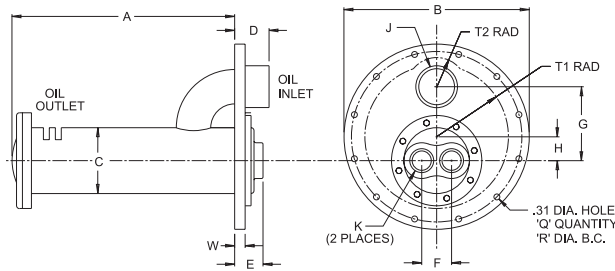
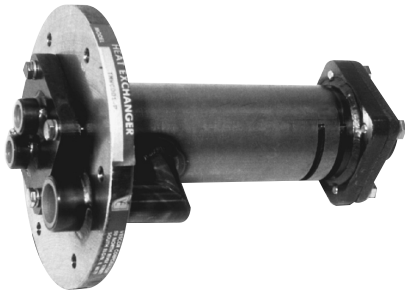




IN TANK-COOLERS (WATER COOLED)



- In-tank design minimizes space requirements and reduces plumbing
- Internal aluminum fins dramatically increase performance
- Removable end bonnets allow water passage servicing
- Steel shell for high strength
- T1 & T2 Radii represent required reservoir cutout

Options

SAE or BSPF connections available

Internal oil flow bypass-relief (Surge-Cushion®) Surge-Cushion is a registered trademark.

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

Model	A	B	C	D NPT or SAE	D BSPF	E	F	G	H	J NPT or BSPF	J SAE	K NPT or BSPF	Q	R	T1	T2	W
TMWC001	8.58	6.75	2.55	1.28	1.52	1.59	1.12	2.44	.50	3/4"	#12	3/8"	6	5.60	2.25	.79	.53
TMWC002	18.58	6.75	2.55	1.28	1.52	1.59	1.12	2.44	.50	3/4"	#12	3/8"	6	5.60	2.25	.79	.53
TMWC003	8.15	9.75	3.52	1.50	1.93	1.50	1.62	3.94	1.28	1 1/2"	#24	1"	12	8.94	4.00	-	.63
TMWC004	18.15	9.75	3.52	1.50	1.93	1.50	1.62	3.94	1.28	1 1/2"	#24	1"	12	8.94	4.00	-	.63
TMWC005	12.50	10.38	5.05	1.62	2.05	2.16	2.38	4.68	1.19	1 1/2"	#24	1 1/2"	12	9.62	4.38	1.12	.66
TMWC006	24.50	10.38	5.05	1.62	2.05	2.16	2.38	4.68	1.19	1 1/2"	#24	1 1/2"	12	9.62	4.38	1.12	.66

All all dimensions in inches. Tank gasket is included. BSPF Threads are 55° Full Form Whitworth.

NOTE: We reserve the right to make reasonable design changes without notice. Certified drawings are available upon request.

SPECIFICATIONS

Materials

Shell - Steel
 Tubes - Copper
 Fins - Aluminum
 Tubesheets - Steel
 Baffles - Steel
 End Bonnets - Cast Iron
 Gaskets - Nitrile Rubber/
 Cellulose Fiber

Ratings

Operating Pressure - PSI
 Shellside - 75
 Tubeside - 150
 Test Pressure - PSI
 Shellside - 75
 Tubeside - 150
 Max. Temperature - 250°F

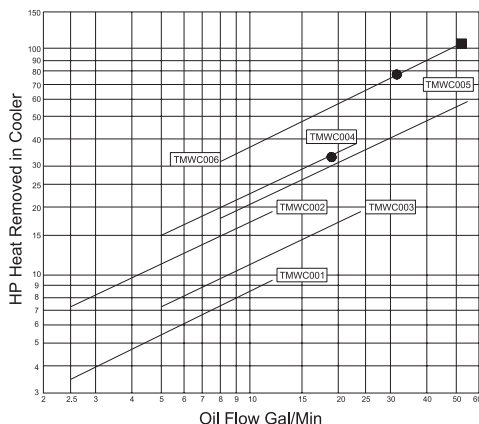
Maximum Flow Rates

Model Size	Shell Side (GPM)	Tube Side (GPM)
TMWC001/002	20	6
TMWC003/004	65	12
TMWC005/006	100	28

How To Order

Model Series	Connections	Surge-Cushion®
TMWC001	P = NPT Conn.	Omit - No Surge-Cushion®
to	S = SAE Oil Conn.	"R" - Surge-Cushion®
TMWC006	M = Metric Conn.	

Cooler Performance Curves



Cooler Selection Procedure

1. 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.
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.
3. Corrections for approach temperature and oil viscosity:

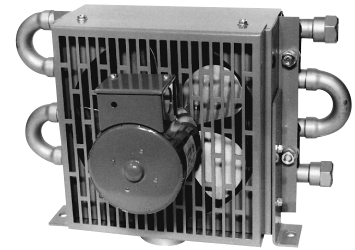
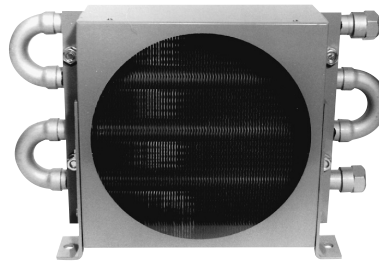
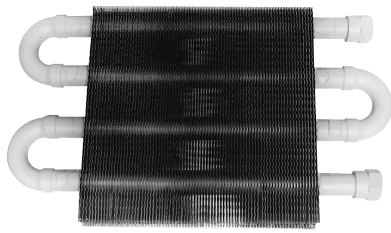
$$\text{HP Heat Removed in Cooler} = \text{HP actual} \times \left\{ \frac{40^\circ\text{F}}{\text{Oil out}^\circ\text{F} - \text{Water in}^\circ\text{F}} \right\} \times \text{Correction A}$$

VISCOSITY CORRECTIONS

Avg. 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



AIR OIL COOLERS



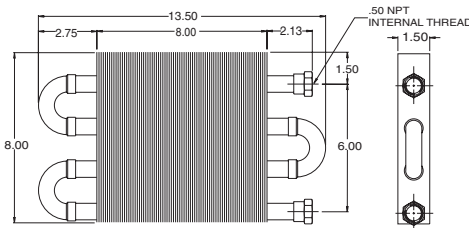
Many hydraulic power units recommend the operating temperature of the oil should not exceed 160° F. Excessive temperature can cause the oil to oxidize, forming gum, varnish, resins, sludge and acids. These by-products shorten the life of the oil, can cause valves to stick and cause erratic operation of the system. Also, excessive heat reduces the efficiency of the hydraulic system while consuming more energy. **Use Air Oil Coolers to Cool:** Fluid Power Systems, Gear Drives, Machine Tools, Torque Converters, Hydraulic Presses.

VESCOR® Air Oil Coolers Come Complete

- Ready for installation
- Readily available from stock
- Low cost - highly efficient designs

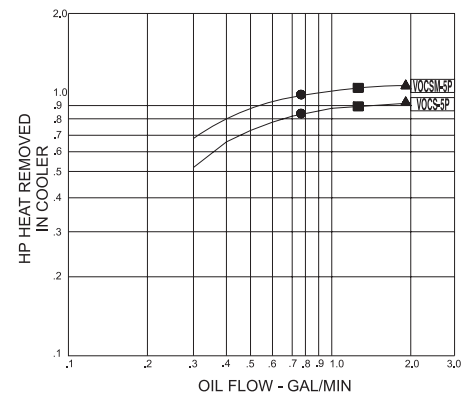
Oil Cooler

- Highly Efficient Design
- Rugged construction Resists Vibration



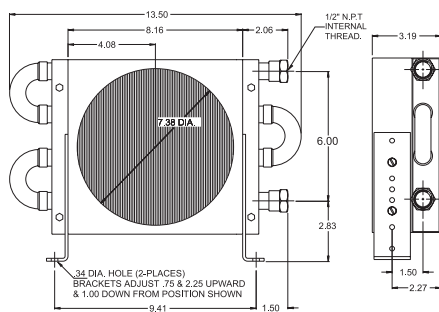
Order Data / Specifications			
Vescor Part Number	Flow Range GPM	HP Heat Removed	Shipping Weight
VOC-5-P	0.3-2	1.0	3.0

PERFORMANCE CURVES



TEFC Rear Mounted Oil Cooler

- Uses air stream from fan of electric motor
- Sized to fit popular electric motor frame sizes
- Durable powder painted cabinet
- Maximizes efficiency with contoured air side fins and internal oil turbulators
- Includes motor gasket and mounting bracket
- Fits Nema Frame sizes 48 thru 184T



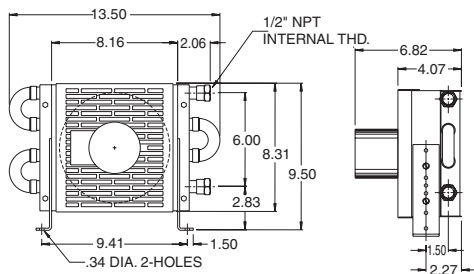
Bracket Adjustment .75 and 2.25 Upward
1.00 Downward (from position shown)

Order Data / Specifications			
Vescor Part Number	Flow Range GPM	HP Heat Removed	Shipping Weight
VOCS-5-P	0.3-2	1.0	6.0

- VOC-5-P Performance: D-Rate VOCS-DP Curve by 25% (When used behind TEFC motor)
- Curves are based in a 40°F approach temperature (oil out °F-amb air °F)
- Oil Press Drop Coding
 - = 5 P.S.I.
 - = 10 P.S.I.
 - ▲ = 20 P.S.I.
- Average Oil Viscosity = 100 SSU for performance rating
- All Models Above:
 - Maximum Pressures — 200 P.S.I.
 - Maximum Temperature — 350°F

Forced Air Oil Cooler

- Compact, highly efficient design with contoured side fins and internal oil turbulators
- Rugged construction resists vibration and stress
- Eliminates sewer and water costs
- Mounting bracket included for easy installation



Bracket Adjustment .75 and 2.25 Upward
1.00 Downward (from position shown)

Order Data / Specifications			
Vescor Part Number	Flow Range GPM	HP Heat Removed	Shipping Weight
VOCSM-5-P	0.3-2	1.0	13.0

NOTE: WITH VESCORS' POLICY OF CONSTANTLY IMPROVING ITS PRODUCTS, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.