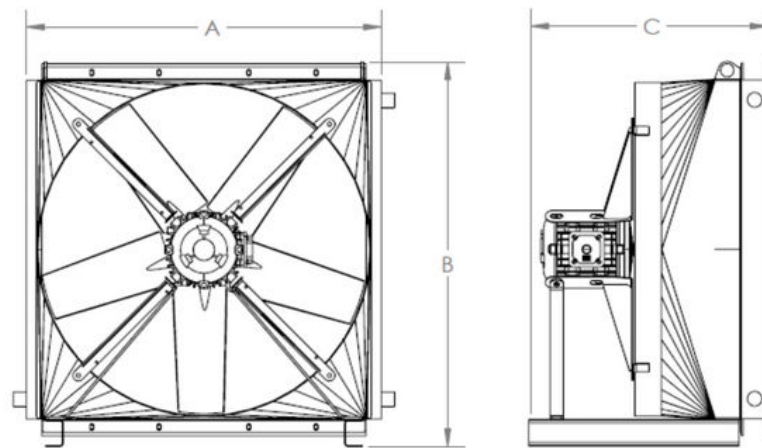


AIR BLAST OIL COOLERS

Ensure optimal machine performance and reliability.

The VENTURA range of air blast oil coolers offer unparalleled performance and reliability at affordable prices. The internal turbulators break up laminar flow inside the core tubes and provide the most efficient cooling performance. The coolers are coupled with WingFan cooling fans to ensure the best performance and lowest noise levels. The fans are available in unlimited fan configurations with 1mm diameter increments, ranging from 250 to over 2000 mm in diameter. Our optimised cowling design ensures a reduced resistance air flow path and provides the end user with the best-in-class cooling performance and operational energy savings.

Large cooler ports help minimise liquid side pressure drops. The coolers are suitable for use with hydraulic oil, water, glycol and other liquids. The industrial quality motors come standard with 380 V supply voltage. Voltages of 220 and 525 V are optional. DC fans for 12 V and 24 V are options for smaller models, however the performance data may differ from the standard models due to different air flow rates.



*Detailed drawings on application

Number	Core Dim [mm]	Ports	WingFan Impeller Code	Motor Size	Max Oil Flow [l/min]	Overall Dimensions		
						A	B	C
VEM28	260x260x60	3/4" BSP	250/6-6/P3HL/30/PA	0,25 kW 2P 380V	100	330	335	365
VEM28B	305x305x60	3/4" BSP	295/3-6/P3HL/30/PA	0,25 kW 2P 380V	135	385	380	365
VEM29	394x397x60	1" BSP	384/3-6/P3HL/30/PA	0,55kW 2P 380V	150	464	467	478
VEM30	460x473x60	1" BSP	450/3-6/P3HL/25/PA	0,55 kW 2P 380V	190	540	540	478
VEM31	565x587x60	1 - 1/4" BSP	555/6-6/P4ZL/35/PA	0,75 kW 4P 380V	225	635	657	478
VEM32	750x750x60	1 - 1/2" BSP	740/5-5/P5ZL/50/PA	1,5 kW 4P 380V	300	802	835	498
VEM40	790x650x140	2" SAE	640/7-7/P6ZL/35/PA	2,2 kW 4P 380V	740	960	830	790
VEM64	1000x1000x120	2"SAE	990/6-6/P6ZL/25/PA	4,0 kW 4P 380V	800	1190	1250	935
VEM70	1220x1220x120	2"SAE	1210/8-8/EDGE5ZL/30/PA	5,5 kW 6P 380V	1050	1420	1502	1200



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Selecting an Air Blast Cooler

Consider the required heat rejection rate (kW or W), maximum allowable fluid temperature, ambient air temperature and the viscosity of the fluid to find a suitable cooler model.

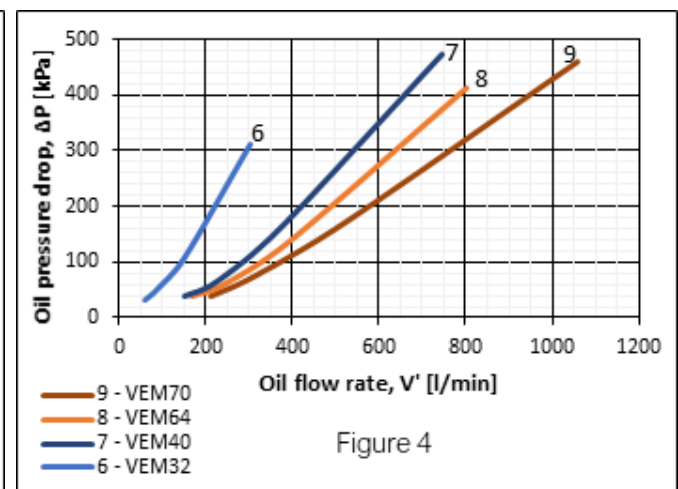
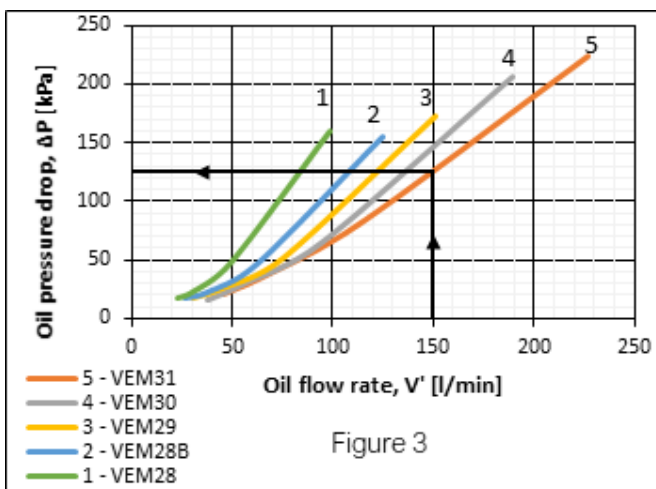
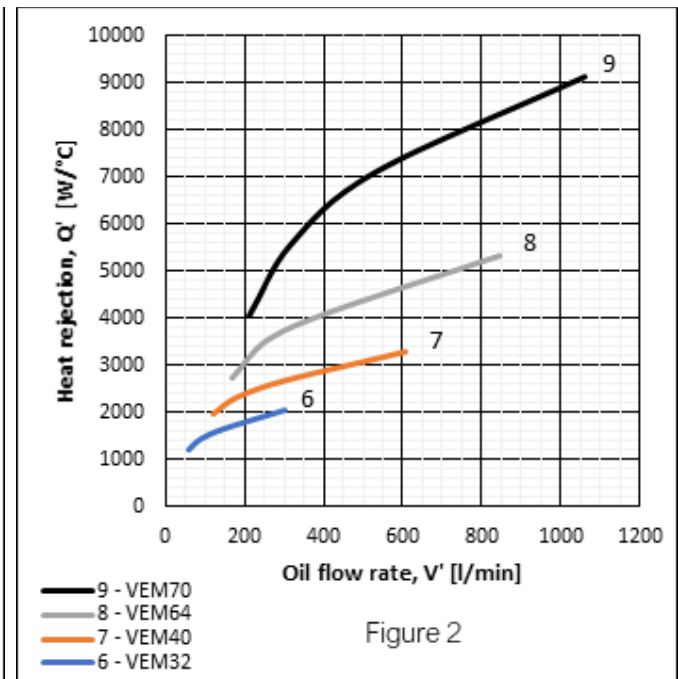
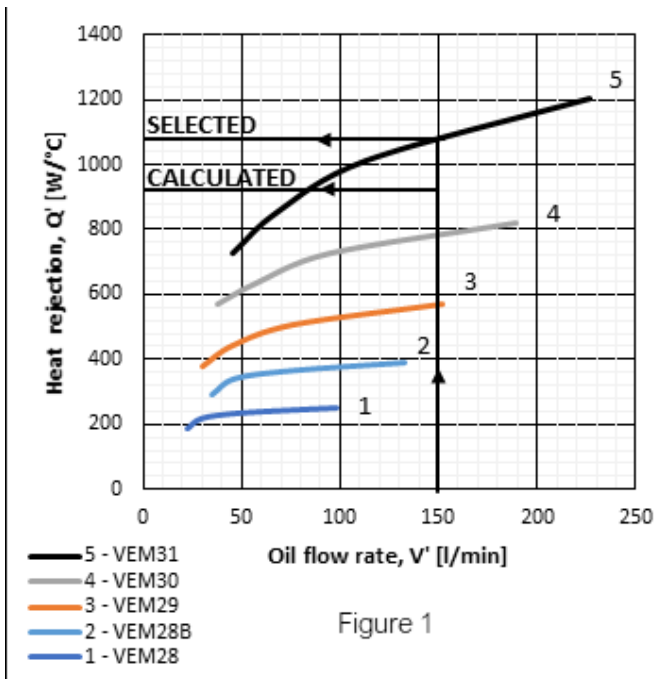
See the below example for the calculation to determine the necessary requirements.

A hydraulic system requires a heat rejection of 24kW. The max allowable temperature is 65 °C with an ambient temp of 40 °C. In this case ISO VG 68 oil is the fluid being cooled and an oil pump with a flow rate of 150 l/min is used.

$$\begin{aligned}
 Q' &= \text{Heat rejection (W)} / \{ \text{max oil temp (}^\circ\text{C)} - \text{ambient air temp (}^\circ\text{C)} \} \\
 &= \frac{24,000}{65 - 40} \\
 &= 960 \text{ W}^\circ\text{C}
 \end{aligned}$$

With the oil flow rate of 150 l/min and minimum of 960 W/°C, VEM31 would be the appropriate cooler. The heat rejection, in this case, would be 1100 W/°C, which gives us a safety factor of 16%.

To find the pressure drop on the oil side, make use of Figure 3 and Figure 4. For this example, the pressure drop would be 125 kPa.



*ISO VG 68 Oil at 65°C

*Consult us for other viscosities