



GLOBAL STANDARD COOLER
Cool-Line DCSB



MADE IN THE USA

OIL-TO-AIR COOLING SYSTEMS WITH BRUSHLESS DC-FAN DRIVE

PRODUCT INFORMATION

AKG Cool-Line is 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, reliable product quality and very competitive prices. The Cool-Line models embraces 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-time
- Standard equipped with anti-clogging cooling air fins

FEATURES

- Low cost alternative to complex or hydraulic systems
- 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 IP6K9K rated
- 40,000 hours fan life

SPECIFICATION

Maximum Working Pressure	250 psi
Maximum Working Temperature	250 °F

MATERIALS

Cooler	Aluminum
Fan Blade	Plastic
Shroud	Steel



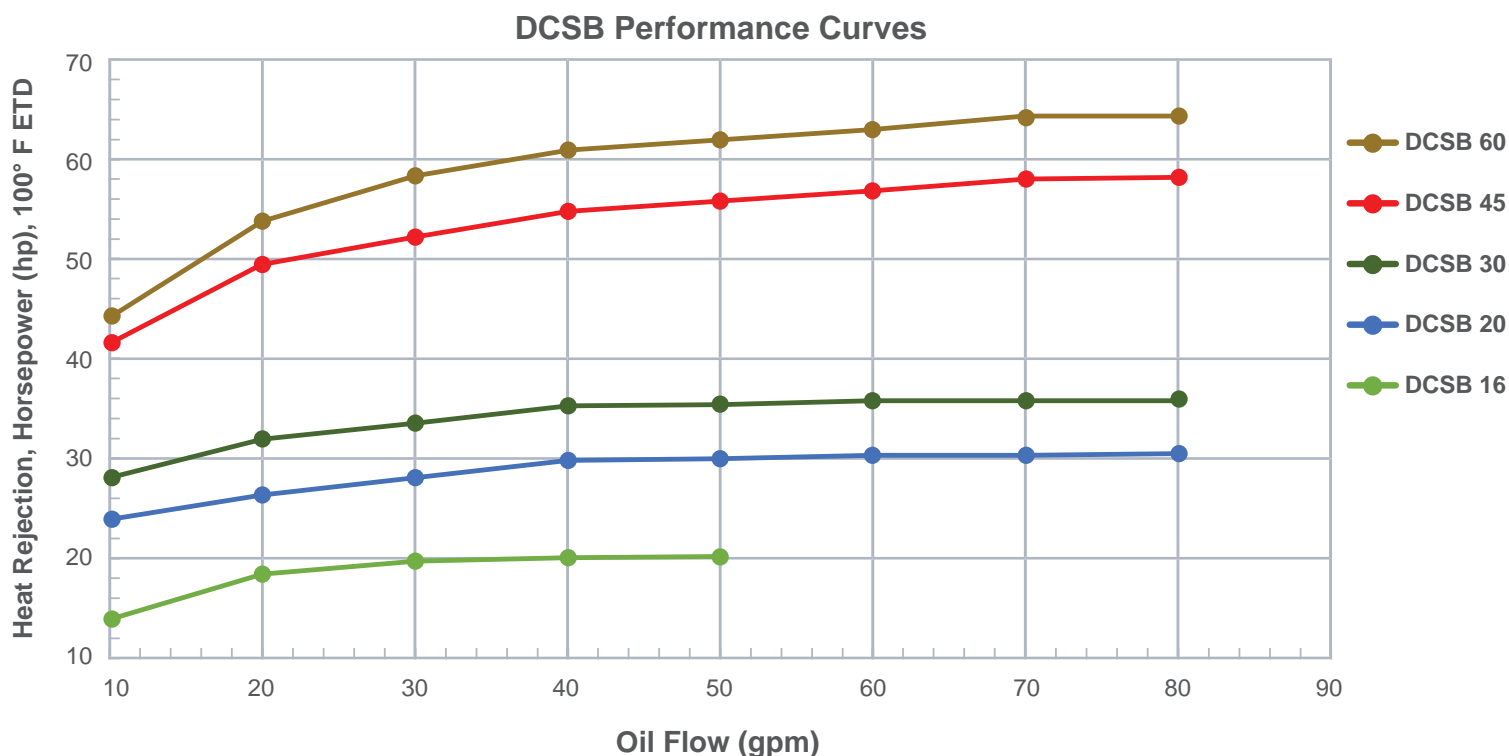
Figure 1. DCSB20



Figure 2. DCSB60



STANDARD MODELS PERFORMANCE DATA



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 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

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

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.

A 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

DCSB SERIES TECHNICAL DATA

Model Number	Motor Voltage (V)	Number of Fans	Approx. Noise Level (dB(A), 1M)	Recommended Fuse Value per Fan (A)	Approx. Shipping Weight	Cooler Volume (gal)
DCSB16	12/24	1	79	35	25	0.5
DCSB20	12/24	1	79	50	31	0.7
DCSB30	12/24	1	79	50	53	1.0
DCSB45	12/24	2	79	50	67	1.0
DCSB60	12/24	2	79	50	111	1.2

All data based at nominal speed

DCSB SERIES DIMENSIONS

Model Number	A	B	C	D	E	F	G	H	I	J	K	M	N
DCSB16	15.7	13.5	7.4	3.9	9.6	5.2	5.9	4.9	12.7	-	-	#16 SAE O-ring	5/16" X 1/2" slot
DCSB20	19.6	18.3	6.3	4.1	14.2	9.2	8.1	5.7	17.2	-	-	#20 SAE O-ring	5/16" X 1/2" slot
DCSB30	26.3	22.0	6.3	4.1	17.9	10.9	15.9	3.8	20.9	-	-	#20 SAE O-ring	7/16" X 3/4" slot
DCSB45	-	18.3	6.3	4.1	14.2	9.2	7.9	4.9	17.2	33.4	14.8	#20 SAE O-ring	7/16" X 3/4" slot
DCSB60	-	22.0	6.3	4.1	17.9	11.0	8.8	4.4	20.9	35.4	15.4	#20 SAE O-ring	7/16" X 3/4" slot

All dimensions in inches

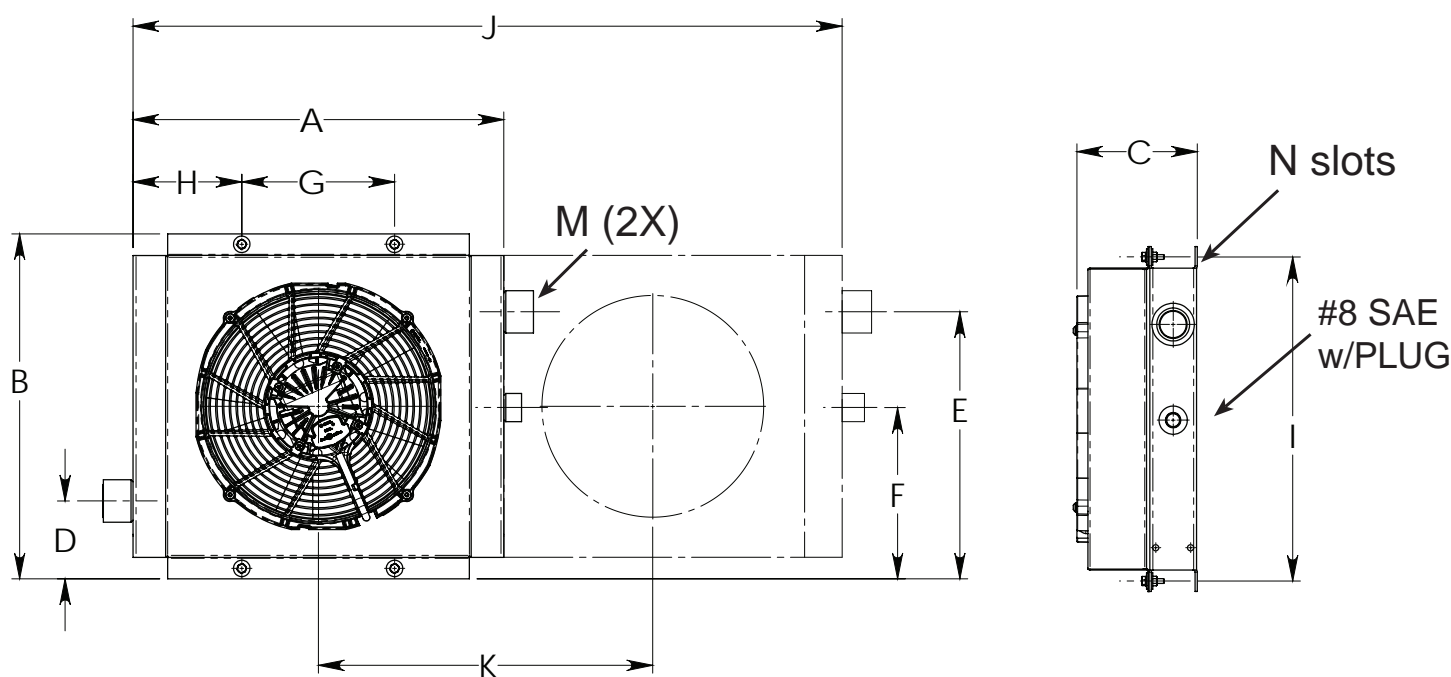


Figure 3



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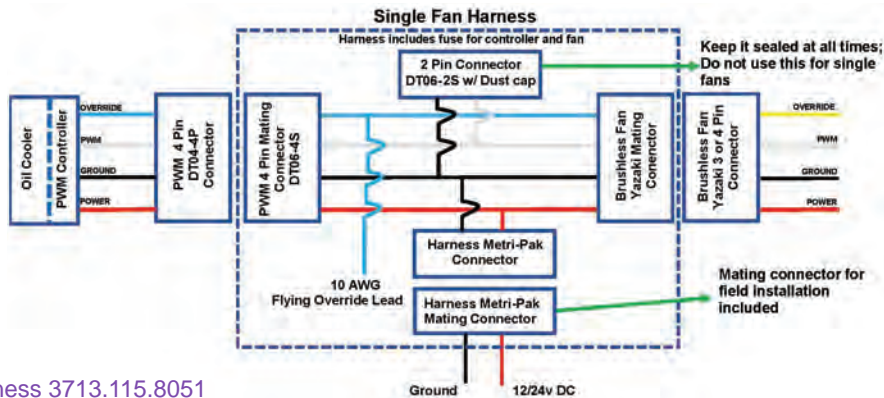


Figure 4.
Single Fan Harness 3713.115.8051
for DCSB16, DCSB20 & DCSB30

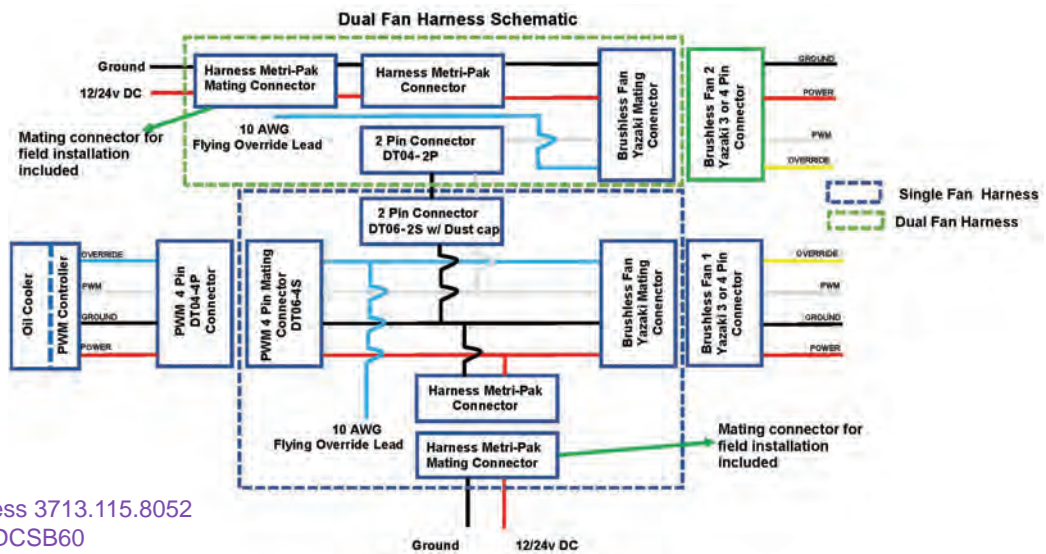


Figure 5.
Dual Fan Harness 3713.115.8052
for DCSB45 & DCSB60

Rated Voltage: 9-16 for 12VDC// 16-32 for 24VDC	Hardware: Low Side Drive / Software: Active High
Maximum temperature Rating 239° F	Manual override option included (Blue wire) allows the fan to run all the time. Do not connect to battery while using PWM.
Yazaki Female Housing Mail Connector	Do not remove dust caps from fuse: Splice box in harness
Yazaki Male Connector: #30130628	PWM Controller Part No: 3713 115 8050
Wire: Red+, Black-, White PWM Input	Consult factory with other configurations

ORDERING INFORMATION

DCSB					
DCSB SERIES	MODEL SIZE	MOTOR DATA	BY PASS DATA	FEATURE OPTIONS	CUSTOM FEATURE
Standard	Select				
	-16	12 = 12Volt	BP25 = 25 psi Internal By Pass	X = No Harness or PWM Controller	AD = SAE to NPT Adapters
	-20	24 = 24 Volt	BP65 = 65 psi Internal By Pass	1 = Wiring Harness	H = Heresite Coated Core
	-30			2 = PWM Controller	
	-45			3 = Wiring Harness and PWM Controller	
	-60				

ORDER EXAMPLE: 30 hp heat rejection with 12 VDC Brushless fan drive with 65-psi internal check valve a including wiring harness and PWM controller

DCSB30-12-BP65-2



MADE IN THE USA



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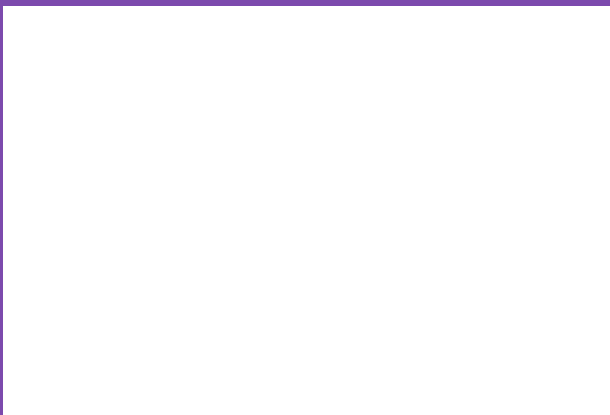
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AKG – COOLING EXPERTS AROUND THE GLOBE

AKG is a globally leading supplier of high performance coolers and heat exchangers as well as customized system solutions, which comply with the highest quality standards.

On a world-wide scale, 2,800 employees work at 12 manufacturing facilities located in Germany, France, United Kingdom, Latvia, the U.S.A., China and India. Together with many new overseas sales companies they are on duty around the clock.

Your AKG-Partner



AKG's longstanding partnership with global OEM customers from 22 markets supports the mobile and industrial pre-engineered solutions. AKG products are found globally in a variety of markets including construction machinery, compressed-air systems, agricultural and forestry machines, vehicle construction 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 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.

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

