# Classic DCS

## DCS SERIES FEATURES

- Bar and Plate brazed aluminum core
- Assembles From Stock
- Premium Quality
- Optional Internal Pressure Bypass
- 12 or 24 Volt Long Life Motors

## OIL-TO-AIR COOLING SYSTEMS WITH BRUSHED DC-FAN DRIVE

### 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 worldwide presence, German engineering, reliable product quality and very competitive prices. The CooL-Line models embrace an all-purpose complete cooling systems that is suited for rugged environmental operating conditions. 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.

### BENEFITS

- Largest and most comprehensive series of mobile hydraulic coolers
- 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 inhouse manufacturing
- Available from stock or at short lead-times
- Standard equipped with anti-clogging cooling air fins

### FEATURES

- High-Performance cooling assemblies
- Maintain consistent oil viscosity
- 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
- Fans are IP69K rated
- 8,000 hour fan life

| SPECIFICATIONS | |
|---|---|
| Maximum Working Pressure | 250 psi |
| Maximum Working Temperature | 250 °F |

| MATERIALS | |
|---|---|
| Cooler | Aluminum |
| Fan Blade | Nylon / Glass Filled |
| Shroud | DCS10-DCS20 Composite<br>DCS30-DCS60 Steel |

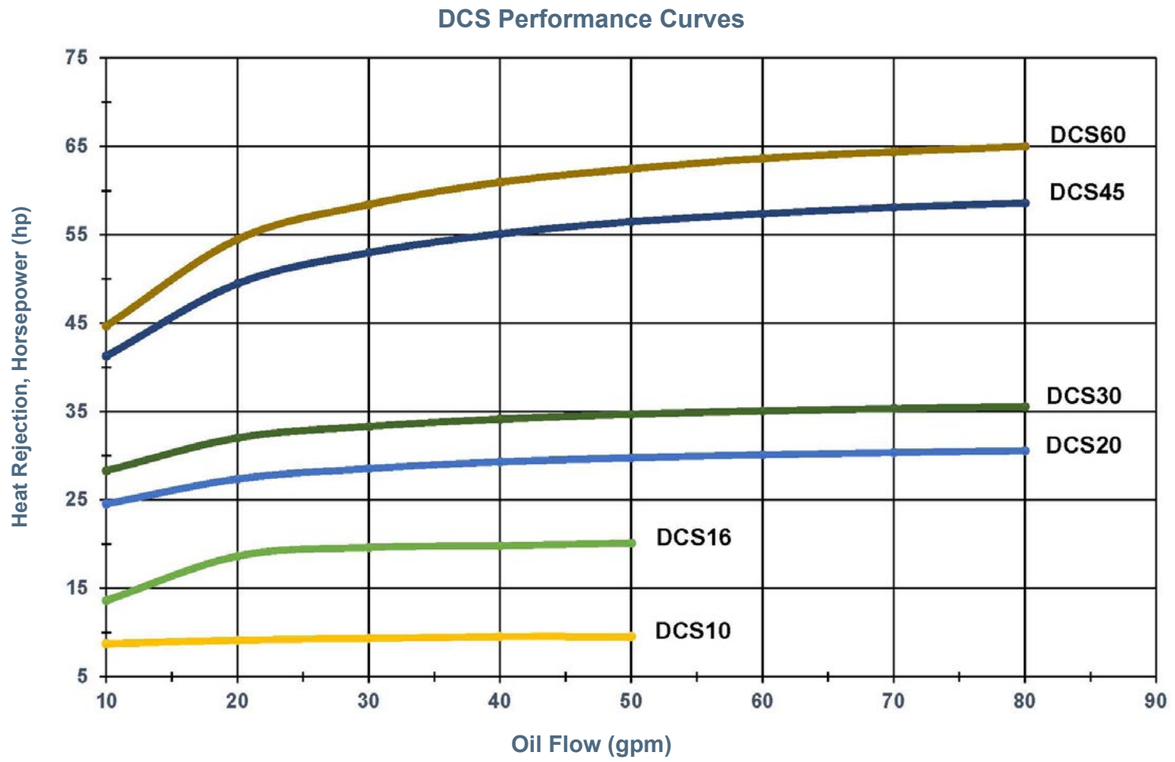
Figure 1. DCS16

Figure 2. DCS60

AR CooL-Line Selection Software, which is available free of charge will guide you through the cooler model selection process in simple steps and will recommend the optimal AKG cooling package for your application: www.akgts.com

GLOBAL STANDARD COOLING SYSTEMS (DCS SERIES)

## STANDARD MODELS PERFORMANCE DATA




## 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

### 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

$$\text{Horsepower Heat Load} \times \frac{100}{\text{Desired ETD}} = \text{Horsepower For Use With Selection Chart}$$

### 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.

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# GLOBAL STANDARD COOLING SYSTEMS (DCS SERIES)

## DCS SERIES TECHNICAL DATA

| Model Number | Motor Voltage (V) | Number of Fans | Approx. Current Draw per Fan (A) 12/24V | Approx. Noise Level (dB(A), 1M) | Recommended Fuse Value per Fan (A) | Approx. Shipping Weight (lbs) | Cooler Volume (gal.) |
|---|---|---|---|---|---|---|---|
| DCS10 | 12/24 | 1 | 5/3 | 75 | 20 | 20 | 0.4 |
| DCS16 | 12/24 | 1 | 10/6 | 76 | 35 | 25 | 0.5 |
| DCS20 | 12/24 | 1 | 19/10 | 79 | 50 | 31 | 0.7 |
| DCS30 | 12/24 | 1 | 19/10 | 79 | 50 | 53 | 1.0 |
| DCS45 | 12/24 | 2 | 17/9 | 79 | 50 | 67 | 1.0 |
| DCS60 | 12/24 | 2 | 19/10 | 79 | 50 | 110 | 1.3 |

All data based at nominal speed

## DCS10 TO DCS30 SERIES DIMENSIONS

| Model Number | A | B | C | D | E | F | G | H | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DCS10 | 13.8 | 11.81 | 6.3 | 9.8 | 9.8 | 10.9 | 5.0 | 4.5 | 1.0 | #12 SAE O-Ring | 5/16” x 1/2” slot |
| DCS16 | 15.7 | 14.06 | 6.9 | 11.8 | 11.8 | 12.7 | 5.9 | 4.9 | 1.14 | #16 SAE O-Ring | 5/16” x 1/2” slot |
| DCS20 | 19.7 | 18.54 | 7.2 | 15.8 | 16.1 | 17.2 | 8.1 | 5.9 | 1.6 | #20 SAE O-Ring | 7/16” x 3/4” slot |
| DCS30 | 23.6 | 22.09 | 7.2 | 19.7 | 19.8 | 20.9 | 8.0 | 3.8 | 1.6 | #20 SAE O-Ring | 7/16” x 3/4” slot |

All dimensions in inches

## DCS45 TO DCS60 SERIES DIMENSIONS

| Model Number | A | B | C | D | E | F | G | H | J | K | L | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCS45 | 33.5 | 18.66 | 7.2 | 29.5 | 16.1 | 17.2 | 7.9 | 4.9 | 1.6 | #20 SAE O-Ring | 7/16” x 3/4” slot | 4.45 | 8.0 | 14.49 |
| DCS60 | 35.4 | 22.32 | 7.2 | 31.5 | 19.8 | 21.0 | 8.9 | 4.4 | 1.6 | #20 SAE O-Ring | 7/16” x 3/4” slot | 5.0 | 9.9 | 14.3 |

All dimensions in inches

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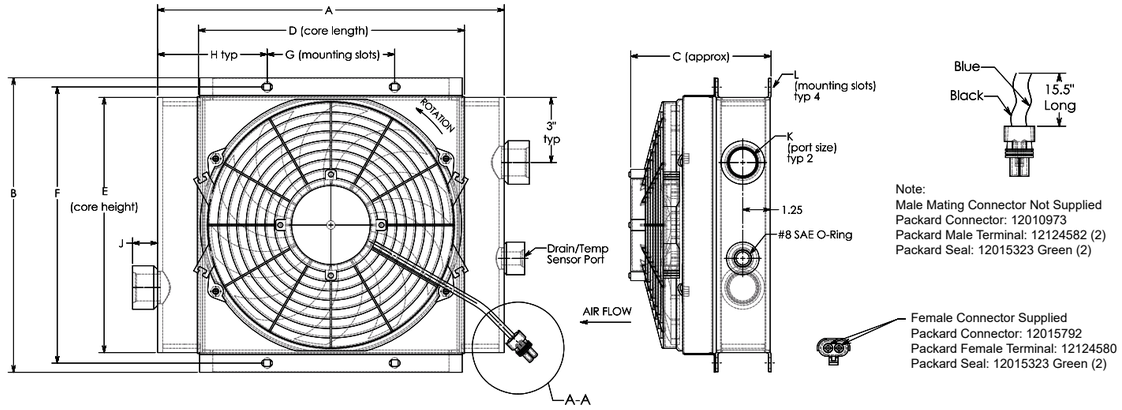
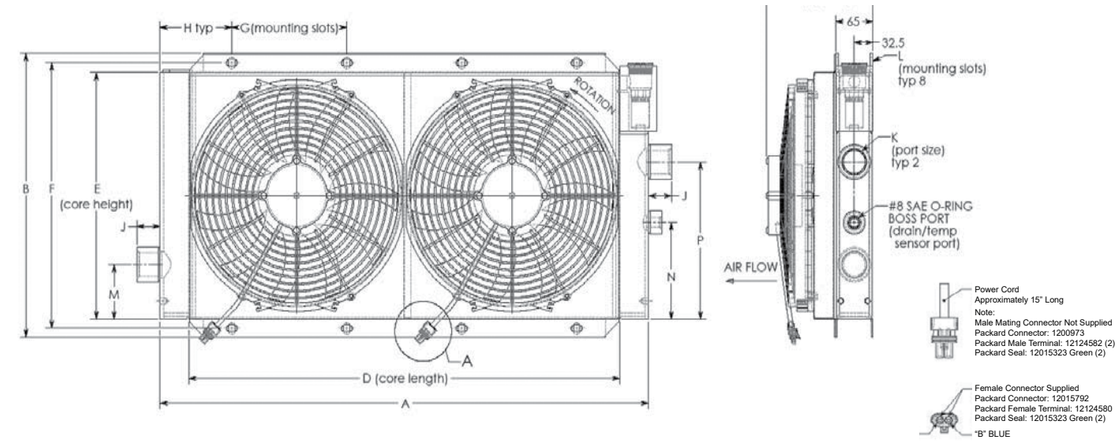
# GLOBAL STANDARD COOLING SYSTEMS (HD SERIES)

## STANDARD DCS SERIES DIMENSIONS




## STANDARD DCS DUAL FAN SERIES DIMENSIONS




## ORDERING INFORMATION

| DCS | | | |
|---|---|---|---|
| **DCS SERIES:** Standard | **MODEL SIZE:** Selected | **MOTOR CODE:** 12=12 Volt 24=24 Volt | **BYPASS DATA:** BP25 = 25PSI Internal By-Pass BP65 = 65PSI Internal By-Pass BPNV = By Pass No Valve | **CUSTOM FEATURE CODE:** R = Reversed AD = SAE to NPT Adaptors Installed TC115 = 115 F Temperature Switch TC140 = 140 F Temperature Switch MTG = Feet Mounting Bracket Set (Included on Models D45/60/70) |

**ORDER EXAMPLE:** Heat Exchanger. 30 HP, 12 Volt, 65 PSI Bypass, TC140 Shipped w/Cooler

**DCS30-12-BP65-TC140**

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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.