



Cool-Line DCSB

DCSB SERIES FEATURES

- Bar and Plate brazed aluminum core
- Competitive pricing and assemblies from stock
- Brushless fan drive 12/24 VDC motors
- Product option—internal pressure bypass
- 12 and 24 Volt long life motors



GLOBAL STANDARD COOLING SYSTEMS (DCSB SERIES)

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

- 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
- 40,000 hour fan life

Specifications

Maximum Working Pressure	250 psi
Maximum Working Temperature	250 °F

Materials

Cooler	Aluminum
Fan Blade	Nylon / GF
Shroud	Steel



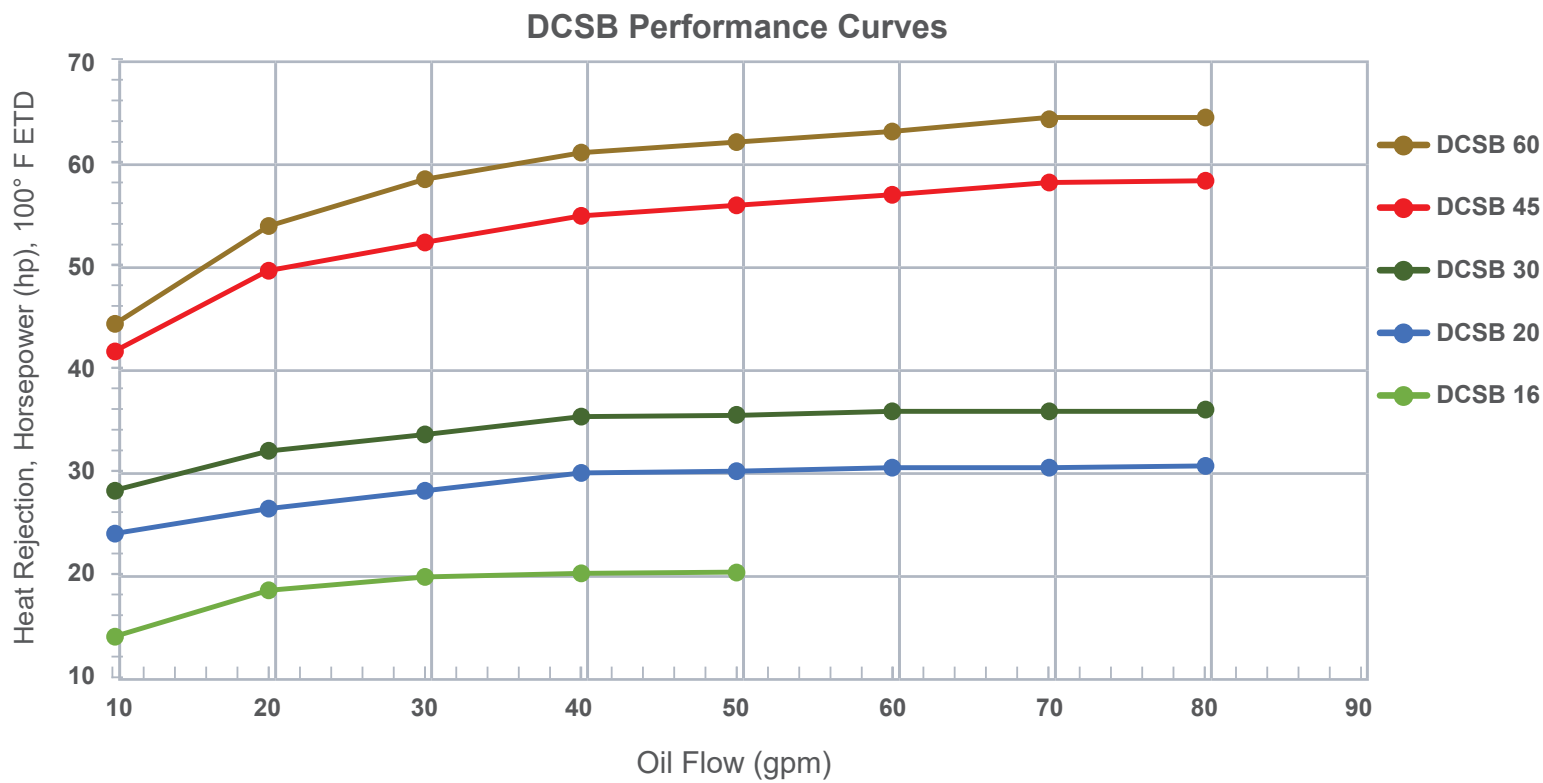
Figure 1. DCSB20



Figure 2. DCSB60

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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

$$\text{Horsepower Heat} \times 2545 = \text{BTU/hr}$$

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.

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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 (lbs)	Cooler Volume (gal.)
DCSB16	12/24	1	76	40	25	0.5
DCSB20	12/24	1	79	30	31	0.7
DCSB30	12/24	1	79	30	53	1.0
DCSB45	12/24	2	79	30	67	1.0
DCSB60	12/24	2	79	30	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

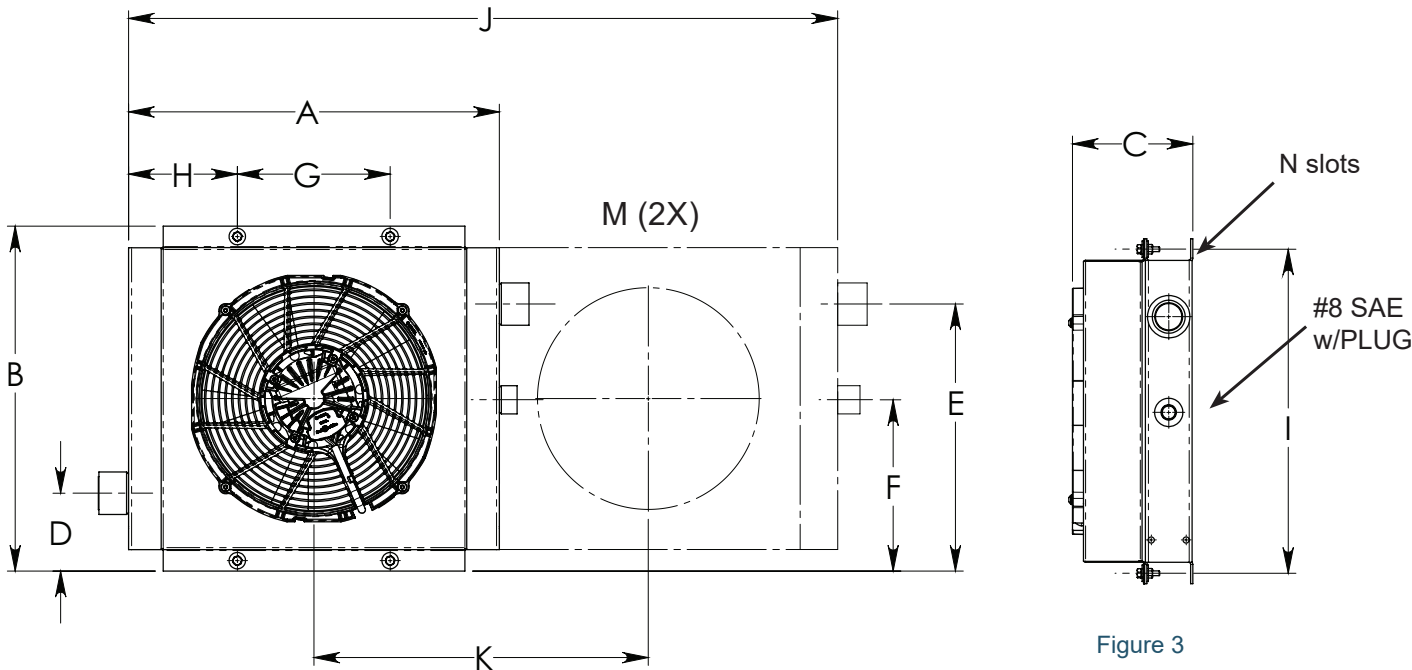


Figure 3

GLOBAL STANDARD COOLING SYSTEMS (DCSB SERIES)

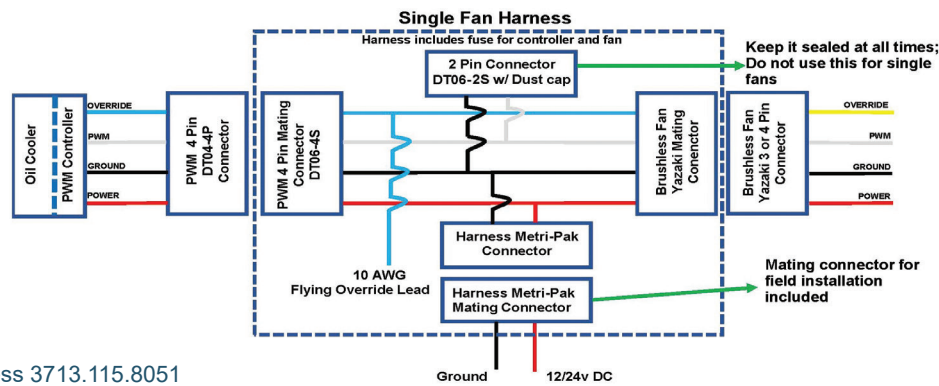


Figure 4.
Single Fan Harness 3713.115.8051
for DCSB16, DCSB20 & DCSB30

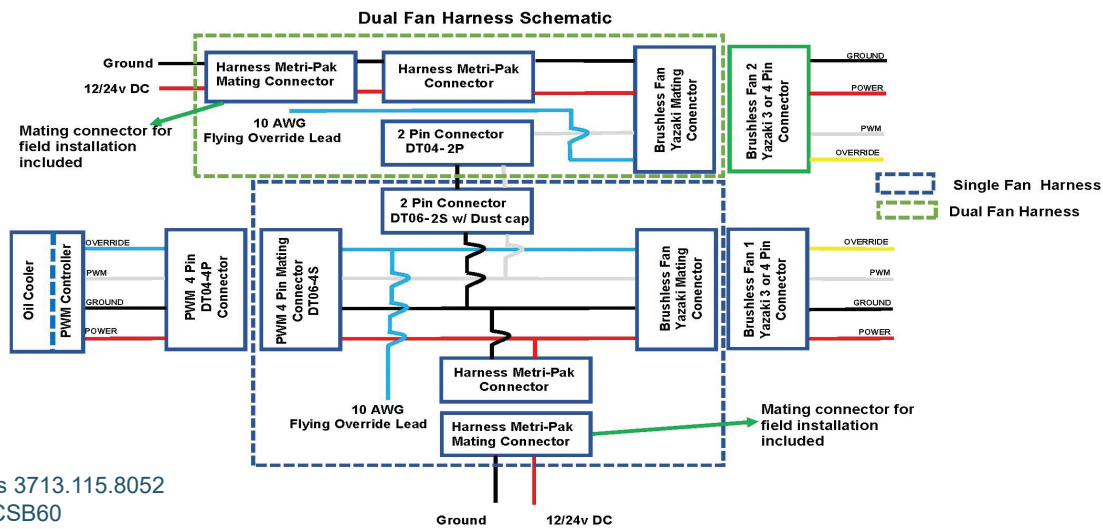


Figure 5.
Dual Fan Harness 3713.115.8052
for DCSB45 & DCSB60

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 Constantly. Leave Override Disconnected While Using PWM.
Yazaki Female Housing Connector - Supplied	Do not remove dust caps from fuse: Splice box in harness
Yazaki Mating Connector: #30130628 - Not Included	PWM Controller Part No: 3713 115 8050
Wire: Red+, Black-, White PWM Input; Blue Override	Consult Factory For Other Configurations

ORDERING INFORMATION

DCSB					
DCS SERIES: Standard	MODEL SIZE: Selected -16 -20 -30 -45 -60	MOTOR CODE: 12=12 Volt 24=24 Volt	BYPASS DATA: BP25 = 25PSI Internal By-Pass BP65 = 65PSI Internal By-Pass	CUSTOM FEATURE: AD = SAE to NPT Adaptors Installed H = Heresite Coated Core	FEATURE OPTIONS: X = No Harness or PMW Controller 1 = Wiring Harness 2 = PWM Controller 3 = Wiring Harness and PMW Controller

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



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AKG – A STRONG, GLOBALLY INTEGRATED, GROUP OF COMPANIES

AKG is a leading supplier of high performance coolers and heat exchangers. We also provide a 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.

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.