

Základné údaje o výkone - WAMAK TWW 360 EVI HeavyDuty 2L3

| Vykurovanie - EN 14511 | | |
|--|--------------------|------------------------|
| Tepelný výkon [kW] | W10 / W35 (max) | 371.8 (62.0 / 371.8) |
| | W10 / W35 (min) | 62.0 (62.0 / 371.8) |
| | W10 / W34 | 372.0 (62.0 / 372.0) |
| Elektrický príkon [kW] | W10 / W35 (max) | 65.1 (10.6 / 65.1) |
| | W10 / W35 (min) | 10.6 (10.6 / 65.1) |
| | W10 / W34 | 63.8 (15.1 / 92.9) |
| Tepelná účinnosť [COP] | W10 / W35 (max) | 5.71 |
| | W10 / W35 (min) | 5.84 |
| | W10 / W34 | 5.83 |
| Sezónna tepelná účinnosť vykurovania - SCOP EN 14825 | | |
| Stredná klim. zóna / Nízka teplota [35°C] | SCOP | 4.34 |
| | η [%] | 173.6 |
| | Label | A+++ |
| | Qhe [kWh] | 768138.8 |
| | Pdesignh [kW] | 371.8 |
| | Tbivalent [°C] | -10 |
| Chladenie | | |
| Chladiaci výkon - [kW] | A35 / W23-18 | 290.6 |
| | A25 / W23-18 | 305.4 |
| | A35 / W12-7 | 218.3 |
| | A25 / W12-7 | 218.3 |
| Sezónna účinnosť chladenia - SEER EN 14825 | | |
| [W 23 / 18°C] | SEER | 5.15 |
| | Qce [kWh] | 130980.0 |
| | η_c [%] | 205.8 |
| Zvuk EN 12102 | | |
| Zvuk - výkon - Lw | dB(A) | 72.3 |
| Zvuk - tlak - Lp | 1 m dB(A) | 64.3 |
| | 5 m dB(A) | 50.3 |
| | 10 m dB(A) | 44.3 |
| Strojné a prevádzkové informácie | | |
| Typ kompresoru (3~ 400/50) | SCROLL / 6 / | Zap/Vyp |
| Chladivo | R410A (GWP - 2088) | 3 x 11.5 kg |
| Prevádzkové hraničné teploty vykurovania - (min / max) [°C] | | 25 / 65 |
| Prevádzkové hraničné teploty zdroja - (min / max) [°C] | | -10 (7) / 30 |
| Váha zariadenia | | 1860 kg |

Hlavné technické údaje - WAMAK TWW 360 EVI HeavyDuty 2L3

| Označenie krytovania | | HD2L3 | | Údaje strany odovzdania tepelnej energie | | |
|--------------------------------------|--------------------------|-------------|---|---|-----------------|---------|
| Základné rozmery | Výška [mm] | 2000 | | Prevádzkové hraničné teploty vykurovania | MAX [°C] | 65 |
| | Šírka [mm] | 2150 | | | MIN [°C] | 25 |
| | Dĺžka [mm] | 1200 | | viac vid. diagram prevádzkových limitov | | |
| Váha zariadenia [kg] | 1860 | | Kondenzátor | Pripojovacia dimenzia | 3 x VIC 2.1/2 " | |
| Farba krytovania | Sivá | | | Typ | BPHE | |
| IP trieda krytovania | IP20 | | | Počet | 3 | |
| | | | | Materiál | AISI 316 | |
| Chladivový okruh | | | | | | |
| Kompresor | Typ | Scroll | | Maximálny prevádzkový tlak - chladivo [bar] | 50 | |
| | Výkonové stupňe | 6 | | Maximálny prevádzkový tlak - Voda [bar] | 6 | |
| | Zap/Vyp | | | Testovací pretlak [bar] | 70 | |
| | Účinník Cosφ | 0.64 | | Teplonosné médium | Voda | |
| | Odpor vynutia kompresora | 0.76 Ohm | | Objemový prietok @ dT 5K (nom) - Voda [m3/h] | 10.70 ~ 64.18 | |
| Chladivo | | R410A | | Vnútorná tlaková strata - Voda [kPa] | 3 x 20 | |
| | Objem | 3 x 11.5 kg | | Teplotný spád @ 35°C (nom) | 5 K | |
| | GWP | 2088 | | @ 55°C | 8 K | |
| | Bezpečnostná trieda | A1 | | @ 65°C | 10 K | |
| Typ oleja v okruhu | POE RL32-3MAF | | | Údaje strany odberu obnoviteľnej energie | | |
| | Objem oleja | 6 x 3.38 L | | Prevádzkové hraničné teploty zdroja | MIN [°C] | -10 (7) |
| Maximálny tlak chladiva [bar] | | 50 | | | MAX [°C] | 30 |
| | PED trieda | 2 | | viac vid. diagram prevádzkových limitov | | |
| EVI - vstrek chladiva s ekonomizérom | | | Výparník | Pripojovacia dimenzia | 3 x VIC 2.1/2 " | |
| | | | | Typ | BPHE | |
| | | | | Počet | 3 | |
| | | | | Materiál | AISI 316 | |
| | | | Maximálny prevádzkový tlak - chladivo [bar] | 29 | | |
| | | | Teplonosné médium | Voda | | |
| | | | Maximálny prevádzkový tlak - Voda [bar] | 6 | | |
| | | | Objemový prietok - Voda [m3/h] | 11.05 ~ 66.32 | | |
| | | | Vnútorná tlaková strata - Voda [kPa] | 3 x 20 | | |
| | | | Teplotný spád - Voda | 4 K | | |
| Riadiaci systém | | | | | | |
| Hlavný regulátor | SIEMENS | | RVS 61 | | | |
| Rozširovací modul | AVS75.3xx | AVS75.3xx | AVS75.372 | | | |
| Bus Clip-In | LPB OCI345 | | Modbus OCI351 | | | |
| Online pripojenie | Web server OZW672 | | ToSyMo | | | |
| Regulácia EEV | | | SEC61 | | | |

*** s príslušenstvom

WAMAK TWW 360 EVI HeavyDuty 2L3

ErP (EU) No 811/2013: Technické parametre vykurovacích zariadení s tepelným čerpadlom

| | |
|---|----------------------------------|
| Model | TWW 360 EVI HeavyDuty 2L3 |
| Tepelné čerpadlo vzduch-voda | nie |
| Tepelné čerpadlo soľanka-voda | nie |
| Tepelné čerpadlo voda-voda | áno |
| Nízkotepelné tepelné čerpadlo | nie |
| Vybavené prídavným ohrievačom | nie |
| Kombinované tepelné čerpadlo s ohrievačom | nie |
| Teplotné použitie | nízka teplota (35 °C - 30 °C) |
| Klimatická oblasť | priemerná |

| Položka | Symbol | Hodnota | mj | Položka | Symbol | Hodnota | mj |
|--|-----------------|-----------------|-----|---|----------|---------------|-------------------|
| Menovitý tepelný výkon pri Tdesignh | Prated | 371.8 | kW | Sezónna energetická účinnosť vykurovania priestoru | η_s | 173.6 | % |
| Deklarovaný výkon vykurovania pri čiastočnom zaťažení pri vnútornej teplote 20 °C a vonkajšej teplote Tj | | | | Deklarovaný súčiniteľ výkonu alebo pomer primárnej energie pre čiastočné zaťaženie pri vnútornej teplote 20 °C a vonkajšej teplote Tj | | | |
| Tj = -7 °C | Pdh | 372.0 | kW | Tj = -7 °C | COPd | 5.83 | - |
| Tj = +2 °C | Pdh | 372.4 | kW | Tj = +2 °C | COPd | 6.4 | - |
| Tj = +7 °C | Pdh | 62.1 | kW | Tj = +7 °C | COPd | 6.9 | - |
| Tj = +12 °C | Pdh | 62.1 | kW | Tj = +12 °C | COPd | 7.4 | - |
| Tj = bivalentná teplota | Pdh | 371.8 | kW | Tj = bivalentná teplota | COPd | 5.7 | - |
| Tj = hraničná prevádzková teplota | Pdh | --- | kW | Tj = hraničná prevádzková teplota | COPd | --- | - |
| Bivalentná teplota | Tbiv | -10 | °C | Tj = hraničná prevádzková teplota | TOL | --- | °C |
| Spotreba energie v iných ako aktívnych režimoch | | | | Medzná prevádzková teplota vykurovacej vody | WTOL | 65 | °C |
| Vypnuté | Poff | 0.010 | kW | Prídavný ohrievač | | | |
| Režim vypnutia termostatu | Pto | 0.010 | kW | Menovitý tepelný výkon | Psup | 57.0 | kW |
| Pohotovostný režim | Psb | 0.010 | kW | Typ príkonu energie | | | elektrická |
| Režim ohrevu kľukovej skrine | Pck | 0.000 | kW | | | | |
| Ostatné položky | | | | | | | |
| Regulácia výkonu | | viacero stupňov | | Pre tepelné čerpadlá vzduch-voda: Menovitý prietok vzduchu, vonku | - | --- | m ³ /h |
| Úroveň akustického výkonu | | | | Pre tepelné čerpadlá voda-voda alebo soľanka-voda: Menovitý prietok soľanky alebo vody, vonkajší výmenník tepla | - | 11.05 ~ 66.32 | m ³ /h |
| v interiéri | Lwa | 72 | dB | | | | |
| vonku | Lwa | --- | dB | | | | |
| Ročná spotreba energie | Q _{HE} | 768138.8 | kWh | | | | |

Kontaktné údaje: WAMAK, s.r.o., Orovnica 252, 96652, Orovnica, Slovakia, info@wamak.sk

WAMAK TWW 360 EVI HeavyDuty 2L3

ErP (EU) No 811/2013: Technické parametre vykurovacích zariadení s tepelným čerpadlom

| | |
|---|----------------------------------|
| Model | TWW 360 EVI HeavyDuty 2L3 |
| Tepelné čerpadlo vzduch-voda | nie |
| Tepelné čerpadlo soľanka-voda | nie |
| Tepelné čerpadlo voda-voda | áno |
| Nízkotepelné tepelné čerpadlo | nie |
| Vybavené prídavným ohrievačom | nie |
| Kombinované tepelné čerpadlo s ohrievačom | nie |
| Teplotné použitie | stredá teplota (55°C - 47°C) |
| Klimatická oblasť | priemerná |

| Položka | Symbol | Hodnota | mj | Položka | Symbol | Hodnota | mj |
|--|-----------------|-----------------|-----|---|----------|---------------|-------------------|
| Menovitý tepelný výkon pri Tdesignh | Prated | 370.1 | kW | Sezónna energetická účinnosť vykurovania priestoru | η_s | 147.7 | % |
| Deklarovaný výkon vykurovania pri čiastočnom zaťažení pri vnútornej teplote 20 °C a vonkajšej teplote Tj | | | | Deklarovaný súčiniteľ výkonu alebo pomer primárnej energie pre čiastočné zaťaženie pri vnútornej teplote 20 °C a vonkajšej teplote Tj | | | |
| Tj = -7 °C | Pdh | 373.9 | kW | Tj = -7 °C | COPd | 4.03 | - |
| Tj = +2 °C | Pdh | 375.3 | kW | Tj = +2 °C | COPd | 5.2 | - |
| Tj = +7 °C | Pdh | 62.7 | kW | Tj = +7 °C | COPd | 6.0 | - |
| Tj = +12 °C | Pdh | 62.8 | kW | Tj = +12 °C | COPd | 6.6 | - |
| Tj = bivalentná teplota | Pdh | 370.1 | kW | Tj = bivalentná teplota | COPd | 3.6 | - |
| Tj = hraničná prevádzková teplota | Pdh | --- | kW | Tj = hraničná prevádzková teplota | COPd | --- | - |
| Bivalentná teplota | Tbiv | -10 | °C | Tj = hraničná prevádzková teplota | TOL | --- | °C |
| Spotreba energie v iných ako aktívnych režimoch | | | | Medzná prevádzková teplota vykurovacej vody | WTOL | 65 | °C |
| Vypnuté | Poff | 0.010 | kW | Prídavný ohrievač | | | |
| Režim vypnutia termostatu | Pto | 0.010 | kW | Menovitý tepelný výkon | Psup | 57.0 | kW |
| Pohotovostný režim | Psb | 0.010 | kW | Typ príkonu energie | | | elektrická |
| Režim ohrevu kľukovej skrine | Pck | 0.000 | kW | | | | |
| Ostatné položky | | | | | | | |
| Regulácia výkonu | | viacero stupňov | | Pre tepelné čerpadlá vzduch-voda: Menovitý prietok vzduchu, vonku | - | --- | m ³ /h |
| Úroveň akustického výkonu | | | | Pre tepelné čerpadlá voda-voda alebo soľanka-voda: Menovitý prietok soľanky alebo vody, vonkajší výmenník tepla | - | 11.05 ~ 66.32 | m ³ /h |
| v interiéri | Lwa | 72 | dB | | | | |
| vonku | Lwa | --- | dB | | | | |
| Ročná spotreba energie | Q _{HE} | 764626.6 | kWh | | | | |

Kontaktné údaje: WAMAK, s.r.o., Orovnica 252, 96652, Orovnica, Slovakia, info@wamak.sk



ENERG Y IIA
 енергия - ενεργεια IE IA



TWW 360 EVI
 HeavyDuty 2L3



55 °C

35 °C



72 dB

--- dB

| | |
|-------|-------|
| ■ 389 | ■ 380 |
| ■ 371 | ■ 372 |
| ■ 363 | ■ 354 |
| kW | kW |

2019

811/2013

TWW 360 EVI
 HeavyDuty 2L3

ErP Data

| | 55 °C | 35 °C |
|---------------------|------------|-------------|
| Energy class | A++ | A+++ |
| η [%] | 147.7 | 173.6 |
| P_{rated} [kW] | 371 | 372 |
| Q_{HE} [kWh/y] | 764627 | 768139 |
| SCOP [-] | 3.69 | 4.34 |
| $T_{bivalent}$ [°C] | -10 | -10 |

CONTROLLER



+ QAA55/75 class VII 3.5% ↓
 - QAA55/75 class III 1.5% ↓

Tepelný výkon - prevádzkové dáta

Version: v2024.004-BW-WW

Zdroj - soľanka [0°C] / Nízka teplota [35°C]

ZHI46K1P-TWD_R410A_6_BWW

| Prevádzkový bod | Qh | P | COP |
|-----------------------|-------|------|------|
| 1 B0 / W30-35 | 295.3 | 65.1 | 4.53 |
| 2 B0 / W30-35 (MIN) | 49.2 | 10.6 | 4.64 |
| A B0 / Wxx-34 | 294.9 | 63.7 | 4.63 |
| B B0 / Wxx-30 | 293.5 | 58.3 | 5.04 |
| C B0 / Wxx-27 | 48.7 | 8.9 | 5.50 |
| D B0 / Wxx-24 | 48.5 | 8.3 | 5.87 |
| E B0 / Wxx-35 | 295.3 | 65.1 | 4.53 |
| F B0 / Wxx-35 | 295.3 | 65.1 | 4.53 |

| SCOP DATA EN 14825:2018 | |
|--|--------|
| Zdroj - soľanka [0°C] / Nízka teplota [35°C] | |
| SCOPon | 3.72 |
| SCOPnet | 5.63 |
| SCOP | 3.72 |
| η [%] | 148.67 |
| Label | A++ |
| Qh [kWh] | 610090 |
| Pdesignh [kW] | 295.3 |
| Tbivalent [°C] | -10 |

Zdroj - soľanka [0°C] / Stredná teplota [55°C]

| Prevádzkový bod | Qh | P | COP |
|-----------------------|-------|-------|------|
| 1 B0 / W47-55 | 301.2 | 102.1 | 2.95 |
| 2 B0 / W47-55 (MIN) | 50.2 | 16.6 | 3.02 |
| A B0 / Wxx-52 | 303.2 | 93.2 | 3.36 |
| B B0 / Wxx-42 | 303.6 | 72.7 | 4.22 |
| C B0 / Wxx-36 | 49.8 | 10.5 | 4.74 |
| D B0 / Wxx-30 | 49.5 | 9.5 | 5.22 |
| E B0 / Wxx-55 | 301.2 | 102.1 | 2.95 |
| F B0 / Wxx-54 | 303.5 | 95.3 | 3.18 |

| SCOP DATA EN 14825:2018 | |
|--|--------|
| Zdroj - soľanka [0°C] / Stredná teplota [55°C] | |
| SCOPon | 3.17 |
| SCOPnet | 4.47 |
| SCOP | 3.17 |
| η [%] | 126.79 |
| Label | A++ |
| Qh [kWh] | 622279 |
| Pdesignh [kW] | 301.2 |
| Tbivalent [°C] | -10 |

Zdroj - voda [10°C] / Nízka teplota [35°C]

| Prevádzkový bod | Qh | P | COP |
|------------------------|-------|------|------|
| 1 W10 / W30-35 | 371.8 | 65.1 | 5.71 |
| 2 W10 / W30-35 (MIN) | 62.0 | 10.6 | 5.84 |
| A W10 / Wxx-34 | 372.0 | 63.8 | 5.83 |
| B W10 / Wxx-30 | 372.4 | 58.6 | 6.35 |
| C W10 / Wxx-27 | 62.1 | 9.0 | 6.93 |
| D W10 / Wxx-24 | 62.1 | 8.4 | 7.38 |
| E W10 / Wxx-35 | 371.8 | 65.1 | 5.71 |
| F W10 / Wxx-35 | 371.8 | 65.1 | 5.71 |

| SCOP DATA EN 14825:2018 | |
|--|--------|
| Zdroj - voda [10°C] / Nízka teplota [35°C] | |
| SCOPon | 4.34 |
| SCOPnet | 7.07 |
| SCOP | 4.34 |
| η [%] | 173.63 |
| Label | A+++ |
| Qh [kWh] | 768139 |
| Pdesignh [kW] | 371.8 |
| Tbivalent [°C] | -10.00 |

WAMAK TWW 360 EVI HeavyDuty 2L3

Zdroj - voda [10°C] / Stredná teplota [55°C]

| | Prevádzkový bod | Qh | P | COP |
|---|----------------------|-------|-------|------|
| 1 | W10 / W47-55 | 370.1 | 102.0 | 3.63 |
| 2 | W10 / W47-55 (MIN) | 61.7 | 16.6 | 3.71 |
| A | W10 / Wxx-52 | 373.9 | 92.9 | 4.03 |
| B | W10 / Wxx-42 | 375.3 | 72.5 | 5.17 |
| C | W10 / Wxx-36 | 62.7 | 10.5 | 5.97 |
| D | W10 / Wxx-30 | 62.8 | 9.6 | 6.57 |
| E | W10 / Wxx-55 | 370.1 | 102.0 | 3.63 |
| F | W10 / Wxx-55 | 370.1 | 102.0 | 3.63 |

| SCOP DATA EN 14825:2018 | |
|--|--------|
| Zdroj - voda [10°C] / Stredná teplota [55°C] | |
| SCOPon | 3.69 |
| SCOPnet | 5.43 |
| SCOP | 3.69 |
| η [%] | 147.67 |
| Label | A++ |
| Qh [kWh] | 764627 |
| Pdesignh [kW] | 370.1 |
| Tbivalent [°C] | -10.00 |

Nízkokoteplotné chladenie W 12 / 7°C

| | Prevádzkový bod | Qc | P | EER |
|---|-----------------|-------|------|------|
| A | W30-35 / W12-7 | 224.3 | 69.6 | 3.22 |
| B | W26-xx / W12-7 | 228.5 | 63.7 | 3.59 |
| C | W22-xx / W12-7 | 232.0 | 58.2 | 3.98 |
| D | W18-xx / W12-7 | 233.6 | 55.7 | 4.20 |

| SEER DATA EN 14825:2018 [W 12 / 7°C] | |
|--|--------|
| SEERon | 3.86 |
| SEER | 3.86 |
| Qc [kWh] | 130980 |
| η [%] | 154.50 |

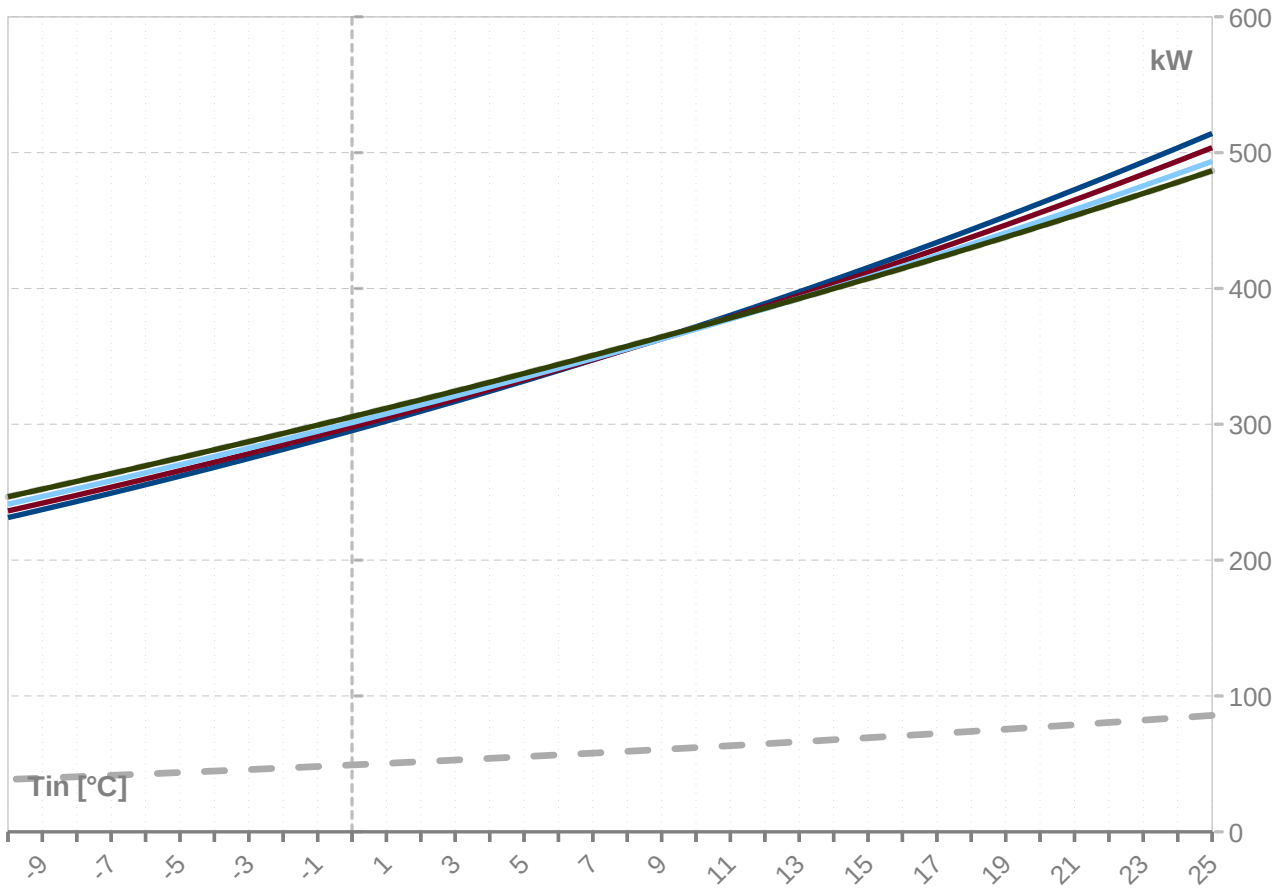
Plošné chladenie W 23 / 18°C

| | Prevádzkový bod | Qc | P | EER |
|---|-----------------|-------|-------|------|
| A | W50-xx / W23-18 | 260.6 | 109.4 | 2.38 |
| B | W40-xx / W23-18 | 281.7 | 87.0 | 3.24 |
| C | W30-35 / W23-18 | 298.5 | 69.6 | 4.29 |
| D | W26-xx / W23-18 | 304.1 | 63.7 | 4.77 |

| SEER DATA EN 14825:2018 [W 23 / 18°C] | |
|---|--------|
| SEERon | 5.15 |
| SEER | 5.15 |
| Qc [kWh] | 130980 |
| η [%] | 205.80 |

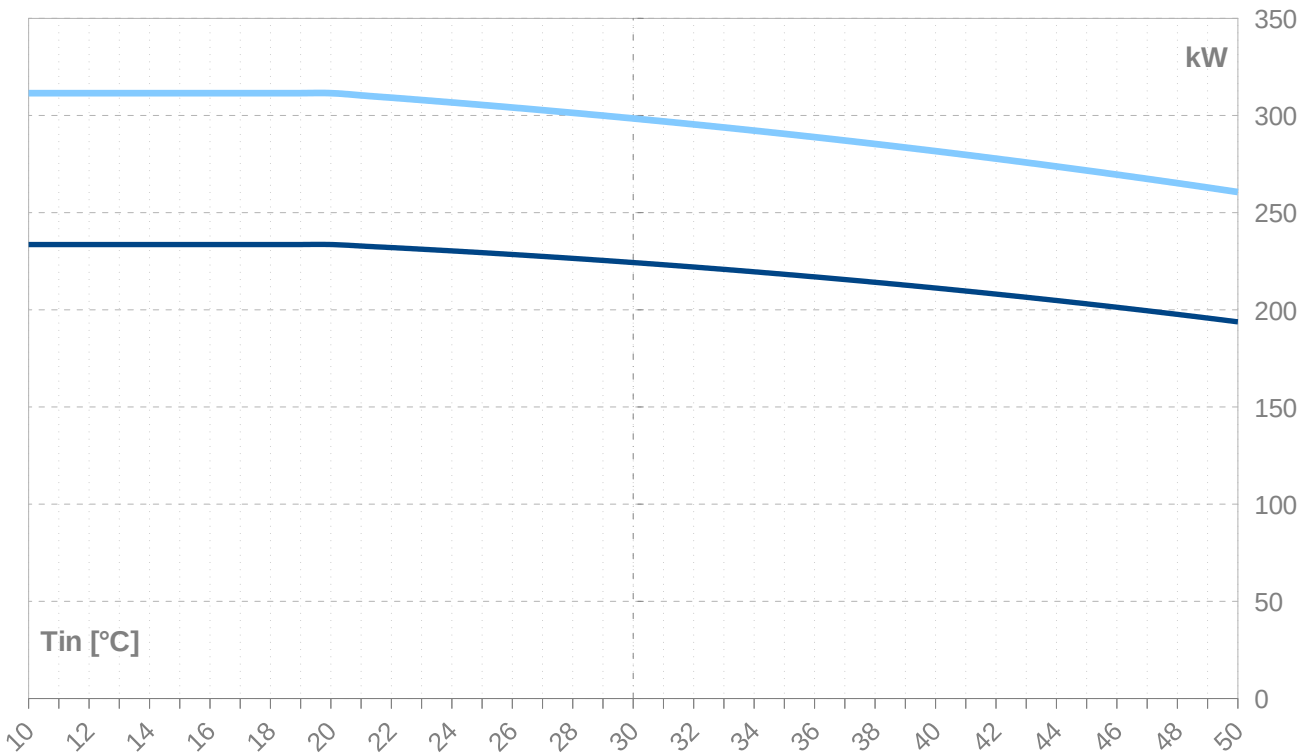
Výkonové kryvky - vykurovanie

— Qh-nom-35 - - - Qh-min-35 - - - Qh-max-65 — Qh-nom-45 — Qh-nom-55
— Qh-nom-65



Výkonové kryvky - chladenie

— Qc-nom-12-7 — Qc-nom-23-18



| Tv -VY | | 35 | | | | | | | | | | |
|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|-----------------------|-------------------|-------------------|-------------------|-----------------|--|
| Tz -VS [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin min [kW] | Pin max [kW] | COP nom kW / kW | Qc nom [kW] | Qc min [kW] | Qc max [kW] | I nom [A] | |
| 25 | 514.1 | 85.7 | 514.1 | 66.5 | 10.8 | 66.5 | 7.73 | 452.0 | 75.3 | 452.0 | 140.7 | |
| 24 | 503.5 | 83.9 | 503.5 | 66.3 | 10.8 | 66.3 | 7.59 | 441.6 | 73.6 | 441.6 | 140.4 | |
| 23 | 493.1 | 82.2 | 493.1 | 66.2 | 10.8 | 66.2 | 7.45 | 431.3 | 71.9 | 431.3 | 140.2 | |
| 22 | 482.8 | 80.5 | 482.8 | 66.0 | 10.8 | 66.0 | 7.31 | 421.2 | 70.2 | 421.2 | 139.9 | |
| 21 | 472.7 | 78.8 | 472.7 | 65.9 | 10.7 | 65.9 | 7.18 | 411.2 | 68.5 | 411.2 | 139.8 | |
| 20 | 462.8 | 77.1 | 462.8 | 65.8 | 10.7 | 65.8 | 7.04 | 401.4 | 66.9 | 401.4 | 139.6 | |
| 19 | 453.0 | 75.5 | 453.0 | 65.6 | 10.7 | 65.6 | 6.90 | 391.7 | 65.3 | 391.7 | 139.5 | |
| 18 | 443.3 | 73.9 | 443.3 | 65.5 | 10.7 | 65.5 | 6.76 | 382.1 | 63.7 | 382.1 | 139.4 | |
| 17 | 433.9 | 72.3 | 433.9 | 65.5 | 10.7 | 65.5 | 6.63 | 372.8 | 62.1 | 372.8 | 139.4 | |
| 16 | 424.6 | 70.8 | 424.6 | 65.4 | 10.6 | 65.4 | 6.49 | 363.5 | 60.6 | 363.5 | 139.4 | |
| 15 | 415.4 | 69.2 | 415.4 | 65.3 | 10.6 | 65.3 | 6.36 | 354.4 | 59.1 | 354.4 | 139.4 | |
| 14 | 406.4 | 67.7 | 406.4 | 65.3 | 10.6 | 65.3 | 6.23 | 345.4 | 57.6 | 345.4 | 139.4 | |
| 13 | 397.5 | 66.3 | 397.5 | 65.2 | 10.6 | 65.2 | 6.10 | 336.6 | 56.1 | 336.6 | 139.5 | |
| 12 | 388.8 | 64.8 | 388.8 | 65.2 | 10.6 | 65.2 | 5.96 | 327.9 | 54.7 | 327.9 | 139.6 | |
| 11 | 380.3 | 63.4 | 380.3 | 65.2 | 10.6 | 65.2 | 5.84 | 319.4 | 53.2 | 319.4 | 139.7 | |
| 10 | 371.8 | 62.0 | 371.8 | 65.1 | 10.6 | 65.1 | 5.71 | 311.0 | 51.8 | 311.0 | 139.8 | |
| 9 | 363.6 | 60.6 | 363.6 | 65.1 | 10.6 | 65.1 | 5.58 | 302.8 | 50.5 | 302.8 | 139.9 | |
| 8 | 355.4 | 59.2 | 355.4 | 65.1 | 10.6 | 65.1 | 5.46 | 294.6 | 49.1 | 294.6 | 140.1 | |
| 7 | 347.4 | 57.9 | 347.4 | 65.1 | 10.6 | 65.1 | 5.34 | 286.6 | 47.8 | 286.6 | 140.2 | |
| 6 | 339.6 | 56.6 | 339.6 | 65.1 | 10.6 | 65.1 | 5.22 | 278.8 | 46.5 | 278.8 | 140.4 | |
| 5 | 331.9 | 55.3 | 331.9 | 65.1 | 10.6 | 65.1 | 5.10 | 271.1 | 45.2 | 271.1 | 140.6 | |
| 4 | 324.3 | 54.0 | 324.3 | 65.1 | 10.6 | 65.1 | 4.98 | 263.5 | 43.9 | 263.5 | 140.7 | |
| 3 | 316.8 | 52.8 | 316.8 | 65.1 | 10.6 | 65.1 | 4.87 | 256.0 | 42.7 | 256.0 | 140.9 | |
| 2 | 309.5 | 51.6 | 309.5 | 65.1 | 10.6 | 65.1 | 4.75 | 248.7 | 41.4 | 248.7 | 141.1 | |
| 1 | 302.3 | 50.4 | 302.3 | 65.1 | 10.6 | 65.1 | 4.64 | 241.5 | 40.3 | 241.5 | 141.3 | |
| 0 | 295.3 | 49.2 | 295.3 | 65.1 | 10.6 | 65.1 | 4.53 | 234.4 | 39.1 | 234.4 | 141.4 | |
| -1 | 288.3 | 48.1 | 288.3 | 65.1 | 10.6 | 65.1 | 4.43 | 227.5 | 37.9 | 227.5 | 141.6 | |
| -2 | 281.5 | 46.9 | 281.5 | 65.1 | 10.6 | 65.1 | 4.32 | 220.7 | 36.8 | 220.7 | 141.8 | |
| -3 | 274.8 | 45.8 | 274.8 | 65.1 | 10.6 | 65.1 | 4.22 | 214.0 | 35.7 | 214.0 | 141.9 | |
| -4 | 268.3 | 44.7 | 268.3 | 65.1 | 10.6 | 65.1 | 4.12 | 207.5 | 34.6 | 207.5 | 142.0 | |
| -5 | 261.8 | 43.6 | 261.8 | 65.1 | 10.6 | 65.1 | 4.02 | 201.0 | 33.5 | 201.0 | 142.2 | |
| -6 | 255.5 | 42.6 | 255.5 | 65.1 | 10.6 | 65.1 | 3.93 | 194.7 | 32.5 | 194.7 | 142.3 | |
| -7 | 249.3 | 41.5 | 249.3 | 65.1 | 10.6 | 65.1 | 3.83 | 188.5 | 31.4 | 188.5 | 142.4 | |
| -8 | 243.2 | 40.5 | 243.2 | 65.0 | 10.6 | 65.0 | 3.74 | 182.5 | 30.4 | 182.5 | 142.4 | |
| -9 | 237.2 | 39.5 | 237.2 | 65.0 | 10.6 | 65.0 | 3.65 | 176.5 | 29.4 | 176.5 | 142.5 | |
| -10 | 231.3 | 38.6 | 231.3 | 64.9 | 10.6 | 64.9 | 3.56 | 170.7 | 28.4 | 170.7 | 142.5 | |
| -11 | 225.5 | 37.6 | 225.5 | 64.8 | 10.6 | 64.8 | 3.48 | 165.0 | 27.5 | 165.0 | 142.5 | |
| -12 | 219.9 | 36.6 | 219.9 | 64.8 | 10.5 | 64.8 | 3.39 | 159.4 | 26.6 | 159.4 | 142.5 | |
| -13 | 214.3 | 35.7 | 214.3 | 64.7 | 10.5 | 64.7 | 3.31 | 153.9 | 25.7 | 153.9 | 142.4 | |
| -14 | 208.9 | 34.8 | 208.9 | 64.6 | 10.5 | 64.6 | 3.23 | 148.6 | 24.8 | 148.6 | 142.3 | |
| -15 | 203.5 | 33.9 | 203.5 | 64.5 | 10.5 | 64.5 | 3.16 | 143.3 | 23.9 | 143.3 | 142.2 | |

-- pozor: pracovný rozsah nie je zohľadnený v tabuľke

ZHI46K1P-TWD_R410A_6_BWW

| Tv -VY | 45 | | | | | | | | | | |
|-----------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|-----------------------|-------------------|-------------------|-------------------|-----------------|
| [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin min [kW] | Pin max [kW] | COP nom kW / kW | Qc nom [kW] | Qc min [kW] | Qc max [kW] | I nom [A] |
| 25 | 503.6 | 83.9 | 503.6 | 80.0 | 13.0 | 80.0 | 6.30 | 428.9 | 71.5 | 428.9 | 158.8 |
| 24 | 493.8 | 82.3 | 493.8 | 79.9 | 13.0 | 79.9 | 6.18 | 419.1 | 69.9 | 419.1 | 158.6 |
| 23 | 484.1 | 80.7 | 484.1 | 79.9 | 13.0 | 79.9 | 6.06 | 409.5 | 68.2 | 409.5 | 158.5 |
| 22 | 474.5 | 79.1 | 474.5 | 79.9 | 13.0 | 79.9 | 5.94 | 399.9 | 66.7 | 399.9 | 158.3 |
| 21 | 465.1 | 77.5 | 465.1 | 79.9 | 13.0 | 79.9 | 5.82 | 390.5 | 65.1 | 390.5 | 158.2 |
| 20 | 455.8 | 76.0 | 455.8 | 79.9 | 13.0 | 79.9 | 5.71 | 381.3 | 63.5 | 381.3 | 158.2 |
| 19 | 446.7 | 74.4 | 446.7 | 79.9 | 13.0 | 79.9 | 5.59 | 372.1 | 62.0 | 372.1 | 158.1 |
| 18 | 437.7 | 73.0 | 437.7 | 79.9 | 13.0 | 79.9 | 5.48 | 363.1 | 60.5 | 363.1 | 158.1 |
| 17 | 428.9 | 71.5 | 428.9 | 79.9 | 13.0 | 79.9 | 5.37 | 354.3 | 59.0 | 354.3 | 158.0 |
| 16 | 420.1 | 70.0 | 420.1 | 79.9 | 13.0 | 79.9 | 5.26 | 345.5 | 57.6 | 345.5 | 158.0 |
| 15 | 411.6 | 68.6 | 411.6 | 79.9 | 13.0 | 79.9 | 5.15 | 336.9 | 56.2 | 336.9 | 158.1 |
| 14 | 403.1 | 67.2 | 403.1 | 80.0 | 13.0 | 80.0 | 5.04 | 328.5 | 54.7 | 328.5 | 158.1 |
| 13 | 394.8 | 65.8 | 394.8 | 80.0 | 13.0 | 80.0 | 4.94 | 320.1 | 53.4 | 320.1 | 158.1 |
| 12 | 386.6 | 64.4 | 386.6 | 80.0 | 13.0 | 80.0 | 4.83 | 311.9 | 52.0 | 311.9 | 158.2 |
| 11 | 378.6 | 63.1 | 378.6 | 80.1 | 13.0 | 80.1 | 4.73 | 303.8 | 50.6 | 303.8 | 158.3 |
| 10 | 370.7 | 61.8 | 370.7 | 80.1 | 13.1 | 80.1 | 4.63 | 295.8 | 49.3 | 295.8 | 158.3 |
| 9 | 362.9 | 60.5 | 362.9 | 80.2 | 13.1 | 80.2 | 4.53 | 288.0 | 48.0 | 288.0 | 158.4 |
| 8 | 355.2 | 59.2 | 355.2 | 80.2 | 13.1 | 80.2 | 4.43 | 280.3 | 46.7 | 280.3 | 158.5 |
| 7 | 347.6 | 57.9 | 347.6 | 80.2 | 13.1 | 80.2 | 4.33 | 272.7 | 45.4 | 272.7 | 158.5 |
| 6 | 340.2 | 56.7 | 340.2 | 80.3 | 13.1 | 80.3 | 4.24 | 265.2 | 44.2 | 265.2 | 158.6 |
| 5 | 332.9 | 55.5 | 332.9 | 80.3 | 13.1 | 80.3 | 4.14 | 257.9 | 43.0 | 257.9 | 158.7 |
| 4 | 325.7 | 54.3 | 325.7 | 80.4 | 13.1 | 80.4 | 4.05 | 250.6 | 41.8 | 250.6 | 158.7 |
| 3 | 318.6 | 53.1 | 318.6 | 80.4 | 13.1 | 80.4 | 3.96 | 243.5 | 40.6 | 243.5 | 158.8 |
| 2 | 311.6 | 51.9 | 311.6 | 80.4 | 13.1 | 80.4 | 3.88 | 236.5 | 39.4 | 236.5 | 158.8 |
| 1 | 304.8 | 50.8 | 304.8 | 80.4 | 13.1 | 80.4 | 3.79 | 229.7 | 38.3 | 229.7 | 158.9 |
| 0 | 298.0 | 49.7 | 298.0 | 80.4 | 13.1 | 80.4 | 3.71 | 222.9 | 37.2 | 222.9 | 158.9 |
| -1 | 291.4 | 48.6 | 291.4 | 80.4 | 13.1 | 80.4 | 3.62 | 216.3 | 36.0 | 216.3 | 158.9 |
| -2 | 284.8 | 47.5 | 284.8 | 80.4 | 13.1 | 80.4 | 3.54 | 209.7 | 35.0 | 209.7 | 158.9 |
| -3 | 278.4 | 46.4 | 278.4 | 80.4 | 13.1 | 80.4 | 3.46 | 203.3 | 33.9 | 203.3 | 158.8 |
| -4 | 272.1 | 45.3 | 272.1 | 80.4 | 13.1 | 80.4 | 3.39 | 197.0 | 32.8 | 197.0 | 158.8 |
| -5 | 265.9 | 44.3 | 265.9 | 80.3 | 13.1 | 80.3 | 3.31 | 190.8 | 31.8 | 190.8 | 158.7 |
| -6 | 259.7 | 43.3 | 259.7 | 80.3 | 13.1 | 80.3 | 3.24 | 184.8 | 30.8 | 184.8 | 158.6 |
| -7 | 253.7 | 42.3 | 253.7 | 80.2 | 13.1 | 80.2 | 3.16 | 178.8 | 29.8 | 178.8 | 158.4 |
| -8 | 247.8 | 41.3 | 247.8 | 80.1 | 13.1 | 80.1 | 3.09 | 172.9 | 28.8 | 172.9 | 158.3 |
| -9 | 241.9 | 40.3 | 241.9 | 80.0 | 13.0 | 80.0 | 3.02 | 167.2 | 27.9 | 167.2 | 158.1 |
| -10 | 236.2 | 39.4 | 236.2 | 79.9 | 13.0 | 79.9 | 2.96 | 161.5 | 26.9 | 161.5 | 157.8 |
| -11 | 230.5 | 38.4 | 230.5 | 79.8 | 13.0 | 79.8 | 2.89 | 156.0 | 26.0 | 156.0 | 157.6 |
| -12 | 225.0 | 37.5 | 225.0 | 79.6 | 13.0 | 79.6 | 2.82 | 150.6 | 25.1 | 150.6 | 157.2 |
| -13 | 219.5 | 36.6 | 219.5 | 79.5 | 12.9 | 79.5 | 2.76 | 145.3 | 24.2 | 145.3 | 156.9 |
| -14 | 214.1 | 35.7 | 214.1 | 79.3 | 12.9 | 79.3 | 2.70 | 140.0 | 23.3 | 140.0 | 156.5 |
| -15 | 208.8 | 34.8 | 208.8 | 79.1 | 12.9 | 79.1 | 2.64 | 134.9 | 22.5 | 134.9 | 156.1 |

-- pozor: pracovný rozsah nie je zohľadnený v tabuľke

| Tv -VY | | 55 | | | | | | | | | | |
|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|-----------------------|-------------------|-------------------|-------------------|-----------------|--|
| Tz -VS [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin min [kW] | Pin max [kW] | COP nom kW / kW | Qc nom [kW] | Qc min [kW] | Qc max [kW] | I nom [A] | |
| 25 | 493.6 | 82.3 | 493.6 | 101.0 | 16.5 | 101.0 | 4.89 | 399.3 | 66.5 | 399.3 | 183.9 | |
| 24 | 484.5 | 80.8 | 484.5 | 101.1 | 16.5 | 101.1 | 4.79 | 390.1 | 65.0 | 390.1 | 183.9 | |
| 23 | 475.5 | 79.3 | 475.5 | 101.1 | 16.5 | 101.1 | 4.70 | 381.1 | 63.5 | 381.1 | 183.8 | |
| 22 | 466.7 | 77.8 | 466.7 | 101.2 | 16.5 | 101.2 | 4.61 | 372.2 | 62.0 | 372.2 | 183.8 | |
| 21 | 458.0 | 76.3 | 458.0 | 101.3 | 16.5 | 101.3 | 4.52 | 363.5 | 60.6 | 363.5 | 183.9 | |
| 20 | 449.4 | 74.9 | 449.4 | 101.3 | 16.5 | 101.3 | 4.44 | 354.8 | 59.1 | 354.8 | 183.9 | |
| 19 | 441.0 | 73.5 | 441.0 | 101.4 | 16.5 | 101.4 | 4.35 | 346.3 | 57.7 | 346.3 | 183.9 | |
| 18 | 432.6 | 72.1 | 432.6 | 101.5 | 16.5 | 101.5 | 4.26 | 337.9 | 56.3 | 337.9 | 184.0 | |
| 17 | 424.4 | 70.7 | 424.4 | 101.6 | 16.5 | 101.6 | 4.18 | 329.6 | 54.9 | 329.6 | 184.0 | |
| 16 | 416.3 | 69.4 | 416.3 | 101.6 | 16.6 | 101.6 | 4.10 | 321.4 | 53.6 | 321.4 | 184.1 | |
| 15 | 408.3 | 68.1 | 408.3 | 101.7 | 16.6 | 101.7 | 4.01 | 313.3 | 52.2 | 313.3 | 184.2 | |
| 14 | 400.5 | 66.7 | 400.5 | 101.8 | 16.6 | 101.8 | 3.93 | 305.4 | 50.9 | 305.4 | 184.2 | |
| 13 | 392.7 | 65.4 | 392.7 | 101.9 | 16.6 | 101.9 | 3.86 | 297.6 | 49.6 | 297.6 | 184.3 | |
| 12 | 385.0 | 64.2 | 385.0 | 101.9 | 16.6 | 101.9 | 3.78 | 289.9 | 48.3 | 289.9 | 184.4 | |
| 11 | 377.5 | 62.9 | 377.5 | 102.0 | 16.6 | 102.0 | 3.70 | 282.3 | 47.0 | 282.3 | 184.4 | |
| 10 | 370.1 | 61.7 | 370.1 | 102.0 | 16.6 | 102.0 | 3.63 | 274.8 | 45.8 | 274.8 | 184.5 | |
| 9 | 362.7 | 60.5 | 362.7 | 102.1 | 16.6 | 102.1 | 3.55 | 267.4 | 44.6 | 267.4 | 184.5 | |
| 8 | 355.5 | 59.3 | 355.5 | 102.1 | 16.6 | 102.1 | 3.48 | 260.1 | 43.4 | 260.1 | 184.6 | |
| 7 | 348.4 | 58.1 | 348.4 | 102.2 | 16.6 | 102.2 | 3.41 | 253.0 | 42.2 | 253.0 | 184.6 | |
| 6 | 341.4 | 56.9 | 341.4 | 102.2 | 16.6 | 102.2 | 3.34 | 245.9 | 41.0 | 245.9 | 184.6 | |
| 5 | 334.4 | 55.7 | 334.4 | 102.2 | 16.6 | 102.2 | 3.27 | 239.0 | 39.8 | 239.0 | 184.6 | |
| 4 | 327.6 | 54.6 | 327.6 | 102.2 | 16.6 | 102.2 | 3.20 | 232.1 | 38.7 | 232.1 | 184.6 | |
| 3 | 320.9 | 53.5 | 320.9 | 102.2 | 16.6 | 102.2 | 3.14 | 225.4 | 37.6 | 225.4 | 184.6 | |
| 2 | 314.2 | 52.4 | 314.2 | 102.2 | 16.6 | 102.2 | 3.07 | 218.8 | 36.5 | 218.8 | 184.5 | |
| 1 | 307.7 | 51.3 | 307.7 | 102.2 | 16.6 | 102.2 | 3.01 | 212.3 | 35.4 | 212.3 | 184.4 | |
| 0 | 301.2 | 50.2 | 301.2 | 102.1 | 16.6 | 102.1 | 2.95 | 205.8 | 34.3 | 205.8 | 184.3 | |
| -1 | 294.8 | 49.1 | 294.8 | 102.1 | 16.6 | 102.1 | 2.89 | 199.5 | 33.3 | 199.5 | 184.2 | |
| -2 | 288.6 | 48.1 | 288.6 | 102.0 | 16.6 | 102.0 | 2.83 | 193.3 | 32.2 | 193.3 | 184.0 | |
| -3 | 282.4 | 47.1 | 282.4 | 101.9 | 16.6 | 101.9 | 2.77 | 187.2 | 31.2 | 187.2 | 183.8 | |
| -4 | 276.2 | 46.0 | 276.2 | 101.8 | 16.6 | 101.8 | 2.71 | 181.2 | 30.2 | 181.2 | 183.6 | |
| -5 | 270.2 | 45.0 | 270.2 | 101.7 | 16.6 | 101.7 | 2.66 | 175.2 | 29.2 | 175.2 | 183.3 | |
| -6 | 264.2 | 44.0 | 264.2 | 101.6 | 16.5 | 101.6 | 2.60 | 169.4 | 28.2 | 169.4 | 183.0 | |
| -7 | 258.4 | 43.1 | 258.4 | 101.4 | 16.5 | 101.4 | 2.55 | 163.7 | 27.3 | 163.7 | 182.7 | |
| -8 | 252.6 | 42.1 | 252.6 | 101.2 | 16.5 | 101.2 | 2.50 | 158.0 | 26.3 | 158.0 | 182.3 | |
| -9 | 246.8 | 41.1 | 246.8 | 101.0 | 16.5 | 101.0 | 2.44 | 152.5 | 25.4 | 152.5 | 181.9 | |
| -10 | 241.2 | 40.2 | 241.2 | 100.8 | 16.4 | 100.8 | 2.39 | 147.0 | 24.5 | 147.0 | 181.4 | |
| -11 | 235.6 | 39.3 | 235.6 | 100.5 | 16.4 | 100.5 | 2.34 | 141.7 | 23.6 | 141.7 | 180.9 | |
| -12 | 230.1 | 38.3 | 230.1 | 100.3 | 16.3 | 100.3 | 2.29 | 136.4 | 22.7 | 136.4 | 180.3 | |
| -13 | 224.6 | 37.4 | 224.6 | 100.0 | 16.3 | 100.0 | 2.25 | 131.2 | 21.9 | 131.2 | 179.7 | |
| -14 | 219.2 | 36.5 | 219.2 | 99.7 | 16.2 | 99.7 | 2.20 | 126.2 | 21.0 | 126.2 | 179.0 | |
| -15 | 213.9 | 35.7 | 213.9 | 99.3 | 16.2 | 99.3 | 2.15 | 121.2 | 20.2 | 121.2 | 178.3 | |

-- pozor: pracovný rozsah nie je zohľadnený v tabuľke

| Tv -VY | 65 (T-max) | | | | | | | | | | |
|-----------|--------------|-----------|-----------|--------------|------------|------------|-------------|-----------|-----------|-----------|----------|
| [°C] | Qh nom | Qh min | Qh max | Pin nom | Pin min | Pin max | COP nom | Qc nom | Qc min | Qc max | I nom |
| [°C] | [kW] | [kW] | [kW] | [kW] | [kW] | [kW] | kW / kW | [kW] | [kW] | [kW] | [A] |
| 25 | 486.6 | 81.1 | 486.6 | 128.7 | 21.0 | 128.7 | 3.78 | 366.5 | 61.1 | 366.5 | 215.8 |
| 24 | 478.2 | 79.7 | 478.2 | 128.8 | 21.0 | 128.8 | 3.71 | 358.0 | 59.7 | 358.0 | 216.0 |
| 23 | 469.9 | 78.3 | 469.9 | 128.9 | 21.0 | 128.9 | 3.65 | 349.6 | 58.3 | 349.6 | 216.1 |
| 22 | 461.7 | 77.0 | 461.7 | 129.0 | 21.0 | 129.0 | 3.58 | 341.3 | 56.9 | 341.3 | 216.3 |
| 21 | 453.7 | 75.6 | 453.7 | 129.1 | 21.0 | 129.1 | 3.51 | 333.1 | 55.5 | 333.1 | 216.5 |
| 20 | 445.7 | 74.3 | 445.7 | 129.2 | 21.0 | 129.2 | 3.45 | 325.0 | 54.2 | 325.0 | 216.7 |
| 19 | 437.8 | 73.0 | 437.8 | 129.3 | 21.1 | 129.3 | 3.39 | 317.1 | 52.8 | 317.1 | 216.8 |
| 18 | 430.0 | 71.7 | 430.0 | 129.4 | 21.1 | 129.4 | 3.32 | 309.2 | 51.5 | 309.2 | 217.0 |
| 17 | 422.4 | 70.4 | 422.4 | 129.5 | 21.1 | 129.5 | 3.26 | 301.5 | 50.2 | 301.5 | 217.2 |
| 16 | 414.8 | 69.1 | 414.8 | 129.5 | 21.1 | 129.5 | 3.20 | 293.8 | 49.0 | 293.8 | 217.3 |
| 15 | 407.3 | 67.9 | 407.3 | 129.6 | 21.1 | 129.6 | 3.14 | 286.3 | 47.7 | 286.3 | 217.5 |
| 14 | 399.9 | 66.7 | 399.9 | 129.7 | 21.1 | 129.7 | 3.08 | 278.8 | 46.5 | 278.8 | 217.7 |
| 13 | 392.6 | 65.4 | 392.6 | 129.7 | 21.1 | 129.7 | 3.03 | 271.5 | 45.3 | 271.5 | 217.8 |
| 12 | 385.4 | 64.2 | 385.4 | 129.8 | 21.1 | 129.8 | 2.97 | 264.3 | 44.0 | 264.3 | 217.9 |
| 11 | 378.3 | 63.1 | 378.3 | 129.8 | 21.1 | 129.8 | 2.92 | 257.1 | 42.9 | 257.1 | 218.0 |
| 10 | 371.3 | 61.9 | 371.3 | 129.8 | 21.1 | 129.8 | 2.86 | 250.1 | 41.7 | 250.1 | 218.1 |
| 9 | 364.4 | 60.7 | 364.4 | 129.8 | 21.1 | 129.8 | 2.81 | 243.1 | 40.5 | 243.1 | 218.2 |
| 8 | 357.5 | 59.6 | 357.5 | 129.8 | 21.1 | 129.8 | 2.75 | 236.3 | 39.4 | 236.3 | 218.3 |
| 7 | 350.7 | 58.5 | 350.7 | 129.8 | 21.1 | 129.8 | 2.70 | 229.5 | 38.3 | 229.5 | 218.3 |
| 6 | 344.0 | 57.3 | 344.0 | 129.7 | 21.1 | 129.7 | 2.65 | 222.9 | 37.1 | 222.9 | 218.3 |
| 5 | 337.4 | 56.2 | 337.4 | 129.7 | 21.1 | 129.7 | 2.60 | 216.3 | 36.1 | 216.3 | 218.3 |
| 4 | 330.9 | 55.2 | 330.9 | 129.6 | 21.1 | 129.6 | 2.55 | 209.9 | 35.0 | 209.9 | 218.3 |
| 3 | 324.4 | 54.1 | 324.4 | 129.5 | 21.1 | 129.5 | 2.50 | 203.5 | 33.9 | 203.5 | 218.2 |
| 2 | 318.1 | 53.0 | 318.1 | 129.4 | 21.1 | 129.4 | 2.46 | 197.2 | 32.9 | 197.2 | 218.1 |
| 1 | 311.8 | 52.0 | 311.8 | 129.3 | 21.1 | 129.3 | 2.41 | 191.0 | 31.8 | 191.0 | 217.9 |
| 0 | 305.5 | 50.9 | 305.5 | 129.2 | 21.0 | 129.2 | 2.37 | 184.9 | 30.8 | 184.9 | 217.7 |
| -1 | 299.3 | 49.9 | 299.3 | 129.0 | 21.0 | 129.0 | 2.32 | 178.9 | 29.8 | 178.9 | 217.5 |
| -2 | 293.2 | 48.9 | 293.2 | 128.8 | 21.0 | 128.8 | 2.28 | 172.9 | 28.8 | 172.9 | 217.3 |
| -3 | 287.2 | 47.9 | 287.2 | 128.6 | 21.0 | 128.6 | 2.23 | 167.1 | 27.8 | 167.1 | 217.0 |
| -4 | 281.2 | 46.9 | 281.2 | 128.4 | 20.9 | 128.4 | 2.19 | 161.3 | 26.9 | 161.3 | 216.6 |
| -5 | 275.3 | 45.9 | 275.3 | 128.2 | 20.9 | 128.2 | 2.15 | 155.6 | 25.9 | 155.6 | 216.2 |
| -6 | 269.5 | 44.9 | 269.5 | 127.9 | 20.8 | 127.9 | 2.11 | 150.0 | 25.0 | 150.0 | 215.8 |
| -7 | 263.7 | 43.9 | 263.7 | 127.6 | 20.8 | 127.6 | 2.07 | 144.5 | 24.1 | 144.5 | 215.3 |
| -8 | 257.9 | 43.0 | 257.9 | 127.3 | 20.7 | 127.3 | 2.03 | 139.1 | 23.2 | 139.1 | 214.7 |
| -9 | 252.3 | 42.0 | 252.3 | 126.9 | 20.7 | 126.9 | 1.99 | 133.8 | 22.3 | 133.8 | 214.1 |
| -10 | 246.6 | 41.1 | 246.6 | 126.5 | 20.6 | 126.5 | 1.95 | 128.5 | 21.4 | 128.5 | 213.5 |
| -11 | 241.1 | 40.2 | 241.1 | 126.1 | 20.5 | 126.1 | 1.91 | 123.3 | 20.5 | 123.3 | 212.7 |
| -12 | 235.5 | 39.3 | 235.5 | 125.7 | 20.5 | 125.7 | 1.87 | 118.2 | 19.7 | 118.2 | 211.9 |
| -13 | 230.1 | 38.3 | 230.1 | 125.2 | 20.4 | 125.2 | 1.84 | 113.1 | 18.9 | 113.1 | 211.1 |
| -14 | 224.6 | 37.4 | 224.6 | 124.7 | 20.3 | 124.7 | 1.80 | 108.2 | 18.0 | 108.2 | 210.2 |
| -15 | 219.2 | 36.5 | 219.2 | 124.2 | 20.2 | 124.2 | 1.77 | 103.3 | 17.2 | 103.3 | 209.2 |

-- pozor: pracovný rozsah nie je zohľadnený v tabuľke

WAMAK TWW 360 EVI HeavyDuty 2L3

| Tch -VY | | W 12 / 7 °C | | | | | | | | | | |
|------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|----------------|-------------------|-------------------|-------------------|-----------------|--|
| [°C] | Qc nom [kW] | Qc min [kW] | Qc max [kW] | Pin nom [kW] | Pin min [kW] | Pin max [kW] | EER kW / kW | Qh nom [kW] | Qh min [kW] | Qh max [kW] | I nom [A] | |
| 40 | 211.2 | 35.2 | 211.2 | 87.0 | 14.2 | 87.0 | 2.43 | 292.5 | 48.7 | 292.5 | 166.4 | |
| 39 | 212.7 | 35.5 | 212.7 | 85.1 | 13.9 | 85.1 | 2.50 | 292.1 | 48.7 | 292.1 | 164.2 | |
| 38 | 214.2 | 35.7 | 214.2 | 83.2 | 13.5 | 83.2 | 2.58 | 291.8 | 48.6 | 291.8 | 162.0 | |
| 37 | 215.6 | 35.9 | 215.6 | 81.3 | 13.2 | 81.3 | 2.65 | 291.5 | 48.6 | 291.5 | 159.9 | |
| 36 | 217.0 | 36.2 | 217.0 | 79.5 | 13.0 | 79.5 | 2.73 | 291.2 | 48.5 | 291.2 | 157.9 | |
| 35 | 218.3 | 36.4 | 218.3 | 77.8 | 12.7 | 77.8 | 2.81 | 290.9 | 48.5 | 290.9 | 155.9 | |
| 34 | 219.6 | 36.6 | 219.6 | 76.1 | 12.4 | 76.1 | 2.89 | 290.6 | 48.4 | 290.6 | 153.9 | |
| 33 | 220.8 | 36.8 | 220.8 | 74.4 | 12.1 | 74.4 | 2.97 | 290.3 | 48.4 | 290.3 | 152.0 | |
| 32 | 222.0 | 37.0 | 222.0 | 72.8 | 11.9 | 72.8 | 3.05 | 290.0 | 48.3 | 290.0 | 150.2 | |
| 31 | 223.2 | 37.2 | 223.2 | 71.2 | 11.6 | 71.2 | 3.14 | 289.7 | 48.3 | 289.7 | 148.4 | |
| 30 | 224.3 | 37.4 | 224.3 | 69.6 | 11.3 | 69.6 | 3.22 | 289.3 | 48.2 | 289.3 | 146.7 | |
| 29 | 225.4 | 37.6 | 225.4 | 68.1 | 11.1 | 68.1 | 3.31 | 289.0 | 48.2 | 289.0 | 144.9 | |
| 28 | 226.5 | 37.7 | 226.5 | 66.6 | 10.8 | 66.6 | 3.40 | 288.7 | 48.1 | 288.7 | 143.2 | |
| 27 | 227.5 | 37.9 | 227.5 | 65.1 | 10.6 | 65.1 | 3.49 | 288.3 | 48.1 | 288.3 | 141.6 | |
| 26 | 228.5 | 38.1 | 228.5 | 63.7 | 10.4 | 63.7 | 3.59 | 288.0 | 48.0 | 288.0 | 140.0 | |
| 25 | 229.4 | 38.2 | 229.4 | 62.3 | 10.1 | 62.3 | 3.68 | 287.6 | 47.9 | 287.6 | 138.4 | |
| 24 | 230.3 | 38.4 | 230.3 | 60.9 | 9.9 | 60.9 | 3.78 | 287.2 | 47.9 | 287.2 | 136.8 | |
| 23 | 231.2 | 38.5 | 231.2 | 59.6 | 9.7 | 59.6 | 3.88 | 286.8 | 47.8 | 286.8 | 135.2 | |
| 22 | 232.0 | 38.7 | 232.0 | 58.2 | 9.5 | 58.2 | 3.98 | 286.4 | 47.7 | 286.4 | 133.7 | |
| 21 | 232.8 | 38.8 | 232.8 | 56.9 | 9.3 | 56.9 | 4.09 | 286.0 | 47.7 | 286.0 | 132.2 | |
| 20 | 233.6 | 38.9 | 233.6 | 55.7 | 9.1 | 55.7 | 4.20 | 285.6 | 47.6 | 285.6 | 130.7 | |

| Tc [°C] | | W 23 / 18 °C | | | | | | | | | | |
|---------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|----------------|-------------------|-------------------|-------------------|-----------------|--|
| [°C] | Qc nom [kW] | Qc min [kW] | Qc max [kW] | Pin nom [kW] | Pin min [kW] | Pin max [kW] | EER kW / kW | Qh nom [kW] | Qh min [kW] | Qh max [kW] | I nom [A] | |
| 0 | | | | | | | | | | | | |
| 40 | 281.7 | 46.9 | 281.7 | 87.0 | 14.2 | 87.0 | 3.24 | 362.7 | 60.4 | 363.0 | 166.3 | |
| 39 | 283.5 | 47.3 | 283.5 | 85.1 | 13.9 | 85.1 | 3.33 | 362.7 | 60.5 | 362.9 | 164.0 | |
| 38 | 285.3 | 47.6 | 285.3 | 83.2 | 13.5 | 83.2 | 3.43 | 362.8 | 60.5 | 362.8 | 161.7 | |
| 37 | 287.1 | 47.9 | 287.1 | 81.3 | 13.2 | 81.3 | 3.53 | 362.8 | 60.5 | 362.7 | 159.5 | |
| 36 | 288.9 | 48.1 | 288.9 | 79.5 | 13.0 | 79.5 | 3.63 | 362.9 | 60.5 | 362.7 | 157.3 | |
| 35 | 290.6 | 48.4 | 290.6 | 77.8 | 12.7 | 77.8 | 3.74 | 363.0 | 60.5 | 362.7 | 155.2 | |
| 34 | 292.2 | 48.7 | 292.2 | 76.1 | 12.4 | 76.1 | 3.84 | 363.0 | 60.5 | 362.6 | 153.2 | |
| 33 | 293.8 | 49.0 | 293.8 | 74.4 | 12.1 | 74.4 | 3.95 | 363.1 | 60.5 | 362.6 | 151.2 | |
| 32 | 295.4 | 49.2 | 295.4 | 72.8 | 11.9 | 72.8 | 4.06 | 363.2 | 60.5 | 362.6 | 149.2 | |
| 31 | 297.0 | 49.5 | 297.0 | 71.2 | 11.6 | 71.2 | 4.17 | 363.3 | 60.5 | 362.7 | 147.3 | |
| 30 | 298.5 | 49.7 | 298.5 | 69.6 | 11.3 | 69.6 | 4.29 | 363.3 | 60.6 | 362.7 | 145.4 | |
| 29 | 299.9 | 50.0 | 299.9 | 68.1 | 11.1 | 68.1 | 4.41 | 363.4 | 60.6 | 362.7 | 143.6 | |
| 28 | 301.4 | 50.2 | 301.4 | 66.6 | 10.8 | 66.6 | 4.53 | 363.5 | 60.6 | 362.8 | 141.7 | |
| 27 | 302.8 | 50.5 | 302.8 | 65.1 | 10.6 | 65.1 | 4.65 | 363.6 | 60.6 | 362.8 | 139.9 | |
| 26 | 304.1 | 50.7 | 304.1 | 63.7 | 10.4 | 63.7 | 4.77 | 363.6 | 60.6 | 362.9 | 138.2 | |
| 25 | 305.4 | 50.9 | 305.4 | 62.3 | 10.1 | 62.3 | 4.90 | 363.7 | 60.6 | 363.0 | 136.4 | |
| 24 | 306.7 | 51.1 | 306.7 | 60.9 | 9.9 | 60.9 | 5.03 | 363.8 | 60.6 | 363.0 | 134.7 | |
| 23 | 308.0 | 51.3 | 308.0 | 59.6 | 9.7 | 59.6 | 5.17 | 363.8 | 60.6 | 363.1 | 133.0 | |
| 22 | 309.2 | 51.5 | 309.2 | 58.2 | 9.5 | 58.2 | 5.31 | 363.8 | 60.6 | 363.2 | 131.3 | |
| 21 | 310.3 | 51.7 | 310.3 | 56.9 | 9.3 | 56.9 | 5.45 | 363.9 | 60.6 | 363.3 | 129.6 | |
| 20 | 311.5 | 51.9 | 311.5 | 55.7 | 9.1 | 55.7 | 5.60 | 363.9 | 60.6 | 363.3 | 127.9 | |

-- pozor: pracovný rozsah nie je zohľadnený v tabuľke

LEGENDA:

Tz-VS: Teplota zdroja - vstup [°C]

Tv-VY: Teplota vykurovania - výstup [°C]

Tch-VY: Teplota chladenia - výstup [°C]

Qh nom: Nominálny tepelný výkon

Qh min: Minimálny tepelný výkon

Qh max: Maxmálny tepelný výkon

Pin nom: Príkion pri nominálnom tepelnom výkone

Pin min: Príkion pri minimálnom tepelnom výkone

Pin max: Príkion pri maximálnom tepelnom výkone

COP nom: Koeficient účinnosti pri nominálnom tepelnom výkone

Qc nom: Chladiaci výkon / odobrané teplo pri nominálnom tepelnom výkone

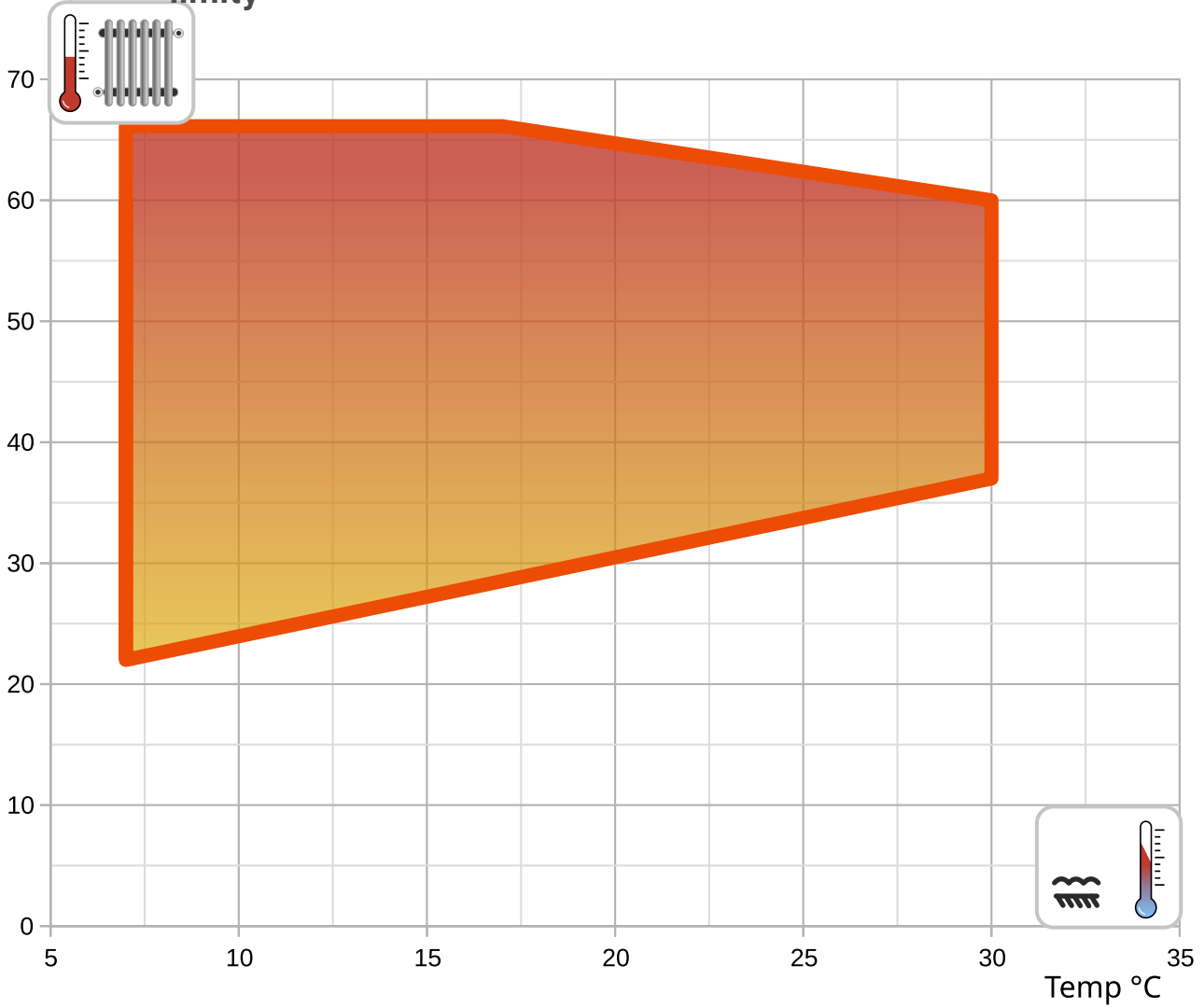
Qc min: Chladiaci výkon / odobrané teplo pri minimálnom tepelnom výkone

Qc max: Chladiaci výkon / odobrané teplo pri maximálnom tepelnom výkone

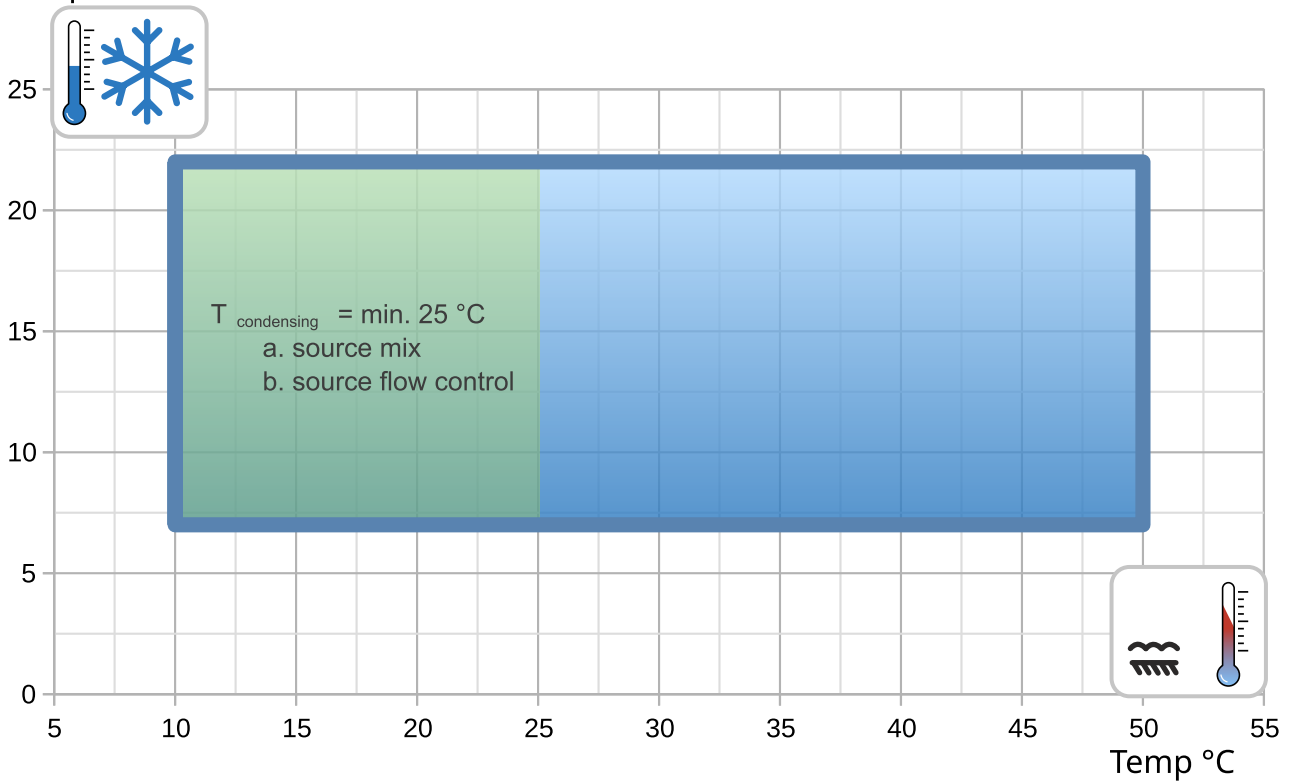
I nom: Prúd pri nominálnom tepelnom výkone

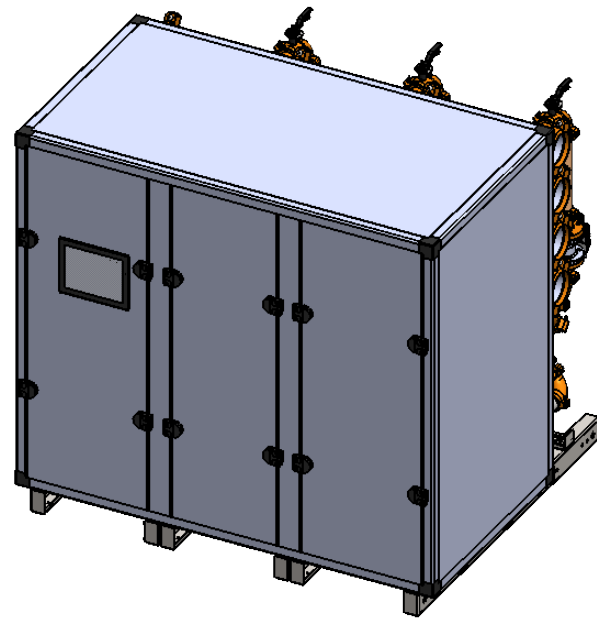
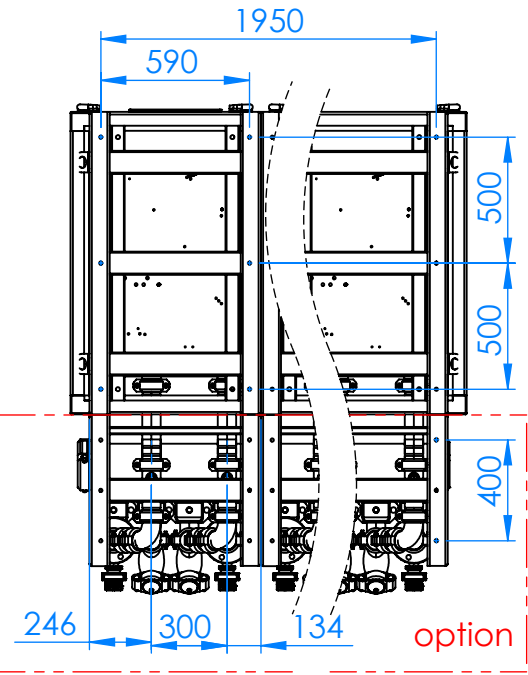
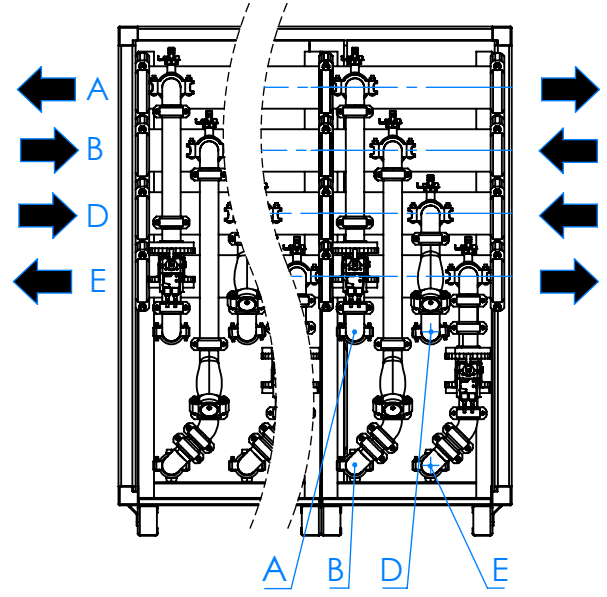
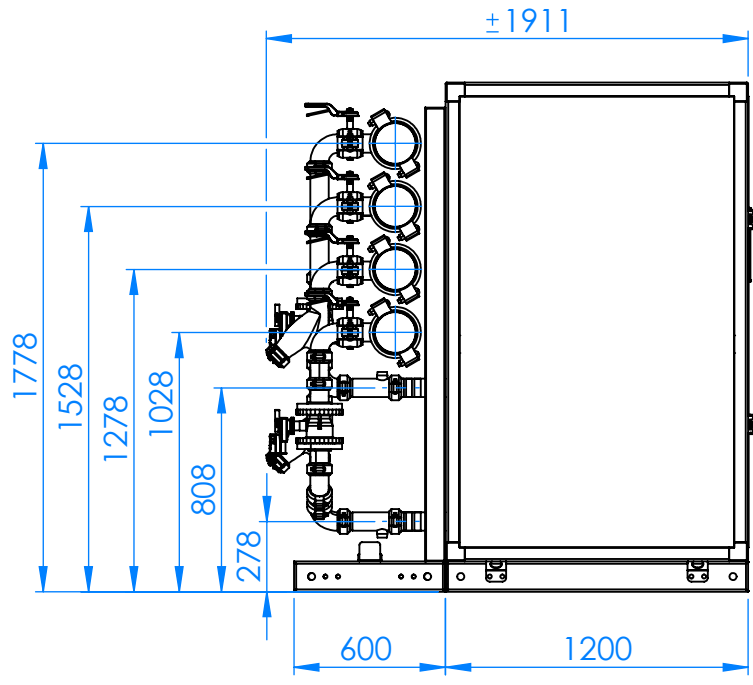
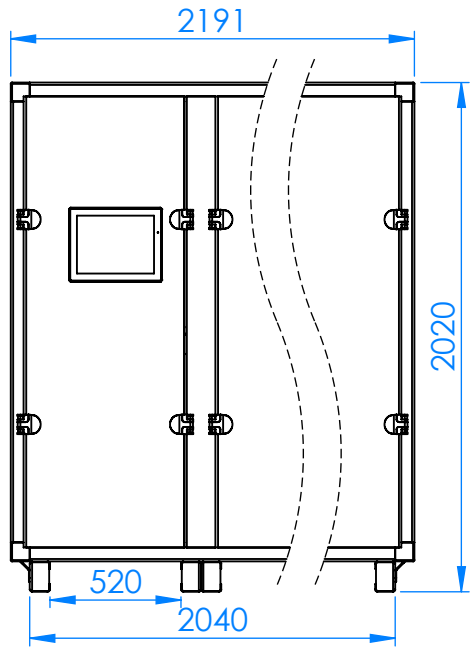
EER: Koeficient účinnosti pri nominálnom chladiacom výkone

Prevádzkové
Temp °C limity

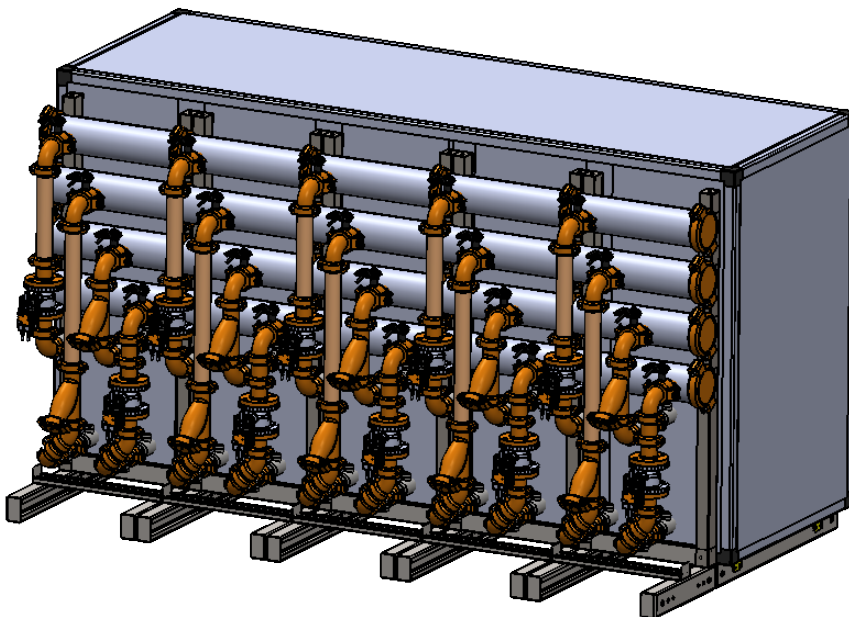
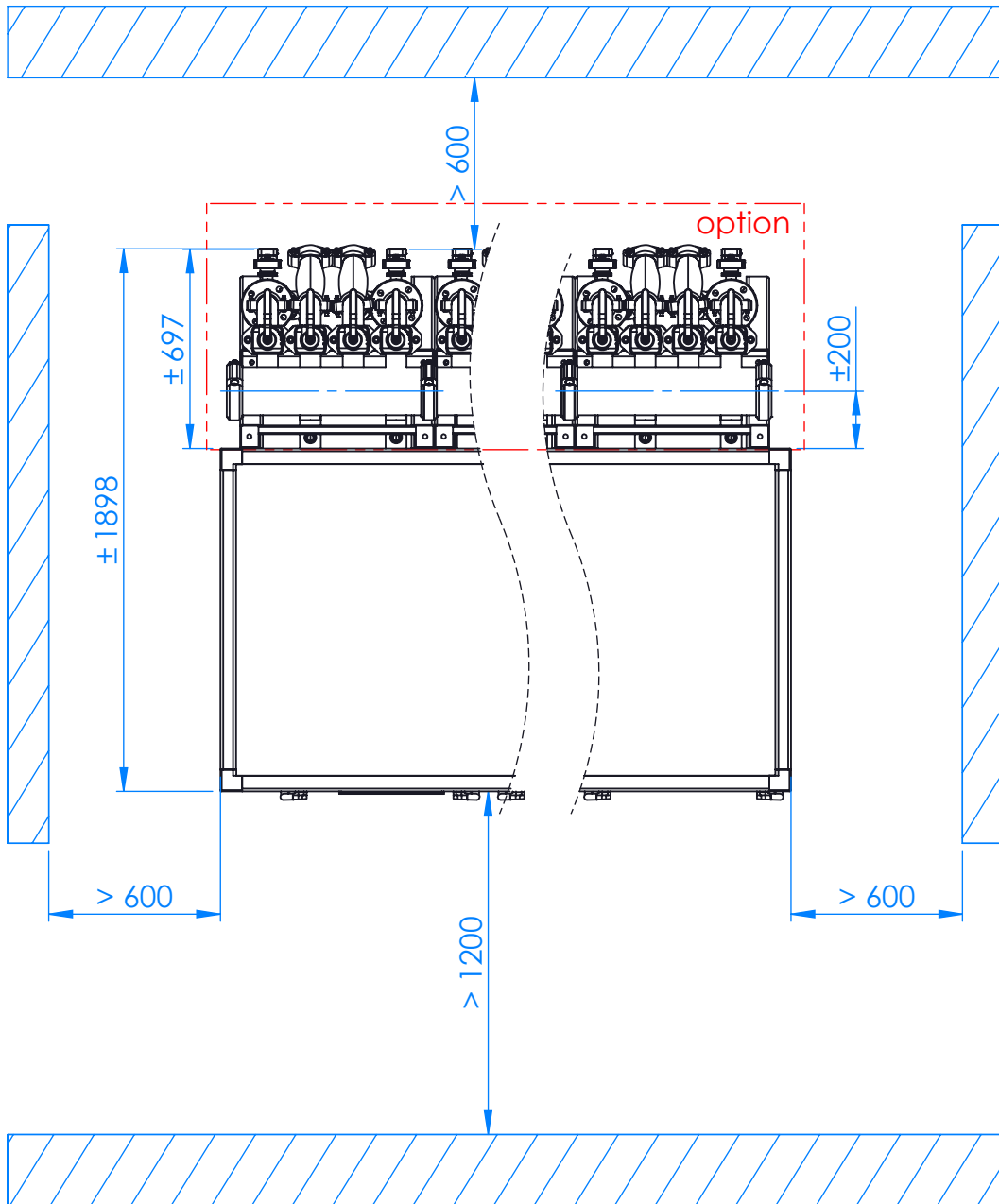


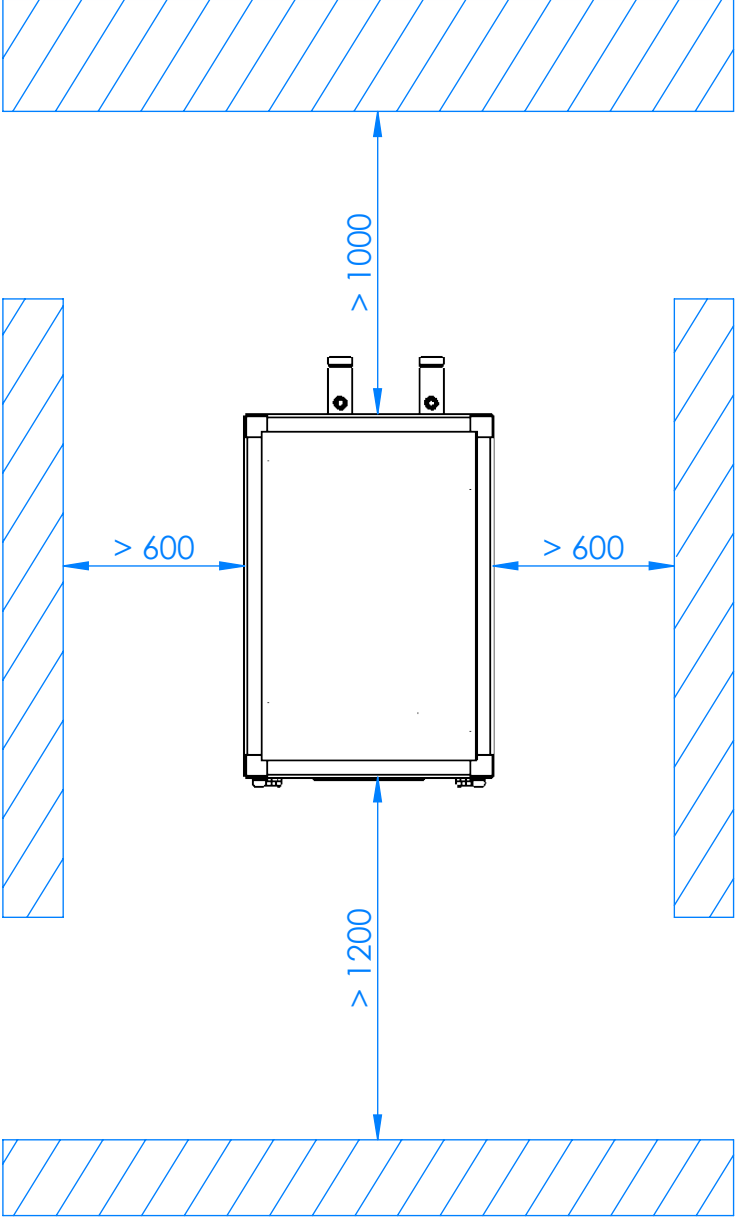
Temp °C

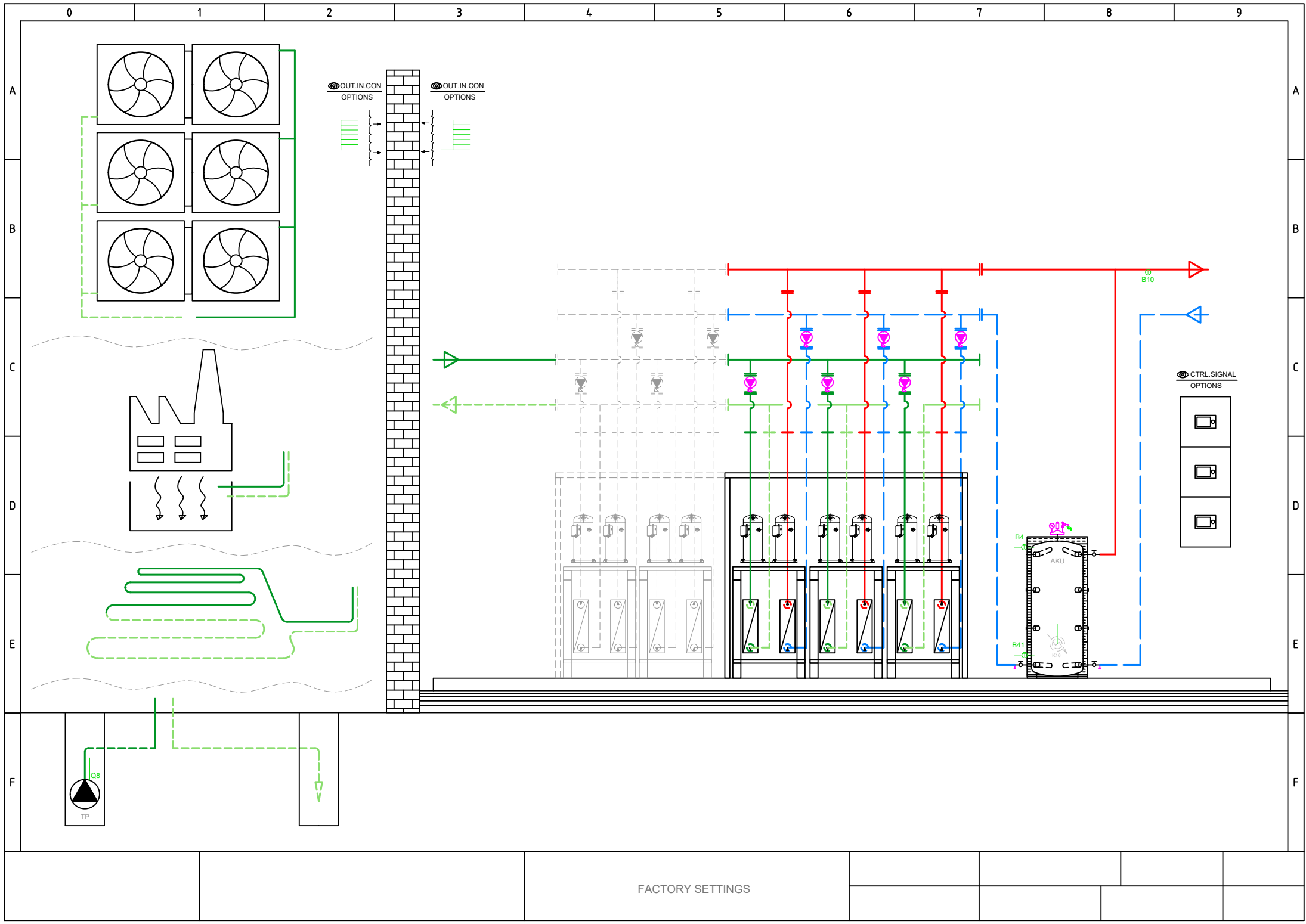




- A -
- B -
- D -
- E -







Total: max 6A
1 x QX...: max 2A

Hlavné napájanie 230V / 50 Hz
Uzemnenie
Nulový vodič

| | |
|-----|-------------------------------|
| E9 | Spínač nízkeho tlaku E9 |
| E10 | Spínač vysokého tlaku E10 |
| E15 | Spínač prietoku zdroja E15 |
| E24 | Spínač prietoku spotreby E24 |
| E6 | Blokovanie vys. tarifa el. E6 |
| E12 | Preťaženie kompresora 2 E12 |
| E21 | Sled fáz E21 |
| E22 | Sled fáz E22 |
| E23 | Sled fáz E23 |
| E11 | Preťaženie kompresora E11 |
| K1 | Kompresor I. stupeň K1 |

Q8 Čerpadlo zdroja Q8

Q9 Čerpadlo kondenzátora Q9

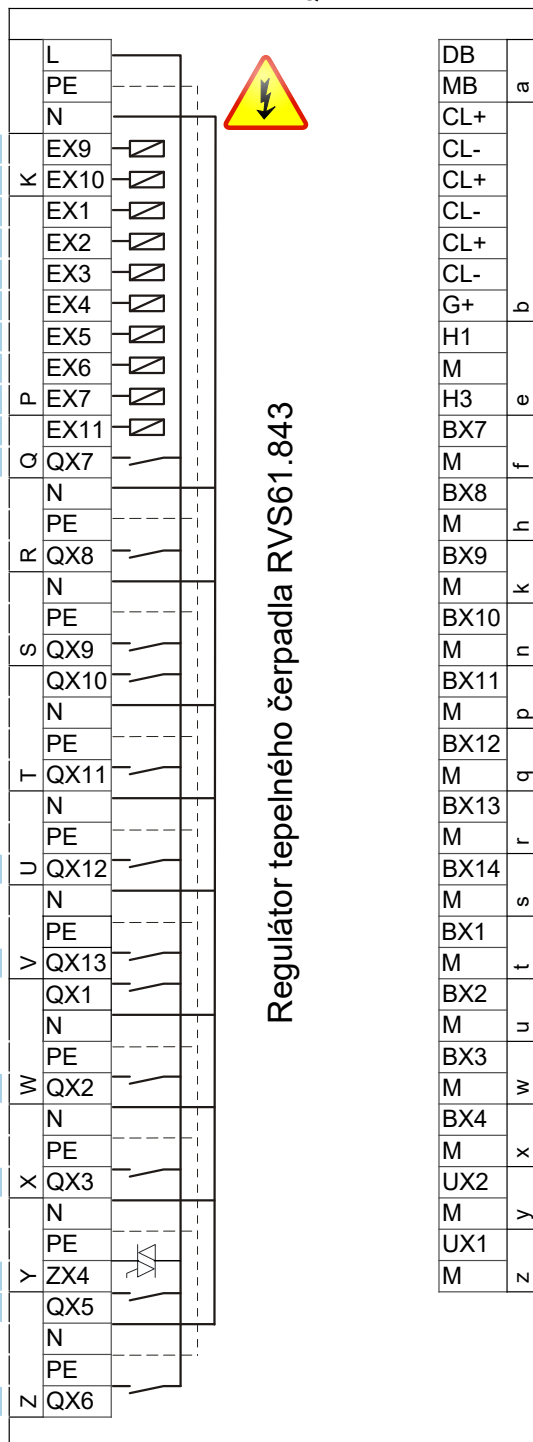
K10 Alarmový výstup K10

K40 Ohrev oleja K40

K81 Ventil výparníka K81

K82 Ventil EVI K82

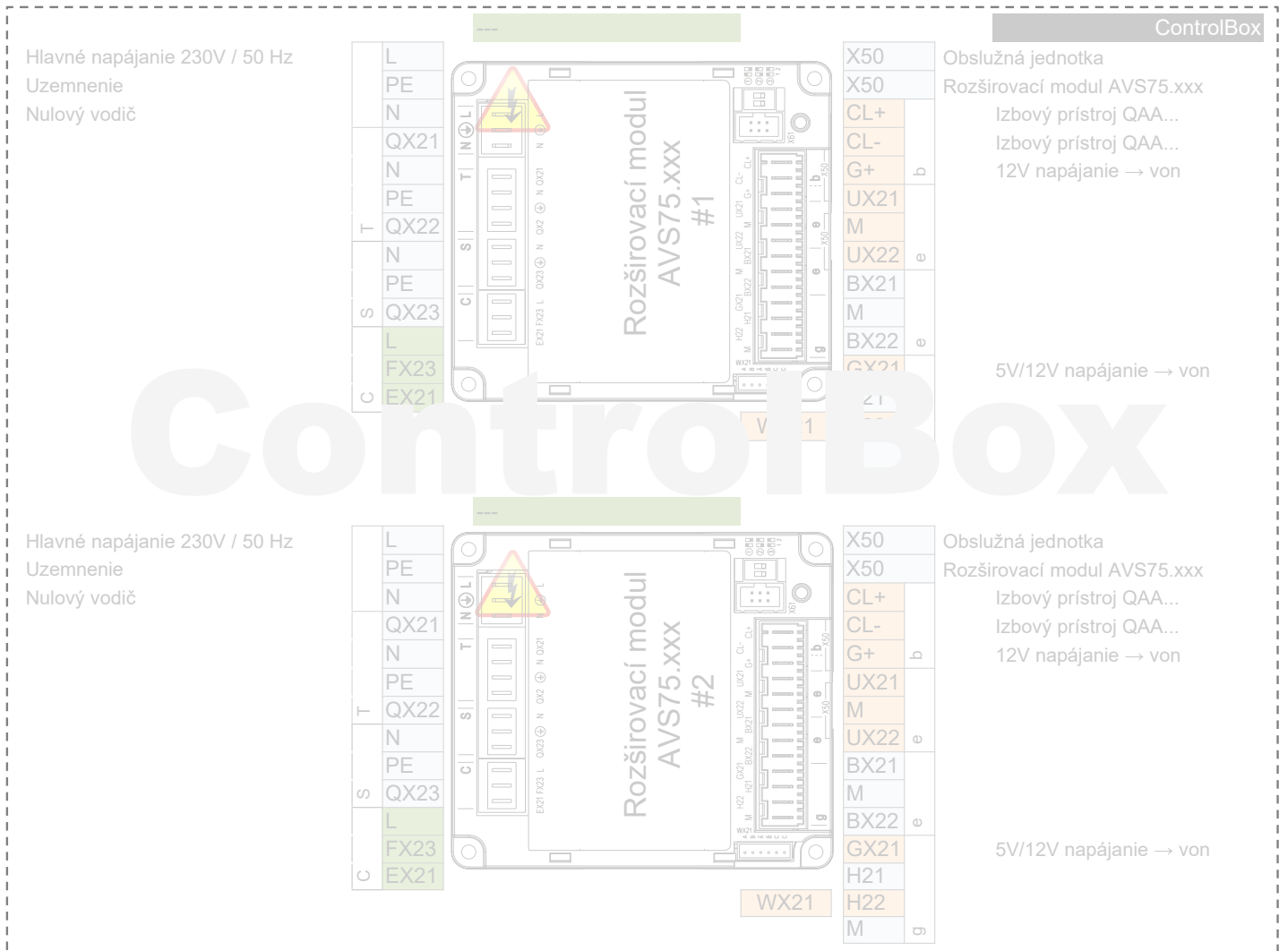
K2 Kompresor 2. stupeň K2



Regulátor tepelného čerpadla RVS61.843

| | |
|------|-------------------------------------|
| DB | LPB Bus dáta |
| MB | LPB Bus zem |
| CL+ | Izbový prístroj QAA... |
| CL- | Izbový prístroj QAA... |
| CL+ | Izbový prístroj QAA... 2. |
| CL- | Izbový prístroj QAA... 2. |
| CL+ | Izbový prístroj QAA... 3. |
| CL- | Izbový prístroj QAA... 3. |
| G+ | 12V napájanie → von |
| H1 | |
| M | |
| H3 | Požiadavka spotrebiča VK1 |
| BX7 | B81 Snímač horúcich plynov K1 B81 |
| M | |
| BX8 | |
| M | |
| BX9 | |
| M | |
| BX10 | B21 Snímač teploty výstupu TČ B21 |
| M | |
| BX11 | |
| M | |
| BX12 | B71 Snímač teploty spiatocky TČ B71 |
| M | |
| BX13 | B91 Snímač vstupu zdroja B91 |
| M | |
| BX14 | B84 Snímač výstupu zdroja B92/B84 |
| M | |
| BX1 | |
| M | |
| BX2 | |
| M | |
| BX3 | B83 Snímač chladiaceho média B83 |
| M | |
| BX4 | B82 Snímač horúcich plynov K2 B82 |
| M | |
| UX2 | Čerpadlo kondenzátora Q9 |
| M | 0..10V analógový signál |
| UX1 | Čerpadlo zdroja Q8 |
| M | 0..10V analógový signál |

| | |
|--|-----------|
| | AVS75.390 |
| | AVS75.391 |
| | AVS75.370 |



HEAT PUMP

A

EXTERNAL

INTERNAL

B

K1

K2

K82

K81

K40

K10

Q8 UX1

Q9 UX2

E11
KRW1
F1K
E11

E12
KRW2
F2K
E12

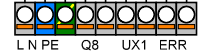
E6

E24
Q9 ERR
F1S
E24

E15
Q8.ERR
F1Z
E15

E10

E9



230V,50Hz max 6A

0...10V



0...10V

230V,50Hz max 6A

0...10V

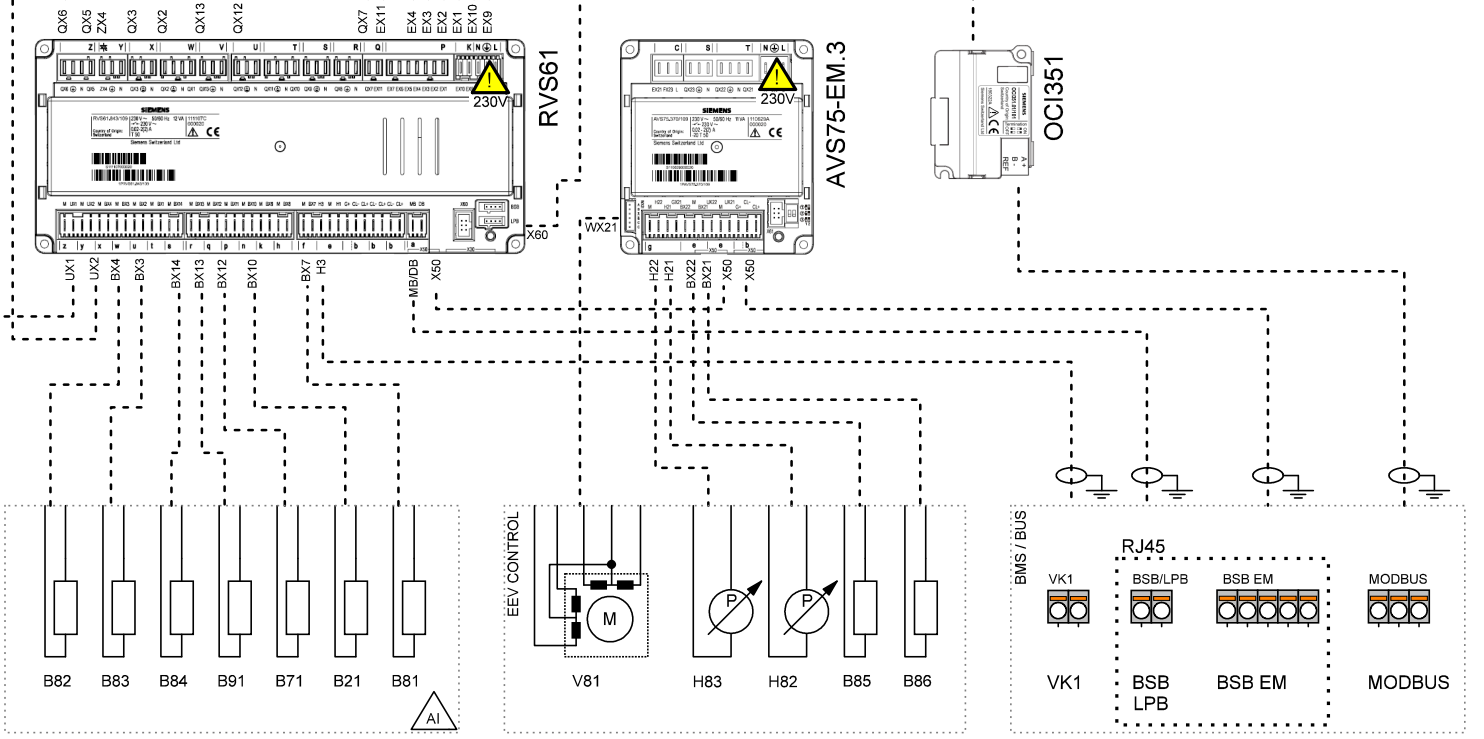
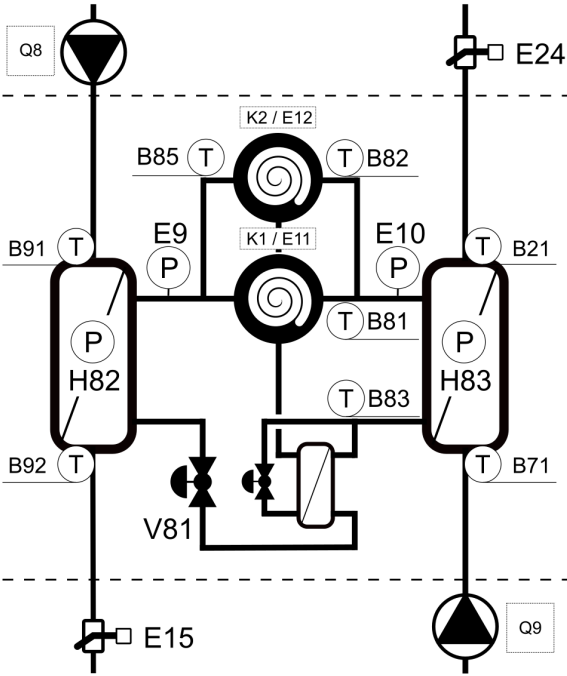


0...10V



C

D



H

PWR SPLY: 3~ 400V, 50 Hz
CTRL: 1~ 230V, 50 HZ

Company
Title
TBW-TWW

Version / Note
05/2024

Number

Created by

Date

Page
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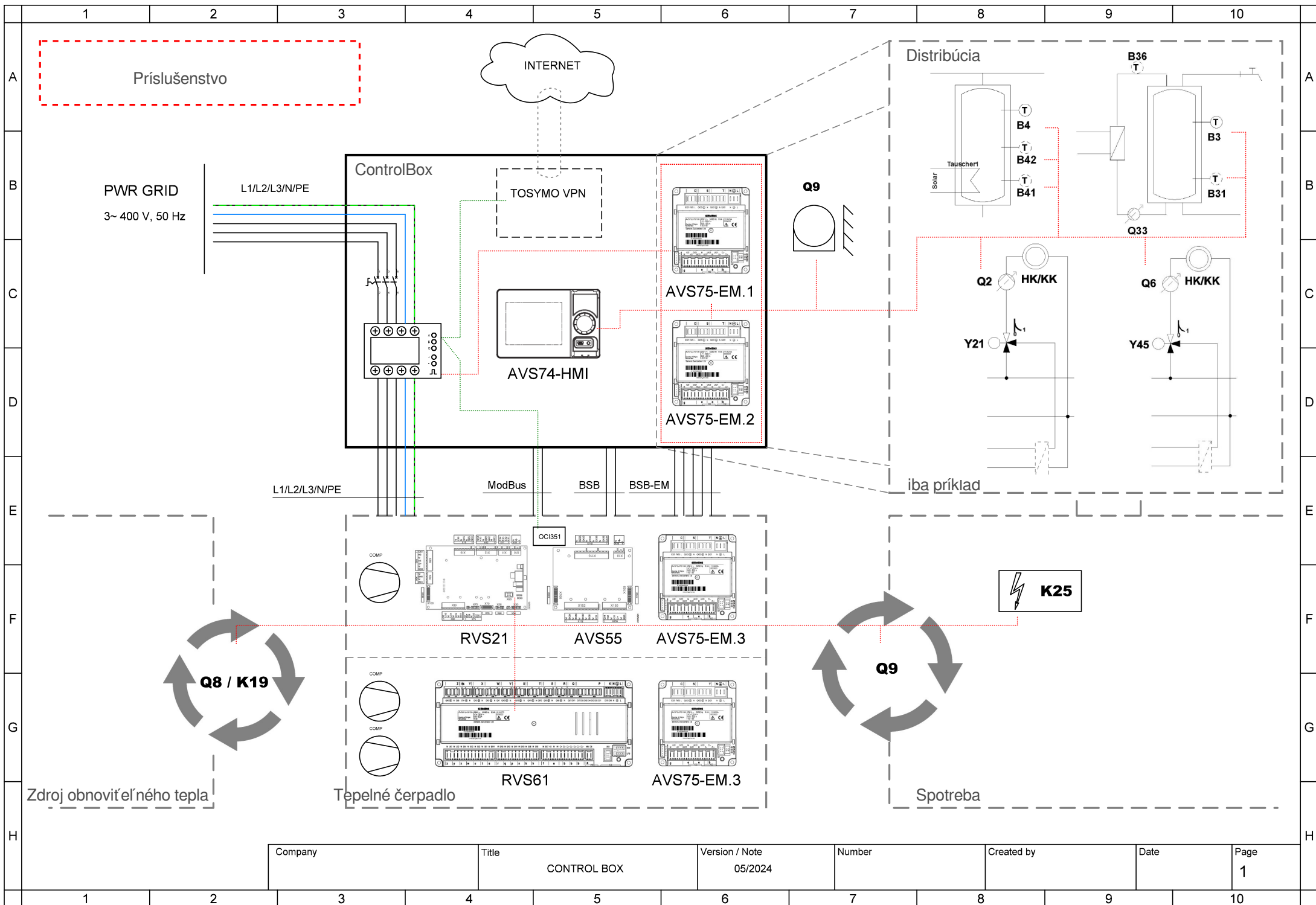
6

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| | | | | | | |
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| Company | Title | Version / Note | Number | Created by | Date | Page |
| | CONTROL BOX | 05/2024 | | | | 1 |



| | | | | | | |
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| | CONTROL BOX | 05/2024 | | | | 2 |



| | | | | | | |
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| Company | Title | Version / Note | Number | Created by | Date | Page |
| | CONTROL BOX | 05/2024 | | | | 3 |

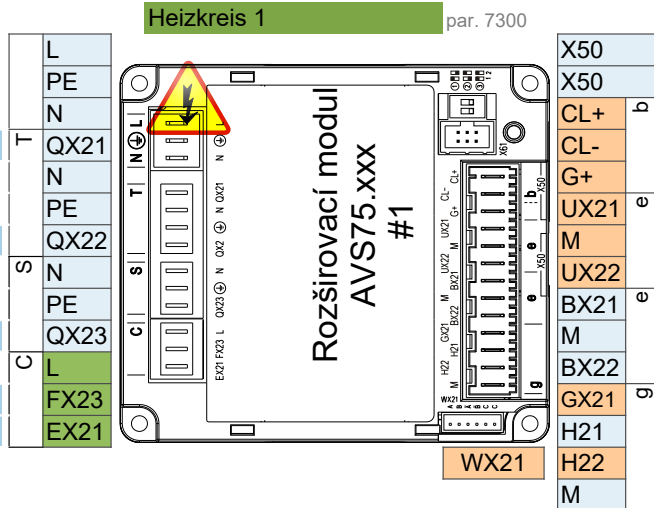


| | | | | | | |
|---------|-------------|----------------|--------|------------|------|------|
| Company | Title | Version / Note | Number | Created by | Date | Page |
| | CONTROL BOX | 05/2024 | | | | 4 |



- AVS75.390
- AVS75.391
- AVS75.370

- AVS75.370**
 Hlavné napájanie 230V / 50 Hz
 Uzemnenie
 Nulový vodič
- Y1** Zmiešavací ventil otváranie
 - Y2** Zmiešavací ventil zatvárať
 - Q2** Čerpadlo vyk. okruhu 1 Q2
 - L** Fáza 230V
 - E61** Smart Grid E61

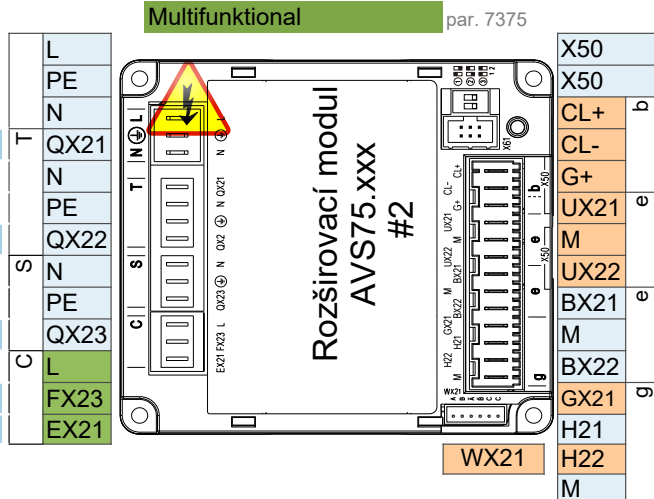


Rozšiřovací modul AVS75.xxx
 Izbový prístroj QAA...
 Izbový prístroj QAA...

B1 Snímač prietoku 1

Čítanie pulzov

- AVS75.370**
 Hlavné napájanie 230V / 50 Hz
 Uzemnenie
 Nulový vodič
- Q3** Servopohon TUV Q3
 - K6** El. výhrevná vložka TUV K6
 - Q6** Čerpadlo vyk. okruhu 2 Q6
 - L** Fáza 230V
 - E62** Smart Grid E62

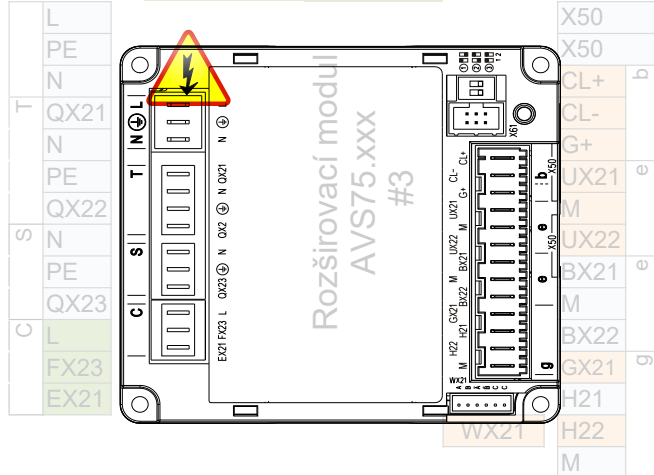


Obslužná jednotka
 Rozšiřovací modul AVS75.xxx
 Izbový prístroj QAA...
 Izbový prístroj QAA...

B3 Snímač TUV B3

B4 Snímač AKU zásobníka B4

- Hlavné napájanie 230V / 50 Hz
 Uzemnenie
 Nulový vodič



Obslužná jednotka
 Rozšiřovací modul AVS75.xxx
 Izbový prístroj QAA...
 Izbový prístroj QAA...

Pozor: Rozšiřovací modul 3 je v tepelnom čerpadle

1 ControlBox

ControlBox s dvoma zabudovanými rozširujúcimi modulmi umožňuje početné možnosti ovládania aplikácie na strane spotrebiča za tepelným čerpadlom. Viac informácií nájdete v schéme ControlBoxu a v hárku s aplikačnými schémami.

2 Fixná žiadaná teplota výstupu - Zap / Vyp bezpotenciálny kontakt

2-vodičový tienený kábel 2 x 0,5 mm² - Nastavená hodnota = 45 °C (upraviteľné parametrom 1859)

Pripojovacia svorka - pozri schému zapojenia

3 Analógová regulácia žiadanej teploty výstupu 0..10V

2-vodičový tienený kábel 2 x 0,5 mm² - Nastavená hodnota: 0V = 16°C ~ 10V = 60°C (možnosť úpravy v nastavení parametrov)

Pripojovacia svorka - pozri schému zapojenia

4 ModBus RTU komunikačný príkaz

3 žilový tienený kábel min. 3 x 0,25 mm²

Pre tabuľku mapovania ModBus kontaktujte technickú podporu

5 MQTT IoT komunikačný protokol

Pre viac informácií kontaktujte technickú podporu