Summary of	AQUATOP S14	Reg. No.	011-1W0307
Certificate Holder			
Name	ELCO GmbH		
Address	Hohenzollernstrasse 31	Zip	72379
City	Hechingen	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	Wärmepumpen-Testzentrum WPZ		
Subtype title	AQUATOP S14		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R410a		
Mass Of Refrigerant	3.4 kg		
Certification Date	04.05.2019		

Model: AQUATOP S14

General Data	
Power supply	3x230V 50Hz

Brine/Water Heat Pump

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2		
	Medium temperature	**Low temperature**
Heat output	13.47 kW	11.99 kW
El input	2.73 kW	4.27 kW
COP	4.94	2.80
Indoor water flow rate	2.37 m³/h	1.34 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	199 %	157 %
Prated	13.00 kW	12.00 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
Pdh Tj = +2°C	14.07 kW	13.35 kW
COP Tj = +2°C	5.34	4.10
Pdh Tj = +7°C	14.07 kW	14.18 kW
COP Tj = +7°C	5.34	4.85
Pdh Tj = 12°C	14.07 kW	14.90 kW
COP Tj = 12°C	5.34	5.71
Pdh Tj = Tbiv	13.40 kW	11.92 kW
COP Tj = Tbiv	4.65	2.79

Pdh Tj = TOL	13.40 kW	11.92 kW
COP Tj = TOL	4.65	2.79
Cdh	1.00	1.00
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	Elektrizität	Elektrizität
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	5348 kWh	5981 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	198 %	158 %
Prated	13.00 kW	12.00 kW

SCOP	5.15	4.15
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	13.40 kW	11.92 kW
COP Tj = +2°C	4.65	2.79
Pdh Tj = +7°C	13.93 kW	12.99 kW
COP Tj = +7°C	5.20	3.62
Pdh Tj = 12°C	14.07 kW	14.42 kW
COP Tj = 12°C	5.34	5.13
Pdh Tj = Tbiv	13.40 kW	11.92 kW
COP Tj = Tbiv	4.65	2.79
Pdh Tj = TOL	13.40 kW	11.92 kW
COP Tj = TOL	4.65	2.79
Cdh	1.00	1.00
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	Elektrizität	Elektrizität
Supplementary Heater: PSUP	6.00 kW	6.00 kW

Annual energy consumption Qhe	3478 kWh	3834 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	162 %
Prated	13.00 kW	12.00 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
Pdh Tj = +2°C	14.07 kW	14.06 kW
COP Tj = +2°C	5.34	4.71
Pdh Tj = +7°C	14.07 kW	14.66 kW
COP Tj = +7°C	5.34	5.41
Pdh Tj = 12°C	14.07 kW	14.90 kW

COP Tj = 12°C	5.34	5.71
Pdh Tj = Tbiv	13.40 kW	11.92 kW
COP Tj = Tbiv	4.65	2.79
Pdh Tj = TOL	13.40 kW	11.92 kW
COP Tj = TOL	4.65	2.79
Cdh	1.00	1.00
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	Elektrizität	Elektrizität
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	6318 kWh	6899 kWh

Water/Water Heat Pump

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	17.06 kW	15.52 kW
El input	2.81 kW	4.22 kW
COP	6.07	3.68
Indoor water flow rate	3.03 m³/h	1.73 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	262 %	209 %

Prated	17.00 kW	16.00 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
Pdh Tj = +2°C	17.91 kW	17.38 kW
COP Tj = +2°C	6.97	5.41
Pdh Tj = +7°C	17.91 kW	18.46 kW
COP Tj = +7°C	6.97	6.40
Pdh Tj = 12°C	17.91 kW	19.40 kW
COP Tj = 12°C	6.97	7.53
Pdh Tj = Tbiv	17.06 kW	15.52 kW
COP Tj = Tbiv	6.07	3.68
Pdh Tj = TOL	17.06 kW	15.52 kW
COP Tj = TOL	6.07	3.68
Cdh	1.00	1.00
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	Elektrizität	Elektrizität
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	5221 kWh	5901 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	260 %	211 %
Prated	17.00 kW	16.00 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
Pdh Tj = +7°C	17.73 kW	16.91 kW
COP Tj = +7°C	6.79	4.77

Pdh Tj = 12°C	17.91 kW	18.78 kW
COP Tj = 12°C	6.97	6.77
Pdh Tj = Tbiv	17.06 kW	15.52 kW
COP Tj = Tbiv	6.07	3.68
Pdh Tj = TOL	17.06 kW	15.52 kW
COP Tj = TOL	6.07	3.68
Cdh	1.00	1.00
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	Elektrizität	Elektrizität
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	3397 kWh	3788 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	265 %	217 %
Prated	17.00 kW	16.00 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
Pdh Tj = +2°C	17.91 kW	18.31 kW
COP Tj = +2°C	6.97	6.21
Pdh Tj = +7°C	17.91 kW	19.09 kW
COP Tj = +7°C	6.97	7.14
Pdh Tj = 12°C	17.91 kW	19.40 kW
COP Tj = 12°C	6.97	7.53
Pdh Tj = Tbiv	17.06 kW	15.52 kW
COP Tj = Tbiv	6.07	3.68
Pdh Tj = TOL	17.06 kW	15.52 kW
COP Tj = TOL	6.07	3.68
Cdh	1.00	1.00
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	Elektrizität	Elektrizität
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	6162 kWh	6804 kWh