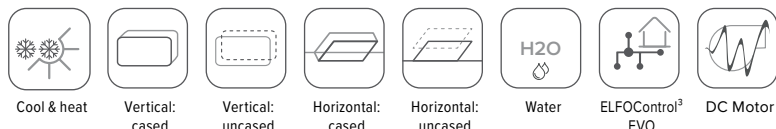
Capacity from 1,5 to 10,7 kW



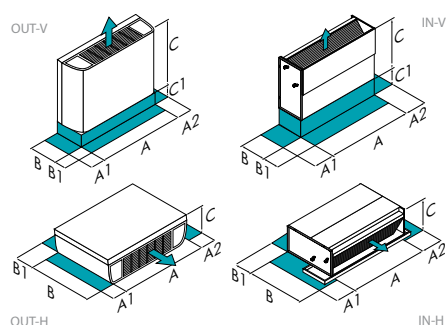
**ELFOSpace OUT and IN** are the cased and uncased water terminal for installation in the commercial sector.

- Versions for 2 and 4-pipe systems.
- Available with DC Brushless ventilating unit (sizes 003.0÷031.0).
- The available controls are simple and user-friendly, satisfying the most varied of requirements.
- Designed for connection to the ELFOControl<sup>3</sup> EVO or general supervisors.
- Low noise operation and easy to clean.
- Twelve sizes available with an almost countless number of accessories for resolving any service application.

### 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	ELFOSPACE	003.0	005.0	007.0	009.0	011.0	015.0	017.0	021.0	025.0	031.0	041.0	051.0
OUTV	A - Length	mm	670	670	870	870	1070	1070	1270	1270	1470	1470	1670
OUTV	B - Width	mm	220	220	220	220	220	220	220	220	220	220	220
OUTV	C - Height	mm	470	470	470	470	470	470	470	470	470	470	470
OUTV	A1	mm	200	200	200	200	200	200	200	200	200	200	200
OUTV	A2	mm	200	200	200	200	200	200	200	200	200	200	200
OUTV	B1	mm	250	250	250	250	250	250	250	250	250	250	250
OUTV	C1	mm	90	90	90	90	90	90	90	90	90	90	90
INV	A - Length	mm	450	450	650	650	850	850	1050	1050	1250	1250	1450
INV	B - Width	mm	215	215	215	215	215	215	215	215	215	215	215
INV	C - Height	mm	450	450	450	450	450	450	450	450	450	450	450
INV	A1	mm	200	200	200	200	200	200	200	200	200	200	200
INV	A2	mm	200	200	200	200	200	200	200	200	200	200	200
INV	B1	mm	250	250	250	250	250	250	250	250	250	250	250
INV	C1	mm	90	90	90	90	90	90	90	90	90	90	90
OUTH	A - Length	mm	670	670	870	870	1070	1070	1270	1270	1470	1470	1670
OUTH	B - Width	mm	470	470	470	470	470	470	470	470	470	470	470
OUTH	C - Height	mm	220	220	220	220	220	220	220	220	220	220	220
OUTH	A1	mm	200	200	200	200	200	200	200	200	200	200	200
OUTH	A2	mm	200	200	200	200	200	200	200	200	200	200	200
OUTH	B1	mm	90	90	90	90	90	90	90	90	90	90	90
INH	A - Length	mm	545	545	745	745	945	945	1145	1145	1345	1345	1545
INH	B - Width	mm	450	450	450	450	450	450	450	450	450	450	450
INH	C - Height	mm	215	215	215	215	215	215	215	215	215	215	215
INH	A1	mm	200	200	200	200	200	200	200	200	200	200	200
INH	A2	mm	200	200	200	200	200	200	200	200	200	200	200
INH	B1	mm	90	90	90	90	90	90	90	90	90	90	90
CC2-INV	Operating weight	kg	11	11	14	14	20	20	23	24	27	28	31
CC2-INH	Operating weight	kg	11	12	14	15	20	21	23	25	27	29	31
CC4-INV	Operating weight	kg	12	12	14	15	21	22	24	26	28	30	32
CC4-INH	Operating weight	kg	12	12	15	16	21	22	24	26	28	30	32
CC2-OUTV	Operating weight	kg	14	14	16	17	22	24	26	28	30	32	34
CC2-OUTH	Operating weight	kg	15	15	18	19	24	26	28	30	33	34	37
CC4-OUTH	Operating weight	kg	16	16	19	20	26	27	30	31	34	36	39
CC4-OUTV	Operating weight	kg	14	15	17	18	24	25	27	29	31	33	35

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.  
 OUTV Vertical cased version  
 INV Vertical uncased version  
 OUTH Horizontal cased version  
 INH Horizontal uncased version  
 CC2-INV 2 pipes-Vertical uncased version

CC2-INH 2 pipes-Horizontal uncased version  
 CC4-INV 4-pipe-Vertical uncased version  
 CC4-INH 4-pipe-Horizontal uncased version  
 CC2-OUTV 2 pipes-Vertical cased version  
 CC2-OUTH 2 pipes-Horizontal cased version  
 CC4-OUTH 4-pipe-Horizontal cased version  
 CC4-OUTV 4-pipe-Vertical cased version

## versions and configurations

### VERSION:

- INV** Vertical uncased version (Standard)
- OUTV** Vertical cased version
- OUTH** Horizontal cased version
- INH** Horizontal uncased version

### COIL CONFIGURATION:

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

### WATER FITTINGS:

- SX** Water fittings to the left (Standard)
- DX** Water fittings to the right

## technical data

Size	ELFOSPACE	003.0	005.0	007.0	009.0	011.0	015.0	017.0	021.0	025.0	031.0	041.0	051.0
<b>2-pipes</b>													
<b>High speed</b>													
Airflow	m <sup>3</sup> /h	370	400	500	550	670	720	1000	1050	1280	1310	1910	1940
▶ Cooling capacity	(1) kW	1,50	2,00	2,53	3,02	3,75	4,25	5,52	6,42	7,53	9,02	9,60	10,70
Sensible capacity	(1) kW	1,29	1,62	2,07	2,31	2,87	3,23	4,33	4,80	5,67	6,62	7,64	8,36
Water flow-rate	(1) l/h	258	344	435	519	645	731	949	1,104	1,295	1,551	1,651	1,710
Water pressure drop	(1) kPa	13,10	16,30	18,50	20,80	22,60	24,10	24,50	27,10	28,80	29,20	31,00	33,40
▶ Heating capacity	(2) kW	1,87	2,46	2,99	3,36	4,08	4,72	6,00	6,65	7,75	9,05	10,55	11,60
Water flow-rate	(2) l/h	322	422	514	577	702	812	1,032	1,144	1,333	1,557	1,815	1,995
Water pressure drop	(2) kPa	17,70	21,40	22,40	22,30	23,30	25,90	25,20	25,30	26,50	25,60	32,50	34,10
Total power input	W	49	49	66	66	71	71	130	130	146	146	224	224
<b>Medium speed</b>													
Airflow	m <sup>3</sup> /h	285	310	400	440	590	635	890	935	1140	1160	1640	1660
▶ Cooling capacity	(1) kW	1,28	1,71	2,20	2,63	3,47	3,93	5,14	5,97	7,01	8,37	8,73	9,72
Sensible capacity	(1) kW	1,07	1,35	1,76	1,97	2,62	2,95	3,98	4,42	5,22	6,07	6,85	7,48
Water flow-rate	(1) l/h	219	294	379	452	596	676	883	1,028	1,205	1,439	1,502	1,672
Water pressure drop	(1) kPa	9,50	11,90	14,00	15,80	19,30	20,70	21,20	23,50	25,00	25,10	25,70	27,60
▶ Heating capacity	(2) kW	1,57	2,08	2,58	2,90	3,75	4,35	5,56	6,16	7,18	8,35	9,54	10,47
Water flow-rate	(2) l/h	271	357	444	498	645	747	956	1,060	1,235	1,437	1,641	1,800
Water pressure drop	(2) kPa	12,60	15,30	16,70	16,60	19,70	21,90	21,60	21,70	22,80	21,80	26,60	27,70
Total power input	W	34	34	53	53	56	56	105	105	123	123	200	200
<b>Low speed</b>													
Airflow	m <sup>3</sup> /h	225	245	305	335	460	500	650	680	870	890	1490	1515
▶ Cooling capacity	(1) kW	1,10	1,48	1,86	2,22	2,97	3,39	4,23	4,90	5,93	7,10	8,23	9,19
Sensible capacity	(1) kW	0,90	1,14	1,45	1,62	2,19	2,49	3,18	3,52	4,30	5,02	6,40	7,00
Water flow-rate	(1) l/h	190	254	320	382	511	583	727	843	1,019	1,221	1,416	1,580
Water pressure drop	(1) kPa	7,10	8,90	10,00	11,20	14,20	15,40	14,40	15,80	17,90	18,10	22,80	24,60
▶ Heating capacity	(2) kW	1,35	1,78	2,16	2,42	3,18	3,71	4,52	4,99	6,01	7,02	8,96	9,86
Water flow-rate	(2) l/h	232	306	371	416	548	638	777	859	1,034	1,207	1,541	1,695
Water pressure drop	(2) kPa	9,20	11,20	11,70	11,60	14,20	16,00	14,30	14,20	15,90	15,40	23,50	24,60
Total power input	W	24	24	36	36	38	38	71	71	88	88	175	175
<b>4-pipes</b>													
<b>High speed</b>													
Airflow	m <sup>3</sup> /h	350	380	480	520	640	680	960	1000	1230	1260	1850	1880
▶ Cooling capacity	(1) kW	1,45	1,94	2,47	2,92	3,65	4,11	5,39	6,23	7,35	8,81	9,42	10,51
Sensible capacity	(1) kW	1,24	1,57	2,02	2,22	2,78	3,11	4,21	4,64	5,52	6,44	7,47	8,18
Water flow-rate	(1) l/h	249	334	425	502	628	707	927	1,072	1,264	1,515	1,620	1,808
Water pressure drop	(1) kPa	12,30	15,40	17,60	19,50	21,40	22,50	23,40	25,50	27,40	27,90	29,80	32,20
▶ Heating capacity	(3) kW	1,67	1,76	2,83	2,98	3,89	4,04	5,59	5,74	7,10	7,21	9,86	9,96
Water flow-rate	(3) l/h	144	151	243	256	335	348	481	494	611	620	848	856
Water pressure drop	(3) kPa	5,90	6,50	9,40	10,50	17,20	18,60	33,30	35,10	30,60	31,50	39,20	40,00
Total power input	W	49	49	66	66	71	71	130	130	146	146	224	224
<b>Medium speed</b>													
Airflow	m <sup>3</sup> /h	270	295	385	415	560	590	850	880	1100	1260	1850	1880
▶ Cooling capacity	(1) kW	1,24	1,66	2,15	2,54	3,36	3,76	5,00	5,76	6,86	8,24	8,64	9,64
Sensible capacity	(1) kW	1,03	1,31	1,73	1,89	2,53	2,81	3,86	4,23	5,10	5,96	6,76	7,40
Water flow-rate	(1) l/h	212	285	371	437	578	647	860	990	1,180	1,416	1,487	1,658
Water pressure drop	(1) kPa	8,90	11,30	13,40	14,70	18,20	18,90	20,10	21,80	23,90	24,40	25,10	27,00
▶ Heating capacity	(3) kW	1,41	1,49	2,44	2,57	3,57	3,68	5,16	5,28	6,60	6,71	9,00	9,08
Water flow-rate	(3) l/h	121	128	210	221	307	317	444	454	567	577	774	781
Water pressure drop	(3) kPa	4,20	4,70	7,10	7,80	14,50	15,40	28,40	29,70	26,40	27,30	32,60	33,20
Total power input	W	34	34	53	53	56	56	105	105	123	123	200	200
<b>Low speed</b>													
Airflow	m <sup>3</sup> /h	210	230	295	320	445	475	630	660	850	865	1470	1485
▶ Cooling capacity	(1) kW	1,06	1,42	1,83	2,16	2,91	3,29	4,15	4,82	5,85	6,98	8,17	9,08
Sensible capacity	(1) kW	0,86	1,10	1,43	1,57	2,14	2,41	3,11	3,45	4,24	4,92	6,34	6,91
Water flow-rate	(1) l/h	182	244	314	372	501	566	714	828	1,005	1,200	1,405	1,562
Water pressure drop	(1) kPa	6,50	8,30	9,60	10,70	13,70	14,40	13,90	15,30	17,30	17,00	22,40	24,00
▶ Heating capacity	(3) kW	1,19	1,26	2,05	2,16	3,06	3,19	4,24	4,37	5,57	5,63	8,47	8,52
Water flow-rate	(3) l/h	103	109	176	186	264	275	364	376	479	484	729	733
Water pressure drop	(3) kPa	3,00	3,40	5,00	5,50	10,70	11,60	19,10	20,30	18,80	19,20	29,00	29,30
Total power input	W	24	24	36	36	38	38	71	71	88	88	175	175
Standard power supply	V	220-240/1/50											
Type of supply fan	(4)	CFG											
No. of supply fans	-	1	1	1	1	2	2	2	2	2	2	3	3
H Sound pressure level	(5) dB(A)	44	44	50	51	43	43	49	51	54	55	57	57
M Sound pressure level	(5) dB(A)	37	37	44	45	39	40	47	47	52	52	54	54
L Sound pressure level	(5) dB(A)	30	31	36	37	32	33	40	41	45	46	51	52
H Sound power level	(5) dB(A)	55	55	61	62	54	54	60	62	65	66	68	68
M Sound power level	(5) dB(A)	48	48	55	56	50	51	58	58	63	63	65	65
L Sound power level	(5) dB(A)	41	42	47	48	43	44	51	52	56	57	62	63

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.

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

(4) CFG = AC 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

<b>MR</b>	90° air outlet	<b>3V2</b>	Three-way valve kit for 2-pipe type "on/off" system
<b>R3</b>	Downward air return	<b>3V2X</b>	Three-way valve kit for 2-pipe type "on/off" system
<b>RF</b>	Front air return	<b>3V4</b>	Three-way valve kit for 4-pipe system type "on/off"
<b>RP</b>	Rear intake	<b>3V4X</b>	Three-way valve kit for 4-pipe system type "on/off"
<b>RPFO</b>	Rear intake with oblique downward filter extraction	<b>10V2</b>	0-10V 3-way valve kit for 2-pipe system
<b>RPFB</b>	Rear intake with vertical downward filter extraction	<b>10V2X</b>	0-10V 3-way valve kit for 2-pipe system
<b>RPFA</b>	Rear intake with vertical upward filter extraction	<b>10V4</b>	0-10V 3 way valve kit for 4-pipe system
<b>VEC</b>	High efficiency EC fan (sizes 003.0÷031.0)	<b>10V4X</b>	0-10V 3 way valve kit for 4-pipe system
<b>CTSP1</b>	CLIVET TALK TERMINAL SPACE electronics with RS485 Modbus serial port	<b>KR90X</b>	90° pipe-fitting kit
<b>CPVM</b>	Control additional card of 0-10V valve and EC fan (available only with options: CTSP1)	<b>BRV</b>	Auxiliary condensate collection pan (vertical installation)
<b>TR</b>	Terminal block for motor connection	<b>BRVX</b>	Auxiliary condensate collection pan (vertical installation)
<b>TRM</b>	Terminal block with minimum water temperature clickson	<b>BRBP</b>	Auxiliary condensate collection pan (horizontal installation)
<b>HIDF1</b>	Control on the unit: off + 3 speed switch	<b>BRBPX</b>	Auxiliary condensate collection pan (horizontal installation)
<b>HIDF2</b>	Built-in control: BULB thermostat (3 speed.+off+E/I+Temp.selection)	<b>CDP</b>	Condensate drain pump
<b>HIDF4</b>	Control on the unit: BULB thermostat(3speed+off+E/I+temp.select.)+ min. temperature thermostat	<b>CDPX</b>	Condensate drain pump
<b>HIDF6</b>	Control mounted on unit's side: multi-function electronic room thermostat	<b>SERX</b>	Manual outside air damper for Vertical and horizontal installation
<b>HIDF7</b>	Built-in control: electronic thermostat with display	<b>SERMX</b>	Outdoor air motorized on/off damper
<b>HIDF8</b>	Control built-in installed: electronic thermostat with display for 0-10Vdc fan (sizes 003.0÷031.0)	<b>PI90X</b>	Support feet for built-in vertical units h=90mm
<b>TRP</b>	Terminal block with closing cover IP40	<b>PI155X</b>	Support plinth for concealed vertical units h=155mm
<b>TRMP</b>	Terminal block with closing cover IP40 and minimum water temperature clickson	<b>FTZX</b>	Galvanized steel plate falseframe
<b>HIDE2X</b>	Remote control with E/I +3V +on/off for wall installation	<b>PNAX</b>	Pre-painted panel with supply and return grilles
<b>HIDE3X</b>	Plurifunctional remote control for wall installation	<b>PPVX</b>	Rear cover panel for OUT-V without support feet
<b>HIDE4X</b>	Plurifunctional remote control for 0-10V valves	<b>PPV90X</b>	Rear cover panel for OUT-V with support feet h=90mm
<b>HIDT2X</b>	HID-T2 electronic room control	<b>PPV155X</b>	Rear cover panel for OUT-V with support feet h=155mm
<b>HIDT3X</b>	HID-T3 electronic room control	<b>PRAX</b>	Air intake straight plenum
<b>HIDT18X</b>	HIDT18X electronic room control for wall installation	<b>PRCAX</b>	Air intake plenum with circular fittings and air filter
<b>TMX</b>	Hot water min. temperature thermostat	<b>PR90AX</b>	90° air intake plenum
<b>PTABX</b>	Remote probe for room air temperature for electromechanical thermostats	<b>PRMX</b>	Air discharge plenum
<b>DCPX</b>	Control device for more units with a single room control.	<b>PR90MX</b>	90° air outlet plenum
<b>RE</b>	Electric heaters	<b>PRCMX</b>	Air outlet plenum with circular fittings+internal thermal and acoustic insulation
<b>KBI2</b>	2-pipe water balancing kit = ball valve+water balancing kit	<b>PRCTX</b>	Terminal plenum with circular connections
<b>KBI2X</b>	2-pipe water balancing kit = ball valve+water balancing kit	<b>PRTX</b>	0-100 mm telescopic extension
<b>KBI4</b>	4-pipe water balancing kit = 2 ball valves+2 water balancing kit	<b>DAOJX</b>	Air supply duct with flexible connection
<b>KBI4X</b>	4-pipe water balancing kit = 2 ball valves+2 water balancing kit	<b>GAAX</b>	Air intake duct with flexible joint
<b>2V2</b>	ON/OFF 2 way valve kit for 2-pipe system	<b>GRMX</b>	Air outlet grille without air filter
<b>2V2X</b>	ON/OFF 2 way valve kit for 2-pipe system	<b>AGRMX</b>	Air outlet grille in aluminium without filter
<b>2V4</b>	ON/OFF 2 way valve kit for 4-pipe system	<b>GRAX</b>	Return grille with filter
<b>2V4X</b>	ON/OFF 2 way valve kit for 4-pipe system	<b>AGRAX</b>	Air intake grille with air filter

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.

## ELFOSpace BOX3

### Water terminal unit

Cassette-type indoor installation

Capacity from 2,98 to 11,19 kW



ErP  
compliant

The **ELFOSpace BOX3** terminal unit has been designed for installation in suspended ceilings without requiring any extra part for operation.

The ELFOSpace BOX3 is therefore suited for use in environments such as shops, restaurants, hotels and gyms, where the excellent outflowing air control makes them ideal air-conditioning units:

- versions for 2 and 4-pipe systems;
- available with standard DC Brushless motor;
- suited for installation in standard suspended ceilings with 600 x 600 mm module;
- high standards of efficiency and quiet operation for unit with 800 X 800 mm module;
- standard version with infrared electronics;
- the unit comes with a condensate drain pump built-in.

### functions and features



Cool & heat



Cassette  
type



Water

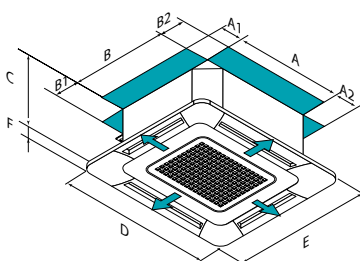


DC Motor



ELFOControl<sup>3</sup>  
EVO

### 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-pipe

## versions and configurations

### PLASTIC FRAME FOR AIR SUPPLY AND RETURN:

**360PX** Plastic frame for air supply and return (Standard)

### COIL CONFIGURATION:

**CC2** Coil configuration for 2-pipe system (Standard)

**CC4** Coil configuration for 4-pipe system

### STANDARD CONFIGURATION:

**IRPCB** Electronics with 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
<b>2 pipe</b>							
<b>High speed</b>							
Airflow	m <sup>3</sup> /h	535	610	781	1175	1581	1871
▶ Cooling capacity	(1) kW	2,98	3,96	4,20	5,93	7,87	11,19
Sensible capacity	(1) kW	2,49	3,20	3,45	5,00	6,68	9,04
Water flow-rate	(1) l/h	530	700	750	1050	1440	1960
Water pressure drop	(1) kPa	10,00	11,48	12,32	19,20	22,30	36,60
▶ Heating capacity	(2) kW	2,61	4,08	4,95	6,06	9,16	10,07
Water flow-rate	(2) l/h	640	830	870	1300	1730	2350
Water pressure drop	(2) kPa	12,10	9,20	9,40	25,90	28,80	49,20
Total power input	W	15	28	43	41	85	126
<b>Medium speed</b>							
Airflow	m <sup>3</sup> /h	429	477	611	987	1371	1415
▶ Cooling capacity	(1) kW	2,53	3,26	3,48	5,30	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	450	580	610	920	1280	1530
Water pressure drop	(1) kPa	7,00	8,20	8,62	15,40	18,10	22,70
▶ Heating capacity	(2) kW	2,31	3,34	3,99	5,72	8,54	9,37
Water flow-rate	(2) l/h	540	670	700	1140	1570	1860
Water pressure drop	(2) kPa	8,50	8,60	8,23	20,10	24,00	31,20
Total power input	W	9	15	28	27	59	58
<b>Low speed</b>							
Airflow	m <sup>3</sup> /h	322	381	494	768	1236	1198
▶ Cooling capacity	(1) kW	2,00	2,76	3,01	4,40	6,67	7,48
Sensible capacity	(1) kW	1,59	2,10	2,31	3,52	5,50	5,97
Water flow-rate	(1) l/h	350	510	540	770	1220	1280
Water pressure drop	(1) kPa	5,00	6,54	7,40	11,00	16,30	16,40
▶ Heating capacity	(2) kW	2,24	2,73	3,26	5,32	7,90	8,68
Water flow-rate	(2) l/h	420	560	580	1130	1460	1590
Water pressure drop	(2) kPa	5,30	6,00	6,10	19,90	20,70	23,30
Total power input	W	5	19	21	17	45	39
<b>4 pipe</b>							
<b>High speed</b>							
Airflow	m <sup>3</sup> /h	493	669	673	1.184	1.642	1.708
▶ 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	420	530	560	900	1.420	1.430
Water pressure drop	(1) kPa	17,40	13,15	16,80	14,80	33,90	33,00
▶ Heating capacity	(3) kW	3,13	3,71	3,94	6,15	9,75	9,93
Water flow-rate	(3) l/h	320	370	420	580	890	900
Water pressure drop	(3) kPa	23,50	24,10	26,80	25,30	42,40	48,70
Total power input	W	24	38	42	62	121	139
<b>Medium speed</b>							
Airflow	m <sup>3</sup> /h	395	523	526	997	1.421	1.297
▶ Cooling capacity	(1) kW	1,86	2,38	2,38	4,38	7,25	6,62
Sensible capacity	(1) kW	1,58	2,00	1,97	3,71	5,99	5,51
Water flow-rate	(1) l/h	370	460	490	800	1.290	1.190
Water pressure drop	(1) kPa	13,50	9,40	13,10	11,50	30,00	22,60
▶ Heating capacity	(3) kW	2,63	3,14	3,30	5,43	8,96	8,33
Water flow-rate	(3) l/h	280	320	360	520	820	760
Water pressure drop	(3) kPa	17,10	17,90	19,20	20,50	36,60	32,50
Total power input	W	18	35	27	44	83	70
<b>Low speed</b>							
Airflow	m <sup>3</sup> /h	295	415	425	783	1.285	1.096
▶ Cooling capacity	(1) kW	1,49	2,05	2,07	3,64	6,70	5,84
Sensible capacity	(1) kW	1,24	1,67	1,70	3,05	5,50	4,81
Water flow-rate	(1) l/h	300	400	430	670	1.200	1.050
Water pressure drop	(1) kPa	9,30	7,00	10,30	8,10	24,00	17,70
▶ Heating capacity	(3) kW	2,08	2,65	2,83	4,61	8,42	7,51
Water flow-rate	(3) l/h	230	280	320	450	770	690
Water pressure drop	(3) kPa	11,30	13,10	14,50	14,50	32,60	27,00
Total power input	W	14	30	20	30	66	49
Standard power supply	V	220-240/1/50					
Type of supply fan	(4) -	RAD DC					
No. of supply fans	-	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

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) 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) RAD DC = DC Brushless radial 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

<b>3V2X</b>	Three-way valve kit for 2-pipe "on/off" system	<b>LONGWX</b>	Lonworks gateway
<b>3V4X</b>	Three-way valve kit for 4-pipe "on/off" system	<b>CCM18UX</b>	Modbus gateway up to 16 indoor units
<b>KJR90X</b>	KJR90 electronic room control for wall installation	<b>CCM18X</b>	Modbus gateway up to 64 indoor units
<b>KJR150X</b>	Indoor units group controller	<b>DTX</b>	Auxiliary condensate collection tray
<b>CCM30BX</b>	Centralized controller with case	<b>0-10VX</b>	Module for DC fan management with external 0-10V control
<b>CCM08X</b>	Bacnet gateway		

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.

## NEW PRODUCT

Available within the first quarter of 2021



ErP  
compliant

## MOOD

### Water terminal unit

Indoor installation, wall-mounted, cased

Capacity from 2,7 to 4,87 kW

**MOOD** is the new wall-mounted water terminal with a new design and advanced control functions.

In addition to these features:

- available with standard DC Brushless motor;
- new design;
- standard version with infrared electronics;
- Modbus port available as standard;
- 0-10V input for ventilation speed control;
- the unit is supplied with 3-way valve built-in.

## functions and features



Cool &  
heat



Vertical:  
cased



Water

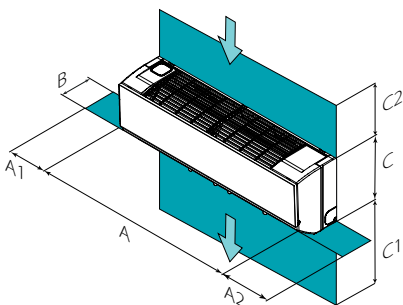


DC Motor



ELFOControl<sup>2</sup>  
EVO

## 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	CFW-2	1	2	3	4	5
A - Length	mm	916	916	916	1074	1074
B - Width	mm	233	233	233	237	237
C - Width	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.

## versions and configurations

### STANDARD CONFIGURATION:

**IRPCB** Electronics with 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

## technical data

Size	CFW-2	1	2	3	4	5
<b>2 pipe</b>						
<b>High speed</b>						
Airflow	m <sup>3</sup> /h	492	585	825	862	979
▶ Cooling capacity	(1) kW	2,70	2,91	3,81	4,47	4,87
Sensible capacity	(1) kW	2,15	2,33	3,18	3,67	4,11
Water flow-rate	(1) l/h	480	510	670	770	850
Water pressure drop	(1) kPa	32	37	57	41	51
▶ Heating capacity	(2) kW	2,94	3,23	4,3	4,84	5,26
Water flow-rate	(2) l/h	480	510	670	770	850
Water pressure drop	(2) kPa	32,70	34,10	51,90	36,80	47,12
Total power input	W	12	14	31	23	33
<b>Medium speed</b>						
Airflow	m <sup>3</sup> /h	454	485	689	741	849
▶ Cooling capacity	(1) kW	2,59	2,54	3,30	3,98	4,26
Sensible capacity	(1) kW	2,03	2	2,71	3,21	3,56
Water flow-rate	(1) l/h	460	450	570	680	720
Water pressure drop	(1) kPa	29	30	41	34	40
▶ Heating capacity	(2) kW	2,8	2,77	3,65	4,23	4,68
Water flow-rate	(2) l/h	460	450	570	680	720
Water pressure drop	(2) kPa	34,90	31,50	47,50	33,80	42,80
Total power input	W	10	10	20	16	23
<b>Low speed</b>						
Airflow	m <sup>3</sup> /h	400	413	590	634	717
▶ Cooling capacity	(1) kW	2,39	2,19	2,88	3,48	3,79
Sensible capacity	(1) kW	1,85	1,71	2,31	2,77	3,1
Water flow-rate	(1) l/h	420	380	510	610	650
Water pressure drop	(1) kPa	25	23	33	27	34
▶ Heating capacity	(2) kW	2,58	2,42	3,09	3,62	3,96
Water flow-rate	(2) l/h	420	380	510	610	650
Water pressure drop	(2) kPa	30,20	25,10	35,70	26,30	33,00
Total power input	W	8	8	14	12	16
Standard power supply	V	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

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) 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** Wall electronic room control

**KJR150X** Indoor units group controller

**CCM30BX** Centralized controller with case

**CCM08X** Bacnet gateway

**LONGWX** Lonworks gateway

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.

## ELFOSpace WALL3

### Water terminal unit

Indoor installation, wall-mounted, cased

Capacity from 2,20 to 4,45 kW



ErP  
compliant

**ELFOSpace WALL3** is a range of cased water terminals that are cleverly designed to be placed in the space above doors or at mid-height on walls, and are particularly suitable, thanks to the accurate design, to residential and hotel installations.

In addition to these features:

- available with standard DC Brushless motor;
- new design;
- standard version with infrared electronics;
- high efficiency and quiet operation;
- air flow direction control;
- the unit is supplied with 3-way valve built-in.

### functions and features



Cool & heat



Vertical:  
cased

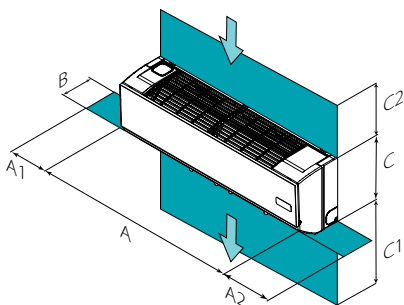


Water



DC Motor

### 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	CFW	007.0	009.0	011.0	017.0	021.0
A - Length	mm	916	916	916	1074	1074
B - Width	mm	218	218	218	221	221
C - Width	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	12	12	14,7	14,7

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

### STANDARD CONFIGURATION:

<b>IRPCB</b>	Electronics with infrared remote control (Standard)
<b>R05</b>	R05 infrared remote control (Standard)
<b>VEC</b>	High efficiency EC fan (Standard)

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

## technical data

Size	CFW	007.0	009.0	011.0	017.0	021.0
<b>2 pipe</b>						
<b>High speed</b>						
Airflow	m <sup>3</sup> /h	425	510	680	850	1,020
▶ Cooling capacity	(1) kW	2,20	2,64	3,08	4,07	4,45
Sensible capacity	(1) kW	1,63	1,97	2,33	3,05	3,36
Water flow-rate	(1) l/h	380	450	530	700	770
Water pressure drop	(1) kPa	23,10	33,60	42,00	34,90	36,30
▶ Heating capacity	(2) kW	2,57	3,15	3,71	4,85	5,38
Water flow-rate	(2) l/h	450	550	640	840	930
Water pressure drop	(2) kPa	29,95	44,14	57,16	41,73	47,32
Total power input	W	11	20	24	28	38
<b>Medium speed</b>						
Airflow	m <sup>3</sup> /h	410	427	550	692	820
▶ Cooling capacity	(1) kW	2,14	2,34	2,71	3,57	3,91
Sensible capacity	(1) kW	1,59	1,74	2,03	2,65	2,93
Water flow-rate	(1) l/h	370	400	470	610	670
Water pressure drop	(1) kPa	22,11	27,40	33,79	27,85	29,09
▶ Heating capacity	(2) kW	2,51	2,78	3,24	4,23	4,69
Water flow-rate	(2) l/h	430	480	560	730	810
Water pressure drop	(2) kPa	28,65	35,63	45,16	32,90	37,26
Total power input	W	9	16	20	24	32
<b>Low speed</b>						
Airflow	m <sup>3</sup> /h	320	349	504	586	670
▶ Cooling capacity	(1) kW	1,78	2,02	2,56	3,18	3,43
Sensible capacity	(1) kW	1,31	1,49	1,91	2,35	2,55
Water flow-rate	(1) l/h	310	350	440	550	590
Water pressure drop	(1) kPa	16,19	21,37	30,70	22,86	23,22
▶ Heating capacity	(2) kW	2,08	2,40	3,05	3,76	4,10
Water flow-rate	(2) l/h	360	420	530	650	710
Water pressure drop	(2) kPa	20,81	27,58	40,80	26,85	29,43
Total power input	W	8	9	17	18	27
Standard power supply	V	220-240/1/50				
Type of supply fan	(3) -	TGZ DC				
No. of supply fan	-	1	1	1	1	1
H Sound pressure level	(4) dB(A)	30	32	36	38	40
M Sound pressure level	(4) dB(A)	26	28	32	34	36
L Sound pressure level	(4) dB(A)	23	25	29	30	31
H Sound power level	(4) dB(A)	41	44	47	49	51
M Sound power level	(4) dB(A)	37	39	43	45	47
L Sound power level	(4) dB(A)	34	36	40	41	42

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) 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

<b>KJR90X</b>	Wall electronic room control
<b>KJR150X</b>	Indoor units group controller
<b>CCM30BX</b>	Centralized controller with case
<b>CCM08X</b>	Bacnet gateway

<b>LONGWX</b>	Lonworks gateway
<b>CCM18UX</b>	Modbus gateway up to 16 indoor units
<b>CCM18X</b>	Modbus gateway up to 64 indoor units
<b>0-10VX</b>	Module for DC fan management with external 0-10V control

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.

## ELFODuct

### Water terminal unit

Uncased horizontal and vertical indoor installation  
Ductable

Capacity from 6 to 20,2 kW



ELFODuct MP INV



ELFODuct MP INH



ErP  
compliant

The **ELFODuct MP** are the new generation air-treatment water terminal units ideal for installations where ducted air distribution is necessary. The units are designed for installation in suspended ceilings or lining walls and are characterized by their compactness and extremely low noise levels.

The advantages of the new series are:

- version for 2 and 4-pipe systems;
- version for horizontal installations in suspended ceilings and version for vertical installations in lining walls;
- high energy efficiency thanks to the configuration with fan deck with DC Brushless motor;
- available head up to **120 Pa**;
- very low sound levels;
- internal exchanger with large exchange surface, easily reversed water connections even on construction site;
- complete accessories range for the full installation;
- complete range of electromechanical and electronic thermostats and serial port RS485 with MODBUS protocol.

## functions and features



Cool & heat



Vertical:  
uncased



Horizontal:  
uncased



H<sub>2</sub>O

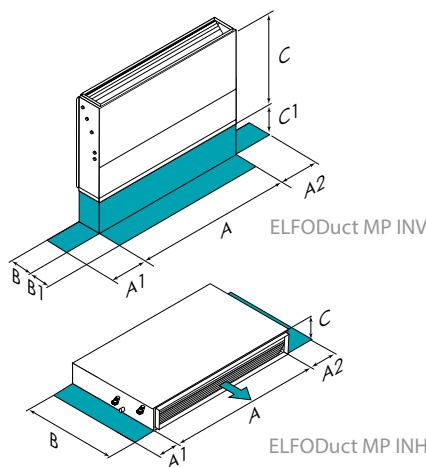


ELFOControl<sup>3</sup>  
EVO



DC Motor

## 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	ELFODUCT MP	15	21	25	31	41	51	61	71
CC2-INV	A - Length	mm 880	880	880	1280	1280	1280	1680	1680
CC2-INV	B - Width	mm 580	580	580	580	580	580	580	580
CC2-INV	C - Height	mm 250	250	250	250	250	250	250	250
CC2-INV	A1	mm 400	400	400	400	400	400	400	400
CC2-INV	A2	mm 200	200	200	200	200	200	200	200
CC2-INV	B1	mm 250	250	250	250	250	250	250	250
CC2-INV	C1	mm 100	100	100	100	100	100	100	100
CC2-INV	Operating weight	kg 34	35	37	48	50	53	65	68
CC2-INH	A - Length	mm 880	880	880	1280	1280	1280	1680	1680
CC2-INH	B - Width	mm 555	555	555	555	555	555	555	555
CC2-INH	C - Height	mm 250	250	250	250	250	250	250	250
CC2-INH	A1	mm 400	400	400	400	400	400	400	400
CC2-INH	A2	mm 200	200	200	200	200	200	200	200
CC2-INH	Operating weight	kg 34	35	37	48	50	53	65	68
CC4-INV	A - Length	mm 880	880	-	1280	1280	1680	1680	-
CC4-INV	B - Width	mm 580	580	-	580	580	580	580	-
CC4-INV	C - Height	mm 250	250	-	250	250	250	250	-
CC4-INV	A1	mm 400	400	-	400	400	400	400	-
CC4-INV	A2	mm 200	200	-	200	200	200	200	-
CC4-INV	B1	mm 250	250	-	250	250	250	250	-
CC4-INV	C1	mm 100	100	-	100	100	100	100	-
CC4-INV	Operating weight	kg 36	37	-	51	53	67	69	-
CC4-INH	A - Length	mm 880	880	-	1280	1280	1680	1680	-
CC4-INH	B - Width	mm 555	555	-	555	555	555	555	-
CC4-INH	C - Height	mm 250	250	-	250	250	250	250	-
CC4-INH	A1	mm 400	400	-	400	400	400	400	-
CC4-INH	A2	mm 200	200	-	200	200	200	200	-
CC4-INH	Operating weight	kg 36	37	-	51	53	67	69	-

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-INV 2 pipes-Vertical uncased version  
CC2-INH 2 pipes-Horizontal uncased version  
CC4-INV 4-pipe-Vertical uncased version  
CC4-INH 4-pipe-Horizontal uncased version

## versions and configurations

### VERSION:

<b>INH</b>	Horizontal uncased version (Standard)
<b>INV</b>	Vertical uncased version

### WATER FITTINGS:

<b>DX</b>	Water fittings to the right (Standard)
<b>SX</b>	Water fittings to the left

### COIL CONFIGURATION:

<b>CC2</b>	Coil configuration for 2-pipe system (Standard)
<b>CC4</b>	Coil configuration for 4-pipe system (sizes 15÷21, 31÷61)

### RETURN:

<b>RP</b>	Rear intake (Standard)
<b>R3</b>	Downward air return
<b>RF</b>	Front air inlet

## technical data

Size	ELFODUCT MP	15	21	25	31	41	51	61	71
<b>2 pipe</b>									
<b>High speed</b>									
Airflow	m <sup>3</sup> /h	1.100	1.200	1.150	2.100	2.300	2.200	3.100	2.950
▶ Cooling capacity	(1) kW	6,01	7,48	8,59	10,30	12,90	15,00	17,20	20,20
Sensible capacity	(1) kW	4,57	5,56	6,16	8,10	9,95	11,10	13,30	14,90
Water flow-rate	(1) l/h	1.034	1.287	1.477	1.772	2.219	2.580	2.958	3.474
Water pressure drop	(1) kPa	28,70	37,80	32,40	21,00	33,10	25,10	23,10	22,00
▶ Heating capacity	(2) kW	6,55	7,90	8,30	11,70	14,40	15,20	19,40	20,40
Water flow-rate	(2) l/h	1.127	1.359	1.428	2.012	2.477	2.614	3.337	3.509
Water pressure drop	(2) kPa	29,60	36,70	26,30	23,60	35,80	22,30	25,50	19,50
Total power input	W	179	179	179	330	330	330	409	409
<b>Medium speed</b>									
Airflow	m <sup>3</sup> /h	913	1.008	978	1.953	2.139	2.068	2.821	2.714
▶ Cooling capacity	(1) kW	5,35	6,71	7,77	9,85	12,33	14,44	16,22	19,18
Sensible capacity	(1) kW	4,00	4,91	5,49	7,69	9,45	10,62	12,43	14,04
Water flow-rate	(1) l/h	921	1.155	1.336	1.694	2.121	2.483	2.790	3.299
Water pressure drop	(1) kPa	22,80	30,50	26,50	19,20	30,20	23,20	20,50	19,90
▶ Heating capacity	(2) kW	5,79	7,04	7,46	11,15	13,73	14,59	18,23	19,31
Water flow-rate	(2) l/h	996	1.211	1.283	1.918	2.361	2.510	3.136	3.321
Water pressure drop	(2) kPa	23,20	29,10	21,20	21,40	32,50	20,60	22,50	17,50
Total power input	W	138	138	138	290	290	290	340	340
<b>Low speed</b>									
Airflow	m <sup>3</sup> /h	715	792	782	1.617	1.771	1.760	2.170	2.154
▶ Cooling capacity	(1) kW	4,60	5,78	6,76	8,76	10,97	13,06	13,79	16,62
Sensible capacity	(1) kW	3,36	4,13	4,67	6,72	8,25	9,46	10,30	11,90
Water flow-rate	(1) l/h	791	994	1.163	1.507	1.887	2.247	2.371	2.859
Water pressure drop	(1) kPa	16,80	22,60	20,10	15,20	23,90	19,00	14,80	14,90
▶ Heating capacity	(2) kW	4,93	6,01	6,44	9,85	12,12	13,12	15,34	16,58
Water flow-rate	(2) l/h	848	1.033	1.107	1.694	2.085	2.257	2.638	2.852
Water pressure drop	(2) kPa	16,80	21,20	15,80	16,70	25,30	16,60	15,90	12,90
Total power input	W	128	128	128	283	283	283	305	305
Number of supply fans	-	1	1	1	2	2	2	3	3
<b>4 pipe</b>									
<b>High speed</b>									
Airflow	m <sup>3</sup> /h	1.050	1.140	-	2.000	2.170	2.670	2.930	-
▶ Cooling capacity	(1) kW	5,83	7,22	-	9,96	12,40	13,20	16,60	-
Sensible capacity	(1) kW	4,42	5,35	-	7,83	9,53	10,40	12,80	-
Water flow-rate	(1) l/h	1.003	1.242	-	1.713	2.133	2.270	2.855	-
Water pressure drop	(1) kPa	27,00	35,30	-	19,60	30,60	13,20	21,40	-
▶ Heating capacity	(3) kW	5,88	6,20	-	10,31	10,84	13,78	14,58	-
Water flow-rate	(3) l/h	505	533	-	887	933	1.185	1.254	-
Water pressure drop	(3) kPa	30,70	33,60	-	27,90	30,40	25,90	28,40	-
Total power input	W	175	175	-	330	330	409	409	-
<b>Medium speed</b>									
Airflow	m <sup>3</sup> /h	893	980	-	1.880	2.040	2.456	2.725	-
▶ Cooling capacity	(1) kW	5,27	6,57	-	9,59	11,93	12,53	15,87	-
Sensible capacity	(1) kW	3,94	4,80	-	7,49	9,12	9,80	12,15	-
Water flow-rate	(1) l/h	907	1.131	-	1.649	2.053	2.156	2.730	-
Water pressure drop	(1) kPa	22,10	29,20	-	18,20	28,30	11,90	19,60	-
▶ Heating capacity	(3) kW	5,28	5,61	-	9,90	10,41	13,04	13,90	-
Water flow-rate	(3) l/h	454	482	-	851	895	1.121	1.195	-
Water pressure drop	(3) kPa	24,80	27,50	-	25,70	28,00	23,20	25,80	-
Total power input	W	138	138	-	290	290	340	340	-
<b>Low speed</b>									
Airflow	m <sup>3</sup> /h	704	775	-	1.600	1.758	1.922	2.168	-
▶ Cooling capacity	(1) kW	4,55	5,68	-	8,67	10,88	10,77	13,77	-
Sensible capacity	(1) kW	3,32	4,06	-	6,67	8,20	8,22	10,32	-
Water flow-rate	(1) l/h	783	978	-	1.492	1.872	1.852	2.369	-
Water pressure drop	(1) kPa	16,50	21,90	-	14,90	23,50	8,80	14,80	-
▶ Heating capacity	(3) kW	4,52	4,80	-	8,90	9,44	11,09	11,95	-
Water flow-rate	(3) l/h	388	413	-	765	812	954	1.028	-
Water pressure drop	(3) kPa	18,10	20,20	-	20,80	23,00	16,80	19,10	-
Total power input	W	128	128	-	283	283	305	305	-
Number of supply fans	-	1	1	-	2	2	3	3	-
Standard power supply	V	220-240/1/50							
Standard power supply	(4) -	CFG							
H Sound pressure level	(5) dB(A)	58	59	59	62	63	63	62	62
M Sound pressure level	(5) dB(A)	53	54	54	60	61	61	59	59
L Sound pressure level	(5) dB(A)	47	48	48	54	55	55	52	52
H Sound power level	(5) dB(A)	69	70	70	73	74	74	73	73
M Sound power level	(5) dB(A)	64	65	65	71	72	72	70	70
L Sound power level	(5) dB(A)	58	59	59	65	66	66	63	63

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.

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

(4) CFG = AC 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

<b>VEC</b>	High efficiency EC fan	<b>SFHEX</b>	Air filter section (ductable) with EU5 air filter (Eurovent 4/5)
<b>TRM</b>	Terminal block with minimum water temperature clickson	<b>HIDE2X</b>	Remote control with E/I +3V +on/off for wall installation
<b>TRP</b>	Terminal block with closing cover IP40	<b>HIDE3X</b>	Plurifunctional remote control for wall installation
<b>TRMP</b>	Terminal block with closing cover IP40 and minimum water temperature clickson	<b>HIDE4X</b>	Plurifunctional room control for 0-10V valves
<b>CTSP1</b>	CLIVET TALK TERMINAL SPACE electronics with RS485 Modbus serial port	<b>HIDT2X</b>	HID-T2 electronic room control
<b>CPVM</b>	Control additional card of 0-10V valve and EC fan (available only with options: CTSP1)	<b>HIDT3X</b>	HID-T3 electronic room control
<b>2V2</b>	ON/OFF 2-way valve kit for 2-pipe system	<b>HIDT18X</b>	HIDT18X electronic room control for wall installation
<b>2V2X</b>	ON/OFF 2-way valve kit for 2-pipe system	<b>PTABX</b>	Remote probe for room air temperature for electromechanical thermostats.
<b>2V4</b>	ON/OFF 2-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>DCPX</b>	Control device for more units with a single room control.
<b>2V4X</b>	ON/OFF 2-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>EH230X</b>	Heating section with electrical heaters 230V with safety thermostat
<b>3V2</b>	3-way valve kit for 2-pipe type "on/off" system	<b>EH400X</b>	Heating section with electrical heaters 400V with safety thermostat
<b>3V2X</b>	3-way valve kit for 2-pipe type "on/off" system	<b>RE700</b>	0.7 kW integrated electric heater with safety thermostat and power electric panel
<b>3V4</b>	3-way valve kit for 4-pipe system type "on/off" (sizes 015.0÷021.0, 031.0÷061.0)	<b>RE1000</b>	1.0 kW integrated electric heater with safety thermostat and power electric panel
<b>3V4X</b>	3-way valve kit for 4-pipe system type "on/off" (sizes 015.0÷021.0, 031.0÷061.0)	<b>RE1500</b>	1.5 kW integrated electric heater with safety thermostat and power electric panel
<b>10V4</b>	0-10V 3-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>RE2000</b>	2.0 kW integrated electric heater with safety thermostat and power electric panel
<b>10V4X</b>	0-10V 3-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>MCRX</b>	Mixing and recirculating chamber
<b>10V2</b>	0-10V 3-way valve kit for 2-pipe system	<b>PR90AX</b>	90° air intake plenum
<b>10V2X</b>	0-10V 3-way valve kit for 2-pipe system	<b>PCCRIX</b>	Air intake plenum with flexible joint
<b>KIB22X</b>	Water and balancing kit for 2-way valve and 2-pipe installation	<b>PGFRIX</b>	Air intake plenum with flexible joint
<b>KIB24X</b>	Water and balancing kit for 2-way valve and 4-pipe installation (sizes 015.0÷021.0, 031.0÷061.0)	<b>PMAX</b>	Straight section for both air intake / supply outlets
<b>KIB32X</b>	Water and balancing kit for 3-way valve and 2-pipe installation	<b>P90MAX</b>	90° section for air supply outlet
<b>KIB34X</b>	Water and balancing kit for 3-way valve and 4-pipe installation (sizes 015.0÷021.0, 031.0÷061.0)	<b>PCCMAX</b>	Section with spigots "Ø" with variable diameter and internal insulation for air supply outlet
<b>BRO</b>	Auxiliary drain pan in galvanized steel with thermal insulation	<b>PGFMAX</b>	Anti-vibration section for supply outlet
<b>BROX</b>	Auxiliary drain pan in galvanized steel with thermal insulation	<b>SILMAX</b>	Labyrinth noise level attenuator section for both air intake / supply outlets
<b>BRV</b>	Auxiliary condensate collection pan (vertical installation)	<b>CUFMX</b>	Air outlet casing with bird-proof grill
<b>BRVX</b>	Auxiliary condensate collection pan (vertical installation)	<b>CUFAX</b>	Air intake casing with bird-proof grill and EU3 air filter (Eurovent 4/5)
<b>CDP</b>	Condensate drain pump	<b>S230X</b>	ON/OFF 230v servomotor for mixing and recirculation chamber
<b>CDPX</b>	Condensate drain pump	<b>GMX</b>	Outlet grille
<b>FAPS</b>	EU3 flat air filter (Eurovent 4/5) not ductable	<b>GRAX</b>	Return grille with filter
<b>FAPSX</b>	EU3 flat air filter (Eurovent 4/5) not ductable	<b>TMX</b>	Hot water min. temperature thermostat
<b>SFCF</b>	Air filter section (ductable) with EU3 flat air filter (Eurovent 4/5)		
<b>SFCFX</b>	Air filter section (ductable) with EU3 flat air filter (Eurovent 4/5)		

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.

## ELFODuct

### Water terminal unit

Uncased horizontal and vertical indoor installation  
Ductable

Capacity from 6,8 to 25,5 kW



ELFODuct HP INV



ELFODuct HP INH



ErP  
compliant

The **ELFODuct HP** are the new generation air-treatment water terminal units ideal for installations where ducted air distribution is necessary. The units are designed for installation in suspended ceilings or lining walls and are characterized by their compactness and extremely low noise levels. The advantages of the new series are:

- version for 2 and 4-pipe systems;
- version for horizontal installations in suspended ceilings and version for vertical installations in lining walls;
- high energy efficiency thanks to the configuration with fan deck with DC Brushless motor;
- available head up to **150 Pa**;
- very low sound levels;
- internal exchanger with large exchange surface, easily reversed water connections even on construction site;
- complete accessories range for the full installation;
- complete range of electromechanical and electronic thermostats and serial port RS485 with MODBUS protocol.

## functions and features



Cool & heat



Vertical:  
uncased



Horizontal:  
uncased



Water

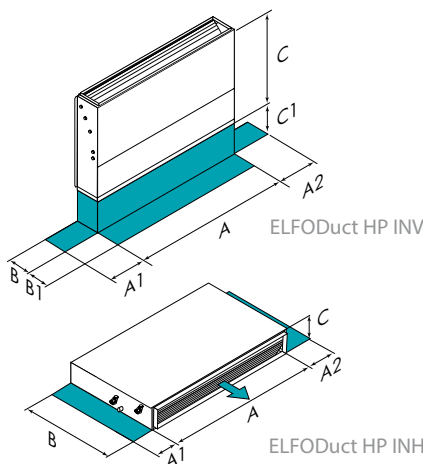


ELFOControl<sup>3</sup>  
EVO



DC Motor

## 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	ELFODUCT HP	015.0	021.0	025.0	031.0	041.0	051.0	061.0	071.0
CC2-INV	A - Length	mm 880	880	880	1280	1280	1280	1680	1680
CC2-INV	B - Width	mm 275	275	275	275	275	275	275	275
CC2-INV	C - Height	mm 650	650	650	650	650	650	650	650
CC2-INV	A1	mm 400	400	400	400	400	400	400	400
CC2-INV	A2	mm 200	200	200	200	200	200	200	200
CC2-INV	B1	mm 250	250	250	250	250	250	250	250
CC2-INV	C1	mm 100	100	100	100	100	100	100	100
CC2-INV	Operating weight	kg 37	38	40	52	54	57	70	73
CC2-INH	A - Length	mm 880	880	880	1280	1280	1280	1680	1680
CC2-INH	B - Width	mm 625	625	625	625	625	625	625	625
CC2-INH	C - Height	mm 275	275	275	275	275	275	275	275
CC2-INH	A1	mm 400	400	400	400	400	400	400	400
CC2-INH	A2	mm 200	200	200	200	200	200	200	200
CC2-INH	Operating weight	kg 37	38	40	52	54	57	70	73
CC4-INV	A - Length	mm 880	880	-	1280	1280	1680	1680	-
CC4-INV	B - Width	mm 275	275	-	275	275	275	275	-
CC4-INV	C - Height	mm 650	650	-	650	650	650	650	-
CC4-INV	A1	mm 400	400	-	400	400	400	400	-
CC4-INV	A2	mm 200	200	-	200	200	200	200	-
CC4-INV	B1	mm 250	250	-	250	250	250	250	-
CC4-INV	C1	mm 100	100	-	100	100	100	100	-
CC4-INV	Operating weight	kg 40	41	-	56	58	73	75	-
CC4-INH	A - Length	mm 880	880	-	1280	1280	1680	1680	-
CC4-INH	B - Width	mm 625	625	-	625	625	625	625	-
CC4-INH	C - Height	mm 275	275	-	275	275	275	275	-
CC4-INH	A1	mm 400	400	-	400	400	400	400	-
CC4-INH	A2	mm 200	200	-	200	200	200	200	-
CC4-INH	Operating weight	kg 40	41	-	56	58	73	75	-

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-INV 2 pipes-Vertical uncased version  
CC2-INH 2 pipes-Horizontal uncased version  
CC4-INV 4-pipe-Vertical uncased version  
CC4-INH 4-pipe-Horizontal uncased version

## versions and configurations

### VERSION:

<b>INH</b>	Horizontal uncased version (Standard)
<b>INV</b>	Vertical uncased version

### WATER FITTINGS:

<b>DX</b>	Water fittings to the right (Standard)
<b>SX</b>	Water fittings to the left

### COIL CONFIGURATION:

<b>CC2</b>	Coil configuration for 2-pipe system (Standard)
<b>CC4</b>	Coil configuration for 4-pipe system (sizes 15÷21, 31÷61)

### RETURN:

<b>RP</b>	Rear intake (Standard)
<b>R3</b>	Downward air return
<b>RF</b>	Front air inlet

## technical data

Size	ELFODUCT HP	015.0	021.0	025.0	031.0	041.0	051.0	061.0	071.0
<b>2 pipe</b>									
<b>High speed</b>									
Airflow	m <sup>3</sup> /h	1.350	1.500	1.450	2.750	3.000	2.850	4.400	4.200
▶ Cooling capacity	(1) kW	6,82	8,65	10,10	12,00	15,20	17,80	21,20	25,50
Sensible capacity	(1) kW	5,30	6,58	7,38	9,78	12,10	13,50	17,20	19,40
Water flow-rate	(1) l/h	1,173	1,488	1,737	2,064	2,614	3,062	3,646	4,386
Water pressure drop	(1) kPa	35,80	39,50	38,50	28,10	38,40	30,70	29,80	25,10
▶ Heating capacity	(2) kW	7,60	9,45	10,00	14,20	17,60	18,60	25,15	26,85
Water flow-rate	(2) l/h	1,307	1,625	1,720	2,442	3,027	3,199	4,326	4,618
Water pressure drop	(2) kPa	38,60	40,90	32,80	34,10	44,70	29,10	36,40	24,10
Total power input	W	212	212	212	390	390	390	570	570
<b>Medium speed</b>									
Airflow	m <sup>3</sup> /h	1.080	1.200	1.175	2.448	2.670	2.537	4.048	3.906
▶ Cooling capacity	(1) kW	5,94	7,53	8,87	11,17	14,14	16,56	20,13	24,38
Sensible capacity	(1) kW	4,52	5,61	6,35	9,00	11,13	12,42	16,20	18,42
Water flow-rate	(1) l/h	1,021	1,296	1,525	1,920	2,432	2,849	3,463	4,193
Water pressure drop	(1) kPa	27,10	29,90	29,70	24,30	33,20	26,50	26,80	22,90
▶ Heating capacity	(2) kW	6,56	8,16	8,71	13,15	16,30	17,23	23,81	25,60
Water flow-rate	(2) l/h	1,128	1,403	1,497	2,262	2,803	2,963	4,095	4,403
Water pressure drop	(2) kPa	28,70	30,50	24,80	29,30	38,30	24,90	32,60	21,90
Total power input	W	170	170	170	280	280	280	520	520
<b>Low speed</b>									
Airflow	m <sup>3</sup> /h	783	885	870	1.540	1.680	1.625	3.036	2.982
▶ Cooling capacity	(1) kW	4,87	6,24	7,36	8,38	10,61	12,57	16,84	20,62
Sensible capacity	(1) kW	3,59	4,51	5,12	6,46	7,99	9,03	13,19	15,18
Water flow-rate	(1) l/h	837	1,073	1,266	1,441	1,825	2,161	2,897	3,547
Water pressure drop	(1) kPa	18,20	20,50	20,40	13,70	18,70	15,30	18,80	16,40
▶ Heating capacity	(2) kW	5,31	6,68	7,14	9,69	12,01	12,85	19,69	21,43
Water flow-rate	(2) l/h	913	1,148	1,228	1,667	2,066	2,209	3,387	3,685
Water pressure drop	(2) kPa	18,80	20,40	16,70	15,90	20,80	13,90	22,30	15,40
Total power input	W	128	128	128	175	175	175	430	430
Number of supply fans	-	1	1	1	2	2	2	3	3
<b>4 pipe</b>									
<b>High speed</b>									
Airflow	m <sup>3</sup> /h	1.270	1.400	-	2.570	2.800	3.800	4.100	-
▶ Cooling capacity	(1) kW	6,57	8,28	-	11,50	14,60	16,10	20,30	-
Sensible capacity	(1) kW	5,07	6,25	-	9,33	11,50	13,30	16,40	-
Water flow-rate	(1) l/h	1,130	1,424	-	1,978	2,511	2,769	3,492	-
Water pressure drop	(1) kPa	33,20	36,20	-	25,80	35,40	19,50	27,20	-
▶ Heating capacity	(3) kW	10,76	11,47	-	19,82	20,98	28,36	29,87	-
Water flow-rate	(3) l/h	925	986	-	1,705	1,804	2,439	2,569	-
Water pressure drop	(3) kPa	28,70	31,80	-	26,20	28,80	24,10	26,20	-
Total power input	W	212	212	-	390	390	570	570	-
<b>Medium speed</b>									
Airflow	m <sup>3</sup> /h	1.041	1.162	-	2.262	2.492	3.534	3.854	-
▶ Cooling capacity	(1) kW	5,81	7,38	-	10,63	13,58	15,39	19,54	-
Sensible capacity	(1) kW	4,40	5,47	-	8,52	10,58	12,63	15,69	-
Water flow-rate	(1) l/h	999	1,269	-	1,827	2,336	2,647	3,360	-
Water pressure drop	(1) kPa	25,90	28,70	-	22,00	30,60	17,90	25,20	-
▶ Heating capacity	(3) kW	9,44	10,14	-	18,22	19,43	27,03	28,67	-
Water flow-rate	(3) l/h	811	872	-	1,567	1,671	2,325	2,466	-
Water pressure drop	(3) kPa	22,10	24,90	-	22,10	24,70	21,90	24,20	-
Total power input	W	170	170	-	280	280	520	520	-
<b>Low speed</b>									
Airflow	m <sup>3</sup> /h	775	854	-	1.465	1.624	2.736	2.993	-
▶ Cooling capacity	(1) kW	4,84	6,09	-	8,12	10,42	13,13	16,70	-
Sensible capacity	(1) kW	3,56	4,39	-	6,24	7,79	10,51	13,09	-
Water flow-rate	(1) l/h	832	1,048	-	1,396	1,791	2,259	2,873	-
Water pressure drop	(1) kPa	18,00	19,60	-	12,80	18,00	13,00	18,40	-
▶ Heating capacity	(3) kW	7,77	8,28	-	13,69	14,65	22,84	24,27	-
Water flow-rate	(3) l/h	668	712	-	1,177	1,260	1,964	2,087	-
Water pressure drop	(3) kPa	15,00	16,60	-	12,50	14,10	15,60	17,30	-
Total power input	W	128	128	-	175	175	430	430	-
Number of supply fans	-	1	1	-	2	2	3	3	-
Standard power supply	V	220-240/1/50							
Number of supply fans	(4) -	CFG							
H Sound pressure level	(5) dB(A)	58	59	59	61	65	62	63	63
M Sound pressure level	(5) dB(A)	52	53	53	57	58	58	62	62
L Sound pressure level	(5) dB(A)	44	45	45	46	47	47	57	57
H Sound power level	(5) dB(A)	69	70	70	72	73	73	74	74
M Sound power level	(5) dB(A)	63	64	64	68	69	69	73	73
L Sound power level	(5) dB(A)	55	56	56	57	58	58	68	68

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.

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

(4) CFG = AC 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

<b>VEC</b>	High efficiency EC fan	<b>HIDE2X</b>	Remote control with E/I +3V +on/off for wall installation
<b>TRM</b>	Terminal block with minimum water temperature clickson	<b>HIDE3X</b>	Plurifunctional remote control for wall installation
<b>TRP</b>	Terminal block with closing cover IP40	<b>HIDE4X</b>	Plurifunctional room control for 0-10V valves
<b>TRMP</b>	Terminal block with closing cover IP40 and minimum water temperature clickson	<b>HIDT2X</b>	HID-T2 electronic room control
<b>CTSP1</b>	CLIVET TALK TERMINAL SPACE electronics with RS485 Modbus serial port	<b>HIDT3X</b>	HID-T3 electronic room control
<b>CPVM</b>	Control additional card of 0-10V valve and EC fan (available only with options: CTSP1)	<b>HIDTI8X</b>	HIDTI8X electronic room control for wall installation
<b>2V2</b>	ON/OFF 2-way valve kit for 2-pipe system	<b>PTABX</b>	Remote probe for room air temperature for electromechanical thermostats.
<b>2V2X</b>	ON/OFF 2-way valve kit for 2-pipe system	<b>DCPX</b>	Control device for more units with a single room control.
<b>2V4</b>	ON/OFF 2-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>EH2QX</b>	Heating section with electrical heaters 230V with safety thermostat and power electric panel
<b>2V4X</b>	ON/OFF 2-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>EH4QX</b>	Heating section with electrical heaters 400V with safety thermostat and power electric panel
<b>3V2</b>	3-way valve kit for 2-pipe type "on/off" system	<b>RE700</b>	0.7 kW integrated electric heater with safety thermostat and power electric panel
<b>3V2X</b>	3-way valve kit for 2-pipe type "on/off" system	<b>RE1000</b>	1.0 kW integrated electric heater with safety thermostat and power electric panel
<b>3V4</b>	3-way valve kit for 4-pipe system type "on/off" (sizes 015.0÷021.0, 031.0÷061.0)	<b>RE1500</b>	1.5 kW integrated electric heater with safety thermostat and power electric panel
<b>3V4X</b>	3-way valve kit for 4-pipe system type "on/off" (sizes 015.0÷021.0, 031.0÷061.0)	<b>RE2000</b>	2.0 kW integrated electric heater with safety thermostat and power electric panel
<b>10V4</b>	0-10V 3-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>MCRX</b>	Mixing and recirculating chamber
<b>10V4X</b>	0-10V 3-way valve kit for 4-pipe system (sizes 015.0÷021.0, 031.0÷061.0)	<b>PR90AX</b>	90° air intake plenum
<b>10V2</b>	0-10V 3-way valve kit for 2-pipe system	<b>PCCRIX</b>	Air intake plenum with flexible joint
<b>10V2X</b>	0-10V 3-way valve kit for 2-pipe system	<b>PGFRIX</b>	Air intake plenum with flexible joint
<b>KIB22X</b>	Water and balancing kit for 2-way valve and 2-pipe installation	<b>PMAX</b>	Straight section for both air intake / supply outlets
<b>KIB24X</b>	Water and balancing kit for 2-way valve and 4-pipe installation (sizes 015.0÷021.0, 031.0÷061.0)	<b>P90MAX</b>	90° section for air supply outlet
<b>KIB32X</b>	Water and balancing kit for 3-way valve and 2-pipe installation	<b>PCCMAX</b>	Section with spigots "Ø" with variable diameter and internal insulation for air supply outlet
<b>KIB34X</b>	Water and balancing kit for 3-way valve and 4-pipe installation (sizes 015.0÷021.0, 031.0÷061.0)	<b>PGFMAX</b>	Anti-vibration section for supply outlet
<b>BRO</b>	Auxiliary drain pan in galvanized steel with thermal insulation	<b>SILMAX</b>	Labyrinth noise level attenuator section for both air intake / supply outlets
<b>BROX</b>	Auxiliary drain pan in galvanized steel with thermal insulation	<b>CUFMAX</b>	Air outlet casing with bird-proof grill
<b>BRV</b>	Auxiliary condensate collection pan (vertical installation)	<b>CUFAX</b>	Air intake casing with bird-proof grill and EU3 air filter (Eurovent 4/5)
<b>BRVX</b>	Auxiliary condensate collection pan (vertical installation)	<b>S230X</b>	ON/OFF 230v servomotor for mixing and recirculation chamber
<b>CDP</b>	Condensate drain pump	<b>GMX</b>	Outlet grille
<b>CDPX</b>	Condensate drain pump	<b>GRAX</b>	Return grille with filter
<b>FAPS</b>	EU3 flat air filter (Eurovent 4/5) not ductable	<b>TMX</b>	Hot water min. temperature thermostat
<b>FAPSX</b>	EU3 flat air filter (Eurovent 4/5) not ductable		
<b>SFCF</b>	Air filter section (ductable) with EU3 flat air filter (Eurovent 4/5)		
<b>SFCFX</b>	Air filter section (ductable) with EU3 flat air filter (Eurovent 4/5)		
<b>SFHEX</b>	Air filter section (ductable) with EU5 air filter (Eurovent 4/5)		

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

Uncased horizontal and vertical indoor installation  
Ductable

**Air flow from 420 to 4200 l/s  
(from 1500 to 15000 m<sup>3</sup>/h)**

The **SAHU** units are ideal air-treatment terminal units for installations where ducted air distribution is necessary. They are designed for installation in suspended ceilings and technical rooms are distinguished by their **compactness** and extremely low noise levels.

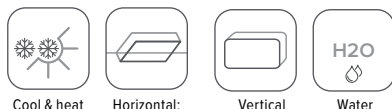
The main features are:

- 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.



ErP  
compliant

## functions and features



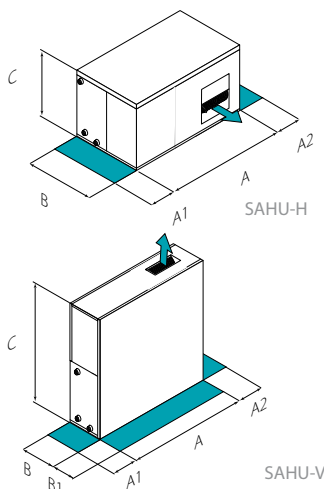
Cool & heat

Horizontal:

Vertical

H<sub>2</sub>O  
Water

## dimensions and clearances



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.

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

## 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:

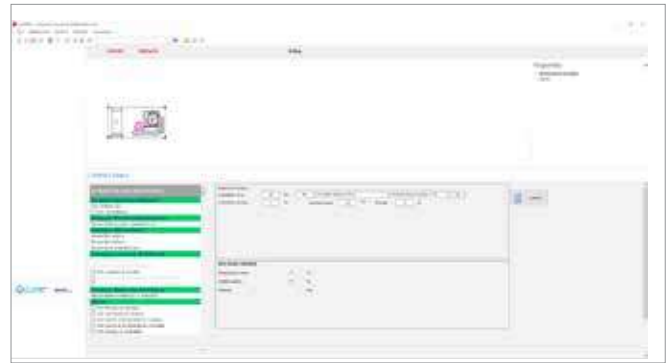
**DX** Water fittings to the right  
**SX** Water fittings to the left

### 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
Airflow	m <sup>3</sup> /h	1500	2090	2890	4020	5580	7750	10770	15000
C4 Cooling capacity	(1) kW	8,46	11,50	15,74	22,67	32,35	42,92	60,47	82,95
C4 Sensible capacity	(1) kW	6,24	8,53	11,71	16,64	23,42	31,66	44,27	61,14
C4 Water flow	(1) l/s	0,40	0,50	0,80	1,10	1,50	2,00	2,90	4,00
C6 Cooling capacity	(1) kW	10,25	13,83	19,39	26,55	37,91	50,27	70,94	99,17
C6 Sensible capacity	(1) kW	7,33	9,97	13,88	19,19	27,06	36,52	51,17	71,41
C6 Water flow	(1) l/s	0,50	0,70	0,90	1,30	1,80	2,40	3,40	4,70
E4 Cooling capacity	(2) kW	7,28	10,10	15,48	22,17	30,94	42,31	59,08	82,29
E4 Sensible capacity	(2) kW	5,76	7,97	11,60	16,45	22,89	31,43	43,75	60,89
C4 Heating capacity	(3) kW	9,57	13,11	18,03	24,46	35,61	48,57	67,72	93,84
C4 Water flow	(3) l/s	0,50	0,60	0,90	1,20	1,70	2,30	3,30	4,50
C6 Heating capacity	(3) kW	10,88	14,89	20,63	28,72	40,12	54,86	76,51	106,65
C6 Water flow	(3) l/s	0,50	0,69	1,00	1,39	1,89	2,61	3,70	5,20
Type of supply fan	(4)	-	-	-	-	-	-	-	-
MAX power input (IE2 - BELT & PULLEY)	kW	0,75	1,10	1,10	2,20	3,00	4,00	5,50	7,50
MAX power input (IE3 - BELT & PULLEY)	kW	0,75	1,10	1,10	2,20	3,00	4,00	5,50	7,50
MAX power input (IE4 - EC PLUG FAN)	kW	1,05	1,05	1,05	1,10	1,85	2,90	3,30	5,00
Power supply	V	-	-	-	-	-	-	-	-
Sound power level	(5) dB(A)	67	74	75	77	78	80	82	89

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 levels refer to units with full load under nominal test conditions.

## accessories

<b>FS4</b>	Frame with G4 efficiency filters, thickness 48mm	<b>✓ AFR</b>	Return antivibration mount for basic unit
<b>FS5</b>	Frame with M5 efficiency filters, thickness 98mm	<b>✓ AFS</b>	Supply antivibration mount for basic unit
<b>FS6</b>	Frame with M6 efficiency filters, thickness 98mm	<b>✓ DAR</b>	Return damper for basic unit
<b>FS7</b>	Frame with F7 efficiency filters, thickness 98mm	<b>✓ FLR</b>	Return flange for basic unit
<b>FS8</b>	Frame with F8 efficiency filters, thickness 98mm	<b>✓ FLS</b>	Supply flange for basic unit
<b>FS9</b>	Frame with F9 efficiency filters, thickness 98mm	<b>✓ EC1</b>	Electric coil version 1
<b>FS45</b>	Frame with G4 efficiency filters, thickness 48mm + M5 th. 98mm	<b>✓ EC2</b>	Electric coil version 2
<b>FS46</b>	Frame with G4 efficiency filters, thickness 48mm + M6 th. 98mm	<b>FTB</b>	Box with terminal block for centrifugal fan wires
<b>FS47</b>	Frame with G4 efficiency filters, thickness 48mm + F7 th. 98mm	<b>ETB</b>	Box with terminal block for EC plug fan wires
<b>FS48</b>	Frame with G4 efficiency filters, thickness 48mm + F8 th. 98mm	<b>✓ KT4</b>	Spare filters - G4 th. 48mm
<b>FS49</b>	Frame with G4 efficiency filters, thickness 48mm + F8 th. 98mm	<b>✓ KT5</b>	Spare filters - M5 th. 98mm
<b>BAH</b>	Base for horizontal basic unit H=120mm	<b>✓ KT6</b>	Spare filters - M6 th. 98mm
<b>BAV</b>	Base for vertical basic unit H=120mm	<b>✓ KT7</b>	Spare filters - F7 th. 98mm
<b>✓ BAM</b>	Base for mixing chamber H=120mm	<b>✓ KT8</b>	Spare filters - F8 th. 98mm
<b>✓ MBX</b>	Mixing chamber with dampers	<b>✓ KT9</b>	Spare filters - F9 th. 98mm
<b>✓ AFM</b>	Antivibration mount for mixing chamber damper		

**✓** Accessories supplied separately

### Air conditioning unit

For the air treatment  
With modular sections  
Indoor and outdoor installation  
**Airflow from 350 to 44400 l/s**  
**(from 1260 to 16000 m<sup>3</sup>/h)**



AQX are custom designed air handling units for commercial, industrial, civil, hotels, congress halls, theatres and fitness centres. In addition, AQX can be designed for special applications such as hospitals, high tech laboratories, clean rooms, food industry or pharmaceuticals, where hygiene and cleanliness requirements are stringent.

The series is characterised by:

- 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.



Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



ErP  
compliant

## functions and features



Heating-  
Cooling



Indoor inst.

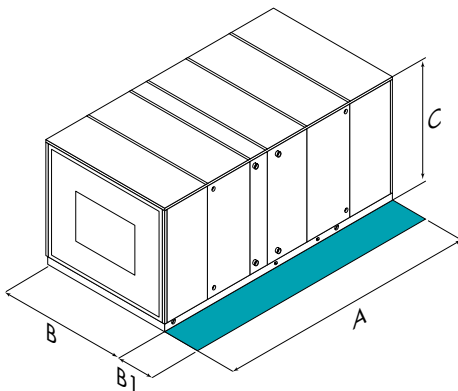


Outdoor inst.



Free-cooling

## 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	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
Weight in operating	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
Weight in operating	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
Weight in operating	kg						(**)				

(\*) Length A depends on the specific configuration.

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

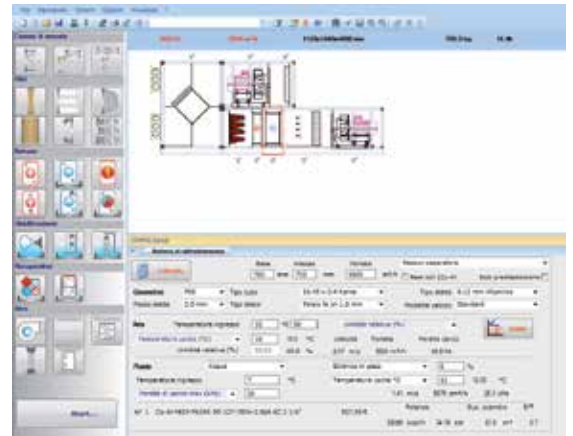
(\*\*\*) Height without base. Standard base = 120 mm

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.

## 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 -	AQX	1	2	3	4	5	6	7	8	9	10	11
Air flow	(1) l/s	414	473	544	624	714	816	938	1073	1223	1404	1602

SIZE	AQX	12	13	14	15	16	17	18	19	20	21	22
Air flow	(1) l/s	1838	2111	2412	2760	3159	3630	4156	4752	5445	6245	7156

SIZE	AQX	23	24	25	26	27	28	29	30	31	32
Air flow	(1) l/s	8190	9383	10751	12315	14101	16167	18513	21191	24276	27821

(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  
**Airflow from 350 to 44400 l/s**



CLA are custom designed air handling units for commercial, industrial, civil, hotels, congress halls, theatres and fitness centres. In addition, CLA can be designed for special applications such as hospitals, high tech laboratories, clean rooms, food industry or pharmaceuticals, where hygiene and cleanliness requirements are stringent.

The series is characterised by:

- 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.



ErP  
compliant

## functions and features



Heating-Cooling



Indoor inst.

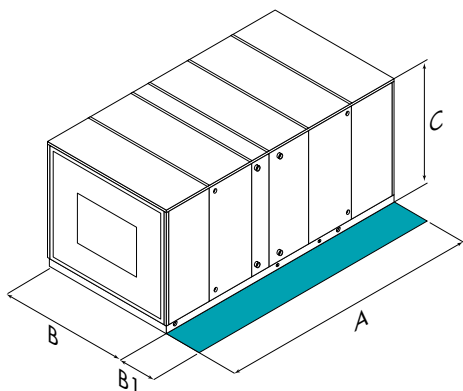


Outdoor inst.



Free-cooling

## dimensions and clearances



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

Sizes	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
Weight in operating	kg											

Sizes	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
Weight in operating	kg											

Sizes	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
Weight in operating	kg										

(\*) Length A depends on the specific configuration.

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

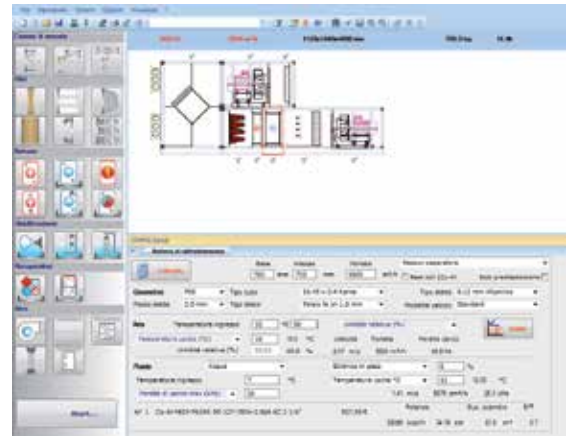
(\*\*\*) Height without base. Standard base = 120 mm

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.

## 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	(1)	l/s	414	473	544	624	714	816	938	1073	1223	1404	1602

SIZE		CLA	12	13	14	15	16	17	18	19	20	21	22
Air flow	(1)	l/s	1838	2111	2412	2760	3159	3630	4156	4752	5445	6245	7156

SIZE		CLA	23	24	25	26	27	28	29	30	31	32
Air flow	(1)	l/s	8190	9383	10751	12315	14101	16167	18513	21191	24276	27821

(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.

## Small and Medium Commercial

### CONDENSING UNITS

Outdoor unit

Capacities

26 ÷ 80 kW

Products



Air source  
Cooling only

MSAT-XEE

# AUXILIARY System

## System components

SERIES	SIZE FROM	TO	NAME	PAGE
<b>Condensing units - air source - axial fans</b>				
MSAT-XEE	8.2	30.2		196



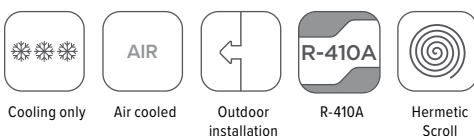
### Condensing unit

Cooling only  
Air cooled  
Outdoor installation  
**Capacity from 26 to 80 kW**

The **MSAT-XEE** air-cooled condensing units have been designed for outdoor installation and for best energy efficiency in relation to reduced size. They may be combined with terminal units or connected to exchanger coils of air-handling units. The main features are:

- **HIGH ENERGY EFFICIENCY:** especially during operation at partial loads, thanks to the use of two compressors of different capacity operating on a single cooling circuit.
- **SELF-ADAPTING:** the evolved electronics implemented adapt the operating parameters to the load conditions of the system it is installed in, optimising consumption, noise and the working life of the components.
- **COMPACT SIZE:** the units are designed to reduce overall dimensions to a minimum, a decisive factor to adapt to the features of any building.

## functions and features



Cooling only

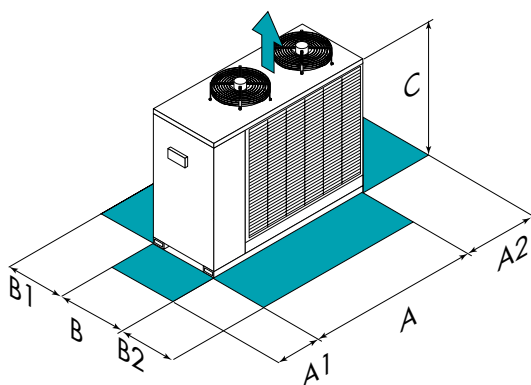
AIR

Outdoor  
installation

R-410A

Hermetic  
Scroll

## 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	MSAT-XEE	8.2	10.2	12.2	16.2	18.2	22.2	26.2	30.2
A - Length	mm	1739	1739	1739	1967	1967	1967	2367	2367
B - Width	mm	721	721	721	1143	1143	1143	1141	1141
C - Height	mm	1287	1287	1287	1599	1599	1599	1593	1593
A1	mm	700	700	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700	700	700
B1	mm	700	700	700	700	700	700	700	700
B2	mm	700	700	700	700	700	700	700	700
Operating weight	kg	298	303	323	456	469	490	547	561

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.

## technical data

Size		MSAT-XEE	8.2	10.2	12.2	16.2	18.2	22.2	26.2	30.2
▶ Cooling capacity	(1)	kW	25,7	31,3	36,0	43,4	51,6	59,1	72,3	80,1
Compressor power input	(1)	kW	8,79	9,95	12,4	14,1	16,2	20,3	22,6	26,6
Total power input	(1)	kW	9,20	10,4	12,9	15,6	17,7	21,8	24,2	28,4
EER	(1)	-	2,78	3,01	2,80	2,78	2,91	2,71	2,99	2,82
Refrigeration circuits										1
No. of compressors		Nr								2
Type of compressors		-	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Standard airflow		l/s	2553	2545	2514	4965	4902	4778	7196	6971
Standard power supply		V	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
Sound pressure level	(2)	dB(A)	60	60	60	64	64	65	65	65

(1) Saturated suction temperature (SST) = 5°C; Outdoor air temperature 35°C

(2) The sound levels refer to the unit at full load, in the rated test conditions.  
The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field.

## accessories

<b>KCX</b>	Connection set	<b>PMX</b>	Phase monitor
<b>HGBP</b>	Hot gas by pass	<b>RCTX</b>	Remote control
<b>AMRX</b>	Rubber antivibration mounts	<b>MEN30</b>	Minimum outdoor air temperature down to -30°C
<b>PGCEX</b>	Coil protection grilles outdoor air side	<b>MEN15</b>	Minimum outdoor air temperature down to -15°C
<b>PM</b>	Phase monitor		

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.

ELFOControl<sup>3</sup> EVO

INTELLIPLANT

Clivet Eye



Chiller, Heat pump	✓	✓	✓
Multifunction unit		✓	✓
Air renewal unit	✓		✓
Packaged unit and AHU			✓
Number of connectable centralized hydronic units	1	10	1
Number of room connectable units	40		1
System Dashboard	✓	✓	
Energy Management	✓	✓	
Energy dashboard, reports and charts		✓	
System layout		✓	
Event-based diagnostics	✓	✓	✓
Preventive diagnostics		✓	
Compatibility with ELFO Control <sup>3</sup> EVO		✓	✓
Compatibility with INTELLIPLANT	✓		✓
Compatibility with Cloud services	✓	✓	

# DIGITAL Solutions

## System components

SERIES	SIZE FROM	TO	NAME	PAGE
<b>Control systems</b>				
ELFOControl <sup>3</sup> EVO	-	-	ELFOControl <sup>3</sup> EVO	200
INTELLIPLANT	-	-	INTELLIPLANT	202
<b>Monitoring systems</b>				
Clivet Eye	-	-	Clivet Eye	204

# ELFOControl<sup>3</sup> EVO

## ELFOControl<sup>3</sup> EVO

Control unit for stand-alone residential systems



- Simultaneous management of up to 12 different climate zones
- Option of setting different temperatures within the same climate zone
- Up to 10 customised time schedules to optimise system operation and efficiency
- Scalable system for possible system expansions and integration of additional appliance control
- Energy management with power consumption data display
- Option for remote monitoring and control of systems from a PC or APP

### The whole system at your fingertips

ELFOControl<sup>3</sup>EVO 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 of the system elements in order to obtain optimal comfort at maximum efficiency.



### Energy management

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. Available with different types of Licences (Visio) that offer various benefits and services. Each Licence has a minimum one year validity, is renewable and can be linked with one Clivet unit. To connect the unit to the Internet, Clivet will provide a GSM (i-MOBILE) or Ethernet (i-LINK) modem. The i-Mobile modem is supplied with a SIM card that can be used in selected countries (list available in the Clivet Eye Price List).

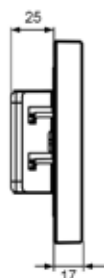
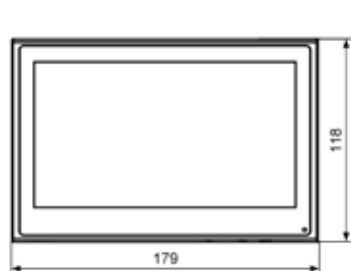
### Remote scheduler

Clivet Eye is Clivet's Cloud-based monitoring system for remote management from smartphones, tablets and PCs.

The connectivity of Clivet Eye, in addition to the various functions, makes it possible to manage time schedules and change operation of the systems remotely without the intervention of on-site personnel.

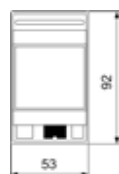


### Dimensions



ELFOControl<sup>3</sup> EVO is supplied with:

- ✓ 12Vdc AL12X power supply unit
- ✓ Ethernet/485 converter
- ✓ Cat. 5 UTP Ethernet cable (5m long)



The maximum distance between the Ethernet/485 converter and ELFOControl<sup>3</sup> EVO is 90 metres.

## 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

A dedicated APP for accessing the ELFOControl<sup>3</sup> EVO system remotely, monitoring the operating temperatures and accessing the main system functions from a PC, smartphone or tablet when connected to an Internet network.

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.



## ELFOControl<sup>3</sup> EVO

Main operator panel with system control logics.

It manages up to 40 devices, making ELFOControl<sup>3</sup> EVO the ideal solution for managing systems in the small- and medium-sized commercial sector, such as offices, restaurants and shops in general.



## Room thermostats and sensors

ELFOControl<sup>3</sup> EVO provides a series of room thermostats and sensors that accurately measure the temperature and humidity values for each individual zone of the system in order to ensure optimal comfort of the connected rooms



## Management of utilities

A series of modules dedicated to the management of pumps and zone valves ensure control of the utilities used for the production and distribution of thermal energy from radiant panels (hot and cold), room radiators and heated towel rails.



# 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:

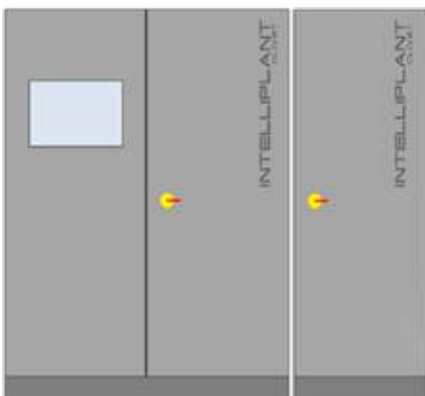
- ✓ System dashboard, with the most significant general system operating data
- ✓ Unit dashboard, with all the operating variables of the individual units
- ✓ Energy dashboard, with system and individual unit efficiency indices
- ✓ Maintenance dashboard, with operating values of system components and 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.



Heating/cooling units, circulation pumps and source devices.



Range sensors for acquiring operating variables.

# Clivet Eye

## Clivet Eye

Cloud-based monitoring and remote management system for Clivet units and systems



**Clivet Eye** is the Cloud-based monitoring system for the remote management of Clivet units and air conditioning, heating, air renewal and hot water production systems for domestic and residential use from a smartphone, tablet and PC and is designed for end users, service centres and system administrators.

### 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.



### 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



SERVICE CENTRES

### Benefits

- ✓ 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

## Monitored units

### Clivet APPLIED and HOME

Clivet Eye is compatible with Clivet APPLIED and HOME products, with the exception of ELFOEnergy Edge, ELFOEnergy Edge EVO, ELFOEnergy Sheen and ELFOEnergy Sheen EVO for which the function is limited\*. Terminal units are NOT compatible.

### Clivet SPLIT and VRF

Clivet Eye is NOT compatible with MONO/MULTISplit and VRF Systems.

Check with your Clivet representative whether your systems are compatible with Clivet Eye.

\* See the Clivet Eye Price List for more details



## Clivet Eye licences

### ✓ USER Visio

Simplified management for the end user

### ✓ TECH Visio

Monitoring by the Technical Service Centre

Clivet Eye is available with different types of Licences (Visio) that offer specific functions to suit various kinds of users.

Each unit is connected to the Cloud service via an Ethernet modem (i-LINK) or a mobile modem (i-MOBILE) supplied with a SIM card that can be used in selected countries of the European Community.



	USER Visio	TECH Visio
i-MOBILE/i-LINK modem	✓	✓
On/Off	✓	✓
Mode and Set Point	✓	✓
Reading parameters	-	✓
Changing parameters	-	✓
Viewing Alarms / Events	✓	✓
Alarms reset	-	✓
Viewing status and graphs	✓	✓
Viewing/Changing parameters	-	✓
Internet connection (i-MOBILE)	✓	✓
Scheduler *	✓	✓

\* The Scheduler is only available in the Web Dashboard

## How does it work?

All you need to remotely manage your system with Clivet Eye is an Internet connection and a computer / tablet / smartphone.

✓ From a computer: [www.cliveteye.com](http://www.cliveteye.com) (in-depth management with Web Dashboard)

✓ From a tablet / smartphone: open the Clivet Eye App (simplified management)



# INDEX

RANGE	SIZE FROM	TO	BRAND NAME.	GROUP	PAGE	RANGE	SIZE FROM	TO	BRAND NAME.	GROUP	PAGE
AQX	1	32	-	TERMINAL Units AHU	190	WDAT-SL3	200.2	580.2	SCREWLine <sup>3</sup>	HYDRONIC System	76
CFF	1	12	AURA	TERMINAL Units AHU	158	WDAT-SL3 FC	200.2	580.2	SCREWLine <sup>3</sup> FC	HYDRONIC System	78
CFFA	1	12	AURA	TERMINAL Units AHU	162	WDH-iK4	120.1	540.2	SCREWLine <sup>4</sup> -i	HYDRONIC System	98
CFK	007.0	041.0	ELFOspace BOX3	TERMINAL Units AHU	170	WDH-SB3	220.2	580.2	SCREWLine <sup>3</sup>	HYDRONIC System	96
CFW	007.0	021.0	ELFOspace WALL3	TERMINAL Units AHU	176	WSAN-XEE	82	302	ELFOEnergy Medium	HYDRONIC System	34
CFW-2	1	5	MOOD	TERMINAL Units AHU	174	WSAN-XEE	352	802	ELFOEnergy Large <sup>2</sup>	HYDRONIC System	36
CKN-XHE2i	71	14.2	SMARTPack <sup>2</sup>	PACKAGED System	112	WSAN-XEM	50.4	120.4	ELFOEnergy Magnum	HYDRONIC System	44
CLA	1	32	-	TERMINAL Units AHU	192	WSAN-XEM HW	35.4	60.4	ELFOEnergy Magnum HW	HYDRONIC System	50
Clivet Eye	-	-	Clivet Eye	DIGITAL Solutions	204	WSAN-XEM MF	50.4	120.4	ELFOEnergy Magnum MF	HYDRONIC System	48
Clivet Master System	-	-	-	PACKAGED System	126	WSAN-XIN	141	171	ELFOEnergy Extended Inverter	HYDRONIC System	26
CPAN-U	17	51	ELFOFresh Large	PRIMARY AIR System	136	WSAN-XIN	18.2	45.2	ELFOEnergy Magnum	HYDRONIC System	42
CPAN-XHE3	Size 1	Size 6	ZEPHIR <sup>3</sup>	PRIMARY AIR System	132	WSAN-XIN MF	18.2	45.2	ELFOEnergy Magnum MF	HYDRONIC System	46
CRH-XHE2	14.2	110.4	CLIVETPack <sup>2</sup>	WLHP System	150	WSAN-YMi	21	141	ELFOEnergy Edge EVO	HYDRONIC System	24
CSNX-XHE2	12.3	44.4	CLIVETPack <sup>2</sup>	PACKAGED System	122	WSAN-YES	18.2	35.2	ELFOEnergy STORM EVO	HYDRONIC System	30
CSRN-XHE2	15.2	44.4	CLIVETPack <sup>2</sup> HSE	PACKAGED System	114	WSAN-YSi	10.1	22.2	ELFOEnergy Sheen EVO	HYDRONIC System	26
CSRN-XHE2	49.4	110.4	CLIVETPack <sup>2</sup>	PACKAGED System	118	WSAN-YSC4	80.3	240.6	SPINchiller <sup>4</sup>	HYDRONIC System	52
CSRN-XHE2-FFA	12.2	24.4	CLIVETPack <sup>2</sup> FFA	PACKAGED System	124	WSAN-XSC3	260.8	480.8	SPINchiller <sup>3</sup>	HYDRONIC System	56
CSRT-XHE2	49.4	110.4	CLIVETPack <sup>2</sup>	PACKAGED System	118	WSAN-XSC3 MF	90.4	480.8	SPINchiller <sup>3</sup> MF	HYDRONIC System	60
ELFOControl <sup>3</sup> EVO	-	-	ELFOControl <sup>3</sup> EVO	DIGITAL Solutions	200	WSAN-YES	18.2	35.2	ELFOEnergy STORM EVO	HYDRONIC System	32
ELFODUCT HP	015.0	071.0	ELFODuct	TERMINAL Units AHU	182	WSAN-XES	18.2	35.2	ELFOEnergy STORM	HYDRONIC System	34
ELFODUCT MP	15	71	ELFODuct	TERMINAL Units AHU	178	WSAT-XEE	352	802	ELFOEnergy Large <sup>2</sup>	HYDRONIC System	36
ELFOSPACE	003.0	051.0	ELFOspace	TERMINAL Units AHU	166	WSAT-XEM	50.4	120.4	ELFOEnergy Magnum	HYDRONIC System	44
EQV-X	5	21	VERSATEMP	WLHP System	142	WSAT-XIN	141	171	ELFOEnergy Extended Inverter	HYDRONIC System	26
EVH-X SPACE	2.1	12.1	VERSATEMP	WLHP System	148	WSAT-XIN	35.2	45.2	ELFOEnergy Magnum	HYDRONIC System	42
EVH-X	5	17	VERSATEMP	WLHP System	146	WSAT-XSC3	260.6	480.8	SPINchiller <sup>3</sup>	HYDRONIC System	56
EVH-XS	005.1	007.1	VERSATEMP	WLHP System	144	WSAT-XSC3 FC	90.4	360.6	SPINchiller <sup>3</sup> FC	HYDRONIC System	64
INTELLIPLANT	-	-	INTELLIPLANT	DIGITAL Solutions	202	WSAT-YES	18.2	35.2	ELFOEnergy STORM EVO	HYDRONIC System	30
MDE-SL3	120.1	580.2	SCREWLine <sup>3</sup>	HYDRONIC System	106	WSAT-YES FC	18.2	35.2	ELFOEnergy STORM EVO FC	HYDRONIC System	32
MSAT-XEE	8.2	30.2	-	AUXILIARY Systems	196	WSAT-YSi	16.2	40.2	ELFOEnergy Sheen EVO	HYDRONIC System	26
MSE-XSC3	90.4	160.4	SPINchiller <sup>3</sup>	HYDRONIC System	104	WSAT-YSC4	80.3	240.6	SPINchiller <sup>4</sup>	HYDRONIC System	52
MSRN-XSC3 + CEV-XT	90.4	160.4	Remotex	HYDRONIC System	66	WSHN-EE	17	121	ELFOEnergy Ground	HYDRONIC System	82
MSRT-XSC3 + CEV-XT	90.4	240.4	Remotex	HYDRONIC System	66	WSHN-XEE2	12.2	120.2	ELFOEnergy Ground Medium <sup>2</sup>	HYDRONIC System	84
SAHU	1	8	SAHU	TERMINAL Units AHU	186	WSHN-XEE2 MF	12.2	80.2	ELFOEnergy Ground Medium <sup>2</sup> MF	HYDRONIC System	88
WBAN	82	302	ELFOEnergy Vulcan Medium	HYDRONIC System	40	WSHN-XSC3	70.4	120.4	SPINchiller <sup>3</sup>	HYDRONIC System	92
WCH-i	250	550	Centrifugal Chiller	HYDRONIC System	102	WSH-XEE2	12.2	120.2	ELFOEnergy Ground Medium <sup>2</sup>	HYDRONIC System	84
WCH-iZ	230	450	Centrifugal Chiller	HYDRONIC System	100	WSH-XEE2 HW	19.2	80.2	ELFOEnergy Ground Medium <sup>2</sup> HW	HYDRONIC System	86
WDAT-iL3	250.2	580.2	SCREWLine <sup>3</sup> -i	HYDRONIC System	74	WSH-XSC3	70.4	120.4	SPINchiller <sup>3</sup>	HYDRONIC System	92
WDAT-iK4	120.1	580.2	SCREWLine <sup>4</sup> -i	HYDRONIC System	72	WSN-XEE	122	402	ELFOEnergy Duct Medium	HYDRONIC System	80
WDAT-iZ4	120.1	580.2	SCREWLine <sup>4</sup> -i	HYDRONIC System	70						

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).

Data contained in this catalogue are not binding and may be changed by the Manufacturer without notice.  
 No part of this publication may be reproduced.  
 Updated data available on [www.clivet.com](http://www.clivet.com)

FOR OVER 30 YEARS WE HAVE BEEN  
OFFERING SOLUTIONS TO ENSURE  
SUSTAINABLE COMFORT  
AND THE WELL-BEING OF PEOPLE  
AND THE ENVIRONMENT

valid from: January 2021  
DG20N051GB-00



**CLIVET SPA**  
Via Camp Lonc 25, Z.I. Villapaiera  
32032 Feltre (BL) - Italy  
Tel. +39 0439 3131 - Fax +39 0439 313300  
info@clivet.it

A Group Company of

