

# Rittal – The System.

Faster – better – everywhere.

## UL Type 12/3R/4 Cooling unit



3303.5x8  
3304.5x8  
3305.5x8  
3329.5x8

## Assembly and operating instructions

ENCLOSURES

POWER DISTRIBUTION

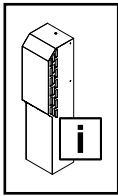
CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP





## Warn- und Sicherheitshinweise Safety instructions and warnings Consignes de sécurité



### DE Sicherheitshinweise

- Die Anschlussvorschriften des zuständigen Stromversorgungsunternehmens sind zu beachten. Der Schutzleiter, der Haube und Chassis verbindet, muss in jedem Fall an beiden Steckern angeschlossen werden. Ansonsten besteht bei einem fehlerhaftem oder defektem Anschluss des Geräts Verletzungsgefahr durch Stromschlag.
- Bitte beachten Sie die maximal zulässigen Hebegewichte für Personen. Ggf. ist eine Hebevorrichtung zu verwenden.
- Während der Montage besteht die Gefahr, dass das Kühlgerät aus dem Montageausbruch herunterfällt.
- Alle Lüftungsöffnungen des Kühlgeräts müssen nach der Montage frei zugänglich sind und dürfen nicht versperrt werden.
- Die Montage der Dichtung aus dem Lieferumfang muss zur Abdichtung der Grenzfläche von Kühlgerät und Schaltschrank gemäß der vorliegenden Anleitung erfolgen, um eine sichere Abdichtung gegen von außen eindringendes Wasser zu erzielen.
- Die Bohrungen auf der Rückseite des Geräts dürfen ausschließlich zur Montage des IoT Interface mit den diesem Gerät beiliegenden Schrauben verwendet werden. Durch die Verwendung anderer, längerer Schrauben besteht die Gefahr der Unterschreitung von Luft- und Kriechstreifen bzw. eines elektrischen Schlags.
- Stellen Sie sicher, dass das Kühlgerät nur in einem trockenen Zustand und in einer trockenen Umgebung montiert wird.
- Vor dem Abnehmen der Haube muss das Gerät mind. 10 Min. abkühlen, um Verbrennungen an heißen Oberflächen zu vermeiden.
- Das Kühlgerät ist nur standsicher, solange Haube und Chassis miteinander verbunden sind. Sichern Sie daher insbesondere das Chassis gegen Umfallen, bevor Sie die Haube abnehmen.
- Das Anschlusskabel darf nicht zu weit abisoliert werden, da ansonsten ggf. die zulässigen Luft-/Kriechstrecken zum Anfasspunkt der Klemme unterschritten werden.
- Tragen Sie bei allen Arbeiten am Gerät die notwendige persönliche Schutzausrüstung.
- Verwenden Sie niemals brennbare Flüssigkeiten zur Reinigung des Geräts.
- Wird das Gerät im montierten Zustand transportiert, muss immer eine geeignete Stützkonstruktion verwendet werden.
- Die Produkte dürfen ausschließlich mit dem von Rittal vorgesehenen Systemzubehör kombiniert und betrieben werden.

### EN Safety instructions

- The connection regulations of the appropriate power supply company are to be followed. Otherwise, there is risk of injury from electric shock if the connection to the unit is defective or connected incorrectly in any way.
- Please observe the maximum permissible weight to be lifted by one person. Use suitable lifting devices, if needed.
- During assembly, the cooling unit is at risk of dropping through the mounting cut-out.
- All ventilation openings of the cooling unit must be freely accessible after assembly and must not be blocked.
- To achieve a secure seal against water ingress from outside, the gasket included in the scope of supply must be fitted to seal the interface between the cooling unit and the enclosure in accordance with these instructions.
- The drill holes on the unit rear may be used only for assembling the IoT interface with the screws supplied with this unit. If longer screws are used, there is a risk of undershooting the clearance and creepage distances or electric shock.
- Do not assemble and re-activate the device until it is completely dry.
- Before removing the hood, allow the unit to cool for at least 10 minutes to eliminate the risk of burns from hot surfaces.
- The cooling unit only stands safely while the hood and chassis are joined to each other. Ensure that the frame, in particular, is secured against tipping before removing the hood.
- Do not strip too much insulation from the connection cable, otherwise the admissible clearance/creepage distances from the terminal point may not be met.
- Always wear the required personal safety equipment when working on this unit.
- Never use flammable liquids for cleaning.

- If transporting the unit in an assembled state, always use a suitable supportive structure.
- The products should only be combined and operated with the prescribed Rittal system accessories.

### FR Consignes de sécurité

- Respecter les directives de raccordement du fournisseur d'électricité compétent. La tresse de mise à la masse qui relie le capot au châssis doit dans tous les cas être raccordée aux deux fiches. Sinon il y a risque de blessure par électrocution en cas de raccordement erroné ou défectueux de l'appareil.
- Veillez tenir compte du poids de levage maximal autorisé pour les personnes et le cas échéant utilisez un appareil de levage.
- Lors de l'installation, le climatiseur risque de tomber de sa découpe de montage.
- Toutes les ouvertures d'aération du climatiseur doivent être librement accessibles après le montage et ne doivent pas être obstruées.
- Pour assurer l'étanchéité entre le climatiseur et l'armoire électrique, le montage du joint inclus à la livraison doit être effectué conformément à la présente notice, afin d'obtenir une étanchéité fiable contre les infiltrations d'eau de l'extérieur.
- Les perçages à l'arrière de l'appareil doivent être utilisés exclusivement pour le montage de l'interface IoT à l'aide des vis fournies avec cet appareil. L'utilisation d'autres vis plus longues peut entraîner le risque de ne pas respecter les entrefer et lignes de fuite nécessaires ou un risque d'électrocution.
- S'assurer que le climatiseur soit monté lorsqu'il est sec et dans un environnement sec.
- Avant d'ôter le capot, l'appareil doit refroidir pendant au moins 10 minutes pour éviter les brûlures sur les surfaces brûlantes.
- Le climatiseur est stable uniquement si le capot et le châssis sont reliés entre eux. S'assurer pour cela que le châssis ne puisse pas tomber avant d'ôter le capot.
- Le câble de raccordement ne doit pas être trop dénudé, sinon les entrefer/lignes de fuite admissibles à partir du point de contact de la borne risquent de ne pas être respectés.
- Portez l'équipement de protection individuelle nécessaire pour toute intervention sur le climatiseur.
- Ne jamais utiliser de liquides inflammables pour le nettoyage.
- Si le climatiseur est transporté lorsqu'il est monté, il convient de toujours utiliser une structure de support appropriée.
- Les produits ne peuvent être associés et exploités qu'avec les accessoires dédiés fournis par Rittal.

### NL Veiligheidsvoorschriften

- Neem de aansluitvoorschriften van het desbetreffende energiebedrijf in acht. De aarddraad, die de kap en het chassis verbindt, dient in elk geval op beide connectoren te worden aangesloten. Anders bestaat bij een onjuiste of defecte aansluiting van het apparaat een risico op letsel door een elektrische schok.
- Neem het maximaal toegestane tilgewicht voor personen in acht. Gebruik eventueel een hefwerktuig.
- Tijdens de montage bestaat het gevaar dat het koelaggregaat uit de montageuitsparing valt.
- Na de montage moeten alle ventilatieopeningen van het koelaggregaat vrij toegankelijk zijn en niet worden geblokkeerd.
- De meegeleverde afdichting moet worden aangebracht om de grensvlakken tussen het koelaggregaat en de kast/behuizing overeenkomstig deze instructies af te dichten en zo een veilige afdichting tegen binnendringend water van buitenaf te realiseren.
- De bringingen aan de achterzijde van het koelaggregaat mogen uitsluitend worden gebruikt voor montage van de IoT-interface met de bij dit aggregaat meegeleverde schroeven. Door andere, langere schroeven te gebruiken bestaat het gevaar onder de lucht- en kruipwegen terecht te komen of een elektrische schok te krijgen.
- Zorg ervoor dat de koelunit alleen in droge toestand en in een droge omgeving wordt geïnstalleerd.
- Voor het afnemen van de kap dient het apparaat minstens tien minuten af te koelen, zodat u zich niet brandt aan hete oppervlakken.
- Het koelaggregaat is alleen stabiel zo lang kap en chassis met elkaar zijn verbonden. Zorg er daarom voor dat als u de kap verwijdert, het chassis niet kan omvallen.

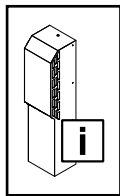
- De aansluitkabel mag niet te ver worden gestript, omdat anders de toelaatbare lucht- en kruipwegafstand vanaf het aansluitpunt niet in acht wordt genomen.
- Draag tijdens alle werkzaamheden aan het aggregaat de noodzakelijke persoonlijke beschermingsmiddelen.
- Gebruik geen brandbare vloeistoffen voor het reinigen.
- Wordt het aggregaat in gemonteerde toestand getransporteerd, dan moet er altijd een geschikte draagconstructie worden gebruikt.
- De producten mogen uitsluitend met de door Rittal aangegeven systeemtoebehoren worden gecombineerd en gebruikt.

### SE Säkerhetsinstruktioner

- Anslutningsföreskrifterna från det ansvariga elförsörjningsföretaget måste följas. Skyddsledarna som förbinder huven och chassit måste alltid vara anslutna till båda kontaktarna. Annars finns risk för skador genom strömstötter vid felaktigt eller defekt anslutning av aggregatet.
- Observera de maximalt tillåtna lyftvikterna för personer. Vid behov ska en lyftanordning användas.
- I samband med montage finns risk att kylaggregatet faller ner från montageöppningen.
- Alla ventilationsöppningar på kylaggregatet måste vara fria och får inte vara blockerade.
- Tätningen som ingår i leveransen ska monteras så att den tätar anslutningsytan mellan kylaggregatet och apparatskåpet enligt dessa anvisningar. Därmed uppnås en säker tätning mot inträngande vatten utifrån.
- Borrhålen på aggregatets baksida får endast användas för montage av IoT-gränssnittet med de skruvar som medföljer aggregatet. Om andra, längre skruvar används finns risk för att luft- och krypavståndet underskrids samt risk för elchock.
- Se noga till att kylaggregatet endast monteras i torr skick och i en torr miljö.
- Innan huven tas av måste aggregatet svalna i minst 10 minuter för att undvika att personer bränner sig på heta ytor.
- Kylaggregatet står endast stabilt så länge huven och chassit är förbundna med varandra. Säkra därför framför allt chassit så att det inte välter, innan du tar av huven.
- Anslutningskabeln får inte avisoleras för långt, eftersom detta kan göra att tillåtna luft-/krypavstånd till klämmans beröringspunkt underskrids.
- Vid alla arbeten på aggregatet måste nödvändig personlig skyddsutrustning bäras.
- Använd inga brännbara vätskor för rengöring.
- Om aggregatet transporteras i monterat skick måste alltid en lämplig stödstruktur användas.
- Produkterna får endast kombineras och användas med de systemtillbehör som föreskrivs av Rittal.

### IT Istruzioni di sicurezza

- Osservare le prescrizioni relative al collegamento dell'azienda fornitrice di elettricità competente. Il conduttore di protezione che collega la copertura al telaio deve essere sempre collegato su entrambe le estremità. In caso di collegamento assente o errato del dispositivo vi è il pericolo di lesioni dovute a scossa elettrica.
- Prestare attenzione ai carichi massimi consentiti per le persone. Se necessario, utilizzare un dispositivo di sollevamento.
- Durante l'installazione, c'è il rischio che il condizionatore si distacchi dalla feritoia di montaggio.
- Tutte le aperture di ventilazione del condizionatore devono rimanere liberamente accessibili dopo l'installazione e non devono essere ostruite.
- Il montaggio della guarnizione fornita in dotazione deve essere eseguito secondo le presenti istruzioni, al fine di garantire una tenuta affidabile della superficie di contatto tra condizionatore e armadio.
- I fori presenti sul retro del condizionatore sono destinati esclusivamente al montaggio dell'interfaccia IoT utilizzando le viti fornite con il condizionatore. L'uso di viti diverse o più lunghe può ridurre le distanze di isolamento e di dispersione, con rischio di scossa elettrica.
- Assicurarsi che il condizionatore venga montato in ambiente asciutto e non umido.
- Far raffreddare il dispositivo per almeno 10 minuti prima di rimuovere la copertura per evitare eventuali ustioni al contatto con le superfici bollenti.
- Il condizionatore è stabile solo se la copertura e il telaio sono collegati tra loro. Mettere pertanto il telaio in sicurezza da eventuali cadute prima di rimuovere la copertura.



## Warn- und Sicherheitshinweise Safety instructions and warnings Consignes de sécurité



- La spelatura del cavo non deve essere eccessiva, altrimenti le distanze di isolamento in aria e superficiali fino al punto di contatto del terminale potrebbero essere inferiori al valore minimo consentito.
- Indossare i dispositivi di protezione individuale necessari durante tutti i lavori sull'unità.
- Non utilizzare liquidi infiammabili per la pulizia.
- Se l'unità viene trasportata premontata, è necessario utilizzare sempre una struttura di supporto idonea.
- I prodotti possono essere combinati e utilizzati solo con gli accessori a catalogo forniti da Rittal.

### ES Instrucciones de seguridad

- Deben tenerse en cuenta las normas del reglamento electrotécnico de baja tensión. El conductor de protección, que conecta la cubierta y el chasis, debe estar siempre conectado a ambos conectores. En caso contrario, con una conexión errónea o defectuosa del aparato, existe un peligro de lesión por descarga eléctrica.
- Rogamos tenga en cuenta el peso máximo permitido que puede levantar una persona. En caso necesario deberá utilizarse un dispositivo de elevación.
- Durante el montaje existe el riesgo, que el refrigerador se desprendra de la escotadura de montaje.
- Todas las aberturas de ventilación del refrigerador deben estar accesibles y deben mantenerse libres tras el montaje.
- Para lograr una estanqueidad segura contra la entrada de agua desde el exterior, debe montarse, siguiendo las instrucciones de este manual, la junta incluida en la unidad de envase para sellar la superficie de contacto entre el refrigerador y el armario.
- Los taladros de la parte posterior de la unidad deben utilizarse exclusivamente para el montaje del dispositivo interfaz IoT mediante los tornillos suministrados. El uso de tornillos diferentes o de mayor longitud puede provocar una disminución de las distancias de aire y de descarga o incluso una descarga eléctrica.
- Asegúrese que el refrigerador se encuentre completamente seco en el momento del montaje y que el montaje se realice en un entorno seco.
- El equipo debe haberse enfriado durante un mínimo de 10 minutos antes de proceder a retirar la cubierta, con el fin de evitar quemaduras.
- El refrigerador sólo se encuentra suficientemente estable, cuando la cubierta y el chasis se encuentran conectados el uno con el otro. Por este motivo es importante proteger especialmente el chasis de una caída, antes de retirar la cubierta.
- El aislamiento del cable no debe pelarse demasiado, ya que de lo contrario podrían no alcanzarse las distancias en el aire y de fuga admisibles en el punto de contacto del borne.
- Utilice, al realizar cualquier trabajo en la unidad, el equipo de protección personal.
- No utilice líquidos inflamables para realizar la limpieza.
- Para el transporte del equipo montado, deberá utilizarse siempre una construcción soporte adecuada.
- Estos productos deben combinarse y utilizarse exclusivamente con los accesorios previstos para ello por parte de Rittal.

### FI Turvallisuusohejet

- Huomioi energiayhtiön liitäntäohjeet. Muussa tapauksessa laiteen virheellinen tai viallinen liitäntä saattaa aiheuttaa sähköiskusta johtuvan loukkaantumisvaaran.
- Huomioi sallittu enimmäisnostopaino. Käytä tarvittaessa nostolaitetta.
- Asennuksen aikana on vaarana, että jäähdytyslaitteen puutaa asennusaukosta.
- Jäähdytyslaitteen kaikkiin tuuletusaukkoihin on oltava esteetön pääsy asennuksen jälkeen, eikä niitä saa sulkea.
- Toimitukseen sisältyvä tiiviste on asennettava jäähdytyslaitteen ja kyltöntäkaapin rajapinnan tiivistämistä varten tämän ohjeen mukaisesti, jotta laitteeseen ei pääse vettä ulkopuolelta.
- Laitteen takaosassa olevia aukkoja saa käyttää ainoastaan IoT-rajapinnan asentamiseen laitteen mukana toimitetuilla ruuveilla. Pidempien ruuvien käyttö saattaa johtaa imatilan ja suojaetäisyyksien alittamiseen tai sähköiskun.
- Varmista, että jäähdytys asennetaan vain kuivana ja vain kuivaan ympäristöön.
- Ennen kehikon irrottamista laitteen on annettava jäähtyä vähintään 10 minuuttia, jotta vältetään kuumien pintojen aiheuttamat palovammat.

- Jäähdytys on vakaana vain, kun kehikko ja runko on kiinnitetty toisiinsa. Tue erityisesti runko kaatumisen varalta ennen suojuksen irrottamista.
- Liitäntäkaapelia ei saa kuoria liian pitkälle, sillä silloin ilma-/pintavälin vähimmäisvaatimus saattaa alittua.
- Käytä tarvittavia henkilösuojaimia aina, kun työskentelet laitteella.
- Älä käytä puhdistukseen palavia nesteitä.
- Jos laitetta kuljetetaan asennettuna, on käytettävä asianmukaista tukirakennetta.
- Tuotteita saa yhdistää ja käyttää vain Rittalin hyväksymien järjestelmälisävarusteiden kanssa.

### DK Sikkerhedsanvisninger

- Følg altid tilslutningsvejledningen fra det ansvarlige el-selskab. Beskyttelseslederen, som forbinder dækslet med chassiset, skal altid være tilsluttet i begge stik. Hvis ikke dette er tilfældet, er der risiko for at få elektrisk stød som følge af forkert eller defekt tilslutning af enheden.
- Overhold den maksimalt tilladte løftevægt for personer. Brug en løfteanordning, hvis vægten overskrider den tilladte løftevægt.
- Under monteringen er der risiko for, at køleapparatet falder ud af udsærgingshullet.
- Alle ventilationsåbninger i køleenheden skal være frit tilgængelige efter montage og må ikke blokeres.
- Pakningen, der medfølger i leveringsomfanget, skal monteres for at tætte berøringsfladen mellem køleenhed og styretavle i overensstemmelse med denne vejledning for at opnå en sikker tætning mod indtrængning af vand udefra.
- Hulleme på bagsiden af enheden må kun anvendes til at montere IoT-grænsefladen med de skruer, der følger med denne enhed. Anvendelse af andre længere skruer kan resultere i underskridelse af frihøjde og krybeafstande eller et elektrisk stød.
- Sørg for, at køleenheden kun monteres i tør tilstand og i tørre omgivelser.
- Lad enheden køle af i mindst ti minutter, før dækslet tages af, for at undgå risiko for at brænde sig på varme overflader.
- Køleenheden står kun sikkert fast, hvis dækslet og chassiset er forbundet med hinanden. Sørg derfor for at sikre chassiset, så det ikke vælter, før dækslet tages af.
- Tilslutningskablet må ikke afsoleres for langt, da de tilladte luft-/krybeafstande til klemmens holdepunkt ellers overskrides.
- Bær de nødvendige personlige væremidler ved alt arbejde med apparatet.
- Brug aldrig brændbare væsker til rengøring.
- Hvis apparatet transporteres i samlet tilstand, skal der altid anvendes en passende støttekonstruktion.
- Produkterne må kun kombineres og ibrugtages sammen med systemtilbehør, der er godkendt af Rittal.

### PL Wskazówki dotyczące bezpieczeństwa

- Przestrzegaj przepisów odpowiedniego Zakładu Energetycznego. Przewód ochronny łączący pokrywy w obudowie musi być zawsze podłączony z obu stron. W przeciwnym razie, w przypadku błędnego lub wadliwego podłączenia urządzenia, istnieje niebezpieczeństwo porażenia prądem elektrycznym.
- Prosimy o nieprzekraczanie maksymalnych dopuszczalnych ciężarów podnoszonych przez ludzi. W razie potrzeby należy zastosować urządzenie podnośnikowe.
- Podczas montażu istnieje niebezpieczeństwo, że klimatyzator wypadnie z wycięcia montażowego.
- Wszystkie otwory wentylacyjne klimatyzatora muszą być swobodnie dostępne po instalacji i nie mogą być zablokowane.
- Uszczelka w zestawie musi być zamontowana w celu uszczelnienia powierzchni między klimatyzatorem a szafą sterowniczą zgodnie z niniejszą instrukcją, aby zapewnić bezpieczne uszczelnienie przed wnikaniem wody z zewnątrz.
- Otwory z tyłu urządzenia mogą być używane wyłącznie do montażu interfejsu IoT za pomocą śrub dołączonych do urządzenia. Użycie innych, dłuższych śrub grozi przekroczeniem odstępów izolacyjnych powietrznych i powierzchniowych lub porażeniem prądem elektrycznym.
- Upewnij się, że klimatyzator jest montowany tylko w suchym i w suchym otoczeniu.
- Przed zdjęciem pokrywy urządzenia musi się chłodzić przez minimum 10 minut, aby nie doszło do poparzenia przez gorące powierzchnie.

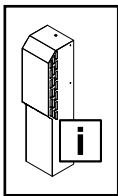
- Urządzenie jest stabilne tylko wówczas, gdy pokrywa i obudowa są ze sobą połączone. Dlatego przed zdjęciem pokrywy należy zabezpieczyć obudowę przed przewróceniem się.
- Nie należy usuwać izolacji z kabla przyłączeniowego zbyt daleko, gdyż w może to doprowadzić do przekroczenia dopuszczalnych odstępów izolacyjnych i powierzchniowych do punktu chwytania zacisku.
- Podczas wszystkich prac przy urządzeniu należy stosować niezbędne środki ochrony indywidualnej.
- Do czyszczenia urządzenia nie stosować łatwopalnych cieczy.
- Jeżeli urządzenie jest transportowane w stanie zmontowanym, to należy zawsze stosować odpowiednią konstrukcję wsporczą.
- Produkty można łączyć i użytkować wyłącznie z przewidzianymi akcesoriami systemowymi Rittal.

### CZ Bezpečnostní pokyny

- Dodržujte předpisy příslušného dodavatele elektrické energie pro připojení elektrického zařízení. V každém případě musí být připojeny oba konektory ochranného vodiče, který spojuje přední plášť jednotky a její rám. Jinak hrozí při chybném nebo vadném připojení přístroje nebezpečí úrazu elektrickým proudem.
- Dodržujte maximální přípustné hmotnosti zvedaných břemen stanovené pro osoby. Případně použijte zvedací zařízení.
- Během montáže existuje nebezpečí, že chladicí jednotka propadne skrz montážní výřez.
- Všechny větrací otvory chladicí jednotky musí být po montáži volně přístupné a nesmí být zablokovány.
- Těsnění, které je součástí dodávky, musí být namontováno tak, aby utěsnilo rozhraní mezi chladicí jednotkou a rozváděčovou skříní v souladu s těmito pokyny, aby bylo dosaženo bezpečného utěsnění proti vniknutí vody zvenčí.
- Otvory na zadní straně zařízení lze použít výlučně pro montáž rozhraní IoT pomocí šroubů dodaných s tímto zařízením. Při použití jiných, delších šroubů hrozí nebezpečí podkročení vzdušných a plazivých vzdáleností příp. úrazu elektrickým proudem.
- Ujistěte se, že montáž chladicí jednotky proběhla jen v suchém stavu a v suchém prostředí.
- Před sejmutím pláště jednotky je nutno nechat chladicí jednotku minimálně 10 minut vychladnout, aby nedošlo k popálení o horké povrchy.
- Chladicí jednotka je stabilní jen v případě namontování pláště na chladicí jednotce. Před sejmutím pláště proto zajistěte samotný rám jednotky proti převrhnutí.
- Izolace připojovacího kabelu nesmí být odstraněna v příliš velké délce, protože by nebylo dosaženo přípustných vzdušných / povrchových vzdáleností k místu připojení.
- Při každé práci na zařízení použijte předepsané osobní ochranné prostředky.
- Nepoužívejte k čištění žádné hořlavé kapaliny.
- Pokud je zařízení připravováno ve smontovaném stavu, musí být vždy použita vhodná podpěrná konstrukce.
- Produkty se smí kombinovat a provozovat pouze se systémem příslušenství společnosti Rittal.

### BG Инструкции за безопасност

- Трябва да се спазват предписанията за свързване към захранването на компютрното електрооборудованно дружество. Заземляващият проводник, който свързва капака и рамата, във всички случаи трябва да се свърже към двата конектора. В противен случай съществува опасност от нараняване вследствие на токов удар в случай на неправилно или неизправно свързване на уреда или неизправна електрическа мрежа.
- Спазвайте максимално допустимата товароносимост на човек при транспортиране на охладителя. Ако се налага, използвайте подемно устройство.
- По време на монтажа има опасност охлаждащият уред да изпадне от монтажния изрез.
- Всички вентилационни отвори на охлаждащия уред трябва да бъдат свободно достъпни след монтажа и не трябва да бъдат блокирани.
- За да се постигне сигурно уплътняване срещу проникване на вода откъм уплътнението, включено в доставката, трябва да бъде монтирано за уплътняване на интерфейса между охлаждащия уред и корпуса в съответствие с тези инструкции.
- Отворите в задната част на уреда могат да се използват само за монтиране на IoT интерфейса с вин-



## Warn- und Sicherheitshinweise Safety instructions and warnings Consignes de sécurité



- товете, доставени с този уред. Ако се използват други, по-дълги винтове, съществува опасност от нарушаване на минималната въздушна междина и минималното изолационно разстояние между проводящите части или възникване на токов удар.
- Уверете се, че охлаждащият уред се монтира в сухо състояние и в суха околна среда.
  - Преди да бъде свален капакът, уредът трябва да се остави да изстине най-малко 10 минути, за да се избегнат изгаряния от горещите повърхности.
  - Климатикът е стабилен само когато капакът и рамата са свързани помежду си. Затова укрепете най-вече рамата срещу падане, преди да свалите капака.
  - Свързващият кабел не трябва да се заголва твърде много, тъй като в противен случай допустимите изолационни отстояния и вероятността за възникване на утечка ще останат под долната граница.
  - Почистването на уреда трябва да се извършва само от специалисти. Преди почистването уредът трябва да бъде изключен от електрозахранването.
  - Не използвайте запалими течности за почистване.
  - Ако уредът се транспортира в монтирано състояние, винаги трябва да се използва подходяща опорна конструкция.
  - Продуктите може да се комбинират и използват само с предвидените от Rittal системни принадлежности.

### GR Υποδείξεις ασφαλείας

- Πρέπει να τηρούνται οι κανονισμοί σύνδεσης της σχετικής εταιρείας παροχής ηλεκτρικού ρεύματος. Ο προστατευτικός αγωγός μεταξύ του καλύμματος και του πλαισίου πρέπει να συνδέεται πάντα και στις δύο υποδοχές βύσματος. Σε αντίθετη περίπτωση, υπάρχει κίνδυνος τραυματισμού από ηλεκτροπληξία εάν η σύνδεση της μονάδας είναι ελαττωματική ή εσφαλμένη.
- Παρακαλούμε τηρείτε το μέγιστο επιτρεπόμενο βάρος που μπορεί να αρθεί από ένα άτομο. Χρησιμοποιήστε κατάλληλες συσκευές ανύψωσης, εάν είναι απαραίτητο.
- Κατά την τοποθέτηση υπάρχει κίνδυνος πτώσης της συσκευής ψύξης από το άνοιγμα τοποθέτησης.
- Όλα τα ανοίγματα αερισμού της συσκευής ψύξης πρέπει να είναι προσβάσιμα μετά τη εγκατάσταση και δεν επιτρέπεται να μπλοκαριστούν.
- Η τοποθέτηση του στεγανοποιητικού στοιχείου που περιλαμβάνεται στο περιεχόμενο παράδοση θα πρέπει να πραγματοποιηθεί σύμφωνα με τις παρούσες οδηγίες για τη στεγανοποίηση της επιφάνειας οριοθέτησης μεταξύ συσκευής ψύξης και ερμηρίου ζευδών, προκειμένου να επιτευχθεί η ασφαλής στεγανοποίηση έναντι εισχώρησης υδάτων από έξω.
- Οι οπές στην πίσω πλευρά της συσκευής επιτρέπεται να χρησιμοποιηθούν αποκλειστικά για την τοποθέτηση του IoT Interface με τις βίδες που παρέχονται μ' αυτήν την συσκευή. Από τη χρήση άλλων βιδών μεγαλύτερου μήκους υπάρχει κίνδυνος να παραβιαστεί το κατώτατο όριο του διάκενου/γραμμής διαφύξης ή κίνδυνος ηλεκτροπληξίας.
- Βεβαιωθείτε ότι η συσκευή ψύξης τοποθετείται σε ξηρό περιβάλλον και μόνο σε στεγνή κατάσταση.
- Πριν αφαιρέσετε το κάλυμμα, αφίστε τη μονάδα να ψυχθεί για τουλάχιστον 10 λεπτά για να εξαλειφθεί ο κίνδυνος εγκαυμάτων από καυτές επιφάνειες.
- Η μονάδα ψύξης στέκεται με ασφάλεια μόνο όταν το κάλυμμα και το πλαίσιο έχουν συνδεθεί μεταξύ τους. Βεβαιωθείτε ότι ειδικά το πλαίσιο είναι ασφαλισμένο έναντι ανατροπής πριν αφαιρέσετε το κάλυμμα.
- Το καλώδιο σύνδεσης δεν επιτρέπεται να απογυμνωθεί σε πολύ μεγάλο μήκος, διαφορετικά θα παραβιαστεί το κατώτατο όριο του επιτρεπόμενου διάκενου/γραμμής διαφύξης από το σημείο σύνδεσης του ακροδέκτη.
- Σε όλες τις εργασίες στη συσκευή πρέπει να φοράτε τον ατομικό εξοπλισμό προστασίας.
- Μη χρησιμοποιείτε ποτέ εύφλεκτα υγρά για τον καθαρισμό.
- Εάν η συσκευή μεταφερθεί συναρμολογημένη πρέπει να χρησιμοποιείται πάντα μια κατάλληλη κατασκευή στήριξης.
- Τα προϊόντα επιτρέπεται να συνδυαστούν και να χρησιμοποιηθούν αποκλειστικά με τον πρόσθετο εξοπλισμό που προβλέπεται από την Rittal.

### RO Instrucțiuni de siguranță

- Trebuie respectate cerințele de racordare ale companiei locale de alimentare cu energie. Conducătorul de protecție dintre capac și carcasa trebuie să fie conectat întot-

deauna la ambele prize. În cazul în care conexiunea aparatului este incorectă sau defectuoasă, există pericol de rănire prin electrocutare.

- Respectați greutatea de ridicare maxim admise pentru o persoană. Dacă este necesar, utilizați dispozitive de ridicare.
- În timpul montajului există pericolul ca aparatul de răcire să cadă din decupajul de montare.
- Toate orificiile de ventilație ale unității de răcire trebuie să fie liber accesibile după instalare și nu trebuie să fie astupate.
- Garnitura de etanșare inclusă în pachetul de livrare trebuie montată pentru a etanșa contactul dintre unitatea de răcire și cutia de comandă în conformitate cu aceste instrucțiuni pentru a obține o etanșare sigură împotriva pătrunderii apei din exterior.
- Orificiile de pe partea din spate a dispozitivului pot fi utilizate numai pentru montarea interfeței IoT cu șuruburile furnizate împreună cu acest dispozitiv. Dacă se utilizează alte șuruburi mai lungi, există riscul de nu respecta distanțele de izolare electrică sau de electrocutare.
- Asigurați-vă că unitatea de răcire este montată numai în stare uscată, într-un mediu uscat.
- Înainte de scoaterea capacului, aparatul trebuie lăsat să se răcească cel puțin 10 min., pentru a evita arsurile cauzate de contactul cu suprafețele fierbinți.
- Aparatul de răcire este stabil numai dacă sunt interconectate capacul și carcasa. În acest scop, asigurați carcasa împotriva căderii, înainte de a scoate capacul.
- Cablul de conectare nu trebuie dezizolat prea mult; în caz contrar, distanțele admisiibile de izolare în aer și de izolare pe suprafață până la punctul de prindere al bornei pot fi depășite.
- Partea echipamentului individual de protecție necesar pentru toate lucrările la aparat.
- Nu utilizați lichide inflamabile pentru curățare.
- Dacă aparatul urmează să fie transportat în stare asamblată, trebuie întotdeauna utilizată o structură de sprijin adecvată.
- Produsele pot fi combinate și exploatate exclusiv cu accesorii prevăzute pentru sistemele Rittal.

### HR Sigurnosne upute

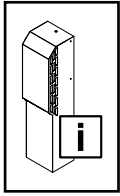
- Potrebno je pridržavati se pravila o priključivanju odgovarajućeg napona isporučitelja električne energije. Zaštitno uzemljenje između poklopca i okvira mora uvijek s biti spojeno na priključne točke poklopca i okvira. Ukoliko zaštitno uzemljenje nije propisno spojeno ili je oštećeno, postoji opasnost od ozljeda uzrokovanih strujnim udarom.
- Obratite pažnju na najveće dopušteno masu koju smije podizati jedna osoba. Ako je potrebno, pripreučite se upotreba opreme za podizanje i premeštanje.
- Tijekom montaže postoji opasnost da rashladni uređaj ispadne iz montažnog probjoja.
- Svi ventilacijski otvori rashladnog uređaja moraju biti dostupni nakon montaže i ne smiju se blokirati.
- Kako bi se postiglo sigurno brtvljenje protiv prodora vode s vanjske strane, brtva uključena u opseg isporuke mora biti postavljena za brtvljenje granične površine između rashladnog uređaja i rasklopnog ormara u skladu s ovim uputama.
- Provrti na stražnjoj strani uređaja smiju se upotrebljavati isključivo za montažu IoT sučelja s pomoću vijaka koji su isporučeni uz ovaj uređaj. Upotrebom drugih, dužih vijaka postoji opasnost od nepostizanja propisanih zračnih razmaka i puznih staza, što može uzrokovati električni udar.
- Uvjerite se da se rashladni uređaj montira samo kada je suh i u suhoj okolini.
- Prije uklanjanja poklopca pričekajte barem 10 minuta da se uređaj ohladi, kako bi se uklonila opasnost od opekotina uzrokovanih vrućim površinama.
- Rashladna jedinica stoji sigurno samo ukoliko su poklopac i kućište međusobno ispravno spojeni. Obratite posebnu pažnju da je okvir osiguran od prevrtanja prije nego uklanjate poklopac rashladne jedinice.
- S priključnog kabela ne smije se previše skinuti izolacija jer se inače možda neće postići dopušteni zračni razmaci / puzne staze u trenutku kontakta sa stezaljkom.
- Nosite potrebnu osobnu zaštitnu opremu tijekom svih radova na uređaju.
- Nikada ne koristite zapaljive tekućine za čišćenje.
- Ako se uređaj prevozi montiran, uvijek je potrebno upotrebljavati prikladnu potpornu konstrukciju.
- Proizvodi se smiju kombinirati i puštati u rad isključivo uz pribor sustava koji predviđa tvrtka Rittal.

### HU Biztonsági utasítások

- Az illetékes áramszolgáltató csatlakoztatási előírásait figyelembe kell venni. A burkolatot és a vázat összekötő védővezetéket minden esetben mindkét csatlakozóhoz csatlakoztatni kell. Ellenkező esetben, a berendezés hibás vagy meghibásodott csatlakoztatása esetén áramütés veszélye áll fenn.
- Vegye figyelembe az egy személy számára maximálisan megengedett emelhető tömegeket. Szükség esetén emelőberendezést kell használni.
- A szerelés folyamán fennáll a veszély, hogy a hűtőberendezés a szerelési kivágásból leesik.
- A szerelés követően minden szellőzőnyílásnak szabadon hozzáférhetőnek kell lennie, tilos elzárni azokat.
- A kívülről behatól víz elleni biztonságos tömítettség eléréséhez a csomagban található tömítés felszerelését, a hűtőberendezés és a kapcsolószekrény érintkezési felületének tömítése érdekében, a mellékelt útmutató alapján kell elvégezni.
- A készülék hátoldalán található furatokat kizárólag az IoT interfész felszereléséhez szabad felhasználni, a készülékhez mellékelt csavarokkal. Egyéb, hosszabb csavarok használata esetén fennáll a légrés- és ívszakaszok el nem érésének, illetve az elektromos áramütésnek a veszélye.
- A hűtőberendezést csak száraz állapotban, száraz környezetben szerelje fel.
- A burkolat levétele előtt a berendezést legalább 10 percig hagyja lehűlni a forró felületek miatti égési sérülések elkerülése érdekében.
- A hűtőberendezés csak akkor áll biztonságosan, ha a burkolat és a váz egymással össze van kötve. Ezért a vázat biztosítsa eldőlés ellen, mielőtt a burkolatot leveszi.
- A csatlakozókábel szigetelését nem szabad túl hosszúan eltávolítani, mert különben előfordulhat, hogy a kapocs csatlakozási pontjánál kisebb lesz az előírtnál az iv- és légrészakasz.
- Minden, a berendezésen végzett munka során viselje a szükséges személyi védőfelszerelést.
- Tisztításhoz ne használjon gyúlékony folyadékot.
- Ha a berendezést felszerelt állapotban szállítják, akkor mindig megfelelő támasztószerveket kell alkalmazni.
- A termékek kizárólag a Rittal által előírt rendszertartozékkal kombinálhatók és üzemeltethetők.

### LT Saugos nurodymai

- Privalu laikytis atsakingos elektros tiekimo tinklų bendrovės parengtų instrukcijų. Apsauginis laidininkas, jungiantis gaubtą ir korpusą, visada turi būti prijungtas prie abiejų jungčių. Įrenginio jungties pažeidimo ar defekto atveju kyla pavojus susižaloti gavus elektros smūgį.
- Žmonės neturėtų kelti pernelyg sunkaus svorio. Prireikus reikia naudoti kelimo įrangą.
- Montavimo metu kyla pavojus, kad aušinimo įrenginys iškris iš montavimo išpjovos.
- Visos aušinimo įrenginio ventiliacijos angos po montavimo turi būti laisvai prieinamos ir neužkimštos.
- Pristatymo komplektacijoje esantis sandariklis turi būti sumontuotas taip, kad sandarintų sąsają tarp aušinimo įrenginio ir valdymo spintos pagal šias instrukcijas, kad būtų užtikrintas saugus montavimas nuo vandens patekimo iš išorės.
- Įrenginio gale esančias skylutes galima naudoti tik „IoT“ sąsajai pritvirtinti, naudojant kartu su šiuo įrenginiu pateiktus varžtus. Jei naudojami kiti, ilgesni varžtai, kyla pavojus, kad bus pažeisti laisvosios erdvės ir laisvojo nuotolio atstumai arba gali ištikti elektros smūgis.
- Įsitinkite, kad, montavimo metu aušinimo įrenginys ir aplinka yra sausi.
- Prieš nuimdami gaubtą, turite palaukti bent 10 minučių, kol įrenginys atvės, kad nenusidėgintumėte prisilietę prie karštų paviršių.
- Saldymo įrenginys stabilus tol, kol gaubtas sujungtas su korpusu. Todėl prieš nuimdami gaubtą, įsitinkite, kad korpusas yra stabilus ir nenukristų.
- Jungiamasis kabelis neturi būti izoliuotas per daug, kitaip leistini oro / valksnumo atstumai iki gnybto sugriebimo taško gali būti nepasiekiami.
- Atlikdami visus darbus su įrenginiu dėvėkite būtinas asmenines apsaugos priemones.
- Valdydami nenaudokite degių skysčių.
- Jeį įrenginys transportuojamas surinktas, visada reikia naudoti tinkamą atraminę konstrukciją.
- Gaminius galima kombinuoti ir eksploatuoti su „Rittal“ patvirtintais sistemais priedais.



Warn- und Sicherheitshinweise  
Safety instructions and warnings  
Consignes de sécurité



**EE** Ohutusjuhised

- Järgige vastutava elektrivarustuse ettevõtte vooluvõrku ühendamise eeskirju. Juhtkaitse, mis ühendab katet ja alusraami, peab igal juhul olema mõlemast pistikust ühendatud. Vastasel korral tekib seadme puuduliku või defektsel ühendamisel vigastusohut elektrilöögi tõttu.
- Arvestage inimestele maksimaalselt lubatud tösteakaaludega. Vajaduse korral kasutage tõsteseadeldist.
- Paigalduse ajal esineb oht, et jahutusseade võib paigaldusraamist välja kukkuda.
- Jahutusseadme kõik ventilatsioonivad peavad pärast paigaldust olema vabalt ligipääsetavad ning neid ei tohi blokeerida.
- Tarnekomplektis sisalduv tihend tuleb paigaldada jahutusseadme ja lülitisikibi vahelise eraldispinna tihendamiseks vastavalt käesolevale juhendile, et saavutada kindel tihendus väljastpoolt sissetungiva vee vastu.
- Seadme tagaküljel olevaid avasid tohib kasutada üksnes IoT liidese monteerimiseks selle seadmega kaasas olevate poltidega. Muude, pikemate poltide kasutamisel on ebapiisavate õhk- ja ülelöögivähiemike või elektrilöögi oht.
- Veenduge, et jahutusseade on paigaldamisel kuiv ja see monteeritakse kuiva keskkonda.
- Enne katte mahavõtmist peab seade vähemalt 10 minutit jahtuma, et vältida põletusi kuumade pindade tõttu.
- Jahutusseade on kindlalt püsti vaid siis, kui kate ja alusraam on omavahel ühendatud. Kindlustage ümberkukumise vastu alusraam enne katte mahavõtmist.
- Ühenduskaabli isolatsiooni ei tohi koordida liiga pikalt, sest vastasel korral võib õhk-/ülelöögivähiemike klemmi kinnituspunkti jääda normist väiksemaks.
- Kandke seadmel tööde tegemise ajal alati vajalikke isiku-kaitsevahendeid.
- Ärge kasutage puhastamiseks põlevaid vedelikke.
- Kui seadet transportitakse paigaldatud kujul, tuleb alati kasutada sobivat toestust.
- Tooteid tohib kombineerida ja kasutada vaid Rittalil ettenähtud lisatarvikutega.

**LV** Drošības norādījumi

- Ievērojiet izmantotā elektropiegādes uzņēmuma pieslēguma noteikumus. Starp pārsegu un rāmi esošajam nulles vadam vienmēr ir jābūt pievienotam abiem elektriskajiem spraudņiem. Pretējā gadījumā, ja iekārtas savienojumā ir radusies kļūme vai tā ir pieslēgta nepareizi, pastāv risks ciest no elektriskās strāvas trieciena.
- Lūdzu, ievērojiet ierobežojumus attiecībā uz maksimālo svaru, ko jāuts celt vienai personai. Izmantojiet atbilstošas ceļšanas ierīces, kad tas ir nepieciešams.
- Montāžas laikā pastāv risks, ka dzesēšanas iekārta var izkrist no montāžas iedobuma.
- Visām dzesēšanas iekārtas ventilācijas atverēm pēc uzstādīšanas jābūt brīvi pieejamām un tās nedrīkst būt aizstātas.
- Blīve, kas iekārta piegādes komplektā, jāuzstāda atbilstoši šiem norādījumiem, lai nodrošinātu drošu blīvējumu starp dzesēšanas iekārtu un sadales skapi, pasargājot no ūdens iekļūšanas no ārpusē.
- Iekārtas aizmugurē esošos urbumus drīkst izmantot tikai IoT saskarnes montāžai ar šīs iekārtas komplektācijā iekļautajām skrūvēm. Izmantojot garākas skrūves, pastāv risks samazināt izolētājstarpes un noplūdes ceļa attālumu, kā arī var palielināties elektriskās strāvas trieciena iespējamība.
- Raugiet, lai dzesēšanas iekārta tiek iemontēta tikai sausā stāvoklī un sausā vidē.
- Pirms pārsega atvēršanas, ļaujiet iekārtai atdzist vismaz 10 minūtes, lai izvairītos no apdedzināšanās riska, ko rada uzkaršu virsmas.
- Dzesēšanas bloka droša novietošana tiek paveikta pārsegu pienācīgi savienojot ar konstrukciju. Pārlecinieties par to, lai rāmis būtu pasargāts pret sasvēršanos, pirms pārsega noņemšanas.
- Savienotājkaabeļa izolāciju nedrīkst noņemt pārāk tālu, jo pretējā gadījumā samazinās pieļaujamie izolētājstarpes un noplūdes ceļa attālumi līdz spaiļes satvēriena punktam.
- Veicot jebkādas darbus ar ierīci, valkājiet nepieciešamos individuālos aizsardzības līdzekļus.
- Nekad neizmantojiet uzliesmojošus tīrīšanas līdzekļus.
- Ja ierīce tiek transportēta samontētā veidā, vienmēr ir jāizmanto piemērota atbalsta konstrukcija.
- Šos izstrādājumus drīkst darbināt un kombinēt tikai kopā ar Rittal nodrošinātajiem sistēmas piederumiem.

**SI** Varnostni napotki

- Upoštevatvi je treba predpise za priključevanje naprav pri-stojnega podjetja za distribucijo električne energije. Ozemljitveni priključek, ki povezuje pokrov in ohišje, je treba v vsakem primeru namestiti na oba vtiča. V nasprotnem primeru pri napačni priključitvi ali okvarjenem priključku obstaja nevarnost nastanka poškodb zaradi električnega udara.
- Upoštečajte največjo dovoljeno težo, ki jo oseba lahko varno dvigne. Po potrebi uporabite dvignjo napravo.
- Med montažo obstaja nevarnost, da hladilna naprava pade iz montažne odprtine.
- Vse prezračevalne odprtine hladilne naprave morajo biti po montaži prosto dostopne in jih ni dovoljeno blokirati.
- Za varno tesnjenje pred vdorom vode od zunaj, mora biti tesnilo ki je vključeno v obseg dobave, nameščeno na zatesniti vmesnik med hladilno enoto in ohišjem, v skladu s temi navodili.
- Izvršite na zadnji strani naprave se lahko uporabijo izključno za montažo vmesnika IoT z vijaki, ki so priloženi tej napravi. Če se uporabijo drugi, daljši vijaki, obstaja nevarnost nedoseganja vrednosti zračne reže in razdalje po izolacijski površini oz. električnega udara.
- Prepričajte se, da bo hladilna enota nameščena suha in v suhem okolju.
- Preden snamete pokrov, naj se naprava najmanj 10 minut ohlaja, da se izognete nevarnosti opeklin na vročih površinah.
- Hladilna naprava je stabilna, dokler sta pokrov in ohišje klime povezana. Preden snamete pokrov, je zato potrebno ohišje še posebej zavarovati, da se ne prevrne.
- S priključnega kabla ni dovoljeno prekomerno sneti izolacije, saj se lahko vrednost dovoljenih zračnih/plazilnih razdalj do pritrilne točke sponke spusti pod najmanjšo dovoljeno vrednost.
- Pri izvajanju del na napravi nosite obvezno osebno varovalno opremo.
- Za čiščenje ne uporabljajte vnetljivih tekočin.
- Pri transportu naprave v montiranem stanju je treba vedno uporabiti primerno podporno strukturo.
- Izdelke lahko združujete in uporabljate izključno s sistemsko dodatno opremo, ki jo za to predvideva podjetje Rittal.

**SK** Bezpečnostné pokyny

- Treba dbať na predpisy príslušného dodávateľa elektrickej energie týkajúce sa zapojenia. Ochranný vodič, ktorý spája kryt a spodnú časť zariadenia, musí byť v každom prípade zapojený do oboch zásuviek. V opačnom prípade hrozí pri chybnom alebo nedostatočnom zapojení zariadenia nebezpečenstvo úrazu elektrickým prúdom.
- Dodržiavajte maximálne limity pre osoby na zdvíhanie bremien. V prípade prekročenia tohto limitu použite zdvíhacie zariadenie.
- Pri montáži hrozí, že chladniaca jednotka vypadne z montážneho výrezu.
- Všetky vetracie otvory chladiaceho zariadenia musia byť po montáži voľne prístupné a nesmú byť blokováné.
- Na utesnenie rozhrania medzi chladiacim zariadením a rozvádzačom musí byť nainštalované tesnenie, ktoré je súčasťou dodávky, v súlade s týmto návodom, aby sa dosiahol bezpečné utesnenie proti prenikaniu vody zvonku.
- Vyvrátné otvory na zadnej strane zariadenia jednotky sa môžu použiť iba na montáž rozhrania IoT pomocou skrutiek dodaných s touto jednotkou. Ak sa použijú dlhšie skrutky, existuje riziko prekročenia vzdušnej vzdialenosti, povrchových ciest alebo úrazu elektrickým prúdom.
- Zabezpečte, aby sa chladniaca jednotka montovala len v suchom stave a v suchom prostredí.
- Pred odstránením krytu musí zariadenie minimálne 10 minút chladnúť, inak môže dôjsť k popáleniu na horúčich povrchoch.
- Klimatizačné zariadenie je stabilné len vtedy, ak sú kryt a spodná časť spojené. Najmä spodnú časť preto zaisťte pred prevrátením ešte skôr, ako odstránite kryt.
- Napájací kábel sa nesmie odizolovať príliš ďaleko, pretože inak môže dôjsť k neododržaniu prípustných vzdušných/povrchových vzdialeností k miestu uchytania koncovky.
- Pri všetkých prácach na zariadení používajte požadované osobné ochranné prostriedky.
- Na čistenie nepoužívajte horľavé kvapaliny.
- Ak sa zariadenie pripravuje v zmontovanom stave, vždy treba použiť vhodnú nosnú konštrukciu.

- Produkty sa môžu kombinovať a prevádzkovať len so systémovým príslušenstvom dodávaným spoločnosťou Rittal.

**PT** Instruções de segurança

- Seguir as orientações da respectiva empresa de fornecimento de energia elétrica. O condutor de proteção que interliga a cobertura com o chassi deve estar sempre conectado em ambas as extremidades. Caso contrário, haverá risco de choque elétrico se a conexão do aparelho apresentar falha ou estiver incorreta.
- Por favor, considerar o peso máximo permitido a ser levantado por uma pessoa. Caso necessário, utilizar equipamento adequado.
- Durante a montagem, o condicionador de ar poderá se soltar do recorte e cair.
- Após a montagem, todas as aberturas do aparelho previstas para ventilação devem ficar livremente acessíveis e não devem ser obstruídas.
- Para impedir a entrada de água de maneira segura, montar a vedação inclusa no fornecimento para vedar o ponto de união entre o condicionador de ar e o armário, seguindo as instruções deste manual.
- Os orifícios que se encontram no lado de trás do aparelho somente devem ser usados para montar a interface IoT utilizando os parafusos que acompanham o condicionador de ar. O uso de parafusos mais longos leva ao risco de as linhas de fuga serem muito curtas, causando, consequentemente, choque elétrico.
- Certifique-se de que o condicionador de ar apenas seja instalado em condições e local secos.
- Antes de remover a cobertura, deixar o aparelho arrefecer por no mínimo 10 minutos, para evitar risco de queimadura nas superfícies quentes.
- O condicionador de ar estará fixo apenas quando a cobertura estiver conectada ao chassi. Antes de remover a cobertura, certificar-se de que o chassi esteja seguro e não possa tombar.
- Não decapar um pedaço muito longo do cabo de ligação para a distância permitida de folga e fuga de corrente até o ponto de ligação do borne não ficar muito curta.
- Ao realizar qualquer tipo de trabalho no aparelho, sempre usar o equipamento de proteção individual (EPI).
- Nunca utilizar líquidos inflamáveis para efetuar a limpeza.
- Se o aparelho for transportado após ser montado, sempre utilizar uma estrutura de apoio adequada.
- Os produtos somente devem ser combinados e utilizados junto com os acessórios + previstos pela Rittal.

**DE** Bestimmungsgemäße Verwendung

Das Kühlgerät ist ausschließlich zum Kühlen von geschlossenen Schaltschränken sowie zur professionellen Nutzung gemäß DIN EN 61000-3-2 vorgesehen. Eine andere Verwendung ist nicht bestimmungsgemäß. Das Gerät darf nicht an Orten installiert und betrieben werden, die der allgemeinen Öffentlichkeit (siehe DIN EN 60335-2-40, Absatz 3.119) zugänglich sind. Das Gerät ist nur für den stationären Betrieb ausgelegt.

**EN** Intended use

The cooling unit is intended exclusively for cooling closed control cabinets as well as for professional use in accordance with DIN EN 61000-3-2. Any other use is not permitted.

The unit must not be installed and operated in locations which are accessible to the general public (see DIN EN 60335-2-40, paragraph 3.119). The unit is designed solely for stationary use.

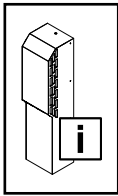
**FR** Utilisation conforme

Le climatiseur est prévu uniquement pour rafraîchir les armoires électriques fermées ainsi que pour une utilisation professionnelle conformément à la norme DIN EN 61000-3-2. Toute autre utilisation est non conforme.

Le climatiseur ne doit pas être installé et exploité dans des lieux accessibles au public (voir norme EN 60335-2-40, paragraphe 3.119). Le climatiseur est uniquement destiné à l'exploitation statique.

**NL** Voorgescreven gebruik

Het koelaggregaat is uitsluitend bestemd voor het koelen van gesloten schakelkasten en voor professioneel gebruik



## Warn- und Sicherheitshinweise Safety instructions and warnings Consignes de sécurité



volgens DIN EN 61000-3-2. Elke andere toepassing wordt gezien als niet-voorgeschreven gebruik.  
Het apparaat mag niet worden geïnstalleerd op plaatsen die openbaar (zie DIN EN 60335-2-40, paragraaf 3.119) toegankelijk zijn.  
Het apparaat is alleen ontworpen voor stationair gebruik.

### SE Ändamålsenlig användning

Kylaggregatet är endast avsett för kylning av slutna apparatskåp i enlighet med DIN EN 61000-3-2. Annan användning är inte tillåten.  
Aggregatet får inte installeras och köras på platser som är tillgängliga för allmänheten (se DIN EN 60335-2-40, stycke 3.119).  
Aggregatet är konstruerat uteslutande för stationär drift.

### IT Impiego conforme alle norme

Il condizionatore è destinato esclusivamente al raffreddamento degli armadi di comando chiusi e per uso professionale secondo EN 61000-3-2. Ogni altro impiego è da intendersi non conforme alla sua destinazione d'uso. L'apparecchio non deve essere installato e utilizzato in aree accessibili al pubblico (vedere la norma DIN EN 60335-2-40, paragrafo 3.119).  
L'apparecchio può essere utilizzato solo da fermo.

### ES Uso correcto

El refrigerador se ha diseñado exclusivamente para la refrigeración de armarios de distribución estancos, para su uso según lo detallado en la normativa DIN EN 61000-3-2. Cualquier otro uso no está permitido.  
El equipo no debe ser instalado ni puesto en funcionamiento en entornos accesibles al público en general (ver DIN EN 60335-2-40, párrafo 3.119).  
El equipo está diseñado para un funcionamiento estacionario.

### FI Määräystenmukainen käyttö

Jäähdytysyksikkö on tarkoitettu yksinomaan suljettujen koteloiden jäähdytyksen sekä ammatikäyttöön DIN EN 61000-3-2 mukaisesti. Mikään muu käyttö ei ole sallittua. Laitetta ei saa asentaa ja käyttää ovelissa paikoissa (katso DIN EN 60335-2-40, kohta 3.119).  
Laitte on suunniteltu ainoastaan kiinteään käyttöön.

### DK Forskriftsmæssig anvendelse

Køleenheden er kun beregnet til køling af lukkede indkapslinger og kun til professionelt brug i henhold til DIN EN 61000-3-2. Enhver anden brug er ikke tilladt.  
Enheden må ikke installeres eller opereres på lokaliteter med offentlig adgang (Se DIN EN 60335-2-40, paragraf 3.119).  
Enheden er udelukkende designet til stationært brug.

### PL Używanie zgodnie z przeznaczeniem

To urządzenie chłodnicze jest przewidziane wyłącznie do chłodzenia zamkniętych szaf sterowniczych oraz do użytku profesjonalnego zgodnie z normą DIN EN 61000-3-2. Każde inne zastosowanie jest niezgodne z przeznaczeniem.  
Urządzenie nie może być instalowane i użytkowane w miejscach ogólnodostępnych (patrz EN 60335-2-40, punkt 3.119).  
Urządzenie jest przystosowane wyłącznie do użytkowania stacjonarnego.

### CZ Použití v souladu s určením

Chladič jednotka je určena výhradně k chlazení uzavřených rozváděčových skříní a k profesionálnímu použití v souladu s ČSN EN 61000-3-2. Jiné použití není použít v souladu s určením.  
Zařízení se nesmí instalovat a provozovat na místech, která jsou veřejně přístupná (viz ČSN EN 60335-2-40, oddíl 3.119).  
Zařízení je navrženo jen pro stacionární provoz.

### BG За правилна употреба

Охладителното устройство е предназначено само за охлаждане на кутии и шкафове както и за професионална употреба съгласно DIN EN 61000-3-2. Не се разрешава всякаква друга употреба.

Уредът не трябва да се монтира и работи в местата, които са достъпни за широката общественост (виж DIN EN 60335-2-40, параграф 3.119).  
Уредът е предназначен единствено за стационарна употреба.

### GR Προβλεπόμενη χρήση

Η μονάδα ψύξης προορίζεται αποκλειστικά για ψύξη κλειστούς πίνακες ελέγχου καθώς και για επαγγελματική χρήση σύμφωνα με το DIN EN 61000-3-2. Οποιαδήποτε άλλη χρήση δεν επιτρέπεται.  
Δεν επιτρέπεται η εγκατάσταση και η λειτουργία της συσκευής σε σημεία, τα οποία είναι προσβάσιμα στο ευρύ κοινό (δείτε DIN EN 60335-2-40, σημείο 3.119).  
Η συσκευή έχει σχεδιαστεί αποκλειστικά για στατική χρήση.

### RO Domeniul de utilizare

Climatizorul este conceput doar pentru racirea dulapurilor inchise precum si pentru o utilizare industriala conform normelor DIN EN 61000-3-2. Orice alta utilizare nu este permisa. Unitatea nu trebuie instalata si folosita in locatii la care are acces publicul larg. (vezi DIN EN 60335-2-40, paragraf 3.119).  
Unitatea este proiectata doar pentru utilizare stationara.

### HR Predviđena uporaba

Klima uređaj namijenjen je isključivo hlađenju nanzanih ormarata te profesionalnoj uporabi skladno DIN EN 61000-3-2. Drugačija uporaba nije dozvoljena.  
Uređaj se ne smije instalirati i raditi na mjestima gdje je dostupan javnosti (DIN EN 60335-2-40, paragraf 3.119).  
Uređaj je namijenjen isključivo za unutarnju upotrebu.

### HU Rendeltetéseszerű használat

A hűtőberendezés kizárólag zárt kapcsoló- és vezérlőszekrények hűtésére, valamint a DIN EN 61000-3-2 szabvánnyal összhangban történő professzionális alkalmazásra használható. Minden más alkalmazás tilos.  
A berendezést tilos olyan helyre telepíteni és üzemeltetni, amely szabadon hozzáférhető laikusok számára (lásd DIN EN 60335-2-40, 3.119 bekezdés).  
A berendezést kizárólag fixen telepítve és álló helyzetben szabad telepíteni és üzemeltetni.

### LT Naudojimas pagal paskirtį

Vėsinimo agregatas skirtas tik uždaro tipo skydų vėsinimui, taip pat profesionaliam naudojimui pagal DIN EN 61000-3-2. Bet koks kitas naudojimas yra draudžiamas.  
Agregatas negali būti sumontuojamas ir eksploatuojamas viešai prieinamoje vietoje (pagal DIN EN 60335-2-40, punktą 3.119).  
Prietaisas skirtas tik stacionariam naudojimui.

### EE Sihtotstarbeline kasutus

Jahutusseadmed on ettenähtud ainult kinniste kilpide jahutamiseks ja professionaalseks kasutamiseks vastavalt standardile DIN EN 61000-3-2. Muu laadne kasutus ei ole lubatud.  
Seadmete kasutus üldkasutatavates ruumides ei ole lubatud (vaata DIN EN 60335-2-40, § 3.119).  
Seade on ettenähtud ainult statsioonarseks paigalduseks.

### LV Paredzētais lietošanas veids

Dzesēšanas bloks paredzēts tikai sadalņu ar slēgtu kontroli dzesēšanai, kā arī profesionālai lietošanai saskaņā ar DIN EN 61000-3-2. Jebkura cita izmantošana nav atļauta.  
Iekārtu nedrīkst uzstādīt un izmantot publiski pieejamās vietās (skatīt standartu DIN EN60335-2-40, paragrafu 3.119).  
Iekārta ir izstrādāta tikai stacionārai lietošanai.

### SI Predvidena uporaba

Hladilna naprava je namenjena samo za hlajenje vrstno povezanij ohišij, kot tudi za profesionalno uporabo skladno z DIN EN 61000-3-2. Vsaka druga uporaba ni dovoljena.  
Naprava ne sme biti nameščena in delovati na lokaciji ki je dostopna širši javnosti (glej DIN EN 60335-2-40, odstavek 3.119).  
Naprava je namenjena izključno za stacionarno uporabo.

### SK Používanie v súlade s účelom

Chladiaca jednotka je určená pre chladenie uzavretých rozvádzačových skriň ako aj iných zariadení, ktoré sú v súlade s normou DIN EN 61000-3-2. Iné použitie nie je prípustné. Zariadenie nesmie byť inštalované a používané vo verejne dostupných priestoroch (viď DIN EN 60335-2-40, odstavce 3.119).  
Zariadenie je určené na stacionárnu prevádzku.

### PT Utilização

A unidade de refrigeração destina-se exclusivamente à refrigeração gabinetes de controle fechados, bem como para uso profissional de acordo com a DIN EN 61000-3-2. Qualquer outro uso não é apropriado e não é permitido.  
O aparelho não deve ser instalado e operado em locais acessíveis ao público em geral (consulte a norma DIN EN 60335-2-40, seção 3.119).  
O aparelho foi projetado apenas para o uso em instalação fixa.

### DE IT-Sicherheitshinweise

Produkte, Netzwerke und Systeme müssen vor unberechtigten Zugriffen geschützt werden, um die Verfügbarkeit, die Vertraulichkeit und die Integrität von Daten zu gewährleisten. Dies muss durch organisatorische und technische Maßnahmen umgesetzt werden. Für erhöhte Sicherheitsanforderungen empfiehlt Rittal die folgenden Maßnahmen zu beachten. Darüber hinaus finden Sie weiterführende Informationen auf den Webseiten des Bundesamts für Sicherheit in der Informationstechnik:

### Maßnahmen für Produkte und Systeme

#### Produkte und Systeme nicht ungeschützt in öffentliche Netzwerke einbinden

- Stellen Sie sicher, dass das System nur in geschützten Netzwerken betrieben wird.

#### Firewall einrichten

- Zum Schutz Ihrer Netzwerke und der eingebundenen Produkte und Systeme vor externen Einflüssen richten Sie eine Firewall ein.
- Zur Segmentierung eines Netzwerks oder zur Isolierung einer Steuerung verwenden Sie ebenso eine Firewall.

#### Defense-in-Depth-Mechanismen in der Planungsphase berücksichtigen

- Berücksichtigen Sie bei Ihrer Anlagenplanung Defense-in-Depth-Mechanismen.
- Defense-in-Depth-Mechanismen („Tiefenverteidigung“) umfassen mehrere Ebenen von aufeinander abgestimmten Sicherheitsmaßnahmen.

#### Zugangsberechtigungen beschränken

- Beschränken Sie die Zugangsberechtigungen zu Netzwerken und Systemen auf die Personen, die eine Berechtigung benötigen.

#### Zugriffe absichern

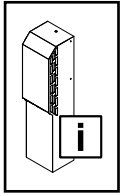
- Verwenden Sie nicht die Standard-Passwörter, sondern nur sichere lange Passwörter, die Zahlen, große/kleine Buchstaben, Zeichen und keine Wiederholungen beinhalten.
- Erzeugen Sie möglichst zufällige Passwörter mit einem Passwort-Manager.

#### Aktuelle Firmware-Version verwenden

- Stellen Sie sicher, dass auf allen Geräten die aktuelle Rittal Firmware verwendet wird.
- Die aktuelle Firmware und ein Programm zum Updaten der Firmware werden auf den jeweiligen Produktseiten im Internet zum Download bereitgestellt.
- Bei neuen Firmware-Versionen sind die jeweiligen Release-Notes zu beachten.

#### Aktuelle Sicherheits-Software verwenden

- Für die Identifizierung und Eliminierung von Sicherheitsrisiken wie Viren, Trojanern und anderer Schad-Software, sollte auf allen PCs und Smartphones eine Sicherheits-Software installiert sein und auf aktuellem Stand gehalten werden.
- Nutzen Sie Whitelist-Tools zur Überwachung des Gerätekontexts.
- Zur Überprüfung der Kommunikation Ihrer Anlage, nutzen Sie ein Intrusion-Detection-System.



## Warn- und Sicherheitshinweise Safety instructions and warnings Consignes de sécurité



### Regelmäßige Bedrohungsanalyse durchführen

- Rittal empfiehlt Ihnen regelmäßig Bedrohungsanalysen durchzuführen.
- Durch Bedrohungsanalysen können Sie feststellen, ob Ihre getroffenen Maßnahmen wirksam sind.

### USB-Schnittstelle gegen Zugriff schützen

- USB-Schnittstellen benötigen Schutz gegen physischen Zugriff. Stellen Sie sicher, dass unbefugte Personen keinen Zugriff auf USB-Schnittstellen haben.
- Bei einem unbefugten Zugriff auf USB-Schnittstellen sind ggf. sensible Daten für jeden auslesbar.

### EN IT safety instructions

To ensure the availability, confidentiality and integrity of data, products, networks and systems must be protected against unauthorised access. Such protection can be achieved only with organisational and technical measures.

To satisfy the increased safety requirements, Rittal recommends the observance of the following measures. Furthermore, more detailed information can be found on the websites of Bundesamt für Sicherheit in der Informationstechnik (Federal Office for IT Security – BSI).

### Measures for products and systems

#### Embed products and systems not in public networks.

- Do not operate the system directly in the Internet, but only in internal networks protected externally with firewalls.

#### Configure the firewall

- To protect your networks, and the embedded products and systems against external effects, configure a firewall.
- Also deploy a firewall for segmentation of a network or to isolate a controller.

#### Consider defence-in-depth mechanisms during the planning phase

- Consider defence-in-depth mechanisms for your system planning.
- Defence-in-depth mechanisms cover several levels of mutually coordinated security measures.

#### Restrict access authorisations

- Restrict access authorisations to networks and systems to only persons that need an authorisation.

#### Protect accesses

- Do not use the default passwords; instead, use secure, long passwords containing numbers, a mix of upper case and lower case letters, symbols and no repetitions.
- Create random passwords with a password manager.

#### Deploy the current firmware version

- Ensure that the current Rittal firmware is deployed on all devices.
- The firmware can be downloaded from the associated product pages in the Internet.
- Observe the associated Release Notes for new firmware versions.

#### Deploy current security software

- To identify and eliminate security threats, such as viruses, trojans and other malicious software, security software should be installed on all PCs and kept upto-date.
- Deploy whitelist tools to monitor the device context.
- Deploy an intrusion-detection system to validate the communication of your system.

#### Perform regular threat analyse

- Rittal recommends that you perform regular threat analyses.
- The threat analyses allow you to determine whether your adopted measures are effective.

#### Protect USB ports against access

- USB ports must be protected against physical access. Ensure that no unauthorised persons have access to USB ports.
- Sensitive data can be read for an unauthorised access to USB ports.

### FR Consignes de sécurité informatique

Les produits, réseaux et systèmes doivent être protégés contre tout accès non autorisé pour garantir la disponibilité, la confidentialité et l'intégrité des données.

Cela doit être mis en œuvre via des mesures organisationnelles et techniques. Pour des exigences de sécurité élevées, Rittal recommande le respect des mesures suivantes. Des informations complémentaires figurent en outre sur le site Internet du bureau fédéral pour la sécurité des technologies informatiques.

### Mesures pour les produits et systèmes

#### Ne pas connecter les produits et systèmes sans protection à des réseaux publics

- S'assurer que le système est exploité uniquement au sein de réseaux protégés.

#### Installer un pare-feu

- Installer un pare-feu pour protéger vos réseaux ainsi que vos produits et systèmes connectés contre tout accès externe.
- Utiliser également un pare-feu pour la segmentation d'un réseau ou pour l'isolation d'un système de contrôle.

#### Tenir compte des mécanismes de défense en profondeur dès la phase d'études

- Tenir compte des mécanismes de défense en profondeur lors de la conception de votre installation.
- Les mécanismes de défense en profondeur englobent plusieurs niveaux de mesures de sécurité coordonnées.

#### Limiter les autorisations d'accès

- Limiter les autorisations d'accès aux réseaux et systèmes aux personnes qui disposent une autorisation.

#### Sécuriser les accès

- N'utilisez pas les mots de passe standard mais uniquement des mots de passe suffisamment longs qui contiennent des chiffres, des lettres majuscules / minuscules, des signes et pas de répétitions.
- Créer si possible des mots de passe aléatoires à l'aide d'un gestionnaire de mots de passe.

#### Utiliser la dernière version disponible du logiciel

- S'assurer que le logiciel Rittal utilisé sur tous les appareils est la version la plus actuelle.
- Le logiciel est disponible pour téléchargement sur les pages produit correspondantes sur Internet.
- Tenir compte des notes de mise à jour correspondantes pour de nouvelles versions de logiciel.

#### Utiliser le logiciel de sécurité le plus à jour

- Pour identifier et éliminer les risques liés à sécurité comme les virus, chevaux de Troie et autre logiciel pernicieux, il est indispensable d'installer un logiciel de sécurité sur tous les PC et smartphones et le tenir à jour.
- Utiliser les outils de liste blanche pour surveiller le contexte de l'appareil.
- Utiliser un système de détection d'intrusion pour vérifier la communication de votre installation.

#### Effectuer régulièrement une analyse de menace

- Rittal vous recommande d'effectuer régulièrement des analyses des menaces potentielles qui vous permettront d'évaluer l'efficacité des mesures prises.

#### Protéger l'interface USB contre tout accès

- Les interfaces USB nécessitent une protection contre l'accès physique. S'assurer que seules les personnes autorisées ont accès aux interfaces USB.
- Des données sensibles peuvent éventuellement être accessibles via les interfaces USB.

# Contents

EN

## Contents

1	Notes on documentation .....	9	7	Inspection and maintenance .....	24
1.1	CE labelling .....	9	7.1	General .....	24
1.2	Storing the documents .....	9	7.2	Cleaning the filter mat .....	24
1.3	Symbols used in these operating instructions .....	9	7.3	Compressed air cleaning .....	25
2	Safety instructions .....	9	8	Storage and disposal .....	27
3	Device description .....	9	9	Technical specifications .....	28
3.1	Functional description .....	10	10	Appendix: Cut-out and hole sizes ..	33
3.1.1	How it works .....	10			
3.1.2	Control .....	10			
3.1.3	Bus mode .....	10			
3.1.4	Safety equipment .....	10			
3.1.5	Condensation .....	11			
3.1.6	Filter mats .....	11			
3.1.7	Door limit switch .....	11			
3.1.8	Additional interface X3 .....	11			
3.2	Intended use, foreseeable misuse .....	11			
3.3	Scope of supply .....	12			
4	Assembly and connection .....	12			
4.1	Choosing the installation site .....	12			
4.2	Assembly instructions .....	12			
4.2.1	General .....	12			
4.2.2	Layout of the electronic components in the enclosure .....	12			
4.3	Fitting the cooling unit .....	13			
4.3.1	Cutting out on the enclosure .....	13			
4.3.2	External mounting of the cooling unit .....	13			
4.4	Notes on electrical installation .....	13			
4.4.1	Connection data .....	14			
4.4.2	Overvoltage protection and supply line load .....	14			
4.4.3	Door limit switch .....	14			
4.4.4	Notes on the flicker standard .....	14			
4.4.5	Potential equalization .....	14			
4.5	Carrying out the electrical installation .....	14			
4.5.1	Bus connection (only in conjunction with several units with an e-Comfort controller) .....	14			
4.5.2	Connection X3 for serial interface .....	14			
4.5.3	Installing the power supply .....	15			
5	Commissioning .....	16			
6	Operation .....	16			
6.1	Control using the e-Comfort controller .....	16			
6.1.1	Properties .....	16			
6.1.2	Eco mode .....	17			
6.1.3	Launching test mode .....	17			
6.1.4	General information about programming .....	17			
6.1.5	Editable parameters .....	19			
6.1.6	Programming overview .....	20			
6.1.7	Defining system messages for evaluation .....	21			
6.1.8	Setting the master/slave identifier .....	21			
6.1.9	Evaluating system messages .....	22			
6.1.10	Reset the e-Comfort controller .....	24			



## 1 Notes on documentation

These assembly instructions are aimed at tradespersons who are familiar with assembly and installation of the cooling unit, and at trained specialists who are familiar with operation of the cooling unit.

### 1.1 CE labelling

Rittal GmbH & Co. KG confirms the conformity of the cooling unit with the European Union's Machinery Directive 2006/42/EC and EMC Directive 2014/30/EC. A corresponding declaration of conformity has been issued. This can be found at the end of this document or on the Rittal homepage.



### 1.2 Storing the documents

The assembly and operating instructions as well as all other applicable documents are an integral part of the product. They must be issued to everyone who works with the unit and must always be available and on hand for operating and maintenance personnel.

### 1.3 Symbols used in these operating instructions

The following symbols are used in this documentation:



#### **Danger!**

**A dangerous situation in which failure to comply with the instructions will result in death or severe injury.**



#### **Warning!**

**A dangerous situation which may cause death or serious injury if the instructions are not followed.**



#### **Caution!**

**A dangerous situation which may lead to (minor) injuries if the instructions are not followed.**



#### **Note:**

Important notices and indication of situations which may result in material damage.

- This symbol indicates an "action point" and shows that you should perform an operation or procedure.

## 2 Safety instructions

Please observe the following general safety instructions when assembling and operating the unit:

- Assembly, installation and servicing may only be performed by properly trained specialists.
- Screw the enclosure to the floor to prevent it from tipping over when the cooling unit is installed.
- Do not obstruct the air inlet and air outlet of the cooling unit inside and outside the enclosure (see also section 4.2.2 "Layout of the electronic components in the enclosure").
- To ensure problem-free opening and closing of the enclosure door, use a ride-up door roller. This raises the door slightly and balances out the weight of the cooling unit, to prevent buckling of the door and associated seal problems.
- The heat loss of the components installed in the enclosure must not exceed the specific useful cooling output of the cooling unit.
- Cooling units must be transported in an upright position and protected from tipping over.
- Shipping braces must be used when transporting a unit that has already been mounted (on the enclosure). A wooden structure made from square timbers or boards to support the cooling unit at the bottom is suitable for this purpose. The pallet should be big enough to prevent the enclosure and cooling unit overturning. If the cooling unit is mounted on a door, ensure the door is kept closed during transport.
- Use only original spare parts and accessories.
- Do not make any changes to the cooling unit other than those described in these instructions or associated instructions.
- Risk of burn injuries! On cooling units with automatic condensate evaporation, the surface of the thermal element will get very hot during operation, and will remain so for some time afterwards.
- The mains connector of the cooling unit must only be connected and disconnected with the system de-energized. Connect the protective device specified on the rating plate.

## 3 Device description

Depending on the model chosen, your cooling unit may vary in appearance from the illustrations contained in these instructions. However, the functions are identical in principle.

# 3 Device description

EN

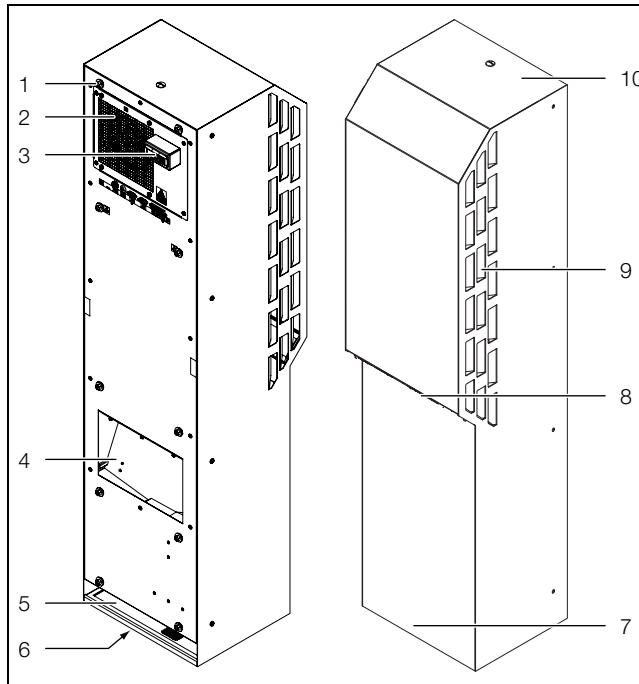


Fig. 1: Device description

**Key**

- 1 Blind rivet nut
- 2 Evaporator fan
- 3 Display
- 4 Evaporator air outlet
- 5 Metal air filter
- 6 Air inlet external circuit
- 7 Condensate discharge
- 8 Metal air filter
- 9 Louvred grille for condenser air
- 10 Housing

### 3.1 Functional description

Enclosure cooling units are designed to dissipate heat from enclosures by cooling the air inside the enclosure and so protect the temperature-sensitive components. They are built into the side or rear panel or into the door of the enclosure.

#### 3.1.1 How it works

The cooling unit (compression refrigeration system) is comprised of four main components (fig. 2): the evaporator (1), the coolant compressor (2), the condenser (3), and the control or expansion valve (4), which are connected by suitable pipework. This circuit is filled with a readily boiling substance, the refrigerant. The Ozone Depletion Potential (ODP) of the refrigerant is 0, making it very ecofriendly. A filter dryer (5) which is integrated into the hermetically sealed cooling circuit provides effective protection against moisture, acid, dirt particles, and foreign bodies within the cooling circuit.

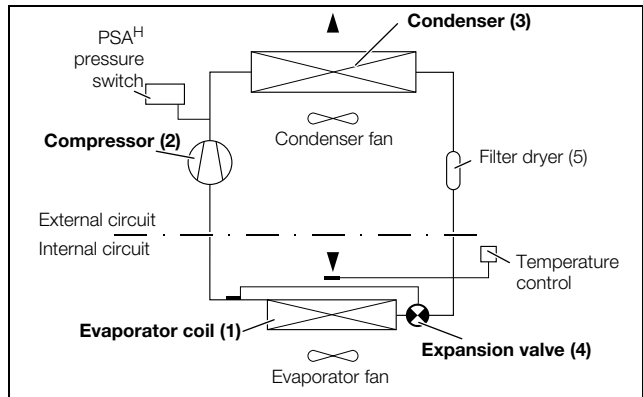


Fig. 2: Cooling circuit

In the evaporator coil (1), the liquid coolant is converted to a gaseous state. The energy needed for this purpose is taken from the enclosure air in the form of heat, which has the effect of cooling the enclosure air. In the compressor (2), the coolant is heavily compressed, so that it achieves a higher temperature inside the condenser (3) than the ambient air. This means that excess heat may be emitted to the ambient air via the surface of the condenser, as a result of which the temperature of the coolant drops and it is converted back into liquid. It is re-injected into the evaporator coil via a thermostatic expansion valve (4), which causes it to cool down further, and is then once again able to absorb the energy from the enclosure air in the evaporator coil. The whole cycle begins again.

#### 3.1.2 Control

Rittal enclosure cooling units are fitted with a comfort controller for setting the functions of the cooling unit (display plus extended functions, see section 6 "Operation").

#### 3.1.3 Bus mode

The serial unit interface X2 allows you to create a bus connection with up to ten cooling units using the master-slave cable (shielded, four-wire cable, Model No. 3124.100). This allows you to implement the following functions:

- Parallel unit control (the cooling units in the network can be switched on and off simultaneously)
- Parallel door status message ("door open")
- Parallel collective fault message

Data is exchanged via the master-slave connection. During commissioning, assign an address to each unit that also includes the identifier "master" or "slave".

#### 3.1.4 Safety equipment

- In the cooling cycle, the cooling unit has a tested pressure-operated switch to EN 12 263 which is set to maximum PS (admissible pressure); this operates via an automatic reset device whenever the pressure drops again.
- Temperature monitoring prevents the evaporator coil from icing over. If there is a risk of icing, the compress-

sor switches itself off and automatically switches itself back on again at higher temperatures.

- The refrigerant compressor and the fans are equipped with thermal winding shields to protect against excess current and excess temperatures.
- In order to allow a reduction of pressure inside the compressor and hence a safe restart, once it has been switched off (e.g. upon reaching the set temperature via the door limit switch function or via de-energizing), the device will switch back on with a delay of 180 seconds.
- The device has floating contacts on the connection pins (terminals 3 – 5), via which system messages from the device may be polled, e.g. using a PLC (2 x normally open contacts e-Comfort controller).

### 3.1.5 Condensation

At high levels of humidity and low temperatures inside the enclosure, condensation may form on the evaporator coil.

The cooling units (except 3303.xxx) have automatic, electric condensate evaporation. The thermal component used for this purpose is based on self-regulating PTC technology. Condensate arising on the evaporator coil is collected in a tank in the external circuit of the cooling unit, and partially evaporated via the airflow. When the water level rises, the water enters the PTC thermal component and is evaporated (through-flow heater principle). The water vapor streams out of the cooling unit with the airflow from the external fan. The PTC thermal component is permanently connected and has no switch point. It is protected against shortcircuits with miniature fuses (F1.1, F1.2). If the fuse has tripped, any condensation is drained off via the safety overflow.

### 3.1.6 Filter mats

The cooling unit condenser is finished all over with a dirt-repelling, easy-to-clean hydrophobic RiNano coating. These UL listed, type NEMA 12/3R/4 models only accept Rittal's metal filters. See section 7.2 "Cleaning the filter mat" for additional information regarding filters. These filters can be cleaned with suitable detergents and reused.

### 3.1.7 Door limit switch

The cooling unit may be operated with a floating door limit switch connected. The door limit switch is not included with the supply (available as an accessory, Model No. PS 4127.010).

The door limit switch function causes the fans and the compressor in the cooling unit to be switched off after approximately 15 seconds when the enclosure door is opened (contacts 1 and 2 closed). This prevents the formation of condensation inside the enclosure while the enclosure door is open. In order to prevent damage to the unit, it is equipped with an ON delay: The evaporator fan cuts back in with a delay of approximately 15 seconds after the door has been closed, while the condens-

er fan and compressor switch on after approximately 3 minutes.



Note:

No external voltage must be applied to the door contacts (terminals 1 and 2).

### 3.1.8 Additional interface X3



Note:

The electrical signals at the interface are of an extra-low voltage (not extra-low safety voltages to EN 60 335).

For incorporating the cooling unit into superordinate monitoring systems, the IoT interface, together with the Blue e IoT adaptor, can be connected to the 9-pole SUB-D connector (available as accessories: IoT interface Model No. 3124.300, Blue e IoT adaptor Model No. 3124.310).

### 3.2 Intended use, foreseeable misuse

The cooling unit is intended exclusively for cooling closed control cabinets as well as for professional use in accordance with DIN EN 61000-3-2. Any other use is not permitted.

- The unit must not be installed and operated in locations which are accessible to the general public (see DIN EN 60335-2-40, paragraph 3.119).
- The unit is designed solely for stationary use.

The cooling unit is state of the art and built according to recognised safety regulations. Nevertheless, improper use can pose a threat to the life and limb of the user or third parties, or result in possible damage to the system and other property.

Consequently, the cooling unit must only be used properly and in a technically sound condition! Any malfunctions which impair safety should be rectified immediately.

Intended use also includes the observance of the documentation provided, and compliance with the inspection and maintenance conditions.

Rittal GmbH & Co. KG is not liable for any damage which may result from failure to comply with the documentation provided. The same applies to failure to comply with the valid documentation for any accessories used.

Inappropriate use may be dangerous. Examples of inappropriate use include:

- Use of the cooling unit over long periods with the enclosure open.
- Use of the cooling unit when it is standing on the ground.
- Use of impermissible tools.
- Improper operation.

# 4 Assembly and connection

EN

- Improper rectification of malfunctions.
- Use of accessories not approved by Rittal GmbH & Co. KG.

### 3.3 Scope of supply

Please check the delivery for completeness. Each unit is supplied with assembly material, technical documentation, sealing tape and connectors.

## 4 Assembly and connection

### 4.1 Choosing the installation site

When choosing the installation site for the enclosure, please observe the following:

- The site for the enclosure, and hence the arrangement of the cooling unit, must be carefully selected so as to ensure good ventilation (distances between units, distances between the unit and the wall and the ground must be at least 7 7/8" (200 mm) in each case).
- The cooling unit must be installed and operated in a vertical position (maximum deviation: 2°).
- The internal and ambient temperature must be within the limits specified on the rating plate.
- The mains connection data as stated on the rating plate of the unit must be guaranteed.
- The site must be free from excessive dirt and moisture.



Note:

These models are UL Type NEMA 12/3R/4 (outdoor) approved only as installed in the **external** mounting position. See section 4.3 "Fitting the cooling unit".

### 4.2 Assembly instructions

#### 4.2.1 General

- Check the packaging carefully for signs of damage. Traces of oil on damaged packaging are an indication of refrigerant loss and leakages. Packaging damage may be the cause of a subsequent functional failure.
- The enclosure must be sealed on all sides (IP 56 or NEMA 12/3R/4). Increased condensation will occur if the enclosure is not airtight.
- In order to avoid excessive condensation inside the enclosure, we recommend installing a door limit switch (e.g. PS 4127.010) which deactivates the cooling unit when the enclosure door is opened (see section 3.1.7 "Door limit switch").

#### 4.2.2 Layout of the electronic components in the enclosure



##### Caution! Risk of condensation!

When arranging the components inside the enclosure, please ensure that the cold airflow from the cooling unit is not directed at active components. Please also ensure that the cold airflow is not directed at the warm exhaust airflow from active components such as converters. This may lead to an air shortcircuit and therefore prevent adequate climate control, or may even cause the cooling unit's internal safety devices to cease cooling operation.

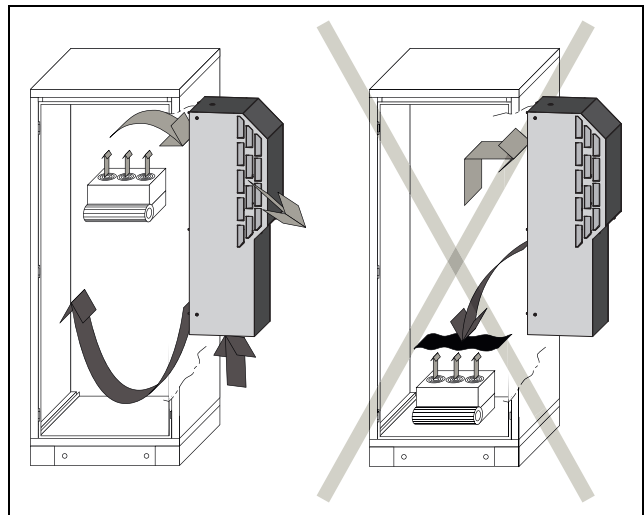


Fig. 3: Never direct the cold airflow at active components

Air diversion components are available as accessories. It is important to ensure even air circulation inside the enclosure. Under no circumstances should air inlet and outlet openings be obstructed, otherwise the cooling performance of the unit will be reduced. Ensure the distance "x" (see fig. 4) from electronic components and other installed enclosures so that the required air circulation is not obstructed and prevented.

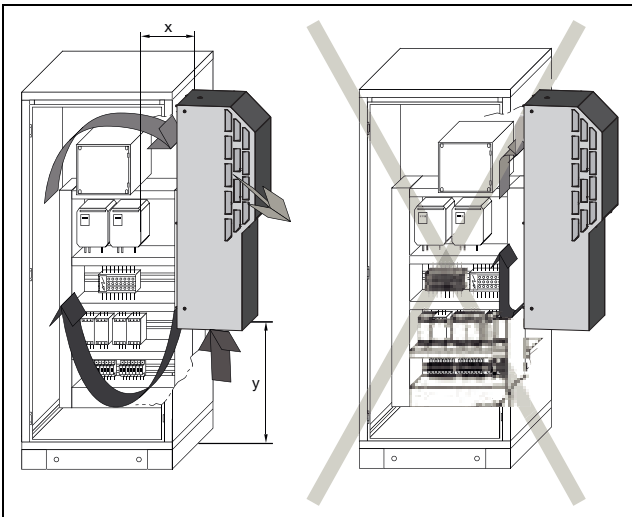


Fig. 4: Air circulation inside the enclosure

Model No.	Dimension x [mm]	Dimension y [mm]
3303.xxx	131	200
3304.xxx/3305.xxx	162	200
3329.xxx	184	200

Tab. 1: Dimension "x"

### 4.3 Fitting the cooling unit

The enclosure cooling unit may be externally mounted on the enclosure.

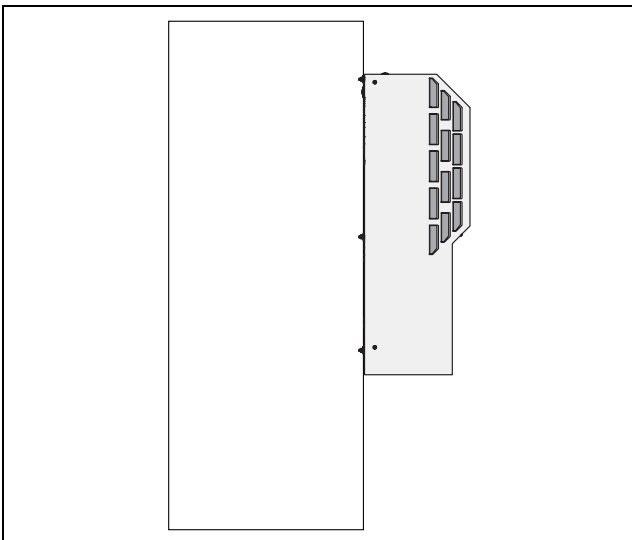


Fig. 5: Installation method

To this end, cut the side panel or door of the enclosure as per the drilling template included with the supply, and drill the relevant holes.

#### 4.3.1 Cutting out on the enclosure

- Stick the supplied drilling template onto the side panel or door of the enclosure using adhesive tape.

There are dimensioning lines on the drilling template for your cooling unit (see section 10 "Appendix: Cut-out and hole sizes").



#### Risk of injury!

**Carefully deburr all drilled holes and cut-outs to prevent injuries caused by sharp edges.**

- Mark, drill and deburr the holes.
- Make the cut-outs including the line width as per the drilling template.
- Deburr the cut-outs.

#### 4.3.2 External mounting of the cooling unit

- Cut the supplied sealing tape to the correct length and stick it carefully along the back of the unit so that no gaps are left at the joints. The joints should be located at the bottom of the unit.

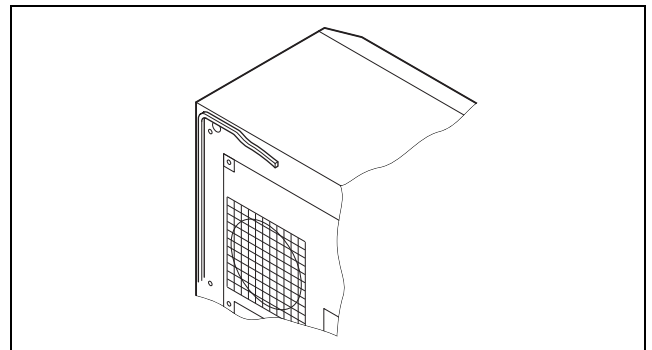


Fig. 6: Attach the sealing tape

- Screw the supplied threaded studs into the blind nuts on the rear of the unit.
- Secure the unit using the supplied washers and nuts.

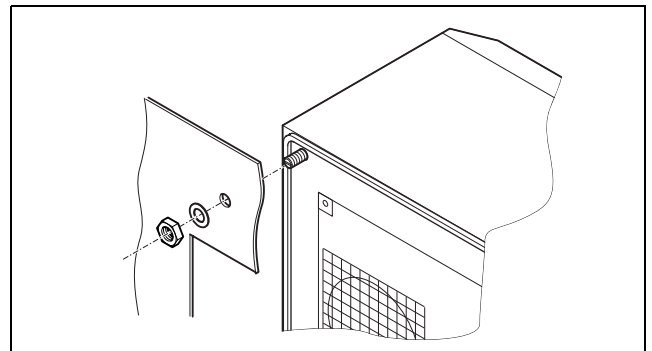


Fig. 7: Secure the cooling unit

### 4.4 Notes on electrical installation

When performing the electrical installation, it is important to observe all valid national and regional regulations as well as the provisions of the responsible power supply company. Electrical installation must only be carried out by a qualified electrician who is responsible for compliance with the existing standards and regulations.

# 4 Assembly and connection

EN

## 4.4.1 Connection data

- The connected voltage and frequency must correspond to the values stated on the rating plate.
- The cooling unit must be connected to the mains via an all-pin isolating device, which ensures at least 1/8" (3 mm) contact opening when switched off.
- No additional temperature control may be connected upstream of the unit at the supply end.

## 4.4.2 Overvoltage protection and supply line load

- The unit does not have its own overvoltage protection. Measures must be taken by the operator at the supply end to ensure effective lightning and overvoltage protection. The mains voltage must not exceed a tolerance of  $\pm 10\%$ .
- In accordance with IEC 61 000-3-11, the unit is intended solely for use at sites with a continuous current-carrying capacity (incoming mains power supply) of more than 100 A per phase and with a supply voltage of 400/230/115 V. If necessary, the power supply company must be consulted to ensure that the continuous current-carrying capacity at the point of connection to the public grid is sufficient for connection of such a unit.
- The fans and compressors in single- and three-phase units are intrinsically safe (thermal winding protection). The same also applies to the transformer versions of types 3304.5x8, 3305.5x8 and 3329.5x8 and to special-voltage units which are likewise equipped with a transformer.
- Install the time delay fuse specified on the rating plate to protect the cable and equipment from short-circuits. Select a suitable circuit-breaker in accordance with the information specified on the rating plate: Set it to the minimum specified value. This will achieve the best short-circuit protection for cables and equipment.  
Example: Specified setting range 6.3 – 10 A; set to 6.3 A.

## 4.4.3 Door limit switch

- Each door limit switch must only be assigned to one cooling unit.
- Several door limit switches may be connected in parallel and operated on one cooling unit.
- The minimum cross-section for the connection cable is 22 AWG for a cable length of 6.5' (2 m).
- The line resistance to the door limit switch must not exceed a maximum of 50  $\Omega$ .
- The door limit switch only supports a floating connection; no external voltages.
- The contact of the door limit switch must be closed when the door is open.

The safety extra-low voltage for the door limit switch is provided by the internal power pack: Current approx. 30 mA DC.

- Connect the door limit switch to terminals 1 and 2 of the connector.

## 4.4.4 Notes on the flicker standard

The flicker limits specified in standard EN 61 000-3-3 or -3-11 are adhered to, provided the supply impedance is less than approx. 1.5  $\Omega$ .

Where necessary, the unit operator should measure the connected impedance or consult the responsible power supply company. If there is no way of influencing the supply impedance and sensitive installed components (e.g. BUS) are subjected to interference, a line reactor or starting-current limiting device should be connected upstream of the cooling unit to restrict the startup current of the cooling unit.

## 4.4.5 Potential equalization

If, for EMC reasons, the unit is to be integrated into the existing potential equalization system at the customer, a conductor with a larger nominal cross section can be connected to the potential equalization connection point (attachment points) on wallmounted cooling units. According to the standard, the PE conductor in the mains connection cable is not classified as an equipotential bonding conductor.

## 4.5 Carrying out the electrical installation

### 4.5.1 Bus connection (only in conjunction with several units with an e-Comfort controller)

When using several cooling units, the serial device interface X2 can be used to connect up to ten cooling units with the bus cable (Model No. 3124.100).



Note:

The electrical signals at the X2 interface are of an extra-low voltage (not extra-low safety voltages to EN 60 335-1).

When interconnecting, please note the following:

- De-energize the cooling units to be connected.
- Ensure proper electrical insulation.
- Make sure the cables are not laid in parallel to power lines.
- Make sure that the lines are short.



**Caution!**

**Regarding the last slave unit in the group, do not, under any circumstances, connect the remaining socket of the Y cable 3124.100 into interface X3 of the cooling unit!**

### 4.5.2 Connection X3 for serial interface

For incorporating the cooling unit into superordinate monitoring systems, the IoT interface, together with the Blue e IoT adaptor, can be connected to the 9-pole SUB-D connector (available as accessories: IoT interface Model No. 3124.300, Blue e IoT adaptor Model No. 3124.310).

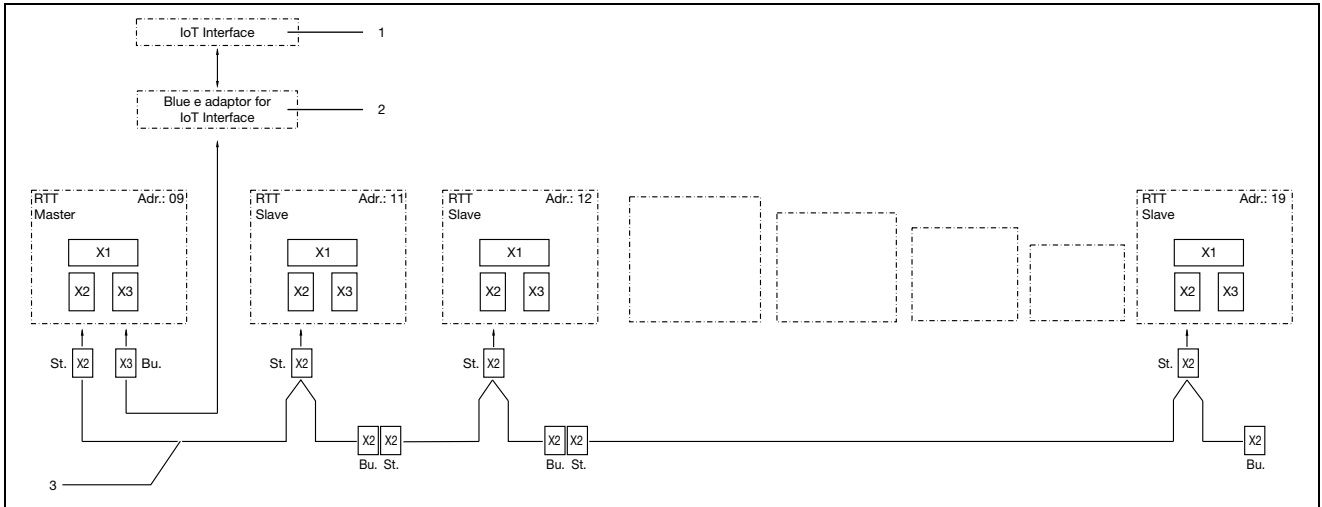


Fig. 8: Connection example: Master-slave operation

**Legend**

- |   |                                   |
|---|-----------------------------------|
| 1 IoT Interface (Model No. 3124.300)                    | X3 Serial interface Sub-D, 9-pole |
| 2 Blue e adaptor for IoT Interface (Model No. 3124.310) | St. Sub-D connector, 9-pole       |
| 3 Master-slave bus cable (Model No. 3124.100)           | Bu. Sub-D jack, 9-pole            |
| RTT Rittal TopTherm cooling units                       | Adr. Address                      |
| X1 Supply connection/door limit switch/alarms           |                                   |
| X2 Master/slave connection Sub-D, 9-pole                |                                   |

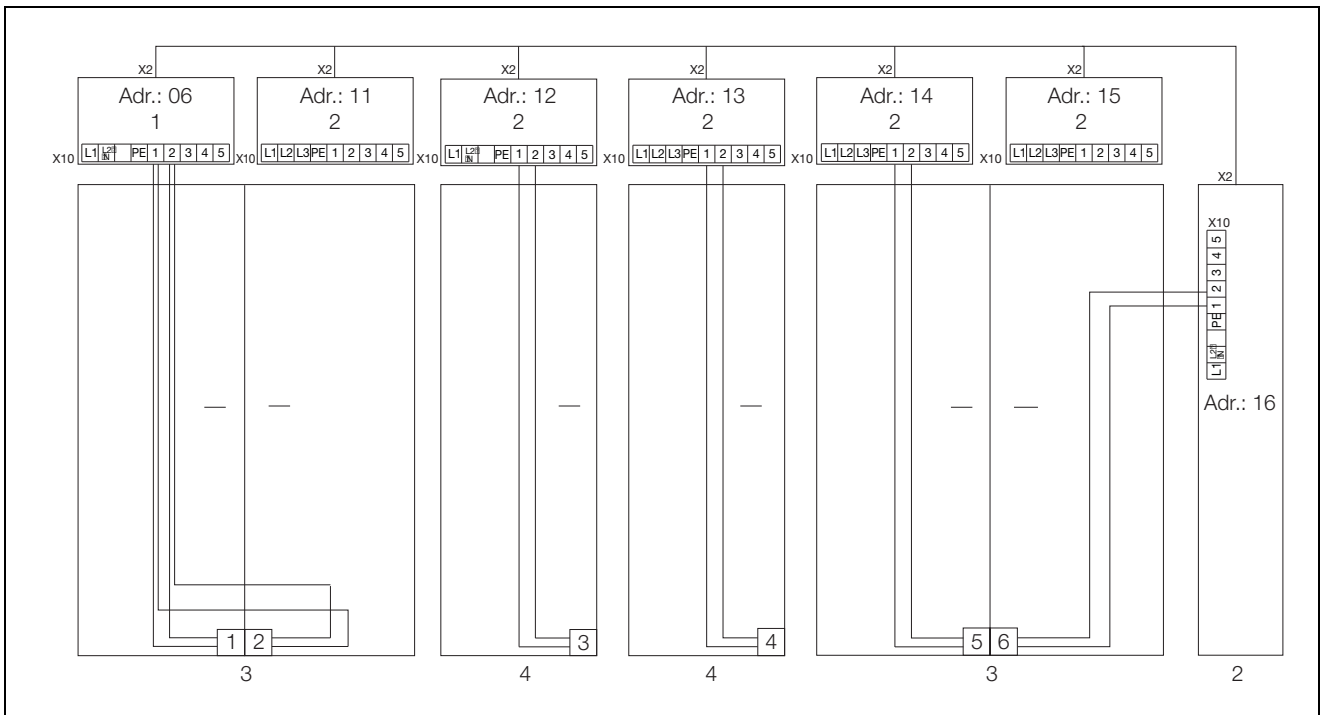


Fig. 9: Connection example: Door limit switch and master-slave operation

**Legend**

- |   |
|---|
| 1 Master cooling unit                           |
| 2 Slave cooling units                           |
| 3 2-door enclosure with two door limit switches |
| 4 Enclosure with door limit switch              |

**4.5.3 Installing the power supply**

- Complete the electrical installation by following the wiring plan on the rear of the cooling unit (see fig. 1 on page 10).
- If you would like the system messages from the cooling unit to be evaluated via the system message relay,

# 5 Commissioning

EN

you should also connect a suitable low-voltage cable to connection clamps 3 – 5.

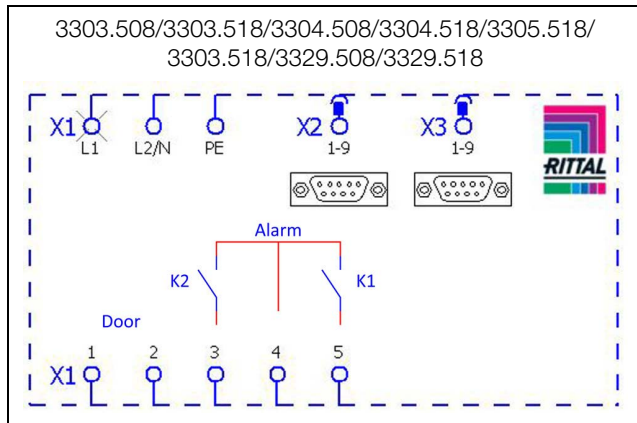


Fig. 10: Electrical wiring plan no. 1

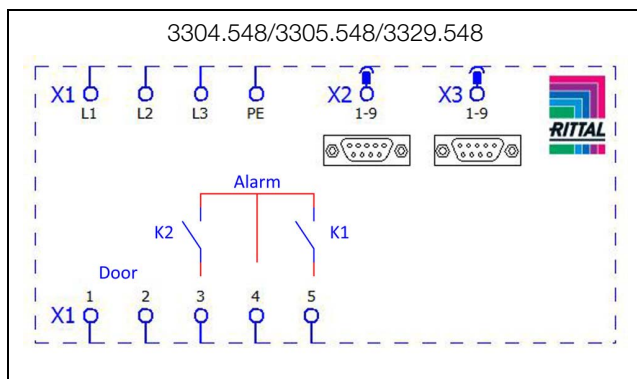


Fig. 11: Electrical wiring plan no. 2

### Legend

- X1 Main terminal strip
- X2 Master/slave connection
- X3 Optional interface
- K1 Relay collective fault 1
- K2 Relay collective fault 2
- Door Door limit switch (without door limit switch: terminal 1, 2 open)



**Note:**  
For technical data refer to the rating plate.

AC $\cos \phi = 1$	DC L/R = 20 ms
I max. = 2 A U max. = 250 V	I min. = 100 mA U max. = 200 V U min. = 18 V I max. = 2 A

Tab. 2: Contact data

## 5 Commissioning



### Caution! Risk of damage!

The oil must collect in the compressor in order to ensure effective lubrication and cooling. Do not operate the cooling unit for at least 30 min. after assembling the equipment.

- Once all the assembly and installation work is complete, switch on the power supply to the cooling unit. The cooling unit starts running:
  - The software version of the controller first appears for approx. 2 sec. Then the enclosure internal temperature appears in the 7-segment display.

You can now make your individual settings on the unit, e.g. set the temperature or assign the network identifier, etc. (refer to section 6 "Operation").

## 6 Operation

You can operate the cooling unit using the controller on the rear of the device (fig. 1, item 3, page 10)

### 6.1 Control using the e-Comfort controller

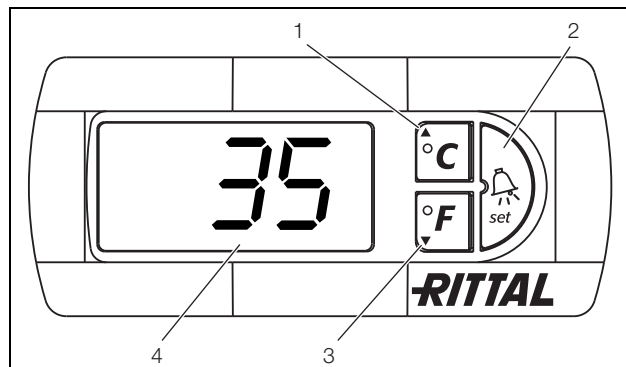


Fig. 12: e-Comfort controller

#### Key

- 1 Programming button, also display of the set temperature unit (degrees Celsius)
- 2 Set button
- 3 Programming button, also display of the set temperature unit (degrees Fahrenheit)
- 4 7-segment display

#### 6.1.1 Properties

- Rated operating voltage:
  - 115 V or
  - 230 V or
  - 400/460 V, 3-phase, supports multiple voltages without rewiring
- Integral start-up delay and door limit switch function
- Monitoring of all motors (compressor, condenser fan, evaporator fan)
- Phase monitoring for three-phase units
- Master-slave function with a maximum of ten units.



One device functions as a master unit. Once the set temperature is reached by one of the connected slave devices or in the event of the door limit switch function, the affected slave unit will report to the master unit that switches all the other cooling units on or off as required.

- Switching hysteresis: adjustable from 2 – 10 K, preset to 5 K, where 5 K is the hysteresis value.
- Visualisation of the current internal enclosure temperature and all error messages in the 7-segment display
- The IoT interface (Model No. 3124.300) together with the Blue e IoT adaptor (Model No. 3124.310) can be incorporated into superordinate remote monitoring systems.

The cooling unit operates automatically, i.e. after switching on the power supply, the evaporator fan (see fig. 2) will run and circulate the internal enclosure air. The compressor and condenser fan are regulated by the e-Comfort controller. The e-Comfort controller has a 7-segment display (fig. 12, item 4). After switching on the power supply, the current software version initially appears on this display for approx. 2 seconds, followed by a preset option (e.g. t10) or the temperature.

In regular operation, the display shows both the temperature (in degrees Celsius or Fahrenheit – users may switch between the two) and any error messages.

The current internal enclosure temperature is usually displayed permanently. In the event of an error message, this alternates with the temperature display.

The unit is programmed using buttons 1 – 3 (fig. 12). The relevant parameters also appear in the display.

### 6.1.2 Eco mode

All Rittal TopTherm cooling units with e-Comfort controller from firmware 3.2 have the energy-saving eco mode, which is disabled in the delivered state of UL Type 12/3R/4 cooling units. The evaporator fan runs continuously.

If required, eco mode can be enabled on the control display. For this purpose switch the parameter from 0 to 1 in the programming level (see tab. 3).

The eco mode is used to save energy in the heat exchanger if there is no thermal load, or there is a low thermal load in the enclosure (e. g. standby operation, no production or weekend). During this process the evaporator fan in the internal circuit is switched off as appropriate if the actual internal enclosure temperature drops to 10 K below the specified setpoint temperature. To ensure the internal temperature is reliably measured during this process, the fan starts cyclically for 30 sec. (see fig. 13). If the internal temperature drops to a range 5 K below the setpoint set again, the fan switches back to continuous operation.

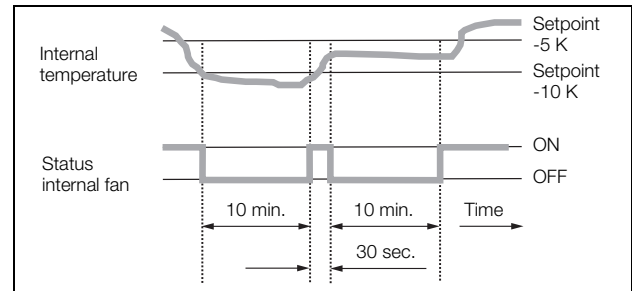


Fig. 13: Eco mode

### 6.1.3 Launching test mode

The e-Comfort controller is equipped with a test function whereby the cooling unit commences cooling operation independently of the set temperature or door limit switch function.

- Simultaneously press buttons 1 and 2 (fig. 12) for at least 5 sec.

The cooling unit will commence operation. Test mode is completed after approximately 5 minutes. The unit switches off and changes to normal operation.

### 6.1.4 General information about programming

Using buttons 1, 2 and 3 (fig. 12) you can change 24 parameters within the preset ranges (min. value, max. value).

Tables 3 and 4 show the parameters which can be altered. Fig. 14 on page 20 shows which buttons must be pressed.



#### Note on switching hysteresis:

With a low hysteresis and short switching cycles, there is a risk that cooling may not be adequate or that only partial sections of the enclosure are cooled. If the cooling unit is oversized and compressor running times are < 1 minute, the switching hysteresis is automatically increased to protect the cooling unit (see message "LH" in section 6.1.9 "Evaluating system messages").

#### Note on temperature settings:

With the e-Comfort controller, the temperature is preset at the factory to 95 °F (+35 °C). In order to save energy, and due to the risk of increased condensation, do not set the temperature lower than that actually necessary.

#### Note on useful cooling power:

Interactive performance diagrams for calculating the useful cooling power may be found at [www.rittal.com](http://www.rittal.com).

In principle, the programming is identical for all editable parameters.

To enter programming mode:

- Press button 2 ("Set") for approx. 5 seconds.

## 6 Operation

EN

The controller is now in programming mode. While in programming mode, if you do not press any buttons for approx. 30 seconds, the display will first flash, then the controller will switch back to normal display mode. "Esc" in the display indicates that any changes made have not been saved.

- Press the programming buttons ▲ (°C) or ▼ (°F) to switch between the editable parameters (see tables 3 and 4).
- Press button 2 ("Set") to select the displayed parameter for editing.

The current value of this parameter is displayed.

- Press one of the programming buttons ▲ (°C) or ▼ (°F).

"Cod" will appear in the display. In order to be able to change a value, you must enter the authorisation code "22".

- Keep the ▲ programming button (°C) held down until "22" appears.
- Press button 2 ("Set") to confirm the code.

You can now alter the parameter within the preset limits.

- Press one of the programming buttons ▲ (°C) or ▼ (°F) until the required value appears.
- Press button 2 ("Set") to confirm the change.

You can now alter other parameters in the same way.

There is no need to re-enter the authorisation code "22".

- To exit programming mode, press button 2 ("Set") again for approximately 5 seconds.

"Acc" will appear in the display to indicate that the changes have been saved. The display then switches back to regular operation (internal enclosure temperature).

You can also program the e-Comfort controller using a diagnosis software package (Model No. 3159.100), which is supplied with a connection cable to the PC. The cable connector on the rear of the e-Comfort controller display serves as an interface.

### 6.1.5 Editable parameters

See also fig. 14 on page 20.

Progr. level	Display screen	Parameter	Min. value	Max. value	Factory setting	Description
1	St	Internal enclosure temperature set-point $T_i$	68 °F	131 °F	95 °F	The internal enclosure temperature setting is preset at the factory to 95 °F (35 °C) and may be altered within a range of 68 – 131 °F (20 – 55 °C).
2	Fi	Filter mat monitoring	10	60	99 (= off)	To enable filter mat monitoring, the display should be set to a minimum of 10 K above the temperature difference shown in programming mode "Fi"; filter mat monitoring is disabled at the factory (99 = off). Not applicable for NEMA 3R/4 units!
3	Ad	Master-slave identifier	0	19	0	See section 6.1.8 "Setting the master/slave identifier"
4	CF	Switch between °C/°F	0	1	0	The temperature display can be switched between °C (0) and °F (1). The LED displays the current unit of temperature.
5	H1	Setting for switching difference (hysteresis)	2	10	5	The cooling unit is preset in the factory to a switching hysteresis of 5 K. This parameter should only be changed in consultation with us. Please contact us for advice.
6	H2	Differential for error message A2	3	15	5	If the internal enclosure temperature exceeds the set value by more than 5 K, then error message A2 (internal enclosure temperature too high) appears on the display terminal. If necessary, the differential may be altered here within the range of 3 – 15 K.
26	ECO	Eco-mode operation	0	1	0	Eco mode OFF: 0 / Eco mode ON: 1
27	PSO	Changing the authorisation code	0	15	0	This parameter allows you to change the "22" authorisation code (factory setting). The new code results from the sum of 22 + PSO.

Tab. 3: Editable parameters

# 6 Operation

## 6.1.6 Programming overview

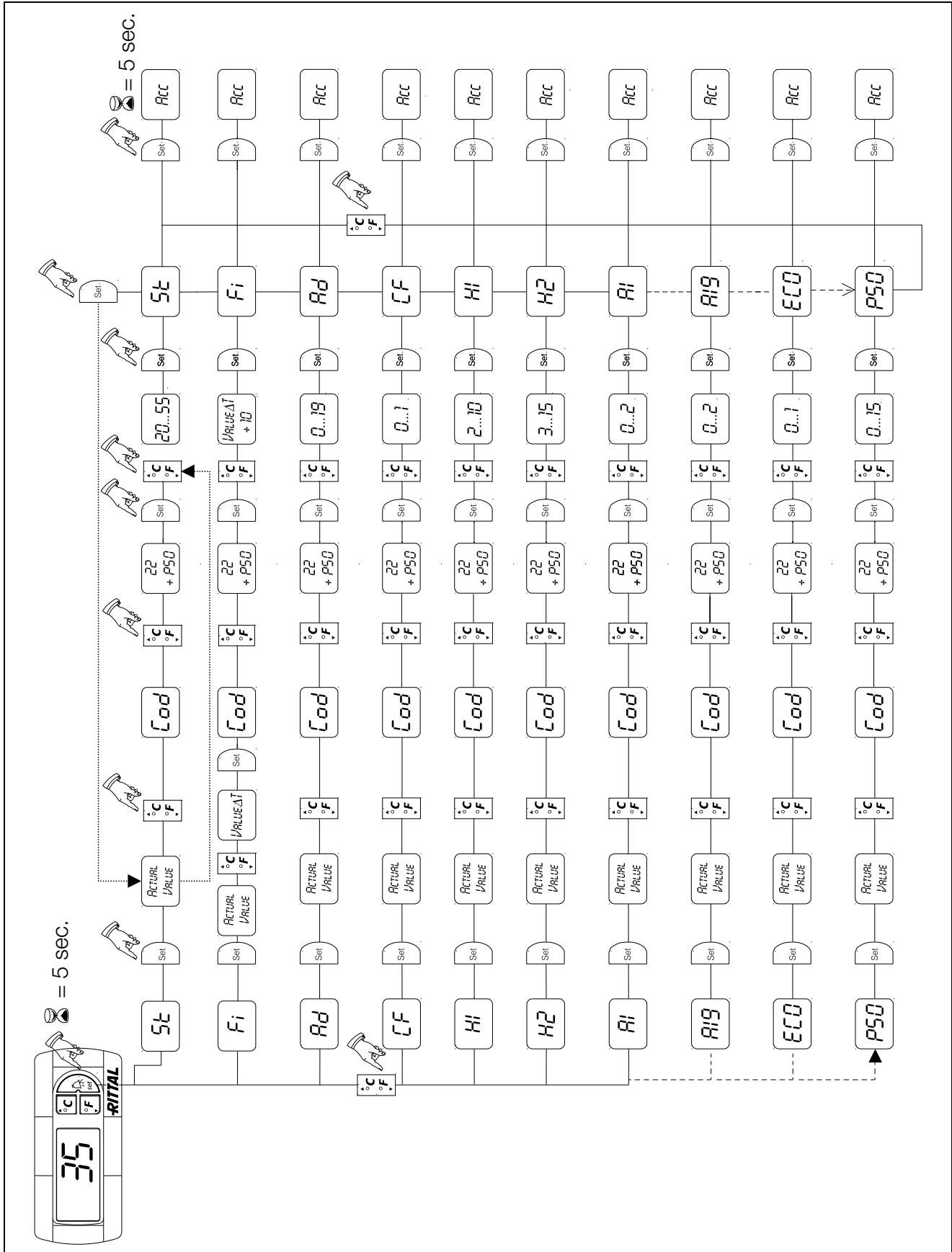


Fig. 14: Programming overview

### 6.1.7 Defining system messages for evaluation

System messages are shown on the display screen of the e-Comfort controller via the displays A1 to A20 and E0.

A more detailed explanation of the system messages may be found in section 6.1.9 "Evaluating system messages".

See also fig. 14 on page 20.

Progr. level	Display screen	Min. value	Max. value	Factory setting	Type or location of fault
7	A1	0	2	0	Enclosure door open
8	A2	0	2	0	Internal temperature of enclosure too high
9	A3	0	2	0	Filter monitoring (Not applicable for NEMA 3R/4 units!)
10	A4	0	2	0	Ambient temperature too high/low
11	A5	0	2	0	Icing hazard (Message disabled if ambient temperature <10 °C)
12	A6	0	2	1	PSA <sup>H</sup> pressure switch
13	A7	0	2	2	Evaporator coil
14	A8	0	2	1	Condensate warning
15	A9	0	2	1	Condenser fan blocked or defective
16	A10	0	2	1	Evaporator fan blocked or defective
17	A11	0	2	2	Compressor
18	A12	0	2	1	Condenser
19	A13	0	2	1	Ambient temperature sensor
20	A14	0	2	1	Icing temperature sensor
21	A15	0	2	1	Condensate warning temperature sensor
22	A16	0	2	1	Internal temperature sensor
23	A17	0	2	1	Phase monitoring
24	A18	0	2	0	EPROM
25	A19	0	2	0	LAN/Master-Slave

Tab. 4: System messages that can be evaluated via relays

The system messages A1 – A19 may also be evaluated via two floating system message relays. In this way, one of the two system message relays may be allocated to each system message.

System message relays with normally open contact, see wiring diagrams in section 4.5.3 "Installing the power supply":

- Terminal 3: NO (normally open, relay 2)
- Terminal 4: C (connection of the supply voltage to the system message relay)
- Terminal 5: NO (normally open, relay 1)

The definition NO refers to the de-energised state. As soon as power is applied to the cooling unit, both system message relays (relay 1 and 2) energise.

This is the normal operating state of the cooling unit. As soon as a system message occurs or the power supply

is interrupted, the corresponding relay will drop out and open the contact.

Program system messages with the value

- 0: System message is not sent to the system message relay, but merely appears in the display
- 1: System message is evaluated by relay 1
- 2: System message is evaluated by relay 2

### 6.1.8 Setting the master/slave identifier

When several cooling units are connected together (maximum ten), one of the cooling units must be defined as the "master" and the others as "slaves". For this purpose, assign a corresponding identifier (address) to each cooling unit which will enable the cooling unit to be identified in the network.

If one of the slave units reaches the set temperature or if the door limit switch function is activated, the affected

# 6 Operation

EN

slave unit will report to the master unit, which then deactivates all the other cooling units.



**Notes:**

- Only one unit may be configured as master, and its identifier must match the number of connected slave units.
- The slave units must have different identifiers.
- The identifiers must be numbered in ascending order without any gaps.

On the **master cooling unit** (00 = factory setting), set the number of slave units present in the network:

- 01: Master with 1 slave cooling unit
- 02: Master with 2 slave cooling units
- 03: Master with 3 slave cooling units
- 04: Master with 4 slave cooling units
- 05: Master with 5 slave cooling units
- 06: Master with 6 slave cooling units
- 07: Master with 7 slave cooling units
- 08: Master with 8 slave cooling units
- 09: Master with 9 slave cooling units

On the **slave cooling unit** (00 = factory setting), set its own address:

- 11: Slave cooling unit no. 1

- 12: Slave cooling unit no. 2
- 13: Slave cooling unit no. 3
- 14: Slave cooling unit no. 4
- 15: Slave cooling unit no. 5
- 16: Slave cooling unit no. 6
- 17: Slave cooling unit no. 7
- 18: Slave cooling unit no. 8
- 19: Slave cooling unit no. 9

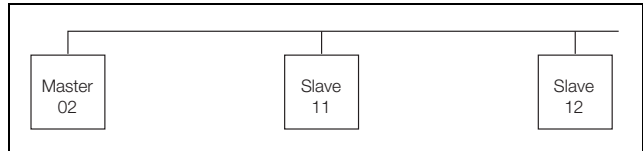


Fig. 15: Master/slave connection (example)

For further connection examples, see section 4.5.1 "Bus connection (only in conjunction with several units with an e-Comfort controller)".

For details of how to set the identifier, see section 6.1.5 "Editable parameters" or section 6.1.6 "Programming overview", parameter "Ad".

### 6.1.9 Evaluating system messages

In the e-Comfort controller, system messages are indicated by a number in the display.

Following the appearance of messages A03, A06 and A07 and after rectifying their cause, you will need to reset the e-Comfort controller (see section 6.1.10 "Reset the e-Comfort controller").

Display screen	System message	Possible cause	Measures to rectify the fault
A01	Enclosure door open	Door open or door limit switch incorrectly positioned	Close door, position door limit switch correctly, check connection if necessary
A02	Internal temperature of enclosure too high	Cooling capacity inadequate/unit undersized Error as a consequence of messages A03 to A17.	Check cooling capacity
A03	Filter monitoring	Filter mat soiled	Clean or replace; reset the e-Comfort controller (Not applicable for NEMA 3R/4 units!)
A04	Ambient temperature too high/low	Ambient temperature outside permissible operating range -4 °F to 122 °F (+10 °C...+60 °C)	Raise or lower the ambient temperature (e.g. heat or ventilate the room)
A05	Icing hazard	Operational display in case of icing hazard. Evaporator coil fan may be mechanically blocked, defective, or cold air outlet obstructed.	Set the enclosure interior temperature to a higher value. Check the evaporator fan; release or exchange if necessary.

Tab. 5: Troubleshooting with the e-Comfort controller

Display screen	System message	Possible cause	Measures to rectify the fault
A06	PSA <sup>H</sup> pressure switch	Ambient temperature too high	Lower the ambient temperature; reset the e-Comfort controller
		Condenser soiled	Clean the condenser; reset the e-Comfort controller
		Filter mat soiled	Clean or replace; reset the e-Comfort controller
		Condenser fan defective	Replace; reset the e-Comfort controller
		E-valve defective	Repair by refrigeration engineer; reset the e-Comfort controller
		PSA <sup>H</sup> pressure switch defective	Refrigeration engineer to exchange reset the e-Comfort controller
A07	Evaporator coil	Lack of refrigerant; sensor in front of or behind condenser defective	Repair by refrigeration engineer; reset the e-Comfort controller
A08	Condensate warning	Condensate discharge kinked or blocked	Check condensate drainage; correct any kinks or blockages in the hose
		Only for units with optional condensate evaporation	Check the evaporation unit, replace if necessary
A09	Condenser fan	Blocked or defective	Clear the blockage; replace if necessary
A10	Evaporator fan	Blocked or defective	Clear the blockage; replace if necessary
A11	Compressor	Compressor overloaded (internal winding protection)	No action required; Unit switches on again independently
		Defective (check by measuring the winding resistance)	Replace by a refrigeration engineer
A12	Condenser temperature sensor	Open or short-circuit	Replace
A13	Ambient temperature sensor	Open or short-circuit	Replace
A14	Icing temperature sensor	Open or short-circuit	Replace
A15	Condensate warning temperature sensor	Open or short-circuit	Replace
A16	Internal temperature sensor	Open or short-circuit	Replace
A17	Phase monitoring	For three-phase devices only: Incorrect rotary field/phase absent	Swap two phases
A18	EPROM error	New board installed incorrectly	Software update needed (only following board installation with more recent software): Enter the programming level with Code 22; press button 1 and confirm with "Set" until "Acc" appears. Next, disconnect the unit from the mains and reconnect.
A19	LAN/Master-Slave	Master and slave not connected	Check setting and/or cable

Tab. 5: Troubleshooting with the e-Comfort controller

# 7 Inspection and maintenance

Display screen	System message	Possible cause	Measures to rectify the fault
A20	Voltage drop	Error display not shown	Event is stored in the log file
E0	Display message	Connection problem between the display and the controller board	Reset: Switch power supply off, then switch on again after approx. 2 sec.
		Cable defective; connection loose	Replace the boards
OL	Overload	Ambient parameters or heat loss outside the applicable limits	
LH	Low Heat	Minimal heat loss in enclosure.	
b07	Leak in the cooling circuit	Sensor B3 and B4 swapped over	Swap the sensors
rSt	Reset	Manual device reset required, see section 6.1.10 "Reset the e-Comfort controller".	

Tab. 5: Troubleshooting with the e-Comfort controller

### 6.1.10 Reset the e-Comfort controller

After the occurrence of faults A03, A06 and A07, you will need to reset the e-Comfort controller.

- Press buttons 1 (▲) and 3 (▼) (fig. 12) simultaneously for 5 seconds.

The system messages disappear and the temperature display is shown.

## 7 Inspection and maintenance



**Risk of electric shock!**  
**The unit is live.**  
**Switch off the power supply before opening, and take suitable precautions against it being accidentally switched back on.**

### 7.1 General

The cooling circuit is designed in the form of a maintenance-free, hermetically sealed system. The cooling unit is filled with the required quantity of refrigerant at the factory, checked for leaks, and subjected to a functional test run.

The installed maintenance-free fans are mounted on ball bearings, protected against moisture and dust, and fitted with a temperature monitor. The life expectancy is at least 30,000 operating hours. The cooling unit is thus largely maintenance-free. All that may be required from time to time is to clean the components of the external air circuit using a vacuum cleaner or compressed air if they become visibly dirty. Any stubborn, oily stains may be removed using a nonflammable detergent, such as degreaser.

Maintenance interval: 2000 operating hours. Depending on the level of contamination in the ambient air, the maintenance interval may be reduced to suit the air pollution intensity.



**Caution!**  
**Risk of fire!**  
**Never use flammable liquids for cleaning.**

Sequence of maintenance measures:

- Check the level of dirt.
- Filter soiling? Replace the filter if necessary.
- Cooling fins dirty? Clean if necessary.
- Activate test mode; cooling function OK?
- Check noise generation of compressor and fans.

### 7.2 Cleaning the filter mat

The two metal filter mats in the cooling unit may be washed with water or grease-dissolving detergents.

- Loosen and remove the two screws with which the upper filter is fastened to the housing.

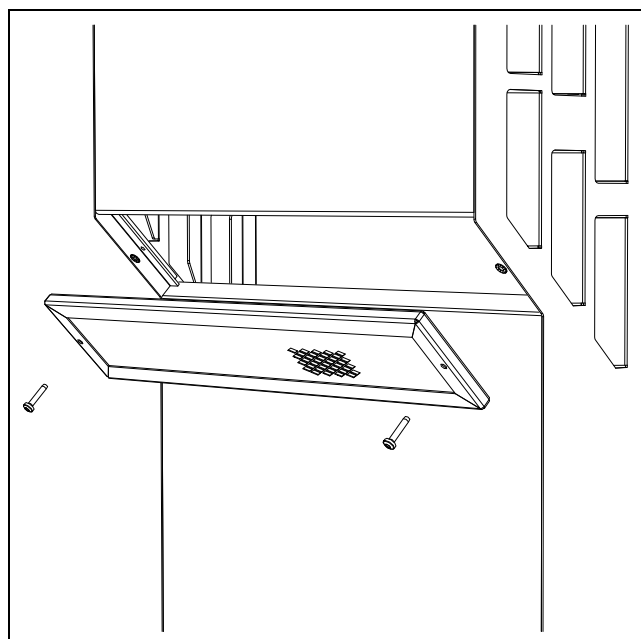


Fig. 16: Dismantle the upper filter



- Then remove the upper filter from the housing.
- Loosen and remove the four screws with which the lower filter is fastened to the housing.

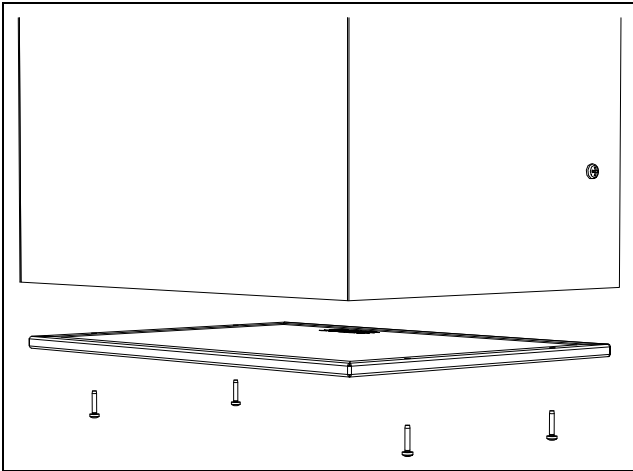


Fig. 17: Dismantle the lower filter

- Then remove the lower filter from the housing.
- Clean both filters, then reinsert them in the housing and fasten them with the appropriate screws.

### 7.3 Compressed air cleaning

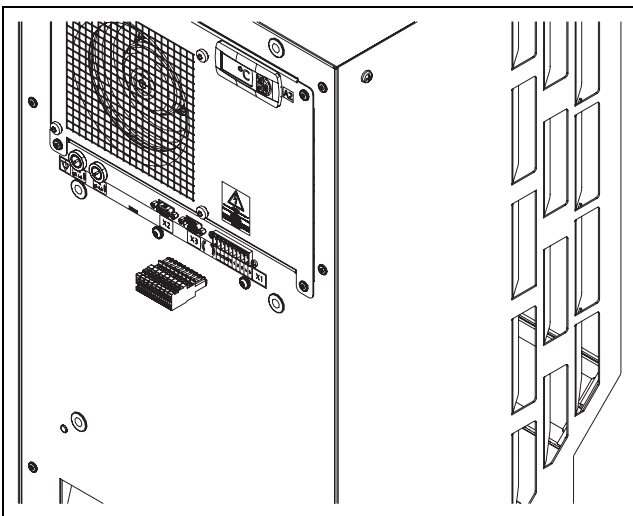


Fig. 18: Disconnect the power cord

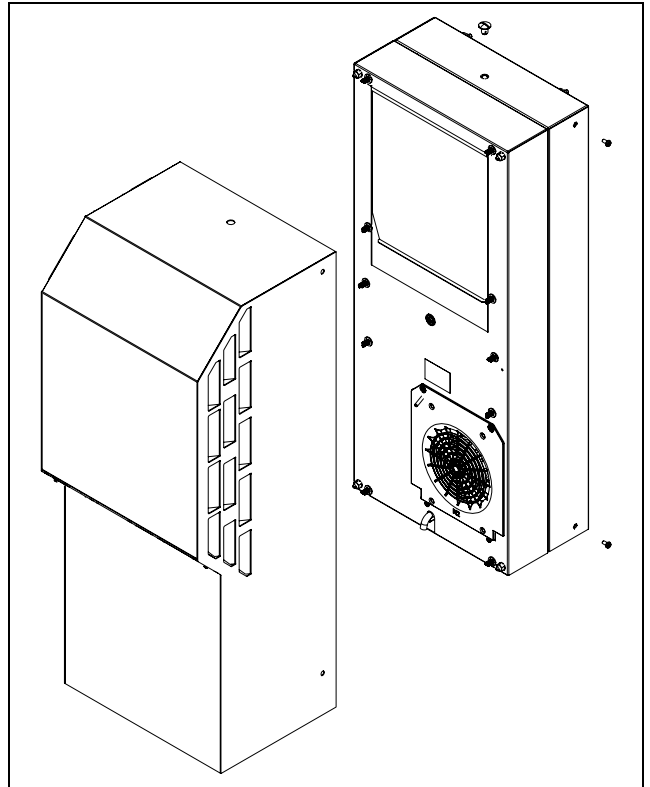


Fig. 19: Remove the hood

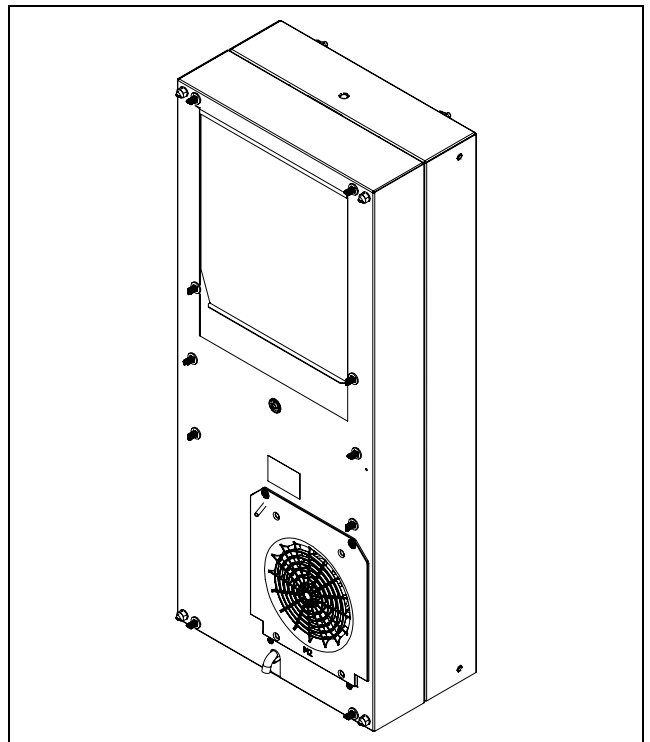


Fig. 20: Cooling unit without hood

# 7 Inspection and maintenance

EN

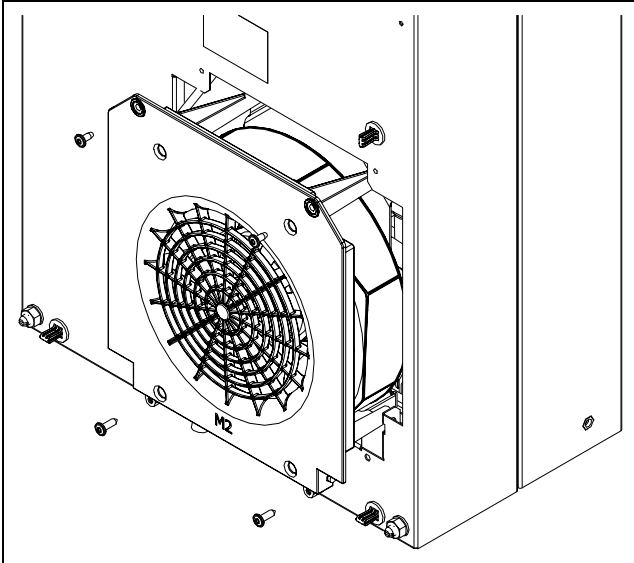


Fig. 21: Remove the external circuit fan (loosen the four screws)

■ Disconnect the fan connector.

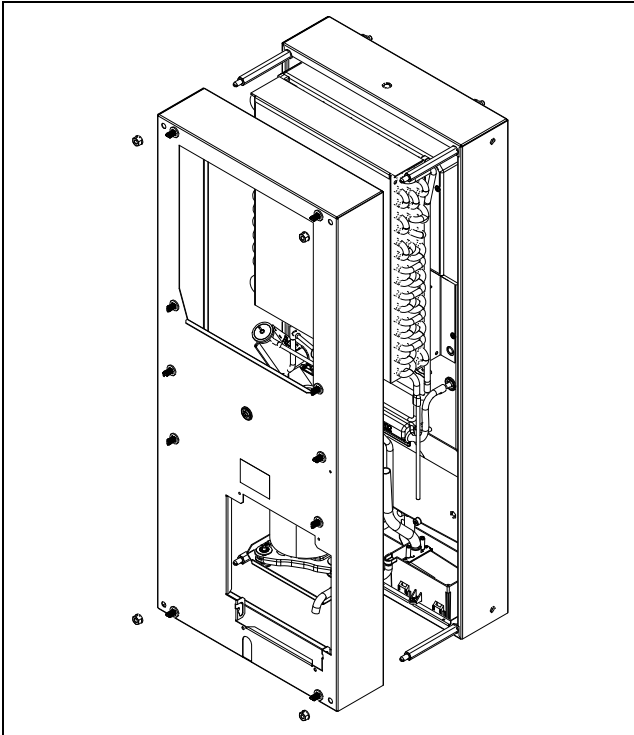


Fig. 22: Loose 4 nuts and remove cover

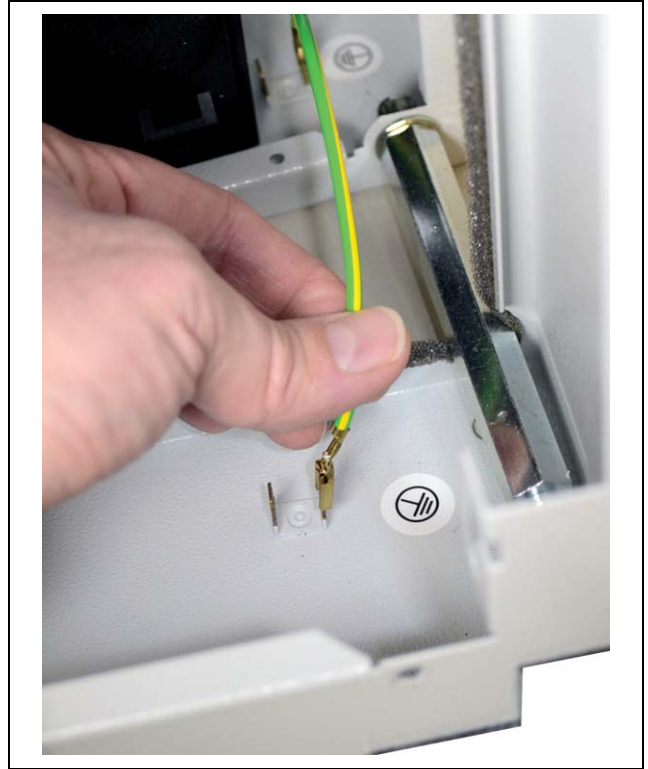


Fig. 23: Disconnect the ground cable between the cover and chassis



Fig. 24: Cut heat shrink tubing around circumference of connector

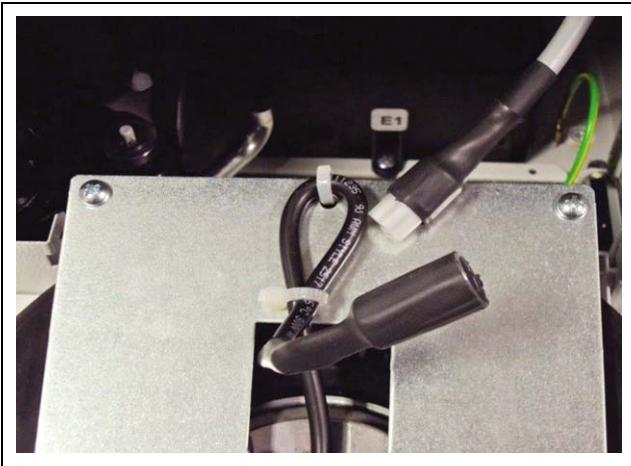


Fig. 25: Disconnect the fan connector

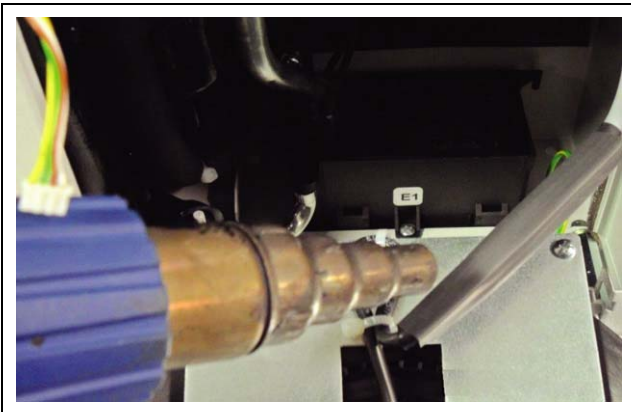


Fig. 26: Reapply heat shrink tube



Fig. 27: Clean out the heat exchanger coil and compressor chamber using compressed air



Fig. 28: Clean out the heat exchanger coil and compressor chamber using compressed air

## 8 Storage and disposal



**Caution!**

**Risk of damage!**

**The cooling unit must not be subjected to temperatures above 158 °F (70 °C) during storage.**

During storage, the cooling unit must stand upright.

- Cooling units must be transported in an upright position and protected from tipping over.

The closed cooling circuit contains refrigerant and oil which must be properly disposed of for the sake of the environment. Disposal can be performed at the Rittal plant.

- Please contact us for advice.

# 9 Technical specifications

EN

## 9 Technical specifications

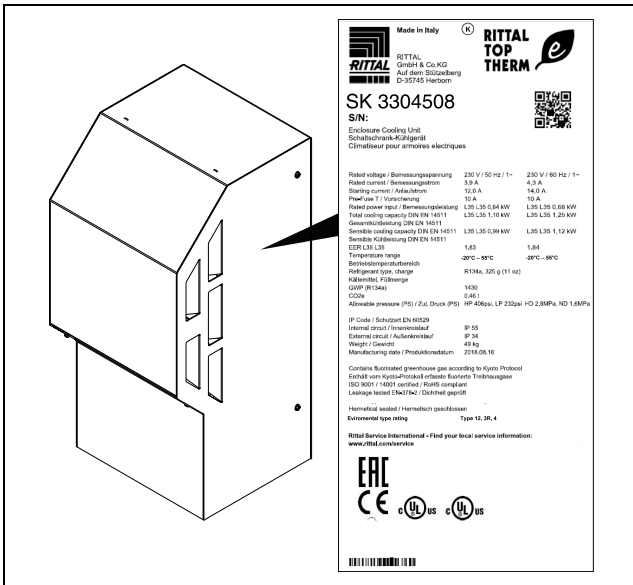


Fig. 29: Rating plate (technical specifications)

- Observe the mains connection data (voltage and frequency) as per the rating plate.
- Observe the pre-fuse as per the specifications on the rating plate.

## 9 Technical specifications

EN

	Unit	Model No.				
		3303.508	3303.518	3304.508	3304.518	3304.548
<b>e-Comfort controller, RAL 7035</b>	-					
Rated voltage	V Hz	230, 1~, 50/60	115, 1~, 50	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60
Rated current	A	2.6/2.6	5.7	3.9/4.3	8.0/8.8	2.2/2.1
Start-up current	A	5.1/6.4	11.5	12.0/14.0	26.0/28.0	11.5/12.7
Pre-fuse T	A	10.0	10.0	10.0	-	-
Circuit-breaker	A	-	-	-	-	6.3...10.0
Transformer circuit-breaker	A	-	-	-	11.0...16.0	-
Miniature circuit-breaker or gG slow fuse (T)	-	■	■	■	-	-
SCCR	kA	5				
Total cooling output P <sub>c</sub> to DIN EN 14511	L 35 L 35 L 35 L 50 W W	440/500 230/270	500 280	1100/1250 910/900	1100/1250 910/900	1100/1250 980/900
Sensible cooling output P <sub>s</sub> to DIN EN 14511	L 35 L 35 W	330/370	380	990/1120	990/1120	940/1070
Rated output P <sub>el</sub> to DIN EN 14511	L 35 L 35 L 35 L 50 W W	390/410 450/470	370 450	660/820 770/890	660/820 770/890	640/790 730/900
Energy efficiency ratio (EER) 50Hz	L 35 L 35	1.13	1.35	1.67	1.67	1.72
Refrigerant	- Type - Filling g	R-513A 170	R-513A 190	R-513A 325		
GWP	-	631				
CO <sub>2</sub> e	t	0.11	0.12	0.21	0.21	0.21
Permissible pressure	MPa	HP 2.8 LP 1.6				
Ambient temperature range	°C/°F	-20...+50/-4...+122				
Internal fan only	°C/°F	-20...+10/-4...+50				
Operating temperature range	°C/°F	+10...+50/50...+122	+10...+55/50...+131			
Setting range	°C/°F	+20...+50/+68...+122				
Storage temperature	°C/°F	-40...+70/-40...+158				
Noise level	dB (A)	≤ 64				≤ 69
Protection category to IEC 60 529	- Internal circuit - External circuit	IP 56 IP 34				
UL-Type rating	-	12, 3R, 4				
Dimensions (W x H x D)	mm	285 x 620 x 298			405 x 1020 x 358	
Weight	kg	25	25	49	54	50

# 9 Technical specifications

EN

	Unit	Model No.					
<b>e-Comfort controller, RAL 7035</b>	–	<b>3305.508</b>	<b>3305.518</b>	<b>3305.548</b>	<b>3329.508</b>	<b>3329.518</b>	<b>3329.548</b>
Rated voltage	V Hz	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60
Rated current	A	5.5/5.8	11.5/12.5	2.5/2.8	8.2/9.3	17.0/22.0	3.7/3.8
Start-up current	A	12.0/14.0	26.0/28.0	12.2/11.3	20.0/24.0	44.0/42.0	6.8/7.6
Pre-fuse T	A	16	–	–	16	–	–
Circuit-breaker	A	–	–	6.3...10.0	–	–	6.3...10.0
Transformer circuit-breaker	A	–	14.0...20.0	–	–	18.0...25.0	–
Miniature circuit-breaker or gG slow fuse (T)	–	■	–	–	■	–	–
SCCR	kA	5					
Total cooling output P <sub>C</sub> to DIN EN 14511	L 35 L 35 L 35 L 50 W W	1600/1730 1180/1260	1600/1730 1180/1260	1600/1610 1100/1250	2550/2600 1800/1800	2550/2600 1800/1800	2430/2570 1900/2000
Sensible cooling output P <sub>s</sub> to DIN EN 14511	L 35 L 35 W	1290/1390	1290/1390	1250/1250	2190/2240	2190/2240	2030/2190
Rated output P <sub>el</sub> to DIN EN 14511	L 35 L 35 L 35 L 50 W W	870/960 910/1000	870/960 910/1000	800/980 870/1150	1210/1530 1410/1800	1210/1530 1410/1800	1360/1780 1450/1750
Energy efficiency ratio (EER) 50Hz	L 35 L 35	1.84	1.84	2.00	2.11	2.11	1.79
Refrigerant – Type – Filling	– g	R-513A 610			R-513A 1100		
GWP	–	631					
CO <sub>2</sub> e	t	0.38	0.38	0.38	0.69	0.69	0.69
Permissible pressure	MPa	HP 2.8 LP 1.6					
Ambient temperature range	°C/°F	-20...+50/-4...+122					
Internal fan only	°C/°F	-20...+10/-4...+50					
Operating temperature range	°C/°F	+10...+55/50...+131			+10...+50/+50...+122		
Setting range	°C/°F	+20...+50/+68...+122					
Storage temperature	°C/°F	-40...+70/-40...+158					
Noise level	dB (A)	≤ 64		≤ 69	≤ 72		≤ 69
Protection category to IEC 60 529 – Internal circuit – External circuit	– –	IP 56 IP 34					
UL-Type rating	–	12, 3R, 4					
Dimensions (W x H x D)	mm	405 x 1020 x 358			405 x 1650 x 388		
Weight	kg	51	56	52	83	90	84

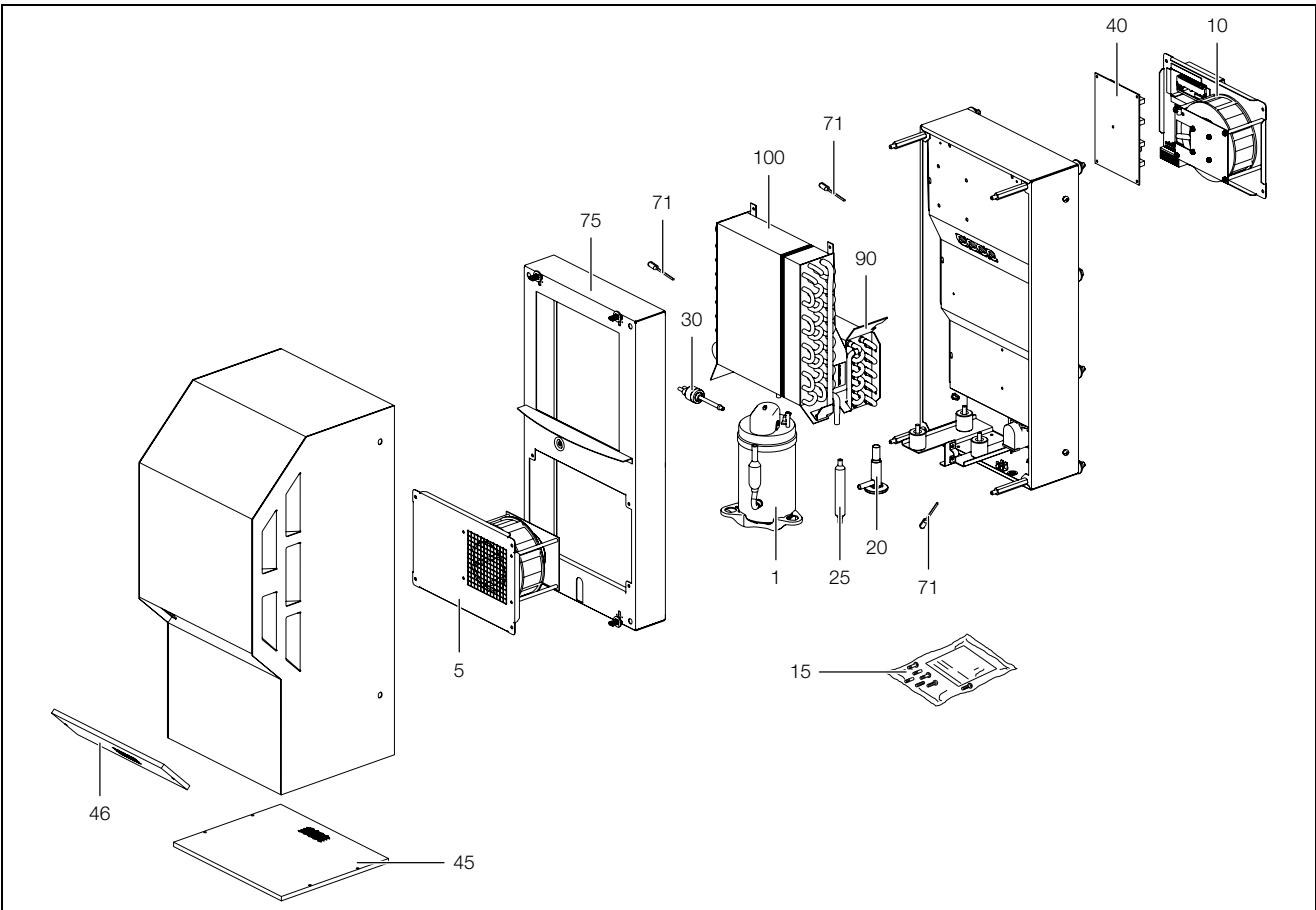


Fig. 30: Spare parts for 3303.5x8

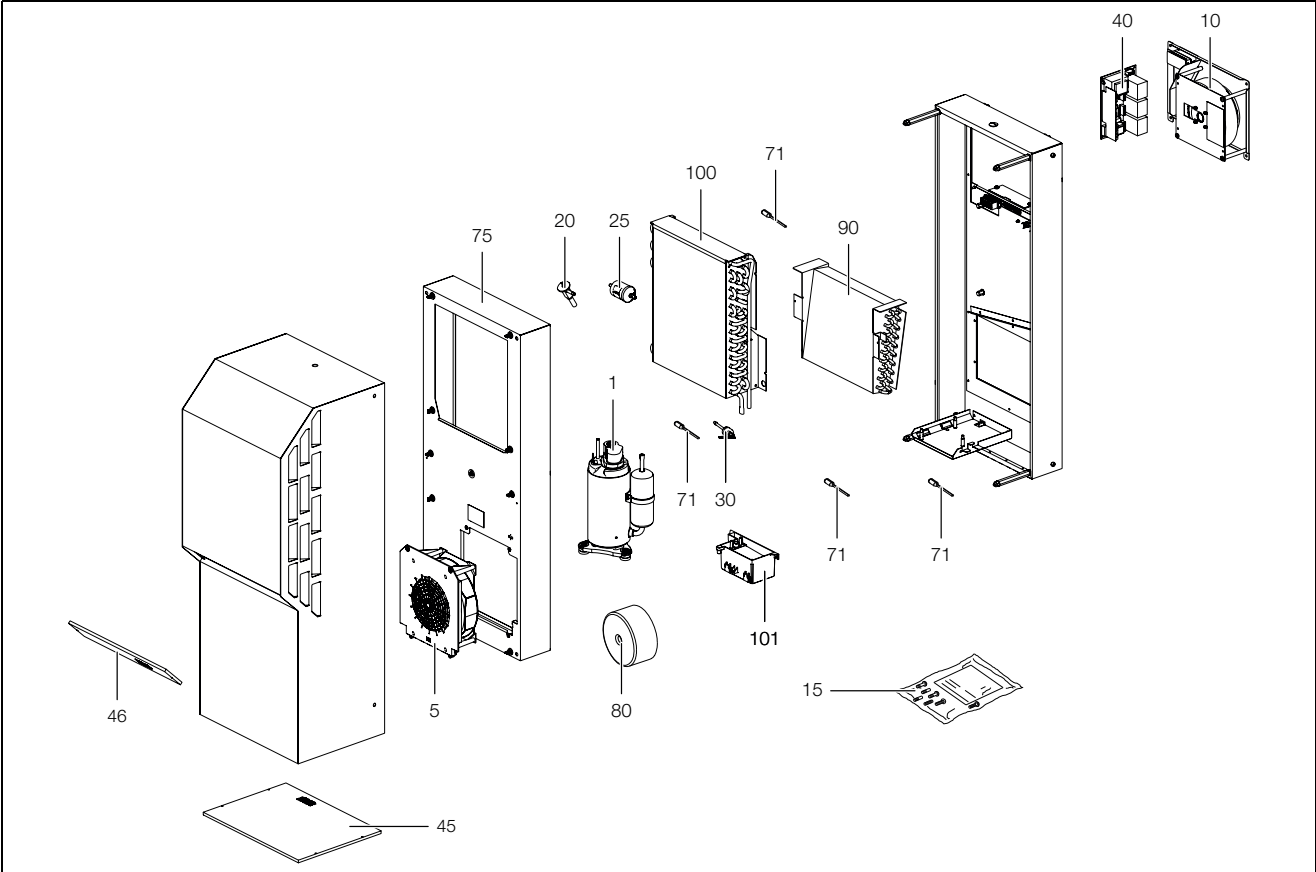


Fig. 31: Spare parts for 3304.5x8, 3305.5x8

# 9 Technical specifications

EN

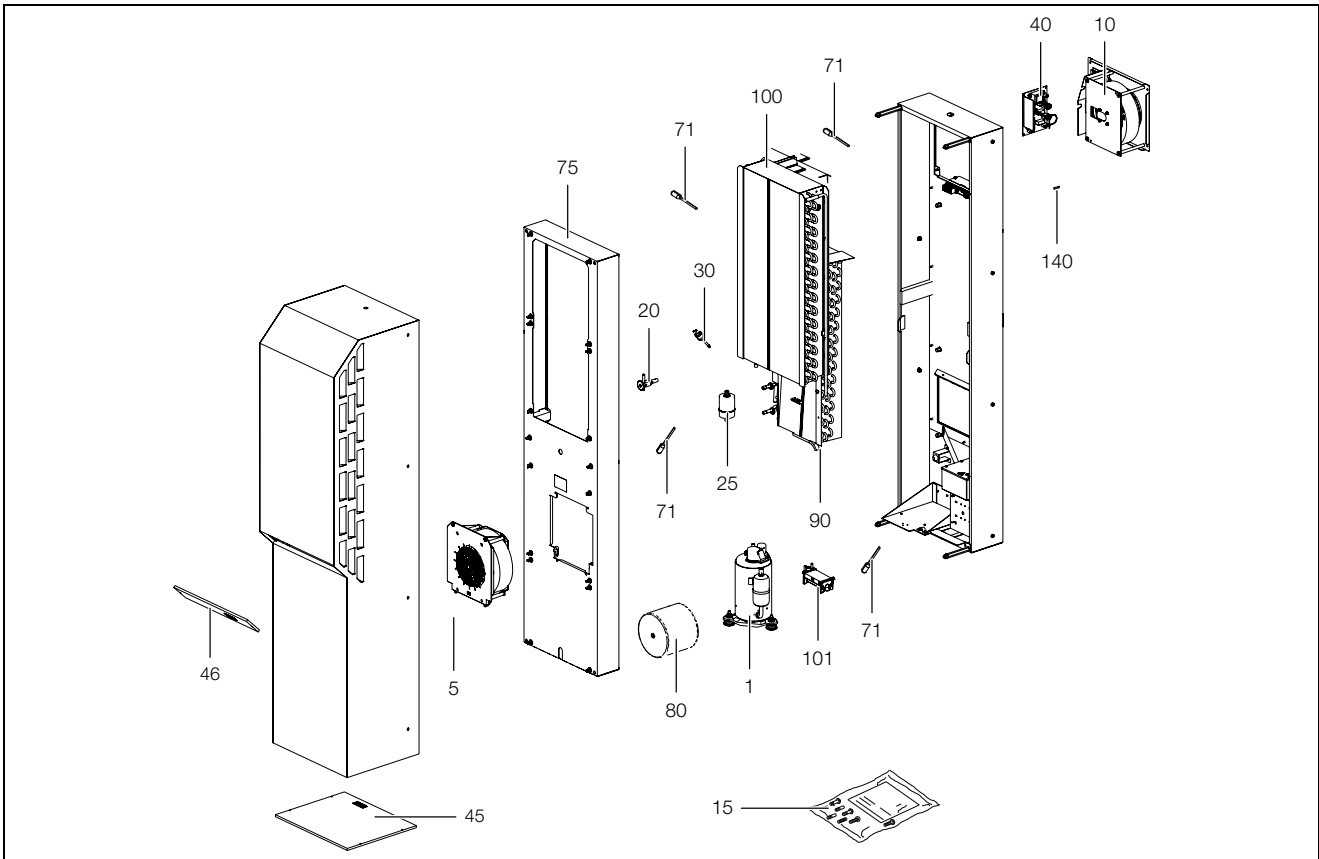


Fig. 32: Spare parts for 3329.5x8

## Legend

- 1 Compressor
- 5 Condenser fan
- 10 Evaporator fan
- 15 Dispatch bag
- 20 Expansion valve
- 25 Filter dryer
- 30 PSA<sup>H</sup> pressure-operated switch
- 40 Controller board
- 45 Metal filter, bottom
- 46 Metal filter, front
- 56 Display
- 71 Temperature sensor
- 75 Enclosure tray
- 80 Transformer
- 90 Evaporator coil
- 100 Condenser
- 101 Condensate evaporator
- 140 Miniature fuse, condensate evaporator (T4A; 6.3 x 32 mm)



### Note:

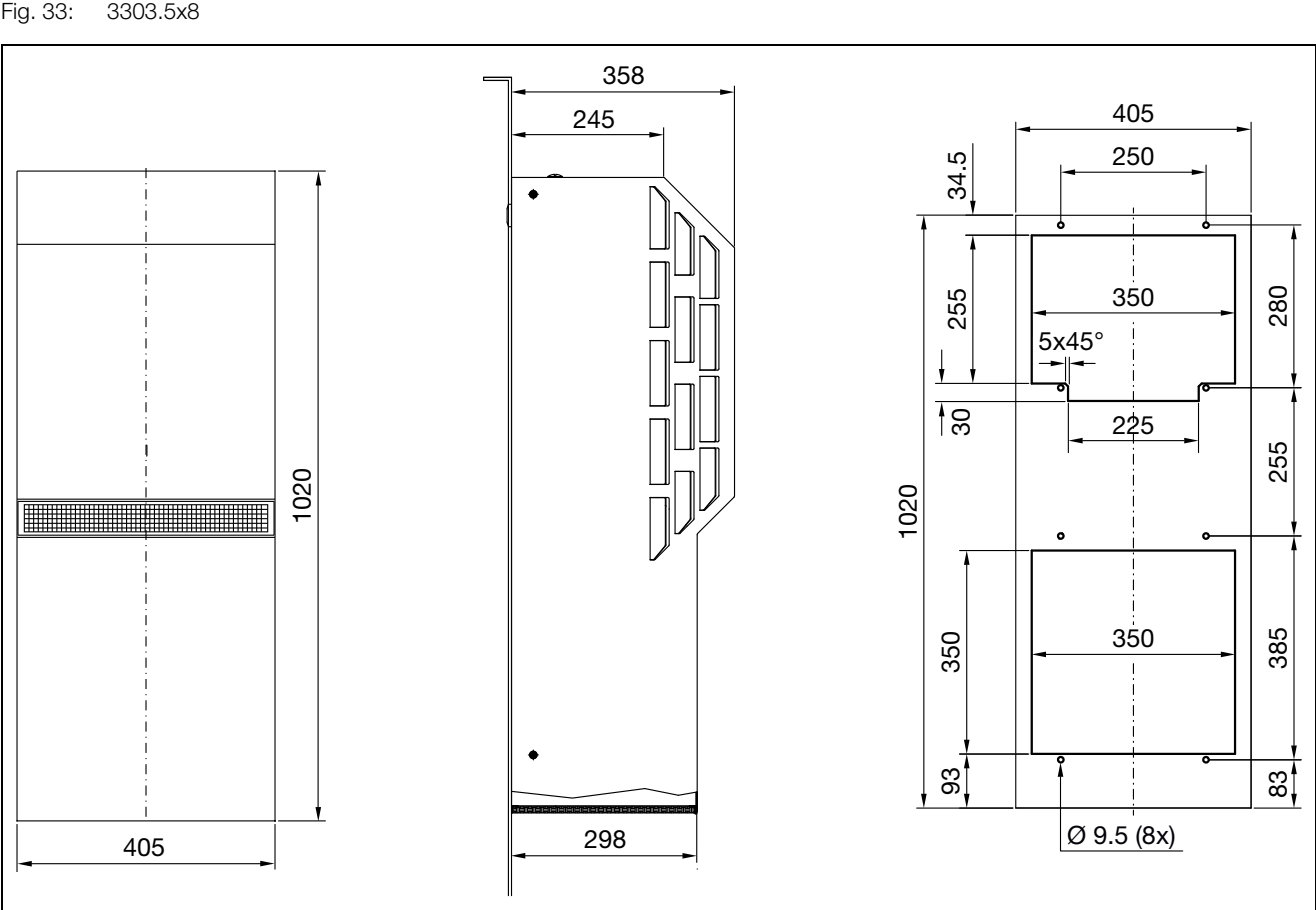
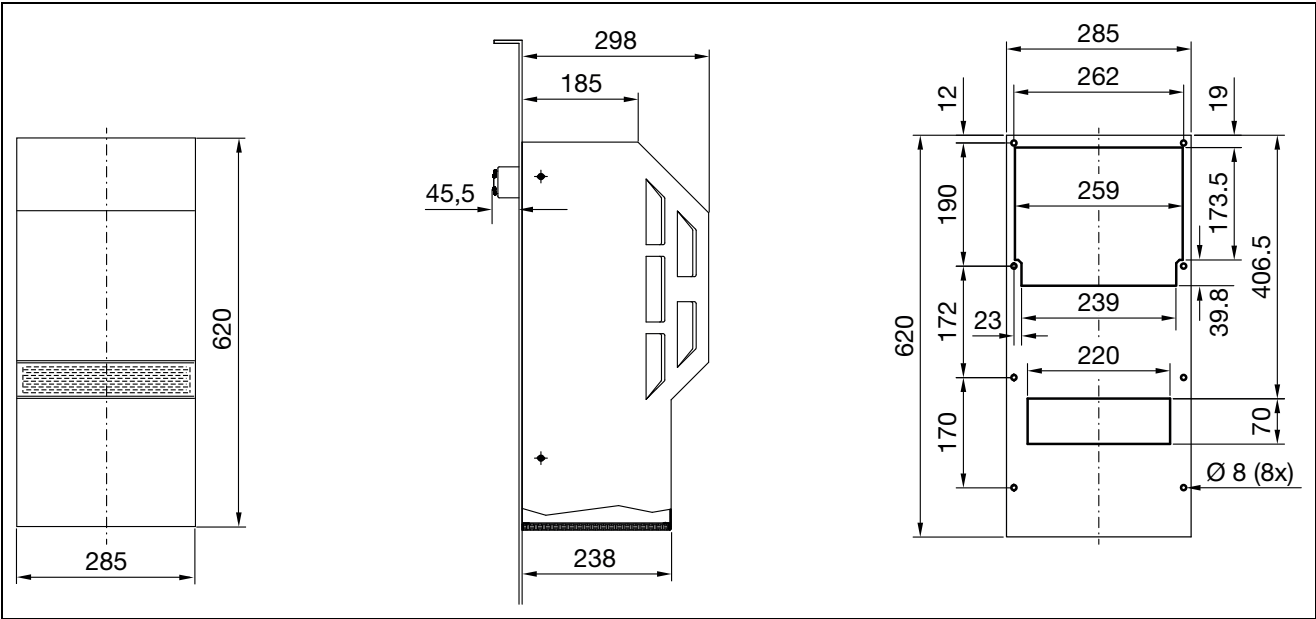
As well as the spare part number, when ordering spare parts the following information must be provided:

- Unit model
- Fabrication number
- Date of manufacture

This information may be found on the rating plate.



10 Appendix: Cut-out and hole sizes



# 10 Appendix: Cut-out and hole sizes

EN

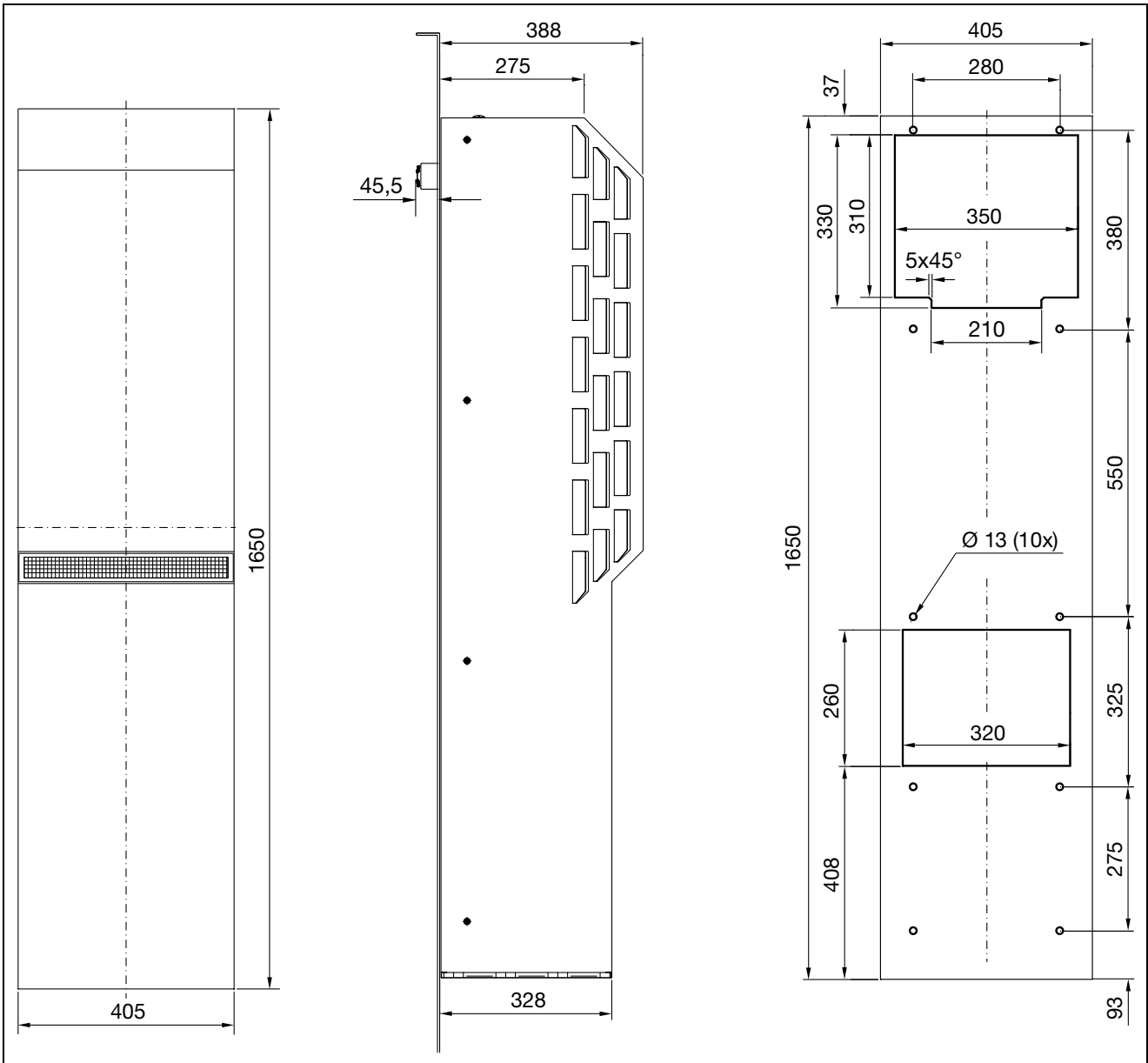
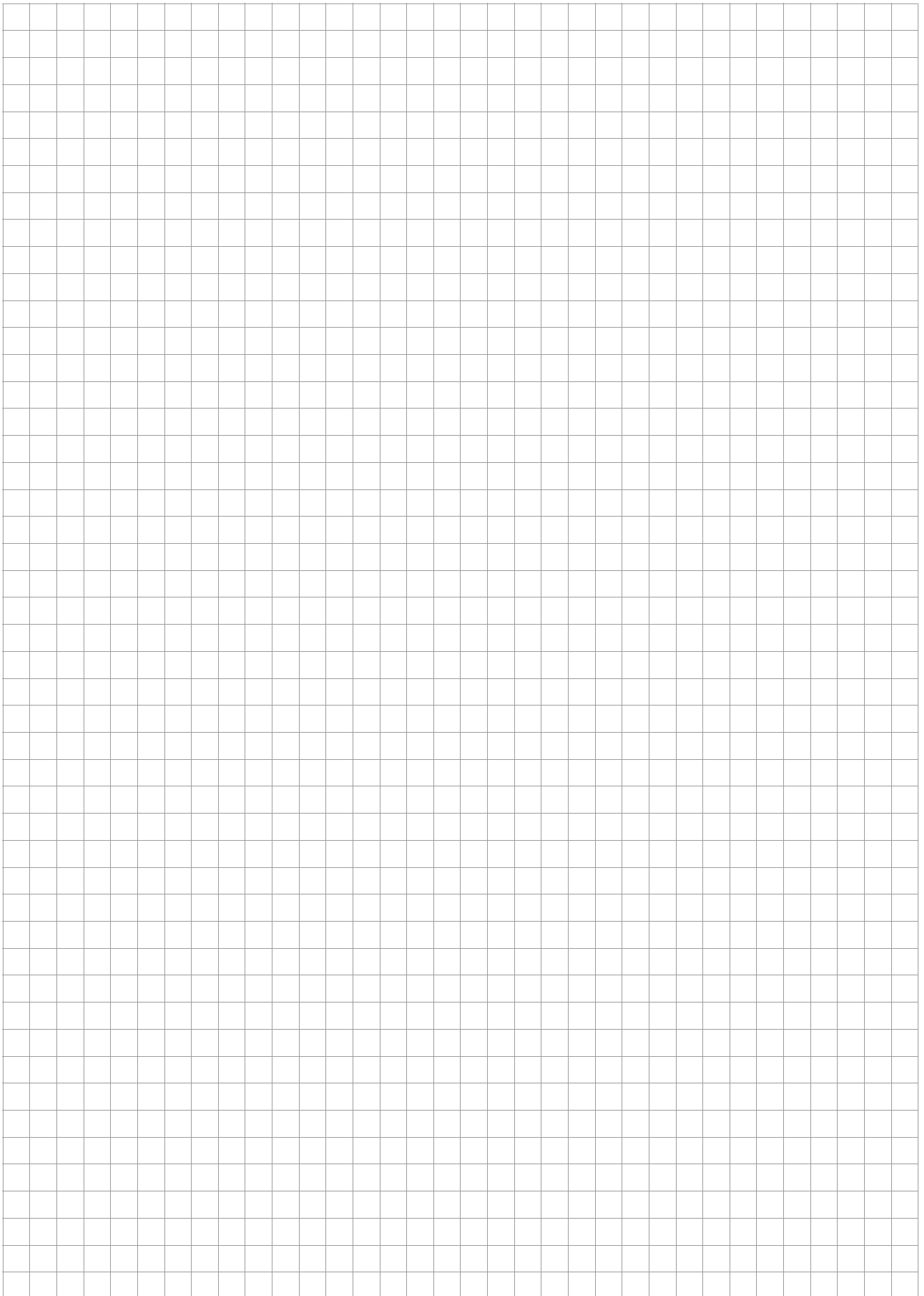


Fig. 35: 3329.5x8



# Rittal – The System.

Faster – better – everywhere.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

You can find the contact details of all Rittal companies throughout the world here.



[www.rittal.com/contact](http://www.rittal.com/contact)

RITTAL GmbH & Co. KG  
Auf dem Stuetzelberg · 35745 Herborn · Germany  
Phone +49 2772 505-0  
E-mail: [info@rittal.de](mailto:info@rittal.de) · [www.rittal.com](http://www.rittal.com)

12.2025 / D-0000-00001713-01-EN

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP

