MEDEA

CHILLERS & water-to-water HEAT PUMPS



26-306 kW
31-350 kW

Multi-Scroll
50 Hz
60 Hz

DHW
HT

Made in Spain

ErP 2021
R410A
R452B
R454B

MEDEA

Adaptation and Versatility

- High-performance equipment with plate heat exchangers which enable a flexible configuration for centralised facilities, with closed water and geothermal loop
- Versions available with a hydraulic unit
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance thanks to removable panels
- MEDEA MAXIMA with R-134a refrigerant to provide water at high temperatures of up to +78ºC

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Complies with ErP 2021
- Tandem multiscroll to improve seasonal energy efficiency
- Units available with optional Inverter compressors for maximum energy efficiency
- Electronic expansion valve for minimal energy consumption
- Equipment with a hydraulic unit can include high-performance electronic pumps

Codification:

KZV — Series; Size; Power — **NS4W**

I -Reversible heat pump
R -Cooling only
Q -Heating only
C -Reversible in water circuit, not reversible in the cooling circuit

Series version
N -Standard scroll compressor /
H High-temperature scroll compressor

S - Standard equipment / **P** - Hydraulic unit

Power supply
4 -400V / III / 50Hz with neutral

Refrigerant
W - R410A / **B** - R452B* / **C** - R454B*

* Refrigerants not available for 2035 & 2040 models

KNV — Series; Size; Power — **R NS4W**

R -Cooling only

Standard version dimensions (S) (mm)			
	Series 1	Series 2	Series 3
L	900	1554	2550
W	800	800	800
H	1267	1500	1500

*Dimensions valid for the version with a hydraulic unit (version P) up to model 2090.
For higher models, the hydraulic unit is provided in an independent module
(see technical catalogue).

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R410A ErP 2021

KZV Model			1025	1030	1035	1040	1045	2035	2040	2045	2050	2060	2070
COOLING MODE													
Cooling capacity	Cooling power (1)	kW	26,7	30,4	34,6	38,9	45,6	34,8	38,9	45,6	53,6	61,7	69,4
		TR	8,0	9,0	10,0	11,5	13,0	10,0	11,5	13,0	15,5	18,0	20,0
		kBTU/h	96	108	120	138	156	120	138	156	186	216	240
	Absorbed power (2)	kW	5,7	6,5	7,4	8,3	9,5	7,4	8,3	9,5	11,5	12,9	15,1
	EER (3)	kW/kW	4,7	4,7	4,7	4,7	4,8	4,7	4,7	4,8	4,7	4,8	4,6
		BTU/(h*W)	16,8	16,6	16,2	16,6	16,4	16,2	16,6	16,4	16,2	16,7	15,9
	SEER (4)	kWh/kWh	5,3	5,3	5,3	5,3	5,4	5,4	5,3	5,5	5,2	5,4	5,2
	ηs,c (5)	%	203%	204%	206%	203%	209%	206%	206%	212%	202%	208%	202%
HEAT PUMP VERSION													
Heating mode	Heating power (6)	kW	31,5	35,9	40,9	45,9	53,5	41,0	45,8	53,5	63,2	72,5	82,1
	Absorbed power (2)	kW	5,7	6,5	7,4	8,3	9,5	7,4	8,3	9,5	11,5	12,9	15,1
	COP (3)	kW/kW	5,5	5,5	5,5	5,5	5,6	5,5	5,5	5,6	5,5	5,6	5,4
	SCOP, average climate, 30-35°C (4)	kWh/kWh	4,7	4,7	4,7	4,8	4,9	5,7	5,7	5,8	5,7	5,9	5,7
	ηs,h average climate, 30-35°C (5)	%	179%	181%	181%	183%	188%	219%	220%	225%	221%	227%	220%
TECHNICAL FEATURES													
Power supply			400V / III / 50HZ with neutral										
Cooling circuit	Refrigerant fluid / GWP	kg CO_2	R410A / 2088										
	Type of compressor		hermetic scroll										
	No. circuits / compressors		1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2
	No. power stages		1	1	1	1	1	2	2	2	2	2	2
Evaporator side hydraulic circuit	Water flow	m³/h	4,6	5,2	6,0	6,7	7,9	6,0	6,7	7,9	9,2	10,6	12,0
	Type of heat exchanger		stainless steel brazed plates heat exchanger										
	Ø hydraulic connections		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Condenser side hydraulic circuit	Water flow	m³/h	5,6	6,4	7,3	8,1	9,5	7,3	8,1	9,5	11,2	12,9	14,6
	Type of heat exchanger		stainless steel brazed plates heat exchanger										
	Ø hydraulic connections		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Equipment sound pressure (Lp10) (7)		dB(A)	36	36	37	38	40	37	39	41	38	38	39
Empty weight		kg	273	273	276	282	288	425	429	474	486	490	502

KZV Model			2080	2090	2105	2120	2135	2150	3160	3180	3210	3240	3300
COOLING MODE													
Cooling capacity	Cooling power (1)	kW	82.4	91.6	104.8	119.6	130.9	149.1	160.5	183.5	204.1	236.8	305.2
		TR	23.5	26.5	30.0	34.5	37.5	42.5	46.0	52.5	58.5	67.5	87.0
		kBTU/hr	282	318	360	414	450	510	552	630	702	810	1044
	Absorbed power (2)	kW	16.3	19.3	22.1	25.1	28.1	31.6	35.1	39.6	45.5	51.5	66.1
	EER (3)	kW/kW	5.1	4.7	4.7	4.8	4.7	4.7	4.6	4.6	4.5	4.6	4.6
		BTU/(hrxW)	17.3	16.5	16.3	16.5	16.0	16.1	15.7	15.9	15.4	15.7	15.8
	SEER (4)	kWh/kWh	5.7	5.4	5.3	5.4	5.2	5.3	5.2	5.2	5.1	5.2	5.2
	ηs,c (5)	%	220%	207%	206%	206%	201%	204%	203%	202%	200%	202%	201%
HEATING MODE													
Heating mode	Heating power (6)	kW	95.9	107.7	123.2	140.4	154.4	175.5	190.1	216.8	242.4	279.9	360.7
	Absorbed power (2)	kW	16.2	19.3	22.0	25.0	28.0	31.5	35.0	39.5	45.4	51.3	66.0
	COP (3)	kW/kW	5.9	5.6	5.6	5.6	5.5	5.6	5.4	5.5	5.3	5.5	5.5
	SCOP, average climate, 30-35°C (4)	kWh/kWh	6.0	5.8	5.8	5.8	5.7	5.8	6.2	6.2	6.1	6.2	6.2
	ηs,h average climate, 30-35°C (5)	%	233%	222%	222%	223%	219%	222%	238%	241%	234%	239%	241%
HEAT PUMP VERSION													
Power supply			400 V/III/50 HZ with neutral										
Cooling circuit	Refrigerant fluid / GWP	kg CO_2	R410A/2088										
	Type of compressor		hermetic scroll										
	No. circuits / compressors		1/2	1/2	2/2	2/2	2/2	2/2	2/4	2/4	2/4	2/4	2/4
	No. power stages		2	2	2	2	2	2	4	4	4	4	4
Evaporator side hydraulic circuit	Water flow	m³/h	14.2	15.8	18.1	20.6	22.6	25.7	27.7	31.6	35.2	40.8	52.6
	Type of heat exchanger		stainless steel brazed plates heat exchanger										
	Ø hydraulic connections		2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	VICTAULIC 3"				
Condenser side hydraulic circuit	Water flow	m³/h	17.0	19.1	21.9	25.0	27.4	31.2	33.7	38.5	43.1	49.7	64.0
	Type of heat exchanger		stainless steel brazed plates heat exchanger										
	Ø hydraulic connections		2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	VICTAULIC 3"				
Equipment sound pressure (Lp10) (7)		dB(A)	39	44	44	45	45	47	46	48	50	51	52
Empty weight		kg	512	569	591	626	644	661	1053	1065	1143	1226	1240

(1) Nominal cooling capacity for a water inlet/outlet temp. of 12/7°C in the evaporator and a water inlet/outlet temp. of 30/35°C in the condenser Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m² · K / W)
(2) Nominal power input by compressors
(3) EER and COP calculated based on standard EN: 14511-2018
(4) Seasonal Efficiency calculated based on standard EN 14825:2018. For heating, the seasonal coefficient of performance (SCOP) and seasonal energy efficiency for heating (Πs, h) are calculated for low temperature and average climate applications
(5) Πs, c values in accordance with Ecodesign Regulation EU 2016/2281 for comfort applications. Πs, h values in accordance with the ecodesign, by virtue of Regulation EU 813/2013 for heat pump applications
(6) Nominal heating capacity for an inlet/outlet temp. of 30/35°C in the condenser and an inlet/outlet temp. of 10/7°C in the evaporator Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m² · K / W)
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source and with directivity 1