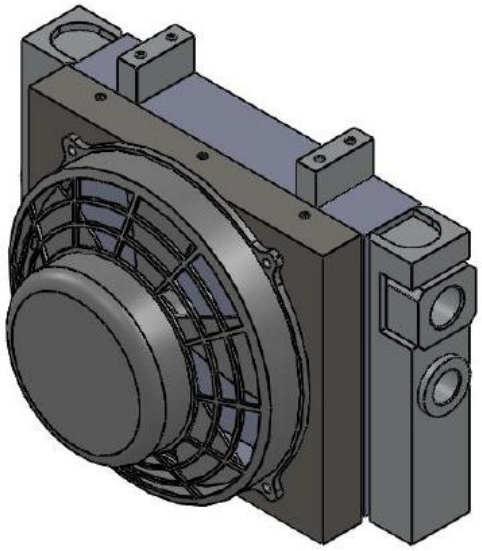
AmberLine Hydraulics

Coolers



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COOLERS

PRODUCT INFORMATION

The **AmberLine** type series consist of different models for mobile and stationary applications. This line of products embraces all-purpose complete cooling systems that comply with European or American Standards, is suited for normal or rugged environmental operating conditions, is powered by AC-, DC- or hydraulic-motor-driven fans and is also available with noise-optimized models.

All of AKG's solutions have been developed with state-of-the-art technology, produced in compliance with the highest quality standards and are comprehensively tested in the company's own research and test facility.

FEATURES OF THE D SERIES

- High-Performance cooling assemblies
- DC motor powered fan
- The heat is transferred from the medium to be cooled to the ambient air - Cool

er can be universally used in hydraulic oil, transmission oil, engine oil, lubri
cating oil and coolant circuits - For the cooling of mineral oil, synthetic oil, biological

oil as well as of HFA, HFB, HFC
and HFD liquids and water with at least 50 per cent of antifreeze and anticorrosive additives (other media available)

- Can be exposed to operating pressures of up to 26 bar

BENEFITS

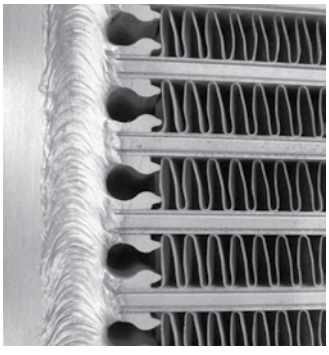
- Largest and most comprehensive series of mobile hydraulic coolers - Highly flexible

complete, ready-to-use cooling packages - Compact and robust design, field-tested

during many years of use in rugged real life
conditions - Best heat transfer results per given cooler size due to comprehensive research and
development

- Highest quality due to professional engineering and in-house manufacturing
- Available from stock or at short notice

FLEXIBLE HOLLOW PROFILE



AmberLine Hydraulics

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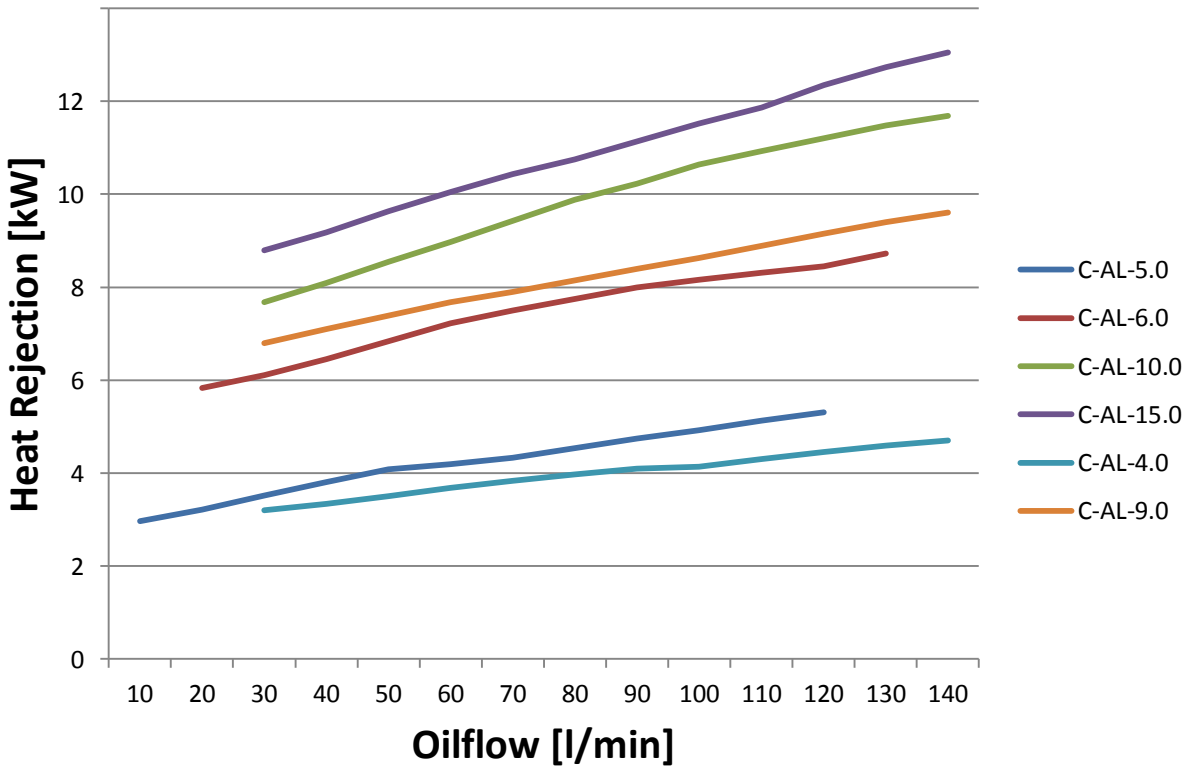
EASY SIZING DIAGRAM FOR ENTRANCE-TEMPERATURE-DIFFERENCE 40K

PERFORMANCE DIAGRAM

FOR ENTRANCE-TEMPERATURE-DIFFERENCE 30 K

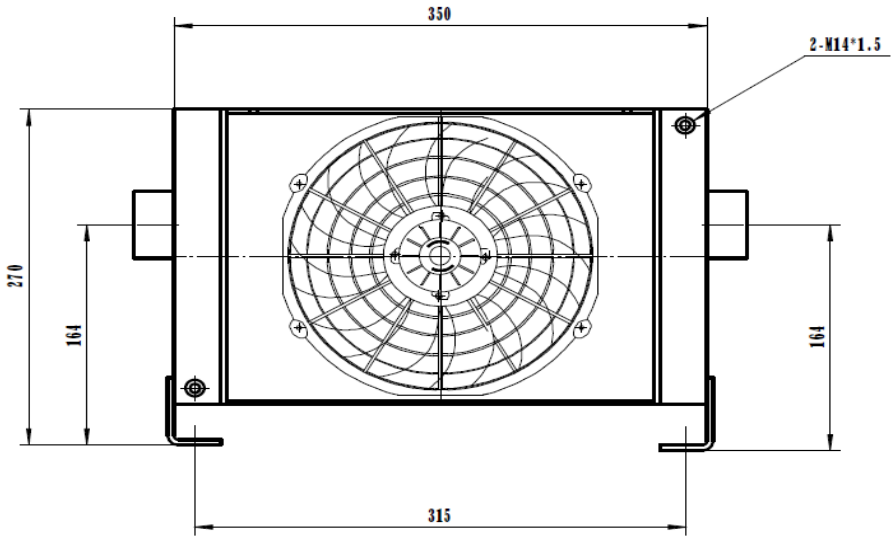


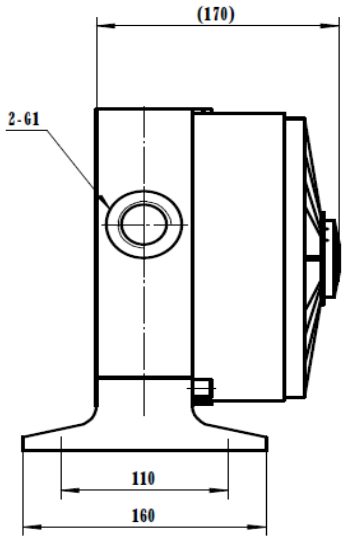
Selection by Specific Heat Rejection		
1. Input Data:		**Example**
Required Heat Rejection	P =	30 kW
Oilflow through Cooler	V =	150 l/min
Oil Inlet Temperature	T_Oil	70 °C
Cooling Airflow Temperature	T_CAF	30 °C
2. Determination of Specific Heat Rejection:		
Entering-Temperature-Difference	ETD =	70 °C - 30 °C = 40 K
Required Specific Heat Rejection	P/ETD	30 kW/40 K = 0,75 kW/K
3. Select According to Diagram and Result:		Next higher curve **D 35**

AmberLine Hydraulics

COOLERS

C-AL-4.0





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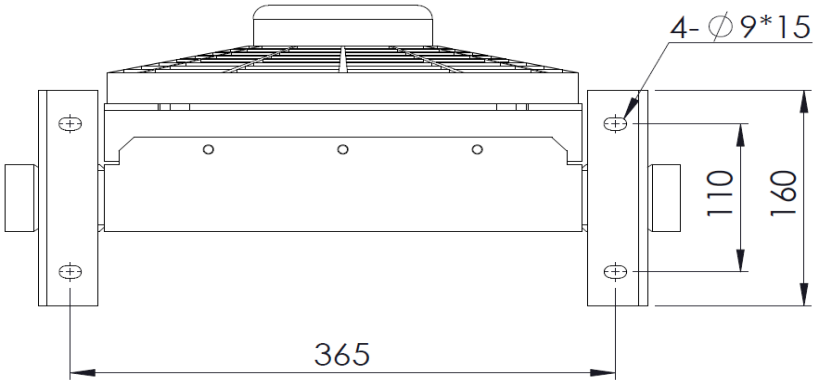

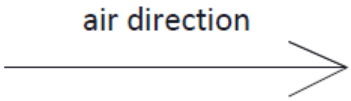

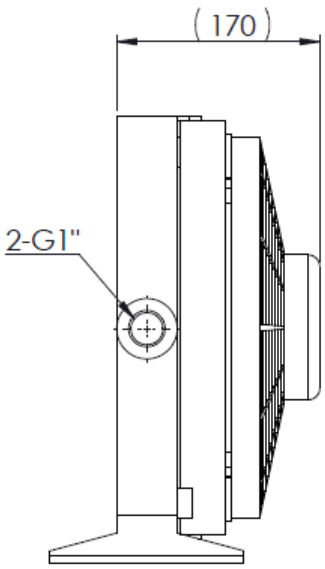

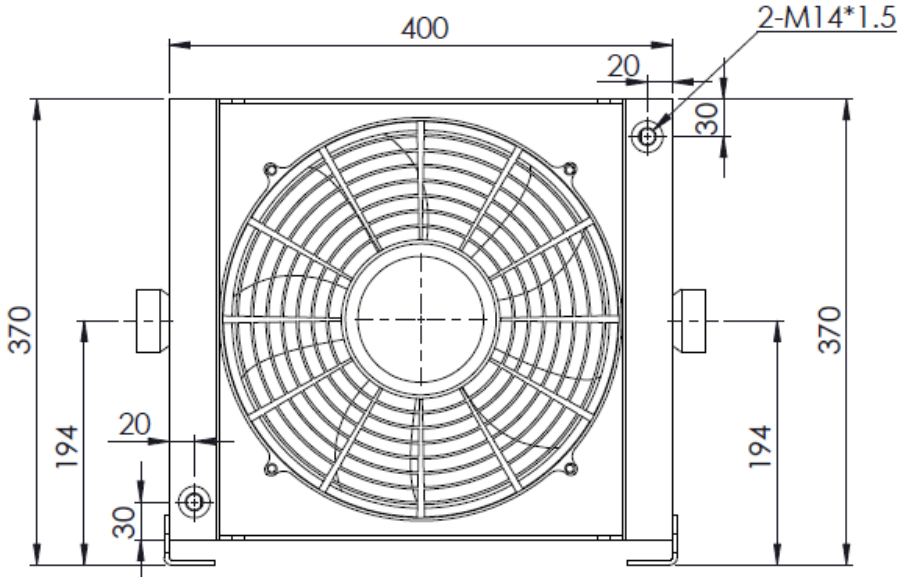

TECHNICAL FEATURES

Radiating mass data

Material	Aluminium
Nominal pressure	25 bar
Test pressure	35 bar
Max temperature	120 °C

Fluid compatibility

Mineral oils, hl, hlp, water-oil emulsion.

Installation

We recommend to install a by-pass valve in parallel to the heat exchanger, for its protection during the starting up.
Make sure there is no obstacle to the air flow.

Maintenance

Oil side cleaning
Flushing with a detergent or a degreasing product compatible with aluminium, eliminates the dirt.
To remove the residuals, use compressed air.

Air side cleaning
It can be done by using compressed air or water and paying attention to the jet direction for not spoiling the vanes.
If oil or grease has to be removed, clean with a jet of steam or hot water.
Make sure that the electric motor is disconnected and properly protected.

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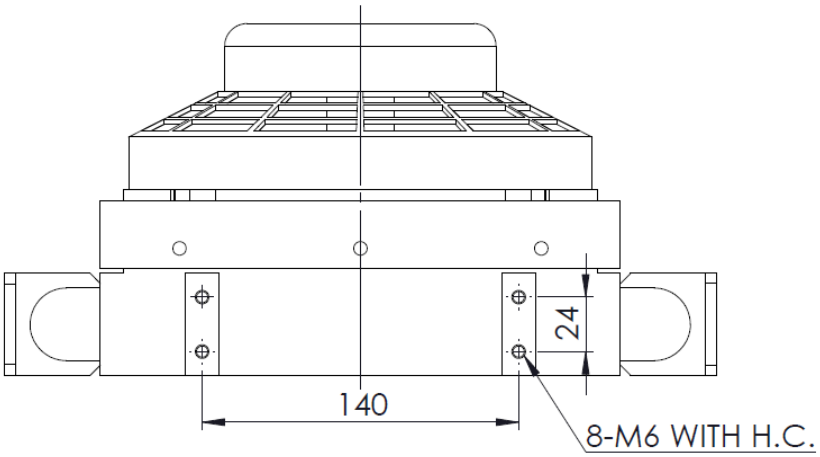
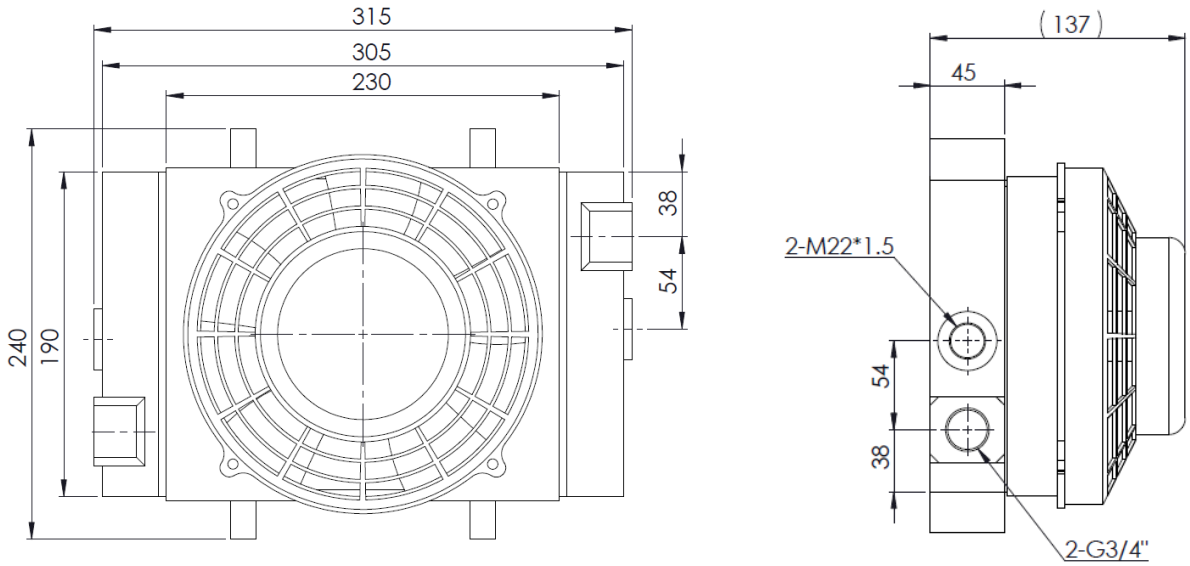
C-AL-5.0





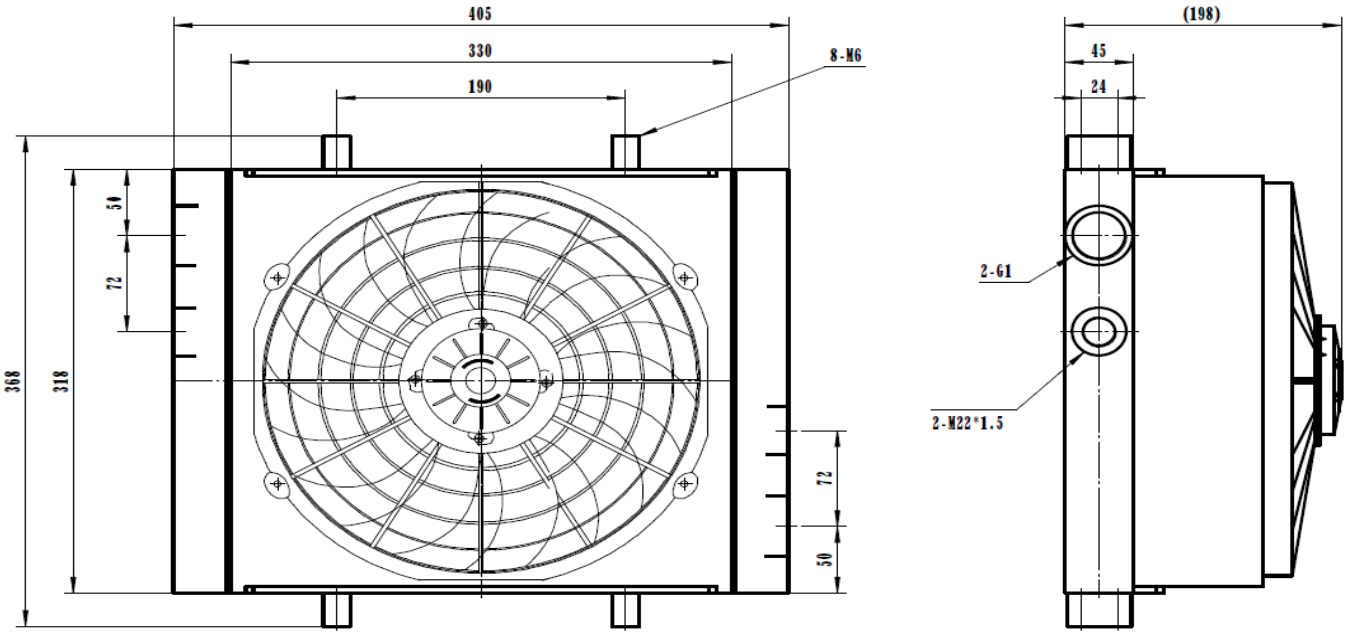
Technical specification:

1.The cooler should be design, manufacturing & testing according to the standard <<NB/T47006-2009>> & the confirmed drawing by customer;
2.Shaping the core before assembling and welding, chamfering the welding place (4x45°), diagonal error≤2mm,warping error≤0.5mm;
3. Welding seam should be smooth & straight, no defect, penetration bead, after welding, should pledge the perpendicularity;
4. Shaping again before pressure test, diagonal error≤2mm,warping error≤0.5mm;
5. Air leakage test pressure 35 Bar for 5minutes in water; should there be not any leakage for cooler;
6. After test clean the inner and outer channels using compress air until no water residual;
7. All drillings closed with plastic stoppers; threads with finish cut and planed; adjust the shape of outside fin; paint RAL9005.
8.electronic fan：voltage：12VDC/24VDC.

AmberLine Hydraulics

COOLERS

C-AL-6.0



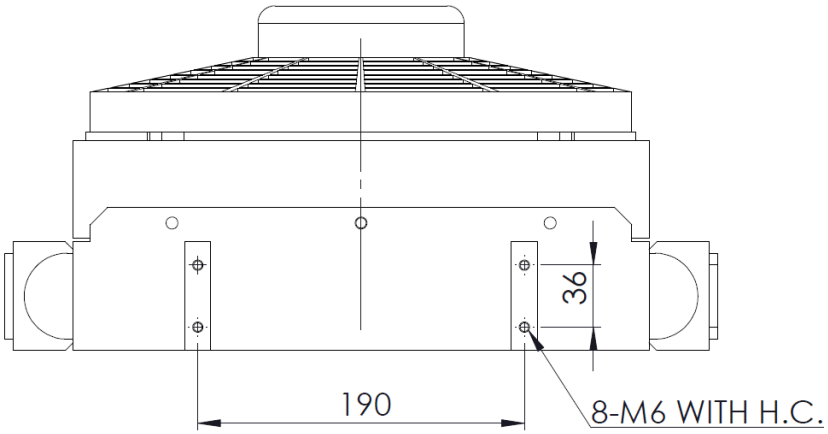
Technical specification:

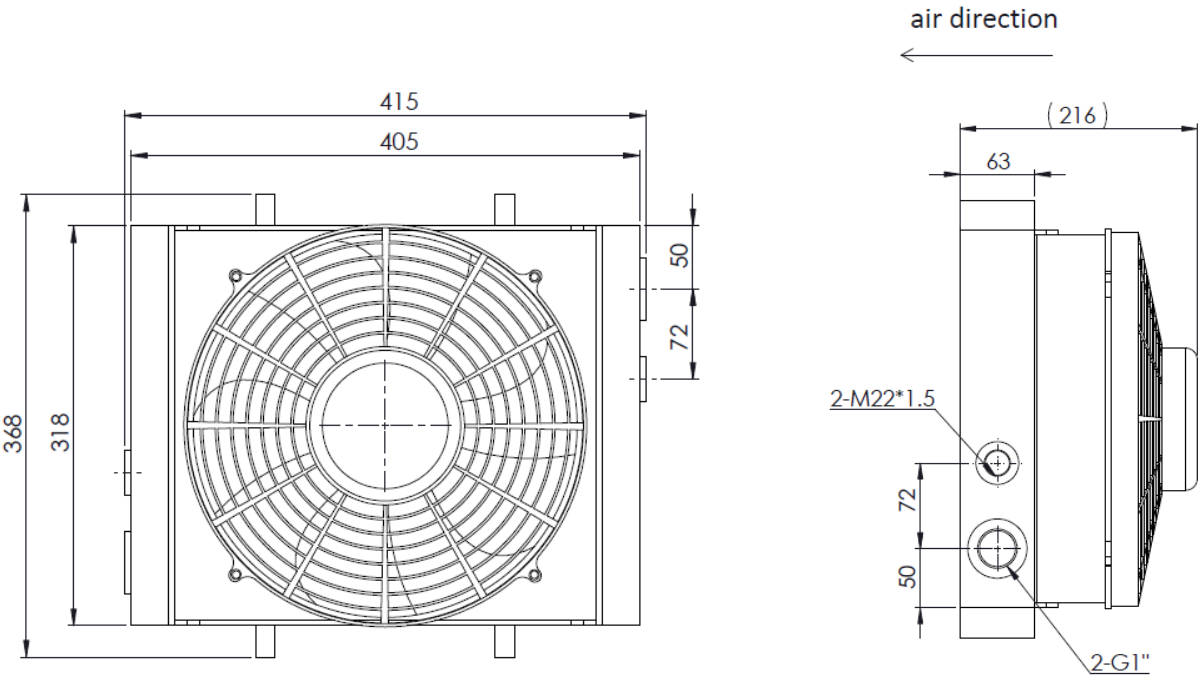
1.The cooler should be design, manufacturing & testing according to the standard <<NB/T47006-2009>> & the confirmed drawing by customer;
2.Shaping the core before assembling and welding, chamfering the welding place (4x45 °), diagonal error≤2mm,warping error≤0.5mm;
3. Welding seam should be smooth & straight, no defect, penetration bead, after welding, should pledge the perpendicularity;
4. Shaping again before pressure test, diagonal error≤2mm,warping error≤0.5mm;
5. Air leakage test pressure 3 Bar for 5minutes in water; should there be not any leakage for cooler;
6. After test clean the inner and outer channels using compress air until no water residual;
7. All drillings closed with plastic stoppers; threads with finish cut and planed; adjust the shape of outside fin; paint RAL9005.

AmberLine Hydraulics

COOLERS

C-AL-10.0





Technical specification:

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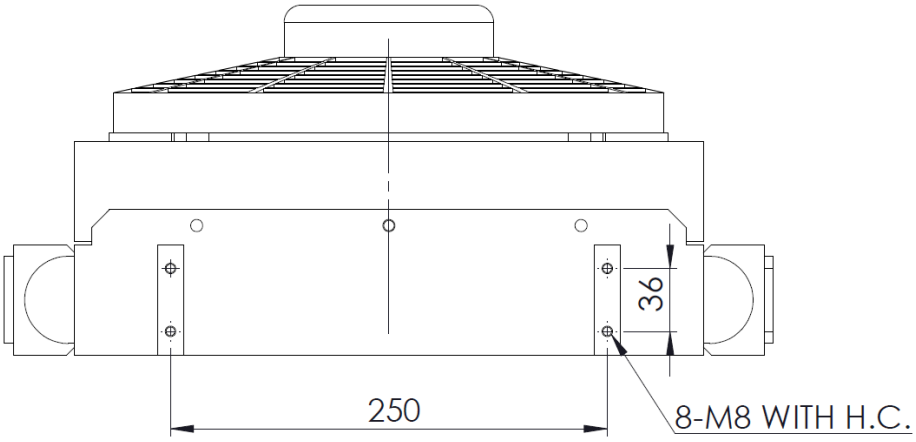
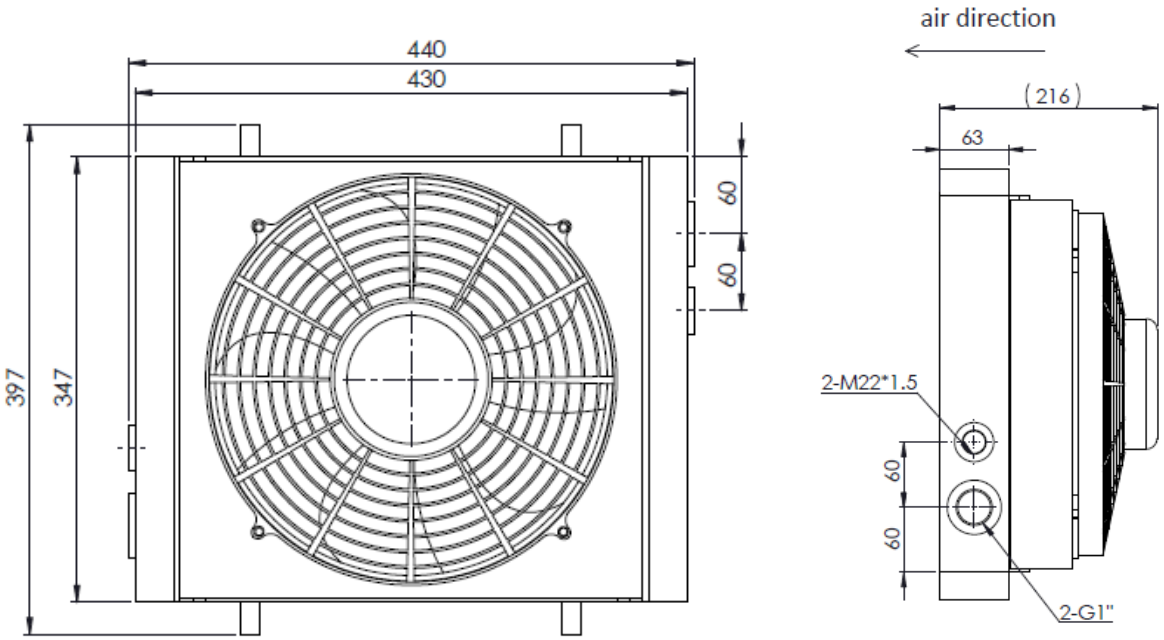
2.Shaping the core before assembling and welding, chamfering the welding place (4x45°), diagonal error≤2mm,warping error≤0.5mm;
3. Welding seam should be smooth & straight, no defect, penetration bead, after welding, should pledge the perpendicularity;
4. Shaping again before pressure test, diagonal error≤2mm,warping error≤0.5mm;
5. Air leakage test pressure 35 Bar for 5minutes in water; should there be not any leakage for cooler;
6. After test clean the inner and outer channels using compress air until no water residual;
7. All drillings closed with plastic stoppers; threads with finish cut and planed; adjust the shape of outside fin; paint RAL9005.
8.electronic fan： voltage： 12VDC/24VDC.

AmberLine Hydraulics

COOLERS

C-AL-15.0





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6. After test clean the inner and outer channels using compress air until no water residual;
7. All drillings closed with plastic stoppers; threads with finish cut and planed; adjust the shape of outside fin; paint RAL9005.
8.electronic fan： voltage： 12VDC/24VDC.