

Summary of	AQUATOP S14	Reg. No.	011-1W0307	
Certificate Holder	<del></del>			
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 W	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** 

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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		
СОР	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	
$\eta_{s}$	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
РТО	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

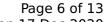
EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	42 dB(A)	42 dB(A)		

Low temperature	Medium temperature
198 %	158 %
13.00 kW	12.00 kW
	198 %





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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
$COP Tj = +7^{\circ}C$	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	o w	0 W
РТО	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
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Annual energy consumption Qhe	3478 kWh	3834 kWh
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## 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
$\eta_{s}$	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





5.71	5.34	COP Tj = 12°C
11.92 kW	13.40 kW	Pdh Tj = Tbiv
2.79	4.65	COP Tj = Tbiv
11.92 kW	13.40 kW	Pdh Tj = TOL
2.79	4.65	COP Tj = TOL
1.00	1.00	Cdh
65 °C	65 °C	WTOL
0 W	0 W	Poff
20 W	20 W	РТО
20 W	20 W	PSB
0 W	0 W	PCK
Elektrizität	Elektrizität	Supplementary Heater: Type of energy input
6.00 kW	6.00 kW	Supplementary Heater: PSUP
6899 kWh	6318 kWh	Annual energy consumption Qhe
1.00 65 °C 0 W 20 W 20 W 0 W Elektrizität 6.00 kW	1.00 65 °C 0 W 20 W 20 W 0 W Elektrizität 6.00 kW	Cdh WTOL Poff PTO PSB PCK Supplementary Heater: Type of energy input Supplementary Heater: PSUP

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	
СОР	6.07	3.68	
Indoor water flow rate	3.03 m³/h	1.73 m³/h	

## Average Climate

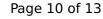
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	262 %	209 %





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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
$COP Tj = -7^{\circ}C$	6.24	4.01
Pdh Tj = $+2$ °C	17.91 kW	17.38 kW
COP Tj = +2°C	6.97	5.41
Pdh Tj = $+7^{\circ}$ C	17.91 kW	18.46 kW
$COP Tj = +7^{\circ}C$	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	o w	o w
РТО	20 W	20 W
PSB	20 W	20 W





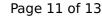
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PCK	o w	0 W
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	5221 kWh	5901 kWh

## 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
$\eta_{s}$	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
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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
РТО	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
$\eta_{s}$	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



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Poff	o w	o w
РТО	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