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Login

Summary of	AQUATOP T22H	Reg. No.	011-1W0309	
Certificate Holder		<u> </u>	'	
Name	ELCO GmbH	ELCO GmbH		
Address	Hohenzollernstrasse 31	Zip	72379	
City	Hechingen	Country	Germany	
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	AQUATOP T22H			
Heat Pump Type	Brine/Water and Water/Water			
Refrigerant	R407c			
Mass of Refrigerant	4.1 kg			
Certification Date	04.05.2019			



Model: AQUATOP T22H

Configure model		
Model name	AQUATOP T22H	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

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	21.00 kW	20.40 kW
El input	4.60 kW	7.00 kW
СОР	4.60	2.90

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

EN 14825			
	Low temperature	Medium temperature	
η_{s}	202 %	169 %	
Prated	21.00 kW	20.00 kW	
SCOP	5.25	4.42	
Tbiv	2 °C	2 °C	
TOL	-22 °C	-22 °C	
Pdh Tj = +2°C	21.00 kW	20.40 kW	
COP Tj = +2°C	4.60	2.90	
Pdh Tj = $+7^{\circ}$ C	21.63 kW	21.83 kW	
$COP Tj = +7^{\circ}C$	5.06	3.86	
Pdh Tj = 12°C	22.26 kW	23.87 kW	
COP Tj = 12°C	5.57	5.37	
Pdh Tj = Tbiv	21.00 kW	20.40 kW	
COP Tj = Tbiv	4.60	2.90	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.00 kW	20.40 kW	
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.60	2.90	





Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5341 kWh	6160 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	206 %	174 %
Prated	21.00 kW	20.00 kW
SCOP	5.35	4.54
Tbiv	-22 °C	-22 °C





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TOL	-22 °C	-22 °C
Pdh Tj = -7°C	21.84 kW	22.24 kW
$COP Tj = -7^{\circ}C$	5.24	4.09
Pdh Tj = +2°C	22.26 kW	23.46 kW
COP Tj = +2°C	5.47	4.96
Pdh Tj = $+7^{\circ}$ C	22.47 kW	24.28 kW
$COPTj = +7^{\circ}C$	5.70	5.63
Pdh Tj = 12°C	22.68 kW	24.89 kW
COP Tj = 12°C	5.80	6.09
Pdh Tj = Tbiv	21.00 kW	20.40 kW
COP Tj = Tbiv	4.60	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.00 kW	20.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.60	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
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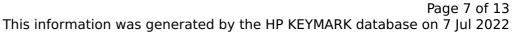


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Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	54 dB(A)	54 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{S}	201 %	167 %
Prated	21.00 kW	20.00 kW
SCOP	5.23	4.38
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7° C	21.21 kW	21.01 kW
COP Tj = -7°C	4.69	3.16
Pdh Tj = $+2$ °C	21.84 kW	22.64 kW
COP Tj = +2°C	5.24	4.35
Pdh Tj = $+7^{\circ}$ C	22.26 kW	23.46 kW
COP Tj = +7°C	5.47	5.10
Pdh Tj = 12°C	22.68 kW	24.48 kW





COP Tj = 12°C	5.80	5.97
Pdh Tj = Tbiv	21.00 kW	20.40 kW
COP Tj = Tbiv	4.60	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.00 kW	20.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.60	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	8297 kWh	9624 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	25.90 kW	25.60 kW	
El input	4.70 kW	7.30 kW	
СОР	5.50	3.90	

Warmer Climate

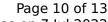
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	54 dB(A)	54 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	241 %	195 %
Prated	26.00 kW	26.00 kW





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SCOP	6.22	5.08
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	25.90 kW	25.56 kW
COP Tj = +2°C	5.55	3.52
Pdh Tj = +7°C	26.53 kW	26.99 kW
$COPTj = +7^{\circ}C$	6.00	4.48
Pdh Tj = 12°C	27.16 kW	29.03 kW
COP Tj = 12°C	6.51	5.99
Pdh Tj = Tbiv	25.90 kW	25.56 kW
COP Tj = Tbiv	5.55	3.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	25.90 kW	25.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.55	3.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	0 W	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
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nual energy consumption Qhe	5566 kWh 6720) kWh
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Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	54 dB(A)	54 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{S}	244 %	197 %
Prated	26.00 kW	26.00 kW
SCOP	6.29	5.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7° C	26.74 kW	27.40 kW
COP Tj = -7°C	6.19	4.71
Pdh Tj = +2°C	27.16 kW	28.62 kW
COP Tj = +2°C	6.42	5.58
Pdh Tj = $+7^{\circ}$ C	27.37 kW	29.44 kW
COP Tj = +7°C	6.64	6.25
Pdh Tj = 12°C	27.58 kW	30.05 kW

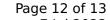


COP Tj = 12°C	6.74	6.71
Pdh Tj = Tbiv	25.90 kW	25.56 kW
COP Tj = Tbiv	5.55	3.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	25.90 kW	25.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.55	3.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	0 W	0 W
РТО	10 W	10 W
PSB	10 W	10 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	10151 kWh	12316 kWh

Average Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	54 dB(A)	54 dB(A)		

EN 14825





	Low temperature	Medium temperature
η_{S}	240 %	193 %
Prated	26.00 kW	26.00 kW
SCOP	6.20	5.03
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7° C	26.11 kW	26.17 kW
$COP Tj = -7^{\circ}C$	5.64	3.78
Pdh Tj = $+2$ °C	26.74 kW	27.80 kW
COP Tj = +2°C	6.19	4.97
Pdh Tj = $+7^{\circ}$ C	27.16 kW	28.62 kW
$COP Tj = +7^{\circ}C$	6.42	5.72
Pdh Tj = 12°C	27.58 kW	29.64 kW
COP Tj = 12°C	6.74	6.59
Pdh Tj = Tbiv	25.90 kW	25.56 kW
COP Tj = Tbiv	5.55	3.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	25.90 kW	25.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.55	3.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	0 W	o w



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РТО	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	8634 kWh	10501 kWh