

Subtype AEROTOP SX13

Certificate Holder	ELCO GmbH
Address	Hohenzollernstrasse 31
ZIP	72379
City	Hechingen
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	AEROTOP SX13
Registration number	011-1W0659
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.6 kg
Certification Date	31.07.2023
Testing basis	HP KEYMARK certification scheme rules V12

Model AEROTOP SX13

Model name	AEROTOP SX13
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
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	9.51 kW	
El input	3.02 kW	
COP	3.15	

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	187 %	151 %
Prated	14.18 kW	13.53 kW
SCOP	4.76	3.85
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.54 kW	11.97 kW
COP Tj = -7°C	2.97	2.36
Cdh Tj = -7 °C	0.996	0.996
Pdh Tj = +2°C	7.54 kW	7.25 kW
COP Tj = +2°C	4.57	3.75
Cdh Tj = +2 °C	0.989	0.989
Pdh Tj = +7°C	4.98 kW	4.87 kW

COP Tj = +7°C	6.40	5.03
Cdh Tj = +7 °C	0.978	0.978
Pdh Tj = 12°C	4.62 kW	4.69 kW
COP Tj = 12°C	8.49	7.22
Cdh Tj = +12 °C	0.968	0.968
Pdh Tj = Tbiv	12.54 kW	11.97 kW
COP Tj = Tbiv	2.97	2.36
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	10.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	1.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	21 W	21 W
PTO	15 W	15 W
PSB	21 W	21 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.68 kW	2.90 kW
Annual energy consumption Qhe	6152 kWh	7254 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	143 %	119 %
Prated	21.00 kW	20.72 kW
SCOP	3.66	3.05
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.71 kW	12.54 kW
COP Tj = -7°C	3.21	2.65
Cdh Tj = -7 °C	0.996	0.996
Pdh Tj = +2°C	7.75 kW	7.09 kW
COP Tj = +2°C	4.97	3.96
Cdh Tj = +2 °C	0.989	0.989
Pdh Tj = +7°C	5.20 kW	5.08 kW
COP Tj = +7°C	6.70	5.60
Cdh Tj = +7 °C	0.978	0.978
Pdh Tj = 12°C	4.62 kW	4.67 kW
COP Tj = 12°C	7.49	7.60
Cdh Tj = +12 °C	0.968	0.968
Pdh Tj = Tbiv	12.71 kW	12.54 kW

COP Tj = Tbiv	3.21	2.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.26 kW	7.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.40
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	21 W	21 W
PTO	15 W	15 W
PSB	21 W	21 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	21.00 kW	20.72 kW
Annual energy consumption Qhe	14150 kWh	16733 kWh
Pdh Tj = -15°C (if TOL		
COP Tj = -15°C (if TOL		
Cdh Tj = -15 °C		

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	258 %	178 %
Prated	7.48 kW	6.86 kW
SCOP	6.52	4.53
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	7.48 kW	6.86 kW
COP Tj = +2°C	4.27	2.67
Cdh Tj = +2 °C	0.989	0.989
Pdh Tj = +7°C	4.55 kW	4.35 kW
COP Tj = +7°C	5.83	3.60
Cdh Tj = +7 °C	0.978	0.978
Pdh Tj = 12°C	4.64 kW	4.74 kW
COP Tj = 12°C	8.07	6.37
Cdh Tj = +12 °C	0.968	0.968
Pdh Tj = Tbiv	7.48 kW	6.86 kW
COP Tj = Tbiv	4.27	2.67
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.48 kW	6.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.27	2.67

$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$

WTOL	60 °C	60 °C
P _{off}	21 W	21 W
PTO	15 W	15 W
PSB	21 W	21 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	1534 kWh	2024 kWh