



HEAT PUMPS

CATALOGUE



AEROTHERMAL UNITS

SYSTEM TYPE

VERSIONS

REFRIGERANT

RANGE

MULTIPURPOSE AND MULTIFUNCTIONAL SPLIT HEAT PUMP WITH DHW PRODUCTION


**EWM/
HHP**


AIR/WATER


20-50
(kW)

Page
10

MULTIFUNCTIONAL AND MULTIPURPOSE MONOBLOC HEAT PUMP WITH HIGH TEMPERATURE DHW PRODUCTION


NAW


AIR/WATER


20-50
(kW)

Page
12

MULTIFUNCTIONAL AND MULTIPURPOSE SPLIT HEAT PUMP WITH HIGH TEMPERATURE DHW PRODUCTION


RAW


AIR/WATER


6-17
(kW)

Page
14

MULTIFUNCTIONAL AND MULTIPURPOSE SPLIT AND WALL-MOUNTED HEAT PUMP WITH HIGH TEMPERATURE DHW PRODUCTION


SHI


AIR/WATER


6-17
(kW)

Page
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MULTIFUNCTIONAL AND MULTIPURPOSE MONOBLOC HEAT PUMP WITH HIGH TEMPERATURE DHW PRODUCTION


HVE


AIR/WATER


6-17
(kW)

Page
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MULTIFUNCTIONAL AND MULTIPURPOSE MONOBLOC HEAT PUMP WITH HIGH TEMPERATURE DHW PRODUCTION


HXE


AIR/WATER


6-50
(kW)

Page
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SPLIT HEAT PUMP WITH INTERNAL WALL-MOUNTED UNIT


RAA


AIR/AIR


40-45
(kW)

Page
22


Cooling Only



Heating Only


Reversible Heat Pump
Heatin / Cooling

Domestic Hot
Water Only

Domestic Hot
Water / Cooling

Technical data are subject to change without notice. Do not use these data in the design stage.

AEROTHERMAL UNITS

	SYSTEM TYPE	VERSIONS	REFRIGERANT	RANGE	
CHILLERS AND HEAT PUMPS AIR CONDENSED WITH SCROLL COMPRESSORS					
	NHE	 AIR/WATER	 R-290 R-454C	92-688* (kW)	Page 24
REVERSIBLE AIR CONDENSED HEAT PUMPS FOR LOW OUTDOOR TEMPERATURES					
	EPH	 AIR/WATER	 R-410A	36-176 (kW)	Page 26
AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS FOR INDOOR INSTALLATIONS					
	EAC	 AIR/WATER	 R-410A	58-202 (kW)	Page 28
AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS					
	EAS	 AIR/WATER	 R-410A R-454B	60-261 (kW)	Page 30
AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL BLDC INVERTER COMPRESSORS					
	EHA	 AIR/WATER	 R-410A R-454B	30-288 (kW)	Page 32
AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS					
	EPS	 AIR/WATER	 R-410A R-454B	43-445 (kW)	Page 34
MULTIPURPOSE AIR CONDENSED HEAT PUMPS WITH SCROLL COMPRESSORS					
	NPE	 AIR/WATER	 R-290 R-454C	60-162 (kW)	Page 36
MULTIPURPOSE CLASS A AIR CONDENSED HEAT PUMPS WITH SCROLL COMPRESSORS					
	EPA	 AIR/WATER	 R-410A R-454B	59-325 (kW)	Page 38
CHILLERS WITH REMOTE CONDENSER WITH SCROLL COMPRESSORS					
	ENR	 AIR/WATER	 R-410A R-454B	43-433 (kW)	Page 40



Technical data are subject to change without notice. Do not use these data in the design stage.

GEO THERMAL UNITS

	SYSTEM TYPE	VERSIONS	REFRIGERANT	RANGE	
	MULTIPURPOSE HEAT PUMP WITH DHW PRODUCTION IN TOTAL RECOVERY				
	 WATER/WATER	HL 		6-50 (kW)	Page 46
		ML 			
		PL 			
	MULTIFUNCTIONAL HEAT PUMP WITH DHW PRODUCTION AND INTEGRATED HYDRONIC MODULE				
	 WATER/WATER			6-17 (kW)	Page 48
	MULTIFUNCTIONAL HEAT PUMP FOR HIGH TEMPERATURE WATER WITH CO ₂ REFRIGERANT				
	 WATER/WATER			10-100 (kW)	Page 50
	WATER CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS				
	 WATER/WATER		 	40-838 (kW)	Page 52
	MULTIPURPOSE WATER-CONDENSED HEAT PUMPS WITH SCROLL COMPRESSORS				
	 WATER/WATER	ML  PL 	 	42-549 (kW)	Page 54

HIGH TEMPERATURE WATER/WATER UNITS

	WATER/WATER HEAT PUMPS FOR HIGH EVAPORATION AND CONDENSATION TEMPERATURES				
	 WATER/WATER		 	38-590 (kW)	Page 58
	WATER/WATER HEAT PUMPS FOR HIGH EVAPORATION AND CONDENSATION TEMPERATURES				
	 WATER/WATER		 	228-604 (kW)	Page 60

SUPERVISION

	ADVANCED TECHNOLOGY AND FLEXIBILITY TO MANAGE AIR CONDITIONING				
	HiNode				Page 64

TECNOLOGIES

ENGINEERING EXCELLENCE AND INNOVATION DRIVEN BY PERFORMANCE

In Eneren, technology is the expression of design quality, continuous research, and an uncompromising focus on performance.

Every product is developed through an advanced engineering approach aimed at setting new standards of reliability, efficiency, and manufacturing excellence in the residential and commercial HVAC sector.

The Research & Development department represents the core of Eneren's innovation. A team of highly qualified specialists operates within state-of-the-art testing laboratories, where solutions are designed, tested, and validated through precise processes and advanced methodologies.

This approach allows technological research to be transformed into concrete, reliable, and high-performance products designed to deliver consistent results over time.

Every component, refrigeration cycle, and control logic is the result

of careful experimentation and optimization.

The adoption of cutting-edge technologies — from next-generation inverter compressors to advanced control systems — is always supported by extensive testing to certify their effectiveness and operational reliability.

The synergy between mechanical, electrical, and software engineering enables Eneren to develop technologically advanced, flexible, and fully integrated solutions capable of delivering high performance, silent operation, and intelligent system management.

Sustainability is an integral part of Eneren's design philosophy: the use of low environmental impact refrigerants and optimized operating cycles helps reduce energy consumption while maximizing efficiency without compromising quality.

Technology engineered with precision. Performance without compromise.



High Seasonal Efficiency

Eneren's design quality translates into outstanding seasonal energy efficiency, achieved through careful component selection and extremely precise system sizing.

The optimization of operating cycles reduces annual energy consumption while ensuring consistent performance in both heating and cooling modes, significantly improving indoor comfort.

Inverter Compressors

The use of next-generation inverter compressors allows **continuous power modulation**, adapting the unit's operation to the actual system demand.

This approach reduces mechanical stress, improves seasonal efficiency, lowers noise levels, and increases the long-term durability of components, making Eneren solutions ideal for residential and commercial applications with variable thermal loads.

High-Efficiency EC Fans

EC fans are a key component in achieving **high performance and reduced energy consumption**.

Thanks to continuous speed control, they ensure efficient operation under all operating conditions, contributing to lower electrical consumption and improved overall acoustic comfort.

Advanced Control Software

Eneren's control software is the result of extensive in-house development and is designed to provide an exceptionally **high level of adaptability**.

The wide range of programmable functions allows the unit to be precisely configured according to the system type, operating conditions, and specific application requirements.

Advanced control logics enable fine tuning, dynamic optimization of operating parameters, and customized regulation strategies, **significantly enhancing both energy efficiency and overall system performance**.

This flexibility makes Eneren solutions suitable for a wide variety of system configurations, ensuring optimal performance even in complex or non-standard applications.

System Integration

Eneren units are designed for easy integration into **both new and existing systems**, supporting low- and high-temperature applications, domestic hot water production, and hybrid system configurations.

Their high design flexibility helps avoid oversizing and unnecessary power consumption, maximizing the efficiency and value of every system component.

Low Noise Operation

Acoustic comfort is a fundamental part of product quality.

The Low Noise and Super Low Noise versions feature specific design solutions aimed at reducing sound emissions through optimized structures, components, and ventilation management.

This makes Eneren units particularly suitable for installations in **sensitive environments** such as residential buildings, offices, hospitality facilities, and high-occupancy spaces.



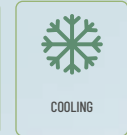
AEROTHERMAL UNITS

AEROTHERMAL UNITS

EWM/HHP

**MULTIPURPOSE AND
MULTIFUNCTIONAL SPLIT HEAT PUMP
WITH DHW PRODUCTION IN TOTAL RECOVERY**

20 - 50 kW



HHP/EWM are a versatile split type heat pumps, highly energy-efficient thanks to the use of BLDC inverter digital scroll compressors. It is able to fully meet any requirement concerning heating, cooling and the production of domestic hot water, **operating with outdoor temperatures down to -20°C and producing hot water up to 65°C.**

EWM Multipurpose unit with DHW:

- **M** for 2-pipe systems with domestic hot water, in **total recovery mode**
- **P** for 4-pipe systems, to also **simultaneously meet heating and cooling requirements**, in total recovery mode

HHP Multifunctional unit with DHW production managed by internal 3 way valve:

- **H** for 2-pipe systems with domestic hot water

Modulating flow control

Electronic pumps and modulating valves, installed inside the unit, are essentially important to ensure flow rate control at constant temperature or constant delta T. Thanks to their control microprocessor, they are also able to adapt to every system need.

Wider pitch finned coil

The coil has a wider fin pitch and is applied a **hydrophilic coating**, which prevents the formation of surface condensation with a resulting **reduction in the number of defrosting cycles by up to 30%.**

Total heat recovery

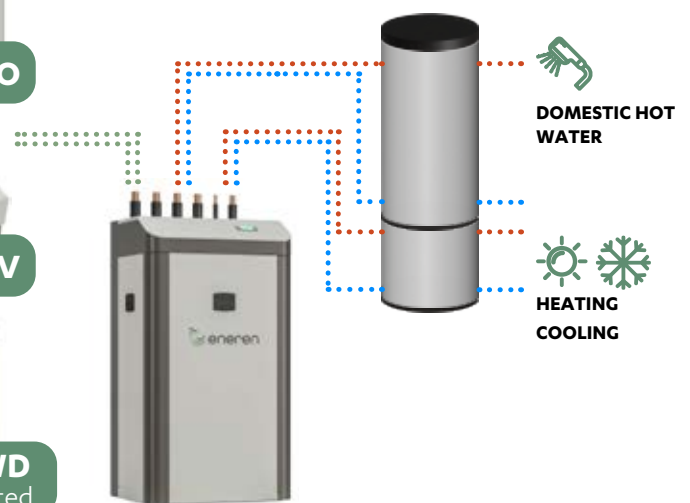
Thanks to the **dedicated total heat recovery refrigeration circuit** with parallel condenser, EWM meets the thermal and sanitary needs of commercial and industrial 4-pipe systems, **without having to reverse the refrigeration cycle** for every heating and cooling request.

EC Fans

The **inverter fan with an electronically commutated motor** makes the EWM/HHP heat pumps **highly energy-efficient and very quiet**, with the ability to adjust airflow rates according to specific requirements.

External unit

Available with horizontal airflow **EWO**, vertical airflow **EWV**, or ducted **EWD** configurations to suit different installation and architectural requirements while delivering the same high performance.





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HXE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

EWM/HHP		020		030		040	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX
COOLING A35 / W18							
Cooling Capacity	kW	4,4	29,6	5,5	36,7	7,6	50,6
Power Input with built-in pumps	kW	1,0	6,8	1,2	9,1	1,6	13,4
EER	-	4,4	4,3	4,5	4,1	4,7	3,8
COOLING A35 / W7							
Cooling Capacity	kW	3	20,1	3,9	26	5,4	35,9
Power Input with built-in pumps	kW	1,1	6,3	1,4	8,6	1,8	12,5
EER	-	2,8	3,2	2,9	3	3	2,9
HEATING A7 / W35							
Heating Capacity	kW	4	25,7	4,8	30,9	6,4	41,6
Power Input with built-in pumps	kW	0,9	5,4	1,2	6,9	1,6	10,3
COP	-	4,3	4,8	4	4,5	3,9	4
HEATING A-5 / W35							
Heating Capacity	kW	2,8	17,8	3,5	22,6	4,6	29,9
Power Input with built-in pumps	kW	0,9	5,2	1,3	6,8	1,7	9,9
COP	-	3	3,40	2,70	3,30	2,70	3,00
DOMESTIC HOT WATER A7 / W55							
Heating Capacity	kW	3,5	23,4	4,5	29,9	6,1	41,0
Power Input with built-in pumps	kW	1,5	8	2,1	10,3	2,8	14,5
COP	-	2,30	2,9	2,2	2,9	2,2	2,8
DOMESTIC HOT WATER A-5 / W55							
Heating Capacity	kW	2,6	17,4	3,3	22,3	4,7	31,1
Power Input with built-in pumps	kW	3,2	8,7	2,1	10,1	2,8	14,2
COP	-	0,80	2,00	1,60	2,20	1,60	2,20
COOLING + DOMESTIC HOT WATER W23/18 W50/55							
Cooling Capacity	kW	5,4	26,3	6,9	34,1	9,3	47,0
Heating Capacity	kW	3,9	33,5	5,1	43,4	7	60,3
Power Input with built-in pumps	kW	1,5	7,7	1,9	10,1	2,5	14,4
Total COP	-	6,1	7,7	6,3	7,7	6,6	7,4
EFFICIENCY							
SEER	-	5,39		4,9		4,88	
SCOP (low temperature)	-	4,62		4,23		4,21	
SCOP (medium temperature)	-	3,51		3,41		3,37	
ERP Efficiency Class (low temperature)	-			A+++			
DHW Energy Class / Declared Profile	-	A/XL		A+/XL		A/XXL	
Sound Pressure Level Lp (indoor unit) @10m EN12102	dB(A)	39		42		48	
Sound Pressure Level Lp (outdoor unit) @10m EN12102	dB(A)	35		35		39	
COMPRESSOR							
Compressor Type	-			BLDC Inverter			
Power Supply	-			400 / 3+N / 50			
Total FLA	A	22		25		32	
DIMENSIONS and WEIGHT							
Length x Width x Height - Indoor unit	mm			803x606x1248			
Length x Width x Height - Outdoor unit (EW0)	mm			2012x702x1440			
Weight - Indoor unit	kg	295		300		310	
Weight - Outdoor unit (EW0)	kg	280		300		310	

AEROTHERMAL UNITS

NAW

**MULTIFUNCTIONAL AND MULTIPURPOSE MONOBLOC HEAT PUMP
WITH HIGH TEMPERATURE DHW
PRODUCTION IN TOTAL RECOVERY**

20 - 50 kW



NAW is a versatile **monobloc heat pump**, highly energy-efficient thanks to the use of BLDC inverter digital scroll compressors. It is able to fully meet any requirement concerning heating, cooling and the production of domestic hot water, **operating with outdoor temperatures down to -20° C and producing hot water up to 65° C.**

Available in three versions:

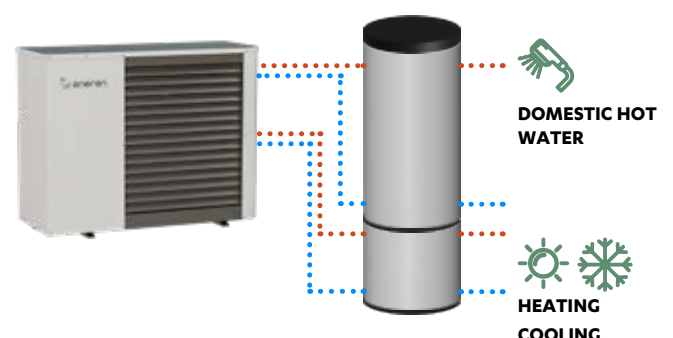
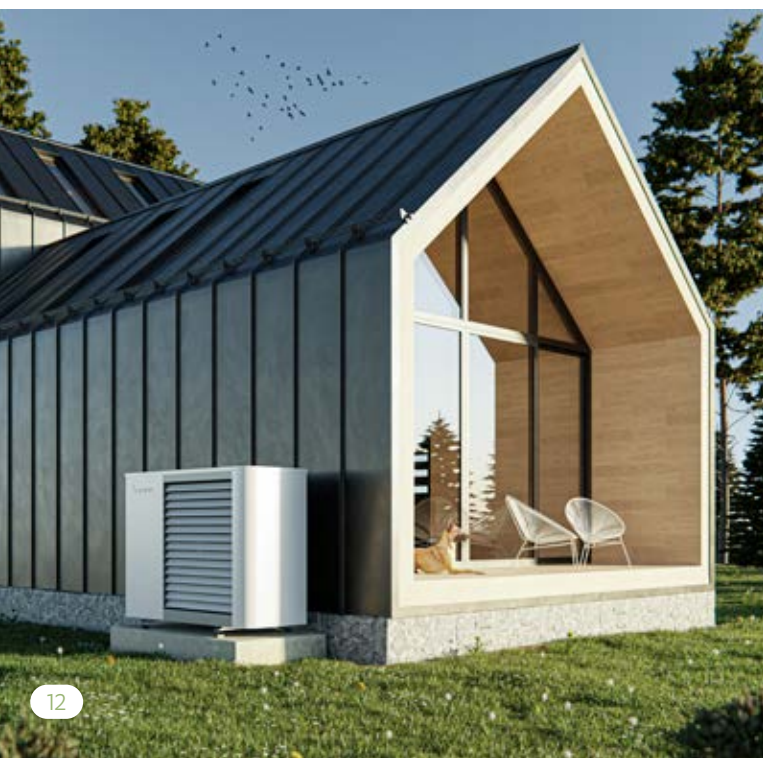
- **M** for 2-pipe systems with domestic hot water, in **total recovery mode**
- **P** for 4-pipe systems, to also **simultaneously meet heating and cooling requirements**, in total recovery mode.
- **H** for 2-pipe systems with domestic hot water

Total heat recovery

Thanks to the **dedicated total heat recovery refrigeration circuit** with parallel condenser, NAW meets the thermal and sanitary needs of commercial and industrial 4-pipe systems, without having to reverse the refrigeration cycle whenever a heating and cooling request is received.

Modulating flow control

Electronic pumps and modulating valves, installed inside the unit, are essentially important to ensure flow rate control at constant temperature or constant delta T. Thanks to their control microprocessor, they are also able to adapt to every system need.





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HXE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

EC Fans

The **inverter fan with an electronically commutated motor** makes the NAW heat pumps **highly energy-efficient and very quiet**, with the ability to adjust airflow rates according to specific requirements.

Wider pitch finned coil

The coil has a wider fin pitch and is applied a **hydrophilic coating**, which prevents the formation of surface condensation with a resulting **reduction in the number of defrosting cycles by up to 30%**.

NAW		020		030		040	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX
COOLING A35 / W18							
Cooling Capacity	kW	13,0	32,7	17,1	41,1	17,3	54,6
Power Input with built-in pumps	kW	2,1	7,2	3,1	9,5	3,1	14,2
EER	-	6,09	4,54	5,59	4,33	5,58	3,84
COOLING A35 / W7							
Cooling Capacity	kW	8,9	22,8	12,0	29,5	12,1	39,8
Power Input with built-in pumps	kW	2,2	6,8	3,1	8,6	3,1	12,8
EER	-	4,06	3,36	3,90	3,42	3,86	3,11
HEATING A7 / W35							
Heating Capacity	kW	10,2	25,0	13,7	34,0	13,8	46,5
Power Input with built-in pumps	kW	2,0	5,6	2,9	7,4	3,0	10,8
COP	-	5,04	4,47	4,76	4,58	4,62	4,30
HEATING A-5 / W35							
Heating Capacity	kW	6,7	18,4	9,8	24,3	9,9	33,4
Power Input with built-in pumps	kW	2,0	5,5	2,8	7,1	2,9	10,1
COP	-	3,30	3,34	3,50	3,43	3,37	3,29
DOMESTIC HOT WATER A7 / W55							
Heating Capacity	kW	8,4	22,9	12,8	30,8	12,9	42,2
Power Input with built-in pumps	kW	3,2	8,5	4,5	10,7	4,6	15,0
COP	-	2,67	2,71	2,85	2,89	2,81	2,82
DOMESTIC HOT WATER A-5 / W55							
Heating Capacity	kW	5,7	16,2	9,6	23,3	9,6	32,0
Power Input with built-in pumps	kW	3,3	8,8	4,8	10,5	4,8	14,6
COP	-	1,71	1,85	2,03	2,22	1,99	2,19
COOLING + DOMESTIC HOT WATER W23/18 W50/55							
Cooling Capacity	kW	10,2	28,1	13,8	35,6	13,8	48,4
Heating Capacity	kW	12,7	35,7	17,4	45,2	17,4	62,2
Power Input with built-in pumps	kW	2,7	8,2	4,0	10,6	4,0	15,1
COP Totale	-	8,37	7,75	7,69	7,61	7,76	7,33
EFFICIENCY							
ESEER / SCOP (high temperature)	-	5,35/2,94		4,84/3,49		4,75/3,64	
SCOP (low temperature)	-	4,66		4,51		4,54	
ERP Efficiency Class (high temperature)	-			A++			
DHW Energy Class / Declared Profile	-	A/XL		A+/XL		A/XXL	
Sound Pressure Level Lp @10m EN12102	dB(A)	33,1	39,3	33,8	41,0	33,8	48,1
COMPRESSOR							
Compressor Type	-	BLDC Inverter					
Power Supply	-	400 / 3+N / 50					
Total FLA	A	22,3		25,4		32,1	
DIMENSIONS and WEIGHT							
Length x Width x Height - Standard	mm	2012 x 702 x 1465					
Weight - Standard	kg	395		456		456	

AEROTHERMAL UNITS

RAW

**MULTIFUNCTIONAL AND MULTIPURPOSE
SPLIT HEAT PUMP
WITH HIGH TEMPERATURE DHW PRODUCTION**

6 - 17 kW



RAW is an all in one split air-water heat pump, able to fully meet heating, cooling and domestic hot water production needs; it can **operate with outdoor temperatures down to -20°C and produce hot water up to 65°C**.

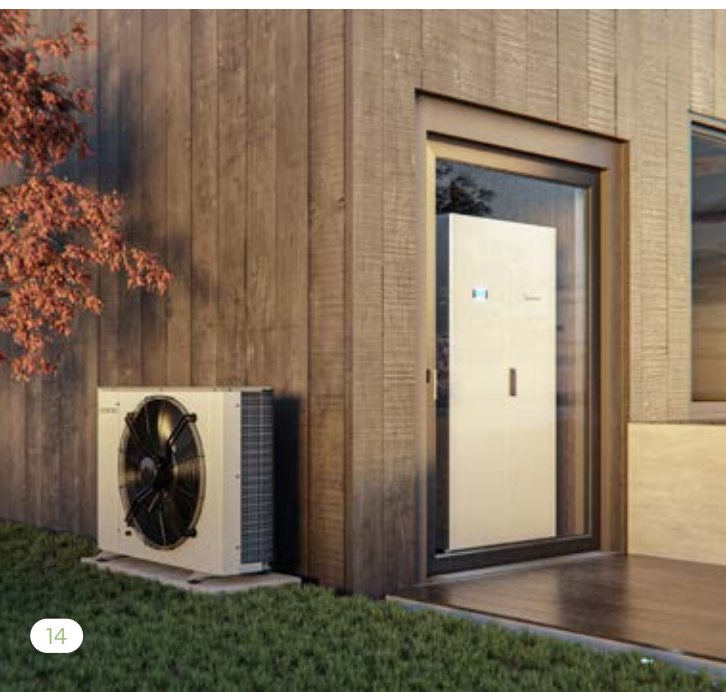
It is completed by an exclusive compact hydronic module, equipped with a 200 l puffer for sanitary technical water, 95 l inertial thermal flywheel, **instantaneous DHW production via a 25 l/min** brazed plate heat exchanger, **expansion vessels, safety valves, hydraulic filters** and electronic pumps for the plumbing system, sanitary water and source circuits.

The heat pump is available in two versions:

- **M** for **2-pipe systems with domestic hot water, in total recovery mode**
- **H** for **2-pipe systems with domestic hot water**

Total heat recovery

The dedicated total heat recovery refrigeration circuit through a parallel condenser allows the RAW heat pump to meet the heating and DHW system requirements, **without having to reverse the refrigeration cycle** in response to different environmental heating and cooling requests.





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HXE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

All-in-one hydronic module

The all-in-one hydronic module is a complete thermal power plant, which can also be installed in confined spaces and which integrates perfectly with the geothermal system, to achieve **the highest levels of efficiency and energy savings**.

EC Fans

The **inverter fan with an electronically commutated motor** makes the RAW heat pumps **highly energy-efficient and very quiet**, with the ability to adjust airflow rates according to specific requirements.

Wider pitch finned coil

The coil has a wider fin pitch and is applied a **hydrophilic coating**, which prevents the formation of surface condensation with a resulting **reduction in the number of defrosting cycles by up to 30%**.

RAW		006		009		012		015		017	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
COOLING A35 / W18											
Cooling Capacity	kW	4,4	8,7	4,4	13,0	6,2	15,5	8,5	19,6	8,6	22,9
Power Input with built-in pumps	kW	0,8	1,7	0,8	2,8	1,3	3,3	1,8	4,3	1,8	5,2
EER	-	5,49	5,18	5,45	4,70	4,58	4,73	4,76	4,52	4,82	4,38
COOLING A35 / W7											
Cooling Capacity	kW	3,0	6,1	3,0	9,3	4,3	11,0	5,9	14,0	6,0	16,3
Power Input with built-in pumps	kW	0,8	1,6	0,8	2,7	1,4	3,1	1,8	4,1	1,8	4,8
EER	-	3,87	3,71	3,76	3,43	3,13	3,49	3,25	3,43	3,29	3,40
HEATING A7 / W35											
Heating Capacity	kW	3,6	7,5	3,7	11,5	5,2	13,4	7,2	17,7	7,2	20,3
Power Input with built-in pumps	kW	0,7	1,4	0,7	2,3	1,3	2,9	1,6	3,6	1,6	4,2
COP	-	5,14	5,36	4,89	4,95	4,01	4,64	4,40	4,94	4,40	4,83
HEATING A-5 / W35											
Heating Capacity	kW	2,5	5,2	2,5	8,2	3,7	9,5	5,1	12,4	5,1	14,5
Power Input with built-in pumps	kW	0,7	1,4	0,8	2,3	1,3	2,8	1,7	3,4	1,7	4,0
COP	-	3,56	3,78	3,39	3,63	2,82	3,43	3,02	3,63	3,02	3,66
DOMESTIC HOT WATER A7 / W55											
Heating Capacity	kW	3,4	7,0	3,4	10,8	5,5	12,4	6,8	15,7	6,8	18,3
Power Input with built-in pumps	kW	1,2	2,1	1,2	3,4	2,3	4,0	2,6	5,1	2,6	5,9
COP	-	2,94	3,26	2,86	3,21	2,44	3,12	2,59	3,06	2,59	3,09
DOMESTIC HOT WATER A-5 / W55											
Heating Capacity	kW	2,6	5,0	2,6	7,8	4,3	9,0	5,0	11,4	5,0	13,2
Power Input with built-in pumps	kW	1,1	2,0	1,2	3,2	2,2	3,7	2,5	4,8	2,5	5,5
COP	-	2,26	2,47	2,19	2,44	1,96	2,42	1,99	2,37	1,99	2,4
COOLING + DOMESTIC HOT WATER W23/18 W50/55											
Cooling Capacity	kW	3,6	7,6	3,6	11,6	5,3	13,2	6,9	16,7	6,9	19,5
Heating Capacity	kW	4,6	9,5	4,6	14,6	7,0	16,7	9,0	21,4	9,0	25,0
Power Input with built-in pumps	kW	1,2	2,1	1,2	3,4	2,0	3,8	2,4	5,1	2,4	6,0
Total COP	-	7,08	8,02	7,08	7,83	6,19	7,83	6,71	7,45	6,71	7,37
EFFICIENCY											
ESEER / SCOP (high temperature)	-	4,91/5,11		4,70/5,00		4,67/4,15		4,33/4,45		4,40/4,45	
SCOP (low temperature)	-	4,77		4,74		3,94		4,41		4,52	
ERP Efficiency Class (high temperature)	-	A+++		A++		A+++		A+++		A+++	
DHW Energy Class / Declared Profile	-	A++/M		A++/M		A+/L		A+/L		A+/L	
Sound Pressure Level Lp @10m EN12102	dB(A)	31		34		37		35		36	
COMPRESSOR											
Compressor Type	-	BLDC Inverter									
Power Supply	-	230 / 1+N / 50						400 / 3+N / 50			
Total FLA	A	14		14		19		17		17	
DIMENSIONS and WEIGHT											
Length x Width x Height - Outdoor unit	mm	1270x456x880					1374x658x1182				
Length x Width x Height - Indoor unit	mm	900x743x1925									
Weight - Outdoor unit	kg	100		100		110		150		150	
Weight - Indoor unit	kg	290		290		290		290		290	

AEROTHERMAL UNITS

SHI

**MULTIFUNCTIONAL AND MULTIPURPOSE SPLIT
AND WALL-MOUNTED HEAT PUMP
WITH HIGH TEMPERATURE DHW PRODUCTION**

6 - 17 kW



HEATING



DOMESTIC
HOT WATER



COOLING

The SHI air-water heat pump is able to meet all heating, cooling and domestic hot water production requirements; it **operates with outdoor temperatures down to -20°C and produces hot water up to 65°C**. A compact, all-in-one and reliable unit for maximum efficiency and sustainability.

Available in three versions:

- **M** for 2-pipe systems with domestic hot water, in **total recovery mode**
- **P** for 4-pipe systems, to also **simultaneously meet heating and cooling requirements**, in total recovery mode
- **H** for 2-pipe systems with domestic hot water

Modulating flow control

Electronic pumps and modulating valves, installed inside the unit, are essentially important to ensure flow rate control at constant temperature or constant delta T. Thanks to their control microprocessor, they are also able to adapt to every system need.

Total heat recovery

Thanks to the hot side **dedicated heat exchanger**, they satisfy the thermal and sanitary needs of commercial 4 pipe systems, **without reversing the refrigerant cycle** at each heating and cooling request.





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HVE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

Wider pitch finned coil

The coil has a wider fin pitch and is applied a **hydrophilic coating**, which prevents the formation of surface condensation with a resulting **reduction in the number of defrosting cycles by up to 30%**.

EC Fans

The **inverter fan with an electronically commutated motor** makes the SHI heat pumps **highly energy-efficient and very quiet**, with the ability to adjust airflow rates according to specific requirements.

SHI		006		009		012		015		017	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
COOLING A35 / W18											
Cooling Capacity	kW	4,4	8,7	4,4	13,0	6,2	15,5	8,5	19,6	8,6	22,9
Power Input with built-in pumps	kW	0,8	1,7	0,8	2,8	1,3	3,3	1,8	4,3	1,8	5,2
EER	-	5,49	5,18	5,45	4,70	4,58	4,73	4,76	4,52	4,82	4,38
COOLING A35 / W7											
Cooling Capacity	kW	3,0	6,1	3,0	9,3	4,3	11,0	5,9	14,0	6,0	16,3
Power Input with built-in pumps	kW	0,8	1,6	0,8	2,7	1,4	3,1	1,8	4,1	1,8	4,8
EER	-	3,87	3,71	3,76	3,43	3,13	3,49	3,25	3,43	3,29	3,40
HEATING A7 / W35											
Heating Capacity	kW	3,6	7,5	3,7	11,5	5,2	13,4	7,2	17,7	7,2	20,3
Power Input with built-in pumps	kW	0,7	1,4	0,7	2,3	1,3	2,9	1,6	3,6	1,6	4,2
COP	-	5,14	5,36	4,89	4,95	4,01	4,64	4,40	4,94	4,40	4,83
HEATING A-5 / W35											
Heating Capacity	kW	2,5	5,2	2,5	8,2	3,7	9,5	5,1	12,4	5,1	14,5
Power Input with built-in pumps	kW	0,7	1,4	0,8	2,3	1,3	2,8	1,7	3,4	1,7	4,0
COP	-	3,56	3,78	3,39	3,63	2,82	3,43	3,02	3,63	3,02	3,66
DOMESTIC HOT WATER A7 / W55											
Heating Capacity	kW	3,4	7,0	3,4	10,8	5,5	12,4	6,8	15,7	6,8	18,3
Power Input with built-in pumps	kW	1,2	2,1	1,2	3,4	2,3	4,0	2,6	5,1	2,6	5,9
COP	-	2,94	3,26	2,86	3,21	2,44	3,12	2,59	3,06	2,59	3,09
DOMESTIC HOT WATER A-5 / W55											
Heating Capacity	kW	2,6	5,0	2,6	7,8	4,3	9,0	5,0	11,4	5,0	13,2
Power Input with built-in pumps	kW	1,1	2,0	1,2	3,2	2,2	3,7	2,5	4,8	2,5	5,5
COP	-	2,26	2,47	2,19	2,44	1,96	2,42	1,99	2,37	1,99	2,4
COOLING + DOMESTIC HOT WATER W23/18 W50/55											
Cooling Capacity	kW	3,6	7,6	3,6	11,6	5,3	13,2	6,9	16,7	6,9	19,5
Heating Capacity	kW	4,6	9,5	4,6	14,6	7,0	16,7	9,0	21,4	9,0	25,0
Power Input with built-in pumps	kW	1,2	2,1	1,2	3,4	2,0	3,8	2,4	5,1	2,4	6,0
COP Totale	-	7,08	8,02	7,08	7,83	6,19	7,83	6,71	7,45	6,71	7,37
EFFICIENCY											
ESEER / SCOP (high temperature)	-	4,91/5,11		4,70/5,00		4,67/4,15		4,33/4,45		4,40/4,45	
SCOP (low temperature)	-	4,77		4,74		3,94		4,41		4,52	
ERP Efficiency Class (high temperature)	-	A+++				A++		A+++			
DHW Energy Class / Declared Profile	-	A++/M		A++/M		A+/L		A+/L		A+/L	
Sound Pressure Level Lp @10m EN12102	dB(A)	31		34		37		35		36	
COMPRESSOR											
Compressor Type	-	BLDC Inverter									
Power Supply	-	230 / 1+N / 50						400 / 3+N / 50			
Total FLA	A	14		14		19		17		17	
DIMENSIONS and WEIGHT											
Length x Width x Height - Outdoor unit	mm	1270x456x880						1374x658x1182			
Length x Width x Height - Indoor unit	mm	480x333x900									
Weight - Outdoor unit	kg	100		100		110		150		150	
Weight - Indoor unit	kg	65		65		70		70		70	

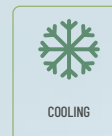
AEROTHERMAL UNITS

HVE



**MULTIFUNCTIONAL AND MULTIPURPOSE
MONOBLOC HEAT PUMP
WITH HIGH TEMPERATURE DHW PRODUCTION**

6 - 17 kW



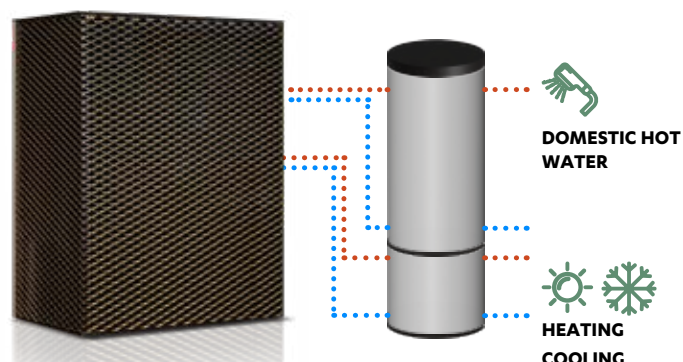
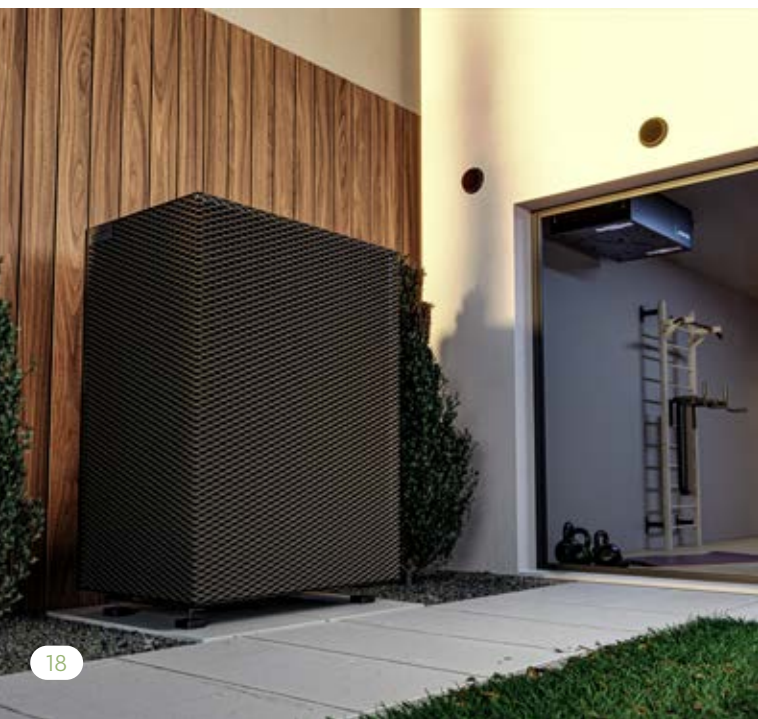
HVE series are adaptable and highly energy efficient monobloc heat pumps, thanks to the use of **BLDC digital scroll inverter compressors**. They are able to completely satisfy the needs for heating, cooling and for the production of domestic hot water; they operate with outdoor temperature down to -20 °C and **produces hot water up to 65 °C**.

Available in three different versions:

- **M** for 2-pipe systems with domestic hot water, in **total recovery**
- **P** for 4-pipe systems, **to satisfy heating and cooling needs at the same time**, in total recovery
- **H** for 2-pipe systems with domestic hot water

Total heat recovery

Thanks to the hot side **dedicated heat exchanger**, they satisfy the thermal and sanitary needs of commercial 4 pipe systems, **without reversing the refrigerant cycle** at each heating and cooling request.





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HVE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

Modulating flow control

Electronic pumps and modulating valves, installed inside the unit, are essentially important to ensure flow rate control at constant temperature or constant delta T. Thanks to their control microprocessor, they are also able to adapt to every system need.

Wider pitch finned coil

The coil has a wider fin pitch and is applied a **hydrophilic coating**, which prevents the formation of surface condensation with a resulting **reduction in the number of defrosting cycles by up to 30%**.

EC Fans

The **inverter fan with an electronically commutated motor** makes the HVE heat pumps **highly energy-efficient and very quiet**, with the ability to adjust airflow rates according to specific requirements.

HVE		006		009		012		015		017	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
COOLING A35 / W18											
Cooling Capacity	kW	4,4	8,6	4,4	13,0	6,2	15,5	8,5	19,6	8,6	22,8
Power Input with built-in pumps	kW	0,8	1,7	0,8	2,8	1,4	3,3	1,8	4,3	1,8	5,3
EER	-	5,44	5,11	5,42	4,66	4,50	4,72	4,76	4,52	4,82	4,33
COOLING A35 / W7											
Cooling Capacity	kW	3,0	6,1	3,0	9,2	4,3	10,9	5,9	14,0	6,0	16,3
Power Input with built-in pumps	kW	0,8	1,6	0,8	2,7	1,4	3,2	1,8	4,1	1,8	4,8
EER	-	3,83	3,69	3,77	3,40	3,10	3,46	3,25	3,43	3,29	3,39
HEATING A7 / W35											
Heating Capacity	kW	3,6	7,5	3,6	11,4	5,2	13,5	7,2	17,7	7,2	20,3
Power Input with built-in pumps	kW	0,7	1,4	0,7	2,3	1,3	2,9	1,6	3,6	1,6	4,2
COP	-	5,18	5,38	4,97	4,93	4,02	4,69	4,40	4,94	4,40	4,81
HEATING A-5 / W35											
Heating Capacity	kW	2,5	5,2	2,5	8,2	3,7	9,5	5,1	12,4	5,1	14,5
Power Input with built-in pumps	kW	0,7	1,4	0,7	2,3	1,3	2,8	1,7	3,4	1,7	4,0
COP	-	3,59	3,80	3,44	3,64	2,83	3,43	3,02	3,63	3,02	3,65
DOMESTIC HOT WATER A7 / W55											
Heating Capacity	kW	3,4	7,0	3,4	10,8	5,5	12,4	6,8	15,7	6,8	18,3
Power Input with built-in pumps	kW	1,2	2,1	1,2	3,4	2,2	4,0	2,6	5,1	2,6	5,9
COP	-	2,96	3,27	2,89	3,22	2,45	3,12	2,59	3,06	2,59	3,09
DOMESTIC HOT WATER A-5 / W55											
Heating Capacity	kW	2,6	5,0	2,6	7,8	4,3	9,0	5,0	11,4	5,0	13,2
Power Input with built-in pumps	kW	1,1	2,0	1,2	3,2	2,2	3,7	2,5	4,8	2,5	5,5
COP	-	2,27	2,48	2,22	2,45	1,96	2,43	1,99	2,37	1,99	2,40
COOLING + DOMESTIC HOT WATER W23/18 W50/55											
Cooling Capacity	kW	3,6	7,6	3,6	11,6	5,3	13,2	6,9	16,7	6,9	19,5
Heating Capacity	kW	4,6	9,5	4,6	14,6	7,0	16,7	9,0	21,4	9,0	25,0
Power Input with built-in pumps	kW	1,2	2,1	1,2	3,4	2,0	3,8	2,4	5,1	2,4	6,0
Total COP	-	7,08	8,02	7,08	7,83	6,19	7,83	6,71	7,45	6,71	7,37
EFFICIENCY											
ESEER / SCOP (high temperature)	-	4,86/3,35		4,83/3,57		4,40/2,96		4,33/3,14		4,40/3,25	
SCOP (low temperature)	-	4,82		4,81		3,95		4,41		4,52	
ERP Efficiency Class (high temperature)	-	A++				A+					
DHW Energy Class / Declared Profile	-	A+/M		A+/M		A+/L		A+/L		A+/L	
Sound Pressure Level Lp @10m EN12102	dB(A)	18	28	18	33	21,3	36	20,3	35,3	20,3	36,3
COMPRESSOR											
Compressor Type	-	BLDC Inverter									
Power Supply	-	230 / 1+N / 50 (opzionale 400V)						400 / 3+N / 50			
Total FLA	A	19,2		25,2		28,2		13,7		17,0	
DIMENSIONS and WEIGHT											
Length x Width x Height	mm	1270 x 770 x 1550									
Weight	kg	196		210		236		245		245	

AEROTHERMAL UNITS

HXE

**MULTIFUNCTIONAL AND MULTIPURPOSE
MONOBLOC HEAT PUMP
WITH HIGH TEMPERATURE DHW PRODUCTION**

6 - 50 kW



Modulating flow control

Electronic pumps and modulating valves, installed inside the unit, are essentially important to ensure flow rate control at constant temperature or constant delta T. Thanks to their control microprocessor, they are also able to adapt to every system need.

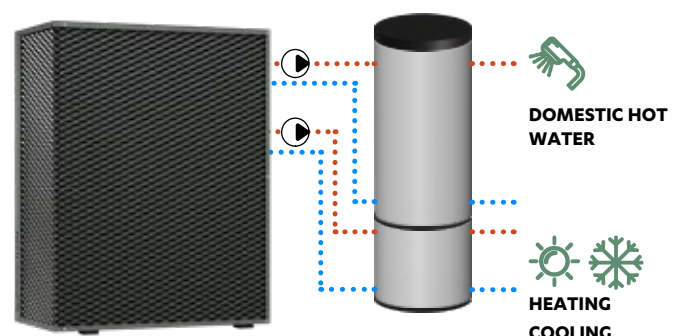
Total heat recovery

Thanks to the hot side **dedicated heat exchanger**, they satisfy the thermal and sanitary needs of commercial 4 pipe systems, **without reversing the refrigerant cycle** at each heating and cooling request.

HXE series are adaptable and highly energy efficient monobloc heat pumps, thanks to the use of **BLDC digital scroll inverter compressors**. They are able to completely satisfy the needs for heating, cooling and for the production of domestic hot water; they operate with **outdoor temperature down to -20 °C** and produces **hot water up to 75 °C**.

Available in three different versions:

- **M** for 2-pipe systems with domestic hot water, in **total recovery**
- **P** for 4-pipe systems, to satisfy **heating and cooling** needs at the same time, in **total recovery**
- **H** for 2-pipe systems with domestic hot water





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HXE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

EC Fans

The **inverter fan with an electronically commutated motor** makes the HXE heat pumps **highly energy-efficient and very quiet**, with the ability to adjust airflow rates according to specific requirements.

Wider pitch finned coil

The coil has a wider fin pitch and is applied a **hydrophilic coating**, which prevents the formation of surface condensation with a resulting **reduction in the number of defrosting cycles by up to 30%**.

HXE		006		009		012		015		017		020		030		040	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
COOLING A35 / W18																	
Cooling Capacity	kW	1,4	9,4	1,6	10,7	2,5	17,0	3,3	22,0	3,7	24,7	4,9	32,8	6,1	40,5	7,9	52,6
Power Input with built-in pumps	kW	0,3	1,9	0,3	2,2	0,5	3,6	0,7	4,8	0,8	5,6	1,0	6,6	1,3	8,7	1,7	13,2
EER	-	5,2	5	5,2	4,8	4,7	4,7	4,7	4,6	4,8	4,4	5,1	4,9	4,5	4,7	4,8	4
COOLING A35 / W7																	
Cooling Capacity	kW	1	6,8	1,2	7,7	1,9	12,4	2,4	16,1	2,7	18,2	3,6	24	4,5	29,8	5,8	38,9
Power Input with built-in pumps	kW	0,3	1,8	0,3	2,1	0,6	3,4	0,7	4,5	0,8	5,3	1,0	6,4	1,3	8,4	1,7	12,5
EER	-	3,6	3,8	3,6	3,6	3,3	3,6	3,4	3,6	3,5	3,4	3,7	3,7	3,3	3,5	3,5	3,1
HEATING A7 / W35																	
Heating Capacity	kW	1,1	7,2	1,3	8,4	2,1	13,4	2,7	17,3	3	19,4	3,7	23,8	4,7	29,8	6,1	39,9
Power Input with built-in pumps	kW	0,3	1,6	0,3	1,9	0,5	3,0	0,7	3,8	0,7	4,4	0,9	5,3	1,2	6,9	1,5	9,9
COP	-	4,3	4,6	4,3	4,5	3,9	4,4	4,1	4,5	4,2	4,4	4,2	4,5	4	4,3	4,1	4
HEATING A-5 / W35																	
Heating Capacity	kW	0,8	5,3	1,0	6,2	1,5	9,8	2,0	12,7	2,2	14,4	2,8	17,6	3,5	22,1	4,6	29,9
Power Input with built-in pumps	kW	0,3	1,5	0,3	1,8	0,5	2,9	0,6	3,6	0,7	4,2	0,9	5,3	1,2	6,9	1,6	9,9
COP	-	3,2	3,50	3,10	3,40	2,90	3,50	3,1	3,50	3,20	3,40	3	3,30	3,00	3,20	3,00	3,00
DOMESTIC HOT WATER A7 / W65																	
Heating Capacity	kW	1	6,6	1,1	7,6	1,8	12,2	2,4	15,8	2,7	18	3,4	22,5	4,3	28,3	5,7	37,9
Power Input with built-in pumps	kW	0,5	2,5	0,5	2,9	0,9	4,6	1,1	6	1,2	6,8	1,8	9	2,2	11,5	2,8	16
COP	-	2,1	2,7	2,1	2,6	2,1	2,6	2,2	2,6	2,2	2,6	1,9	2,5	2	2,5	2	2,4
DOMESTIC HOT WATER A-5 / W65																	
Heating Capacity	kW	0,7	4,9	0,9	5,7	1,4	9,2	1,8	12,0	2,1	13,7	2,6	17,6	3,3	22,3	4,5	29,9
Power Input with built-in pumps	kW	0,4	2,3	0,5	2,7	0,8	4,3	1	5,6	1,1	6,4	1,8	8,9	2,2	11,5	2,8	15,8
COP	-	1,70	2,1	1,7	2,1	1,7	2,1	1,80	2,1	1,8	2,1	1,50	2	1,5	2	1,6	1,9
COOLING + DOMESTIC HOT WATER W23/18 W50/55																	
Cooling Capacity	kW	1,2	8,1	1,4	9,2	2,2	14,6	2,9	19,4	3,3	22	4,3	28,9	5,5	36,4	7,3	48,8
Heating Capacity	kW	1,6	10,3	1,8	11,8	2,9	18,6	3,8	24,7	4,3	28,1	5,7	36,2	7,2	45,6	9,6	61,9
Power Input with built-in pumps	kW	0,4	2,3	0,5	2,7	0,7	4,2	0,9	5,5	1,0	6,4	1,5	7,8	1,9	10,0	2,4	14,2
Total COP	-	6,9	7,9	7,1	7,7	7,2	7,8	7,1	7,9	7,3	7,8	6,9	8,3	6,5	8,2	6,9	7,8
EFFICIENCY																	
SEER	-	5,03		4,99		4,82		4,88		4,88		5,11		4,8		4,77	
SCOP (low temperature)	-	4,93		4,78		4,46		4,48		4,56		4,66		4,45		4,47	
SCOP (high temperature)	-	3,67		3,56		3,33		3,57		3,63		3,47		3,41		3,46	
ERP Efficiency Class (low temperature)	-	A+++															
Sound Pressure Level Lp @10m EN12102	dB(A)	22		26		32		32		33		30		32		33	
DHW Energy Class / Declared Profile	-	A/XL		A+/XL		A/XXL		A/XL		A+/XL		A/XL		A+/XL		A/XXL	
COMPRESSOR																	
Compressor Type	-	BLDC Inverter															
Power Supply	-	230 / 1+N / 50								400 / 3+N / 50							
Total FLA	A	16		18		24		19		19		22		26		35	
DIMENSIONS and WEIGHT																	
Length x Width x Height	mm	1200 x 645 x 1545										2012x702x1465					
Weight	kg	179		193		219		222		222		368		456		456	

AEROTHERMAL UNITS

RAA

SPLIT HEAT PUMP WITH INTERNAL WALL-MOUNTED UNIT

40 - 45 kW



HEATING



COOLING



RAA units are air-to-air heat pumps designed to deliver complete indoor comfort control in industrial and commercial applications. They make use of the electricity generated by the photovoltaic system for self-consumption and **simplify building retrofit projects** thanks to easy installation without altering the existing system.

A single system can **heat, cool and dehumidify the air**, ensuring optimal conditions all year round with high energy efficiency and maximum reliability.

Outdoor Unit

The outdoor unit houses the main components of the refrigerant circuit: **high-efficiency BLDC inverter compressor**, low-noise fan, electrical panel with programmable electronic control, and electronic expansion valve. All components are designed to **ensure operating continuity and high performance** even under demanding conditions.

Indoor Unit

The indoor unit is **available in several configurations** to suit different system requirements:

- **direct discharge version**, featuring adjustable louvers and an oversized axial fan;
- **ducted version**, always equipped with high-static EC brushless centrifugal fans.

Both solutions incorporate a second mechanical expansion valve, which helps improve system control and stability.





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. RAA units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

Dual Expansion Valve

The dual expansion valve technology, with electronic control on the outdoor unit and mechanical control on the indoor unit, enables more precise refrigerant management, **ensuring consistent performance**, greater design flexibility and reliable operation even in more complex systems.

Advanced Sound Insulation EC Fans

The inverter fan with electronically commutated motor (optional) makes RAA heat pumps **extremely energy efficient and quiet**, while allowing airflow rates to be adjusted according to specific requirements.

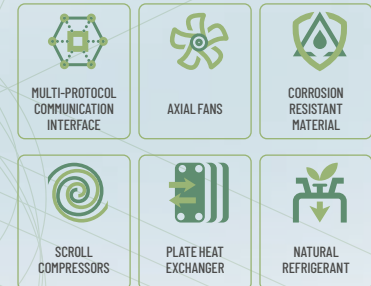


		RAA-NAR 040 AC		RAA-NAR 040 EC		RAA-NAR 045 EC		RAA-NAD 040 EC		RAA-NAD 045 EC	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
COOLING A35 / W27											
Cooling Capacity	kW	6,5	43,3	6,5	43,4	7,2	47,9	6,6	43,9	7,3	48,5
Power Input	kW	1,7	12,8	1,6	12,3	1,7	14,8	2,0	13,3	2,1	15,9
EER	-	3,79	3,39	4,17	3,54	4,24	3,24	3,36	3,30	3,40	3,05
SEER	-	6,17	6,17	6,63	6,63	6,63	6,63	5,18	5,48	5,1	5,1
HEATING A7 / A20											
Heating Capacity	kW	6,1	40,2	6,1	40,3	6,9	45,4	6,2	40,3	6,9	45,5
Power Input	kW	1,7	9,4	1,5	9,0	1,6	10,8	1,9	9,9	2,2	11,7
COP	-	3,71	4,26	4,22	4,49	4,27	4,20	3,17	4,08	3,20	3,90
SCOP	-	3,87	3,87	4,29	4,29	4,33	4,33	3,78	3,78	3,83	3,83
REFRIGERANT											
Refrigerant	-	R454B									
Refrigerant charge	kg	9									
GWP	-	466									
CO ₂ equivalent tonnes	-	4,194									
Sound Pressure Level Lp @10mEN3744	dB(A)	Indoor unit: 36 Outdoor unit: 49		Indoor unit: 36 Outdoor unit: 49		Indoor unit: 35 Outdoor unit: 55		Indoor unit: 49 Outdoor unit: 49		Indoor unit: 49 Outdoor unit: 55	
COMPRESSOR											
Compressor type	-	Scroll									
Power Supply	-	400 / 3+N / 50									
Total FLA	A	34		34		37		38		41	
Fan type	-	AC	AC	EC	EC	EC	EC	EC	EC	EC	EC
Air flow	m³/h	Indoor unit: 12028 Outdoor unit: 13443		Indoor unit: 12227 Outdoor unit: 13704		Indoor unit: 12227 Outdoor unit: 13704		Indoor unit: 13815 Outdoor unit: 13704		Indoor unit: 13815 Outdoor unit: 13704	
DIMENSIONS and WEIGHT											
Length x Width x Height - Indoor unit	mm	1350 x 870 x 1270									
Length x Width x Height - Ducted indoor unit	mm	1430 x 812 x 1816									
Length x Width x Height - Outdoor unit	mm	1900 x 750 x 1480									
Weight - Indoor unit	kg	260									
Weight - Ducted indoor unit	kg	240									
Weight - Outdoor unit	kg	368									

NHE

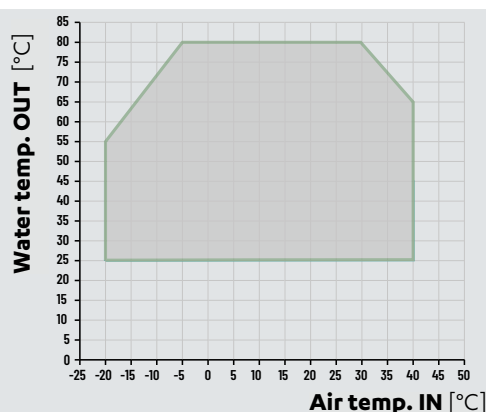
CHILLERS AND HEAT PUMPS AIR CONDENSED WITH SCROLL COMPRESSORS

92-688 kW



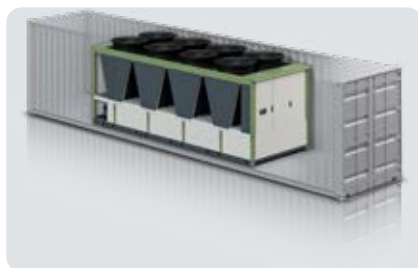
NHE is the range of air/water units in chiller and reversible heat pump versions with natural refrigerant R290. The NHE range is designed to handle **the air conditioning of industrial plants and thermal loads in technological applications, where maximum system reliability is required in all operating conditions, 24/7**. The NHE range utilises state-of-the-art Scroll compressors, plate exchangers optimised for use with medium pressure refrigerants (R290) and low-noise axial fans. The unit lends itself to being installed in environments where it is essential to reduce noise emissions as much as possible; three soundproofing set-ups are available.

- Available in R290 or R454C
- 2 different soundproofing set-ups available: Standard and Low Noise
- Available versions: Chiller (C) and reversible heat pump (H)
- High power density units in both chiller and heat pump modes
- Electronic expansion valve
- Easy accessibility thanks to the optimisation of the internal space
- High-efficiency On-Off Scroll Compressors
- EC Fans



Production of hot water up to 80°C

The units of the range are capable of **producing water at 80°C** and operating at outside air temperatures as low as **-20°C**.



Easy shipping, everywhere!

Thanks to its small size, each unit in the NHE range can easily be placed in a High Cube container and shipped worldwide!

Precise control of the supply temperature

The units in the NHE range are equipped with 2-way motorized valves that ensure **precise control of the supply temperature even at partial loads**, preventing mixing that would compromise the unit's energy efficiency.



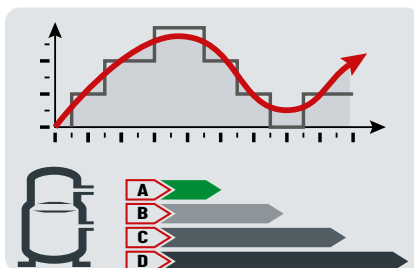
Plate heat exchangers

The NHE range uses brazed plate heat exchangers with asymmetrical channels, suitable for the use of high and medium pressure refrigerant gases. The asymmetrical channel configuration **allows high heat exchange efficiencies to be achieved** while maintaining low water-side pressure drops, **thus reducing pumping expenses**, both at full and partial load.



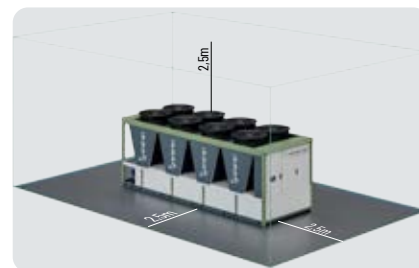
Modular design

The NHE range is designed with a high focus on efficiency and ease of use, features that are reflected **in the integration of a single pumping unit and a single electrical panel**. This configuration not only simplifies installation and maintenance, but also ensures reliable and continuous operation, minimising the risk of breakdowns and optimising system performance.



Modulation and redundancy

The units in the NHE range have 2 to 8 independent circuits, each with 2 high-efficiency On-Off Scroll compressors. This guarantees maximum redundancy and high efficiency at partial loads as well as precise control of the heating and cooling capacity delivered.



Safety first

Units loaded with **A3 (highly flammable) gas** must be installed away from drains, manholes, drainage channels and any other element that could act as a potential escape route for any leakage of said gases, **which must always be considered FLAMMABLE and heavier than air**. The minimum distance to be maintained with respect to these requirements is **2.5 metres**. Within this safety zone, it is strictly forbidden to smoke, use open flames or carry out any work that may generate flames, arc discharges or sparks.



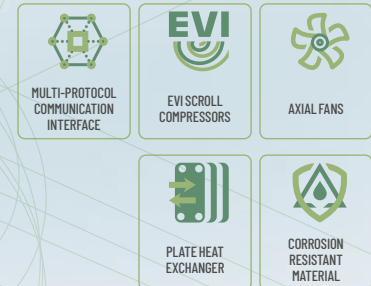
NHE		101	151	202	252	302	353	403	453	504	554	604
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.												
Cooling capacity	kW	91.8	163.3	183.5	228	272.5	319.8	364.3	408.8	456.1	500.6	545.1
Total absorbed power	kW	32.2	49.1	64.4	81.3	98.2	113.5	130.4	147.3	162.6	179.5	196.4
EER		2.85	2.78	2.85	2.8	2.78	2.82	2.79	2.78	2.8	2.79	2.78
Heating: User water values 30/35°C, 7°C outside air, 87% U.R.												
Thermal power	kW	116	172	232	288	344	404	460	516	576	632	688
Total absorbed power	kW	25.3	37.9	50.6	63.2	75.8	88.5	101.1	113.7	126.4	139	151.6
COP		4.58	4.54	4.58	4.56	4.54	4.56	4.55	4.54	4.56	4.55	4.54
Sound power [Standard]	dB(A)	83	84	86	87	87	88	89	89	90	90	90
Sound power [Low noise]	dB(A)	78	80	81	82	83	84	85	85	85	86	86
Dimensions [LxHxD]	mm	1905x2530x2256		3310x2530x2256			4715x2530x2256			6120x2530x2256		

Also available with 60 Hz power supply | Data referring to R290 versions

EPH

REVERSIBLE AIR CONDENSED HEAT PUMPS FOR LOW OUTDOOR TEMPERATURES

36-176 kW



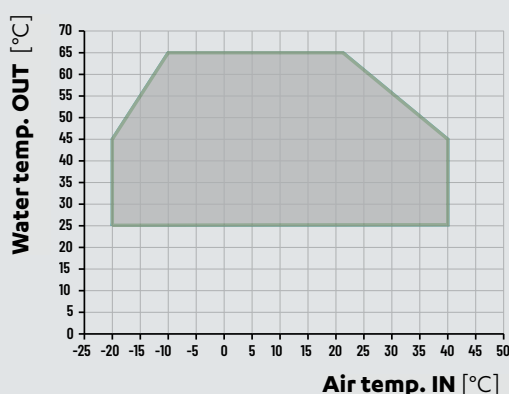
EPH is the Eneren range of air-to-water reversible heat pumps designed for operation in very cold climates. **The use of compressors with EVI steam injection technology allows the production of hot water up to 65 °C and operation with outdoor temperatures down to -20 °C.** This is combined with special **focus on Low Noise** (the “Low-Noise” silenced version is supplied as standard) and the use of different refrigeration circuit architectures to meet the needs of many different system applications.

The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor and dual circuit unit, for a system with greater redundancy.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

-  Refrigerant R410A
-  Electronic expansion valve
-  EVI compressors with steam injection
-  “Cold” start Smart Kit configurable on request, to manage any mixing systems
-  Hydrophilic coated coils with wider fin pitch
-  Condensate collection trays with heating resistances
-  Optional EC fans



Production of hot water up to 65 °C

The units of the EPH range are capable of **producing water at 65 °C**, as well as operating with outdoor air temperatures down **to -20 °C**.



Efficiency and reliability in line with system requirements

The available refrigerating circuit configurations have been designed to ensure, also simultaneously, **redundancy and efficiency at partial loads**. More specifically, the units - depending on the size of the machine and on specific plant engineering requirements - consist of two compressors on two circuits **for high system redundancy** or four compressors (double tandem) on two circuits **for a system that is simultaneously redundant and efficient at partial loads**.



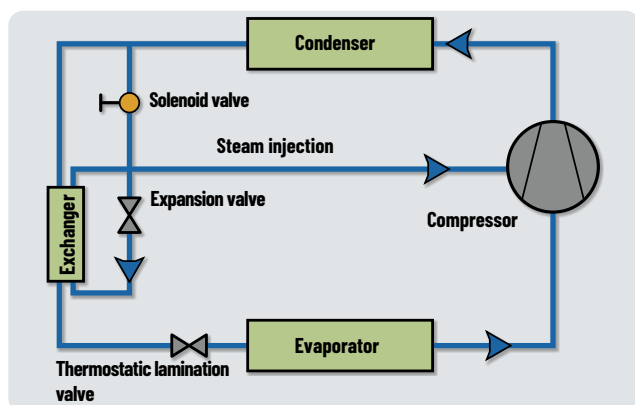
Smart Defrost System

A factor that heavily weighs on the costs of managing the entire plant is finned pack evaporator defrosting during wintertime operation. The (patented) Smart Defrost System is able to identify a decline in the exchanger performance caused by the formation of ice and to **minimise the duration of the defrosting process**. The use of coils treated with hydrophilic surface coating **speeds up the defrosting process** so that melting of just the first, thin ice layer on the fins is only required for cleaning.



Extra low noise

All units in the EPH range are, as standard, **"Low Noise"**, which means fan speed is controlled, anti-vibration piping is used on the refrigeration circuit, and the compressors are compartmentalised in a box lined with soundproofing material. **All this ensures minimum noise emissions throughout the system.**



Units with vapour injection compressors, optimised for all climates

The Scroll compressors of the EPH range use **steam injection technology**: a light flow of refrigerant in a medium-pressure vapour state is "injected" into the coils in the compression chamber. This system allows for both **an increase in the cooling** (and therefore, also the heating) **capacity and efficiency and, above all, an extension of the operating range of the heat pump**; this makes of the EPH range the ideal solution in case of extremely low outdoor temperatures.



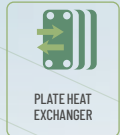
EPH		041HL	051HL	071HL	081HL	101HL	134HL	164HL	204HL
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.									
Cooling capacity	kW	36.3	45.5	61.8	68.9	79.2	121.5	136.9	156
Total absorbed power	kW	12	15	19.7	23.3	25.4	40.2	48.9	52.6
EER		3.03	3.03	3.14	2.96	3.12	3.02	2.8	2.96
Heating: User water values 40/45°C, 7°C outside air, 89% U.R.									
Thermal power	kW	43.6	53.9	72.5	81.6	92.2	140.3	158	175.6
Total absorbed power	kW	13	15.7	21.2	24.4	26.8	41.1	48.6	50.9
COP		3.34	3.42	3.41	3.35	3.44	3.41	3.25	3.45
SCOP		2.83	2.96	2.91	2.9	2.91	3.2	2.85	3.05
Sound power [Standard]	dB(A)	79	78	80	81	81	80	82	82
Dimensions [LxHxD]	mm	2440x1735x1183		2792x1735x1183		3540x1679x1183	3538x1884x1653		3538x2284x1653

Also available with 60 Hz power supply

EAC

AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS FOR INDOOR INSTALLATIONS

58-202 kW



EAC is the range of air-condensed liquid chillers with Scroll compressors for indoor installations. Three different versions (chiller and reversible heat pump) and several power output rates are available. The compact frame makes these units **highly versatile and suited to a wide range of system layouts**. Sizing and selection of individual components seeks to **contain energy consumption, aiming to optimise energy savings not just for individual chillers but for the entire system**. The unit is suitable for installation in equipment rooms and **can be ducted at both intake and delivery ends**. The maximum working head available is 250 Pa.

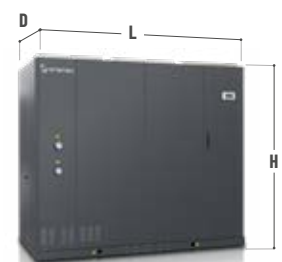
The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor and dual circuit unit, for a system with greater redundancy.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

-  Refrigerant R410A
-  2 different soundproofing set-ups available: Standard and Low Noise
-  Radial EC motor fans
-  Electronic expansion valve
-  Easy accessibility thanks to the optimisation of the internal space
-  Available with single or double pumping kit in timed rotation





Attention to detail and to low noise requirements

Scroll compressors are fitted on rubber feet that **dampen vibration and attenuate the noise transmitted to the various system parts**. On request, the compressor compartment can be lined with special sound absorbing material and the compressors encased in special insulating hoods **to reduce airborne noise emissions**.



All accessories on-board the machine

The special component layout, together with compact plate heat exchangers and Scroll compressors, ensures on one hand **easier access to carry out maintenance procedures** and on the other hand, **sufficient internal space available for fitting a wide range of accessories and hydraulic options**. The hydraulic circuit may include a dual shut-off pump, flow switch, tank, expansion tank and safety valve.



Maximum efficiency at partial loads

The adoption of a multi-Scroll solution, the use of electronically controlled expansion valves and plate heat exchangers and modulation of the compressors are all key features **that make the HWC range particularly efficient at partial loads**.



EAC		052CS	062CS	072CS	082CS	092CS	102CS	112CS	132CS	142CS	162CS	182CS	204CS
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.													
Cooling capacity	kW	57.7	62	71	78.7	94.5	106.8	118.8	128.2	142	155.5	183	201.5
Total absorbed power	kW	18.5	23	25	28.7	33.8	39.6	42.6	47.1	55.2	63.8	68.5	82.2
EER		3.12	2.69	2.84	2.74	2.8	2.7	2.82	2.72	2.57	2.44	2.67	2.45
SEER		4.38	4.1	4.46	4.38	4.2	4.29	4.36	4.36	4.15	4.21	4.14	4.1
SEPR		5.29	5.26	5.32	5.33	5.27	5.22	5.42	5.3	5.11	5.05	5.24	5.15
Sound power [Standard]	dB(A)	82	82	82	83	85	86	86	86	89	90	92	89
Dimensions [LxHxD]	mm	2000x2020x1100						3090x2020x1100				4090x2104x1100	

Calculated with 20% glycol. | Features referred to the standard set-up. If not available, these features are referred to the Low Noise or Super Low Noise set-ups | Also available with 60 Hz power supply | Data declared with use of R410A refrigerant

EAS

AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS

60-261 kW



EAS is the range of air-condensed liquid chillers and heat pumps with Scroll compressors. Three different versions (chiller and reversible heat pump) and the several available power output rates make these units **highly versatile and suited to a wide range of system set-ups**. The sizing and selection of individual components have focused on containing energy consumption, aiming to optimise energy savings not just for individual chillers but for the entire system. The unit is suitable for being installed in environments where **noise abatement is fundamentally important**; three different soundproofing set-ups are available.

The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor dual circuit unit for higher redundancy systems.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

-  3 different soundproofing setups available: Standard, Low Noise and Super Low Noise
-  Electronic expansion valve
-  Optional EC fans
-  Easy accessibility thanks to the optimisation of the internal space
-  Available with variable flow pumping kit



Plate heat exchangers

The EAS range uses brazewelded plate exchangers with asymmetrical channels, suitable for the use of high and medium pressure refrigerant gases. The configuration with asymmetrical channels allows **high exchange efficiencies** to be reached while maintaining pressure drops low on the water side - **reducing pumping costs** at both full and partial load.



Acoustic comfort

It is possible to choose between **three different soundproofing configurations**. The solutions include fan speed management, the use of anti-vibration components on the refrigeration circuit, and the placement of the compressors in a box internally lined with sound-absorbing material.



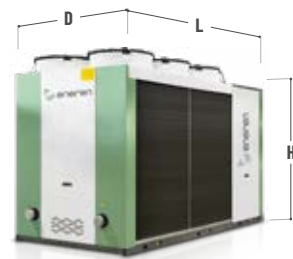
All accessories on-board the machine

The special component layout, together with compact plate heat exchangers and Scroll compressors, allows users on the one hand to make **the most of large sized condensing sections** and on the other hand, to have sufficient free internal space available for fitting **a wide range of accessories and hydraulic options**. The hydraulic circuit may include a dual shut-off pump, flow switch, tank, expansion tank and safety valve.



Maximum efficiency at partial loads

The adoption of the multi-Scroll solution, the use of electronically controlled expansion valves, selection of plate heat exchangers, fan modulation and variable flow rate controlled with circulation pumps are all key features that make the **EAS range particularly efficient at partial loads**.



EAS		061FS	071FS	081FS	101FS	114FS	124FS	144FS	164FS	194FS	214FS	244FS
User water temperature 12/7°C 20% ethylene glycol, outside air 35°C, 40% R.H.												
Cooling capacity	kW	60.4	74.3	87.1	100.8	116.4	124.5	146.8	159.3	184.6	218.6	246.1
Total absorbed power	kW	17	21.5	25.9	30	34.1	36.6	44.3	48.3	56.7	72.1	81.3
EER		3.55	3.45	3.36	3.36	3.42	3.4	3.31	3.3	3.26	3.03	3.03
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.												
Cooling capacity	kW	61.5	75.5	88.5	102.8	118.2	127	149.6	162.5	187.7	222.6	250.4
Total absorbed power	kW	16.9	21.4	25.6	29.6	33.8	35.9	43.3	47.2	55.9	71	80
EER		3.63	3.53	3.45	3.47	3.5	3.54	3.46	3.44	3.36	3.14	3.13
SEER		4.68	4.82	4.94	4.71	4.87	4.76	4.79	4.91	4.9	4.81	4.76
SEPR		5.33	5.49	5.73	5.45	5.59	5.61	5.65	5.76	5.77	5.61	5.69
Heating: User water values 40/45°C, 7°C outside air, 89% U.R.												
Thermal power	kW	60.3	74.2	85.5	100.7	121.3	127.6	147	159.6	183.2	223.4	260.5
Total absorbed power	kW	18.8	22.7	26.6	31.3	36.4	39.6	45.2	49.8	57.2	69.8	81.5
COP		3.21	3.27	3.21	3.22	3.33	3.23	3.25	3.21	3.2	3.2	3.2
SCOP		3.45	3.83	3.81	3.74	3.7	3.59	3.61	3.67	3.77	3.9	3.93
Sound power [Standard]	dB(A)	81	83	83	86	83	84	86	86	87	88	89
Sound power [Low noise]	dB(A)	78	80	80	83	80	81	83	83	84	85	86
Sound power [Super Low noise]	dB(A)	76	78	78	81	78	80	82	82	84	84	85
Dimensions [LxHxD]	mm	2792x1735x1183			3340x1735x1183	3540x1735x1183	3540x1846x1653			3540x2330x1653		4206x2330x1653

Also available with 60 Hz power supply | Features referred to the standards set-up. If not available, these features are referred to the Low Noise or Super Low Noise set-ups | Data declared with use of R410A refrigerant

EHA

AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL BLDC INVERTER COMPRESSORS

30-288 kW



EHA is the Eneren range of air condensed liquid chillers and heat pumps that uses a combination of Scroll ON/OFF compressors and modulating BLDC (Brushless DC-inverter) compressors. **Thanks to timely control of the supplied refrigerating power, based on the achievement of maximum system delivery or energy efficiency, the running costs of the system are minimised.** The excellent configurability of the range in terms of refrigerating circuit, noise levels and available power ratings, together with the numerous accessories and options, make EHA chillers **highly versatile and suitable for a wide range of system applications.**

-  Available refrigerants: R410A and R454B
-  Electronic expansion valve
-  Available in version: Liquid chiller and reversible heat pump
-  Variable flow management up to 25% of the nominal flow rate
-  Quick water connections
-  Optional electronic flow switch



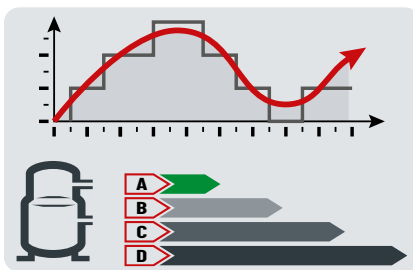
Attention to detail and to low noise requirements

Depending on how important noise containment is in the overall plant layout, a standard version or a **Low Noise version** can be chosen. Adopted technical solutions include fan speed control, the use of anti-vibration devices on the refrigerating circuit, compartmentalisation of compressors and pumping kits in a box internally lined with soundproofing material.



Advantages of modulation

DC-inverter compressors are frequency modulated: from an electrical viewpoint, **this significantly reduces inrush current.**



Dual management of the delivered power

The control software integrated on the EHA range allows management of the cooling capacity, delivered by the Scroll ON/OFF compressors combined with BLDC modulating compressors, according to a dual logic:

- **Maximum power:** the compressors are driven by the inverters at maximum frequency to quickly reach set-point conditions.
- **Maximum efficiency:** the software calculates the point of highest machine efficiency to minimise running costs.

Maximum efficiency at partial loads

The high precision of the hot-wire flow switch (up to 1/10 of the nominal flow rate), combined with pump modulation via the control software, **allows an ideal combination of machine delivery and water flow rate in the primary circuit.** This **optimises the water flow** required at each operating point and **reduces the power absorbed by the hydraulic module**, preventing the risk of ice formation in the evaporator.



Efficiency and reliability in line with system requirements

Users can select, according to unit size and specific plant engineering requirements, refrigerating circuits with different set-ups:

EFFICIENCY PACK 1: Dual compressor on dual circuit for high system redundancy.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 3: Three compressors (trio) on single circuit for higher efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is also efficient with low loads.



EHA		030	035	061	062	081	082	101	102	104	121	122	124	141	142	144	171	172	174	204	244	294
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.																						
Cooling capacity	kW	30.2	40.3	57.8	57.7	75.7	76.4	98.2	98.9	102.4	124.9	127.3	126.6	146.1	147.4	155.7	156.3	156.7	170.4	200.9	252.8	278.6
Total absorbed power	kW	11.3	14.9	18.9	18.8	24.4	24.4	34.2	34.1	37.5	44	43.2	43.4	48.6	48.4	52.3	52.3	52.2	58.7	72.7	86.9	99.4
EER		2.68	2.7	3.07	3.07	3.1	3.13	2.87	2.9	2.73	2.84	2.95	2.91	3.01	3.04	2.98	2.99	3	2.9	2.76	2.91	2.8
SEER		4.5	4.57	4.39	5.17	4.43	5.23	4.18	4.88	4.48	4.28	5.19	4.71	4.27	5.03	4.5	4.19	4.95	4.44	4.55	4.68	4.62
SEPR		5.08	5	6.14	6.08	6.31	6.39	5.62	5.58	5.31	5.7	5.79	5.61	5.9	5.97	5.27	5.75	5.86	5.3	5.35	5.69	5.69
Weight	kg	418	424	600	600	789	789	789	789	789	1085	1085	1085	1390	1390	1390	1430	1430	1470	1620	1943	1985
Heating: User water values 40/45°C, 7°C outside air, 89% U.R.																						
Thermal power	kW	31.7	42.2	-	57.5	-	75.9	-	100.8	106.8	-	133.6	133.5	-	149.8	159	-	160.5	178.1	210.1	257	287.6
Total absorbed power	kW	11.7	15.7	-	19.9	-	26	-	35	38.1	-	45.1	45.7	-	51.8	55.5	-	55.6	61.4	74	89.4	100.4
COP		2.7	2.69	-	2.88	-	2.92	-	2.88	2.8	-	2.96	2.92	-	2.89	2.86	-	2.89	2.9	2.84	2.88	2.86
SCOP		3.28	3.32	-	3.2	-	3.21	-	3.34	3.32	-	3.36	3.22	-	3.22	3.21	-	3.2	3.2	3.36	3.27	3.31
Weight	kg	423	430	-	600	-	789	-	789	789	-	1085	1085	-	1390	1390	-	1430	1495	1655	1980	2025
Sound power [Standard]	dB(A)	87	92	87	87	88	88	90	90	90	94	94	88	94	94	90	94	94	90	94	94	94
Sound power [Low noise]	dB(A)	85	90	83	83	86	84	86	86	86	90	90	84	90	90	86	90	90	86	90	90	90
Dimensions [LxHxD]	mm	1661 x1468 x914		2440 x1735 x1185		2972x1735x1185		3540x1735x1185		3540x1735x1185		3540x1735x1185		3540x1847x1653		3540x1847x1653		3540x1847x1653		3538 x2247 x1653	4206 x2247 x1653	

Also available with 60 Hz power supply

EPS

AIR CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS

43-445 kW



EPS is the range of air-condensed liquid chillers and heat pumps with Scroll compressors. Three different versions (chiller and reversible heat pump) and the several available power output rates make these units **highly versatile and suited to a wide range of system set-ups**. The sizing and selection of individual components have focused **on containing energy consumption, aiming to optimise energy savings not just for individual chillers but for the entire system**. The unit is available with **three soundproofing set-ups**.

The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor dual circuit unit for higher redundancy systems.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

-  3 different soundproofing setups available: Standard, Low Noise and Super Low Noise
-  Optional EC fans
-  Electronic expansion valve
-  Easy accessibility thanks to the optimisation of the internal space
-  Available with variable flow pumping kit





Acoustic comfort

Three different soundproofing set-ups are available: the most suitable one will depend on the importance of noise containment in the overall plant layout. Adopted technical solutions include fan speed control, the use of anti-vibration devices on the refrigerating circuit, compartmentalisation of compressors and pumping kits in a box internally lined with soundproofing material.



All accessories on-board the machine

The special component layout, together with compact plate heat exchangers and Scroll compressors, allows users on the one hand to make **the most of large sized condensing sections** and on the other hand, to have sufficient free internal space available for fitting **a wide range of accessories and hydraulic options**. The hydraulic circuit may include a dual shut-off pump, flow switch, tank, expansion tank and safety valve.



Maximum efficiency at partial loads

The adoption of the multi-Scroll solution, the use of electronically controlled expansion valves, selection of plate heat exchangers, fan modulation and variable flow rate controlled with circulation pumps are all key features that make **the TPS range particularly efficient at partial loads**.



EPS		042	052	062	072	082	092	102	122	124	142	144	162	164
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.														
Cooling capacity	kW	43.2	54.4	63.1	70.9	78.5	94.4	105.6	122.4	125.3	133.7	141.4	160.5	156.2
Total absorbed power	kW	13.1	18.3	20.7	24.3	28.1	32.6	38.5	40.8	42.1	43.9	48.3	59.2	55.9
EER		3.31	2.98	3.05	2.91	2.79	2.9	2.74	3	2.98	3.04	2.93	2.71	2.79
SEER		4.98	4.9	4.63	4.58	4.52	4.35	4.39	4.54	4.53	4.71	4.61	4.34	4.54
SEPR		5.69	5.72	5.3	5.38	5.38	5.31	5.22	5.35	5.32	5.41	5.38	5.13	5.38
Weight	kg	525	525	540	570	650	730	730	1010	1050	1055	1070	1085	1220
Heating: User water values 40/45°C, 7°C outside air, 89% U.R.														
Thermal power	kW	50.7	57.1	64.2	72.6	80.8	96	108.7	124	126.9	142.4	151.8	175.8	169.6
Total absorbed power	kW	16.8	19.1	22.3	25.1	28.3	33.8	38.6	42.8	44	46.9	51.2	58.7	56.8
COP		3.02	2.99	2.87	2.89	2.86	2.85	2.82	2.9	2.89	3.03	2.97	3	2.99
SCOP		3.99	3.99	3.66	3.73	3.71	3.58	3.66	3.68	3.54	3.69	3.58	3.68	3.68
Weight	kg	545	545	585	585	675	755	760	1050	1090	1100	1120	1155	1270
Sound power [Standard]	dB(A)	72	73	79	80	82	85	86	86	82	86	83	87	85
Dimensions [LxHxD]	mm	2090x1740x1180					2640x1740x1180			x1740 x1180	x1740 x1180	x1740 x1180	x1740 x1180	x1740 x1180

EPS		174	192	194	212	214	242	244	272	274	294	324	364	394
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.														
Cooling capacity	kW	166.2	189.1	188.4	207.6	211.2	230.1	232	267.2	266	293.2	317.5	352	397.6
Total absorbed power	kW	54.2	65.4	65.4	73.9	77.5	82.8	85.2	90.3	89.5	104.9	120.5	136.9	153.8
EER		3.06	2.89	2.88	2.81	2.72	2.78	2.72	2.96	2.97	2.79	2.63	2.57	2.59
SEER		4.62	4.31	4.28	4.37	4.32	4.27	4.31	4.61	4.6	4.25	4.23	4.15	4.28
SEPR		5.43	5.18	5.32	5.13	5.19	5.32	5.4	5.42	5.51	5.29	5.1	5.21	5.22
Weight	kg	1440	1430	1460	1430	1470	1620	1620	1943	1943	1975	2010	2060	3090
Heating: User water values 40/45°C, 7°C outside air, 89% U.R.														
Thermal power	kW	172.8	199.6	199.3	220.4	226.2	243.7	247.4	275.7	278	311	342.1	395.8	444.7
Total absorbed power	kW	59	68.9	69.5	75.4	79.1	82.8	85.5	91.4	93	105.7	118.5	132.7	147.5
COP		2.93	2.9	2.87	2.92	2.86	2.94	2.89	3.02	2.99	2.94	2.89	2.98	3.01
SCOP		3.32	3.49	3.41	3.55	3.49	3.66	3.62	3.66	3.54	3.5	3.54	3.62	3.56
Weight	kg	1495	1485	1515	1485	1530	1690	1690	2015	2015	2050	2101	2191	3190
Sound power [Standard]	dB(A)	86	92	87	92	89	94	89	89	94	93	95	94	97
Dimensions [LxHxD]	mm	3540x1847x1653					3540x2247x1653			4200x2330x1653			4296 x2330 x1653	5350 x2330 x1653

Also available with 60 Hz power supply | Calculated with 20% glycol. | Features referred to the standard set-up. If not available, they refer to the Low Noise or Quiet set-up | Data declared with use of R410A refrigerant

NPE

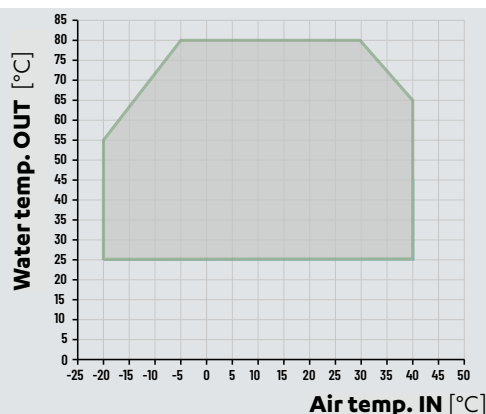
MULTIPURPOSE AIR CONDENSED HEAT PUMPS WITH SCROLL COMPRESSORS

60-162 kW



The NPE units are multipurpose air/water units available for use with R290 refrigerant with low environmental impact. The NPE range is designed to manage **the conditioning of industrial plants and thermal loads in technological applications where full 24/7 reliability in all working conditions is a requirement**. The NPE range uses latest-generation Scroll compressors, braze-welded plate exchangers optimised for use with medium pressure refrigerants (R290) and axial fans suitable for outdoor installation.

- Available in R290 or R454C
- 3 different soundproofing setups available: Standard, Low Noise and Super Low Noise
- Available versions: multi-purpose for 2-pipe system (M) and multi-purpose for 4-pipe system (P)
- High power density units in both chiller and heat pump modes
- Electronic expansion valve
- Easy accessibility thanks to the optimisation of the internal space
- EC Fans



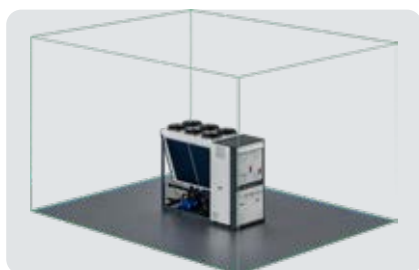
Production of hot water up to 80°C

The units of the range are capable of **producing water at 80°C** and operating at outside air temperatures as low as **-20°C**.



Plate heat exchangers

The NPE range uses braze-welded plate exchangers with asymmetrical channels, suitable for the use of high and medium pressure refrigerant gases. The configuration with asymmetrical channels allows **high heat exchange efficiencies to be reached while maintaining low pressure drops** on the water side - which results in **reduced pumping costs** at both full and partial load.



Safety first

Units loaded with **A3 (highly flammable) gas** must be installed away from drains, manholes, drainage channels and any other element that could act as a potential escape route for any leakage of said gases, **which must always be considered FLAMMABLE and heavier than air**. The minimum distance to be maintained with respect to these requirements is 2.5 metres. Within this safety zone, it is strictly forbidden to smoke, use open flames or carry out any work that may generate flames, arc discharges or sparks.

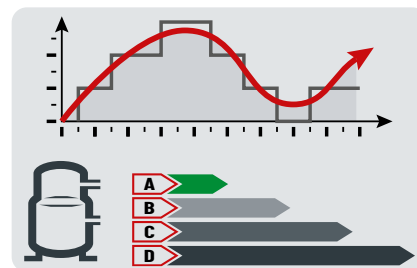


Smart defrosting

A factor that heavily weighs on the costs of managing the entire plant is finned coil defrosting during wintertime operation. The special management of the defrosting cycle of **NPE units minimises the time to completion and ensures that defrosting is only performed when strictly necessary, guaranteeing greater heating efficiency**. The presence of two completely independent thermodynamic circuits ensures **uninterrupted operation** also during the defrosting phase, **with practically no thermal discomfort for the user**.

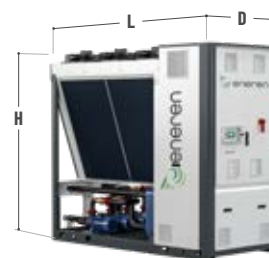
Redundancy and continuous operation in all weather conditions

The presence of two completely independent thermodynamic circuits ensures **continuous operation** even during the defrost phase, **eliminating any thermal discomfort for the user**.



Precise management of the delivered power

The integrated control software of the NPE range allows for the management of cooling and heating power output by adjusting the rotational speed of the **modulating BLDC compressors**.



NPE		061PS	081PS	111PS	131PS
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.					
Cooling capacity	kW	60.3	75	109.6	121.7
Total absorbed power	kW	20.2	24.8	38.7	44.1
EER		2.99	3.03	2.83	2.76
Cooling: Utility water temperature 12/7°C, Recovery water temperature 40/45°C					
Cooling capacity	kW	60.4	74.1	112.9	125.2
Thermal power	kW	77.5	96	144.6	162.3
Total absorbed power	kW	18.6	23.2	34.5	39.3
TER		7.43	7.35	7.46	7.31
COP Total		7.43	7.35	7.46	7.31
Heating: User water values 30/35°C, 7°C outside air, 89% U.R.					
Thermal power	kW	64.5	81	113.9	130.8
Total absorbed power	kW	16.3	20.6	29.7	34.2
COP		3.97	3.94	3.84	3.82
Sound power [Standard]	dB(A)	88	91	93	95
Sound power [Low noise]	dB(A)	81	85	86	89
Dimensions [LxHxD]	mm	2440x2425x1179		2763x2425x1179	

Also available with 60 Hz power supply | Data referring to R290 versions



The EPA units are multipurpose air/water units in energy class A for both cooling and heating, available for use with R410A refrigerant or, in the "A2L" version, with low environmental impact R454B refrigerant. The EPA range is designed to manage **the conditioning of industrial plants and thermal loads in technological applications where full 24/7 reliability in all working conditions is a requirement**. The EPA range uses latest-generation Scroll compressors, braze-welded plate exchangers optimised for use with high pressure refrigerants (R410A/R454B) and axial fans suitable for outdoor installation.

The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor and dual circuit unit, for a system with greater redundancy.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

-  3 different soundproofing setups available: Standard, Low Noise and Super Low Noise
-  Available versions: multi-purpose for 2-pipe system (M) and multi-purpose for 4-pipe system (P)
-  High power density units in both chiller and heat pump modes
-  Optional EC fans
-  Electronic expansion valve
-  Easy accessibility thanks to the optimisation of the internal space





Plate heat exchangers

The EPA range uses braze-welded plate exchangers with asymmetrical channels, suitable for the use of high and medium pressure refrigerant gases. The configuration with asymmetrical channels allows **high exchange efficiencies to be reached while maintaining pressure drops low on the water side - reducing pumping costs** at both full and partial load.



Maximised energy efficiency

The units of the EPA range fall within the **energy efficiency class A**, both in cooling and in heating mode. This is thanks to **a careful selection of internal components**, which also includes the adoption of **innovative high efficiency Scroll compressors with direct start, permanent magnet motor technology**. The high modulation range guaranteed by the multi-Scroll technology allows cooling/heating requirements to be met at any time, **minimising energy waste and increasing seasonal efficiency**. The high degree of partial load operation (**up to 20%** of the rated power), combined with water flow rate modulation (**up to 20%** of the nominal flow) allows **operating costs and system maintenance costs to be reduced**.



Smart defrosting

A factor that heavily weighs on the costs of managing the entire plant is finned coil defrosting during wintertime operation. The special management of the defrosting cycle of **EPA units minimises the time to completion and ensures that defrosting is only performed when strictly necessary, guaranteeing greater heating efficiency**. The presence of two completely independent thermodynamic circuits ensures **uninterrupted operation** also during the defrosting phase, **with practically no thermal discomfort for the user**.



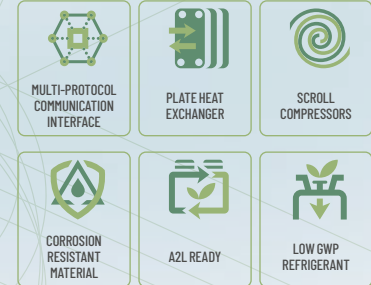
EPA		061PS	071PS	081PS	101PS	114PS	124PS	144PS	164PS	194PS	214PS	244PS	
Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.													
Cooling capacity	kW	61.2	75.3	88.3	102.4	118.2	127	149.6	162.5	187.7	222.6	250.4	
Total absorbed power	kW	16.9	21.4	25.6	29.7	33.8	35.9	43.3	47.2	55.9	71	80	
EER		3.62	3.53	3.44	3.45	3.5	3.54	3.46	3.44	3.36	3.14	3.13	
SEER		4.7	4.55	4.52	4.66	5.14	5.06	5.05	5.15	5.15	5	4.96	
SEPR		5.99	5.93	5.99	5.83	6.03	6.07	6.01	6.1	6.18	5.92	6.09	
Cooling: Utility water temperature 12/7°C, Recovery water temperature 40/45°C													
Cooling capacity	kW	59.1	74.5	89.2	101.2	116.9	124.2	150	162.5	191	227.2	258	
Thermal power	kW	73.9	93	111	126.9	146.5	155.2	186.8	203.1	238.5	286.3	324.7	
Total absorbed power	kW	15.6	19.5	23.1	27.2	31.5	32.8	39	43	50.6	62.9	71.1	
TER		8.54	8.58	8.68	8.38	8.37	8.51	8.64	8.5	8.49	8.16	8.2	
COP Totale		8.54	8.58	8.68	8.38	8.37	8.51	8.64	8.5	8.49	8.16	8.2	
Heating: User water values 40/45°C, 7°C outside air, 89% U.R.													
Thermal power	kW	61.5	75.5	87.2	102.5	123.9	130.4	149.9	163	186.9	227.6	265.1	
Total absorbed power	kW	17.5	21.1	24.8	29.2	33.8	36.7	42.1	46.3	53.2	64.8	75.3	
COP		3.51	3.57	3.51	3.51	3.67	3.55	3.56	3.52	3.51	3.51	3.52	
SCOP		4	4.27	4.19	4.33	4.26	4.16	4.19	4.22	4.37	4.41	4.51	
Sound power [Standard]	dB(A)	81	83	83	86	83	84	86	86	87	88	89	
Sound power [Low noise]	dB(A)	76	78	78	81	78	80	82	82	84	84	85	
Dimensions [LxHxD]	mm	2792x1735x1183			3540x1735x1183			3540x1846x1653			3540x2330x1653		4206x2330x1653

Also available with 60 Hz power supply

ENR

CHILLERS WITH REMOTE CONDENSER WITH SCROLL COMPRESSORS

43-433 kW



ENR is the Eneren range of liquid chillers with remote condenser and Scroll compressors. These units are available with different refrigerating set-ups (Efficiency Packs), numerous power ratings and two different noise emission set-ups, making them **particularly versatile for a number of system engineering applications**. Sizing, the choice of individual components and control of auxiliary units (circulation pumps, remote condenser fans) all aim to **reduce energy consumption and increase energy savings throughout the system**.

The configurations available for the refrigeration circuit are:

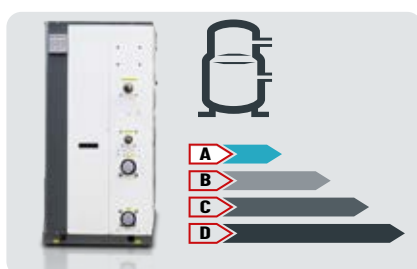
EFFICIENCY PACK 1: Dual compressor on dual circuit for high system redundancy. For units from 43 to 177 kW.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads. For units from 43 to 177 kW.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is also efficient with low loads. For units from 146 to 433 kW.

Sizes above 433 kW are always of the dual refrigerating circuit type with five or six Scroll compressors.

-  Refrigerant R410A: Available on request with R454B
-  Electronic expansion valve
-  Optional Vic-Taulic hydraulic couplings
-  Remote condenser fan management for air flow modulation
-  External pump control according to constant T or constant ΔT logic
-  Partial heat recovery (desuperheater)(optional)
-  Oil recovery kit for refrigeration lines up to 50 m long



Maximum efficiency at partial loads

The ENR range features a multi-Scroll solution also on single circuits, electronically controlled expansion valves and the option of managing the circulation pumps and remote condenser fans via onboard software: all these features help **achieve high standards of energy efficiency, particularly at partial loads**.



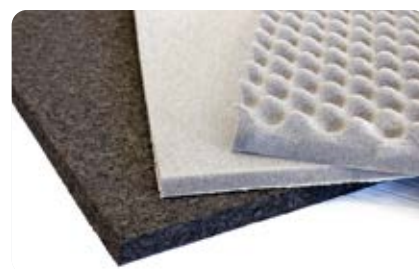
Reduced footprint

The carefully arranged component layout, together with compact plate heat exchangers and the Scroll compressors, gives the machine a **compact configuration and makes it adaptable to any installation area**. Sizes with **EFFICIENCY PACK 1 and 2** also have a width compatible with that of most commercially available doors, **making transport and installation easier**.



Efficiency and reliability in line with system requirements

The main strength of the ENR range is given by **its numerous configurations available for the refrigeration circuit**, which, depending on the size of the machine and system construction requirements (redundancy and/or efficiency at reduced load), can be available in the form of different **EFFICIENCY PACKS**. The management of the oil return through integrated software logic also helps **to increase the reliability of the compressors** - and consequently - of the unit.



Attention to detail and to low noise requirements

Scroll compressors, which are the main noise source in the unit, are fitted on rubber feet; these dampen vibration and therefore **attenuate the noise transmitted to the various system parts**. On request, the compressor enclosure can be lined with special sound absorbing material and the compressors can be enclosed in special insulating sheaths **to reduce airborne noise emission**.



ENR		041 CS	042 CS	051 CS	052 CS	061 CS	062 CS	071 CS	072 CS	081 CS	082 CS	091 CS	092 CS
User water values 12/7°C, condensing temperature 50°C													
Cooling capacity	kW	43.1	43.1	50.5	50.3	57.9	57.9	65.2	65.1	75.3	75.4	84.5	84.3
Total absorbed power	kW	13.2	13.2	15.5	15.5	17.5	17.5	19.5	19.5	22.4	22.4	25.2	25.2
EER		3.26	3.25	3.25	3.24	3.32	3.32	3.34	3.33	3.37	3.37	3.35	3.34
Weight	kg	372	362	432	422	442	432	452	442	472	462	512	492
Sound power [Standard]	dB(A)	76	76	78	78	78	78	79	79	79	79	81	81
Sound power [Low noise]	dB(A)	72	72	74	74	74	74	75	75	75	75	77	77
Dimensions [LxHxD]	mm	1174x1930x772											
ENR		111 CS	112 CS	131 CS	132 CS	141 CS	142 CS	144 CS	161 CS	162 CS	164 CS	181 CS	182 CS
User water values 12/7°C, condensing temperature 50°C													
Cooling capacity	kW	100.2	100.1	114.4	114.1	127.3	127.3	131.2	139.7	139.4	149.8	175.1	175.1
Total absorbed power	kW	29.8	29.8	34.6	34.6	37.8	37.8	39	41.2	41.2	44.8	53.1	53.1
EER		3.36	3.36	3.31	3.3	3.37	3.37	3.37	3.39	3.39	3.34	3.3	3.3
Weight	kg	563	553	573	563	633	618	723	673	653	743	713	693
Sound power [Standard]	dB(A)	84	84	85	85	85	85	82	85	85	82	90	90
Sound power [Low noise]	dB(A)	80	80	81	81	81	81	78	81	81	78	86	86
Dimensions [LxHxD]	mm	1644x1930x772						2374 x1990 x877	1644x1594x772		2374 x1854 x877	1644x1594x772	
ENR		184 CS	204 CS	214 CS	244 CS	284 CS	314 CS	344 CS	374 CS	424 CS	484 CS		
User water values 12/7°C, condensing temperature 50°C													
Cooling capacity	kW	169.8	185.3	199.2	228	249.6	272	303.1	338.8	384.4	433.2		
Total absorbed power	kW	50.4	55	59.7	68.8	75.5	82.2	94	105.7	118.9	132.1		
EER		3.37	3.37	3.33	3.31	3.31	3.31	3.23	3.21	3.23	3.28		
Weight	kg	853	873	923	983	1093	1253	1293	1333	1413	1520		
Sound power [Standard]	dB(A)	84	85	86	88	88	88	91	93	94	95		
Sound power [Low noise]	dB(A)	80	81	82	84	84	84	87	89	90	91		
Dimensions [LxHxD]	mm	2374x1854x877											

Also available with 60 Hz power supply

GEO THERMAL UNITS

LOW-ENTHALPY GEOTHERMAL ENERGY

ENEREN – HIGH-EFFICIENCY CLIMATE CONTROL SOLUTIONS

Eneren integrates a complete portfolio of low-enthalpy geothermal heat pumps within its product range for residential, commercial, and industrial HVAC systems, **using the constant underground temperature as a renewable energy source.**

Low-enthalpy geothermal technology uses the thermal energy naturally stored in the shallow layers of the ground to provide heating and cooling for buildings **with significantly higher energy performance compared to conventional air-to-air or air-to-water systems**, thanks to a very high Coefficient of Performance (COP).

Dedicated Product Range

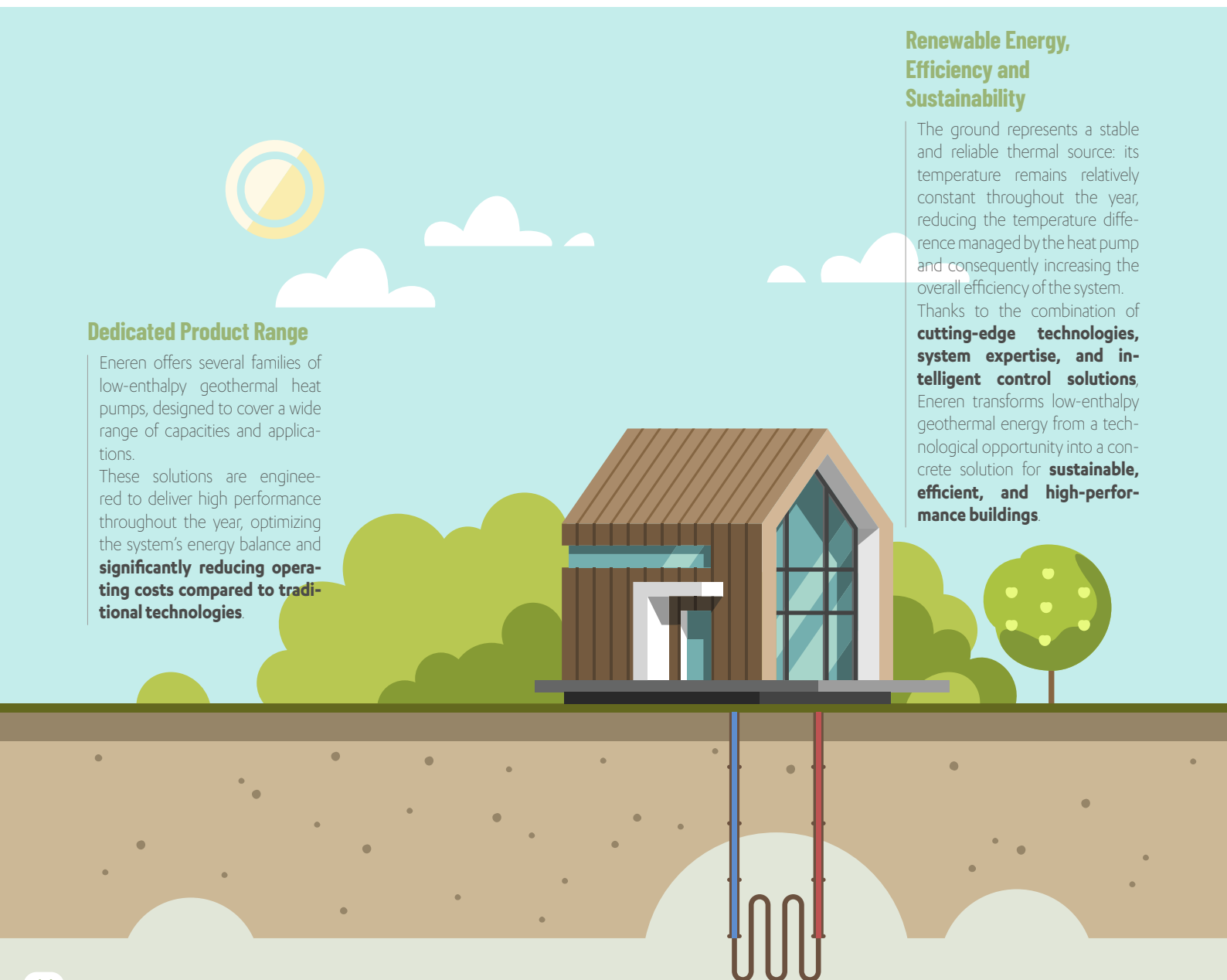
Eneren offers several families of low-enthalpy geothermal heat pumps, designed to cover a wide range of capacities and applications.

These solutions are engineered to deliver high performance throughout the year, optimizing the system's energy balance and **significantly reducing operating costs compared to traditional technologies.**

Renewable Energy, Efficiency and Sustainability

The ground represents a stable and reliable thermal source: its temperature remains relatively constant throughout the year, reducing the temperature difference managed by the heat pump and consequently increasing the overall efficiency of the system.

Thanks to the combination of **cutting-edge technologies, system expertise, and intelligent control solutions**, Eneren transforms low-enthalpy geothermal energy from a technological opportunity into a concrete solution for **sustainable, efficient, and high-performance buildings.**



Technical Expertise and Eneren Value

Eneren designs and delivers complete geothermal systems based on water-to-water heat pumps featuring advanced compressors and sophisticated electronic controls, capable of:

-  using **underground thermal energy** for heating, cooling, and, where required, domestic hot water production through a single integrated system;
-  ensuring **outstanding seasonal energy efficiency** thanks to inverter compressors and advanced modulation technologies;
-  adapting to **different system configurations** (geothermal boreholes, groundwater applications, multifunction systems), guaranteeing design flexibility and easy integration;
-  operating with **lower electrical consumption and a reduced environmental footprint** compared to traditional systems, supporting the use of renewable energy sources and overall building sustainability;
-  offering **integrated smart regulation and control** functions to maximize operational efficiency in every season and under varying thermal loads.

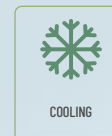
GEOTHERMAL UNITS

GSP/ENX



**MULTIPURPOSE HEAT PUMP
WITH DHW PRODUCTION
IN TOTAL RECOVERY**

6 - 50 kW



GSP/ENX is a versatile geothermal compact heat pump, highly energy-efficient thanks to the use of a BLDC inverter digital scroll compressor. It is able to fully meet heating, **cooling and domestic hot water production** requirements.

Available in three versions:

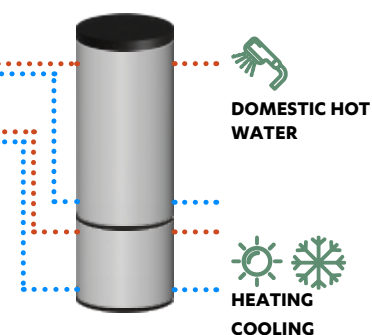
- **M** for 2-pipe systems with domestic hot water, in **total recovery mode**
- **P** for 4-pipe systems, to also **simultaneously meet heating and cooling requirements**, in total recovery mode.
- **H** for 2-pipe systems with domestic hot water

Efficiency and reliability

The GSP/ENX heat pump is both reliable and efficient. **Suitable for both geothermal probe and groundwater systems**, it is equipped with BLDC digital scroll inverter compressors and electronic pumps that make it ideally suited also to systems that require extensive seasonal modulation.



**GEOTHERMAL
SOURCE**





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HXE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

Total heat recovery

Thanks to the **dedicated total heat recovery refrigeration circuit** with parallel condenser, GSP/ENX meets the heating and DHW needs of residential commercial and industrial systems, **without having to reverse the refrigeration cycle** whenever a heating and cooling request is received.

Natural-Cooling / Natural-Heating

Wherever the source has temperature levels that allow its use without a compressor, **GSP/ENX are able to independently manage the production of chilled or heated water**, thus obtaining very high energy efficiency.

Modulating flow control

Electronic pumps and modulating valves, installed inside the unit, are essentially important to ensure flow rate control at constant temperature or constant delta T. Thanks to their control microprocessor, they are also able to adapt to every system need.

GSP/ENX		006		009		012		015		017		020		030		040	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
COOLING B35 W18																	
Cooling Capacity	kW	1,1	7,5	1,7	11,3	2,1	14,0	2,8	18,5	3,2	21,2	4,9	32,4	6,1	40,5	8,4	56,2
Power Input with built-in pumps	kW	0,2	1,3	0,3	2,1	0,4	2,5	0,6	3,3	0,7	4,0	0,9	5,7	1,1	7,0	1,4	10,7
EER	-	4,6	5,7	5	5,4	5	5,6	4,3	5,6	4,5	5,3	5,3	5,7	5,4	5,7	6	5,3
COOLING B35 W7																	
Cooling Capacity	kW	0,8	5,2	1,2	7,8	1,4	9,6	1,9	12,8	2,2	14,6	3,3	21,9	4,2	27,7	5,8	38,9
Power Input with built-in pumps	kW	0,3	1,4	0,4	2,2	0,5	2,5	0,7	3,3	0,7	3,9	1,0	5,6	1,3	7,3	1,7	10,6
EER	-	2,9	3,8	3,2	3,6	3,2	3,8	2,9	3,9	3,1	3,8	3,3	3,9	3,2	3,8	3,5	3,7
HEATING B0/-3 W35																	
Heating Capacity	kW	0,8	5,5	1,2	8,2	1,5	10	2	13	2,2	14,9	3,4	22,8	4,3	28,7	5,9	39,4
Power Input with built-in pumps	kW	0,2	1,2	0,3	2,0	0,4	2,3	0,6	2,9	0,6	3,5	0,9	5,0	1,1	6,6	1,5	9,7
COP	-	3,5	4,4	3,8	4,2	3,8	4,4	3,3	4,4	3,5	4,3	4	4,5	3,8	4,3	4	4,1
HEATING B10/7 W35																	
Heating Capacity	kW	1,1	7,3	1,6	10,8	2,0	13,3	2,6	17,3	3,0	19,8	4,6	30,8	5,7	38,1	7,9	52,4
Power Input with built-in pumps	kW	0,2	1,2	0,3	2,0	0,4	2,3	0,6	3,0	0,6	3,6	0,8	5,2	1,0	6,5	1,3	9,9
COP	-	4,8	5,90	5,30	5,40	5,30	5,70	4,4	5,70	4,6	5,50	5,6	5,90	5,60	5,80	5,90	5,30
DOMESTIC HOT WATER B10/7 W55																	
Heating Capacity	kW	1,0	6,8	1,5	10,1	1,9	12,4	2,4	16,3	2,8	18,6	4,2	27,9	5,4	35,8	7,4	49,1
Power Input with built-in pumps	kW	0,4	1,9	0,5	2,9	0,6	3,5	0,9	4,6	1	5,3	1,5	7,6	1,9	10,1	2,5	14,2
COP	-	2,60	3,5	2,9	3,5	2,9	3,6	2,60	3,6	2,70	3,5	2,80	3,7	2,8	3,5	3	3,5
COOLING + DOMESTIC HOT WATER W12/7 W50/55																	
Cooling Capacity	kW	0,7	4,4	1,0	6,6	1,2	8,1	1,6	10,8	1,8	12,3	2,6	17,6	3,5	23,2	4,8	32,1
Heating Capacity	kW	1	6,1	1,5	9,2	1,8	11,3	2,5	14,9	2,8	17,1	4,2	24,7	5,4	32,5	7,4	45,2
Power Input with built-in pumps	kW	0,4	1,9	0,6	2,9	0,7	3,4	1,0	4,5	1,0	5,2	1,7	7,7	2,1	10,1	2,8	14,2
Total COP	-	4,2	5,5	4,5	5,5	4,5	5,6	4,3	5,7	4,5	5,6	4,1	5,5	4,2	5,5	4,4	5,5
EFFICIENCY																	
SEER	-	5,38		5,52		5,24		5,18		5,25		5,9		5,43		5,41	
SCOP (low temperature)		4,58		4,65		4,84		4,66		4,71		5,07		4,86		4,79	
SCOP (medium temperature)	-	3,5		3,64		3,7		3,65		3,68		3,67		3,59		3,62	
ERP Efficiency Class (low temperature)	-	A+++															
DHW Energy Class / Declared Profile	dB(A)	A/XL		A+/XL		A/XXL		A/XL		A/XL		A/XL		A+/XL		A/XXL	
Sound Pressure Level Lp@10m EN12102	dB(A)	28		33		35		33		34		37		36		46	
COMPRESSOR																	
Compressor Type	-	BLDC Inverter															
Power Supply	-	230/1+N/50								400 / 3+N / 50							
Total FLA	A	22		25		32		22		22		22		25		32	
DIMENSIONS and WEIGHT																	
Length x Width x Height	mm	804x607x1462											1254x757x1462				
Weight	kg	360		36		390		420		420		520		550		580	

GEOTHERMAL UNITS

NWW



MULTIFUNCTIONAL HEAT PUMP WITH DHW PRODUCTION AND INTEGRATED HYDRONIC MODULE

6 - 17 kW

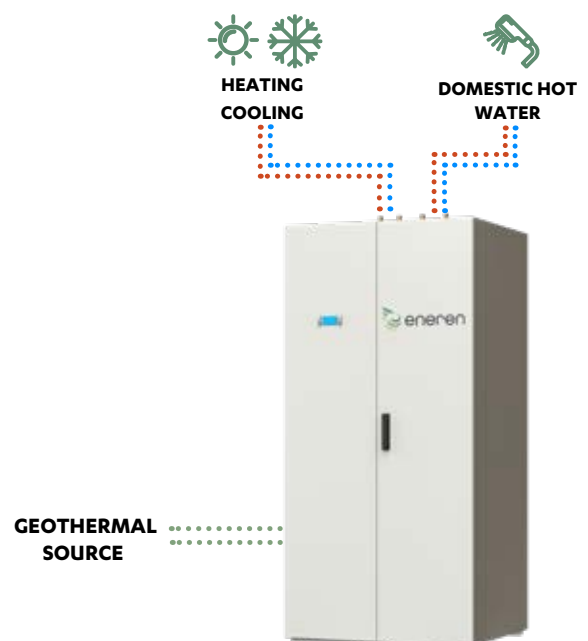
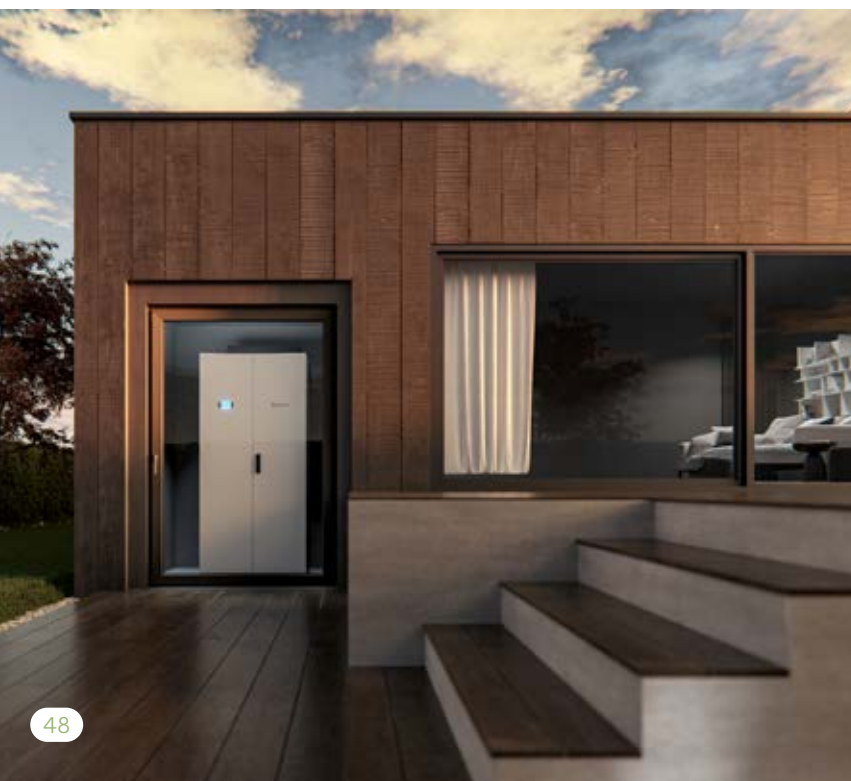


NWW is an **all-in-one geothermal heat pump**, equipped with a unique, compact multifunctional hydronic module. It is versatile and highly energy-efficient thanks to the use of a BLDC inverter digital scroll compressor. It fully meets heating, cooling and domestic hot water production requirements. A compact, **complete and reliable unit to serve a geothermal plant** ensuring the highest levels of efficiency and sustainability.

The hydronic module is equipped with a **200 lt puffer for sanitary technical water**, an **instant producer of sanitary water through a 25 lt/min** brazed plate exchanger, **expansion vessels, safety valves, hydraulic filters** and electronic pumps for the plumbing system, sanitary water and source circuits.

Total heat recovery

By using a dedicated heat exchanger, **NWW recovers 100% of the heat generated during the cooling phase**. The recovered heat can be reused to produce domestic hot water or to supply 2-pipe systems. This solution increases the overall efficiency of the unit and prevents temperature fluctuations in systems with low thermal inertia.





En-power Temperature Control and Supervision

En-power is the advanced temperature control and supervision system for HVAC installations, enabling **intelligent control and remote management** via a dedicated app.



Smart Grid Ready

Smart Grid Ready for self-consumption management, with integrated My Economy device. HXE units are smart grid ready, meaning **they can automatically use surplus energy generated by the photovoltaic system**.

It is also possible to reduce or inhibit absorbed power during periods of electricity draw from the grid by adding an extra smart meter.

All-in-one hydronic module

The all-in-one hydronic module is a complete thermal power plant, which can also be installed in confined spaces and which integrates perfectly with the geothermal system, to achieve **the highest levels of efficiency and energy savings**.

Efficiency and reliability

The NWW heat pump is both reliable and efficient. **Suitable for both geothermal probe and groundwater systems**, it is equipped with BLDC digital scroll inverter compressors and electronic pumps that make it ideally suited also to systems that require extensive seasonal modulation.

Natural-Cooling / Natural-Heating

Wherever the source has temperature levels that allow its use without a compressor, **NWW are able to independently manage the production of chilled or heated water**, thus obtaining very high energy efficiency.

NWW		006		009		012		017	
Rated capacity data according to EN 14511		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
COOLING B35 W18									
Cooling Capacity	kW	1,1	7,5	1,7	11,3	2,4	15,7	3,2	21,2
Power Input with built-in pumps	kW	0,2	1,3	0,3	2,1	0,5	2,9	0,7	3,9
EER	-	4,6	5,7	5	5,4	5,1	5,4	4,6	5,5
COOLING B35 W7									
Cooling Capacity	kW	0,8	5,2	1,2	7,9	1,6	10,9	2,2	14,7
Power Input with built-in pumps	kW	0,3	1,4	0,4	2,1	0,5	2,8	0,7	3,7
EER	-	2,9	3,8	3,2	3,7	3,3	3,8	3,1	3,9
HEATING B0/-3 W35									
Heating Capacity	kW	0,8	5,5	1,2	8,2	1,7	11,2	2,3	15,2
Power Input with built-in pumps	kW	0,2	1,3	0,3	2,0	0,4	2,6	0,6	3,4
COP	-	3,4	4,4	3,8	4,2	3,8	4,3	3,5	4,4
HEATING B10/7 W35									
Heating Capacity	kW	1,1	7,2	1,6	10,8	2,2	14,9	3,0	20,2
Power Input with built-in pumps	kW	0,2	1,2	0,3	2,0	0,4	2,7	0,6	3,6
COP	-	4,8	5,90	5,20	5,40	5,30	5,50	4,8	5,70
DOMESTIC HOT WATER B10/7 W55									
Heating Capacity	kW	1,0	6,8	1,5	10,1	2,1	13,9	2,8	18,8
Power Input with built-in pumps	kW	0,4	1,9	0,5	2,9	0,7	3,9	1	5,2
COP	-	2,60	3,5	2,8	3,5	2,9	3,5	2,80	3,6
EFFICIENCY									
SEER	-	5,11		5,39		5,23		5,35	
SCOP (low temperature)	-	6,44		6,32		6,52		6,36	
SCOP (medium temperature)	-	4,69		4,71		4,87		4,85	
ERP Efficiency Class (low temperature)	-	A+++							
DHW Energy Class / Declared Profile	-	A/XL		A+/XL		A/XXL		A/XL	
Sound Pressure Level Lp @10m EN12102	dB(A)	27		32		35		35	
COMPRESSOR									
Compressor Type	-	BLDC Inverter							
Power Supply	-	230 / 1+N / 50						400/3+N/50	
Total FLA	A	14		14		19		16	
DIMENSIONS and WEIGHT									
Length x Width x Height	mm	900x740x1875							
Weight	kg	300		310		310		330	

GEOTHERMAL UNITS

CDH



MULTIFUNCTIONAL HEAT PUMP FOR HIGH TEMPERATURE WATER WITH CO₂ REFRIGERANT

10 - 100 kW



CDH is a **compact geothermal heat pump** which uses the natural refrigerant R744 – commonly known as CO₂. It is able to meet any **heating, cooling and domestic hot water production requirements**.

Its **wide hydraulic configurability** allows it to be equipped with electronic pumps, internal modulating 2- or 3-way valves and external auxiliary devices to be controlled autonomously.

Modulating flow control

Electronic pumps and modulating valves, installed inside the unit, are essentially important to ensure flow rate control at wide delta Ts for the maximum required efficiency.

Stainless steel refrigeration circuit

The refrigeration circuit is built with **stainless steel pipes** and the **plate heat exchangers are armored** and specifically designed to withstand pressure values up to 130 bar. These specifications are essentially important to **guarantee machine prolonged life and resistance** to high operating pressures deriving from the use of CO₂ refrigerant. pressioni di esercizio derivanti dall'utilizzo del refrigerante CO₂.

Efficiency and sustainability

The CDH heat pump features **technological innovations aimed at environmental and energy sustainability**. Thanks to the use of CO₂, a **completely natural refrigerant**, it can produce hot water even at temperatures above 80°C, reaching a coefficient of performance (COP) greater than 4 – the highest on the scale.

Patented adjustment

Thanks to the **innovative and patented regulation system**, CDH controls the operating pressure of the gas cooler, in order to **maximise its efficiency**, in any produced water temperature and operating conditions.

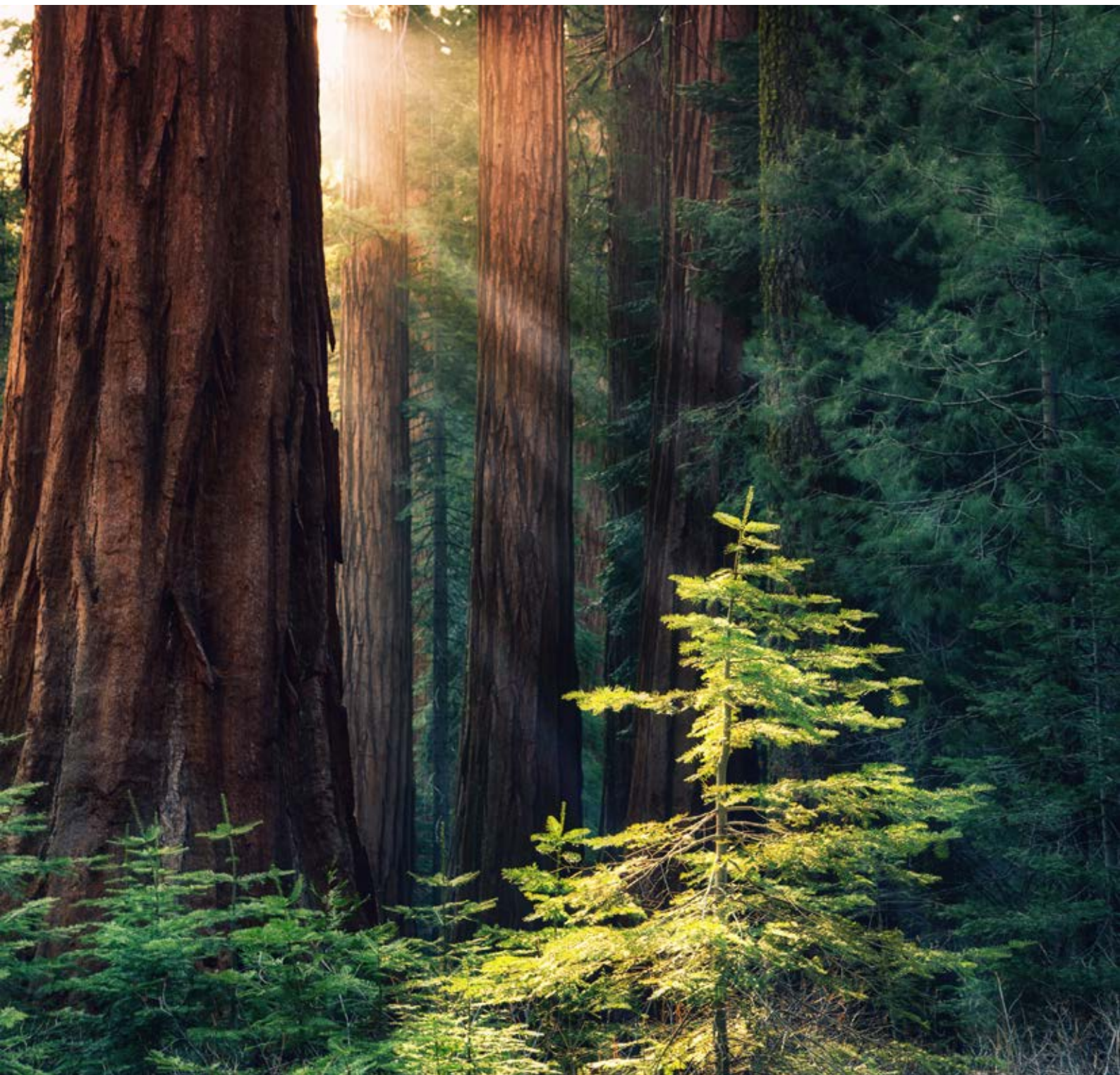
En-power Temperature Control and Supervision

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GEOTHERMAL SOURCE

VERY HIGH TEMPERATURE HOT WATER



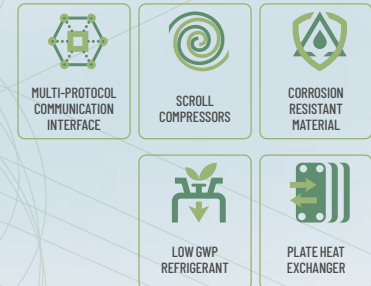


CDH		015	030	055	080
10/70°C@0/-3°C (30% Ethylene Glycol)					
Heating Capacity	kW	15,1	29,8	55,8	81,5
Power Input	kW	4,0	8,0	14,1	20,7
COP	-	3,83	3,75	3,96	3,94
EFFICIENCY					
Sound Pressure Level Lp @10m EN12102	dB(A)	41	39	48	50
Sound Pressure Level Lp (Low Noise) @10m EN12102	dB(A)	39	37	46	48
COMPRESSOR					
Compressor Type	-	Inverter Reciprocating Compressors			
Power Supply	-	400 / 3+N / 50			
DIMENSIONS					
Length x Width x Height	mm	804x607x1462	1170x770x1594		

ENB

WATER CONDENSED CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS

40-838 kW



ENB is Eneren range of water-condensed chillers and heat pumps with multi-scroll compressors. The many refrigerating configuration options, together with specific construction choices, make the ample choice of ENB units **suitable for a wide range of plant engineering requirements: redundancy, efficiency at partial loads, compactness to make the most of limited space in technical enclosures, low noise levels, auxiliary unit control, and easy installation.** The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor on dual circuit for high system redundancy.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 3: 3 compressors on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: 4 compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

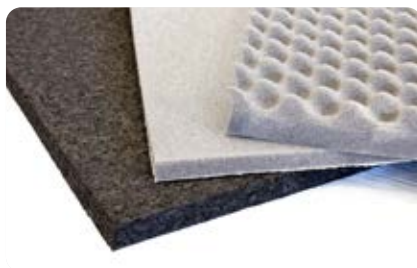
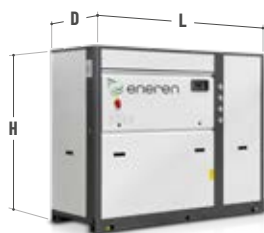
Two refrigerating circuits with five or six Scroll compressors for capacities above 560 kW.

- Available with R454B or R410A refrigerant
- Electronic expansion valve
- Can be used with Polymorph hydronic modules
- Versions: cooling-only chiller, reversible heat pump, and heating-only heat pump
- Easy connection with Vic-Taulic type couplings
- Partial heat recovery (desuperheater)(optional)
- Possibility for the software to natively manage the application of two 3-way valves to use the Natural-Cooling option offered by the geothermal source



Maximum efficiency at partial loads

The ENB range adopts a multi-Scroll solution also on single circuits, electronically controlled expansion valves, plate heat exchangers and the option to control the (external) circulation pumps **via dedicated software**: all these characteristics allow **high energy efficiency to be achieved at partial loads**.



Attention to detail and low noise operation

Scroll compressors, which are the main noise source in the unit, are fitted on rubber feet; these **dampen vibration and therefore attenuate the noise transmitted to the various system parts**. On request, the compressor compartment can be lined with special sound absorbing material and the compressors encased in special insulating hoods **to reduce airborne noise emissions**.



More space in the heating unit

The adoption of compact plate heat exchangers facing the unit right side panel **maximise the use of the available internal space thanks to reduced unit footprint**.



Efficiency and reliability in line with system requirements

The main strength of the ENB range lies in the numerous available configurations for the refrigeration circuit, depending on the unit size and the specific system requirements (redundancy and/or efficiency at partial load).

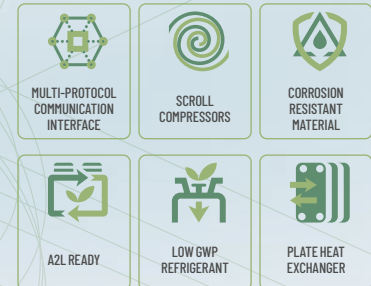
ENB		041H	042H	051H	052H	061H	062H	071H	072H	081H	082H	091H	092H	111H	112H	131H	132H	141H	142H	144H	161H
User water values 12/7°C, 40/45°C source water side																					
Cooling capacity	kW	39.8	40	45.8	46	53.3	53.5	59.5	59.8	69.7	69.7	77.1	77.4	92.7	93.1	104.8	104.9	117.7	118	121	128.9
Total absorbed power	kW	14.2	14.2	16.8	16.8	18.7	18.7	21	21.1	23.8	23.9	27.3	27.3	31.8	31.8	37.3	37.3	40.5	40.5	41.7	44.1
EER		2.81	2.82	2.72	2.73	2.86	2.86	2.83	2.83	2.92	2.92	2.83	2.84	2.91	2.93	2.81	2.81	2.9	2.91	2.9	2.92
User water values 40/45°C, 12/7°C source water side																					
Thermal power	kW	53.5	53.7	62.1	62.3	71.4	71.6	79.9	80.1	92.8	92.8	103.4	103.8	123.5	123.9	140.7	140.9	156.8	157	161.2	171.5
Total absorbed power	kW	14.2	14.2	16.8	16.9	18.7	18.7	21.1	21.1	23.9	23.9	27.3	27.3	31.8	31.8	37.3	37.4	40.5	40.5	41.7	44.2
COP		3.78	3.79	3.69	3.69	3.82	3.83	3.79	3.8	3.89	3.89	3.79	3.8	3.88	3.89	3.77	3.77	3.87	3.88	3.86	3.88
SCOP		5.35	5.82	5.17	5.65	5.42	5.9	5.31	5.79	5.53	5.99	5.4	5.88	5.48	5.82	5.36	5.82	5.47	5.91	6.11	5.53
Sound power [Standard]	dB(A)	76	76	78	78	78	78	79	79	79	79	81	81	83	83	85	85	85	85	82	85
Sound power [Low noise]	dB(A)	72	72	74	74	74	74	75	75	75	75	77	77	79	79	81	81	81	81	78	81
Dimensions [LxHxD]	mm	1174x1930x772												1644x1930x772						2374x1990x877	1644x1930x772
Frame		F1												F2						F3	F2
ENB		162H	164H	181H	182H	184H	204H	214H	243H	244H	283H	284H	314H	344H	374H	424H	484H	535H	576H	636H	706H
User water values 12/7°C, 40/45°C source water side																					
Cooling capacity	kW	129	137.5	164	164.3	158.4	170.5	186.4	203.1	224	248.4	240.2	259.9	294.2	328.9	376.3	423.5	471.7	523.6	552.6	626.7
Total absorbed power	kW	44.1	48.4	56.3	56.4	53.5	58.9	63.5	64.7	71.7	83.9	79.7	87.6	100	112.3	125.9	139.8	159.1	175.5	190.2	211.5
EER		2.92	2.84	2.91	2.91	2.96	2.89	2.94	3.14	3.12	2.96	3.01	2.97	2.94	2.93	2.99	3.03	2.96	2.98	2.91	2.96
User water values 40/45°C, 12/7°C source water side																					
Thermal power	kW	171.5	184.1	218.2	218.6	210.1	227.3	247.6	265.4	293.4	329.4	317.3	344.3	390.6	437	497.5	558	624.3	691.8	734.6	838.3
Total absorbed power	kW	44.2	48.4	56.3	56.3	53.6	59	63.5	64.7	71.7	83.9	79.8	87.6	100	112.3	126	139.8	159.2	175.6	190.3	216.5
COP		3.88	3.8	3.88	3.88	3.92	3.85	3.9	4.1	4.09	3.93	3.98	3.93	3.9	3.89	3.95	3.99	3.92	3.94	3.86	3.87
SCOP		5.98	6.09	5.43	5.84	6.26	6.1	6.11	6.4	6.39	6.1	6.37	6.33	6.08	6.12	6.17	6.24	6.21	3.94	3.86	3.87
Sound power [Standard]	dB(A)	85	82	90	90	84	85	86	87	88	92	88	88	91	93	94	95	91	91	90	93
Sound power [Low noise]	dB(A)	81	78	86	86	80	81	82	83	84	88	84	84	87	89	90	91	87	87	86	89
Dimensions [LxHxD]	mm	1644x1930x772	2374x1990x877	1644x1930x772	2374x1990x877														3820x2040x1085		
Frame		F2	F3	F2	F3														F4		

Performance figures refer to units with R410A refrigerant. Data subject to change without notice.

ENP

MULTIPURPOSE WATER-CONDENSED HEAT PUMPS WITH SCROLL COMPRESSORS

42-549 kW



ENP units are multi-purpose water-cooled heat pumps with Scroll compressors, designed for both tertiary and industrial uses. They guarantee **extensive configurability, in terms of both accessories and refrigeration circuit**. All sizes of the ENP series can be coupled to both 2 and 4-pipe systems. In the former case production is guaranteed on the hot or cold water primary system side with simultaneous production of hot water on the total recovery side; in the latter case the simultaneous production of hot and cold water is guaranteed for heating and cooling. The numerous cooling configurations available, which offer **single-circuit** and **two-circuit solutions with compressors in a tandem arrangement**, ensure **maximum efficiency even at partial loads and optimised redundancy**. The ENP range is thus designed to meet any requirement efficiently.

Operation modes with 2-pipe system: cooling mode, heating mode, domestic water mode and cooling + domestic water.

Operation modes with 4-pipe system: cooling mode, heating mode and cooling + heating.

The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor and dual circuit unit, for a system with greater redundancy.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

- Refrigerant R410A: Available on request with R454B
- Electronic expansion valve
- Vic-Taulic-type hydraulic connections (optional)
- Available versions: multi-purpose for 2-pipe system (M) and multi-purpose for 4-pipe system (P)

More space in the heating unit

The adoption of compact plate heat exchangers facing the unit right side panel **maximise the use of the available internal space thanks to reduced unit footprint.**





Maximum efficiency at partial loads

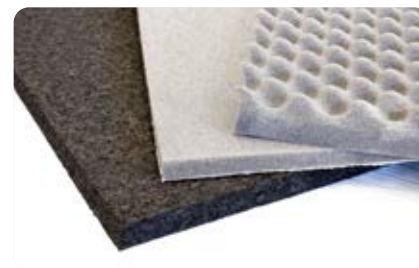
Meticulous selection of components allows **high efficiency to be obtained at partial loads** thanks to the use of Scroll compressors and the use of electronically controlled electric expansion valves (one per circuit), **optimised to track refrigerant load trends in all conditions of use**. The plate heat exchanger also ensures low water/refrigerant approaches during operation, **all to the advantage of heat exchange efficiency**.



Excellent configurability of the refrigeration section

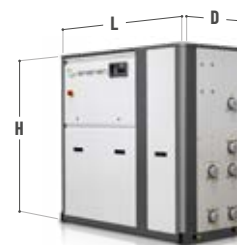
One of the main strengths of the ENP range is the excellent configurability of the refrigeration circuit structure, which depending on the required size and special requirements can consist of:

- **a dual compressor (tandem) on a single circuit** for greater efficiency at partial loads;
- **four compressors (dual tandem) on dual circuit**, for a redundant system that is also efficient with low loads.



Attention to detail and low noise operation

The Scroll compressors, which are the main source of noise from the machine, can be mounted on a rubber support that **dampens vibrations**, wrapped in special insulating sheaths and placed in a dedicated compartment lined with sound-absorbing material. The machine noise emission and vibrations are thus **considerably reduced at all operating points**.



ENP		042P	052P	062P	072P	082P	092P	112P	132P	142P	144P	162P
Cooling: Utility water temperature 12/7°C, Recovery water temperature 40/45°C												
Cooling capacity	kW	42.3	49	56.7	63.5	73.9	82.4	98.7	111.6	125.2	128.2	137
Thermal power	kW	54.8	63.8	73.2	82	94.8	106.3	126.6	144.1	160.5	164.7	175.4
Total absorbed power	kW	13.2	15.7	17.6	19.7	22.3	25.5	29.8	34.8	37.8	39.1	41.2
TER		7.33	7.16	7.38	7.38	7.56	7.4	7.57	7.34	7.55	7.5	7.58
COP Total		7.33	7.16	7.38	7.38	7.56	7.4	7.57	7.34	7.55	7.5	7.58
User water values 12/7°C, 40/45°C source water side												
Cooling capacity	kW	42.3	49	56.7	63.5	73.9	82.4	98.7	111.6	125.2	128.2	137
Total absorbed power	kW	13.2	15.7	17.5	19.7	22.3	25.5	29.7	34.8	37.8	39.1	41.2
EER		3.2	3.12	3.24	3.22	3.31	3.24	3.32	3.21	3.31	3.28	3.33
User water values 12/7°C, 15/10°C source water side												
Thermal power	kW	59.6	69.4	79.5	89.1	103.2	115.3	137.4	156.8	174.3	179.4	190.5
Total absorbed power	kW	13.4	16	17.7	20.1	22.6	25.7	30.1	35.3	38.3	39.6	41.8
COP		4.46	4.34	4.5	4.44	4.57	4.48	4.56	4.44	4.56	4.54	4.56
SCOP		4.59	4.52	4.67	4.65	4.77	4.71	4.66	4.69	4.75	4.91	4.81
Sound power [Standard]	dB(A)	76	78	78	79	79	81	83	85	85	82	85
Sound power [Low noise]	dB(A)	72	74	74	75	75	77	79	81	81	78	81
Dimensions [LxHxD]	mm	1174x1930x772						1644x1930x772			2374x1990x877	

ENP		164P	182P	184P	204P	214P	244P	284P	314P	344P	374P	424P
Cooling: Utility water temperature 12/7°C, Recovery water temperature 40/45°C												
Cooling capacity	kW	146.1	174	167.9	181.2	197.8	234	255.5	277	313.4	350.3	399.2
Thermal power	kW	188.2	223.3	214.6	232.4	253	297	324.9	352.8	400.1	447.7	506.1
Total absorbed power	kW	45.1	52.8	50	55	59.3	67.1	74.1	81.3	93	104.5	114.9
TER		7.42	7.52	7.65	7.51	7.6	7.91	7.83	7.75	7.67	7.63	7.88
COP Total		7.42	7.52	7.65	7.51	7.6	7.91	7.83	7.75	7.67	7.63	7.88
User water values 12/7°C, 40/45°C source water side												
Cooling capacity	kW	146.1	174	167.9	181.2	197.8	234	255.5	277	313.4	350.3	399.2
Total absorbed power	kW	45.1	52.8	50.1	55	59.3	67.1	74.1	81.2	93	104.5	114.9
EER		3.24	3.3	3.35	3.29	3.33	3.49	3.45	3.41	3.37	3.35	3.48
User water values 12/7°C, 15/10°C source water side												
Thermal power	kW	204.4	242.4	233.7	252.8	274.7	322.2	352.2	382.4	433.7	485	549.2
Total absorbed power	kW	45.5	53.6	50.4	55.6	60	67.7	74.8	82	94	106	115.9
COP		4.49	4.52	4.64	4.55	4.58	4.76	4.71	4.66	4.61	4.58	4.74
SCOP		4.89	4.75	5.01	4.89	4.9	5.05	5.1	5.08	4.94	4.97	5.14
Sound power [Standard]	dB(A)	82	90	84	85	86	88	88	88	91	93	89
Sound power [Low noise]	dB(A)	78	86	80	81	82	84	84	84	87	89	85
Dimensions [LxHxD]	mm	2374x1990x877						3130x1990x877				

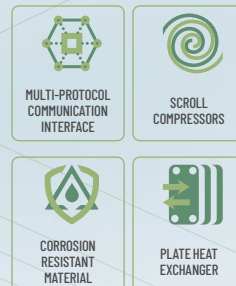
Also available with 60 Hz power supply

HIGH TEMPERATURE WATER/WATER UNITS

EKW

WATER/WATER HEAT PUMPS FOR HIGH EVAPORATION AND CONDENSATION TEMPERATURES

38-590 kW



Eneren's range of EKW Water/Water heat pumps is designed for all applications where the cold source is at medium temperatures and at the same time, very hot water is required at the condenser - up to 80°C. This particular feature makes EKW units the **ideal solution in the event of medium heat** (up to 45°C) waste heat, which can be used to produce water at higher temperatures in both residential and industrial applications, e.g. district heating systems. All this while **ensuring partial load efficiency, redundancy, compact footprint in utility rooms, low noise levels, auxiliary system management and easy installation.**

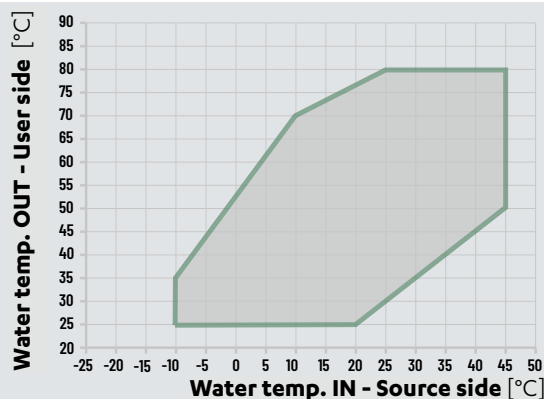
The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor and dual circuit unit, for a system with greater redundancy.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

- 🔧 Refrigerant R134a or R513A
- 🔧 Electronic expansion valve
- 🔧 Vic-Taulic-type hydraulic connections (optional)
- 🔧 Optional integrated energy meter via Modbus, for metering the energy absorbed by the machine
- 🔧 External pump control according to constant T or constant ΔT logic



Optimised units for high temperature water production (80°C)

The EKW range units can produce water **up to 80°C** even when associated with a source of medium-temperature water (up to 45°C). This is thanks to **an accurate sizing of the heat exchangers and to the use of Scroll compressors** specially developed for high evaporation and condensation temperatures.



Efficiency and reliability in line with system requirements

The available refrigerating circuit configurations have been designed to ensure, also simultaneously, **redundancy and efficiency at partial loads**. More specifically, the units - depending on the size of the machine and on specific plant engineering requirements - consist of two compressors on two circuits **for high system redundancy** or four compressors (double tandem) on two circuits for a system that is **simultaneously redundant and efficient at partial loads**.



Attention to detail and low noise operation

Scroll compressors, which are the main noise source in the unit, are fitted on rubber feet; **these dampen vibration and therefore attenuate the noise transmitted to the various system parts**. On request, the compressor compartment can be lined with special sound absorbing material and the compressors encased in special insulating hoods **to reduce airborne noise emissions**.



Maximum efficiency at partial loads

The EKW range adopts a multi-Scroll solution also on single circuits, electronically controlled expansion valves, plate heat exchangers and the option to control the (external) circulation pumps **via dedicated software**: all these characteristics allow **high energy efficiency to be achieved at partial loads**.

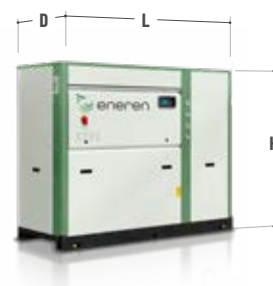


More space in the heating unit

The adoption of compact plate heat exchangers facing the unit right side panel **maximise the use of the available internal space thanks to reduced unit footprint**.

Ideal design for medium temperature heat sources

Thanks to the special features of the EKW range, heat sources at temperatures **between 30° and 45°C** (and therefore, unsuitable for direct use) are used by heat pumps **to produce hotter water**. This is true for industrial heat waste, which can be reused to produce, for example, district heating. Similarly, in residential applications, EKW heat pumps can, for example, use in **wintertime fan coil loop water as a heat source** to produce water to feed to high temperature terminals, produce hot water or run anti-legionella cycles.



EKW		040K	050K	060K	081K	082K	091K	092K	101K	102K	121K	122K	151K	152K	171K	172K	174K	201K
R134a - Heating: User water values 70/80°C, 45/40°C source water side																		
Thermal power	kW	38	49.5	61.1	75.6	75.8	83.9	84.1	97.1	97.3	121.3	121.5	148.8	149.3	171	171.3	166.4	191.2
Total absorbed power	kW	8.5	11.2	14.1	16.9	16.9	19	19	22.4	22.3	27.9	27.8	35	35	40.2	40.1	38.3	45.2
COP		4.45	4.41	4.33	4.47	4.49	4.41	4.44	4.34	4.35	4.35	4.37	4.25	4.26	4.26	4.27	4.35	4.23
SCOP		4.18	4.2	4.17	4.91	4.92	4.89	4.94	4.84	4.95	4.86	4.87	4.52	4.59	4.62	4.65	5.15	4.67
Sound power [Standard]	dB(A)	74	74	78	77	77	77	77	77	77	81	81	84	84	85	85	80	86
Sound power [Low noise]	dB(A)	70	70	74	73	73	73	73	73	73	77	77	80	80	79	79	74	80
Dimensions [LxHxD]	mm	804x1462x607				1174x1594x772								1644x1594x772				2374x1854x877
																	1644x1594x877	
EKW		202K	204K	221K	222K	241K	242K	244K	301K	302K	304K	344K	404K	444K	484K	554K	604K	
R134a - Heating: User water values 70/80°C, 45/40°C source water side																		
Thermal power	kW	191.3	192	211.4	211.8	240.9	241.7	239.5	291.5	292.3	296.1	339.5	380.5	431.7	474.7	537.1	589.7	
Total absorbed power	kW	45.2	45.1	51.4	51.3	56.5	56.4	56.3	69.9	69.9	70.4	80.6	91.2	102.3	114.5	126.3	139.8	
COP		4.24	4.25	4.12	4.13	4.26	4.28	4.26	4.17	4.18	4.2	4.21	4.17	4.22	4.14	4.25	4.22	
SCOP		4.84	5.14	4.68	4.84	4.72	4.82	5.05	4.65	4.85	4.74	4.84	4.98	5	4.93	4.98	5.01	
Sound power [Standard]	dB(A)	86	80	87	87	88	88	84	90	90	87	88	89	90	91	92	93	
Sound power [Low noise]	dB(A)	80	74	81	81	82	82	78	82	82	79	80	81	82	83	84	85	
Dimensions [LxHxD]	mm	1644x1594x772	2374x1854x877	1644x1594x772				2374x1854x877	1644x1594x772				2374x1854x877					
EKW		040K	050K	060K	081K	082K	091K	092K	101K	102K	121K	122K	151K	152K	174K	204K	244K	304K
R513A - Heating: User water temperature 70/80°C, Source water temperature 45/40°C																		
Thermal power	kW	41	48	60.7	85.4	85.4	99	99.3	111	111	125.5	125.8	148.3	148.4	197.3	222	250	295
Total absorbed power	kW	9.7	11.3	14.7	18.8	18.7	22.1	22.1	25.1	25	28.8	28.8	34.2	34.2	44.2	50	57.5	70
COP		4.2	4.2	4.1	4.5	4.5	4.4	4.5	4.4	4.4	4.36	4.3	4.3	4.3	4.46	4.4	4.3	4.2
Sound power [Standard]	dB(A)	70	70	75	73	73	73	73	74	74	78	78	81	81	74	75	79	80
Dimensions [LxHxD]	mm	804x1462x607				1174x1594x772								2374x1854x877				

Also available with 60 Hz power supply

EZW

WATER/WATER HEAT PUMPS FOR HIGH EVAPORATION AND CONDENSATION TEMPERATURES

228-604 kW



MULTI-PROTOCOL
COMMUNICATION
INTERFACE



SCROLL
COMPRESSORS



CORROSION
RESISTANT
MATERIAL

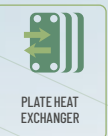


PLATE HEAT
EXCHANGER

Eneren's range of EZW Water/Water heat pumps is designed for all applications where the cold source is at medium temperatures and at the same time, very hot water is required at the condenser - up to 85°C. This particular feature makes EZW units the **ideal solution in the event of medium heat** (up to 50°C) waste heat, which can be used to produce water at higher temperatures in both residential and industrial applications, e.g. district heating systems. All this while **ensuring partial load efficiency, redundancy, compact footprint in utility rooms, low noise levels, auxiliary system management and easy installation.**

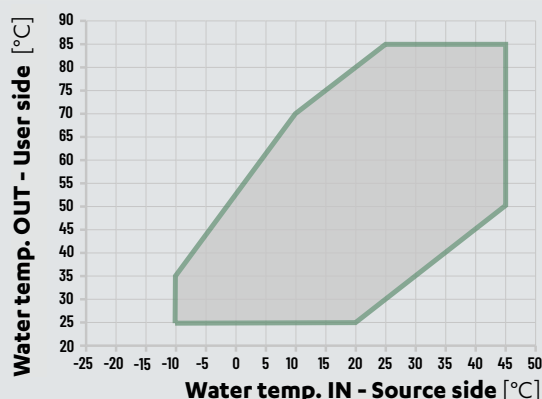
The configurations available for the refrigeration circuit are:

EFFICIENCY PACK 1: Dual compressor and dual circuit unit, for a system with greater redundancy.

EFFICIENCY PACK 2: Dual compressor (tandem) on single circuit for greater efficiency at partial loads.

EFFICIENCY PACK 4: Four compressors (dual tandem) on dual circuit, for a redundant system that is efficient with low loads.

- Available refrigerants: R1234ze and R515B
- Electronic expansion valve
- Vic-Taulic-type hydraulic connections (optional)
- Optional integrated energy meter via Modbus, for metering the energy absorbed by the machine
- External pump control according to constant T or constant ΔT logic



Optimised units for high temperature water production (85°C)

The EZW range units can produce water **up to 85°C** even when associated with a source of medium-temperature water (up to 50°C). This is thanks to **an accurate sizing of the heat exchangers and to the use of Scroll compressors** specially developed for high evaporation and condensation temperatures.



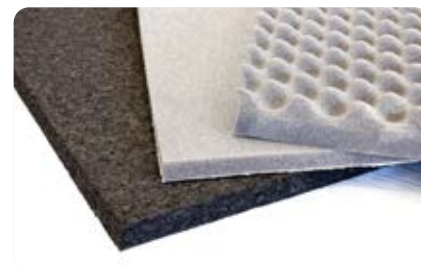
More space in the heating unit

The adoption of compact plate heat exchangers facing the unit right side panel **maximise the use of the available internal space thanks to reduced unit footprint.**



Maximum efficiency at partial loads

The EZW range adopts a multi-Scroll solution also on single circuits, electronically controlled expansion valves, plate heat exchangers and the option to control the (external) circulation pumps **via dedicated software**: all these characteristics allow **high energy efficiency to be achieved at partial loads.**



Attention to detail and low noise operation

Scroll compressors, which are the main noise source in the unit, are fitted on rubber feet; **these dampen vibration and therefore attenuate the noise transmitted to the various system parts.** On request, the compressor compartment can be lined with special sound absorbing material and the compressors encased in special insulating hoods **to reduce airborne noise emissions.**



Efficiency and reliability in line with system requirements

The available refrigerating circuit configurations have been designed to ensure, also simultaneously, **redundancy and efficiency at partial loads.** More specifically, the units - depending on the size of the machine and on specific plant engineering requirements - consist of two compressors on two circuits **for high system redundancy** or four compressors (double tandem) on two circuits for a system that is **simultaneously redundant and efficient at partial loads.**

Ideal design for medium temperature heat sources

Thanks to the special features of the EZW range, heat sources at temperatures **between 30° and 45°C** (and therefore, unsuitable for direct use) are used by heat pumps **to produce hotter water.** This is true for industrial heat waste, which can be reused to produce, for example, district heating. Similarly, in residential applications, EZW heat pumps can, for example, use in **wintertime fan coil loop water as a heat source** to produce water to feed to high temperature terminals, produce hot water or run anti-legionella cycles.



EZW		221K	222K	241K	242K	484K	604K
R1234ze - Heating: User water values 75/85°C, 45/40°C source water side							
Thermal power	kW	230.4	230.4	303.6	303.6	457.8	603.8
Total absorbed power	kW	63.1	63.1	80.9	80.9	127.6	163.5
COP		3.65	3.65	3.75	3.75	3.59	3.69
SCOP		4.10	4.11	4.35	4.37	4.23	4.49
R515B - Heating: User water values 75/85°C, 45/40°C source water side							
Thermal power	kW	229.1	227.8	299.6	299.8	452.4	596.5
Total absorbed power	kW	63.1	63.1	80.6	80.5	127.7	162.5
COP		3.63	3.61	3.72	3.72	3.54	3.67
SCOP		4.10	4.12	4.34	4.36	4.23	4.48
Sound power [Standard]	dB(A)	88	88	91	91	91	94
Sound power [Low noise]	dB(A)	84	84	87	87	87	90
Dimensions [LxDxH]	mm	1790x1930x770				3130x1990x880	

Also available with 60 Hz power supply

SUPERVISION

HiNode

**ADVANCED TECHNOLOGY
AND FLEXIBILITY TO MANAGE
AIR CONDITIONING**



HiNode 2.0 is a complete system for the management and supervision of air conditioning and process cooling plants, capable of interfacing with all units and devices in an installation to make operation more efficient.

Advanced and flexible in use, **HiNode 2.0** can monitor system performance and optimally manage fault resolution, ensuring maximum service continuity for the user. The system sizing is modular and can be defined each time according to the number of devices to be controlled.



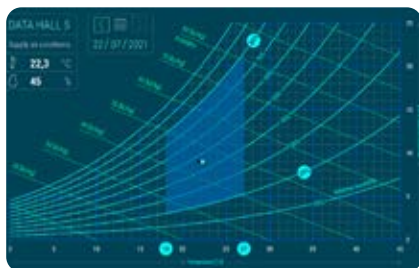
The heart of the device

Equipped with digital and analogue inputs and outputs to control the devices present (pumps, valves, etc.) and to acquire and record temperature, pressure, etc. values. At the heart of **HiNode 2.0** is a programmable microprocessor **compatible with all major serial and Ethernet communication protocols**. Operating data can be accessed locally, via the LCD display or touch screen, or remotely, via the clear and intuitive web interface. The system can also be configured to send data to a third-party cloud service via MQTT protocol.



Communication protocols

HiNode 2.0 supports the following communication protocols: Modbus RTU or TCP/IP, BACnet MS-TP or IP, SNMP v1-v2c-v3, MQTT, and Redfish.



Information management

The system lets you verify the main operating variables for the managed units, displaying trends over time in graph form and recording them together with the event history. The data can also be exported in different formats and sent automatically by e-mail.



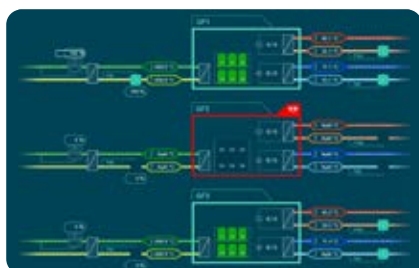
User flexibility

The software allows you to perform numerous basic functions and **can be integrated with customised management logics, adapting itself to each type of plant.** With HiNode 2.0 it is possible to achieve high energy efficiency and greater savings in operating costs. HiNode 2.0 software was designed and developed by the Eneren Controls team. **It allows several basic operations to be performed and can be integrated with many customised functions according to the type of system to be managed.**



Operation logic

The **HiNode 2.0** software is designed and developed by Eneren and **enables efficient management of the distribution of heat loads between installed units, even if they are of different ranges.**



On/off and modulating valve management

Management of mixed climate zones. Control of groundwater rejection temperature.



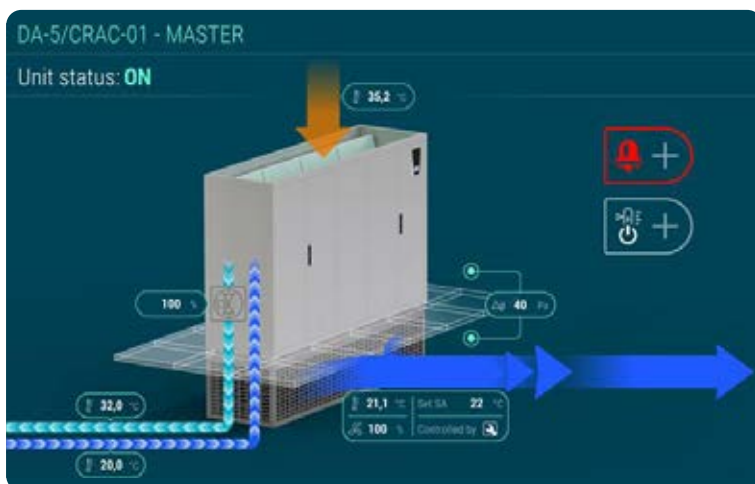
Controlled devices and functions: on/off and modulating distribution pump management

Time rotation, constant or variable flow control, control with ΔT or constant pressure. Flow balancing between primary and secondary circuits.



Energy metering

Measurement of thermal energy and electrical energy. With the possibility of using MID-certified devices (Measuring Instruments Directive 2014/32/EU).



Controlled devices and functions: Eneren air conditioning unit

Management of load distribution between available units with selection of the most suitable resource, in addition to basic functions managed by LAN connected machines. Heating/cooling generation calculation based on working temperatures between primary and secondary circuits. Running time balancing and advanced Dynamic Setpoint function.



your future-proof choice



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