



Tepelné čerpadlo



AW 400 EVI HeavyDuty 2L4

WAMAK AW 400 EVI HeavyDuty 2L4

Popis výrobku

Priemyselné vysokovýkonné tepelné čerpadlo s delenou konštrukciou Split s vnútornou a vonkajšou jednotkou. Robustné Scroll kompresory (2 až 6 kusov) sa nachádzajú vo vnútornej jednotke a naopak výmenníky tepla a ventilátory sú umiestnené vonku mimo objektu. Delená konštrukcia umožňuje inštaláciu aj v náročnejších podmienkach pri rekonštrukciách, kde sa zdroj energie nachádza ďalej od technickej miestnosti. Široké využitie od vykurovania a chladenia administratívnych alebo polyfunkčných budov, až po uplatnenie v priemyselných aplikáciách v kaskádovom zapojení.

Využitie pre náročné priemyselné aplikácie. Kombináciou najvhodnejších výkonových a aplikačných variantov modulov tepelných čerpadiel je možné na mieru vytvoriť kompletný požadovaný systém. Každý modul je chladiarensky, hydraulicky a elektricky oddelený so samostatným regulátorom. Spojenie modulov je kaskádové, pričom každý jeden regulátor môže prevziať funkciu kaskádového mastra.

Ako primárny zdroj je využívaná tepelná energia z okolitého vzduchu, ktorý je tichým ventilátorom v tvare sových krídel preháňaný cez tepelný výmenník z medi a hliníka.

Technológia EVI (Enhanced Vapour Injection) umožňuje tepelnému čerpadlu dosahovať vyššie výstupné teploty aj pri nízkych teplotách média ktorému je teplo odoberané. Rovnako EVI vplýva na lepšiu životnosť kompresora a celkového systému nakoľko je teplota výtlačných plynov z kompresora nižšia.

Systém APS (Active Process Subcooling) zvyšuje súčasne stabilitu a efektivitu prevádzky lepším využitím energie tekutého chladiva po jeho z kondenzovaní.

Prevedenie Split

Vlastnosti produktu

- Scroll kompresor pre tepelné čerpadlo
- EVI technológia
- Asymetrický tepelný výmenník
- Viacstupňová regulácia výkonu
- Reverzibilné odtavenie
- Regulované otáčky EC ventilátora
- Sled výpadku a rotácie fáz
- Snímač vysokého tlaku chladiva - analog
- Spínač prietoku strana spotreby - Zap/Vyp - (s príslušenstvom)
- Ochrana doskového výmenníka horúcimi parami HG-BYPASS
- Snímač teploty pre ohrev TUV - (s príslušenstvom)
- Možnosť pripojenia v kaskáde
- Masívna rámová konštrukcia
- Uloženie na sylomerových podložkách
- Elektronický expanzný ventil - vykurovanie
- Veľký tepelný výmenník vzduchu s APS systémom
- Aktívne chladenie
- Optimalizácia odtavenia APS
- Vaňa kondenzátu - vyhrievaná - (s príslušenstvom)
- Spínač maximálneho tlaku chladiva Zap/Vyp
- Snímač nízkeho tlaku chladiva - analog
- Snímač prietoku strana spotreby - analog - (s príslušenstvom)
- Snímač vonkajšej teploty - (s príslušenstvom)
- Snímač teploty pre akumulčný zásobník - (s príslušenstvom)
- ModBus spojenie
- Dvojúrovňový rám

Základné údaje o výkone - WAMAK AW 400 EVI HeavyDuty 2L4

| Vykurovanie - EN 14511 | | |
|--|--------------------|------------------------|
| Tepelný výkon [kW] | A7 / W35 | 392.7 (49.1 / 392.7) |
| | A2 / W35 | 333.6 (41.7 / 333.6) |
| | A-7 / W34 | 279.9 (35.0 / 279.9) |
| Elektrický príkon [kW] | A7 / W35 | 91.1 (10.7 / 91.1) |
| | A2 / W35 | 91.0 (10.7 / 91.0) |
| | A-7 / W34 | 88.4 (10.3 / 88.4) |
| Tepelná účinnosť [COP] | A7 / W35 | 4.31 |
| | A2 / W35 | 3.67 |
| | A-7 / W34 | 3.17 |
| Sezónna tepelná účinnosť vykurovania - SCOP EN 14825 | | |
| Stredná klim. zóna / Nízka teplota [35°C] | SCOP | 4.24 |
| | η [%] | 169.5 |
| | Label | A+++ |
| | Qhe [kWh] | 154395.0 |
| | Pdesignh [kW] | 317.4 |
| | Tbivalent [°C] | -7 |
| Chladienie | | |
| Chladiaci výkon - [kW] | A35 / W23-18 | 387.4 |
| | A25 / W23-18 | 407.2 |
| | A35 / W12-7 | 291.0 |
| | A25 / W12-7 | 291.0 |
| Sezónna účinnosť chladienia - SEER EN 14825 | | |
| [W 23 / 18°C] | SEER | 4.55 |
| | Qce [kWh] | 174600.0 |
| | η_c [%] | 182.1 |
| Zvuk EN 12102 | | |
| Zvuk - výkon - Lw | dB(A) | 75.2 |
| Zvuk - tlak - Lp | 1 m dB(A) | 67.2 |
| | 5 m dB(A) | 53.2 |
| | 10 m dB(A) | 47.2 |
| Strojné a prevádzkové informácie | | |
| Typ kompresoru (3~ 400/50) | SCROLL / 8 / | Zap/Vyp |
| Chladivo | R410A (GWP - 2088) | 8 x 9.6 kg |
| Prevádzkové hraničné teploty vykurovania - (min / max) [°C] | | 25 / 65 |
| Prevádzkové hraničné teploty zdroja - (min / max) [°C] | | -22 / 40 |
| Váha zariadenia | | 1980 kg |

Hlavné technické údaje - WAMAK AW 400 EVI HeavyDuty 2L4

| Označenie krytovania | | HD2L4 | | Údaje strany odovzdania tepelnej energie | | |
|---|--------------------------|-------------------|---|---|------------------------|-----|
| Základné rozmery | Výška [mm] | 2000 | | Prevádzkové hraničné teploty vykurovania | MAX [°C] | 65 |
| | Šírka [mm] | 2800 | | | MIN [°C] | 25 |
| | Dĺžka [mm] | 1200 | | viac vid. diagram prevádzkových limitov | | |
| Váha zariadenia [kg] | 1980 | | Kondenzátor | Pripojovacia dimenzia | 8 x 2 " | |
| Farba krytovania | Sivá | | | Typ | BPHE | |
| IP trieda krytovania | IP20 | | | Počet | 8 | |
| | | | | Materiál | AISI 316 | |
| Chladivový okruh | | | | Maximálny prevádzkový tlak - chladivo [bar] | 50 | |
| Kompresor | Typ | Scroll | | Maximálny prevádzkový tlak - Voda [bar] | 6 | |
| | Výkonové stupňe | 8 | | Testovací pretlak [bar] | 70 | |
| | Zap/Vyp | | | Teplonosné médium | Voda | |
| | Účinník Cosφ | 0.64 | | Objemový prietok @ dT 5K (nom) - Voda [m3/h] | 8.48 ~ 67.81 | |
| | Odpor vynutia kompresora | 0.76 Ohm | | Vnútorná tlaková strata - Voda [kPa] | 8 x 20 | |
| Chladivo | | R410A | | Teplotný spád @ 35°C (nom) | 5 K | |
| | Objem | 8 x 9.6 kg | | @ 55°C | 8 K | |
| | GWP | 2088 | | @ 65°C | 10 K | |
| | Bezpečnostná trieda | A1 | | | | |
| Typ oleja v okruhu | POE RL32-3MAF | | | Údaje strany odberu obnoviteľnej energie | | |
| | Objem oleja | 8 x 3.38 L | | Prevádzkové hraničné teploty zdroja | MIN [°C] | -22 |
| Maximálny tlak chladiva [bar] | | 50 | | | MAX [°C] | 40 |
| | PED trieda | 2 | | viac vid. diagram prevádzkových limitov | | |
| EVI - vstrek chladiva s ekonomizérom | | | Výparník | Pripojovacia dimenzia | 8 x (7/8" - 1.3/8") " | |
| APS systém podchladenia chladiva | | | | Typ | Cu-coil /Al-fin | |
| Reverzibilný chod (chladenie) | | | | Počet | 8 | |
| Reverzibilné odtavenie horúcimi parami | | | | Materiál | Cu/Al | |
| Ochrana doskového výmenníka horúcimi parami HG-BYPASS | | | Maximálny prevádzkový tlak - chladivo [bar] | 29 | | |
| Údaje elektrického pripojenia | | | Teplonosné médium | Vzduch | | |
| Elektro napájanie [#~ V/Hz] | 3~ 400/50 | | Objemový prietok - Vzduch [m3/h] | 15073 ~ 120580 | | |
| Prúd | nominálny [A] | 188.24 | | Vnútorná tlaková strata - Vzduch [kPa] | 8 x 0.061 | |
| | maximálny [A] | 299.20 | | Teplotný spád - Vzduch | 7 K | |
| | štartovací [A] | 57.2 | | Možné vonkajšie jednotky | 4 x VOV900X2-FRAME | |
| Softštartér | - | | 8 x VOII-1200-2LOW | | | |
| Hlavný istič - charakteristika | C300 | | 8 x VOII-1200-2HIGH | | | |
| | | | 8 x VOII-1200-2LOW-DUCT | | | |
| | | | 8 x VOII-1200-2HIGH-DUCT | | | |
| Riadiaci systém | | | Slit systém (kompresor v interieri) | | | |
| Hlavný regulátor | SIEMENS | RVS 21 AVS 55.199 | | Dimenzia tekutinové potrubie (do 8 metrov VN/VO) | 8 x 7/8" | |
| Rozširovací modul | AVS75.3xx | AVS75.3xx | AVS75.372 | Dimenzia sacie potrubie (do 8 metrov VN/VO) | 8 x 1.3/8" | |
| Bus Clip-In | | LPB OCI345 | Modbus OCI351 | Náplň nad 8 metrov dĺžky prepoja | 8 x 0.35 kg/m | |
| Online pripojenie | | Web server OZW672 | ToSyMo | pri Split systémoch je vnútorná jednotka TC predplnená iba minimálnym pretlakom chladiva ktoré ostalo v systéme po funkčnej skúške. | | |
| Regulácia EEV | SEC61 | | | | | |

*** s príslušenstvom

WAMAK AW 400 EVI HeavyDuty 2L4

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

| | |
|---|---------------------------------|
| Model | AW 400 EVI HeavyDuty 2L4 |
| Tepelné čerpadlo vzduch-voda | áno |
| Tepelné čerpadlo soľanka-voda | nie |
| Tepelné čerpadlo voda-voda | nie |
| Nízkoteplotné 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 | 317.4 | kW | Sezónna energetická účinnosť vykurovania priestoru | η_s | 169.5 | % |
| 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 | 279.9 | kW | Tj = -7 °C | COPd | 3.17 | - |
| Tj = +2 °C | Pdh | 330.0 | kW | Tj = +2 °C | COPd | 4.1 | - |
| Tj = +7 °C | Pdh | 388.7 | kW | Tj = +7 °C | COPd | 5.1 | - |
| Tj = +12 °C | Pdh | 459.6 | kW | Tj = +12 °C | COPd | 6.4 | - |
| Tj = bivalentná teplota | Pdh | 275.2 | kW | Tj = bivalentná teplota | COPd | 3.1 | - |
| Tj = hraničná prevádzková teplota | Pdh | 200.7 | kW | Tj = hraničná prevádzková teplota | COPd | 2.3 | - |
| Bivalentná teplota | Tbiv | -7 | °C | Tj = hraničná prevádzková teplota | TOL | -22 | °C |
| Spotreba energie v iných ako aktívnych režimoch | | | | Medzná prevádzková teplota vykurovacej vody | WTOL | 65 | °C |
| Vypnuté | Poff | 0.040 | kW | Prídavný ohrievač | | | |
| Režim vypnutia termostatu | Pto | 0.010 | kW | Menovitý tepelný výkon | Psup | 140.7 | kW |
| Pohotovostný režim | Psb | 0.010 | kW | Typ príkonu energie | | | elektrická |
| Režim ohrevu kľukovej skrine | Pck | 0.050 | kW | | | | |
| Ostatné položky | | | | | | | |
| Regulácia výkonu | | viacero stupňov | | Pre tepelné čerpadlá vzduch-voda: Menovitý prietok vzduchu, vonku | - | 15073 ~ 120580 | m3/h |
| Úroveň akustického výkonu | | | | Pre tepelné čerpadlá voda-voda alebo soľanka-voda: Menovitý prietok soľanky alebo vody, vonkajší výmenník tepla | - | --- | m3/h |
| v interiéri | Lwa | 75 | dB | | | | |
| vonku | Lwa | 80 | dB | | | | |
| Ročná spotreba energie | Q _{HE} | 154395.0 | kWh | | | | |

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

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

| | |
|---|---------------------------------|
| Model | AW 400 EVI HeavyDuty 2L4 |
| Tepelné čerpadlo vzduch-voda | áno |
| Tepelné čerpadlo soľanka-voda | nie |
| Tepelné čerpadlo voda-voda | nie |
| Nízkoteplotné 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 | 333.0 | kW | Sezónna energetická účinnosť vykurovania priestoru | η_s | 132.6 | % |
| 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 | 292.6 | kW | Tj = -7 °C | COPd | 2.24 | - |
| Tj = +2 °C | Pdh | 338.0 | kW | Tj = +2 °C | COPd | 3.2 | - |
| Tj = +7 °C | Pdh | 393.1 | kW | Tj = +7 °C | COPd | 4.2 | - |
| Tj = +12 °C | Pdh | 460.5 | kW | Tj = +12 °C | COPd | 5.6 | - |
| Tj = bivalentná teplota | Pdh | 289.1 | kW | Tj = bivalentná teplota | COPd | 2.1 | - |
| Tj = hraničná prevádzková teplota | Pdh | 211.6 | kW | Tj = hraničná prevádzková teplota | COPd | 1.6 | - |
| Bivalentná teplota | Tbiv | -7 | °C | Tj = hraničná prevádzková teplota | TOL | -22 | °C |
| Spotreba energie v iných ako aktívnych režimoch | | | | Medzná prevádzková teplota vykurovacej vody | WTOL | 65 | °C |
| Vypnuté | Poff | 0.040 | kW | Prídavný ohrievač | | | |
| Režim vypnutia termostatu | Pto | 0.010 | kW | Menovitý tepelný výkon | Psup | 140.7 | kW |
| Pohotovostný režim | Psb | 0.010 | kW | Typ príkonu energie | elektrická | | |
| Režim ohrevu kľukovej skrine | Pck | 0.050 | kW | | | | |
| Ostatné položky | | | | | | | |
| Regulácia výkonu | viacero stupňov | | | Pre tepelné čerpadlá vzduch-voda: Menovitý prietok vzduchu, vonku | - | 15073 ~ 120580 | m3/h |
| Úroveň akustického výkonu | | | | Pre tepelné čerpadlá voda-voda alebo soľanka-voda: Menovitý prietok soľanky alebo vody, vonkajší výmenník tepla | - | --- | m3/h |
| v interiéri | Lwa | 75 | dB | | | | |
| vonku | Lwa | 80 | dB | | | | |
| Ročná spotreba energie | QHE | 207204.4 | kWh | | | | |

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

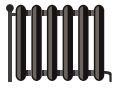


ENERG Y IIA
 енергия - ενεργεια IE IA



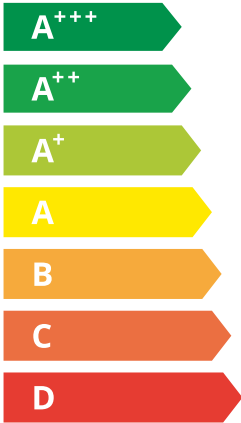
AW 400 EVI

HeavyDuty 2L4



55 °C

35 °C



75 dB

80 dB

| | |
|-------|-------|
| ■ 350 | ■ 324 |
| ■ 333 | ■ 318 |
| ■ 327 | ■ 302 |

kW kW

2019

811/2013

AW 400 EVI HeavyDuty
 2L4

ErP Data

| | 55 °C | 35 °C |
|---------------------|------------|-------------|
| Energy class | A++ | A+++ |
| η [%] | 132.6 | 169.5 |
| P_{rated} [kW] | 333 | 318 |
| Q_{HE} [kWh/y] | 207205 | 154395 |
| SCOP [-] | 3.31 | 4.24 |
| $T_{bivalent}$ [°C] | -7 | -7 |

CONTROLLER



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

Tepelný výkon - prevádzkové dáta

Version: v2024.004-AW

Stredná klim. zóna / Nízka teplota [35°C]

ZHI46K1P-TWD_R410A_8_AW

| Prevádzkové podmienky | Qh | P | COP |
|-----------------------|-------|------|------|
| 1 A7 / W30-35 | 392.7 | 91.1 | 4.31 |
| 2 A2 / W35 | 333.6 | 91.0 | 3.67 |
| 3 A-22 / W35 | 200.7 | 86.7 | 2.31 |
| A A-7 / W34 | 279.9 | 88.4 | 3.17 |
| B A2 / W30 | 330.0 | 81.3 | 4.06 |
| C A7 / W27 | 388.7 | 76.1 | 5.11 |
| D A12 / W24 | 459.6 | 71.7 | 6.41 |
| E A-10 / W35 | 275.2 | 90.2 | 3.05 |
| F A-7 / W34 | 279.9 | 88.4 | 3.17 |

| SCOP DATA EN 14825:2018 | |
|---|-----------|
| Stredná klim. zóna / Nízka teplota [35°C] | |
| SCOPon | 4.25 |
| SCOPnet | 4.29 |
| SCOP | 4.24 |
| η [%] | 169.48 |
| Label | A+++ |
| Qh [kWh] | 655748.40 |
| Pdesignh [kW] | 317.4 |
| Tbivalent [°C] | -7.00 |

Stredná klim. zóna / Stredná teplota [55°C]

| Prevádzkové podmienky | Qh | P | COP |
|-----------------------|-------|-------|------|
| 1 A7 / W47-55 | 400.7 | 142.8 | 2.81 |
| 2 A2 / W55 | 345.7 | 141.8 | 2.44 |
| 3 A-22 / W55 | 211.6 | 121.3 | 1.62 |
| A A-7 / W52 | 292.6 | 130.6 | 2.24 |
| B A2 / W42 | 338.0 | 106.1 | 3.18 |
| C A7 / W36 | 393.1 | 93.1 | 4.22 |
| D A12 / W30 | 460.5 | 81.7 | 5.64 |
| E A-10 / W55 | 289.1 | 139.1 | 2.08 |
| F A-7 / W55 | 294.5 | 139.5 | 2.11 |

| SCOP DATA EN 14825:2018 | |
|---|-----------|
| Stredná klim. zóna / Stredná teplota [55°C] | |
| SCOPon | 3.32 |
| SCOPnet | 3.34 |
| SCOP | 3.31 |
| η [%] | 132.57 |
| Label | A++ |
| Qh [kWh] | 687978.00 |
| Pdesignh [kW] | 333.0 |
| Tbivalent [°C] | -7.00 |

Chladiaci výkon - prevádzkové dáta

Nízkoteplotné chladenie W 12 / 7°C

| Prevádzkové podmienky | Qc | P | EER |
|-----------------------|-------|-------|------|
| A A35 / W12-7 | 291.0 | 108.7 | 2.68 |
| B A30 / W12-7 | 299.1 | 97.3 | 3.07 |
| C A25 / W12-7 | 305.9 | 87.1 | 3.51 |
| D A20 / W12-7 | 311.5 | 77.8 | 4.00 |

| SEER DATA EN 14825:2018 [W 12 / 7°C] | |
|--|-----------|
| SEERon | 3.43 |
| SEER | 3.42 |
| Qc [kWh] | 174600.00 |
| η [%] | 136.86 |

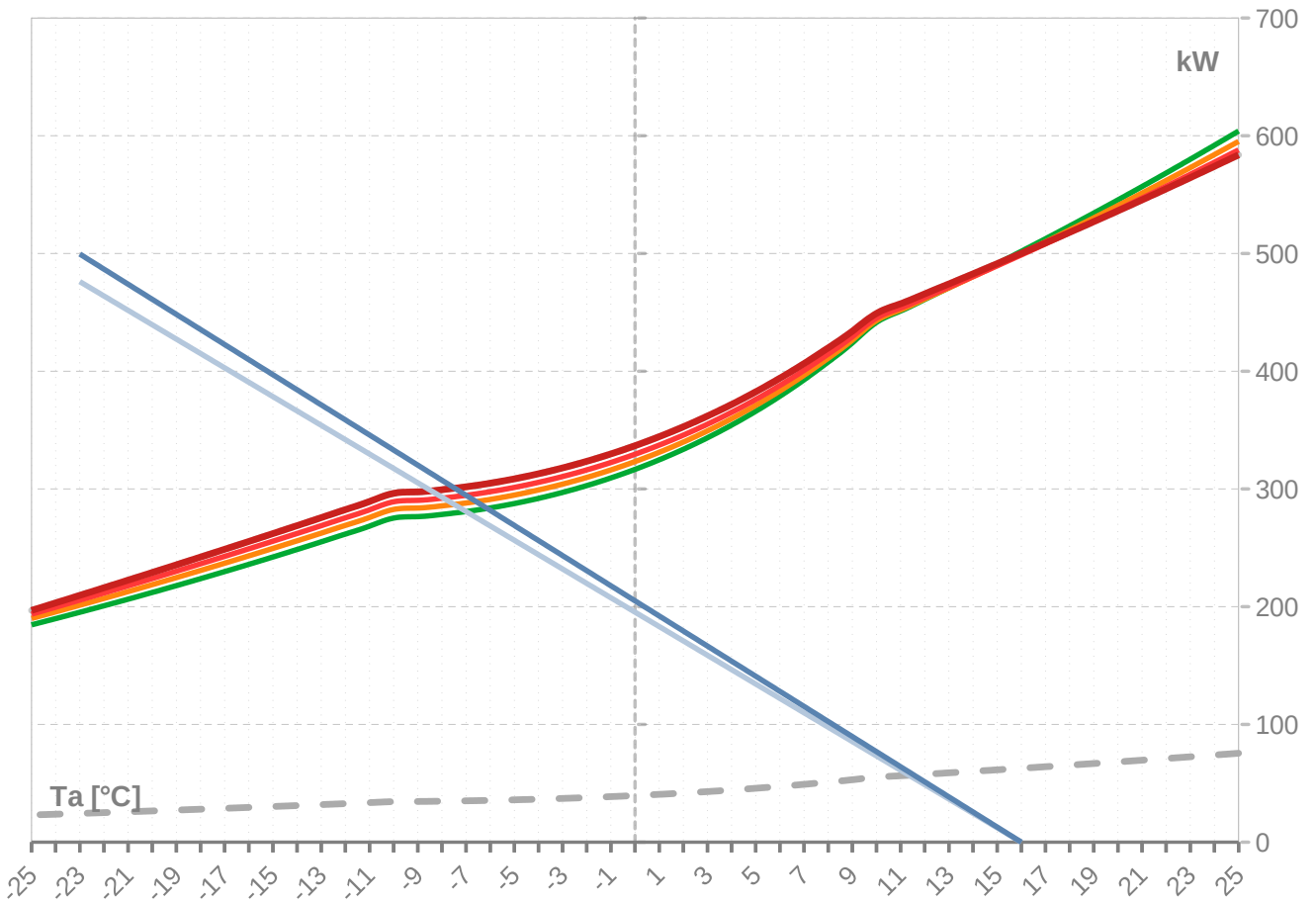
Plošné chladenie W 23 / 18°C

| Prevádzkové podmienky | Qc | P | EER |
|-----------------------|-------|-------|------|
| A A35 / W23-18 | 387.4 | 108.7 | 3.56 |
| B A30 / W23-18 | 398.0 | 90.1 | 4.09 |
| C A25 / W23-18 | 407.2 | 80.9 | 4.67 |
| D A20 / W23-18 | 415.3 | 72.8 | 5.34 |

| SEER DATA EN 14825:2018 [W 23 / 18°C] | |
|---|-----------|
| SEERon | 4.57 |
| SEER | 4.55 |
| Qc [kWh] | 174600.00 |
| η [%] | 182.09 |

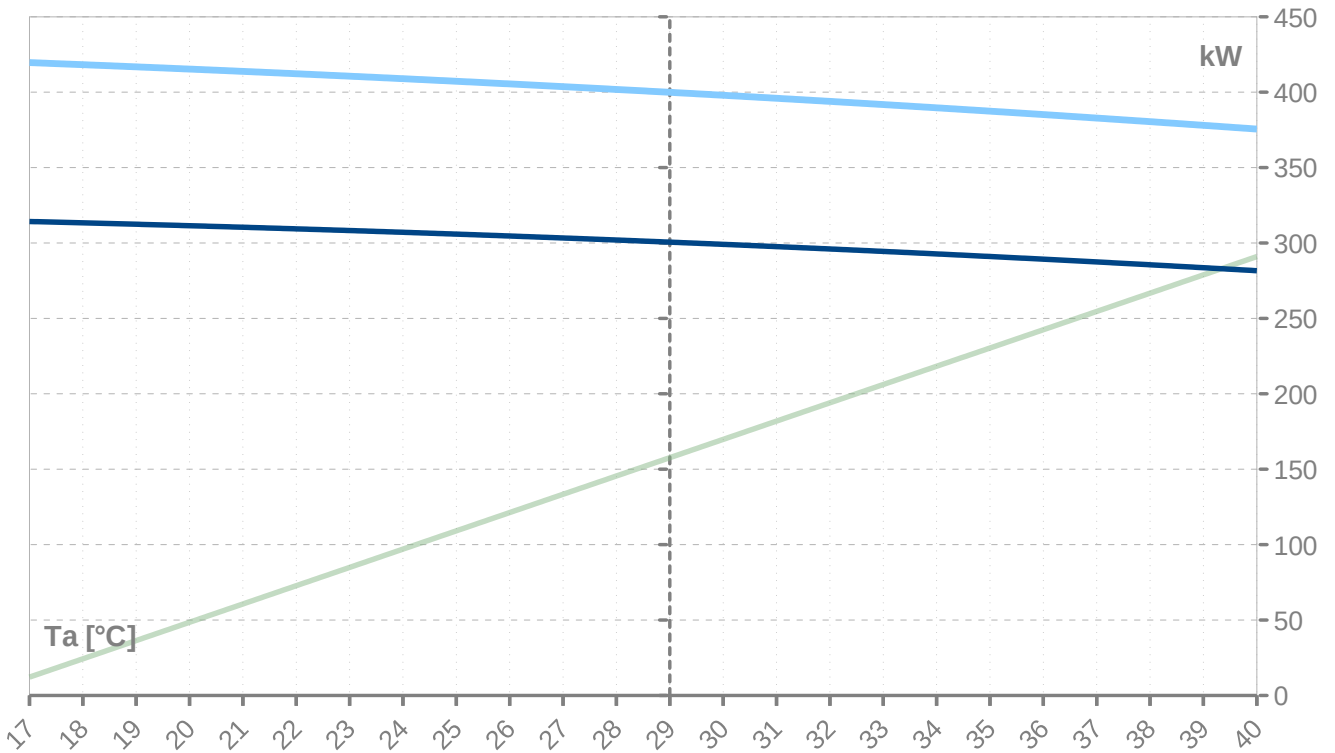
Výkonové kryvky - vykurovanie

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



Výkonové kryvky - chladenie

- Pratedc — Qc-12/7 — Qc-23/18



WAMAK AW 400 EVI HeavyDuty 2L4

| Th [°C] | | 35 °C | | | | | | | | |
|---------|--------------|-------------|-------------|--------------|--------------|--------------|-------------|-----------|-----------|-----------|
| Ta [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin-min [kW] | Pin-max [kW] | COP kW / kW | I nom [A] | I min [A] | I max [A] |
| 25 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 24 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 23 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 22 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 21 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 20 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 19 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 18 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 17 | 512.5 | 64.1 | | 91.1 | 10.7 | | 5.62 | 186.2 | 23.3 | |
| 16 | 501.8 | 62.7 | 501.8 | 91.1 | 10.7 | 91.1 | 5.51 | 186.3 | 23.3 | 186.3 |
| 15 | 491.4 | 61.4 | 491.4 | 91.1 | 10.7 | 91.1 | 5.40 | 186.5 | 23.3 | 186.5 |
| 14 | 481.1 | 60.1 | 481.1 | 91.1 | 10.7 | 91.1 | 5.28 | 186.6 | 23.3 | 186.6 |
| 13 | 470.9 | 58.9 | 470.9 | 91.0 | 10.7 | 91.0 | 5.17 | 186.8 | 23.4 | 186.8 |
| 12 | 460.9 | 57.6 | 460.9 | 91.0 | 10.7 | 91.0 | 5.06 | 187.0 | 23.4 | 187.0 |
| 11 | 451.1 | 56.4 | 451.1 | 91.0 | 10.7 | 91.0 | 4.96 | 187.2 | 23.4 | 187.2 |
| 10 | 441.5 | 55.2 | 441.5 | 91.0 | 10.7 | 91.0 | 4.85 | 187.4 | 23.4 | 187.4 |
| 9 | 424.0 | 53.0 | 424.0 | 91.1 | 10.7 | 91.1 | 4.66 | 187.8 | 23.5 | 187.8 |
| 8 | 407.8 | 51.0 | 407.8 | 91.1 | 10.7 | 91.1 | 4.48 | 188.2 | 23.5 | 188.2 |
| 7 | 392.7 | 49.1 | 392.7 | 91.1 | 10.7 | 91.1 | 4.31 | 188.6 | 23.6 | 188.6 |
| 6 | 378.8 | 47.3 | 378.8 | 91.1 | 10.7 | 91.1 | 4.16 | 188.9 | 23.6 | 188.9 |
| 5 | 366.0 | 45.7 | 366.0 | 91.1 | 10.7 | 91.1 | 4.02 | 189.2 | 23.7 | 189.2 |
| 4 | 354.2 | 44.3 | 354.2 | 91.0 | 10.7 | 91.0 | 3.89 | 189.4 | 23.7 | 189.4 |
| 3 | 343.4 | 42.9 | 343.4 | 91.0 | 10.7 | 91.0 | 3.77 | 189.6 | 23.7 | 189.6 |
| 2 | 333.6 | 41.7 | 333.6 | 91.0 | 10.7 | 91.0 | 3.67 | 189.8 | 23.7 | 189.8 |
| 1 | 324.7 | 40.6 | 324.7 | 90.9 | 10.6 | 90.9 | 3.57 | 189.9 | 23.7 | 189.9 |
| 0 | 316.6 | 39.6 | 316.6 | 90.8 | 10.6 | 90.8 | 3.49 | 190.0 | 23.7 | 190.0 |
| -1 | 309.3 | 38.7 | 309.3 | 90.8 | 10.6 | 90.8 | 3.41 | 190.0 | 23.7 | 190.0 |
| -2 | 302.8 | 37.9 | 302.8 | 90.7 | 10.6 | 90.7 | 3.34 | 190.0 | 23.7 | 190.0 |
| -3 | 297.0 | 37.1 | 297.0 | 90.6 | 10.6 | 90.6 | 3.28 | 190.0 | 23.7 | 190.0 |
| -4 | 292.0 | 36.5 | 292.0 | 90.5 | 10.6 | 90.5 | 3.22 | 189.9 | 23.7 | 189.9 |
| -5 | 287.6 | 35.9 | 287.6 | 90.5 | 10.6 | 90.5 | 3.18 | 189.9 | 23.7 | 189.9 |
| -6 | 283.8 | 35.5 | 283.8 | 90.4 | 10.6 | 90.4 | 3.14 | 189.8 | 23.7 | 189.8 |
| -7 | 280.8 | 35.1 | 280.8 | 90.3 | 10.6 | 90.3 | 3.11 | 189.8 | 23.7 | 189.8 |
| -8 | 278.3 | 34.8 | 278.3 | 90.3 | 10.6 | 90.3 | 3.08 | 189.7 | 23.7 | 189.7 |
| -9 | 276.5 | 34.6 | 276.5 | 90.2 | 10.6 | 90.2 | 3.06 | 189.7 | 23.7 | 189.7 |
| -10 | 275.2 | 34.4 | 275.2 | 90.2 | 10.6 | 90.2 | 3.05 | 189.7 | 23.7 | 189.7 |
| -11 | 268.4 | 33.5 | 268.4 | 90.1 | 10.5 | 90.1 | 2.98 | 189.5 | 23.7 | 189.5 |
| -12 | 261.6 | 32.7 | 261.6 | 89.9 | 10.5 | 89.9 | 2.91 | 189.3 | 23.7 | 189.3 |
| -13 | 255.0 | 31.9 | 255.0 | 89.7 | 10.5 | 89.7 | 2.84 | 189.0 | 23.6 | 189.0 |
| -14 | 248.5 | 31.1 | 248.5 | 89.4 | 10.5 | 89.4 | 2.78 | 188.6 | 23.6 | 188.6 |
| -15 | 242.2 | 30.3 | 242.2 | 89.2 | 10.4 | 89.2 | 2.72 | 188.3 | 23.5 | 188.3 |
| -16 | 235.9 | 29.5 | 235.9 | 88.9 | 10.4 | 88.9 | 2.65 | 187.8 | 23.5 | 187.8 |
| -17 | 229.8 | 28.7 | 229.8 | 88.6 | 10.4 | 88.6 | 2.59 | 187.3 | 23.4 | 187.3 |
| -18 | 223.7 | 28.0 | 223.7 | 88.3 | 10.3 | 88.3 | 2.53 | 186.8 | 23.3 | 186.8 |
| -19 | 217.8 | 27.2 | 217.8 | 87.9 | 10.3 | 87.9 | 2.48 | 186.2 | 23.3 | 186.2 |
| -20 | 212.0 | 26.5 | 212.0 | 87.6 | 10.3 | 87.6 | 2.42 | 185.5 | 23.2 | 185.5 |
| -21 | 206.3 | 25.8 | 206.3 | 87.1 | 10.2 | 87.1 | 2.37 | 184.7 | 23.1 | 184.7 |
| -22 | 200.7 | 25.1 | 200.7 | 86.7 | 10.2 | 86.7 | 2.31 | 183.9 | 23.0 | 183.9 |
| -23 | 195.2 | 24.4 | 195.2 | 86.2 | 10.1 | 86.2 | 2.26 | 183.0 | 22.9 | 183.0 |
| -24 | 189.8 | 23.7 | 189.8 | 85.7 | 10.0 | 85.7 | 2.21 | 182.0 | 22.8 | 182.0 |
| -25 | 184.5 | 23.1 | 184.5 | 85.2 | 10.0 | 85.2 | 2.17 | 181.0 | 22.6 | 181.0 |

* pozor: pracovný rozsah nie je zohľadnený v tabuľke

ZHI46K1P-TWD_R410A_8_AW

| Th [°C] | | 45 °C | | | | | | | | |
|---------|--------------|-------------|-------------|--------------|--------------|--------------|-------------|-----------|-----------|-----------|
| Ta [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin-min [kW] | Pin-max [kW] | COP kW / kW | I nom [A] | I min [A] | I max [A] |
| 25 | 595.2 | 74.4 | 595.2 | 112.9 | 13.2 | 112.9 | 5.27 | 212.2 | 26.5 | 212.2 |
| 24 | 584.0 | 73.0 | 584.0 | 112.9 | 13.2 | 112.9 | 5.17 | 212.2 | 26.5 | 212.2 |
| 23 | 572.9 | 71.6 | 572.9 | 112.9 | 13.2 | 112.9 | 5.07 | 212.2 | 26.5 | 212.2 |
| 22 | 562.0 | 70.2 | 562.0 | 113.0 | 13.2 | 113.0 | 4.98 | 212.2 | 26.5 | 212.2 |
| 21 | 551.2 | 68.9 | 551.2 | 113.0 | 13.2 | 113.0 | 4.88 | 212.2 | 26.5 | 212.2 |
| 20 | 540.6 | 67.6 | 540.6 | 113.0 | 13.2 | 113.0 | 4.78 | 212.2 | 26.5 | 212.2 |
| 19 | 530.2 | 66.3 | 530.2 | 113.1 | 13.2 | 113.1 | 4.69 | 212.3 | 26.5 | 212.3 |
| 18 | 519.9 | 65.0 | 519.9 | 113.1 | 13.2 | 113.1 | 4.60 | 212.3 | 26.5 | 212.3 |
| 17 | 509.8 | 63.7 | 509.8 | 113.2 | 13.3 | 113.2 | 4.50 | 212.4 | 26.6 | 212.4 |
| 16 | 499.8 | 62.5 | 499.8 | 113.3 | 13.3 | 113.3 | 4.41 | 212.5 | 26.6 | 212.5 |
| 15 | 490.0 | 61.2 | 490.0 | 113.3 | 13.3 | 113.3 | 4.32 | 212.6 | 26.6 | 212.6 |
| 14 | 480.3 | 60.0 | 480.3 | 113.4 | 13.3 | 113.4 | 4.24 | 212.7 | 26.6 | 212.7 |
| 13 | 470.7 | 58.8 | 470.7 | 113.4 | 13.3 | 113.4 | 4.15 | 212.8 | 26.6 | 212.8 |
| 12 | 461.3 | 57.7 | 461.3 | 113.5 | 13.3 | 113.5 | 4.07 | 212.9 | 26.6 | 212.9 |
| 11 | 452.1 | 56.5 | 452.1 | 113.5 | 13.3 | 113.5 | 3.98 | 212.9 | 26.6 | 212.9 |
| 10 | 443.0 | 55.4 | 443.0 | 113.6 | 13.3 | 113.6 | 3.90 | 213.0 | 26.6 | 213.0 |
| 9 | 426.4 | 53.3 | 426.4 | 113.6 | 13.3 | 113.6 | 3.75 | 213.1 | 26.6 | 213.1 |
| 8 | 411.0 | 51.4 | 411.0 | 113.7 | 13.3 | 113.7 | 3.62 | 213.2 | 26.7 | 213.2 |
| 7 | 396.6 | 49.6 | 396.6 | 113.7 | 13.3 | 113.7 | 3.49 | 213.2 | 26.7 | 213.2 |
| 6 | 383.3 | 47.9 | 383.3 | 113.7 | 13.3 | 113.7 | 3.37 | 213.2 | 26.7 | 213.2 |
| 5 | 371.0 | 46.4 | 371.0 | 113.7 | 13.3 | 113.7 | 3.26 | 213.1 | 26.6 | 213.1 |
| 4 | 359.7 | 45.0 | 359.7 | 113.6 | 13.3 | 113.6 | 3.17 | 213.0 | 26.6 | 213.0 |
| 3 | 349.3 | 43.7 | 349.3 | 113.5 | 13.3 | 113.5 | 3.08 | 212.8 | 26.6 | 212.8 |
| 2 | 339.8 | 42.5 | 339.8 | 113.4 | 13.3 | 113.4 | 3.00 | 212.6 | 26.6 | 212.6 |
| 1 | 331.1 | 41.4 | 331.1 | 113.3 | 13.3 | 113.3 | 2.92 | 212.3 | 26.5 | 212.3 |
| 0 | 323.2 | 40.4 | 323.2 | 113.1 | 13.2 | 113.1 | 2.86 | 212.0 | 26.5 | 212.0 |
| -1 | 316.1 | 39.5 | 316.1 | 113.0 | 13.2 | 113.0 | 2.80 | 211.7 | 26.5 | 211.7 |
| -2 | 309.7 | 38.7 | 309.7 | 112.8 | 13.2 | 112.8 | 2.74 | 211.4 | 26.4 | 211.4 |
| -3 | 304.1 | 38.0 | 304.1 | 112.7 | 13.2 | 112.7 | 2.70 | 211.1 | 26.4 | 211.1 |
| -4 | 299.1 | 37.4 | 299.1 | 112.5 | 13.2 | 112.5 | 2.66 | 210.8 | 26.4 | 210.8 |
| -5 | 294.8 | 36.8 | 294.8 | 112.4 | 13.2 | 112.4 | 2.62 | 210.5 | 26.3 | 210.5 |
| -6 | 291.1 | 36.4 | 291.1 | 112.3 | 13.1 | 112.3 | 2.59 | 210.3 | 26.3 | 210.3 |
| -7 | 288.0 | 36.0 | 288.0 | 112.2 | 13.1 | 112.2 | 2.57 | 210.0 | 26.3 | 210.0 |
| -8 | 285.6 | 35.7 | 285.6 | 112.1 | 13.1 | 112.1 | 2.55 | 209.8 | 26.2 | 209.8 |
| -9 | 283.8 | 35.5 | 283.8 | 112.0 | 13.1 | 112.0 | 2.53 | 209.7 | 26.2 | 209.7 |
| -10 | 282.6 | 35.3 | 282.6 | 112.0 | 13.1 | 112.0 | 2.52 | 209.6 | 26.2 | 209.6 |
| -11 | 275.7 | 34.5 | 275.7 | 111.7 | 13.1 | 111.7 | 2.47 | 209.0 | 26.1 | 209.0 |
| -12 | 269.0 | 33.6 | 269.0 | 111.4 | 13.0 | 111.4 | 2.42 | 208.3 | 26.0 | 208.3 |
| -13 | 262.4 | 32.8 | 262.4 | 111.0 | 13.0 | 111.0 | 2.36 | 207.6 | 25.9 | 207.6 |
| -14 | 255.9 | 32.0 | 255.9 | 110.6 | 13.0 | 110.6 | 2.31 | 206.8 | 25.8 | 206.8 |
| -15 | 249.5 | 31.2 | 249.5 | 110.2 | 12.9 | 110.2 | 2.26 | 205.9 | 25.7 | 205.9 |
| -16 | 243.1 | 30.4 | 243.1 | 109.8 | 12.9 | 109.8 | 2.21 | 205.0 | 25.6 | 205.0 |
| -17 | 236.9 | 29.6 | 236.9 | 109.3 | 12.8 | 109.3 | 2.17 | 204.0 | 25.5 | 204.0 |
| -18 | 230.7 | 28.8 | 230.7 | 108.8 | 12.7 | 108.8 | 2.12 | 202.9 | 25.4 | 202.9 |
| -19 | 224.7 | 28.1 | 224.7 | 108.3 | 12.7 | 108.3 | 2.07 | 201.7 | 25.2 | 201.7 |
| -20 | 218.7 | 27.3 | 218.7 | 107.7 | 12.6 | 107.7 | 2.03 | 200.5 | 25.1 | 200.5 |
| -21 | 212.8 | 26.6 | 212.8 | 107.1 | 12.5 | 107.1 | 1.99 | 199.1 | 24.9 | 199.1 |
| -22 | 207.0 | 25.9 | 207.0 | 106.4 | 12.5 | 106.4 | 1.94 | 197.7 | 24.7 | 197.7 |
| -23 | 201.2 | 25.2 | 201.2 | 105.8 | 12.4 | 105.8 | 1.90 | 196.3 | 24.5 | 196.3 |
| -24 | 195.6 | 24.4 | 195.6 | 105.0 | 12.3 | 105.0 | 1.86 | 194.7 | 24.3 | 194.7 |
| -25 | 190.0 | 23.7 | 190.0 | 104.2 | 12.2 | 104.2 | 1.82 | 193.0 | 24.1 | 193.0 |

* pozor: pracovný rozsah nie je zohľadnený v tabuľke

WAMAK AW 400 EVI HeavyDuty 2L4

| Th [°C] | | 55 °C | | | | | | | | |
|---------|--------------|-------------|-------------|--------------|--------------|--------------|-------------|-----------|-----------|-----------|
| Ta [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin-min [kW] | Pin-max [kW] | COP kW / kW | I nom [A] | I min [A] | I max [A] |
| 25 | 588.0 | 73.5 | 588.0 | 141.8 | 16.6 | 141.8 | 4.15 | 245.2 | 30.7 | 245.2 |
| 24 | 577.5 | 72.2 | 577.5 | 141.9 | 16.6 | 141.9 | 4.07 | 245.3 | 30.7 | 245.3 |
| 23 | 567.2 | 70.9 | 567.2 | 142.0 | 16.6 | 142.0 | 3.99 | 245.4 | 30.7 | 245.4 |
| 22 | 557.0 | 69.6 | 557.0 | 142.1 | 16.6 | 142.1 | 3.92 | 245.4 | 30.7 | 245.4 |
| 21 | 547.0 | 68.4 | 547.0 | 142.2 | 16.6 | 142.2 | 3.85 | 245.5 | 30.7 | 245.5 |
| 20 | 537.1 | 67.1 | 537.1 | 142.3 | 16.7 | 142.3 | 3.77 | 245.6 | 30.7 | 245.6 |
| 19 | 527.3 | 65.9 | 527.3 | 142.4 | 16.7 | 142.4 | 3.70 | 245.7 | 30.7 | 245.7 |
| 18 | 517.7 | 64.7 | 517.7 | 142.5 | 16.7 | 142.5 | 3.63 | 245.8 | 30.7 | 245.8 |
| 17 | 508.1 | 63.5 | 508.1 | 142.5 | 16.7 | 142.5 | 3.56 | 245.9 | 30.7 | 245.9 |
| 16 | 498.8 | 62.3 | 498.8 | 142.6 | 16.7 | 142.6 | 3.50 | 245.9 | 30.7 | 245.9 |
| 15 | 489.5 | 61.2 | 489.5 | 142.7 | 16.7 | 142.7 | 3.43 | 246.0 | 30.8 | 246.0 |
| 14 | 480.4 | 60.0 | 480.4 | 142.8 | 16.7 | 142.8 | 3.36 | 246.1 | 30.8 | 246.1 |
| 13 | 471.3 | 58.9 | 471.3 | 142.8 | 16.7 | 142.8 | 3.30 | 246.1 | 30.8 | 246.1 |
| 12 | 462.4 | 57.8 | 462.4 | 142.9 | 16.7 | 142.9 | 3.24 | 246.2 | 30.8 | 246.2 |
| 11 | 453.7 | 56.7 | 453.7 | 142.9 | 16.7 | 142.9 | 3.17 | 246.2 | 30.8 | 246.2 |
| 10 | 445.0 | 55.6 | 445.0 | 142.9 | 16.7 | 142.9 | 3.11 | 246.2 | 30.8 | 246.2 |
| 9 | 429.3 | 53.7 | 429.3 | 142.9 | 16.7 | 142.9 | 3.00 | 246.1 | 30.8 | 246.1 |
| 8 | 414.5 | 51.8 | 414.5 | 142.9 | 16.7 | 142.9 | 2.90 | 246.0 | 30.7 | 246.0 |
| 7 | 400.7 | 50.1 | 400.7 | 142.8 | 16.7 | 142.8 | 2.81 | 245.8 | 30.7 | 245.8 |
| 6 | 387.9 | 48.5 | 387.9 | 142.7 | 16.7 | 142.7 | 2.72 | 245.5 | 30.7 | 245.5 |
| 5 | 376.0 | 47.0 | 376.0 | 142.5 | 16.7 | 142.5 | 2.64 | 245.1 | 30.6 | 245.1 |
| 4 | 365.1 | 45.6 | 365.1 | 142.3 | 16.7 | 142.3 | 2.57 | 244.7 | 30.6 | 244.7 |
| 3 | 355.0 | 44.4 | 355.0 | 142.1 | 16.6 | 142.1 | 2.50 | 244.2 | 30.5 | 244.2 |
| 2 | 345.7 | 43.2 | 345.7 | 141.8 | 16.6 | 141.8 | 2.44 | 243.7 | 30.5 | 243.7 |
| 1 | 337.2 | 42.1 | 337.2 | 141.5 | 16.6 | 141.5 | 2.38 | 243.1 | 30.4 | 243.1 |
| 0 | 329.4 | 41.2 | 329.4 | 141.2 | 16.5 | 141.2 | 2.33 | 242.5 | 30.3 | 242.5 |
| -1 | 322.4 | 40.3 | 322.4 | 141.0 | 16.5 | 141.0 | 2.29 | 241.9 | 30.2 | 241.9 |
| -2 | 316.1 | 39.5 | 316.1 | 140.7 | 16.5 | 140.7 | 2.25 | 241.4 | 30.2 | 241.4 |
| -3 | 310.5 | 38.8 | 310.5 | 140.4 | 16.4 | 140.4 | 2.21 | 240.8 | 30.1 | 240.8 |
| -4 | 305.6 | 38.2 | 305.6 | 140.1 | 16.4 | 140.1 | 2.18 | 240.3 | 30.0 | 240.3 |
| -5 | 301.3 | 37.7 | 301.3 | 139.9 | 16.4 | 139.9 | 2.15 | 239.8 | 30.0 | 239.8 |
| -6 | 297.6 | 37.2 | 297.6 | 139.7 | 16.4 | 139.7 | 2.13 | 239.3 | 29.9 | 239.3 |
| -7 | 294.5 | 36.8 | 294.5 | 139.5 | 16.3 | 139.5 | 2.11 | 238.9 | 29.9 | 238.9 |
| -8 | 292.1 | 36.5 | 292.1 | 139.3 | 16.3 | 139.3 | 2.10 | 238.6 | 29.8 | 238.6 |
| -9 | 290.3 | 36.3 | 290.3 | 139.2 | 16.3 | 139.2 | 2.09 | 238.4 | 29.8 | 238.4 |
| -10 | 289.1 | 36.1 | 289.1 | 139.1 | 16.3 | 139.1 | 2.08 | 238.2 | 29.8 | 238.2 |
| -11 | 282.2 | 35.3 | 282.2 | 138.7 | 16.2 | 138.7 | 2.04 | 237.2 | 29.7 | 237.2 |
| -12 | 275.5 | 34.4 | 275.5 | 138.1 | 16.2 | 138.1 | 1.99 | 236.2 | 29.5 | 236.2 |
| -13 | 268.8 | 33.6 | 268.8 | 137.6 | 16.1 | 137.6 | 1.95 | 235.0 | 29.4 | 235.0 |
| -14 | 262.1 | 32.8 | 262.1 | 137.0 | 16.0 | 137.0 | 1.91 | 233.8 | 29.2 | 233.8 |
| -15 | 255.6 | 31.9 | 255.6 | 136.4 | 16.0 | 136.4 | 1.87 | 232.5 | 29.1 | 232.5 |
| -16 | 249.1 | 31.1 | 249.1 | 135.7 | 15.9 | 135.7 | 1.84 | 231.2 | 28.9 | 231.2 |
| -17 | 242.7 | 30.3 | 242.7 | 135.0 | 15.8 | 135.0 | 1.80 | 229.7 | 28.7 | 229.7 |
| -18 | 236.4 | 29.5 | 236.4 | 134.2 | 15.7 | 134.2 | 1.76 | 228.1 | 28.5 | 228.1 |
| -19 | 230.1 | 28.8 | 230.1 | 133.4 | 15.6 | 133.4 | 1.72 | 226.5 | 28.3 | 226.5 |
| -20 | 223.9 | 28.0 | 223.9 | 132.6 | 15.5 | 132.6 | 1.69 | 224.8 | 28.1 | 224.8 |
| -21 | 217.7 | 27.2 | 217.7 | 131.7 | 15.4 | 131.7 | 1.65 | 222.9 | 27.9 | 222.9 |
| -22 | 211.6 | 26.4 | 211.6 | 130.8 | 15.3 | 130.8 | 1.62 | 221.0 | 27.6 | 221.0 |
| -23 | 205.5 | 25.7 | 205.5 | 129.8 | 15.2 | 129.8 | 1.58 | 219.0 | 27.4 | 219.0 |
| -24 | 199.5 | 24.9 | 199.5 | 128.8 | 15.1 | 128.8 | 1.55 | 216.8 | 27.1 | 216.8 |
| -25 | 193.6 | 24.2 | 193.6 | 127.7 | 15.0 | 127.7 | 1.52 | 214.6 | 26.8 | 214.6 |

* pozor: pracovný rozsah nie je zohľadnený v tabuľke

WAMAK AW 400 EVI HeavyDuty 2L4

| Th [°C] | | T-Max @ 65 °C | | | | | | | | |
|---------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|--------------|--------------|--------------|
| Ta [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin-min [kW] | Pin-max [kW] | COP kW / kW | I nom [A] | I min [A] | I max [A] |
| 25 | 583.7 | 73.0 | 583.7 | 180.8 | 21.2 | 180.8 | 3.23 | 289.1 | 36.1 | 289.1 |
| 24 | 574.0 | 71.8 | 574.0 | 180.9 | 21.2 | 180.9 | 3.17 | 289.3 | 36.2 | 289.3 |
| 23 | 564.4 | 70.5 | 564.4 | 181.0 | 21.2 | 181.0 | 3.12 | 289.5 | 36.2 | 289.5 |
| 22 | 554.9 | 69.4 | 554.9 | 181.1 | 21.2 | 181.1 | 3.06 | 289.8 | 36.2 | 289.8 |
| 21 | 545.5 | 68.2 | 545.5 | 181.2 | 21.2 | 181.2 | 3.01 | 290.0 | 36.2 | 290.0 |
| 20 | 536.2 | 67.0 | 536.2 | 181.3 | 21.2 | 181.3 | 2.96 | 290.2 | 36.3 | 290.2 |
| 19 | 527.0 | 65.9 | 527.0 | 181.3 | 21.2 | 181.3 | 2.91 | 290.3 | 36.3 | 290.3 |
| 18 | 517.9 | 64.7 | 517.9 | 181.4 | 21.2 | 181.4 | 2.86 | 290.5 | 36.3 | 290.5 |
| 17 | 509.0 | 63.6 | 509.0 | 181.4 | 21.2 | 181.4 | 2.81 | 290.6 | 36.3 | 290.6 |
| 16 | 500.1 | 62.5 | 500.1 | 181.5 | 21.2 | 181.5 | 2.76 | 290.8 | 36.3 | 290.8 |
| 15 | 491.4 | 61.4 | 491.4 | 181.5 | 21.2 | 181.5 | 2.71 | 290.9 | 36.4 | 290.9 |
| 14 | 482.7 | 60.3 | 482.7 | 181.5 | 21.3 | 181.5 | 2.66 | 291.0 | 36.4 | 291.0 |
| 13 | 474.1 | 59.3 | 474.1 | 181.5 | 21.2 | 181.5 | 2.61 | 291.0 | 36.4 | 291.0 |
| 12 | 465.7 | 58.2 | 465.7 | 181.4 | 21.2 | 181.4 | 2.57 | 291.1 | 36.4 | 291.1 |
| 11 | 457.3 | 57.2 | 457.3 | 181.4 | 21.2 | 181.4 | 2.52 | 291.1 | 36.4 | 291.1 |
| 10 | 449.0 | 56.1 | 449.0 | 181.3 | 21.2 | 181.3 | 2.48 | 291.1 | 36.4 | 291.1 |
| 9 | 434.0 | 54.2 | 434.0 | 181.1 | 21.2 | 181.1 | 2.40 | 290.9 | 36.4 | 290.9 |
| 8 | 419.8 | 52.5 | 419.8 | 180.9 | 21.2 | 180.9 | 2.32 | 290.7 | 36.3 | 290.7 |
| 7 | 406.5 | 50.8 | 406.5 | 180.6 | 21.1 | 180.6 | 2.25 | 290.3 | 36.3 | 290.3 |
| 6 | 394.0 | 49.3 | 394.0 | 180.2 | 21.1 | 180.2 | 2.19 | 289.8 | 36.2 | 289.8 |
| 5 | 382.5 | 47.8 | 382.5 | 179.8 | 21.1 | 179.8 | 2.13 | 289.2 | 36.2 | 289.2 |
| 4 | 371.8 | 46.5 | 371.8 | 179.4 | 21.0 | 179.4 | 2.07 | 288.6 | 36.1 | 288.6 |
| 3 | 361.9 | 45.2 | 361.9 | 178.9 | 21.0 | 178.9 | 2.02 | 287.9 | 36.0 | 287.9 |
| 2 | 352.7 | 44.1 | 352.7 | 178.4 | 20.9 | 178.4 | 1.98 | 287.1 | 35.9 | 287.1 |
| 1 | 344.4 | 43.0 | 344.4 | 177.9 | 20.8 | 177.9 | 1.94 | 286.3 | 35.8 | 286.3 |
| 0 | 336.7 | 42.1 | 336.7 | 177.5 | 20.8 | 177.5 | 1.90 | 285.5 | 35.7 | 285.5 |
| -1 | 329.7 | 41.2 | 329.7 | 177.0 | 20.7 | 177.0 | 1.86 | 284.7 | 35.6 | 284.7 |
| -2 | 323.4 | 40.4 | 323.4 | 176.5 | 20.7 | 176.5 | 1.83 | 283.9 | 35.5 | 283.9 |
| -3 | 317.8 | 39.7 | 317.8 | 176.0 | 20.6 | 176.0 | 1.81 | 283.1 | 35.4 | 283.1 |
| -4 | 312.8 | 39.1 | 312.8 | 175.6 | 20.6 | 175.6 | 1.78 | 282.4 | 35.3 | 282.4 |
| -5 | 308.5 | 38.6 | 308.5 | 175.2 | 20.5 | 175.2 | 1.76 | 281.8 | 35.2 | 281.8 |
| -6 | 304.8 | 38.1 | 304.8 | 174.9 | 20.5 | 174.9 | 1.74 | 281.2 | 35.1 | 281.2 |
| -7 | 301.8 | 37.7 | 301.8 | 174.6 | 20.4 | 174.6 | 1.73 | 280.7 | 35.1 | 280.7 |
| -8 | 299.3 | 37.4 | 299.3 | 174.3 | 20.4 | 174.3 | 1.72 | 280.2 | 35.0 | 280.2 |
| -9 | 297.5 | 37.2 | 297.5 | 174.1 | 20.4 | 174.1 | 1.71 | 279.9 | 35.0 | 279.9 |
| -10 | 296.2 | 37.0 | 296.2 | 174.0 | 20.4 | 174.0 | 1.70 | 279.7 | 35.0 | 279.7 |
| -11 | 289.3 | 36.2 | 289.3 | 173.3 | 20.3 | 173.3 | 1.67 | 278.4 | 34.8 | 278.4 |
| -12 | 282.4 | 35.3 | 282.4 | 172.5 | 20.2 | 172.5 | 1.64 | 277.0 | 34.6 | 277.0 |
| -13 | 275.6 | 34.4 | 275.6 | 171.6 | 20.1 | 171.6 | 1.61 | 275.5 | 34.4 | 275.5 |
| -14 | 268.8 | 33.6 | 268.8 | 170.8 | 20.0 | 170.8 | 1.57 | 273.9 | 34.2 | 273.9 |
| -15 | 262.0 | 32.8 | 262.0 | 169.8 | 19.9 | 169.8 | 1.54 | 272.3 | 34.0 | 272.3 |
| -16 | | | | | | | | | | |
| -17 | | | | | | | | | | |
| -18 | | | | | | | | | | |
| -19 | | | | | | | | | | |
| -20 | | | | | | | | | | |
| -21 | | | | | | | | | | |
| -22 | | | | | | | | | | |
| -23 | | | | | | | | | | |
| -24 | | | | | | | | | | |
| -25 | | | | | | | | | | |

* pozor: pracovný rozsah nie je zohľadnený v tabuľke

WAMAK AW 400 EVI HeavyDuty 2L4

| Tc [°C] | | W 12 / 7 °C | | | | | | | | |
|---------|--------------|-------------|-------------|--------------|--------------|--------------|-------------|-----------|-----------|-----------|
| Ta [°C] | Qc nom [kW] | Qc min [kW] | Qc max [kW] | Pin [kW] | Pin min [kW] | Pin max [kW] | EER kW / kW | I nom [A] | I min [A] | I max [A] |
| 40 | 281.6 | 281.6 | 281.6 | 121.6 | 113.9 | 121.6 | 2.32 | 221.9 | 221.9 | 221.9 |
| 39 | 283.6 | 283.6 | 283.6 | 118.9 | 111.4 | 118.9 | 2.38 | 218.9 | 218.9 | 218.9 |
| 38 | 285.6 | 285.6 | 285.6 | 116.3 | 108.9 | 116.3 | 2.46 | 216.0 | 216.0 | 216.0 |
| 37 | 287.4 | 287.4 | 287.4 | 113.7 | 106.5 | 113.7 | 2.53 | 213.2 | 213.2 | 213.2 |
| 36 | 289.3 | 289.3 | 289.3 | 111.2 | 104.2 | 111.2 | 2.60 | 210.5 | 210.5 | 210.5 |
| 35 | 291.0 | 291.0 | 291.0 | 108.7 | 101.9 | 108.7 | 2.68 | 207.8 | 207.8 | 207.8 |
| 34 | 292.8 | 292.8 | 292.8 | 106.3 | 99.6 | 106.3 | 2.75 | 205.3 | 205.3 | 205.3 |
| 33 | 294.4 | 294.4 | 294.4 | 104.0 | 97.4 | 104.0 | 2.83 | 202.7 | 202.7 | 202.7 |
| 32 | 296.0 | 296.0 | 296.0 | 101.7 | 95.3 | 101.7 | 2.91 | 200.3 | 200.3 | 200.3 |
| 31 | 297.6 | 297.6 | 297.6 | 99.5 | 93.2 | 99.5 | 2.99 | 197.9 | 197.9 | 197.9 |
| 30 | 299.1 | 299.1 | 299.1 | 97.3 | 91.2 | 97.3 | 3.07 | 195.5 | 195.5 | 195.5 |
| 29 | 300.6 | 300.6 | 300.6 | 95.2 | 89.2 | 95.2 | 3.16 | 193.2 | 193.2 | 193.2 |
| 28 | 302.0 | 302.0 | 302.0 | 93.1 | 87.2 | 93.1 | 3.24 | 191.0 | 191.0 | 191.0 |
| 27 | 303.3 | 303.3 | 303.3 | 91.1 | 85.3 | 91.1 | 3.33 | 188.8 | 188.8 | 188.8 |
| 26 | 304.6 | 304.6 | 304.6 | 89.1 | 83.4 | 89.1 | 3.42 | 186.6 | 186.6 | 186.6 |
| 25 | 305.9 | 305.9 | 305.9 | 87.1 | 81.6 | 87.1 | 3.51 | 184.5 | 184.5 | 184.5 |
| 24 | 307.1 | 307.1 | 307.1 | 85.2 | 79.8 | 85.2 | 3.60 | 182.4 | 182.4 | 182.4 |
| 23 | 308.3 | 308.3 | 308.3 | 83.3 | 78.0 | 83.3 | 3.70 | 180.3 | 180.3 | 180.3 |
| 22 | 309.4 | 309.4 | 309.4 | 81.4 | 76.3 | 81.4 | 3.80 | 178.3 | 178.3 | 178.3 |
| 21 | 310.4 | 310.4 | 310.4 | 79.6 | 74.6 | 79.6 | 3.90 | 176.2 | 176.2 | 176.2 |
| 20 | 311.5 | 311.5 | 311.5 | 77.8 | 72.9 | 77.8 | 4.00 | 174.2 | 174.2 | 174.2 |
| 19 | 312.4 | 312.4 | 312.4 | 76.0 | 71.2 | 76.0 | 4.11 | 172.2 | 172.2 | 172.2 |
| 18 | 313.4 | 313.4 | 313.4 | 74.3 | 69.6 | 74.3 | 4.22 | 170.2 | 170.2 | 170.2 |
| 17 | 314.3 | 314.3 | 314.3 | 72.6 | 68.0 | 72.6 | 4.33 | 168.2 | 168.2 | 168.2 |

| Tc [°C] | | W 23 / 18 °C | | | | | | | | |
|---------|--------------|--------------|-------------|--------------|--------------|--------------|-------------|-------|-----------|-----------|
| Ta [°C] | Qc [kW] | Qh-min [kW] | Qh-max [kW] | Pin [kW] | Pin-min [kW] | Pin-max [kW] | EER kW / kW | I [A] | I-min [A] | I-max [A] |
| 40 | 375.5 | 375.5 | 375.5 | 121.6 | 113.9 | 121.6 | 3.09 | 221.7 | 221.7 | 221.7 |
| 39 | 378.0 | 378.0 | 378.0 | 118.9 | 111.4 | 118.9 | 3.18 | 218.6 | 218.6 | 218.6 |
| 38 | 380.5 | 380.5 | 380.5 | 116.3 | 108.9 | 116.3 | 3.27 | 215.6 | 215.6 | 215.6 |
| 37 | 382.8 | 382.8 | 382.8 | 113.7 | 106.5 | 113.7 | 3.37 | 212.6 | 212.6 | 212.6 |
| 36 | 385.2 | 385.2 | 385.2 | 111.2 | 104.2 | 111.2 | 3.46 | 209.8 | 209.8 | 209.8 |
| 35 | 387.4 | 387.4 | 387.4 | 108.7 | 101.9 | 108.7 | 3.56 | 207.0 | 207.0 | 207.0 |
| 34 | 389.6 | 389.6 | 389.6 | 106.3 | 99.6 | 106.3 | 3.66 | 204.2 | 204.2 | 204.2 |
| 33 | 391.8 | 391.8 | 391.8 | 104.0 | 97.4 | 104.0 | 3.77 | 201.6 | 201.6 | 201.6 |
| 32 | 393.9 | 393.9 | 393.9 | 101.7 | 95.3 | 101.7 | 3.87 | 199.0 | 199.0 | 199.0 |
| 31 | 396.0 | 396.0 | 396.0 | 99.5 | 93.2 | 99.5 | 3.98 | 196.4 | 196.4 | 196.4 |
| 30 | 398.0 | 398.0 | 398.0 | 97.3 | 91.2 | 97.3 | 4.09 | 193.9 | 193.9 | 193.9 |
| 29 | 399.9 | 399.9 | 399.9 | 95.2 | 89.2 | 95.2 | 4.20 | 191.4 | 191.4 | 191.4 |
| 28 | 401.8 | 401.8 | 401.8 | 93.1 | 87.2 | 93.1 | 4.32 | 189.0 | 189.0 | 189.0 |
| 27 | 403.7 | 403.7 | 403.7 | 91.1 | 85.3 | 91.1 | 4.43 | 186.6 | 186.6 | 186.6 |
| 26 | 405.5 | 405.5 | 405.5 | 89.1 | 83.4 | 89.1 | 4.55 | 184.2 | 184.2 | 184.2 |
| 25 | 407.2 | 407.2 | 407.2 | 87.1 | 81.6 | 87.1 | 4.67 | 181.9 | 181.9 | 181.9 |
| 24 | 408.9 | 408.9 | 408.9 | 85.2 | 79.8 | 85.2 | 4.80 | 179.6 | 179.6 | 179.6 |
| 23 | 410.6 | 410.6 | 410.6 | 83.3 | 78.0 | 83.3 | 4.93 | 177.3 | 177.3 | 177.3 |
| 22 | 412.2 | 412.2 | 412.2 | 81.4 | 76.3 | 81.4 | 5.06 | 175.0 | 175.0 | 175.0 |
| 21 | 413.8 | 413.8 | 413.8 | 79.6 | 74.6 | 79.6 | 5.20 | 172.8 | 172.8 | 172.8 |
| 20 | 415.3 | 415.3 | 415.3 | 77.8 | 72.9 | 77.8 | 5.34 | 170.5 | 170.5 | 170.5 |
| 19 | 416.8 | 416.8 | 416.8 | 76.0 | 71.2 | 76.0 | 5.48 | 168.3 | 168.3 | 168.3 |
| 18 | 418.2 | 418.2 | 418.2 | 74.3 | 69.6 | 74.3 | 5.63 | 166.0 | 166.0 | 166.0 |
| 17 | 419.6 | 419.6 | 419.6 | 72.6 | 68.0 | 72.6 | 5.78 | 163.8 | 163.8 | 163.8 |

* pozor: pracovný rozsah nie je zohľadnený v tabuľke

LEGENDE:

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: Príkonnosť pri nominálnom tepelnom výkone

Pin min: Príkonnosť pri minimálnom tepelnom výkone

Pin max: Príkonnosť 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

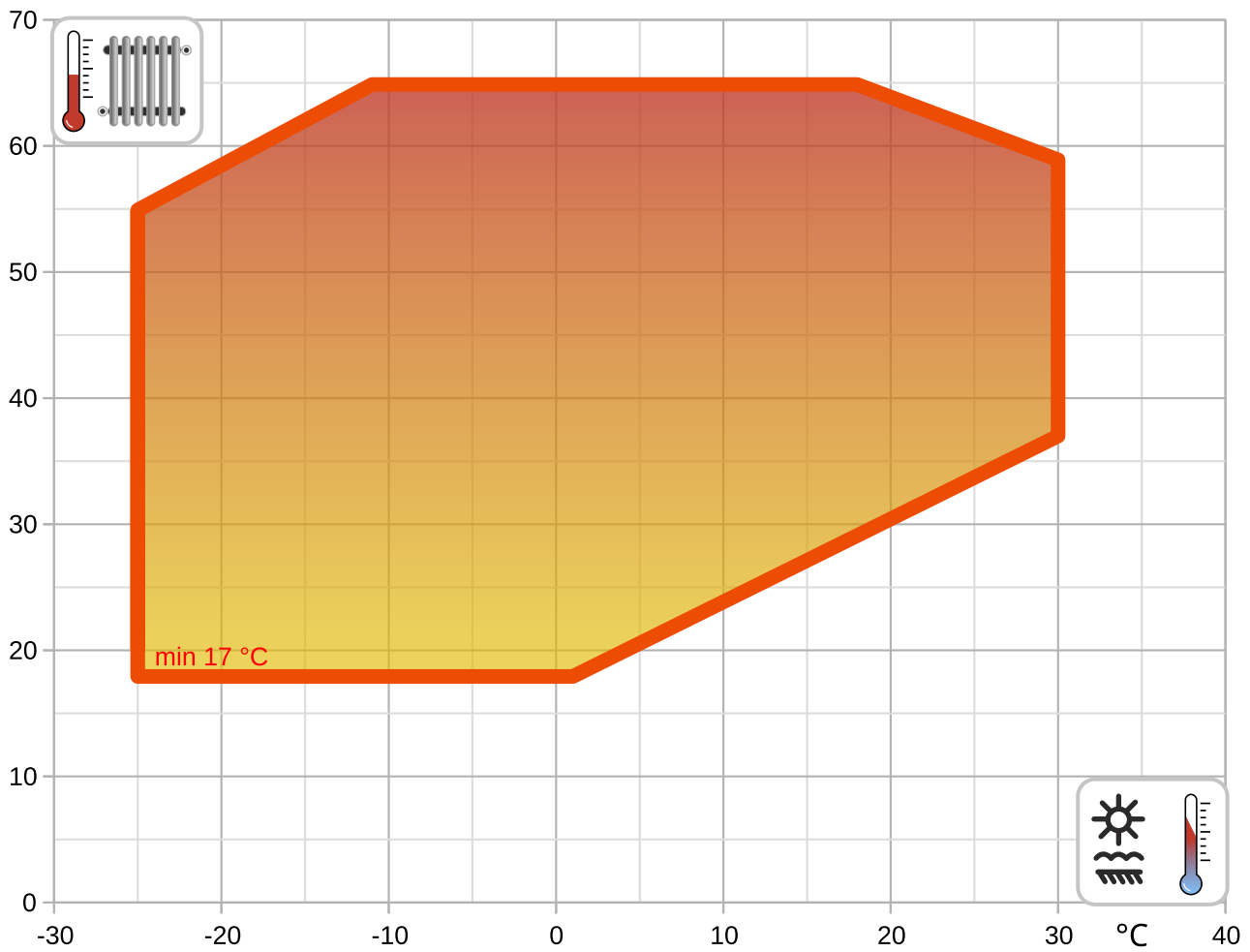
Qc max: Chladiaci výkon / odobrané teplo pri maximálnom tepelnom výkone

I nom: Prúd pri nominálnom tepelnom výkone

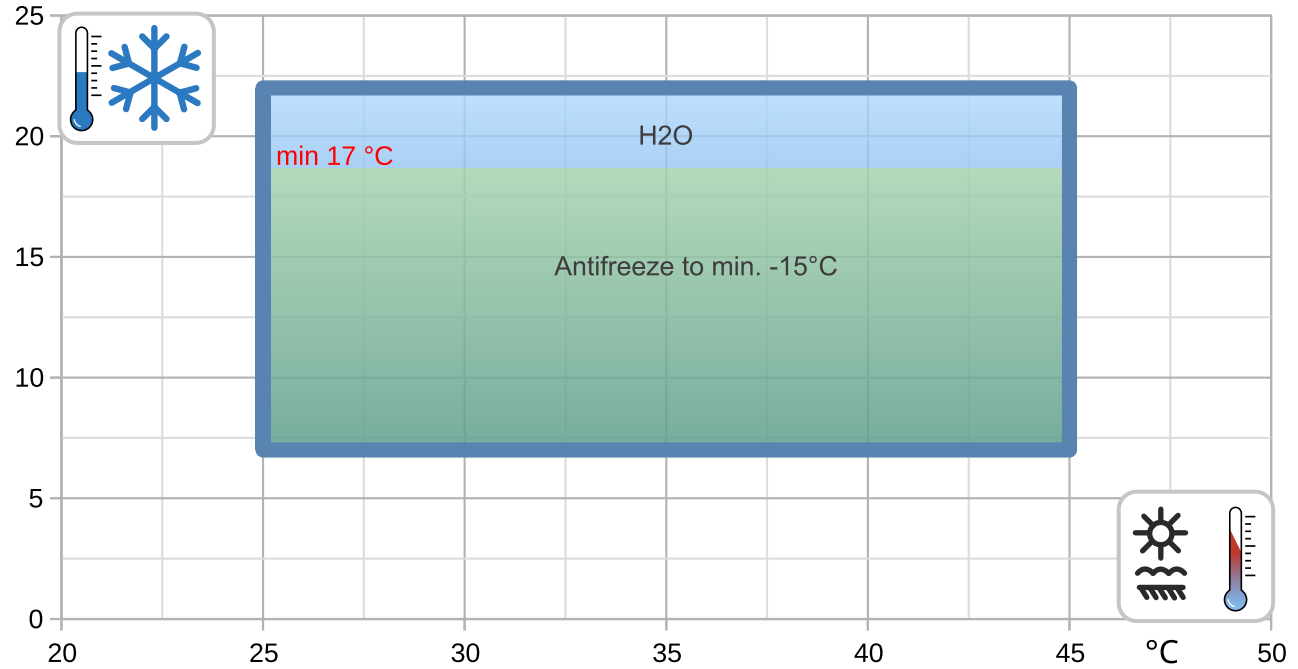
EER: Koeficient účinnosti pri nominálnom chladiacom výkone

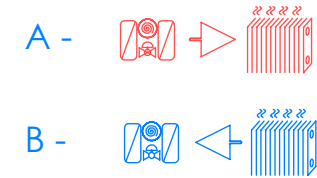
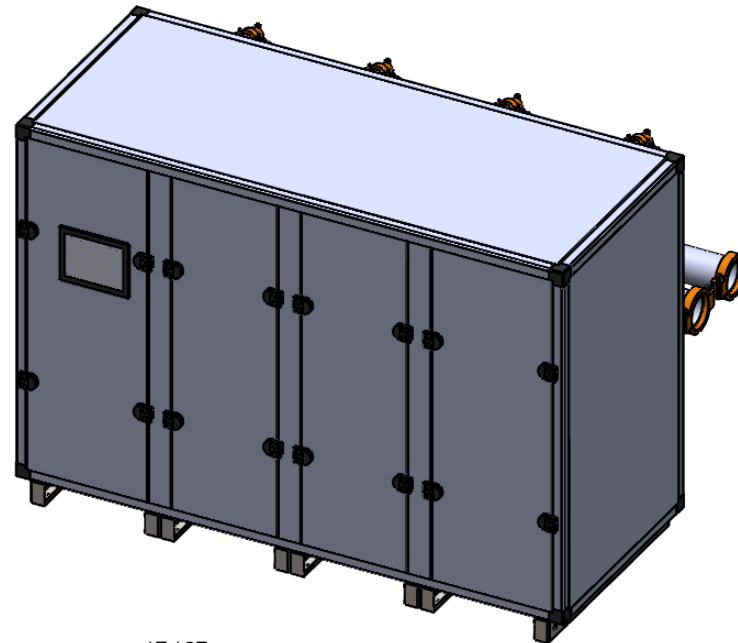
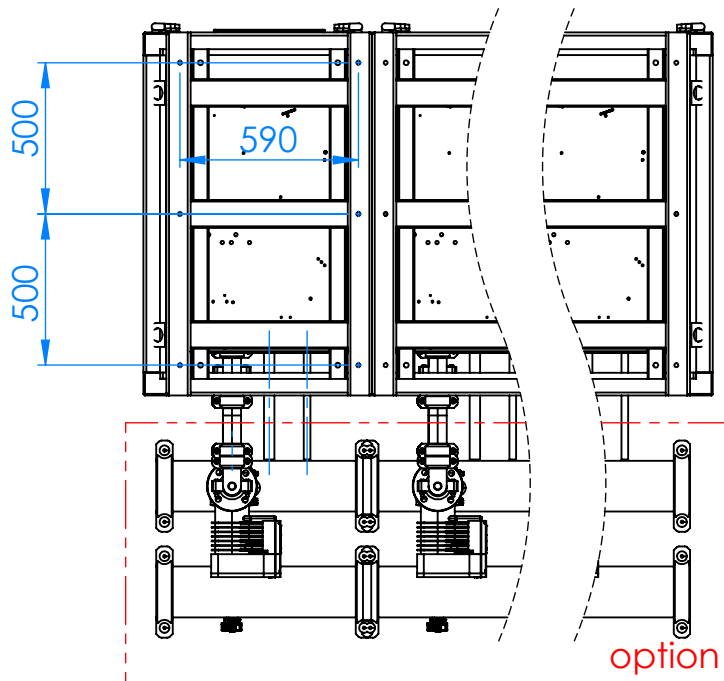
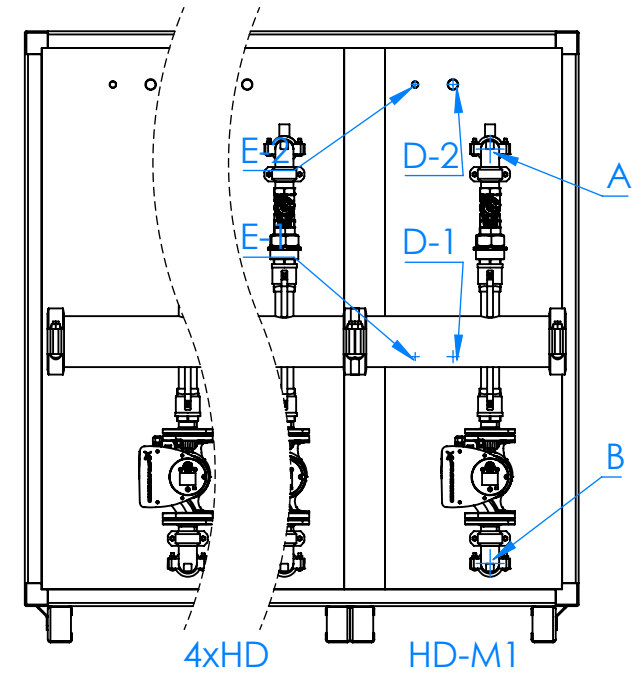
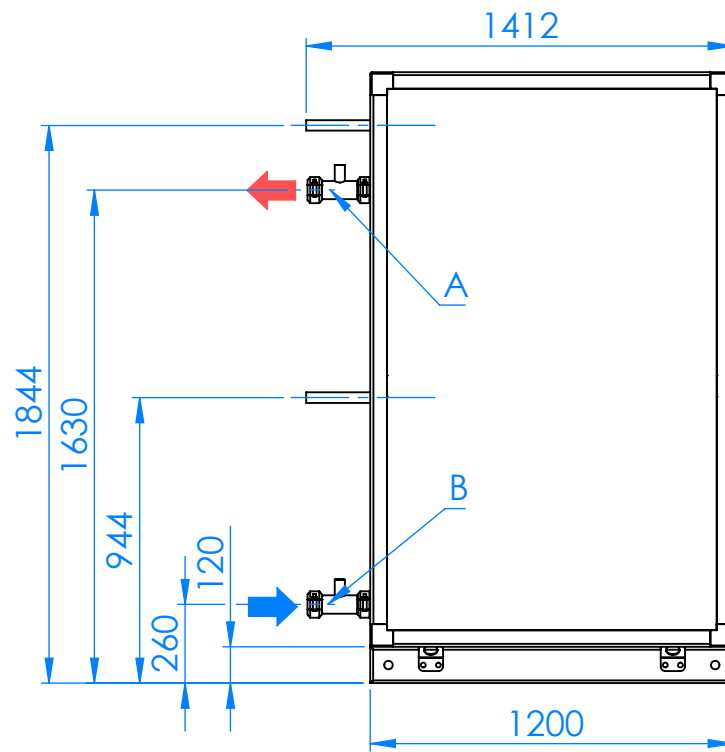
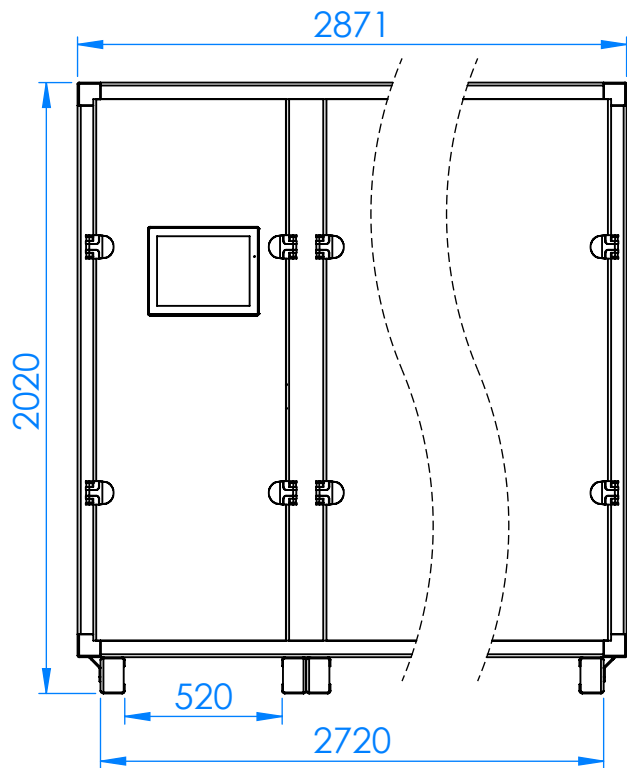
Prevádzkové limity

°C



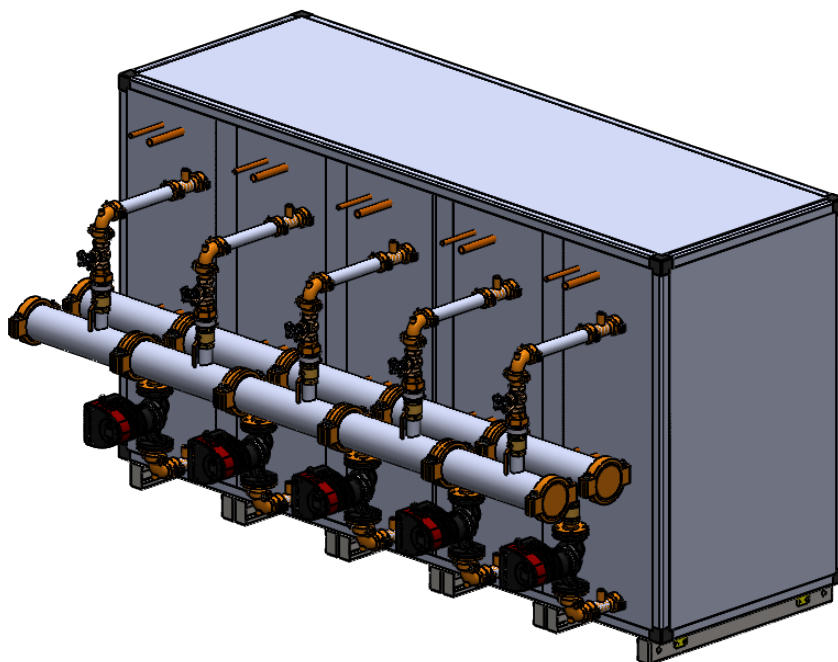
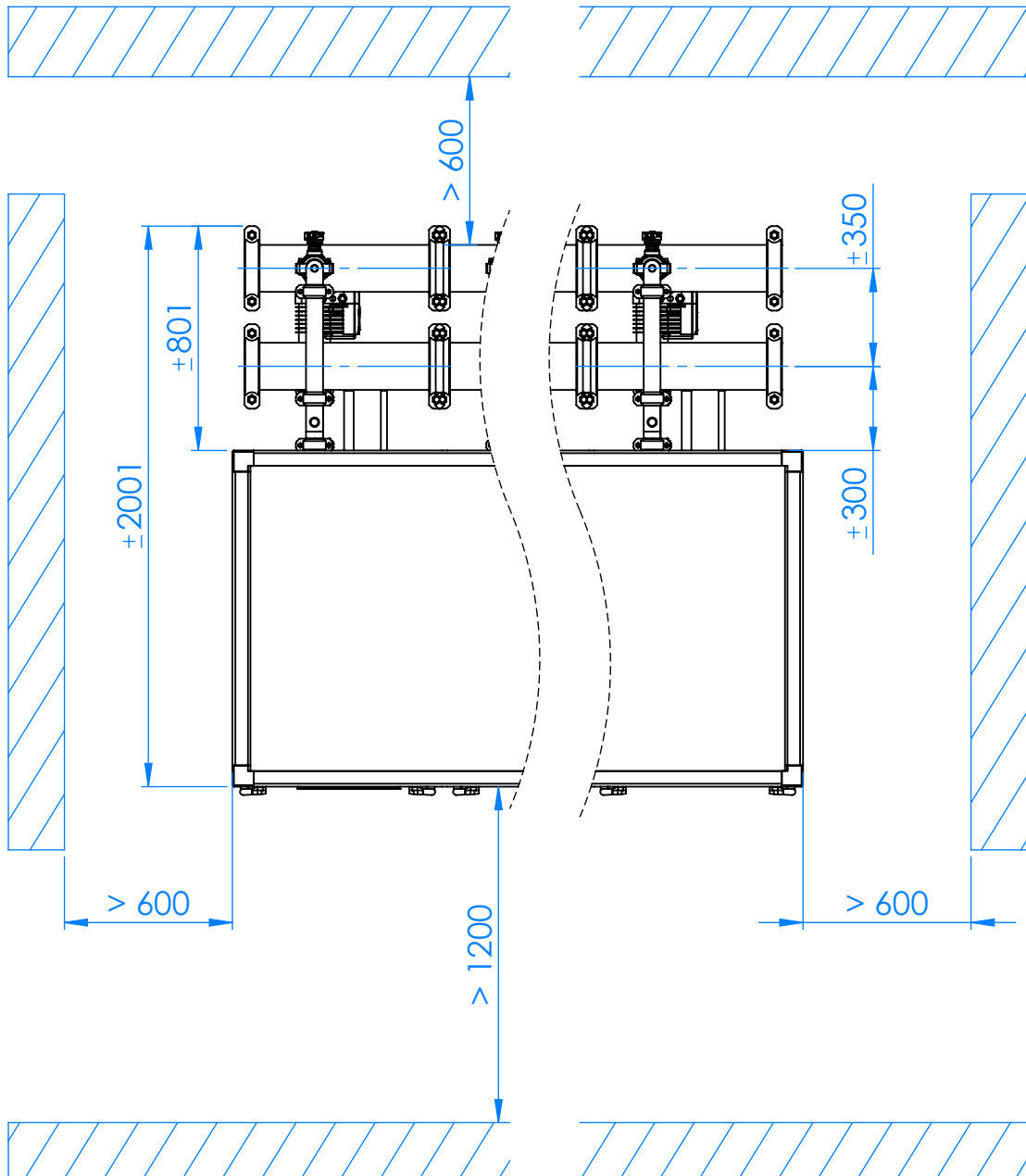
°C





D (1,2,x) - SPLIT - FRIGO GAS
(Modul 1-2-x)

E (1,2,x) - SPLIT - FRIGO LIQUID
(Modul 1-2-x)



WAMAK AW 400 EVI HeavyDuty 2L4 - Variant Split jednotky: VOV900X2-FRAME

Potrebný počet jednotiek

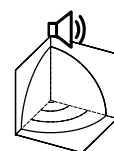
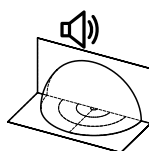
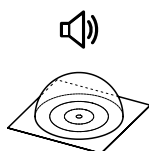
4



| Označenie krytovania: VOV900X2-FRAME | | | Výparník | |
|--------------------------------------|------------|------|--|-----------------------|
| Kód výrobku | WAVV2X90 | | Typ | Cu-coil /Al-fin " |
| Základné rozmery | Výška [mm] | 1400 | Pripojovacia dimenzia | 8 x (7/8" - 1.3/8") " |
| | Šírka [mm] | 1500 | Teplonosné médium | Vzduch |
| | Dĺžka [mm] | 2300 | Objemový prietok - Vzduch [m3/h] | 15073 ~ 120580 |
| Váha zariadenia [kg] | 430 | | Vnútorná tlaková strata - Vzduch [kPa] | 8 x 0.061 |
| Farba krytovania | Nerez | | Teplotný spád - Vzduch | 7 K |
| IP trieda krytovania | IP44 | | Expanzný ventil | EEV |
| Ventilátor | 800 mm | | | |
| Počet ventilátorov | 2 | | Pozícia ventilátora | Vertikálna os |
| Typ motora ventilátora | EC | | Typ ventilátora | Axial |
| Nominálny prúd ventilátora [A] | 1.35 | | Napájanie ventilátora [V/Hz] | 3~ 400/50 |
| Minimálny príkon ventilátora [Watt] | 81 | | Maximálny príkon ventilátora [Watt] | 802 |

Zvuk - výkon Lw

79.5 dB(A)



Odstup [m]

1

5

10

15

1

5

10

15

1

5

10

15

Zvuk - tlak Lp [dB(A)]

74.5

60.5

54.5

51

77.5

63.5

57.5

54

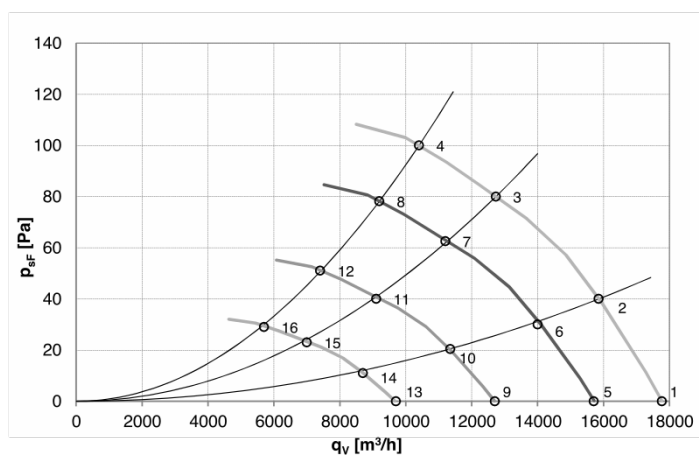
71.5

57.5

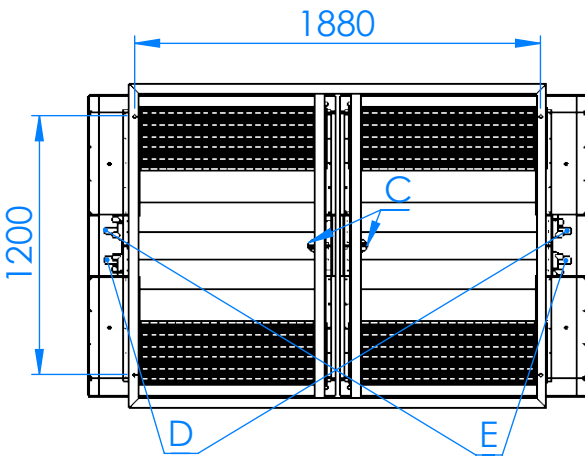
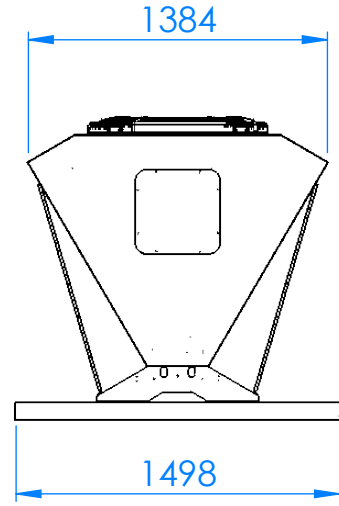
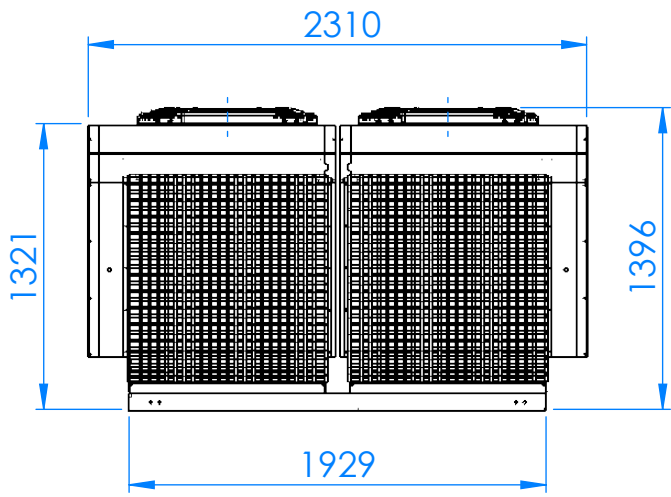
51.5

48

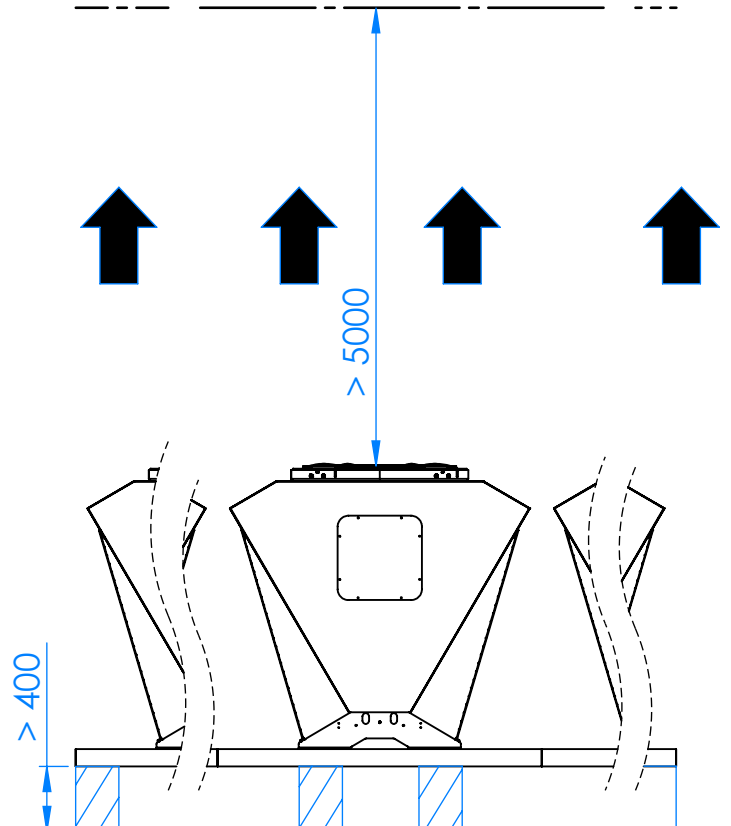
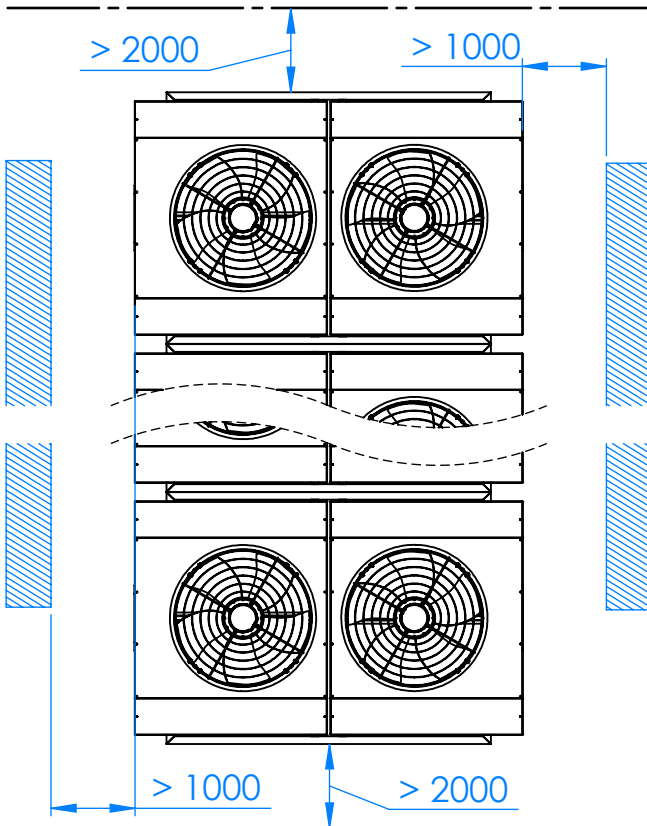
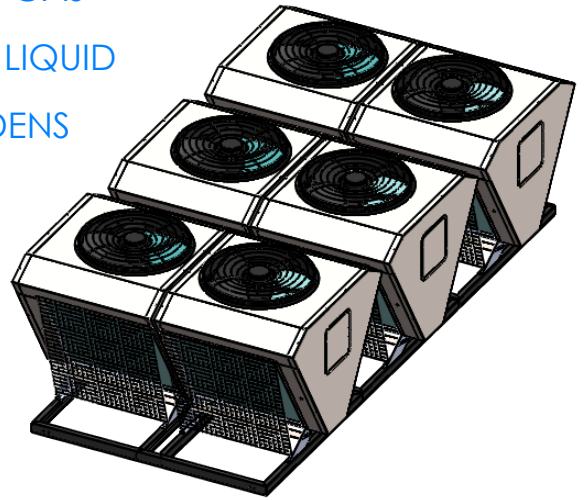
EC Fan 800mm



| | U | f | n | qv | PstF | Pe | I | LwA out | Ta max |
|----|-----|------|-------|--------|------|-----|------|----------|--------|
| | [V] | [Hz] | [RPM] | [m³/h] | [Pa] | [W] | [A] | [dB (A)] | [°C] |
| 1 | 400 | 50 | 735 | 17770 | 0 | 503 | 0,85 | 70 | 60 |
| 2 | 400 | 50 | 735 | 15850 | 40 | 612 | 1,02 | 66 | 60 |
| 3 | 400 | 50 | 735 | 12730 | 80 | 735 | 1,18 | 65 | 60 |
| 4 | 400 | 50 | 735 | 10400 | 100 | 802 | 1,36 | 68 | 60 |
| 5 | 400 | 50 | 650 | 15700 | 0 | 348 | 0,68 | 67 | 60 |
| 6 | 400 | 50 | 650 | 14000 | 30 | 421 | 0,80 | 63 | 60 |
| 7 | 400 | 50 | 650 | 11200 | 63 | 510 | 0,92 | 62 | 60 |
| 8 | 400 | 50 | 650 | 9200 | 78 | 554 | 0,93 | 65 | 60 |
| 9 | 400 | 50 | 525 | 12700 | 0 | 183 | 0,38 | 63 | 60 |
| 10 | 400 | 50 | 525 | 11350 | 20 | 225 | 0,35 | 59 | 60 |
| 11 | 400 | 50 | 525 | 9100 | 40 | 265 | 0,53 | 58 | 60 |
| 12 | 400 | 50 | 525 | 7400 | 51 | 292 | 0,57 | 61 | 60 |
| 13 | 400 | 50 | 400 | 9700 | 0 | 81 | 0,21 | 57 | 60 |
| 14 | 400 | 50 | 400 | 8700 | 11 | 97 | 0,24 | 53 | 60 |
| 15 | 400 | 50 | 400 | 7000 | 23 | 117 | 0,27 | 52 | 60 |
| 16 | 400 | 50 | 400 | 5700 | 29 | 128 | 0,28 | 55 | 60 |



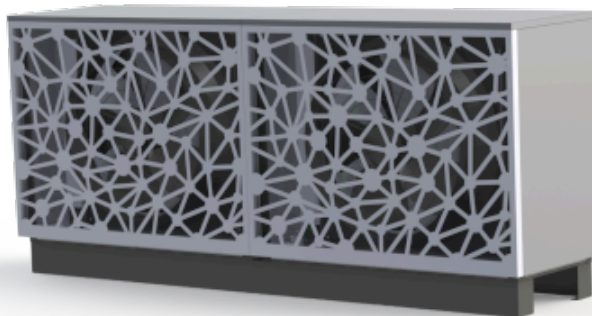
D - FRIGO GAS
E - FRIGO LIQUID
C - CONDENS



WAMAK AW 400 EVI HeavyDuty 2L4 - Variant Split jednotky: VOII-1200-2LOW

Potrebný počet jednotiek

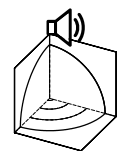
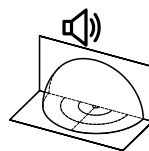
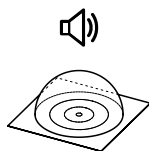
8



| Označenie krytovania: VOII-1200-2LOW | | | Výparník | |
|--------------------------------------|------------|------|--|-----------------------|
| Kód výrobku | WAVII12L | | Typ | Cu-coil /Al-fin " |
| Základné rozmery | Výška [mm] | 1240 | Pripojovacia dimenzia | 8 x (7/8" - 1.3/8") " |
| | Šírka [mm] | 2850 | Teplonosné médium | Vzduch |
| | Dĺžka [mm] | 710 | Objemový prietok - Vzduch [m3/h] | 15073 ~ 120580 |
| Váha zariadenia [kg] | 300 | | Vnútorná tlaková strata - Vzduch [kPa] | 8 x 0.061 |
| Farba krytovania | Sivá | | Teplotný spád - Vzduch | 7 K |
| IP trieda krytovania | IP44 | | Expanzný ventil | EEV |
| Ventilátor | 800 mm | | | |
| Počet ventilátorov | 2 | | Pozícia ventilátora | Horizontálna os |
| Typ motora ventilátora | EC | | Typ ventilátora | Axial |
| Nominálny prúd ventilátora [A] | 1.35 | | Napájanie ventilátora [V/Hz] | 3~ 400/50 |
| Minimálny príkon ventilátora [Watt] | 81 | | Maximálny príkon ventilátora [Watt] | 802 |

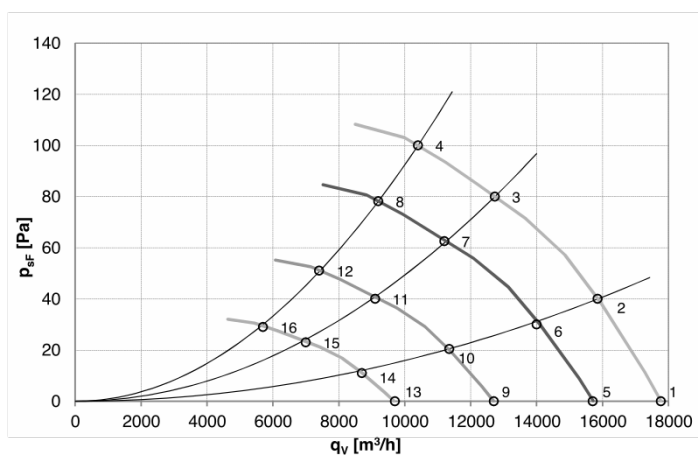
Zvuk - výkon Lw

76.1 dB(A)



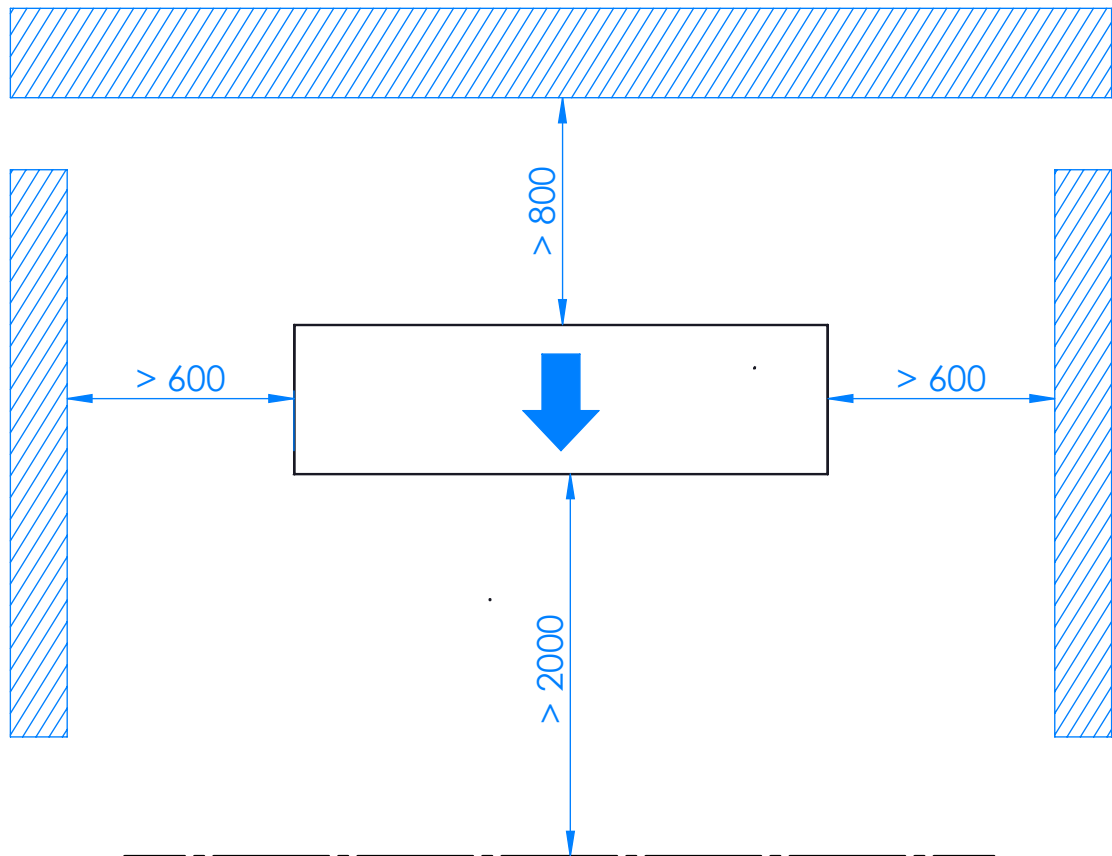
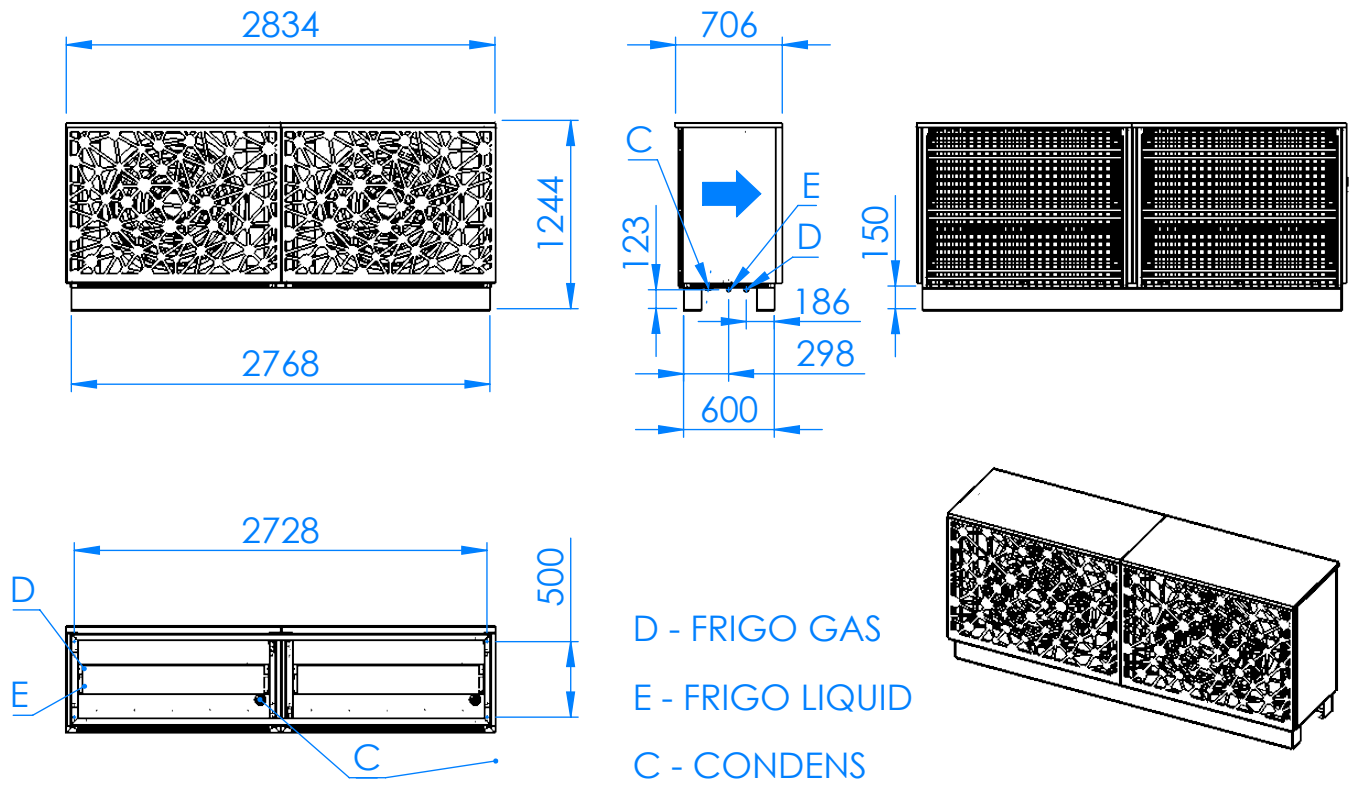
| Odstup [m] | 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Zvuk - tlak Lp [dB(A)] | 71.1 | 57.1 | 51.1 | 47.6 | 74.1 | 60.1 | 54.1 | 50.6 | 68.1 | 54.1 | 48.1 | 44.6 |

EC Fan 800mm



| | U | f | n | qv | P _{sF} | P _e | I | L _{WA out} | T _{a max} |
|----|-----|------|-------|--------|-----------------|----------------|------|---------------------|--------------------|
| | [V] | [Hz] | [RPM] | [m³/h] | [Pa] | [W] | [A] | [dB (A)] | [°C] |
| 1 | 400 | 50 | 735 | 17770 | 0 | 503 | 0,85 | 70 | 60 |
| 2 | 400 | 50 | 735 | 15850 | 40 | 612 | 1,02 | 66 | 60 |
| 3 | 400 | 50 | 735 | 12730 | 80 | 735 | 1,18 | 65 | 60 |
| 4 | 400 | 50 | 735 | 10400 | 100 | 802 | 1,36 | 68 | 60 |
| 5 | 400 | 50 | 650 | 15700 | 0 | 348 | 0,68 | 67 | 60 |
| 6 | 400 | 50 | 650 | 14000 | 30 | 421 | 0,80 | 63 | 60 |
| 7 | 400 | 50 | 650 | 11200 | 63 | 510 | 0,92 | 62 | 60 |
| 8 | 400 | 50 | 650 | 9200 | 78 | 554 | 0,93 | 65 | 60 |
| 9 | 400 | 50 | 525 | 12700 | 0 | 183 | 0,38 | 63 | 60 |
| 10 | 400 | 50 | 525 | 11350 | 20 | 225 | 0,35 | 59 | 60 |
| 11 | 400 | 50 | 525 | 9100 | 40 | 265 | 0,53 | 58 | 60 |
| 12 | 400 | 50 | 525 | 7400 | 51 | 292 | 0,57 | 61 | 60 |
| 13 | 400 | 50 | 400 | 9700 | 0 | 81 | 0,21 | 57 | 60 |
| 14 | 400 | 50 | 400 | 8700 | 11 | 97 | 0,24 | 53 | 60 |
| 15 | 400 | 50 | 400 | 7000 | 23 | 117 | 0,27 | 52 | 60 |
| 16 | 400 | 50 | 400 | 5700 | 29 | 128 | 0,28 | 55 | 60 |

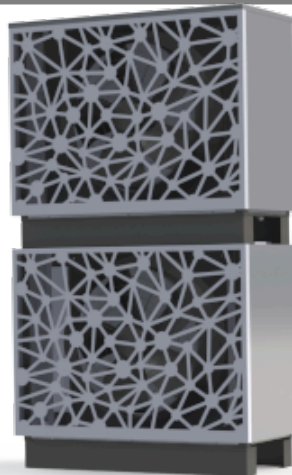
WAMAK AW 400 EVI HeavyDuty 2L4



WAMAK AW 400 EVI HeavyDuty 2L4 - Variant Split jednotky: VOII-1200-2HIGH

Potrebný počet jednotiek

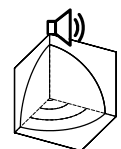
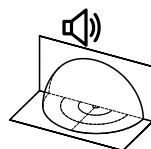
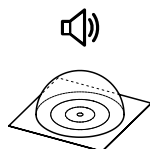
8



| Označenie krytovania: VOII-1200-2HIGH | | | Výparník | |
|---------------------------------------|------------|------|--|-----------------------|
| Kód výrobku | WAVII12H | | Typ | Cu-coil /Al-fin " |
| Základné rozmery | Výška [mm] | 2450 | Pripojovacia dimenzia | 8 x (7/8" - 1.3/8") " |
| | Šírka [mm] | 1420 | Teplonosné médium | Vzduch |
| | Dĺžka [mm] | 710 | Objemový prietok - Vzduch [m3/h] | 15073 ~ 120580 |
| Váha zariadenia [kg] | 300 | | Vnútorná tlaková strata - Vzduch [kPa] | 8 x 0.061 |
| Farba krytovania | Sivá | | Teplotný spád - Vzduch | 7 K |
| IP trieda krytovania | IP44 | | Expanzný ventil | EEV |
| Ventilátor | 800 mm | | | |
| Počet ventilátorov | 2 | | Pozícia ventilátora | Horizontálna os |
| Typ motora ventilátora | EC | | Typ ventilátora | Axial |
| Nominálny prúd ventilátora [A] | 1.35 | | Napájanie ventilátora [V/Hz] | 3~ 400/50 |
| Minimálny príkon ventilátora [Watt] | 81 | | Maximálny príkon ventilátora [Watt] | 802 |

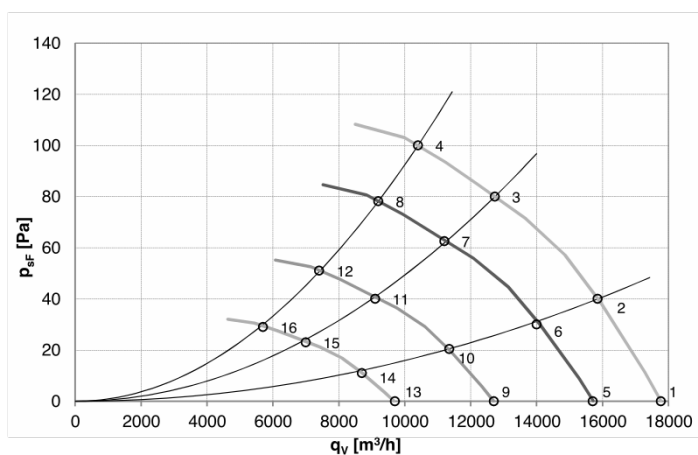
Zvuk - výkon Lw

76.1 dB(A)



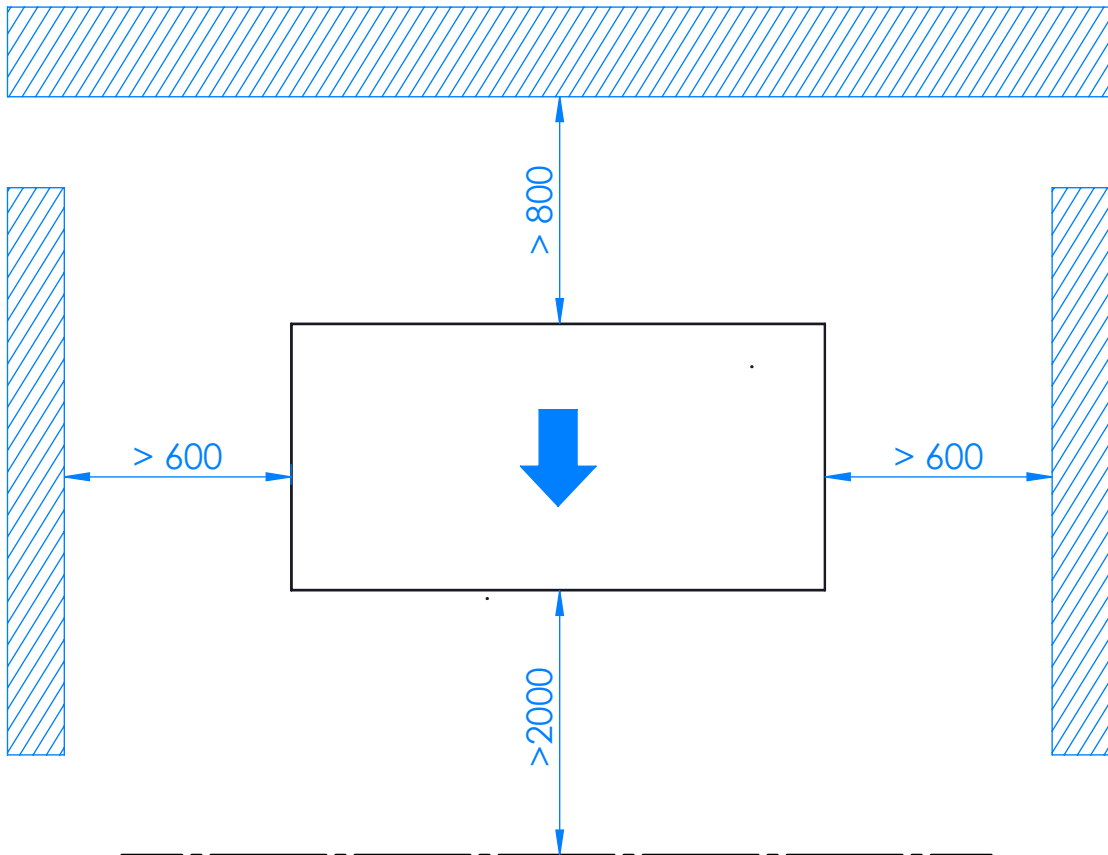
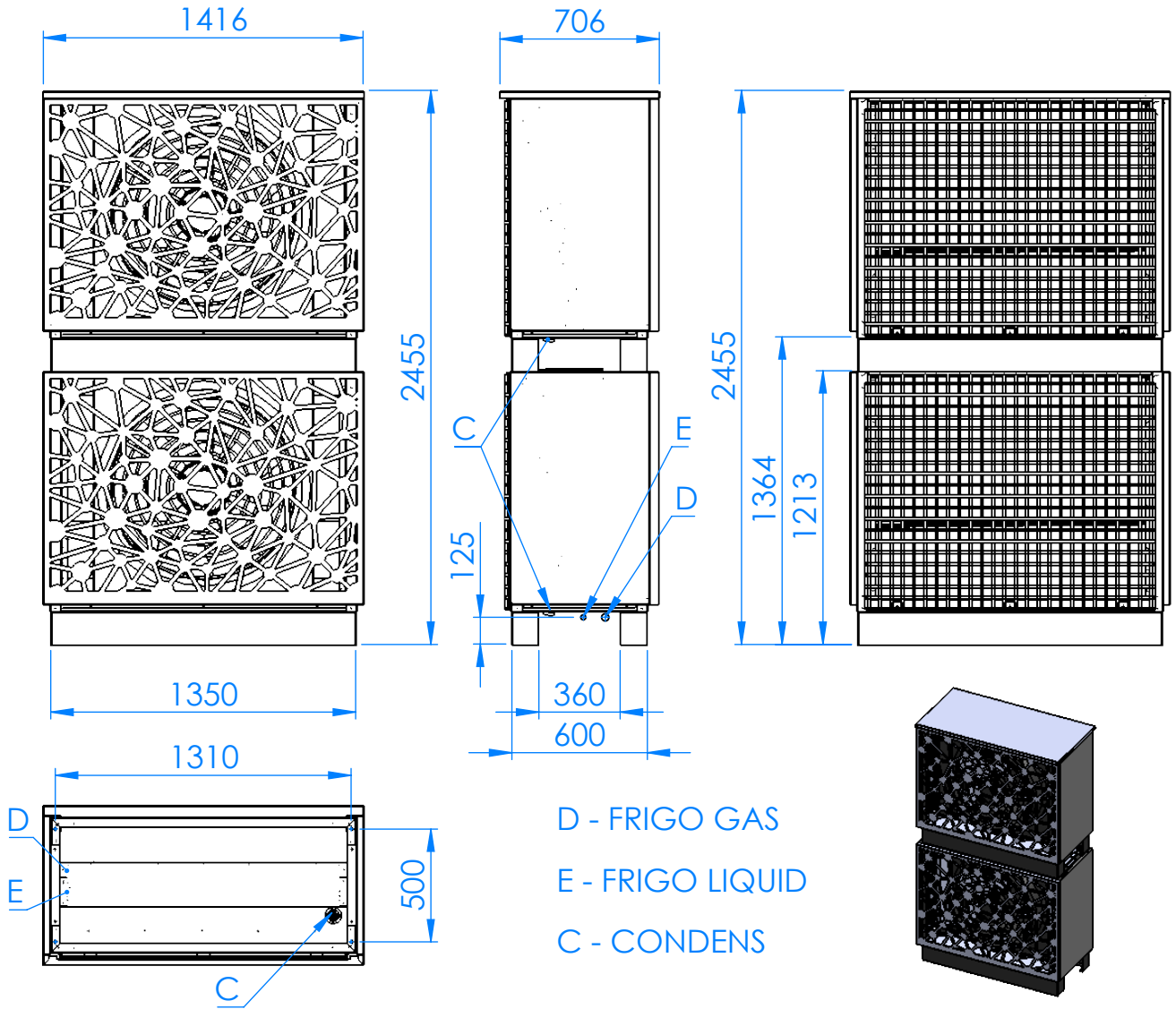
| Odstup [m] | 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Zvuk - tlak Lp [dB(A)] | 71.1 | 57.1 | 51.1 | 47.6 | 74.1 | 60.1 | 54.1 | 50.6 | 68.1 | 54.1 | 48.1 | 44.6 |

EC Fan 800mm



| | U | f | n | q _v | P _{sF} | P _e | I | L _{WA out} | T _{a max} |
|----|-----|------|-------|----------------|-----------------|----------------|------|---------------------|--------------------|
| | [V] | [Hz] | [RPM] | [m³/h] | [Pa] | [W] | [A] | [dB (A)] | [°C] |
| 1 | 400 | 50 | 735 | 17770 | 0 | 503 | 0,85 | 70 | 60 |
| 2 | 400 | 50 | 735 | 15850 | 40 | 612 | 1,02 | 66 | 60 |
| 3 | 400 | 50 | 735 | 12730 | 80 | 735 | 1,18 | 65 | 60 |
| 4 | 400 | 50 | 735 | 10400 | 100 | 802 | 1,36 | 68 | 60 |
| 5 | 400 | 50 | 650 | 15700 | 0 | 348 | 0,68 | 67 | 60 |
| 6 | 400 | 50 | 650 | 14000 | 30 | 421 | 0,80 | 63 | 60 |
| 7 | 400 | 50 | 650 | 11200 | 63 | 510 | 0,92 | 62 | 60 |
| 8 | 400 | 50 | 650 | 9200 | 78 | 554 | 0,93 | 65 | 60 |
| 9 | 400 | 50 | 525 | 12700 | 0 | 183 | 0,38 | 63 | 60 |
| 10 | 400 | 50 | 525 | 11350 | 20 | 225 | 0,35 | 59 | 60 |
| 11 | 400 | 50 | 525 | 9100 | 40 | 265 | 0,53 | 58 | 60 |
| 12 | 400 | 50 | 525 | 7400 | 51 | 292 | 0,57 | 61 | 60 |
| 13 | 400 | 50 | 400 | 9700 | 0 | 81 | 0,21 | 57 | 60 |
| 14 | 400 | 50 | 400 | 8700 | 11 | 97 | 0,24 | 53 | 60 |
| 15 | 400 | 50 | 400 | 7000 | 23 | 117 | 0,27 | 52 | 60 |
| 16 | 400 | 50 | 400 | 5700 | 29 | 128 | 0,28 | 55 | 60 |

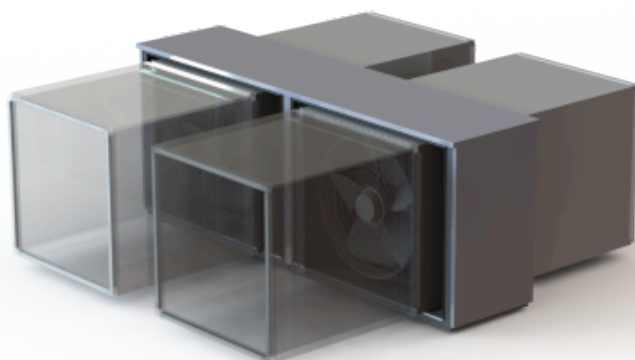
WAMAK AW 400 EVI HeavyDuty 2L4



WAMAK AW 400 EVI HeavyDuty 2L4 - Variant Split jednotky: VOII-1200-2LOW-DUCT

Potrebný počet jednotiek

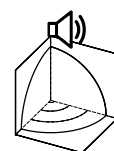
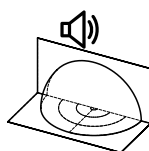
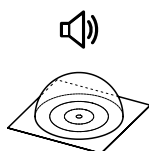
8



| Označenie krytovania: VOII-1200-2LOW-DUCT | | | Výparník | |
|---|------------|------|--|-----------------------|
| Kód výrobku | WAVID12L | | Typ | Cu-coil /Al-fin " |
| Základné rozmery | Výška [mm] | 1240 | Pripojovacia dimenzia | 8 x (7/8" - 1.3/8") " |
| | Šírka [mm] | 2850 | Teplonosné médium | Vzduch |
| | Dĺžka [mm] | 710 | Objemový prietok - Vzduch [m3/h] | 15073 ~ 120580 |
| Váha zariadenia [kg] | 300 | | Vnútorná tlaková strata - Vzduch [kPa] | 8 x 0.061 |
| Farba krytovania | Sivá | | Teplotný spád - Vzduch | 7 K |
| IP trieda krytovania | IP44 | | Expanzný ventil | EEV |
| Ventilátor | 800 mm | | | |
| Počet ventilátorov | 2 | | Pozícia ventilátora | Horizontálna os |
| Typ motora ventilátora | EC | | Typ ventilátora | Axial |
| Nominálny prúd ventilátora [A] | 1.35 | | Napájanie ventilátora [V/Hz] | 3~ 400/50 |
| Minimálny príkon ventilátora [Watt] | 81 | | Maximálny príkon ventilátora [Watt] | 802 |

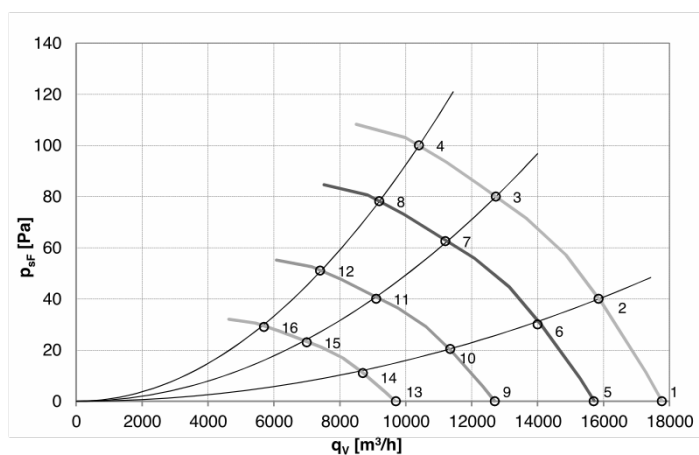
Zvuk - výkon Lw

76.1 dB(A)



| Odstup [m] | 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Zvuk - tlak Lp [dB(A)] | 71.1 | 57.1 | 51.1 | 47.6 | 74.1 | 60.1 | 54.1 | 50.6 | 68.1 | 54.1 | 48.1 | 44.6 |

EC Fan 800mm

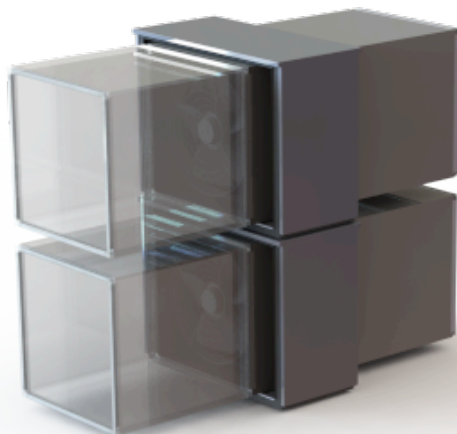


| | U [V] | f [Hz] | n [RPM] | qv [m³/h] | P _{sF} [Pa] | P _e [W] | I [A] | L _{WA out} [dB (A)] | T _{a max} [°C] |
|----|-------|--------|---------|-----------|----------------------|--------------------|-------|------------------------------|-------------------------|
| 1 | 400 | 50 | 735 | 17770 | 0 | 503 | 0,85 | 70 | 60 |
| 2 | 400 | 50 | 735 | 15850 | 40 | 612 | 1,02 | 66 | 60 |
| 3 | 400 | 50 | 735 | 12730 | 80 | 735 | 1,18 | 65 | 60 |
| 4 | 400 | 50 | 735 | 10400 | 100 | 802 | 1,36 | 68 | 60 |
| 5 | 400 | 50 | 650 | 15700 | 0 | 348 | 0,68 | 67 | 60 |
| 6 | 400 | 50 | 650 | 14000 | 30 | 421 | 0,80 | 63 | 60 |
| 7 | 400 | 50 | 650 | 11200 | 63 | 510 | 0,92 | 62 | 60 |
| 8 | 400 | 50 | 650 | 9200 | 78 | 554 | 0,93 | 65 | 60 |
| 9 | 400 | 50 | 525 | 12700 | 0 | 183 | 0,38 | 63 | 60 |
| 10 | 400 | 50 | 525 | 11350 | 20 | 225 | 0,35 | 59 | 60 |
| 11 | 400 | 50 | 525 | 9100 | 40 | 265 | 0,53 | 58 | 60 |
| 12 | 400 | 50 | 525 | 7400 | 51 | 292 | 0,57 | 61 | 60 |
| 13 | 400 | 50 | 400 | 9700 | 0 | 81 | 0,21 | 57 | 60 |
| 14 | 400 | 50 | 400 | 8700 | 11 | 97 | 0,24 | 53 | 60 |
| 15 | 400 | 50 | 400 | 7000 | 23 | 117 | 0,27 | 52 | 60 |
| 16 | 400 | 50 | 400 | 5700 | 29 | 128 | 0,28 | 55 | 60 |

WAMAK AW 400 EVI HeavyDuty 2L4 - Variant Split jednotky: VOII-1200-2HIGH-DUCT

Potrebný počet jednotiek

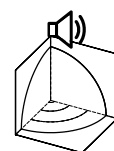
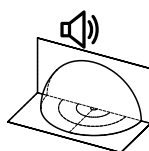
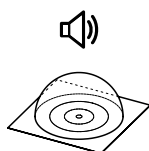
8



| Označenie krytovania: VOII-1200-2HIGH-DUCT | | | Výparník | |
|--|------------|------|--|-----------------------|
| Kód výrobku | WAVID12H | | Typ | Cu-coil /Al-fin " |
| Základné rozmery | Výška [mm] | 2450 | Pripojovacia dimenzia | 8 x (7/8" - 1.3/8") " |
| | Šírka [mm] | 1420 | Teplonosné médium | Vzduch |
| | Dĺžka [mm] | 710 | Objemový prietok - Vzduch [m3/h] | 15073 ~ 120580 |
| Váha zariadenia [kg] | 300 | | Vnútorná tlaková strata - Vzduch [kPa] | 8 x 0.061 |
| Farba krytovania | Sivá | | Teplotný spád - Vzduch | 7 K |
| IP trieda krytovania | IP44 | | Expanzný ventil | EEV |
| Ventilátor | 800 mm | | | |
| Počet ventilátorov | 2 | | Pozícia ventilátora | Horizontálna os |
| Typ motora ventilátora | EC | | Typ ventilátora | Axial |
| Nominálny prúd ventilátora [A] | 1.35 | | Napájanie ventilátora [V/Hz] | 3~ 400/50 |
| Minimálny príkon ventilátora [Watt] | 81 | | Maximálny príkon ventilátora [Watt] | 802 |

Zvuk - výkon Lw

76.1 dB(A)

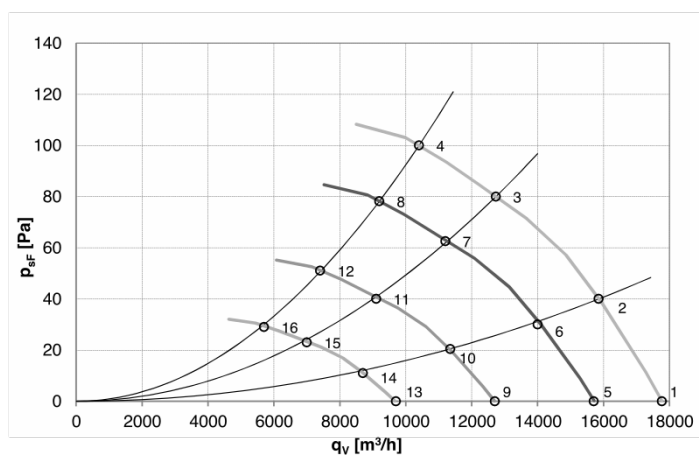


Odstup [m]

Zvuk - tlak Lp [dB(A)]

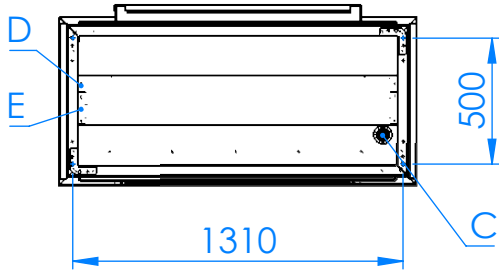
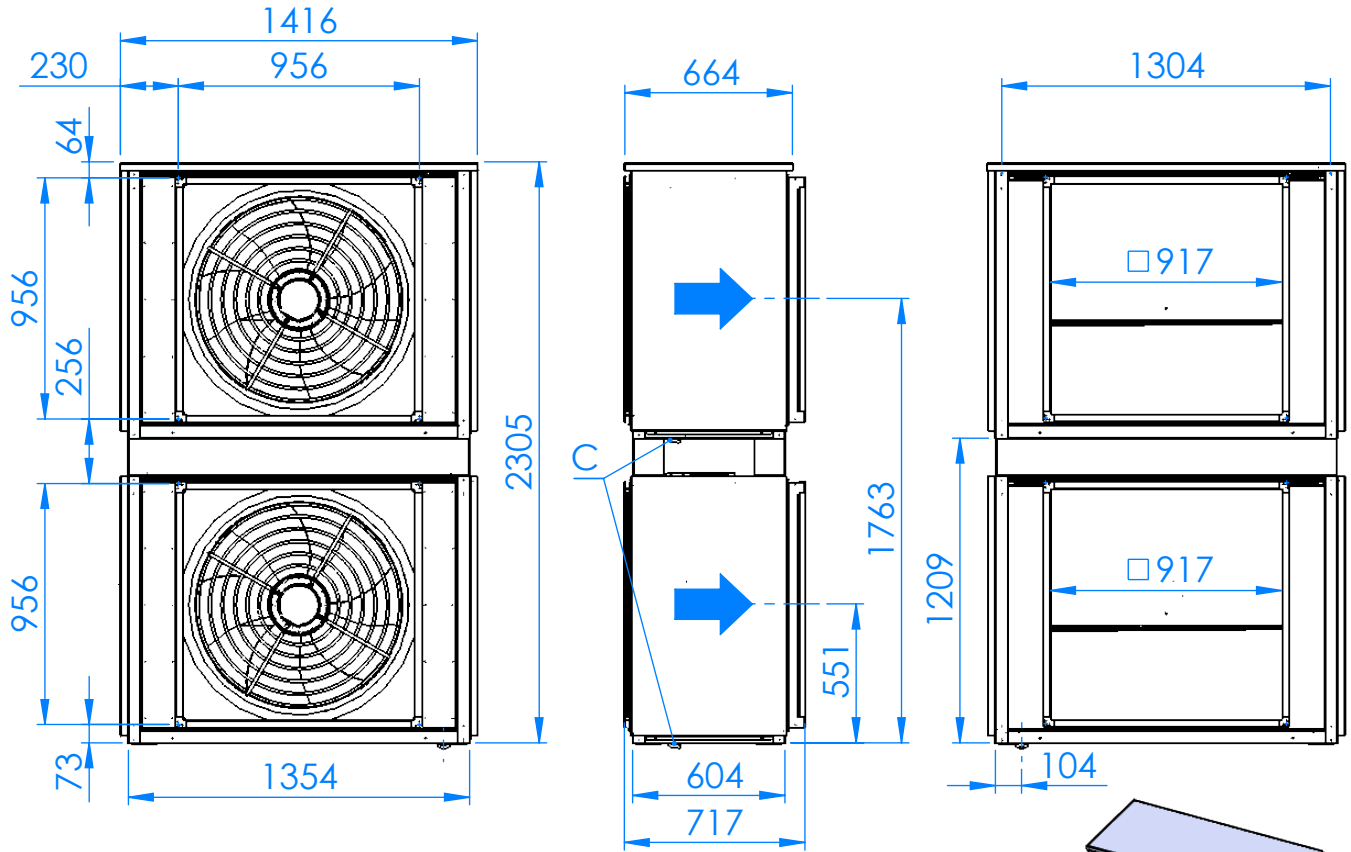
| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 | 1 | 5 | 10 | 15 |
| 71.1 | 57.1 | 51.1 | 47.6 | 74.1 | 60.1 | 54.1 | 50.6 | 68.1 | 54.1 | 48.1 | 44.6 |

EC Fan 800mm

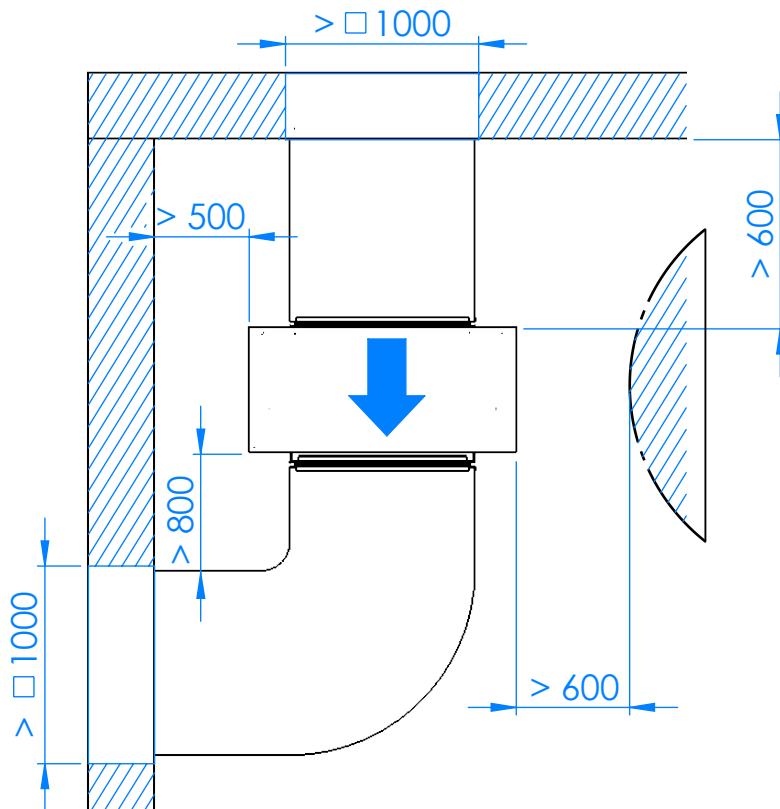
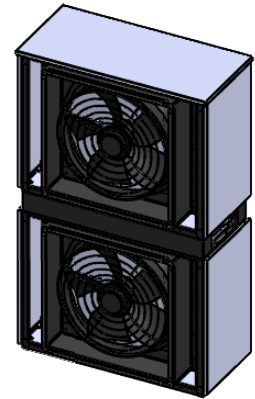


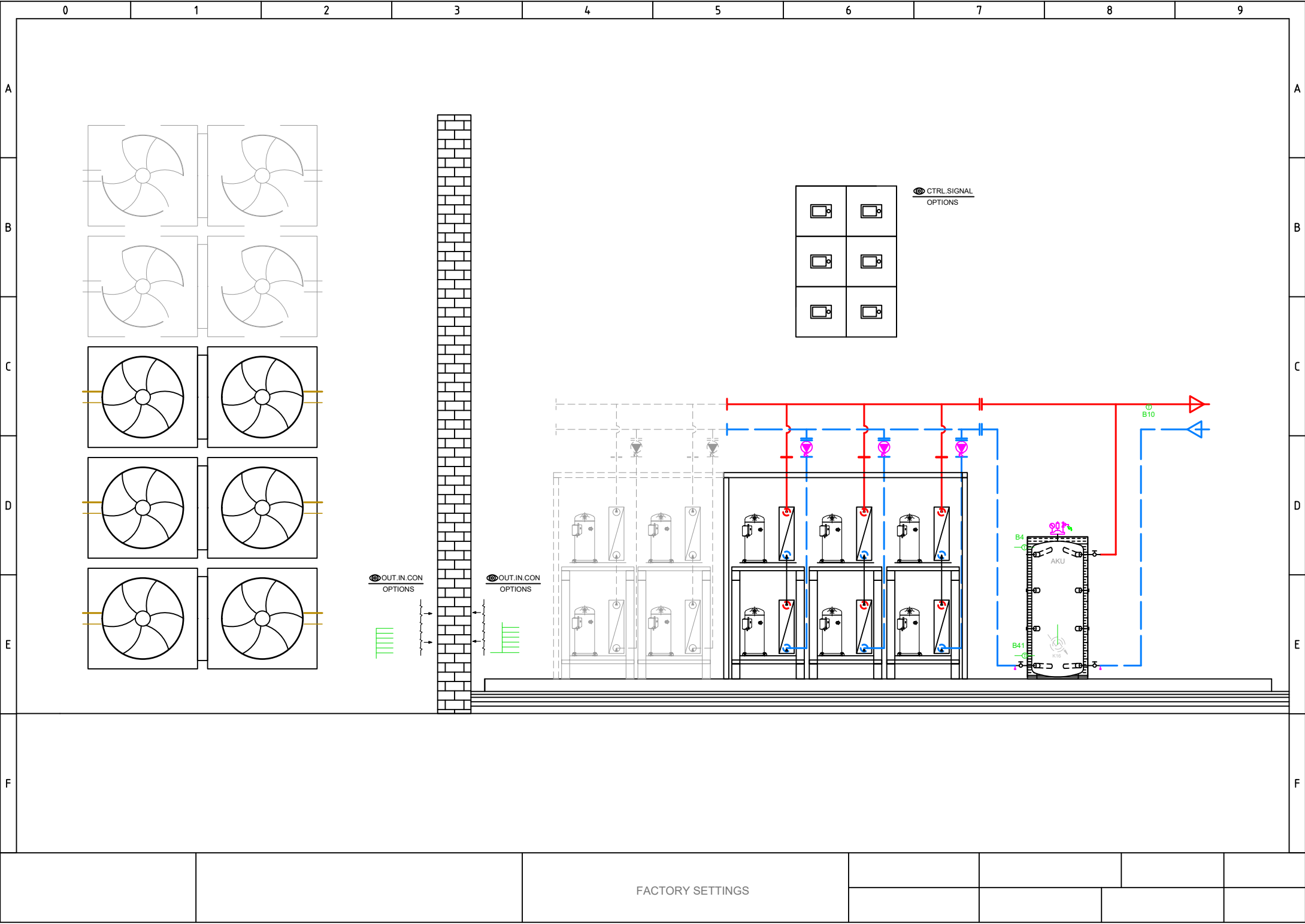
| | U | f | n | qv | P _{sF} | P _e | I | L _{WA out} | T _{a max} |
|----|-----|------|-------|--------|-----------------|----------------|------|---------------------|--------------------|
| | [V] | [Hz] | [RPM] | [m³/h] | [Pa] | [W] | [A] | [dB (A)] | [°C] |
| 1 | 400 | 50 | 735 | 17770 | 0 | 503 | 0,85 | 70 | 60 |
| 2 | 400 | 50 | 735 | 15850 | 40 | 612 | 1,02 | 66 | 60 |
| 3 | 400 | 50 | 735 | 12730 | 80 | 735 | 1,18 | 65 | 60 |
| 4 | 400 | 50 | 735 | 10400 | 100 | 802 | 1,36 | 68 | 60 |
| 5 | 400 | 50 | 650 | 15700 | 0 | 348 | 0,68 | 67 | 60 |
| 6 | 400 | 50 | 650 | 14000 | 30 | 421 | 0,80 | 63 | 60 |
| 7 | 400 | 50 | 650 | 11200 | 63 | 510 | 0,92 | 62 | 60 |
| 8 | 400 | 50 | 650 | 9200 | 78 | 554 | 0,93 | 65 | 60 |
| 9 | 400 | 50 | 525 | 12700 | 0 | 183 | 0,38 | 63 | 60 |
| 10 | 400 | 50 | 525 | 11350 | 20 | 225 | 0,35 | 59 | 60 |
| 11 | 400 | 50 | 525 | 9100 | 40 | 265 | 0,53 | 58 | 60 |
| 12 | 400 | 50 | 525 | 7400 | 51 | 292 | 0,57 | 61 | 60 |
| 13 | 400 | 50 | 400 | 9700 | 0 | 81 | 0,21 | 57 | 60 |
| 14 | 400 | 50 | 400 | 8700 | 11 | 97 | 0,24 | 53 | 60 |
| 15 | 400 | 50 | 400 | 7000 | 23 | 117 | 0,27 | 52 | 60 |
| 16 | 400 | 50 | 400 | 5700 | 29 | 128 | 0,28 | 55 | 60 |

WAMAK AW 400 EVI HeavyDuty 2L4



D - FRIGO GAS
 E - FRIGO LIQUID
 C - CONDENS





OUT.IN.CON
OPTIONS

OUT.IN.CON
OPTIONS

CTRL.SIGNAL
OPTIONS

FACTORY SETTINGS



Hlavné napájanie 230V / 50 Hz
 Uzemnenie
 Nulový vodič

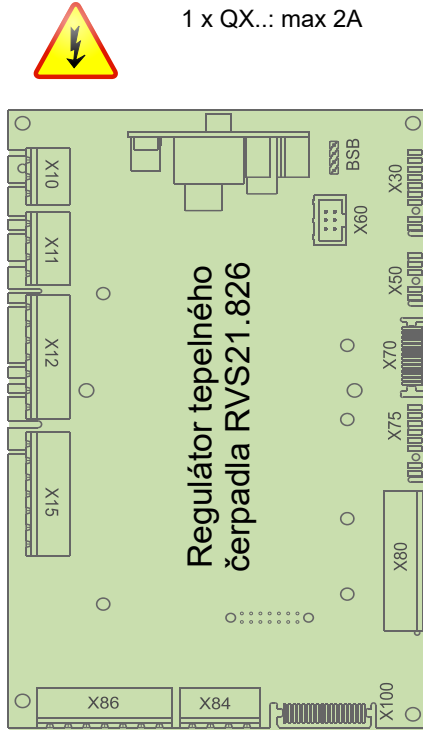
- E10 Spínač vysokého tlaku E10
- E11 Preťaženie kompresora E11
- E14 Preťaženie zdroja E14
- E24 Spínač prietoku spotreby E24
- K82 Ventil EVI K82

K40 Ohrev oleja K40

- L Fáza 230V
- K1 Kompresor I. stupeň K1
- Y22 Reverzný ventil Y22

Q9 Čerpadlo kondenzátora Q9

| | | |
|-----|---|------|
| X10 | 1 | L |
| X10 | 1 | PE |
| X10 | 1 | N |
| X11 | 1 | EX1 |
| X11 | 1 | EX2 |
| X11 | 1 | EX3 |
| X11 | 1 | EX4 |
| X12 | 1 | QX1 |
| X12 | 1 | N |
| X12 | 1 | QX2 |
| X12 | 1 | QX2i |
| X12 | 1 | N |
| X12 | 1 | FX3 |
| X15 | 1 | QX3 |
| X15 | 1 | QX4 |
| X15 | 1 | QX4i |
| X15 | 1 | N |
| X15 | 1 | QX5 |
| X15 | 1 | N |
| X15 | 1 | ZX6 |
| X15 | 1 | N |
| X86 | 1 | GX1 |
| X86 | 1 | H3 |
| X86 | 1 | M |
| X86 | 1 | H1 |
| X86 | 1 | G+ |
| X86 | 1 | M |
| X86 | 1 | BSB |



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

| |
|-----|
| BSB |
| X30 |
| X60 |
| X50 |
| X70 |

- Pripojenie Servicetool (OCI700)
- Obslužná jednotka
- Modbus clip-in OCI351.01
- Rozširovací modul AVS75.xxx
- LPB clip-in

| |
|-----|
| D1 |
| D2 |
| D3 |
| UX3 |
| M |
| DI6 |
| DI7 |
| M |

- D1 Digitálny výstup 1 kúrenia
- D2 Digitálny výstup 2 chladenia
- D3 Digitálny výstup 3 TČ Zap./Vyp.
- DI6 Digitálny vstup 6 odmrazenie
- DI7 Digitálny vstup 7 Alarm

| |
|-----|
| BX1 |
| M |
| BX2 |
| M |
| UX1 |
| M |
| UX2 |
| M |

- B91 Snímač vstupu zdroja B91
- B84 Snímač výstupu zdroja B92/B84
- K19 Ventilátor K19
- 0..10V analógový signál
- Q9 Čerpadlo kondenzátora Q9
- PWM Signal

| |
|-----|
| BX3 |
| M |
| BX4 |
| M |

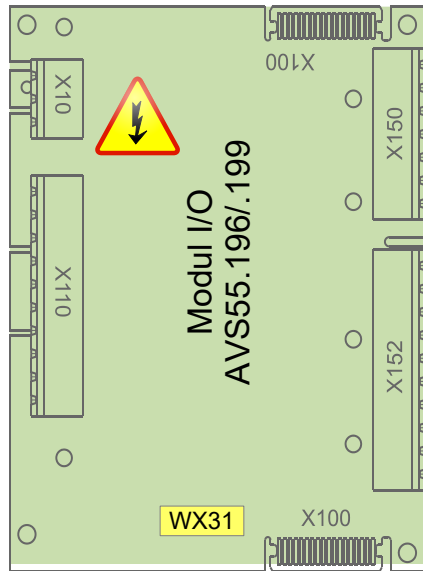
- B71 Snímač teploty spiatocky TČ B71
- B9 Snímač vonkajšej teploty B9

Hlavné napájanie 230V / 50 Hz
 Uzemnenie
 Nulový vodič

K10 Alarmový výstup K10

V81 EEV výparníka V81

| | | |
|------|---|-------|
| X10 | 1 | L |
| X10 | 1 | PE |
| X10 | 1 | N |
| X110 | 1 | QX31 |
| X110 | 1 | QX32 |
| X110 | 1 | N |
| X110 | 1 | QX33 |
| X110 | 1 | N |
| X110 | 1 | ZX34 |
| X110 | 1 | N |
| X115 | 1 | QX35 |
| X115 | 1 | QX35i |
| X115 | 1 | N |

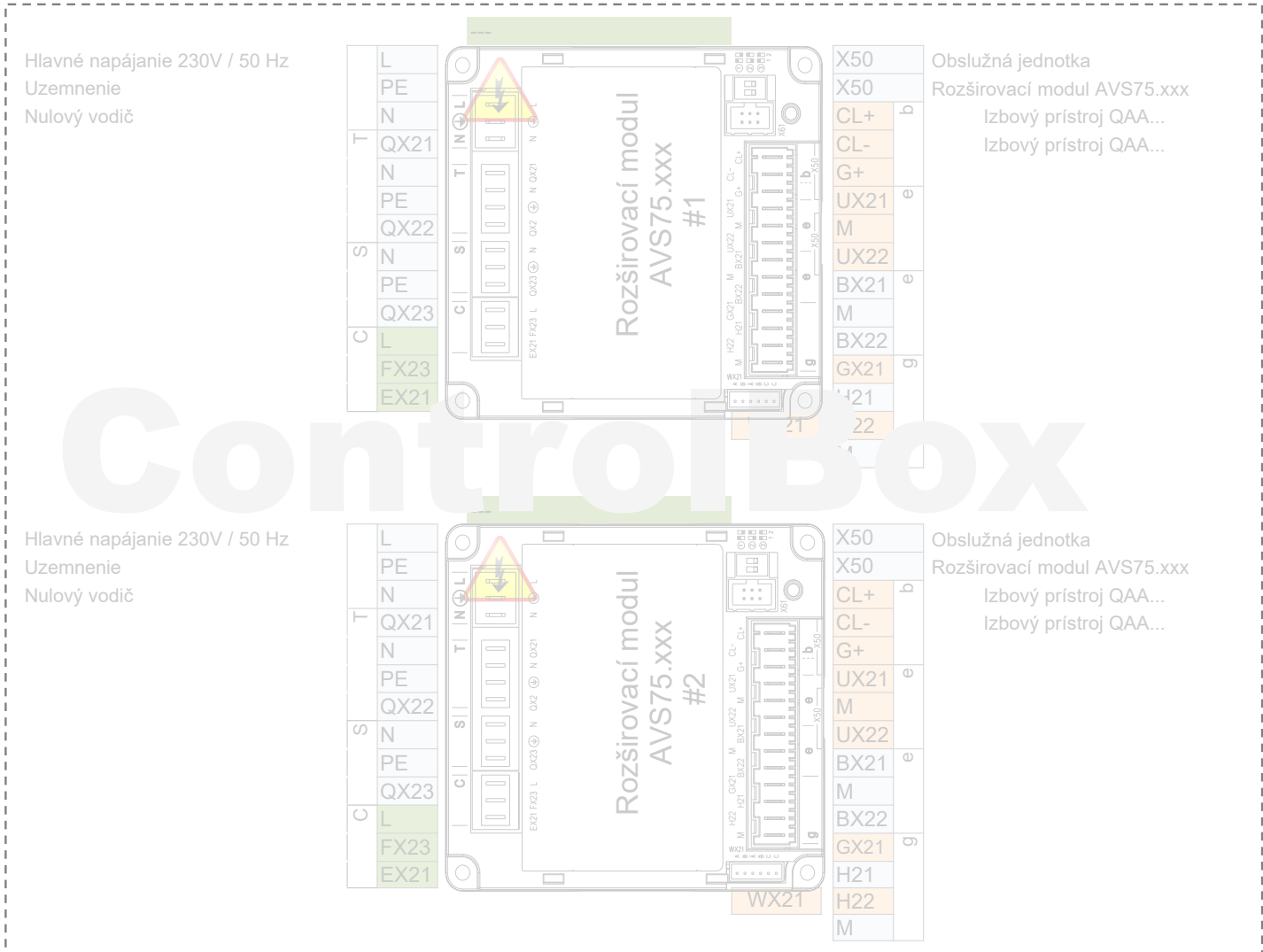


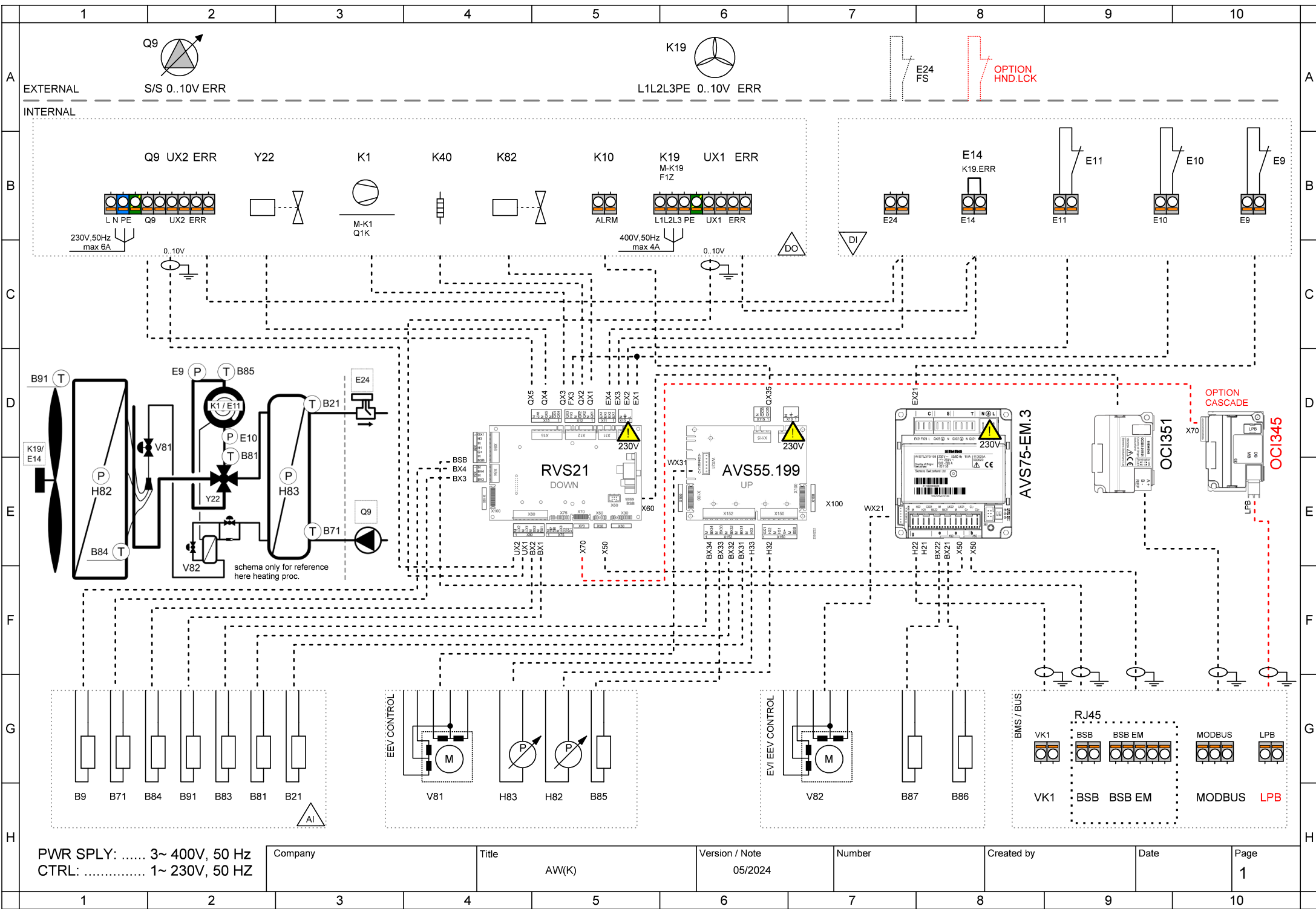
| |
|------|
| BSB |
| M |
| G+ |
| H31 |
| M |
| H32 |
| GX1 |
| H33 |
| M |
| BX31 |
| M |
| BX32 |
| M |
| BX33 |
| M |
| BX34 |
| M |

- 5V/12V aktívne snímače
- Meranie prietoku 10V
- Nízky tlak 0..10V
- 5V/12V aktívne snímače
- Vysoký tlak 0..10V
- B21 Snímač teploty výstupu TČ B21
- B81 Snímač horúcich plynov B81
- B85 Snímač plynov sania B85
- B83 Snímač chladiaceho média B83



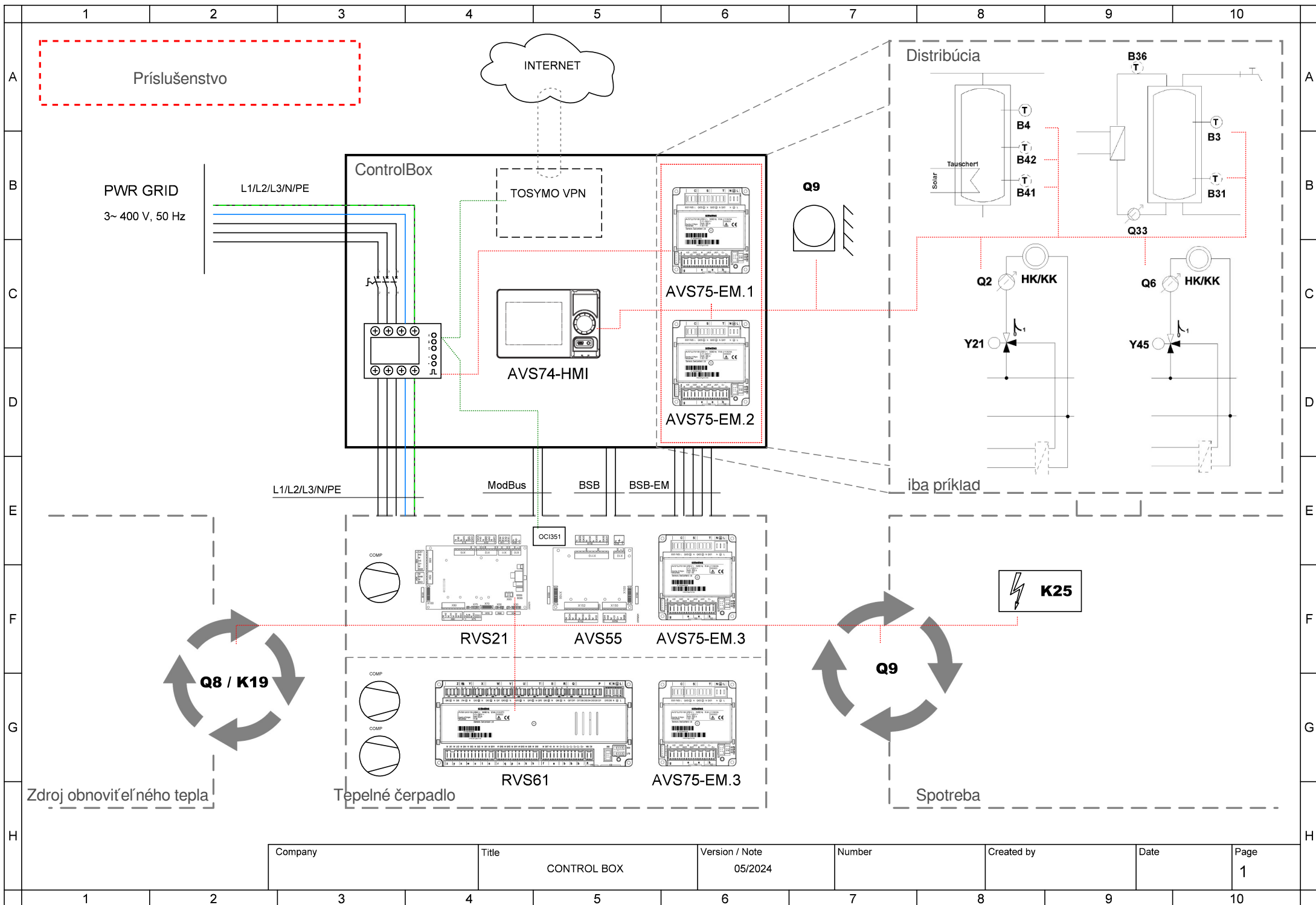
- AVS75.390
- AVS75.391
- AVS75.370



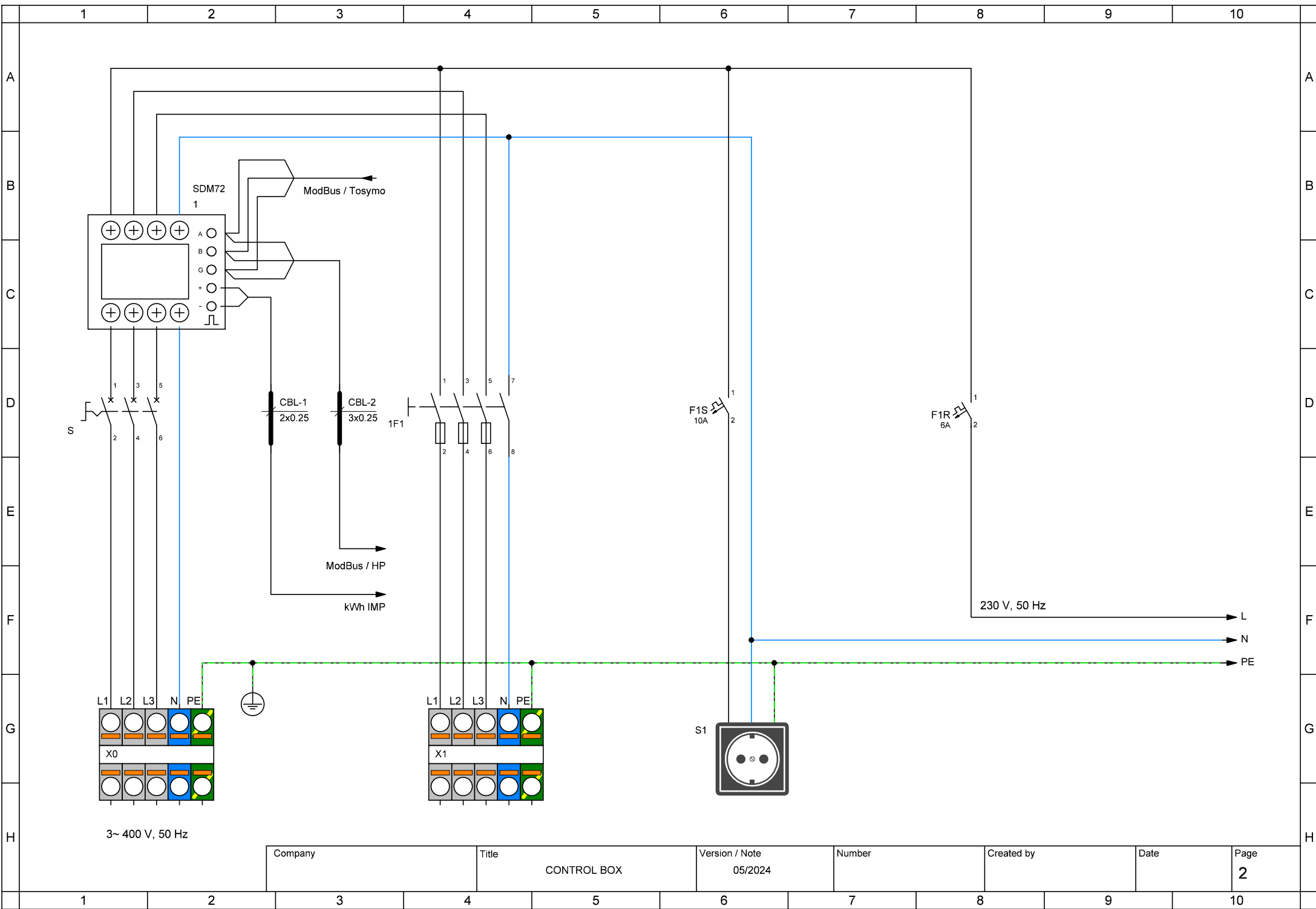


PWR SPLY: 3~ 400V, 50 Hz
 CTRL: 1~ 230V, 50 HZ

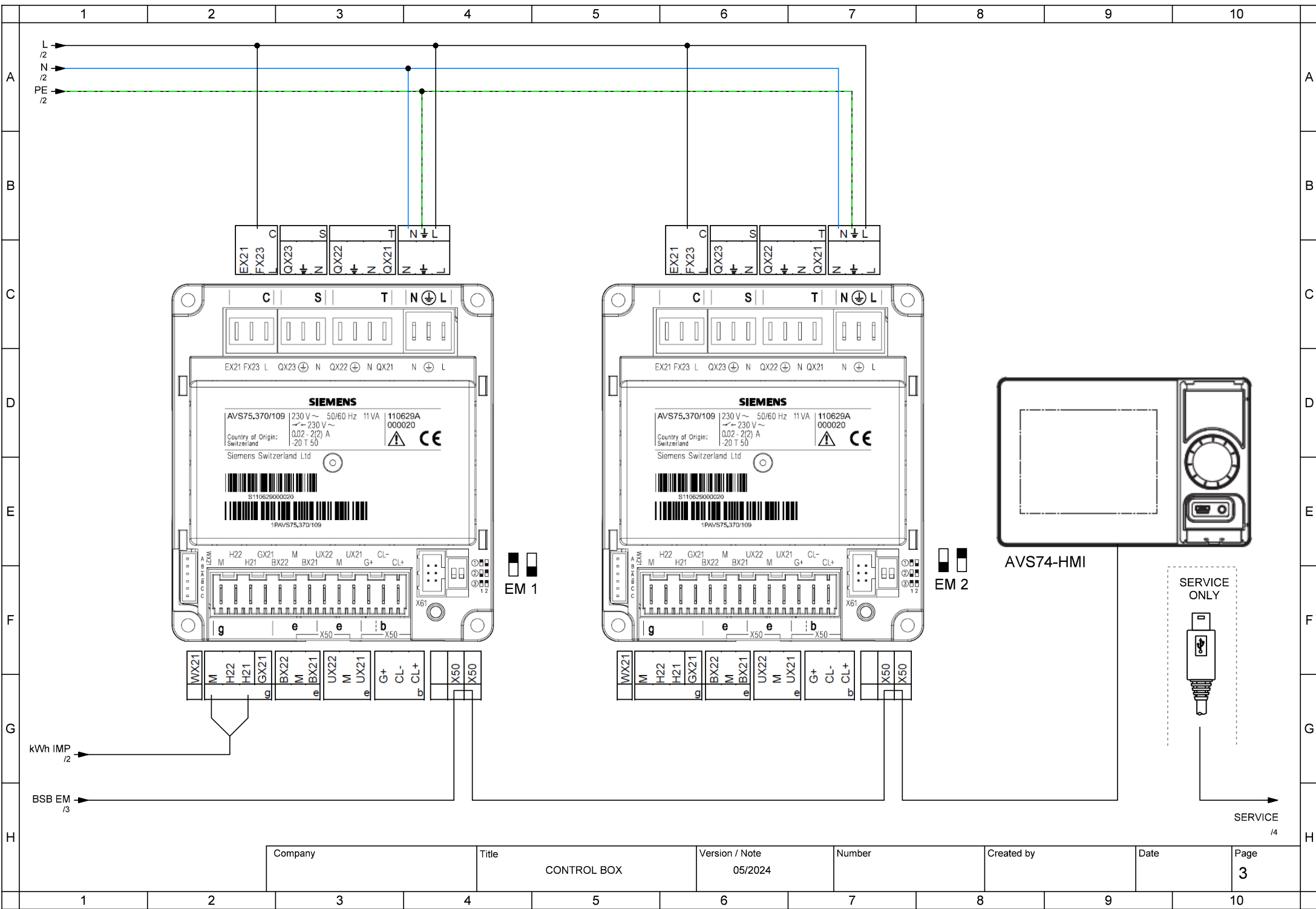
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| Company | Title | Version / Note | Number | Created by | Date | Page |
| | AW(K) | 05/2024 | | | | 1 |



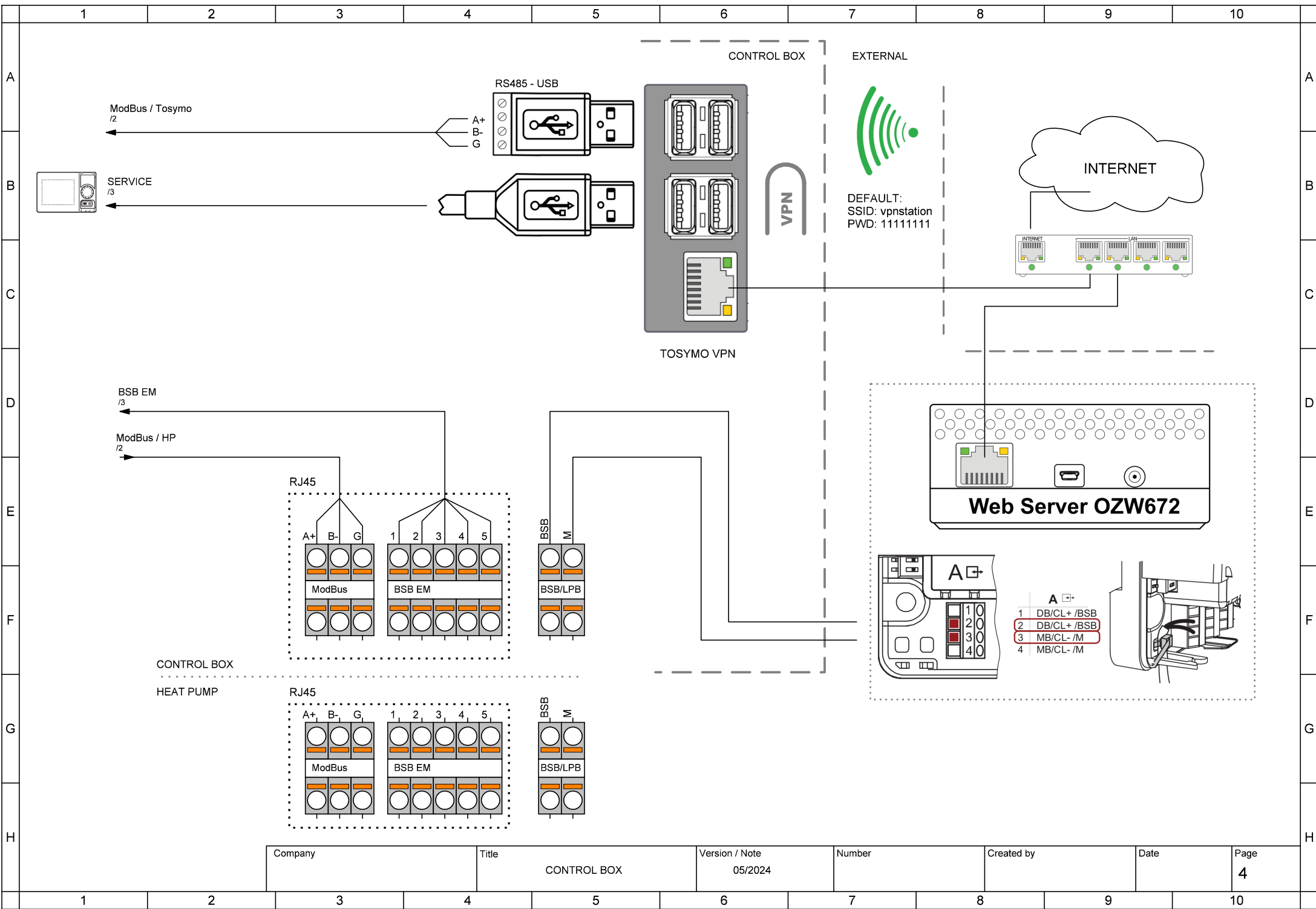
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| | CONTROL BOX | 05/2024 | | | | 1 |



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| | CONTROL BOX | 05/2024 | | | | 3 |



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



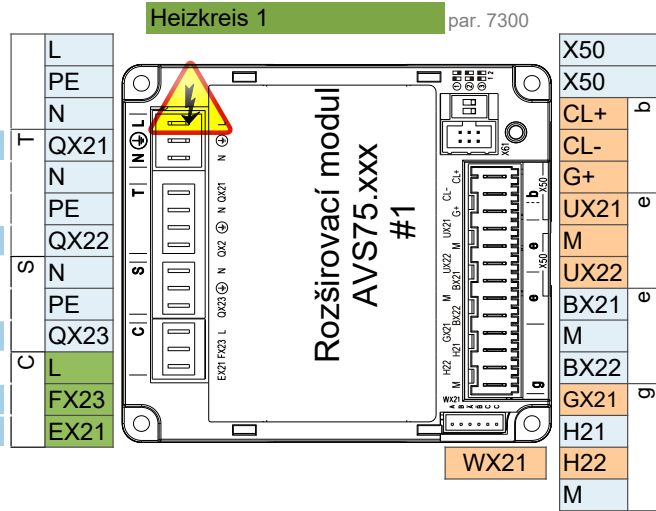
- AVS75.390
- AVS75.391
- AVS75.370

- AVS75.370**
 Hlavné napájanie 230V / 50 Hz
 Uzemnenie
 Nulový vodič
Y1 Zmiešavací ventil otváranie

Y2 Zmiešavací ventil zatváranie

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

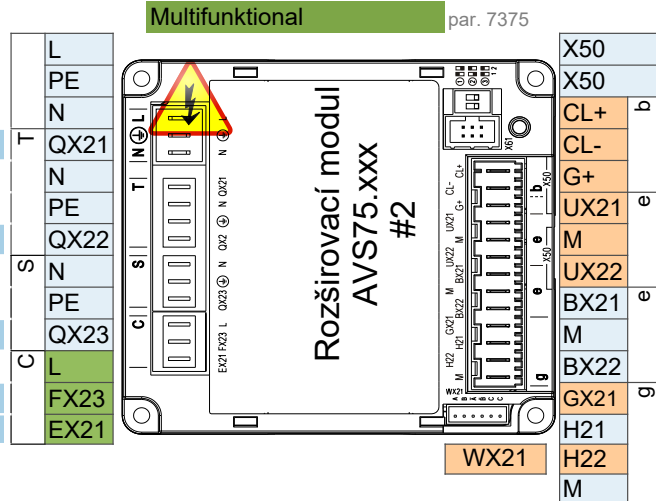
Čítanie pulzov

- 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

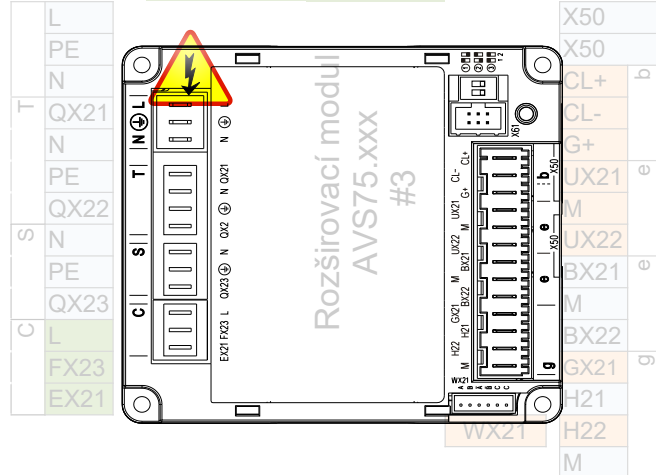


- Obslužná jednotka**
Rozšiřovací modul AVS75.xxx
 Izbový prístroj QAA...
 Izbový prístroj QAA...

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