




Benefits

- Increased mechanical resistance
- Long lasting performance thanks to longer lifecycle
- Reduced maintenance
- Pre-coated fins edge protected
- No risk of bridging when using pre-coated fins
- No thermal efficiency loss
- Laboratory tested effectiveness

General information & application

R-fin is a patented solution designed to provide increased mechanical and corrosion resistance in all environments, from urban to heavy industrial. Applicable both to coated and uncoated fins. Longer operating life and Reduced maintenance with Reinforced, Robust and Reliable R-fin.

Standard configuration

This solution is applicable to our Air-cooled Liquid Coolers such Alfa-V, AlfaTrafo, Genset, Reverse and others used in medium to high industrial environments, and is available with different fin types.

- Aluminum and industrial Aluminum fins (R-Al/R-IndAl)
Increased mechanical resistance for protection against handling damage and climate events such as hailstorms, avoiding expensive coil protections. Suitable for dirty, abrasive air. Higher water pressure allowed for cleaning.
- Aluminum pre-coated fins (R-AlPrv)
In addition to the advantages of uncoated aluminum, based on test results pre-coated R-fin shows a slightly better corrosion resistance behavior compared to the most common spray coatings with a 70% lower cost.
- Aluminum-Magnesium fins (R-ALMg)
Increased mechanical resistance, suitable for abrasive air in industrial/coastal areas. Higher water pressure allowed for cleaning purposes compared to standard.

Test done have demonstrated an increased mechanical resistance +80% R-fin compared with the same fin type and material without this feature.

Selection

Selection and pricing is to be performed with our Alfa LU-VE air heat exchangers specialists. They will guide you to select the best solution according to the specific installation needs. Please contact our sales organization for details and full technical documentation.

Applications and environments guideline table

Application	Description and examples
Commercial	Commercial refrigeration installations (air conditioning, free cooling, datacenter cooling) and general installations in residential areas.
Light industry	Industrial Refrigeration, process cooling systems, radiators in small power plants, plastic industry.
Medium Industry	Process cooling, medium/big power plants (engines/turbines), HVDC cooling systems, oil coolers for transformers
Heavy Industry	Chemical Industry, waste treatment plants, agricultural-fertilizers plants.

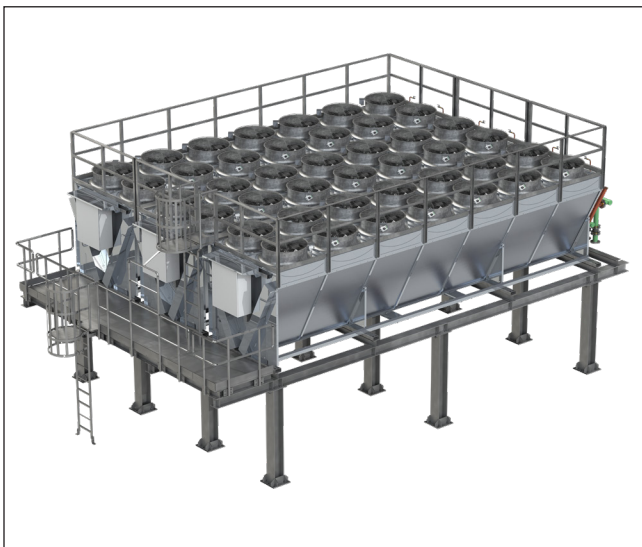


R-fin is an exclusive patented design owned by LU-VE Group.

Fin selection guideline table

Fin	Material	Aluminum (Al)				Aluminum (Alprv)		Aluminum-Magnesium (AlMg)				Copper (Cu)		Al, AlMg, Cu	
	Treatment			Spray coating		Pre-coated				Spray coating				E-coat	
	R-fin	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Environment	Urban	+													
	Medium industrial	+	++												
	Heavy Industrial	+	++	+++	+++	+++	+++								
	Desert (sandy)	+	++					++	+++						
	Coastal (Low-salinity)							+	++	+++	+++			++++	++++
	Coastal (Moderate-salinity)								+	++	++		+	+	+++
Properties	Mechanical resistance		R		R		R		R		R		R		R
	Protected coil frame parts			Fins		Fins				Fins				Fins, tubes, manifolds, frame	
	Coating material			Polyuretane		Polyester				Polyuretane				Epoxy+ UV Top-coat	
	Coating thickness (µm)			25		7				25				15 ÷ 30	
	Heat transfer vs basic Al (%)			-3		-4			-3	-7				-1	
	Coating temperature range (°C)			-50 ÷ +180		-40/+150				-50/+180				-40/+160	
	ASTM B117-97 (h)			4000		1000				4000				15000	
	ISO 12944													C5-H	
	UV resistance			Yes	Yes		Yes			Yes	Yes			Yes	Yes
	Cost index		1	4		3			2	5			6	6-7	

R = Reinforced



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