DWBE oil / water coolers of perking-segment style
DWBE翅片式油水冷却器

PRODUCT DESCRIPTION
DWBE series is a kind of perking-wing-style heat exchangers, which are suitable for wide industrial application. This series has greater cooling surface. As a tube-swelling technology is adopted between brass tubes for heat exchange and perking wings, making both of which touch each other closely, they increase performance of heat exchange remarkably than existing heat exchanges.

PRODUCT FEATURES
- Heat exchanging fins and brass tubes ensure the utmost effect of heat exchange
- Large oil connectors for minimum flow resistance
- Removable end caps for easy cleaning of the tubes
- High-quality materials
- Max. pressure: oil 16 bar/water 10 bar
- Full range of accessories available
- Inventory available

OPTIONS
- Sea water cooler
- Applied to compressed air
- Water-water application
- Stainless steel version or chemically nickel plated

产品描述
DWBE 系列是管翅式热交换器的一种，适合很多工业应用。这个系列具有更大的冷却表面。换热铜管与翅片之间采用胀管工艺，实现铜管和翅片紧密接触，比现有的换热器显著提高了换热性能。

产品特点
- 换热翅片和铜管可以确保最大程度的换热效果
- 油路接口大可以降低流动阻力
- 端盖可拆卸便于管路的清洗
- 选用高品质的材料
- 最大压力: 油16bar / 水10bar
- 全系列附件
- 充足库存

备选
- 海水冷却
- 应用于压缩空气
- 应用于水–水
- 不锈钢板或化学镀锌镍合金

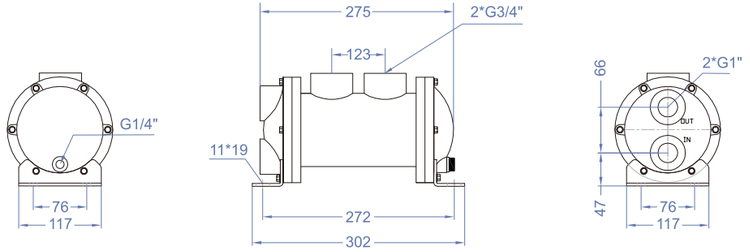
Materials 材质

	Standard 标准
Shell, Mounting bracket, Baffels 外壳, 安装支架, 挡板	Steel 钢
End plates 管板	Steel 钢
Cooling fins 散热翅片	Aluminium (Copper can be customized) 铝 (铜定制)
Tubes 换热管	Copper (Nickel can be customized) 铜 (镍白铜定制)
End caps 端盖	Castiron 铸铁
Gaskets 垫圈	Nitrile rubber 丁腈橡胶

Dimension of DWBE 外形尺寸

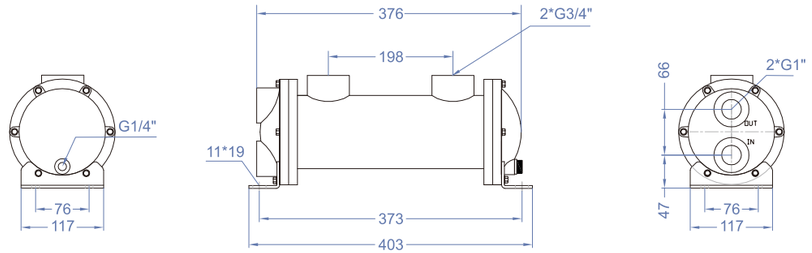
DWBE-408-T

1.3m² (用于4.0Kw以下液压系统) Used for hydraulic system below 4.0Kw



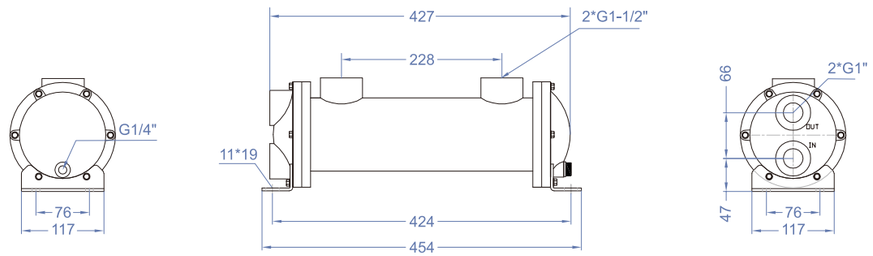
DWBE-412-T

2.1m² (用于5.5Kw以下液压系统) Used for hydraulic system below 5.5Kw



DWBE-414-T

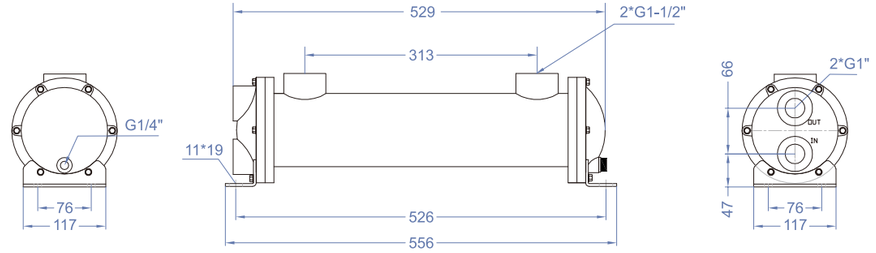
2.5m² (用于7.5Kw以下液压系统) Used for hydraulic system below 7.5Kw



Dimension of DWBE 外形尺寸

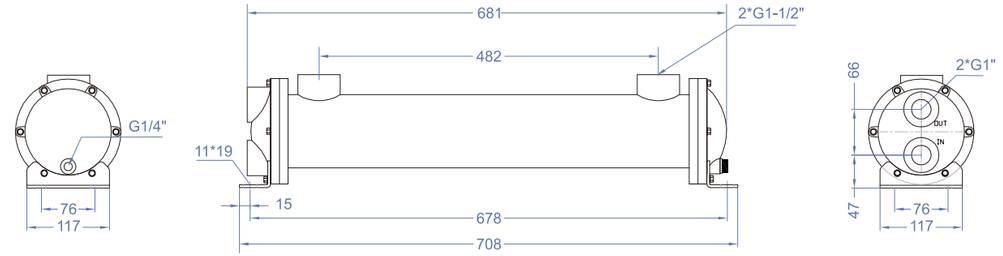
DWBE-418-T

3.1m² (用于11.0Kw以下液压系统) Used for hydraulic system below 11.0Kw



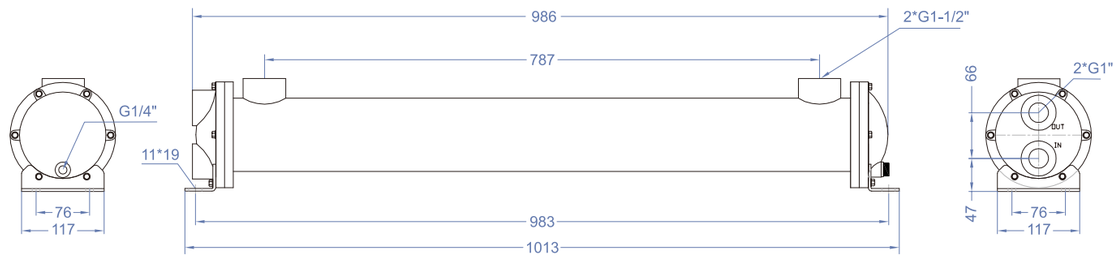
DWBE-424-T

4.4m² (用于18.5Kw以下液压系统) Used for hydraulic system below 18.5Kw



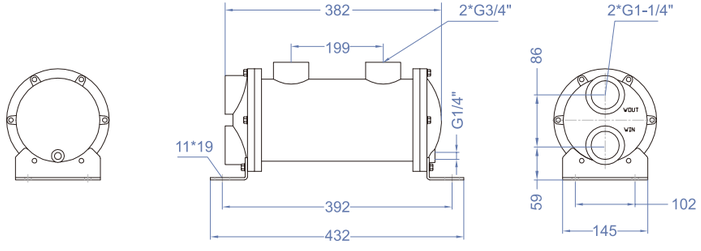
DWBE-436-T

6.7m² (用于30.0Kw以下液压系统) Used for hydraulic system below 30.0Kw



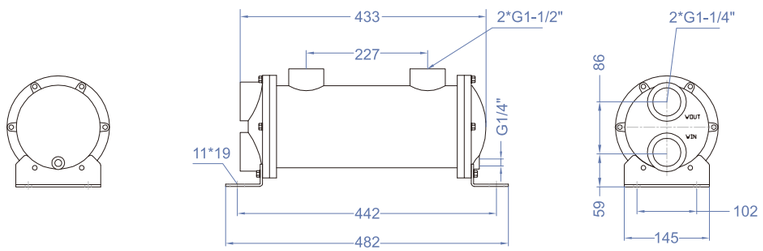
DWBE-512-T

4.3m² (用于15.0Kw以下液压系统) Used for hydraulic system below 15.0Kw



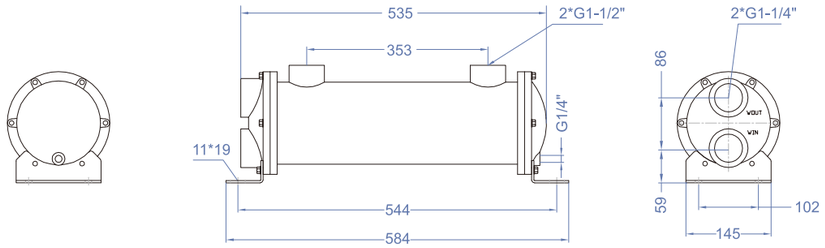
DWBE-514-T

5.1m² (用于22.0Kw以下液压系统) Used for hydraulic system below 22.0Kw



DWBE-518-T

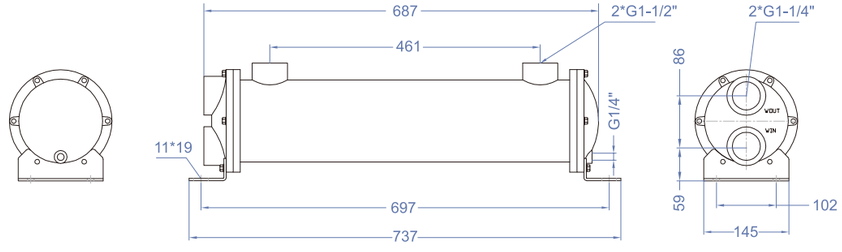
6.7m² (用于30.0Kw以下液压系统) Used for hydraulic system below 30.0Kw



Dimension of DWBE 外形尺寸

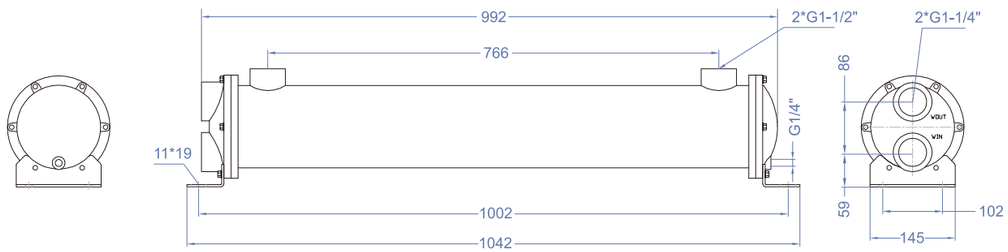
DWBE-524-T

9.0m² (用于37.0Kw以下液压系统) Used for hydraulic system below 37.0Kw



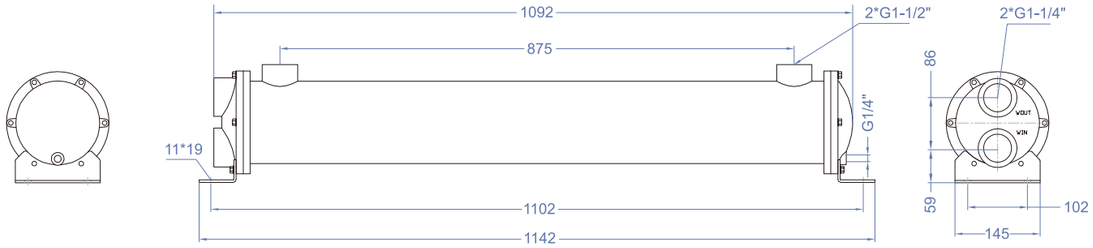
DWBE-536-T

13.7m² (用于55.0Kw以下液压系统) Used for hydraulic system below 55.0Kw



DWBE-548-T

15.0m² (用于60.0Kw以下液压系统) Used for hydraulic system below 60.0Kw



Model selection 选型

For deviating oil outlet temperatures, water inlet temperatures and viscosities, the calculation has to be made as follows :

Here

Heat to be dissipated (AW)	= 17 kW
Oil flux (V)	= 80 L/min
Oil outlet temp. (t oil out)	= 45°C
Water inlet temp. (t water in)	= 25°C
Oil type	= ISO 68
Effective heat to be dissipated	= kW eff.

1. The viscosity correction parameter is calculated as follows:

Temperature difference T (°C) =

$$\frac{\text{AW (kW) x 34.1}}{\text{Q (L / mm)}} = 7.2$$

Average oil temp. therefore (°C) =

$$\frac{t_{\text{oil out}} + \Delta t + t_{\text{oil out}}}{2} = 49^\circ\text{ C}$$

2. From oil manufacturer's data for ISO 68 :

Viscosity at 49°C = 38 CSt

3. From viscosity correction table B :

38 CSt = 1.11

AW eff. =

$$\frac{\text{AW (kW) x 25 x viscosity (CSt) . B}}{t_{\text{oil out}}\,(°C) - t_{\text{water in}}\,(°C)}$$

$$= \frac{17 \times 25 \times 1{,}11}{20} = 23.6\text{ kW}$$

From table A, at an oil flux of 80 L/min and 23.6 kW, the result is Cooler 524 -T

对于不同的油出口温度, 水入口温度和粘度, 需要进行以下计算 :

这里

散热量 (AW)	= 17 kW
油流量 (V)	= 80 L/min
油出口温度 (t 油出口)	= 45°C
水入口温度 (t 进水)	= 25°C
油品	= ISO 68
有效散热量	= kW eff.

1. 粘度修正系数计算如下:

温差 T (°C) =

$$\frac{\text{AW (kW) x 34.1}}{\text{Q (L / mm)}} = 7.2$$

因此, 平均油温 (°C) =

$$\frac{t_{\text{oil out}} + \Delta t + t_{\text{oil out}}}{2} = 49^\circ\text{ C}$$

2. 根据 ISO68 号油的数据:

49°C 时的粘度 = 38 CSt

3. 根据粘度修正表B:

38 CSt = 1.11

AW eff. =

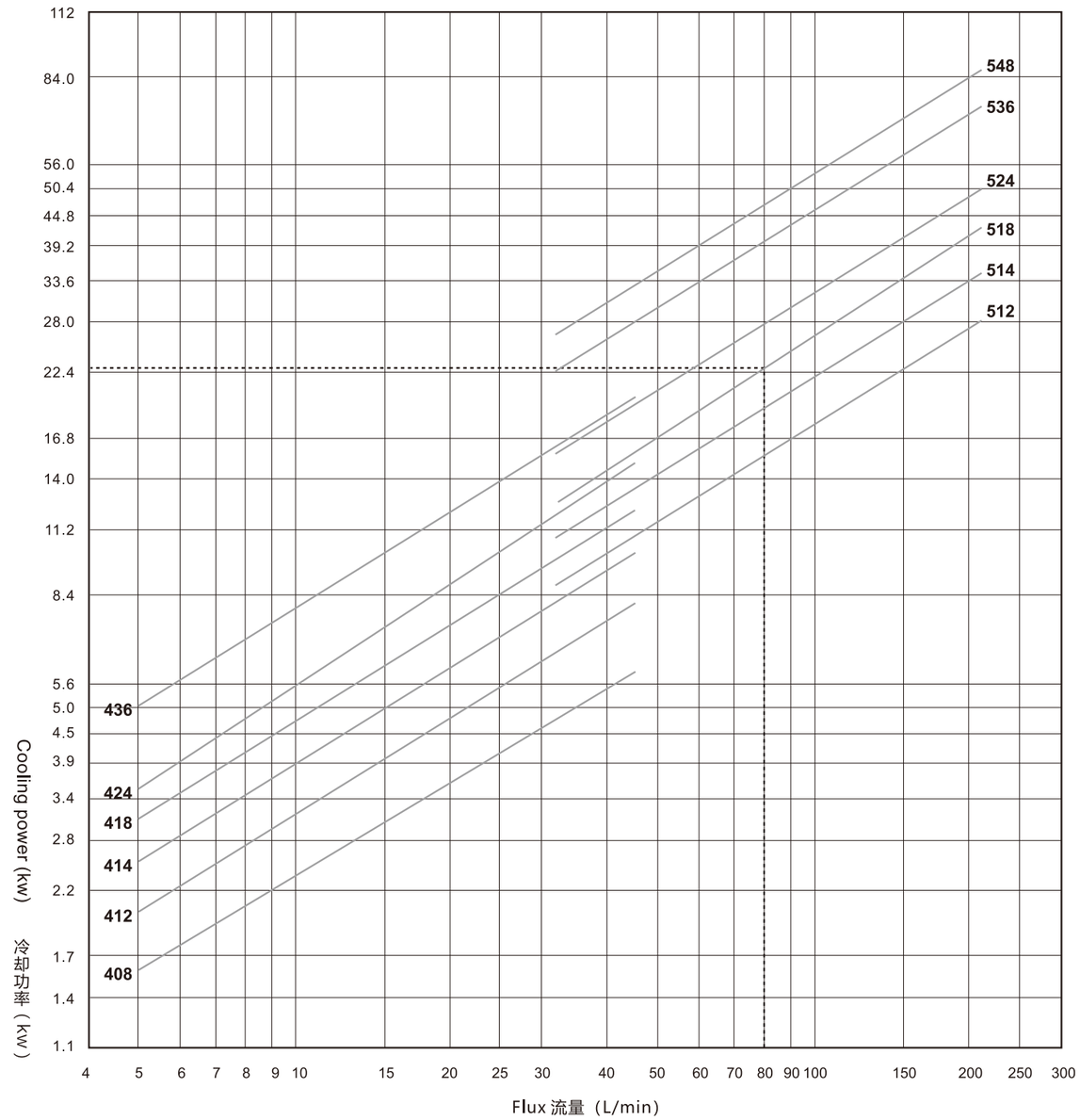
$$\frac{\text{AW (kW) x 25 x 粘度 (CSt) 表. B}}{t_{\text{油出口}}(°C) - t_{\text{进水}}\,(°C)}$$

$$= \frac{17 \times 25 \times 1{,}11}{20} = 23.6\text{ kW}$$

依据表A, 当油流量 80 升/分钟 和 23.6 kW时, 结果为 : 冷却器 524-T

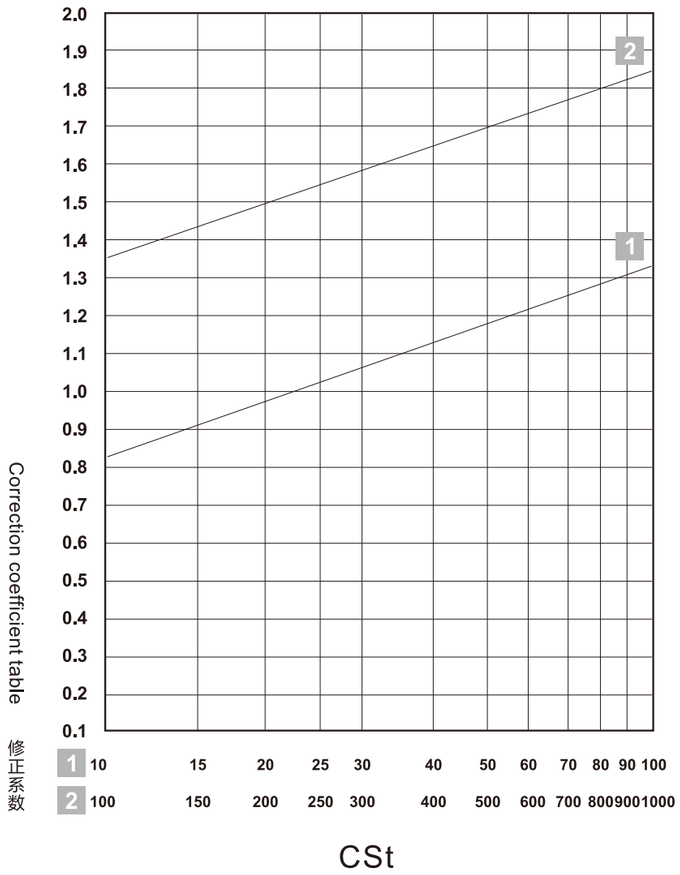
Performance curve of DWBE 性能曲线

Table A 表A



Viscosity correction coefficient table 粘度修正系数表

Table B 表B



Choice of Cooler

The performance data shown is based on a water inlet temperature of 25°C and an oil outlet temperature of 50°C, together with an oil viscosity of 20.6 CSt. For different viscosities, the correction parameter can be read off from the performance curve below.

冷却器的选择

图中所示的性能数据是基于水入口温度 25°C 和油出口温度 50°C, 油的粘度 20.6 CSt. 对于不同的粘度, 可依据以下性能曲线读出修正系数.