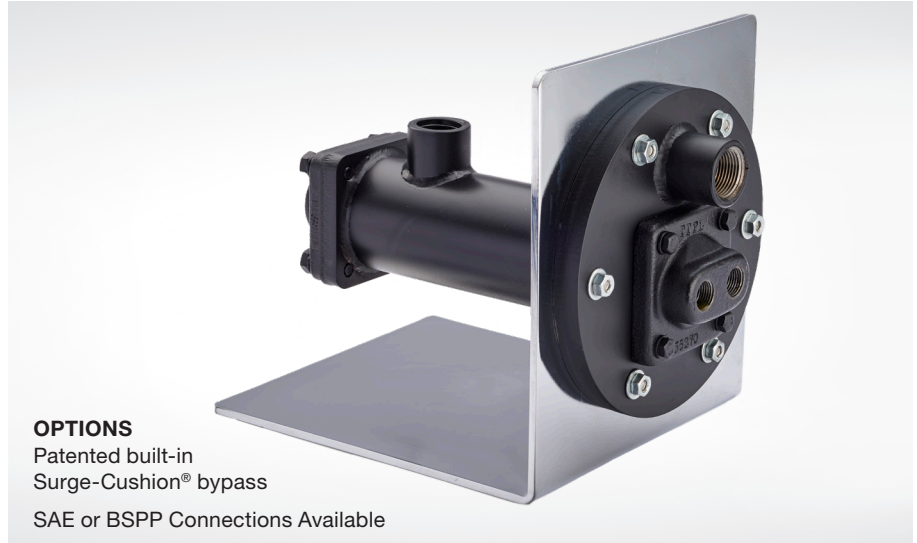


EKT Series – In-Tank Finned Tube Bundle Shell & Tube Water to Oil Cooling

0822

The EKT Series is an EK model designed with a tank flange that allows it to be installed directly in the hydraulic reservoir. The aluminum finned tube bundle design provides an increased surface area that allows for optimal heat rejection with low water usage. An optional Surge-Cushion® bypass is available for cold start up protection or flow surges. This compact design allows for simple integration and installation in the hydraulic power unit.



How to Order

Model Series

EKT = NPT Oil x NPT Water
EKTS = SAE Oil x NPT Water
EKTM = BSPP Oil x BSPP Water

Model Size Selected

508, 518, 708, 718, 1012, 1024
 (See Performance Curve Chart on page 2 for sizes)

Surge Cushion

Blank - None
R - Surge Cushion

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 an external bypass, but it is not intended to bypass the total oil flow.

Features

Compact Size

High Efficiency Finned Bundle Design

Removable and Serviceable

In-Tank Design Minimizes Space Requirements and Reduces Plumbing

Internal Aluminum Fins Increase Performance

High Strength Steel Construction

Multiple Connections Options

- NPT x NPT
- SAE x NPT
- BSPP x BSPP

End Bonnets Removable For Servicing

Mounting Feet Included (May be rotated in 90° increments)

Materials

Tubes Copper

Tubesheets Steel

Shell Steel

Baffles Steel

End Bonnets Cast Iron

Fins Aluminum

Gaskets Nitrile Rubber/
Cellulose Fiber

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

For additional sizing information consider using TTP's **XSelector** online sizing Program.*

Selection Procedure

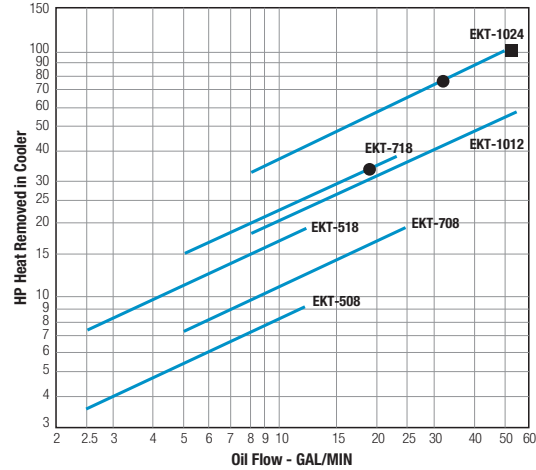
Performance Curves are based on a 40°F approach temperature, a 2:1 oil to water ratio and an average oil viscosity of 100 SSU. Example: oil leaving cooler at 125°F with 85°F cooling water (125°F - 85°F = 40°F). The 2:1 oil to water ratio means that for every GPM of oil circulated, a minimum of 1/2 GPM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

STEP 1 Corrections for approach temperature and oil viscosity.

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

STEP 2 Oil Pressure Drop Coding: l = 5 PSI n = 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

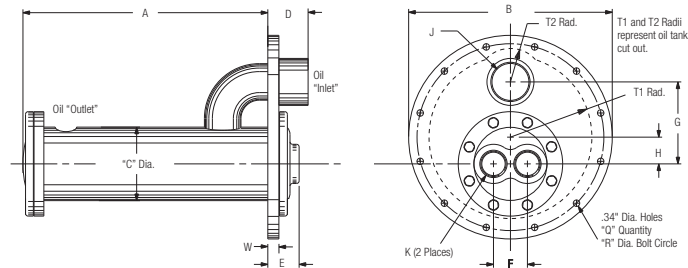
Average Oil SSU	A	B
50	0.84	0.6
100	1.00	1.0
200	1.14	2.0
300	1.24	3.1
400	1.31	4.1
500	1.37	5.1

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.

Dimensions



Model	A	B	C	D	E	F	G	H	J		K NPT BSPP	Q	R	T 1	T 2	W	Approx. Weight (LBS)	
									NPT BSPP	SAE							Net	Shipping
EKT-508	8.78	6.79	2.55	1.84	1.68	1.12	2.44	.50	3/4	-12 1 1/16-12	3/8	6	5.60	2.25	.79	.59	11	14
EKT-518	18.78	6.79	2.55	1.84	1.68	1.12	2.44	.50	3/4	-12 1 1/16-12	3/8	6	5.60	2.25	.79	.59	14	16
EKT-708	8.72	9.75	3.52	2.22	1.67	1.62	3.93	1.25	1 1/2	-24 1 7/8-12	3/4	12	8.95	4.00	—	.70	23	27
EKT-718	18.72	9.75	3.52	2.22	1.67	1.62	3.93	1.25	1 1/2	-24 1 7/8-12	3/4	12	8.95	4.00	—	.70	30	34
EKT-1012	12.55	10.38	5.05	2.22	2.23	2.38	4.68	1.18	1 1/2	-24 1 7/8-12	1	12	9.62	4.38	1.12	.70	42	46
EKT-1024	24.55	10.38	5.05	2.22	2.23	2.38	4.68	1.18	1 1/2	-24 1 7/8-12	1	12	9.62	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.

* To register for **XSelector** please go to www.thermaltransfer.com/get-in-touch/ and complete the **XSelector** Inquiry form and submit. Download the **XSelector** for both Apple and Android formats by searching for **XSelector** in their App Stores. You must first register for **XSelector** before using it on mobile devices.