

EPH

REVERSIBLE HEAT PUMPS AIR COOLED FOR COLD CLIMATES



		041	051	071	081	101	134	164	204
		Water 40/45°C; Outdoor air 7°C							
Heating capacity	kW	45.7	56.4	75.7	85.4	96.3	147.7	166.6	212.9
Total Power Input	kW	14.0	16.9	22.8	26.3	28.7	44.3	52.3	65.7
COP (UNI 14511)		3.27	3.35	3.32	3.25	3.35	3.34	3.19	3.24
		Water 55/65°C; Outdoor air 7°C							
Heating capacity	kW	45.2	55.8	75.9	86.4	97	148.7	168.3	211.5
Total Power Input	kW	19.3	22.7	32.7	37.4	40.5	63.7	74.4	90.8
COP (UNI 14511)		2.35	2.35	2.32	2.31	2.39	2.33	2.26	2.33
		Water 40/50°C; Outdoor air -15°C							
Heating capacity	kW	27.2	34.2	44.9	51.2	56.9	85.2	97.5	128.7
Total Power Input	kW	12.9	15.3	21.9	25	28	41.6	50.4	62
COP (UNI 14511)		2.11	2.24	2.06	2.04	2.03	2.05	1.93	2.08
800D		0 00	2.06	2.01	2.00	2.01	2.0	2.95	2.05
Sourd Dever Low poice version	db (A)	2.02	2.90	2.91	2.90	2.91	07	2.00	3.00
Sound Power Low hoise version	uD(A)	01	01	82	83	84	87	88	00
Dimensions [L x D x H]	mm	2090 x 1183 x 1735		2792 x 1183 x 1735		3540 x 1183 x 1679	3538 x 1653 x 1884		3538 x 1653 x 2284





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REVERSIBLE HEAT PUMPS AIR COOLED FOR COLD CLIMATES

UNITS OPTIMISED FOR **CLIMATES DOWN TO -20°C**



The Scroll compressors of the EPH range relies on the vapour injection technology: a small flow of refrigerant in the vapour state at medium pressure is "injected" in the scrolls into the compression chamber. This system allows an increase both of cooling capacity (thus heating capacity) and of efficiency and, above all, an extension of the working range of the heat pump, which makes the EPH range the ideal solution in case of very cold outdoor conditions.

EXTREMELY LOW-NOISE



All the units in the EPH range are supplied in the "Low Noise" version as standard equipment; this version features fan speed management, anti-vibration piping on the refrigerating circuit, compartment of the compressors and of the pumping kit in a box with soundproof material: this to guarantee the lowest sound emission at all working points.

PRODUCTION OF HOT WATER UP TO 65°C



The units of the **EPH** range are able to produce water at 65°C, as well as to operate with outdoor temperatures of down to -20°C.

SMART DEFROST SYSTEM



The defrosting cycle of the evaporating coil during the wintertime has a significant impact on the operating costs of the entire system. The Smart Defrost System® by Eneren (covered by patent) can detect a performance drop in the heat exchange due to icing and to shorten the defrost time. The hydrophilic treatment of the coils speeds up the defrosting process, so that only the first thin layer of ice on the fins needs to melt.

EPH is the range of air/water reversible heat pumps made by Eneren designed to operate with extremely low outdoor temperatures. In fact, the use of compressors with EVI vapour injection technology allows the production of hot water up to 65°C and to operate with outdoor temperatures of down to -20°C. This is combined with a special focus on noise (the "Low-Noise" version is standard equipment) and using different layouts of the refrigerating circuit in order to meet the needs of any system applications.

EFFICIENCY AND RELIABILITY ACCORDING TO THE INSTALLATION NEEDS

The available configurations for the refrigerating circuit are designed to guarantee both redundancy and efficiency at partial loads. In particular, depending on the size of the machine and on the particular needs of the installation, the units consist of two compressors on two circuits for high system redundancy, or by four compressors (double tandem) on two circuits for a system that is, at the same time, redundant and efficient at partial loads.

- » Refrigerant R410A.
- » EVI compressors with vapour injection.
- » Electronically controlled expansion valve.
- » Smart Kit for "cold" start up.
- » Coils with hydrophilic treatment and larger fin pitch.
- » Defrost ice trays with electrical heaters.
- » Optional EC fans.
- » Available as multfunction version for 2- or 4- pipe systems.



