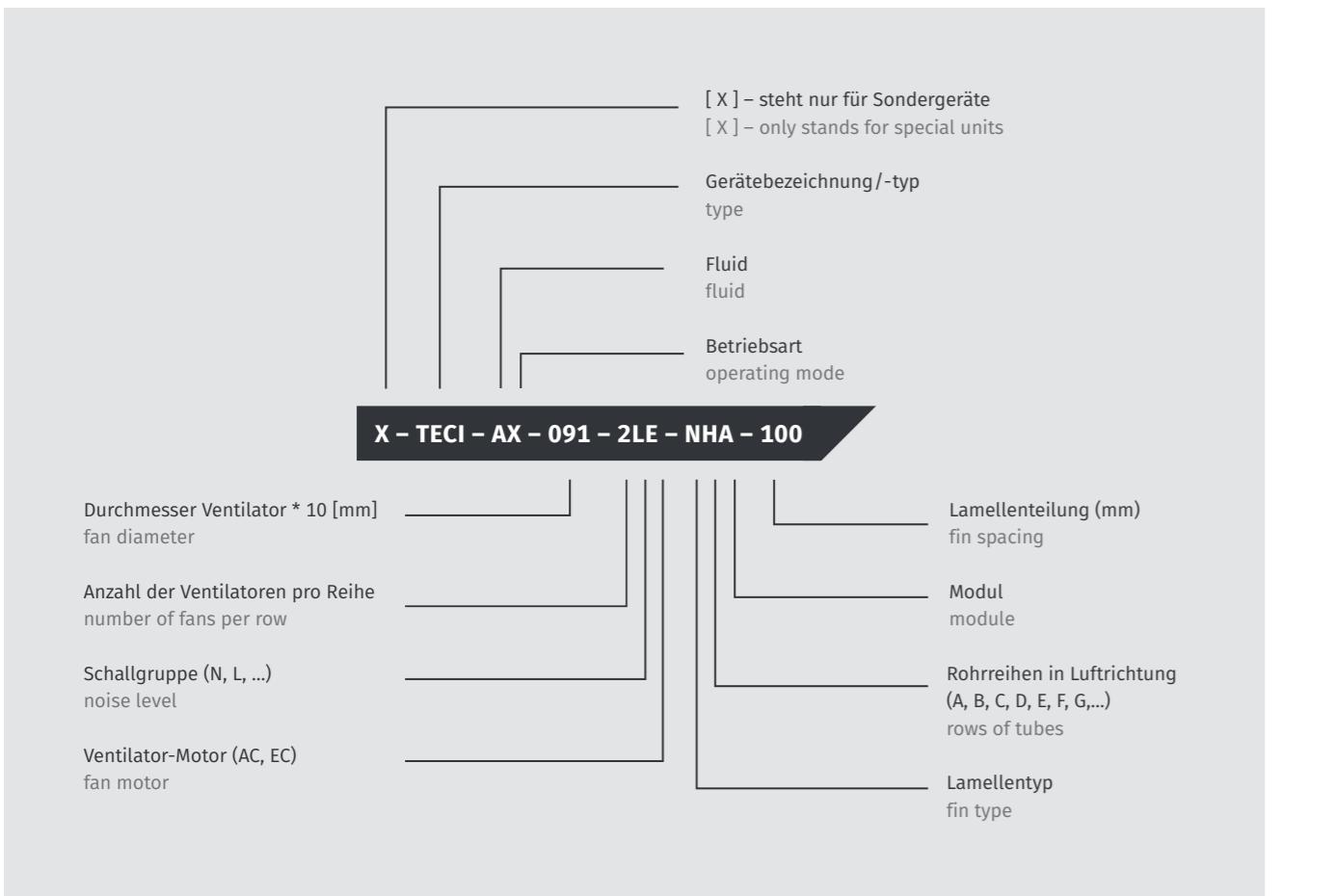


NOMENCLATURE

Typenschlüssel



SERIES

Baureihen

| Medium | Baureihe | Druckstufen, Standard [bar,rel] |
|--------|----------|---------------------------------|
|--------|----------|---------------------------------|

| | | |
|-----------------|------|----------------|
| NH ₃ | TECI | 25; 28 |
| CO ₂ | TECI | 28; 45; 60; 90 |
| HFKW/HFO | TECI | 28 |
| Glykol | TGCI | 10 |

Luftführung saugend

| medium | series | pressure levels, standard [bar,rel] |
|--------|--------|-------------------------------------|
|--------|--------|-------------------------------------|

| | | |
|-----------------|------|----------------|
| NH ₃ | TECI | 25; 28 |
| CO ₂ | TECI | 28; 45; 60; 90 |
| HFC/HFO | TECI | 28 |
| glycol | TGCI | 10 |

airflow draw-through

REFERENCES

Referenzen

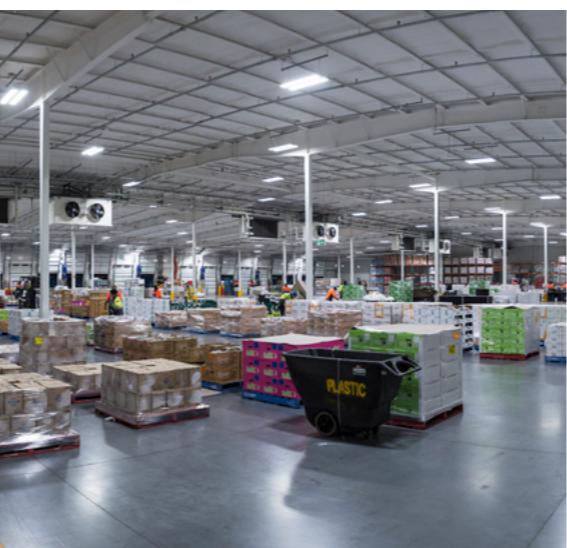


LEISTUNGSDATEN:

- ▶ Projekt: REWE Frischezentrum
- ▶ Standort: Dortmund, Deutschland
- ▶ Produktionsjahr: 2018/2019
- ▶ Lieferumfang, Leistung und Raumtemperatur:
 - ▶ Wareneingang: 39 x TECI – Deckenverdampfer (NH₃-DX), 2,355 kW, Raumtemperatur 6 °C
 - ▶ Lager- und Packräume sowie Warenausgang für Obst und Gemüse: 10 x TGCI – Deckenluftkühler, 550 kW, Raumtemperatur 12 °C

PERFORMANCE DATA:

- ▶ project: REWE logistic centre
- ▶ installation site: Dortmund, Germany
- ▶ production year: 2018/2019
- ▶ scope of delivery, refrigerating capacity and room temperature:
 - ▶ goods receipt: 39 x TECI – ceiling-mounted evaporators (NH₃-DX), 2,355 kW, room temperature 6 °C
 - ▶ storage and packing rooms as well as goods issue for fruit and vegetables: 10 x TGCI – ceiling-mounted air coolers, 550 kW, room temperature 12 °C



LEISTUNGSDATEN:

- ▶ Projekt: Sydney Distribution Centre (Kühl Lagerung und Verteilzentrum)
- ▶ Standort: Western Sydney, New South Wales, Australien
- ▶ Produktionsjahr: 2018
- ▶ Lieferumfang: 16 CO₂– Deckenverdampfer der Baureihe TECI
- ▶ Leistung: 906 kW
- ▶ Raumtemperatur: 0,3/-25,8 °C

PERFORMANCE DATA:

- ▶ project: Sydney Distribution Centre (cold storage and distribution center)
- ▶ installation site: Western Sydney, New South Wales, Australia
- ▶ production year: 2018
- ▶ scope of delivery: 16 x TGCI – ceiling-mounted evaporators (CO₂)
- ▶ refrigerating capacity: 906 kW
- ▶ room temperature: 0,3/-25,8 °C



LEISTUNGSDATEN:

- ▶ Projekt: Zhangjiajie Ice World – Indoor-Skihalle
- ▶ Standort: Zhangjiajie, China
- ▶ Produktionsjahr: 2017
- ▶ Lieferumfang: 48 x TECI – Deckenluftkühler (Glykol)
- ▶ Leistung: 1.920 kW
- ▶ Raumtemperatur: -6,5 °C

PERFORMANCE DATA:

- ▶ project: Zhangjiajie Ice World – indoor ski run
- ▶ installation site: Zhangjiajie, China
- ▶ production year: 2017
- ▶ scope of delivery: 48 x TGCI – ceiling-mounted air coolers (glycol)
- ▶ refrigerating capacity: 1,920 kW
- ▶ room temperature: -6,5 °C



TECI/ TGCI

Baureihen - series

DECKENVERDAMPFER/-LUFTKÜHLER
CEILING-MOUNTED EVAPORATOR/
AIR COOLER



thermofin®
heat exchangers · Germany

www.thermofin.de

DESIGN

Anwendung

Die thermofin® Industrie-Deckenverdampfer und -luftkühler wurden für vielfältige Anwendungen entwickelt, speziell aber für:

- ▶ die Lebensmittelverarbeitung
- ▶ die Lebensmittellagerung im Kühl- und Tiefkühlbereich
- ▶ die Lebensmittellogistik
- ▶ Eissporthallen und Indoor-Skipisten

Hygiene

- ▶ Tropwanne (optional Edelstahl, vollverschweißt):
 - ▶ vollständig abklappbare Wanne mit Scharnieren, dadurch leichter Zugang zur kompletten Reinigung möglich
- ▶ UV-C-Lampen (optional):
 - ▶ zur Reduzierung von Keimen und Viren, zur Luftdesinfektion/-entkeimung und zur Inaktivierung von Mikroorganismen

Zubehör

- ▶ Klimaregister
- ▶ Ventilatorringheizungen
- ▶ doppelte und isolierte Wanne
- ▶ Abtauklappen
- ▶ Shut Up mit Ansaughuben
- ▶ Ansaug-/Ausblaschauben
- ▶ Aufstellfüße
- ▶ Isolierendscheiben
- ▶ klappbare Ventilatoren
- ▶ CIP-System zur Reinigung
- ▶ Nachleiträder zur Wurfweitererhöhung
- ▶ Luftschauchanschlüsse
- ▶ Vorverdrahtung der Ventilatoren
- ▶ Reparaturschalter
- ▶ „Wireless“ Ventilatoransteuerung
- ▶ beheizte Tropwanne zur Vermeidung von Kondensatabbildung
- ▶ UV-C-System
- ▶ Elektro-/Glykol- bzw. Heißgasabtauung in Block und / oder Wanne
- ▶ verkabelte Temperaturfühler zur effizienten Abtauung

The thermofin® industrial ceiling-mounted evaporators and air coolers were developed for a wide range of applications, but especially for:

- ▶ food processing
- ▶ food storage in refrigeration and deep freezing range
- ▶ food logistics
- ▶ ice houses and indoor ski slopes

hygiene

- ▶ drip tray (optional stainless steel, fully welded):
 - ▶ completely tilting drip tray with hinges, which allows easy access for complete cleaning
- ▶ UV-C lamps (optional):
 - ▶ for reducing germs and viruses, for air disinfection and for inactivation of microorganisms

accessories

- ▶ heating coil
- ▶ electric fan ring heaters
- ▶ double and insulated tray
- ▶ defrost dampers
- ▶ shut up with draw-in hoods
- ▶ draw-in/blow-out hoods
- ▶ legs (feet)
- ▶ insulation end plates
- ▶ tiltable fans
- ▶ CIP system for cleaning
- ▶ streamers for an increased air throw
- ▶ air hose connections
- ▶ pre-wired fans
- ▶ repair switches
- ▶ „wireless“ fan control
- ▶ heated tray to prevent the formation of condensate
- ▶ UV-C system
- ▶ electric/glycol or hot gas defrosting in block and / or tray
- ▶ wired temperature sensors for efficient defrosting

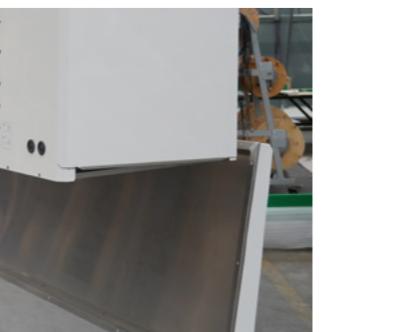
CONSTRUCTIONAL DESIGN

Konstruktive Ausführung



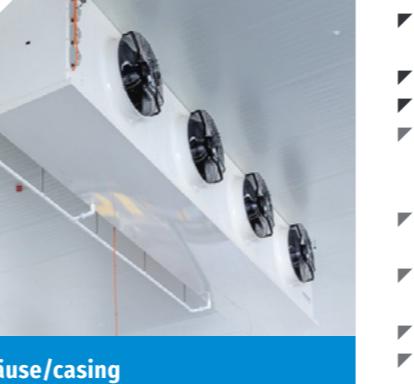
**Wärmeübertragerblock/
heat exchanger coil**

- ▶ fluchtende Rohranordnung für hohe Luftfeuchte (geringe Entfeuchtung) und Tiefkühlwendungen
 - ▶ Rohrdurchmesser 12/16/20 mm
- ▶ versetzte Rohranordnung für hohe Leistungs-dichten
 - ▶ Rohrdurchmesser 9,52/12 mm
- ▶ Rohre: Kupfer, Edelstahl V2A bzw. V4A
- ▶ Lamelle: Aluminium, Aluminium epoxidharzbe-schichtet, AlMg2.5
- ▶ Abtaumöglichkeiten: elektrisch, Heißgas, Sole / Glykol, Wasser
- ▶ aligned pipe arrangement for high humidity (low dehumidification) and deep-freeze applica-tions
 - ▶ pipe diameter 12/16/20 mm
- ▶ staggered tube arrangement for high power densities
 - ▶ pipe diameter 9,52/12 mm
- ▶ tubes: copper, stainless steel (V2A or V4A)
- ▶ fins: aluminium, aluminium epoxy coated, AlMg2.5
- ▶ defrosting coil options: electric, hot gas, brine / glycol, water



Tropwanne/drip tray

- ▶ doppelte und isolierte Ausführung
- ▶ Ausführung: AlMg (Standard), optional Edelstahl
- ▶ Ablauf standardmäßig horizontal
- ▶ optional: Heizmatte zur Verhinderung von Ober-flächenkondensation
- ▶ double and insulated version
- ▶ design: AlMg (standard), optional stainless steel
- ▶ standard outlet is horizontal
- ▶ optional: heating mat to prevent surface condensation



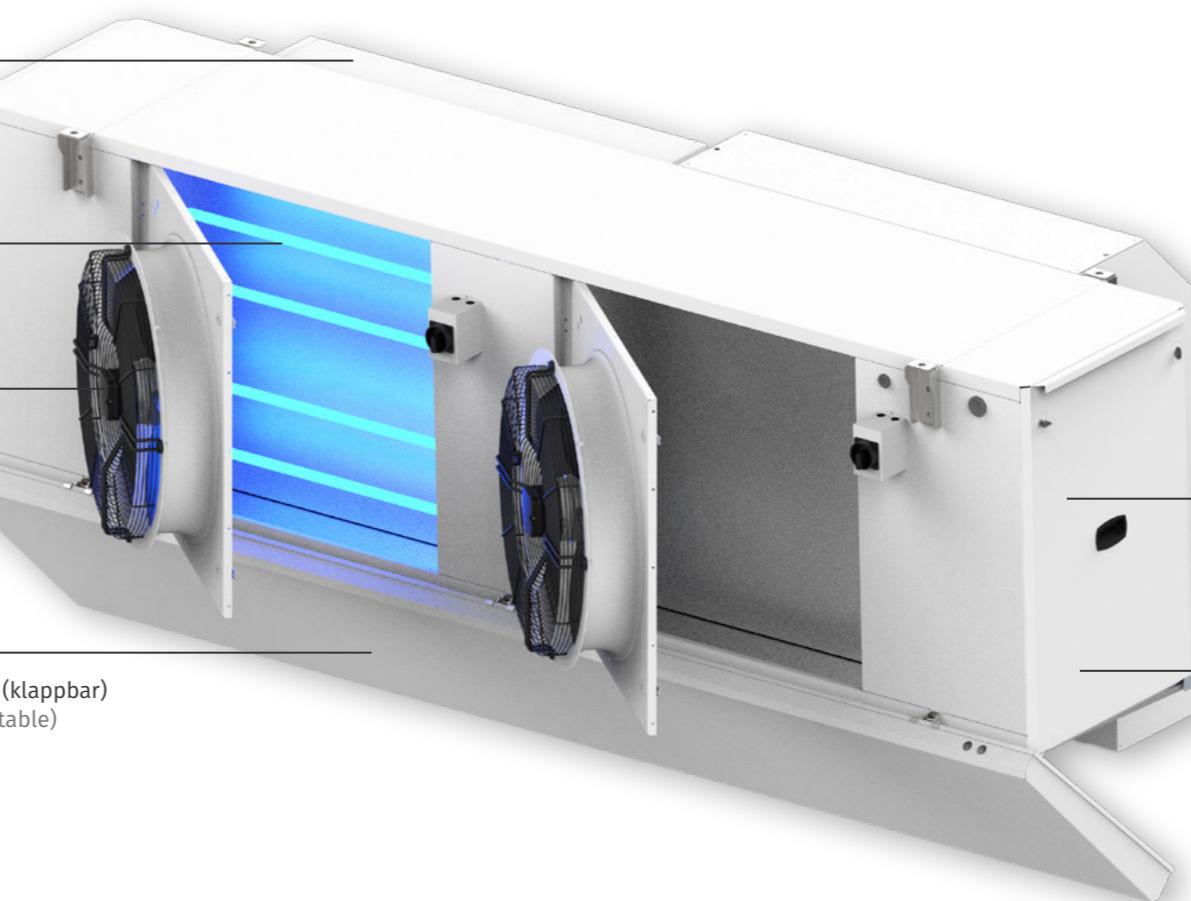
Gehäuse/casing



UV-C-Lampen/UV-C lamps

optional:

- ▶ UV-C-Lampen zur Reduzierung von Keimen und Viren
- ▶ UV-C lamps to reduce germs and viruses



**Tropwanne (klappbar)
drip tray (tiltable)**

**Abtauklappe
defrost damper**

**UV-C-Lampen
UV-C lamps**

**Ventilatoren
fans**

**Ansaughube
draw-in hood**

**Wärmeüber-tragerblock
heat exchanger coil**

**Gehäuse
casing**



Abtauklappe/defrost damper

optional:

- ▶ motorisch betätigtes Klappenausführung mit Begleitheizungen
- ▶ Ausführung in verschiedenen Materialien möglich
- ▶ motor-driven damper design with heat tracing
- ▶ design possible with different materials



Ventilatoren/fans

- ▶ Ø 315–910 mm, Standard IP54 (optional IP55 for EC)
- ▶ saugende Ausführung
- ▶ AC-Ventilatoren oder optional energie-sparende EC-Ventilatoren, direkt ansteuerbar über 0–10 V, 4–20 mA oder Modbus-Signal
- ▶ leise und langsam laufende Ventilatoren bei kritischer Schallvorgabe
- ▶ Klappfunktionen der Ventilatoren ermöglichen einfache Zugang für Reinigungsarbeiten innerhalb des Kühlers
- ▶ Schutzgitter mit KTL-Beschichtung oder in Edelstahl
- ▶ Ø 315 – 910 mm, standard IP54 (optional IP55 for EC)
- ▶ draw-through design
- ▶ AC or optional energy-saving EC fans, directly controllable via 0 – 10 V, 4 – 20 mA or Modbus signal
- ▶ silent, slowly running fans in case of critical noise requirements
- ▶ tiltable function of the fans allow easy access for cleaning inside the cooler
- ▶ protective grid with cathodic dip-paint coating or made of stainless steel



Ansaughube/draw-in hood

- ▶ Gehäuse mit Isolierung
- ▶ optional: mit beheizter Rinne
- ▶ housing with insulation
- ▶ optional: with heated channel