

## Subtype AQUATOP S08

Certificate Holder	ELCO GmbH
Address	Hohenzollernstrasse 31
ZIP	72379
City	Hechingen
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	AQUATOP S08
Registration number	011-1W0305
Heat Pump Type	Brine/Water and Water/Water
Refrigerant	R410A
Mass of Refrigerant	2.3 kg
Certification Date	04.05.2019

## Model AQUATOP S08

Model name	AQUATOP S08
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

### EN 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	189 %	154 %
Prated	8.25 kW	7.36 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
Cdh Tj = -7 °C		
Pdh Tj = +2°C	8.66 kW	8.24 kW
COP Tj = +2°C	5.12	4.07
Cdh Tj = +2 °C		
Pdh Tj = +7°C	8.66 kW	8.75 kW
COP Tj = +7°C	5.12	4.81
Cdh Tj = +7 °C		
Pdh Tj = 12°C	8.25 kW	9.20 kW
COP Tj = 12°C	5.12	5.67
Cdh Tj = +12 °C		
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	1.000	1.000
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	3461 kWh	3749 kWh

#### EN 12102-1 | Colder Climate

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

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	191 %	160 %
Prated	8.25 kW	7.36 kW
SCOP	4.98	4.20
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.66 kW	8.09 kW
COP Tj = -7°C	5.12	3.82
Cdh Tj = -7 °C		
Pdh Tj = +2°C	8.68 kW	8.68 kW
COP Tj = +2°C	5.12	4.68
Cdh Tj = +2 °C		
Pdh Tj = +7°C	8.68 kW	9.05 kW
COP Tj = +7°C	5.12	5.37
Cdh Tj = +7 °C		
Pdh Tj = 12°C	8.68 kW	9.20 kW
COP Tj = 12°C	5.12	5.67
Cdh Tj = +12 °C		
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	1.000	1.000
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	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	4086 kWh	4323 kWh

#### EN 12102-1 | Warmer Climate

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

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	155 %
Prated	8.25 kW	7.36 kW
SCOP	4.89	4.08
T <sub>biv</sub>	2 °C	2 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.25 kW	7.36 kW
COP T <sub>j</sub> = +2°C	4.46	2.77
C <sub>dh</sub> T <sub>j</sub> = +2 °C		
P <sub>dh</sub> T <sub>j</sub> = +7°C	8.58 kW	8.02 kW
COP T <sub>j</sub> = +7°C	4.99	3.60
C <sub>dh</sub> T <sub>j</sub> = +7 °C		
P <sub>dh</sub> T <sub>j</sub> = 12°C	8.66 kW	8.90 kW
COP T <sub>j</sub> = 12°C	5.12	5.09
C <sub>dh</sub> T <sub>j</sub> = +12 °C		
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	8.25 kW	7.36 kW
COP T <sub>j</sub> = T <sub>biv</sub>	4.46	2.77
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	8.25 kW	7.36 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	4.46	2.77
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	1.000	1.000
WTOL	65 °C	65 °C
P <sub>off</sub>	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	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	2255 kWh	2408 kWh

#### Water/Water

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	243 %	193 %
Prated	9.84 kW	8.95 kW
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
Cdh Tj = -7 °C		
Pdh Tj = +2°C	10.33 kW	10.02 kW
COP Tj = +2°C	6.53	5.05
Cdh Tj = +2 °C		
Pdh Tj = +7°C	10.33 kW	10.64 kW
COP Tj = +7°C	6.53	5.97
Cdh Tj = +7 °C		
Pdh Tj = 12°C	10.33 kW	11.19 kW
COP Tj = 12°C	6.53	7.04
Cdh Tj = +12 °C		
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	1.000	1.000
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	3238 kWh	3671 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
--	-----------------	--------------------

Sound power level indoor	34 dB(A)	34 dB(A)
--------------------------	----------	----------

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	246 %	200 %
Prated	9.84 kW	8.95 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
Cdh Tj = -7 °C		
Pdh Tj = +2°C	10.33 kW	10.56 kW
COP Tj = +2°C	6.53	5.81
Cdh Tj = +2 °C		
Pdh Tj = +7°C	10.33 kW	11.01 kW
COP Tj = +7°C	6.53	6.67
Cdh Tj = +7 °C		
Pdh Tj = 12°C	10.33 kW	11.19 kW
COP Tj = 12°C	6.53	7.04
Cdh Tj = +12 °C		
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	1.000	1.000
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	3826 kWh	4235 kWh

#### EN 12102-1 | Warmer Climate

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

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	241 %	195 %

Prated	9.84 kW	8.95 kW
SCOP	6.23	5.07
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	9.84 kW	8.95 kW
COP Tj = +2°C	5.69	3.44
Cdh Tj = +2 °C		
Pdh Tj = +7°C	10.23 kW	9.75 kW
COP Tj = +7°C	6.37	4.47
Cdh Tj = +7 °C		
Pdh Tj = 12°C	10.33 kW	10.82 kW
COP Tj = 12°C	6.53	6.32
Cdh Tj = +12 °C		
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	1.000	1.000
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	2112 kWh	2360 kWh