

# INDUSTRIAL COOLERS

## OK Series - AC Motor Drive

Air Cooled Oil Coolers



### Features

The OK Series cooler design uses an axial fan assembly which draws air through the cooler. This offers excellent cooling capacity.

- Up to 200 HP cooling capacity
- Highly efficient and rugged bar-and plate style heat exchangers
- Externally mounted heat exchangers for easy maintenance and cleaning
- Modular pump and filter options for a plug and play fluid conditioning system
- Available with HYDAC LPF and FLND series filters
- Accessories include: Thermostats (*adjustable and fixed*), Integrated Thermostatic bypass valves and pressure bypass valves.
- Packaged systems with pump flows ranging from 8.45 gpm to 47.5 gpm

### Applications



Gearboxes



Industrial



Elevators



Power Generation



Pulp & Paper



Railways



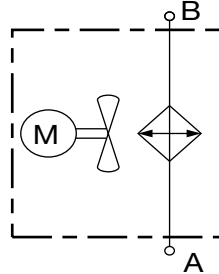
Shipbuilding



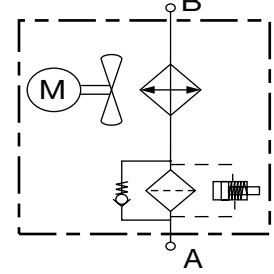
Steel / Heavy Industry

### Hydraulic Symbol

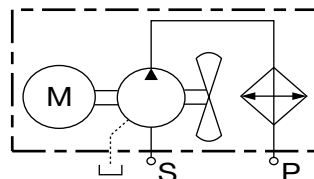
OK Sizes 3 - 7



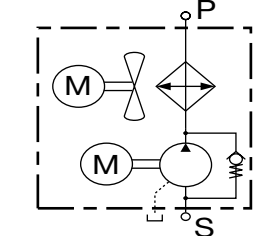
OKF Sizes 3 - 11



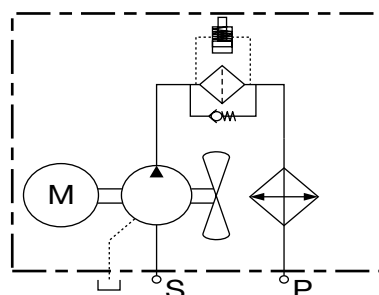
OKA Sizes 4 - 6



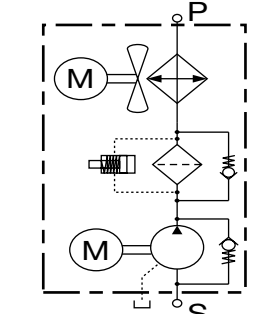
OKA Size 7 - 11



OKAF Sizes 4 - 6



OKAF Size 7 - 11



## General

<b>Materials</b>	Housing: Welded Steel Heat Exchanger: Aluminum Heavy Duty Bar and Plate Fan: Plastic Motor: TEFC, NEMA or IEC frame <i>(varies by cooler size)</i> Pump: Screw
<b>Mounting Orientation</b>	Horizontal, motor shaft
<b>Maximum Pressure</b>	230 psi (16 Bar)
<b>Fluids</b>	Mineral oil to DIN 51524 Part 1 and 2
<b>Ambient Temperature</b>	50° – 104°F (10° – 40°C) <i>(Contact factory for other fluid usages)</i>
<b>Maximum Oil Viscosity</b>	w/o pump: 2000 cSt w/ pump: 180 cSt
<b>Maximum Oil Temperature</b>	w/o pump: 266°F (130°C) w/ pump: 176°F (80°C)
<b>Standard Air Flow Direction</b>	Air pulled across heat exchanger

\*Note: Sizes OKA-4-6 do not include relief valve. Pressures higher than 90 psi *(measured at pump outlet)* will result in motor overload conditions.  
Size OKA-7 comes with a 145 psi relief valve built into the pump.

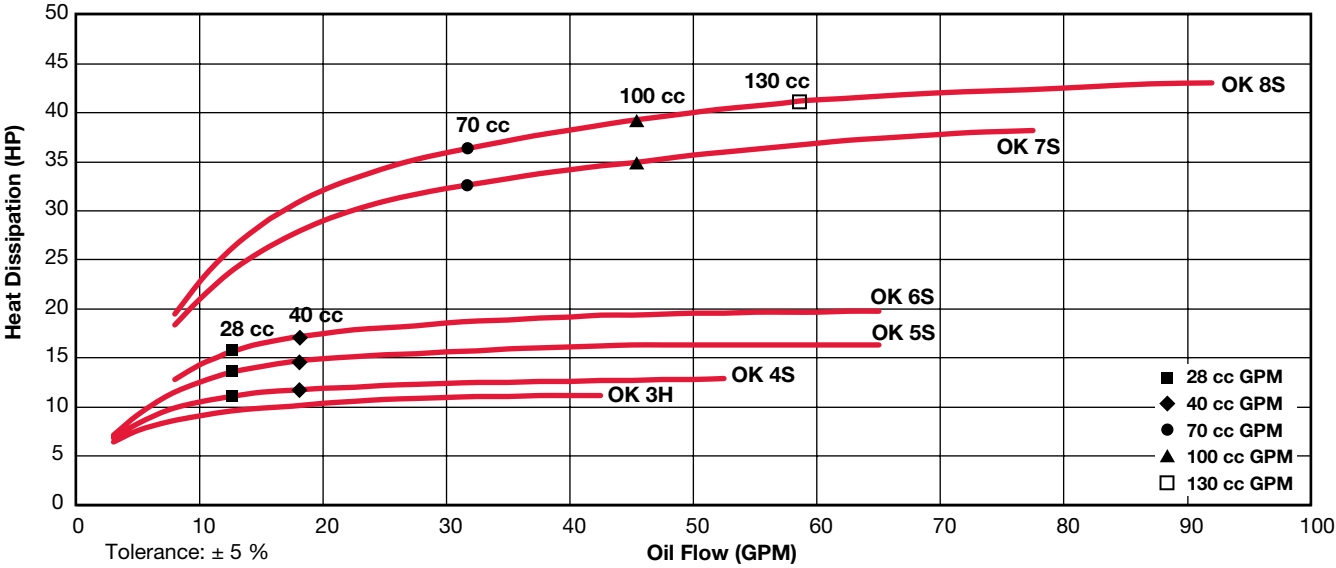
## Model Code

	OKA	4S	3.6	B	28	LPF280	3	B	IBP	2	TS120
<b>Model</b>											
OK	= Basic Cooler										
OKF	= Cooler with Filter <i>(Sizes 3-11 only)</i>										
OKA	= Cooler with Pump <i>(Sizes 4-11 only)</i>										
OKAF	= Cooler with Pump & Filter <i>(Sizes 4-11 only)</i>										
<b>Size</b>											
3H, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 14S											
<i>(Note: H = 3600 RPM, S = 1800 RPM)</i>											
<b>Modification Number</b> <i>(latest version supplied)</i>											
<b>Motor Voltage</b>											
B	= 230/460 Volts, 3ph										
X	= No Motor										
<b>Pump</b>											
<i>(omit)</i>	= No Pump										
28	= 28 ccm/rev, L=8.4 gpm, S=12.75 gpm <i>(sizes 4S, 5S, 6S only)</i>										
40	= 40 ccm/rev, L=12 gpm, S=18.1 gpm <i>(sizes 4S, 5S, 6S only)</i>										
70	= 70 ccm/rev, S=31.7 gpm <i>(sizes 7-11 only)</i>										
100	= 100 ccm/rev, S=45.3 gpm <i>(sizes 7-11 only)</i>										
130	= 130 ccm/rev, S=58.9 gpm <i>(sizes 8-11 only)</i>										
<b>Filter Type</b>											
<i>(omit)</i>	= No Filter										
LPF160	= Cartridge Filter 43 rated gpm										
LPF240	= Cartridge Filter 63 rated gpm										
LPF280	= Cartridge Filter 73 rated gpm										
FLND250	= Duplex Filter 66 rated gpm <i>(sizes 4-9 only)</i>										
FLND400	= Duplex Filter 105 rated gpm <i>(size 7-11 only)</i>										
<b>Micron Rating</b>											
<i>(omit)</i>	= No Filter										
10	= 10 micron, Absolute										
<b>Filter Indicator</b>											
<i>(omit)</i>	= No Filter										
B	= Visual										
D24	= 24 VDC Lamp/Switch <i>(LPF + FLND filters only)</i>										
<b>Accessories</b>											
<i>(omit)</i>	= None										
IBT	= Internal Temperature Bypass Valve										
IBP	= Internal Pressure Bypass Valve										
<b>Opening Temperature</b> <i>(IBT Only)</i>											
45	= Opens 113°F (45°C) Closes at 131°F (55°C)										
50	= Opens 130°F (50°C) Closes at 150°F (65°C)										
60	= Opens 140°F (60°C) Closes at 158°F (70°C)										
<b>Opening Pressure</b> <i>(IBT &amp; IBP)</i>											
2	= 2 bar (29 psi)										
3	= 3 bar (45 psi)										
4	= 4 bar (58 psi) <i>(IBP only)</i>										
<b>Temperature Switch</b>											
TS-120	= Inline Temperature Switch, Fixed 120°F										
TS-140	= Inline Temperature Switch, Fixed 140°F										
AITR	= Inline thermostat adjustable 32°F to 200°F										
<i>(not applicable with OKA or OKAF models 4-6)</i>											

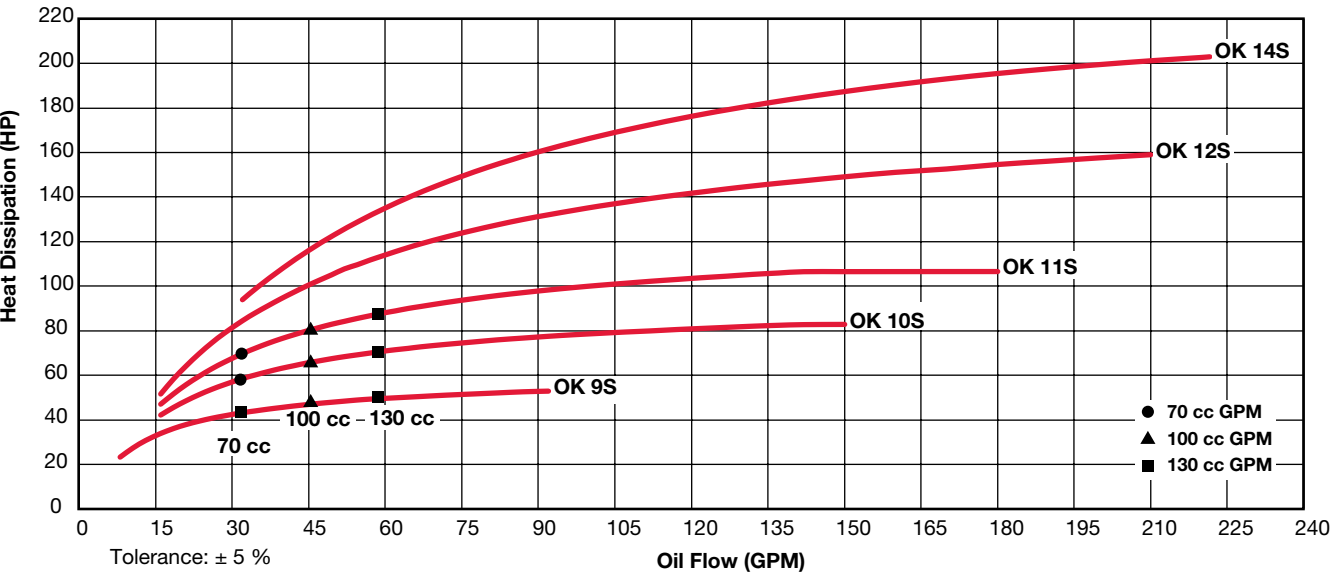
*(not applicable with OKA or OKAF models 4-6)*

# INDUSTRIAL COOLERS

Heat Dissipation @  $\Delta T = 40^{\circ}\text{F}$   
Sizes 3-8

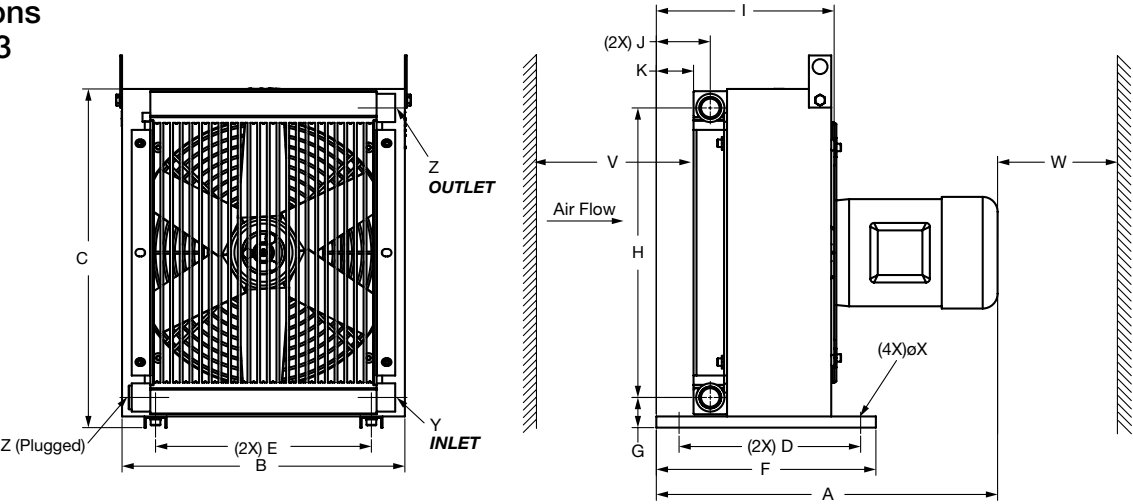


## Sizes 9-14



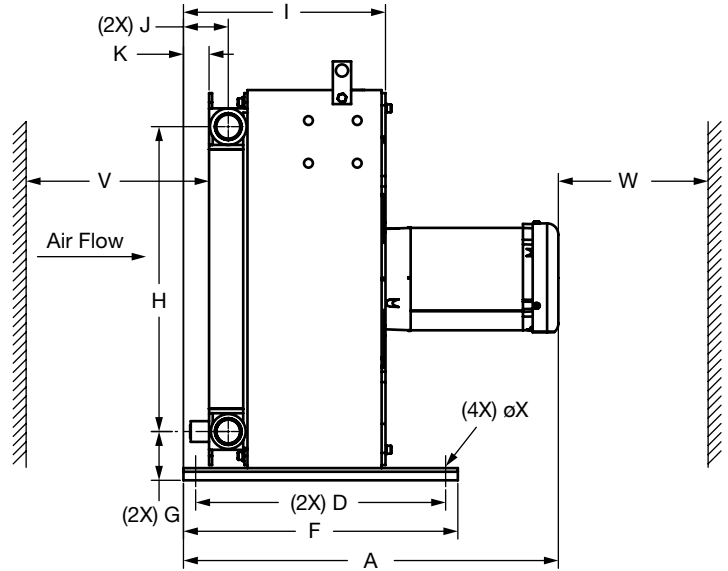
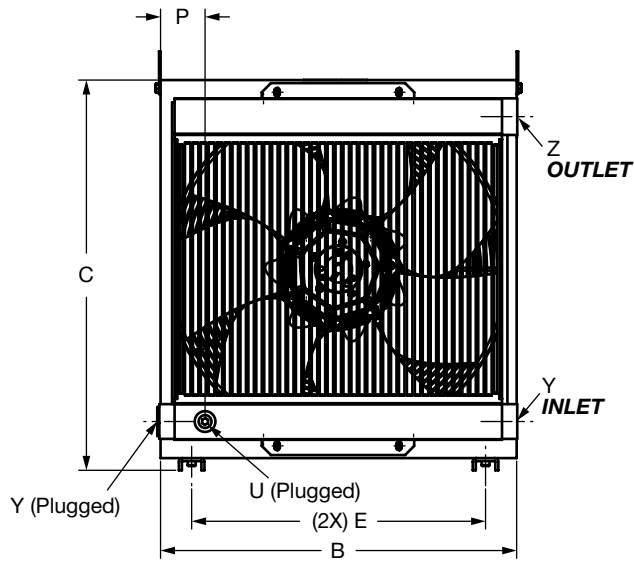
Dependent on the oil flow rate and the temperature difference ( $\Delta T$ ) between oil inlet and air inlet.  
Note: The values are measured at  $\Delta T = 40^{\circ}\text{F}$  ( $22^{\circ}\text{C}$ ). For smaller  $\Delta T$  values, the heat dissipation can change. Please reference page E1 or contact your local HYDAC distributor for further consultation.

## Dimensions OK Size 3



Size	A	B	C	D	E	F	G	H	I	J	K	V	W	X	Y	Z
OK3H	17.46	14.96	17.91	10.04	11.42	11.61	1.59	15.31	8.66	2.26	1.38	11.81	31.5	0.35	SAE-12	SAE-12

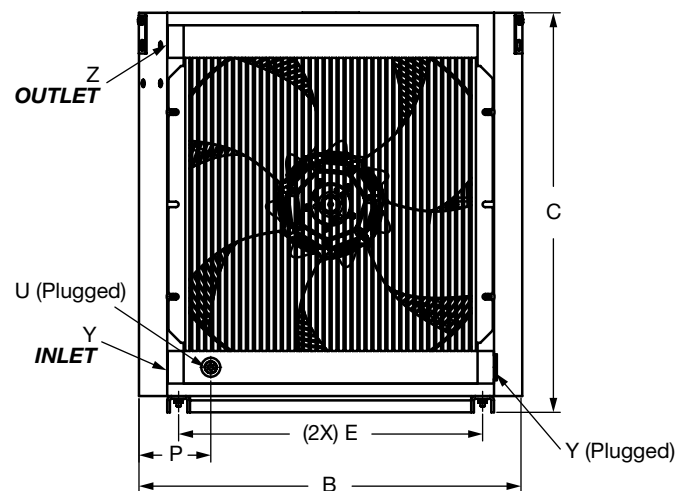
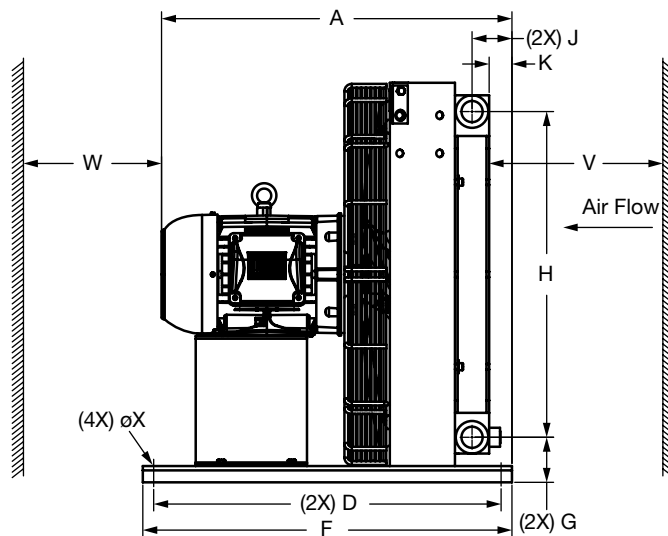
## Dimensions OK Size 4 - 6



Size	A	B	C	D	E	F	G	H	I	J	K	P	U	V	W	X	Y	Z
OK4S	23.15	19.09	20.47	16.14	16.73	17.72	2.13	17.28	11.86	4.07	2.83	-	-	15.75	47.24	ø0.35 x 0.78 slot	SAE-16	SAE-16
OK5S	23.55	21.34	22.13	16.14	18.98	17.72	2.81	17.28	12.26	3.68	2.44	-	-	19.69	59.06	ø0.35 x 0.78 slot	SAE-16	SAE-16
OK6S	24.34	22.99	25.20	16.14	18.98	17.72	3.15	19.69	13.05	2.89	1.65	2.89	1/2" NPT	23.62	70.87	ø0.35 x 0.78 slot	SAE-20	SAE-20

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print. Dimensions are in inches.

## Dimensions OK Size 7



A	B	C	D	E	F	G	H	J	K	P	U	V	W	X	Y	Z
25.70	27.80	28.98	25.20	22.05	26.77	3.27	23.62	2.89	1.65	5.21	1/2" NPT	23.62	47.24	ø0.35 x 0.78 Slot	SAE-20	SAE-20