AC Motor Driven Forced Air Oil Coolers

AKG®

- Brazed aluminum with black painted finish
- Max. temp.: 250°F
- Mounting feet included

Cool-Line A Series oil coolers offer maximum cooling effectiveness with minimum pressure drop. Aluminum bar/plate cooler construction is 30% to 50% smaller than copper tube/aluminum fin oil coolers for same heat transfer performance. Hollow profile design reduces local peak strains for a significant increase in cooler service life. Performance is based on oil entering cooler 50°F higher than ambient air temperature. For Replacement Motors, call 1-800-GRAINGER (472-4643). On Grainger.com, search by Grainger Item Number and click Optional Accessories.

Flow Ranges (gpm)	Inlet Port Thread Size	HP	Full Load Amps	Motor Frame Size	Max. Pressure	Overall Height	Overall Width	Overall Depth	Mfr. Model	Item No.
115/230V AC Volts										
2 to 30	SAE #12	0.25 hp	5.4/2.7	56C	377 psi	13.74 in	13.78 in	12.56 in	AL5-1	**4UHZ4**
	SAE #12	0.33 hp	5.6/2.8	56C	377 psi	14.25 in	13.78 in	13.27 in	A8-1	**4UHZ5**
4 to 50	SAE #16	0.5 hp	7/3.5	56C	377 psi	15.91 in	15.75 in	14.5 in	A10-1	**4UHZ6**
	SAE #20	0.5 hp	8/4	56C	377 psi	19.6 in	21.65 in	15.5 in	A20-1	**4UHZ8**
	SAE #20	1 hp	12.8/6.4	56C	377 psi	24.03 in	25.59 in	16.75 in	A30-1	**4UHZ9**
8 to 80	SAE #16	0.5 hp	7/3.5	56C	377 psi	15.91 in	16.54 in	16.0 in	A15-1	**4UHZ7**
	SAE #20	1 hp	12.8/6.4	56C	377 psi	24.03 in	26.38 in	18.0 in	A40-1	**4UJA1**
230/460V AC Volts										
8 to 80	SAE #20	2 hp	6.2/3.1	56C	377 psi	25.89 in	30.31 in	19.5 in	A55-3	**4UJA2**
20 to 200	2 in SAE 4 Bolt Flange	3 hp	8.6/4.3	56C	377 psi	30.19 in	37.01 in	23.3 in	A90-3	**4UJA3**
	2 in SAE 4 Bolt Flange	3 hp	8.6/4.3	56C	377 psi	33.26 in	38.98 in	23.4 in	A105-3	**4UJA4**
	2 in SAE 4 Bolt Flange	5 hp	13.2/6.6	184TC	377 psi	37.56 in	40.94 in	25.1 in	A130-3	**4UJA5**
	2 in SAE 4 Bolt Flange	7.5 hp	19.6/9.8	213TC	250 psi	38.4 in	43.62 in	29.5 in	A160-3	**4UJA6**
20 to 350	3 in SAE 4 Bolt Flange	10 hp	26/13	215TC	250 psi	46.96 in	49.49 in	30.8 in	A215-3	**4UJA7**
	3 in SAE 4 Bolt Flange	10 hp	26/13	215TC	250 psi	59.76 in	53.68 in	30.7 in	A275-3	**4UJA8**

4UHZ7

Off-Line Forced Air Oil Coolers

AKG®

- Gearmotor type
- Spin-on filter
- Steel fan guard
- Mounting feet included
- 230/460V

High-performance aluminum cooler assemblies come complete with integrated 1750 rpm pump/motor and filter for cooling, filtration, or lubrication circuits in industrial or mobile applications. Excellent in low-pressure systems that use fluids with varying viscosities, and that have varying flow rates or pressure spikes in return lines. Pump flow range: 8.9 gpm to 45.1 gpm. Spin-on filter has a 9 micron rating with 50 psi bypass valve and visual indicator.

HP Heat Removed	Displacement	Full Load Amps	HP	Inlet Port Size	Outlet Port Size	Overall Height	Overall Width	Overall Depth	Item No.
Polypropylene Fan Blade Material									
7.1	1.22 cu in	Fan/Pump - 6.2/3.1	Fan/Pump - 2	Code 61, 1 ½ in Flange	#16	15.20 in	17.70 in	24.00 in	**6PKT9**
14.1	1.22 cu in	Fan/Pump - 8.6/4.3	Fan/Pump - 3	Code 61, 1 ½ in Flange	#16	18.90 in	23.60 in	24.00 in	**6PKU0**
17	2.44 cu in	Fan/Pump - 8.6/4.3	Fan/Pump - 3	Code 61, 1 ½ in Flange	#16	18.90 in	23.60 in	24.00 in	**6PKU1**
18.1	1.22 cu in	Fan/Pump - 8.6/4.3	Fan/Pump - 3	Code 61, 1 ½ in Flange	#16	23.40 in	27.60 in	24.00 in	**6PKU2**
23.0	2.44 cu in	Fan/Pump - 8.6/4.3	Fan/Pump - 3	Code 61, 1 ½ in Flange	#16	23.40 in	27.60 in	24.00 in	**6PKU3**
Nylon Fan Blade Material									
46.8	4.88 cu in	Fan - 6.2/3.1 Pump -19.6/9.8	Fan - 2 Pump - 7.5	Code 61, 2 in Flange	#20	26.30 in	32.30 in	38.00 in	**6PKU4**
59.9	4.88 cu in	Fan - 6.2/3.1 Pump -19.6/9.8	Fan - 2 Pump - 7.5	Code 61, 2 in Flange	#20	31.40 in	38.20 in	38.00 in	**6PKU5**
73.7	4.88 cu in	Fan - 8.6/4.3 Pump - 19.6/9.8	Fan - 3 Pump - 7.5	Code 61, 2 in Flange	#20	33.20 in	39.00 in	48.40 in	**6PKU6**
85.9	4.88 cu in	Fan - 13.2/6.6 Pump - 19.6/9.8	Fan - 5 Pump - 7.5	Code 61, 2 in Flange	#20	37.60 in	40.90 in	50.70 in	**6PKU7**

6PKU0

How To Size a Hydraulic Oil Cooler

1. Find the system oil flow (GPM).
2. Size the heat exchanger to remove approximately 30% of input horsepower.

To find input horsepower, multiply the system pressure (PSI) times the system flow (GPM), then divide by 1714 (PSI x GPM ÷ 1714).

To find an approximation of the BTU removed, multiply the horsepower heat removed by 2545.

4UJF5

Air-Cooled Oil Coolers

AKG®

4UJD5

- Brazed aluminum
- Max. pressure: 250 psi
- Max. temp.: 250°F
- Universal mounting bracket included

Deliver maximum cooling performance while minimizing pressure drop. Designed for rugged environments. Nonlouvered external fin prevents clogging and is easy to clean. Aluminum bar/plate cooler construction is 30% to 50% smaller in size than copper tube/aluminum fin oil coolers for same heat transfer performance. Cooler performance is based on oil entering cooler 100°F higher than ambient air temperature. 1000 standard ft. per minute (sfpm) air velocity.

HP Heat Removed	Flow Ranges (gpm)	Inlet Port Thread Size	Overall Height	Overall Width	Overall Depth	Mfr. Model	Item No.
8 hp	2 to 30	SAE #12	6.65 in	17.91 in	1.77 in	C-8	**4UJD3**
12 hp	2 to 30	SAE #12	11.73 in	13.98 in	2.56 in	C-12	**4UJD6**
14 hp	2 to 30	SAE #12	10.98 in	17.91 in	1.77 in	C-14	**4UJD4**
18 hp	2 to 30	SAE #12	13.58 in	15.94 in	2.56 in	C-18	**4UJD7**
20 hp	2 to 30	SAE #12	15.31 in	17.91 in	1.77 in	C-20	**4UJD5**
32 hp	8 to 80	SAE #20	18.43 in	19.88 in	2.56 in	C-32	**4UJD8**
48 hp	8 to 80	SAE #20	22.13 in	23.62 in	2.56 in	C-48	**4UJD9**
66 hp	8 to 80	SAE #20	25.83 in	27.56 in	2.56 in	C-66	**4UJE1**
82 hp	10 to 110	SAE #24	27.68 in	31.5 in	2.56 in	C-82	**4UJE2**
120 hp	10 to 110	SAE #24	39.49 in	31.5 in	2.56 in	C-120	**4UJE3**

DC Motor Driven Forced Air Oil Coolers

AKG®

- Brazed aluminum with black painted finish
- Max. pressure: 377 psi
- Max. temp.: 250°F
- IP 68 frame
- Mounting bracket included

Cool-Line D Series oil coolers maximize cooling capability while minimizing pressure drop. Ideal for rugged environments. Easy-to-clean, nonlouvered external fin prevents clogging. Aluminum bar/plate cooler construction is 30% to 50% smaller than copper tube/aluminum fin oil coolers for the same heat transfer. Hollow profile design reduces local peak strains, significantly increasing cooler service life. Performance is based on oil entering cooler 100°F higher than ambient air temperature. Brushless DC Motors are rated to 40,000 hours. Coolers with bypass valves are available on Grainger.com.

HP Heat Removed	Flow Ranges (gpm)	Inlet Port Thread Size	Motor HP*	Motor Amps*	Overall W (in.)	Includes	OIL COOLER Mfr. Model	OIL COOLER Item No.	REPLACEMENT MOTOR Item No.
Brushless DC Motor									
16	10 to 50	SAE #16	0.39	24	15.80 in	Temperature Controller	DB16-12	**53XG47**	—
20	10 to 50	SAE #16	0.40	20	15.80 in	Temperature Controller	DB20-12	**53XG50**	—
30	10 to 80	SAE #20	0.39	24	19.70 in	Temperature Controller	DB30-12	**53XG53**	—
36	10 to 80	SAE #20	0.40	25	20.50 in	Temperature Controller	DB36-12	**53XG56**	—
45	10 to 80	SAE #20	0.39	24	28.70 in	Foot Mounting Bracket	DB45-12	**53XG59**	—
DC Motor									
10 hp	2 to 30	SAE #12	0.08 hp	5	13.78 in	Bypass Valve	D10-12-BP65	**53XG28**	**4UJG9**
	2 to 30	SAE #12	—	—	13.78 in	Grill Mounting Bracket	D10-12	**4UJF4**	**4UJG9**
16 hp	4 to 50	SAE #16	0.19 hp	17	15.75 in	Bypass Valve	D16-12-BP65	**53XG30**	**4UJH1**
	4 to 50	SAE #16	0.19 hp	17	15.75 in	Universal Mounting Bracket	D16-12	**4UJF5**	**4UJH1**
20 hp	4 to 50	SAE #16	0.19 hp	17	15.75 in	Bypass Valve	D20-12-BP65	**53XG32**	**4UJH1**
	4 to 50	SAE #16	0.19 hp	17	15.75 in	Universal Mounting Bracket	D20-12	**4UJF6**	**4UJH1**
30 hp	4 to 50	SAE #20	0.48 hp	29	19.69 in	Bypass Valve	D30-12-BP65	**53XG34**	**4UJH2**
	4 to 50	SAE #20	0.48 hp	29	19.69 in	Universal Mounting Bracket	D30-12	**4UJF7**	**4UJH2**
36 hp	8 to 80	SAE #20	0.48 hp	29	20.47 in	Bypass Valve	D36-12-BP60	**53XG37**	**4UJH2**
	8 to 80	SAE #20	0.48 hp	29	20.47 in	Universal Mounting Bracket	D36-12	**4UJF8**	**4UJH2**
45 hp	8 to 80	SAE #20	0.19 hp	17	28.35 in	Foot Mounting Bracket	D45-12	**4UJF9**	**4UJH1**
60 hp	4 to 50	SAE #20	0.48 hp	29	35.63 in	Foot Mounting Bracket	D60-12	**4UJG1**	**4UJH2**
70 hp	8 to 80	SAE #20	0.48 hp	29	36.22 in	Foot Mounting Bracket	D70-12	**4UJG2**	**4UJH2**

** Motor values are per fan. 4UJF9, 4UJG1, 4UJG2 and 53XG59 have 2 fans.*