

Subtype AQUATOP S14

Certificate Holder	ELCO GmbH
Address	Hohenzollernstrasse 31
ZIP	72379
City	Hechingen
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	AQUATOP S14
Registration number	011-1W0307
Heat Pump Type	Brine/Water and Water/Water
Refrigerant	R410A
Mass of Refrigerant	3.4 kg
Certification Date	04.05.2019

Model AQUATOP S14

Model name	AQUATOP S14
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x230V 50Hz
Off-peak product	n/a

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	199 %	157 %
Prated	13.40 kW	11.92 kW
SCOP	5.18	2.00
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.52 kW	12.27 kW
COP Tj = -7°C	4.78	3.04
Cdh Tj = -7 °C		
Pdh Tj = +2°C	14.07 kW	13.35 kW
COP Tj = +2°C	5.34	4.10
Cdh Tj = +2 °C		
Pdh Tj = +7°C	14.07 kW	14.18 kW
COP Tj = +7°C	5.34	4.85
Cdh Tj = +7 °C		
Pdh Tj = 12°C	14.07 kW	14.90 kW
COP Tj = 12°C	5.34	5.71
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.40 kW	11.92 kW
COP Tj = Tbiv	4.65	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.92 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.65	2.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 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 Qhe	5348 kWh	5981 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	201 %	162 %
Prated	13.40 kW	11.92 kW
SCOP	5.23	4.26
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	14.07 kW	13.11 kW
COP Tj = -7°C	5.34	3.85
Cdh Tj = -7 °C		
Pdh Tj = +2°C	14.07 kW	14.06 kW
COP Tj = +2°C	5.34	4.71
Cdh Tj = +2 °C		
Pdh Tj = +7°C	14.07 kW	14.66 kW
COP Tj = +7°C	5.34	5.41
Cdh Tj = +7 °C		
Pdh Tj = 12°C	14.07 kW	14.90 kW
COP Tj = 12°C	5.34	5.71
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.40 kW	11.92 kW
COP Tj = Tbiv	4.65	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.65	2.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	65 °C	65 °C
Poff	0 W	0 W

PTO	20 W	20 W
PSB	20 W	20 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}	6318 kWh	6899 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	198 %	158 %
Prated	13.40 kW	11.92 kW
SCOP	5.15	4.15
T _{biv}	2 °C	2 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = +2°C	13.40 kW	11.92 kW
COP T _j = +2°C	4.65	2.79
C _{dh} T _j = +2 °C		
P _{dh} T _j = +7°C	13.93 kW	12.99 kW
COP T _j = +7°C	5.20	3.62
C _{dh} T _j = +7 °C		
P _{dh} T _j = 12°C	14.07 kW	14.42 kW
COP T _j = 12°C	5.34	5.13
C _{dh} T _j = +12 °C		
P _{dh} T _j = T _{biv}	13.40 kW	11.92 kW
COP T _j = T _{biv}	4.65	2.79
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	13.40 kW	11.92 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.65	2.79
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	1.000	1.000
WTOL	65 °C	65 °C
P _{off}	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 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}	3478 kWh	3834 kWh

Water/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	262 %	209 %
Prated	17.06 kW	15.52 kW
SCOP	6.75	5.43
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.21 kW	15.98 kW
COP Tj = -7°C	6.24	4.01
Cdh Tj = -7 °C		
Pdh Tj = +2°C	17.91 kW	17.38 kW
COP Tj = +2°C	6.97	5.41
Cdh Tj = +2 °C		
Pdh Tj = +7°C	17.91 kW	18.46 kW
COP Tj = +7°C	6.97	6.40
Cdh Tj = +7 °C		
Pdh Tj = 12°C	17.91 kW	19.40 kW
COP Tj = 12°C	6.97	7.53
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	17.06 kW	15.52 kW
COP Tj = Tbiv	6.07	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.06 kW	15.52 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.07	3.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 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 Qhe	5221 kWh	5901 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
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Sound power level indoor	34 dB(A)	34 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
η_s	265 %	217 %
Prated	17.06 kW	15.52 kW
SCOP	6.82	5.62
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.91 kW	17.07 kW
COP Tj = -7°C	6.97	5.08
Cdh Tj = -7 °C		
Pdh Tj = +2°C	17.91 kW	18.31 kW
COP Tj = +2°C	6.97	6.21
Cdh Tj = +2 °C		
Pdh Tj = +7°C	17.91 kW	19.09 kW
COP Tj = +7°C	6.97	7.14
Cdh Tj = +7 °C		
Pdh Tj = 12°C	17.91 kW	19.40 kW
COP Tj = 12°C	6.97	7.53
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	17.06 kW	15.52 kW
COP Tj = Tbiv	6.07	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.06 kW	15.52 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.07	3.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 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 Qhe	6162 kWh	6804 kWh

EN 12102-1 Warmer Climate		
	Low temperature	Medium temperature
Sound power level indoor	34 dB(A)	34 dB(A)
EN 14825 Warmer Climate		
	Low temperature	Medium temperature
η_s	260 %	211 %

Prated	17.06 kW	15.52 kW
SCOP	6.71	5.47
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	17.06 kW	15.52 kW
COP Tj = +2°C	6.07	3.68
Cdh Tj = +2 °C		
Pdh Tj = +7°C	17.73 kW	16.91 kW
COP Tj = +7°C	6.79	4.77
Cdh Tj = +7 °C		
Pdh Tj = 12°C	17.91 kW	18.78 kW
COP Tj = 12°C	6.97	6.77
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	17.06 kW	15.52 kW
COP Tj = Tbiv	6.07	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.06 kW	15.52 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.07	3.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 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 Qhe	3397 kWh	3788 kWh