Summary of	AQUATOP S17	Reg. No.	011-1W0308
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 S17		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R410a		
Mass Of Refrigerant	3.8 kg		
Certification Date	04.05.2019		

Model: AQUATOP S17

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	16.83 kW	14.78 kW
El input	3.44 kW	5.34 kW
COP	4.89	2.77
Indoor water flow rate	2.91 m³/h	1.65 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	158 %
Prated	17.00 kW	15.00 kW
SCOP	5.22	4.15
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.08 kW	15.72 kW
COP Tj = -7°C	5.37	3.05
Pdh Tj = +2°C	17.76 kW	17.10 kW
COP Tj = +2°C	5.37	4.11
Pdh Tj = +7°C	17.76 kW	18.17 kW
COP Tj = +7°C	5.37	4.87
Pdh Tj = 12°C	17.76 kW	19.10 kW
COP Tj = 12°C	5.37	5.74
Pdh Tj = Tbiv	16.92 kW	15.27 kW
COP Tj = Tbiv	4.67	2.80

Pdh Tj = TOL	16.92 kW	15.27 kW
COP Tj = TOL	4.67	2.80
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	6700 kWh	7605 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	200 %	159 %
Prated	17.00 kW	15.00 kW

SCOP	5.19	4.19
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	16.92 kW	15.27 kW
COP Tj = +2°C	4.67	2.80
Pdh Tj = +7°C	17.59 kW	16.64 kW
COP Tj = +7°C	5.23	3.64
Pdh Tj = 12°C	17.76 kW	18.47 kW
COP Tj = 12°C	5.37	5.15
Pdh Tj = Tbiv	16.92 kW	15.27 kW
COP Tj = Tbiv	4.67	2.80
Pdh Tj = TOL	16.92 kW	15.27 kW
COP Tj = TOL	4.67	2.80
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	4354 kWh	4872 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	203 %	160 %
Prated	17.00 kW	15.00 kW
SCOP	5.28	4.19
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.76 kW	16.79 kW
COP Tj = -7°C	5.37	3.86
Pdh Tj = +2°C	17.76 kW	18.01 kW
COP Tj = +2°C	5.37	4.73
Pdh Tj = +7°C	17.76 kW	18.78 kW
COP Tj = +7°C	5.37	5.43
Pdh Tj = 12°C	17.76 kW	19.08 kW

COP Tj = 12°C	5.37	5.74
Pdh Tj = Tbiv	16.92 kW	15.27 kW
COP Tj = Tbiv	4.67	2.80
Pdh Tj = TOL	16.92 kW	15.27 kW
COP Tj = TOL	4.67	2.80
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	7901 kWh	8986 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	21.27 kW	19.35 kW
El input	3.53 kW	5.31 kW
COP	6.03	3.64
Indoor water flow rate	3.72 m³/h	2.13 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	261 %	207 %

Prated	21.00 kW	19.00 kW
SCOP	6.73	5.39
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	21.47 kW	19.92 kW
COP Tj = -7°C	6.21	3.97
Pdh Tj = +2°C	22.33 kW	21.67 kW
COP Tj = +2°C	6.93	5.34
Pdh Tj = +7°C	22.33 kW	23.02 kW
COP Tj = +7°C	6.93	6.93
Pdh Tj = 12°C	22.33 kW	24.18 kW
COP Tj = 12°C	6.93	7.46
Pdh Tj = Tbiv	21.47 kW	19.35 kW
COP Tj = Tbiv	6.21	3.64
Pdh Tj = TOL	21.47 kW	19.35 kW
COP Tj = TOL	6.21	3.64
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	6526 kWh	7422 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 %	210 %
Prated	21.00 kW	19.00 kW
SCOP	6.70	5.44
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	21.27 kW	19.35 kW
COP Tj = +2°C	6.03	3.64
Pdh Tj = +7°C	22.11 kW	21.09 kW
COP Tj = +7°C	6.75	4.73

Pdh Tj = 12°C	22.33 kW	23.41 kW
COP Tj = 12°C	6.93	6.70
Pdh Tj = Tbiv	21.27 kW	19.35 kW
COP Tj = Tbiv	6.03	3.64
Pdh Tj = TOL	21.27 kW	19.35 kW
COP Tj = TOL	6.03	3.64
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	4242 kWh	4754 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	264 %	215 %
Prated	21.00 kW	19.00 kW
SCOP	6.81	5.58
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	22.33 kW	21.28 kW
COP Tj = -7°C	6.93	5.02
Pdh Tj = +2°C	22.33 kW	22.82 kW
COP Tj = +2°C	6.93	6.15
Pdh Tj = +7°C	22.33 kW	23.80 kW
COP Tj = +7°C	6.93	7.06
Pdh Tj = 12°C	22.33 kW	24.18 kW
COP Tj = 12°C	6.93	7.46
Pdh Tj = Tbiv	21.27 kW	19.35 kW
COP Tj = Tbiv	6.03	3.64
Pdh Tj = TOL	21.27 kW	19.35 kW
COP Tj = TOL	6.03	3.64
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	7701 kWh	8552 kWh