

Water to water heat pumps, heating only, very high temperature water production



EW-HT represents the best solution for systems where very high temperature water is needed, for domestic hot water production, space heating or industrial process purpose.

The special compressor adopted grants hot water production up to 78°C and allows high evaporation temperature (evaporator leaving water temperature up to 40°C). The extraordinary operating limits ensure the perfect integration of the unit in any application, such as 4-pipe systems for residential and commercial buildings, industrial process heat recovery, district heating systems, IT-cooling plants.

Control



Electronic control W3000TE

W3000TE Compact control features an easy-to-use interface and a complete LCD display that allows consulting and intervening on the unit by means of a multi-language menu (19 languages are available).

The regulation is based on the patented "Quickmind" water temperature regulation logic uses self-adapting control to maintain flow temperatures and optimise performance even in low water content scenarios. As an alternative, the proportional or proportional-integral regulations are also available.

The diagnostics comprises a complete alarm management system, with the "black-box" (via PC) and the alarm history display (via display or also PC) for enhanced analysis of the unit operation

Optional proprietary devices can perform the adjustment of the resources in systems made of several units. Consumption metering and performance measurement are possible as well.

Supervision can be easily developed via proprietary devices or the integration in third party systems by means of the most common protocols as ModBus, Bacnet, Bacnet-over-IP, LonWorks.

Compatibility with the remote keyboard (up to 8 units).

The programmable timer manages a weekly schedule organised into time bands to optimise unit performance by minimising power consumption during periods of inactivity. Up to 10 daily time bands can be associated with different operating set points.

The defrosting (air source reversible unit only) follows a proprietary self-adaptive logic, which features the monitoring of several operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

Refrigerant



Versions

B Basic

Configurations

- Basic function

Features

WIDE OPERATING RANGE

Hot water production up to 78°C (evaporator water outlet up to 40°C).

MAXIMUM RELIABILITY

Unit with two independent refrigerant circuit, designed to ensure maximum efficiency at full load, ensuring uninterrupted operation even in the event of temporary stop of one of the two circuits.

ELECTRONIC EXPANSION VALVE SUPPLIED STANDARD

The use of the electronic expansion valve generates considerable benefits, especially in cases of variable demand and different external conditions. It was introduced into these units as a result of accurate design choices concerning the cooling circuit and the optimisation of operation in various different working conditions

RENEWABLE ENERGY FOR COMMERCIAL INSTALLATIONS

Best solution in centralised residential systems such as apartment buildings, where the cost of renovation needs to be limited by keeping the same distribution system with radiators, while offering a source of renewable energy.

COMPACTNESS

Reduced dimensions, for easy installation even in sites with space constraints

Accessories

- Soft starters
- Thicker soundproofing cladding
- Set-up for remote connectivity with ModBus/Echelon protocol cards
- Remote control keyboard (distance to 200m and to 500m)



EW-HT			0152	0182	0202	0262	0302	0412	0512	0612
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE										
HEATING ONLY (GROSS VALUE)										
Total heating capacity	(1)	kW	70,18	79,27	92,48	112,9	139,4	180,7	224,8	279,2
Total power input	(1)	kW	17,00	18,90	22,00	27,90	34,20	43,70	55,10	67,60
COP	(1)	kW/kW	4,129	4,196	4,205	4,047	4,076	4,135	4,080	4,130
HEATING ONLY (EN14511 VALUE)										
Total heating capacity	(1)(2)	kW	70,40	79,50	92,70	113,2	139,7	181,0	225,2	279,7
COP	(1)(2)	kW/kW	4,010	4,070	4,080	3,940	3,980	4,040	4,010	4,060
ENERGY EFFICIENCY										
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)										
PDesign	(3)	kW	38,6	43,6	50,0	61,6	78,1	104	128	157
SCOP	(3)(8)		3,27	3,39	3,45	3,30	3,30	3,25	3,27	3,30
Performance ηs	(3)(9)	%	123	128	130	124	124	122	123	124
Seasonal efficiency class	(10)		A+	A++	A++	A+	-	-	-	-
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN HEATING										
Water flow	(1)	l/s	2,145	2,423	2,827	3,452	4,262	5,522	6,871	8,535
Pressure drop	(1)	kPa	23,9	25,0	24,2	24,2	19,7	19,8	19,8	20,1
HEAT EXCHANGER SOURCE SIDE IN HEATING										
Water flow	(1)	l/s	2,616	2,969	3,466	4,185	5,179	6,739	8,351	10,41
Pressure drop	(1)	kPa	45,4	46,7	51,8	53,8	49,7	50,1	37,6	37,7
REFRIGERANT CIRCUIT										
Compressors nr.		N°	2	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2	2
Refrigerant charge		kg	6,00	7,00	8,10	9,10	9,90	11,0	13,2	14,3
NOISE LEVEL										
Sound Pressure	(4)	dB(A)	58	58	58	60	60	62	62	64
Sound power level in heating	(5)(6)	dB(A)	74	74	74	76	76	78	78	80
SIZE AND WEIGHT										
A	(7)	mm	1223	1223	1223	1223	1223	1223	1223	1223
B	(7)	mm	877	877	877	877	877	877	877	877
H	(7)	mm	1496	1496	1496	1496	1496	1496	1496	1496
Operating weight	(7)	kg	365	380	390	415	430	610	675	740

Notes

- Plant (side) heat exchanger water (in/out) 70°C/78°C; Source (side) heat exchanger water (in/out) 45°C/40°C.
- Values in compliance with EN14511.
- Parameter calculated for MEDIUM TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013]
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in heating, indoors.
- Unit in standard configuration/execution, without optional accessories.
- Seasonal coefficient of performance
- Seasonal space heating energy efficiency
- Energy efficiency class referred to LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain HFC R134a [GWP₁₀₀ 1430] fluorinated greenhouse gases.

Dimensional drawing

