



GLOBAL STANDARD COOLER

Cool-Line

HD

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.

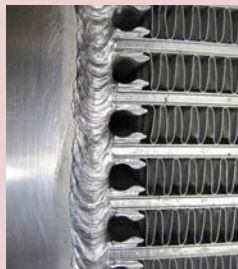
FEATURES OF THE HD SERIES:

- 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 high-performance air fins

HD Series FEATURES/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.

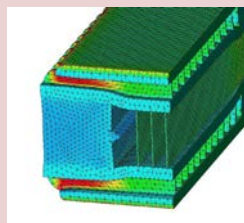
PATENTED FLEXIBLE AKG HOLLOW PROFILE



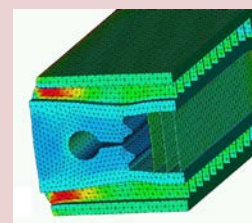
HD uses patented AKG hollow profiles to reduce local peak strains. This way the strength of heat exchangers is significantly increased and their service life time is considerably prolonged.

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

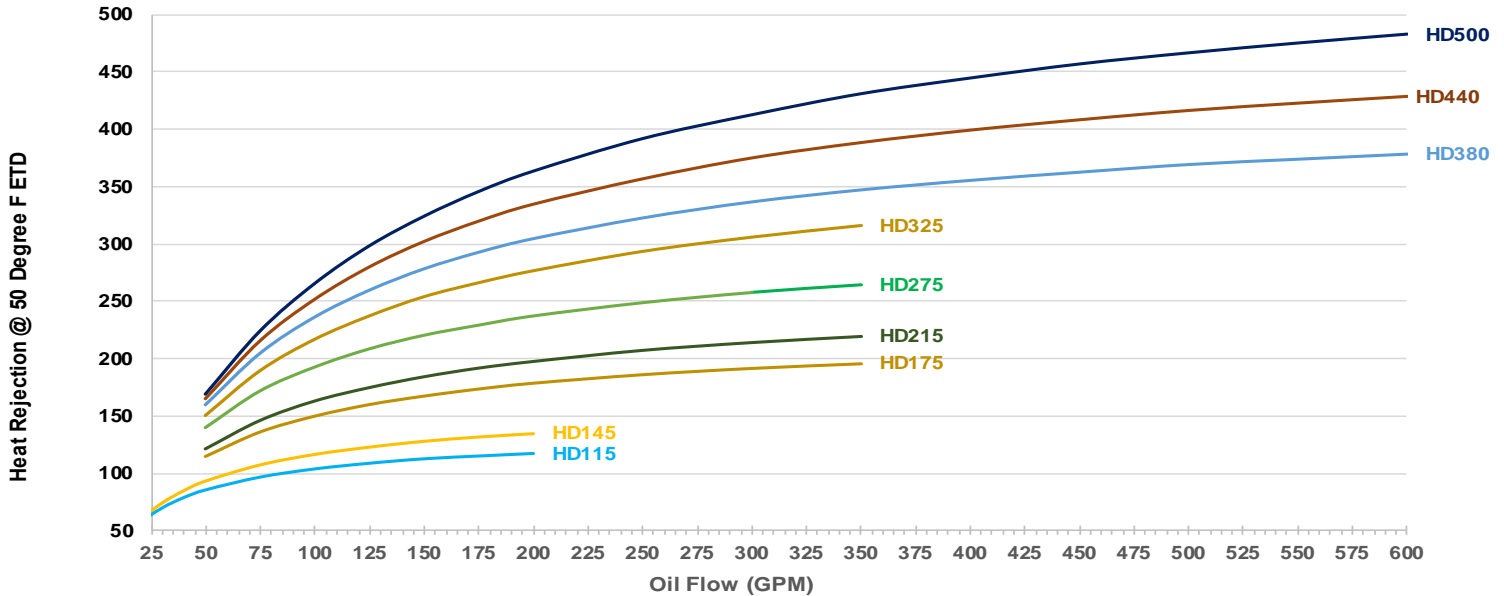


with standard profile



with hollow profile

HD PERFORMANCE CHART



| Specifications: | |
|-----------------------------|---------|
| Maximum Working Pressure | 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 |

SELECTION PROCEDURES

The performance curves above 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

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

STEP 4. Determine 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 /13.3 A | 89 | 250z |
| 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 |

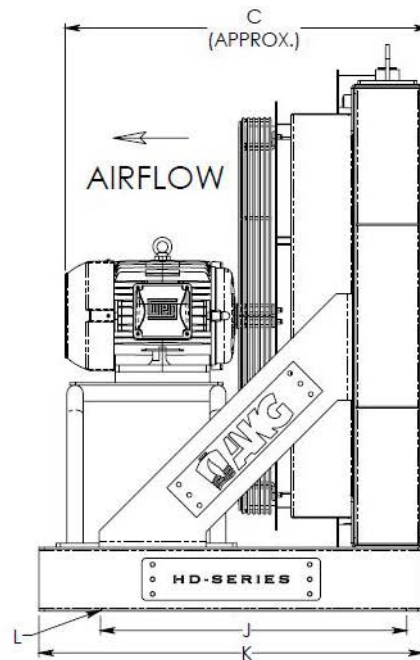
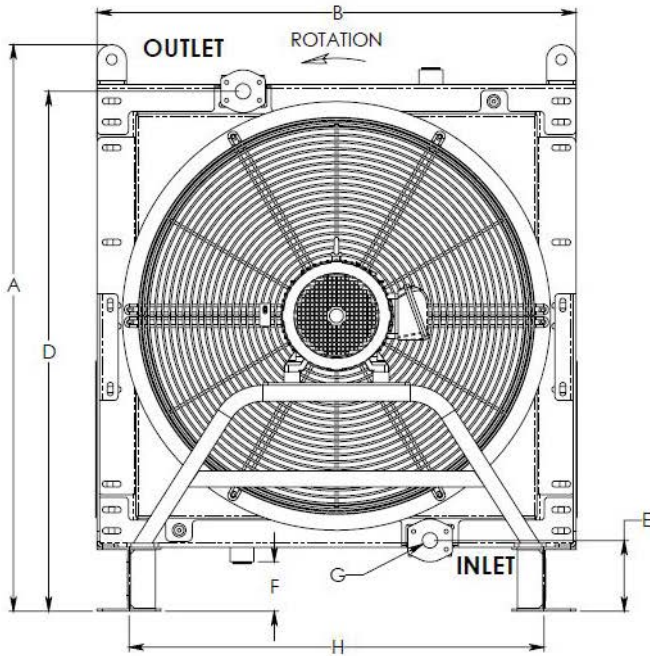
Electric Motors are TEFC and are not thermally protected
 Electric Motors are Dual Rated 50/60 HZ and CE marked
 Actual rating may vary with motor brand. Check motor nameplate for actual rating.
 Motor RPM is reduced by 1/6 for 50 Hz service

HD SERIES DIMENSIONS

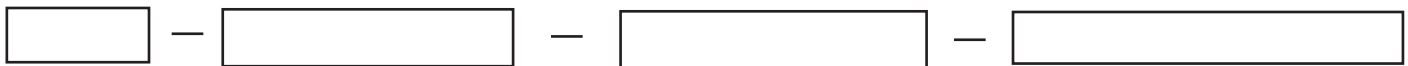
| Model Number | A | B | C | D | E | F | G | H | J | K | L |
|--------------|------|------|------|------|-----|-----|----------------------|------|-----|------|----------|
| HD115 | 1348 | 1140 | 867 | 1237 | 169 | 118 | 2" SAE 4-BOLT FLANGE | 988 | 689 | 914 | 9/16x1.5 |
| HD145 | 1348 | 1140 | 983 | 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



HD SERIES
STANDARD

MODEL SIZE
SELECTED

MOTOR CODE

3 = THREE PHASE
3EXP = EXPLOSION
PROOF 3 PH
5 = 575V 3 PH

CUSTOM FEATURE CODE

AD = SAE TO NPT
H=HERESITE
RG= ROCK GUARD

- 115
- 145
- 175
- 215
- 275
- 325
- 380
- 440
- 500