



GLOBAL STANDARD COOLER

Cool-Line

H



OIL-TO-AIR COOLING SYSTEMS WITH HYDRAULIC MOTOR

PRODUCT INFORMATION

AKG Cool-Line is a standard line of products from the market leader in high performance aluminum 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 Cool-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.

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 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 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
- Largest and most comprehensive series of industrial and mobile hydraulic coolers
- 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 or alternatively with non-louvered low fouling cooling air fins (HR-Series)

H-Series FEATURES/BENEFITS

- New H optimized series coolers with louvered fin design provides the best HEAT TRANSFER per given cooler size in the industry.
- New H optimized series coolers offer increased performance with lower pressure drop than current same size AKG THERMAL SYSTEMS HC SERIES COOLERS.
- New H optimized series coolers have proprietary R & D designed, engineered and tested internal and external fins unique to AKG THERMAL SYSTEM coolers.
- All H series coolers are available with internal pressure BYPASS option.
- New H optimized series coolers offer the largest, most comprehensive cooler size ranges with competitive pricing and deliveries from stock.

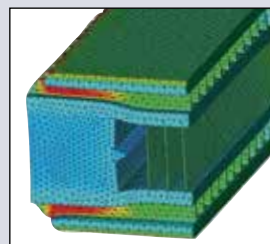
PATENTED FLEXIBLE AKG HOLLOW PROFILE



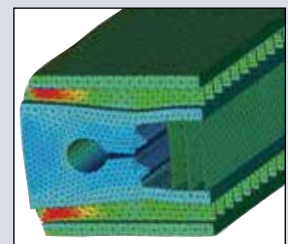
Cool-Line uses patented AKG hollow profiles to reduce local peak strains. This way the strength of heat exchangers is significantly increased and their service life time considerably prolonged.

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

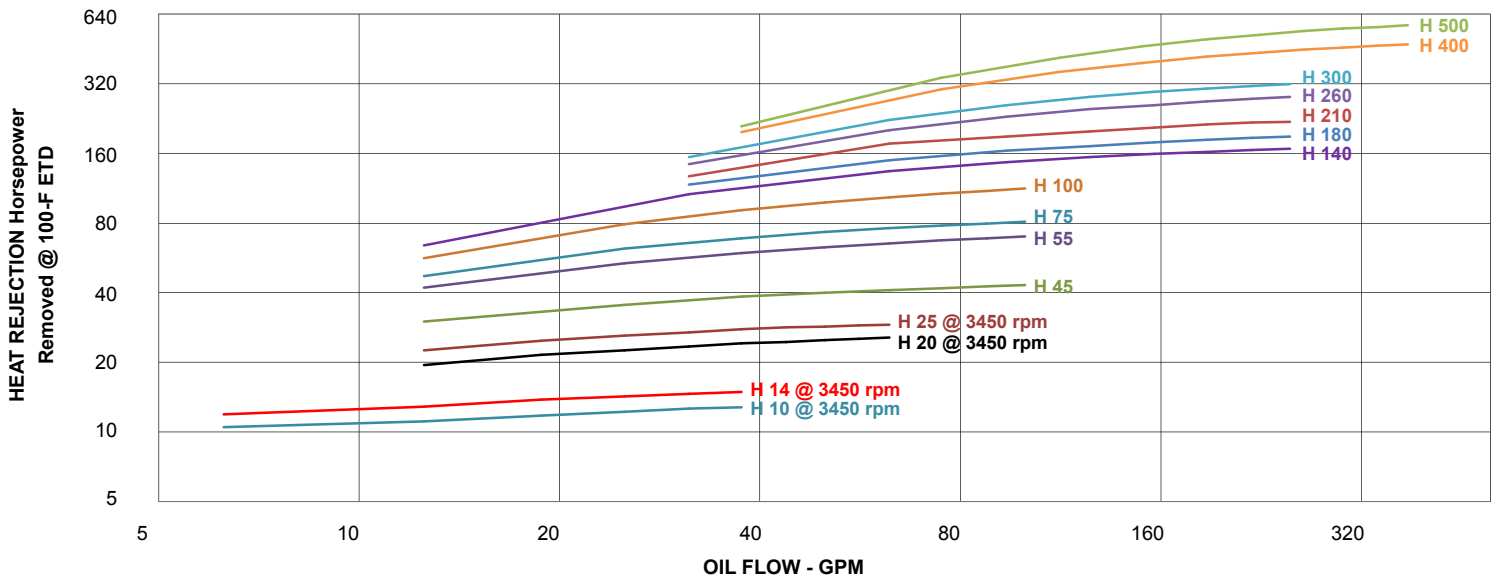


with standard profile



with hollow profile

PERFORMANCE DATA (H SERIES @ 1750 RPM FAN SPEED)



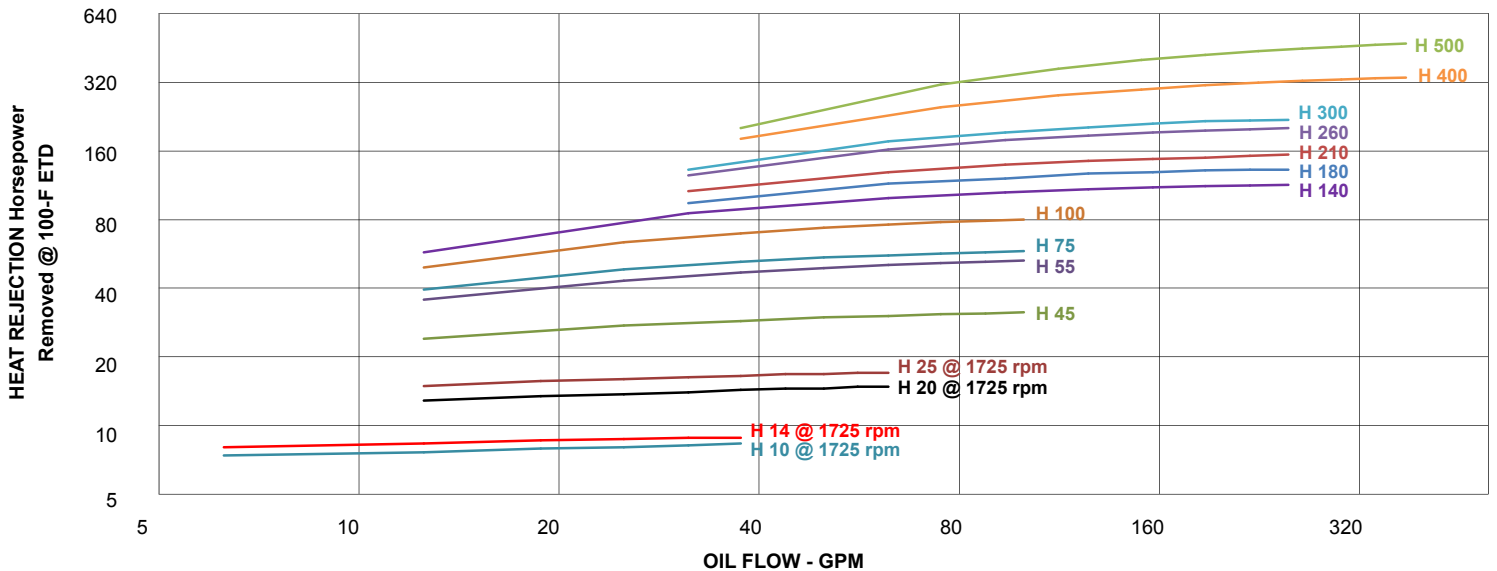
Specifications:

Maximum Working Pressure (H10 through H260)	377 PSI
Maximum Working Pressure (H300 through H500)	250 PSI
Maximum Working Temperature	250 °F

Materials:

Cooler	Aluminum
Shroud	Power Painted Steel
Fan Guard	Zinc Plated Steel
Fan Blade	Polypropylene Blades Aluminum Hub
Mounting Brackets	Powder Painted Steel

PERFORMANCE DATA (H SERIES @ 1140 RPM FAN SPEED)



GLOBAL STANDARD Cool-Line H



H SERIES TECHNICAL DATA

Model Size	Motor Size (cubic in.)	Operating Speed (RPM)	Motor Flow Rate @ Operating Speed (gpm)	Motor Pressure @ Operating Speed (psi)	Motor Max Pressure (psi)	Approx. Noise Level (dB(A), 1 m)	Working Pressure (psi)	Approx. Shipping Weight (lbs)
H10	0.218	3450/1725	3.6/1.8	500	2000	77/65	377	30
H14	0.218	3450/1725	3.6/1.8	500	2000	77/65	377	36
H20	0.218	3450/1725	3.6/1.8	500	2000	81/69	377	41
H25	0.218	3450/1725	3.6/1.8	500	2000	86/73	377	50
	0.372	3450/1725	6.2/3.1	500	2000	86/73	377	50
H45	0.218	1750/1140	1.8/1.2	500	2000	83/74	377	57
	0.372	1750/1140	3.1/2.1	1050/500	2000	83/74	377	57
H55	0.372	1750/1140	3.1/2.1	650/500	2000	86/75	377	127
	0.5	1750/1140	4.2/2.7	500	3500	86/75	377	127
H75	0.372	1750/1140	3.1/2.1	650/500	2000	88/79	377	159
	0.5	1750/1140	4.2/2.7	500	3500	88/79	377	159
H100	0.372	1750/1140	3.1/2.1	1160/500	2000	92/83	377	195
	0.5	1750/1140	4.2/2.7	870/500	3500	92/83	377	195
H140	0.5	1750/1140	4.2/2.7	1440/560	3500	92/83	377	230
	1.4	1750/1140	11.8/7.7	520/500	2750	92/83	377	230
H180	0.5	1750/1140	4.2/2.7	1440/560	3500	94/85	377	267
	1.4	1750/1140	11.8/7.7	520/500	2750	94/85	377	267
H210	0.5	1750/1140	4.2/2.7	1440/650	3500	95/86	377	280
	1.4	1750/1140	11.8/7.7	520/500	2750	95/86	377	280
H260	0.5	1750/1140	4.2/2.7	2300/1000	3500	97/88	377	405
	1.4	1750/1140	11.8/7.7	825/500	2750	97/88	377	405
H300	1.4	1750/1140	11.8/7.7	1010/525	2750	98/89	250	500
	1.95	1750/1140	16.4/10.7	725/500	3500	98/89	250	500
H400	1.4	1750/1140	11.8/7.7	1630/765	2750	101/92	250	590
	1.95	1750/1140	16.4/10.7	1170/550	3500	101/92	250	590
H500	1.4	1750/1140	11.8/7.7	1600/735	2750	101/92	250	650
	1.95	1750/1140	16.4/10.7	1150/530	3500	101/92	250	650

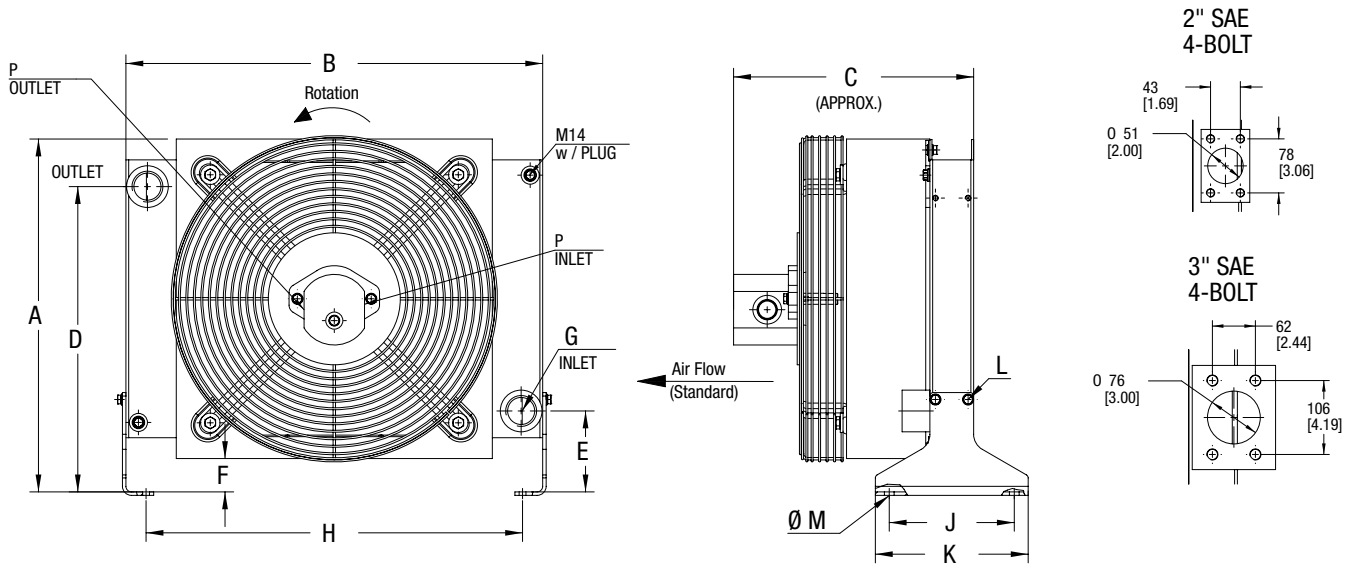
All data based at nominal speed

H SERIES DIMENSIONS

Model Size	A	B	C (Approx.)	D	E	F	G	H	J	K	L	M	P
H10	13.74	13.78	10.00	11.38	4.37	1.97	#12 SAE 1 1/16-12 UN-2B	11.93	7.09	8.66	M6-1 X12MM Bolt (4 PL)	Ø 0.55	#8 SAE 3/4-16 UN-2B
H14	14.25	13.78	11.00	11.85	4.84	2.48	#12 SAE 1 1/16-12 UN-2B	11.93	7.09	8.66	M8-1.25 X16MM Bolt (4 PL)	Ø 0.55	#8 SAE 3/4-16 UN-2B
H20	15.91	15.75	10.00	12.54	4.87	1.50	#16 SAE 1 5/16-12 UN-2B	13.86	7.09	8.66		Ø 0.55	#8 SAE 3/4-16 UN-2B
H25	15.91	16.54	11.20	12.15	5.26	1.50	#16 SAE 1 5/16-12 UN-2B	14.65			Ø 0.55	#8 SAE 3/4-16 UN-2B	
H45	19.60	21.65	11.10	16.24	4.87	1.50	#20 SAE 1 5/8-12 UN-2B	19.76	23.70	11.81	M10-1.5 X20MM Bolt (8 PL)	Ø 0.55	#8 SAE 3/4-16 UN-2B
H55	24.03	25.59	11.00	20.63	4.88	1.50	#20 SAE 1 5/8-12 UN-2B	23.70				Ø 0.55	#12 SAE 1 1/16-12 UN-2B
H75	24.03	26.38	12.30	17.68	7.84	1.50	#20 SAE 1 5/8-12 UN-2B	24.49	10.24	11.81	M12-1.75 X25MM Bolt (8 PL)	Ø 0.55	#12 SAE 1 1/16-12 UN-2B
H100	25.89	30.31	12.20	19.50	7.84	1.50	#20 SAE 1 5/8-12 UN-2B	28.32	10.24	11.81		Ø 0.55	#12 SAE 1 1/16-12 UN-2B
H140	30.19	36.22	13.56	23.00	10.69	1.50	2" SAE 4-Bolt FLANGE	34.22	21.10	22.64	M12-1.75 X25MM Bolt (8 PL)	Ø 0.55	#12 SAE 1 1/16-12 UN-2B
H180	30.19	37.01	15.06	21.00	10.69	1.50		35.01	21.10	22.64		Ø 0.55	#12 SAE 1 1/16-12 UN-2B
H210	33.26	38.98	16.00	24.07	10.69	1.50		36.98	21.10	22.64		Ø 0.55	#12 SAE 1 1/16-12 UN-2B
H260	37.56	40.94	17.80	29.27	9.80	1.50		39.06	21.10	22.64		Ø 0.55	#12 SAE 1 1/16-12 UN-2B
H300	38.40	43.62	19.88	31.27	9.94	2.00	3" SAE 4-Bolt FLANGE	40.17	14.72	17.72	3/4-10 x 1.75 Bolt (8 PL)	Ø 0.75	#16 SAE 1 5/16-12 UN-2B
H400	46.96	49.49	20.79	36.03	12.73	2.00		48.22	15.70	18.70		Ø 0.75	#16 SAE 1 5/16-12 UN-2B
H500	59.76	53.68	18.78	43.62	17.56	2.00		50.34	17.67	20.67		Ø 0.75	#16 SAE 1 5/16-12 UN-2B

All dimensions in inch

COOLER DIMENSIONS H



SELECTION PROCEDURES

The performance curves are based on the following:

- 50 SUS Oil
- 100 °F Entering Temperature Difference (ETD)

If your application conditions are different, use the following selection procedure:

STEP 1. DETERMINE THE HEAT LOAD

Horsepower Heat x 2545 = BTU/hr

STEP 2. DETERMINE THE ACTUAL ETD DESIRED

Entering **OIL** Temperature - Entering **AIR** Temperature = **ETD**

The entering oil temperature is the highest desired oil temperature. The entering air temperature is the highest anticipated ambient air temperature, plus any pre-heating of the air prior to its entering the cooler. This is especially important if air is drawn from the engine compartment for cooling.

STEP 3. CALCULATE THE ADJUSTED BTU/HR FOR SELECTION

$$\text{BTU/hr} \times \frac{100}{\text{Desired ETD}} = \text{BTU/hr For Use}$$

Heat Load With Selection Chart

STEP 4. SELECT THE MODEL FROM THE CURVES

Read up from the GPM to the required heat rejection. Select any model on, or above this point.

ORDERING INFORMATION

SERIES CODE: MODEL SIZE:

MOTOR CODE:

BYPASS DATA:

CUSTOM FEATURE CODE:

SERIES:

H = Optimized

MODEL SIZE:

Selected

MOTOR CODE:

0 = No Motor ; 0218 = 0.218 cu-in; 0372 = 0.372 cu-in; 0050 = 0.50 cu-in; 0140 = 1.40 cu-in; 0195 = 1.95 cu-in

BYPASS DATA:

BPNV = Bypass No Valve, BP25 = 25PSI Internal Bypass, BP30 = 30PSI Internal Bypass, BP60 = 60PSI Internal Bypass, BP65 = 65PSI Internal Bypass,

CUSTOM FEATURE CODE:

B = Blowing Fan, AD = SAE to NPT Adaptors, H = Heresite Coating Core, F = Foam Filter

ORDER EXAMPLE:

Heat Exchanger, 75 HP; Suction Fan, No Motor; 60PSI Internal Bypass

H75-0-BP60



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E-Mail: sales@akgts.com

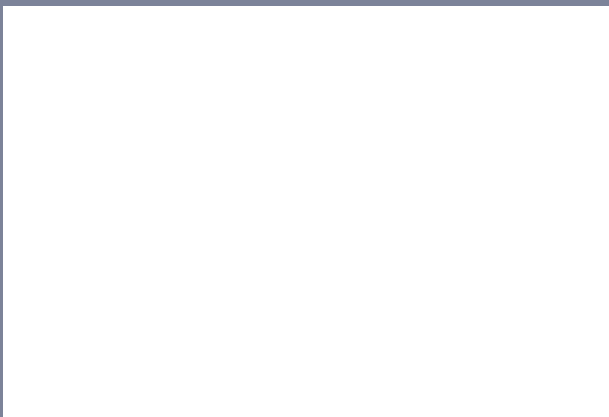
Internet: www.akgts.com

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 11 manufacturing facilities located in Germany, France, Latvia, the U.S.A., China, Brasil 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 100 years.

Aluminum Coolers – Made by AKG
DIN EN ISO 9001 : 2000