

Summary of	AQUATOP T28H	Reg. No.	011-1W0310
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	TÜV Rheinland Energy GmbH		
Subtype title	AQUATOP T28H		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R407c		
Mass Of Refrigerant	5.7 kg		
Certification Date	04.05.2019		



Model: AQUATOP T28H

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			
	Low temperature	Medium temperature	
Heat output	28.70 kW	24.80 kW	
El input	6.50 kW	9.20 kW	
СОР	4.40	2.70	
Indoor water flow rate	4.94 m³/h	3.53 m³/h	

Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	59 dB(A)	59 dB(A)	

	EN 14825	
	Low temperature	Medium temperature
η_{s}	192 %	155 %
Prated	29.00 kW	25.00 kW
SCOP	5.01	4.08
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	28.99 kW	25.54 kW
COP Tj = -7°C	4.49	2.94
Pdh Tj = +2°C	29.85 kW	27.53 kW
COP Tj = +2°C	5.02	4.05
Pdh Tj = +7°C	30.42 kW	28.52 kW
COP Tj = +7°C	5.24	4.75
Pdh Tj = 12°C	31.00 kW	29.76 kW
COP Tj = 12°C	5.54	5.56
Pdh Tj = Tbiv	28.70 kW	24.80 kW
COP Tj = Tbiv	4.40	2.70

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Pdh Tj = TOL	28.70 kW	24.80 kW
COP Tj = TOL	4.40	2.70
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	o w	o w
РТО	10 W	10 W
PSB	10 W	10 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11837 kWh	12560 kWh

Warmer Climate

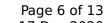
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	59 dB(A)	59 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	193 %	157 %
Prated	29.00 kW	25.00 kW





This information was generated by the HP RETMARK database on 17 Dec 2020				
SCOP	5.03	4.13		
Tbiv	2 °C	2 °C		
TOL	-22 °C	-22 °C		
Pdh Tj = +2°C	28.70 kW	24.80 kW		
COP Tj = +2°C	4.40	2.70		
Pdh Tj = +7°C	29.56 kW	26.54 kW		
$COPTj = +7^{\circ}C$	4.84	3.59		
Pdh Tj = 12°C	30.42 kW	29.02 kW		
COP Tj = 12°C	5.32	5.00		
Pdh Tj = Tbiv	28.70 kW	24.80 kW		
COP Tj = Tbiv	4.40	2.70		
Pdh Tj = TOL	28.70 kW	24.80 kW		
COP Tj = TOL	4.40	2.70		
Cdh	1.00	1.00		
WTOL	60 °C	60 °C		
Poff	0 W	0 W		
РТО	10 W	10 W		
PSB	10 W	10 W		
PCK	0 W	0 W		
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität		
Supplementary Heater: PSUP	0.00 kW	0.00 kW		
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This information was	generated by the	HP KEYMARK o	database on 17 Dec 2020

Annual energy consumption Qhe	7630 kWh	8030 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	59 dB(A)	59 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	161 %
Prated	29.00 kW	25.00 kW
SCOP	5.13	4.23
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	29.85 kW	27.03 kW
COP Tj = -7°C	5.02	3.81
Pdh Tj = +2°C	30.42 kW	28.52 kW
COP Tj = +2°C	5.24	4.62
Pdh Tj = +7°C	30.71 kW	29.51 kW
COP Tj = +7°C	5.46	5.24
Pdh Tj = 12°C	31.00 kW	30.26 kW

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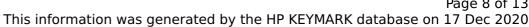




5.67
24.80 kW
2.70
24.80 kW
2.70
1.00
60 °C
0 W
10 W
10 W
0 W
Elektrizität
0.00 kW
14453 kWh

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	35.50 kW	34.20 kW	
El input	7.00 kW	9.70 kW	
СОР	5.10	3.50	
Indoor water flow rate	6.15 m³/h	4.37 m³/h	

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	59 dB(A)	59 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	232 %	189 %





Prated	37.00 kW	34.00 kW
SCOP	6.00	4.92
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	37.49 kW	34.90 kW
COP Tj = -7°C	5.47	3.76
Pdh Tj = +2°C	38.35 kW	36.89 kW
COP Tj = +2°C	5.99	4.87
Pdh Tj = +7°C	38.92 kW	37.88 kW
COP Tj = +7°C	6.22	5.57
Pdh Tj = 12°C	39.50 kW	39.12 kW
COP Tj = 12°C	6.52	6.38
Pdh Tj = Tbiv	37.20 kW	34.16 kW
COP Tj = Tbiv	5.38	3.52
Pdh Tj = TOL	37.20 kW	34.16 kW
COP Tj = TOL	5.38	3.52
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	o w	o w
РТО	10 W	10 W
PSB	10 W	10 W





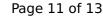
PCK	o w	0 W
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	12807 kWh	14330 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	59 dB(A)	59 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	233 %	191 %
Prated	37.00 kW	34.00 kW
SCOP	6.02	4.98
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	37.20 kW	34.16 kW
COP Tj = +2°C	5.38	3.52
Pdh Tj = +7°C	38.06 kW	35.90 kW
COP Tj = +7°C	5.82	4.41

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Pdh Tj = 12°C	38.92 kW	38.38 kW
COP Tj = 12°C	6.30	5.82
Pdh Tj = Tbiv	37.20 kW	34.16 kW
COP Tj = Tbiv	5.38	3.52
Pdh Tj = TOL	37.20 kW	34.16 kW
COP Tj = TOL	5.38	3.52
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	o w	0 W
РТО	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	8253 kWh	9170 kWh

Colder Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	59 dB(A)	59 dB(A)		





EN 14825

	Low temperature	Medium temperature
η_{s}	236 %	192 %
Prated	37.00 kW	34.00 kW
SCOP	6.09	5.01
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	38.35 kW	36.39 kW
COP Tj = -7°C	5.99	4.63
Pdh Tj = +2°C	38.92 kW	37.88 kW
COP Tj = +2°C	6.22	5.43
Pdh Tj = +7°C	39.21 kW	38.87 kW
COP Tj = +7°C	6.44	6.05
Pdh Tj = 12°C	39.50 kW	39.62 kW
COP Tj = 12°C	6.52	6.48
Pdh Tj = Tbiv	37.20 kW	34.16 kW
COP Tj = Tbiv	5.38	3.52
Pdh Tj = TOL	37.20 kW	34.16 kW
COP Tj = TOL	5.38	3.52
Cdh	1.00	1.00
WTOL	60 °C	60 °C



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Poff	o w	o w
РТО	10 W	10 W
PSB	10 W	10 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	15056 kWh	16805 kWh