

## Subtype AEROTOP SX10

Certificate Holder	ELCO GmbH
Address	Hohenzollernstrasse 31
ZIP	72379
City	Hechingen
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	AEROTOP SX10
Registration number	011-1W0543
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.6 kg
Certification Date	04.08.2022
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 9

## Model AEROTOP SX10

Model name	AEROTOP SX10
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, 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 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	189 %	156 %
Prated	10.80 kW	10.51 kW
SCOP	4.81	3.96
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.73 kW	9.30 kW
COP Tj = -7°C	3.51	2.45
Cdh Tj = -7 °C	0.994	0.994
Pdh Tj = +2°C	5.62 kW	6.12 kW
COP Tj = +2°C	4.79	3.77
Cdh Tj = +2 °C	0.987	0.987
Pdh Tj = +7°C	4.30 kW	3.97 kW
COP Tj = +7°C	6.49	5.70
Cdh Tj = +7 °C	0.970	0.970
Pdh Tj = 12°C	4.41 kW	4.48 kW
COP Tj = 12°C	7.70	6.23
Cdh Tj = +12 °C	0.971	0.971
Pdh Tj = Tbiv	9.73 kW	9.30 kW
COP Tj = Tbiv	3.24	2.45

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.97 kW	8.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	2.10
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
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	1.83 kW	1.76 kW
Annual energy consumption Qhe	4641 kWh	5480 kWh

#### EN 12102-1 | Colder Climate

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

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	147 %	127 %
Prated	15.48 kW	15.89 kW
SCOP	3.75	3.24
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.37 kW	9.62 kW
COP Tj = -7°C	3.51	2.93
Cdh Tj = -7 °C	0.994	0.994
Pdh Tj = +2°C	5.70 kW	5.87 kW
COP Tj = +2°C	4.85	4.10
Cdh Tj = +2 °C	0.987	0.987
Pdh Tj = +7°C	4.36 kW	4.17 kW
COP Tj = +7°C	6.50	5.85
Cdh Tj = +7 °C	0.970	0.970
Pdh Tj = 12°C	4.41 kW	5.25 kW
COP Tj = 12°C	7.70	6.90
Cdh Tj = +12 °C	0.971	0.971
Pdh Tj = Tbiv	9.37 kW	9.62 kW
COP Tj = Tbiv	3.51	2.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.53 kW	6.53 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.34	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990

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	15.48 kW	15.89 kW
Annual energy consumption Q <sub>he</sub>	10178 kWh	12133 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL	7.75	7.56
COP T <sub>j</sub> = -15°C (if TOL	2.79	1.79
C <sub>dh</sub> T <sub>j</sub> = -15 °C	0.900	0.900

#### EN 12102-1 | Warmer Climate

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

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η <sub>s</sub>	243 %	184 %
Prated	6.21 kW	6.05 kW
SCOP	6.16	4.67
T <sub>biv</sub>	2 °C	2 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	6.21 kW	6.05 kW
COP T <sub>j</sub> = +2°C	4.48	2.72
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.987	0.987
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.15 kW	3.80 kW
COP T <sub>j</sub> = +7°C	5.85	4.10
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.970	0.970
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.45 kW	4.60 kW
COP T <sub>j</sub> = 12°C	7.20	6.20
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.971	0.971
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.21 kW	6.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	4.48	2.72
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.21 kW	6.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	4.48	2.72
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.900	0.900
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	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1347 kWh	1732 kWh