

# Helpman THOR-F

## Agricultural storage cooler

### General information & application

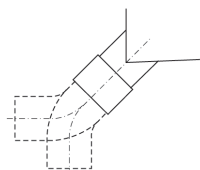
The Helpman THOR-F air cooler series has been specifically designed for the refrigerated storage of agricultural produce. These coolers are characterised by an optimised capacity/air volume ratio and a relatively low profile. All models have been optimised for air temperatures around 0 °C and a small temperature difference to avoid product dehydration.

Evaporating temp.	+5 to -10 °C
Refrigerants	all HFO/HFC, brine, CO <sub>2</sub>
Capacities (SC2)	7 up to 57 kW*
Air volume	5,100 up to 36,000 m <sup>3</sup> /h

\* Higher capacities on request

### Standard configuration

- Finned coil
  - 2 coil block modules
  - 6 tube rows deep
  - Cu ripple fin tubing  $\varnothing$  5/8" (smooth tubing for brine)
  - Tube pitch 50x50 mm square
  - Corrugated Alu-fins
  - Fin spacings 7 mm
- 3-7 Fans, blowing through the coil. Diameters  $\varnothing$  406 mm or  $\varnothing$  457 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.
- Fans with elevated external pressure to ensure optimised air distribution.
- Corrosion resistant casing material: Aluminium/Sendzimir, white epoxy coated (RAL 9003).
- Hinged, enclosed end covers.
- Hinged driptray. Drain(s) 32 mm PVC connection, freely adjustable into either horizontal or vertical position.



THOR-F

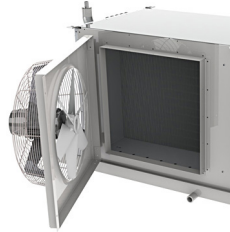
- Refrigerant distribution optimised to refrigerant applied.
- Refrigerant connections on right hand side (fan side view).
- Fitted with schröder valve on the suction connection for testing purposes.
- Sufficient room for fitting the expansion valve inside.
- Suitable for dry expansion or pumped system.
- 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 (HFO/HFC) 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)
  - Hot gas connected (G1C)  
*Hot gas coil in driptray connected to suction header, without non-return valve.*
  - Water defrost (W)
  - Electric defrost (E1, E4)  
*Electric defrost for air coolers with pumped refrigerant circulation or in glycol execution on special request only.*
- Driptray insulation
  - Styropore 10 mm + cladding (I2)  
*Not combined with electric defrost*
  - Foamglass 25 mm + cladding (I3)
- Refrigerant connections (L/R)  
(fan side view)
- Isolating switch, mounted (ISM)
- 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

## 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. Please contact our sales organization for details and full technical documentation.

## Code description

<b>THOR-F</b>	<b>1 3 6</b>	<b>7</b>	<b>400</b>	-	<b>*</b>
1	2 3 4	5	6		7

- Agricultural storage cooler Cu/Al
- Cooler module (1 or 2)
- Number of fans (3 to 7)
- Tube rows in air direction (6)
- Fin spacing (7 mm)
- Fan power supply (400=230/400/50/3, 230=230/50/1)
- Options

## Benefits

- Application based air cooler design to secure product quality.
- Elevated external fan pressure to ensure optimised air distribution.
- All models optimised for air temperatures around 0 °C and a small temperature difference to avoid product dehydration.
- Advanced product selection software available.
- Heavy duty coil & casing materials, resulting in a long operational product life.
- Reliable performance.
- Easy-install.
- Energy efficient.
- Low total cost of ownership.
- Two-year product guarantee.
- Easy access to additional on-line product information (QR code).



## 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](http://alfa.luvegroup.com)