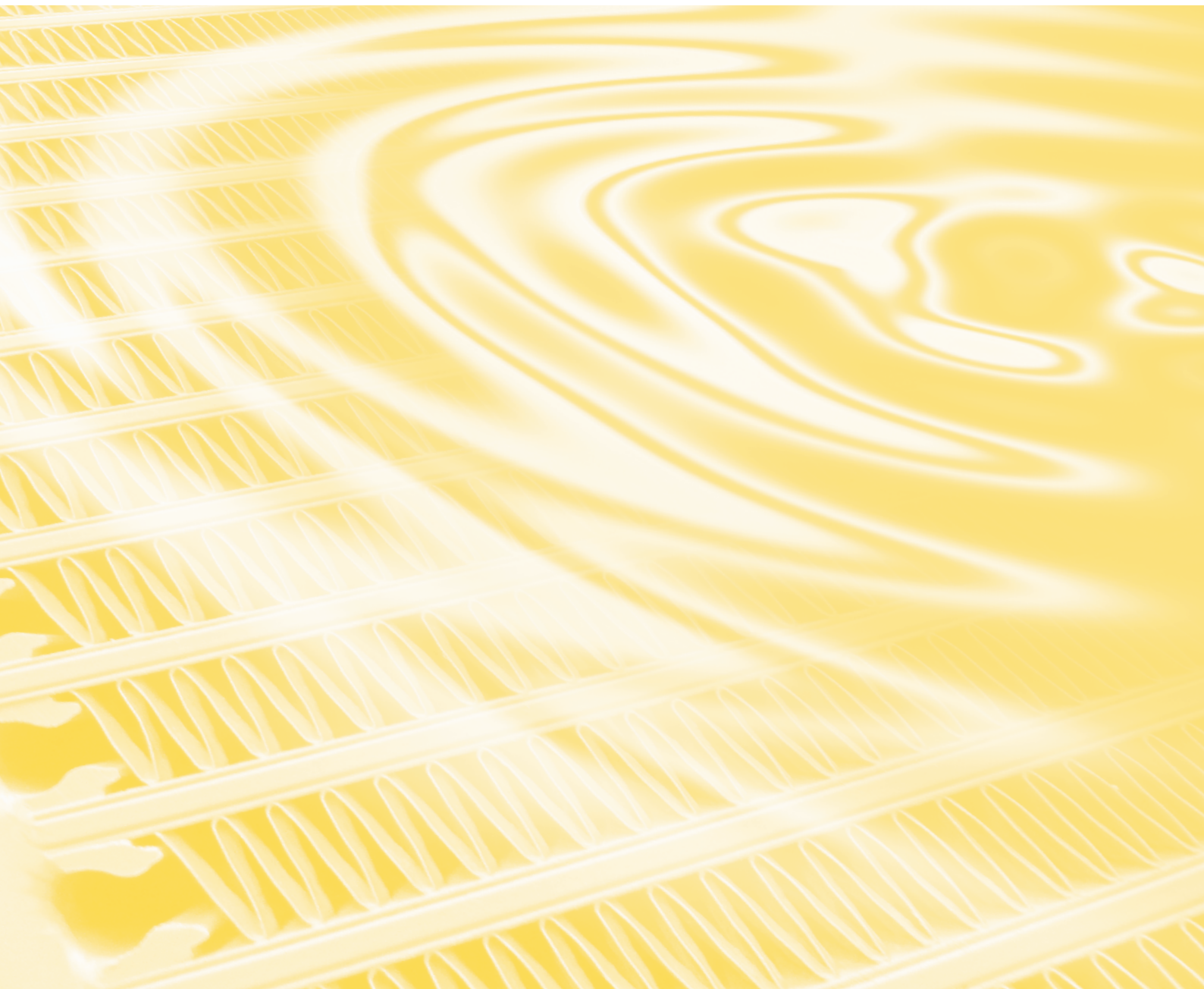




OFFLINE SERIES
GLOBAL STANDARD COOLER
AKG-Line AP



OIL-TO-AIR COOLING SYSTEMS WITH AC-MOTOR AND PUMP

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 Offline** Series 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.

THE FEATURES OF THE AP SERIES

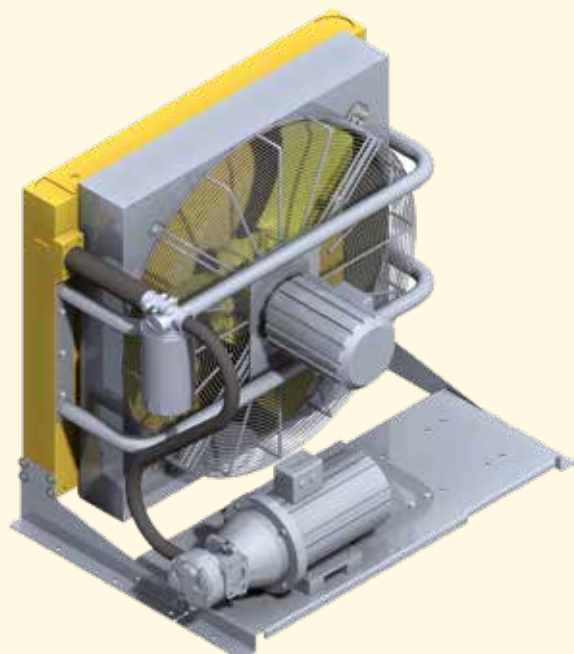
- High-Performance Aluminum cooling assemblies
- AC-motor powered fan and pump
- The heat is transferred from the medium to be cooled to the ambient air
- Cooler can be universally used in hydraulic oil, transmission oil, engine oil and lubricating oil
- For the cooling of HLP mineral oil to DIN 51524 and 100 cSt (other media and viscosity available)
- Ambient temperature from -20 °C up to +80 °C
- Max. oil temperature 80 °C
- Pump rated suction pressure 0,7 – 2 bar (0,5 bar when starting)
- Largest and most comprehensive series of industrial coolers

BENEFITS

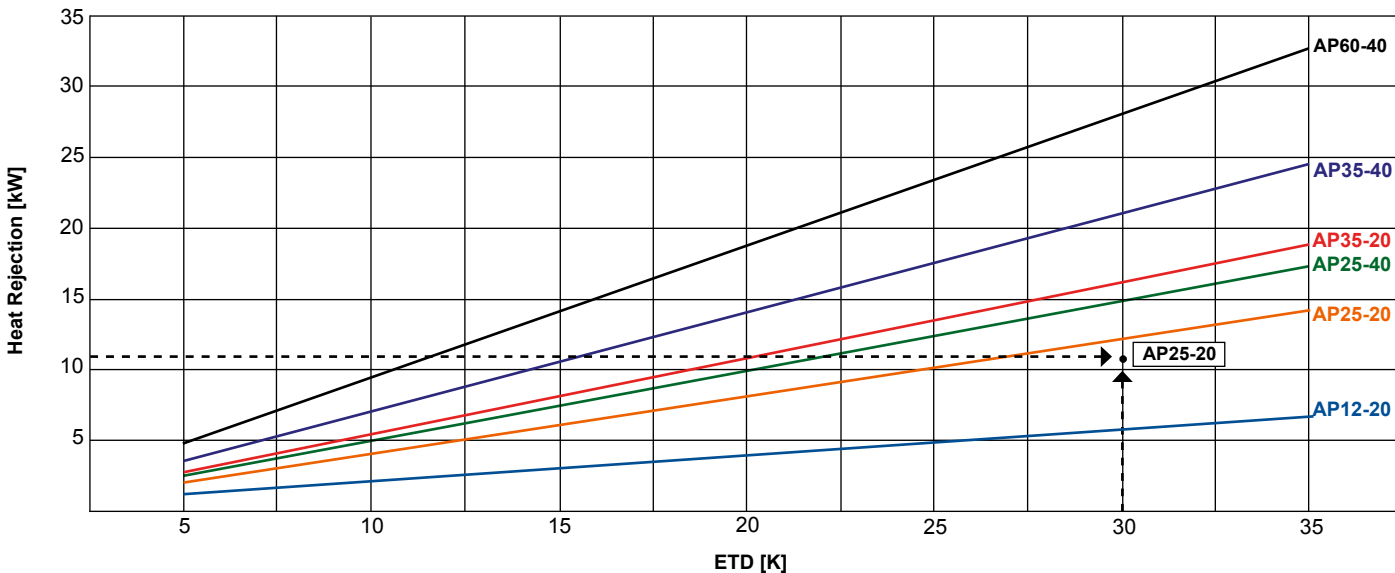
- Highly flexible complete, ready-to-use cooling packages
- Compact and robust design, field-tested during many years of use in rugged real life conditions
- Best heat transfer results per given cooler size due to comprehensive research and development
- Highest quality due to professional engineering 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

FUNCTIONAL DESCRIPTION

- Integrated cooling system with pump flows ranging from 30 l/min up to 150 l/min
- 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.



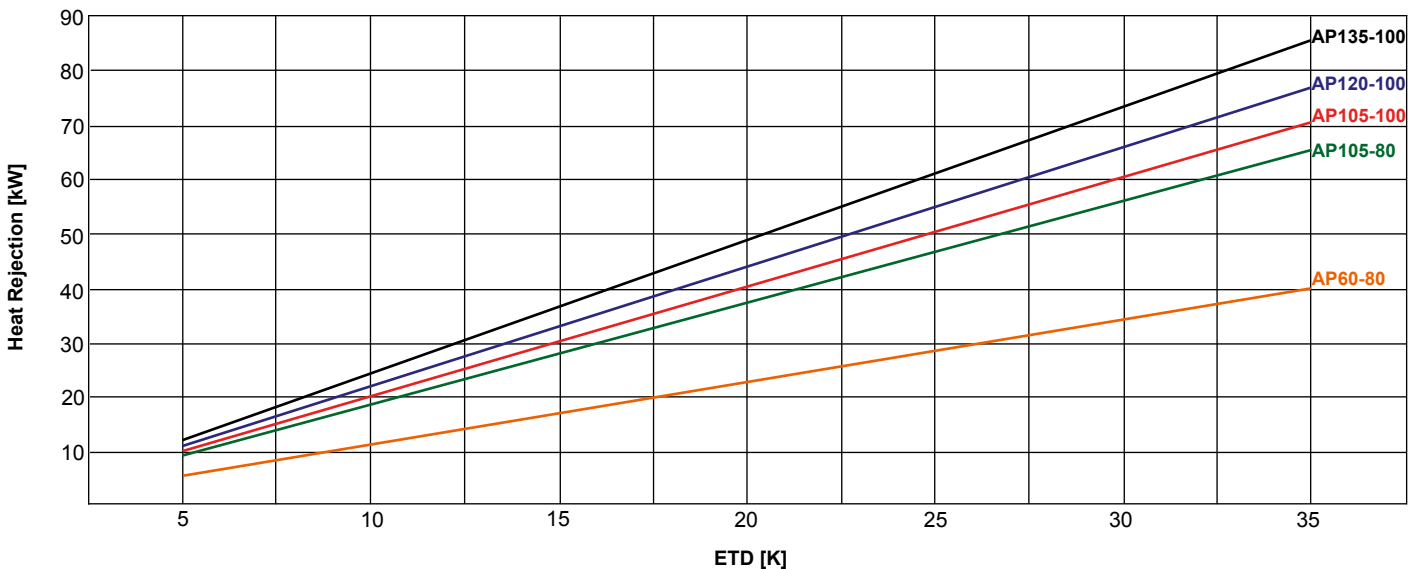
EASY SIZING DIAGRAM FOR ENTRANCE-TEMPERATURE-DIFFERENCE



Selection by Specific Heat Rejection

1. Input Data:		Example
Required Heat Rejection	P =	12 kW
Oilflow through Cooler	V =	20 cm ³ (30 l/min)
Oil Inlet Temperature	T _{Oil} =	65 °C
Cooling Airflow Temperature	T _{CAF} =	35 °C
2. Determination of Specific Heat Rejection:		
Entering-Temperature-Difference	ETD =	65 °C - 35 °C = 30 K
3. Select According to Diagram and Result:		Next higher curve AP 25-20

EASY SIZING DIAGRAM FOR ENTRANCE-TEMPERATURE-DIFFERENCE



TECHNICAL DATA

Model Size	Pump Size [cm ³]	Oil Flow [l/min]	Nominell Speed [rpm]	Motor Consumption fan/pumpo [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
AP25	20	30	1500	2,2	230/400	7,1	81	
	40	60						
AP35	20	30	1500	2,2	230/400	7,6	80	78
	40	60						
AP60	40	60	1500	0,75/2,2	230/400	13,2	83	122
	80	120						
AP105	80	120	1500	2,2/2,2	230/400	19,2	80	153
	100	150		2,2/3				
AP120	100	150	1500	2,2/3	230/400	25,2	86	181
AP135	100	150	1500	2,2/3	230/400	30,2	88	203

The applied AC motors are suitable for 50 Hz and working conditions up to 5 bar and up to 100 cSt. Exceeding conditions on request.

DIMENSIONS

Model Size	A	B	C (approx.)	E	G	H	J	K	M	N	O	P	R	S (SAE)
AP12	391	450	768	107	G1	518	285	450	Ø14	140	/	/	136	1½"
AP25	496	600	846	105	G1 1/4	668	285	450	Ø14	140	/	/	189	1½"
AP35	601	700	883	104	G1 1/4	768	285	450	Ø14	140	/	/	241	1½"
AP60	666	790	/	123	G1 1/4	858	275	726	Ø14	140	191,5	/	204	1½" / 2"
AP105	884	990	/	255	SAE 2"	1058	187,5	788	Ø14	150	143,5	187,5	204	2"
AP120	992	1040	/	255	SAE 2"	1108	187,5	788	Ø14	150	143,5	187,5	204	2"
AP135	989	1090	/	261	SAE 2"	1158	275	991	Ø14	175	146,5	275	204	2"

All dimensions in mm

ORDERING INFORMATION

Serial Code:

AP

Model Size:

Pump:

20 = 20cm³ (AP12-AP35) [20]
40 = 40cm³ (AP25-AP60) [40]
80 = 80cm³ (AP60-AP135) [80]
100 = 100cm³ (AP105-AP135) [100]

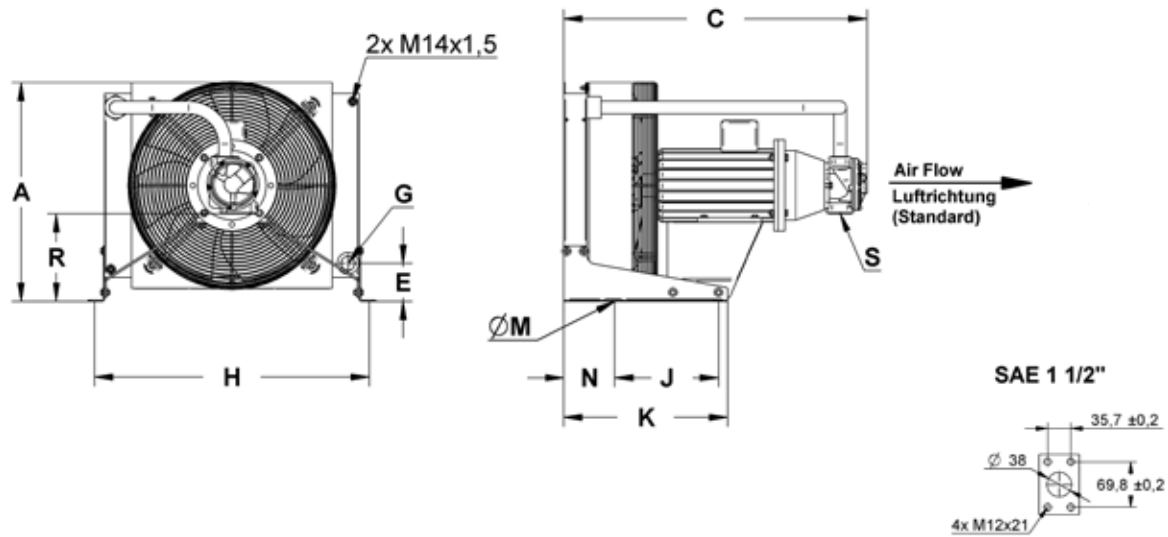
Example: Heat Exchanger 35 kW, pump 40 cm³ and AC-driven fan ->

AP35-40

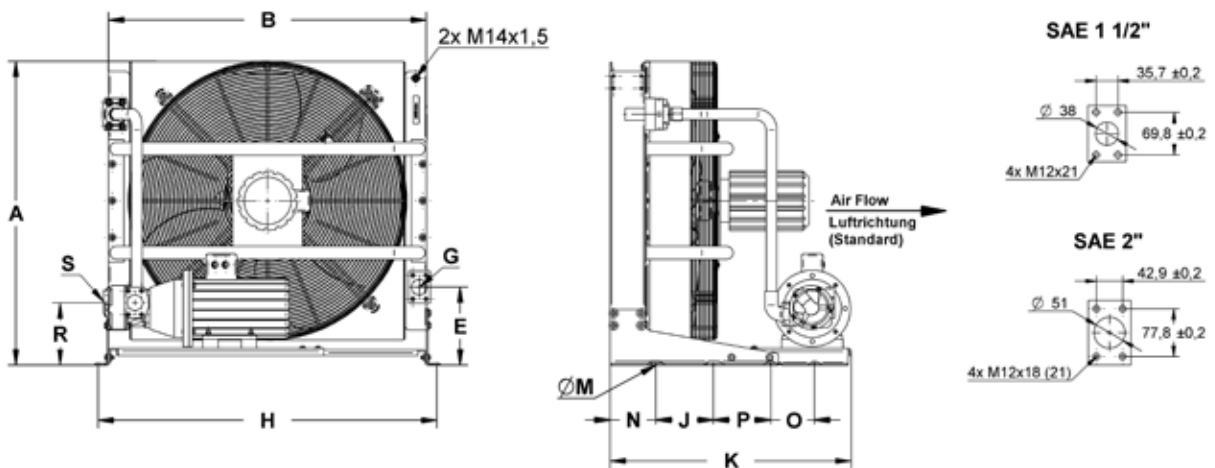
Example: Heat Exchanger 12 kW, pump 20 cm³, AC-driven fan ->

AP12-20

COOLER DIMENSIONS AP12 TO AP35



COOLER DIMENSIONS AP60 TO AP135



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
Pump
Hose unit



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AKG – A STRONG GLOBALLY INTEGRATED GROUP OF COMPANIES

AKG is a globally leading supplier of high-performance coolers and heat exchangers as well as customised system solutions that comply with the highest quality standards.

On a world-wide scale 2,500 employees work at 12 manufacturing facilities located in Germany, France, Latvia, Turkey, the U.S.A., Brasil, China and India. Together with a number of additional oversea sales companies they are on duty around the clock.

Your AKG-Partner



The longstanding and competent partnership with global OEM customers from 22 lines of business such as construction machinery, compressed-air systems, agricultural and forestry machines, vehicle construction and many other fields of application give fresh and innovative impetus to the mobile and industrial standard type series.

AKG operates one of the world's largest research, development, measurement and validation centres for cooling solutions and customised applications.

AKG's heat exchangers have stood for innovative solutions as well as highest engineering and manufacturing competence for more than 95 years.