CHANGYU
PUMP CUSTOMIZATION EXPERT

Anhui Changyu pump and valve manufacturing Co., LTD

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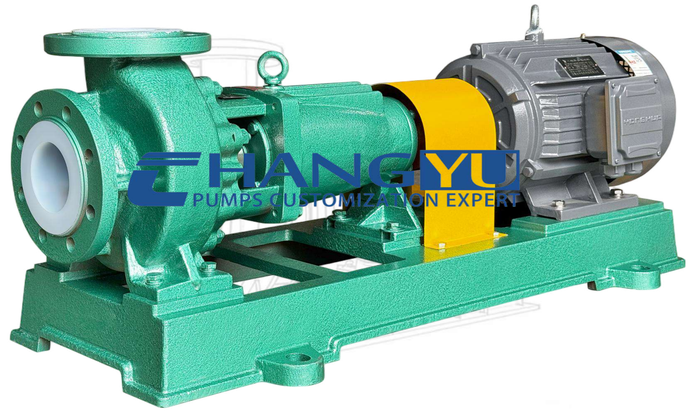
whatsapp

CYBY

Innovative fluid solutions.

The choice of trust in the chemical industry

PRODUCT CATALOG



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Product Overview

Introduction

CHANGYU Pump Industry's IHF is a single-stage, single-suction fluoroplastic alloy chemical pump, designed and manufactured using non-metallic pump processing techniques. The pump body features a metal outer shell lined with perfluoroethylene propylene (F46), while the pump cover, impeller, and shaft sleeve are integrally sintered and pressed using metal inserts encased in fluoroplastic. The shaft seal uses PTFE-filled material, and the inlet and outlet are reinforced with cast steel. CHANGYU Pump Industry's chemical pumps utilize computer-aided design and optimization.

Features

It has the advantages of corrosion resistance, wear resistance, high temperature resistance, non-aging, high mechanical strength, stable operation, advanced and reasonable structure, strict and reliable sealing performance, convenient disassembly and maintenance, and long service life.

Scope of application

It is widely used in chemical, pharmaceutical, petroleum, metallurgy, smelting, power, electroplating, dye, pesticide, papermaking, food, textile and other industries.

It can transport highly corrosive media of any concentration, such as sulfuric acid, hydrochloric acid, hydrofluoric acid, nitric acid, aqua regia, strong alkalis, strong oxidants, organic solvents, and reducing agents, under long-term temperature conditions of -85°C to 200°C.

Model Designation

IH F - 50-32 - 160

- 160 — Impeller nominal diameter: 160mm
- 32 — Pump outlet diameter: 32mm
- 50 — Pump inlet diameter: 50mm
- F — Pump flow parts are made of fluoroplastics
- IH — International Standard Chemical Pump Series Code

Advantages

1. Outstanding Corrosion Resistance for Extreme Conditions

Featuring an overall lining structure made of fluoroplastic alloy (F46), it can handle highly corrosive media such as sulfuric acid, hydrochloric acid, hydrofluoric acid, aqua regia, strong alkalis, and organic solvents, making it suitable for the most demanding chemical environments.

2. Stable Operation Across a Wide Temperature Range (-85°C to 200°C)

Maintains reliable performance under both high and low temperatures, ideal for complex processes in various industries.

3. Dual Structure: Metal Casing + Fluoroplastic Lining

Combines the mechanical strength of metal with the superior corrosion resistance of fluoroplastics, ensuring durability, structural stability, and long service life.

4. Highly Reliable Sealing System

Equipped with a PTFE-filled sealing structure to ensure stable sealing performance and minimize leakage risks, meeting strict safety requirements.

5. Smooth Operation & Easy Maintenance

Optimized structural design allows for stable operation, easy disassembly, and low maintenance costs, suitable for continuous-duty applications.

Product Details

1. Fully Fluoroplastic Wetted Parts：Key flow components such as the impeller, pump cover, and shaft sleeve are lined or integrally sintered with fluoroplastics, ensuring superior corrosion resistance.

2. Integrated Sintering Process：Metal inserts combined with fluoroplastic molding prevent delamination and enhance overall structural strength and stability.

3. Reinforced Inlet and Outlet Design：The inlet and outlet are strengthened with cast steel, improving mechanical strength and making them suitable for industrial pipeline connections.

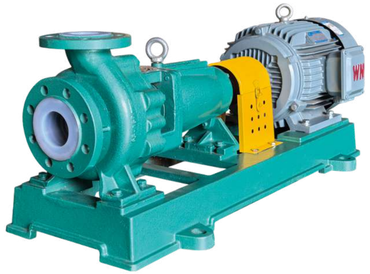
4. High-Precision Alignment Design：Strict coaxial alignment between the pump shaft and motor ensures low vibration during operation and extends the service life of bearings and seals.

5. Optimized Bearing and Lubrication System：Designed with high-quality bearings and lubrication (grease) to ensure long-term stable operation.

6. Safe Operation Design

* Protection against dry running
* Supports installation of filters (for particle prevention)
* Anti–water hammer design (check valve recommended)

Performance Parameters



Flow Range: Approx. 3 – 400 m³/h

Head Range: Approx. 20 – 80 m (higher for certain models)

Speed: 1450 / 2900 r/min

Power Range: Approx. 0.55 – 75 kW

Efficiency: Up to approx. 70%+ (varies by model)

NPSH (Net Positive Suction Head): Approx. 3 – 7 m

Applicable Temperature: -85°C to 200°C

Applicable Media:

· Strong acids (such as sulfuric acid, hydrochloric acid, nitric acid, etc.)

· Strong alkalis· Strong oxidizing agents

· Organic solvents

· Corrosive mixed media

APPLICATION

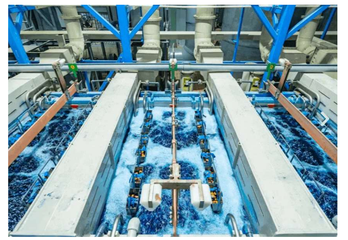
Widely used in chemical, pharmaceutical, electroplating, metallurgy, environmental protection, papermaking, food, and other industries.

Ion-exchange membrane caustic soda

Circulating conveyance of electroplating bath solution

Non-ferrous metal smelting

Industrial wastewater



Conveying bleaching agents

Conveying food-grade cleaning and disinfecting solutions

Matters needing attention

Installation Precautions

1. Proper pump installation has a crucial impact on its normal operation and service life; therefore, installation and alignment must be carried out carefully.

2. Pre-embed the foundation bolts according to the installation dimensions and prepare the concrete foundation.

3. After the foundation cement has hardened, install the pump on the foundation. Use a level to check the levelness of the pump and motor shafts. If not level, use shims to adjust until level, and then tighten the foundation nuts.

4. Check the rotating parts of the pump for jamming or rubbing. Strictly check the coaxiality of the pump shaft and motor. Use thin shims to adjust them to be concentric. Finally, rotate the coupling by hand; if it rotates easily and evenly without rubbing, it is normal.

5. The pump's suction and discharge pipelines should have their own supports. The weight of the pipelines should not be directly borne by the pump to avoid damaging it.

6. When the pump is installed above the liquid level (within the pump's allowable suction head range), a foot valve should be installed at the end of the suction line, and a priming screw hole or valve should be installed on the discharge line for priming before pump start-up. When the pump is installed below the liquid level, a control valve and filter should be installed on the suction line to prevent debris from being drawn into the pump. The filter area should be 3-4 times larger than the pipe area.

7. For high-head pumps, a check valve should also be installed on the pipe outside the outlet flow control valve to prevent water hammer damage during sudden shutdown.

8. The pump's installation height must meet the pump's net positive suction head (NPSH), and pipe losses and medium temperature must be considered.

Pump starting,running and stopping

1. Before starting the pump, fill it with the required amount of liquid to be pumped. Starting with liquid is strictly prohibited.

2. Close the outlet valve. After connecting the power supply, immediately check that the pump's rotation direction matches the direction arrow on the pump. Reverse operation is strictly prohibited.

3. After the pump starts and reaches normal operating speed, gradually open the outlet valve and adjust it to the required operating conditions before putting it into operation. With the valves on the discharge pipeline closed, the pump should not operate continuously for more than 3 minutes.

4. When shutting down, first close the outlet valve, and then disconnect the power supply.

Maintenance and repair

1. Regularly inspect the pump and motor, and replace easily worn parts.

2. Regularly apply high-quality calcium-based grease to the bearing housing to ensure good lubrication of the bearings.

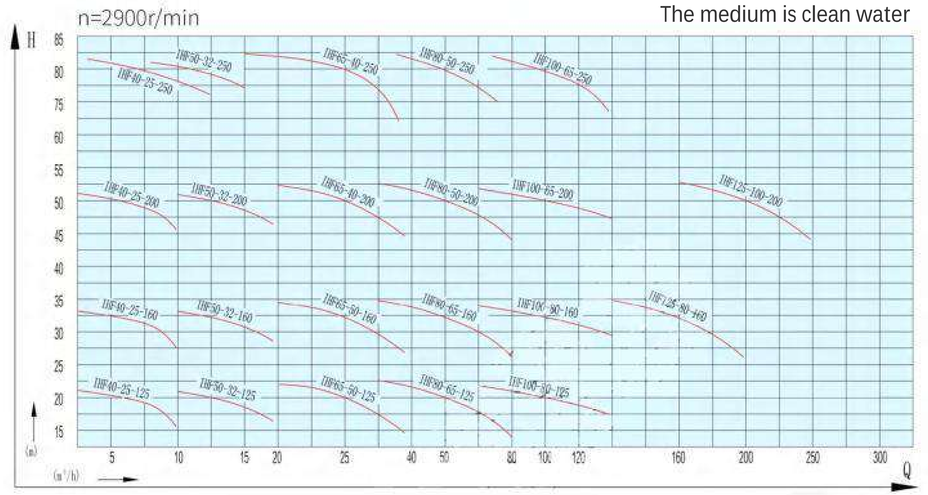
3. When the pump is not in use for an extended period, in addition to draining any corrosive liquids from the pump, ensure all components and internal flow channels are thoroughly cleaned, and disconnect the power supply.

4. The pump must never be run under no-load.

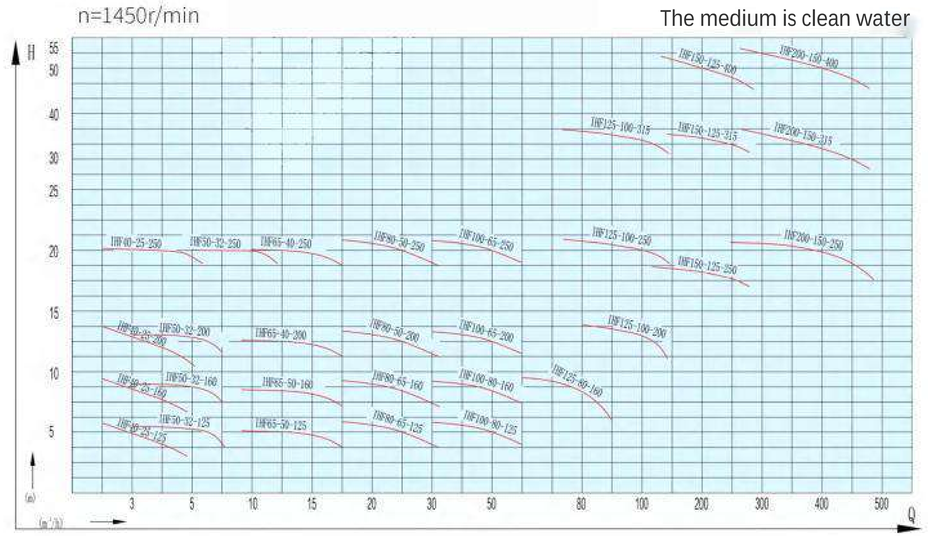
5. If the medium contains solid particles, a filter must be installed at the pump inlet.

Performance curve

Performance curve



IHF centrifugal pump



IHF centrifugal pump

Performance parameters (Table 1)

Parameters are for reference only.

Model	Efficiency (%)	Speed (r/min)	Flow (m3/h)	Head (m)	Power (kw)	Inlet (mm)	Outlet (mm)	NPSH (m)	Weight (kg)
4503 24. 02900	ϕ6	521 4	11ϕ	80	ϕ25	606	35ϕ	407	81
0642 51. 5ϕ655 4	. 0	21 41	450	ϕ8	08ϕ	. 33	22.	253	26
IHF80-50-200	29	004.	068	02	30	. 55	321	450	3.
5 2. 52 . 24. 02	00	30ϕ8	022	5	50ϕ4	1 45	0-2	042	02
0ϕ 503 93 ϕ8 025	I H	3. 23	F80	-5	0-2	. 0I	4. 5	502	90
1450 2044. 539	80	IHF8	0-5	3	725ϕ	ϕ25	250	I HF	0-
80-125 2900 20	01	ϕ100	4.5	1 I	215	HF1	00-	145	023
.54. 521 5I HF1	ϕ8	00-8	046	0-12	5145	0ϕ3	055	501	1ϕ5
80-160 321 55.	90	0254	010	0ϕ	10	051	00-	80ϕ	71 2
2 2ϕ1 00ϕ805.	-8	F100	01	60	14	324	025	050	48ϕ
5-200 67290 01	I H	0030	ϕ100	5.	038	F10	0-6	245	06
50I 2. 5ϕ655. 0	0-	3821	65-	4	504ϕ	200	ϕ10	067	50
F100-65-250 8	01	0045	0ϕ10	-5	0	0I H	290	55	054
7. 5ϕ100ϕ65 H	F1	00-6	05	5	5020	0ϕ5	5-2	50	450
5477 I HF125-8	0-	0290	0ϕ12	16	070	023	323	05.	5ϕ8
ϕ805. 047784I	14	50I H	F12	5-8	8ϕ	HF6	125	-16	070
0290 0200 556.	10	5-10	0-20	06	30	621	0I H	F12	450
50100 12. 57. 5	10	6 06	01H	IF1	25-	100	-20	014	302
ϕ100 I HF125-1	50	00-2	14	50	ϕ	100	632	015	-4
3. 0 IHF125-10	. 5	8 46	6082	0	-15	145	100	ϕ12	5ϕ
150ϕ125I HF15	0-	65ϕ4	12	0ϕ	5-2	506	714	502	002
125 6532 7. 0 IH	21	F150	-125	-	41	40-	200	50ϕ	315
3. 529 7ϕ200ϕ1	50	691 4	50	40	68	0 IH	F20	020	7'.5
50-315 400 75-	3.	1506	8827	.5IH	59	F20	0-1	73ϕ	442
			50	40		055	-4		

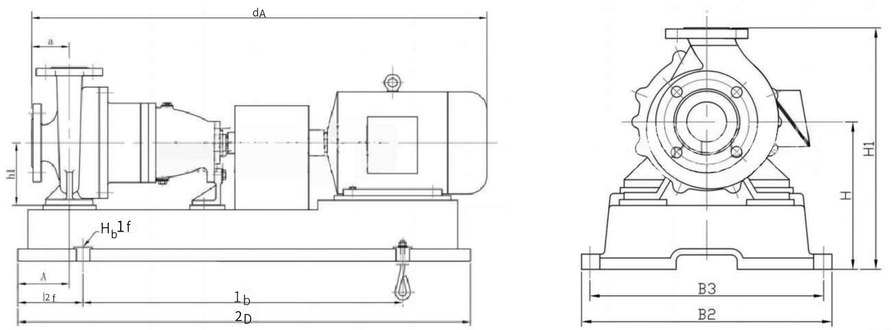
Performance Parameter

Performance parameters (Table 2)

Parameters are for reference only.

Model	Efficiency (%)	Speed (r/min)	Flow (m3/h)	Head (m)	Power (kw)	Inlet (mm)	Outlet (mm)	NPSH (m)	Weight (kg)
HF40-25-1251	HF	4503	. 2	80	05	-65	-16	53	051
092I HF40-25-	1 6	0290	0ϕ	0	46	23.	5ϕ5	350	501
292ϕ25I HF40-	25	03. 0	-1	60	F8	0-5	63ϕ	8ϕ4	50H
IHF40-25-200	29	5750	00	0	63	803	5. 5	3.0	1 47
14501 2. 50. 55	HF	ϕ251	40	-2	5-	40ϕ	200	47ϕ	505
-250 2900 233	40	286.	38	03.0	1ϕ	010	-25	406	6ϕ8
IHF40-25-250	3.	ϕ252	22	01	. 5	1 00	33ϕ	3.0	40ϕ
1252 9001 2. 52	F5	02. 2	0-	3.	0	32-	2I H	99	HF1
.01HF50-32-12	6.	51 45	0ϕ3	05	28	0.55	3ϕ5	907	1IH
0-32-1601 2.54	3.	5ϕ6	01	5	28	5290	032	59	HF5
.30 55I HF50-3	0ϕ	323.	012	2-	16	HF10	581	046	145
F50-32-200 395	IH	07. 5	ϕ3	5	23	0290	012	. 5	666
1450 6. 312. 53.	01	661.	1ϕ3	ϕ6	2I	HF50	539	-32	-20
.0540 35ϕ325. 0	12.	011ϕ	. 5	IHF5	5	2900	0-3	2-2	508
50 IHF50-32-2	01	6035	6 3	50	2011. 5	1450	235	ϕ50	ϕ32
20ϕ65ϕ503. 599	5-	3655	50	-1	252	906	225	04ϕ	25ϕ
53. 599ϕ50 IHF6	5-	0. 55	25ϕ	50	-1	ϕ656	5ϕ1	255	12.
2 HF65-50-160	57	9003	25	4	6	5. 5ϕ	65ϕ	503	. 51
ϕ50 571. 13. 5I HF	12	65-5	0-1	56	60	. 038	6ϕ65	145	012
480 IHF65-40-20	01	0522	900	255	35	008	. 5-4	214	11ϕ
47. 0500 521. 53.	. 5	5I 45	012	12	.5ϕ6	5ϕ40	022-	IHF	65-
80 65ϕ40 HF65-	14	40-2	504	50	929 01	2004	5-46	602	8. 5
055-4ϕ65 HF65-	40	-250	491	45	012.	0-15	0-25	520	ϕ40
32ϕ200 7.594 0IH	0ϕ	F200	-15	15	0-31	0094	0145	068	514

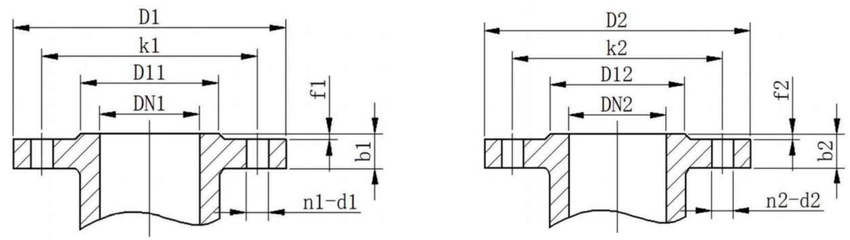
InstallationDimensionChart



Parameters are for reference only.

Number	Model	External installation dimensions											
		l	a	09	25	l5	05	2	90	88	52	l2	3521
8	40182565851	51	63	34—	Φ4	2HF	32-	20-	160	788	099	515	05908
1	404-Φ182555	85	4—	Φ14	385	903	IHF	40-	25-	125	758	092	51503
-	5-1254-Φ184	-Φ	14	337	580	F40	995	150	590	885	232	392	13244
5	650970260440	F4	0-	25-	160	4-Φ	188	54—	Φ14	110	380	430	75801
3	52380IHF50-3	49	25	IHF40	590	-25	-20	034	-Φ1	885	834	-Φ1	2-125
0	534-Φ18371HF	50	-3	Φ18	2-1	6IH	F50	607	-32	580	995	-12	15059
H	650-32-16034	-Φ	18	34—	Φ8	758	IHF	50-	32-	200	801	105	17065
0	34-Φ1832761 0	52	01	4018	881	250	9IH	F50	-32	-25	075	100	21072
-	32-250501653	32	100	HF50	140	359	0007	515	088	521	211	235	2IHF6
65	Φ83IHF65-50	4—	-1	607	Φ8	451	509	912	34—	520	580	110	51706
10	65-50-160I4	53	4—	Φ89	984	-Φ1	812	210	160	IHF	65-	40-	20075
18	Φ840841101 5	01	884	-Φ18	520	751	0021	072	011	34—	202	805	05180
4—	475100170650	01	8IH	Φ81	F65	-40	-250	34—	Φ18	843	970	232	39213
60	1433IHF80-65	20	020	-160	8-Φ	186	511	814	518	520	125	015	75100
45	200208-Φ1865	18	520	1181	4-Φ	183	3125	016	IHF	80-	200	50-	75100
00	2038-Φ185099	12	520	1602	34—	Φ18	IHF8	0-5	0-2	507	512	521	09405
IH	-250801321 60	38	-Φ1	1026	899	125	0160	F10	34—	Φ8	181	002	0-80-
20	80-1252202003	38	8-Φ	-Φ18	18	197	5220	HF1	460	00-	210	012	02601
80	2002038-Φ1832	-1	075	1002	562	601	08—	Φ18	001	107	201	120	50513
0-	4534-Φ181400	65	-20	1181	010	022	038—	130	Φ18	021	IHF	100	-65-2
38	-Φ1865118145 1	85	203	5618	4-Φ	18	0220						

Installation DimensionChart



Imported flange

Export flange

Parameters are for reference only.

Number	Model	Imported flanges						Export flange							
		Φ19	1IH	F3	2-	33	03	25-12	54—	Φ18	13	27	80	4-	6I001
-	52323921323	Φ1	93	276	181	15	-	038041	16	21	HF	32-	25	1	60100
3	3038041940	85	21	84(	101	23	I	501182	56	58	51	52	12	H	15163
0	84(101501825	HF	40	25	-16	03	I	651115	30	38	04	-Φ	94	H	16438
2	0841(101501825	70	16	5I	HF4	0-	4	56585	25	-2	11	004	-Φ	4	51665
0	9125I6532032	75	80	50	212	11	7	61001	23	30	4-	Φ9	65	4	01184—
5	1652032761 00	88	52	323	921	32	1	401187	33	03	804	-Φ1	95	I	09912
4	-Φ18HF50-32-	09	70	260	440	16	2	00509	03	80	430	4-Φ	24	9	12516
9	2804851 8044	04	90	4-Φ	244	-Φ	1	899 12	52	07	68	4—Φ	18	I	01120
Φ	191065201651	HF	12	580	65-	99	5	3804-	0-	53	125	118	30	1	5-50-
50	9213238043 04	97	-Φ2	411	65(	02	H	1181 85	20	50	125	323	16	5	2011
04	904-Φ2412IHF	01	50	65-	720	11	4	0-200	20	65	260	440	44	(	11814
13	1350 IHF65-40	-2	04	404	904	-Φ	2	413 65	(1	81	48	852	04	0	11015
2	Φ24IHF80-65-	HF	0-	65-	125	11	1	254-Φ	05	18	380	430	4-	8	01321
21	21072011 2026	60	490	440	4-Φ	24	6	15IHF	80	-65	-16	080	13	0	04401
2	08401120260 4	60	160	440	490	4-	3	Φ2416	16	5H	F80	-50	-2	2	00801
05	4905401 35013	00	172	804	-Φ2	41	7	200 20	50	16	520	180	IH	F	80-50
12	2044044049 04	-Φ	241	810	575	12	0	15618	50	02	280	720	11	1	32160
HF	4-Φ241918022 8	100	-80	-16	013	01	0	F100-	00	125	06	216	04	H	40490
50	8018044049 04	-Φ2	420	IHF1	156	00	0	18022	-6	5-2	002	651	85	2	01HF1
50	0030049054 04-	Φ24	751	252	212	10	2	IHF10	84	06	5-2	055	02	5	0100

Troubleshooting Method

Troubleshooting and troubleshooting methods

Fault phenomenon	Reason	Solution
No liquid can be pumped out	1. Incorrect motor rotation 2. Insufficient liquid in the pump body 3. Air leakage into the suction pipe	1. Adjust the direction ofrotation 2. Refill with liquid 3. Remove air
The pump does not draw liquid.	1. Foot valve not open or blocked 2. Suction head too high or suction pipe too 3. Impeller blockage in the suction pipe	1. Correct orreplace the foot valve 2. Reduce the suction head or shorten the pipeline 3. Remove blockages and debrislong
Insufficient pump flow	1. Impeller damaged 2. Blockage in the suction or outlet section3. Insufficient power, too low speed	1. Replace the impeller 2. Remove blockages and debris 3. Check the motor and increase the speed
Insufficient pump head	1. Impeller damaged 2. Air in the conveying medium3 . Insufficient speed	1. Replace the impeller 2. Refill with liquid orremove air 3. Check the motor and increase the speed
Noise or vibration	1. Pump shaft and motor shaft misaligned2. Loose base nuts 3. Suction head too high	1. Correct the coaxiality of the pump and motor 2. Tighten the base nuts 3. Lower the installation height
bearing temperature rise is too high	1. Damaged bearing 2. Deteriorated, dried or insufficient grase	1.Replace 2. Replace and add grease
Pump leakage	1. Damaged mechanical seal2. Loose connecting bolts	1. Replace 2. Tighten all bolts

Product Structure

For reference only, the actual product shall prevail.