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

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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-theart 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.

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

MATERIALS

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

Figure 1. D16-12

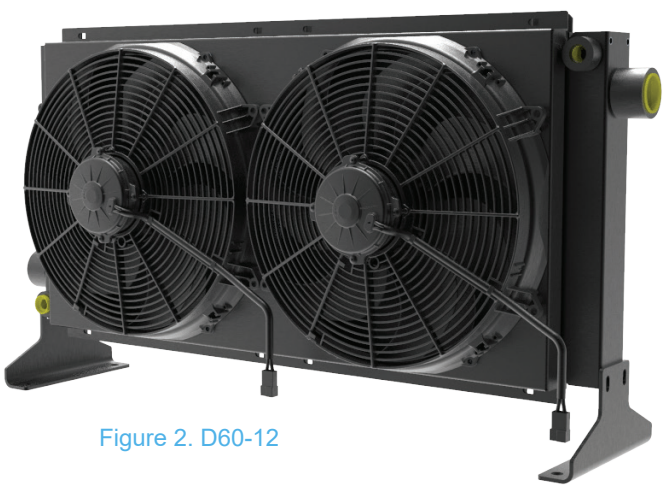
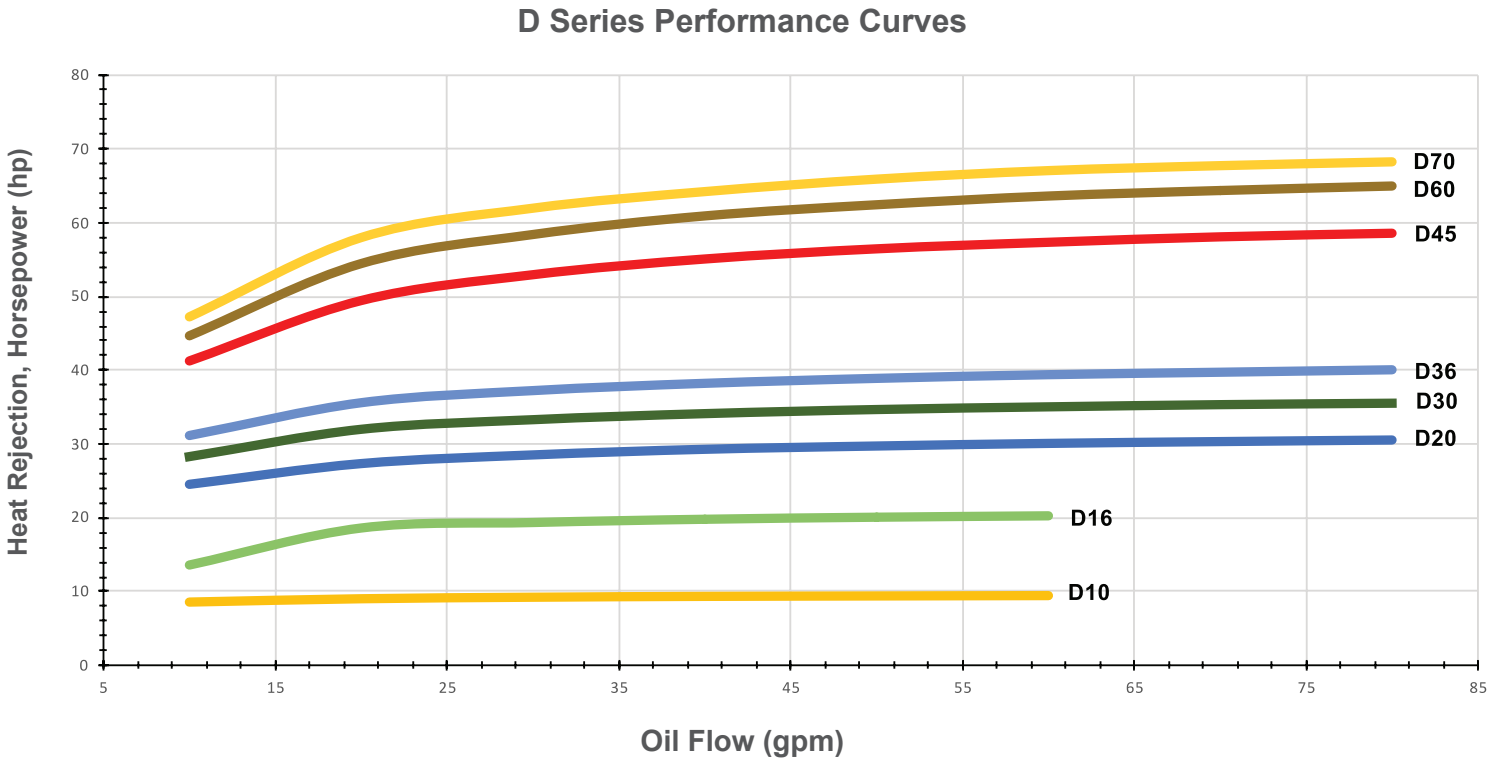


Figure 2. D60-12

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

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

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.

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

All data based at nominal speed

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

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

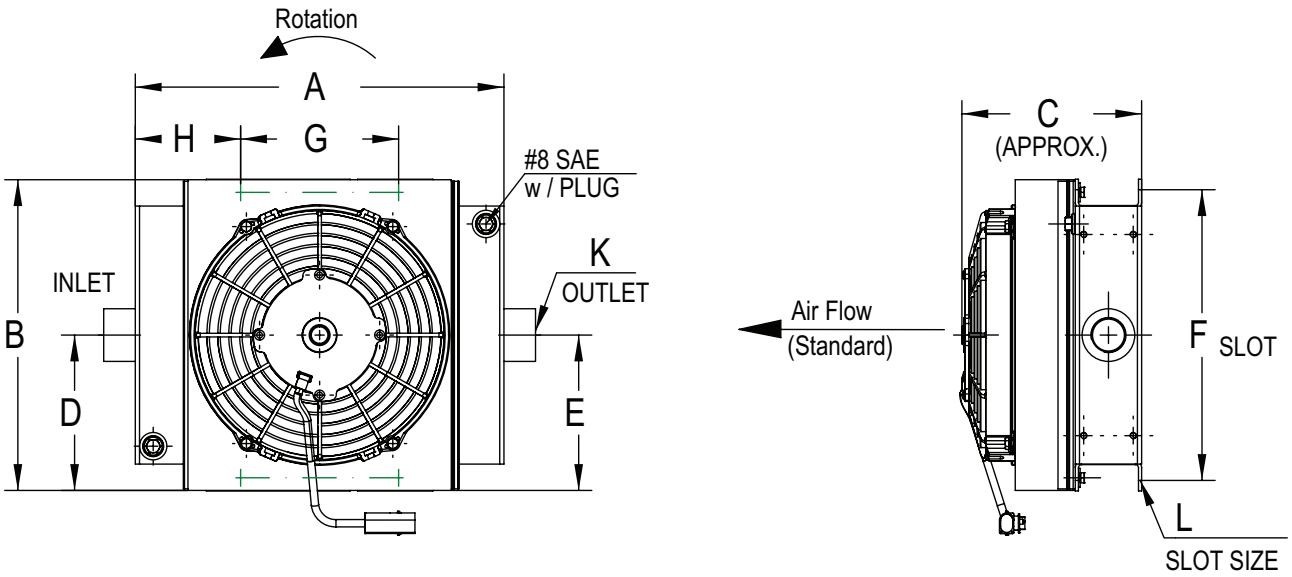
All dimensions in inches

D45 TO D70 SERIES DIMENSIONS

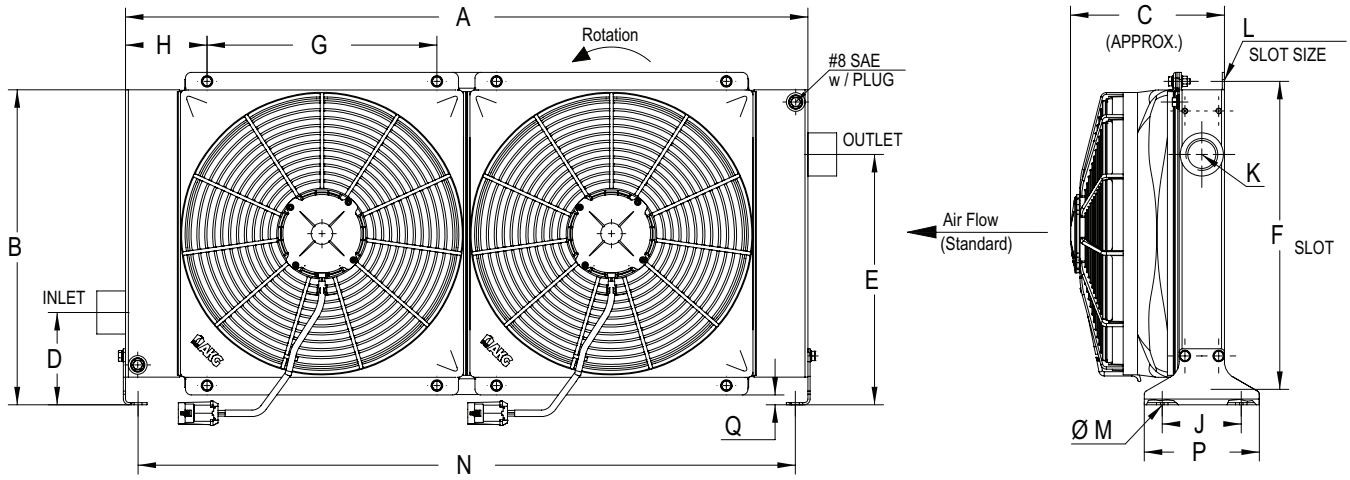
Model Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
D45	28.35	16.6	8.45	6.8	12.4	12.92	11.81	8.27	7.09	#20 SAE O-Ring	5/16 x 1/2” slot	Ø 0.55	26.46	8.66	2.54
D60	35.63	19.4	8.70	6.2	16.7	16.77	12.60	3.64	7.09	#20 SAE O-Ring	5/16 x 1/2” slot	Ø 0.55	33.54	8.66	2.67
D70	36.22	19.5	9.96	6.81	16.14	16.77	12.60	3.94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

All dimensions in inches

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**