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Summary of	AQUATOP S08	Reg. No.	011-1W0305
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 S08		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R410A		
Mass of Refrigerant	2.3 kg		
Certification Date	04.05.2019		

## Model: AQUATOP S08

Configure model	
Model name	AQUATOP S08
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		
	Medium temperature	Low temperature
Heat output	7.74 kW	6.71 kW
El input	1.44 kW	2.53 kW
COP	4.65	2.65

### Average Climate

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### EN 12102-1

	Medium temperature	Low temperature
Sound power level indoor	34 dB(A)	34 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	189 %	154 %
Prated	8.00 kW	7.00 kW
SCOP	4.92	4.06
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.33 kW	7.58 kW
COP Tj = -7°C	4.59	3.01
Pdh Tj = +2°C	8.66 kW	8.24 kW
COP Tj = +2°C	5.12	4.07
Pdh Tj = +7°C	8.66 kW	8.75 kW
COP Tj = +7°C	5.12	4.81
Pdh Tj = 12°C	8.25 kW	9.20 kW
COP Tj = 12°C	5.12	5.67
Pdh Tj = Tbiv	8.25 kW	7.36 kW
COP Tj = Tbiv	4.46	2.77

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$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	8.25 kW	7.36 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	4.46	2.77
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	1.00	1.00
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption $Q_{he}$	3461 kWh	3749 kWh

## Warmer Climate

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

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	187 %	155 %
Prated	8.00 kW	7.00 kW

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SCOP	4.89	4.08
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	8.25 kW	7.36 kW
COP Tj = +2°C	4.46	2.77
Pdh Tj = +7°C	8.58 kW	8.02 kW
COP Tj = +7°C	4.99	3.60
Pdh Tj = 12°C	8.66 kW	8.90 kW
COP Tj = 12°C	5.12	5.09
Pdh Tj = Tbiv	8.25 kW	7.36 kW
COP Tj = Tbiv	4.46	2.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.25 kW	7.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.46	2.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW

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Annual energy consumption Q <sub>he</sub>	2255 kWh	2408 kWh
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## Colder Climate

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

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	191 %	160 %
Prated	8.00 kW	7.00 kW
SCOP	4.98	4.20
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	8.66 kW	8.09 kW
COP T <sub>j</sub> = -7°C	5.12	3.82
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.68 kW	8.68 kW
COP T <sub>j</sub> = +2°C	5.12	4.68
P <sub>dh</sub> T <sub>j</sub> = +7°C	8.68 kW	9.05 kW
COP T <sub>j</sub> = +7°C	5.12	5.37
P <sub>dh</sub> T <sub>j</sub> = 12°C	8.68 kW	9.20 kW

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COP Tj = 12°C	5.12	5.67
Pdh Tj = Tbiv	8.25 kW	7.36 kW
COP Tj = Tbiv	4.46	2.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.25 kW	7.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.46	2.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	4086 kWh	4323 kWh

Water/Water Heat Pump

## Heating

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<b>EN 14511-4</b>	
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

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	9.84 kW	8.95 kW
El input	1.73 kW	2.60 kW
COP	5.69	3.44

## Average Climate

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

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	243 %	193 %
Prated	10.00 kW	9.00 kW



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SCOP	6.28	5.04
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.94 kW	9.22 kW
COP Tj = -7°C	5.86	3.74
Pdh Tj = +2°C	10.33 kW	10.02 kW
COP Tj = +2°C	6.53	5.05
Pdh Tj = +7°C	10.33 kW	10.64 kW
COP Tj = +7°C	6.53	5.97
Pdh Tj = 12°C	10.33 kW	11.19 kW
COP Tj = 12°C	6.53	7.04
Pdh Tj = Tbiv	9.84 kW	8.95 kW
COP Tj = Tbiv	5.69	3.44
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.84 kW	8.95 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.69	3.44
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	0 W	0 W

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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Q <sub>he</sub>	3238 kWh	3671 kWh

## Warmer Climate

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

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	241 %	195 %
Prated	10.00 kW	9.00 kW
SCOP	6.23	5.07
T <sub>biv</sub>	2 °C	2 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	9.84 kW	8.95 kW
COP T <sub>j</sub> = +2°C	5.69	3.44
P <sub>dh</sub> T <sub>j</sub> = +7°C	10.23 kW	9.75 kW
COP T <sub>j</sub> = +7°C	6.37	4.47
P <sub>dh</sub> T <sub>j</sub> = 12°C	10.33 kW	10.82 kW

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COP Tj = 12°C	6.53	6.32
Pdh Tj = Tbiv	9.84 kW	8.95 kW
COP Tj = Tbiv	5.69	3.44
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.84 kW	8.95 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.69	3.44
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	2112 kWh	2360 kWh

## Colder Climate

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

<b>EN 14825</b>
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	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	246 %	200 %
Prated	10.00 kW	9.00 kW
SCOP	6.34	5.21
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	10.33 kW	9.84 kW
COP Tj = -7°C	3.44	4.74
Pdh Tj = +2°C	10.33 kW	10.56 kW
COP Tj = +2°C	6.53	5.81
Pdh Tj = +7°C	10.33 kW	11.01 kW
COP Tj = +7°C	6.53	6.67
Pdh Tj = 12°C	10.33 kW	11.19 kW
COP Tj = 12°C	6.53	7.04
Pdh Tj = Tbiv	9.84 kW	8.95 kW
COP Tj = Tbiv	5.69	3.44
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.84 kW	8.95 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.69	3.44
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	0 W	0 W

This information was generated by the HP KEYMARK database on 13 Apr 2022

PTO	20 W	20 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Q <sub>he</sub>	3826 kWh	4235 kWh