

Helpman THOR-D

Industrial air coolers - dual discharge

General information & application

The Helpman THOR-D series is a wide and flexible range of heavy-duty dual discharge industrial air coolers for both cooling and freezing applications in medium to large cold rooms. Suitable for a wide range of applications with a special focus on meat storage, agricultural produce and processing rooms.

Evaporating temp.	+5 to -40 °C
Refrigerants	all HFO/HFC, brine, CO ₂
Capacities (SC2)	4.5 up to 116.1 kW*
Air volume	3,000 up to 60,000 m ³ /h

* Higher capacities on request

Standard configuration

- Finned coil
 - 3 coil block modules
 - 4, 6 or 8 tube rows deep
 - Cu ripple fin tubing ø 5/8" (smooth tubing for brine)
 - Tube pitch 50 x 50 mm square
 - Corrugated Alu-fins
 - Fin spacings 4 and 7 mm.
- 1-5 Fans, available in a range of different executions. Diameters Ø 457, 508 and 560 mm.
- Cables are led to the outside of the casing. Enclosed design spray-tight fan motors, protection class IP55. Motors are equipped with a thermal safety device in the windings, connected to separate terminals in the box.
- All models available in both high and low fan speed execution.
 - 1000 rpm (=L design)
 - 1500 rpm (=H design)
- Corrosion resistant casing material: Aluminium/Sendzimir, white epoxy coated (RAL 9003).
- Hinged, enclosed end covers.
- Hinged driptray with vertical drains 1 ¼" BSP male.
- Refrigerant distribution optimised to refrigerant applied.
- Fitted with schröder valve on the suction connection for testing purposes.



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- Sufficient room for fitting the expansion valve inside.
- Suitable for dry expansion or pumped system.
- Stickers indicate fan direction and refrigerant in/out
- Delivery in mounting position. Coolers are mounted on wooden beams. Installation can take place with use of a forklift.

Benefits

- Application based air cooler design to secure product quality and working conditions.
- Low air velocities for use in processing rooms.
- Low silhouette.
- Advanced product selection software available.
- Heavy duty coil & casing materials, resulting in a long operational product life.
- Reliable performance.
- Easy-install.
- Energy efficient.
- Low defrost frequency thanks to square tube pitch configuration.
- Low total cost of ownership.
- Two-year product guarantee.
- Easy access to additional on-line product information (QR code).



Options

- Defrost systems
 - Hot gas coil in drip tray (G1)
 - Hot gas connected (G1C)
Hot gas coil in drip tray connected to suction header, without non-return valve.
 - Hot glycol defrost (HW1, HW2)
 - Electric defrost (E1, E4)
Electric defrost for air coolers with pumped refrigerant circulation or in glycol execution on special request only.
- Fan ring heater (FRH)
- Drip tray insulation
 - Styropore 10 mm + cladding (I2)
Not combined with electric defrost
 - Foamglass 25 mm + cladding (I3)
- Isolating switch, mounted (ISM)
- Horizontal drain
Hinged drip tray with horizontal drain at the short side. Available for THOR-D up to 3 fans, but not in combination with drip tray insulation I2/I3.
- Dual fan speed motors *modules 2 and 4 only*
- Secondary refrigerant
All models available for brine application. Standard connections Cu soldering, other connections (thread/flange) on request.
- Stainless steel 304 casing (SSC)
- Hinged fan plate (HN)

Non-standard executions (on request only)

- Higher capacities
- Special fan motors
 - Dual fan speed motors
 - Variable fan speed motors
 - EC fans
 - Fan motors 254-280/440-480/60/3, 230/60/1 or 230-380/60/3
- Built in heater coil sections

Design pressure

Design pressure 33 bar (HFO/HFC) or 6 bar (brine).
Each heat exchanger is leak tested with dry air and finally supplied with a nitrogen pre-charge.

Selection

Selection and pricing is to be performed with our Alfa LU-VE air heat exchanger selection software. Selection output includes all relevant technical data and dimensional drawings.

Code description

THOR-D	4	2	6	7	L	H1	400	-	*
1	2	3	4	5	6	7	8		9

- Industrial dual discharge air cooler CuAl
- Cooler module (2, 4 or 6)
- Number of fans (1 to 5)
- Tube rows in air direction (4, 6 or 8 rows)
- Fin spacing (4 or 7 mm)
- Fan speed (L=1000, H=1500 rpm)
- Circuiting design (H1, H2 ...)
- Fan power supply (400=230/400/50/3, 230=230/50/1)
- Options

Certifications

The Alfa LU-VE quality system is in accordance with ISO 9001.
All products are manufactured according to PED regulations.

How to contact Alfa LU-VE

Up-to-date Alfa LU-VE contact details for all countries are always available on our website at alfa.luvegroup.com