



機械隔膜式定量注入泵浦操作說明書
Mechanical diaphragm type quantitative
pump operating instructions

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卧式技术参数表 Technical parameter table (Horizontal)

系列 series	流量 (L/ H) Trafic	功率 (W) Power	膜片 直径 (mm) Diaphragm diameter	最大压 力(kg) Maxi mum pres sure	流量 调整 Flow adju stment	泵头 材质 Pump head mater ial	连 接 方 式 Connect	
							软管 Hose	硬管 Hard tube
OP10	30	60	64	10	可运 转中 手动 调整	PPG/P TFE/S US304	软管内径	
OP20	40	60	64				Hose diameter	DN15
OP30	50	60	64				9mm × 外	
OP50	70	60	64	6	径外径			
OP90	89	60	65	3	external diameter			
OP90-B	100	60	65	3	15mm			
OP120	120	60	65	3	manua lly opera tion			

安装 Install

1. 安装前一般注意事项

- 1) 本泵浦尽量安装在通风良好，没有灰尘，干燥之处。
- 2) 本泵浦的安装处要注意电机的防水，防潮，防日照直接照射。
- 3) 本泵浦请勿安装在易接触混气或腐蚀性气体之处。
- 4) 本泵浦的进出口接头处，务必接好，以免药液的泄漏。
- 5) 管路安装时，连接时注意胶水不要滴到泵浦前盖的球导管中。
- 6) 泵浦本体上之前头请朝上，并将泵浦之基座水平安置。
- 7) 泵浦安装之周围温度在 -20°C 至 40°C 范围，高度是海拔1000M以下使用。

2. 电源拉线

- 1) 马达铭板上标示马达规格，请确认电源与马达规格是否符合，如果电源与马达规格不符，会造成烧损，请注意。
- 2) 单相马之马达与电容期间有配线，请将电源线直接接于电源上。
- 3) 三相马达之三条线与电源相接，回转方向左右均可。

Before the installation of 1 General considerations

- 1) the pump to instalml without dust in ventilated, dry place.
- 2) install the pump should pay attention to the waterproof motor, oistureproof, prevent sun direct radiation
- 3) the pumps do not install contact mixed gas or corrosive gases in easy.
- 4) the pump import and export joint, must be connected, so as not to liquid leakage
- 5) pipeline installation, connection note glue don't drop the ball catheter pump front cover.

- 6) do not install easy contact in mixed gas or corrosive gas.
- 7) to 40 ° C range of pump installed in ambient temperature -20 ° C, height is below 1000M above sea level.

2 power cable

- 1) motor nameplate marking motor specifications, please confirm whether the power supply and motor specifications meet, if the power supply and motor does not conform to the specification, can cause burning, please note.
- 2) a distribution during motor and capacitor single-phase horse, please power line directly connected to the power supply.
- 3) three-phase motor three lines connected with the power supply, the direction of rotation around.

运转 Operation

- 1) 首先确认电源线接线是否正确,
- 2) 确认阀门是否打开,
- 3) 正式加药前, 请用清水测试, 已确认泵浦能否正常工作

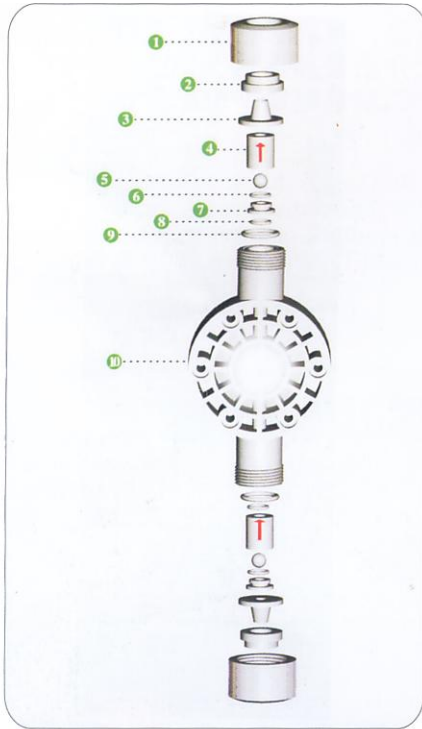
- 1) pump, suction pipe, spit out the side tube and the siphon control valve for exhaust, air pump, loosen the control valve of the exhaust valve, do the operation for a minute or so.
- 2) please reconfirm all wiring whether it tight, do operation.

吐出量之调整 Discharge amount of adjustment

- 1) 请松开蝶形螺丝。
- 2) 旋转调整凸轮至所需使用刻度处即可。
- 3) 如向左旋转，泵浦的行程长度变短，吐出量减少，如向右旋转，泵浦的行程长度增长，流出量增加。
- 4) 使用时必须固定紧，如不固定紧，在运转中调整凸轮会转移，吐出量会变动。

- 1) loosen the butterfly screw.
- 2) the rotation adjustment cam to the required alignment line can use scale.
- 3) such as a turn to the left, the pump stroke length is shorter, spit out the volume reduction, such as a turn to the left, the pump stroke length growth, increase the amount of outflow.
- 4) butterfly screw is tightened by hand, the above is not tight enough, adjusting the cam will be transferred in the process of operation, output will change.

卧式过液端结构图 Fluid end structure diagram



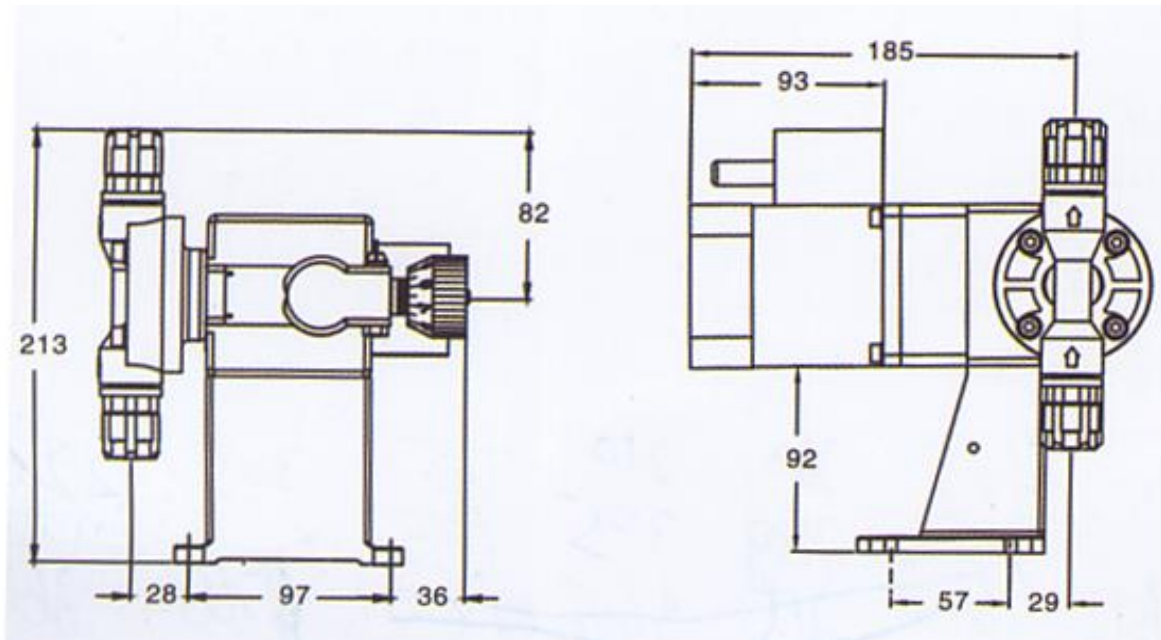
NO.	1	2	3	4	5
零件名称 Parts name	螺帽 Nuts	软管套环 Hose casing ring	软管喷嘴 Hose nozzle	球导管 Ball catheter	球阀 Ball valve
数量 Count quantity	2	2	2	2	2

NO.	6	7	8	9	10
零件名称 Parts name	O型环 O-ring	球座 Ball seat	O型环 O-ring	O型环 O-ring	前盖 Front cover
数量 Count quantity	2	2	2	2	1

备注:如客户遇到打不上药的情况,请清洗球导管组,并按照图示方向进行安装.

Note: If the customer experiences the condition that can not supply the drug, please clean the ball catheter group, and install according to the graphic presentation.

卧式外型尺寸图 Dimensions shown in Figure



立式技术参数表 Technical parameter table (Vertical)

系列 series	流量 (L/H) Traffic	功率(W) Power	膜片直径 (mm) Diaphragm diameter	最大 压力 (kg) Maximum pressure	流量调 整 Flow adjustm ent	泵头材 质 Pumphe ad materi al	连接方式 Connect
PS120-A	120	140/150	101	5	可运转 中手动 调整 Canbe adjuste d manuall y operati on	PVC/PT FE	DN15
PS150-A	150						
PS180-A	180						
PS240-A	240						
PS300	300	200	120	5			DN20
PS360	360						
PS400	400						
PS500	500	200/400	120/142	3			DN32/DN40
PS600	600	200/400	142				
PS700	700						
PS800	800	400/750	168	3			
PS900	900		170				
PS1000	980/1000						
PS1200	1200	750/400	170/210	3			
PS1500	1500	750/1100					

1. 常温清水测试值

2. 220V&380V;110V&440V

3. 流量大于 1500L/H, 可以定做

1 normal temperature water test

2 220V&380V; 110V&440V

3 flow is greater than 1500L/H, can be customized

安装 Install

1. 泵浦的安装中如向管道注入药液的或者有负压情况的出现都要加相关配件，如背压阀，管路过长也会造成泵浦的震动过大，除固定好之外，也要加相关配件。
2. 泵浦的吸入侧，尽量置于药槽的附近，但入口处不要在药槽的最底端，以免杂质可能堵住泵浦的入口。
3. 泵浦尽量安装在通风良好处，且注意电机的防水，防晒。
4. 泵浦置于水泥基础或能支撑的台架上，并做水平的安装，且安装在不受其他机械振动的地方。
5. 电源接入前务必先行确认电源规格是否正确，注意：如接线方法有变动，恕不另行通知，接线时请参考马达铭牌接线图
6. 泵浦进出口若与管线直接连接，应确认管线已放空压力时方可安装，以免危险。
7. 泵浦并不适宜所有的流体，部分溶剂，高酸度，高浓度或高氧化性流体可能造成故障。
8. 安装的进出口管径必须和泵浦进出口尺寸相配，管道的尺寸过大过小都会影响泵浦的正常使用。

1 pump installed as to pipeline injection or suction phenomenon and related accessories, If the back pressure valve, pipeline is too long will cause the pump vibration is too large, in addition to the fixed good, also want to add related accessories.

2 pump, as far as possible in the medicine groove near the entrance, but not in the medicine groove at the bottom, so as to avoid impurities may be steep live pump entrance

3 The pump installed in a well ventilated place, as far as possible and pay attention to the motor is waterproof, prevent bask in

4 the pump in the cement foundation or can support, and horizontal installation, and installation without other mechanical vibration.

5 power access prior to confirm the power supply specification is correct, Note: if the wiring method change, without notice, please refer to the motor nameplate when wiring wiring diagram

6 pump import and export if directly connected with the pipeline, should confirm the pipeline has been venting pressure shall be installed, in order to avoid the danger.

7 pump is not suitable for all of the fluid, part of the solvent, high acidity, high concentration or high oxidizing fluid may cause failure.

8 the installation of the import and export of pipe and pump import and export size match, pipe size too small will affect the normal use of the pump

运转 Operation

安装后初次启动时，请依下列顺序试运行（空运转）

1. 先打开吐出口的配管，再把吸入的配管接上。
2. 调节调量手轮旁边的蝶形螺丝使其放松，将调量顶杆长调至 0/% 后请务必把蝶形螺丝锁紧，如未完全锁紧螺旋距的螺丝易损坏。
3. 这种空转的测试大约 10 分钟。
4. 如没有异常，打开吸入开关让液体通过，在吐出口没有压力的状态下，将调量顶杆长度调至 100%。
5. 泵浦内空气完全清除后，慢慢升高吐出口的压力，并设定所需要的压力。

Start after installing, please according to the following sequence of trial operation (idle)

1 first open pipe outlet, then the suction piping connected.

Butterfly screw

2 regulating handwheel next amount to relax, will adjust the amount of top rod length to 0/% please put the butterfly screw locking, if not completely locking screw pitch screw is easy to damage.

3 About 10 minutes of such idle test.

4 if there is no exception, open the suction switch let liquid pass through the outlet, no pressure, will adjust the amount of the top rod length to 100%.

5 air pump clearance after complete, gradually increased outlet pressure, and set the required pressure.

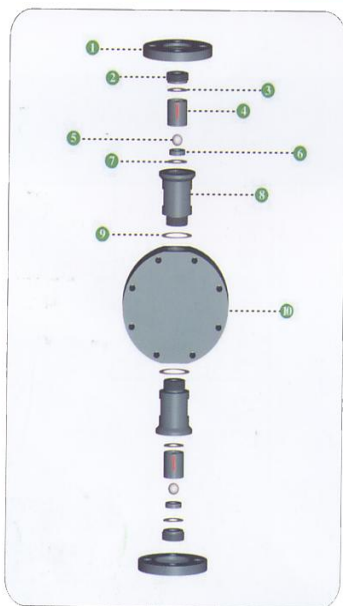
调量顶杆长短调节（吐出量调节）

The top rod length adjustment adjustment (output regulation)

1. 将蝶形螺丝松开。
2. 调节计量泵流量大小，调节手轮向顺时针方向旋转量变小，向逆时针方向旋转流量变大。
3. 调整顶杆上的刻度，到所需要调量顶杆的长。
4. 蝶形螺丝请务必锁紧，否则在运转中螺旋钮会转动使吐出量有所变化，也容易使螺旋钮损坏。

- 1 butterfly screw loose.
- 2 regulating metering pump flow rate, adjusting hand wheel clockwise rotation amount, counterclockwise rotation of high traffic.
- 3 adjust the scale indicator, the need to adjust the length of the top rod.
- 4 butterfly screw please lock, or in the operation of the spiral button will rotate to spit out the amount of change, also easy to cause the screw button damage.

立式过液端结构图 Fluid end structure diagram



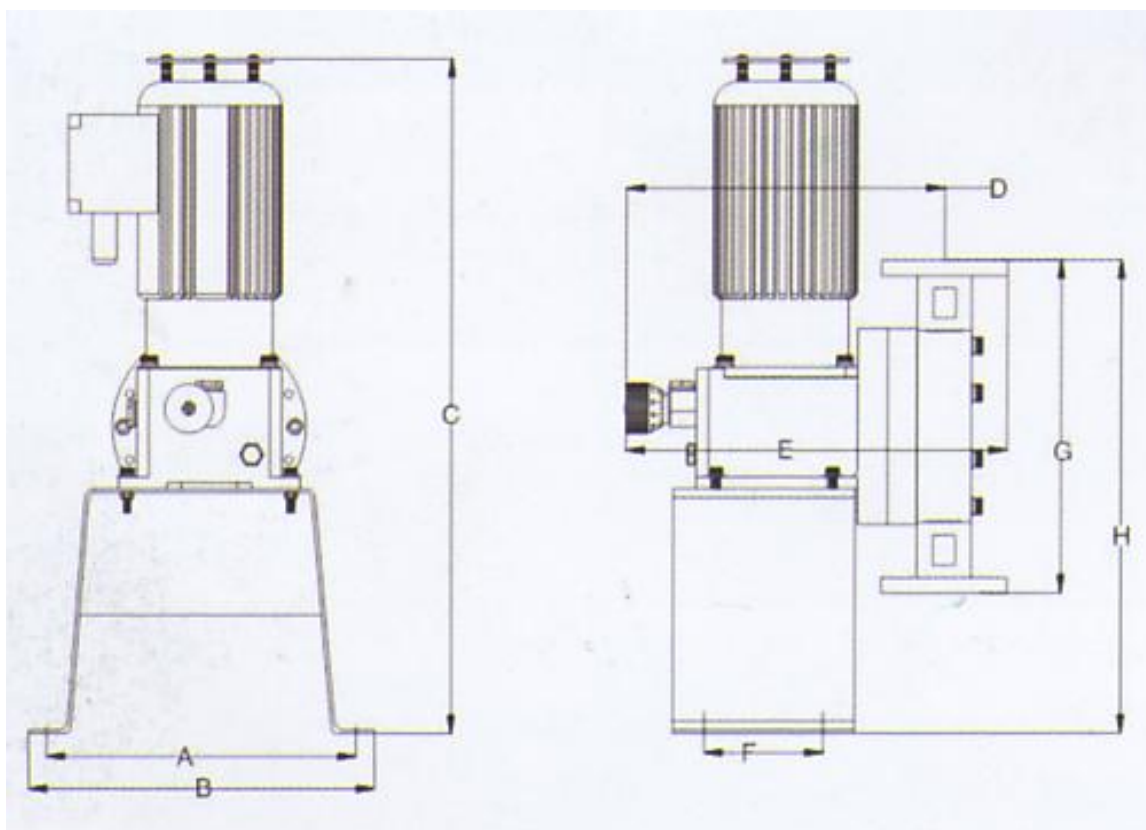
NO.	1	2	3	4	5
零件名称 Parts name	法兰 Flange	压紧螺母 Pressure nut	垫片 Gaskets	球导管 Ball catheter	球阀 Ball valve
数量	2	2	2	2	2

NO.	6	7	8	9	10
零件名称 Parts name	球座 Ball seat	垫片 Gaskets	阀体 The body	垫片 Gaskets	前盖 Front cover
数量	2	2	2	2	1

备注:如客户遇到打不上药的情况,请清洗球导管组,并按照图示方向进行安装.

Note: If the customer experiences the condition that can not supply the drug, please clean the ball catheter group, and install according to the graphic presentation.

立式外形尺寸图 Dimensions shown in Figure



流量	A	B	C	D	E	F	G	H
120-240L (140/150W)	178	212	395	192	220	70	270	297
150-500 (200W)	203	231	516	276	326	116	265	353
500-1000 (400W)	203	231	539	307	377	118	290	385
800-1200 (750W)	308	337	665	398	468	170	370	522
1500-1800 (750W)	308	337	665	398	468	170	410	542

膜片的更换（立式/卧式） Diaphragm replacement

1. 取下固定泵头的螺丝。

2. 在泵头松动后，取下泵头之前，调节冲程长度 0%位置，抓住液体端逆时针旋转，这样就可以旋下隔膜。
3. 安装新的隔膜，顺时针旋转背板和隔膜直到贴紧。调节背板，使漏液排出孔位于泵的最底端。
4. 旋转到冲程长度的 100%位置，在泵的运行过程中调整液力端河隔膜至合适的位置。

1 fixed pump head screw.

2 in loose pump head, the pump head removed prior to the stroke length adjustment, 0% position, seize the liquid-side anti-clockwise rotation, so that you can unscrew the diaphragm.

3 install new diaphragm, back and diaphragm clockwise until the close. Conditioning backplane, so that leakage from the hole at the bottom of the pump.

4 rotary stroke length to 100% position, to the proper position the fluid end River diaphragm adjustment during the operation of pump.

保养（立式/卧式） Maintenance

1. 日常运转时注意保持凉爽通风。
2. 定期检查电缆线是否破损及接头是否牢靠。
3. 避免化学药剂喷溅与泵浦表面，若有应立即清洗干净。
4. 经常检查泵浦是否有异常声，马达温度过高（高于 70° C），电流过大，液体泄漏等异常现象，并根据（异常分析表）自行判断故障原因并设法排除。
5. 隔段时间用扳手测试泵头及减速机是否螺丝固定，以确定无松动现象。

- 1 daily operation keep cool ventilation.
- 2 regular check cable is damaged and the joint is solid.
- 3 avoid chemical spray with pump surface, if any should immediately clean.
- 4 regularly check the pump if there is abnormal sound, high motor temperature (above 70 ° C), the current is too large, abnormal phenomena of liquid leakage, and according to the (anomaly analysis) to determine the cause of the malfunction and try to exclude.
- 5 from time to time with the wrench test pump head and a speed reducer to determine whether screw fixation, no loosening phenomenon.

维修及注意（立式/卧式） Repair and attention

泵浦在使用中发现异常时，请立即停止并检查是否有故障。若有故障状况要向我公司查询时，请记下故障异常状况事项及泵浦铭牌上的资料，再与我公司联系。

1. 本泵浦之保固期为交货日起壹年。
2. 本泵浦之保固仅限于国内使用。
3. 于保固期内，属于正常的安装使用造成之故障，其故障部分可做免修维修，其他费用恕不负担。
4. 下列故障、破损之维修时必须付费的：
 - A. 已过保固期限之故障维修
 - B. 不当之操作或库存、搬运所产生的故障或破损。
 - C. 火灾、天灾、地变及人力不可抵挡之故障或破损。
 - D. 使用我公司零件以外之零件所造成之故障与破损。
5. 接液部材质于订购时已指定，对于实际操作液体未告知我公司，而造成腐蚀，或因液体造成动作不良（例如：液体结晶、氧化、

或管路中有异物、垃圾等)情形,本公司恕不负责。

6. 其他由于本泵浦使用故障而造成其他设备之损害或危险,本公司恕不负责该赔偿。

Pump abnormality found in use, please immediately stop and check whether there is fault. If a fault condition to the query to my company, please write down the fault events different Changde state and pump nameplate data, then contact me.

Warranty

1 pump for one year from the date of delivery.

2 to pump the warranty is limited to domestic use.

3 Yu Baogu period, belong to the normal installation using the cause of fault, the fault section can be exempt the maintenance, and other fees will not be a burden.

4 following a fault, when must pay:

A. has a fault repair warranty period

The fault

B. improper operation or storage, handling or broken.

C. fire, natural disasters, land and human can not resist the fault or damage.

Fault

D. parts except our components and damage caused by.

5 the liquid material in the order specified, for the actual operation of liquid is not inform our company, caused by corrosion, or because of liquid caused by adverse action (for example: liquid crystal, oxidation, or line of foreign body, rubbish and so on), the company will not be responsible for.

6 other because the pump using the fault caused by damage to other equipment or dangerous, the company will not be responsible for the compensation.

定量注入泵浦应用过程中的问题及处理（立式/卧式）

Pump application problems and treatment of quantitative injection

故障 Fault	可能原因 Possible reasons	排除 Debar
试运行时计量泵不吸液 Trial operation of metering pump not imbibition	吸尘太高 Suction is too high	接近药桶处或者装一个底阀 Close to the medicine bucket or a foot valve
试运行时计量泵不加药且泵头处有液体泄漏 Trial operation of metering pump dosing pump head and no liquid leakage	管道阀门没打开 Pipeline valve does not open	打开管道阀门 Open the pipe valve
试运行时计量泵不加药 Trial operation of metering pump not.	管道连接进出口药口处连接时被被胶水或者异物堵塞 Pipeline connecting the import and export of medicine outlet connected by glue or blockage	看连接时是否被胶水或者异物堵塞，清洗即可 See the connection is glue or blockage, wash
试运行时计量泵不加药或者流量很小 Trial operation of metering pump dosing flow is very small or not	调整凸轮被调到“0”或者“0”附近位置 Adjust cam was transferred to the "0" or "0" in the vicinity of position	将调整凸轮调整到“0”即可 Adjust cam is adjusted to "0".
计量泵不加药或者流量很小 Metering pump dosing flow is very small or not	进出口的球阀可能有异物堵住 Ball valve import and export may have blocked foreign body	清洗即可 Wash
计量泵泵头处漏药 Metering pump pump head medicine leakage	膜片损坏 Diaphragm damage	换掉膜片 Replace the diaphragm

安全注意事项（立式/卧式）

Safety precautions

1. 维修前，首先要断开电源，关闭相关阀门。
2. 维修时，如果介质时危险的或者未知的液体时要带安全防护用具。
3. 只有经过培训的合格人员才可以维修计量泵。必要是请返厂维修。

1 repair, must first disconnect the power supply, close valves.

2 repair, if the medium risk or unknown liquid to bring the safety protection appliances.

3 only trained and qualified personnel can repair the metering pump. As may be necessary, please return to factory maintenance.

实际使用（所有泵浦）

1. 在向我司订购设备时，合同上须注明每台设备具体投加的介质。如不注明，我司就认为是普通介质（非强酸强碱类），但实际使用的介质却是强酸、强碱时，使用前必须和我司沟通，以免发生意外。
2. 在正式加药前，所有泵浦必须用清水运行 2-3 天才可以正式使用，以免发生意外。
3. 使用过程中，如发现任何泄漏，应立即停止使用，马上和我司联系，以免发生意外。
4. 实际使用必须严格按照以上三点执行。

Use (all pumps)

1, in the division of ordering equipment, the contract must specify the specific equipment for each device to add the media. If not specified, our that ordinary media (non strong acid and strong base class), but the actual use of the medium is strong acid, strong alkali, prior to use must communicate with the Division I, in order to avoid the accident

2, in the official before dosing, all must be pumped with water running 2-3 days can be used to avoid accidents;

3, the use of the process, such as the discovery of any leakage, should immediately stop using, and I immediately contact the division, so as to avoid accidents;

4, the actual use must be strictly in accordance with the implementation of the above three points.

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