








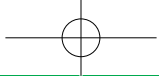


海密梯克制冷泵

HERMETIC REFRIGERATION CANNED MOTOR PUMP

- 
优势一
 总成本低，性价比高
 Low cost and high performance to price ratio
- 
优势二
 使用寿命长，产品损耗低
 Long service period and low product consumption
- 
优势三
 几乎零维修，返修费用少
 Nearly zero maintenance and repair expense
- 
优势四
 运转能耗低，使用能效高
 Low operation energy consumption and high efficiency
- 
优势五
 结构简单紧凑，降低安装费用
 Simple and compact structure makes low installation expense
- 
优势六
 安全性能高
 High safety performance
- 
优势七
 强大的售后服务团队
 Powerful after-sale service group

大连海密梯克泵业有限公司
Dalian HERMETIC Pump Co.,Ltd.



公司简介

Brief Introduction



Established in 1997, Dalian Hermetic Pump Co., Ltd. (as Dalian Hermetic) is a joint venture between Hermetic-Pumpen GmbH and Dalian Danai Pumps Co., Ltd., in which the German Party holds 54.38% shares and with sealless canned motor pump and magnetic drive pump as its main products. Hermetic-Pumpen GmbH was founded in 1866, being a worldleading position in the global market of sealless pump.

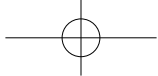
Hermetic products stand for best quality and highest operational safety in chemical, petrochemical, refrigeration and nuclear industries. Dalian Hermetic introduced synchronously the advanced design, manufacture technologies from Germany. The excellent quality assurance and customer service system is available to provide users with safe, efficient, environmentally-friendly and energy-efficient solutions to fluid delivery.

The products have been widely applied in chemical, petrochemical, pharmaceutical, textile, nuclear power and refrigeration industries. It has a long-term partnership with such well-known refrigeration enterprises as York, Grasso, Praxair, Bingshan Group, Binglun Group, Wuhan Xinshijie Refrigeration, Shuanghui Group, Three Gorge Corporation, etc.

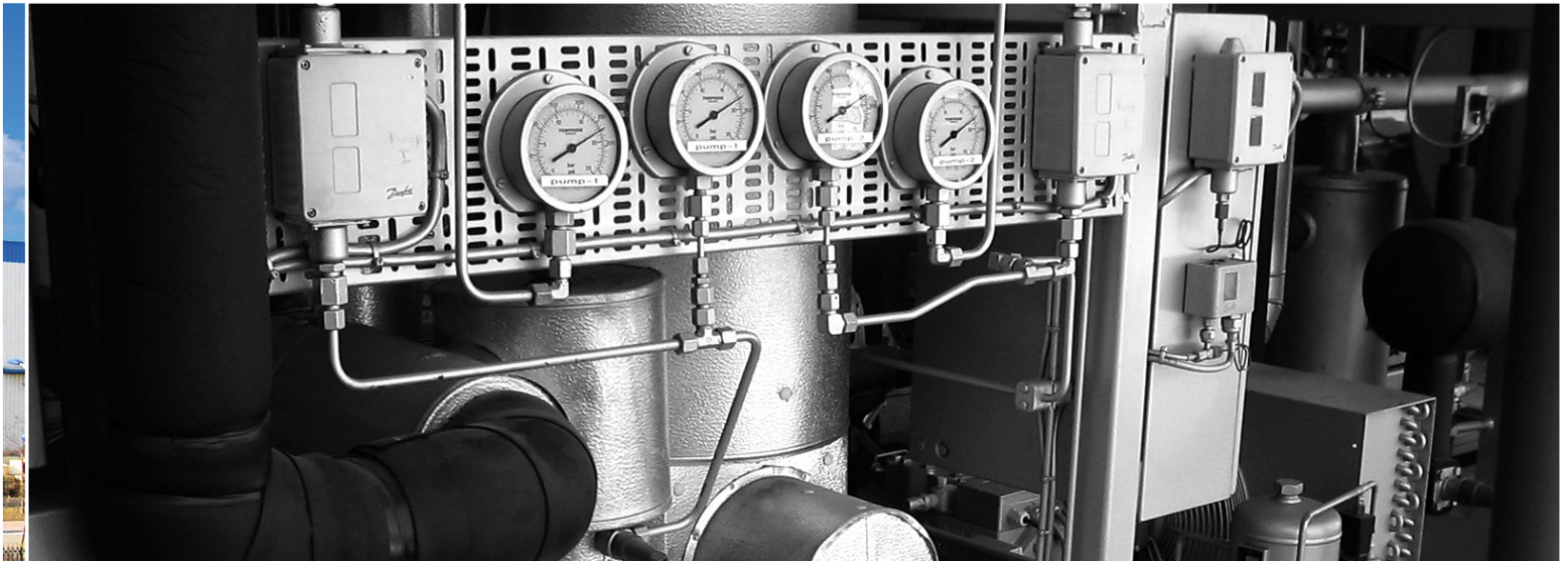
大连海密梯克泵业有限公司是由大耐泵业有限公司和德国海密梯克公司于1997年合资兴建，德方控股54.38%，中方控股45.62%。主要生产无泄漏的屏蔽泵和磁力泵，具有安全、高效、环保、节能的特性，特别适合输送腐蚀性、放射性、有毒、易燃、易爆、易汽化、昂贵的介质。

德国海密梯克泵业公司创建于1866年，经过百余年的发展，是全球领先的无泄漏泵制造商。作为德国海密梯克泵业公司的合资企业，我们同步引进德国先进的设计、制造技术，并且还拥有完善的质量保证和优质的客户服务体系。我们的产品代表着化工、石油化工、医药、纺织、制冷和核工业中更好的质量以及更高的安全，以“一流的质量、一流的服务、一流的信誉”服务于社会各界，为用户提供安全、高效、环保和节能的流体输送方案。

大连海密梯克泵业有限公司产品已广泛应用于石化、石油化工、医药、纺织、核电和制冷等领域，是国内众多知名企业，如约克、格拉索、普莱克斯、冰山集团、冰轮集团、武汉新世界制冷、双汇集团、三峡总公司等长期合作伙伴。



应用范围 Application



海密梯克制冷泵广泛使用在制冷行业，用于制冷剂的安全输送，如液氨（R717）、氟利昂（R22/R12）、硅油、二氧化碳(CO2)等。

图1是一个典型的制冷系统流程示意图。气液分离器中的制冷剂，通过海密梯克制冷泵输送到蒸发器中，产生的蒸汽和多余的制冷剂返回到气液分离器中。

Hermetic refrigeration pump is widely used in the refrigeration industry for safe delivery of such refrigerants as liquid ammonia (R717), Freon (R22/R12), silicon oil, CO2, etc.

Figure 1 shows the simplified scheme of a typical refrigeration plant. The refrigerant flows through a central fluid separator and is then conveyed by Hermetic refrigeration pump to the evaporators. The resulting vapor and the surplus fluid return back to the separator.

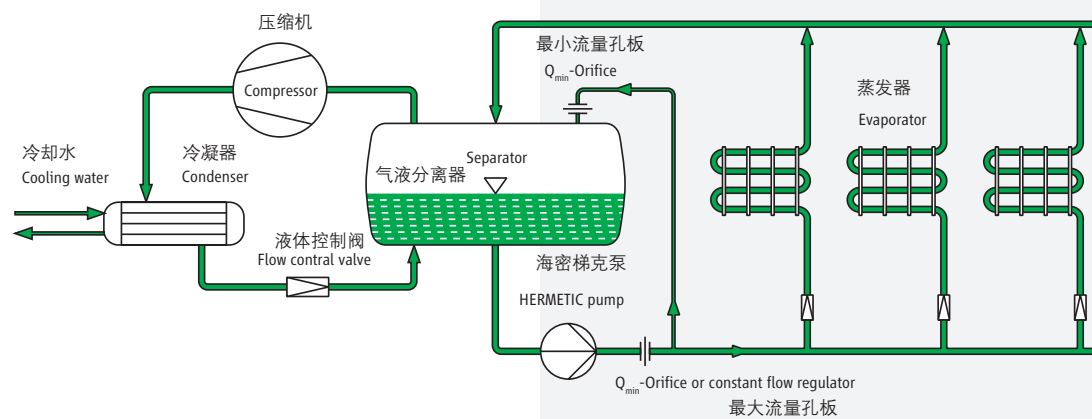
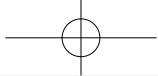


图1 Figure 1



产品简介

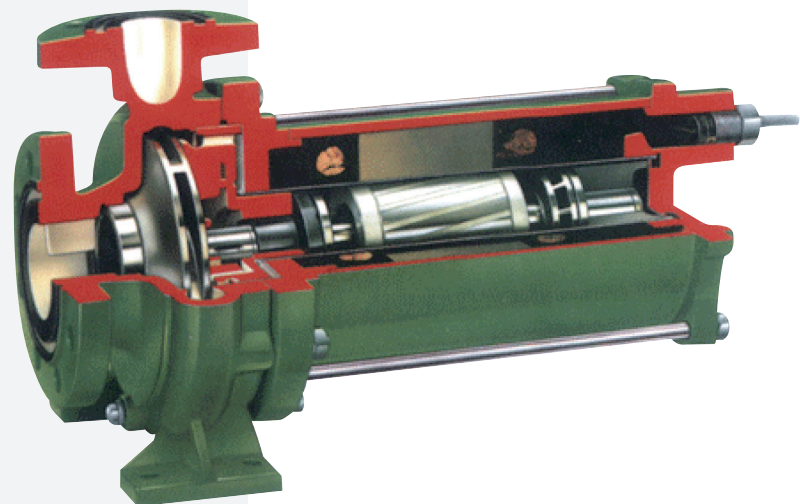
Products Brief Introduction

海密梯克制冷泵是离心泵和三相交流电机的共同体，过流部件直接与驱动电机轴相连，共同组成转子部件。屏蔽套嵌在定子内侧以隔离转子腔和定子腔，使海密梯克泵达到完全无泄漏。泵运转时，轴向力为水力自动平衡。

屏蔽套为德国进口，采用特殊工艺滚压成型，精度高、质量好、无焊接缺陷，充分保证了屏蔽泵可靠稳定的运转。

滑动轴承材质为FH82A，具有强度高，耐磨性好等优点，比浸树脂石墨轴承使用寿命高10倍以上。

海密梯克制冷泵分为CNF系列和CAM1/CAM2系列。CNF系列是卧式单级结构，CAM1/CAM2系列是卧式多级结构，均为轴向吸入，径向排出。



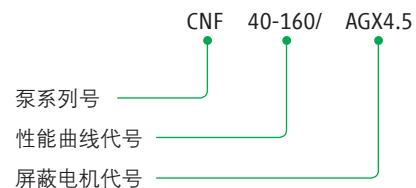
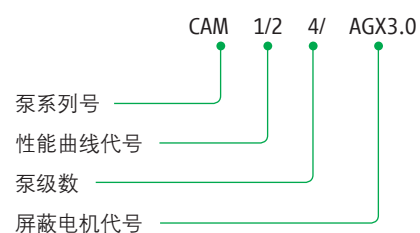
Hermetic refrigeration pump is a combination unit of centrifugal pump and 3-phase AC motor, with the hydraulic section connecting directly with the motor drive shaft to constitute the rotor component jointly. The stator can is embedded on the inner side of the stator to isolate both the rotor chamber and stator chamber, that makes Hermetic pumps sealless completely. When the pump is operating, the axial force is balanced automatically and hydraulically.

The stator can is imported from Germany, that is formed by rolling in a special process to have a high precision, a good quality free from welding defects, that ensures sufficiently the canned motor pump to operate reliably and stably.

The slide bearing is in FH82A to have such advantages as high strength, good wear resistance, etc, and a service life 10 times more than resin impregnated graphite bearing.

Hermetic refrigeration pump consists of CNF series and CAM1/CAM2 series, in which CNF series is in a horizontal single-stage structure and CAM1/CAM2 in a horizontal multi-stage structure, and both are in the form of axial suction, radial discharge.

海密梯克制冷泵表示方法示例如下:
Example for designation of Hermetic refrigeration pump:



CNF系列制冷泵

Refrigeration Pump Series CNF

结构特点

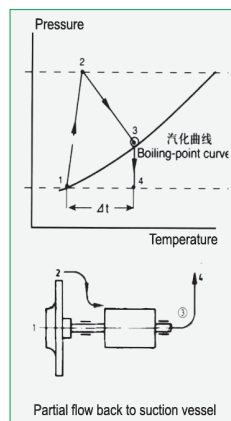
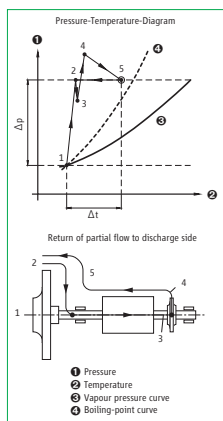
CNF型制冷泵为单级泵，采用高压内循环方式。部分介质从叶轮出口高压区分流，经过滤网流入轴心孔，再次被辅助叶轮加压后进入屏蔽电机转子腔，最后回到叶轮出口高压区。这种高压内循环方式，充分保证了屏蔽电机转子腔的压力，避免介质在泵内汽化（见图2）。该分流同时实现冷却屏蔽电机，润滑滑动轴承的作用。

传统制冷屏蔽泵（见图3）最易汽化点离饱和蒸汽压很近，甚至有时超越气压线，使电机腔内压力降低，产生汽化现象，滑动轴承产生干摩擦，易损坏，同时现场安装时须配排气管路。

Structural characteristics

Series CNF refrigeration pump is one with a single stage and in a high-pressure internal circulation mode. Part of medium is diverted from the high-pressure zone at the impeller outlet, and capacity through a filter net into the shaft central hole, where it is further pressurized by the auxiliary impeller before coming into the rotor chamber of the canned motor, and finally, it returns to the high-pressure zone at the impeller outlet. This kind of high-pressure internal circulation mode ensures sufficiently the pressure in the rotor chamber of the canned motor to keep media from vaporizing in the pump (see Figure 2). That diversion also has a function of cooling the canned motor, lubricating the slide bearing.

In traditional refrigeration canned motor pump (see Figure 3), the vaporizing point is the most likely to get very close to saturation vapor pressure or even go beyond the pressure line sometimes, resulting in a reduced pressure in the motor chamber leading to a vaporization phenomenon. The slide bearing becomes worn easily due to generation of dry friction. Furthermore, gas exhaust piping should be provided during field installation.



材质/额定压力/法兰标准

泵体	A352 LCB
叶轮	ZG230-450
滑动轴承	2Cr13/FH82A
轴	2Cr13
屏蔽套	1.4571 (进口)
密封垫	AFM34 (进口)*
额定压力	PN25*
法兰标准	GB/T9113.1 PN25 RF*

Materials/Pressure/Flanges

Casing	A352 LCB
Impeller	ZG230-450
Bearings	2Cr13/FH82A
Shaft	2Cr13
Stator can	1.4571 (import)
Gaskets	AFM34 (import)*
Pressure rating	PN25*
Flanges	GB/T9113.1 PN25 RF*

工作范围 Operating range

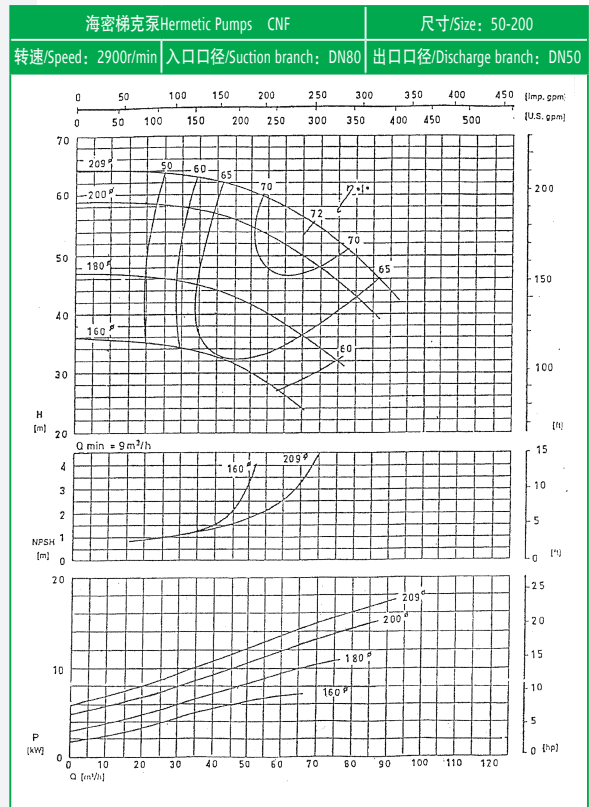
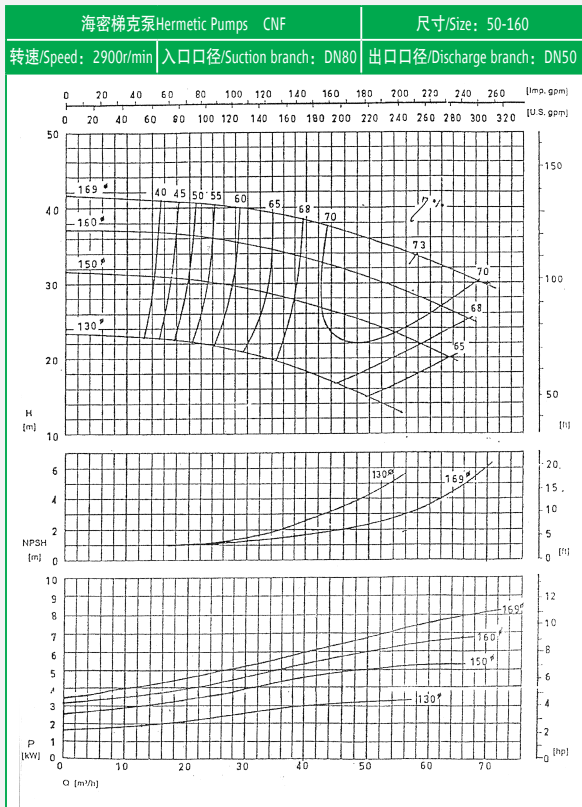
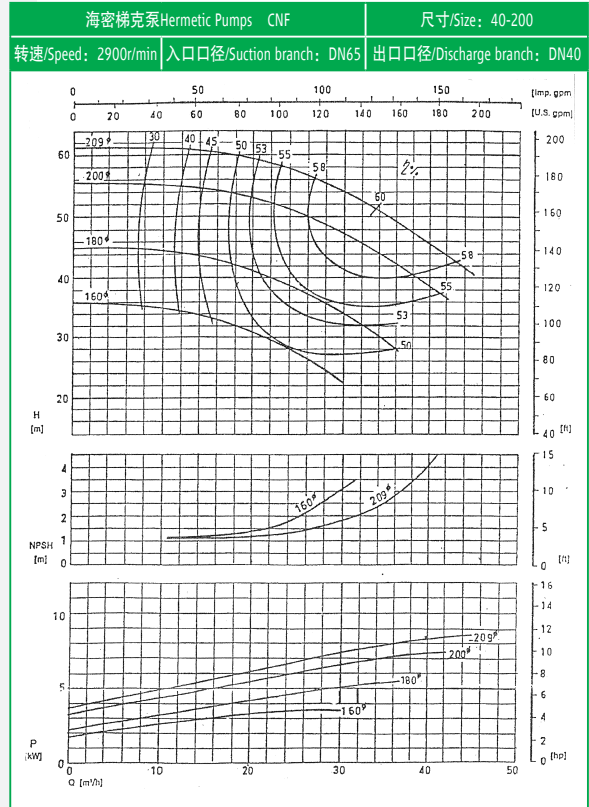
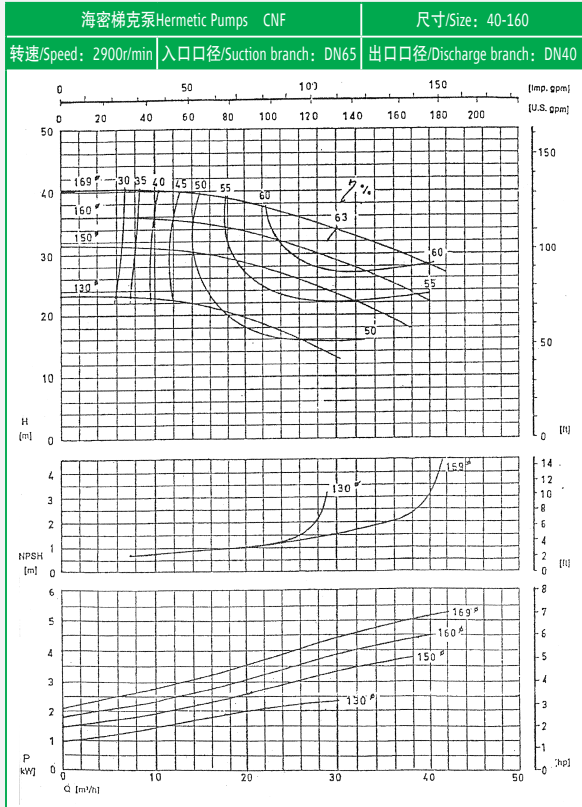
流量 Capacity Q	4~70m ³ /h*
扬程 Head H	max. 100m*
工作温度 Temperature	-50°C~+30°C*



*为常规设计，如有其它需求，请在订单中注明。
Items marked with * are the conventional design, and in case of any other requirements, please indicate in order.

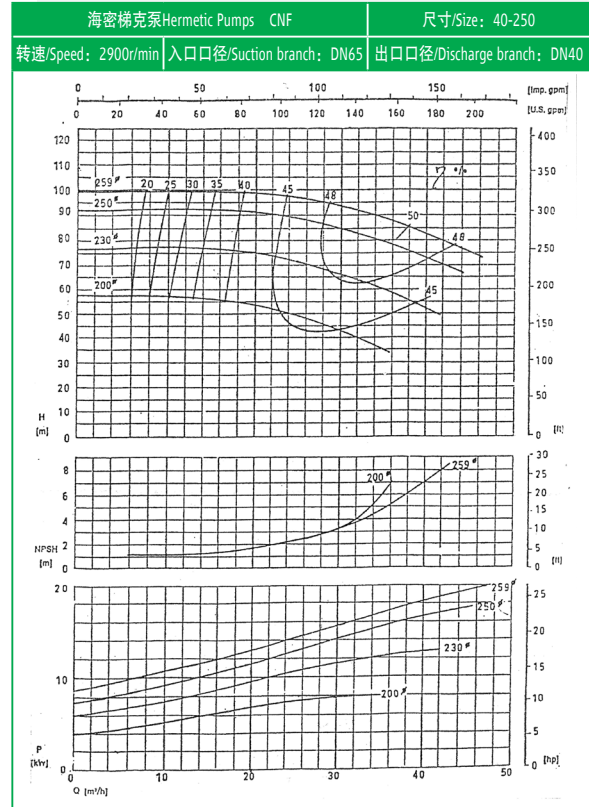
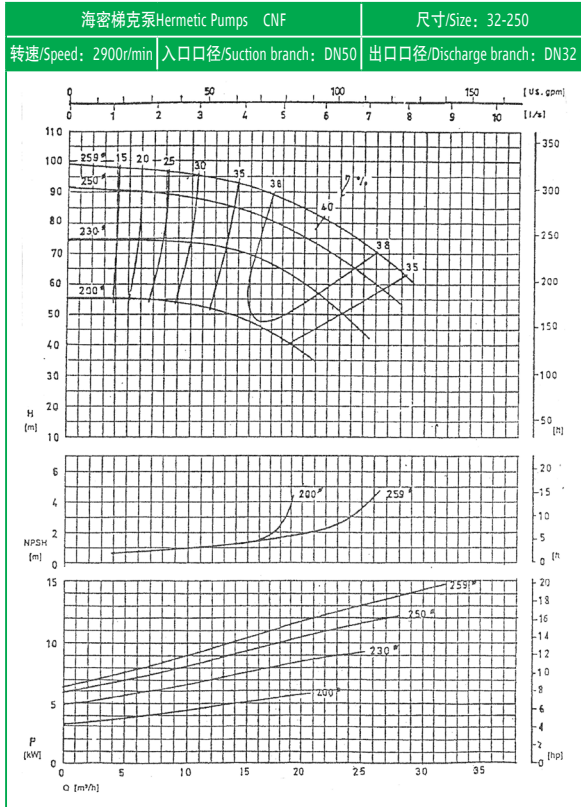
CNF系列制冷泵

Refrigeration Pump Series CNF



CNF系列制冷泵

Refrigeration Pump Series CNF



泵型号 Pump type	电机型号 Motor type	泵数据 Pump data		电机数据 Motor data	
		最小流量 Qmin (m³/h)	最大流量 Qmax (m³/h)	功率 Power (KW)	额定电流 Rated current (A) at 380V
CNF32-250	AGX6.5	4	15	6.5	16.8
	AGX8.5	4	15	8.5	22.1
CNF40-160	AGX3.0	4	22	3.0	8.0
	AGX4.5			4.5	11.1
	AGX6.5			6.5	16.8
CNF40-200	AGX8.5	4	25	8.5	22.1
	AGX4.5			4.5	11.1
CNF40-250	AGX6.5	4	25	6.5	16.8
	AGX8.5			8.5	22.1
CNF50-160	AGX4.5	6	50	4.5	11.1
	AGX6.5			6.5	16.8
CNF50-200	AGX8.5	6	50	8.5	22.1
	AGX6.5			6.5	16.8
	AGX8.5			8.5	22.1

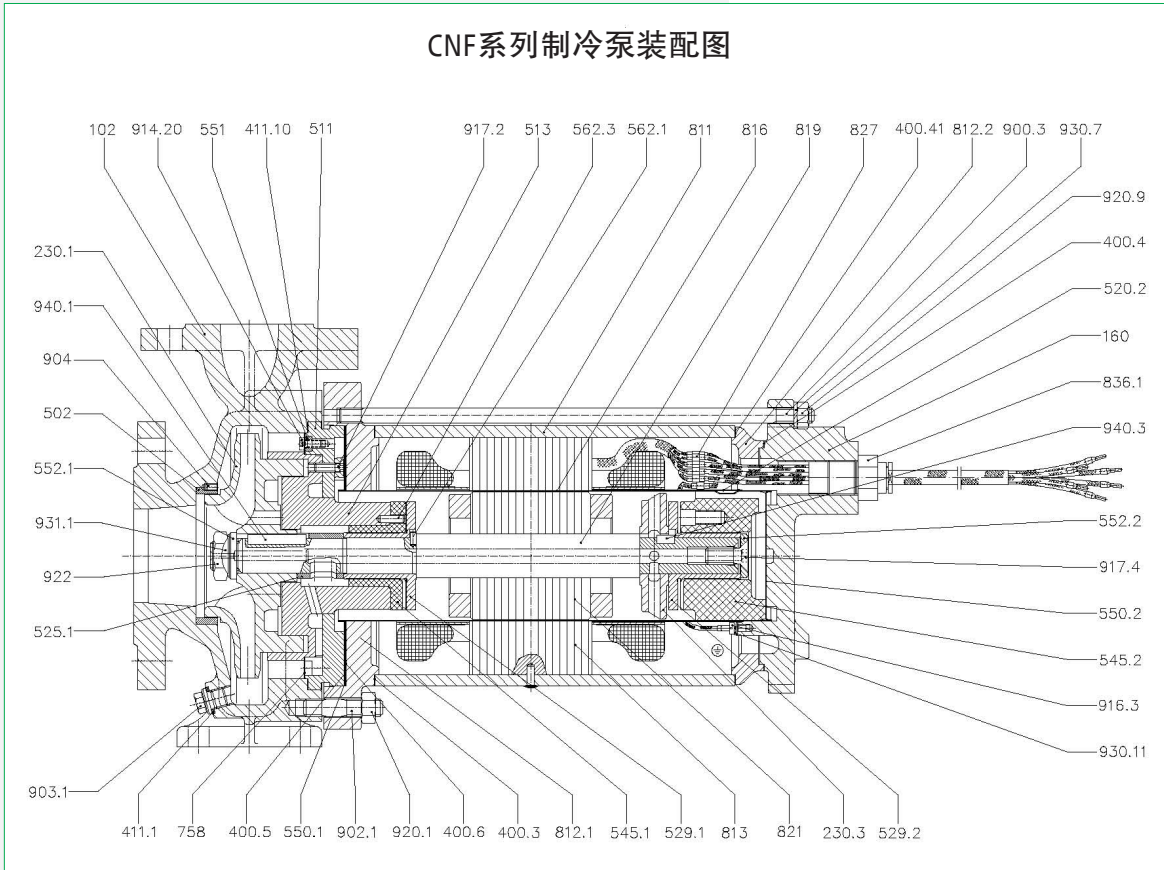
注：如果功率>8.5KW，可选择化工屏蔽泵。

Note: If the power >8.5KW, a chemical canned motor pump can be selected.

CNF系列制冷泵

Refrigeration Pump Series CNF

CNF系列制冷泵装配图



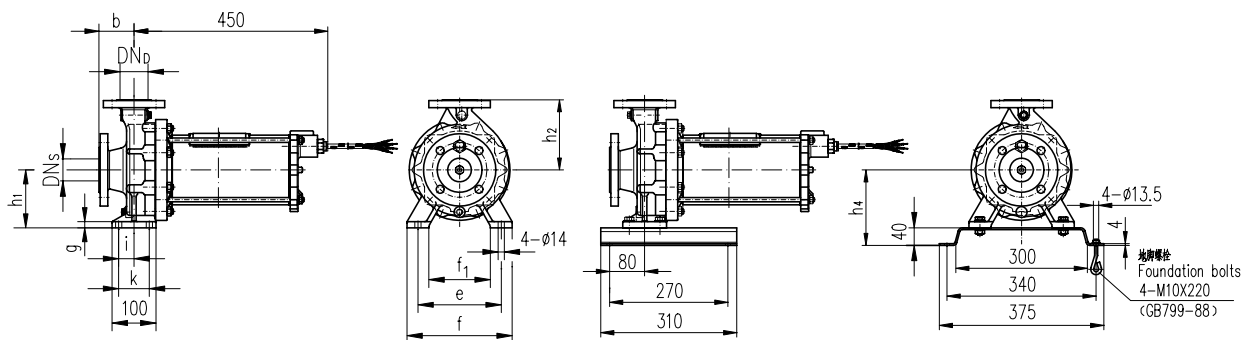
CNF系列制冷泵零件表

Part-No./零件号	Designation/名称	Part-No./零件号	Designation/名称	Part-No./零件号	Designation/名称	Part-No./零件号	Designation/名称
102	Pump Casing/泵体	520.2	Reinforceing sleeve/加固套	811	Motor casing/电机外壳	916.3	Int.hex.head screw/螺钉
160	Casing Cover/外壳盖	525.1	Distance Sleeve/轴承套	812.1	Motor casing cover/电机端盖	917.2	Int.hex.head screw/螺钉
230.1	Impeller/叶轮	529.1	Bearing sleeve/滑动轴承套	812.2	Motor casing cover/电机端盖	917.4	Int.hex.head screw/螺钉
230.3	Impeller/叶轮	529.2	Bearing sleeve/滑动轴承套	813	Stator/定子	920.1	Hexagon nut/螺母
400.3	Gasket/密封垫	545.1	Sliding bearing/滑动轴承	816	Stator lining/定子屏蔽套	920.9	Hexagon nut/螺母
400.4	Gasket/密封垫	545.2	Sliding bearing/滑动轴承	819	Motor shaft/轴	922.00	Hexagon nut/叶轮螺母
400.5	Gasket/密封垫	550.1	Sealing disc/定子屏蔽板	821	Rotor/转子	930.7	Lockwasher/弹簧垫圈
400.6	Gasket/密封垫	550.2	Sealing disc/定子屏蔽板	827	Cable adaptor/电线束套	930.11	Lockwasher/弹簧垫圈
400.41	Gasket/密封垫	551.00	Retaining plate/垫片	836.1	Cable aland/电线接头	931.1	Tabwasher/止动垫圈
411.1	Gasket/密封垫	552.1	Retaining plate/垫片	900.3	Screw/穿杠	940.1	Paraller key/键
411.10	Gasket/密封垫	552.2	Retaining plate/垫片	902.1	Hexagon screw/螺柱	940.3	Paraller key/键
502	Split Ring/口环	562.1	Cylindrical pin/销	903.1	Screwed plug/六角螺塞		
511	Casing-cover/泵盖	562.3	Cylindrical pin/销	904.00	Int.hex.head screw/螺钉		
513	Wear ring insert/耐磨板	758	Filter/过滤网	914.2	Int.hex.head screw/螺钉		

CNF系列制冷泵

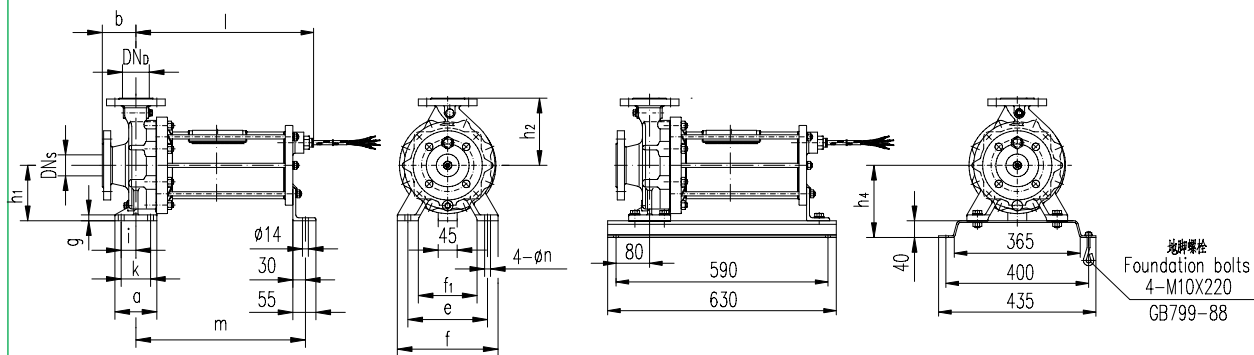
Refrigeration Pump Series CNF

CNF40/50-160/200 (AGX3.0 ~ 6.5) 外形安装尺寸 (Dimension Drawing)



型号/type	DNs	DNb	b		e	f	f ₁	g	h ₁	h ₂	h ₄	i	k
			无诱导轮 Without Inducer	带诱导轮 With Inducer									
CNF40-160	65	40	80	118	190	240	140	14	132	160	172	35	70
CNF40-200			100	100	212	265	165	14	160	180	200	35	70
CNF50-160	80	50	100	133	212	265	165	14	160	180	200	35	70
CNF50-200			100	133	212	265	165	14	160	200	200	35	70

CNF32~50-160~250/AGX8.5外形安装尺寸 (Dimension Drawing)



型号/Type	DNs	DNb	a	b		e	f	f ₁	g	h ₁	h ₂	h ₄	i	k	l	m	n
				无诱导轮 Without Inducer	带诱导轮 With Inducer												
32-200	50	32	100	80	113	190	240	140	14	160	180	200	35	70	530	495	13.5
32-250			125	100	100	250	320	190	16	180	225	220	47.5	95	560	505	14.5
40-160	65	40	100	80	118	190	240	140	14	132	160	172	35	70	530	495	13.5
40-200			100	100	100	212	265	165	14	160	180	200	35	70	530	495	13.5
40-250			125	100	100	250	320	190	16	180	225	220	47.5	95	560	505	14.5
50-160	80	50	100	100	133	212	265	165	14	160	180	200	35	70	530	495	13.5
50-200			100	100	133	212	265	165	14	160	200	200	35	70	530	495	13.5

CAM1/CAM2系列制冷泵

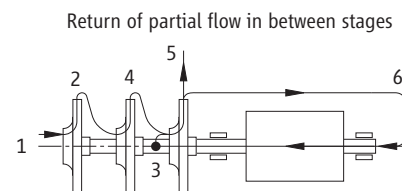
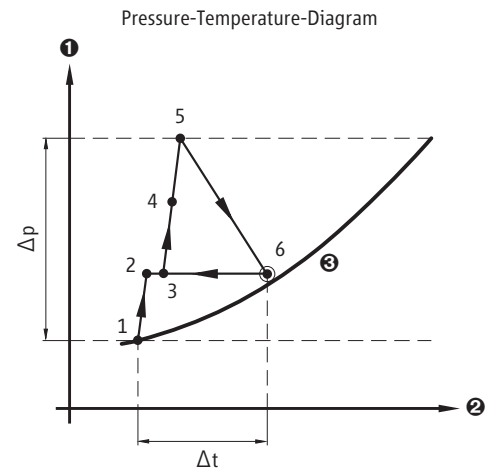
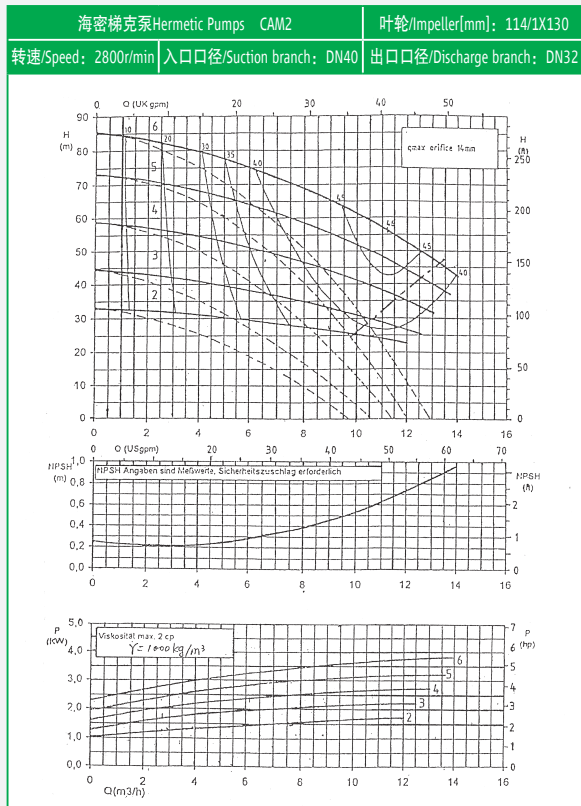
Refrigeration Pump Series CAM1/CAM2

结构特点

CAM1/CAM2制冷泵为多级泵，采用高压内循环方式（见图4），部分介质从末级叶轮出口高压区分流，经过滤网流入屏蔽电机转子腔，通过轴心孔回到次级叶轮的次高压区。这种高压内循环方式，充分保证了屏蔽电机转子腔的压力，避免介质在泵内汽化。该分流同时实现冷却屏蔽电机，润滑滑动轴承的作用。泵运转时，轴向力为水力自动平衡。泵汽蚀余量很低，CAM2如流量高达10m³/h时，泵汽蚀余量仅为0.8m。

Structural characteristics

Series CAM1/CAM2 refrigeration pump is one with multi-stage and in a high-pressure internal circulation mode (see Figure 4). Part of medium is diverted from the high-pressure zone at the impeller outlet in the final stage, and capacitys through the filter net into the rotor chamber of canned motor, and returns through the shaft central hole to the hypo-high-pressure impeller zone in the next final stage. This kind of high-pressure internal circulation mode ensures sufficiently the pressure in the rotor chamber of the canned motor to keep media from vaporizing in the pump. That diversion also has a function of cooling the canned motor, lubricating the slide bearing. When the pump is operating, the axial force is balanced automatically and hydraulically. The NPSHr is very low, and when the capacity is as high as 10m³/h, it is only 0.8m for the pump.



- ① Pressure
- ② Temperature
- ③ Vapour pressure curve

图4 Figure 4

CAM1/CAM2系列制冷泵

Refrigeration Pump Series CAM1/CAM2

材质/额定压力/法兰标准	
泵体	QT400-18A
吸入端盖	QT400-18A
中段壳体	20 #
叶轮	HT250
滑动轴承	2Cr13/FH82A
轴	2Cr13
屏蔽套	1.4571 (进口)
密封垫	AFM34 (进口) *
额定压力	PN25*
法兰标准	GB/T9113.3PN25 G *

Materials/Pressure/Flanges	
Casing	QT400-18A
Suction cover	QT400-18A
Stage casing	20 #
Impeller	HT250
Bearings	2Cr13/FH82A
Shaft	2Cr13
Stator can	1.4571(import)
Gaskets	AFM34(import)*
Pressure rating	PN25*
Flanges	GB/T9113.1 PN25 G *

工作范围 Operating range	
流量 Capacity Q	0.5~10.5m ³ /h*
扬程 Head H	max. 80m*
工作温度 Temperature	-50°C~+30°C*



*为常规设计，如有其它需求，请在订单中注明。
Items marked with * are the conventional design, and in case of any other requirements, please indicate in order.

泵型号 Pump type	电机型号 Motor type	泵数据 Pump data		电机数据 Motor data	
		最小流量 Qmin. (m ³ /h)	最大流量 Qmax (m ³ /h)	功率 Power (KW)	额定电流 Rated current (A) at 380V
CAM1	AGX1.0	0.5	5	1.0	2.7
CAM2/2	AGX3.0	1.0	10.5	3.0	8.0
CAM2/3	AGX3.0	1.0	10.5	3.0	8.0
	AGX4.5			4.5	16.8
CAM2/4	AGX3.0	1.0	10.5	3.0	11.1
	AGX4.5			4.5	16.8
CAM2/5	AGX3.0	1.0	10.5	3.0	8.0
	AGX4.5			4.5	11.1
	AGX6.5			6.5	16.8
CAM2/6	AGX3.0	1.0	10.5	3.0	8.0
	AGX4.5			4.5	11.1
	AGX6.5			6.5	16.8

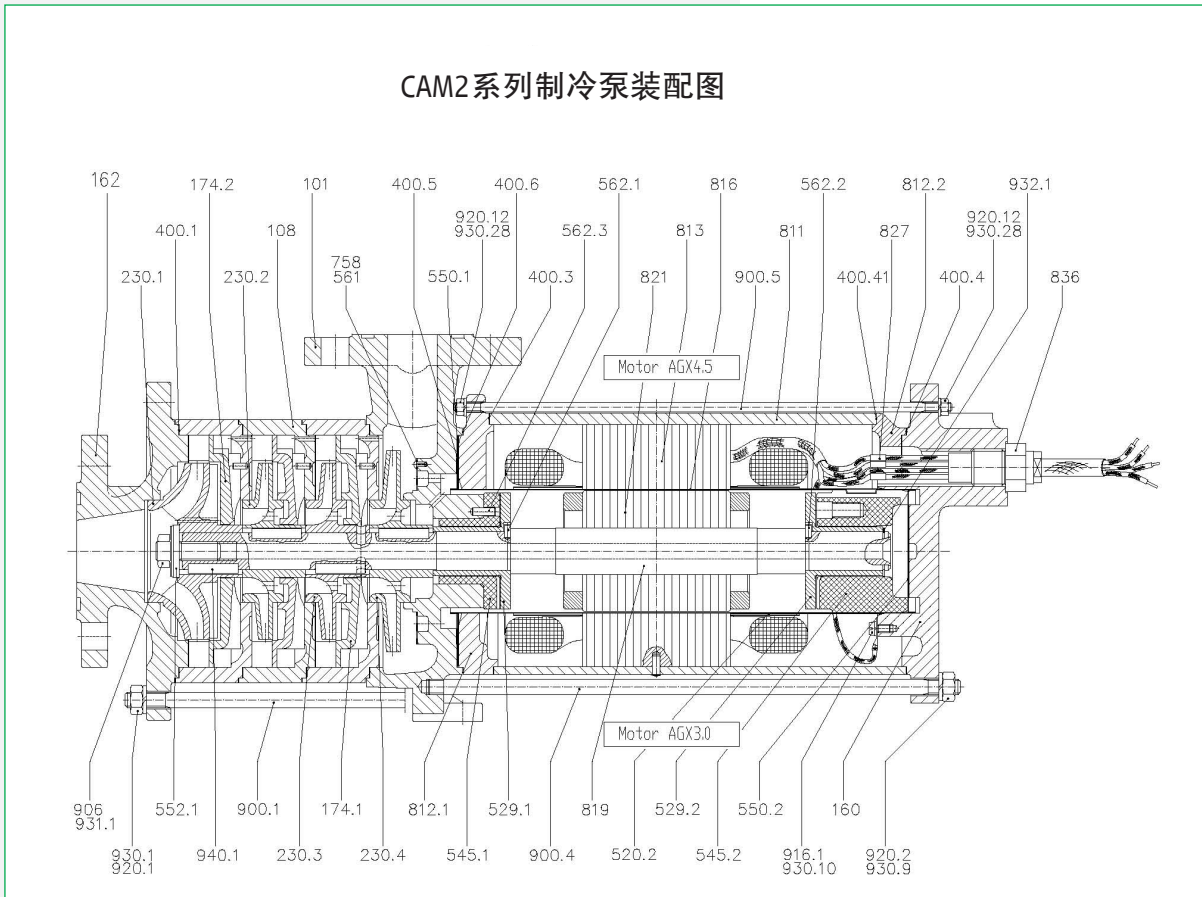
注：如果功率>6.5KW，可选择化工屏蔽泵。

Note: If the power >6.5KW, a chemical canned motor pump can be selected.

CAM2系列制冷泵

Refrigeration Pump Series CAM2

CAM2系列制冷泵装配图



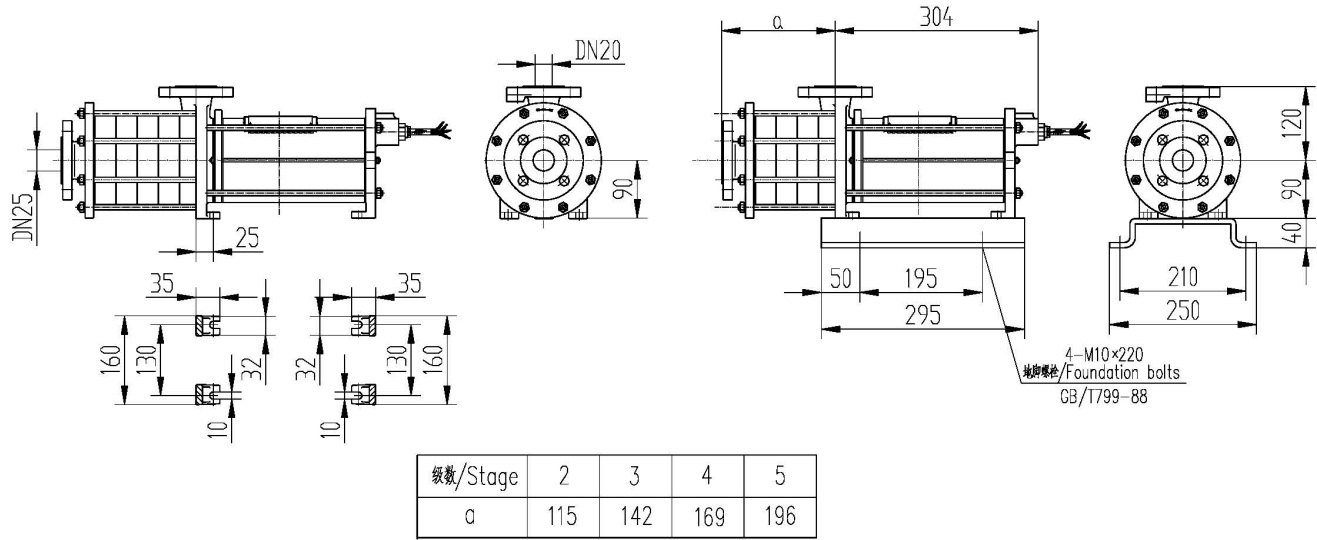
CAM2系列制冷泵零件表

Part-No./ 零件号	Designation/名称	Part-No./ 零件号	Designation/名称	Part-No./ 零件号	Designation/名称	Part-No./ 零件号	Designation/名称
101	Pump casing/泵体	400.41	Gasket/密封垫	562.3	Cylindrical pin/销	900.5	Screw/穿杠
108	Stage casing/中段壳体	400.5	Gasket/密封垫	758	Filter/过滤网	906	Hexagon screw/螺栓
160	Casing cover/外壳体	400.6	Gasket/密封垫	811	Motor casing/电机外壳组件	916.1	Int.hex.head screw/螺钉
162	Suction cover/吸入端盖	520.2	Reinforcing sleeve/加固套	812.1	Motor casing cover/电机外壳前盖	920.1	Hexagon nut/螺母
174.1	Diffuser insert/导叶	529.1	Bearing sleeve/滑动轴承套	812.2	Motor casing cover/电机外壳后盖	920.2	Hexagon nut/螺母
174.2	Diffuser insert/导叶	529.2	Bearing sleeve/滑动轴承套	813	Stator/定子	920.12	Hexagon nut/螺母
230.1	Impeller/叶轮	545.1	Bearing bush/滑动轴承组件	816	Stator lining/定子屏蔽套	930.1	Lockwasher/弹簧垫圈
230.2	Impeller/叶轮	545.2	Bearing bush/滑动轴承组件	819	Motor shaft/轴	930.9	Lockwasher/弹簧垫圈
230.3	Impeller/叶轮	550.2	Sealing disc/定子屏蔽板	821	Rotor/转子	930.10	Lockwasher/弹簧垫圈
230.4	Impeller/叶轮	552.1	Retaining plate/垫片	827	Cable adaptor/电线束套	930.28	Lockwasher/弹簧垫圈
400.1	Gasket/密封垫	561	Grooved dowel pin/铆钉	836	Cable inlet/接线端子	931.1	Tabwasher/止动垫圈
400.3	Gasket/密封垫	562.1	Cylindrical pin/销	900.1	Screw/穿杠	932.1	Tabwasher/止动垫圈
400.4	Gasket/密封垫	562.2	Cylindrical pin/销	900.4	Screw/穿杠	940.1	Paraller key/键

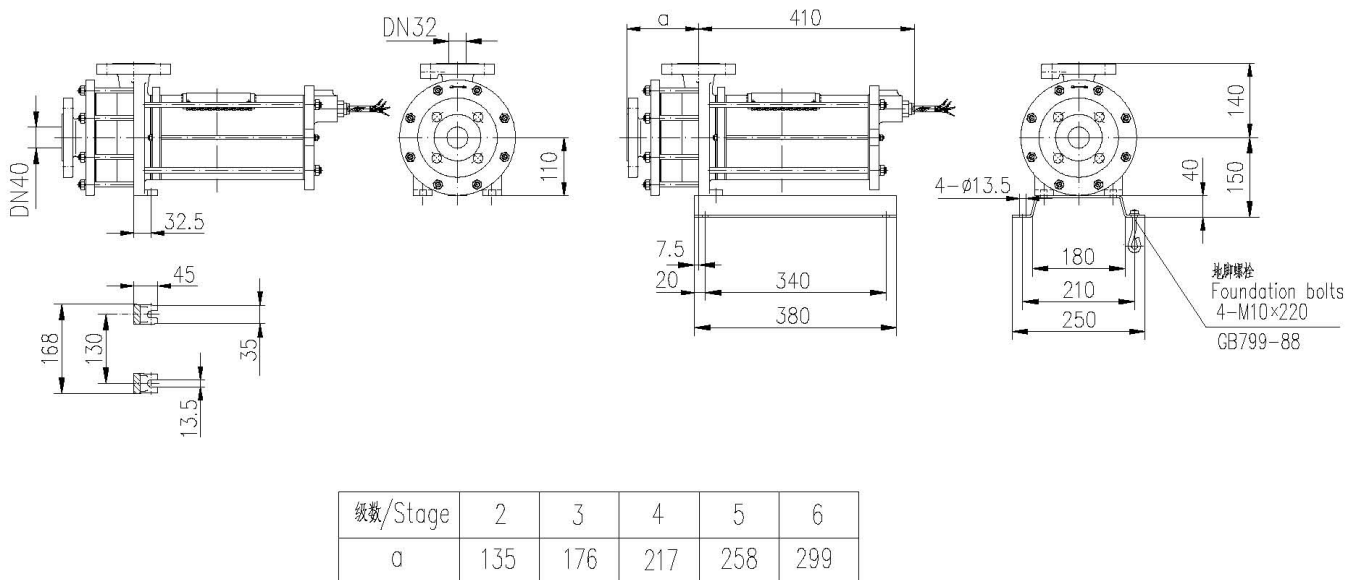
CAM1/CAM2系列制冷泵

Refrigeration Pump Series CAM1/CAM2

CAM1 (AGX1.0) 外形安装尺寸 (Dimension Drawing)



CAM2 (AGX3.0~6.5) 外形安装尺寸 (Dimension Drawing)





海密梯克制冷泵选型方法

How to select Hermetic Refrigeration Canned Motor Pump

Step 1: Determine specific parameters

Determine the following basic parameters based on the specific condition of refrigeration system:

Capacity Q (m³/h)

Head H (m)

Density of refrigerant ρ (kg/ m³)

Step 2: Capacity, Head correction

Each pump specification has a performance curve, which reflects the specific working parameters and working range of a pump, however, as this curve is drawn at the standard rotation speed, and the actual rotation speed is often lower than the standard one, the capacity, head have to be corrected in order to satisfy the operating requirements.

$$Q_{cor.} = n_2 / n_1 \cdot Q$$

$$H_{cor.} = (n_2 / n_1)^2 \cdot H$$

n₁ (r/min) Standard rotation speed obtained from the performance curve.

n₂ (r/min) Actual rotation speed of canned motor obtained from

"Parameters for the Canned Motor of Refrigeration Pump" later.

Q_{cor.} (m³/h): Corrected Capacity

H_{cor.} (m): Corrected Head

Step 3: Select a right performance curve

Select a right performance curve based on Q_{cor.}, H_{cor.}, in which attention should be paid to the following two points:

1. The operating point should be selected as possible as in or close to the best efficiency area in the performance curve.
2. The operating point should be selected in a relatively flat area on the NPSH curve.

Step 4: Calculate the shaft power (the hydraulic power)

$$P_H = (9.8 \cdot Q \cdot H \cdot \rho) / (3.6 \times 10^6 \cdot \eta) \text{ (KW)}$$

Q(m³/h), H(m): Actual parameters for a refrigeration system

ρ (kg/m³): Density of refrigerant

η (%): The hydraulic efficiency of pump obtained from the performance curve.

The above calculation disregards the influence of variation in the rotation speed of canned motor on η.

Step 5: Determination of canned motor

$$P \geq 1.2 P_H$$

$$P = P_2$$

P₂: The rated output power of canned motor, which can be obtained from "Parameters for the Canned Motor of Refrigeration Pump".

After P₂ is selected, determine the specification of the canned motor.

Step 6: Checking Suction Head Geod.

$$14 \quad H_{sh}(m) \geq NPSHr(m) + \text{loss of pump suction piping (m)} + 0.5(m)$$

NPSHr: Obtained from the performance curve.

第一步: 确定具体参数

根据制冷系统的具体情况确定如下基本参数:

流量 Q (m³/h)

扬程 H (m)

制冷剂密度 ρ (kg/ m³)

第二步: 流量、扬程修正

每种规格的泵都有一个性能曲线, 它反映了泵的具体工作参数及工作范围, 但此曲线是在标准转速下绘制的, 实际工作的转速往往比标准转速低, 因此, 为满足使用要求, 需对流量、扬程进行修正。

$$Q_{修正} = n_2 / n_1 \cdot Q \quad H_{修正} = (n_2 / n_1)^2 \cdot H$$

n₁ (r/min) 性能曲线上的标准转速, 此数据可以从性能曲线上查找。

n₂ (r/min) 屏蔽电机实际转速, 此数据从后面“制冷泵屏蔽电机参数表”中查找。

Q_{修正}(m³/h)修正后流量 H_{修正}(m)修正后扬程

第三步: 选择合适的性能曲线

根据Q_{修正}、H_{修正}来选择合适的性能曲线, 在选择时一般应注意以下两点:

1. 工作点尽量选在性能曲线上最佳效率区域, 或接近最佳效率区域。
2. 汽蚀曲线相对较平坦的区域。

第四步: 计算轴功率 (水力功率)

$$P_{轴} = (9.8 \cdot Q \cdot H \cdot \rho) / (3.6 \times 10^6 \cdot \eta) \text{ (KW)}$$

Q(m³/h)、H(m): 制冷系统所需实际参数

ρ (kg/m³): 制冷剂密度

η (%): 泵水力效率, 从性能曲线上查找。

以上计算忽略了屏蔽电机转速变化对 η 的影响。

第五步: 确定屏蔽电机

$$P \geq 1.2 P_{轴}$$

$$P = P_2$$

P₂: 屏蔽电机额定输出功率, 在“制冷泵屏蔽电机参数表”中查找。

选定P₂后, 确定屏蔽电机规格。

第六步: 倒灌高度H_{倒灌}的校核

$$H_{倒灌}(m) \geq NPSHr(m) + \text{泵吸入管路损失}(m) + 0.5(m)$$

NPSHr: 泵汽蚀余量从性能曲线上查找。

制冷泵屏蔽电机参数表

Parameters for Canned Motor of Refrigeration Pump

AGX系列制冷泵用电动机额定数据												
Rated Data for AGX-series Canned Motor of Refrigeration Pump												
机座号 Base No.	P1 (KW)	P2 (KW)	频率 Frequency (Hz)	转速 Speed (r/min)	额定电Rated current (A)						满载效率 Full-load efficiency (η %)	满载功率因数 Full-load power factor ($\cos \phi$)
					220V	230V	380V	400V	660V	690V		
AGX3.0	4.6	3.0	50	2690	13.9	13.3	8	7.6	4.6	4.4	65.2	0.87
AGX4.5	6.4	4.5		2695	19.1	18.3	11.1	10.5	6.4	6.1	70.3	0.88
AGX6.5	9.3	6.5		2695	29.1	27.8	16.8	16	9.7	9.3	69.9	0.84
AGX8.5	11.9	8.5		2800	36.4	34.8	21.1	20	12.1	11.6	71.2	0.86
AGX3.0	4.6	3.0	60	3225	13.9	13.3	8	7.6	4.6	4.4	65.2	0.87
AGX4.5	6.4	4.5		3230	19.1	18.3	11.1	10.5	6.1	6.1	70.3	0.88
AGX6.5	9.3	6.5		3230	29.1	27.8	16.8	16	9.3	9.3	69.9	0.84
AGX8.5	11.9	8.5		3360	36.4	34.8	22.1	20	11.6	11.6	71.2	0.86

机座号 Base No.	P1 (KW)	P2 (KW)	频率 Frequency (Hz)	转速 Speed (r/min)	额定电Rated current (A)		满载效率 Full-load efficiency (η %)	满载功率因数 Full-load power factor ($\cos \phi$)
					240V	415V		
AGX3.0	4.0	3.0	50	2690	11.1	6.4	74.5	0.87
AGX4.5	6.3	4.5		2695	17.3	10.0	71.0	0.88
AGX6.5	9.0	6.5		2695	25.2	14.6	72.2	0.86
AGX8.5	11.9	8.5		2800	33.4	19.3	71.2	0.86
AGX3.0	4.0	3.0	60	3225	10.8	6.2	74.5	0.90
AGX4.5	6.3	4.5		3230	17.1	9.9	71.0	0.87
AGX6.5	9.0	6.5		3230	24.9	14.4	72.2	0.87
AGX8.5	11.9	8.5		3360	33.4	19.3	71.2	0.86

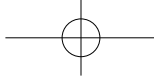
AGX系列440V-50/60Hz制冷泵用电动机额定数据									
Rated Data for AGX-series 440V-50/60Hz Canned Motor of Refrigeration Pump									
机座号 Base No.	P1 (KW)	P2 (KW)	频率 Frequency (Hz)	转速 Speed (r/min)	额定电Rated current (A)		满载效率 Full-load efficiency (η %)	满载功率因数 Full-load power factor ($\cos \phi$)	
					440V				
AGX3.0	4.6	3.0	50	2690	6.9		65.2	0.87	
AGX4.5	6.4	4.5		2695	9.5		70.3	0.88	
AGX6.5	9.3	6.5		2695	14.5		69.9	0.84	
AGX8.5	11.9	8.5		2800	18.2		71.2	0.86	
AGX3.0	4.6	3.0	60	3225	6.9		65.2	0.87	
AGX4.5	6.4	4.5		3230	9.5		70.3	0.88	
AGX6.5	9.3	6.5		3230	14.5		69.9	0.84	
AGX8.5	11.9	8.5		3360	18.2		71.2	0.86	

Order Information

- When ordering, please indicate such parameters as capacity, head, liquid, temperature, density, viscosity, vapor pressure, specific heat, pressure in suction and discharge, suction head geod., particles and impurities, etc., for us to select the right type for you.
- Hermetic refrigeration pump operates smoothly and with a low noise, and equipped without base plate unless it is indicated in the order.

订货须知

- 订货时应指明流量、扬程、介质名称、温度、密度、粘度、饱和蒸汽压、比热、泵入口压力、泵出口压力、最小倒灌高度、颗粒及杂质等参数，以便我们为您正确选型。
- 海密梯克制冷泵运转平稳、噪音低，标准配制中无底座，需要时请在订货合同中特殊注明。



当摩擦不在的时候，我的效率可想而知
Imagine my efficiency if there is no friction



雄心只因责任·细致只为严谨

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大连海密梯克泵业有限公司
Dalian HERMETIC Pump Co.,Ltd.

中国·大连市双D港辽河东路86号 邮编：116620
No.86 LiaoHe East Road, DD Port Dalian, 116620 P.R.China
电 话/ Tel. : +86-411-87581188
传 真/ Fax. : +86-411-87581199
销售电话/ Sales tel. : +86-411-87581186
服务电话/Service tel. : +86-411-87582373
免费服务电话/Free tel: +86-400-638-7775