

This information was generated by the HP KEYMARK database on 18 Mar 2022

[Login](#)

| | | | |
|---------------------|---|----------|------------|
| Summary of | TTL 5.6 ACS, TTL 7.6 ACS | Reg. No. | 011-1W0405 |
| Certificate Holder | | | |
| Name | tecalor GmbH | | |
| Address | Fürstenbergerstr. 77 | Zip | 37603 |
| City | Holzminde | Country | Germany |
| Certification Body | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH | | |
| Subtype title | TTL 5.6 ACS, TTL 7.6 ACS | | |
| Heat Pump Type | Outdoor Air/Water | | |
| Refrigerant | R454C | | |
| Mass of Refrigerant | 3 kg | | |
| Certification Date | 30.11.2020 | | |

Model: TTL 5.6 ACS

| Configure model | |
|-------------------------------------|---------------------------------|
| Model name | TTL 5.6 ACS |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate Zone | Colder Climate + Warmer Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |

| General Data | |
|--------------|-------------|
| Power supply | 3x230V 50Hz |

Heating

| EN 14511-2 | | |
|-------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Heat output | 3.31 kW | 2.70 kW |
| El input | 0.61 kW | 0.82 kW |
| COP | 5.42 | 3.29 |

| EN 14511-4 | |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |
| Defrost test | passed |
| Starting and operating test | passed |

Average Climate

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 47 dB(A) | 47 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 185 % | 151 % |
| Prated | 5.50 kW | 5.60 kW |
| SCOP | 4.70 | 3.85 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 4.86 kW | 4.89 kW |
| COP Tj = -7°C | 3.40 | 2.64 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 2.95 kW | 3.03 kW |
| COP Tj = +2°C | 4.58 | 3.80 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.16 kW | 2.99 kW |
| COP Tj = +7°C | 6.32 | 4.84 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 3.74 kW | 3.57 kW |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| COP Tj = 12°C | 8.19 | 6.09 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 4.68 kW | 4.89 kW |
| COP Tj = Tbiv | 3.40 | 2.64 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.43 kW | 4.13 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.06 | 2.22 |
| WTOL | 75 °C | 75 °C |
| Poff | 12 W | 12 W |
| PTO | 10 W | 10 W |
| PSB | 12 W | 12 W |
| PCK | 10 W | 10 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.07 kW | 1.50 kW |
| Annual energy consumption Qhe | 2415 kWh | 3021 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level outdoor | 47 dB(A) | 47 dB(A) |

| EN 14825 | | |
|-----------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|---------|---------|
| η_s | 208 % | 143 % |
| Prated | 3.00 kW | 3.00 kW |
| SCOP | 5.26 | 3.66 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 3.03 kW | 2.97 kW |
| COP Tj = +2°C | 4.29 | 2.86 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.07 kW | 2.72 kW |
| COP Tj = +7°C | 5.52 | 3.61 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 3.69 kW | 3.46 kW |
| COP Tj = 12°C | 7.51 | 5.33 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 3.03 kW | 2.97 kW |
| COP Tj = Tbiv | 4.29 | 2.86 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.03 kW | 2.97 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.29 | 2.86 |
| WTOL | 75 °C | 75 °C |
| Poff | 12 W | 12 W |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|-------------|-------------|
| PTO | 10 W | 10 W |
| PSB | 12 W | 12 W |
| PCK | 10 W | 10 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Q _{he} | 768 kWh | 1085 kWh |

Colder Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level outdoor | 47 dB(A) | 47 dB(A) |

| EN 14825 | | |
|---------------------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 151 % | 126 % |
| Prated | 8.20 kW | 7.80 kW |
| SCOP | 3.84 | 3.23 |
| T _{biv} | -7 °C | -7 °C |
| TOL | -22 °C | -22 °C |
| P _{dh} T _j = -7°C | 4.94 kW | 4.70 kW |
| COP T _j = -7°C | 3.67 | 2.94 |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 3.00 kW | 2.86 kW |
| COP Tj = +2°C | 5.03 | 4.30 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.21 kW | 3.08 kW |
| COP Tj = +7°C | 6.81 | 5.42 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 3.74 kW | 3.63 kW |
| COP Tj = 12°C | 8.20 | 6.56 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 4.94 kW | 4.70 kW |
| COP Tj = Tbiv | 3.67 | 2.94 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.04 kW | 2.58 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.93 | 2.20 |
| WTOL | 75 °C | 75 °C |
| Poff | 12 W | 12 W |
| PTO | 10 W | 10 W |
| PSB | 12 W | 12 W |
| PCK | 10 W | 10 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 5.13 kW | 5.19 kW |
| | | |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|----------|----------|
| Annual energy consumption Q_{he} | 5239 kWh | 5927 kWh |
| $P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$) | 4.00 | 3.64 |
| $COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$) | 2.93 | 2.20 |
| $C_{dh} T_j = -15^{\circ}\text{C}$ | 0.90 | 0.90 |

Model: TTL 7.6 ACS

| Configure model | |
|-------------------------------------|---------------------------------|
| Model name | TTL 7.6 ACS |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate Zone | Colder Climate + Warmer Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |

| General Data | |
|--------------|-------------|
| Power supply | 3x230V 50Hz |

Heating

| EN 14511-2 | | |
|-------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Heat output | 3.31 kW | 2.70 kW |
| El input | 0.61 kW | 0.82 kW |
| COP | 5.42 | 3.29 |

| EN 14511-4 | |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |
| Defrost test | passed |
| Starting and operating test | passed |

Average Climate

This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 47 dB(A) | 47 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 192 % | 153 % |
| Prated | 8.10 kW | 8.00 kW |
| SCOP | 4.88 | 3.90 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 7.13 kW | 7.04 kW |
| COP Tj = -7°C | 3.00 | 2.43 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 4.34 kW | 4.28 kW |
| COP Tj = +2°C | 4.82 | 3.79 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.19 kW | 3.05 kW |
| COP Tj = +7°C | 6.66 | 5.22 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 3.75 kW | 3.60 kW |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| COP Tj = 12°C | 8.40 | 6.33 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 7.13 kW | 7.04 kW |
| COP Tj = Tbiv | 3.00 | 2.43 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.86 kW | 6.53 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.80 | 2.43 |
| WTOL | 75 °C | 75 °C |
| Poff | 12 W | 12 W |
| PTO | 10 W | 10 W |
| PSB | 12 W | 12 W |
| PCK | 10 W | 10 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.20 kW | 1.43 kW |
| Annual energy consumption Qhe | 3413 kWh | 4219 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level outdoor | 47 dB(A) | 47 dB(A) |

| EN 14825 | | |
|-----------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|---------|---------|
| η_s | 230 % | 163 % |
| Prated | 4.30 kW | 4.30 kW |
| SCOP | 5.84 | 4.14 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 4.30 kW | 4.30 kW |
| COP Tj = +2°C | 4.30 | 2.93 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.10 kW | 2.80 kW |
| COP Tj = +7°C | 5.77 | 3.90 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 3.70 kW | 3.49 kW |
| COP Tj = 12°C | 7.69 | 5.53 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 4.30 kW | 4.30 kW |
| COP Tj = Tbiv | 4.30 | 2.93 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.30 kW | 4.30 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.30 | 2.93 |
| WTOL | 75 °C | 75 °C |
| Poff | 12 W | 12 W |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|-------------|-------------|
| PTO | 10 W | 10 W |
| PSB | 12 W | 12 W |
| PCK | 10 W | 10 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Q _{he} | 984 kWh | 1388 kWh |

Colder Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level outdoor | 47 dB(A) | 47 dB(A) |

| EN 14825 | | |
|---------------------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 151 % | 128 % |
| Prated | 11.80 kW | 11.90 kW |
| SCOP | 3.84 | 3.26 |
| T _{biv} | -7 °C | -7 °C |
| TOL | -22 °C | -22 °C |
| P _{dh} T _j = -7°C | 7.15 kW | 7.21 kW |
| COP T _j = -7°C | 3.17 | 2.70 |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 4.35 kW | 4.39 kW |
| COP Tj = +2°C | 5.24 | 4.31 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.24 kW | 3.15 kW |
| COP Tj = +7°C | 7.18 | 5.99 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 3.75 kW | 3.66 kW |
| COP Tj = 12°C | 8.41 | 6.88 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 7.15 kW | 7.21 kW |
| COP Tj = Tbiv | 3.17 | 2.70 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.25 kW | 4.98 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.74 | 2.22 |
| WTOL | 75 °C | 75 °C |
| Poff | 12 W | 12 W |
| PTO | 10 W | 10 W |
| PSB | 12 W | 12 W |
| PCK | 10 W | 10 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 6.56 kW | 6.93 kW |
| | | |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|----------|----------|
| Annual energy consumption Q_{he} | 7574 kWh | 9005 kWh |
| $P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$) | 6.49 | 6.29 |
| $COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$) | 2.74 | 2.22 |
| $C_{dh} T_j = -15^{\circ}\text{C}$ | 0.90 | 0.90 |