

AKG-Line

GLOBAL STANDARD COOLER

**Serie A
with AC-Motor**



GLOBAL STANDARD AKG LINE A/AL AND AR/ARL

Oil-to-Air Cooling Systems with AC-Motor

Product Information

AKG-Line is a standard line of products from the market leader in high performance aluminium cooling systems. AKG is best known for its world-wide presence, German engineering and extremely reliable product quality on the one hand and very competitive prices on the other hand.

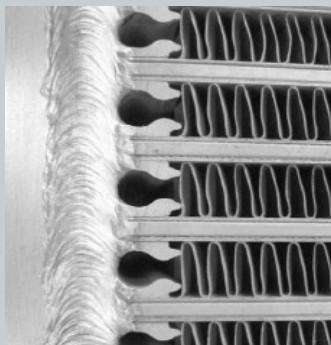
The **AKG-Line** series consist of different models for mobile and stationary applications and are available through our global specialist dealer network. This line of products embraces all-purpose complete cooling systems that comply with European or American Standards, is suited for normal or rugged environmental operating conditions, and 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 A Series

- High-Performance Aluminum cooling assemblies
- AC-motor powered fan
- The heat is transferred from the medium to be cooled to the ambient air
- Cooler can be universally used in hydraulic oil, transmission oil, engine oil, lubricating oil and coolant circuits
- For the cooling of mineral oil, synthetic oil, biological oil as well as of HFA, HFB, HFC and HFD liquids, diesel fuel and water with at least 50% of antifreeze and anticorrosive additives (other media available)
- Can be exposed to operating pressures of up to 26 bar or 17 bar, depending on model

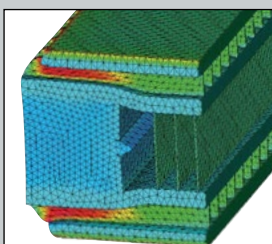
Flexible AKG Hollow Profile



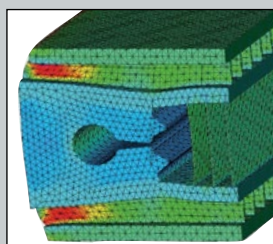
Cool-Line uses patented AKG hollow profiles to reduce local peak strains. This way the strength of heat exchangers is significantly increased and their service life time considerably prolonged.

AKG Hollow Profile Features

- **Reduced Strain:**
Strength calculations show that when using AKG hollow profiles maximum strain is reduced by a factor of 2
- **Prolonged Service Life Time:**
Extensive rig tests have shown that service life time increases by a factor ranging from 3 to 5



with standard profile



with hollow profile

Benefits

- 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
- As a standard, equipped with **AKG's** patented **double-life hollow** sections designed to increase cooler service life
- As a standard feature, available with louvered high-performance air fins (A) or alternatively with non-louvered low fouling cooling air fins (AR)
- The fin system is resistant to clogging and easy to clean (AR)
- Noise-optimized models available (low-noise series) (AL/ARL)

GLOBAL STANDARD AKG LINE A/AL AND AR/ARL

Technical Data

Model Size	Voltage of 3 Phase-Motor (V)	Motor Power Consumption (kW)	Nominal Speed (rpm)	Approx. Noise Level (dB(A), 1m)	Approx. Net Weight of Assembly (kg)	Volume (l)	Frequency (Hz)	Working Pressure (bar)
A12	230/400	0,37	3000	80	20	2,3	50	26
A25	230/400	0,55	1500	81	32	4,5	50	26
AR35	230/400	0,75	1500	80	43	5	50	26
A45 AR45	230/400	0,75	1500	81	60	7,5	50	26
A60 AR60	230/400	0,75	1500	83	69	9	50	26
A75 AR75	230/400	0,75	1500	82	81	13,5	50	26
A105 AR105	230/400	2,2	1500	80	100	15	50	26
A225	400/690	5,5	1500	94	217	37	50	17

Standard Scope of Supply of Oil-to-Air Cooling System

Cooler made of painted aluminium

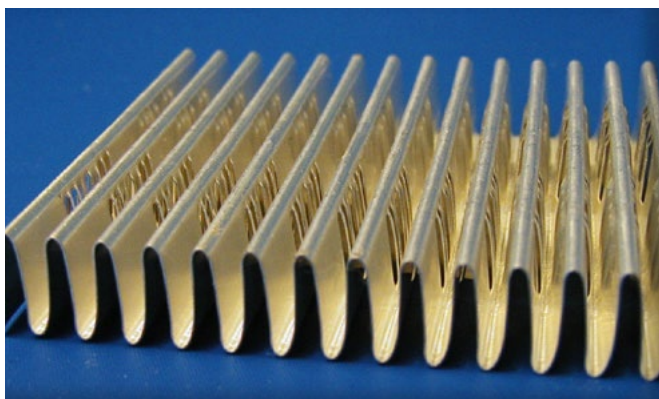
Plastic fan

Fan-shroud, fingerguard, support feet and motorholder all made of steel (chromated or powder coated)

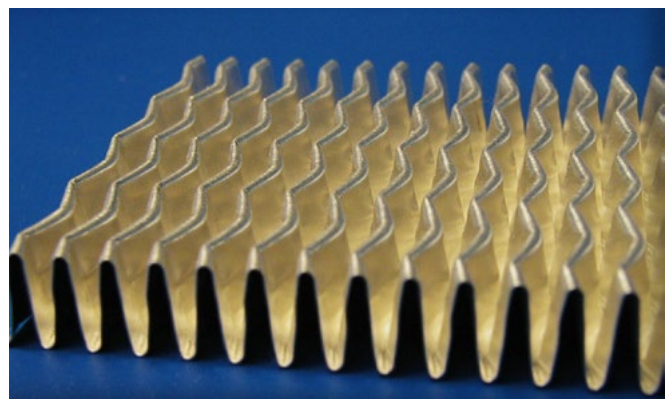
Motor



Cooling Air Fins



A Series with high-performance cooling fins



AR Series equipped with anti-clogging fins, easy to clean.

Ordering Information

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Series:

- A
- AL (Low Noise)
- AR
- ARL (Low Noise)

Model Size:

Optional Custom Features:

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with:

- Blower Fan [B]
- Teflon Coating [+T]
- Frequency 60 Hz [+60 Hz]

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without:

- Motor [-M]
- Cooler only [C]

Order Code Example: Heat Exchanger, 75 kW, sucking AC-driven fan > A 75
Rugged Environment Heat Exchanger, 225 kW, blowing AC-driven fan > AR 225 B

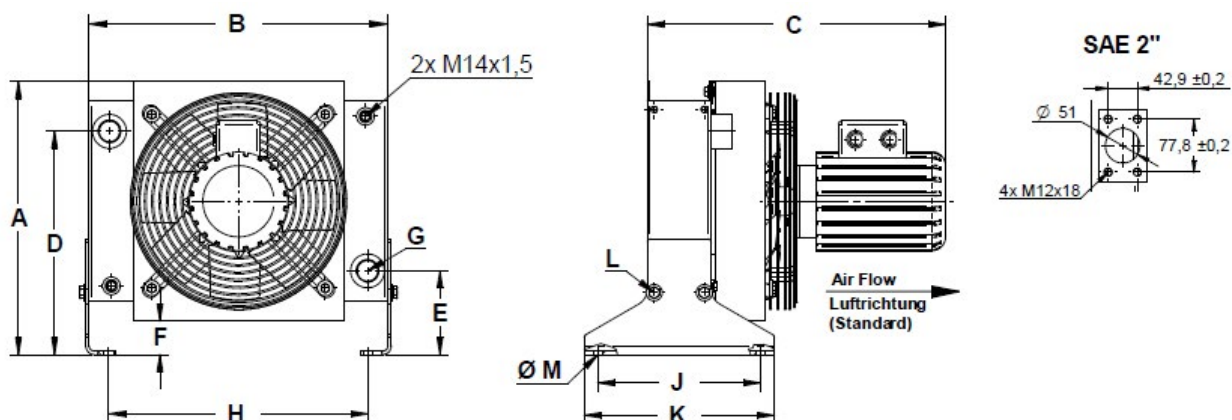
GLOBAL STANDARD AKG LINE A/AL AND AR/ARL

Dimensions

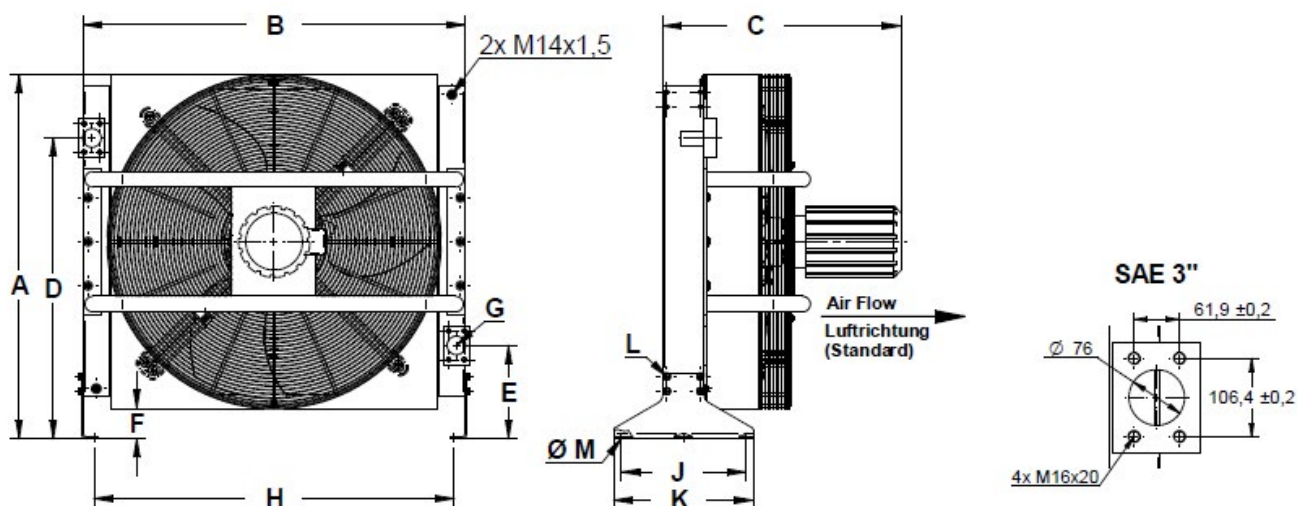
Model Size	A	B	C (approx.)	D	E	F	G	H	J	K	L	M
A12	391	450	410	324	107	40	G1	388	180	220	M8	ø14
A25	496	600	500	427	105	36	G1 1/4	538	180	220	M8	ø14
AR35	601	700	510	532	104	36	G1 1/4	638	180	220	M8	ø14
A45	613	690	540	538	123	48	G1 1/4	628	240	280	M10	ø14
AR45												
A60	666	790	605	583	123	43	G1 1/4	732	240	280	M10	ø14
AR60												
A75	791	940	625	668	205	83	G1 1/2	882	340	380	M10	ø14
AR75												
A105	884	990	670	715	255	85	SAE 2"	932	340	380	M10	ø14
AR105												
A225	1220	1240	810	1001	296	77	SAE 3"	1182	410	450	M12	ø14

All dimensions in mm

Cooler Dimensions A12 to A105 and AR35 to AR105



Cooler Dimensions A225 and A225



GLOBAL STANDARD AKG LINE AY/ARY

Oil-to-Air Cooling Systems with integrated Bypass and AC-Motor

Product Information

The **AKG-Line Bypass Series** consists of different models for mobile and stationary applications. It is available through our global specialist dealer network. 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 and powered by AC- (AY), DC- (DY) or hydraulic-motor-driven (HY) fans.

Features of the AY Series

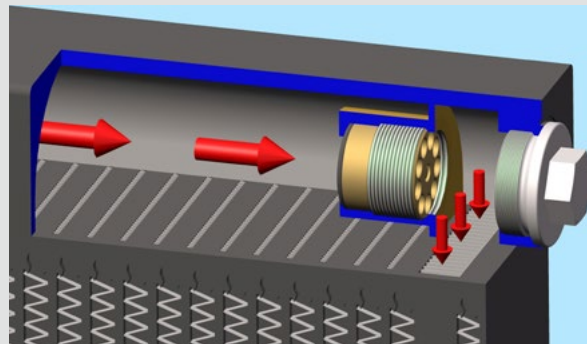
- Avoiding overstraining at cold start conditions and high oil flows
- DC motor powered fan
- For the cooling of mineral oil, synthetic oil, biological oil as well as HFA, HFB, HFC, HFD, diesel fuel and liquids (other media on request)
- Can be exposed to operating pressures of up to 17 bar and operating temperatures of up to 120 °C
- Standard design with 2 bar opening pressure bypass valve (other pressures on request)

OPERATING MODE OF INTEGRATED BYPASS

Especially with high oil flows or at cold start conditions (low oil temperatures and high oil viscosities) high pressures can occur in the cooler core.

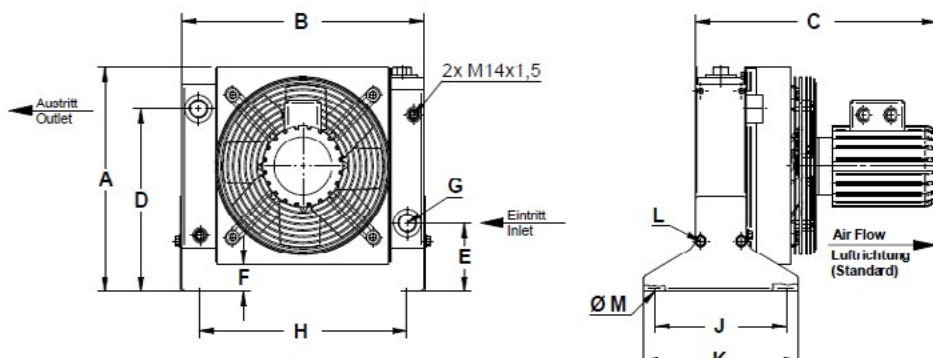
In this case part of the volume flow is bypassing the cooler core through the integrated valve.

Like this a sufficient volume flow can be assured for the cooler and lubrication oil circuit - also with high pressure drops. Overstraining of the cooler core will be avoided effectively.



The installation of an external bypass is not necessary reducing costs and mounting space.

Cooler Dimensions ARY25 and AY60



Benefits

- Compact design because of integration of bypass
- Faster approach of operating temperature
- Highest quality due to professional engineering and in-house manufacturing
- Highly flexible, complete ready-to-use cooling packages
- Available from stock or at short notice
- As a standard equipped with **AKG's patented double-life** hollow sections designed to increase cooler life span

Technical Data

Model Size	Voltage of 3 Phase-Motor (V)	Motor Power Consumption (kW)	Nominal Speed (rpm)	Approx. Noise Level (dB(A), 1m)	Approx. Net Weight of Assembly (kg)	Valve opening pressure (By-pass) (bar)	Volume (l)	Frequency (Hz)	Working Pressure (bar)
ARY25	230/400	0,55	1500	81	32	2,0	4,5	50	17
AY60	230/400	0,75	1500	83	69	2,0	9	50	17

Dimensions

Model Size	A	B	C (approx.)	D	E	F	G	H	J	K	L	M
ARY25	496	600	500	427	105	36	G1 1/4	538	180	220	M8	ø14
AY60	666	790	605	583	123	43	G1 1/4	732	240	280	M10	ø14

Ordering Information AY / ARY

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Series: Model Size:
 - AY
 - ARY
 - Low-noise version available upon request

Optional Custom Features:

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with:
 - Blower Fan
 - Teflon Coating
 - Motor Frequency 60 Hz

[B]
 [+T]
 [+60 Hz]

Order Code Example:

Heat Exchanger, 60 KW, blowing
 AC-driven fan, Bypass (2 bar) >
 AY60 B

GLOBAL STANDARD AKG LINE AP

Oil-To-Air Cooling Systems with AC-Motor and Pump

Product Information

The **AKG Offline Cooler AP-12-20** consist of different offline cooler models to be used for cooling, filtration and lubrication circuits at low pressures in mobile or industrial applications. This line of products embraces all-purpose complete cooling systems and are available through our global specialist dealer network.

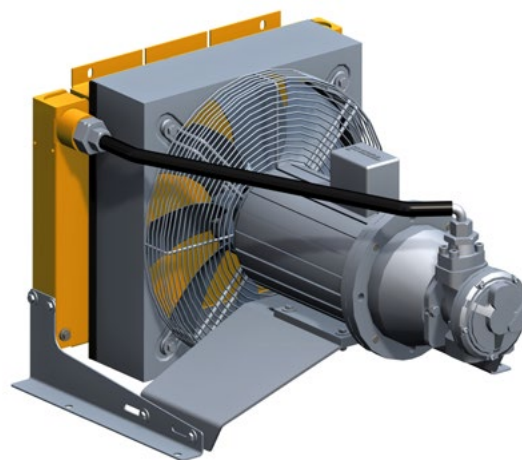
All of AKG's solutions have been developed with state-of-the-art technology, produced in compliance with the highest quality standards and are comprehensively tested in the company's own research and test facility.

Functional Description

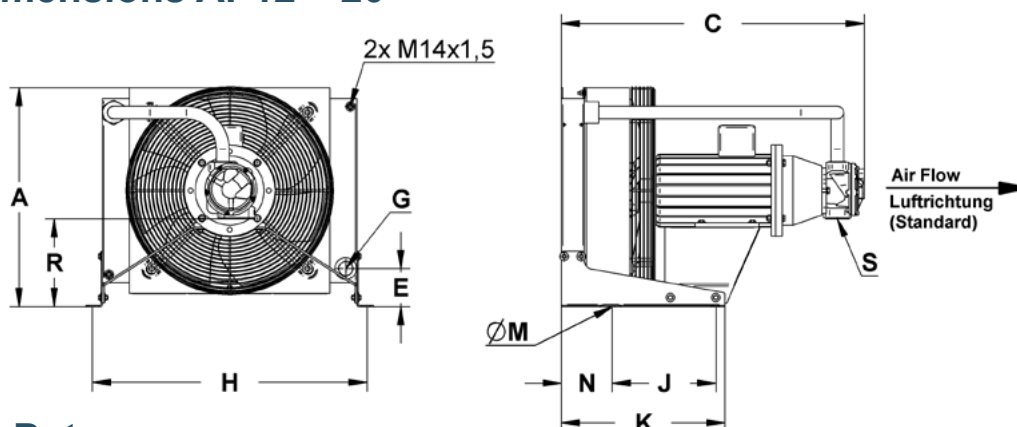
- Integrated cooling system with pump flows
- Ideal for system with varying flow rates or pressure spikes in return lines. Applications include cooling gearboxes, lube oil, hydraulic presses CNC machining, injection molding presses etc.

Features and Benefits

- High-Performance Aluminum cooling assemblies
- AC-motor powered fan and pump
- For the cooling of HLP mineral oil to DIN 51524 and 100 cSt (other media and viscosity available)
- Ambient temperature from -20 °C up to +80 °C
- Max. oil temperature 80 °C
- Max. pump outlet pressure: 15 bar
- Pump rated suction pressure 0,7 – 2 bar (0,5 bar when starting)
- Highly flexible complete, ready-to-use cooling packages



Cooler Dimensions AP12 – 20



Technical Data

Model Size	Pump Size (cm³)	Oil Flow (l/min)	Nominell Speed (U/min)	Motor Consumption fan/pump (kW)	Voltage of 3 Phase-Motor (V)	Volume (approx) (l)	Noise Level (approx). (dB(A), 1m)	Weight (approx) (kg)
AP12	20	30	1500	2.2	230/400	4.9	60	54

Dimensions

Model Size	A	B	C (approx.)	E	G	H	J	K	M	N	R	S/SAE
AP12	391	450	768	107	G1	518	285	450	14	140	136	1 1/2"

Ordering Information

Model Size:

AP12

Pump:

20

20 = 20cm³



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GLOBAL EXCELLENCE IN THERMAL MANAGEMENT

AKG is a leading global provider of customer-oriented system solutions, a reliable supplier of high-performance coolers, heat exchangers and thermal management systems that meet the highest quality standards.

The head office in Hofgeismar controls the progress and success of the Group, which has more than 3,000 employees and manufactures over 1.1 million heat exchangers per year in various designs. Worldwide, 11 independent production facilities in Germany, France, Latvia, Turkey, India, the USA, Brazil and China as well as 15 sales companies operate around the clock.

The AKG Group develops and produces high-performance heat exchangers as well as complete cooling modules and systems for construction machinery, compressed air systems, industrial coolers, agricultural and forestry machinery, vehicle construction, rail vehicles, aviation, municipal vehicles, household appliances and special applications.

For over 100 years, AKG heat exchangers have been synonymous with innovative solutions and the highest levels of engineering and manufacturing expertise.