



DEO - Help to Desorb More Powerful Force
迪奥—助你释放最强动力

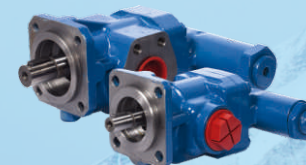


NINGBO DEO MACHINERY CO.,LTD
宁波迪奥机械有限公司

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Company profile 企业简介

Ningbo DEO Machinery Co.,LTD. is a supplier who majors in coolers and their fittings, having 15 years of experience of designing and producing coolers. Our designing and producing group has reliable technology and abundant experience in hydraulic fluid cooling, lubricant cooling, voltage transformer oil cooling, water thylene glycol cooling, air cooling , natural gas cooling and so on.

The principal products of our company are wind coolers, water coolers, wind - autocircling coolers, water - autocirculating coolers, gear transporting pumps, adding up to five categories, dividing into 18 series and 320 normative types of machines. These products are widely applied to engineered machinery, machine tools, petrochemical industry, steel, wind electricity, vessels, mining, colliery, etc. They are approved and liked by all consumers, which constitutes the greatest affirmation and encouragement to our formal diligence.

It is the core of our work to poner what consumers desire, earnestly help to solve conundrums in temperature controlling, so as to provide considerate service in product upgrading of sonsumers. Aspiring after excellence and product innovation is our persistent pursuance and long-range goal.

DEO - Help to Desorb More Powerful Force

宁波迪奥机械有限公司是一家专业的冷却器及配件供应商，公司有着15年冷却器设计生产经验。我们的设计生产团队在液压油冷却、润滑油冷却、变压器油冷却、水乙二醇冷却、空气冷却、天然气冷却等方面有可靠的技术和丰富的经验。

我公司主要产品有风冷却器、水冷却器、自循环风冷却器、自循环水冷却器、齿轮输送泵5大类，18个系列，320款标准机型，已广泛应用于工程机械、机床、石油化工、钢铁、风电、船舶、矿山和煤矿等众多行业。产品获得了客户的一致认可和好评，这也是对我们之前工作最大的肯定与鼓励。

想客户所想，认真的协助客户解决产品中的温度控制难题，为客户的产品不断升级提供最及时周到的服务，是我们工作的核心。追求卓越、产品创新是我们矢志不渝的追求和长远目标。

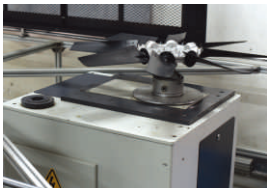
迪奥——助你释放最强动力！



Capability Testing Platform of radiators
散热器性能测试台



Testing Platform of Pressure Impulse
压力脉冲测试台



German SHENKE Dynamic Balancer
德国申克动平衡机



Testing Platform of Gear Pump
齿轮泵测试台



Full-automatic Gear Testing Apparatus
全自动齿轮检测仪



Full-automatic Three-dimensional Measuring Apparatus
全自动三坐标测量仪



Vacuum Brazing Workshop
真空钎焊车间



Cleaning Workshop
清洗车间



General Office
综合办公室



A Glimpse of Workshop
车间一角



A Glimpse of Workshop
车间一角



A Glimpse of Workshop
车间一角



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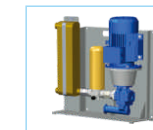
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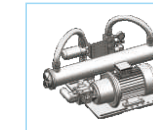
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How to choose a model 如何进行选型

Necessary parameters for model choosing are as below:

- Abstracted heat quantity: heat quantity need to be carried off by cooler
- Oil flux: the quantity of oil which directly enter cooler
- Inpouring temperature of oil: the temperature of oil which enter cooler.
- Cooling wind temperature: the temperature of cooling wind which enter cooler.

1. Data necessary to input

For example:

Q_{req} [kW]	Heat quantity to abstract	$Q_{req}=22\text{kW}$
V_{oil} [L/min]	Oil flux	$V_{oil}=100\text{ L/min}$
T_{oil} [°C]	Inpouring humidity of oil	$T_{oil}=70^\circ\text{C}$
T_{air} [°C]	Humidity of cooling wind	$T_{air}=30^\circ\text{C}$

2. Calculation of transforming comparative abstracted heat quantity into heat capability:

$ETD [^\circ\text{C}] = T_{oil} - T_{air}$
Difference between inpouring temperatures of oil and cooling wind
 $ETD [^\circ\text{C}] = T_{oil} - T_{air} = 70^\circ\text{C} - 30^\circ\text{C} = 40^\circ\text{C}$

$q_{req}[\text{kW}/^\circ\text{C}] = Q_{req} / ETD$
Comparative abstracted heat quantity

$q_{req}[\text{kW}/^\circ\text{C}] = Q_{req} / ETD = 22\text{kW} / 40^\circ\text{C} = 0.55\text{kW} / ^\circ\text{C}$

3. Choose a cooler according to the curve chart of abstracted quantity

To choose cooler according to curve chart of abstracted heat quantity (in page18)

Cooling capacity of DET5-4:
 $Q=0.61\text{ kW}/^\circ\text{C} > q_{req}=0.55\text{kW}/^\circ\text{C} \Rightarrow$ choose DET5-4

Actual heat release:
 $Q=q \times ETD \quad Q=0.61\text{kW}/^\circ\text{C} \times 40^\circ\text{C}=24.4\text{kW}$

4. Pressure loss

You may find out that the pressure loss is 0.81 bar according to the curve chart of pressure loss.

5. Calculation of temperature difference between entering oil and outflowing oil

Calculating formula: $\Delta T = Q / (V_{oil} \cdot \rho \cdot C_p)$

If there is no detailed parameter, you may reckon the difference in the light of the formula below.

$\Delta T_{oil}[^\circ\text{C}] = 33 \times Q[\text{kW}] / V_{oil}[\text{L/min}]$

$\Delta T_{oil} = 33 \times 24.4\text{kW} / 100\text{ L/min} = 8.1^\circ\text{C}$

6. Result

The cooler model of choice: DET5-4
Actual heat abstraction quantity: 24.4kW
Temperature difference between inpouring and outflowing oil through the cooler: 8.1°C
Pressure loss: 0.81bar

选型所需要的参数如下:

- 散热量: 要求冷却器带走的散热量
- 油流量: 直接进入冷却器的油流量
- 油进口温度: 进入冷却器的油的温度
- 冷却风温度: 进入冷却器的冷却风温度

1. 需要输入的数据:

举例说明:

Q_{req} [kW]	需要的散热量	$Q_{req}=22\text{kW}$
V_{oil} [L/min]	油流量	$V_{oil}=100\text{ L/min}$
T_{oil} [°C]	油进口温度	$T_{oil}=70^\circ\text{C}$
T_{air} [°C]	冷却风的温度	$T_{air}=30^\circ\text{C}$

2. 比散热量换热能力的计算:

$ETD [^\circ\text{C}] = T_{oil} - T_{air}$ 油进口温度和冷却风进口温度之差
 $ETD [^\circ\text{C}] = T_{oil} - T_{air} = 70^\circ\text{C} - 30^\circ\text{C} = 40^\circ\text{C}$

$q_{req}[\text{kW}/^\circ\text{C}] = Q_{req} / ETD$ 需要的比散热量

$q_{req}[\text{kW}/^\circ\text{C}] = Q_{req} / ETD = 22\text{kW} / 40^\circ\text{C} = 0.55\text{kW} / ^\circ\text{C}$

3. 根据散热量曲线选择冷却器

根据散热量曲线图表选择合适的冷却器(见18页)

DET5-4 的散热量比:

$Q=0.61\text{ kW}/^\circ\text{C} > q_{req}=0.55\text{kW}/^\circ\text{C} \Rightarrow$ 选 DET5-4

实际散热量:

$Q=q \times ETD \quad Q=0.61\text{kW}/^\circ\text{C} \times 40^\circ\text{C}=24.4\text{kW}$

4. 压力损失

根据压力损失曲线图表可查得压力损失是0.81 bar

5. 冷却器进出口油温差计算

计算公式: $\Delta T = Q / (V_{oil} \cdot \rho \cdot C_p)$

如果没有详细的参数, 可以按以下公式估算:

$\Delta T_{oil}[^\circ\text{C}] = 33 \times Q[\text{kW}] / V_{oil}[\text{L/min}]$

$\Delta T_{oil} = 33 \times 24.4\text{kW} / 100\text{ L/min} = 8.1^\circ\text{C}$

6. 结果

选择冷却器型号: DET5-4
实际散热量为: 24.4kW
冷却器油进出口温差: 8.1°C
冷却器压力损失: 0.81bar

Instalation of oil cooling system 油冷却系统的安装

1. Installation of cooler

Take safe steps during the installation, making sure to eradicate installing strain. To reduce tensile force and buffer vibration, flexible connecting components and shockproof pads should be used. While installing connecting tunnels, filters and drivepipes, you should hold the connection with a spanner lest the cooler be damaged. No strain and shake should consist in connections between tubes for exit & entrance and the cooler. Do not let the cooler support or bear too heavy units. Make sure not to damage the surface of seal, flange plates and interfaces.

2. As ciscosity of petrochemical media rises when the temperature is low, if operation start under this circumstance, or the flux is great at an instant, pressure peak value which is not peimitted may emerge. So bypass valve should be installed.

3. Pressure peak values often emerge or even rise to several times than usual in hydraulic and lubricating systems. As these peak value arise as the form of pulses, only an oscillography can record them. As the peak values arise in a very short time, ecumenic overloading valves usually can not react in time, then pressure assaults and concussions are difficult to be eliminated. Under these circumstances, we suggest an independently-circulating cooling loop be adopted.

1、冷却器的安装

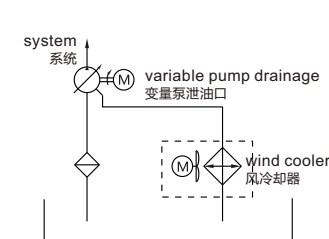
安装时要注意有关的安全措施。在安装操作过程中要确保没有安装应力。为减少张力, 缓冲振动, 请使用柔性连接元件和防振垫片。安装接管、过滤器及套管等, 要用扳手握住被连接部分, 以避免损坏冷却器。进出口管路 with 冷却器的连接必须无应力, 能抗振动。不可让冷却器承受或支撑其它有相当重量的部件。安装时请特别注意不要损伤密封表面、法兰盘和接口。

2、油类介质在低温情况下, 粘度增大, 这样在低温启动时, 可能会产生超过允许范围的压力峰值; 或在瞬时大流量时, 也会产生超过允许范围的压力峰值。因此必须安装旁通阀以保护冷却器。

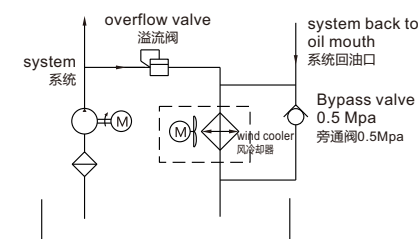
3、油路的连接在液压系统和润滑系统里经常会有压力峰值出现, 这些峰值可能达到最大压力的好几倍, 这些压力峰值以脉冲形式出现, 只能用示波仪把它们记录下来。由于这种峰值出现的持续时间很短, 一般的过载阀无法及时反应, 从而远远不足以消除系统内的压力冲击和压力震荡。在这种情况下, 出于安全和可靠性方面的考虑, 建议使用独立循环冷却回路。

Installing diagrammatic sketch of wind-cooling-style oil cooler

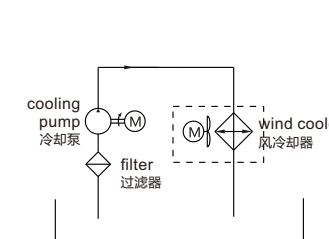
风冷式油冷却器安装示意图



Variable pump installation method:
Answer the variable pump drainage
变量泵安装方法: 接变量泵泄油口



Quantitative pump installation method:
after the overflow valve oil mouth
定量泵安装方法: 接溢流阀回油口



Independent circulation cooling
installation method
独立循环冷却安装方法



》 Supplementary illustrations for model choosing 选型补充说明

》 Matters need attention about installation and operation of water coolers 水冷却器安装使用注意事项

1. Converting coefficients while viscosity is different

Curve chart of pressure loss is directed against the condition in which the fluid viscosity is 30cst. To calculate the press loss under the condition of other fluid viscosity, please apply such parameters below:

Viscosity (mm ² /s)	10	15	20	30	40	50	60	80	100
Conversion factor (f)	0.5	0.65	0.75	1.0	1.2	1.4	1.6	2.1	2.8

For example:
Under the condition of flux at 150 litres per minute and viscosity at 30cst, the pressure loss is 1.3bar. So assume that the viscosity of ISO Vg46 oil is 20cst at the temperatures of 60 degrees Centigrade, the pressure loss of DT7 is calculated like this: f = 0.75x1.3bar, the result is about 1 bar. About the relationship between viscosity and humidity, you may refer to relevant handbooks.

2. Choice of hydraulic fluid temperature

The maximum temperature allowed is decided by consumers according to particular operating conditions. Fluid temperature mainly affect the efficiency of system (owing to leakage) and lifetime of seal components. Generally temperature of hydraulic fluid is allowed to reach 80-85 degrees Centigrade, that of lubricant is allowed to maintain at 110-120 degrees Centigrade.

3. Choice of heat abstraction quantity

Generally speaking, the following methods are adopted to decide abstracted heat quantity.

1. To calculate precisely according to actual conditions of heat generation .
Example: Assume a tank of 100litres in hydraulic system is working, oil temperature in it rises from 20 to 45 degrees Centigrade in 15 minutes, thermal energy to be disposed is calculated as below:

$$Q_{req} = T \times C_{oil} \times \rho_{oil} \times V \div S$$
$$= 25 \times 1.88 \times 0.915 \times 100 \div (15 \times 60)$$
$$= 4.78(KW)$$

2. To reckon heat quantity to abstract in accordance with formula below, considering temperatures of inpouring and outflowing fluid:

$$Q_{req} \approx 0.028 \times V \times (T_{In} - T_{Out})$$

3. If parameters above are absent, one third of gross capacity of hydraulic system may be deemed to be heat quantity to abstract. For example.

Diesel engine driven	1/3 diesel engine power
Motor drive	1/3 motor power

1. 不同粘度下的转换系数

压力损失曲线是针对液体粘度为30cst而言的，其他粘度下的压力损失，请使用以下转换参数来计算。

粘度 (mm ² /s)	10	15	20	30	40	50	60	80	100
转换系数 (f)	0.5	0.65	0.75	1.0	1.2	1.4	1.6	2.1	2.8

举例说明:
在流量为150 L/min，粘度为30cst的情况下，DT7的压力损失为1.3 bar，假设 ISO Vg46油在60℃的情况下粘度为20cst，则其压力损失为 f=0.75乘以 1.3 bar，其结果大约为 1 bar。关于粘度与温度的关系可以查相关的手册。

2. 液压油油温的选择

液压油的油温最高允许多少？应由客户根据具体使用情况来确定。油温主要影响系统的效率（由于泄漏）及密封件的寿命。通常情况下，液压油的最高允许油温可达到80~85℃，润滑油的最高允许油温可达到110~120℃。

3. 冷却器散热量的选择

一般情况下，可以采取以下几种方法确定散热量：

1. 根据系统的实际发热情况进行准确计算。
范例：设液压系统，油箱为100L运行时，油温在15分钟从20℃上升到45℃。须处理散热能：

$$Q_{req} = T \times C_{oil} \times \rho_{oil} \times V \div S$$
$$= 25 \times 1.88 \times 0.915 \times 100 \div (15 \times 60)$$
$$= 4.78(KW)$$

2. 根据进出口油温的要求，按以下公式估算散热量。

$$Q_{req} \approx 0.028 \times V \times (T_{进} - T_{出})$$

3. 如果不能提供以上参数的话，可选用液压系统总功率的1/3作为要求的散热量。比如：

柴油机驱动	1/3柴油机功率
电动机驱动	1/3电动机功率

Attention

1. Make sure that the connecting position is right, no tangential force should be permitted between pipeline and the heat exchanger, lest fractures should appear. Measures to reduce force and shake are to be taken.
2. Water should be clean, no sinking dirt exists in it, and too much chloridion is not permitted. When inferior water is used, take care that pullutants such as sulphuric acid and sulphuric oxide will strengthen the corrosivity of chlorine.
3. A dirt purger with a filter whose meshes are 0.5-1.5mm should be installed in the ring circuit of cooling water, placed before the pump at best. The size of meshes depends upon water quality and the degree of protection needed.
4. As freezing might seriously damage this product, anti-freezing should be thought about when environment temperature is below zero Centigrade.
5. Who need to adopt sea water in cooling should make a statement when ordering our products.
6. Regular exhausting and inner checking up and washing are needed. Washing interval depends on the quality of cooling water. Generally every 5-10 months a thorough checking-up and washing should be done.
7. If zinc anode is used in this product, inspecting is needed 2 weeks after its first operation. Duing the inspection, inspecting interval is decided by corrosion degree of the zinc anode. When 70% of the zinc anode is corroded, it should be replaced.

注意事项

1. 正确连接方位，系统管路 with 换热器联接不能有切向力，以防因切向作用导致断裂，应采用减力、减振措施。
2. 水质应干净无积垢，并控制氯离子含量不能过高；应用较差的冷却水时要小心，污染物如硫酸和硫氧化物将增大氯的腐蚀作用。PH值通常应该在7~9之间，太高可能导致结垢，甚至腐蚀。
3. 过滤网网眼为0.5~1.5mm的除污器被装在冷却水环路中，最好设在泵前，网眼大小取决于水质和需要保护的程 度。
4. 环境温度0℃以下，应在系统中考虑防冻结现象，如出现该类情况，会严重损坏本产品。
5. 用海水冷却时，需在订货时说明。
6. 要定期排气、定期进行内部检查和清洗，清洗周期据冷却水质而定，一般5-10个月必须进行一次的检查和清洗。
7. 如在产品中使用了锌阳极，则应当在初次使用2周后对锌阳极进行检查，检查时，通过观察阳极锌金属的实际腐蚀情况确定将来的检查周期；当锌金属的腐蚀量达到70%时，必须对锌阳极进行更换。

>> Matters need attention about installation and operation of water coolers 水冷却器安装使用注意事项

The connection of whorl connecting tubes at entrance and exit

1. The utmost torque of the whorl is 385Nm in G1,and that in G1-1/2 is 770Nm.
2. Make sure to prevent installing strain in connection between tubes.
3. Avoid the water cooler to be damaged by linear expansion and vibrance engendered by the pipeline.

Fastening of screw bolts

To avoid abscission and the danger of divulging coming from the distortion of seal backboard, both of which are caused by too great torque force, please use a torque spanner.

Blot	M6	1/4"	M8	M10	M12
Torque	≤10Nm	≤12Nm	≤15Nm	≤18Nm	≤22Nm

进出口螺纹接管联接

1. G1"内螺纹最大扭矩385Nm；G1-1/2"内螺纹最大扭矩770Nm。
2. 管路连接必须保证无安装应力。
3. 避免管路对水冷却器产生线性膨胀和振动。

螺栓紧固联接

为避免螺栓因过大扭力而产生脱落及对换热器封后板产生变形导致泄漏危险，使用扭力扳手。

Blot	M6	1/4"	M8	M10	M12
Torque	≤10Nm	≤12Nm	≤15Nm	≤18Nm	≤22Nm

>> Fittings 配件

Temperature bypass-valve

A temperature bypass-valve is used for protection of cooler in low temperature environment. When the temperature is below the set point by temperatuere bapass-valve, the bypass-valve will fully open and hydraulic fluid does not go through radiator. When the temperature rises, the bypass-valve begins to shut partly. When the temperature rises over the set point, the bypass-valve shuts completely, and all hydraulic fluid go through the radiator.

Set temperature range: 45±2°C

Temperature point for complete shutting: 60°C

Utmost flux: 100L/min, 160L/min



温度旁通阀

温度旁通阀用于低温情况下对冷却器有效的保护。当温度低于温度旁通阀设定值时，旁通阀全开，液压油不走散热器；当温度升高，旁通阀开始关小，当超过关闭设定值时，旁通阀全关，液压油全部走散热器。

设定温度值：45±2°C

全关温度值：60°C

最大流量：100L/min，160L/min

Pressure bypass-valve

It is mainly applied to lubricating and heat radiating systems, protecting the systems while the pressure is too high. When entrance pressure reaches the set pressure point, the bypass-valve opens, preventing the radiator from bearing great pressure effectively, and preventing the fluid pump and electrical machinery in the lubricating system from overloading.

Set pressure range: 0.05-2.5Mpa

Flux range: 0-120L/min



压力旁通阀

主要用于润滑系统或散热系统中，起压力过高保护的作用。当入口压力达到设定压力值时，压力旁通阀打开，能有效防止散热器承受过高的压力；也能在润滑系统中有效防止油泵和电机过载情况。

压力设定范围：0.05-2.5Mpa

流量范围：0-120L/min

Temperature switch

It is applied in monitoring the start and stop of electrical fans to control the abstracting capability, and also in giving alarms when the temperature is too high. it can be operated by direct-current and alternating electricity. An additional relay is needed to control the fan lest the contactor of the temperature switch should be overloaded.

温度开关

主要用于电驱动风扇的启动停止来控制散热器的散热能力，也用于温度过高报警。可分为直流和交流两种，需另外增加继电器来控制风扇，以免温度开关的触点过载。



Pressure switch

Mainly used for monitoring the system pressure as high and low voltage alarm.

压力开关

主要用于监视系统压力作高低压报警。



Wind Cooler (standard form)

风冷却器（标准型）



» Enumeration of wind cooler models 风冷却器型号说明

DELA - 4 - 4 - A - T - 55 - 0 - Ex - SX - R
1 2 3 4 5 6 7 8 9 10

1. Serial number

DEL, DELA, DELH, DET, DEQ, DEK, EC

2. Models of Cooler

1, 2, 3, 3B, 4, 4B, 5, 6, 7, 8, 9, 10, 11

3. Rotation rate of wind vane

2P 3000rpm =2 6P 1000rpm =6
4P 1500rpm =4 8P 750rpm =8

4. Voltage and frequency

3 ̸ 220/380V 50Hz	=A
3 ̸ 380/660V 50Hz	=B
3 ̸ 660/1140V 50Hz	=C
3 ̸ 220-240/380-420V 50Hz; 440/480V 60Hz	=E
2 ̸ 110V	=H
2 ̸ 220V	=I
2 ̸ 380V	=J
DC 12V	=K
DC 24V	=L
Others (to be introduced verbally)	=***

5. Built-in bypass-valve

Temperature bypass-valve (45-55°C)	=T
Pressure bypass-valve (5 Bar)	=P
None	=0
Others (to be introduced verbally)	=X

6. Temperature switch

45°C = 45, 55°C = 55, 65°C = 65, 75°C = 75, None = 00

7. Directions of entry & exit

Lower left entry, right upper exit, facing the radiator	=0
Lower right entry, left upper exit, facing the radiator	=1
Special	=Z

8. Applicable working conditions

Not explosion-proof	=None
Exd I explosion-proof (not digging side)	=Ex
Exd II explosion-proof (explosion-proof symbols to be introduced verbally)	=Ex II

9. Direction of wind

Wind-inhaling = None Wind-blowing = CF Bidirectional = SX

10. Radiating process

One-way process=None Two-way process=R

Attention: If special requirements are needed, please tell us verbally.

- All series of products by our company can be equipped with temperature bypass-valves or pressure bypass-valves, which are welcome to be selected.
- When you are choosing a model, please tell us the environmental temperature and altitude where the cooler will work, so that we can help you choose it correctly.

1. 系列号

DEL, DELA, DELH, DET, DEQ, DEK, EC

2. 冷却器型号

1, 2, 3, 3B, 4, 4B, 5, 6, 7, 8, 9, 10, 11

3. 风叶转速数

2P 3000rpm =2 6P 1000rpm =6
4P 1500rpm =4 8P 750rpm =8

4. 电压和频率

3 ̸ 220/380V 50Hz	=A
3 ̸ 380/660V 50Hz	=B
3 ̸ 660/1140V 50Hz	=C
3 ̸ 220-240/380-420V 50Hz; 440/480V 60Hz	=E
2 ̸ 110V	=H
2 ̸ 220V	=I
2 ̸ 380V	=J
DC 12V	=K
DC 24V	=L
其他(用明语说明)	=***

5. 内置旁通阀

温度旁通阀(45-55°C)	=T
压力旁通阀(5 Bar)	=P
无	=0
其他(用明语说明)	=X

6. 温度开关

45°C = 45, 55°C = 55, 65°C = 65, 75°C = 75, None = 00

7. 进出口方向

面对散热器, 左下进口, 右上出口	=0
面对散热器, 右下进口, 左上出口	=1
特殊	=Z

8. 适用工况

非防爆	=无
Exd I 类防爆 (非采掘面)	=Ex
Exd II 类防爆 (用明语说明防爆标志)	=Ex II

9. 风向

吸风式 = 无 吹风式 = CF 双向 = SX

10. 散热流程

单流程 = 无 双流程 = R

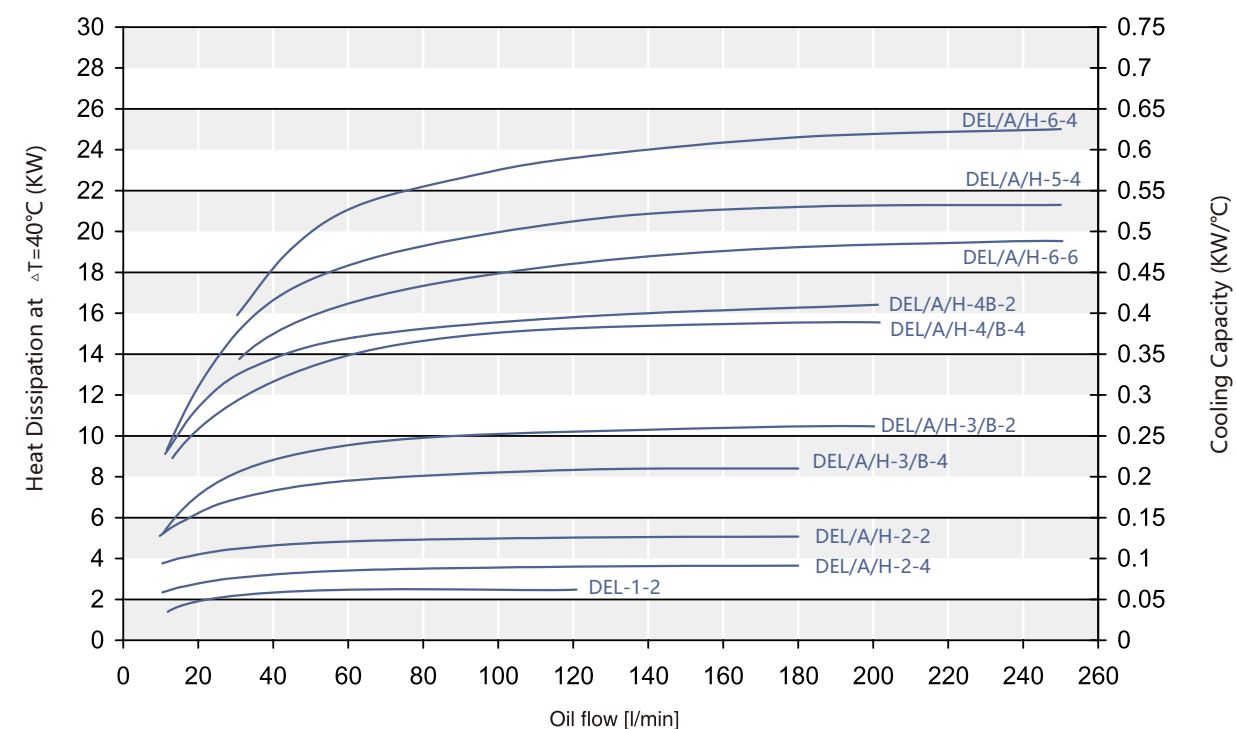
注: 如有其他特殊要求请用明语说明!

- 我公司全系列标准产品, 均可选配内置温度旁通阀或压力旁通阀, 欢迎选配
- 选型时请告知您的使用环境温度 and 海拔高度, 以便我们为您正确选型

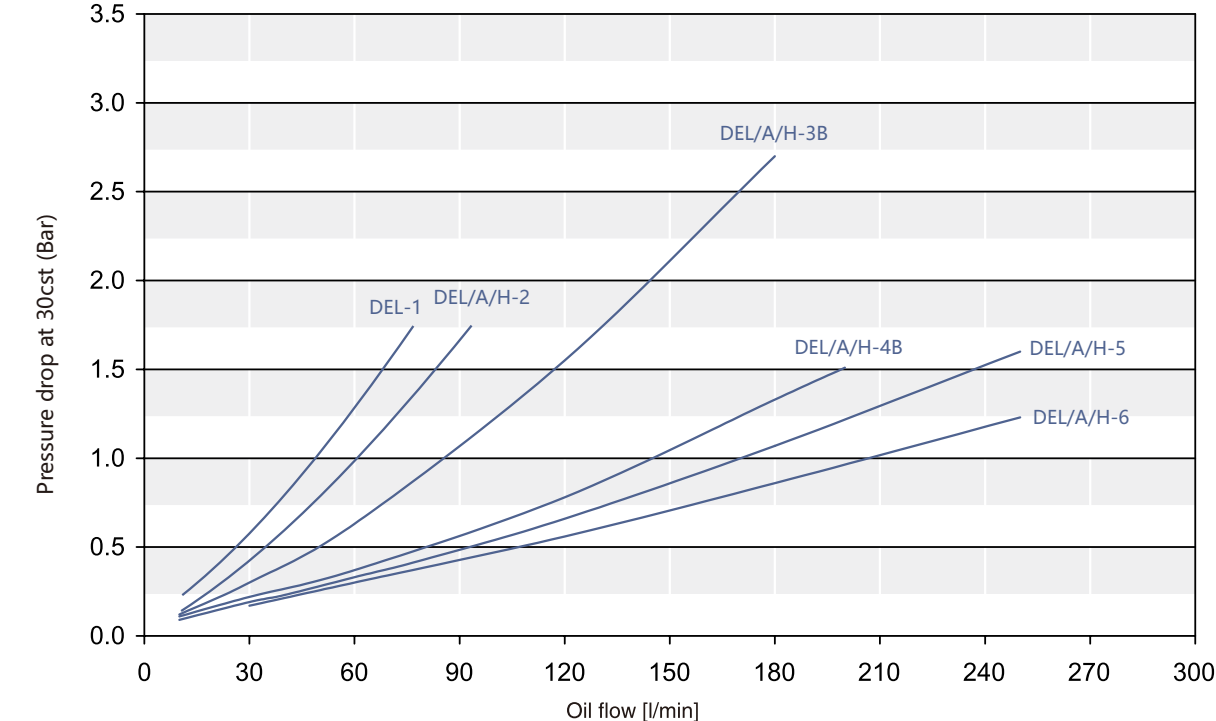
» Heatabstraction quantity curve of DEL. DELA. DELH 散热量曲线

» Pressure drop curve of DEL. DELA. DELH 压力损失曲线

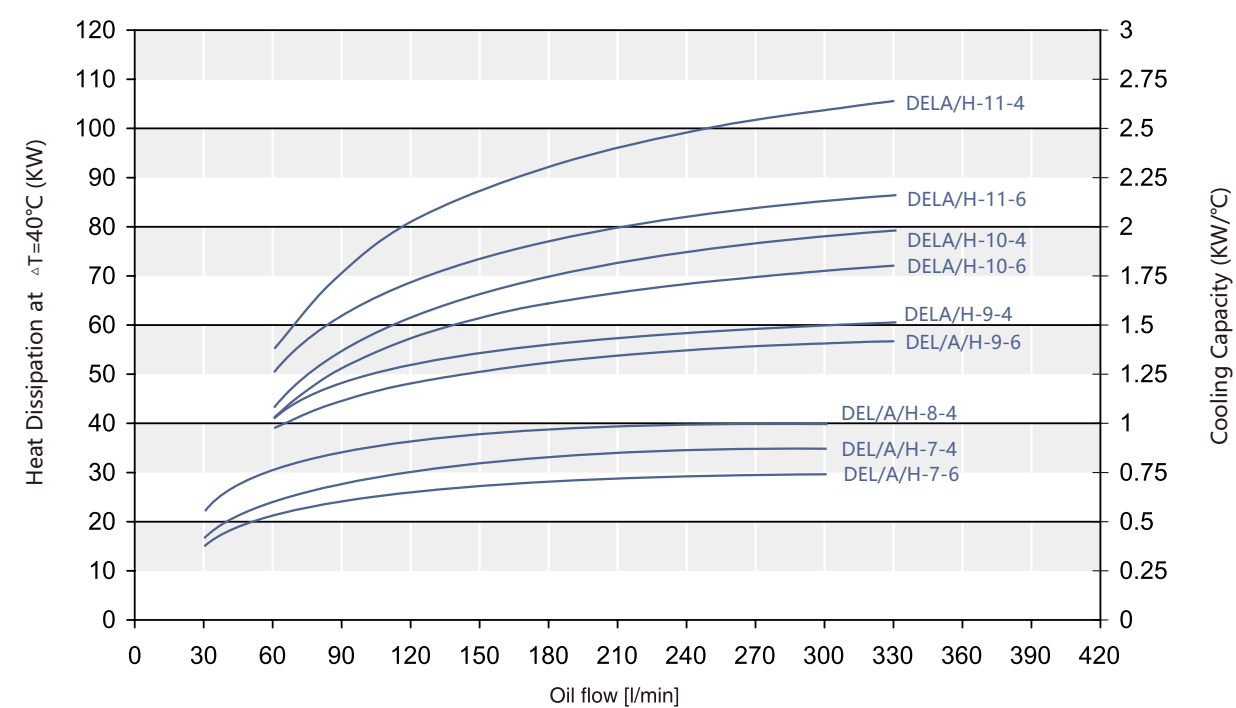
DEL1~6



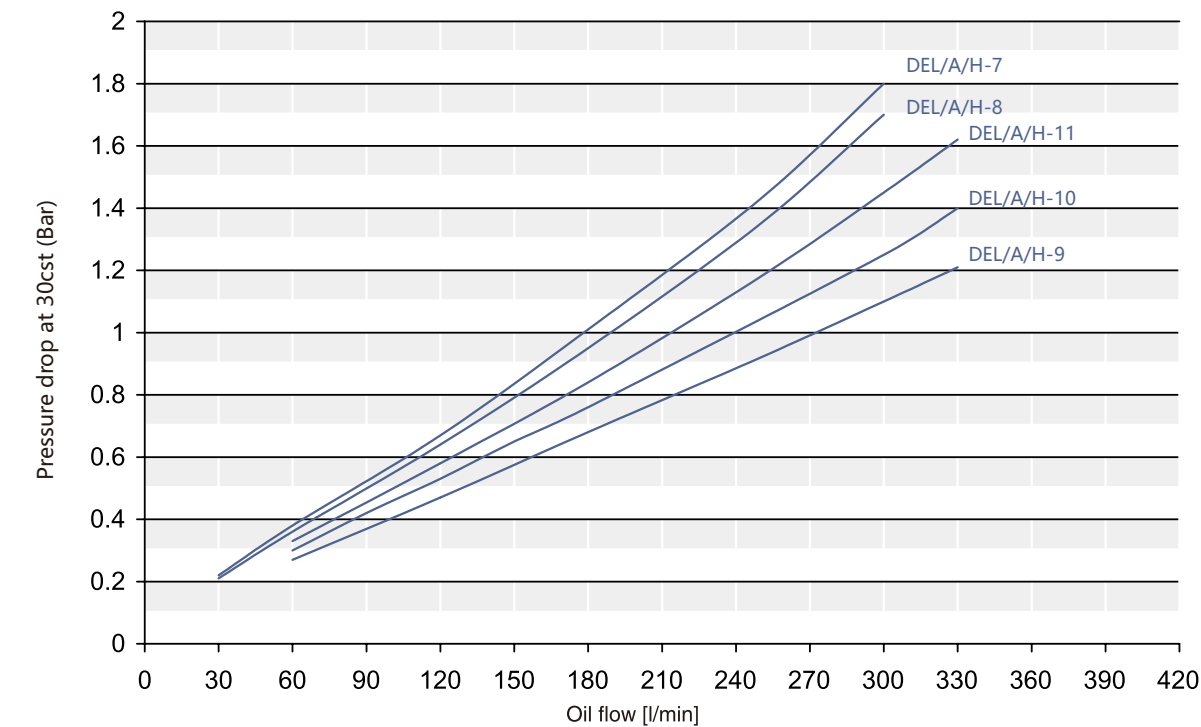
DEL1~6



DEL7~11



DEL7~11



DEL series

Coolers applied to indoor hydraulic and lubricating systems
液压系统、润滑系统等室内用冷却器

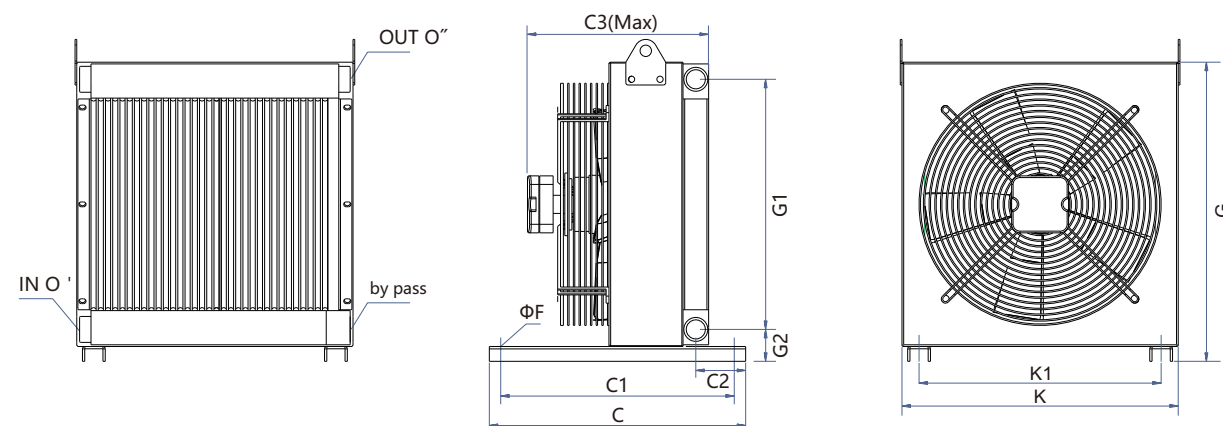


Mainly use for :
General hydraulic system, lubricating system, gearbox (large reduction box) and so on in indoor enviroment.

Technical data (DEL-1~DEL-8)
Maximum static pressure:
16 Bar (ones of higher pressure can be custom made)
Rated inlet tempreture:
70 °C (below 130 °C can be custom made)

DEL主要运用于:
一般液压系统、润滑系统、齿轮箱
(大型减速机) 等室内工作环境

技术参数:
最大静态压力: 16Bar (更高压力接受定制)
额定入口温度: 70°C (130°C以下可订制)



Dimensions 外形尺寸

Make sure you can select the right cooler, please contact us ※ 为保证冷却器选型的准确性, 请与迪奥公司电话联系。

Type 型号	G ±10	K ±10	C ±2	G1 ±5	G2 ±5	K1 ±2	C1 ±2	C2 ±5	C3 ±5	O'	O''	ΦF
DEL1	356	226	135	289	/	206	70	/	135	G3/4"	G3/4"	9
DEL2	356	335	296	289	43	160	255	58	240	G3/4"	G3/4"	9*12
DEL3B	456	385	296	389	43	290	255	63	300	G3/4"	G3/4"	9*12
DEL4B	525	486	450	439	56	425	410	78	345	G1"	G1"	9*20
DEL5	565	545	450	479	56	482	410	78	345	G1"	G1"	9*20
DEL6	645	585	450	500	86	482	410	78	345	G1-1/4"	G1-1/4"	9*20
DEL7	738	708	500	630	70	560	460	98	420	G1-1/4"	G1-1/4"	9*20
DEL8	866	700	500	760	68	560	460	98	420	G1-1/4"	G1-1/4"	9*20

Technical data of DEL 技术参数

Type 型号	Comparative Cooling Capacity [KW/°C] 比散热量	Suggested Flux [L/min] 建议流量	Fan Diameter [mm] 风扇直径	Fan speed [rpm] 风扇转速	Noise level [dB(A), 1m] 噪声	Motor Voltage [V] 电机电压	Consumed Power [kW] 消耗功率	Working Pressure [bar] 工作压力
DEL1	0.05	5~40	150	2600	63	AC220	0.04*2	16
			150	2600	63	AC380	0.04*2	16
			150	2600	63	DC24	0.04*2	16
			150	2600	63	DC12	0.04*2	16
DEL2	0.10	10~60	250	1380	76	AC110	0.12	16
			250	2600	76	AC220	0.06	16
			250	2600	76	AC380	0.06	16
			250	3000	78	DC12	0.1	16
DEL3B	0.16	15~100	250	3000	78	DC24	0.1	16
			300	1380	66	AC110	0.21	16
			300	2600	66	AC220	0.08	16
			300	2600	66	AC380	0.08	16
DEL4B	0.34	15~120	300	2600	66	DC12	0.2	16
			300	3000	78	DC24	0.2	16
			300	3000	78	AC110	0.18	16
			300	3000	78	AC220	0.18	16
DEL5	0.46	20~170	385	1380	73	AC380	0.18	16
			385	1380	73	DC12	0.2	16
			385	3000	82	DC24	0.2	16
			385	3000	82	AC220	0.2	16
DEL6	0.6	20~180	450	1360	78	AC380	0.25	16
			450	1360	78	DC12	0.25	16
			450	3000	82	DC24	0.2	16
			450	3000	82	AC220	0.2	16
DEL7	0.7	50~200	500	1300	81	AC380	0.45	16
			500	1300	81	DC12	0.45	16
			280	3000	82	DC24	0.12*4	16
			280	3000	82	AC220	0.12*4	16
DEL8	0.78	50~180	500	1300	81	AC380	0.45	16
			500	1300	81	DC12	0.45	16
			280	3000	82	DC24	0.12*4	16
			280	3000	82	AC220	0.12*4	16

In order to avoid cracking , when a cooler is installed in the return oil circuit, a bypass unloading valve must be parallely connected. And make sure the unloading valve can be opened preferentially when the decompression valve reaches the pressure peak. If there is a pulse in the return oil of system or the oil flow is very big, suggest to choose the self-circulating cooling system from Deo, so that you can keep the whole system stable and reliable.

为保护冷却器不致破裂, 当冷却器安装于回油回路时, 必需加装旁通卸载阀, 与冷却器并联, 并且确认泄压阀遭遇压力峰值时, 能够优先打开卸载。如果系统回油有脉冲或者流量很大, 建议选用迪奥自循环冷却系统, 以保证整个系统的稳定和可靠。

DELA series

Firm and reliable cooler used outdoors
结实可靠的户外用冷却器



Mainly use for :

Vessel equipments, wind electricity-generating equipments, extracting equipments in mines working in severe environments whose protection class is above IP55, which are outdoor, explosion-proof, water-proof, dirt-proof.

Features:

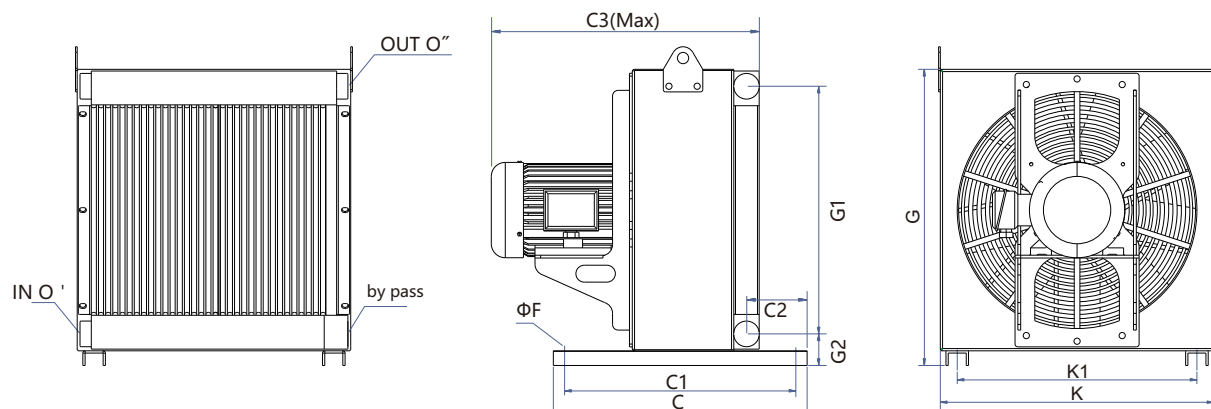
- Capable of achieving explosion-proof standard requirements.
- Of high-quality metal plate structure completely through numerical control machining.
- Imported electrical motor, wind blades are reliable-quality with good-looking appearance.
- Processed by flame plating of phosphorization plus static electricity at the surface, having excellent anticorrosion performance.

DELA主要运用于:

防护等级IP55以上, 户外工作, 防爆、防水、防尘, 环境较差的场合。
如: 船舶设备、风力发电设备、矿山开采设备

特点介绍:

- 可达到防爆的标准要求;
- 高品质钣金结构件, 全部数控加工;
- 进口电机, 风叶质量可靠, 外型美观;
- 表面磷化加静电喷涂处理, 防腐性能优越。



Dimensions 外形尺寸

Make sure you can select the right cooler, please contact us ※ 为保证冷却器选型的准确性, 请与迪奥公司电话联系。

Type 型号	G ±10	K ±10	C ±2	G1 ±5	G2 ±5	K1 ±2	C1 ±2	C2 ±5	C3 ±5	O' O''	ΦF
DELA2	366	335	400	289	43	160	360	58	385	G3/4"	9*12
DELA3B	466	385	450	389	43	290	410	66	430	G3/4"	9*12
DELA4B	525	486	450	439	56	425	410	98	495	G1"	9*20
DELA5	565	545	450	479	56	482	410	98	500	G1"	9*20
DELA6	645	585	450	500	86	482	410	98	500	G1-1/4"	9*20
DELA7	738	708	500	630	70	560	460	98	540	G1-1/4"	9*20
DELA8	866	700	500	760	68	560	460	98	550	G1-1/4"	9*20
DELA9	880	790	700	770	75	700	660	119	676	G1-1/2"	14*23
DELA10	1040	930	700	890	95	700	660	113	710	G1-1/2"	14*23
DELA11	1220	1050	700	1060	100	700	660	113	780	G1-1/2"	14*23

Technical data of DELA 技术参数

Type 型号	Comparative Cooling Capacity [KW/°C] 比散热量	Suggested Flux [L/min] 建议流量	Fan Diameter [mm] 风扇直径	Fan speed [rpm] 风扇转速	Noise level [dB(A), 1m] 噪声	Motor Voltage [V] 电机电压	Consumed Power [kW] 消耗功率	Working Pressure [bar] 工作压力
DELA2	0.15	10-60	250	3000	80	3Φ380	0.55	16
	0.10		250	1500	66		0.25	16
DELA3B	0.30	15-100	300	3000	85		0.55	16
	0.18		300	1500	66		0.25	16
DELA4B	0.42	15-120	400	3000	86		1.1	16
	0.38		400	1500	74		0.55	16
DELA5	0.52	20-170	450	1500	75		0.55	16
DELA6	0.65	20-180	500	1500	78		0.75	16
	0.45		500	1000	67		0.55	16
DELA7	0.85	50-200	630	1500	84		1.5	16
	0.72		630	1000	76		0.75	16
DELA8	1.15	50-180	630	1500	84		2.2	16
	0.91		630	1000	77		0.75	16
DELA9	1.82	50-250	700	1500	87		2.2	16
	1.60		700	1000	77		1.5	16
DELA10	1.93	50-280	800	1500	92		5.5	16
	1.72		800	1000	80		3	16
DELA11	2.8	50-300	900	1500	98		5.5	16
	2.3		900	1000	88		4	16

Technical data (DELA-2~DELA-11)

Maximum static pressure:

16 Bar (ones of higher pressure can be custom made)

Rated inlet temperature:

70 °C (below 130 °C can be custom made)

In order to avoid cracking, when a cooler is installed in the return oil circuit, a bypass unloading valve must be parallelly connected. And make sure the unloading valve can be opened preferentially when the decompression valve reaches the pressure peak. If there is a pulse in the return oil of system or the oil flow is very big, suggest to choose the self-circulating cooling system from Deo, so that you can keep the whole system stable and reliable.

DELA-2 ~ DELA-11技术参数

最大静态压力: 16Bar(更高压力接受定制)

额定入口温度: 70°C (130°C以下可订制)

为保护冷却器不致破裂, 当冷却器安装于回油回路时, 必需加装旁通卸载阀, 与冷却器并联, 并且确认泄压阀遭遇压力峰值时, 能够优先打开卸载。如果系统回油有脉冲或者流量很大, 建议选用迪奥自循环冷却系统, 以保证整个系统的稳定和可靠。

DELH series Hydraulic motor driven oil cooler 液压马达驱动油冷却器



Mainly used for :

All kinds of movable hydraulic system or situations without large power supply of AC power.

Features:

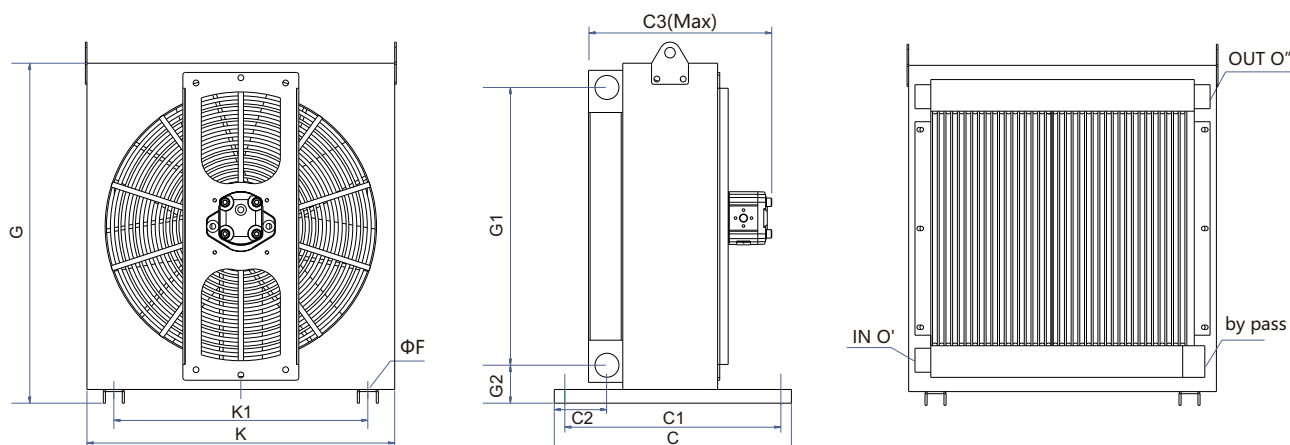
- Patented exterior design
- Of high-quality metal plate structure completely through numerical control machining.
- Imported electrical motor, wind blades of reliable-quality with good-looking appearance.
- Processed by flame plating of phosphorization plus static electricity at the surface, having excellent anticorrosion performance.

DELH主要运用于:

各种移动式液压系统或现场无交流电源的大功率场合。

特点介绍:

- 专利外型设计;
- 高品质钣金结构件, 全部数控加工;
- 进口风叶, 质量可靠, 外型美观;
- 表面磷化加静电喷涂处理, 防腐性能优越;



Dimensions 外形尺寸

Make sure you can select the right cooler, please contact us ※ 为保证冷却器选型的准确性, 请与迪奥公司电话联系。

Type 型号	G ±10	K ±10	C ±2	G1 ±5	G2 ±5	K1 ±2	C1 ±2	C2 ±5	C3 ±5	O' O''	ΦF
DELH2	366	335	400	289	43	160	360	58	385	G3/4"	9*12
DELH3B	466	385	450	389	43	290	410	66	430	G3/4"	9*12
DELH4B	525	486	450	439	56	425	410	98	355	G1"	9*20
DELH5	565	545	450	479	56	482	410	98	355	G1"	9*20
DELH6	645	585	450	500	86	482	410	98	355	G1-1/4"	9*20
DELH7	738	708	450	630	70	560	410	98	375	G1-1/4"	9*20
DELH8	866	700	450	760	68	560	410	98	375	G1-1/4"	9*20
DELH9	880	790	520	770	75	700	480	119	600	G1-1/2"	14*23
DELH10	1040	930	520	890	95	700	480	113	610	G1-1/2"	14*23
DELH11	1220	1050	520	1060	100	700	480	113	630	G1-1/2"	14*23

Technical data of DELH 技术参数

Type 型号	Cooling Capacity [KW/°C] 比散热量	Traffic [L/min] 建议流量	Fan Diameter [mm] 风扇直径	Fan speed [rpm] 风扇转速	Noise level [dB(A), 1m] 噪声	Displacement Hydraulic Motor [ccm] 液压马达排量	Motor Working Pressure [Mpa] 马达工作压力	Working Pressure [bar] 工作压力
DELH2	0.15	10-60	250	3000	80	8	10~16	16
DELH3B	0.3	15-100	300	3000	85	8	10~16	16
DELH4B	0.42	15-120	400	3000	86	8	10~16	16
DELH5	0.52	20-150	450	1500	75	8	10~16	16
DELH6	0.65	20-180	500	1500	75	16	10~16	16
DELH7	0.85	50-200	630	1500	78	16	10~16	16
DELH8	1.15	50-180	630	1500	84	16	10~16	16
DELH9	1.82	50-250	700	1000	87	25	10~16	16
DELH10	1.93	50-280	800	1000	92	25	10~16	16
DELH11	2.8	50-300	900	1000	98	25	10~16	16

Technical data :

Maximum static pressure:16 Bar (ones of higher pressure can be custom made)

Rated inlet tempreture:70 °C (below 130 °C can be custom made)

In order to avoid cracking , when a cooler is installed in the return oil circuit, a bypass unloading valve must be parallelly connected. And make sure the unloading valve can be opened preferentially when the decompression valve reaches the pressure peak. If there is a pulse in the return oil of system or the oil flow is very big, suggest to choose the self-circulating cooling system from Deo, so that you can keep the whole system stable and reliable.

DELH技术参数:

最大静态压力: 16Bar(更高压力接受定制)

额定入口温度: 70°C (130°C以下可订制)

为保护冷却器不致破裂, 当冷却器安装于回油回路时, 必需加装旁通卸载阀, 与冷却器并联, 并且确认泄压阀遭遇压力峰值时, 能够优先打开卸载。如果系统回油有脉冲或者流量很大, 建议选用迪奥自循环冷却系统, 以保证整个系统的稳定和可靠。

DET series

Applied to construction machinery
工程机械用

Technical data of DET 技术参数

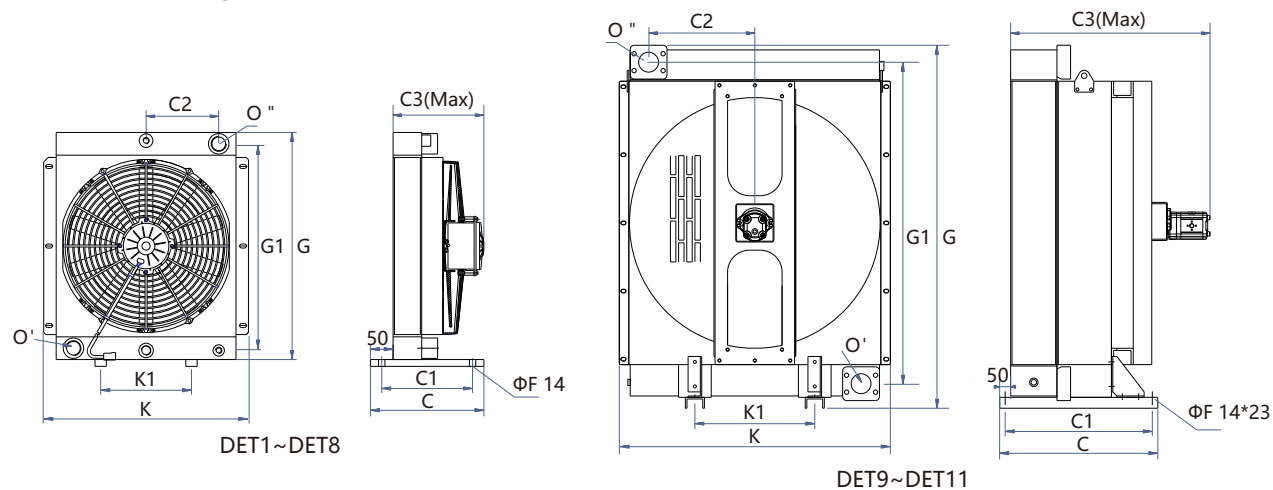


Features

- Highly efficient cooling systems made of Aluminium.
- High performance and working pressure-even for heavy duty of hydraulic or lubrication applications.
- Maximum working pressure
DET1-DET8 16bar
DET9-DET11 10bar
- Wide application to transmission systems, engines, hydraulic and lubricating systems etc. They may also act as independent coolers.
- This model of cooler can be collocated with 12V/24V DC generator, 220v/380v AC generator or fans driven by hydraulic motors.

特点:

- 铝质高效冷却系统
- 性能卓越, 可承受高工作压力—重载液压或润滑系统亦可使用
- 最高工作压力: DET1~DET8 16bar
DET9~DET11 10bar
- 应用场合广泛, 如传输系统、发动机, 液压及润滑系统等, 也可用作独立的冷却器
- 可配置12V/24V直流电机, 220V/380V交流电机或液压马达驱动风扇



Dimensions 外形尺寸

Make sure you can select the right cooler, please contact us ※ 为保证冷却器选型的准确性, 请与迪奥公司电话联系。

Type 型号	Heat Rejection (KW) 散热量	G ±10	K ±10	C ±2	C1 ±2	C2 ±5	C3 ±5	G1 ±5	K1 ±2	O'/O"
DET1	1-5	325	250	200	150	65	170	260	80	G3/4"
DET2	3-10	415	360	250	200	115	330	350	150	G1"
DET3	8-15	520	455	250	200	160	330	450	200	G1"
DET4	10-20	520	455	300	250	160	330	460	200	G1 1/4"
DET5(DET5K)	15-25	695	471	300	250	165	445(415)	610	200	G1 1/4"(G1")
DET6	20-35	795	610	300	250	235	495	710	310	G1 1/4"
DET7	35-40	950	610	300	250	235	525	860	310	G1 1/4"
DET8	35-75	960	725	300	250	280	580	870	400	G1 1/2"
DET9	60-120	1340	1000	580	540	390	710	1180	440	FL65
DET10	85-180	1340	1000	580	540	390	730	1180	440	FL80
DET11	120-260	1482	1290	850	810	532	850	1330	525	FL80

Type 型号	Fan Diameter [mm] 风扇直径	Fan speed [rpm] 风扇转速	Noise level [dB(A), 1m] 噪声	Motor Voltage [V] 电机电压	Consumed Power [kW] 消耗功率	Volume [l] 容量	Working Pressure [bar] 工作压力	Total Weight excluding fluid [kg] 总重量(不含液体)
DET1	190	3250	71	12	0.08	1.0	16	6.7
	190	3250	71	24	0.08	1.0	16	6.7
	200	2750	64	230/400	0.05	1.0	16	7.1
DET2	255	2600	74	12	0.1	1.9	16	15.6
	255	2600	72	24	0.1	1.9	16	15.6
	250	3000	75	Hydraulic motor		1.9	16	15.6
	250	1500	57	230/400	0.06	1.9	16	15.6
	250	1500	65	*230/400	0.25	1.9	16	15.6
DET3	350	2950	76	12	0.2	2.9	16	23
	350	2950	78	24	0.2	2.9	16	23
	380	1500	75	Hydraulic motor		2.9	16	23
	380	1000	68	234/400	0.14	2.9	16	23
	350	1500	75	*230/400	0.25	2.9	16	23
DET4	350	2950	77	12	0.2	5.2	16	28.8
	350	2950	78	24	0.2	5.2	16	28.8
	350	1500	77	Hydraulic motor		5.2	16	28.8
	350	1500	77	230/400	0.14	5.2	16	28.8
	350	1500	77	*230/400	0.37	5.2	16	28.8
DET5	385	3100	79	12	0.2	6.3	16	38
	385	3100	79	24	0.2	6.3	16	38
	450	1500	77	Hydraulic motor		6.3	16	38
	450	1500	77	230/400	0.25	6.3	16	38
	450	1500	77	*230/400	0.55	5.5	16	38
DET6	2x305	3100	81	12	2x0.2	8.5	16	49
	2x305	3100	81	24	2x0.2	8.5	16	49
	500	1500	79	Hydraulic motor		8.5	16	49
	500	1500	79	230/400	0.45	8.5	16	49
	500	1500	79	*230/400	0.75	8.5	16	49
DET7	2x305	3100	81	12	2x0.2	10.6	16	54
	2x305	3100	81	24	2x0.2	10.6	16	54
	500	1500	79	Hydraulic motor		10.6	16	54
	500	1500	79	230/400	0.45	10.6	16	54
	500	1500	79	*230/400	0.75	10.6	16	54
DET8	4x305	3100	81	12	4x0.2	17.7	16	89
	4x305	3100	81	24	4x0.2	17.7	16	89
	630	1000	79	Hydraulic motor		17.7	16	89
	630	1000	79	*230/400	0.75	17.7	16	89
	630	1500	90	*230/400	2.2	17.7	16	89
DET9	900	1000	88	Hydraulic motor		25	10	190
	900	1000	88	*230/400	2.2	25	10	190
	900	750	82	*230/400	1.1	25	10	190
DET10	900	1000	98	Hydraulic motor		31	10	200
	900	1500	98	*400/690	5.5	31	10	200
	900	1000	88	*400/690	3.0	31	10	200
DET11	1000	1000	100	Hydraulic motor		55	10	约290
	1000	1500	100	*400/690	11.0	55	10	约290
	1000	1000	90	*400/690	7.5	55	10	约290

Displacement of hydraulic motor [cm³]

DET2~DET5: 8ccm
DET6~DET8: 16ccm
DET9~DET10: 25ccm

液压马达排量 [cm³]:

DET2~DET5: 8ccm
DET6~DET8: 16ccm
DET9~DET10: 25ccm

★ Motor 电机

Quick model selection of DET 快速选型

Quick selection can be made with the help of the following tables

The data of heat abstraction quantity in the forms below are based on the assumption that oil inlet temperature does not exceed 70°C for hydraulic systems and 110°C for lubricating systems.

Please use the following heat abstraction figures if no details are available:

- Agricultural and construction machinery: 1/3 of diesel engine power
- Hydraulic pumps driven by an electric motor: 1/3 of electric motor power

借助以下表格可进行快速选型

下表中给出的散热量数据是在下述条件下求得的:

1. 液压系统进口温度不超过70°C
2. 润滑系统进口温度不超过110°C

若无详细散热量参数, 可按下列方法估算散热量:

- 农业及建筑机械: 柴油机功率的1/3
- 电机驱动的液压泵: 电机功率的1/3

Applied to hydraulic systems 应用于液压系统

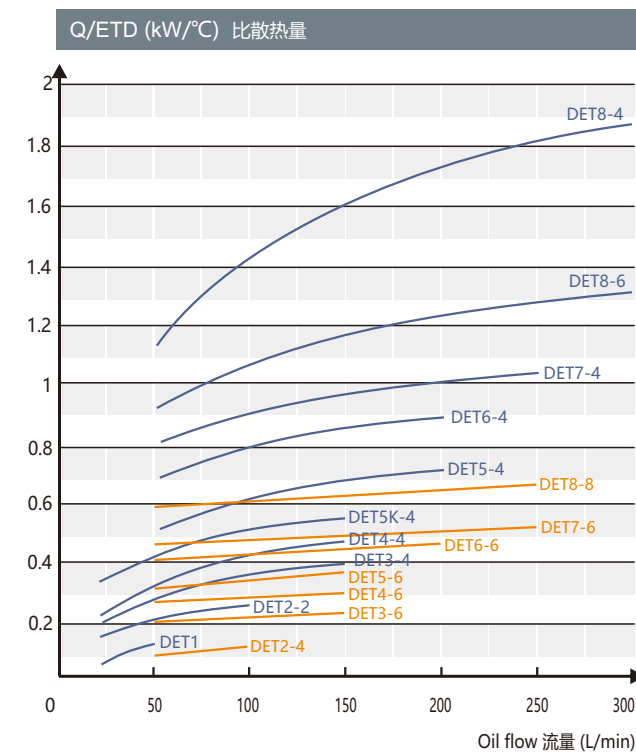
Heat rejection [kW @40°C ambient temperature] 环境温度30°C时的散热量 (kW)													
Oil flow in 油流量 (L/min)	DET1	DET2	DET3	DET4	DET5K	DET5	DET6	DET7	DET8	DET8S	DET9	DET10	DET11
10	1.5	3.4	5										
20	2.2	4.6	6	6	11								
30	3	5.4	7	8.5	13								
50	3.5	6.3	8.5	10	12.6	16	20	24	28	34			
75		7	10	11	15	17	23	26	31	31	46	60	
100		7.6	11	12	16	18	24	27	33	42	52	84	
150			12	13	17	20	25	29	36	47	61	96	131
200						21	26	30	37	51	68	105	147
250									38	54	72	111	159
300											75	117	171
400											83	126	186
500											89	135	200
600													210

Applied to lubricating systems 应用于润滑系统

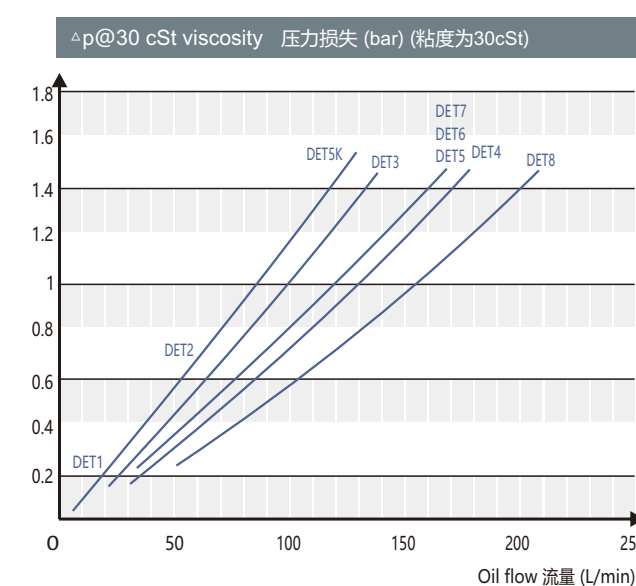
Heat rejection [kW @40°C ambient temperature] 环境温度40°C时的散热量 (kW)													
Oil flow in 油流量 (L/min)	DET1	DET2	DET3	DET4	DET5K	DET5	DET6	DET7	DET8	DET8S	DET9	DET10	DET11
10	3.5	7	11										
20	5.5	10	14	14	27								
30	7	12	17	20	30	31							
50	8	14	20	23	32	37	48	56	69	81			
75	9	16	22	27	35	40	53	60	73	91	107		
100		18	24	29	37	43	55	63	77	98	121	196	
150			28	32	40	46	59	67	84	110	142	224	301
200						49	62	70	88	119	158	245	343
250									90	126	168	259	371
300											175	273	399
400											193	294	434
500											207	315	466
600													490

Heat abstraction quantity curve & pressure loss of DET 散热量曲线和压力损失

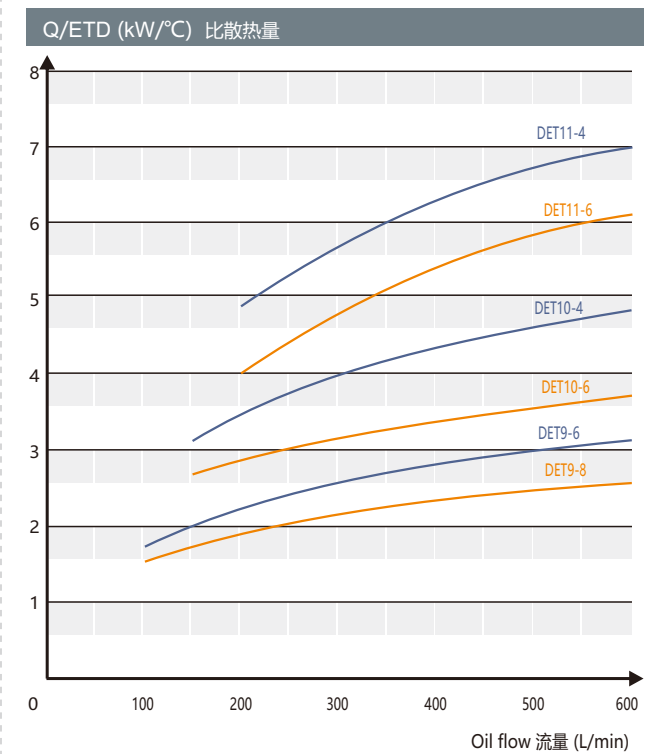
Curve of heat abstraction quantity 散热量曲线
DET1~DET8



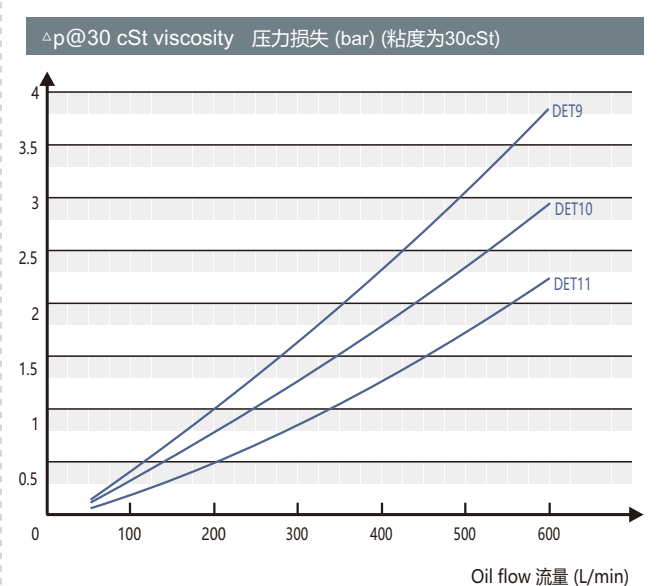
Pressure loss 压力损失
DET1~DET8



Curve of heat abstraction quantity 散热量曲线
DET9~DET11



Pressure loss 压力损失
DET9~DET11



DEQ series

Suitable for outdoor, oceanic, explosion-proof and other environment
户外、海洋、防爆等环境适用

Mainly used for:

Severe outdoor occasions requested to be explosion-proof, water proof, where protection class in over IP55. For example, vessel equipments wind-generating equipments, exploiting equipments in diggings.

Technical data:

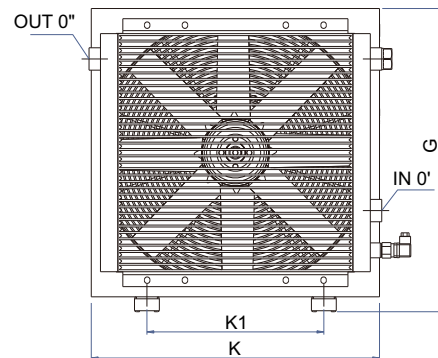
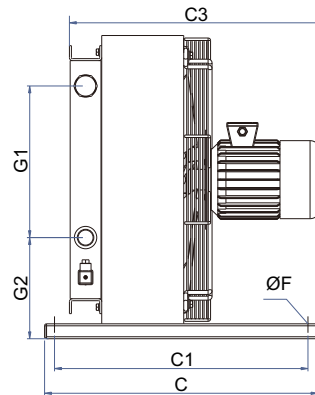
Maximum static pressure:
16 Bar (ones of higher pressure can be custom made)
Rated inlet tempreture:
70 °C (below 130 °C can be custom made)

DEQ主要运用于:

防护等级IP55以上, 户外工作, 防爆、防水、防尘, 环境较差的场合。如: 船舶设备、风力发电设备、矿山开采设备。

技术参数:

最大静态压力:
16Bar(更高压力接受定制)
额定入口温度:
70°C (130°C以下可订制)



Dimensions 外形尺寸

Make sure you can select the right cooler, please contact us ※ 为保证冷却器选型的准确性, 请与迪奥公司电话联系。

Type 型号	G ±10	K ±10	C ±2	C1 ±2	C2 ±5	C3 ±5	G1 ±5	G2 ±5	K1 ±2	O' "	O" "	ØF
DEQ-007	395	365	550	510	225	435	160	132	203	G 1"	G 1"	9*20
DEQ-011	470	440	550	510	249	493	230	136	203	G 1"	G 1"	9*20
DEQ-016	526	496	550	510	272	480	230	197	203	G 1"	G 1"	9*20
DEQ-023	610	580	550	510	287	529	305	204	356	G 1"	G 1"	9*20
DEQ-033	722	692	550	510	318	654	406	213	356	G 1-1/4"	G 1-1/4"	9*20
DEQ-044	866	692	550	510	343	679	584	196	356	G 1-1/4"	G 1-1/4"	9*20
DEQ-056	898	868	550	510	368	704	584	212	508	G 1-1/4"	G 1-1/4"	9*20
DEQ-058	898	868	550	510	387	723	584	212	508	G 2"	G 2"	9*20
DEQ-076	1052	1022	840	800	393	712	821	131	518	G 1-1/2"	G 1-1/2"	14*23
DEQ-078	1052	1022	840	800	413	732	821	131	518	G 2"	G 2"	14*23
DEQ-110	1215	1185	840	800	418	842	985	130	600	G 2"	G 2"	14*23
DEQ-112	1215	1185	840	800	438	862	985	130	600	G 2"	G 2"	14*23
DEQ-113	1215	1200	840	800	468	892	985	130	600	G 2"	G 2"	14*23

Technical data of DEQ 技术参数

Type 型号	Comparative Cooling Capacity [KW/°C] 比散热量	Suggested Flux [L/min] 建议流量	Fan Diameter [mm] 风扇直径	Fan speed [rpm] 风扇转速	Noise level [dB(A), 1m] 噪声	Motor Voltage [V] 电机电压	Consumed Power [kW] 消耗功率	Working Pressure [bar] 工作压力
DEQ-007-2	0.2	10-60	300	3000	79	3Φ380	0.55	16
DEQ-007-4	0.14			1500	62		0.25	16
DEQ-011-2	0.3	15-100	400	3000	82		1.1	16
DEQ-011-4	0.18			1500	67		0.25	16
DEQ-016-2	0.42	15-120	450	3000	86		1.1	16
DEQ-016-4	0.38			1500	70		0.37	16
DEQ-023-4	0.58	20-150	500	1500	76		0.75	16
DEQ-023-6	0.47			1000	64		0.55	16
DEQ-033-4	0.89	40-200	630	1500	84		2.2	16
DEQ-033-6	0.72			1000	74		0.75	16
DEQ-044-4	1.15	50-190	630	1500	85		2.2	16
DEQ-044-6	0.91			1000	76		0.75	16
DEQ-056-4	1.62	50-220	800	1500	84		2.2	16
DEQ-056-6	1.35			1000	81		1.5	16
DEQ-058-4	1.72	50-250	800	1500	85		2.2	16
DEQ-058-6	1.4			1000	82		1.5	16
DEQ-076-6	1.9	50-250	900	1000	86		2.2	16
DEQ-076-8	1.53			750	79		1.1	16
DEQ-078-6	2.1	80-300	900	1000	87		2.2	16
DEQ-078-8	1.73			750	80		1.1	16
DEQ-110-6	2.23	120-300	1000	1000	90		5.5	16
DEQ-110-8	1.97			750	84		2.2	16
DEQ-112-6	2.66	120-350	1000	1000	91		5.5	16
DEQ-112-8	2.12			750	85		2.2	16
DEQ-113-6	2.81	150-400	1000	1000	88		5.5	16
DEQ-113-8	2.32			750	80		2.2	16

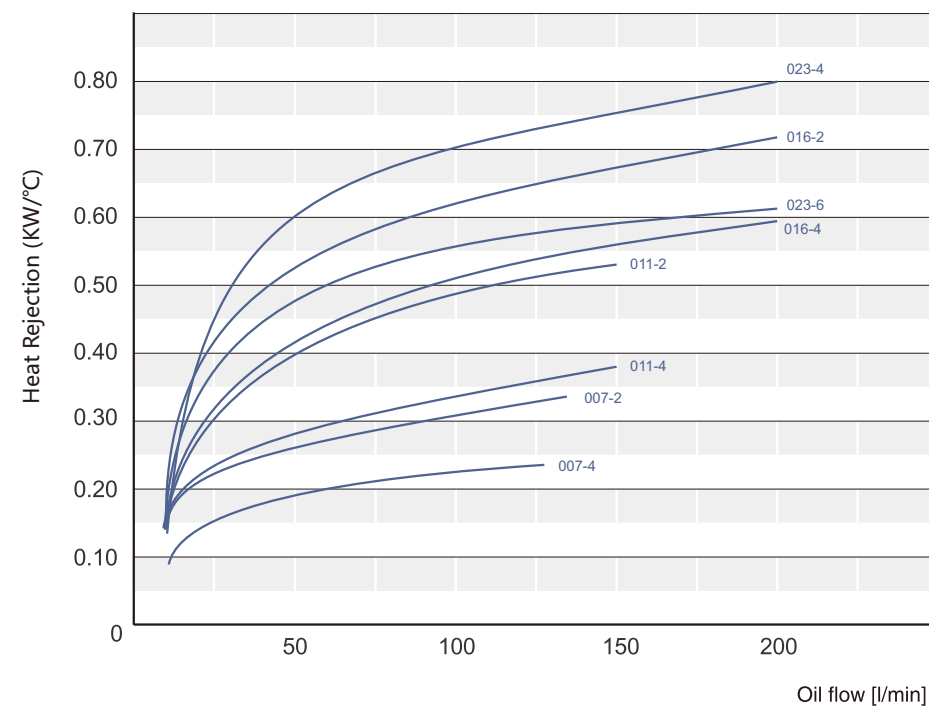
In order to avoid cracking , when a cooler is installed in the return oil circuit, a bypass unloading valve must be parallely connected. And make sure the unloading valve can be opened preferentially when the decompression valve reaches the pressure peak. If there is a pulse in the return oil of system or the oil flow is very big, suggest to choose the self-circulating cooling system from Deo, so that you can keep the whole system stable and reliable.

为保护冷却器不致破裂, 当冷却器安装于回油回路时, 必需加装旁通卸载阀, 与冷却器并联, 并且确认泄压阀遭遇压力峰值时, 能够优先打开卸载。如果系统回油有脉冲或者流量很大, 建议选用迪奥自循环冷却系统, 以保证整个系统的稳定和可靠。

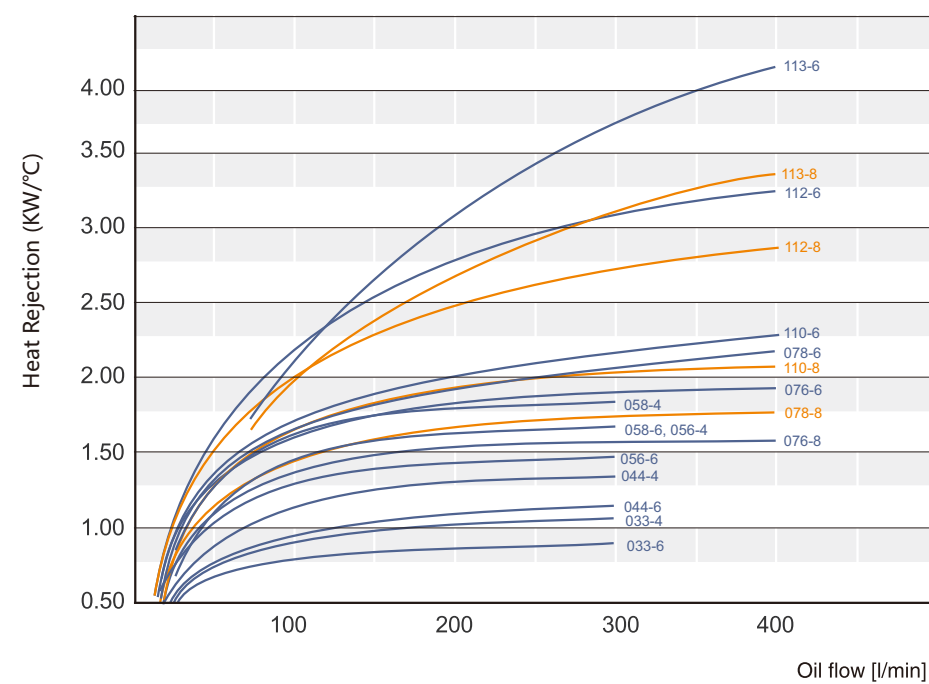
» Heat abstraction quantity curve of DEQ 散热量曲线

» Pressure loss of DEQ 压力损失

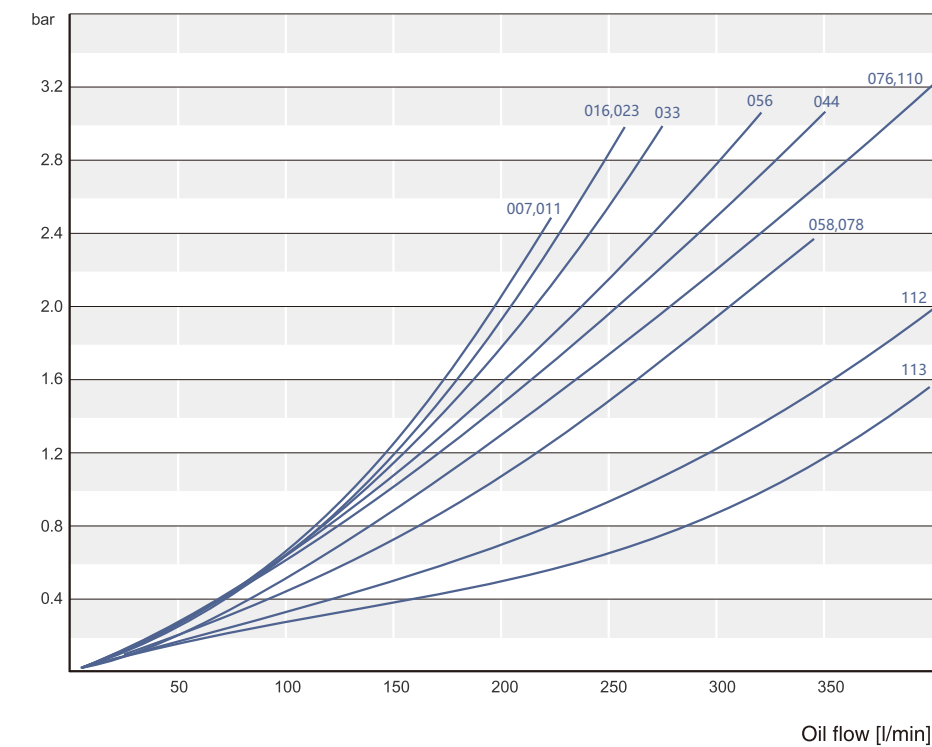
007~023



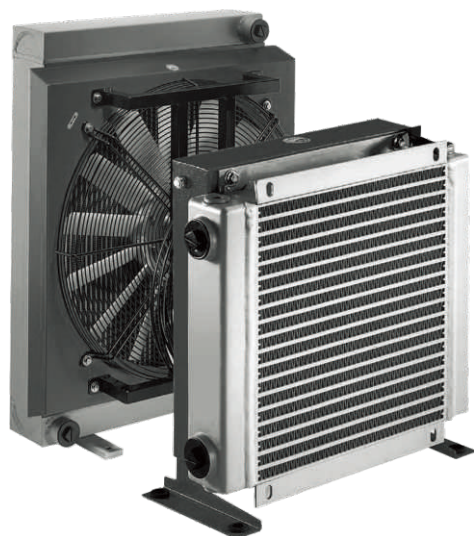
033~113



At 30 cSt single-pass



DEK series



Mainly used for:
General hydraulic and lubricating systems, gearbox (large reduction box), and so on, which work in indoor enviroment.

Technical data:

Maximum static pressure:
16 Bar (ones of higher pressure can be custom made)
Rated inlet tempreature:
70 °C (below 130 °C can be custom made)

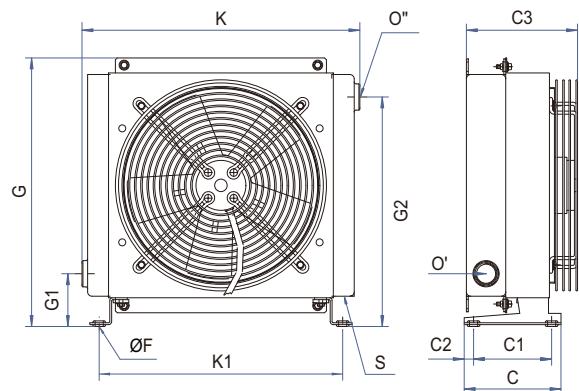
DEK主要运用于:

一般液压系统、润滑系统、齿轮箱
(大型减速机) 等室内工作环境

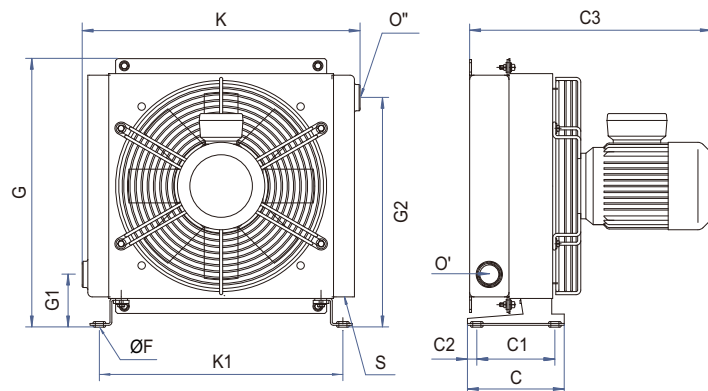
技术参数:

最大静态压力: 16Bar (更高压力接受定制)
额定入口温度: 70°C (130°C以下可订制)

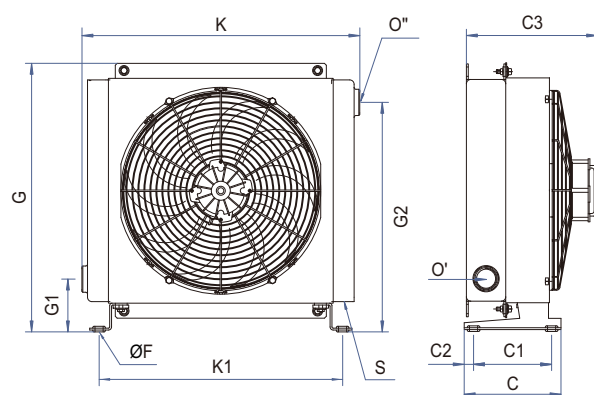
DEK-XX-01
DEK-XX-03



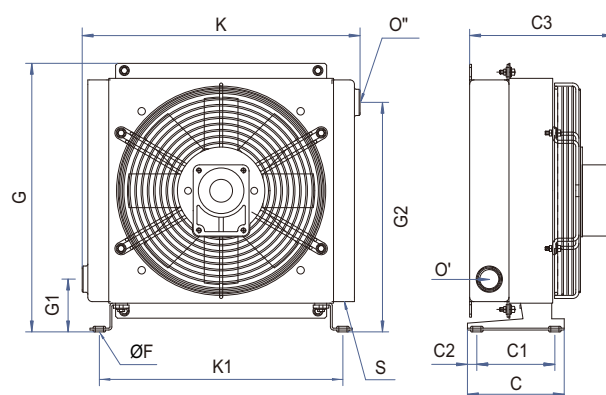
DEK-XX-04



DEK-XX-12
DEK-XX-24



DEK-XX-56



Dimensions of DEK 外形尺寸

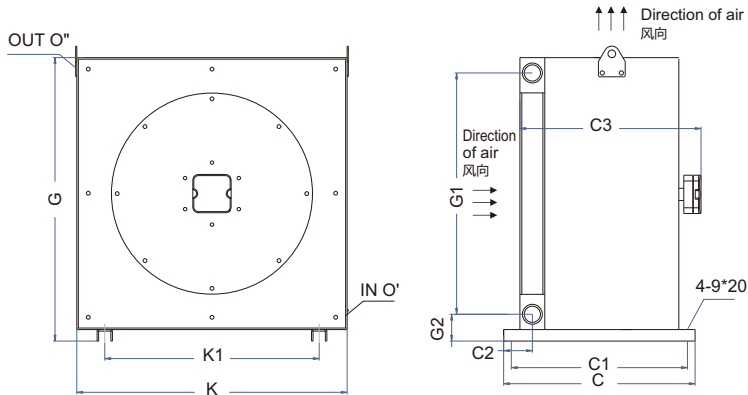
Type 型号	G	K	C	C1	C2	C3	G1	G2	K1	F	O'	O''	S
DEK-1-01													
DEK-1-12	190	146	70	/	10	116	18	173	101	Ø9	G1/2"	G1/2"	/
DEK-1-24													
DEK-2-01						125							
DEK-2-12	249	225	155	125	15	125	55	233	120	Ø13	G1/2"	G1/2"	/
DEK-2-24						170							
DEK-3-01						150							
DEK-3-03						150							
DEK-3-04						375							
DEK-3-12	305	320	155	125	15	170	83	241	273	Ø13	G1"	G1"	M14*1.5
DEK-3-24						170							
DEK-3-56						207							
DEK-4-01						170							
DEK-4-03						170							
DEK-4-04						395							
DEK-4-12	305	320	155	125	15	190	83	241	273	Ø13	G1"	G1"	M14*1.5
DEK-4-24						190							
DEK-4-56						230							
DEK-5K-01						170							
DEK-5K-03						170							
DEK-5K-04						395							
DEK-5K-12	354	334	155	125	15	195	42.5	332	280	Ø13	G3/4"	G3/4"	M14*1.5
DEK-5K-24						195							
DEK-5K-56						230							
DEK-5-01						170							
DEK-5-03						170							
DEK-5-04						395							
DEK-5-12	366	380	155	125	15	195	82	304	325	Ø13	G1"	G1"	M14*1.5
DEK-5-24						195							
DEK-5-56						230							
DEK-6-01						180							
DEK-6-03						180							
DEK-6-04						395							
DEK-6-12	430	445	155	125	15	231	85	368	390	Ø13	G1"	G1"	M14*1.5
DEK-6-24						231							
DEK-6-56						240							
DEK-7-01						240							
DEK-7-03						240							
DEK-7-04						450							
DEK-7-12	526	540	155	125	15	254	79	468	485	Ø13	G1"	G1"	M14*1.5
DEK-7-24						254							
DEK-7-56						265							
DEK-8-01						275							
DEK-8-03						275							
DEK-8-04						430							
DEK-8-12	660	600	230	180	25	195	35	635	400	Ø14	G1-1/4"	G1-1/4"	M14*1.6
DEK-8-24						195							
DEK-8-56						265							

Make sure you can select the right cooler, please contact us ※ 为保证冷却器选型的准确性, 请与迪奥公司电话联系。

Technical data of DEK 技术参数

Type 型号	Comparative Cooling Capacity [kW/°C] 比散热量	Suggested Flux [L/min] 建议流量	Fan Diameter [mm] 风扇直径	Fan speed [rpm] 风扇转速	Noise level [dB(A), 1m] 噪声	Motor Voltage [V] 电机电压	Consumed Power [kW] 消耗功率	Working Pressure [bar] 工作压力
DEK-1-01	0.05	2.5-20	120	2650	40	AC220	0.012	16
DEK-1-12	0.05		120	2500	40	DC12	0.008	16
DEK-1-24	0.05		120	2500	40	DC24	0.008	16
DEK-2-01	0.07	10-40	175	2700	63	AC220	0.05	16
DEK-2-12	0.08		190	2600	63	DC12	0.08	16
DEK-2-24	0.08		190	2600	63	DC24	0.08	16
DEK-3-01	0.12	20-80	200	2500	68	AC220	0.055	16
DEK-3-03	0.12		200	2300	68	AC380	0.055	16
DEK-3-04	0.1		200	1350	68	AC220/380	0.25	16
DEK-3-12	0.13		225	3100	72	DC12	0.1	16
DEK-3-24	0.13		225	3100	72	DC24	0.1	16
DEK-3-56	0.13		225	3000	72	/	/	16
DEK-4-01	0.14	25-100	200	2500	68	AC220	0.055	16
DEK-4-03	0.15		200	2300	68	AC380	0.055	16
DEK-4-04	0.12		200	1350	60	AC220/380	0.25	16
DEK-4-12	0.17		225	2600	72	DC12	0.1	16
DEK-4-24	0.17		225	2600	72	DC24	0.1	16
DEK-4-56	0.17		225	3000	72	/	/	16
DEK-5K-01	0.38	30-150	250	2650	70	AC220	0.08	16
DEK-5K-03	0.38		250	2650	70	AC380	0.08	16
DEK-5K-04	0.3		250	1350	60	AC220/380	0.25	16
DEK-5K-12	0.33		255	2600	72	DC12	0.1	16
DEK-5K-24	0.33		255	2600	72	DC24	0.1	16
DEK-5K-56	0.4		250	3000	72	/	/	16
DEK-5-01	0.31	30-120	250	2650	70	AC220	0.08	16
DEK-5-03	0.31		250	2650	70	AC380	0.08	16
DEK-5-04	0.26		250	1350	60	AC220/380	0.25	16
DEK-5-12	0.3		255	2600	72	DC12	0.1	16
DEK-5-24	0.3		255	2600	72	DC24	0.1	16
DEK-5-56	0.38		250	3000	72	/	/	16
DEK-6-01	0.35	35-140	300	2300	76	AC220	0.145	16
DEK-6-03	0.35		300	2300	76	AC380	0.145	16
DEK-6-04	0.27		300	1350	65	AC220/380	0.25	16
DEK-6-12	0.32		305	3100	76	DC12	0.2	16
DEK-6-24	0.32		305	3100	76	DC24	0.2	16
DEK-6-56	0.41		300	3000	76	/	/	16
DEK-7-01	0.45	40-160	400	1380	76	AC220	0.18	16
DEK-7-03	0.45		400	1380	76	AC380	0.18	16
DEK-7-04	0.48		400	1450	77	AC220/380	0.55	16
DEK-7-12	0.45		385	3100	78	DC12	0.2	16
DEK-7-24	0.45		385	3100	78	DC24	0.2	16
DEK-7-56	0.65		400	3000	78	/	/	16
DEK-8-01	0.69	45-180	450	1350	79	AC220	0.25	16
DEK-8-03	0.69		450	1350	79	AC380	0.25	16
DEK-8-04	0.69		450	1450	76	AC220/380	0.75	16
DEK-8-12	0.62		280	2600	79	DC12	0.2	16
DEK-8-24	0.62		280	2600	79	DC24	0.2	16
DEK-8-56	0.9		450	3000	80	/	/	16

EC series Super silent 超静音



Dimensions 外形尺寸

Make sure you can select the right cooler, please contact us ※ 为保证冷却器选型的准确性, 请与迪奥公司电话联系。

Type 型号	G	K	C	G1	G2	K1	C1	C2	C3
EC2	366	335	400	289	52	160	360	58	218
EC3	466	380	450	390	54	290	410	78	310
EC4	525	485	450	439	56	425	410	78	310
EC5	567	542	540	479	57	482	500	95	423
EC6	645	522	540	500	87	482	500	95	423
EC7	740	708	540	630	70	560	500	95	423

Technical data of DEQ 技术参数

Type 型号	Voltage [V] 电压	Fan Diameter [mm] 风扇直径	Power [kW] 功率	Noise level [dB(A), 1m] 噪声
EC2	220V	225	140	68
EC3	220V/380V	315	140	64
EC4	220V/380V	355	170	67
EC5	220V/380V	400	240	68
EC6	220V/380V	450	530	76
EC7	220V/380V	450	530	76

In order to avoid cracking , when a cooler is installed in the return oil circuit, a bypass unloading valve must be parallelly connected. And make sure the unloading valve can be opened preferentially when the decompression valve reaches the pressure peak. If there is a pulse in the return oil of system or the oil flow is very big, suggest to choose the self-circulating cooling system from Deo, so that you can keep the whole system stable and reliable.

为保护冷却器不致破裂, 当冷却器安装于回油回路时, 必需加装旁通卸载阀, 与冷却器并联, 并且确认泄压阀遭遇压力峰值时, 能够优先打开卸载。如果系统回油有脉冲或者流量很大, 建议选用迪奥自循环冷却系统, 以保证整个系统的稳定和可靠。

DPK series

Wind cooler with bell-shaped cover
钟型罩风冷却器



Used for

DPK series of coolers are applied to overflowing rinsing cooling in closed-off system, and independently-circulating cooling system, such as products in oil, mining, vessels, heavy equipments.

Features

Arrange the cooler and bell-shaped cover together artfully, making the structure compact, and easy to install. It don't need to drive electrical motor in addition. It adopt centrifugal draught fan, with very low noise, and great wind pressure. It is suited for conditions of cabined space, where explosion-proof lights are employed. It is first choice for upgrading your products.

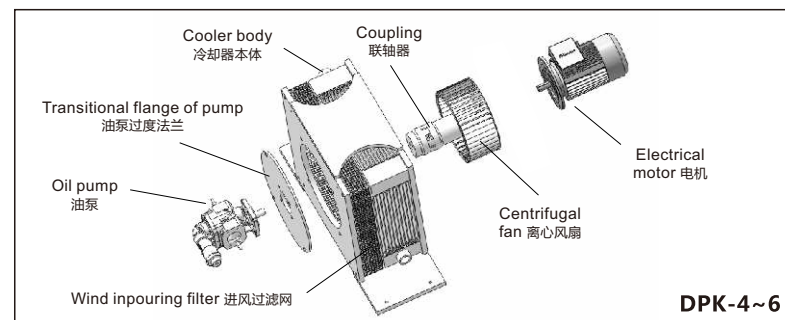
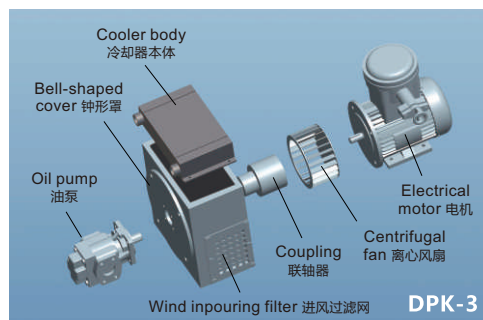
适用范围:

DPK系列冷却器主要运用于闭式系统的溢流冲洗冷却和有防爆要求的独立循环冷却系统。如：石油、采矿、船舶、重型设备等行业。

特点:

结构紧凑，巧妙的把冷却器与钟型罩合二为一，安装方便。无须另外驱动电机。采用离心式风机，噪音低，风压大。特别适合空间狭窄、防爆灯场合使用，是您产品升级的首选。

DPK series structure 构造



Instructions of DPK 型号说明

DPK - 4 - R - 160 - F - 10 - EX

1 2 3 4 5 6 7

- Serial number:** DPK bell-shaped cover cooler
- Sizes of coolers:** 3, 4, 5, 6
- Rotating directions of wind blades**
Right-rotating (clockwise) = R
Left-rotating (anticlockwise) = L
- Numbers of electrical motor base**
- Filter:** F = with filter, None = without filter
- Precision of filter:** 10μm=10, 20μm=20
- Applicable conditions**
Not explosion-proof = None
Exd I explosion-proof = EX
Exd II explosion-proof = EX2

Please offer additional drawings about installing sizes of oil pump axis

Attention: If there is any special request, please tell us in speech.

- 系列号:** DPK钟罩冷却器
- 冷却器尺寸:** 3, 4, 5, 6
- 风叶旋向:** 右旋 (顺时针) = R
左旋 (逆时针) = L
- 电机机座号**
- 过滤器:** F = 含过滤器, 无 = 无过滤器
- 过滤器精度:** 10μm=10, 20μm=20
- 适用工况:** 非防爆 = 无
Exd I 类防爆 = EX
Exd II 类防爆 = EX2

油泵轴安装尺寸请附图纸

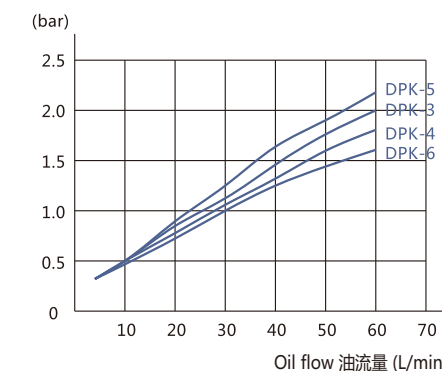
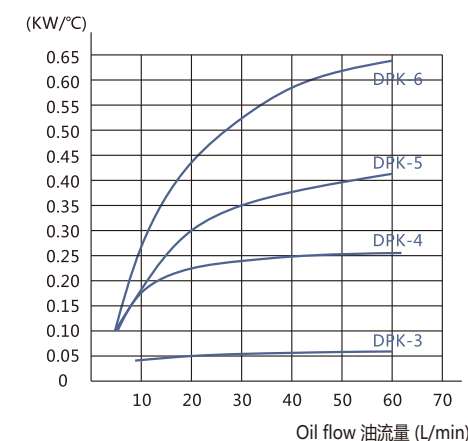
注: 如有特殊要求请用明语说明!

Performance curve & dimension of DPK 性能曲线和外形尺寸

Performance curve 性能曲线

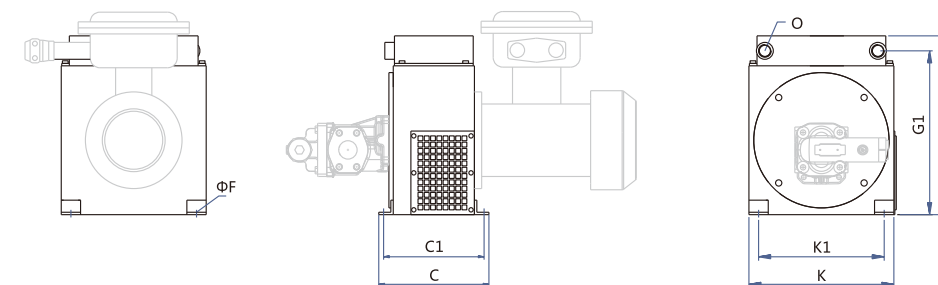
Input parameter of performance curve
Quality of oil : ISO VG46
Temperature of inpouring oil : 60°C

性能曲线输入参数
油品 : ISO VG46
进油温度 : 60°C

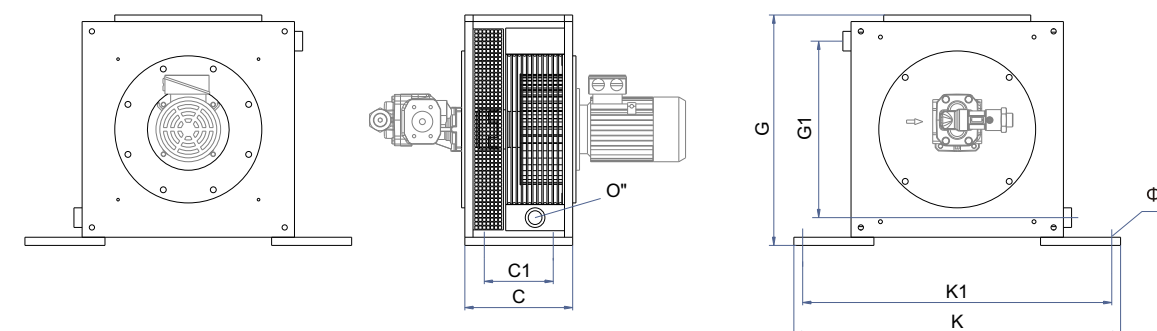


Dimension 外形尺寸

DPK-3



DPK-4~6



Type 型号	G(mm)	K(mm)	C(mm)	G1(mm)	K1(mm)	C1(mm)	O	ΦF(mm)	P	Power(kw) 功率
DPK-3	370	300	228	339	260	208	G3/4"	12	4	0.37~4
DPK-4	500	470	430	455	390	385	G1"	18	4	5.5~22
DPK-5	705	650	470	625	580	400	G1"	20	4	30~55
DPK-6	765	690	470	625	620	400	G1"	20	4	55~90