

Solutions for Fluid Technology

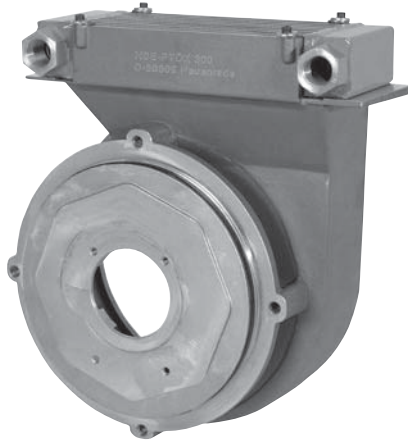


带冷却器钟罩

BELLHOUSINGS WITH OIL-COOLER

带空气冷却器的钟罩

系列PTÖK



产品描述

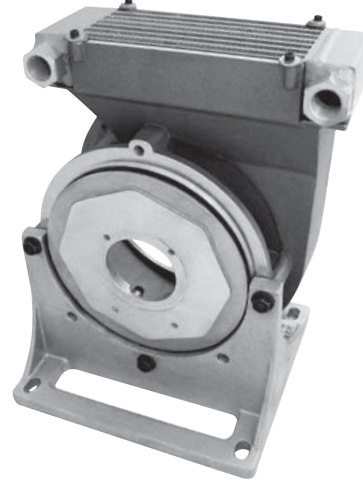
- 系列PTÖK, 圆形钟罩带冷却器
- 模块化系列用于0.55-22 KW (IMB 5/IMB 35/IMV 1) 电机
- 降噪设计, 型号B
- 冷却功率 0.95-5.15 KW
- 有4种系列可供选择 (ø 200 - ø 350)
- 所有钟罩的长度都符合标准 VDMA 24561
- 由于采用统一的安装长度, 因此标准钟罩可以方便地用带冷却器钟罩代替
- 适合卧式(IMB 5/IMB 35)或立式(IMV 1)安装
- PTFL和PTFS系列脚架可以按照标准VDMA 24561 进行安装

技术特点

- 冷却功率大, 噪音低, 所需空间很小
- 适用于回油或漏油的冷却
- 不需要电气安装
- 安装和拆除冷却单元过程方便, 易于维护
- 冷却单元结构稳固, 即使压力峰值也很安全
- 由于采用标准减震措施, 噪音水平可以降低达 6db (A)

BELLHOUSING WITH INTEGRATED OIL AIR COOLER

SERIES PTÖK



PRODUCT DESCRIPTION

- Round bell housing with oil air cooler, series PTÖK
- Model series for electrical motors 0.55-22 KW (IMB 5/IMB 35/IMV 1)
- Noise reduced design, form B
- Cooling capacity 0.95 - 5.15 KW
- 4 model series available (ø 200 - ø 350)
- All bell housing lengths comply with VDMA code 24561
- The standard bell housing can be replaced easily with a bell housing with oil cooling at any time due to identical installation lengths
- Can be used horizontally (IMB 5/IMB 35) as well as vertically (IMV 1)
- Foot brackets series PTFL and PTFS mountable acc. to VDMA 24561

TECHNICAL ADVANTAGES

- High cooling capacity with low noise output on the smallest installation space
- Suitable as reflux or leak oil cooler
- Requires no electrical installation
- Easy to maintain through simple installation and removal of the cooler element
- Sturdy cooler element for more safety during pressure peaks
- Due to the standard dampening, reduction of noise level up to 6 db (A) possible

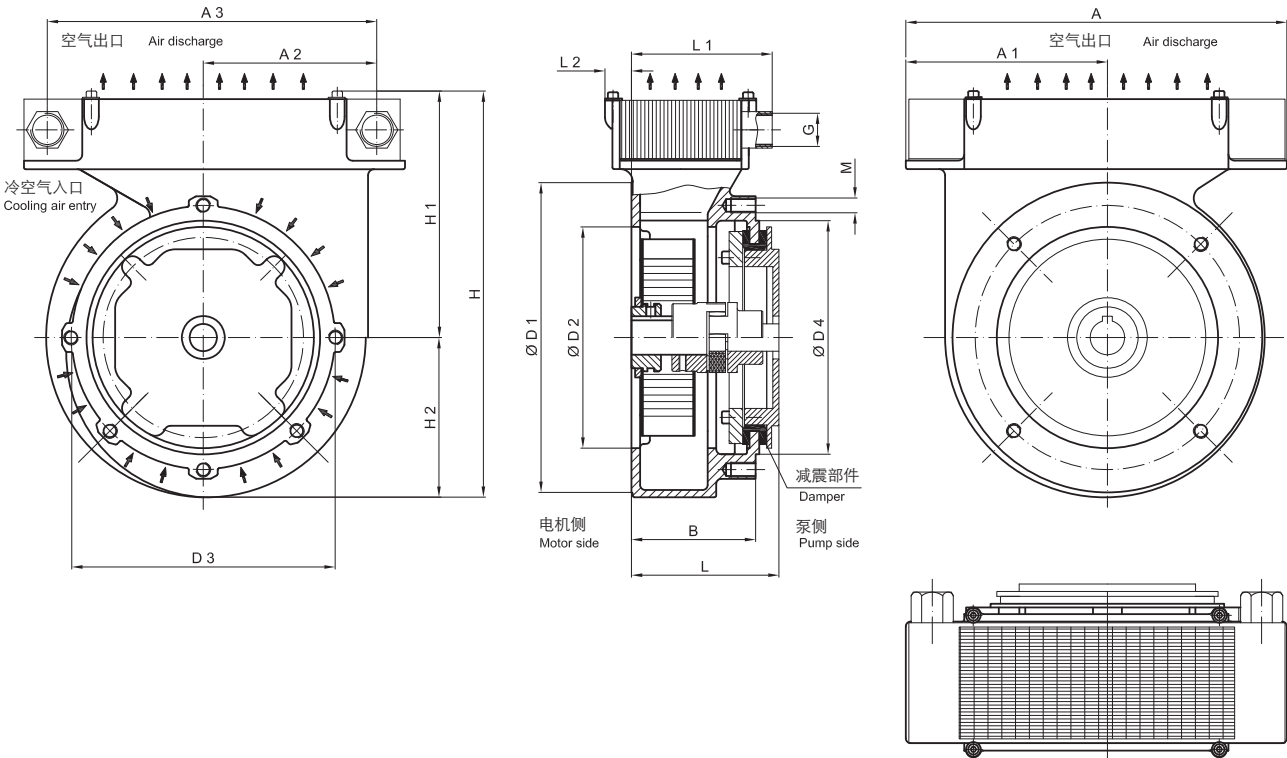
技术参数

TECHNICAL DATA

工作压力 WORKING PRESSURE	负荷频率 LOAD CYCLE	最大静态压力 MAX. STATIC PRESSURE
16 bar	1 x 10 ⁶ , f = 2 Hz	10 bar

产品代码 SIZE	冷却能力 COOLING POWER P [kW] Δt = 40 K	电机功率 E-ENGINE POWER n=1500 1/min ⁽¹⁾ kW	气流量 AIR FLOW m ³ /h	送风能力 INPUT POWER W	噪音水平 ⁽²⁾ NOISE LEVEL ⁽²⁾ dB(A)	冷却功率 / 电机功率 CORRELATION COOLING AND E-ENGINE POWER %
PTÖK 200	0,95	0,55-1,5	72	20	52	63-100
PTÖK 250	2,1	2,2-4	260	30	58	53-95
PTÖK 300	3,22	5,5-7,5	430	90	69	43-59
PTÖK 350	5,15	11-22	780	140	70	23-46

- 额定转速 (1) 1500 kW 1/min. 其他转速, 请接洽制造商
- 噪音水平是指配有减震的钟罩和电机, 检测点距离1米. 电机不同也会影响到噪音水平
- 泵的旋转方向都是顺时针 (面对泵轴)
- Nominal rotation (1) of driven machine 1,500 kW 1/min. In case of different rpm please contact the manufacturer.
- Noise levels (2) of damped version are measured with bellhousing and electric motor. Distance to the tested object 1 m. The stated values of noise level will be various depending on the electric motor
- Direction of pump rotation always clockwise (looking on pump shaft)



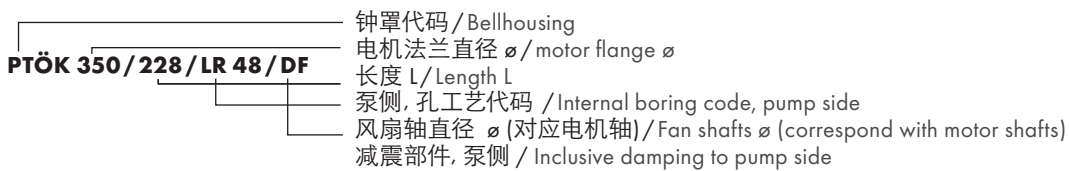
可选用PTFL和PTFS系列脚架 相关尺寸请参考样本“钟罩和附件“

Foot brackets series PTFL and PTFS used optionally For dimensions please see catalogue “Pump Housings and Accessories“.

产品代码 SIZE	电机代码 FRAME SIZE	功率 P POWER P kW	电机轴 DxL SHAFT DxL	脚架代码 FOOT FLANGES TYPE	尺寸 / DIMENSIONS mm																
					A	A1	A2	A3	B	D1	D2	D3	D4	G	H	H1	H2	L	L1	L2	MW
PTÖK 200	80	0,55	19 x 24	PTFL 200	241	141	122,5	205	70	200	130	165	145	G ¹ / ₂	285	180	105	100	88	10,3	M10
		0,75																110			
	90 S + L	1,1	24 x 50															118			
		1,5																124			
PTÖK 250	100 L	2,2	28 x 60	PTFL 250 PTFS 250	310	164	144,5	267	102	252	180	215	190	G ³ / ₄	329	199	130	120	101,5	22	M12
		3,0																124			
	112 M	4																128			
																		135			
																		148			
175																					
PTÖK 300	132 S + M	5,5	38 x 80	PTFL 300 PTFS 300	310	191	168,5	267	126	300	230	265	234	G ³ / ₄	384	234	150	144	128,5	8	M12
		7,5																150			
	155																				
	168																				
196																					
PTÖK 350	160 M + L	11 15	42 x 110	PTFL 350 PTFS 350	355	230	210,5	316	152	350	250	300	260	G ³ / ₄	426	251	175	188	155	6	M16
		18,5 22																204			
	180 M + L	18,5 22	48 x 110															228			
																		256			

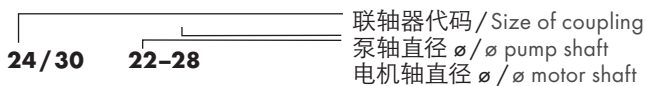
订货号: 钟罩

ORDERING CODE: BELLHOUSING



订货号: 联轴器

ORDERING CODE: COUPLING



冷却能力

如果没有额外的热源，液压系统中处于正常工作效率的电机，30 - 40% 的电机输出功率是热量。一部分热量是通过系统中的各个零件向外散发的，其中油箱表面对于热量的散发起到很重要的作用。然而，一些热量还是保留在液压系统内，这些热量会导致液压油过热。为避免这种情况发生，需要采用额外的冷却装置。大量的应用实例表明，相当于电机输出功率的 20 - 30% 的冷却能力是足够的，即使油箱很小，油箱表面也很小。

同时，很难想象液压装置没有采用钟罩冷却器。钟罩冷却器安装简单，只需要很小空间 - 尤其是可以代替通风系统，并且在很多情形下，钟罩冷却器可以满足系统所需要的冷却能力。见图1。

图1 中的数据表明，温差在 Δt 1K (40K起) 时达到最佳冷却效果所需要的油流量。如果油流量很低或者不连续，那么就需要安装一个单独的冷却回路，即使是这样，PTÖK系列冷却钟罩也很容易调整。图1 表明 冷却能力随着油的流量变化的关系。将实际温差作为倍数，就曲线中的对应冷却功率可以计算得到实际的冷却功率。

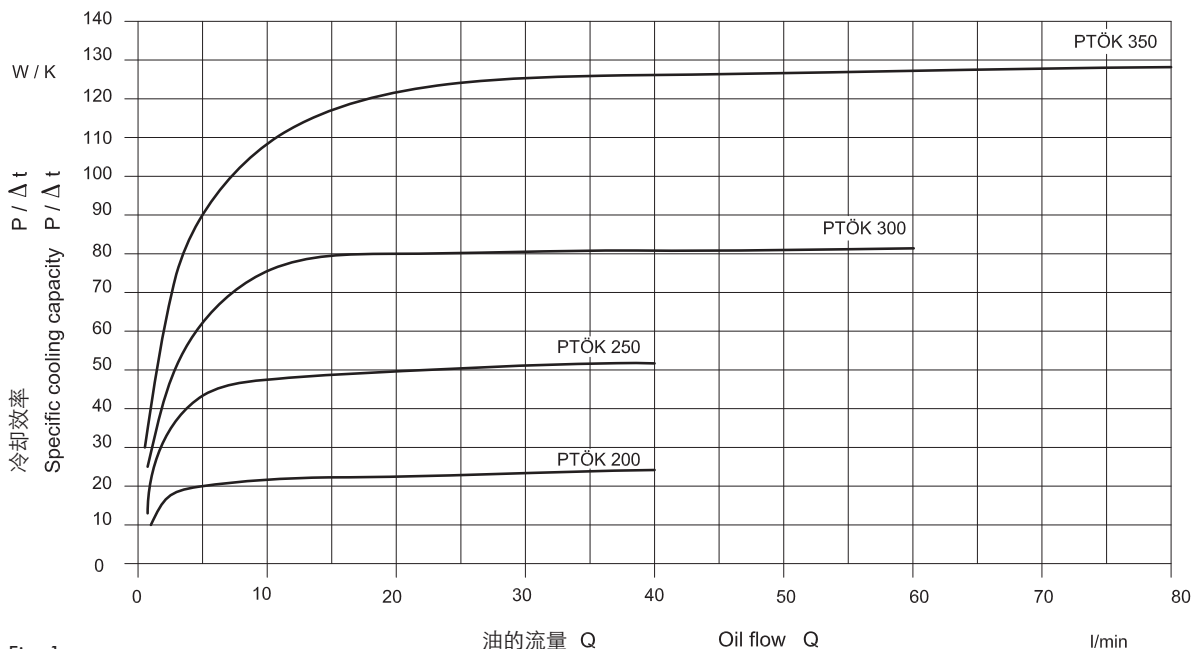


Fig. 1

具体冷却效率 $P/\Delta t$ 取决于油的流量 Q 和 油的入口温度与空气入口温度之间的温差 $\Delta t = 1$ K

BELLOUSING WITH INTEGRATED OIL AIR COOLER





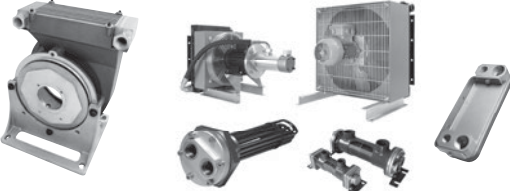


COOLING CAPACITY

Should no additional heat sources have an effect on the hydraulic aggregate between 30 and 40 percent of the engine output is lost as heat energy when the engine is operated at an average efficiency. A part of this heat is released outwards from the individual components. Above all, the surface area of the tank plays an important role here. However, some heat energy remains which may lead to overheating of the oil. In order to avoid this, the usage of an additional cooler is required. In the vast majority of cases, a cooling capacity of between 20 to 30 percent of the engine output is sufficient - also with aggregates with a smaller tank surface area.

Meanwhile, it is hard to imagine oil hydraulics without bell housing coolers. They are simple to install, they require very little space - particularly due to the ventilation system no longer being required - and, in most applications, achieve the complete required cooling capacity. See figure 1.

The values from figure 1 apply for an optimal amount of oil flow and applies to one Δt from 40 K. Should the oil flow be notably low or not sufficiently continual, the installation of a separate cooling circuit could be necessary - even this is effortlessly convertible with PTÖK bellhousing coolers. Figure 1 shows the dependency of the cooling capacity with the amount of oil flow. You will achieve the actual cooling capacity by multiplying the values for 1K Δt with the relevant Δt .

Specific cooling power $P/\Delta t$ depending on oil flow Q and temperature difference $\Delta t = 1$ K (oil inlet to air inlet).

<p>铝制油箱 Oil tanks made of aluminium</p>	
<p>清洗端盖和附件 液位计和温度计 Cleaning covers and further tank accessories Level- and temperature indicators</p>	
<p>油箱加热器 Tank heaters</p>	
<p>钟罩和附件 Bellhousings and accessories</p>	
<p>带冷却器的钟罩 各类换热器 DOC® 钎焊板式换热器 Bellhousing with oil-cooler Heat exchangers DOC® Brazed plate heat exchanger</p>	
<p>SOFTEX® 弹性和无背隙联轴器 SOFTEX® elastic and no backlash shaft couplings</p>	
<p>STAREX® 齿面联轴器 STAREX® flexible couplings</p>	
<p>内燃机联轴器 Diesel engine couplings</p>	