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## 概述 General

QS 型泵是单级双吸，卧式中开离心泵。输送清水及物理化学性质类似于水的液体。液体的最高温度不超过 80 ℃， 适合工厂，矿山，城市，电站，农田排涝灌溉及各种水利工程。

本系列泵符合 GB/T3 216，GB/T5657 标准。

Model QS pump is a single-stage double-suction horizontal split centrifugal pump and used to transport pure water and the liquid of both physical and chemical nature similar to those of water, the maximum temperature of which must not be over 80℃ , suitable for water supply and drainage in factories, mines, cities and electric stations, waterlogged land drainage and irrigation of farming land and carious hydraulic projects.

This series pump comply with the standards of GB/T3 216 and GB/T5657.

## 型号意义 Model Meaning



## 应用 Application



航空

Aerospace



油气业

Oil & Gas



建筑业

Building Trades



发电站

Power Station



化工业

Chemical



石油化工

Petro- Chemical



工业

General Industry



制药业

Pharmaceutical



海洋船舶

Marine



纸&纸浆

Pulp & Paper



采矿业

Mining & Aggregate



水&污水处理

Water & Wastewater

## 结构说明 Pump Structure

QS 型泵的吸入口与吐出口均在水泵轴心线下方，与轴线垂直呈水平方向，泵壳中开，检修时无需拆卸进水，排出管路及电动机。从联轴器方向看，水泵为顺时针旋转。根据需要也可生产逆时针旋转的泵，但订货时应特殊提出。

泵的主要零件有，泵体，泵盖，叶轮，轴，双吸密封环，轴套，轴承部件与联轴器部件等

除轴的材质为优质碳素钢外，其余均为铸铁制成。根据介质不同可换其他材质

泵壳制成水平中开，泵的吸入口与吐出口均铸在下半部泵体上，泵改为螺尾锥销定位，与泵体配合。检查泵壳内部时，只要拆开泵盖，无需拆卸进水管路。泵体的进出水法兰上，有安装真空表与压力表的管螺纹孔。在进出水法兰的底部有防水用的螺塞。

叶轮经过静平衡校验，用轴套和两侧的轴套螺母固定，其轴向位置可以通过轴套螺母进行调整，叶轮的轴向力利用其叶片的对称布置达到平衡，可能还有一些剩余轴向力则由轴端的轴承承受。

泵轴由两个单列向心球轴承支撑，轴承装在泵体两端的轴承体内，用润滑脂润滑。双吸密封环用以减少水泵叶轮出泄露水。

泵以弹性联轴器与电机直接联接，如泵用皮带传动，必须另设支架支撑皮带轮。

Both inlet and outlet of this pump are placed under the axial line, horizontally and vertical to the axial line, the pump casing is opened in the middle so it is unnecessary to remove the water inlet and outlet pipelines and motor(or other prime movers). The pump moves CW viewing from the clutch to it. The pump moving CCW can also be made, but it should be specially noted at order.

The main parts of the pump are: pump casing, pump cover, impeller, shaft, dual-suction seal ring, muff, bearing etc. and all of them, except the axle which is made of quality carbon steel, are made of cast iron. The material may be replaced with others upon different media.

The volute casing is split on the horizontal centerline with the suction and discharge nozzle cast integral with the pump casing. The upper casing is accurately located on the lower half by the use of dowel pins. The upper casing can be removed to inspect the interior of the pump without disturbing the pipe connections or pump alignment. The suction and discharge flanges contain tapped holes for vacuum and pressure gauge. At the bottom of the flanges, there are tapped plugs for water drainage.

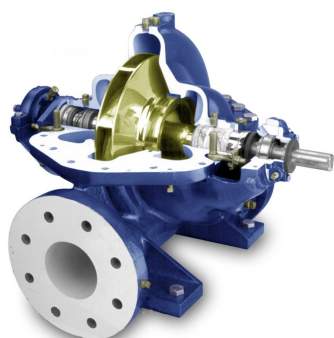
The impeller is static-balance calibrated, fixed with the muff and the muff nuts in both sides and its axial position can be adjusted via the nuts and axial force gets balanced by means of the symmetrical arrangement of its blades, there may be residual axial force which is borne by the bearing at the axle end.

The pump shaft is supported by two single-column centripetal ball bearings, which are mounted inside of the bearing body on both ends of the pump and lubricated with grease. The dual-suction seal ring is used to reduce the leak at the impeller

双吸密封环，以其余叶轮的间隙，来减少压水室内的液体漏回吸水室。密封环保护泵壳免于磨损，本身为易损零件，磨损后可以备件更换。

轴封采用软填料密封，为了冷却润滑密封腔和防止空气漏入泵内，在填料之间装有填料环，水泵运行时少量高压水通过泵盖中开面上的梯形凹槽流入料腔，起水封作用。

填料处液体的渗漏，以每分钟 10 滴至 20 滴为适当。



The flexible couplings connect the pump with the motor directly. For pumps driven by belt, there must be an intermediate bracket fitted for supporting the belt pulley.

The close running fit between the wearing rings and the impeller minimizes the leakage of water back into the suction part. The rings protect the casing from wearing and can be promptly replaced with the spare parts when they have been worn out.

The shaft seal is soft packing. The stuffing ring is fit between the packing in order to prevent air from leaking into the pump and to cool and lubricate sealing case, and while the pump is working, a small amount of high-pressured water flows into the packing case through the concave notch on the pump cover to function as water seal.

The appropriate leakage from the packing case is at 10 to 20 drops per minute.



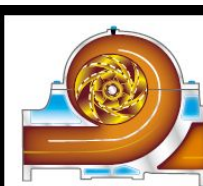
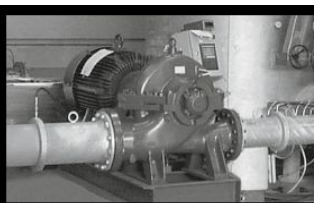
Bareshaft Pump



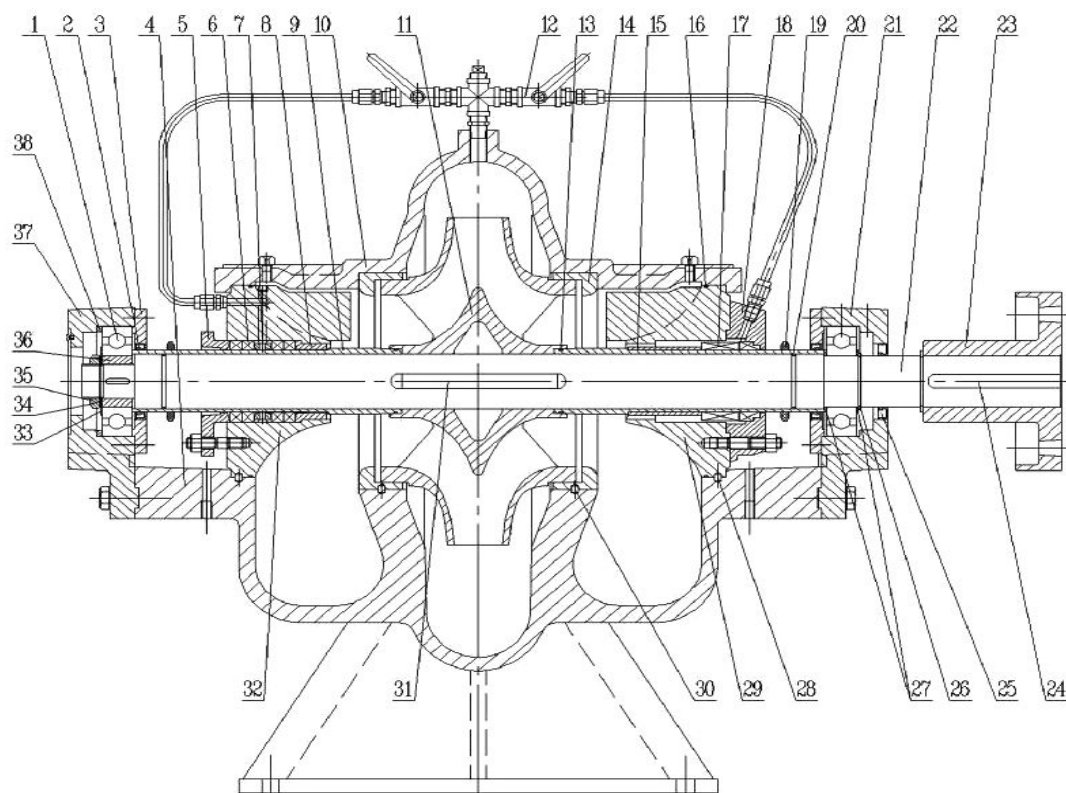
Electric Motor Drive



Diesel Engine Drive



# 结构图 Structure Chart



|                                    |                                           |                                                |                                         |                                |                                        |
|------------------------------------|-------------------------------------------|------------------------------------------------|-----------------------------------------|--------------------------------|----------------------------------------|
| 1.<br>Bearing<br>轴承                | 2.<br>Framework oil seal<br>骨架油封          | 3.<br>Bearing gland<br>轴承压盖                    | 4.<br>Pump casing<br>泵体                 | 5.<br>Packing gland<br>填料箱     | 6.<br>Packings<br>填料                   |
| 7.<br>Packing ring<br>填料环          | 8.<br>Packing sleeve<br>填料套               | 9.<br>Shaft sleeve<br>轴套                       | 10.<br>Pump cover<br>泵盖                 | 11.<br>Impeller<br>叶轮          | 12.<br>Washing pipe<br>冲洗管部件           |
| 13.<br>O ring<br>O 型圈              | 14.<br>Seal ring for pump casing<br>泵体密封环 | 15.<br>Mechanical seal liner<br>机械密封衬套         | 16.<br>O ring<br>O 型圈                   | 17.<br>Mechanical seal<br>机械密封 | 18.<br>Mechanical seal gland<br>机械密封压盖 |
| 19.<br>Water retaining ring<br>挡水圈 | 20.<br>O ring<br>O 型圈                     | 21.<br>Bearing housing at driven end<br>驱动端轴承体 | 22.<br>Shaft<br>轴                       | 23.<br>Couplings<br>联轴器        | 24.<br>C type key<br>C 型平键             |
| 25.<br>Framework oil seal<br>骨架油封  | 26.<br>Ring for shaft<br>轴用弹性挡圈           | 27.<br>Bearing junk ring<br>轴承内套               | 28.<br>Cylindrical pin<br>圆柱销           | 29.<br>Mechanical seal<br>机械密封 | 30.<br>Cylindrical pin<br>圆柱销          |
| 31.<br>B type key<br>B 型平键         | 32.<br>Packing seal<br>填料密封               | 33.<br>Seal<br>挡圈                              | 34.<br>Round nut lock washer<br>圆螺母止动垫圈 | 35.<br>Round nut<br>圆螺母        | 36.<br>Bearing inner liner<br>轴承内套     |
| 37.Pump end bearing housing 泵端轴承   |                                           |                                                | 38.Bearing spacer 轴承定位套                 |                                |                                        |

## 性能参数 QS Series Pump Performance Data

| Pump Type<br>泵型 | Q<br>Flow<br>流量     |       | H<br>Head<br>扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)<br>功率 |               | $\eta$<br>Eff<br>效率<br>(%) | NPSH | Pump Weight<br>泵重<br>(kg) |
|-----------------|---------------------|-------|------------------------|---------------------------|----------------------|---------------|----------------------------|------|---------------------------|
|                 | (m <sup>3</sup> /h) | (L/s) |                        |                           | Shaft power<br>轴功率   | Motor<br>电机功率 |                            |      |                           |
| 15QS-78         | 126                 | 35    | 84                     | 2900                      | 40                   | 55            | 72                         | 5    | 150                       |
|                 | 162                 | 45    | 78                     |                           | 45.8                 |               | 75                         |      |                           |
|                 | 198                 | 55    | 70                     |                           | 51.0                 |               | 74                         |      |                           |
| 150QS-78A       | 112                 | 31    | 67                     | 2900                      | 30                   | 45            | 68                         | 5    | 150                       |
|                 | 114                 | 40    | 62                     |                           | 33.8                 |               | 72                         |      |                           |
|                 | 180                 | 50    | 55                     |                           | 38.5                 |               | 70                         |      |                           |
| 150QS-50        | 130                 | 36.2  | 52                     | 2900                      | 25.3                 | 37            | 74                         | 5    | 145                       |
|                 | 170                 | 47.2  | 47.6                   |                           | 27.6                 |               | 80                         |      |                           |
|                 | 220                 | 61.2  | 35                     |                           | 31.3                 |               | 67                         |      |                           |
| 150QS-50A       | 120                 | 31    | 43.8                   | 2900                      | 18.5                 | 30            | 72                         | 5    | 145                       |
|                 | 144                 | 40    | 40                     |                           | 20.9                 |               | 75                         |      |                           |
|                 | 180                 | 35    | 35                     |                           | 24.5                 |               | 70                         |      |                           |
| 200QS-95        | 180                 | 50    | 100                    | 2900                      | 79.1                 | 110           | 62                         | 5.5  | 245                       |
|                 | 234                 | 65    | 93.5                   |                           | 85.0                 |               | 71                         |      |                           |
|                 | 288                 | 80    | 82.5                   |                           | 88.6                 |               | 73                         |      |                           |
| 200QS-95A       | 160                 | 44.5  | 85.1                   | 2900                      | 60.8                 | 90            | 61                         | 5.5  | 265                       |
|                 | 215                 | 59.7  | 75.6                   |                           | 64.2                 |               | 69                         |      |                           |
|                 | 265                 | 73.6  | 70.2                   |                           | 71.4                 |               | 71                         |      |                           |
| 200QS-63        | 213                 | 60    | 69                     | 2900                      | 55                   | 75            | 74                         | 4.7  | 265                       |
|                 | 288                 | 80    | 62.5                   |                           | 61.3                 |               | 80                         | 5.5  |                           |
|                 | 351                 | 97.5  | 50                     |                           | 67.8                 |               | 70.5                       | 7    |                           |
| 200QS-63A       | 180                 | 50    | 54.5                   | 2900                      | 41                   | 55            | 65                         | 5.0  | 265                       |
|                 | 270                 | 70    | 46                     |                           | 48.3                 |               | 70                         | 6.2  |                           |
|                 | 324                 | 90    | 37.5                   |                           | 51                   |               | 65                         |      |                           |
| 200QS-42        | 216                 | 60    | 48                     | 2900                      | 34.9                 | 45            | 81.85                      | 5.0  | 219                       |
|                 | 288                 | 80    | 41.3                   |                           | 38.1                 |               | 81                         | 6.4  |                           |
|                 | 342                 | 95    | 35                     |                           | 40.2                 |               |                            | 8.2  |                           |
| 200QS-42A       | 198                 | 55    | 43                     | 2900                      | 30.5                 | 37            | 76                         | 4.8  | 219                       |
|                 | 270                 | 75    | 36                     |                           | 33.1                 |               | 80                         | 5.8  |                           |
|                 | 310                 | 86    | 31                     |                           | 34.4                 |               | 76                         | 7    |                           |
| 250QS-65        | 360                 | 100   | 71                     | 1450                      | 91.5                 | 132           | 76                         | 4    | 565                       |
|                 | 486                 | 135   | 65.1                   |                           | 109                  |               | 79                         |      |                           |
|                 | 612                 | 170   | 56                     |                           | 129.6                |               | 72                         |      |                           |
| 250QS-65A       | 342                 | 95    | 61                     | 1450                      | 76.7                 | 110           | 74                         | 4    | 565                       |
|                 | 468                 | 130   | 54                     |                           | 89.4                 |               | 77                         |      |                           |
|                 | 540                 | 150   | 50                     |                           | 98                   |               | 75                         |      |                           |

| Pump Type<br>泵型 | Q<br>Flow<br>流量     |       | H<br>Head<br>扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)<br>功率 |               | $\eta$<br>Eff<br>(%) | NPSH | Pump Weight<br>泵重<br>(kg) |
|-----------------|---------------------|-------|------------------------|---------------------------|----------------------|---------------|----------------------|------|---------------------------|
|                 | (m <sup>3</sup> /h) | (L/s) |                        |                           | Shaft power<br>轴功率   | Motor<br>电机功率 |                      |      |                           |
| 250QS-39        | 360                 | 100   | 42.5                   | 1450                      | 55.5                 | 75            | 75                   | 4    | 428                       |
|                 | 486                 | 135   | 38.5                   |                           | 61.5                 |               | 93                   |      |                           |
|                 | 612                 | 170   | 32.5                   |                           | 67.7                 |               | 80                   |      |                           |
| 250QS-39A       | 324                 | 90    | 35.5                   | 1450                      | 40.2                 | 55            | 78                   | 4    | 428                       |
|                 | 468                 | 130   | 30.5                   |                           | 45.7                 |               | 86                   |      |                           |
|                 | 576                 | 160   | 25                     |                           | 47.8                 |               | 82                   |      |                           |
| 250QS-24        | 360                 | 100   | 27                     | 1450                      | 33.1                 | 45            | 80                   | 4    | 420                       |
|                 | 486                 | 135   | 23.5                   |                           | 36.2                 |               | 86                   |      |                           |
|                 | 576                 | 160   | 19                     |                           | 36.4                 |               | 82                   |      |                           |
| 250QS-24A       | 342                 | 95    | 22.2                   | 1450                      | 25.8                 | 37            | 80                   | 4    | 420                       |
|                 | 414                 | 115   | 20.3                   |                           | 27.6                 |               | 83                   |      |                           |
|                 | 482                 | 134   | 17.4                   |                           | 28.6                 |               | 80                   |      |                           |
| 250QS-14        | 360                 | 100   | 17.5                   | 1450                      | 21.4                 | 30            | 80                   | 4    | 405                       |
|                 | 486                 | 135   | 14                     |                           | 21.8                 |               | 85                   |      |                           |
|                 | 576                 | 160   | 11                     |                           | 22.1                 |               | 78                   |      |                           |
| 250QS-14A       | 520                 | 89    | 13.7                   | 1450                      | 15.4                 | 22            | 78                   | 4    | 405                       |
|                 | 432                 | 120   | 11                     |                           | 15.8                 |               | 82                   |      |                           |
|                 | 504                 | 140   | 8.6                    |                           | 15.8                 |               | 75                   |      |                           |
| 300QS-90        | 590                 | 164   | 98                     | 1450                      | 213                  | 260           | 74                   | 4.6  | 847                       |
|                 | 792                 | 220   | 90                     |                           | 245                  |               | 80                   | 5.5  |                           |
|                 | 936                 | 260   | 82                     |                           | 279                  |               | 75                   | 6.5  |                           |
| 300QS-90A       | 576                 | 160   | 86                     | 1450                      | 190                  | 260           | 71                   | 4.5  | 845                       |
|                 | 755                 | 220   | 78                     |                           | 217                  |               | 74                   | 5.3  |                           |
|                 | 918                 | 260   | 70                     |                           | 246                  |               | 71                   | 6.4  |                           |
| 300QS-90B       | 540                 | 150   | 72                     | 1450                      | 151                  | 250           | 70                   | 4.4  | 845                       |
|                 | 720                 | 200   | 67                     |                           | 180                  |               | 73                   | 5.1  |                           |
|                 | 900                 | 250   | 57                     |                           | 200                  |               | 70                   | 6.2  |                           |
| 300QS-58        | 576                 | 160   | 65                     | 1450                      | 128                  | 180           | 80                   | 5.5  | 572                       |
|                 | 792                 | 210   | 58                     |                           | 149                  |               | 84                   |      |                           |
|                 | 972                 | 255   | 50                     |                           | 168                  |               | 79                   |      |                           |
| 300QS-58A       | 530                 | 147   | 55                     | 1450                      | 99.2                 | 155           | 80                   | 5.5  | 572                       |
|                 | 720                 | 200   | 49                     |                           | 116                  |               | 83                   |      |                           |
|                 | 893                 | 248   | 42                     |                           | 131                  |               | 78                   |      |                           |
| 300QS-58B       | 504                 | 140   | 47.2                   | 1450                      | 82.5                 | 135           | 79                   | 5.5  | 572                       |
|                 | 684                 | 190   | 43                     |                           | 97.7                 |               | 82                   |      |                           |
|                 | 835                 | 232   | 37                     |                           | 108                  |               | 78                   |      |                           |

| Pump Type<br>泵型 | Flow (Q)<br>流量 |       | H<br>Head<br>扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)<br>功率 |               | $\eta$<br>Eff<br>效率<br>(%) | NPSH | Pump Weight<br>泵重<br>(kg) |
|-----------------|----------------|-------|------------------------|---------------------------|----------------------|---------------|----------------------------|------|---------------------------|
|                 | (m3/h)         | (L/s) |                        |                           | Shaft power<br>轴功率   | Motor<br>电机功率 |                            |      |                           |
| 300QS-32        | 612            | 170   | 38                     | 1450                      | 76.2                 | 90            | 83                         | 5.5  | 809                       |
|                 | 792            | 220   | 32.2                   |                           | 79.8                 |               | 87                         |      |                           |
|                 | 900            | 258   | 25.5                   |                           | 78.1                 |               | 80                         |      |                           |
| 300QS-32A       | 550            | 153   | 31                     | 1450                      | 58.1                 | 75            | 80                         | 5.5  | 660                       |
|                 | 720            | 200   | 26                     |                           | 60.7                 |               | 84                         |      |                           |
|                 | 810            | 225   | 20.5                   |                           | 58                   |               | 75                         |      |                           |
| 300QS-19        | 612            | 170   | 23                     | 1450                      | 47.3                 | 55            | 81                         | 5.5  | 660                       |
|                 | 792            | 220   | 19.4                   |                           | 49.8                 |               | 84                         |      |                           |
|                 | 935            | 260   | 14                     |                           | 47.6                 |               | 75                         |      |                           |
| 300QS-19A       | 504            | 140   | 20                     | 1450                      | 34.8                 | 45            | 79                         | 5.5  | 660                       |
|                 | 720            | 200   | 16                     |                           | 39.3                 |               | 82                         |      |                           |
|                 | 900            | 250   | 11.5                   |                           | 37.6                 |               | 75                         |      |                           |
| 300QS-12        | 611            | 170   | 14.5                   | 1450                      | 30.3                 | 30            | 75                         | 5.5  | 660                       |
|                 | 792            | 220   | 12                     |                           | 31.2                 |               | 80                         |      |                           |
|                 | 900            | 250   | 10                     |                           | 33.1                 |               | 77                         |      |                           |
| 300QS-12A       | 522            | 145   | 11.8                   | 1450                      | 22.4                 | 30            | 75                         | 5.5  | 660                       |
|                 | 685            | 190   | 10                     |                           | 233                  |               | 80                         |      |                           |
|                 | 792            | 220   | 8.7                    |                           | 24.4                 |               | 77                         |      |                           |
| 300QS-125       | 850            | 236   | 140                    | 1470                      | 450                  | 680           | 72                         | 6.5  | 1580                      |
|                 | 1250           | 347   | 125                    |                           | 252                  |               | 81                         |      |                           |
|                 | 1663           | 461   | 100                    |                           | 620                  |               | 73                         |      |                           |
| 300QS-125A      | 800            | 223   | 125                    | 1470                      | 391                  | 630           | 70                         | 6.5  | 1580                      |
|                 | 1180           | 328   | 112                    |                           | 426                  |               | 78                         |      |                           |
|                 | 1570           | 436   | 90                     |                           | 550                  |               | 70                         |      |                           |
| 300QS-125B      | 745            | 207   | 108                    | 1470                      | 313                  | 500           | 70                         | 6.5  | 1580                      |
|                 | 1100           | 305   | 96                     |                           | 373                  |               | 77                         |      |                           |
|                 | 16460          | 405   | 77                     |                           | 422                  |               | 72.5                       |      |                           |
| 350QS-75        | 972            | 270   | 80                     | 1450                      | 268                  | 400           | 79                         | 6.5  | 1200                      |
|                 | 1260           | 350   | 75                     |                           | 306                  |               | 84                         |      |                           |
|                 | 1440           | 400   | 65                     |                           | 319                  |               | 80                         |      |                           |
| 350QS-75A       | 900            | 250   | 70                     | 1450                      | 220                  | 300           | 78                         | 6.5  | 1200                      |
|                 | 1170           | 325   | 65                     |                           | 247                  |               | 84                         |      |                           |
|                 | 1330           | 370   | 56                     |                           | 257                  |               | 79                         |      |                           |
| 350QS-75B       | 900            | 250   | 60                     | 1450                      | 175                  | 250           | 78                         | 6.5  | 1200                      |
|                 | 1080           | 300   | 58                     |                           | 196                  |               | 84                         |      |                           |
|                 | 1260           | 350   | 54                     |                           | 213                  |               | 79                         |      |                           |

| Pump Type<br>泵型 | Flow (Q)<br>流量      |       | H<br>Head<br>扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)<br>功率 |               | $\eta$<br>Eff<br>效率<br>(%) | NPSH | Pump Weight<br>泵重<br>(kg) |
|-----------------|---------------------|-------|------------------------|---------------------------|----------------------|---------------|----------------------------|------|---------------------------|
|                 | (m <sup>3</sup> /h) | (L/s) |                        |                           | Shaft power<br>轴功率   | Motor<br>电机功率 |                            |      |                           |
| 350QS-44        | 972                 | 270   | 50                     | 1470                      | 164                  | 220           | 81                         | 6.5  | 1105                      |
|                 | 1260                | 350   | 43.58                  |                           | 179                  |               | 84                         |      |                           |
|                 | 1480                | 410   | 37                     |                           | 188                  |               | 79                         |      |                           |
| 350QS-44A       | 864                 | 240   | 41                     | 1470                      | 121                  | 180           | 80                         | 1105 | 1105                      |
|                 | 1120                | 310   | 36                     |                           | 130                  |               | 84                         |      |                           |
|                 | 1330                | 370   | 30                     |                           | 136                  |               | 80                         |      |                           |
| 350QS-26        | 971                 | 270   | 32                     | 1450                      | 99.7                 | 132           | 85                         | 6.5  | 880                       |
|                 | 1260                | 350   | 26                     |                           | 102                  |               | 88                         |      |                           |
|                 | 1440                | 400   | 22                     |                           | 95.7                 |               | 82                         |      |                           |
| 350QS-26A       | 864                 | 240   | 26                     | 1450                      | 76.5                 | 110           | 80                         | 6.5  | 880                       |
|                 | 1120                | 310   | 21.5                   |                           | 77                   |               | 85                         |      |                           |
|                 | 1296                | 360   | 16.5                   |                           | 80                   |               | 73                         |      |                           |
| 350QS-16        | 971                 | 270   | 20                     | 1450                      | 64.4                 | 75            | 82                         | 6.5  | 760                       |
|                 | 1260                | 350   | 16.2                   |                           | 65.3                 |               | 85                         |      |                           |
|                 | 1440                | 400   | 13.4                   |                           | 70                   |               | 75                         |      |                           |
| 350QS-16A       | 864                 | 240   | 16                     | 1450                      | 50.2                 | 55            | 75                         | 6.5  | 760                       |
|                 | 1044                | 290   | 13.4                   |                           | 47.6                 |               | 80                         |      |                           |
|                 | 1260                | 350   | 10                     |                           | 48.3                 |               | 71                         |      |                           |
| 400QS-96        | 1080                | 300   | 98                     | 1480                      | 400                  | 500           | 71.5                       | 5.5  | 1910                      |
|                 | 1260                | 350   | 96                     |                           | 428                  |               | 77                         |      |                           |
|                 | 1620                | 450   | 90                     |                           | 473                  |               | 84                         |      |                           |
| 400QS-96A       | 1080                | 250   | 85.5                   | 1480                      | 346                  | 440           | 73                         | 6    | 1910                      |
|                 | 1260                | 300   | 85                     |                           | 376                  |               | 79                         |      |                           |
|                 | 1620                | 350   | 78                     |                           | 410                  |               | 84                         |      |                           |
| 400QS-96B       | 1080                | 300   | 78                     | 1480                      | 298                  | 440           | 77                         | 6    | 1910                      |
|                 | 1260                | 350   | 76                     |                           | 318                  |               | 82                         |      |                           |
|                 | 1620                | 450   | 68                     |                           | 349                  |               | 80                         |      |                           |
| 400QS-96J       | 900                 | 250   | 40                     | 980                       | 124                  | 185           | 79                         | 6    | 1910                      |
|                 | 1080                | 300   | 40                     |                           | 140                  |               | 84                         |      |                           |
|                 | 1260                | 350   | 38                     |                           | 155.3                |               | 84                         |      |                           |
| 400QS-96JA      | 900                 | 250   | 37                     | 980                       | 112                  | 155           | 81                         | 5    | 1910                      |
|                 | 1080                | 300   | 35                     |                           | 123                  |               | 84                         |      |                           |
|                 | 1260                | 350   | 32                     |                           | 131                  |               | 84                         |      |                           |
| 500QS-59        | 1150                | 430   | 66                     | 970                       | 340                  | 500           | 82                         | 6    | 2750                      |
|                 | 2016                | 560   | 59                     |                           | 390                  |               | 83                         |      |                           |
|                 | 2450                | 680   | 50                     |                           | 433                  |               | 77                         |      |                           |

| Pump Type<br>泵型 | Flow (Q)<br>流量      |       | H<br>Head<br>扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)<br>功率 |             | $\eta$<br>Eff<br>效率<br>(%) | NPSH | Pump Weight<br>泵重<br>(kg) |
|-----------------|---------------------|-------|------------------------|---------------------------|----------------------|-------------|----------------------------|------|---------------------------|
|                 | (m <sup>3</sup> /h) | (L/s) |                        |                           | Shaft power<br>轴功率   | Motor<br>电机 |                            |      |                           |
| 500QS-59A       | 1450                | 390   | 58                     | 970                       | 300                  | 400         | 74                         | 6    | 2750                      |
|                 | 1910                | 530   | 50                     |                           | 347                  |             | 75                         |      |                           |
|                 | 2270                | 630   | 42                     |                           | 360                  |             | 72                         |      |                           |
| 500QS-59B       | 1763                | 490   | 42                     | 970                       | 273                  | 355         | 74                         | 6    | 2750                      |
|                 | 1550                |       |                        |                           |                      |             |                            |      |                           |
|                 | 2016                |       |                        |                           |                      |             |                            |      |                           |
| 500QS-35        | 1550                | 430   | 40                     | 970                       | 206                  | 280         | 82                         | 6    | 2340                      |
|                 | 2016                | 560   | 35.1                   |                           | 219                  |             | 88                         |      |                           |
|                 | 2410                | 670   | 30                     |                           | 247                  |             | 80                         |      |                           |
| 500QS-35A       | 1870                | 520   | 31                     | 970                       | 186                  | 240         | 85                         | 6    | 2340                      |
| 500QS-22        | 1620                | 450   | 27                     | 970                       | 148                  | 180         | 80                         | 6    | 2010                      |
|                 | 2016                | 560   | 22                     |                           | 147                  |             | 82                         |      |                           |
|                 | 2340                | 650   | 15                     |                           | 137                  |             | 70                         |      |                           |
| 500QS-22A       | 1296                | 360   | 23                     | 970                       | 111                  | 130         | 73                         | 6    | 2010                      |
|                 | 1870                | 520   | 17                     |                           | 108                  |             | 80                         |      |                           |
|                 | 2016                | 560   | 14                     |                           | 101                  |             | 76                         |      |                           |
| 500QS-20        | 2500                | 694.4 | 24.5                   | 745                       | 238.3                | 340         | 70                         | 4.5  | 3030                      |
|                 | 3600                | 1000  | 21                     |                           | 248                  |             | 83                         | 5    |                           |
|                 | 3800                | 1055  | 20.4                   |                           | 255.9                |             | 82.5                       | 5.2  |                           |
| 500QS-20A       | 2500                | 694.4 | 22                     | 740                       | 218.3                | 280         | 70                         | 5    | 3030                      |
|                 | 3600                | 1000  | 17.2                   |                           | 215                  |             | 80                         | 5.4  |                           |
|                 | 3800                | 1055  | 16                     |                           | 216.5                |             | 78                         | 5.6  |                           |
| 500QS-13        | 1620                | 450   | 15.2                   | 970                       | 78.9                 | 110         | 85                         | 6    | 2000                      |
|                 | 2016                | 560   | 12.8                   |                           | 79                   |             | 89                         |      |                           |
|                 | 2325                | 646   | 10.6                   |                           | 78                   |             | 86                         |      |                           |
| 600QS-75        | 2750                | 764   | 80                     | 960                       | 689                  | 900         | 87                         | 8.7  | 4300                      |
|                 | 3420                | 950   | 71                     |                           | 727                  |             | 91                         |      |                           |
|                 | 3930                | 1092  | 60                     |                           | 730                  |             | 88                         |      |                           |
| 600QS-75A       | 2550                | 708   | 64                     | 960                       | 516                  | 710         | 86                         | 7.5  | 4300                      |
|                 | 3168                | 880   | 61                     |                           | 585                  |             | 90                         |      |                           |
|                 | 3640                | 1010  | 53                     |                           | 610                  |             | 86                         |      |                           |
| 600QS-75B       | 2300                | 630   | 60                     | 960                       | 442                  | 550         | 85                         | 7.5  | 4300                      |
|                 | 2800                | 778   | 56                     |                           | 514                  |             | 88                         |      |                           |
|                 | 3200                | 889   | 49                     |                           | 502                  |             | 85                         |      |                           |
| 600QS-39        | 2600                | 750   | 39                     | 730                       | 319                  | 380         | 90                         | 5.2  | 4300                      |

| Pump Type<br>泵型 | Flow (Q)<br>流量      |       | H<br>Head<br>扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)<br>功率 |               | $\eta$<br>Eff<br>效率<br>(%) | NPSH | Pump Weight<br>泵重<br>(kg) |
|-----------------|---------------------|-------|------------------------|---------------------------|----------------------|---------------|----------------------------|------|---------------------------|
|                 | (m <sup>3</sup> /h) | (L/s) |                        |                           | Shaft power<br>轴功率   | Motor<br>电机功率 |                            |      |                           |
| 600QS-15        | 2500                | 694   | 33.5                   | 740                       | 316.7                | 420           | 70                         | 5    | 3210                      |
|                 | 3600                | 1000  | 30                     |                           | 345.6                |               | 85                         | 5.5  |                           |
|                 | 4000                | 1111  | 28.5                   |                           | 365                  |               | 83                         | 5.8  |                           |
| 600QS-47        | 2502                | 695   | 56                     | 970                       | 460                  | 550           | 83                         | 7.5  | 3200                      |
|                 | 3168                | 880   | 47.4                   |                           | 465                  |               | 88                         |      |                           |
|                 | 3499                | 972   | 38                     |                           | 426                  |               | 80                         |      |                           |
| 600QS-47A       | 2700                | 750   | 48.5                   | 970                       | 434                  | 450           | 83                         | 7.5  | 1000                      |
|                 | 3150                | 875   | 44                     |                           | 438                  |               | 88                         |      |                           |
|                 | 3600                | 1000  | 32                     |                           | 392                  |               | 80                         |      |                           |
| 600QS-32        | 2480                | 700   | 37                     | 970                       | 295                  | 380           | 86                         | 7.5  | 2550                      |
|                 | 3170                | 880   | 32                     |                           | 310                  |               | 87                         |      |                           |
|                 | 3960                | 1100  | 22                     |                           | 279                  |               | 85                         |      |                           |
| 600QS-32A       | 2304                | 640   | 31.5                   | 970                       | 235                  | 280           | 84                         | 7.5  | 2550                      |
|                 | 2880                | 800   | 27                     |                           | 228                  |               | 89                         |      |                           |
|                 | 3600                | 1000  | 20                     |                           | 231                  |               | 85                         |      |                           |
| 600QS-21        | 2500                | 694.4 | 24.5                   | 740                       | 238.3                | 340           | 70                         | 5    | 3030                      |
|                 | 3600                | 1000  | 21                     |                           | 248                  |               | 83                         |      |                           |
|                 | 3800                | 1055  | 20.4                   |                           | 256                  |               | 82.5                       |      |                           |
| 600QS-21A       | 2500                | 694.4 | 22                     | 740                       | 218.3                | 280           | 70                         | 5    | 3030                      |
|                 | 3600                | 1000  | 17.2                   |                           | 215                  |               | 80                         |      |                           |
|                 | 3800                | 1055  | 16                     |                           | 216.3                |               | 78                         |      |                           |
| 600QS-22        | 2340                | 650   | 23.5                   | 970                       | 187                  | 250           | 80                         | 7.5  | 2500                      |
|                 | 2880                | 800   | 21                     |                           | 195                  |               | 84.5                       |      |                           |
|                 | 3420                | 950   | 18                     |                           | 207                  |               | 81                         |      |                           |
| 600QS-22A       | 2340                | 650   | 17.5                   | 970                       | 145                  | 185           | 77                         | 7.5  | 2500                      |
|                 | 2880                | 800   | 15.5                   |                           | 148                  |               | 82                         |      |                           |
|                 | 3420                | 950   | 13                     |                           | 154                  |               | 78.5                       |      |                           |
| 700QS-90        | 3715                | 1032  | 99.5                   | 980                       | 1157                 | 1250          | 87                         | 9.5  | 5800                      |
|                 | 4700                | 1306  | 90                     |                           | 1252                 |               | 92                         |      |                           |
|                 | 4896                | 1360  | 87                     |                           | 1018                 |               | 89.5                       |      |                           |
| 700QS-90A       | 3420                | 952   | 84.5                   | 980                       | 929                  | 1250          | 85                         | 8    | 5800                      |
|                 | 4336                | 1204  | 76.5                   |                           | 1005                 |               | 90                         |      |                           |
|                 | 4517                | 1255  | 74                     |                           | 1018                 |               | 89.5                       |      |                           |
| 700QS-90JA      | 2111                | 586.4 | 57.5                   | 742                       | 501                  | 710           | 52                         | 5    | 5800                      |
|                 | 3600                | 1000  | 52                     |                           | 555                  |               | 72                         |      |                           |
|                 | 4248                | 1180  | 43.5                   |                           | 595                  |               | 79                         |      |                           |

| Pump Type<br>泵型 | Flow (Q)<br>流量      |       | H<br>Head、扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)     |               | η<br>Eff<br>效率<br>(%) | NPSH | Pump Weight<br>泵重<br>(kg) |
|-----------------|---------------------|-------|---------------------|---------------------------|--------------------|---------------|-----------------------|------|---------------------------|
|                 | (m <sup>3</sup> /h) | (L/s) |                     |                           | Shaft power<br>轴功率 | Motor<br>电机功率 |                       |      |                           |
| 700QS-90JB      | 2400                | 667   | 51                  | 742                       | 397                | 560           | 84                    | 5    | 5800                      |
|                 | 3000                | 833   | 47                  |                           | 431                |               | 89                    |      |                           |
|                 | 3744                | 1040  | 39.5                |                           | 474                |               | 88.5                  |      |                           |
| 800QS-76        | 4400                | 1222  | 82                  | 740                       | 1128               | 15000         | 87                    | 8    | 8000                      |
|                 | 5500                | 1528  | 76                  |                           | 1250               |               | 91                    |      |                           |
|                 | 6600                | 1722  | 68                  |                           | 1384               |               | 88                    |      |                           |
| 800QS-76A       | 4160                | 1156  | 75                  | 740                       | 976                | 1400          | 86                    | 7.5  | 8000                      |
|                 | 5200                | 1646  | 69                  |                           | 1085               |               | 86                    |      |                           |
|                 | 6200                | 1722  | 63                  |                           | 1222               |               | 87                    |      |                           |
| 800QS-10        | 4680                | 1300  | 84                  | 742                       | 1216               | 1600          | 88                    | 8.5  | 8300                      |
|                 | 6330                | 1758  | 75                  |                           | 1405               |               | 92                    |      |                           |
|                 | 7200                | 2000  | 67.5                |                           | 1478               |               | 90                    |      |                           |
| 800QS-10A       | 4470                | 1242  | 76.5                | 742                       | 1060               | 1400          | 88                    | 7.5  | 8300                      |
|                 | 5760                | 1600  | 70                  |                           | 1194               |               | 92                    |      |                           |
|                 | 6878                | 1910  | 61.5                |                           | 1396               |               | 89                    |      |                           |
| 800QS-10J       | 3960                | 1100  | 50                  | 600                       | 702                | 1000          | 77                    | 6.5  | 8300                      |
|                 | 5070                | 1408  | 47.5                |                           | 785                |               | 84                    |      |                           |
|                 | 6210                | 1725  | 44                  |                           | 862                |               | 87                    |      |                           |
| 800QS-32        | 4700                | 1305  | 35                  | 730                       | 575                | 630           | 78                    | 6.5  | 5100                      |
|                 | 5500                | 1530  | 32.5                |                           | 580                |               | 84                    |      |                           |
|                 | 6010                | 1670  | 28.9                |                           | 567                |               | 83.5                  |      |                           |
|                 | 6460                | 1795  | 25.4                |                           | 567                |               | 80.5                  |      |                           |
| 800QS-32A       | 4550                | 1260  | 31                  | 730                       | 492                | 560           | 78                    | 6.5  | 5100                      |
|                 | 5310                | 1475  | 29                  |                           | 500                |               | 84                    |      |                           |
|                 | 5800                | 1600  | 26.5                |                           | 496                |               | 83.5                  |      |                           |
|                 | 6250                | 1735  | 23                  |                           | 487                |               | 80.5                  |      |                           |
| 800QS-32B       | 4170                | 1050  | 29                  | 750                       | 391                | 450           | 79                    | 6.5  | 5100                      |
|                 | 5000                | 1388  | 26                  |                           | 393                |               | 84                    |      |                           |
|                 | 5450                | 1518  | 23.5                |                           | 415                |               | 81                    |      |                           |
| 1000QS-46       | 6600                | 1933  | 52                  | 600                       | 1222               | 1250          | 84                    | 6    | 10000                     |
|                 | 8250                | 2292  | 46                  |                           | 1174               |               | 88                    |      |                           |
|                 | 9900                | 2750  | 37                  |                           | 997                |               | 80                    |      |                           |
| 1000QS-46A      | 6000                | 1666  | 47                  | 000                       | 936                | 1250          | 80                    | 6    | 1000                      |
|                 | 7800                | 2167  | 41.5                |                           | 1013               |               | 87                    |      |                           |
|                 | 9000                | 2722  | 32                  |                           | 992                |               | 79                    |      |                           |

| Pump Type<br>泵型 | Flow (Q)<br>流量      |       | H<br>Head<br>扬程<br>(m) | n<br>Speed<br>转速<br>(rpm) | N<br>Power(kw)<br>功率 |               | $\eta$<br>Eff<br>效率<br>(%) | NPSH | Pump<br>Weight<br>泵重<br>(kg) |
|-----------------|---------------------|-------|------------------------|---------------------------|----------------------|---------------|----------------------------|------|------------------------------|
|                 | (m <sup>3</sup> /h) | (L/s) |                        |                           | Shaft power<br>轴功率   | Motor<br>电机功率 |                            |      |                              |
| 1200QS-39       | 7200                | 2000  | 42.5                   | 500                       | 1023                 | 1600          | 81.5                       | 5.5  |                              |
|                 | 9000                | 2500  | 39                     |                           | 1092.4               |               | 87.5                       |      |                              |
|                 | 10800               | 3000  | 33                     |                           | 1155                 |               | 84                         |      |                              |
| 1200QS-39A      | 6480                | 1800  | 38.5                   | 500                       | 849                  | 1250          | 80                         | 5.5  |                              |
|                 | 8100                | 2250  | 35                     |                           | 892.5                |               | 86.5                       |      |                              |
|                 | 9720                | 2700  | 29                     |                           | 925                  |               | 83                         |      |                              |
| 1200QS-39B      | 5832                | 1620  | 34                     | 500                       | 675                  | 1000          | 80                         | 5.5  |                              |
|                 | 7290                | 2025  | 31                     |                           | 718                  |               | 85.7                       |      |                              |
|                 | 8748                | 2430  | 25.5                   |                           | 741                  |               | 82                         |      |                              |
| 1200QS-85       | 9360                | 2600  | 95.7                   | 745                       | 2903                 | 3450          | 84                         | 11   | 16000                        |
|                 | 12240               | 3400  | 85                     |                           | 3147                 |               | 90                         | 12   |                              |
|                 | 14400               | 4000  | 70                     |                           | 3228                 |               | 85                         | 12.4 |                              |
| 1200QS-56       | 8640                | 2400  | 60.5                   | 600                       | 1763                 | 2240          | 82                         | 7.5  | 16000                        |
|                 | 10800               | 3000  | 56                     |                           | 1871                 |               | 88                         |      |                              |
|                 | 12960               | 3600  | 47.5                   |                           | 1960                 |               | 86                         |      |                              |
| 1200QS-56A      | 7776                | 2160  | 54.5                   | 600                       | 1425                 | 2000          | 81                         | 7.5  | 15500                        |
|                 | 9720                | 2700  | 50                     |                           | 1518                 |               | 88                         |      |                              |
|                 | 11664               | 3240  | 42                     |                           | 1597                 |               | 84                         |      |                              |
| 1200QS-32       | 8640                | 2400  | 35                     | 600                       | 992                  | 1400          | 83                         | 7.5  | 13000                        |
|                 | 10800               | 3000  | 32                     |                           | 1082                 |               | 87                         |      |                              |
|                 | 12960               | 3600  | 6                      |                           | 1073                 |               | 85.5                       |      |                              |
| 1200QS-32A      | 7776                | 2160  | 32.5                   | 600                       | 834                  | 1250          | 83                         | 7.5  | 13000                        |
|                 | 9720                | 2700  | 29                     |                           | 882                  |               | 87                         |      |                              |
|                 | 11664               | 3240  | 23                     |                           | 880                  |               | 83                         |      |                              |
| 1200QS-22       | 7920                | 2240  | 26                     | 500                       | 644                  | 800           | 83                         | 5.5  | 12500                        |
|                 | 9612                | 2670  | 22                     |                           | 662                  |               | 87                         |      |                              |
|                 | 10800               | 3000  | 18                     |                           | 638                  |               | 83                         |      |                              |
| 1200QS-22A      | 7200                | 2000  | 23                     | 50                        | 534                  | 710           | 85                         | 5.5  | 12500                        |
|                 | 9000                | 2722  | 20.5                   |                           | 575                  |               | 86.2                       |      |                              |
|                 | 10800               | 2800  | 17.5                   |                           | 585                  |               | 82.5                       |      |                              |

## 装配与拆卸 Assembly and Disassembly

1. 装配转子部分：依次将叶轮，轴套，轴套螺母，填料套，填料环，填料压盖，挡水圈，轴承部分装在泵轴上，并套上双吸密封环，然后装上联轴器。

2. 分别检查转子部件上的叶轮的密封部件外圆，轴套外圆径向跳动不应超过下表的规定。

| Nominal diameter<br>名义直径 | <50  | 50 - 120 | 120 - 250 | 250 - 500 | 500 - 800 | 800 - 1250 |
|--------------------------|------|----------|-----------|-----------|-----------|------------|
| Jumping capacity<br>跳动量  | 0.03 | 0.04     | 0.05      | 0.06      | 0.08      | 0.10       |

3. 将转子部分装在泵体上，调整叶轮的轴向位置到两侧双吸密封环的中间加以固定，将轴承体压盖由固定螺钉紧固。

4. 装上填料，放好中开面纸垫，盖上泵盖，拧紧螺尾锥销后，拧紧泵盖螺母，最后装上填料压盖。但不要将填料压盖压得太近，填料过紧会使轴套发热，同时耗用功率大，也不要压得太松，填料过松液体渗漏大，水泵效率低，所以在运行中予以调节。

拆卸完成后，用手转动泵轴，没有擦碰现象，转动比较轻滑均匀即可。拆卸可按上述装配顺序相反的进行。

1. Assembly of the rotor's parts: in turn mount the impeller, muff, muff nut, packing sleeve, packing ring, packing gland, mechanical seal, mechanical seal gland, water retaining ring and bearing on the pump shaft, put on the dual-suction seal ring and then the clutch.

2. Check the outer circles of the impeller's seal and the muff on the rotor separately, the radial jumping of which should not be over the settings in the table below.

3 Mount the rotor on the pump casing and adjust the impeller to have its axial position in the middle of the dual-suction seal ring in both sides and then fixed, then fix the gland of the bearing's body with the fixing screws.

4 Put on the packing (in case of a packing seal), the paper pad on the middle opened face and the pump cover and tighten the threaded-tail conical pin first and then cover's nut. Mount the packing gland, but do not press the packing too tightly, otherwise the muff may get heated to leave a bigger power consumption; while not too loose, or a big leak of liquid and reduced pump efficiency may result in . If mechanical seal is used, adjust compress capacity of mechanical seal to ensure no leak with it.

After assembly, move the pump shaft with hand, it should be smooth and uniform without touch. Disassembly can be made with the steps contrary to above ones.

## 安装 Installation

1. 检查水泵和电动机应完好无损

2. 水泵的安装高度，加上吸入管路的水利损失，及其速度能即为装置汽蚀余量 $NPSH_a$ ， $NPSH_a$ 要大于 $NPSH_r$ 。基础尺寸应符合泵机组的安装尺寸

### 3. 安装顺序

(1) 将水泵放在埋有地脚螺栓的混凝土基础上，用调整其间的楔形垫块的方法校正水平，并适当拧紧地脚螺栓，以防松动。

(2) 在基础与泵地脚之间灌注混凝土。

(3) 待混凝土干固后，拧紧地脚螺栓，并重新检查水泵的水平度。

(4) 校正电动机轴与水泵轴的同心度。使两轴成一条直线，在两联轴器外圆上的不同心度允差为0.1 毫米（在连接进出水管路及试运行后再分别校核一边，仍应符合上述要求）。

(5) 在检查电动机转向与水泵的转向相一致后，装上联轴器的连接注销。

4. 进出水管应另设支架支撑，不得借泵本体支撑。

5. 水泵与管路之间的结合面，应保证良好的气密性，尤其是进水管路，必须保证严格的不漏气，并且在装置上无窝存空气的可能。

6. 如水泵安装在进水水位以上时，为了灌泵启动，一般可装底阀，也可采用真空泵引水的方法。

1 Check both pump and motor to see if any damages with them.

2 The installation height of the pump plus the hydraulic loss of the suck-in pipeline and its speed energy is just the  $NPSH_a$  of the unit, which should be bigger than  $NPSH_r$ . The dimensions of the basis should be in line with those of installation of the pump unit.

### 3. Installation sequences:

(1) Place the pump on the concrete basis with built-in foot bolts, correct the levelness with the method adjusting the wedge cushion block and properly tighten the bolts to prevent them from displacement.

(2) Grout concrete between the basis and the pump foot.

(3) After the concrete gets solidified, tighten the foot bolts and check the pump's levelness again.

(4) Correct the concentricity between the axles of both pump and motor to have them in a straight line. The allowed tolerance of the non-concentricity of the outer circles of two clutches is 0.1mm and the one of the non-uniform end-face intervals along with the circumference is 0.3mm (another correction of which after both water inlet and outlet pipelines are connected and a trial movement, the above requirements should also be met with).

(5) After finding out the rotating direction of the motor is identical to that of the pump, mount the link pin of the clutch.

4 Both water inlet and outlet pipelines should be supported by a separate stand and not by the pump body.

5 A good air tightness of the combined face between both pump and pipeline should be kept, especially the inlet pipeline, it must be guaranteed without air leak and without the possibility for air to be nested on the unit.

6 In general, a foot valve can be mounted if the pump is mounted above the water level of the water inlet so as to start the pump with priming, it can also use the way of vacuum pump water leading.

7.水泵的出水管路中，一般需安装闸阀和止回阀（扬程小于 20 米的可不用），止回阀安装在闸阀后面。

以上所述安装方法是指不配带公共底座的水泵机组。安装配带公共底座的泵，用调整底座与混凝土基础之间的楔形垫铁来矫正机组的水平，然后在期间灌注混凝土。其安装原则与要求，和不配带公共底座的机组相同。

7 In general gate valve and check valve are required to be mounted in the water outlet pipeline of the pump (unnecessary for those of a head less than 20m), with the check valve mounted after the gate valve

The above ways of installation mean the pump without a common foundation. For the pump with a common foundation, use the wedge iron pad between both foundation and concrete to correct the levelness of the unit, then grout concrete between them. The installation principle and requirements are the same as those for the pump without a common foundation.

## 启动，停止与运行 Start, Stop and Operation

### 1. 启动与停止

- (1) 启动前，转动泵的转子，应该轻滑均匀。
- (2) 关闭出水闸阀，向泵内注水（如无底阀则用真空泵抽吸引水），要保证泵内充满水，无空气窝存。
- (3) 如果泵上装有真空表或压力表，要关闭其与泵相连接的旋塞再启动电动机，待转速正常后再打开；然后逐渐打开出水闸阀，如流量过大，可以适当的关小闸阀进行调节；反之，流量过小时，将闸阀开大。
- (4) 均匀地拧紧填料压盖上的压紧螺母，使液体成滴状漏出，同时注意填料腔外的温升；
- (5) 当停止水泵运转时，要先关闭真空表及压力表的算嘴和出水管路上的闸阀，然后切断电动机的电源，如所处环境的温度较低

### 1. Start and Stop

- (1) Before starting, move the rotor of the pump, which should be felt light, smooth and uniform.
- (2) Close the water outlet valve, prime water into the pump (lead water by extracting with a vacuum pump in case of no foot valve). Ensure the pump full of water and no air nested inside of it.
- (3) First close the plug of a vacuum or pressure meter, if so mounted on the pump, connected to the pump before starting the motor and then open it when the motor move in the normal speed; next, gradually open the water outlet gate valve and make it smaller in case of a large flowrate or bigger or bigger on the contrary.
- (4) Uniformly tighten the pressing nut on the packing gland to have liquid leak in drops and pay attention to the temperature rise outside of the packing cavity.
- (5) When to stop the pump, first close the plug of the vacuum or pressure meter and the gate valve on the water outlet pipeline, then cut off the power of the motor. Open the square screw plug on the lower side of the pump casing to let the residual water out to

时，则应将泵体下部的四方螺塞打开，去掉剩水，以免冻裂；

- (6) 长期停止使用时，应拆开水泵，将零件上的水擦干，在加工表面涂上防锈油保管好。

## 2. 试运转

- (1) 水泵轴承最高温度不应超过 75℃；
- (2) 润滑轴承用的钙基脂数量以占轴承体空间的 1/3 - 1/2 为宜；
- (3) 填料磨损时可适当压紧填料压盖，若磨损过多时应予以更换；
- (4) 定期检查弹性联轴器部件，注意电机轴承温升；
- (5) 运转过程中，如发现噪声或其他不正常的声音时，应立即停车，检查原因，加以消除；
- (6) 不得任意提高水泵的转速，但可以降低转速使用，如本型泵额定转速  $n$ ，流量为  $Q$ ，扬程为  $H$ ，轴功率为  $N$ ，降低转速为  $n_1$ ，降低后的流量，扬程，轴功率分别是  $Q_1$ ， $H_1$ ，和  $N_1$ ，其相互关系，可利用下列公式进行换算：

$$Q_1 = \left( \frac{n_1}{n} \right) Q$$

$$H_1 = \left( \frac{n_1}{n} \right)^2 H$$

$$N_1 = \left( \frac{n_1}{n} \right)^3 N$$

prevent frozen cracking in case of a lower ambient temperature

- (6) If it will stop for a long time, the pump must be disconnected and all the parts should be kept dry, and smeared on the machining face with rust-proof grease oil.

## 2. Running

- (1) The maximum temperature of the pump's bearing must not be over 75℃
- (2) It is proper for the volume of the calcium-based grease lubricating the bearing to hold a space inside of the bearing body by 1/3 to 1/2.
- (3) Properly press the packing gland in case of a little bit wear and replace it in case of too much wear.
- (4) Take a periodic check of the elastic clutch and take care of the temperature rise with the motor's bearing.
- (5) During running, stop it at once when noise or other abnormal sound is heard to find the cause and settle it.
- (6) Do not raise the pump speed at will, but lowering it is allowed.

For instance, with this type of pump, the rated rotating speed is  $n$ , flowrate is  $Q$ , head is  $H$ , axle power is  $N$ , lowered speed is  $n_1$ , the flowrate, head and axle power after speed lowering are  $Q_1$ ,  $H_1$  and  $N_1$ , respectively. Make conversion by means of the following formula.

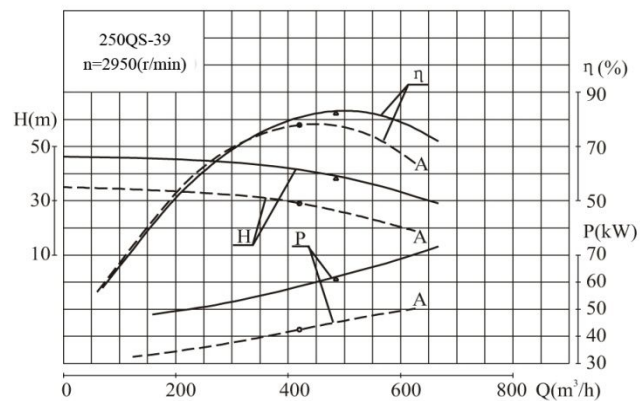
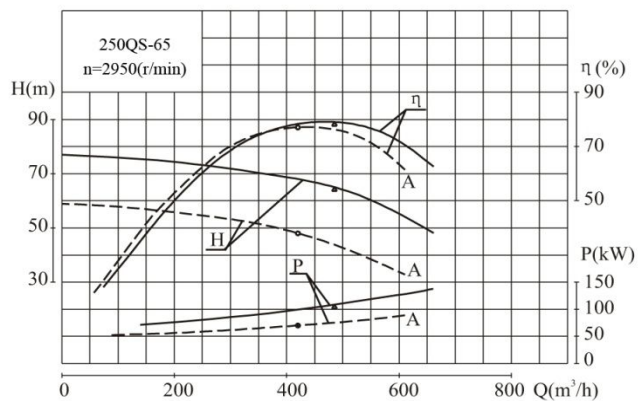
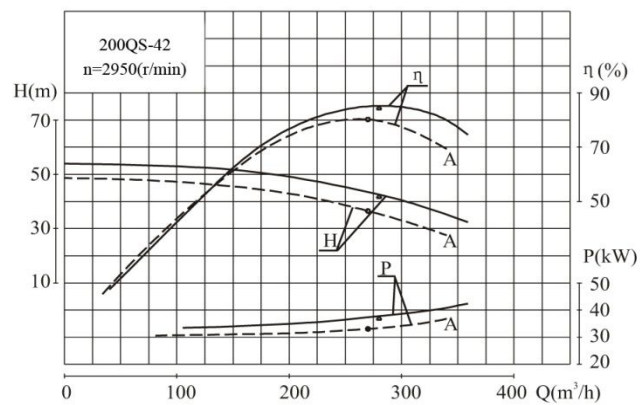
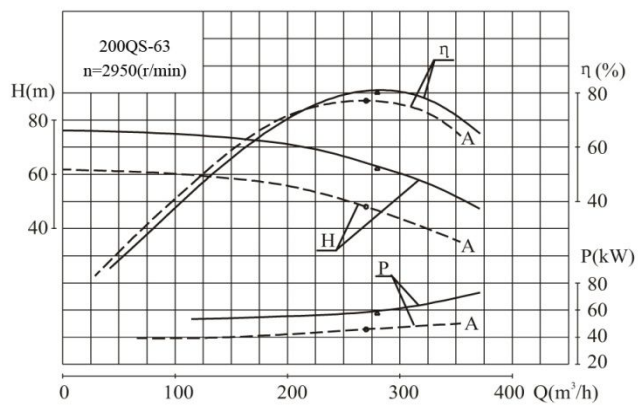
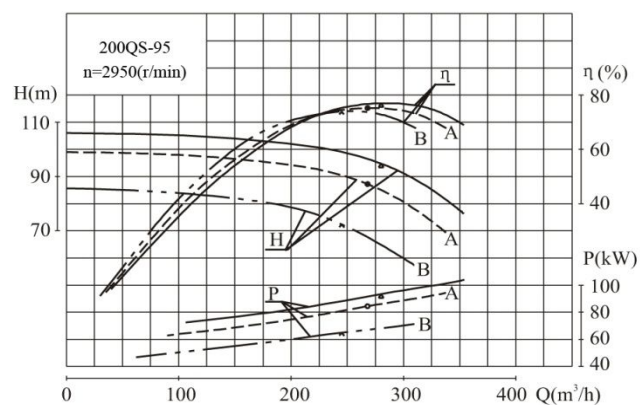
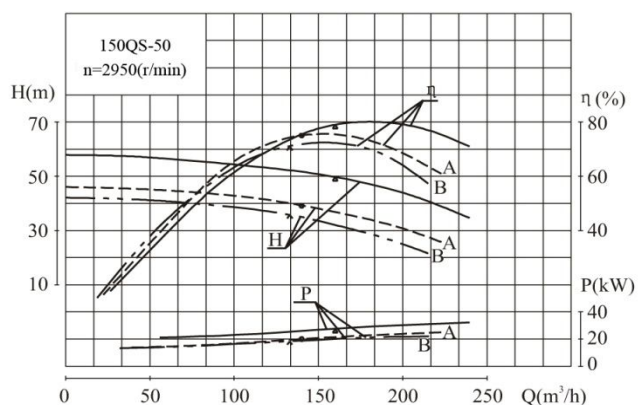
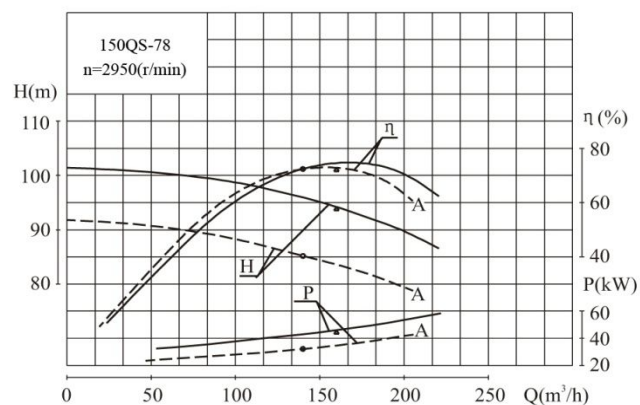
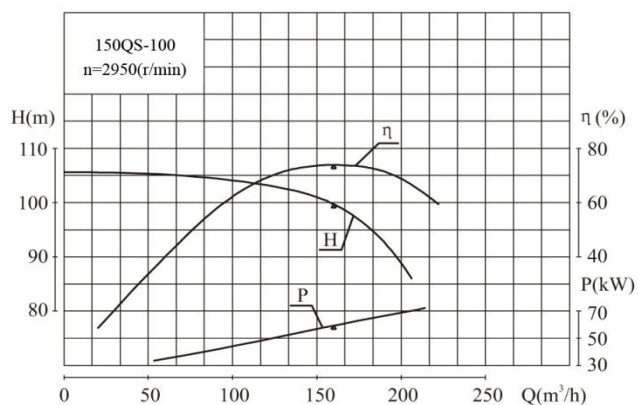
## 可能发生的故障及消除方法

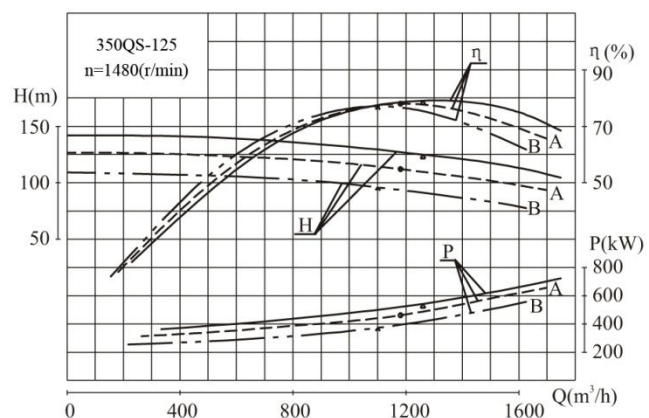
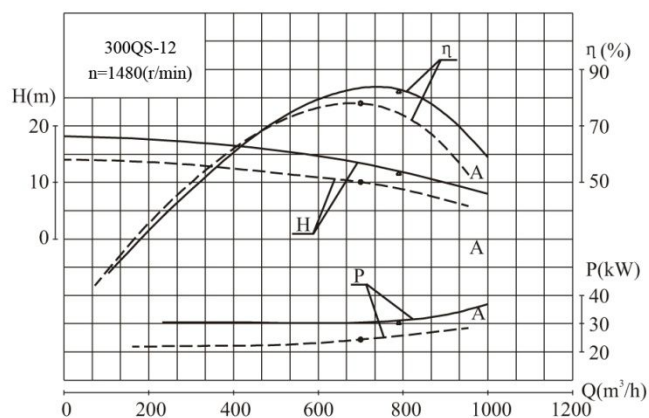
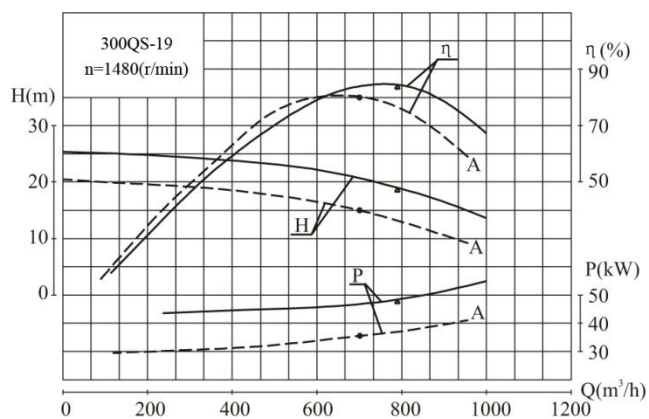
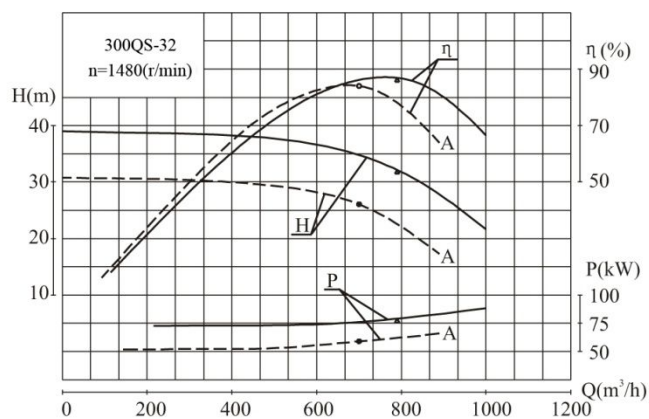
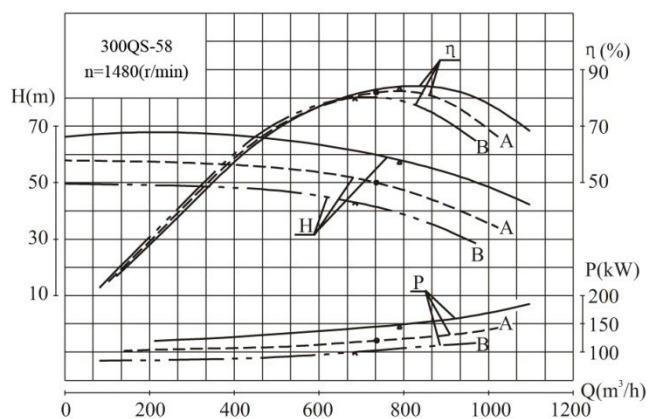
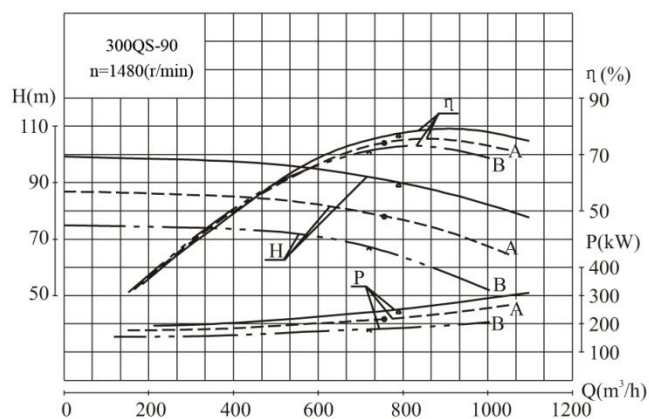
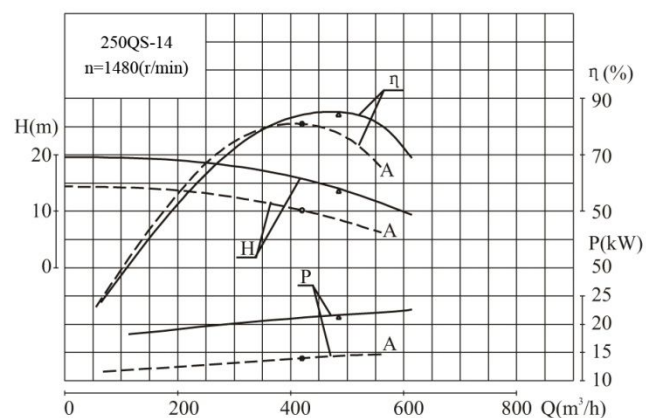
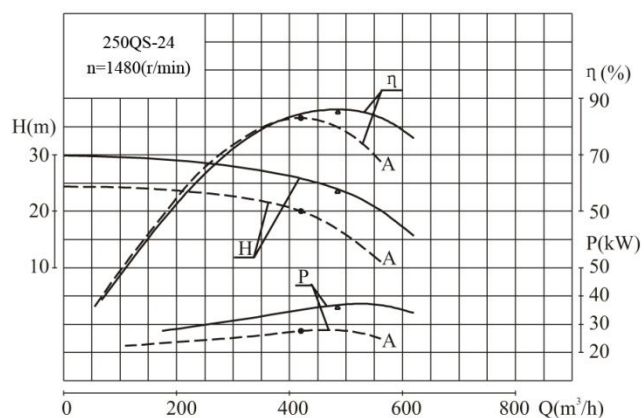
| 故 障                   | 原 因                        | 消除方法                        |
|-----------------------|----------------------------|-----------------------------|
| 1.泵不出水，压力表及真空表指针剧烈跳动。 | 注入泵的水不够；进水管漏气              | 再往泵内注水；堵塞漏气处                |
| 2.泵不吸水，但真空表显示真空高度     | 底阀没打开或淤塞；吸水管阻力太大；吸水高度太高    | 校平或更换底阀；清晰或更换吸水管；降低吸水高度     |
| 3.泵不出水，压力表显示有压力       | 泵轴旋转方向不对；出水管阻力太大；叶轮淤塞；转数不够 | 改正转向；减少水管长度或者清除淤塞；清洗叶轮；增加转数 |
| 4.泵流量减少或者扬程下降         | 叶轮或管路阻塞；密封环或叶轮磨损严重；转速低于规定值 | 清晰叶轮或管道；更换损坏的零件；调整到额定转速     |
| 5.泵消耗的功率过大            | 填料压得太紧；叶轮与双吸密封环磨损；流量过大     | 拧松填料压盖；消除机械摩擦；关小出水闸阀        |
| 6.泵内双声音翻唱，吸不上水        | 吸水高度过高；吸水管漏气；流量过大，发生汽蚀     | 减少吸水高度；堵塞漏气处；调节出水闸阀在规定的工况用  |
| 7.泵振动厉害               | 泵发生汽蚀；叶轮不平衡；泵与电机不同心；地脚螺栓松动 | 消除汽蚀；叶轮校平衡；校泵与电机的同轴度；拧紧地脚螺栓 |
| 8.轴承过热                | 润滑油不足或过多，或变质；泵与电机轴不同心      | 检查油量，清晰轴承并换油；校泵轴与电机的同轴度     |

## Failures Causes and Trouble Shooting

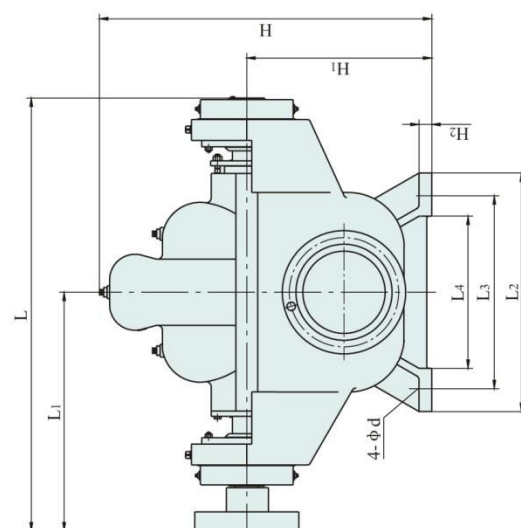
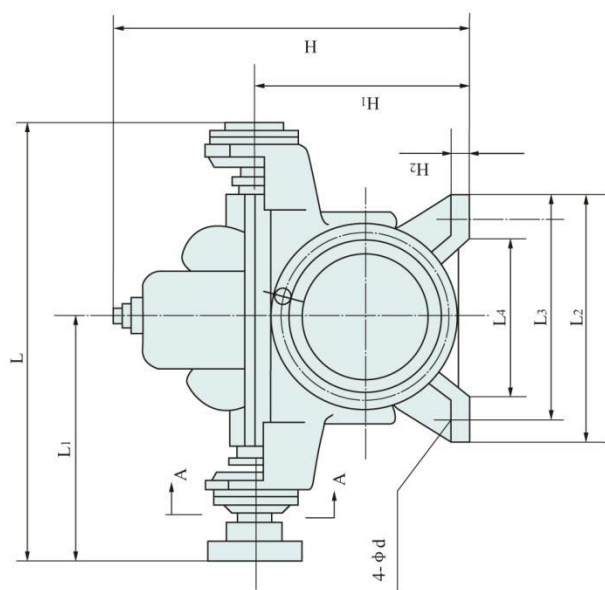
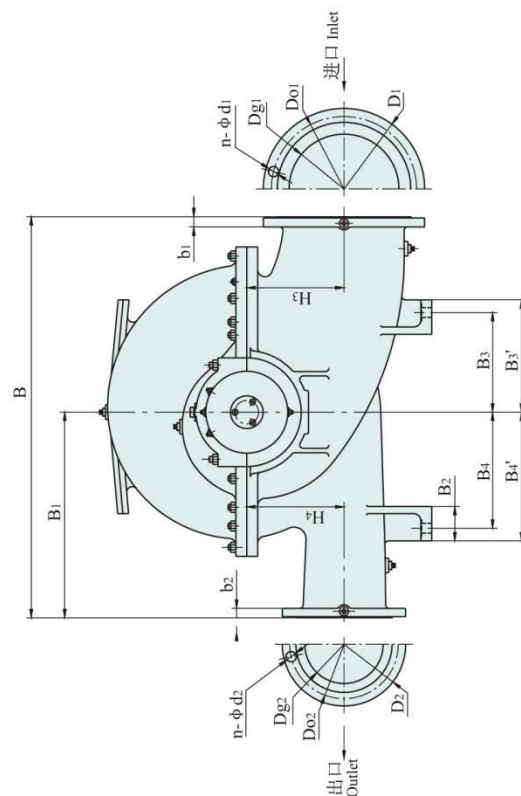
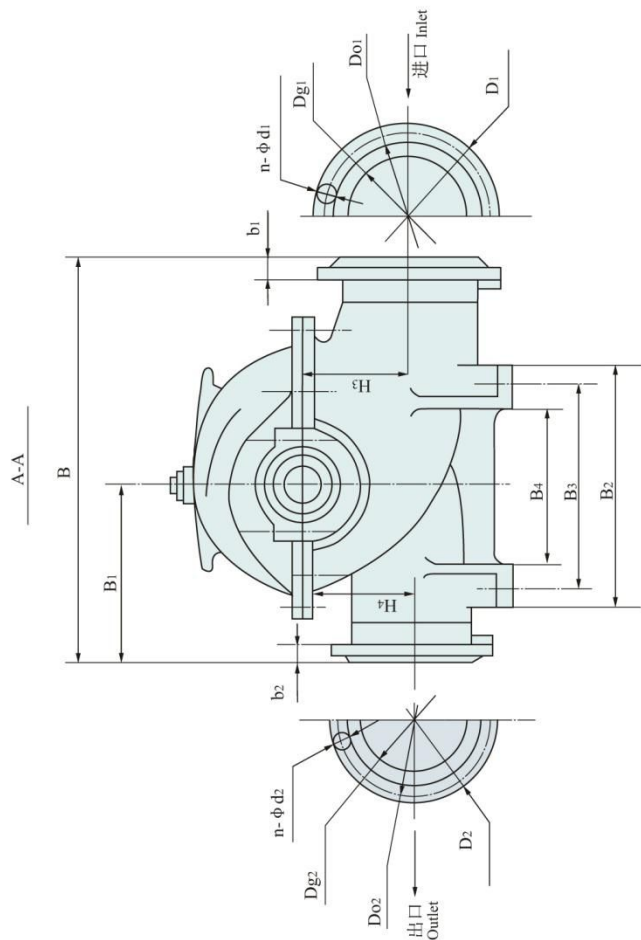
| Failure                                                                      | Causes                                                                                                                                                                                                                                                                                                                | Troubleshooting                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pump not suck water, indicator of pressure and vacuum meters severely jumps. | <ol style="list-style-type: none"> <li>1. Injected water insufficient</li> <li>2. Leak occurs with pipeline or meter.</li> </ol>                                                                                                                                                                                      | <ol style="list-style-type: none"> <li>1. Inject more water;</li> <li>2. Tighten or block up the leak point</li> </ol>                                                                                                                                                                                                   |
| Pump not suck water, high vacuum is shown on vacuum meter.                   | <ol style="list-style-type: none"> <li>1. Foot valve not opened or blocked up;</li> <li>2. Too big resistance with suction pipeline;</li> <li>3. Too high water-suction height.</li> </ol>                                                                                                                            | <ol style="list-style-type: none"> <li>1. Correct or replace foot valve;</li> <li>2. Rinse or replace pipeline</li> <li>3. Lower the height.</li> </ol>                                                                                                                                                                  |
| No water out of pump, pressure is shown on pressure meter.                   | <ol style="list-style-type: none"> <li>1. Too big resistance with water outlet</li> <li>2. Too big resistance with water outlet</li> <li>3. Impeller blocked up;</li> <li>4. Rotating speed not enough.</li> </ol>                                                                                                    | <ol style="list-style-type: none"> <li>1. Check or shorten pipeline;</li> <li>2. Correct the direction of motor;</li> <li>3. Clean it;</li> <li>4. Check power voltage and raise the speed.</li> </ol>                                                                                                                   |
| Flowrate insufficient or too low head                                        | <ol style="list-style-type: none"> <li>1. Impeller or both water inlet and outlet pipelines blocked up;</li> <li>2. Too much wear with dual-suction seal ring or impeller damaged;</li> <li>3. Rotating speed is lower than the set value.</li> </ol>                                                                 | <ol style="list-style-type: none"> <li>1. Clean impeller or pipeline;</li> <li>2. Replace it;</li> <li>3. Adjust it to the rated value.</li> </ol>                                                                                                                                                                       |
| Too large consumption of power by pump                                       | <ol style="list-style-type: none"> <li>1. Too tightly pressed packing;</li> <li>2. Friction between impeller and dual-suction seal ring ;</li> <li>3. Too large flowrate.</li> </ol>                                                                                                                                  | <ol style="list-style-type: none"> <li>1. loosen the packing gland</li> <li>2. Check the cause to remove it;</li> <li>3. Reduce the opening gate valve.</li> </ol>                                                                                                                                                       |
| Abnormal sound inside of pump, no water goes upward into pump.               | <ol style="list-style-type: none"> <li>1. Too big resistance with suction pipeline;</li> <li>2. Too high suction height;</li> <li>3. Air is sucked into the water suck-in place;</li> <li>4. Too high temperature with the liquid being sucked;</li> <li>5. Steam loss occurs due to a too large flowrate.</li> </ol> | <ol style="list-style-type: none"> <li>1. Make up suction pipeline and foot valve;</li> <li>2. Lower it;</li> <li>3. Check foot valve, lower suction height, block up the air leak place;</li> <li>4. Lower it;</li> <li>5. Adjust water outlet gate valve to have it run within the set range of performance</li> </ol> |
| Abnormal vibration with pump.                                                | <ol style="list-style-type: none"> <li>1. Steam loss occurs with it;</li> <li>2. Impeller is unbalanced;</li> <li>3. Both pump and motor axles are not concentric;</li> <li>4. Foot stud loose.</li> </ol>                                                                                                            | <ol style="list-style-type: none"> <li>1. Adjust the valve to have it run within the set range of performance;</li> <li>2. Take static correction for impeller;</li> <li>3. Correct the concentricity;</li> <li>4. Tighten it.</li> </ol>                                                                                |
| Bearing over heated.                                                         | <ol style="list-style-type: none"> <li>1. Lack of oil inside of it;</li> <li>2. Lack of oil inside of it;</li> </ol>                                                                                                                                                                                                  | <ol style="list-style-type: none"> <li>1. Check and clean bearing body, lubricate it;</li> <li>2. Check and clean bearing body, lubricate it;</li> </ol>                                                                                                                                                                 |

## QS 性能曲线图 QS Series Pump Performance Curve





## 安装尺寸图 Pump Installation Drawing



单位 Unit: mm

| 型 号<br>Type | 泵外形尺寸 Pump figure dimensions |     |     |     |     |     |     |     |     |     |     |     |       |      | 进水法兰尺寸<br>Inlet flange dimensions |     |     |       |     | 出水法兰尺寸<br>Outlet flange dimensions |     |    |        |     |     |     |    |       |
|-------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|------|-----------------------------------|-----|-----|-------|-----|------------------------------------|-----|----|--------|-----|-----|-----|----|-------|
|             | L                            | L1  | L2  | L3  | L4  | B   | B1  | B2  | B3  | B3' | B4  | B4' | H     | H1   | H2                                | H3  | H4  | 4-φd  | Dg1 | Do1                                | D1  | b1 | n-φd1  | Dg2 | Do2 | D2  | b2 | n-φd2 |
| 150QS-100   | 740.5                        | 410 | 330 | 280 | 190 | 550 | 250 | 330 | 280 | -   | 190 | -   | 490   | 285  | 25                                | 140 | 170 | 4-φ18 | 150 | 240                                | 285 | 26 | 8-φ23  | 100 | 180 | 220 | 24 | 8-φ19 |
| 150QS-78    | 713.5                        | 397 | 330 | 280 | 190 | 550 | 250 | 330 | 280 | -   | 190 | -   | 472.5 | 285  | 25                                | 140 | 155 | 4-φ18 | 150 | 240                                | 285 | 26 | 8-φ23  | 100 | 180 | 220 | 24 | 8-φ19 |
| 150QS-78A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 150QS-50    | 713.5                        | 397 | 330 | 280 | 190 | 550 | 250 | 330 | 280 | -   | 190 | -   | 455   | 285  | 25                                | 140 | 140 | 4-φ18 | 150 | 240                                | 285 | 26 | 8-φ23  | 100 | 180 | 220 | 24 | 8-φ19 |
| 150QS-50A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 150QS-50B   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 200QS-95    | 850.5                        | 475 | 330 | 280 | 190 | 680 | 330 | 330 | 280 | -   | 190 | -   | 555   | 355  | 25                                | 170 | 170 | 4-φ18 | 200 | 295                                | 340 | 24 | 8-φ23  | 125 | 210 | 250 | 22 | 8-φ19 |
| 200QS-95A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 200QS-95B   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 200QS-63    | 743.5                        | 409 | 330 | 280 | 190 | 620 | 300 | 330 | 280 | -   | 190 | -   | 547   | 355  | 25                                | 170 | 170 | 4-φ18 | 200 | 295                                | 340 | 24 | 8-φ23  | 150 | 240 | 285 | 24 | 8-φ23 |
| 200QS-63A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 200QS-42    | 743.5                        | 409 | 330 | 280 | 190 | 620 | 300 | 330 | 280 | -   | 190 | -   | 547   | 355  | 25                                | 170 | 170 | 4-φ18 | 200 | 295                                | 340 | 24 | 8-φ23  | 150 | 240 | 285 | 24 | 8-φ23 |
| 200QS-42A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 250QS-65    | 1100.5                       | 612 | 510 | 450 | 330 | 880 | 400 | 620 | 550 | -   | 430 | -   | 856   | 510  | 40                                | 240 | 300 | 4-φ27 | 250 | 350                                | 395 | 28 | 12-φ23 | 150 | 240 | 285 | 26 | 8-φ23 |
| 250QS-65A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 250QS-39    | 983.5                        | 552 | 410 | 350 | 230 | 890 | 440 | 510 | 450 | -   | 330 | -   | 750   | 450  | 30                                | 200 | 260 | 4-φ27 | 250 | 350                                | 395 | 28 | 12-φ23 | 200 | 295 | 340 | 26 | 8-φ23 |
| 250QS-39A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 250QS-24    | 983.5                        | 517 | 410 | 350 | 230 | 850 | 400 | 510 | 450 | -   | 330 | -   | 738   | 4450 | 30                                | 210 | 215 | 4-φ27 | 250 | 350                                | 395 | 28 | 12-φ23 | 200 | 295 | 340 | 26 | 8-φ23 |
| 250QS-24A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |
| 250QS-14    | 892.5                        | 485 | 410 | 350 | 230 | 745 | 330 | 510 | 450 | -   | 330 | -   | 709   | 450  | 30                                | 210 | 215 | 4-φ27 | 250 | 350                                | 395 | 28 | 12-φ23 | 200 | 295 | 340 | 26 | 8-φ23 |
| 250QS-14A   |                              |     |     |     |     |     |     |     |     |     |     |     |       |      |                                   |     |     |       |     |                                    |     |    |        |     |     |     |    |       |

单位 Unit: mm

| 型 号<br>Type | 泵外形尺寸 Pump figure dimensions |     |     |     |     |      |     |     |     |     |     |     |      |     | 进水法兰尺寸<br>Inlet flange dimensions |     |     |       | 出水法兰尺寸<br>Outlet flange dimensions |     |     |    |        |     |     |     |    |        |
|-------------|------------------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|------|-----|-----------------------------------|-----|-----|-------|------------------------------------|-----|-----|----|--------|-----|-----|-----|----|--------|
|             | L                            | L1  | L2  | L3  | L4  | B    | B1  | B2  | B3  | B3' | B4  | B4' | H    | H1  | H2                                | H3  | H4  | 4-φd  | Dg1                                | Do1 | D1  | b1 | n-φd1  | Dg2 | Do2 | D2  | b2 | n-φd2  |
| 300QS-90    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 300QS-90A   | 1185                         | 660 | 510 | 450 | 330 | 1080 | 470 | 620 | 550 | -   | 420 | -   | 898  | 510 | 40                                | 268 | 325 | 4-φ27 | 300                                | 400 | 440 | 28 | 12-φ23 | 200 | 295 | 340 | 26 | 8-φ23  |
| 300QS-90B   |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 300QS-58    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 300QS-58A   | 1140                         | 630 | 510 | 450 | 330 | 1070 | 530 | 620 | 550 | -   | 430 | -   | 852  | 510 | 40                                | 240 | 310 | 4-φ27 | 300                                | 400 | 445 | 28 | 12-φ23 | 250 | 350 | 395 | 28 | 12-φ23 |
| 300QS-58B   |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 300QS-32    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 300QS-32A   | 1100                         | 605 | 510 | 450 | 330 | 880  | 410 | 620 | 550 | -   | 430 | -   | 824  | 510 | 40                                | 260 | 270 | 4-φ27 | 300                                | 400 | 445 | 28 | 12-φ23 | 250 | 350 | 395 | 28 | 12-φ23 |
| 300QS-19    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 300QS-19A   | 978.5                        | 537 | 510 | 450 | 330 | 900  | 400 | 620 | 550 | -   | 430 | -   | 808  | 510 | 40                                | 250 | 260 | 4-φ27 | 300                                | 400 | 445 | 28 | 12-φ23 | 250 | 350 | 395 | 28 | 12-φ23 |
| 300QS-12    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 300QS-12A   | 1009                         | 552 | 510 | 450 | 330 | 1000 | 500 | 620 | 550 | -   | 430 | -   | 808  | 510 | 40                                | 256 | 265 | 4-φ27 | 300                                | 400 | 445 | 28 | 12-φ23 | 300 | 400 | 445 | 28 | 12-φ23 |
| 350QS-125   |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 350QS-125A  | 1431                         | 801 | 580 | 500 | 360 | 1210 | 550 | 680 | 600 | -   | 450 | -   | 1080 | 620 | 50                                | 330 | 410 | 4-φ34 | 350                                | 460 | 505 | 30 | 16-φ23 | 200 | 295 | 340 | 26 | 12-φ23 |
| 350QS-125B  |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 350QS-75    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 350QS-75A   | 1272                         | 710 | 600 | 500 | 360 | 1250 | 600 | 690 | 600 | -   | 450 | -   | 1017 | 620 | 50                                | 274 | 356 | 4-φ34 | 350                                | 460 | 505 | 30 | 16-φ23 | 250 | 350 | 395 | 28 | 12-φ23 |
| 350QS-75B   |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 350QS-44    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 350QS-44A   | 1233                         | 675 | 580 | 500 | 360 | 1040 | 460 | 680 | 600 | -   | 450 | -   | 980  | 620 | 50                                | 290 | 300 | 4-φ34 | 350                                | 460 | 505 | 30 | 16-φ23 | 300 | 400 | 445 | 28 | 12-φ23 |
| 350QS-26    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 350QS-26A   | 1171                         | 642 | 580 | 500 | 360 | 1040 | 460 | 680 | 600 | -   | 450 | -   | 963  | 620 | 50                                | 290 | 300 | 4-φ34 | 350                                | 460 | 505 | 30 | 16-φ23 | 300 | 400 | 445 | 28 | 12-φ23 |
| 350QS-16    |                              |     |     |     |     |      |     |     |     |     |     |     |      |     |                                   |     |     |       |                                    |     |     |    |        |     |     |     |    |        |
| 350QS-16A   | 1129                         | 622 | 580 | 500 | 360 | 1168 | 584 | 680 | 600 | -   | 450 | -   | 970  | 620 | 50                                | 310 | 310 | 4-φ34 | 350                                | 460 | 505 | 30 | 16-φ23 | 350 | 460 | 505 | 30 | 16-φ23 |

单位 Unit: mm

| 型 号<br>Type | 泵外形尺寸 Pump figure dimensions |       |      |      |     |      |     |      |      |     |     |     |      |     | 进水法兰尺寸<br>Inlet flange dimensions |     |     |       |     |     | 出水法兰尺寸<br>Outlet flange dimensions |    |        |     |     |     |    |        |  |
|-------------|------------------------------|-------|------|------|-----|------|-----|------|------|-----|-----|-----|------|-----|-----------------------------------|-----|-----|-------|-----|-----|------------------------------------|----|--------|-----|-----|-----|----|--------|--|
|             | L                            | L1    | L2   | L3   | L4  | B    | B1  | B2   | B3   | B3' | B4  | B4' | H    | H1  | H2                                | H3  | H4  | 4-φd  | Dg1 | Do1 | D1                                 | b1 | n-φd1  | Dg2 | Do2 | D2  | b2 | n-φd2  |  |
| 400QS-90    |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 400QS-90A   | 1747                         | 907   | 820  | 700  | 480 | 1645 | 900 | 900  | 700  | -   | 500 | -   | 1130 | 670 | 40                                | 372 | 482 | 4-φ35 | 400 | 515 | 565                                | 32 | 16-φ28 | 300 | 400 | 445 | 28 | 12-φ23 |  |
| 400QS-90B   |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 400QS-40    |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 400QS-40A   | 1747                         | 907   | 820  | 700  | 480 | 1645 | 900 | 900  | 700  | -   | 500 | -   | 1130 | 670 | 40                                | 372 | 482 | 4-φ35 | 400 | 515 | 565                                | 32 | 16-φ28 | 300 | 400 | 445 | 28 | 12-φ23 |  |
| 500QS-98    |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 500QS-98A   | 1639.5                       | 912   | 760  | 580  | 420 | 1550 | 750 | 1020 | 800  | -   | 580 | -   | 1381 | 800 | 55                                | 425 | 545 | 4-φ41 | 500 | 620 | 670                                | 34 | 20-φ28 | 300 | 400 | 445 | 28 | 12-φ23 |  |
| 500QS-98B   |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 500QS-59    |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 500QS-59A   | 1639.5                       | 907   | 760  | 580  | 420 | 1640 | 810 | 1020 | 800  | -   | 580 | -   | 1300 | 800 | 55                                | 370 | 480 | 4-φ41 | 500 | 620 | 670                                | 34 | 20-φ28 | 350 | 460 | 505 | 30 | 16-φ23 |  |
| 500QS-59B   |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 500QS-35    |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 500QS-35A   | 1363.5                       | 756   | 760  | 580  | 420 | 1350 | 630 | 1020 | 800  | -   | 580 | -   | 1270 | 800 | 55                                | 415 | 415 | 4-φ41 | 500 | 620 | 670                                | 34 | 20-φ28 | 350 | 460 | 505 | 30 | 16-φ23 |  |
| 500QS-22    |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 500QS-22A   | 1396.5                       | 770   | 760  | 580  | 420 | 1460 | 640 | 1020 | 800  | -   | 580 | -   | 1266 | 800 | 55                                | 410 | 410 | 4-φ41 | 500 | 620 | 670                                | 34 | 20-φ28 | 400 | 515 | 565 | 32 | 16-φ28 |  |
| 500QS-13    | 1308.5                       | 714.5 | 760  | 580  | 420 | 1550 | 775 | 1020 | 800  | -   | 580 | -   | 1251 | 800 | 55                                | 410 | 410 | 4-φ41 | 500 | 620 | 670                                | 34 | 20-φ28 | 500 | 620 | 670 | 34 | 20-φ28 |  |
| 600QS-100   |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 600QS-100A  | 1935                         | 1097  | 1200 | 1000 | 800 | 1900 | 900 | 1300 | 1000 | -   | 700 | -   | 1610 | 950 | 55                                | 532 | 588 | 4-φ42 | 600 | 725 | 780                                | 36 | 20-φ31 | 400 | 515 | 565 | 32 | 16-φ28 |  |
| 600QS-100B  |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 600QS-75    |                              |       |      |      |     |      |     |      |      |     |     |     |      |     |                                   |     |     |       |     |     |                                    |    |        |     |     |     |    |        |  |
| 600QS-75A   | 1694.5                       | 940   | 940  | 760  | 600 | 1900 | 940 | 1020 | 800  | -   | 580 | -   | 1550 | 950 | 55                                | 425 | 555 | 4-φ41 | 600 | 725 | 780                                | 36 | 20-φ31 | 400 | 515 | 565 | 32 | 16-φ28 |  |
| 600QS-47    | 1694.5                       | 940   | 940  | 760  | 600 | 1595 | 745 | 1020 | 800  | -   | 580 | -   | 1505 | 950 | 55                                | 490 | 490 | 4-φ41 | 600 | 725 | 780                                | 36 | 20-φ31 | 400 | 515 | 565 | 32 | 16-φ28 |  |

单位 Unit: mm

| 型 号<br>Type | 泵外形尺寸 Pump figure dimensions |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     | 进水法兰尺寸<br>Inlet flange dimensions |       |      |      |      | 出水法兰尺寸<br>Outlet flange dimensions |        |     |     |      |    |        |  |
|-------------|------------------------------|------|------|------|------|------|------|------|------|------|-----|-----|------|------|-----|-----|-----------------------------------|-------|------|------|------|------------------------------------|--------|-----|-----|------|----|--------|--|
|             | L                            | L1   | L2   | L3   | L4   | B    | B1   | B2   | B3   | B3'  | B4  | B4' | H    | H1   | H2  | H3  | H4                                | 4-φd  | Dg1  | Do1  | D1   | b1                                 | n-φd1  | Dg2 | Do2 | D2   | b2 | n-φd2  |  |
| 600QS-32    |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 600QS-32A   | 1627.5                       | 900  | 940  | 760  | 600  | 1600 | 750  | 1020 | 800  | -    | 580 | -   | 1490 | 950  | 55  | 480 | 480                               | 4-φ41 | 600  | 725  | 780  | 36                                 | 20-φ31 | 500 | 620 | 670  | 34 | 20-φ28 |  |
| 600QS-32B   |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 600QS-22    |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 600QS-22A   | 1466.5                       | 805  | 940  | 760  | 600  | 1790 | 840  | 1020 | 800  | -    | 580 | -   | 1476 | 950  | 55  | 460 | 460                               | 4-φ41 | 600  | 725  | 780  | 36                                 | 20-φ31 | 500 | 620 | 670  | 34 | 20-φ28 |  |
| 800QS-76    | 2750                         | -    | 1200 | 1000 | -    | 2285 | 1000 | -    | 1350 | -    | -   | -   | 2105 | 1200 | 10  | 720 | 850                               | 4-φ56 | 800  | 950  | 1015 | 42                                 | 24-φ33 | -   | -   | -    | -  | -      |  |
| 800QS-76A   | 2500                         | -    | 1200 | 1000 | -    | 2200 | 875  | 1200 | 1000 | -    | -   | -   | 2074 | 1200 | 10  | 720 | 720                               | 4-φ42 | 800  | 950  | 1015 | 42                                 | 24-φ33 | 600 | 725 | 780  | 40 | 20-φ30 |  |
| 800QS-32    | 2300                         | 1220 | 1200 | 1000 | -    | 2150 | 750  | 1200 | 1000 | -    | -   | -   | 2044 | 1200 | 10  | 720 | 720                               | 4-φ42 | 800  | 950  | 1015 | 42                                 | 24-φ33 | -   | -   | -    | -  | -      |  |
| 800QS-22    | 2100                         | -    | 1200 | 1000 | -    | 2100 | 750  | 1200 | 1000 | -    | -   | -   | 2014 | 1200 | 10  | 720 | 720                               | 4-φ42 | 800  | 950  | 1015 | 42                                 | 24-φ33 | -   | -   | -    | -  | -      |  |
| 800QS-23    | 2730                         | 1350 | 1200 | 1000 | 700  | 2400 | 840  | 1200 | 900  | -    | 600 | -   | 2400 | 1400 | 60  | 840 | 760                               | 4-φ42 | 900  | 1050 | 1115 | 46                                 | 28-φ34 | 700 | 840 | 895  | 40 | 24-φ31 |  |
| 1000QS-36   | 3550                         | 2000 | 1550 | 1400 | 1000 | 2900 | 1360 | 1900 | 1200 | -    | 900 | -   | 2750 | 1600 | 70  | 860 | 760                               | 4-φ42 | 1000 | 1160 | 1230 | 50                                 | 28-φ37 | 800 | 950 | 1015 | 44 | 24-φ34 |  |
| 1200QS-22   |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   | 4-φ48 |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-22A  | 3285                         | 1695 | 1600 | 1250 | 900  | 2800 | 1250 | 550  | 725  | 1105 | 575 | 950 | 2650 | 1700 | 120 | 870 | 1020                              |       | 1200 | 1380 | 1455 | 56                                 | 32-φ40 | -   | -   | -    | -  | -      |  |
| 1200QS-32   |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   | 4-φ56 |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-32A  |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-39   |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-39A  |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-39B  |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-56   | 3295                         | 1695 | 1680 | 1250 | 900  | 2800 | 1250 | 550  | 725  | 1105 | 575 | 950 | 2700 | 1700 | 120 | 870 | 1020                              | 4-φ56 | 1200 | 1380 | 1455 | 56                                 | 32-φ40 | -   | -   | -    | -  | -      |  |
| 1200QS-56A  |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-56B  |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |
| 1200QS-72   |                              |      |      |      |      |      |      |      |      |      |     |     |      |      |     |     |                                   |       |      |      |      |                                    |        |     |     |      |    |        |  |

## 应用实例 QS Series Split Casing Pump Application



十六台中开泵 QS300&QS350，安泵机械出口到瑞典，应用在水处理厂，此图为水泵应用一角展示。  
Sixteen Sets QS300&QS350 split casing pumps application for water treatment plant in Swedish.

20 台中开泵，QS600&QS400&QS350 安泵机械出口到印尼，应用在铁矿山，  
Twenty sets QS600&QS350 split casing pumps application for iron mining in Indonesia.



十四台中开泵，QS150&QS200&QS300，安泵机械出口到泰国，应用在果汁生产厂。  
Fourteen sets QS150&QS200&QS300 split casing pumps application for juice plant in Thailand.



八台中开泵，QS200&QS300&QS500，安泵机械出口到，应用巴基斯坦某一小水利工程，在六台投入使用，两台备用。  
Eight sets split casing pumps QS200&QS300&QS500, application for a small water conservancy project in Pakistan, six sets on working, and two sets for spare.



## 质量保证体系 QAS(quality assurance system)

具有可靠完备的质量保证体系，确保了过硬的产品质量。产品通过“采用国际标准”认证，按国标、部标和行业标准制造，生产的全过程推行全面的质量管理，严格按照工艺文件加工，各种检测手段齐全。

本公司有达到 GB3216-89 要求的国家 B 级精度《离心泵、混流泵和旋涡泵试验方法》清水试泵站应用计算机进行试验数据监控。厂内设有物理化学实验室、金相分析室，可对材质性能进行多方面的检测。

本公司对出厂的产品进行全检测，确保所有产品受控。

本公司通过了 ISO9001 质量保证体系认证。

### 1. 质量方针

崇尚质量是企业的生命力,孜孜以求，追求卓越

### 2. 质量目标

产品合格率 98%，出厂合格率 100%

### 3. 质量承诺

1) 我们将不断地提高全员的质量意识,严格执行 GB/T19001-2000 质量保证模式标准,满足合同规定的各项技术要求,不仅对供货主机负责,同时对配套件、外协件、外购件的质量负责。

2) 保证及时交货严格履行合同,按合同规定的期限交货。

Reliable and comprehensive quality assurance system ensures the excellent quality of our products. We have got the “International Standard” certification, manufactured according to GB, Department of superscript, and industry standards, we implement a comprehensive quality management during the entire process of production, accordance with the process file processing strictly, and a variety of detection methods etc.

We have meet the requirements of GB3216-89 national Class B accuracy, <<Centrifugal pump, mixed flow pump and vortex pumps test method >>, computer test data monitoring of water test pumping station application. There are physical chemistry laboratory, metallographic analysis room in our factory, for testing material properties in different respects.

Shijiazhuang An Pump Machinery Co., Ltd has got the ISO 9001 quality assurance system certification.

### 1. Quality Policy

Advocates quality is the life of enterprise, assiduous, the pursuit of excellence

### 2. Quality objectives

qualified products rate 98%, factory qualified pass rate: 100%

### 3. Quality Commitment

1) We will continue to improve the awareness of quality, implementing as GB/T19001-2000 quality assurance model standard, meeting technical requirements stipulated in the contract. We are not only discharge for the supplier host, but also for the quality of spare parts, external assistance products etc.

2) We promise the delivery time stipulated in the contract.

## 工厂生产设备 Factory Production Equipments

| 设备类别<br>Equipment                 | 数量<br>Qty | 备 注<br>Note                                                                                               | 设 备 类 别<br>Equipment        | 数 量<br>Qty |
|-----------------------------------|-----------|-----------------------------------------------------------------------------------------------------------|-----------------------------|------------|
| 金切<br>Metal cutting               | 18 台      | 精、大、稀 金切设备 16 台<br>进口设备 2 台<br>6 metal cuttings, 2 imported ones                                          | 起重设备<br>Lifting equipment   | 3 台        |
| 铸造设备<br>Casting equipment         | 16 台      | 铸造机械化生产线一套,<br>熔炼机械化生产线一套<br>1 casting mechanized production line<br>1 melting mechanized production line | 运输设备<br>Transport equipment | 4 辆        |
|                                   |           |                                                                                                           | 动力设备<br>Power Equipment     | 12 台       |
| 工业炉窑<br>Industrial kilns          | 4 座       | 远红外炉 2 座,<br>退火窑 1 座<br>2 far infrared furnaces<br>1 annealing kiln                                       | 检测设备<br>Testing equipment   | 24 台       |
| 热处理设备<br>Heat Treatment Equipment | 6 台       | 高显微机控制炉一台<br>1 High microscopic control furnace                                                           | 其它<br>Others                | 2 台        |



## 检测设备 Testing Equipment

| 编号<br>Item | 设备名称<br>Equipment                                                           | 编号<br>Item | 设备名称<br>Equipment                                             |
|------------|-----------------------------------------------------------------------------|------------|---------------------------------------------------------------|
| 1          | J09A 测长机<br>J09A Measuring machine                                          | 13         | Hr-4B 高速自动分析仪<br>Hr-4B High-speed automatic analyzer          |
| 2          | G72A 光学天平<br>G72A Optical balance                                           | 14         | HLN-11 里氏硬度计<br>HLN-11 Leeb hardness tester                   |
| 3          | JGA 平行度检测仪<br>JGA Parallel detector                                         | 15         | HR-150A 硬度计<br>HR-150A Hardness tester                        |
| 4          | BJ-3 百分表检测仪<br>BJ-3 Dial indicator detection instrument                     | 16         | M20-1 制样机<br>M20-1 sampling machine                           |
| 5          | 500×280 偏置检测仪<br>500×280 Offset detector                                    | 17         | TNC-17 试验台<br>TNC-17 Test Bench                               |
| 6          | JDY-2 万能测长仪<br>JDY-2 Omnipotent length measurement device                   | 18         | WZ-60 万能试验机<br>WZ-60 Universal testing machine                |
| 7          | M-2 金相检测仪<br>M-2 Metallographic detector                                    | 19         | 197A 万能显微镜<br>197A Universal microscope                       |
| 8          | P-2 金相检测仪<br>P-2 Metallographic detector                                    | 20         | DL4310 示波器<br>DL4310 Oscilloscope                             |
| 9          | Q-2 金相检测仪<br>Q-2 Metallographic detector                                    | 21         | S0910 轴承震动测量仪<br>S0910 Bearing vibration measuring instrument |
| 10         | LG-1 光学计<br>LG-1 Optical meter                                              | 22         | Dxy100k 试压泵<br>Dxy100k Hydraulic test pump                    |
| 11         | 722 光栅分光分度计<br>722 Grating spectral dividing plan                           | 23         | 磨损试验仪<br>Wear tester                                          |
| 12         | HCA-313 锰磷硅自动分析仪<br>HCA-313 Silicon manganese phosphorus automatic analyzer | 24         | 200（500）研磨机<br>200（500）Grinding machine                       |

主导产品及生产能力表 Leading Product and Production Ability Sheet

| 产品名称<br>Products                                         | 产品型号<br>Pump Model  | 注册商标<br>Brand | 月生产能力<br>Production capacity/Month |
|----------------------------------------------------------|---------------------|---------------|------------------------------------|
|                                                          |                     |               | (台套)<br>(pcs/set)                  |
| 单级双吸中开泵<br>Single Stage Double Suction Split Casing Pump | QS, QSh             | 安泵<br>An Pump | 120                                |
| 立式、液下渣浆泵<br>Vertical Slurry Pump                         | ZD (L)、BP, BPR      | 安泵<br>An Pump | 80                                 |
| 渣浆泵<br>Slurry Pump                                       | AZ                  | 安泵<br>An Pump | 150                                |
| 渣浆泵<br>Slurry Pump                                       | AM, AMR             | 安泵<br>An Pump | 180                                |
| 标准化工泵<br>Standard Chemical Pump                          | QIH                 | 安泵<br>An Pump | 80                                 |
| 胶泵<br>Rubber Pump                                        | APNJ (F)            | 安泵<br>An Pump | 60                                 |
| 水环式真空泵<br>Water Ring Type Vacuum Pump                    | SZ, SK              | 安泵<br>An Pump | 40                                 |
| 泥浆泵<br>Mud Pump                                          | PN (L)              | 安泵<br>An Pump | 40                                 |
| 单级离心泵<br>Single Stage Centrifugal Pump                   | QI, QIR             | 安泵<br>An Pump | 200                                |
| 锅炉给水泵<br>Boiler Feed Water Pump                          | QDG, QDGL           | 安泵<br>An Pump | 165                                |
| 多级离心泵<br>Multistage Centrifugal Pump                     | QD, QDA, QDM        | 安泵<br>An Pump | 75                                 |
| 立式多级泵<br>Vertical Multistage Pump                        | QDL, QDLR           | 安泵<br>An Pump | 68                                 |
| 污水泵<br>Sewage Pump                                       | AW (F), AW (F), AWL | 安泵<br>An Pump | 80                                 |

## 包装和运输 Packing and Shipping

### 包装 Packing



托盘 Tray



内部防水塑料布 Inner water proof plastic packing



外部木箱包装 Outer fumigated wooden case



提示标志 Warning mark

### 运输 Shipping



快递 Express



海运  
By sea



空运  
By air

运输 Shipping