



Cool-Line D Series



DCSB SERIES FEATURES

- Bar and Plate brazed aluminum core
- Competitive pricing and assembles from stock
- Product option—internal pressure bypass
- 12 and 24 Volt brushed long life motors



MADE IN THE USA

GLOBAL STANDARD COOLING SYSTEMS (D SERIES)

OIL-TO-AIR COOLING SYSTEMS WITH DC-MOTOR

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

- High-Performance cooling assemblies.
- DC motor powered fan.
- Cooler can be universally used in hydraulic oil, transmission oil, engine oil, lubricating oil and coolant circuits.
- Can be exposed to operating pressures of up to 377 psi.
- Largest and most comprehensive series of mobile hydraulic coolers.
- Highly flexible complete, ready-to-use cooling packages.
- Compact and robust design that has proven itself in the field for 20 years.
- 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.
- Anti-clogging cooling air fins come standard.



Figure 1. D16-12

FEATURES

- All D Series coolers are available with an internal pressure by-pass option.
- D Series coolers provide the best heat transfer per given cooler size in the industry.
- D Series coolers offer increased performance with low pressure drop.
- D Series coolers have proprietary R&D designed, engineered and tested internal and external fins unique to AKG Thermal Systems coolers.

COOLER SPECIFICATION

Maximum Working Pressure	377 psi
Maximum Working Temperature	250 °F

FAN SPECIFICATION

Maximum Working Temperature	176 °F
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MATERIALS

Cooler	Aluminum
Fan Blade	Nylon / Glass fiber
Shroud	Nylon / Steel



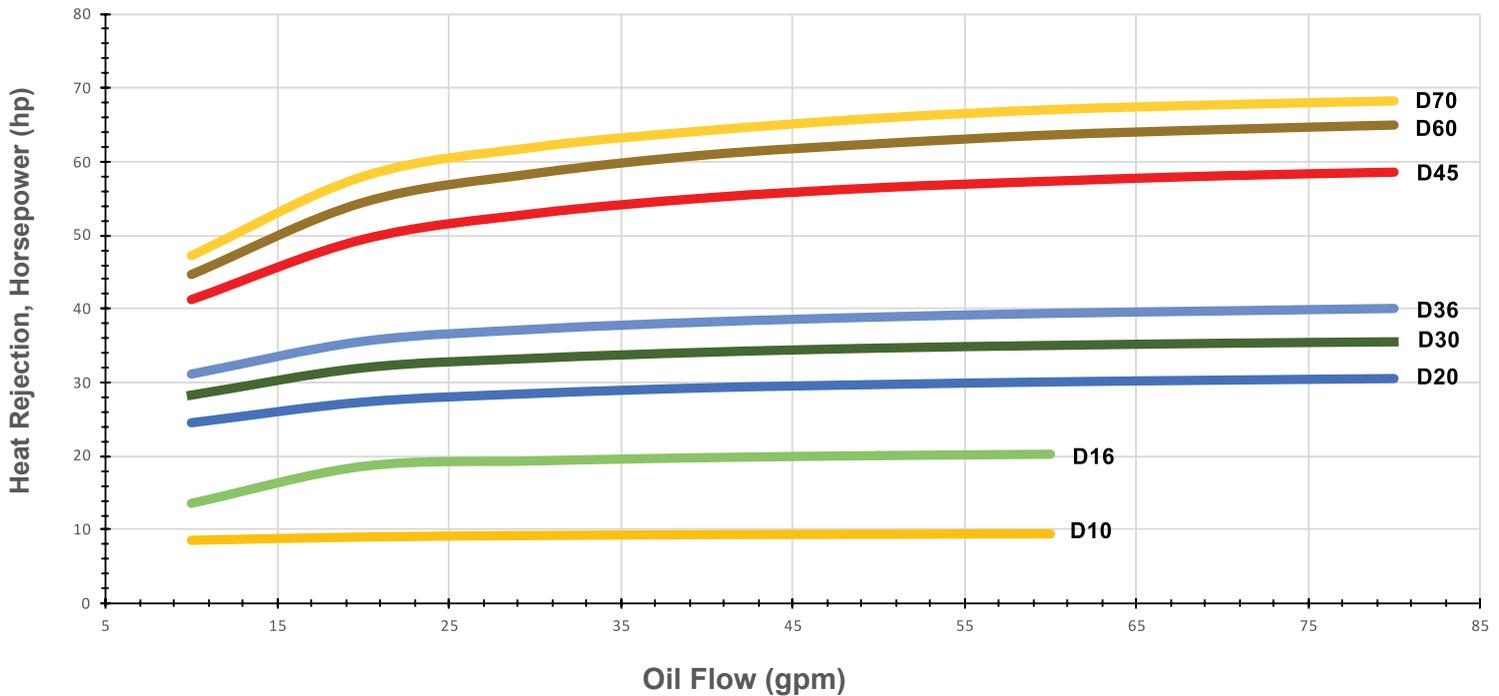
Figure 2. D60-12



GLOBAL STANDARD COOLING SYSTEMS (D SERIES)

STANDARD MODELS PERFORMANCE DATA

D Series Performance Curves



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

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

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.



GLOBAL STANDARD COOLING SYSTEMS (D SERIES)

D SERIES TECHNICAL DATA

Model Number	Motor Voltage (V)	Number of Fans	Approx. Current Draw per Fan (A) +/- 10%	Approx. Noise Level (dB(A), 1M)	Recommended Fuse Value per Fan (A) 12/24	Cooler Volume (gal)	Approx. Shipping Weight (lbs)
D10	12/24	1	8/4	75	15	0.4	20
D16	12/24	1	20/9	79	40	0.3	23
D20	12/24	1	20/9	79	40	0.5	26
D30	12/24	1	25/13	76	50	0.8	32
D36	12/24	1	25/13	76	50	0.9	47
D45	12/24	2	20/9	79	40	1.2	62
D60	12/24	2	25/13	76	50	1.1	70
D70	12/24	2	25/13	76	50	1.9	84

D10-12/24 Cooler has Weather Pak 280 connector
 D16/20/45-12 Cooler has Metri Pak 630 connector
 D16/20/45-24 Cooler has Metri Pak 280 connector

D30/36/60/70-12 Cooler has Metri Pak 630 connector.
 D130/36/60/70-24 Cooler has Metri Pak 280 connector

Mating connector not supplied by AKG

All data based at nominal speed

D10 TO D36 SERIES DIMENSIONS

Model Number	A	B	C	D	E	F	G	H	K	L
D10	13.78	11.6	6.02	3.9	7.9	10.9	4.96	4.41	#12 SAE O-Ring	5/16 x 1/2" slot
D16	15.75	13.8	6.52	6.9	6.9	13	8.66	3.54	#16 SAE O-Ring	5/16 x 1/2" slot
D20	15.75	13.8	7.23	6.9	6.9	13	8.66	3.54	#16 SAE O-Ring	5/16 x 1/2" slot
D30	19.69	17.8	8.70	3.6	14.1	16.9	12.60	3.54	#20 SAE O-Ring	5/16 x 5/8" slot
D36	20.47	18.1	9.96	4.3	13.9	17.1	12.60	3.94	#20 SAE O-Ring	5/16 x 5/8" slot

All dimensions in inches

D45 TO D70 SERIES DIMENSIONS

Model Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
D45	28.35	16.6	8.45	6.8	12.4	12.92	11.81	8.27	7.09	#20 SAE O-Ring	5/16 x 1/2" slot	∅ 0.55	26.46	8.66	2.54
D60	35.63	19.4	8.70	6.2	16.7	16.77	12.60	3.64	7.09	#20 SAE O-Ring	5/16 x 1/2" slot	∅ 0.55	33.54	8.66	2.67
D70	36.22	19.5	9.96	6.81	16.14	16.77	12.60	3.94	7.09	#20 SAE O-Ring	5/16 x 1/2" slot	∅ 0.55	34.33	8.66	2.66

All dimensions in inches

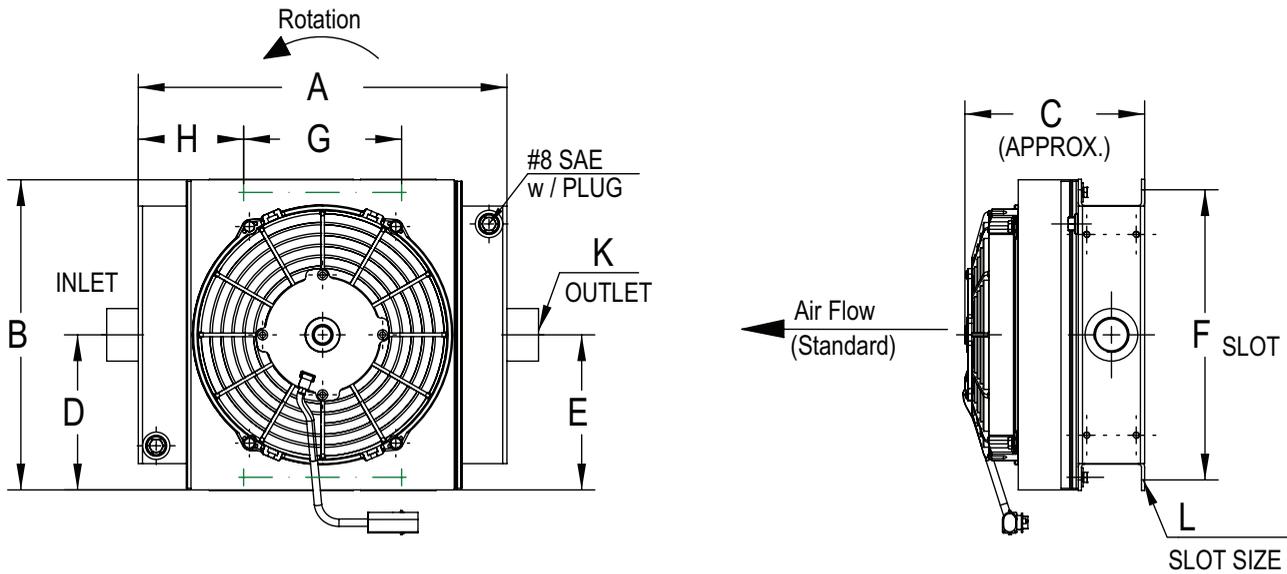
A Cool-Line Selection Software, which is available free of charge will guide you through the cooler model selection process in simple steps and will recommend the optimal AKG cooling package for your application: www.akgts.com



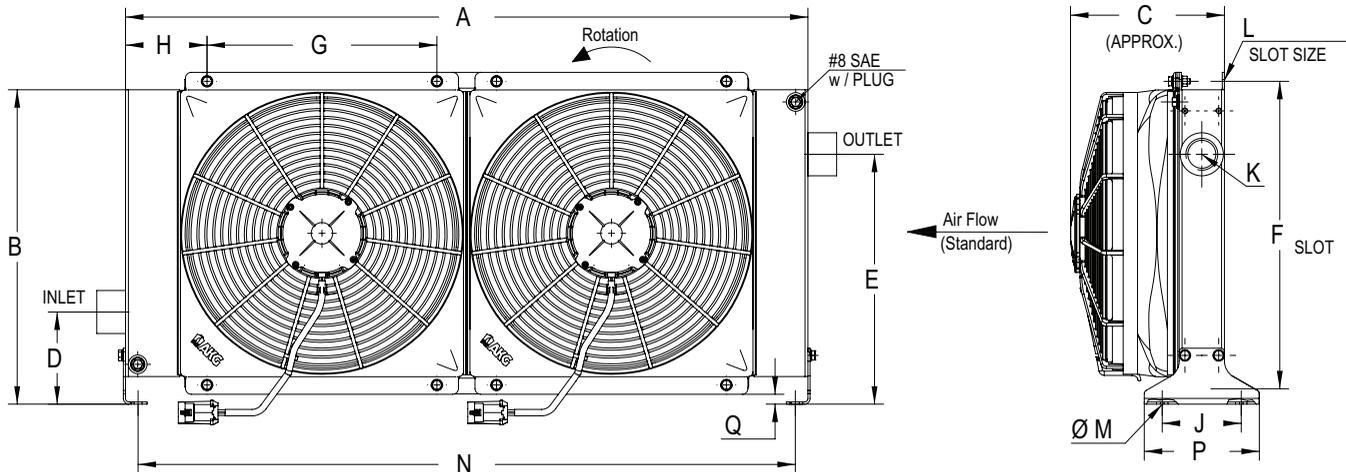
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GLOBAL STANDARD COOLING SYSTEMS (D SERIES)

COOLER DIMENSIONS D10 TO D36



COOLER DIMENSIONS D45 TO D70



ORDERING INFORMATION

SERIES CODE:	MODEL SIZE:	MOTOR CODE:	BYPASS DATA:	CUSTOM FEATURE CODE:
D				

SERIES: D = Standard

MODEL SIZE: Selected

MOTOR CODE: 12 = 12 Volt; 24 = 24 Volt

BYPASS DATA: BP25 = 25 PSI Internal Bypass, BP30 = 30 PSI Internal Bypass, BP65 = 65PSI Internal Bypass BP60 = 60 PSI Internal Bypass

CUSTOM FEATURE CODE: B = Blowing Fan, AD = SAE to NPT Adaptors shipped w/Cooler; TC115 = TC115 Shipped w/Cooler; TC140 = TC140 Shipped w/Cooler; MTG = Feet Mounting Bracket Set (Included on Models D45/60/70)

ORDER EXAMPLE: Heat Exchanger, 30 HP, 12 Volt, SAE to NPT Adaptors, TC115 Shipped w/Cooler - **D30-12-AD-TC115**





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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.

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

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