

# EKW

## WATER/WATER HEAT PUMPS

FOR HIGH EVAPORATION AND CONDENSATION TEMPERATURES



EKW	040	050	060	081-082	091-092	101-102	121-122	151-152	171	174	201-202	
Water Conditions: User end 70/80°C; Source end 45/40 °C												
Thermal power	kW	38,0	49,5	61,1	75,8	84,1	97,2	121,5	149,2	170,9	166,3	191,2
Total absorbed power	kW	8,5	11,1	13,9	16,8	8,8	22,1	27,6	34,7	39,7	37,9	44,7
COP		4,49	4,46	4,39	4,52	4,47	4,39	4,40	4,30	4,31	4,39	4,28
Water Conditions: User end 60/70°C; Source end 40/35 °C												
Thermal power	kW	36,2	47,1	58,2	72,5	80,4	93,0	116,0	142,3	162,6	159,0	181,7
Total absorbed power	kW	7,0	9,2	11,5	13,8	15,5	18,3	22,8	28,6	31,9	31,4	35,3
COP		5,17	5,14	5,05	5,25	5,18	5,09	5,10	4,98	5,10	5,07	5,15
Water Conditions: User end 60/70°C; Source end 35/30 °C												
Thermal power	kW	32,6	42,4	52,5	65,6	72,7	84,0	105,1	125,7	143,5	143,5	160,3
Total absorbed power	kW	7,1	9,3	11,6	14,0	15,7	18,4	23,0	28,1	31,6	31,5	35,0
COP		4,61	4,58	4,51	4,70	4,64	4,57	4,58	4,47	4,55	4,55	4,58
Sound power	db(A)	74	74	78	77	77	77	81	84	85	80	86
Dimensions [L x D x H]	mm	804 x 607 x 1462			1174 x 772 x 1594					1644 x 772 x 1594	2374 x 877 x 1854	1644 x 772 x 1594

EKW	221-222	241-242	244	301-302	304	344	404	444	484	554	604	
Water Conditions: User end 70/80°C; Source end 45/40 °C												
Thermal power	kW	211,7	241,7	239,4	292,2	296,0	339,4	380,4	431,5	474,4	536,8	589,4
Total absorbed power	kW	50,7	56,0	55,8	69,1	69,6	79,7	90,0	101,1	113,1	125,0	138,1
COP		4,18	4,32	4,29	4,23	4,25	4,26	4,23	4,27	4,19	4,30	4,27
Water Conditions: User end 60/70°C; Source end 40/35 °C												
Thermal power	kW	200,6	229,4	228,4	277,1	281,3	321,9	359,7	407,2	446,9	506,6	555,7
Total absorbed power	kW	40,0	44,1	46,1	54,4	57,2	64,0	70,9	79,6	89,2	98,5	108,8
COP		5,01	5,20	4,95	5,09	4,91	5,03	5,08	5,11	5,01	5,14	5,11
Water Conditions: User end 60/70°C; Source end 35/30 °C												
Thermal power	kW	177,7	202,4	206,7	245,0	247,5	283,6	316,7	359,1	394,7	446,8	490,4
Total absorbed power	kW	39,8	43,8	46,4	54,2	56,4	63,3	70,5	79,1	88,6	97,8	108,1
COP		4,47	4,62	4,46	4,52	4,39	4,48	4,49	4,54	4,45	4,57	4,54
Sound power	db(A)	87	88	84	90	87	88	89	90	91	92	93
Dimensions [L x D x H]	mm	1644 x 772 x 1594		2374 x 877 x 1854	1644 x 772 x 1594	2374 x 877 x 1854						



## WATER/WATER HEAT PUMPS FOR HIGH EVAPORATION AND CONDENSATION TEMPERATURES

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39 - 610 kW





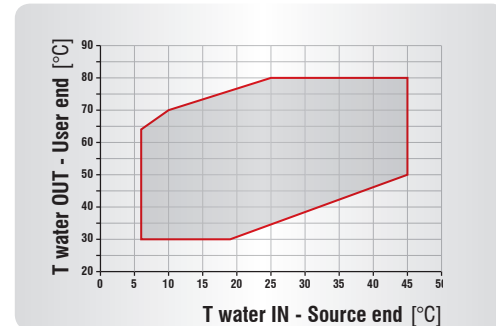
## WATER/WATER HEAT PUMPS FOR HIGH EVAPORATION AND CONDENSATION TEMPERATURES

### ● MAXIMUM EFFICIENCY AT PARTIAL LOADS



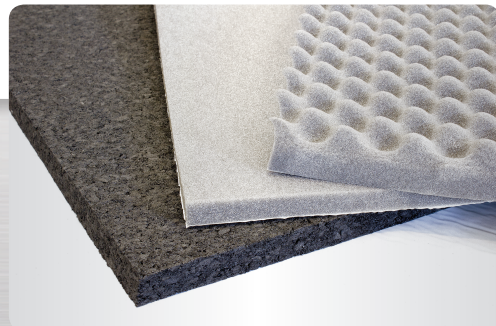
The **EKW** range adopts a multiscroll solution (also on single circuits), electronically controlled expansion valves, plate heat exchangers and the option to control the (external) circulation pumps via dedicated software: all these characteristics allow high energy efficiency at partial loads to be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

### ● OPTIMISED UNITS FOR OF HIGH TEMPERATURE WATER PRODUCTION (80°C)



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

### ● ATTENTION TO DETAIL AND LOW NOISE



Scroll compressors, which are the main source of noise in the machine, are mounted on rubber feet that dampen vibrations and therefore attenuate the noise transmitted to the various parts of the plant. On request, the compressor compartment can be lined with special sound absorbing material and the compressors can be enclosed in special insulating sheaths to reduce airborne sound emission.

### ● EFFICIENCY AND RELIABILITY ACCORDING TO SYSTEM REQUIREMENTS



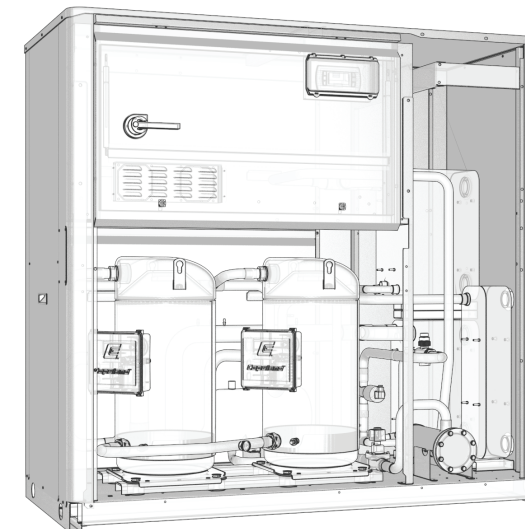
The available refrigerating circuit configurations have been designed to ensure, also simultaneously, redundancy and efficiency at partial loads. In particular, depending on the size of the machine and any special plant requirements, the units consist of two compressors on two circuits for high system redundancy or four compressors (dual tandem) on two circuits for a system that is at the same time redundant and efficient with partial loads.

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.

### ● IDEAL DESIGN FOR MEDIUM TEMPERATURE THERMAL SOURCES

Thanks to the special features of the **EKW** range, thermal sources at temperatures between 30° and 45°C (and therefore, unsuitable for direct use) are used by heat pumps to produce warmer 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 thermal source to produce water to feed high temperature terminals, produce hot water or run anti-legionella cycles.



### ● MORE SPACE IN THE HEAT STATION

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.



- » R134a refrigerant.
- » Electronically controlled expansion valve supplied as standard
- » Optional Vic-Taulic hydraulic couplings.
- » Optional power meter integrated via Modbus, for machine energy absorption accounting.
- » Remote pump control according to constant T or constant  $\Delta T$  logic.

