

# Alfa Laval AlfaSolar SR

## Customized air-cooled radiators

#### General information & application

Air cooled radiators AlfaSolar SR have been designed for heavy industrial cooling applications for cooling of various process liquids. Dual coil models are available for simultaneous cooling of LT/HT engine circuits. Applications include diesel and gas engine cooling, turbine cooling, oil cooling and various other processes (transformers, air compressors, etc.)

Liquids	all liquids that do not corrode copper
Capacities	customer specification

#### Standard configuration

- Finned coil F5
  - Cu-tubes ø 12.7 mm
  - corrugated Al-fins 0.14 mm, no turbulators
  - fin spacing 2.3 mm
- Design pressure 6 barg. Each heat exchanger is leak tested dry air at 9 barg. Higher design pressures on request.
- Two casing widths (SRM=1630 mm, SRD=2400 mm)
- Flanges PN10/16
- Direct driven axial fans, suitable for use with frequency converters. When designing a frequency converter system, the general guidelines for allowed cable lengths, dU/dT and/or sinus filters etc. have to be considered.
- Axial fans in a range of different fan speed executions. Available in two fan diameters: 914 mm (1 to 14 fans) or 1240 mm (1 to 7 fans). All fans have corrosion resistant fan blades and fan guards.
- Fan motors available for various power supplies. The motors are squirrel-caged motors for outdoor use built to IEC standards and provided with condensing water outlets and shaft seals together with F-class insulation. Protection class IP54/55, except for the condensing water outlets. Motors pre-wired to lockable safety switches.
- All casing parts are of hot dip galvanized steel plates.
- Specifically designed for installations with several radiators installed side by side.
- Adjustable mounting legs (~120/420/620 mm)
- Fitted with header tube protection panels.
- Manual venting and draining valves.



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- Partitions between fans for regulation of the cooler capacity by means of separate use of the fans.
- Standard vertical transport position, fixed on a wooden pallet. Suitable for truck transportation or loading into a container. Wooden seaworthy packing on request.

#### Benefits

- Heavy duty coil & casing materials, resulting in a long operational product life
- Floating coil construction to compensate for thermal stress
- Plain profile fins make the coil less prone to fouling and easier to clean
- Excellent sound characteristics
- Reliable performance
- Easy-install & maintenance
- · Energy efficient low total cost of ownership
- Two units can be fitted into a single container side-by-side
- Two year full product guarantee
- Easy access to additional on-line product information (QR code).



#### Mechanical Options

- Coil corrosion protection
  - epoxy coated aluminium fins (EP)
  - copper fins (CU)
  - sea water resistant aluminium fins (SWR)
- Dual coil model with LT- and HT-circuits
- Fin spacings 2.3 4 mm
- Fin thickness 0.18 mm
- Water spraying system (KW)
- Vibration dampers for mounting legs (VD)
- Counter flanges
- Flange dimensions acc. to ANSI
- Flexible connection joints
- Higher mounting legs (up to 6m)
- · Handrails & ladder
- Expansion tanks with Murphy LLS (ET)
- Packing (P = Pallet, PT = Pallet & tarpaulin, PH = Pallet & hard board, CN = Container, BO = wooden box). Seaworthy packing on request.
- Casing epoxy painted grey RAL 7040 in four thicknesses - MU (cat. C2/3, film thickness 80 µm
  - M1 (cat. C3, special painting, film thickness 80 µm
  - M2 (cat. C4, special painting, film thickness 160 µm
  - M3 (cat. C5M/C5I, film thickness 320 µm
  - Other RAL colours on request

#### Fan motor options

- Motors with thermal overload Klixon switches
- · Motors equipped with anti-condensation heater
- Special fan motors (NEMA, UL, CSA etc.)
- EC fan motors
- H-class insulation fan motors
- Forced draught fans (FD)

### Code description

### **Electrical options**

- Control panels
  - Step control (SC)
  - Step control external control (SC-EC)
  - Inverter control EMC (SVC)
  - Inverter control EMC remote installation (SVC-R)
- Connection boxes (located at the end of the radiator)
  - Connection box terminal box (CB)
  - Starter panel (SP)
  - Motor protective switch panel (B)
- Miscellaneous
  - EMC cables, glands & safety switches for each fan (EMC)
  - Ex motors, fans & safety switches (EX)

#### 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.

#### Documentation

For AlfaSolar SR radiators extensive product & project documentation can be supplied (standard in English).

- Mechanical & electrical configuration
- Quality, test & material certificates
- Project reports & documentation
- Installation, operation & maintenance manuals

#### Certifications

The Alfa Laval Vantaa quality system is in accordance with ISO 9001 and ISO 14001. All products are manufactured according to machinery (2006/42/EC) and pressure equipment (97/23/EC) directives.



#### - AL 2.3 CU SR D 6 B 09 T N5 D 42 H GS P B 132 1 x DN65 + 66 1 x DN80 ET 5 6 7 8 9 10 11 12 13 1 3 4 14 15 16 17 18 19 20 21 23 1 AlfaSolar customized radiator 13 Options (electrical/fan) 14 Fin Material (AL = standard Al, IF = industrial Al, 2 Unit width (M=narrow, D=wide) Ep = precoated epoxy AI, CU = copper, SWR = AIMg2) 3 No. of modules 15 Fin spacing (mm) 4 Module length (A=1400 mm, B=1800 mm, C= 2100 mm) 16 Tube material (CU = copper, CT = Copper with internal 5 Fan diameter (09=910 mm, 12=1240 mm) turbulators) 6 Fan speed (T=950, S=720, L=560, Q=470, R=350) 17 No. of LT circuits 7 Power supply (N5 = 3/380-420/50 Hz, N6 = 3/440-480/60, 18 Number of connections N7 = 3/230/50, N8 = 3/690/50, NE = Special) (1 = one inlet/outlet, 2 = two inlets/outlets) 8 Fan motor connection (D=delta, Y=star) 19 LT connection size (e.g. DN65 or AN2.5" for ANSI dimensions) 9 Tube rows in air direction (LT-circuit HT-circuit) 20 Number of HT circuits (if 2-circuit application) 10 Air flow (H=vertical, V=horizontal) 21 Number of LT connections 11 Casing material/coating (1 = one inlet/outlet, 2 = two inlets/outlets) (GS=uncoated, GPU=MU, GP1=M1, GP2=M2, GP3=M3) 22 HT connection size (e.g. DN80 or AN3" for ANSI dimensions) 12 Packaging (P = Pallet, PT = Pallet & tarpaulin, 23 Options (mechanical) PH = Pallet & hard board, CN = Container, BO = wooden box)

#### AHE00024EN 1512

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