This information was generated by the HP KEYMARK database on 17 Dec 2020

| 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 | | |
| Name of testing laboratory | TÜV Rheinland Energy GmbH | | |
| 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

| 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 |
| Indoor water flow rate | 6.13 m³/h | 4.52 m³/h |

## 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** |
| $\eta_s$ | 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 Tj = -7°C | 37.07 kW | 35.74 kW |
| COP Tj = -7°C | 4.49 | 3.27 |
| Pdh Tj = +2°C | 38.17 kW | 38.52 kW |
| COP Tj = +2°C | 5.02 | 4.50 |
| Pdh Tj = +7°C | 38.90 kW | 39.91 kW |
| COP Tj = +7°C | 5.24 | 5.28 |
| Pdh Tj = 12°C | 39.64 kW | 41.64 kW |
| 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 | 36.70 kW | 34.70 kW |
| COP Tj = TOL | 4.40 | 3.00 |
| Cdh | 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 | Elektrizität | Elektrizität |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 15136 kWh | 15793 kWh |

## 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** |
| $\eta_s$ | 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 | 36.70 kW | 34.70 kW |
| COP Tj = TOL | 4.40 | 3.00 |
| Cdh | 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 | Elektrizität | Elektrizität |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |

| | | |
|---|---|---|
| Annual energy consumption Qhe | 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** |
| $\eta_s$ | 197 % | 180 % |
| Prated | 37.00 kW | 35.00 kW |
| SCOP | 5.13 | 4.71 |
| Tbiv | -22 °C | -22 °C |
| 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 | 36.70 kW | 34.70 kW |
| COP Tj = TOL | 4.40 | 3.00 |
| Cdh | 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 | Elektrizität | Elektrizität |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 17636 kWh | 18161 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 | 38.90 kW | 46.00 kW |
| El input | 9.20 kW | 12.60 kW |
| COP | 5.30 | 3.70 |
| Indoor water flow rate | 8.40 m³/h | 6.02 m³/h |

## 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** |
| $\eta_s$ | 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 | 48.85 kW | 46.00 kW |
| COP Tj = TOL | 5.31 | 3.65 |
| Cdh | 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 | Elektrizität | Elektrizität |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 17006 kWh | 18234 kWh |

## 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** |
| $\eta_s$ | 230 % | 203 % |
| Prated | 49.00 kW | 46.00 kW |
| 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 | 48.85 kW | 46.00 kW |
| COP Tj = TOL | 5.31 | 3.65 |
| Cdh | 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 | Elektrizität | Elektrizität |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 10958 kWh | 11670 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 |
|---|---|---|
| $\eta_s$ | 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 |
| 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 | 48.85 kW | 46.00 kW |
| COP Tj = TOL | 5.31 | 3.65 |
| Cdh | 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 | Elektrizität | Elektrizität |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 19989 kWh | 21386 kWh |