

Subtype HPS.Z 12-16kW/400 V

Certificate Holder	Kospel SP. z o.o.
Address	ul. Olchowa 1
ZIP	75-136
City	Koszalin
Country	PL
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	HPS.Z 12-16kW/400 V
Registration number	011-1W0439
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	2.5 kg
Certification Date	15.12.2021
Testing basis	HP KEYMARK certification scheme rules rev. 9

Model HPSO-12/400 + HPSI-9

Model name	HPSO-12/400 + HPSI-9
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

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	11.50 kW	9.72 kW
El input	2.58 kW	3.65 kW
COP	4.45	2.66

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	156 %	110 %
Prated	9.00 kW	8.79 kW
SCOP	3.98	2.83
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.98 kW	7.70 kW
COP Tj = -7°C	2.87	1.93
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.63 kW	5.17 kW
COP Tj = +2°C	3.90	3.50
Cdh Tj = +2 °C	0.99	0.99

Pdh Tj = +7°C	5.78 kW	8.52 kW
COP Tj = +7°C	4.86	3.66
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.54 kW	6.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	0 W	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.48 kW	1.85 kW
Annual energy consumption Qhe	4696 kWh	6362 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
COP Tj = +2°C	3.50	

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
COP Tj = +2°C	1.93	
Cdh Tj = +2 °C	0.99	

EN 14825 | Average Climate

Pdesignh	8.80 kW
Backup Heater	0.00 kW

Model HPSO-16/400 + HPSI-9

Model name	HPSO-16/400 + HPSI-9
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

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	15.74 kW	12.67 kW
El input	3.60 kW	4.95 kW
COP	4.37	2.62

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	151 %	111 %
Prated	12.80 kW	10.83 kW
SCOP	3.85	2.85
Tbiv	-7 °C	-4 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11.33 kW	9.20 kW
COP Tj = -7°C	2.46	1.89
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	7.16 kW	6.61 kW
COP Tj = +2°C	3.70	2.77
Cdh Tj = +2 °C	0.99	0.99

Pdh Tj = +7°C	5.98 kW	5.08 kW
COP Tj = +7°C	5.17	3.74
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.68 kW	9.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	0 W	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	1.32 kW
Annual energy consumption Qhe	26449 kWh	22384 kWh

EN 14825 | Average Climate

Pdesignh	10.80 kW
Backup Heater	0.00 kW