Alfa Laval Arctigo – Optimal design made real

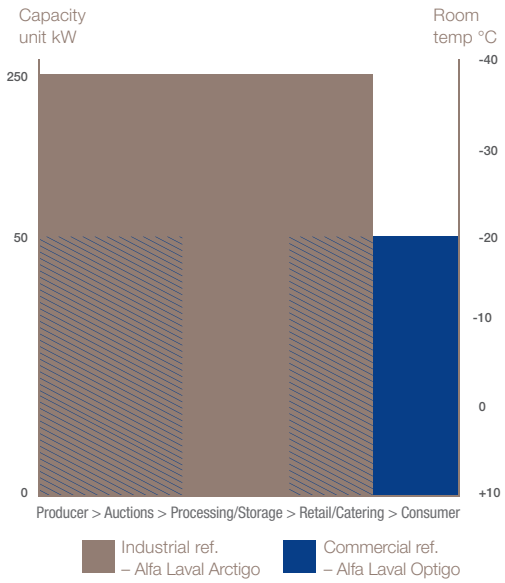
The Alfa Laval range of industrial air coolers

Alfa Laval Arctigo – Optimal design made real

In industrial refrigeration, standard commercial solutions often fall short, as every application has its own unique requirements. Every product has to be perfectly customized to achieve the optimal efficiency and climate conditions.

That's why Alfa Laval has developed Arctigo, our industrial air cooler platform. Arctigo air coolers are built with an application-led approach, creating the optimal design for industrial applications like yours.

Combined with the Alfa Laval Optigo range for commercial refrigeration, we can now supply a full range of the latest high efficiency air coolers for all applications.



A unique fusion of experience and technology

With decades of broad experience and practical expertise in heat transfer, Alfa Laval is today a world-leading supplier of heat exchangers. Combining our experience with that of Helpman and Fincoil, Alfa Laval has created a unique fusion of knowledge and technology, introducing our new range of industrial air coolers – Alfa Laval Arctigo.

Application expertise

Thanks to our application expertise, we are able to help customers find and select the right product for their cooling and heating projects. We have put all our application knowledge and customer insights into developing Alfa Laval Arctigo – an industrial air cooler with high quality parts configured to deliver optimal performance by using less energy and resulting in a lower total cost of ownership.

Wide and versatile range

Arctigo air coolers are based on a modular concept with seven different coil block modules. Each of them can be combined with different construction variants, fan types and several options. The result is a wide and deep range with solutions for all industrial refrigeration applications.

Configurator and support

Our easy-to-use configurator software, AlfaSelect Air, helps you select the most suitable solution for your specific application. Worldwide sales, technical support and service in local languages give you total peace of mind.

Alfa Laval Arctigo at a glance

- Suitable for all HFC, ammonia, CO_2 & brine refrigerants
- DX and pumped system
- Design pressures HFC DX 33 bar, NH_3 pump 27 bar, CO_2 33–60 bar, brine 6 bar
- Triangular or square pitched coil
- Fin spacing 4 up to 12 mm
- 1 to 8 fans, fan diameters 450 up to 1000 mm
- Hinged fan rings for easy maintenance, saving time and cost
- Blow-through or draw-through design
- Room temperatures +10 down to -40 °C
- Capacity range 3 up to 250 kW
- Air volumes 3000 up to 120000 m^3/h

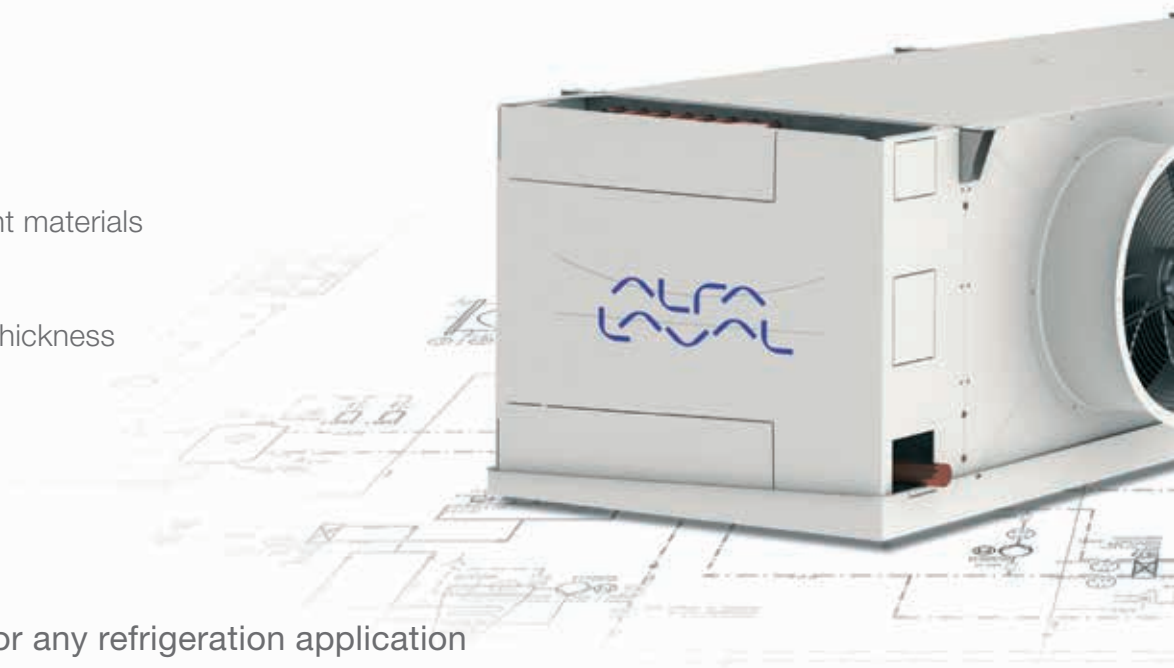
Customer benefits

High quality

- World-class material and supplier choice, design based on field and laboratory tests
- Combined technology and experience from thousands of installations around the world
- Renowned Alfa Laval commitment to performance and excellence

Energy efficient

- EC fan motors available
- Ideal ratio between primary and secondary surface
- Optimal fin thickness with waved fins
- Internal tubes' corrugation increases turbulence and primary surface



Heavy-duty

- Corrosion resistant materials
- Robust design
- Optimal material thickness and weight ratio

Optimized for any refrigeration application

- Decades of experience in all industrial cooling applications
- Wide choice of available dimensions
- Up to 8 fan units, blow- or draw-through design
- Choice of triangular or square coil pitch
- Low unit height to optimize your cold room space

Easy to install and maintain

- Delivery in mounting position with transport feet on a pallet
- Hinged drip tray, side covers and optional hinged fan motors
- Wide lateral spaces for comfortable welding of piping and installing valves and controls

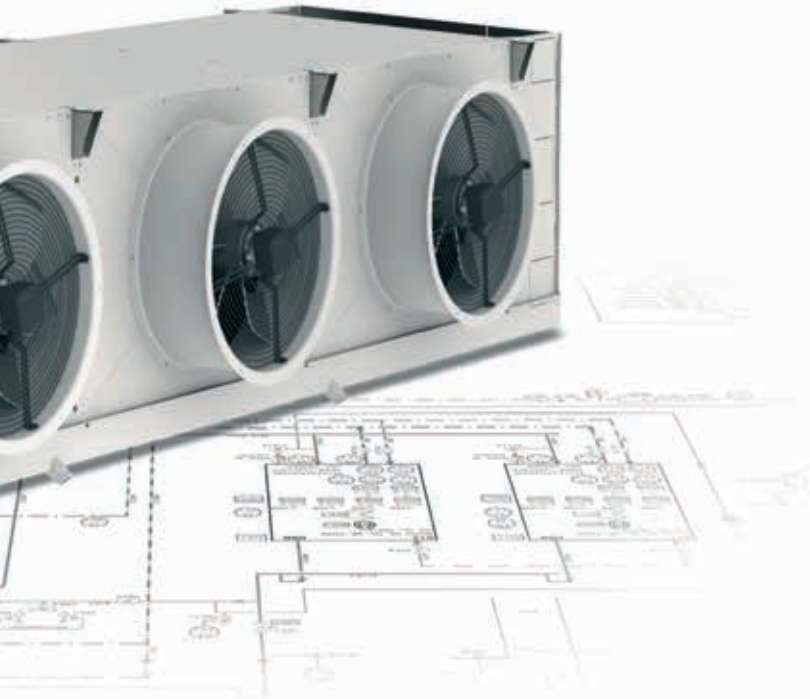

Application expertise


Wide & versatile


Configurator & support

Worldwide support and service

- Local Alfa Laval sales organization in local languages
- Worldwide support from product and application specialists
- Local after-sales service
- Original spare parts available from Alfa Laval channel partners



One-stop supplier

- All heat transfer products for your refrigeration application
- Shell-and-tube heat exchangers
- Welded, semi-welded, fully gasketed, brazed and fusion bonded (AlfaNova) plate heat exchangers
- Air-cooled condensers, dry coolers and gas coolers

Wide fan range

- Blow-through or draw-through designs
- Wide choice of power supplies for both single and triple phases
- 6 fan diameters up to 1000 mm available as standard
- Full range of AC and EC fan motors
- Fan selection possible with different external pressures

Reliable

- Wide casing reduces risk of sputtering and ensures even air distribution over finned tube coil
- Eurovent certified performance (HFC DX models only)
- Refrigerant implementation in the selection software as result of in-house laboratory tests

State-of-the-art selection software

- Easy-to-use configurator with separate thermal selection module
- Multiple configurations
- Easy categorization by different parameters
- Wide and deep product range in executions, material and options available for selection

Application expertise for your industry

From freezing and cold storage in industrial premises, cooling in slaughter houses, fish and meat processing areas, to climate control in storage rooms for fresh food, Alfa Laval Arctigo delivers an optimal climate for every product.

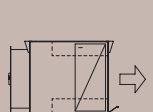
Agricultural produce

Agricultural storage coolers are characterized by an ideal capacity to air volume ratio and a relatively low profile. Arctigo coolers for this application have been optimized for air temperatures around 0°C and a small temperature difference to avoid dehydration.

Meat, fish & poultry freezing and storage

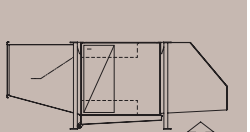
Alfa Laval air coolers are developed to be extremely reliable and operate with a low defrosting frequency to create a good freezing process. This minimizes moisture loss of the fresh products during freezing, which preserves the product value and quality.

Using Arctigo in shock cooling applications limits the difference between air-on and air-off temperature to a maximum of 2–3 K. This minimizes the moisture withdrawn from the product, which settles as frost on the fin coil. In addition, an extra wide fin spacing is available on the entrance side of the coil (dual fin spacing) to prolong the freezing cycle before defrosting and as a result freeze more goods.



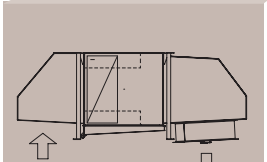
Blow-through
Ceiling mounted

Example:
Long term storage
fresh produce



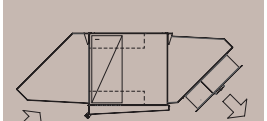
Blow-through
Floor mounted
Inlet hood 90°
Diffusor + defrost valve

Example:
Large cold rooms
high humidity



Draw-through
Floor mounted
Inlet hood 90°
Fan casing 90°

Example:
Blast freezing large
slaughter houses



Draw-through
Ceiling mounted
Inlet hood 45°
Fan casing 45°

Example:
Shock cooling meat,
fish and poultry

Blow-th
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Processing rooms

Processing room air coolers have to take into consideration the optimum quality of the food being processed, and yet maintain climate conditions suitable for the workers. To guarantee the health of the employees, Arctigo units used as processing room coolers have been designed with a minimal noise level and a minimal sensible draft.

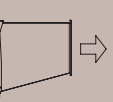
The goal is achieved through low air velocities, an extremely even airflow and small temperature gradients in the ambient air. An excellent aid is the airsock, ensuring good air distribution over the entire working space.

The Arctigo range covers models that have been specifically designed with the appropriate external pressure for airsock application.

Distribution centres

Distribution centres impose complex demands on air coolers. Alfa Laval Arctigo units used in these areas are designed for high cooling capacities and long air throws. All Arctigo coolers are fitted with hinged drip trays and can be supplied with hinged fans for easy inspection and cleaning, which is especially important in this application.

High stock turnover and movement requires these coolers to be extremely efficient in maintaining the right temperatures, and very easy to clean.



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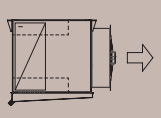
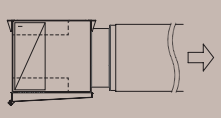


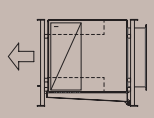
Draw-through
Ceiling mounted

Example:
General purpose
packed produce



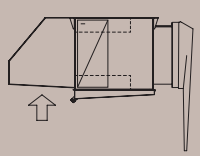
Draw-through
Ceiling mounted
Airsock ring

Example:
Processing rooms



Blow-through
Floor mounted

Example:
Distribution centres
fresh produce



Draw-through
Ceiling mounted
Inlet hood 90°
Shutup sock

Example:
Frozen storage fish
and meat

Alfa Laval Arctigo standard features

Alfa Laval Arctigo is a wide and flexible range of single discharge air coolers for cooling and freezing applications in medium to large cold rooms. The range keeps fresh and frozen goods at optimum conditions, at a temperature range down to -40°C.

Refrigerants

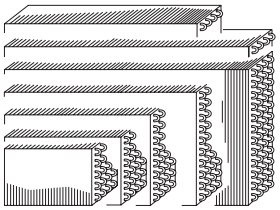
Alfa Laval Arctigo units can be configured for all common refrigerants in both direct expansion and pumped systems. Circuiting is optimized according to the refrigerant and application.

Refrigerant application	Design pressure
HFC	33 bar
Ammonia	27 bar
CO_2	30–60 bar
Brine	6 bar

Coil

- 7 basic coil block modules
- 3, 4, 6, 8 or 10 tube rows in air direction
- Tubing: copper ripple, copper smooth (brine) or stainless steel, tube diameter 16 mm
- Corrugated fins 0.3 mm in aluminium, pre-coated aluminium or seawater-resistant aluminium
- Fin spacing: 4, 5, 6, 7, 8, 10, 12 mm or dual fin spacing

Each heat exchanger coil is leak tested with dry air and subsequently supplied with a dry air pre-charge.



Fans

- 1 to 8 fans
- Diameters (both AC and EC): 450, 500, 630, 710, 800 or 1000 mm
- Air direction: drawing or blowing through coil
- 2-speed fan motors: 400-460/50-60/3 or 230/50-60/1 (ø450 mm only)
- Two sound levels (Δ/Y connection)
- Fan motors with dynamically and statically balanced external rotor, protection class IP54 class F
- Integrated thermo contacts provide reliable protection against thermal overload

Modules						
Alfa Laval Arctigo model	max no. of fans/unit		fan diameter mm	unit dimensions		
	coil type			height mm	L min mm	L max mm
	triang.	square				
IS 1	7	8	450	590	1475	7075
IS 2	6	6	450	690	1675	6675
			500			
IS 3	5	5	630	890	1875	6675
			710			
IS 4	3	4	800	1110	2275	7075
IS 5	3	3	1000	1310	2675	6675
IS 6	3	3	1000	1510	2675	6675
IS 7	3	4	1000	1710	2275	7075

Frame and casing

- Heavy-duty material, coil frame and casing pre-galvanized sheet steel, epoxy coated RAL 9002
- Hinged side panels
- Corrosion resistant fixing materials
- Sufficient space for piping, valves and control devices inside casing

Driptray

Hinged driptray, drain(s) 40 mm PVC connection, freely adjustable into either horizontal or vertical position.

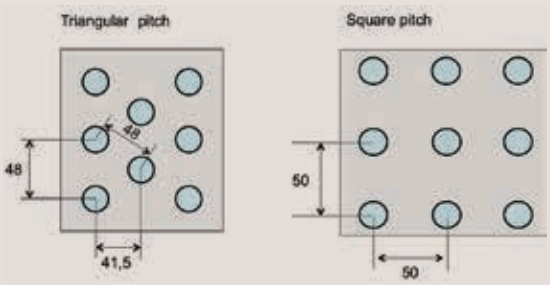
Drainage is inclined by 45° to optimize piping layout, with specially designed holes between internal and external driptray, and an optimized number of drains.

Triangular or square tube pitch

Alfa Laval Arctigo units can be configured with square or triangular pitched coils.

Square pitches enhance the surface area for less defrosting, longer cooling periods, lower air drop pressure and lower fan power consumption. This is more suitable for applications that require keeping the Relative Humidity high.

Triangular pitches result in a lower fin temperature and more capacity per m^2 coil surface. This allows for a more compact cooler design at a given duty.



Refrigerant connections L R

Refrigerant connections can be configured on both sides of the cooler to suit your application. Default position is on the left side (fan view).

Delivery in mounting position

Arctigo coolers are mounted on wooden beams using special transport feet for ceiling mounted coolers (to be removed after installation). Installation can take place with a forklift.

Code description

All Arctigo models are labelled according to the following code type. This allows easy reference to the products' specifications.

IS	B	3	5	-	2	H	8	CU	-	E	-	AL	7.0	-	2H-5	L	-	FA29A	-	00	-	FRH
1	2	3	4		5	6	7	8		9		10	11		12	13		14		15		16

1 Arctigo industrial air cooler - single discharge
2 Air direction (B=blow through, D=draw through)
3 Cooler module size (1 to 7)
4 Number of fans (1 to 8)
5 Coil geometry (1=triangular, 2=square)
6 Fan speed (H=high pressure fans)
7 Tubes rows in air direction (3, 4, 6, 8 or 10 rows)
8 Tube material (CU=copper, SS= stainless steel)
9 Refrigerant system (E=direct expansion, W=brine, PB=pumped bottom feed, PT= pumped top feed)
10 Fin material (AL=aluminium, EP= precoated aluminium, SWR= sea water resistant aluminium)
11 Fin spacing (4, 5, 6, 7, 8, 10 and 12 mm)
12 Circuiting code
13 Refrigerant connection side (R=right, L=left - fan side view)
14 Fan motor code
15 Revision code
16 Option code

Wide and versatile range

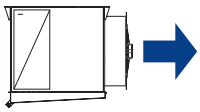
Alfa Laval fan technology

The type of fans depends on the application area. Air coolers from Alfa Laval are equipped with premium quality fans and motors that comply with the highest industry standards.

Draw-through vs. blow-through

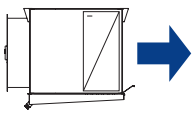
Draw-through air direction

- Better air distribution over the coil, hence higher coil efficiency
- Longer air throw
- Frost build-up visible on air inlet side



Blow-through air direction

- Higher DTML, higher cooling capacity
- Large air outlet surface, more even airflow
- Higher RH in air outlet (less product dehydration)



AC and EC fans

Both options are available for all Alfa Laval Arctigo units.

Alfa Laval EC motors are direct current motors where collector and brushes have been replaced by electronics. EC fan motors are equipped with integrated Electronic Commutation speed control. The result is a highly efficient and extremely compact speed controlled fan.

Benefits of EC fans compared to AC fans

- Absence of slip and friction losses
- Less noise and heat generation
- Higher efficiency at any speed
- Decrease of power consumption
- Longer lifetime
- Fan speed independent of power supply frequency & number of poles
- Excellent electromagnetic compatibility (EMC) according to EN 50082-2, no shielded motor cabling required

Fans					
Alfa Laval Arctigo model	max no. of fans/unit, coil type		fan diameter mm	fan speed rpm	power per fan W
	triang.	square			
IS 1	7	8	450	1280	350
				1350	540
IS 2	6	6	450	1350	540
			500	1300	770
IS 3	5	5	630	900	620
				1310	1970
			710	970	1970
				1330	2600
IS 4	3	4	710	1330	2600
			800	910	1570
IS 5	3	3	1000	690	1550
				870	3100
IS 6	3	3	1000	690	1550
				870	3100
IS 7	3	4	1000	690	1550
				870	3100

ErP
All Alfa Laval Arctigo fans comply with the Energy-related Products (ErP) directive, which aims to increase the total share of renewable energy by 20% by 2020 while increasing the energy efficiency by 20%.

External pressure
Using our standard fan range, additional external static pressures of between 40 and 150 Pa are available for different cooler configurations and for instance, airsock applications.

AC dual fan speed
All AC fan motors for Arctigo are dual fan speed type. Connecting the fan motors in either star or delta allows for two different fan speeds and cooler operation at two sound pressure levels.

Power supply
Fan motors for all common power supplies 400/460V-50/60Hz-3ph or 230V-50/60Hz–1ph are available. Special fan motors for other power supplies are available on request.

Cooling or freezing application
All Arctigo models can be optimized for either cooling or freezing conditions depending on the fan type selected.

Fan configuration
Based on the following input, the fan is automatically selected during configuration of Arctigo:

- Cooling capacity
- Static pressure
- Air direction
- Unit dimensions
- Fin spacing
- Freezing/cooling application
- AC/EC
- Delta/star connection
- Hinged fan ring – optimized and designed for Alfa Laval Arctigo

You can trust Alfa Laval's sound data

Complete units
Air cooler sound power values are often supplied per fan. Alfa Laval, however, supplies reliable sound power data for the complete air cooler unit.

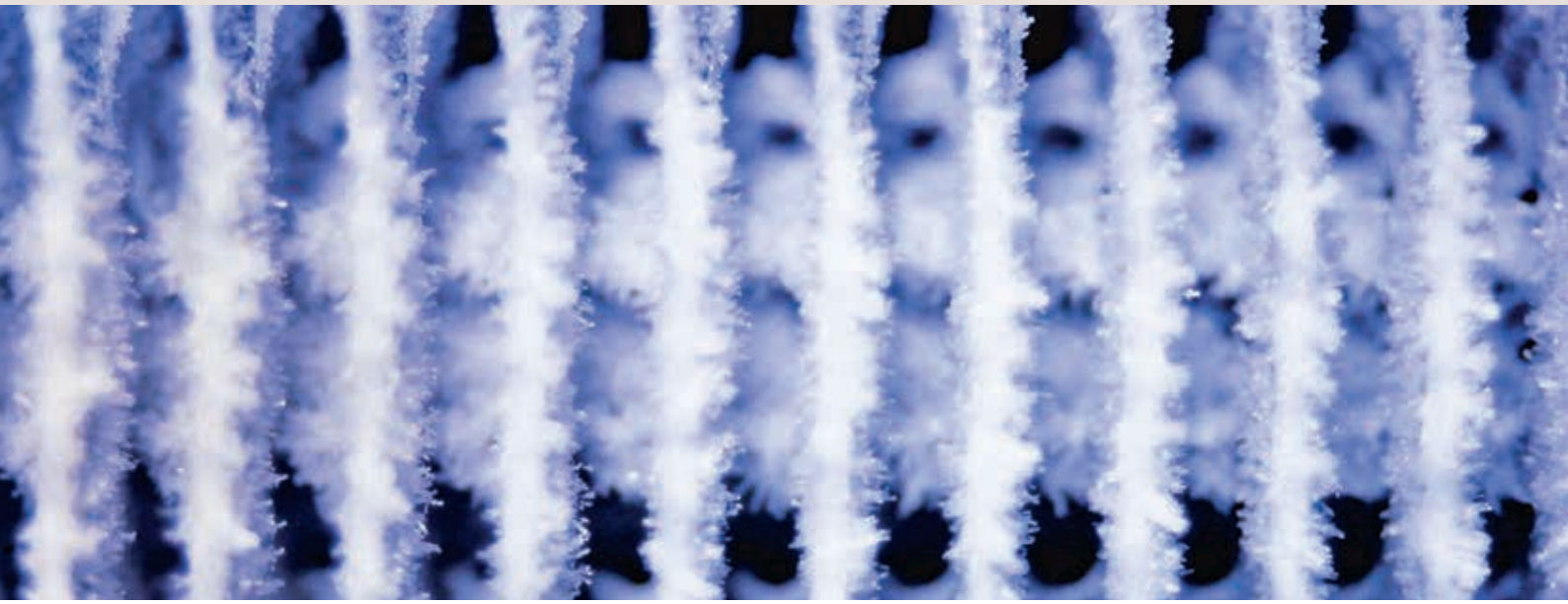
Sound specification is crucial for air coolers, since they are often used in environments with human presence, and adequate sound levels are required for the workplace to be safe and suitable for workers.

There are a few methods used in the refrigeration industry to calculate sound values, each with different specific advantages or disadvantages. The basic issue is whether to refer to sound power (L_wA) or sound pressure (L_pA).

Sound power L_wA
Sound power is the sound energy that is generated per time unit (W=Nm/s). Sound power is not dependent from the distance to the sound source and other situational circumstances,which makes it the only correct value to compare different sound sources. Sound power cannot be measured directly (we measure the pressure P) so sound power is the result of a complex calculation involving many different parameters. Sound power values are usually given in dB(A).

Sound pressure L_pA
Sound pressure is the sound force/surface (P=N/m^2), the force N being the alternating pressure generated by acoustic oscillation of the air. Sound pressure values can be directly measured under laboratory conditions according to strictly formalized standards (free field conditions, fixed distances etc.). Sound pressure values are also given in dB(A). Sound pressure values for Alfa Laval air coolers are given according to EN13487 in free field conditions.

Sound pressure values given in a brochure or data sheet are no clear indication of the actual sound characteristics in the working situation. There are numerous acoustic determinants to consider during actual operation of air coolers, such as the number of reflection planes, the presence of additional air coolers, and cold room content and construction. This needs to be calculated based on the provided sound power values in combination with all relevant situational parameters. This is primarily a responsibility of the contractor or plant designer.



Defrost systems

Alfa Laval Arctigo's defrost systems are developed to deliver the highest possible efficiency at the lowest operating costs. Each defrost system is optimized for specific applications and conditions. Even user behavior, such as the frequency of door opening, and the position of the air coolers, will be taken into consideration during installation to ensure optimal operation of the air cooler.

Recommended defrost system

The defrost system recommended depends on the ambient temperature required.

Air-on temperature °C		+5	0	-5	-10	-15	-20	-25	-30	-35	-40
Hot gas defrost	HG1										
	HG2										
	HG1E										
	HG1E										
	HG1E + I2										
	HG2E + I2										
Electrical defrost	E1*										
	E1 + I2*										
	E2										
	E2 + I2										
	E4										
Water defrost	W1										
	W2 (+I2/FRH)										
Hot water defrost	HW1										
	HW2										

* In combination with hot gas defrost in the coil.

Electric defrost E

Stainless steel heater elements placed in additional tubes between the evaporator tubes. The elements for the driptray are fitted to the bottom of the inner tray. Both coil and driptray have the same elements. All defrost elements are connected in a central connection box.

- **E1 – Electric defrost driptray**
  Air-on temperatures down to -25°C.
  Electric stainless steel defrost elements in the driptray. For use in combination with, for example, hot gas defrost in the coil block. In combination with driptray insulation (I2) suitable for air-on temperatures down to -40°C.

- **E2 – Electric defrost heavy**
  Air-on temperature down to -25°C. Electric stainless steel defrost elements in coil block and driptray. Recommended for general use. In combination with driptray insulation (I2) suitable for air-on temperatures down to -40°C.

- **E4 – Electric defrost light**
  Air-on temperatures down to -10°C. Electric stainless steel defrost elements in the coil block and driptray, low duty.

- **E5 – Electric defrost for defrost valve**
  Defrost element for the defrost valve (DO). Available for blow-through models only.

Hot gas defrost HG HGC

The driptray can be fitted with a copper defrost coil (HG) to rapidly increase temperatures by means of hot gas.

- HG1 – Hot gas defrost light with defrost coil mounted under the coil block
- HG2 – Hot gas defrost heavy with defrost coil mounted in the driptray

The hot gas defrost coil system can be supplied with (HGC) or without connection to the cooler coil (HG). In combination with driptray insulation (I2), hot gas defrost is suitable for air-on temperatures down to -40°C.

Combined defrost HGE

- HG1E – Hot gas coil in driptray + light electric defrost in coil
- HG2E – Hot gas coil in driptray + heavy electric defrost in coil

Water defrost W

Water defrost requires only pump energy and a sufficient water volume to function. Alfa Laval Arctigo's water defrost systems have been designed based on the results of field tests in Korea and Japan, ensuring that only the most efficient systems are employed. Suitable for air-on temperatures down to -5°C (W1). In combination with driptray insulation and fan ring heater, suitable for air-on temperatures down to -30°C (W2).

Hot water/glycol defrost HW

This is one of the best defrost systems for CO_2 applications. The condensation heat can be used as an energy source for greater energy savings. Defrost circuits (copper or stainless steel tubes) are placed in both coil and driptray.

- HW1 – Hot glycol defrost light for air-on temperatures down to -5°C
- Hot glycol defrost heavy for air-on temperatures down to -25°C

Keeping your defrost system in optimal condition

Arnold Leistra, Service Specialist Air, shares his experience about defrost challenges:

About 75% of issues raised with regards to malfunctioning of air coolers are related to defrost problems. Common problems encountered include ice buildup in the drip tray and bottom plate, bad refrigeration distribution caused by uneven frost or ice buildup in the coil, and reduced airflow. These happen due to possible errors such as stopping the defrost period too early, too many defrost periods per day, non-optimal time settings of the defrost process, and irregular checks on the remaining frost or ice in the air cooler.

Such problems can be avoided by regularly monitoring the defrost results in the first period after commissioning and changing the settings if there is still frost remaining in the heat exchanger.

Optional features

By adding optional features to the Arctigo cooler, the performance of the specific installation can easily be optimized during the design process.

Mechanical options

Diffusor D
Discharge diffusor to increase air throw.

Diffusor with defrost valve DO
Diffusor with integrated defrost valve to improve defrost efficiency (shortens defrost time by up to 30%). The defrost valve closes automatically when the fans are stopped during the defrost cycle to keep the defrost heat within the cooler casing. Available for blow-through models only.

Hinged fan rings HF
Unique to Alfa Laval Arctigo, hinged fan rings enable easier cleaning operations and reduces the weight of the entire unit as compared to traditional hinged fans, resulting in time and cost savings.

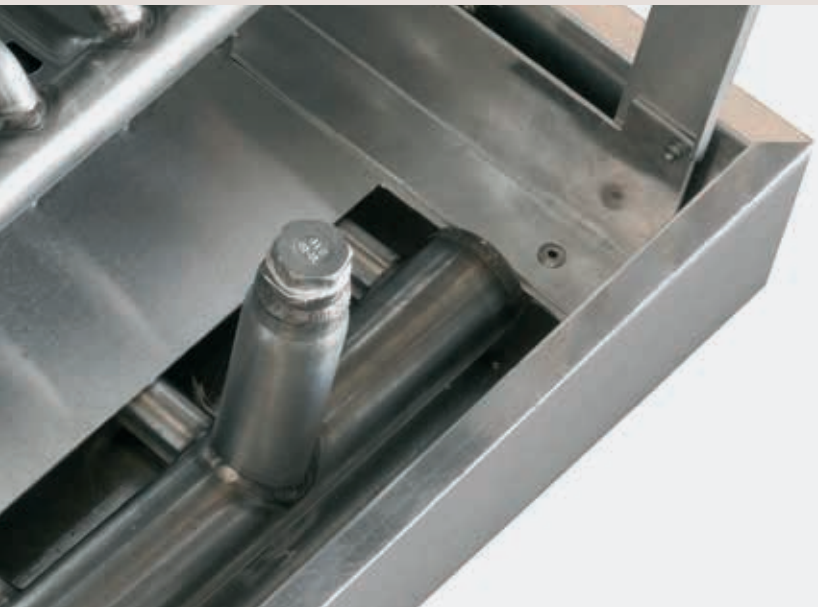
Hood H1 H2
Hoods 45° (H1) or 90° (H2) can be fitted on both coil and fan side of the cooler. Hoods on the air inlet side can be used to enhance defrost efficiency in combination with a shutup sock (S) or defrost valve (DO) on the discharge side. Hoods on the discharge side are used to guide the cold airflow in a required direction.

Driptray insulation I2
Double drip tray, insulated with 10 mm styropor. Other insulating materials on request.

Streamer ST
Fan streamer to increase air throw by more than 50%. For draw-through units only.







Shutup sock S
Polyester shutup sock for improved air throw, shorter defrost time by up to 30%, and lower power consumption. For draw-through units only.

Fan casing FC1 FC2
Fan casing 45° (FC1) or 90° (FC2) for uniform temperature and air distribution for shock cooling applications. For draw-through units only.

Airsock adaptor ring SR
Adaptor ring for air sock application.

Fin protection EP SWR
Pre-coated aluminium fins (EP) or seawater resistant aluminium AlMg2.5 (SWR) for even more aggressive climate conditions.

Flanges F
Slip-on flanges for brine applications (aluminium PN16 or stainless steel PN).

Dual/triple fin spacing DF TF
Dual or triple fin spacing is available on request.

Stainless steel casing and frame SSC
All casing and frame material stainless steel AISI 304

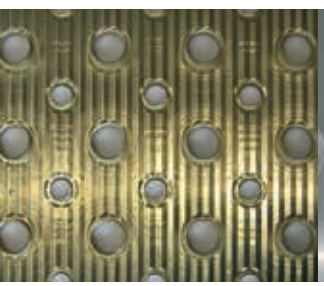
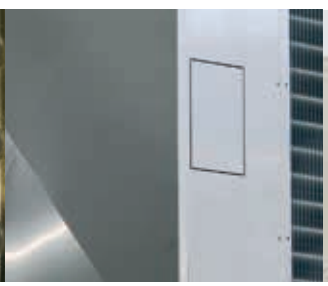
Mounting feet MF
Hotdip galvanized steel mounting feet (stainless steel in combination with SSC).

Electrical options

Fan ring heater FRH FRHC
Fan ring heater unconnected (FRH) or connected (FRHC).

Repair switch SW
Fan motor on/off switch.

Central connection box CB1 CB2
All fan motors internally wired to a central connection box (CB1) or central internal connection box wired to a single external switch (CB2). Default positioning opposite to refrigerant connections side.


Product selection and information

To facilitate you in your Arctigo product configuration, we give you access to our state-of-the-art online selection software, AlfaSelect. For additional product information, please visit www.alfalaval.com

AlfaSelect Air

Our computer selection software, AlfaSelect Air, offers separate modules for mechanical and thermal configuration, as well as instant access to selection and pricing of optional extras. It also offers a fully sortable selection output, thanks to an interface that offers multiple language options.

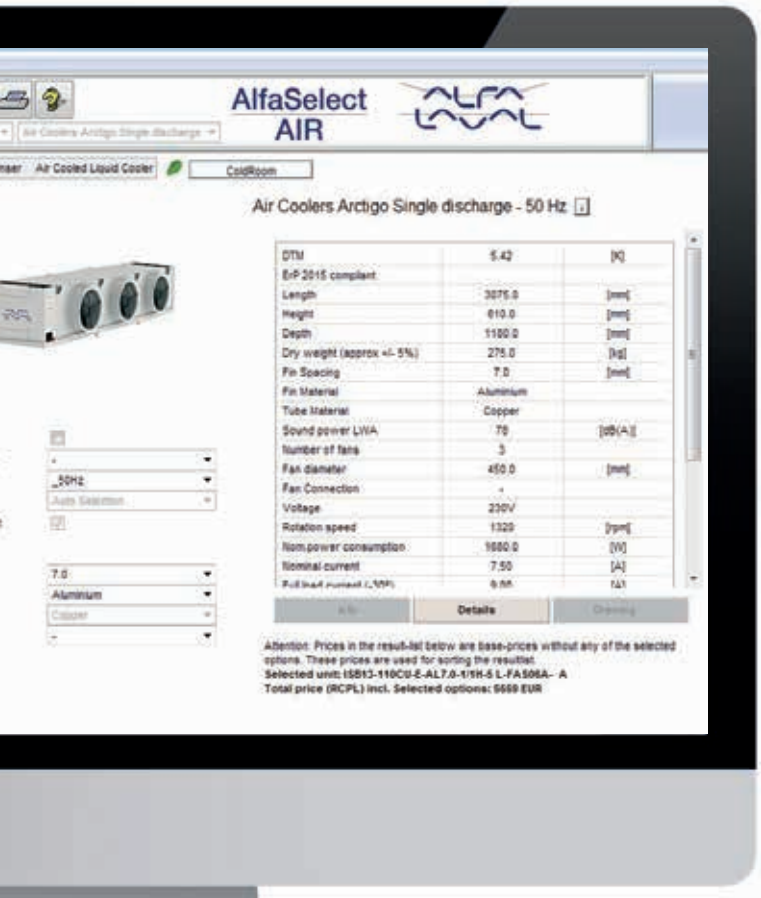
Data sheets

The AlfaSelect air data sheet printout provides all relevant technical specifications for the selected cooler model, including detailed dimensional drawings.

Selection features in AlfaSelect Air

To optimize cooler configuration, AlfaSelect offers different Arctigo-specific selection parameters:

- Application at freezing or cooling conditions
- Maximum unit dimensions
- Fan external pressure
- Coil material
- Tube pattern
- EC or AC fans
- Air direction blowing or drawing
- Power supply
- Single units selectable up to 230 kW



Product information

Comprehensive product information is available on www.alfalaval.com including product leaflets, manuals, certificates and brochures. You will also find CAD drawings, high-resolution images and electrical connections available for download.

Cold room estimation

In the thermal configuration module of AlfaSelect Air, it is also possible to make an estimation of the required cooling capacity for a specific cold room and application. Once you have received an estimated cooling capacity, it can be used for defining the right air cooler.

Worldwide support

Quality and certifications

All Alfa Laval Arctigo production sites are certified according to ISO 9001 (quality management system), ISO14001 (environmental management system) and KRA (Korean Refrigeration Association).

Alfa Laval Arctigo units are built according to the strictest international standards in terms of safety, energy efficiency, and environmental sustainability. All units are given a 2-year guarantee. Alfa Laval participates in the Eurovent Certify All Programme (for air cooled condensers, dry coolers & HFC DX air coolers).

Worldwide support

- 103 sales offices in 53 countries
- Worldwide support from product and application specialists
- Original spare parts available from Alfa Laval channel partners

After-sales service

Alfa Laval offers a comprehensive portfolio of parts and services, including quality spare parts delivery, reconditioning, onsite services, performance agreements, exclusive stock stored, upgrades, consulting services and training.

One stop for all applications

A full range for your application

As a market leader in heat transfer technologies, our mission is to optimize the performance of our customers' processes, time and time again. Thanks to our wide range of heat exchangers for the Refrigeration and HVAC industry, we are also able to supply the following air heat exchangers:

Other Alfa Laval industrial air heat exchangers:

- Industrial dual discharge air coolers
- Galvanized steel ammonia air coolers and condensers
- Customized coils & coolers
- Air-cooled condensers
- Air-cooled liquid coolers
- Air-cooled gas coolers

Alfa Laval commercial air heat exchangers

The Alfa Laval Optigo range contains following models: low silhouette (Optigo CS), dual discharge (Optigo CD) and single discharge (Optigo CC) air coolers for general application in cooling, freezing, storage, working and processing rooms. A wide range of models, fitted with energy efficient EC fans (as standard on the single discharge range Optigo CS), make them especially suitable for refrigerated working, processing and storage rooms. Optigo also offers dedicated ranges for HFC refrigerants, brine and CO_2 applications. We also offer outdoor condenser units, the Alfa Laval Blue Junior range. Wide range available from stock.

Semi/fully welded and fully gasketed plate heat exchangers

Alfa Laval's semi-welded heat exchangers are available in six models. The refrigerant flows in laser-welded, sealed plate channels, and the brine in gasketed channels. Fully welded plate heat exchangers are perfect for heat recovery in corrosive operating environments and for handling aggressive, high-temperature fluids of all kinds.

The fully gasketed plate heat exchanger range includes versions to cope with heat transfer between pure, corrosive, fouling or hygienic fluids. Gaskets between each plate offer a very flexible solution that is possible to expand and easy to maintain.

Brazed and fusion-bonded plate heat exchangers

Alfa Laval is the market leader for all kinds of brazed plate heat exchangers for applications such as refrigeration, HVAC, heat pumps etc. The different types of heat exchangers support a wide variety of HFC refrigerants such as R404A and R134a, and natural refrigerants (propane, ammonia, CO_2). AXP and CBX models meet the high working pressure demands of CO_2.

Alfa Laval AlfaNova is our unique fusion-bonded plate heat exchanger made of 100% stainless steel. It is well suited to applications that put high demands on cleanliness, where ammonia is used, or where copper or nickel contamination is unacceptable. Particularly suitable as an NH_3 chiller compressor oil cooler.

Shell-and-tube heat exchangers

Optimized for HFC condensation and evaporation, this unique range of shell-and-tube heat exchangers ensures efficient and reliable performance with all HFC refrigerants (also with new R407F), HFO, ammonia and propane. The range is typically used as dry expansion evaporators for air-conditioning (A/C), refrigeration process cooling, condensers, and de-superheaters (flooded evaporators for A/C).

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our equipment, systems and services are dedicated to helping customers optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

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

Scan to learn more about Alfa Laval products and solutions for the refrigeration industry.

Alfa Laval channel partner

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