



**GLOBAL STANDARD COOLER**

**Cool-Line**

**HDZ**

## 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.

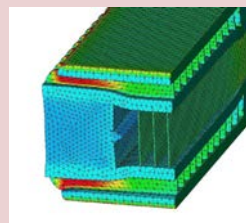
### PATENTED FLEXIBLE AKG HOLLOW PROFILE



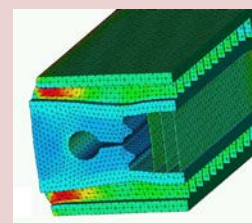
HD uses patented AKG hollow profiles to reduce local peak strains. This way the strength of heat exchangers is significantly increased and their service life time is considerably prolonged.

### 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

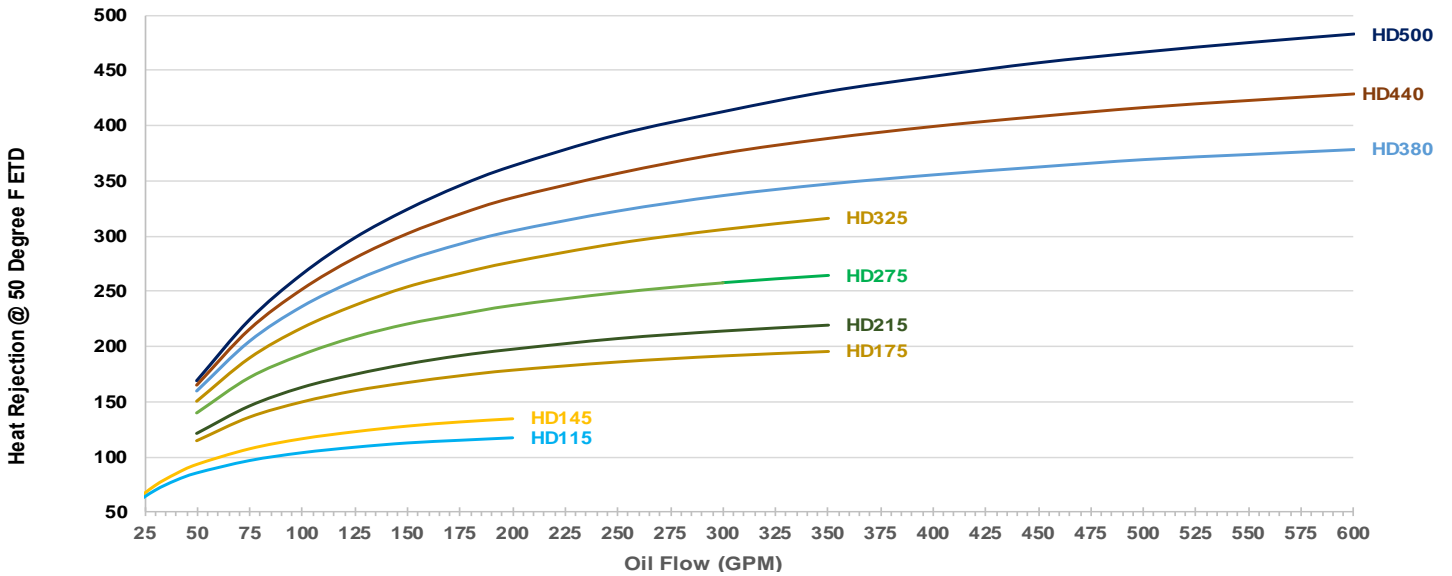


with standard profile



with hollow profile

HDZ 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**

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

**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.

**HDZ 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)
HDZ115	5 1200	213/5T	208-230/460	50/60	15.1-13.7 /6.83A	78	250
HDZ145	10 1200	254/6T	208-230/460	50/60	28.5-26.6 /13.3A	78	250
HDZ175	10 1200	254/6T	208-230/460	50/60	28.5-26.6 /13.3A	87	250
HDZ215	20 1200	284/6T	208-230/460	50/60	53.5-48.4 /24.2A	81	250
HDZ275	10 1200	254/6T	208-230/460	50/60	28.5-26.6 /13.3 A	89	250
HDZ325	20 1200	284/6T	208-230/460	50/60	53.5-48.4 /24.2A	94	250
HDZ380	15 1200	284/6T	208-230/460	50/60	39.6-35.8 /17.9A	89	250
HDZ440	25 1200	324/6T	208-230/460	50/60	67.2-60.8 /30.4A	90	250
HDZ500	40 1200	364/5T	208-230/460	50/60	103-93 /46.5A	95	250

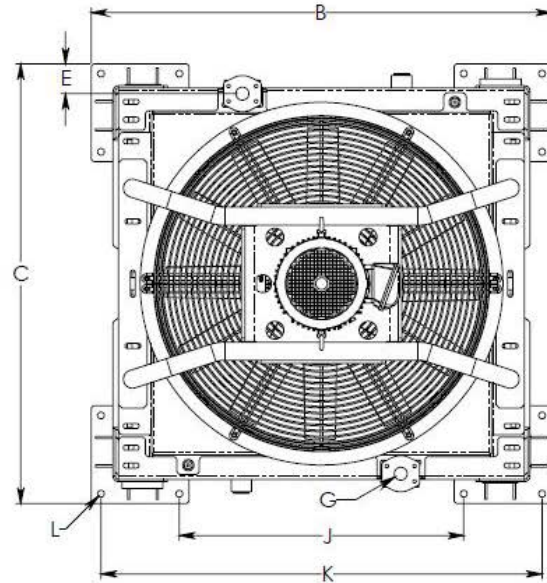
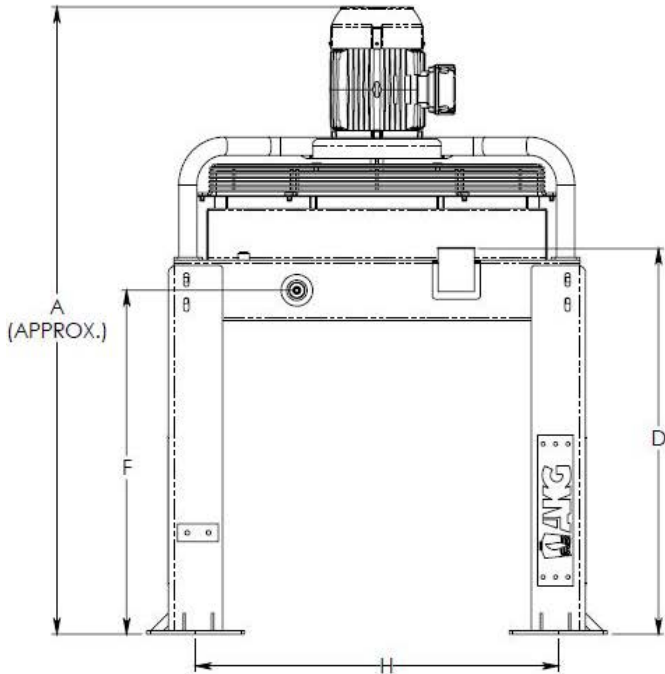
Electric Motors are TEFC and are not thermally protected  
 Electric Motors are Dual Rated 50/60 HZ and CE marked  
 Actual rating may vary with motor brand. Check motor nameplate for actual rating.  
 Motor RPM is reduced by 1/6 for 50 Hz service

**HDZ SERIES DIMENSIONS**

Model Number	A	B	C	D	E	F	G	H	J	K	L
HDZ115	1762	1294	1236	1083	84	966	2" SAE 4-BOLT FLANGE	1019	799	1239	19
HDZ145	1880	1294	1236	1083	84	966	2" SAE 4-BOLT FLANGE	1019	799	1239	19
HDZ175	1877	1484	1386	1097	88	967	3" SAE 4-BOLT FLANGE	1209	987	1429	19
HDZ215	1941	1484	1386	1097	88	967	3" SAE 4-BOLT FLANGE	1209	987	1429	19
HDZ275	1882	1770	1687	1098	48	968	3" SAE 4-BOLT FLANGE	1495	1275	1715	19
HDZ325	1946	1770	1687	1098	48	968	3" SAE 4-BOLT FLANGE	1495	1275	1715	19
HDZ380	1843	2132	1790	1101	61	970	4" SAE 4-BOLT FLANGE	1863	1643	2083	19
HDZ440	1908	2132	1790	1101	61	970	4" SAE 4-BOLT FLANGE	1863	1643	2083	19
HDZ500	1978	2132	1790	1101	61	970	4" SAE 4-BOLT FLANGE	1863	1643	2083	19

\*All dimensions are in mm unless otherwise mentioned

**COOLER DIMENSIONS HDZ**



**ORDERING INFORMATION**

HDZ SERIES STANDARD	MODEL SIZE SELECTED	MOTOR CODE	CUSTOM FEATURE CODE
	115	3 = THREE PHASE	AD = SAE TO NPT
	145	3EXP = EXPLOSION	H=HERESITE
	175	PROOF 3 PH	
	215	5 = 575V 3 PH	
	275		
	325		
	380		
	440		
	500		