Fluid Cooling Shell & Tube EKT Series

COPPER & STEEL CONSTRUCTION

Performance Notes

- HPU, in-tank cooler
- Compact size
- EK style & size
- High efficiency finned bundle design
- Serviceable
- Removable
- In-tank design minimizes space requirements and reduces plumbing
- Internal aluminum fins increase performance
- Removable end bonnets allow water passage servicing
- High strength steel shell

OPTIONS
Patented built-in
Surge-Cushion® bypass

SAE or BSPP Connections Available

Ratings

Maximum Operating Pressure - Shell Side
75 PSI

Maximum Operating Pressure - Tube Side
150 PSI

Test Pressure - Shell Side
75 PSI

Test Pressure - Tube Side
150 PSI

Maximum Operating Temperature
250°F

Materials

Shell Steel

Tubes Copper

Fins Aluminum

Tubesheets Steel

Baffles Steel

End Bonnets Cast iron

Gaskets Nitrile rubber/cellulose fiber

Optional Surge-Cushion®

The **Surge-Cushion**® is a patented protective device designed to internally bypass a portion of the oil flow during cold start conditions, or when sudden flow surges temporarily exceed the maximum flow allowed for a given cooler. This device may replace may replace an external bypass, but it is not intended to bypass the total oil flow.

How to Order

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Model Series **EKT** **EKTS** **EKTM**		**Model Size Selected**		**Surge Cushion** **Blank** - None **R** - Surge Cushion

EKT = NPT Connections.
EKTS = SAE Oil Connections.
EKTM = All Metric Connections.

THERMAL PRODUCTS INC.
Engineered Solutions To Industrial Applications

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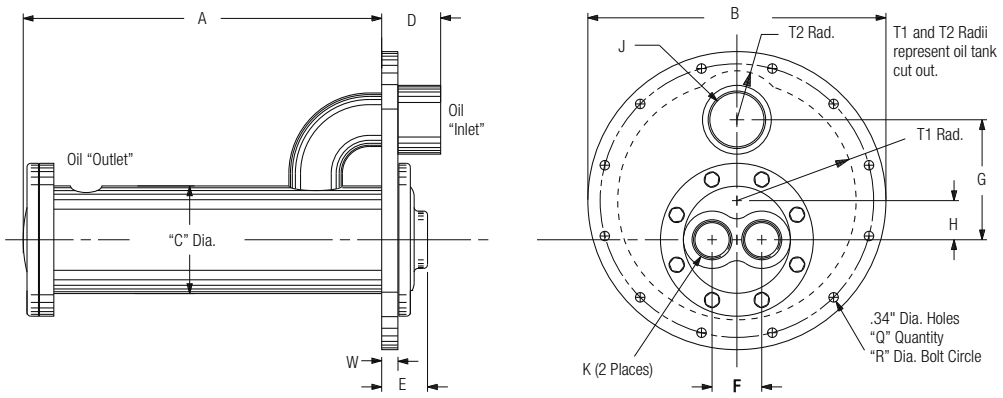
Dimensions



Model	A	B	C	D	E	F	G	H	J NPT BSPF	J SAE	K NPT BSPP	Q	R	T1	T2	W	Approx. Weight (LBS) Net	Approx. Weight (LBS) Shipping
EKT-508	8.87	6.79	2.55	1.84	1.68	1.12	2.44	.50	3/4	#12	3/8	6	5.60	2.25	.79	.62	11	14
EKT-518	18.87	6.79	2.55	1.84	1.68	1.12	2.44	.50	3/4	#12	3/8	6	5.60	2.25	.79	.62	14	16
EKT-708	8.72	9.75	3.52	2.22	1.67	1.62	3.94	1.25	1½	#24	3/4	12	4.00	4.00	—	.70	23	27
EKT-188	18.72	9.75	3.52	2.22	1.67	1.62	3.94	1.25	1½	#24	3/4	12	4.00	4.00	—	.70	30	34
EKT-1012	12.55	10.38	5.05	2.22	2.23	2.38	4.69	1.19	1½	#24	1	12	4.38	4.38	1.12	.70	42	46
EKT-1024	24.55	10.38	5.05	2.22	2.23	2.38	4.69	1.19	1½	#24	1	12	4.38	4.38	1.12	.70	58	63

NOTE: We reserve the right to make reasonable design changes without notice. Certified drawings are available upon request. All dimensions in inches.
Tank gasket is included. BSPP threads are 55° full form whitworth.

Selection Procedure

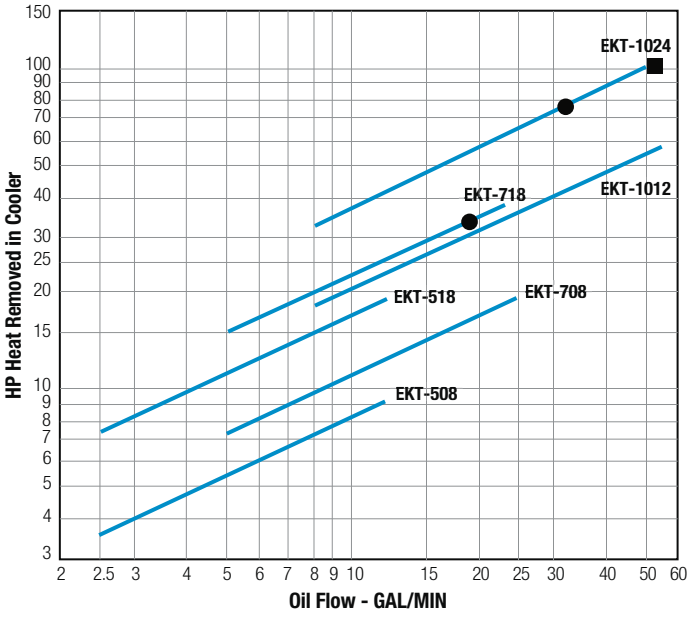
Performance Curves are based on a 40°F approach temperature, a 2:1 oil to water ratio and an average oil viscosity of 100 SSU. Example: oil leaving cooler at 125°F with 85°F cooling water (125°F - 85°F = 40°F). The 2:1 oil to water ratio means that for every GPM of oil circulated, a minimum of 1/2 GPM of water must must be circulated to obtain the curve results.

STEP 1 **Corrections for approach temperature and oil viscosity.**

$$HP_{Heat\ Removed} \text{ in Cooler} = HP_{Actual} \times \left[\frac{40°F}{\text{Oil out and °F - Water in °F}} \right] \times \text{Correction A}$$

STEP 2 **Oil Pressure Drop Coding:** ● = 5 PSI ■ = 10 PSI. Curves having no pressure drop symbol indicate that the oil pressure drop is less than 5 PSI to the highest oil flow rate for that curve. Multiply curve oil pressure drop by Correction B.

Performance Curves



Viscosity Corrections

Average Oil SSU	A	B
50	0.84	0.6
100	1.00	1.0
200	1.14	2.0
300	1.24	3.1
400	1.31	4.1
500	1.37	5.1

Maximum Flow Rates

Unit Size	Shell Side GPM	Tube Side GPM
500	20	6
700	70	12
1000	100	28

If maximum allowable flow rates are exceeded, premature failure may occur.