



Water Cooled **AKG/P** Series

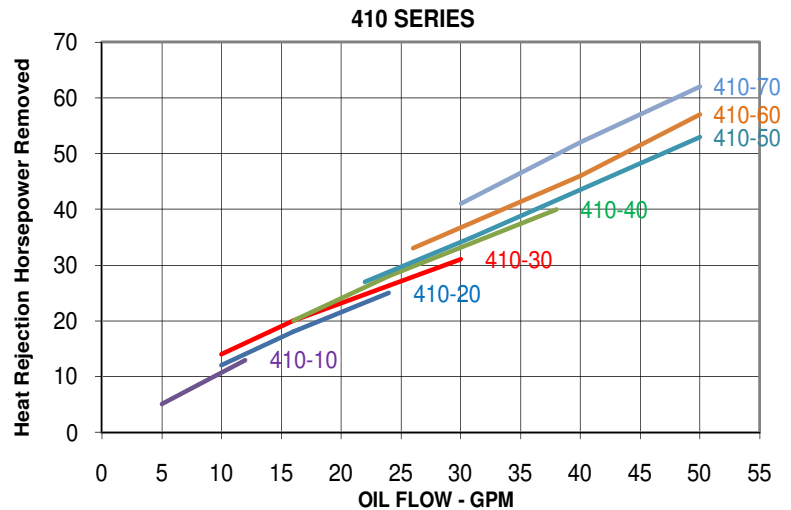
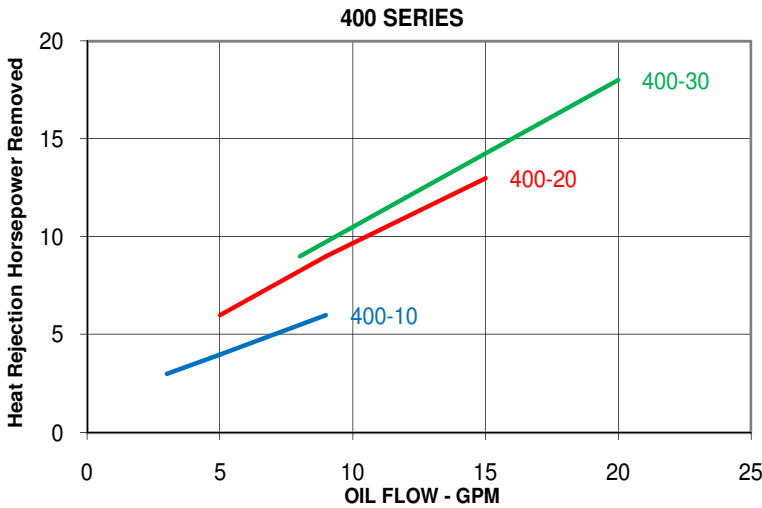
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Water Cooled AKG/P Series



PERFORMANCE DATA AKG/P 400 AND AKG/P 410



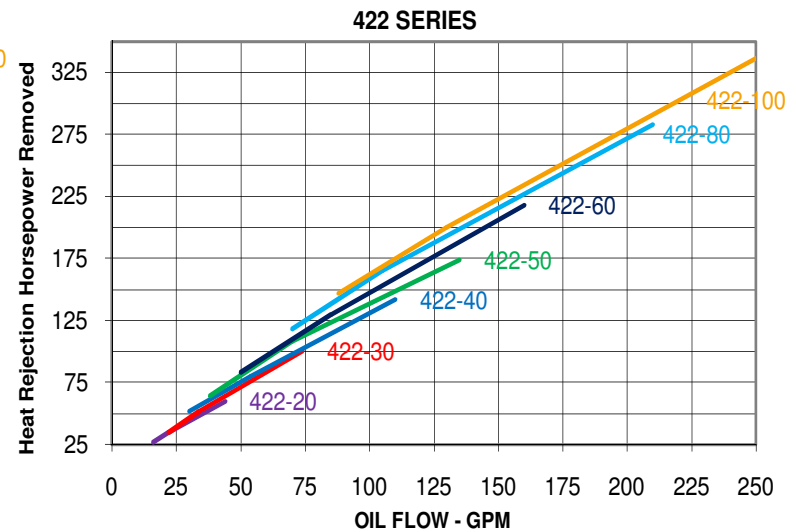
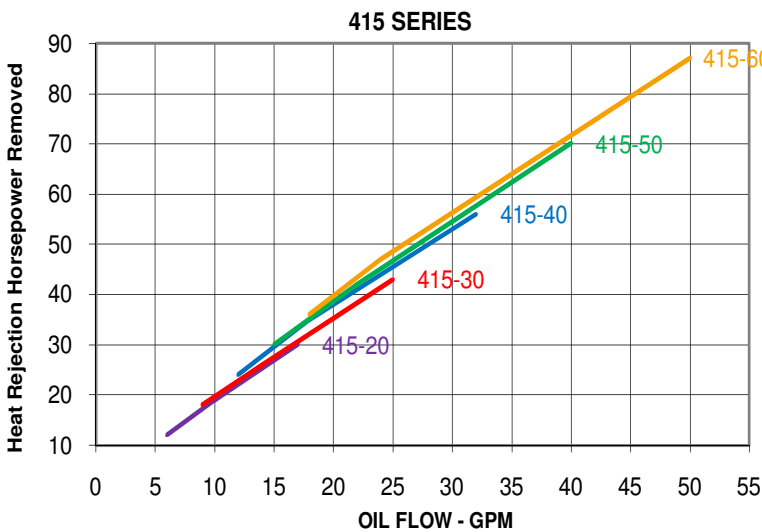
Specifications:

Maximum Working Pressure	435 PSI
Maximum Working Temperature	450° F

Materials:

Plates	316L Stainless Steel
Brazing	Copper
Connections	316L Stainless Steel
Mounting Bracket	Powder Painted Steel

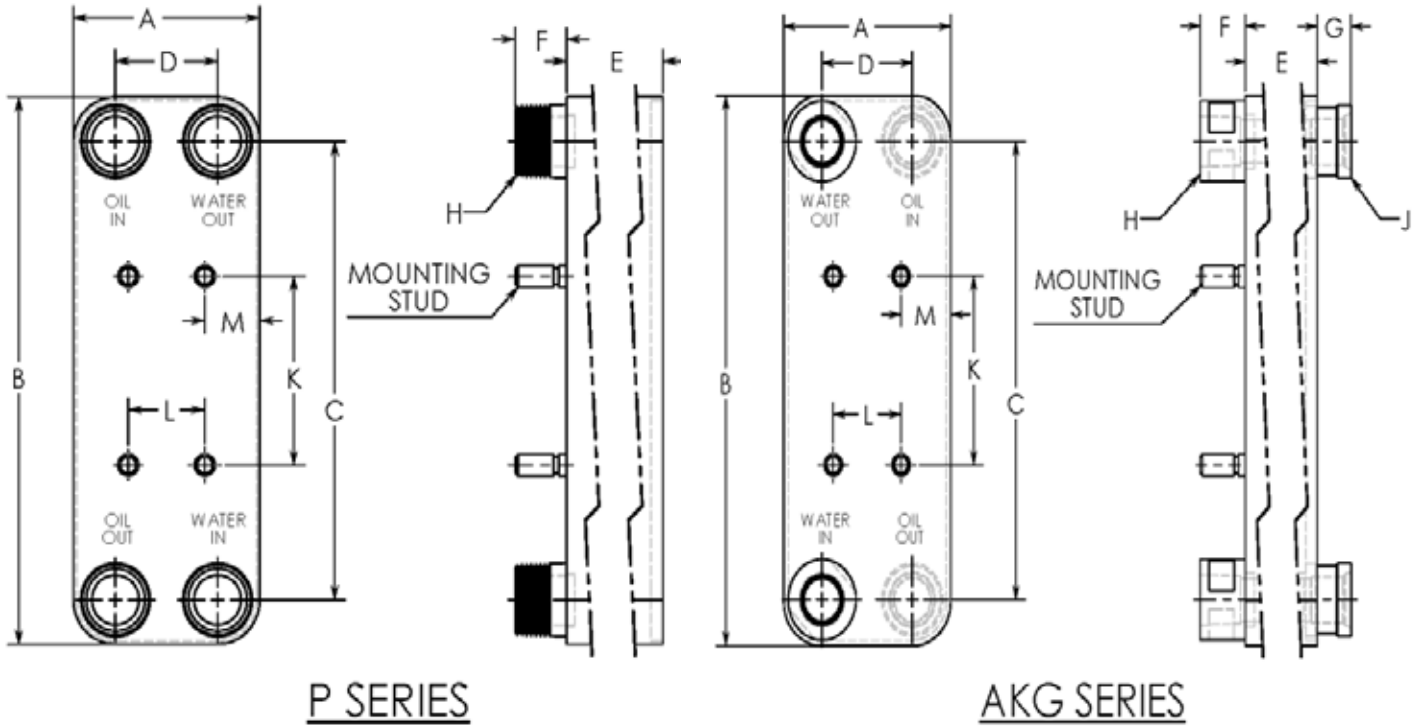
PERFORMANCE DATA AKG/P 415 AND AKG/P 422



Water Cooled AKG/P Series



COOLER DIMENSIONS AKG/P



AKG/P SERIES DIMENSIONS

Model Size	Dimensions							H NPT	J SAE	Mounting Studs			Weight Empty (lbs)
	A	B	C	D	E	F	G			K	L	M	
AKG/P400	3.18	8.45	6.77	1.65	$(.078 \times N) + .4$	0.95	0.95	3/4"	#8	2.8	N/A	1.6	$1.5 + (.13 \times N)$
AKG/P410	4.4	12.2	9.84	1.97	$(.097 \times N) + .4$	0.95	0.95	1"	#16	5.5	2.4	1.0	$2.6 + (.29 \times N)$
AKG/P415	4.4	20.7	18.35	1.97	$(.097 \times N) + .4$	0.95	0.95	1"	#16	5.5	2.4	1.0	$4.2 + (.51 \times N)$
AKG/P422	7.5	24.3	20.43	3.62	$(.1151 \times N) + .4$	1.9	1.9	2"	#32	5.5	3.9	1.8	$15.4 + (.97 \times N)$

Dimensions are in inches. N = Number of Plates

Note: AKG 400 models have 1/2" FPT ports

SELECTION PROCEDURES

The performance curves are based on the following:

- 50 SUS Oil
- 50 °F Entering Temperature Difference
(130° F Oil entering cooler, 80° F water entering the cooler)
- 2:1 oil to water ratio (1 GPM water flow for each 2 GPM oil flow)

If your application conditions are different, use the following selection procedure:

STEP 1. DETERMINE THE HEAT LOAD

In most cases you can use 25% of the input horsepower
Example: 40 HP Power Unit = 10 HP Heat Load.

STEP 2. DETERMINE THE ACTUAL HEAT LOAD DESIRED

Entering **OIL** Temperature - Entering **WATER** Temperature = **ETD**
The entering oil temperature is the highest desired oil temperature.
The entering water temperature is the highest anticipated water temperature.

STEP 3. CALCULATE THE ADJUSTED HORSEPOWER FOR SELECTION

$$\begin{array}{rcl} \text{Horsepower} & 50 & \text{Horsepower For} \\ & \times \frac{\quad}{\quad} & \text{Use With} \\ \text{Heat Load} & \text{Desired ETD} & \text{Selection Chart} \end{array} =$$

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.

ORDERING INFORMATION

MODEL SERIES:	PLATE SIZE:	NUMBER OF PLATES:	CUSTOM FEATURED CODE:

MODEL SERIES: AKG or P

PLATE SIZE:
 400 - 10, 20, 30
 410 - 10, 20, 30, 40, 50, 60, 70
 415 - 20, 30, 40, 50, 60
 422 - 20, 30, 40, 50, 60, 80, 100

CUSTOM FEATURE CODE: MTG = Mounting Bracket for P Series. Standard on AKG Series

ORDER EXAMPLE: AKG Series, 30 HP Heat Rejection, Model 415 with 20 Plates

AKG415-20

OIL-TO-WATER COOLING SYSTEMS

PRODUCT INFORMATION

AKG/P Series coolers are a standard line of stainless steel brazed plate water cooled heat exchangers from the market leader in high performance cooling systems.

The AKG/P Series coolers consist of different cooler models that are capable of cooling a wide variety of different fluids for mobile and stationary applications.

All of AKG's solutions have been developed with state-of-the-art technology, produced in compliance with the highest quality standards and comprehensively tested in the company's own research and test facility

FEATURES OF THE SERIES

- High-Performance Stainless Steel Braze Plate coolers provide high rates of heat transfer requiring less surface area than conventional shell and tube heat exchangers.
- Both AKG/P Series models have threaded studs for cooler mounting. Optional mounting bracket available for P Series coolers and is provided with AKG Series coolers.
- AKG/P Series braze plate coolers can be universally used in hydraulic oil, transmission oil, engine oil, lubricating oil and coolant circuits.
- Thin corrugated stainless steel plates are vacuum brazed together to form a very durable, self-contained integral unit that can withstand both high pressure and high temperature.
- Can be exposed to operating pressures up to 435 PSI and temperatures up to 450° F.
- AKG Series braze plate coolers are designed for oil cooling in that SAE connections are standard on all AKG Series models. Oil and water connections are on opposite sides reducing piping requirements. P Series coolers have 4 NPT connections on front side of cooler.

AKG/P Series BENEFITS

- Compact and robust design. The corrugated plate design provides high heat transfer coefficients resulting in a smaller surface area.
- AKG/P Series braze plate coolers offer the highest level of thermal efficiency and durability in a compact, low cost cooler.
- AKG/P Series braze plate coolers offer design flexibility with a wide range of sizes and fluid connections.
- Available from stock or at short notice





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AKG – A STRONG GLOBALLY INTEGRATED GROUP OF COMPANIES

AKG is a globally leading supplier of high-performance coolers and heat exchangers as well as customised system solutions, that 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 a number of additional oversea sales companies they are on duty around the clock.

Your AKG-Partner



The longstanding and competent partnership with global OEM customers from 22 lines of business such as construction machinery, compressed-air systems, agricultural and forestry machines, vehicle construction and many other fields of application give fresh and innovative impetus to the mobile and industrial standard type series.

AKG operates one of the world's largest research, development, measurement and validation centres for cooling solutions and customised applications.

For 90 years AKG's heat exchangers have stood for innovative solutions as well as highest engineering and manufacturing competence.