## Subtype AQUATOP S14

| | |
|---|---|
| Certificate Holder | ELCO GmbH |
| Address | Hohenzollernstrasse 31 |
| ZIP | 72379 |
| City | Hechingen |
| Country | DE |
| Certification Body | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |
| Subtype title | AQUATOP S14 |
| Registration number | 011-1W0307 |
| Heat Pump Type | Brine/Water and Water/Water |
| Refrigerant | R410A |
| Mass of Refrigerant | 3.4 kg |
| Certification Date | 04.05.2019 |

| Model AQUATOP S14 | |
|---|---|
| Model name | AQUATOP S14 |
| 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 | n/a |

Brine/Water

EN 14511-4 | Heating

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

EN 14511-2 | Heating

| | Low temperature | Medium temperature |
|---|---|---|
| Heat output | 13.47 kW | 11.99 kW |
| El input | 2.73 kW | 4.27 kW |
| COP | 4.94 | 2.80 |

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 42 dB(A) | 42 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| ηs | 199 % | 157 % |
| Prated | 13.40 kW | 11.92 kW |
| SCOP | 5.18 | 2.00 |
| Tbiv | -10 °C | -10 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 13.52 kW | 12.27 kW |
| COP Tj = -7°C | 4.78 | 3.04 |
| Cdh Tj = -7 °C | | |
| Pdh Tj = +2°C | 14.07 kW | 13.35 kW |
| COP Tj = +2°C | 5.34 | 4.10 |
| Cdh Tj = +2 °C | | |
| Pdh Tj = +7°C | 14.07 kW | 14.18 kW |
| COP Tj = +7°C | 5.34 | 4.85 |
| Cdh Tj = +7 °C | | |
| Pdh Tj = 12°C | 14.07 kW | 14.90 kW |

| | | |
|---|---|---|
| COP Tj = 12°C | 5.34 | 5.71 |
| Cdh Tj = +12 °C | | |
| Pdh Tj = Tbiv | 13.40 kW | 11.92 kW |
| COP Tj = Tbiv | 4.65 | 2.79 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 13.40 kW | 11.92 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.65 | 2.79 |
| 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 | 5348 kWh | 5981 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 42 dB(A) | 42 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| ηs | 201 % | 162 % |
| Prated | 13.40 kW | 11.92 kW |
| SCOP | 5.23 | 4.26 |
| Tbiv | -22 °C | -22 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 14.07 kW | 13.11 kW |
| COP Tj = -7°C | 5.34 | 3.85 |
| Cdh Tj = -7 °C | | |
| Pdh Tj = +2°C | 14.07 kW | 14.06 kW |
| COP Tj = +2°C | 5.34 | 4.71 |
| Cdh Tj = +2 °C | | |
| Pdh Tj = +7°C | 14.07 kW | 14.66 kW |
| COP Tj = +7°C | 5.34 | 5.41 |
| Cdh Tj = +7 °C | | |
| Pdh Tj = 12°C | 14.07 kW | 14.90 kW |
| COP Tj = 12°C | 5.34 | 5.71 |
| Cdh Tj = +12 °C | | |
| Pdh Tj = Tbiv | 13.40 kW | 11.92 kW |
| COP Tj = Tbiv | 4.65 | 2.79 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 13.40 kW | 11.92 kW |

| | | |
|---|---|---|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.65 | 2.79 |
| 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 | 6318 kWh | 6899 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 42 dB(A) | 42 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| ηs | 198 % | 158 % |
| Prated | 13.40 kW | 11.92 kW |
| SCOP | 5.15 | 4.15 |
| Tbiv | 2 °C | 2 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = +2°C | 13.40 kW | 11.92 kW |
| COP Tj = +2°C | 4.65 | 2.79 |
| Cdh Tj = +2 °C | | |
| Pdh Tj = +7°C | 13.93 kW | 12.99 kW |
| COP Tj = +7°C | 5.20 | 3.62 |
| Cdh Tj = +7 °C | | |
| Pdh Tj = 12°C | 14.07 kW | 14.42 kW |
| COP Tj = 12°C | 5.34 | 5.13 |
| Cdh Tj = +12 °C | | |
| Pdh Tj = Tbiv | 13.40 kW | 11.92 kW |
| COP Tj = Tbiv | 4.65 | 2.79 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 13.40 kW | 11.92 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.65 | 2.79 |
| 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 | 3478 kWh | 3834 kWh |

## Water/Water

### EN 14511-4 | Heating

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

### EN 14511-2 | Heating

| | Low temperature | Medium temperature |
|---|---|---|
| Heat output | 17.06 kW | 15.52 kW |
| El input | 2.81 kW | 4.22 kW |
| COP | 6.07 | 3.68 |

### 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 |
|---|---|---|
| ηs | 262 % | 209 % |
| Prated | 17.06 kW | 15.52 kW |
| SCOP | 6.75 | 5.43 |
| Tbiv | -10 °C | -10 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 17.21 kW | 15.98 kW |
| COP Tj = -7°C | 6.24 | 4.01 |
| Cdh Tj = -7 °C | | |
| Pdh Tj = +2°C | 17.91 kW | 17.38 kW |
| COP Tj = +2°C | 6.97 | 5.41 |
| Cdh Tj = +2 °C | | |
| Pdh Tj = +7°C | 17.91 kW | 18.46 kW |
| COP Tj = +7°C | 6.97 | 6.40 |
| Cdh Tj = +7 °C | | |
| Pdh Tj = 12°C | 17.91 kW | 19.40 kW |
| COP Tj = 12°C | 6.97 | 7.53 |
| Cdh Tj = +12 °C | | |
| Pdh Tj = Tbiv | 17.06 kW | 15.52 kW |
| COP Tj = Tbiv | 6.07 | 3.68 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 17.06 kW | 15.52 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 6.07 | 3.68 |

| | | |
|---|---|---|
| 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 | 5221 kWh | 5901 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 |
|---|---|---|
| ηs | 265 % | 217 % |
| Prated | 17.06 kW | 15.52 kW |
| SCOP | 6.82 | 5.62 |
| Tbiv | -22 °C | -22 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 17.91 kW | 17.07 kW |
| COP Tj = -7°C | 6.97 | 5.08 |
| Cdh Tj = -7 °C | | |
| Pdh Tj = +2°C | 17.91 kW | 18.31 kW |
| COP Tj = +2°C | 6.97 | 6.21 |
| Cdh Tj = +2 °C | | |
| Pdh Tj = +7°C | 17.91 kW | 19.09 kW |
| COP Tj = +7°C | 6.97 | 7.14 |
| Cdh Tj = +7 °C | | |
| Pdh Tj = 12°C | 17.91 kW | 19.40 kW |
| COP Tj = 12°C | 6.97 | 7.53 |
| Cdh Tj = +12 °C | | |
| Pdh Tj = Tbiv | 17.06 kW | 15.52 kW |
| COP Tj = Tbiv | 6.07 | 3.68 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 17.06 kW | 15.52 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 6.07 | 3.68 |
| 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 | 6162 kWh | 6804 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 |
| ηs | 260 % | 211 % |
| Prated | 17.06 kW | 15.52 kW |
| SCOP | 6.71 | 5.47 |
| Tbiv | 2 °C | 2 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = +2°C | 17.06 kW | 15.52 kW |
| COP Tj = +2°C | 6.07 | 3.68 |
| Cdh Tj = +2 °C | | |
| Pdh Tj = +7°C | 17.73 kW | 16.91 kW |
| COP Tj = +7°C | 6.79 | 4.77 |
| Cdh Tj = +7 °C | | |
| Pdh Tj = 12°C | 17.91 kW | 18.78 kW |
| COP Tj = 12°C | 6.97 | 6.77 |
| Cdh Tj = +12 °C | | |
| Pdh Tj = Tbiv | 17.06 kW | 15.52 kW |
| COP Tj = Tbiv | 6.07 | 3.68 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 17.06 kW | 15.52 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 6.07 | 3.68 |
| 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 | 3397 kWh | 3788 kWh |