

Subtype SENERTEC HyPer WP20H

Certificate Holder	Senertec Kraft-Wärme-Energiesysteme GmbH
Address	Carl-Zeiss-Straße 18
ZIP	97424
City	Schweinfurt
Country	DE
Certification Body	Kiwa Nederland B.V.
Subtype title	SENERTEC HyPer WP20H
Registration number	007-DO0171
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	4.45 kg
Certification Date	21.02.2024
Testing basis	European KEYMARK Scheme for Heat Pumps (v12)

Model HyPer WP20H

Model name	HyPer WP20H
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	20.00 kW	20.00 kW
El input	4.36 kW	6.67 kW
COP	4.60	3.00

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	6.06 kW	3.89 kW
Cooling capacity	20.00	20.00
EER	3.31	5.14

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	151 %
Prated	20.00 kW	20.00 kW
SCOP	5.00	3.86
Tbiv	-10 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	17.52 kW	17.69 kW

COP Tj = -7°C	2.90	2.24
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	10.78 kW	10.77 kW
COP Tj = +2°C	5.04	3.85
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.84 kW	6.92 kW
COP Tj = +7°C	6.59	5.26
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	7.37 kW	7.18 kW
COP Tj = 12°C	8.50	7.10
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	20.00 kW	17.69 kW
COP Tj = Tbiv	2.49	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.00 kW	16.38 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.49	1.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	35 °C	55 °C
Poff	162 W	19 W
PTO	162 W	122 W
PSB	162 W	19 W
PCK	0 W	158 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	3.62 kW
Annual energy consumption Qhe	8265 kWh	10718 kWh

EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	20.00 kW	20.00 kW
SEER	5.29	5.29
Pdc Tj = 35°C	20.00 kW	20.00 kW
EER Tj = 35°C	3.31	5.14
Cdc Tj = 35 °C	0.900	0.900
Pdc Tj = 30°C	14.74 kW	14.74 kW
EER Tj = 30°C	4.73	6.52
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	9.47 kW	9.71 kW
EER Tj = 25°C	6.63	6.80
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	6.76 kW	7.50 kW
EER Tj = 20°C	8.14	7.10
Cdc Tj = 20 °C	0.900	0.900
Poff	0 W	0 W
PTO	166 W	200 W

PSB	166 W	166 W
PCK	0 W	0 W
Annual energy consumption Qce	2270 kWh	2201 kWh

Model HyPer WP20H-S

Model name	HyPer WP20H-S
Application	Heating (medium temp)
Units	Outdoor
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Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
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