



# Cool-Line HD

## HD SERIES FEATURES

- Bar and Plate brazed aluminum core
- Competitive pricing and assembles from stock
- Patented flexible profile for long life
- Rated for flows from 20 to 500 gpm
- Capable of high viscosity fluids (ISO VG320) for industrial and process markets



## HEAVY DUTY COOLERS FOR SEVERE APPLICATIONS

### Product Information

**AKG HD Series**, 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 HD 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 and is suited for normal or rugged environmental operating conditions.

### Features of the HD series

- High-Performance cooling assemblies
- AC-motor powered fan
- The heat is transferred from the fluid 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 17 bar
- Capable of high flows and high viscosity fluids for industrial and process markets
- 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 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, uses louvered highperformance air fins

### BENEFITS

- HD optimized series coolers with louvered fin design provides the best HEAT TRANSFER per given cooler size in the industry.
- Nine cooler models available in 4 different cooler sizes for flows from 20 to 500 gpm.
- HD optimized series coolers have proprietary R & D designed, engineered and tested internal and external fins unique to AKG THERMAL SYSTEMS coolers.
- HD optimized series coolers offer the largest, most comprehensive cooler size ranges with competitive pricing and deliveries from stock.

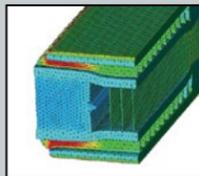
### PATENTED FLEXIBLE AKG HOLLOW PROFILE



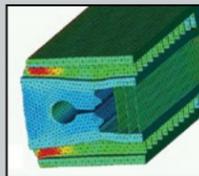
HD uses patented AKG hollow profiles to reduce local peak strains. This way the strength of heat exchangers is significantly increased and their service life time is considerably prolonged.

#### 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

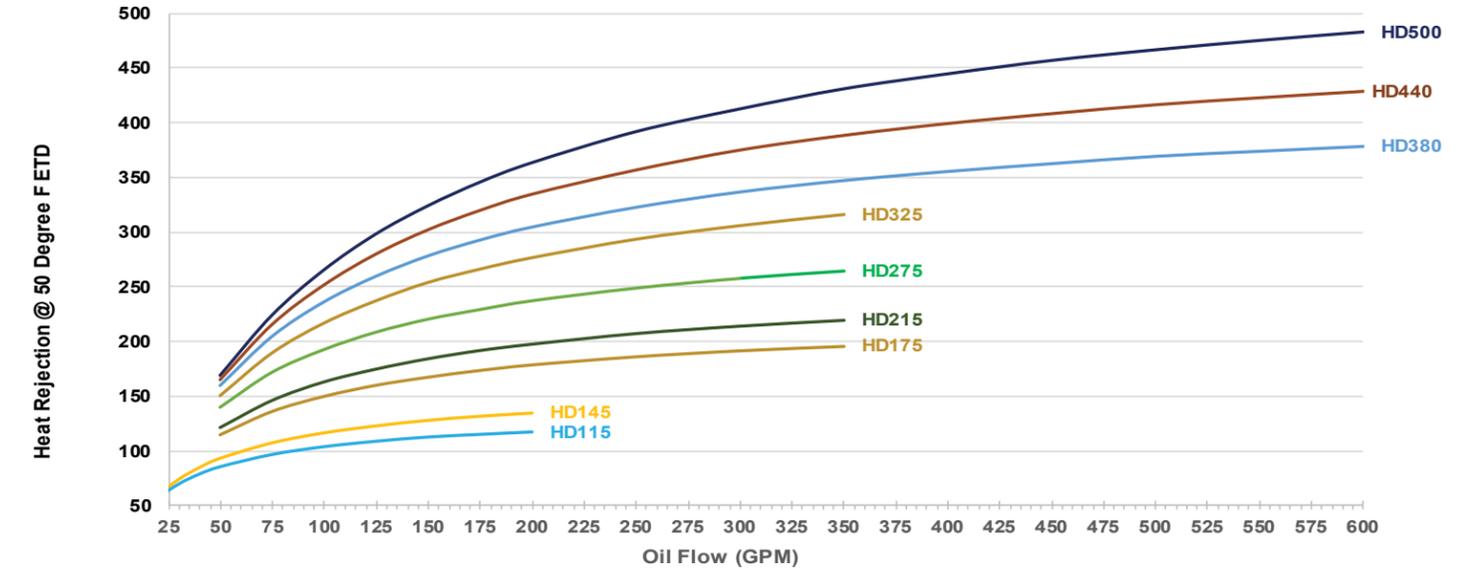


with standard profile



with hollow profile

## HD PERFORMANCE DATA



### SPECIFICATIONS

Maximum working pressure	250 psi
Maximum working temperature	250 °F

### MATERIALS

Cooler	Aluminum
Shroud	Powder painted steel
Fan Guard	Zinc plated steel
Fan Blade	Polypropylene blades, Aluminum hub
Mounting Brackets	Powder painted steel

## SELECTION PROCEDURES

**The Performance Curves are Based on the Following:**

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

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

### STEP 1: Determine the Heat Load

In most cases you can use 1/3 of the input horsepower.

Example: 30 HP Power Unit = 10 HP Heat Load

### 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 it entering the cooler.

### STEP 3: Calculate the Adjusted BTU/HR for Selection

$$\text{Horsepower} \times \frac{50}{\text{Desired ETD}} = \text{Horsepower For Use With Selection Chart}$$

### 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.

## HD SERIES TECHNICAL DATA

Model Size	HP RPM	Motor Frame	Voltage (3 Phase)	Hz	Full Load Amps 230 V	Approx. Noise Level (dB(A), 1m)	Working Pressure (psi)
HD115	5 1200	213/5T	208-230/460	50/60	15.1-13.7 /6.83A	78	250
HD145	10 1200	254/6T	208-230/460	50/60	28.5-26.6 /13.3A	78	250
HD175	10 1200	254/6T	208-230/460	50/60	28.5-26.6 /13.3A	87	250
HD215	20 1200	284/6T	208-230/460	50/60	53.5-48.4 /24.2A	81	250
HD275	10 1200	254/6T	208-230/460	50/60	28.5-26.6 /13.3A	89	250
HD325	20 1200	284/6T	208-230/460	50/60	53.5-48.4 /24.2A	94	250
HD380	15 1200	284/6T	208-230/460	50/60	39.6-35.8 /17.9A	89	250
HD440	25 1200	324/6T	208-230/460	50/60	67.2-60.8 /30.4A	90	250
HD500	40 1200	364/5T	208-230/460	50/60	103-93 /46.5A	95	250

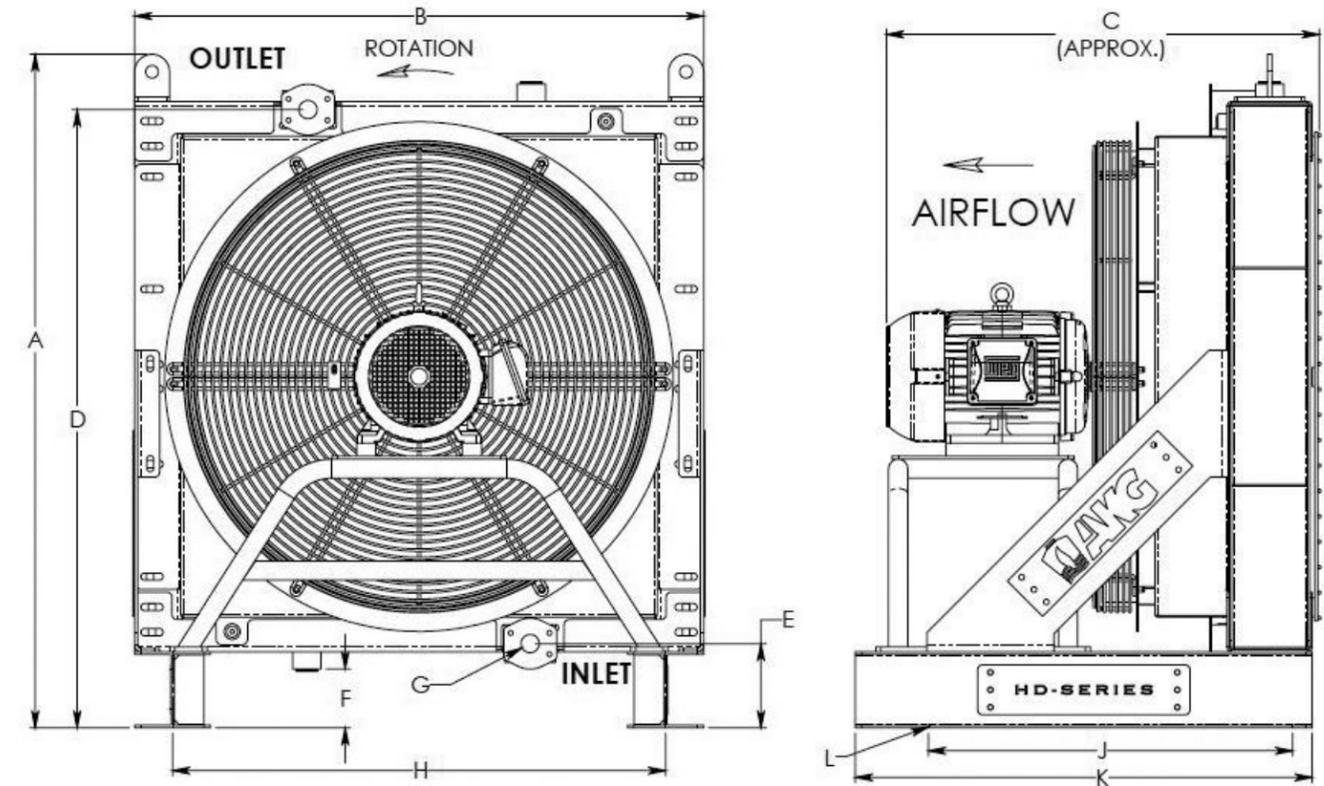
Electric Motors are TEFC and are not thermally protected. Electric Motors are Dual Rated 50/60 HZ and CE marked. Actual rating may vary with motor brand. Check motor nameplate for actual rating. Motor RPM is reduced by 1/6 for 50 Hz service.

## HD SERIES DIMENSIONS

Model Number	A	B	C	D	E	F	G	H	J	K	L
HD115	1348	1140	867	1237	169	118	2" SAE 4-BOLT FLANGE	988	689	914	9/16x1.5
HD145	1348	1140	983	1237	169	118	2" SAE 4-BOLT FLANGE	988	689	914	9/16x1.5
HD175	1463	1330	975	1383	173	118	3" SAE 4-BOLT FLANGE	1178	689	914	9/16x1.5
HD215	1463	1330	1039	1383	173	118	3" SAE 4-BOLT FLANGE	1178	689	914	9/16x1.5
HD275	1763	1616	1049	1723	133	118	3" SAE 4-BOLT FLANGE	1464	894	1016	9/16x1.5
HD325	1763	1616	1078	1723	133	118	3" SAE 4-BOLT FLANGE	1464	894	1016	9/16x1.5
HD380	1867	2033	1143	1814	146	120	4" SAE 4-BOLT FLANGE	1832	894	1016	9/16x1.5
HD440	1867	2033	1179	1814	146	120	4" SAE 4-BOLT FLANGE	1832	894	1016	9/16x1.5
HD500	1867	2033	1187	1814	146	120	4" SAE 4-BOLT FLANGE	1832	894	1016	9/16x1.5

\*All dimensions are in mm unless otherwise mentioned

## COOLER DIMENSIONS HD



## ORDERING INFORMATION

<b>HD</b>	—	—	—
<b>HD SERIES</b> Standard	<b>MODEL SIZE</b> Select	<b>MOTOR CODE</b>	<b>CUSTOM FEATURE</b>
	115 145 175 215 275 325 380 440 500	3 = Three Phase 3EXP = Explosion Proof 3 PH 5 = 575V 3 PH	AD = SAE to NPT H = Heresite RG = Rock Guard



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## AKG – A STRONG GLOBAL GROUP

AKG is a leading supplier of high-performance coolers and thermal management systems. We also provide customized system solutions, which comply with the highest quality standards.

On a world-wide scale, our over 3,000 employees work at 11 manufacturing facilities located in the United States, Germany, France, Latvia, Turkey, Mexico, Brazil, China and India. Together with our wide network of sales companies, AKG's team is on duty around the clock.

AKG's longstanding partnership with global OEM's across a wide range of markets supports the demanding needs of mobile and industrial applications. AKG products are found globally in a variety of markets including construction machinery, agricultural and forestry equipment, power generation and specialty on-highway vehicles and many more.

AKG operates one of the world's most extensive research, development, measurement and validation centers for cooling solutions and customized applications.

For over 100 years AKG has been a symbol of innovation, engineering excellence and manufacturing competence. This makes a winning combination that raises the bar for our competition and keeps us pushing forward.