AKG-Line

GLOBAL STANDARD COOLER

H Series with Hydraulic Motor

GLOBAL STANDARD AKG LINE H AND HR

Oil-to-Air Cooling Systems with Hydraulic Motor

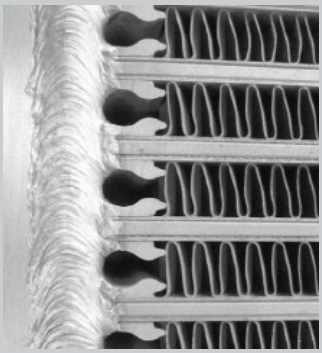
Product Information

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** type 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, 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.

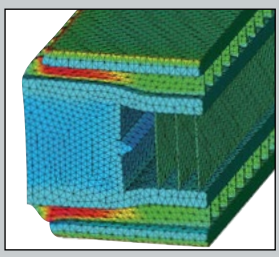
Flexible AKG Hollow Profile



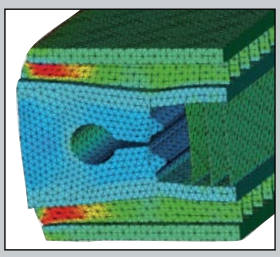
AKG-Line uses AKG hollow profiles to reduce local peak strains. This way the strength of heat exchangers is significantly increased and their service life time considerably prolonged.

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

Features of the H Series

- High-Performance cooling assemblies
- Hydraulic 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, 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

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 double-life hollow** sections designed to increase cooler service life
- As a standard feature, available with louvered high-performance air fins or alternatively with non-louvered low fouling cooling air fins

GLOBAL STANDARD AKG LINE H AND HR

Technical Data

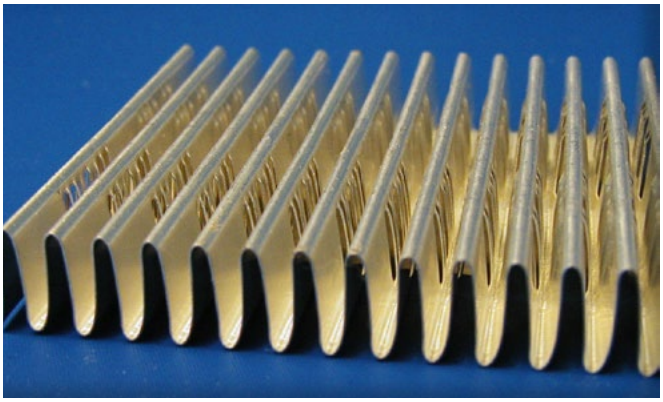
Model Size	Motor Size (cm3)	Max. Speed (rpm)	Nominal Speed (rpm)	Max. Motor Pressure (bar)	Approx. Noise level (dB(A), 1m)	Approx. Net Weight of Assembly (kg)	Volume (l)	Working Pressure (bar)
H18	11	3500	3000	250	80	17	2,3	26
H35	11	3500	1500	250	81	26	4,5	26
HR50	11	3500	1500	250	80	35	5	26
H65/ HR65	11	3000	1500	250	81	53	7,5	26
H80/ HR80	11	3000	1500	250	83	61	9	26
H110/ HR110	11	2500	1500	250	82	73	13,5	26
H150/ HR150	11	2500	1500	250	80	87	15	26
H320	21	1500	1500	200	94	180	37	17

All data based on nominal fan speed conditions

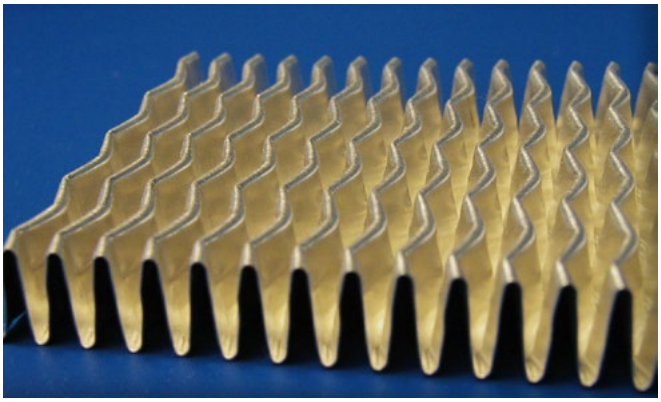
Standard Scope of Supply of Oil-to-Air Cooling System

Cooler made of painted aluminium
Plastic fan
Fan-shroud, fingerguard, support feet and motorholder all made of steel (chromated or powder coated)
Hydraulic motor

Cooling Air Fins



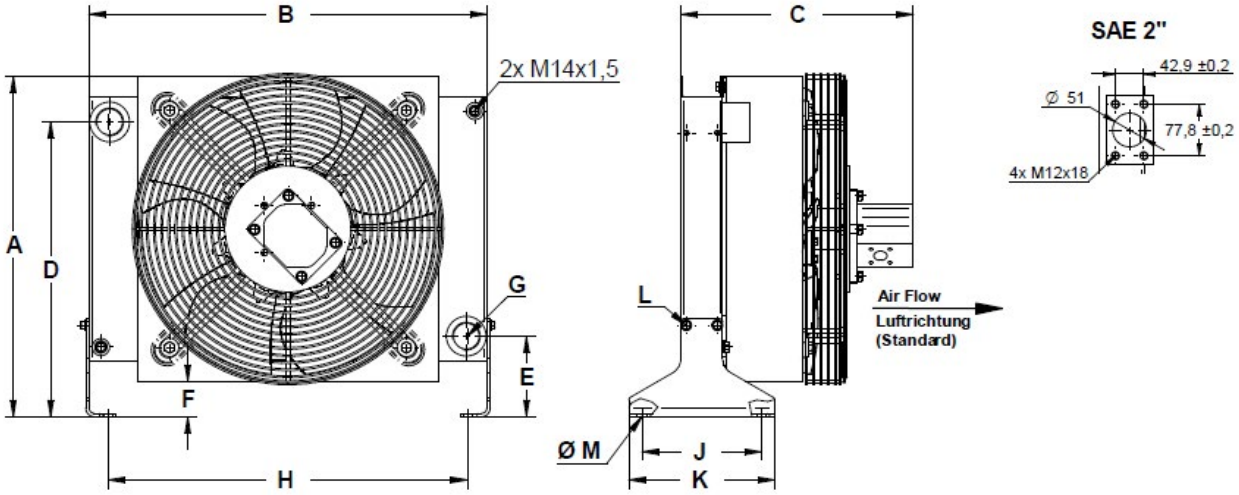
H Series with high-performance cooling fins



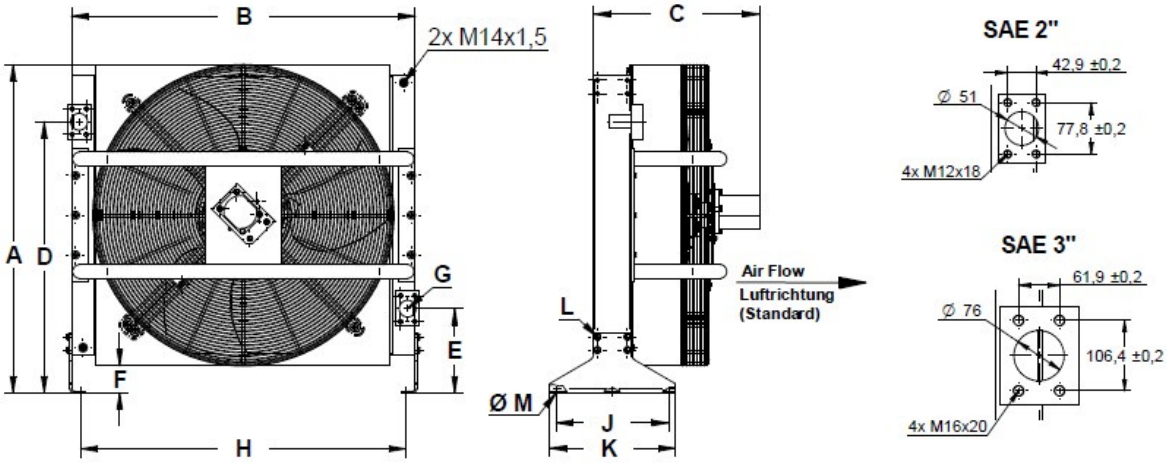
HR Series equipped with anti-clogging fins, easy to clean.

GLOBAL STANDARD AKG LINE H AND HR

Cooler Dimensions H18 to H150



Cooler Dimensions H320



Dimensions

Model Size	A	B	C (approx.)	D	E	F	G	H	J	K	L	M
H18	391	450	300	324	107	40	G1	392	180	220	M8	ø14
H35	496	600	375	427	105	36	G1 1/4	542	180	220	M8	ø14
HR50	601	700	365	532	104	36	G1 1/4	638	180	220	M8	ø14
H65/ HR65	613	690	395	538	123	48	G1 1/4	632	240	280	M10	ø14
H80/ HR80	666	790	460	583	123	43	G1 1/4	732	240	280	M10	ø14
H110/ HR110	791	940	615	668	205	83	G1 1/2	882	340	380	M10	ø14
H150/ HR150	884	990	490	715	255	85	SAE 2“	932	340	380	M10	ø14
H320	1220	1240	560	1001	296	77	SAE 3“	1182	410	450	M12	ø14

All dimensions in mm

Ordering Information

Model Size:

Serie:
- H
- HR

Optional Custom Features:

with:
- Blower Fan [B]
- PTFE Based Coating [+T]

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

Order Code Example: Heat Exchanger, 80 KW, sucking Hydraulic fan -> H80
Heat Exchanger, 150 KW, blowing Hydraulic fan -> H150B

GLOBAL STANDARD AKG LINE HY AND HRY

Oil-to-Air Cooling Systems with integrated Bypass & Hydraulic Motor

Product Information

The **AKG-Line Bypass** 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 HY Series

- Avoiding overstraining at cold start conditions and high oil flows
- Hydraulic motor powered fan
- Coolers can be universally used with hydraulic oil, transmission oil, engine oil and lubricating oil
- For the cooling of mineral oil, synthetic oil, biological oil as well as HFA, HFB, HFC and HFD liquids, diesel fuel (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)

Benefits

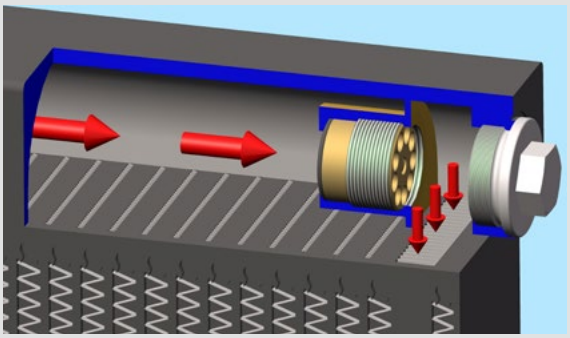
- Compact design because of integration of bypass
- Faster approach of operating temperature
- Highly flexible, complete ready-to-use cooling packages
- Compact and robust design, field-tested during many years of use in rugged real life conditions
- Highest quality due to professional engineering and 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 life span

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.

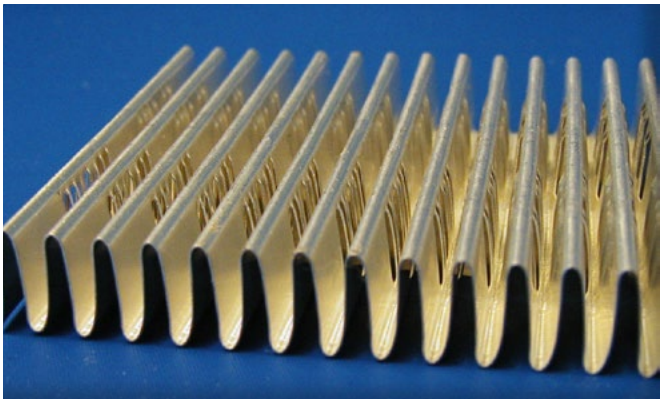
In this case part of the volume flow is bypassing the cooler core through the integrated valve.

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.

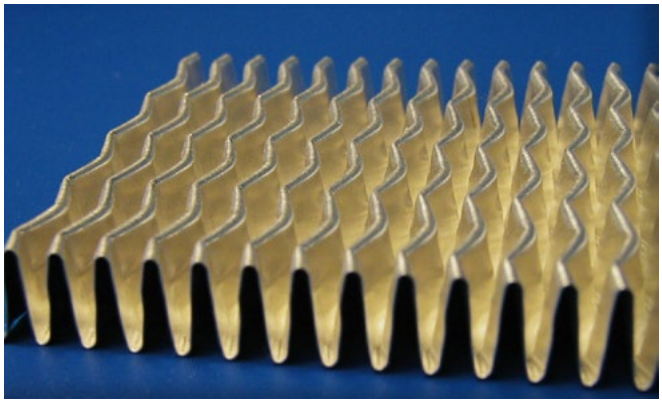


The installation of an external bypass is not necessary reducing costs and mounting space.

Cooling Air Fins



HY Series with high-performance cooling fins



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

GLOBAL STANDARD AKG LINE HY AND HRY

Technical Data

Model Size	Motor Size (cm3)	Max. Speed (rpm)	Nominal Speed (rpm)	Max. Motor Pressure (bar)	Approx. Noise level (dB(A), 1m)	Approx. Net Weight of Assembly (kg)	Volume (l)	Working Pressure (bar)
HRY35	11	3500	1500	250	81	26	4,5	17
HY80	11	3000	1500	250	83	61	9	17

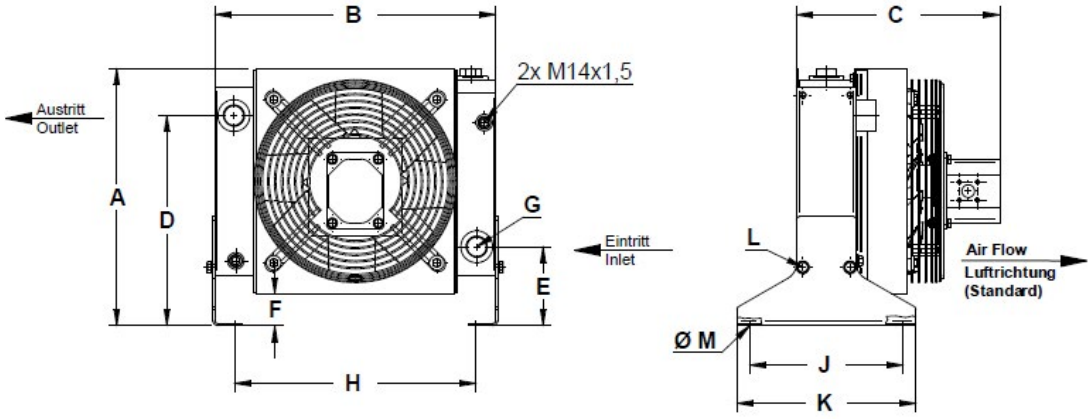
All data based on nominal fan speed conditions.

Dimensions

Model Size	A	B	C (approx.)	D	E	F	G	H	J	K	L	M
HRY35	496	600	375	427	105	36	G1 1/4	638	180	220	M8	ø14
HY80	666	790	460	583	123	43	G1 1/4	732	240	280	M10	ø14

All dimensions in mm

Cooler Dimensions HRY35 and HY80



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

Cooler made of painted aluminium with Bypass
Plastic fan
Fan-shroud, fingerguard and support feet all made of steel (chromated or powder coated)
Hydraulic motor

Ordering Informationen

Model Size:

Series:
- HY
- HRY

Optional Custom Features:

with:
- Blower Fan [B]
- Teflon Coating [+T]

without:
- Motor [-M]
- Cooler only [C]

Bestellbeispiel

Heat Exchanger, 35 KW, sucking Hydraulic fan,Bypass (2 bar) ->HY35
Heat Exchanger, 80 KW, blowing Hydraulic fan,Bypass (2 bar) ->HY80 B

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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.

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