

Subtype AEROTOP S09.2

Certificate Holder	ELCO GmbH
Address	Hohenzollernstrasse 31
ZIP	72379
City	Hechingen
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	AEROTOP S09.2
Registration number	011-1W0392
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	4 kg
Certification Date	28.07.2020

Model AEROTOP S09.2

Model name	AEROTOP S09.2
Application	Heating (medium temp)
Units	Indoor
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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	196 %	134 %
Prated	9.91 kW	8.20 kW
SCOP	4.99	3.42
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.77 kW	7.25 kW
COP Tj = -7°C	3.18	2.24
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.59 kW	4.60 kW
COP Tj = +2°C	4.99	3.13
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	3.58 kW	3.07 kW
COP Tj = +7°C	6.28	4.95
Cdh Tj = +7 °C	0.94	0.94
Pdh Tj = 12°C	3.03 kW	3.00 kW
COP Tj = 12°C	7.77	6.00
Cdh Tj = +12 °C	0.93	0.93
Pdh Tj = Tbiv	8.77 kW	7.25 kW
COP Tj = Tbiv	3.18	2.24

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.47 kW	9.03 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.80
WTOL	63 °C	63 °C
Poff	35 W	35 W
PTO	36 W	36 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.44 kW	0.00 kW
Annual energy consumption Qhe	4108 kWh	4948 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	151 %	117 %
Prated	11.28 kW	10.57 kW
SCOP	3.84	3.01
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.83 kW	6.40 kW
COP Tj = -7°C	3.12	2.44
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.25 kW	3.79 kW
COP Tj = +2°C	5.38	4.21
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.62 kW	2.58 kW
COP Tj = +7°C	6.24	4.96
Cdh Tj = +7 °C	0.940	0.940
Pdh Tj = 12°C	3.03 kW	3.03 kW
COP Tj = 12°C	7.77	6.45
Cdh Tj = +12 °C	0.930	0.930
Pdh Tj = Tbiv	6.83 kW	6.40 kW
COP Tj = Tbiv	3.12	2.44
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.91 kW	6.54 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.02	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	63 °C	63 °C
Poff	35 W	35 W

PTO	36 W	36 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.28 kW	10.57 kW
Annual energy consumption Q _{he}	7241 kWh	8667 kWh
P _{dh} T _j = -15°C (if TOL		
COP T _j = -15°C (if TOL		
C _{dh} T _j = -15 °C		

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	230 %	172 %
Prated	9.05 kW	9.78 kW
SCOP	5.81	4.38
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	9.05 kW	9.78 kW
COP T _j = +2°C	3.79	2.68
C _{dh} T _j = +2 °C	0.98	0.98
P _{dh} T _j = +7°C	6.75 kW	6.34 kW
COP T _j = +7°C	5.04	3.89
C _{dh} T _j = +7 °C	0.94	0.94
P _{dh} T _j = 12°C	3.01 kW	2.94 kW
COP T _j = 12°C	7.34	5.35
C _{dh} T _j = +12 °C	0.93	0.93
P _{dh} T _j = T _{biv}	9.05 kW	9.78 kW
COP T _j = T _{biv}	3.79	2.68
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	9.05 kW	9.78 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.79	2.68
WTOL	63 °C	63 °C
P _{off}	35 W	35 W
PTO	36 W	36 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2081 kWh	2983 kWh

Model AEROTOP S09.2_2-parts

Model name	AEROTOP S09.2_2-parts
Application	Heating (medium temp)
Units	Indoor
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

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P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	9.05 kW	9.78 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.79	2.68
WTOL	63 °C	63 °C
P _{off}	35 W	35 W
PTO	36 W	36 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2081 kWh	2983 kWh