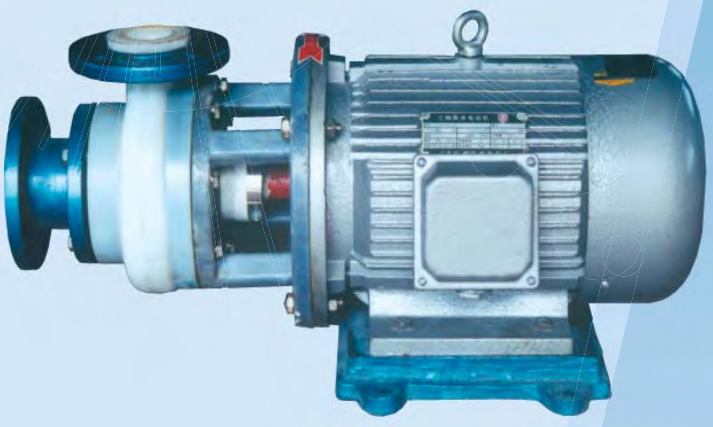
☆Prior to use,
read this manual thoroughly

FSB/FSB(L) Series
Fluoroplastics Anticorrosion Pump

FSB series

FSB(L) series



Yixing Zeus Pump Co., Ltd.

2011.11

I. Main Performance and Purpose

This series of pump is a kind of single-stage and single-suction cantilevered centrifugal pump. Structural features: the flow passage components are made of fluoroplastics, the lining materials of pump body cover such varieties as Fluorinated ethylene propylene (FEP) and Polyvinylidence fluoride (PVDF), which can be selected by the user according to the requirement.

This variety of pump is mainly applicable for conveying such types of clear solution media as acid-base or solvent. After the special sealing is employed, the corrosive media with inclusion of a small amount of solid can also be conveyed. The mechanical sealing with such types as WB2, 152 and 169 is employed by this series of pump, with 20～100℃ for application temperature scope.

II. Type Selection Prompting and Other Descriptions

I) When the user selects this kind of pump, the detailed working condition should be provided for this factory, such as: chemical property of conveying medium, solid content of medium, viscosity and temperature of medium as well as anti-explosion requirement.

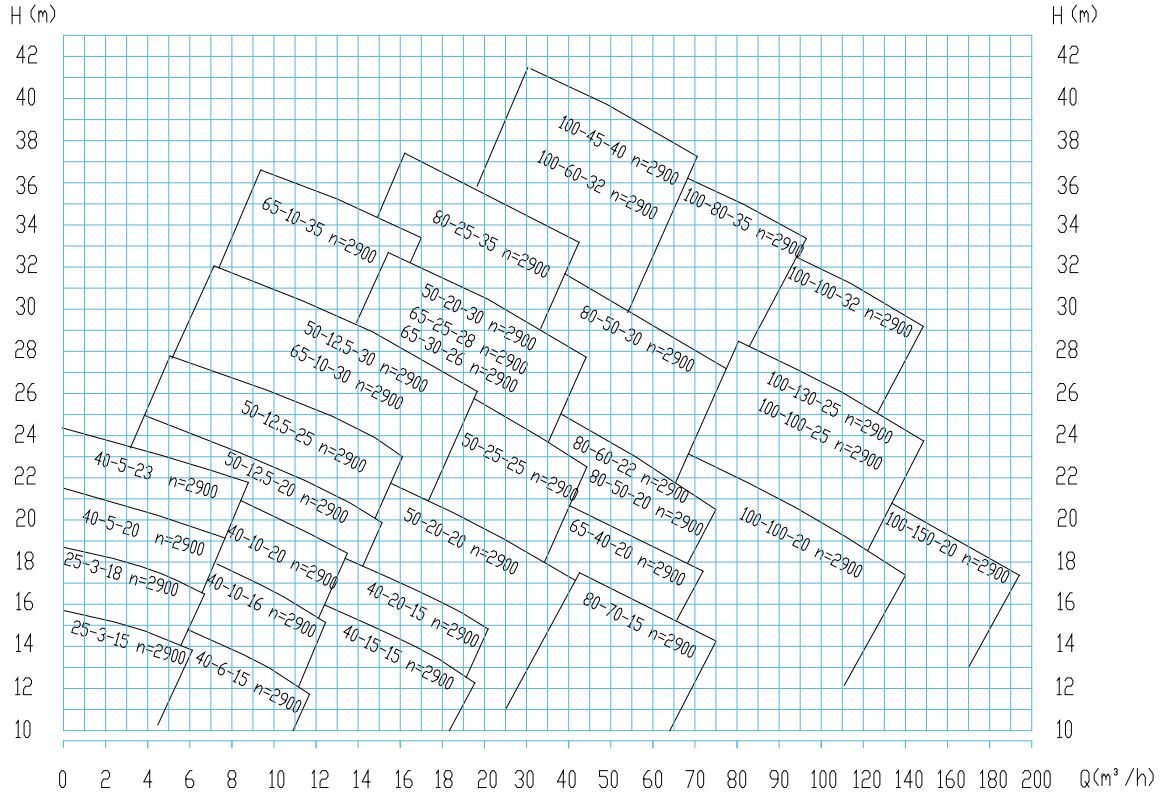
1. Acid-resistance type: applicable for conveying the mixture between various strong acid or acid and solvent.

2. Alkali-resistance type: applicable for conveying the mixture between alkaline clear liquid or alkaline liquor and solvent.

3. Impurity-resistance type: applicable for conveying the acid or alkali liquid with inclusion of a small amount of solid-phase materials. If the solid content is great, UHB-ZK series of anticorrosion slurry pump can be selected, or the type selection is performed through negotiation with this factory.

4. Anti-explosion type: applicable for conveying the inflammable and explosive liquid and being provided with the anti-explosion electric motor.

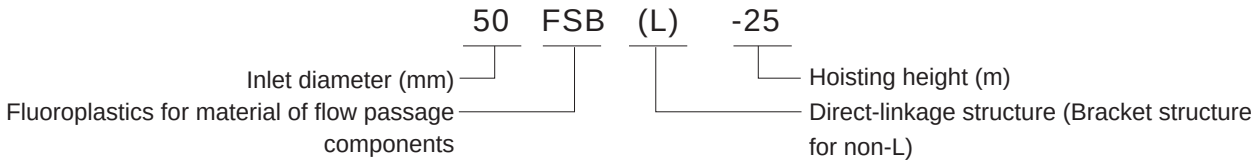
Spectrogram ■ This table is only used for preliminary type selection.



II) When this series of pump is under the special working condition for user, the pump body and vane wheel are also made of UHMWPE, meanwhile, the price of product changes with variation of materials.

III) FSB type of pump is of bracket structure, with characteristics of convenient maintenance on. FSB(L) type of pump is of direct-linkage structure, with characteristics of portableness, energy saving and economy. The user can select type according to the requirement of this organization.

III. Model meaning and description

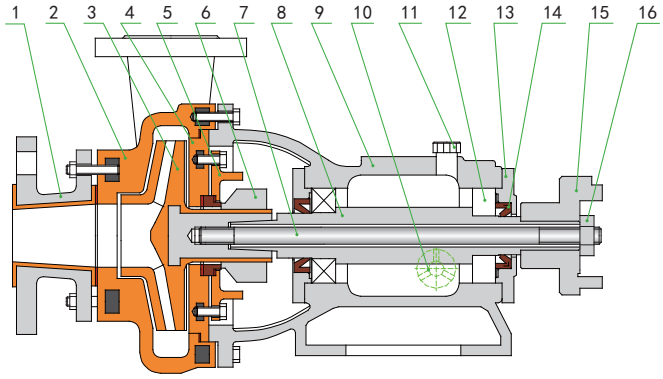


IV. Performance Parameters

No.	Model	Flow(m^3/h)	Hoisting height(m)	Speed(r/min)	Power(kw)	Inlet × Outlet(mm)	Allowable suction height(m)	Efficiency(%)
1	25FSB(L)−15	3	15	2900	0.75	25 × 20	5	35
2	25FSB(L)−18	3	18		0.75		5	35
3	25FSB(L)−15	6	15		1.1		5	35
4	25FSB(L)−10	10	10		1.1		5	35
5	40FSB(L)−23	5	23		2.2	40 × 32	5	46
6	40FSB(L)−20	10	20		2.2		5	46
7	40FSB(L)−15	20	15		2.2−3		5	46
8	40FSB(L)−20	5	20		1.1−2.2		5	46
9	40FSB(L)−16	10	16		1.1		5	46
10	40FSB(L)−15	15	15		1.1−2.2		5	46
11	50FSB(L)−25	12.5	25		3−4	50 × 32	5	48
12	50FSB(L)−20	20	20		3−4		5	48
13	50FSB(L)−25	25	25		3−4		5	48
14	50FSB(L)−20	12.5	20		3		5	51
15	50FSB(L)−15	20	15		3		5	51
16	50FSB(L)−35(H)	20	35		4−5.5	50 × 40(H)	5	53
17	50FSB(L)−32(H)	12.5	32		4−5.5		5	53
18	50FSB(L)−30(H)	20	30		4−5.5		5	53
19	65FSB(L)−35	10	35		5.5−7.5	65 × 50	4.5	55
20	65FSB(L)−30	25	30		5.5−7.5		4.5	55
21	65FSB(L)−20	40	20		5.5−7.5		4.5	55
22	65FSB(L)−28	25	28		7.5		4.5	55
23	65FSB(L)−26	30	26		4−5.5		4.5	55
24	65FSB(L)−30	10	30		4−5.5		4.5	55
25	80FSB(L)−35	25	35		7.5	80 × 65	4.5	63
26	80FSB(L)−30	50	30		7.5		4.5	64
27	80FSB(L)−22	60	22		7.5−11		4.5	68
28	80FSB(L)−15	70	15		7.5−11		4.5	68
29	80FSB(L)−26	30	26		7.5		4	68
30	80FSB(L)−20	50	20		4−5.5		4	68
31	80FSB(L)−15	60	15		5.5−7.5		4	68
32	100FSB(L)−40	45	40		15	100 × 80	4	68
33	100FSB(L)−35	80	35		15−18.5		4	68
34	100FSB(L)−32	100	32		15−18.5		4	68
35	100FSB(L)−25	130	25		18.5−22		4	68
36	100FSB(L)−25	100	25		15−18.5		4	68
37	100FSB(L)−20	100	20		15		4	68
38	100FSB(L)−20	150	20		18.5−22		4	69
39	100FSB(L)−32	60	32		15		4	67

V. Structural Diagram for Pump

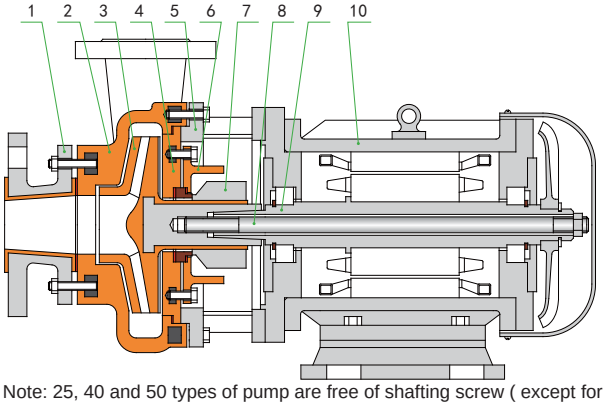
I) Structural Diagram of FSB series



Note: 25, 40 and 50 types of pump are free of shafting screw (except for lift with 50 in height)

1. Connecting pipe	6. Mechanical seal	11. Oil plug
2. Case	7. Shafting screw	12. Bearing
3. Vane	8. Main shaft	13. Bearing cover
4. Rear cover	9. Bearing seat	14. Bearing oil seal
5. Stationary ring gland	10. Oil immersion lens	15. Coupling

II) Structural Diagram of FSB(L) series

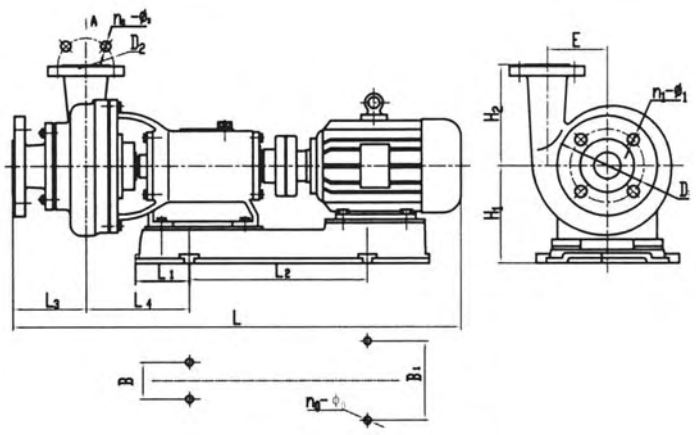


Note: 25, 40 and 50 types of pump are free of shafting screw (except for lift with 50 in height)

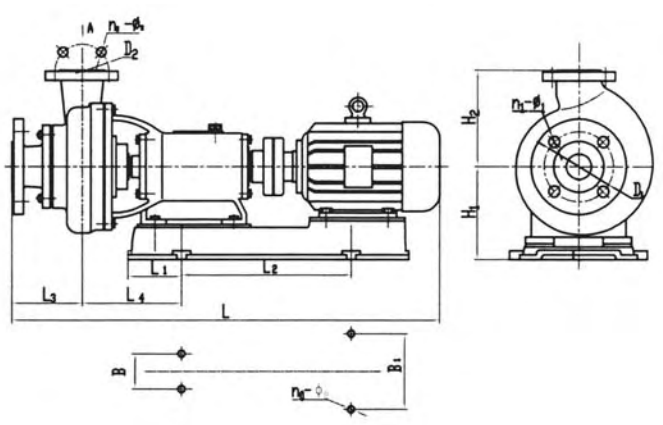
1. Connecting pipe	6. Stationary ring gland
2. Case	7. Mechanical seal
3. Vane	8. Shafting screw
4. Rear cover	9. Tightened screw
5. Bracket	10. Electric motor

VI. Overall and Installation Dimensions

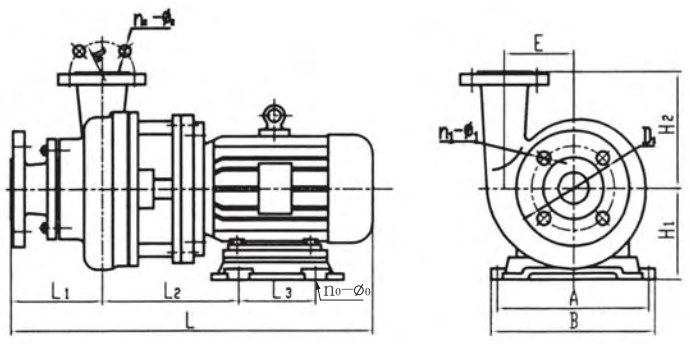
I) Overall of 25FSB～50FSB



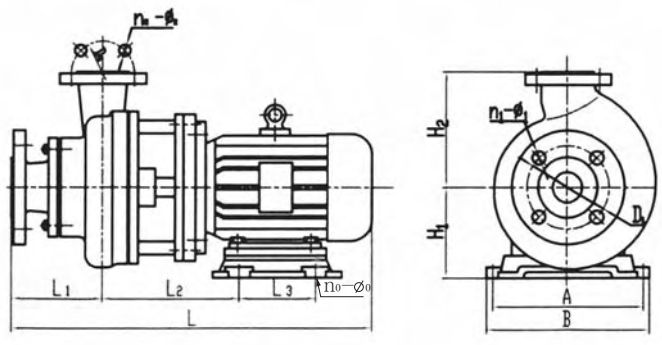
II) Overall of 50FSB(H)～100FSB



I) Overall of 25FSB(L)～50FSB(L)



II) Overall of 50FSB(L)(H)～100FSB(L)



I) Installation Dimensions of FSB series

No.	Model	Power(kw)	H1	H2	E	L1	L2	L3	L4	L	B	B1	n1−ø1	n2−ø2	n0−ø0	D1	D2
1	25FSB	0.75−1.1kw	165	120	60	90	380	85	130	760	230	230	4−ø14	4−ø14	4−ø15	85	85
2	25FSB	2.2kw	165	120	60	90	380	85	130	810	230	230	4−ø14	4−ø14	4−ø15	85	85
3	40FSB	2.2kw	165	140	75	90	380	125	140	845	230	230	4−ø14	4−ø14	4−ø15	110	100
4	40FSB	3kw	165	140	75	110	420	125	160	900	230	270	4−ø14	4−ø14	4−ø15	110	100
5	50FSB	3kw	165	125	82	110	420	120	170	900	230	270	4−ø14	4−ø14	4−ø15	125	100
6	50FSB	4kw	165	125	82	110	420	120	170	920	230	310	4−ø14	4−ø14	4−ø15	125	100
7	50FSB(高)	4kw	162	160	0	110	420	135	165	880	230	310	4−ø14	4−ø14	4−ø15	125	110
8	50FSB(高)	5.5−7.5kw	182	160	0	110	420	135	165	945	230	350	4−ø14	4−ø14	4−ø15	125	110
9	65FSB	7.5kw	187	165	0	150	450	130	205	1060	275	340	4−ø18	4−ø18	4−ø18	145	125
10	65FSB	11−15kw	220	165	0	150	560	130	200	1240	275	370	4−ø18	4−ø18	4−ø18	145	125
11	80FSB	5.5−7.5kw	187	165	0	150	450	145	205	1065	275	340	4−ø18	4−ø18	4−ø18	160	145
12	80FSB	11−15kw	220	165	0	150	560	145	200	1195	275	370	4−ø18	4−ø18	4−ø18	160	145
13	100FSB	11−15kw	225	220	0	165	600	205	220	1260	310	430	4−ø18	4−ø18	4−ø20	180	160
14	100FSB	18.5kw	225	220	0	165	600	205	220	1305	310	430	4−ø18	4−ø18	4−ø20	180	160

II) Installation Dimensions of FSB(L) series

No.	Model	Power(kw)	A	B	H1	H2	E	L1	L2	L3	L	n1−ø1	n2−ø2	n0−ø0	D1	D2
1	25FSB(L)	0.75−1.1kw	220	250	125	120	60	85	138	180	510	4−ø14	4−ø14	4−ø15	85	85
2	40FSB(L)	2.2kw	220	250	135	140	75	125	165	180	590	4−ø14	4−ø14	4−ø15	110	100
3	40FSB(L)	3kw	220	250	135	140	75	125	178	180	590	4−ø14	4−ø14	4−ø15	110	100
4	50FSB(L)	3kw	300	345	145	125	83	120	155	220	615	4−ø14	4−ø14	4−ø15	125	100
5	50FSB(L)	4kw	300	345	157	125	83	120	155	220	630	4−ø14	4−ø14	4−ø15	125	100
6	50FSB(L)(高)	4kw	300	345	157	160	0	135	128	220	620	4−ø14	4−ø14	4−ø15	125	110
7	50FSB(L)(高)	5.5−7.5kw	330	380	177	160	0	135	230	180	685	4−ø14	4−ø14	4−ø15	125	110
8	65FSB(L)	5.5−7.5kw	330	380	177	165	0	130	165	180	685	4−ø18	4−ø18	4−ø18	145	125
9	65FSB(L)	11−15kw	375	425	210	165	0	130	140	365	835	4−ø18	4−ø18	4−ø18	145	125
10	80FSB(L)	5.5−7.5kw	330	380	177	165	0	145	178	180	765	4−ø18	4−ø18	4−ø18	160	145
11	80FSB(L)	11−15kw	375	425	210	165	0	145	155	365	865	4−ø18	4−ø18	4−ø18	160	145
12	100FSB(L)	11−15kw	375	425	210	220	0	205	131	365	905	4−ø18	4−ø18	4−ø20	180	160
13	100FSB(L)	18.5kw	420	470	235	220	0	205	115	415	980	4−ø18	4−ø18	4−ø20	180	160

VII. Installation, dismantling and assembling

I) Installation of Pump

1. This pump and electric motor are assembled properly and delivered by this factory, as long as this pump is placed horizontally to be connected with in and out pipe as well as switched on the lead wire of power supply.(Notice: the steering of motor should be consistent with the arrow direction of running pump).

2. The pump body is made by rolling of fluoroplastics, and its stiffness is worse than the one of metal, therefore, the pipeline can't be pressed on the pump body. The suction pipeline should be short and straight as much as possible. If the pipeline at the outlet is too heavy, the support bearing should be added additionally to prolong the life.

3. All junctions must be sealed to prevent that the air and liquid leakage affects the service performance of pump.

II) Dismantling of Pump

1. The coupling between this series of pump and electric motor is conducted by employing the claw coupler. While dismantling, firstly loosen 4 linking bolts between the bracket and the pedestal to ensure the pump and electric motor is separated.

2. Loosen the connecting bolts between the pump body (2) and rear cover (4), and lightly strike the pump body to separate it.

3. Loosen the vane wheel shaft (8) and connect it on the draw bar screw in the center of coupler with the Mohs taper of pump shaft. The draw bar screw of FSB-L type of direct-linkage pump is inside the fan cover of electric motor. While dismantling, firstly dismantle the fan cover of electric cover. (2 head screws on the axle head of electric motor are only required to be loosened for 25mm, 40mm and 50mm imported types of pumps.)

4. Loosen the rotating seal ring inner hexangular set screw with mechanical sealing; employ the wooden hammer to lightly strike the draw bar (7) in the center of coupler. After loosening the Mohs taper between the valve wheel axle and pump shaft, pull out the vane wheel (3)and rear cover (4) as well as the rotating seal ring of sealing components ; loosen the fastening screw on the rear cover and take out the stationary seal ring.

5. Loosen the screw of side cover around the pump shaft, take out the pump shaft and the bearing, and wash the oil chamber of bracket.

III) Assembling of pump

1. Install the tightening screw onto the rotating seal ring, stationary ring, rear cover, vane wheel and pump body of sealing elements in reverse sequence of dismantling.

2. Assemble the screwing bolts on the rear cover and on the stationary ring gland; cleanly wipe the end surface of stationary seal ring with the soft cleaning cloth and drip the lubricating oil on it.

3. While installing the pump body, inspect the thread of bolt to prevent jacking the thread inside the pump body.

4. Properly install the flange ring at the outlet.

VIII. Operation and Function of Pump

1. Inspect whether the rotating direction of electric motor is consistent with the rotating mark of pump.

2. Prior to starting of FSB- type pump, inspect whether the oil level inside the oil chamber of bracket is within the specified scope.

3. Open the inlet valve and fully fill the liquid (leading liquid) into the water pump.

4. Shut off the outlet valve.

5. After the aforesaid steps are completed, start the motor and slowly open the outlet valve, right now, the location of pressure meter varies with openness of outflow. When the pointer of pressure meter points to the necessary location, stop the adjustment for outflow valve.

6. When the parking is required, firstly close the outflow valve and shut off the power supply, secondly close the inlet valve.

7. In the process of running, when it is found that there is vibration or abnormal sound, immediately suspend the driving and inspect the causes. The work can be commenced after the faults are eliminated.

IX. Application and Maintenance for Mechanical Sealing

According to different service conditions, this series of pump shall be installed with the mechanical sealing with different materials, the sealing assorted with ex-factory for normal installation by our factory is of WB2 or 169 type. While being employed, the following points should be noticed:

1. The common mechanical sealing is applicable for clean medium free of suspended hard particles, if there are the particles, the notice should be informed while signing the contract in advance. The newly installed series of pipeline and liquid storage tank should be washed cleanly and carefully to strictly prevent the solid particles entering into the sealed end surface to give rise to the failure of sealing.

2. While employing the mechanical sealing in the crystallized medium, the frequent flushing should be noticed. After parking and before restarting, the crystallization on the sealing end surface should be flushed cleanly.

3. The mechanical sealing should be dismantled carefully, not allowing employing the hand hammer and iron objects to perform the knocking to avoid destroying the moving and stationary ring sealing surface.

4. If the dirt isn't dismantled down after long-term application for mechanical sealing, the forced knocking is strictly prohibited and the dirt should be eliminated as much as possible. After clean flushing, the dismantling can be performed to guarantee the perfectness and lossless of elements.

5. Before installing the mechanical sealing, firstly inspect whether the sealed elements are ineffective and damaged. If there are the ineffective and damaged elements, replace and repair them. Strictly inspect the damage conditions of moving and stationary sealing surface, not allowing producing any slight scratches, damaged edge and defects. All spare parts (including the pump body, vane wheel, rear cover and the sealing cavity) should be flushed cleanly, and then a layer of clean grease or engine oil is coated.

6. While assembling, take notice of the parallelism between stationery ring and rear cover to prevent affecting the sealing effect.

7. Correctly adjust the compression force of spring to ensure that the compression force is too tight and too loose. While installing the pump, rotate it manually and ensure that the sealing is provided with a certain compression force and the rotating can be relaxed and flexible. If the compression force of spring isn't perceived, the sealing effect should be guaranteed.

Other Main Products in this Company

UHB-UF Series

UHB-ZK Series

UHB-UM Series

UHB-HM Series

HFM Series

FSZ Series

FZB Series

FS Series

FP Series

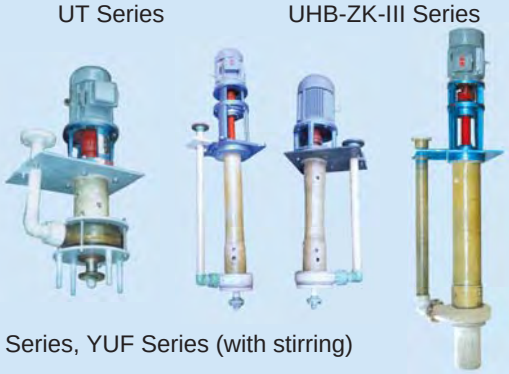
RGB Series

UHB-Z Series

UT Series

UHB-ZK-III Series

IHF Series



YU Series, YUF Series (with stirring)

A50 new type of anticorrosive and abrasion resistant pipeline

Temperature resistance ≤120℃, abrasion resistance; applicable for conveying various corrosive slurry and clear liquid.

Local scene of installation workshop

Quality Safety

Production License:
XK06-003-00409

Yixing Zeus Pump Co., Ltd.

Add: Dapu Industry Concentration Zone, Dingshu Town, Yixing City, Jiangsu Province, China

Post Code: 214225