



THOR

Industrial air cooler

General information & application

The Helpman THOR series is a wide and flexible range of heavy-duty 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 packed products.

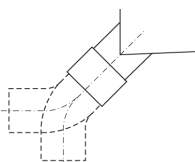
All THOR models have been highly standardised in construction and dimensions, while maintaining flexibility in fin spacings, coil construction and circuiting design.

Evaporating temp.	+5 to -40°C
Refrigerants	all H(C)FC, brine, CO ₂
Capacities (SC2)	5 up to 123 kW*
Air volume	4,000 up to 68,000 m ³ /h.

* Higher capacities on request

Standard configuration

- Finned coil
 - 7 coil block modules
 - 4, 6 or 8 tube rows deep
 - Cu ripple fin tubing \varnothing 5/8" (smooth tubing for brine)
 - Tube pitch 50 x 50 mm square
 - Corrugated Alu-fins
 - Fin spacings 4, 6, 7, 8, 10 and 12 mm.
- 1-7 Fans, available in a range of different executions. Diameters \varnothing 406 mm up to \varnothing 710 mm. 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 blow-through (THOR-B) and draw-through (THOR-Z) execution.
- Corrosion resistant casing material: Aluminium/Sendzimir, white epoxy coated (RAL 9003).
- Hinged, enclosed end covers (modules 1 - 4). Larger modules fitted with easily removable end covers.
- Hinged driptray, drain(s) 32 mm PVC connection, freely adjustable into either horizontal or vertical position.



THOR

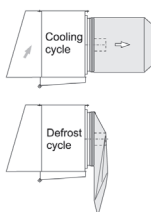
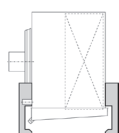
- Refrigerant distribution optimised to refrigerant applied.
- Refrigerant connections on right hand side (fan side view).
- Fitted with schröder valve on the suction connection for testing purposes.
- Sufficient room for fitting the expansion valve inside
- Suitable for dry expansion or pumped system.
- 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.

Design pressure

Design pressure 33 bar (H(C)FC) or 6 bar (brine). Higher design pressures on request. Each heat exchanger is leak tested with dry air and finally supplied with a nitrogen pre-charge.

Options

- Defrost systems
 - Hot gas coil in driptray (G1, G2)
 - Hot gas connected (G1C, G2C)
Hot gas coil in driptray connected to suction header, without non-return valve.
 - Electric defrost (E1, E2, E4, E5)
Electric defrost for air coolers with pumped refrigerant circulation or in glycol execution on special request only.
 - Hot glycol defrost (HW1, HW2)
 - Water defrost (W)
Electric defrost for air coolers with pumped refrigerant circulation or in glycol execution on special request only.
- Fan ring heater (FRH)
- Driptray insulation
 - Styropore 10 mm + cladding (I 2)
Not combined with electric defrost
 - Foamglass 25 mm + cladding (I 3)
- Refrigerant connections (L / R)
- Mounting feet (MF)
For floor mounting, THOR coolers can be equipped with hot dip galvanized steel mounting feet.
- Isolating switch, mounted (ISM)
- Shut up® system (S + SH) for THOR-Z only. The system comprises a shut-up sock and an inlet hood to enhance defrost efficiency.

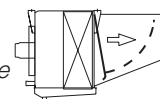


Code description

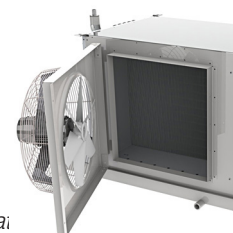
THOR-B	4 2 6 8	H1/6	400	-	Options
1	2	3 4 5 6	7	8	9

- Industrial air cooler CuAl
- Air direction (B=blow, Z=draw)
- Cooler module (1 to 7)
- Number of fans (1 to 7)
- Tube rows in air direction (4, 6 or 8 rows)
- Fin spacing (4, 6, 7, 8, 10 or 12 mm)
- Circuiting design (2H, H1, H2 ...)
- Fan power supply (400=230/400/50/3, 230=230/50/1)
- Option codes

- Diffuser + defrost damper (D, DO)
Discharge diffuser (D) to increase air throw, can also be fitted with a defrost damper valve (O) that closes automatically when the fans are stopped (THOR-B only).



- Hinged fan plate (HN)
- Stainless steel 304 casing (SSC)
- Fan motors 254-280/440-480/60/3 or 230/60/1
- Secondary refrigerant
All models available for brine application. Standard connections Cu soldering, other connections (thread/flange) on request.



Non-standard executions (on request only)

- Special fan motors
 - Dual fan speed motors
 - Variable fan speed motors
 - EC fans
 - Alternative electrical supply 230-380/60/3
 - Fans for extra external pressure 125 Pa (P) (modules 5, 6 and 7)
- Built in heater coil sections

Selection

Selection and pricing is to be performed with our Alfa Laval air heat exchanger selection software. Selection output includes all relevant technical data and dimensional drawings. Please contact our sales organization for details and full technical documentation.

Benefits

- Application based air cooler design to secure product quality.
- Advanced product selection software available.
- Heavy duty coil & casing materials, resulting in a long operational product life.
- Exceptionally wide & versatile cooler range.
- Reliable performance.
- Easy-install.
- Energy efficient.
- Low defrost frequency thanks to square tube pitch configuration.
- Low total cost of ownership.
- Easy access to additional on-line product information (QR code)



Certifications

Eurovent certified performance only applies to models included in the scope of the programme. Check certificate validity on www.eurovent-certification.com.



How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com