

HBR 系列 工业软管泵

HBR Series Industrial Hose Pumps

输送介质固体含量可达80%

The max solid content in medium can reach 80%

有自吸能力

Self suction

无泄漏

Non leakage

最大工作压力1.5MPa

Max working pressure 1.5MPa

软管规格32、40、50、65、80、100

Size of hose pipe 32/40/50/65/80/100



Since 1958

工业软管泵

Industrial Hose Pump

主要应用于 Application

- 采矿业
- 陶瓷
- 化工
- 造纸工业
- 制药工业
- 食品加工
- 水处理
- Mineral processing
- Ceramic
- Chemical industry
- Pulp and paper
- Pharmaceutical
- Food processing
- Water treatment

用法 Usage

一种容积式泵，适用于输送高含固量、高粘度、强腐蚀性、强磨损性介质。

Positive displacement type of pump, used to transfer medium with high solid content, high viscosity, strong corrosion, serious wearing situations.

法兰标准 Flange standard	EN 1092-1	ASME/ANSI B16.5
公称压力 Nominal pressure	PN16	class150

材料 Material

与介质接触的软管主要有以下几种材质：

For the hose inner layers, 4 materials are available to suit the delivery of the pumped fluids:

- 天然橡胶
- 丁腈橡胶
- 三元乙丙橡胶
- 氟橡胶
- 其它材质软管可按要求定做
- NR
- NBR
- EPDM
- FKM
- Any other hoses material requirements available on request.

泵型号说明 Pump model instruction



泵运行数据 Operating data

流量 (0.4~45) m³/h
压力 < 1.5MPa

Flow rate (0.4~45)m³/h
Working pressure < 1.5MPa

现场标准条件 Standard conditions at site

- 连续运行过程中的相对湿度不大于90%
- 环境温度不高于40°C，不低于4°C
- 海拔高度不超过1000m

当场地条件与上述规定不符时必须加以说明。

- Relative humidity during continuous operation max. 90%
- Ambient temperature max.40°C, min.4°C
- Permissible altitude up to 1000m above sea level

Deviations from the site conditions specified herein must already be disclosed in the inquiry.

流量 Flow rate

软管泵允许运行范围取决于：

- 转速
- 介质特性
- 轴承及轴载荷
- 运行状态（连续或间歇运行）

适用工作范围在性能曲线和泵数据表中表示。

The permissible operating range of centrifugal pumps depends on:

- speed
- medium characteristics
- bearing and shaft load
- operation situation(continuous or intermittent)

The operating range applicable to the pump is indicated in the individual characteristic curves and the pump data sheet.

出口压力 Outlet pressure

软管泵出口压力取决于：

- 沿程管路阻力
- 泵送介质的密度
- 介质特性

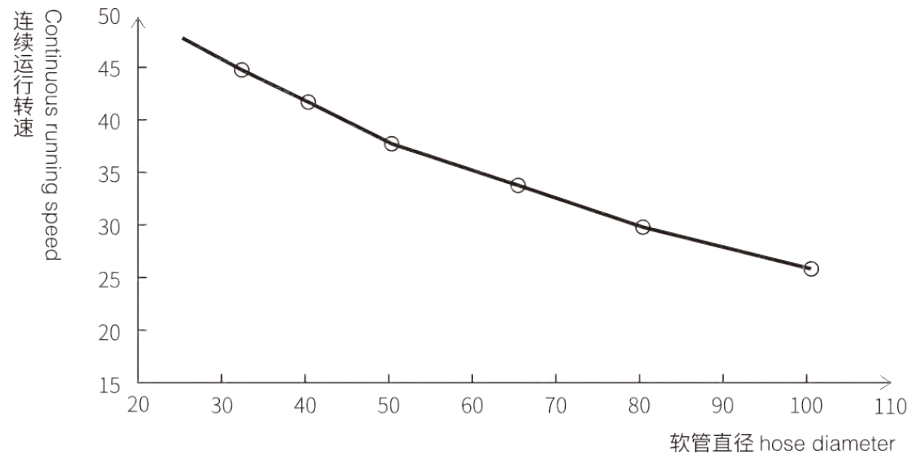
泵选择和运行必须确保泵出口最大压力绝不能超过工作温度下软管最大允许工作压力。

The outlet pressure of hose pump depends on:

- Resistance in pipe
- The density of the medium to be pumped
- Medium characteristics

Pumps must be selected and operated in a way which ensures that the maximum pump outlet pressure does by no means exceed the maximum permissible operating pressure of hose pipe under the operation temperature.

连续运行转速和
软管直径限制
The limits of
continuous running
speed and hose
diameter



泵的结构 STRUCTURE

软管泵是基于橡胶软管可被挤压变形并随即恢复原状的能力而设计的。

安装在滚轮对角的2只滑靴挤压有纤维加强层的软管持续的输送液体。

滑靴挤压软管在入口处产生真空吸入液体从而推动到出口继而输送出去。

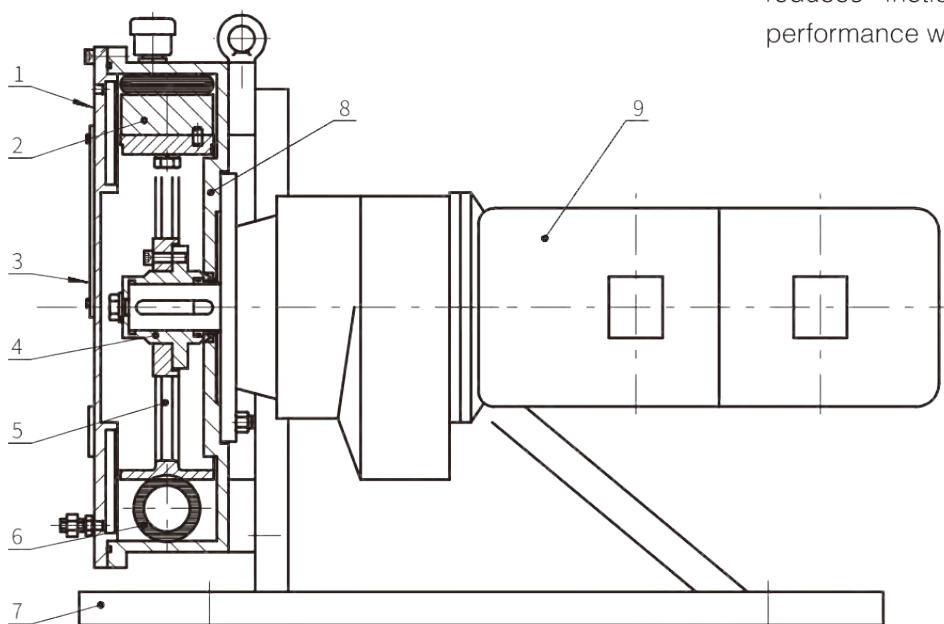
泵腔内有润滑液用以降低滑靴与软管之间的摩擦，带走摩擦热以减少磨损。

Hose pump is designed based on the principle that rubber hose can be extruded deformation and restore to original design.

Two shoes mounted at 180 ° on a rotating wheel compress a reinforced rubber hose that contains a fluid to be pumped.

The compression of the hose by the rotating shoes creates continuous suction at the inlet of the pump and pushes the fluid to the outlet of the pump.

The pump casing contains a lubricant that reduces friction and ensures the best pump performance with minimum maintenance.



- 1 泵盖 pump cover
- 2 压轮 pinch roller
- 3 观察镜 sight glass
- 4 传动轴 driven shaft
- 5 转子 rotor
- 6 软管 hose
- 7 支架 bracket
- 8 泵壳 pump casing
- 9 减速电机 deceleration motor

■ 软管泵结构图 Structure

结构优化设计，操作安全性高 维修方便，使用寿命长

Optimized design, safe operation Easy maintenance, long running life

泵送的液体仅仅与软管的内壁接触，多种软管材质可选，这使得软管泵可以输送几乎所有的流体介质。

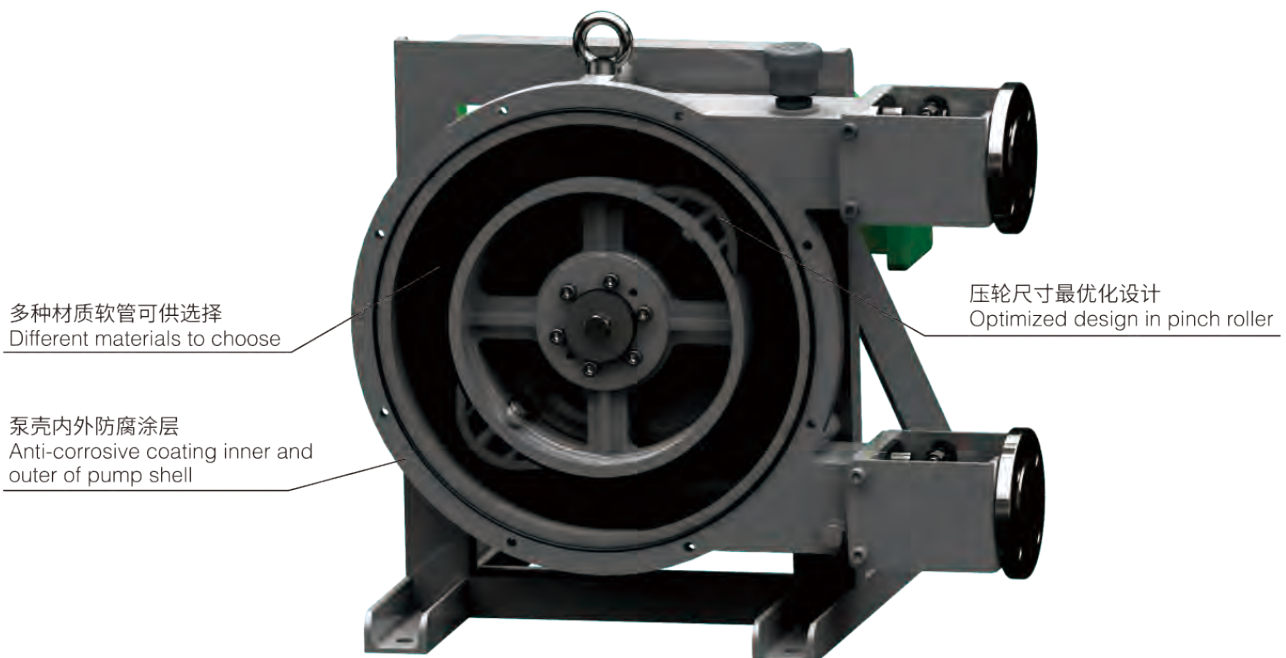
软管由高质量的聚合橡胶经4~6层辫状尼龙丝强化组合而成，耐用性好，寿命长。

泵壳采用优质的球墨铸铁材质制造，并在内外表面喷涂聚氨酯涂层，使其可耐特定的腐蚀性环境气氛。

The pumped fluid is in contact with only the interior of the rubber hose, thus permitting the pumping of a wide variety of reactive fluids.

The hose is made of high quality polymer rubber, reinforced by 4~6 layers of nylon wire, with good durability and longer service life.

Pump cover is made of high quality ductile iron, and coated with polyurethane, to make it resistant to specific corrosive situations



食品级软管泵专用润滑油，降低压轮和软管的摩擦，延长软管使用寿命。

采用同轴式减速电机，且泵转子直接安装在减速机伸出轴，结构紧凑，节约占用空间。

压轮形状最优化设计，使其平缓作用于软管，有效提升软管使用寿命。

泵腔加温冷却可变，输送介质适应性广，延长软管使用寿命。

Food-grade special lubricating oil, to reduce the friction between pinch roller and hose, extend the service life.

Adopt coaxial deceleration motor, and pump rotor mounted on the protruding shaft of deceleration machine, compact structure and save space.

Optimized design in pinch roller, make it gentle to hose, to improve the service life of hose.

Variable cooling of pump chamber, wide adaptability of conveying medium, extend the service life of hose.



合同试验， 保证泵性能的满足

本公司依据合同和标准执行以下测试：

材料检验

零部件材质检验，保证整机可靠性。

试运转

泵在主要零件材质、制造精度、装配精度检验合格后，进行运转试验。

额定工况点流量监测

测量泵在额定压力下和额定泵速下的流量，满足合同要求。

性能试验

测量并记录泵的流量、输入功率、泵效率、泵速与压差的关系，并绘制曲线。

噪声试验

依据ISO20361标准进行噪声试验。

*Order-related tests,
confirm the performance of pump conform*

The company carries out the tests below as standard:

Raw material inspect

Spare and casting parts inspection, to ensure the reliability of the whole machinery.

Test run

Test run will be made after the test of main parts of pump materials, manufacturing accuracy, assembly accuracy approved.

Flow monitoring at rated operating conditions

Measure the flow under the rated pressure and speed, ensure the pump meet the requirement of contract.

Performance test

Measure and record the relationship between pump flow, input power, efficiency, speed and pressure difference, and draw the curves.

Noise test

Test according to ISO20361 standard.



订货须知

Notice to Order

(一) 配用电机的额定输出功率与泵的额定轴功率之比应按照下列的百分数：

轴功率	百分比%
3kW以下	150%
(3~22)kW	130%
22kW以上	120%

The ratio of the motor's rated power to the pump's shaft power should be the following:

The shaft power of the pump	the ratio (%)
Below 3kW	150%
(3-22)kW	130%
Above 22kW	120%

(二) 订货时按《泵工作条件》详细填写。

When ordering, please fill in the table "Working conditions of the pump".

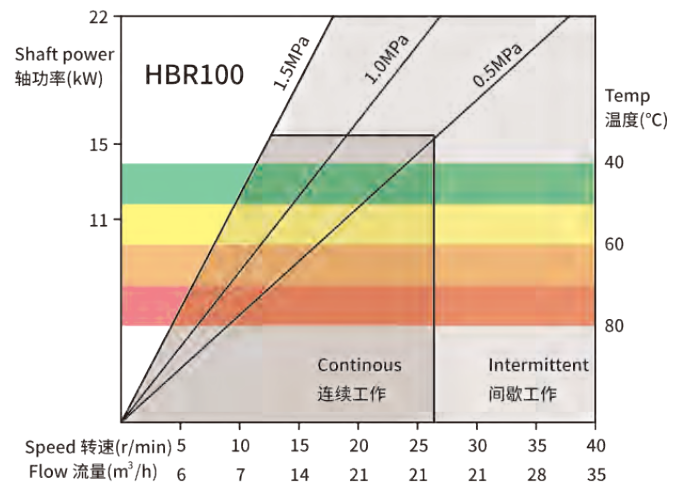
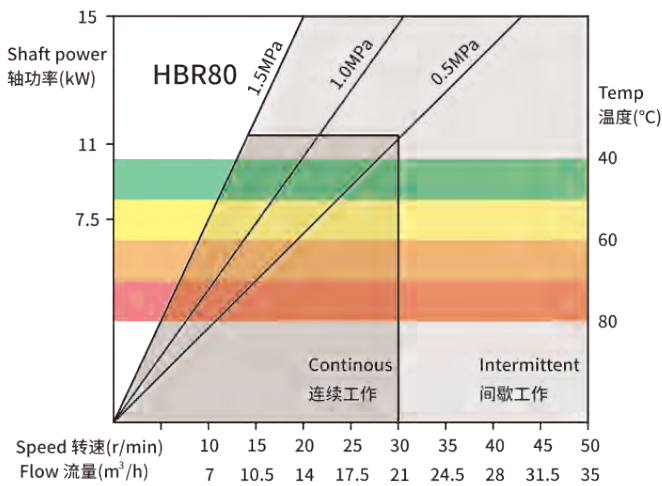
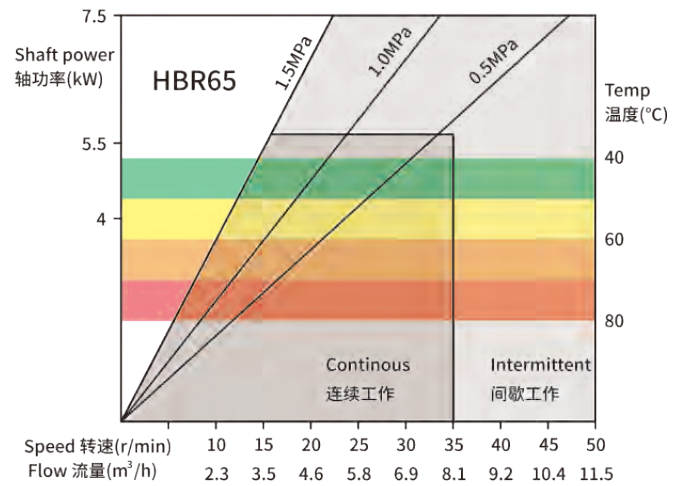
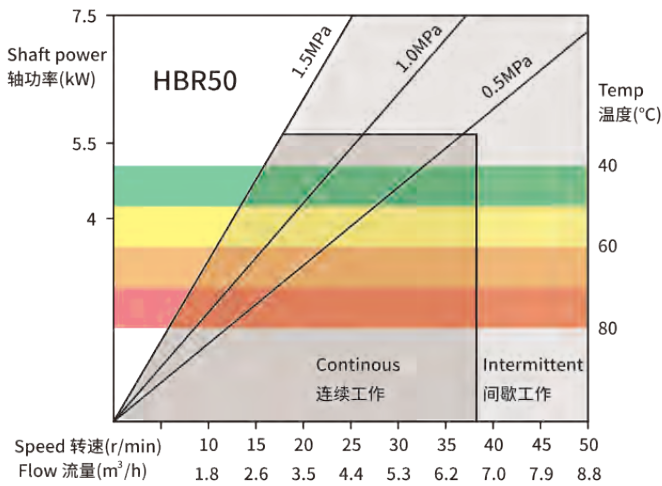
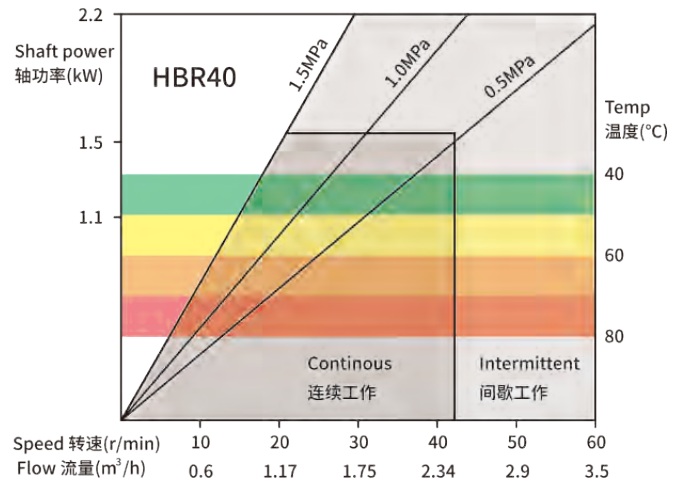
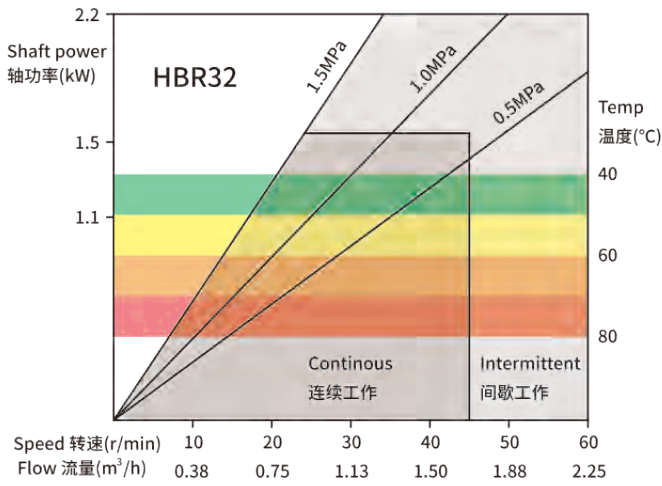
(三) 保修条款只有在使用本公司原厂备件时才有法律效力。

Warranty is valid only when genuine spare parts of our company are used.

泵工作条件 Working Conditions of the Pump

工作条件 Operating conditions				输送介质 Pumped fluid					
流量 Capacity	m ³ /h	最大 Max	额定 Rated	最小 Min	介质 1 Media	最大比例 Max ratio	最小比例 Min ratio	%	
扬程 Total head	m	最大 Max	额定 Rated	最小 Min	介质 2 Media	最大比例 Max ratio	最小比例 Min ratio	%	
进口压力 Suction pressure	MPa	最大 Max	额定 Rated	最小 Min	介质 3 Media	最大比例 Max ratio	最小比例 Min ratio	%	
出口压力 Discharge pressure	MPa	最大 Max	额定 Rated	最小 Min	固体 Solid	含量 (湿基) Content (humidity) Wt %			
必需汽蚀余量 NPSH required	m					粒度直径 Particle diameter mm			
操作条件 Operating conditions	连续 Continuous		间断 Intermittent		介质特性 Medium characteristics	腐蚀 Corrosion	磨(冲)蚀 Abrasion		
现场资料和公用事业条件 Spot conditions					泵送温度 Operation temp	°C	最大 Max	正常 Normal	最小 Min
位置 Position					密度 Density	在操作温度下 Under operating temp kg/m ³			
室内 Indoor	有采暖 With heating		有遮棚 With shield		粘度 Viscosity	在操作温度下 Under operating temp mPa.s			
室外 Outdoor	无采暖 Without heating		无遮棚 Without shield		汽化压力 Vapor pressure	在操作温度下 Under operating temp MPa(A)			
必须的防寒气候条件 Requirement of Cold-proof					比热 Specific heat	kcal/kg°C			
必须的耐湿热气候条件 Requirement of Damp-heat-proof					氯化物浓度 Concentration of chloride	PPM			
现场资料 Site condition					H2S(硫化氢)浓度 Concentration of H2S	PPM			
海拔高度 Altitude				m	危险程度 Hazardous liquid	易燃 Flammable	易爆 Explosive	有毒 Toxic	
大气压力 Atmosphere pressure				kPa	挥发特性 Volatile characteristics	易 Easy	不易 Not easy		
相对湿度 Relative humidity	最大 Max	最小 Min			沸点 Boiling point	°C			
环境温度范围 Ambient temp. Range				°C	结晶温度 Crystallization temp	°C			
异常条件 Abnormal conditions	粉尘 Dust	烟雾 Smoking			熔点 Smelting point	°C			
危险区域 Electrical classification	类 Class	级 Division	组 Group		闪点 Point of flammability	°C			
电源 Power source	伏特 Volt	赫兹 Hz	相 Phase		相溶的液体 Compatible liquid				
冷却水 Cooling water	温度 Temp	压力 °C Pressure		MPa	相溶的橡胶 Compatible rubber				
	氯化物浓度 Chloride concentration			PPM	临界温度 Critical temp	°C			
仪表压缩空气 Compressed air of instrument	最大/最小压力 Max / Min. Pressure			/MPa	临界压力 Critical pressure	MPa			
传动方式 Driving way					其它 Other				
联轴器 Coupling type									

性能范围



■ 间歇工作：连续运行2小时后至少停机1小时 Intermittent use: Minimum of 1 hour stop after 2 hour use

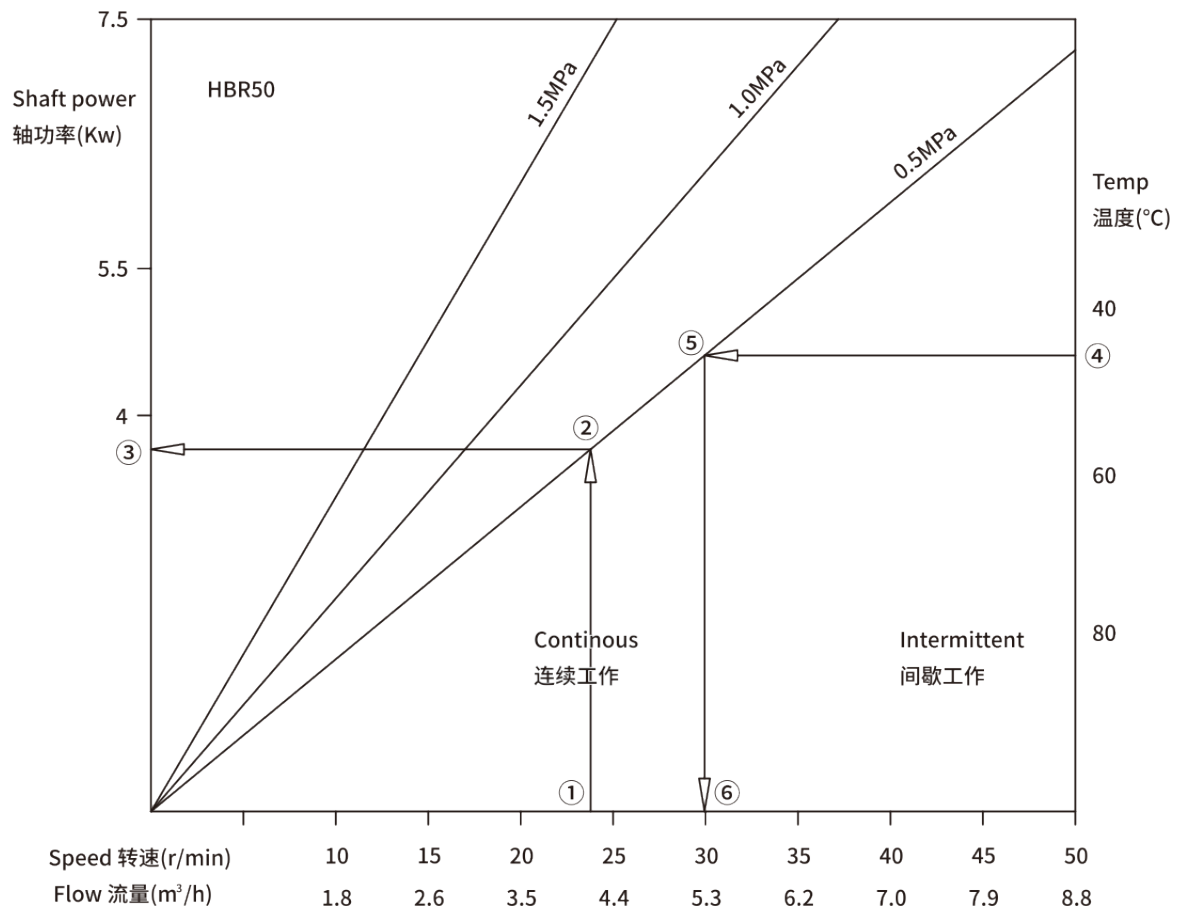
PERFORMANCE RANGE

如何根据曲线图选型:

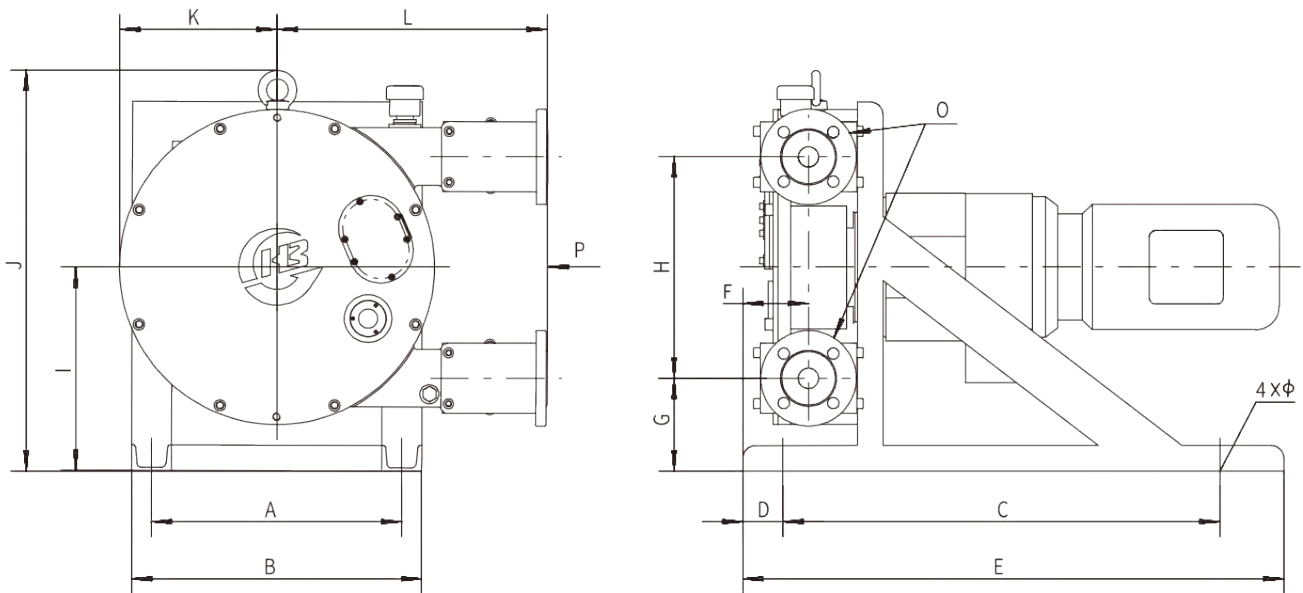
- 找到所需的流量, 可以选择到泵的转速
- 向上移动到您所需要的压力
- 再向左移动得到所需的轴功率
- 确定介质的最高温度
- 移动到左边所需的压力
- 向下移动确定在这个温度下所允许的泵的转速

How to select model from curve:

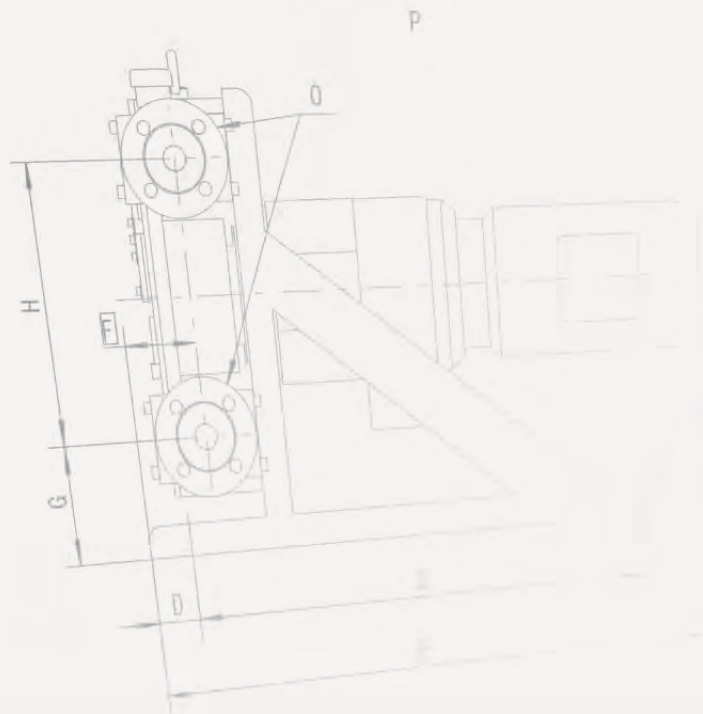
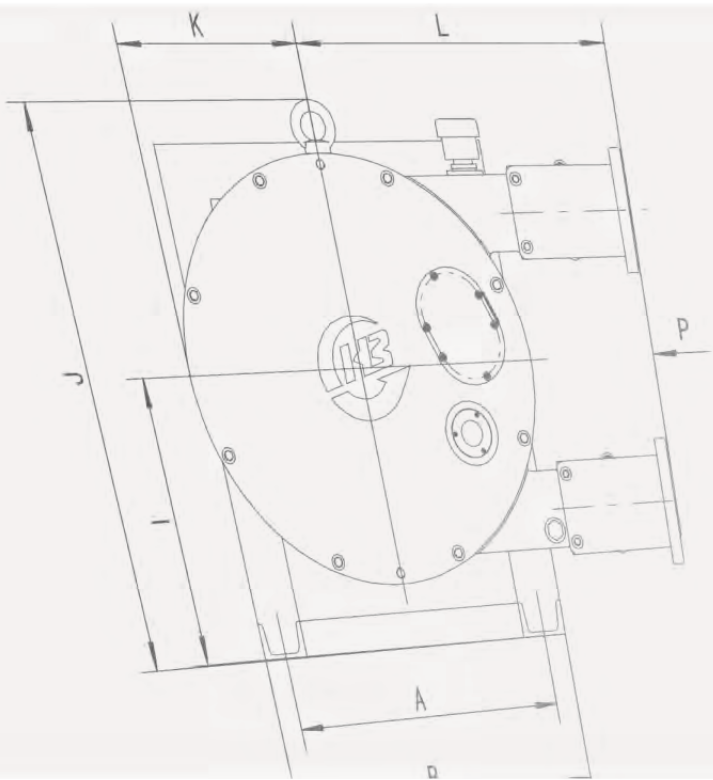
- Select the required flow, this gives you the required pump speed.
- Move upwards to the calculated discharge pressure.
- Move to the left for the installed motor power.
- Determine the fluid's max temperature.
- Move to the left to the calculated discharge pressure.
- Move downwards to determine your maximum allowed pump speed for the fluids temperature.



泵安装尺寸图 PUMP DIMENSIONS



型号 Pump Mode	A	B	C	D	E	F	G	H	I	J	K	L	Ø	O
HBR32	393	456	680	40	850	63	146	348	320	630	248	425	Ø18	DN32
HBR40	393	456	680	40	850	63	146	348	320	630	248	425	Ø18	DN40
HBR50	520	600	750	170	1050	125	190	510	415	800	340	550	Ø24	DN50
HBR65	520	600	750	170	1050	125	190	510	415	800	340	550	Ø24	DN65
HBR80	700	840	1120	80	1400	162	200	900	650	1276	565	820	Ø24	DN80
HBR100	840	980	1300	100	1600	185	205	1050	730	1427	660	904	Ø24	DN100



杭州碱泵有限公司
HANGZHOU ALKALI PUMP CO.,LTD.
浙江华泵科技有限公司
HB PUMP CO., LTD.

销售部电话: 0571-89905601/89905603
 销售部传真: 0571-89905602
 E-mail:sales@hbgroups.com
<http://www.hbgroups.com>
 地址: 杭州市三墩镇西湖科技园西园五路12号
 邮编: 310030

International Clients
 Tel:+86 571 89900102
 Fax:+86 571 89905602
 E-mail: overseas@hbgroups.com
<http://www.hbgroups.com>
 Add:No.12 Xiyuan 5 Road, Westlake Science & Technology
 Zone, Sandun Town, Hangzhou
 Post code: 310030

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