

Summary of	AQUATOP T43H	Reg. No.	011-1W0312
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 T43H		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R407c		
Mass Of Refrigerant	7.4 kg		
Certification Date	04.05.2019		



Model: AQUATOP T43H

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	44.44 kW	41.30 kW
El input	10.00 kW	13.50 kW
СОР	4.40	3.10
Indoor water flow rate	7.39 m³/h	5.46 m³/h

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	192 %	180 %
Prated	44.00 kW	41.00 kW
SCOP	5.01	4.69
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	44.84 kW	42.54 kW
COP Tj = -7°C	4.49	3.38
Pdh Tj = +2°C	46.18 kW	45.84 kW
COP Tj = +2°C	5.02	4.65
Pdh Tj = +7°C	47.06 kW	47.50 kW
COP Tj = +7°C	5.24	5.46
Pdh Tj = 12°C	47.95 kW	49.56 kW
COP Tj = 12°C	5.54	6.39
Pdh Tj = Tbiv	44.40 kW	41.30 kW
COP Tj = Tbiv	4.40	3.10

EHPA Secretariat | Rue dArlon 63-67 | Phone: +32 2 400 10 17 | Email: secretariat@heatpumpkeymark.com | www.heatpumpkeymark.com





Pdh Tj = TOL	44.40 kW	41.30 kW
COP Tj = TOL	4.40	3.10
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	18311 kWh	18195 kWh

Warmer Climate

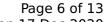
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	61 dB(A)	61 dB(A)

Low temperature	NA
•	Medium temperature
193 %	181 %
44.00 kW	41.00 kW





THIS IIIIOTHIALION WAS	generated by the HP	KEYMARK database on 17 Dec 2020
SCOP	5.04	4.74
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	44.40 kW	41.30 kW
$COP Tj = +2^{\circ}C$	4.40	3.10
Pdh Tj = +7°C	45.73 kW	44.19 kW
$COPTj = +7^{\circ}C$	4.84	4.12
Pdh Tj = 12°C	47.06 kW	48.32 kW
COP Tj = 12°C	5.32	5.74
Pdh Tj = Tbiv	44.40 kW	41.30 kW
COP Tj = Tbiv	4.40	3.10
Pdh Tj = TOL	44.40 kW	41.30 kW
COP Tj = TOL	4.40	3.10
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
РСК	o w	o w
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Supplementary Heater: PSUP	0.00 kW	0.00 kW
		1





Annual energy consumption Qhe	11777 kWh	11648 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	187 %
Prated	44.00 kW	41.00 kW
SCOP	5.13	4.87
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	46.18 kW	45.02 kW
COP Tj = -7°C	5.02	4.37
Pdh Tj = +2°C	47.06 kW	47.50 kW
COP Tj = +2°C	5.24	5.30
Pdh Tj = +7°C	47.51 kW	49.15 kW
$COP Tj = +7^{\circ}C$	5.46	6.01
Pdh Tj = 12°C	47.95 kW	50.39 kW

EHPA Secretariat | Rue dArlon 63-67 | Phone: +32 2 400 10 17 | Email: secretariat@heatpumpkeymark.com | www.heatpumpkeymark.com





COP Tj = 12°C 5.54 6.51 Pdh Tj = Tbiv 44.40 kW 41.30 kW COP Tj = Tbiv 4.40 3.10 Pdh Tj = TOL 44.40 kW 41.30 kW COP Tj = TOL 4.40 3.10 Cdh 1.00 1.00 WTOL 60 °C 60 °C Poff 0 W 0 W PTO 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 21336 kWh 20905 kWh			
COP Tj = Tbiv	COP Tj = 12°C	5.54	6.51
Pdh Tj = TOL 44.40 kW 41.30 kW COP Tj = TOL 4.40 3.10 Cdh 1.00 1.00 WTOL 60 °C 60 °C Poff 0 W 0 W PTO 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	Pdh Tj = Tbiv	44.40 kW	41.30 kW
COP Tj = TOL 4.40 3.10 Cdh 1.00 1.00 WTOL 60 °C 60 °C Poff 0 W 0 W PTO 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	COP Tj = Tbiv	4.40	3.10
Cdh 1.00 1.00 1.00 WTOL 60 °C 60 °C Poff 0 W 0 W PTO 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	Pdh Tj = TOL	44.40 kW	41.30 kW
WTOL 60 °C 60 °C 0 W 0 W PTO 10 W 10 W 10 W PSB 10 W 10 W 0 W PCK 0 W Elektrizität Elektrizität Supplementary Heater: PSUP 0.00 kW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	COP Tj = TOL	4.40	3.10
Poff 0 W 0 W PTO 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	Cdh	1.00	1.00
PTO 10 W 10 W PSB 10 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input Elektrizität Elektrizität Supplementary Heater: PSUP 0.00 kW 0.00 kW	WTOL	60 °C	60 °C
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	Poff	0 W	0 W
PCK 0 W 0 W Supplementary Heater: Type of energy input Elektrizität Elektrizität Supplementary Heater: PSUP 0.00 kW 0.00 kW	РТО	10 W	10 W
Supplementary Heater: Type of energy input Elektrizität Elektrizität Supplementary Heater: PSUP 0.00 kW 0.00 kW	PSB	10 W	10 W
Supplementary Heater: PSUP 0.00 kW 0.00 kW	PCK	0 W	0 W
	Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Annual energy consumption Qhe 21336 kWh 20905 kWh	Supplementary Heater: PSUP	0.00 kW	0.00 kW
	Annual energy consumption Qhe	21336 kWh	20905 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	47.30 kW	54.50 kW	
El input	11.30 kW	39.20 kW	
СОР	5.20	3.60	
Indoor water flow rate	10.10 m³/h	7.21 m³/h	

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	224 %	199 %





This information was get	Teracea by the rin Renn	ANN database on 17 Dec 2020
Prated	59.00 kW	55.00 kW
SCOP	5.81	5.17
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	59.04 kW	55.74 kW
COP Tj = -7 °C	5.28	3.84
Pdh Tj = $+2$ °C	60.38 kW	59.04 kW
$COP Tj = +2^{\circ}C$	5.81	5.11
Pdh Tj = $+7^{\circ}$ C	61.26 kW	60.70 kW
$COP Tj = +7^{\circ}C$	6.02	5.92
Pdh Tj = 12°C	62.15 kW	62.76 kW
COP Tj = 12°C	6.33	6.85
Pdh Tj = Tbiv	58.60 kW	54.50 kW
COP Tj = Tbiv	5.19	3.56
Pdh Tj = TOL	58.60 kW	54.50 kW
COP Tj = TOL	5.19	3.56
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





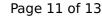
PCK	o w	0 W
Supplementary Heater: Type of energy input	Elektrizität	Elektrizität
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	20831 kWh	21775 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	225 %	201 %
Prated	59.00 kW	55.00 kW
SCOP	5.83	5.23
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	58.60 kW	54.50 kW
COP Tj = +2°C	5.19	3.56
Pdh Tj = +7°C	59.93 kW	57.39 kW
COP Tj = +7°C	5.63	4.58

EHPA Secretariat | Rue dArlon 63-67 | Phone: +32 2 400 10 17 | Email: secretariat@heatpumpkeymark.com | www.heatpumpkeymark.com





	<u> </u>	
Pdh Tj = 12°C	61.26 kW	61.52 kW
COP Tj = 12°C	6.11	6.20
Pdh Tj = Tbiv	58.60 kW	54.50 kW
COP Tj = Tbiv	5.19	3.56
Pdh Tj = TOL	58.60 kW	54.50 kW
COP Tj = TOL	5.19	3.56
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
Annual energy consumption Qhe	13422 kWh	13929 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	61 dB(A)	61 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	228 %	203 %
Prated	59.00 kW	55.00 kW
SCOP	5.90	5.26
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	60.38 kW	58.22 kW
COP Tj = -7°C	5.81	4.83
Pdh Tj = +2°C	61.26 kW	60.70 kW
COP Tj = +2°C	6.02	5.76
Pdh Tj = +7°C	61.71 kW	62.35 kW
COP Tj = +7°C	6.25	6.47
Pdh Tj = 12°C	62.15 kW	63.59 kW
COP Tj = 12°C	6.33	6.97
Pdh Tj = Tbiv	58.60 kW	54.50 kW
COP Tj = Tbiv	5.19	3.56
Pdh Tj = TOL	58.60 kW	54.50 kW
COP Tj = TOL	5.19	3.56
Cdh	1.00	1.00
WTOL	60 °C	60 °C



$$\operatorname{\textit{Page}}\ 13$$ of 13 This information was generated by the HP KEYMARK database on 17 Dec 2020

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	24485 kWh	25527 kWh