

CQB-F 型

氟塑料磁力泵



产品说明书

Products Specification

重要

操作人员在使用本产品前，
请务必仔细阅读产品说明书，
以确保操作安全。

IMPORTANT

Please ensure that these instructions are read and understood by machine operators before using the product.

请详阅手册内容并善加保存
Please read and save this manual

CQB-F系列氟塑料磁力驱动泵 CQB-F series fluoride plastic magnetic-driving pump

◆ 用途

CQB-F系列磁力泵广泛应用于石油、化工、冶金、制药、电镀、环保等行业，可输送强酸、强碱、强氧化性、易燃、易爆、剧毒贵重液体。

◆ 性能

流量: 1.8-100m³/h
扬程: 8-32m
功率: 0.12-18.5kw

◆ 特点

采用磁力传动原理，无泄漏输送腐蚀性介质。

◆ 型号意义



Application

CQB-F series magnetic pump can be widely applied to petroleum, chemical metallurgy, pharmacy, electroplating, environmental protection and so on. It can transmit the liquid with strong acid, strong base strong oxidability, flammability, explosion, toxin and value.

Performance

Flowing rate: 1.8-100m³/h
Delivery head: 8-32m
Power of work: 0.12-18.5kw

Traits

Adopt magnetism transmission principle, non-leakages transmit media.



CQB-F系列氟塑料磁力泵性能参数

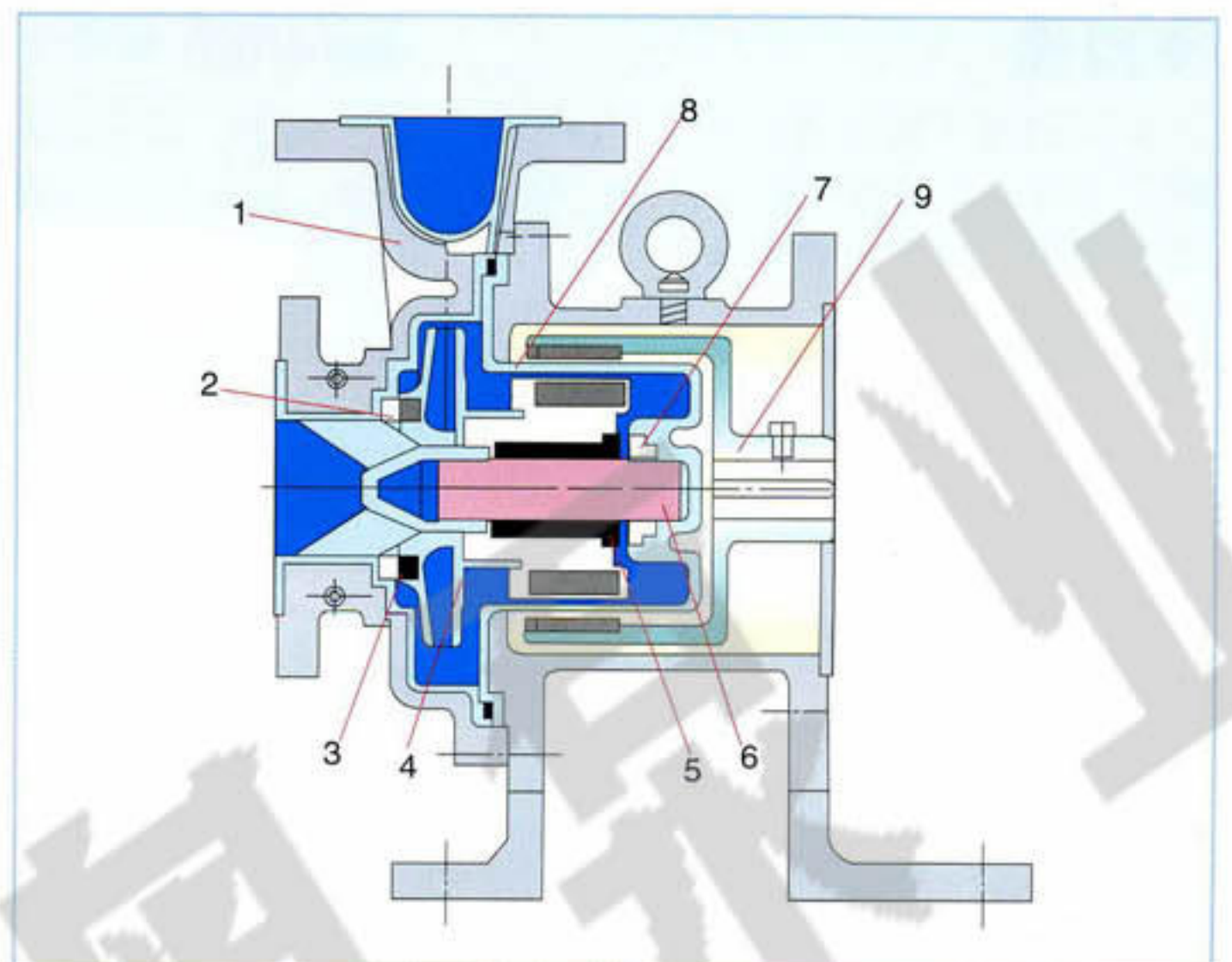
Performance parameter of fluoride plastic magnetic pump in CQB-F series

| Type 型号 | mm | | 流量Q m ³ /h | 扬程H (m) | 汽蚀余量 Positive suction heat (NPSH)r(m) | 功率 kw Power | 转速n Rotating Speed (r/min) | 效率η Efficiency (%) | 电压 (V) Voltage |
|----------------|-------------|--------------|--------------------------|------------|---|-------------------|-------------------------------------|--------------------------|----------------------|
| | 进口 inlet | 出口 outlet | | | | | | | |
| CQB15-10-85F | 15 | 10 | 1.8 | 8 | 6.0 | 0.12 | 2800 | 33 | 220/380 |
| CQB20-15-105F | 20 | 15 | 3 | 12 | 6.0 | 0.37 | 2800 | 33 | 220/380 |
| CQB32-25-125F | 32 | 25 | 3.2 | 20 | 5.0 | 0.75 | 2900 | 35 | 380 |
| CQB40-32-115F | 40 | 32 | 6.3 | 15 | 6.0 | 0.75 | 2900 | 45 | 380 |
| CQB40-32-145F | 40 | 32 | 6.3 | 25 | 5.0 | 1.5 | 2900 | 42 | 380 |
| CQB50-40-125F | 50 | 40 | 12.5 | 20 | 3.5 | 2.2 | 2900 | 50 | 380 |
| CQB50-40-160F | 50 | 40 | 12.5 | 32 | 3.5 | 3 | 2900 | 46 | 380 |
| CQB65-50-125F | 65 | 50 | 25 | 20 | 4.0 | 3 | 2900 | 58 | 380 |
| CQB65-50-160F | 65 | 50 | 25 | 32 | 4.0 | 5.5 | 2900 | 56 | 380 |
| CQB80-65-125F | 80 | 65 | 50 | 20 | 4.0 | 7.5 | 2900 | 66 | 380 |
| CQB80-65-160F | 80 | 65 | 50 | 32 | 4.0 | 11 | 2900 | 64 | 380 |
| CQB100-80-125F | 100 | 80 | 100 | 20 | 4.0 | 11 | 2900 | 72 | 380 |
| CQB100-80-160F | 100 | 80 | 100 | 32 | 4.0 | 18.5 | 2900 | 70 | 380 |

注: 表中型号从CQB20-15-105F至CQB100-80-160F均可配防爆电机。

Note: In this table, type from CQB20-15-105F to CQB100-80-160F can install fireproof machinery.

CQB-F系列氟塑料磁力驱动泵 CQB-F series fluoride plastic magnetic-driving pump



1、泵壳：球墨铸铁内衬聚偏二氟乙烯
Pump body: spheroidal graphite cast iron lining polyvinylidene fluoride fibre



2、静环：99.5%氧化铝陶瓷
Stationary seal ring: 99.5% alumina ceramic



3、动环：填充聚四氟乙烯
Rotating seal ring: filling teflon



4、叶轮、内转子总成：聚偏二氟乙烯
Impeller and inner rotor assembly: Polyvinylidene fluoride fibre



5、轴套：碳化硅、陶瓷、四氟，可供选择
Shaft sleeve: Carborundum, ceramic and tetrafluoride for option



6、轴：用碳化硅制造，能耐温、耐磨、耐腐蚀。
Shaft: Adopt SiC, thermostability, abrasability and corrosion preventive.



7、止推环：99.5%氧化铝陶瓷
Trust collar: 99.5% alumina ceramic



8、隔离套：用氟塑料注塑成型，强度高、无涡流损失。
Isolating suite: Adopt fibre reinforced fluorinated plastics injection, high strength, without vortex loss.

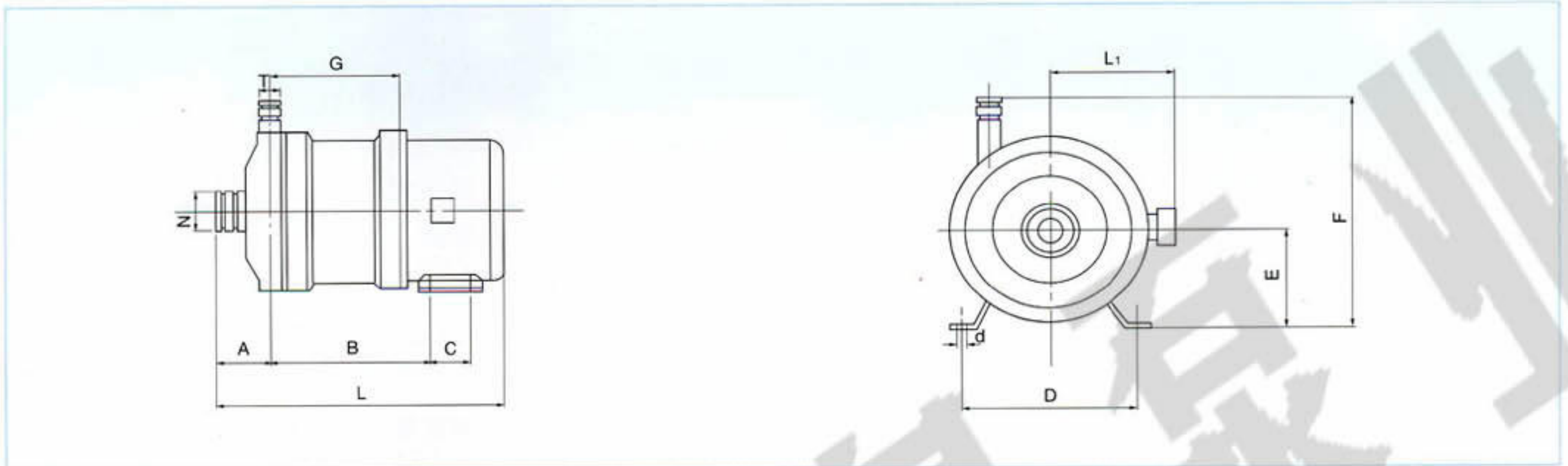


9、外磁钢总成：磁材采用强磁材料，确保足够的磁传力矩，磁钢外表面镀有可靠的保护层，以防腐影响磁性。
Exterior magnetic steel part: Adopt strong magnetic material, ensure enough magnetic field force moment, the outer surface of magnetic steel electroplates reliable protective covering prevents corrosion influencing magnetics.

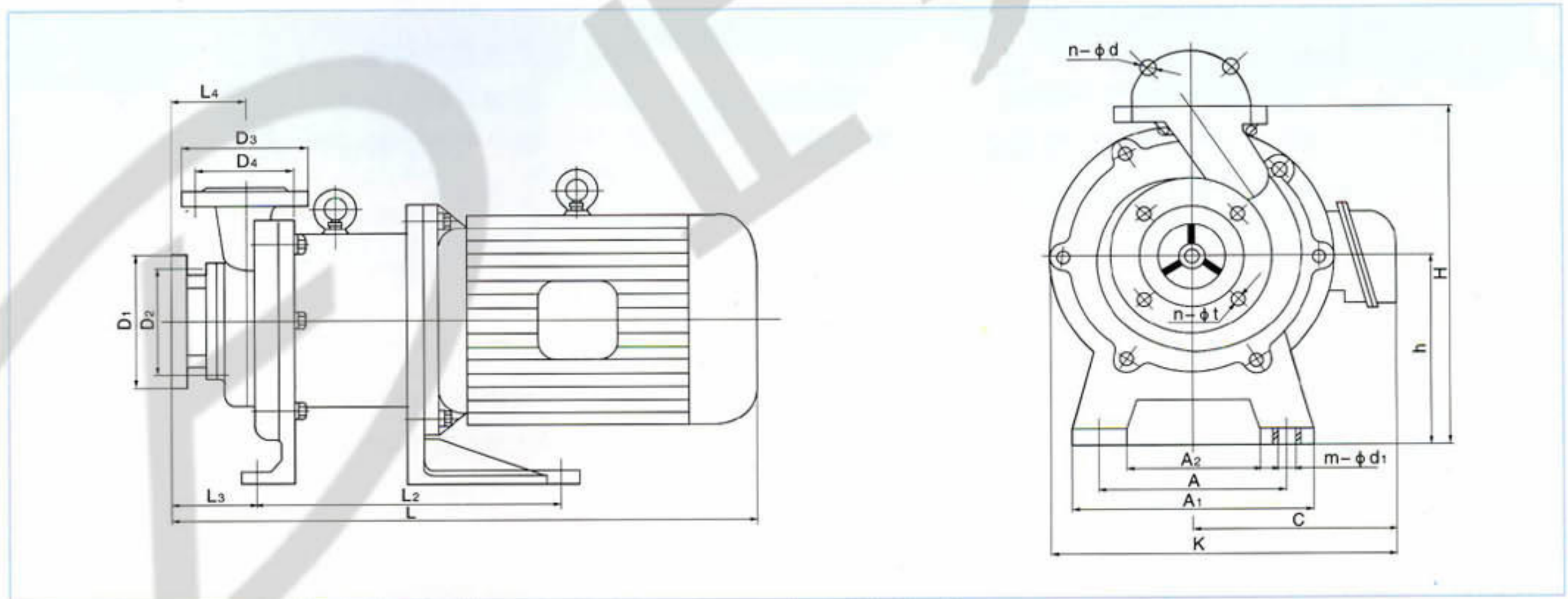
CQB-F系列氟塑料磁力驱动泵 CQB-F series fluoride plastic magnetic pump

外形和安装尺寸

Structure and installation drawing of fluoride plastic magnetic pump



| 型号 Type | A | B | C | D | E | F | d | G | L1 | L | N | T |
|---------------|-------|-------|----|-----|----|-----|---|-------|----|-----|----|----|
| CQB15-10-85F | 56.5 | 93.5 | 80 | 100 | 63 | 144 | 7 | 87.5 | 75 | 304 | 22 | 18 |
| CQB20-15-105F | 54.15 | 125.5 | 90 | 112 | 71 | 165 | 7 | 111.5 | 85 | 340 | 26 | 18 |



| 型号 Type | D1 | D2 | N-φt | D3 | D4 | n-φd | L1 | L3 | L2 | L1 | L | A | A1 | A2 | h | H | m-φd1 | K | C |
|----------------|-----|-----|----------|-----|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-------|-----|
| CQB32-25-125F | 140 | 100 | 4-φ 17.5 | 115 | 85 | 4-φ 17.5 | 69 | 80 | 200 | 150 | 500 | 140 | 180 | 100 | 140 | 270 | 4-φ 13.5 | 238.5 | 135 |
| CQB40-32-115F | 150 | 110 | 4-φ 17.5 | 140 | 100 | 4-φ 17.5 | 73 | 86 | 200 | 153 | 406 | 160 | 200 | 120 | 150 | 290 | 4-φ 13.5 | 204 | 85 |
| CQB40-32-145F | 150 | 110 | 4-φ 17.5 | 140 | 100 | 4-φ 17.5 | 73 | 86 | 200 | 153 | 506 | 160 | 200 | 120 | 150 | 290 | 4-φ 13.5 | 264 | 145 |
| CQB50-40-125F | 165 | 125 | 4-φ 17.5 | 150 | 110 | 4-φ 17.5 | 83 | 80 | 250 | 165 | 528 | 190 | 240 | 140 | 165 | 325 | 4-φ 13.5 | 279 | 175 |
| CQB50-40-160F | 165 | 125 | 4-φ 17.5 | 150 | 110 | 4-φ 17.5 | 83 | 80 | 250 | 165 | 583 | 190 | 240 | 140 | 165 | 325 | 4-φ 13.5 | 309 | 175 |
| CQB65-50-125F | 185 | 145 | 4-φ 17.5 | 165 | 125 | 4-φ 17.5 | 81 | 83 | 258 | 183 | 600 | 194 | 250 | 138 | 200 | 380 | 4-φ 17.5 | 319 | 175 |
| CQB65-50-160F | 185 | 145 | 4-φ 17.5 | 165 | 125 | 4-φ 17.5 | 81 | 83 | 258 | 183 | 600 | 194 | 250 | 138 | 200 | 380 | 4-φ 17.5 | 319 | 175 |
| CQB80-65-125F | 200 | 160 | 8-φ 17.5 | 185 | 145 | 4-φ 17.5 | 101 | 102 | 342 | 259 | 740 | 230 | 300 | 160 | 250 | 450 | 4-φ 25 | 364 | 195 |
| CQB80-65-160F | 200 | 160 | 8-φ 17.5 | 185 | 145 | 4-φ 17.5 | 101 | 102 | 342 | 259 | 900 | 230 | 300 | 160 | 250 | 450 | 4-φ 25 | 417 | 250 |
| CQB100-80-125F | 220 | 180 | 8-φ 17.5 | 200 | 160 | 8-φ 17.5 | 116 | 124 | 348 | 275 | 951 | 280 | 360 | 200 | 250 | 470 | 4-φ 25 | 458 | 250 |
| CQB100-80-160F | 220 | 180 | 8-φ 17.5 | 200 | 160 | 8-φ 17.5 | 116 | 124 | 348 | 275 | 951 | 280 | 360 | 200 | 250 | 470 | 4-φ 25 | 458 | 250 |

磁力泵常见故障及其排除方法

| 故障形式 | 产生原因 | 排除方法 |
|------|--|---|
| 泵不出水 | <ol style="list-style-type: none"> 1、水泵反转 2、进水管漏气 3、泵腔蓄水太少 4、电压太高，启动时联轴器打滑 5、吸程太高 6、没有灌水或泵内灌水不足 7、叶轮受阻不转 8、底阀堵塞或锈死 | 改变电机接线 杜绝漏气 增加蓄水量 调整电压 降低泵安装位置 放净空气、灌满水 清洗叶轮、泵壳、隔离套 清除堵塞物和修理底阀 |
| 流量不足 | <ol style="list-style-type: none"> 1、吸入管径太小 2、叶轮流道堵塞 3、扬程过高 4、转速太低 5、叶轮磨损或腐蚀严重 6、安装的总扬程太高或吸水扬程超过规定 7、吸入管路有空气漏进 8、密封环严重磨损 | 调换进水管 清洗叶轮 开大出水阀 恢复额定转速 更换叶轮 降低扬程、降低泵的安装位置 杜绝漏气 更换密封环 |
| 扬程过低 | <ol style="list-style-type: none"> 1、流量过大 2、转速太低 | 关小出水阀 恢复额定转速 |
| 噪音太大 | <ol style="list-style-type: none"> 1、轴严重磨损 2、轴套严重磨损 3、驱动磁钢杯与隔离套接触 4、转动部分和固定部分有摩擦 5、吸水扬程超过规定或底阀阻塞 6、泵没有固定好 | 更换泵轴 更换轴套 调整间隙或更换部件 检修、更换零件 降低水泵位置或消除堵塞物 重新固定好 |
| 漏液 | <ol style="list-style-type: none"> 1、螺钉松动 2、O型密封圈损坏 3、泵壳或隔离套破裂或腐蚀穿孔 | 拧紧螺钉 更换O型密封圈 更换泵壳或隔离套 |

Common faults and removal methods of magnetic pump

| Fault form | Cause | Removal method |
|------------------------|--|--|
| No Water from the pump | <ol style="list-style-type: none"> 1. Reversion of water pump 2. Air leakage of water inlet channel 3. Too little water store in the pump chamber 4. Too high voltage causing the skid of coupling during activation 5. Too high suction head 6. No watering or insufficient watering in the pump 7. The impeller is blocked and doesn't rotate. 8. The bottom valve is clogged or rust buildup. | <p>Change the wire splice of the engine Stop the air leakage Increase the water storage Adjust the voltage</p> <p>Reduce the installation position of the pump Empty the air and watering to the full Wash the impeller, pump casing and distance sleeve Remove the stuffing and repair the bottom valve</p> |
| Insufficient flow | <ol style="list-style-type: none"> 1. The suction pipe caliber is too small 2. The impeller flow channel is stuffed 3. Too high head 4. Too low speed of rotation 5. Serious abrasion or corrosion of the impeller 6. The total head installed is too high or the water suction head exceeds the regulation. 7. There is air coming into the suction pipeline. 8. Serious abrasion of seal ring | <p>Exchange the water inlet pipe Wash the impeller Release the discharge valve to a larger extent Restore the rated rotation speed Change the impeller Reduce the head and debase the installation position of the pump Stop the air leakage Change the seal ring</p> |
| Extra low head | <ol style="list-style-type: none"> 1. Over flow 2. Too low rotation speed | <p>Turn down the discharge valve Restore the rated rotation speed</p> |
| Too loud noise | <ol style="list-style-type: none"> 1. Serious abrasion of shafts 2. Serous abrasion of shaft sleeve 3. Contact between driven magnetic steel cup and distance sleeve 4. Friction between rotating part and fixed part 5. The water suction head exceeds the regulation or the bottom valve is stuffed. 6. The pump is not fixed well. | <p>Change the pump shafts Change the shaft sleeve Adjust the clearance or change compon ents Service and change parts Debase the position of the pump or remove the stuffing Fix it properly again</p> |
| Leakage | <ol style="list-style-type: none"> 1. The bolt is loose. 2. O-ring is damaged. 3. The pump casing or distance sleeve is broken or corroded to be perforated. | <p>Screw down the bolt tightly Change the O-ring Change the pump casing or distance sleeve</p> |

使用过程中注意事项(重要) Notes for use (Important)

- (一)因磁力泵轴承的冷却和润滑是靠被输送的介质，所以绝对禁止空运转，同时避免在工作中途停电后再启动时所造成的空转运转。
- (二)被输送介质中，若含有固体颗粒，泵入口要加过滤网；如含有铁磁质微粒，需加磁性过滤器。
- (三)泵在使用中环境温度应小于40℃，电机温升不得超过75℃。
- (四)被输送的介质及其温度应在泵材允许范围内(详见磁力泵耐腐蚀性能表)。工程塑料泵的使用温度<60℃，吸入压力不大于0.1MPa，最大工作压力为0.6MPa；金属泵的使用温度<80℃，风冷式高温泵的使用温度<180℃，水循环式高温泵使用温度<280℃，输送吸入压力不大于0.2MPa，最大工作压力1.6MPa、密度不大于1600kg/m³，粒度不大于30×10⁻⁶m²/S的不含硬颗粒和纤维的液体(若超过该范围，订货时必须说明，方可正常使用)。
- (五)对于输送液为易沉淀结晶的介质，使用后应及时清洗，排净泵内积液。
- (六)磁力泵运行500小时后，应拆检轴承和端面动环的磨损情况，若轴承和轴套的间隙大于0.5~1mm，叶轮轴向窜动1.5~2mm时，应更换轴承和轴向动环。
- 注意：1、磁力泵在维修拆装过程中，内、外磁钢部件辐射出来的磁场将对如：心脏起搏器、信用卡、计算机磁盘、手表、精密仪器、仪表等产生磁场干扰，甚至产生危害性的影响。
- a)上述物件应远离磁性器件，保持1米以上的距离。
- b)装配好的整机磁力泵，不存在上述问题，因结构上有磁回路屏，可放心使用。
- 2、装配内磁转子对准外磁转子轴向到位时，由于磁吸力(尤其是钕铁硼或稀土钴强磁)，用户应采取适当的缓冲措施，以免卡、夹手指，防止工伤事故。

1. Because the cooling and lubrication of the bearing of the magnetic pump rely on the conveyed medium, the idle running should be prohibited absolutely. It is also necessary to avoid the idle running caused by the reactivation after the power failure during operation.
 2. If the convey medium contains solid grains, the pump inlet should be provided with an additional strainer; in case of ferromagnetic substance particles, a magnetic filter should be added.
 3. The ambient temperature for the pump during operation should be lower than 40℃ and the temperature rise of the engine should not exceed 75℃.
 4. The conveyed medium and its temperature should be within the allowable range of pump materials (See the table for corrosion-proof performance of magnetic pump). For engineering plastic pump, the working temperature is <60℃ with suction pressure not higher than 0.1MPa and 0.6MPa maximum working pressure; for metal pump, the working temperature is <80℃; for air-cooled high temperature pump, the working temperature is <180℃; and for water circulating high temperature pump, the working temperature is <280℃, transporting the liquid containing no hard grains and fibers with suction pressure not higher than 0.2MPa, 1.6MPa maximum working pressure, density not larger than 1600kg/m³ and gran ularity not larger than 30×10⁻⁶m²/S (In case of exceeding this range, description should be given in the order for normal operation.)
 5. If the transportation liquid is medium easily generating crystal sediment, it is necessary to wash promptly after use to clean away the deposited liquid in the pump.
 6. After the magnetic pump operates for 500 hours, it is necessary to disassemble and check the abrasion condition of the bearing and the rotating seal ring on the end surface. If the clearance between the bearing and the bearing bush is larger than 0.5~1mm and the axial float of the impeller is within 1.5~2mm, it is necessary to change the bearing and the axial rotating seal ring.
- Note:
- (1) During disassembling and installing the magnetic pump for service, the magnetic field radiated by the internal and external magnetic steel components will cause magnetic field interference and even have a hazardous effect on such articles as heart pacemakers, credit cards, computer disks, watches, precision instruments and meters.
 - a) The above articles should be kept far away from the magnetic parts with a distance longer than 1 m.
 - b) The complete magnetic pump assembled has not the above problems. As there is a magnetic loop screen on the structure, it can be used at ease.
 - (2) When the internal magnetic rotor of the installation aims at the external magnetic rotor with a right axial direction, due to the magnetic attraction (esp. Nd-Fe-B or rare earth-cobalt strong magnetic) the user should take proper buffer measures in case the fingers may be trapped or clamped so as to avoid industrial accidents.

产品抗化学腐蚀状况 Chemical resistance guide

抗化学腐蚀标签注释:

- A—优秀;
- B—好
- C—一般
- X—不能接受
- 不能用于

液体最高温度标签注释:

- 1—20度(68F);
- 2—40度(104F);
- 3—60度(140F);
- 4—80度(176F);
- 5—100度(212F);
- 6—120度(248F)

Chemical resistance ratings:

- A—Excellent
- B—Good
- C—Fair
- X—Not Recommended
- Data Not Available

Maximum operating temperature:

- 1—20℃ (68F);
- 2—40℃ (104F);
- 3—60℃ (140F);
- 4—80℃ (176F);
- 5—100℃ (212F);
- 6—120℃ (248F)

| 化学药品 CHEMICAL | 材料 MATERIAL | | | | | | | | | |
|----------------------------|-------------|-------------------------------------|------------|---------------------|---------|---------------|------------|-----------------|--------------------------|----|
| | 聚丙烯 PP | 聚偏二氟乙烯 Polymethylene fluoride fibre | 聚四氟乙烯 PTFE | 不锈钢 Stainless steel | 氟橡胶 FKM | 丁腈橡胶 Chemigum | 三元乙丙胶 EPDM | 95陶瓷 95 Ceramic | 高密度碳 High density carbon | |
| 硫酸 Sul furica Acid | 0~10% | A4 | A6 | A6 | B1 | A6 | B2 | A4 | A5 | A6 |
| | 10~75% | A3 | A3 | A6 | x | A4 | x | A3 | A5 | A6 |
| | 75~100% | B2 | B1 | A4 | C1 | A4 | - | B2 | A5 | A4 |
| 硝酸 Nitric Acid | 10% | A3 | A3 | A5 | A5 | A5 | x | A2 | A5 | A6 |
| | 30% | A2 | A3 | A6 | A5 | A6 | x | A2 | A5 | A6 |
| | 50% | B2 | A3 | A3 | A5 | A1 | x | x | A5 | A5 |
| 盐酸 Hydrochloric Acid | 0~25% | A4 | A6 | A6 | x | A3 | B1 | A3 | A5 | A6 |
| | 25~40% | A4 | A6 | A6 | x | B2 | x | C2 | A5 | A6 |
| 氢氟酸 Hydrofluoric Acid | 10% | B2 | A6 | A6 | x | A3 | x | A3 | - | A3 |
| | 30% | C2 | A6 | A6 | x | A4 | - | B3 | - | A3 |
| | 60% | x | A5 | A6 | x | A4 | - | C2 | - | A2 |
| 醋酸 Acetic Acid | 20% | A2 | A3 | A6 | B5 | B1 | B2 | A2 | A5 | A4 |
| | 80% | B1 | A3 | A6 | B1 | x | - | - | A5 | A4 |
| 氢氧化钠 Sodium Hydroxide | 20% | A3 | A3 | A6 | B1 | B1 | B2 | A3 | - | A3 |
| | 50% | A3 | A3 | A6 | B1 | x | B1 | A4 | - | A3 |
| 溴水 Bromine Water | C1 | A4 | A3 | C1 | A2 | - | x | A1 | A2 | |
| 乙醇 Ethyl Alcohol | A2 | A6 | A3 | B5 | A3 | x | B3 | A3 | A5 | |
| 丙酮 Acetone | A2 | x | A6 | A5 | x | - | B2 | A3 | A5 | |
| 氟里昂12 Freon12 | x | A4 | A6 | B5 | A1 | x | B1 | A4 | A4 | |
| 氯化铝 Aluminum Chloride | A4 | A6 | A6 | x | A5 | B4 | A4 | A4 | A5 | |
| 氨水 Ammonia Liquid | A1 | A4 | A6 | A5 | C1 | B1 | B3 | A3 | A5 | |
| 王水 Aqua regia | C2 | A1 | A5 | x | B2 | - | C2 | A4 | - | |
| 甲醛 Formaldehyde. | A4 | A4 | A6 | A4 | A4 | x | A4 | A4 | A5 | |
| 汽油 Gasoline | x | A6 | A6 | A5 | B3 | B3 | x | A4 | A6 | |
| 煤油 Kerosene | A1 | A6 | A6 | A5 | A1 | B1 | x | A4 | A6 | |
| 甲醇 Methyl alcohol | A3 | A6 | A6 | A5 | B2 | B4 | A3 | A5 | A6 | |
| 甲苯 Toluene | C1 | A3 | A4 | A5 | B1 | - | x | A5 | A4 | |
| 三氯乙烯 Trichloroethylene | C1 | A6 | A6 | B5 | A1 | - | x | A4 | A6 | |
| 二甲苯 Xylene | x | A3 | A6 | A5 | B1 | - | x | A5 | A5 | |
| 无水硝酸 Nitric acid anhydrous | C1 | A3 | A3 | | A1 | - | x | A5 | A2 | |
| 发烟硫酸 Oleum | x | x | A6 | x | A4 | - | x | A5 | A2 | |
| 氢氧化钾 Potassium hydroxide | A4 | A3 | A6 | A1 | B1 | C2 | A5 | - | A6 | |

注: 95陶瓷——含氧化铝95%。 Note: 95 cerami means containing 95 percent of alumina



本公司保留产品设计改进权，如有变动，恕不另行通知。2011



上海正奥泵业制造有限公司

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