



Dirty Environment Oil Coolers

SERIES

- ▶ Low Fouling Model Series
with Non-Louvered Fin Design
- ▶ Standard Models
with Higher Speed
Fans for Compact,
Most Economical
Selection
- ▶ Low Noise Models
with Slower Fan
Speeds for Reduced
Noise Levels and
Lower Fan HP
Requirements
- ▶ Competitive Pricing
Deliveries From Stock

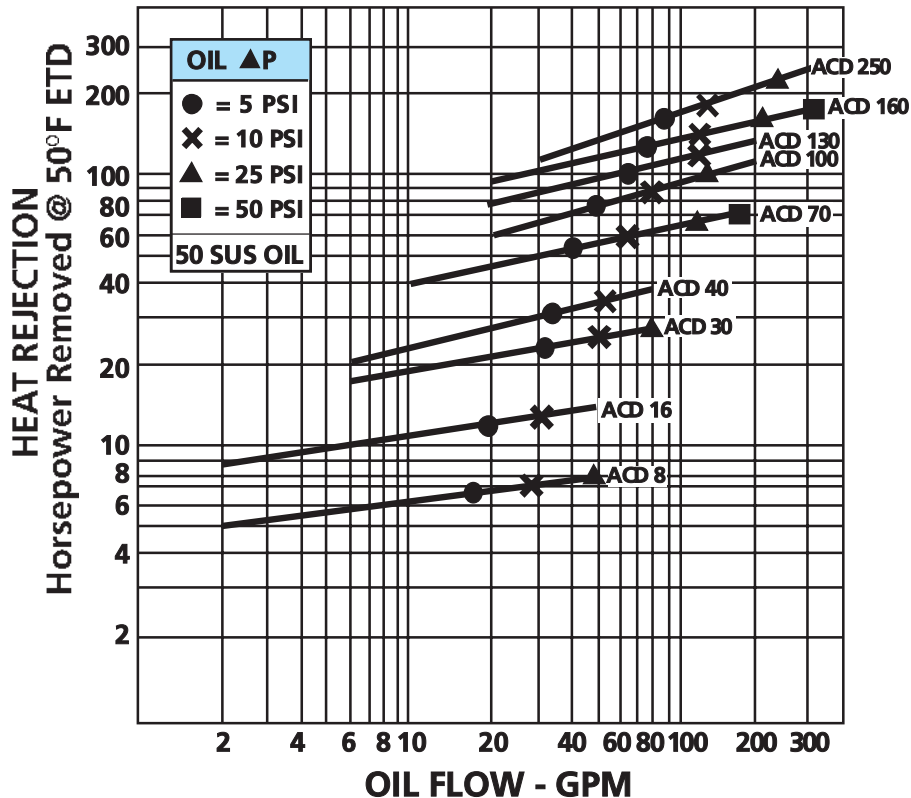


 **AKG THERMAL SYSTEMS, INC.**

BULLETIN ACDB-2

Standard Models

PERFORMANCE DATA STANDARD MODELS ACD SERIES



NOISE LEVELS
dB A SCALE
AT 1 METER

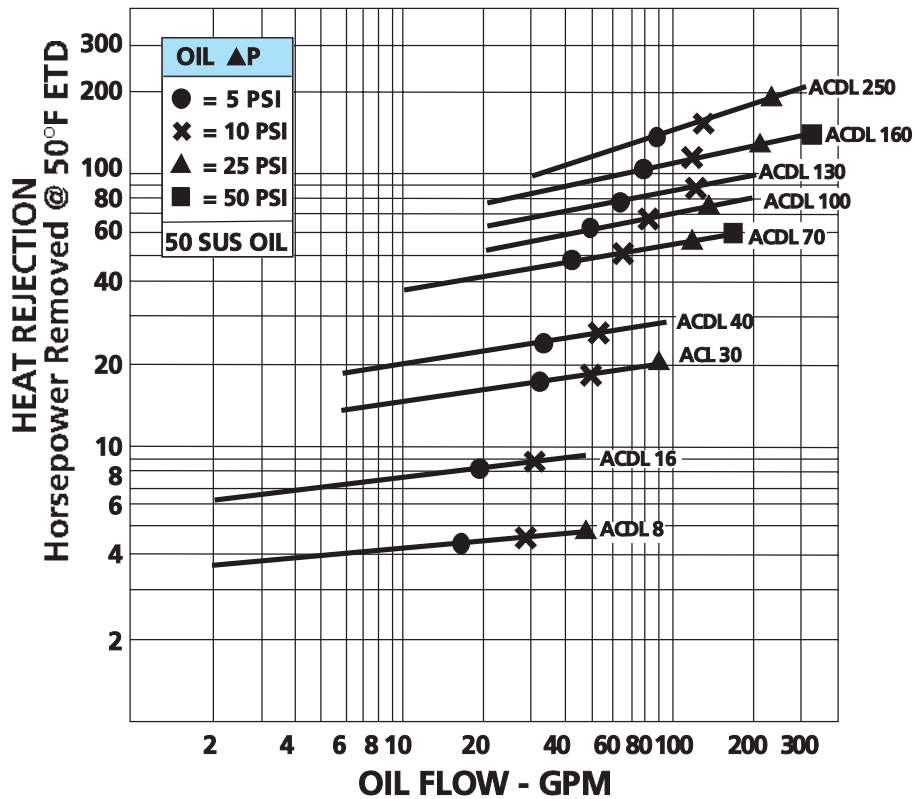
Model	dB(A)
ACD 8	80
ACD 16	85
ACD 30	85
ACD 40	88
ACD 70	93
ACD 100	94
ACD 130	96
ACD 160	98
ACD 250	101

ELECTRIC MOTOR DATA

Model Size	HP RPM	Motor Frame	SINGLE PHASE			THREE PHASE			
			Voltage	Hz	Full Load Amps 230 V.	Voltage	Hz	Full Load Amps 230V	
ACD 8	1/3 3250	IEC 63	115/230	60	2.6	208-230/460		60	1.2
						200/220		50	
						380/440			
ACD 16	1/2 3250	IEC 71			3.4	208-230/460		60	
						200/220		50	
						380/440			
ACD 30	1/2 1725	NEMA 56C	115-208/230	60	4.4	208-230/460		60	2.0
						190/200 208/220		50	
						380/400 416/440			
ACD 40	1 1725	NEMA 56C	115-208/230	60	6.4	208-230/460		60	3.4
						190/200 208/220		50	
						380/400 416/440			
ACD 70	2 1725	NEMA 56C	115/230	60	10.0	208-230/480		60	6.2
						190/200 208		50	
						380/400 416			
ACD 100	5 1725	NEMA 184TC	230	60	23.0	208-230/460		60	13.4
						190/200 208		50	
						380/400 416			
ACD 130	7.5 1725	NEMA 213TC	Consult Factory			208-230/460		60	19.2
						190/200 208		50	
						380/400 416			
ACD 160	7.5 1725	NEMA 213TC				208-230/460		60	19.2
						190/200 208		50	
						380/400 416			
ACD 250	10 1725	NEMA 215TC				208-230/460		60	25.0
						190/200 208		50	
						380/400 416			

Low Noise Models

PERFORMANCE DATA STANDARD MODELS ACDL SERIES



NOISE LEVELS
dB A SCALE
AT 1 METER

Model	dB(A)
ACDL 8	62
ACDL 16	65
ACDL 30	72
ACDL 40	74
ACDL 70	79
ACDL 100	80
ACDL 130	85
ACDL 160	88
ACDL 250	90

ELECTRIC MOTOR DATA

Model Size	HP RPM	Motor Frame	SINGLE PHASE			THREE PHASE					
			Voltage	Hz	Full Load Amps 230 V.	Voltage	Hz	Full Load Amps 230V			
ACDL 8	1/4 1700	IEC 63	Consult Factory			230/460	60	1.0			
						220-380/440	50				
ACDL 16	1/3 1700	IEC 71							230/460	60	1.4
									220-380/440	50	
ACDL 30	1/2 1140	NEMA 56C	115-208/230	60	4.9	208-230/460	60	2.4			
						190/200 208/220	50				
						380/400 416/440					
ACDL 40	1/2 1140	NEMA 56C	115-208/230	60	4.9	208-230/460	60	2.4			
						190/200 208/220	50				
						380/400 416/440					
ACDL 70	3/4 1140	NEMA 56C	115/208/230	60	5.3	208-230/480	60	3.0			
						190/200 208	50				
						380/400 416					
ACDL 100	1.5 1140	NEMA 56C	Consult Factory			208-230/460	60	5.2			
						190/200 208	50				
						380/400 416					
ACDL 130	2.0 1140	NEMA 184TC				208-230/460	60	7.6			
						190/200 208	50				
						380/400 416					
ACDL 160	5.0 1140	NEMA 215TC				230/460	60	16.0			
						380/400 416	50				
ACDL 250	7.5 1140	NEMA 215TC				230/460	60	23.0			
						380/400 416	50				

Selection Procedures

The performance curves above 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

In most cases you can use 1/3 of the input horsepower.

Example: 30 HP Power Unit = 10 HP Heat Load

STEP 2. Determine the Actual ETD Desired

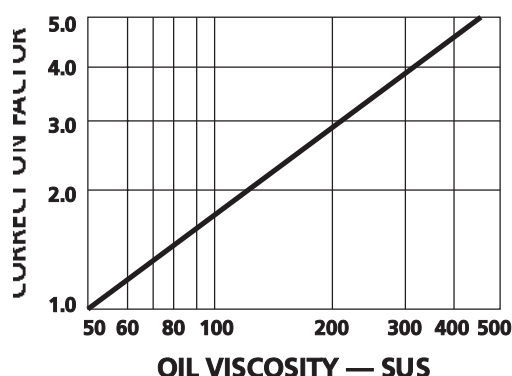
Entering OIL Temperature — Entering AIR Temperature = ETD

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 its entering the cooler.

STEP 3. Calculate the Adjusted BTU/hr for Selection

$$\frac{\text{Horsepower}}{\text{Heat Load}} \times \frac{50}{\text{Desired ETD}} = \text{Horsepower For Use With Selection Chart}$$

OIL PRESSURE DROP CORRECTION



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.

STEP 5. Calculate Oil Pressure Drop

Find the oil pressure drop correction factor and multiply it by the oil pressure drop found on the performance curve.

Specifications

RATINGS:

Maximum Working Pressure250 PSI

Maximum Working Temperature.....250 °F

MATERIALS:

Cooler.....Aluminum

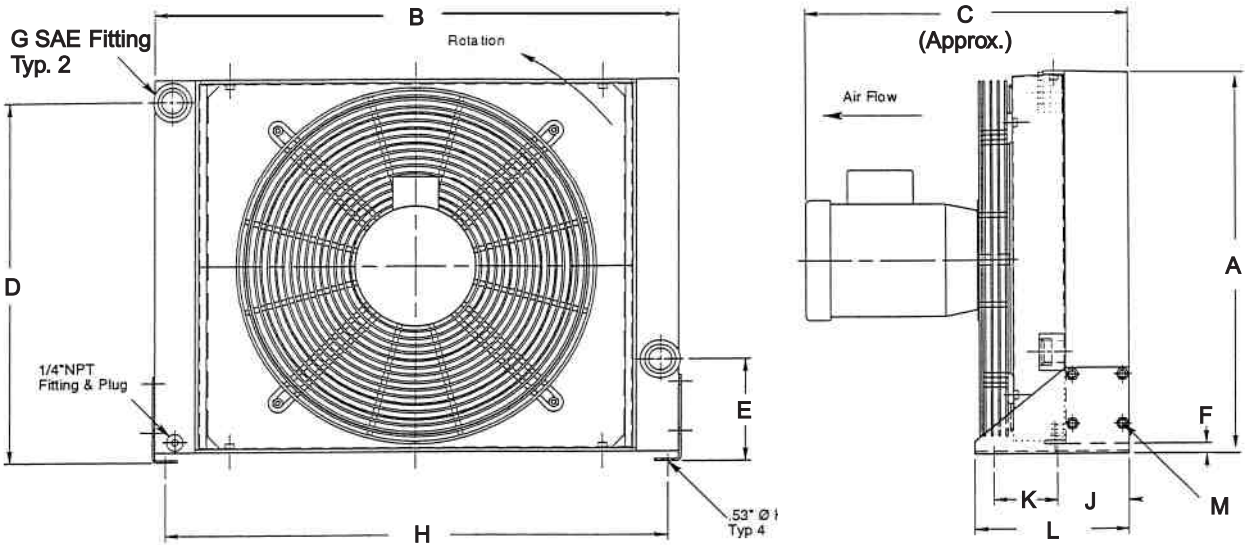
Fan Blade.....Polypropylene Blades
Aluminum Hub

Shroud.....Powder Painted
Steel

Mounting Brackets.....Powder Painted
Steel

Fan Guard.....Zinc Plated Steel

Dimensions



MODEL	A	B	C (Approx.)	D	E	F	G	H	J	K	L	M	Approx. Weights	
													Net	Shipping
ACD 8	12.44	15.75	14.72	11.30	3.27	0.55	#16 SAE 1 1/16-12 UN-2B	14.53	3.07	3.50	7.36	M8x10 Bolt (4 PL)	35	45
ACD 16	16.26	19.88	15.59	15.08	3.35	0.59		18.66					45	55
ACD 30	20.59	26.38	17.76	19.29	6.02	0.59	#20 SAE 1 3/8-12 UN-2B	25.20	4.17	3.74	9.02	M10x20 Bolt (8 PL)	90	125
ACD 40	22.44	30.32	18.74	21.18				29.09					125	163
ACD 70	28.27	37.01	22.60	20.47	9.92	2.09	2" SAE 4-Bolt FLANGE	37.48	5.39	7.87	15.47	M12x20 Bolt (8 PL)	195	240
ACD 100	37.40	40.95	24.76	29.69	9.02	0.59		41.42					350	405
ACD 130	37.52	42.91	29.84	35.52	9.13	0.59		43.49					365	420
ACD 160	44.09	48.82	30.28	34.72	11.02	0.65	3" SAE 4-Bolt FLANGE	49.29	7.80	10.00	20.00	3/4x1 1/2 Bolt (8 PL)	480	545
ACD 250	57.64	52.76	33.82	43.62	17.56	2.04		50.55					600	688

- Dimensions are in inches.
- We reserve the right to make reasonable design changes without notice.
- Weights are in pounds.

- Electric motors are totally enclosed, and are not thermally protected.
- Actual ratings vary with motor brand. Check motor nameplate for actual ratings.
- Motor RPM is reduced by 1/6 for 50 Hz service.

Ordering Information

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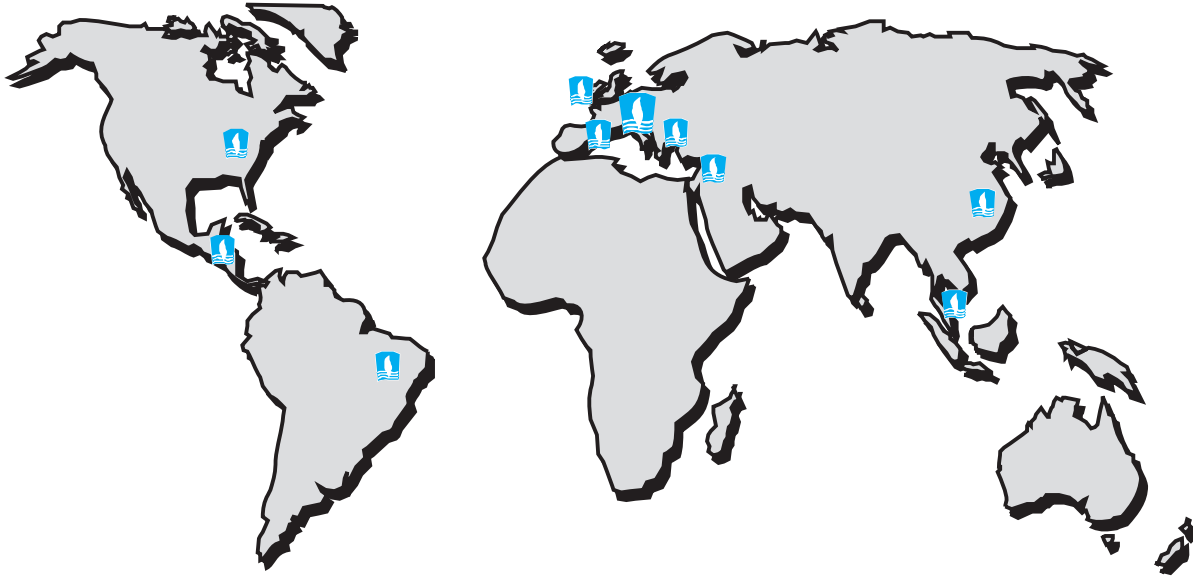
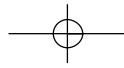
ACD SERIES
Standard

MODEL SIZE
SELECTED

MOTOR DATA
0=NO MOTOR
C=CORE ONLY
1= SINGLE PHASE
3=THREE PHASE
575=575 VOLT

CUSTOM FEATURE CODE
R=REVERSED AIR FLOW
AD=SAE TO NPT ADAPTORS INSTALLED
H=HERESITE COATING/CORE ASSEMBLY
CRN=CANADIAN REGISTRY, 250 PSI
CRS=CANADIAN REGISTRY, 150 PSI

ACDL SERIES
Low Noise



AKG has been manufacturing high quality coolers and cooling systems since 1919. We have grown to include 10 facilities with over 1400 employees to serve you.

Your Business Partner



AKG Worldwide

AKG is a complete single source supply for all of your cooling requirements. Choose from both standard and custom engineered products depending on your specific needs.



Partnership

AKG believes in solid long-term business relationships built on partnerships with its customers.



Customer

AKG places heavy emphasis on development of leading edge technologies, products and finding creative solutions to our customers individual requirements.

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