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Summary of	AQUATOP T35H	Reg. No.	011-1W0311
Certificate Holder			
Name	ELCO GmbH		
Address	Hohenzollernstrasse 31	Zip	72379
City	Hechingen	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	AQUATOP T35H		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R407c		
Mass of Refrigerant	6.2 kg		
Certification Date	04.05.2019		

Model: AQUATOP T35H

Configure model	
Model name	AQUATOP T35H
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	36.70 kW	34.70 kW
El input	8.30 kW	11.40 kW
COP	4.40	3.00

Warmer Climate

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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	193 %	175 %
Prated	37.00 kW	35.00 kW
SCOP	5.04	4.59
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	36.70 kW	34.70 kW
COP Tj = +2°C	4.40	3.00
Pdh Tj = +7°C	37.80 kW	37.12 kW
COP Tj = +7°C	4.84	3.99
Pdh Tj = 12°C	38.90 kW	40.60 kW
COP Tj = 12°C	5.32	5.55
Pdh Tj = Tbiv	36.70 kW	34.70 kW
COP Tj = Tbiv	4.40	3.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	36.70 kW	34.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	3.00

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$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	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	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q_{he}	9736 kWh	10108 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 %	180 %
Prated	37.00 kW	35.00 kW
SCOP	5.13	4.71
Tbiv	-22 °C	-22 °C

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TOL	-22 °C	-22 °C
Pdh Tj = -7°C	38.17 kW	37.82 kW
COP Tj = -7°C	5.02	4.23
Pdh Tj = +2°C	38.90 kW	39.91 kW
COP Tj = +2°C	5.24	5.13
Pdh Tj = +7°C	39.27 kW	41.29 kW
COP Tj = +7°C	5.46	5.82
Pdh Tj = 12°C	39.64 kW	42.33 kW
COP Tj = 12°C	5.54	6.30
Pdh Tj = Tbiv	36.70 kW	34.70 kW
COP Tj = Tbiv	4.40	3.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	36.70 kW	34.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	3.00
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

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Annual energy consumption Q_{he}	17636 kWh	18161 kWh
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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 %	174 %
Prated	37.00 kW	35.00 kW
SCOP	5.01	4.54
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh $T_j = -7^\circ\text{C}$	37.07 kW	35.74 kW
COP $T_j = -7^\circ\text{C}$	4.49	3.27
Pdh $T_j = +2^\circ\text{C}$	38.17 kW	38.52 kW
COP $T_j = +2^\circ\text{C}$	5.02	4.50
Pdh $T_j = +7^\circ\text{C}$	38.90 kW	39.91 kW
COP $T_j = +7^\circ\text{C}$	5.24	5.28
Pdh $T_j = 12^\circ\text{C}$	39.64 kW	41.64 kW

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COP Tj = 12°C	5.54	6.18
Pdh Tj = Tbiv	36.70 kW	34.70 kW
COP Tj = Tbiv	4.40	3.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	36.70 kW	34.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	3.00
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	15136 kWh	15793 kWh

Water/Water Heat Pump

Heating

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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	38.90 kW	46.00 kW
El input	9.20 kW	12.60 kW
COP	5.30	3.70

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	230 %	203 %
Prated	49.00 kW	46.00 kW

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SCOP	5.96	5.27
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	48.85 kW	46.00 kW
COP Tj = +2°C	5.31	3.65
Pdh Tj = +7°C	49.95 kW	48.42 kW
COP Tj = +7°C	5.75	4.64
Pdh Tj = 12°C	51.05 kW	51.90 kW
COP Tj = 12°C	6.23	6.20
Pdh Tj = Tbiv	48.85 kW	46.00 kW
COP Tj = Tbiv	5.31	3.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	48.85 kW	46.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.31	3.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

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Annual energy consumption Q_{he}	10958 kWh	11670 kWh
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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	233 %	204 %
Prated	49.00 kW	46.00 kW
SCOP	6.02	5.30
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	50.32 kW	49.12 kW
COP Tj = -7°C	5.93	4.88
Pdh Tj = +2°C	51.05 kW	51.21 kW
COP Tj = +2°C	6.15	5.78
Pdh Tj = +7°C	51.42 kW	52.59 kW
COP Tj = +7°C	6.37	6.47
Pdh Tj = 12°C	51.79 kW	53.63 kW

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COP Tj = 12°C	6.45	6.95
Pdh Tj = Tbiv	48.85 kW	46.00 kW
COP Tj = Tbiv	5.31	3.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	48.85 kW	46.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.31	3.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	19989 kWh	21386 kWh

Average Climate

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

EN 14825

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	Low temperature	Medium temperature
η_s	229 %	200 %
Prated	49.00 kW	46.00 kW
SCOP	5.93	5.21
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	49.22 kW	47.04 kW
COP Tj = -7°C	5.40	3.92
Pdh Tj = +2°C	50.32 kW	49.82 kW
COP Tj = +2°C	5.93	5.15
Pdh Tj = +7°C	51.05 kW	51.21 kW
COP Tj = +7°C	6.15	5.93
Pdh Tj = 12°C	51.79 kW	52.94 kW
COP Tj = 12°C	6.45	6.83
Pdh Tj = Tbiv	48.85 kW	46.00 kW
COP Tj = Tbiv	5.31	3.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	48.85 kW	46.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.31	3.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	0 W	0 W

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PTO	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 Q _{he}	17006 kWh	18234 kWh