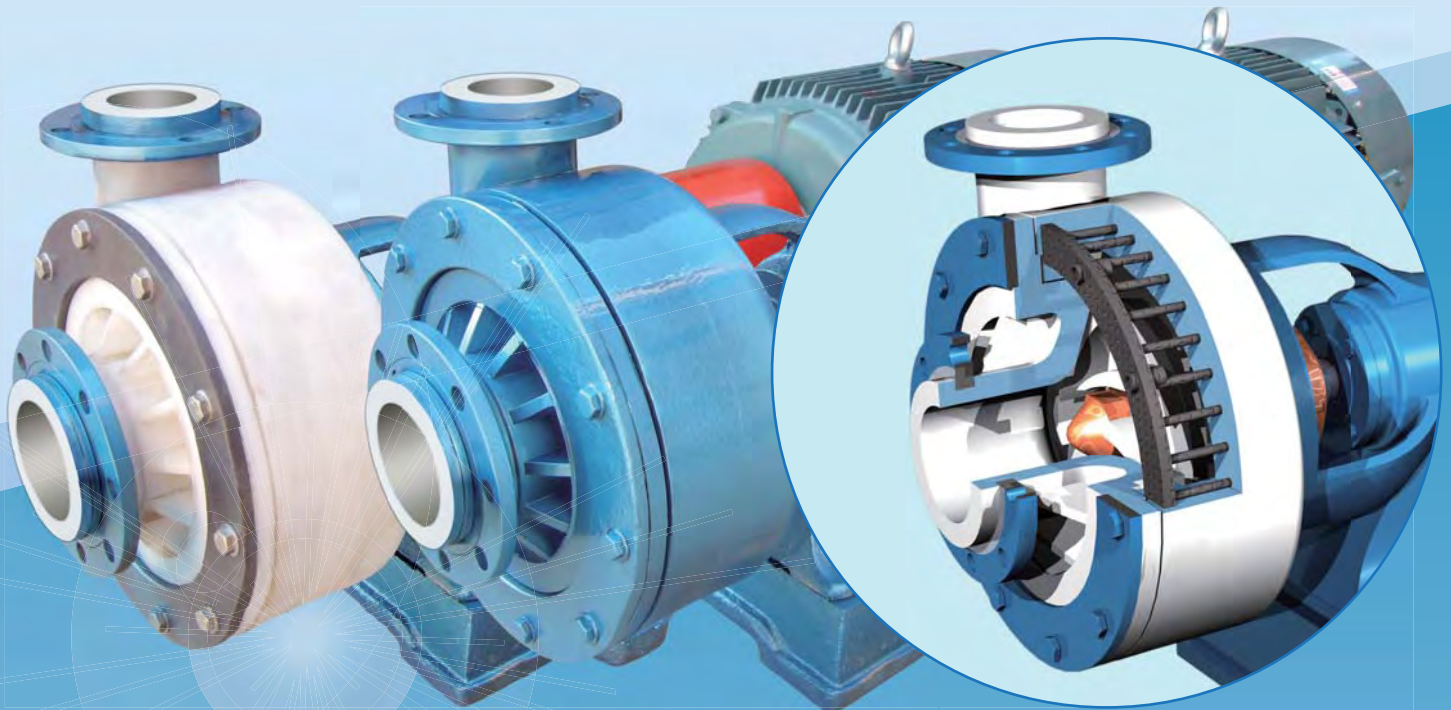


**Generation type
patented product:**

High mechanical strength, good sealing performance, long service life, corrosion resistance and abrasion resistance

UHB-UF Corrosion and Abrasion Resistant Pumps

UHB-UF: Modified UHMWPE materials; UHB-UP: MPP materials.



Local paint

Full paint

Built-in steel skeleton

Characteristics and advantages:

(advantages comparable to similar pumps)

- Not only have the advantage of internal and external corrosion resistance for plastic pump but also have such advantages as good rigidity of plastic –lining pump and good mechanical stability.
- Stretching resistance, extrusion resistance, deformation resistance and temperature resistance (relatively).
- The flow passage components are of “U00”material, improving 30~40% for abrasion resistance.
- New type of patented sealing, with longer service life.

Applicable for conveying various kinds of corrosive slurry and or clear liquid.



Yixing Zeus Pump Co., Ltd.

Version: 2011.07

☆Prior to use, read this manual thoroughly



Zeus Pump is a well-known inland enterprise professionally manufacturing the lining-type and fully plastic type anticorrosive and abrasion-resistant pump. ◇19 series and over 2000 specifications of anticorrosive and abrasion-resistant pumps are provided for selection by the user , with DN600mm for maximal caliber of anticorrosive pump and 6000m³/h for maximal flow for anticorrosive pump. ◇ The company attaches importance to the advancement of science and technology all along as well as holds a hundred of patents nearly and many national new products, which is a Hi-tech enterprise in Jiangsu Province. ◇ The products can meet the conveying demands of different chemical performance, different concentration, different temperature and different complex working conditions as well as are widely used in such industries as chemical industry, dying industry, nonmetallic minerals processing, ferrous smelting and environmental protection; ◇ In 2002, Zeus anticorrosive and abrasion-resistant pump was awarded as famous-brand product for township enterprise in Jiangsu Province. In 2007, the company was awarded as hi-tech enterprise and famous trademark in Jiangsu Province. In addition, the enterprise has been awarded as municipal civilized taxpaying major client in successive 8 years. ◇ Operation philosophy of company: Establish the Market with good Faith; Create the Brand with High Quality; Build the Advantage with Variety; Create the Future with Service.

New plant area of company



Research and Development



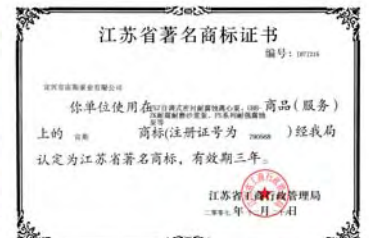
▲ Development

▲ Test Board with Full Performance for 2000m³/h Pump

▲ Test Board with Full Performance for 8000m³/h Pump

Introduction of Contents

- P1: I. Overview
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- P1: III. Model labeling
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In 2007, the company was awarded as Hi-tech enterprise in Jiangsu Province, and the "Zeus" trademark was awarded as a famous trademark in Jiangsu Province. Facing the new opportunity and new challenge, the company marches towards higher target and provides more excellent services for clients.

I. Overview

UHB-UF (UP) is a kind of full plastic type anticorrosive and abrasion-resistant pump, UF-type flow passage components are of modified UHMWPE materials, and UP-type flow passage components are of MPP materials. This series of pump is a kind of innovative invention product in this company, and its structure lies in the plastics packed internally and externally, the anticorrosive and abrasion-resistant pump is provided with the supporting(stretching resistance and compression resistance) steel skeleton. The prominent comparative functional advantages cover:

I. Overcome such disadvantages as corrosion resistance internally and non- corrosion resistance externally as well as high manufacturing cost; retain such advantages as good rigidity strength of plastic lining pump and convenient installation.

II. Overcome such shortcomings as poor mechanical stability and easy damage for full plastic pump resulted from great coefficient of plastic linear expansion and larger axial deformation induced by expansion and contraction, however, retain such advantages as uniform corrosion resistance internally and externally as well as non-corrosion on the surface and good corrosion resistance while use under the condition of corrosive air.

III. Other Comparative Advantages (comparison with similar pump):

1. Stretching resistance, extrusion resistance, deformation resistance
2. The flow passage components are of “U00”material, improving 30~40% for abrasion resistance.
3. New type of sealing structure and long sealing life (B–type patented sealing).

II. Technical performance, applicable scope and application

2.1 Technical Performance Parameters:

- There are 210 kinds of specifications for import diameter with $\Phi 32\sim 250\text{mm}$.
- Optional for flow scope with $5\sim 800\text{m}^3/\text{h}$.
- Lift: minimum lift: 5m (pressure: 0.05MPa) , maximal lift: 80m (pressure: within 0.8MPa), selection according to different specifications.
- Sealing type and structure: optional for K type of dynamic sealing and mechanical sealing.

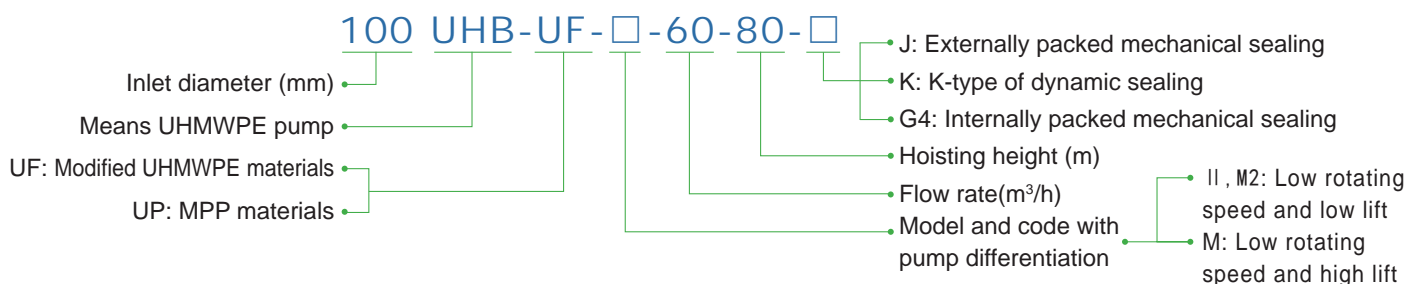
2.2 Applicable Scope:

- UF-type flow passage components are of modified UHMWPE materials, with corrosion resistance and abrasion resistance for service property. Therefore, they are applicable for conveying the slurry and clear liquid with corrosivity and non- corrosivity within $100\text{ }^\circ\text{C}$ for temperature and are mainly applicable for conveying acid-base medium and are not applicable for conveying strongly oxidized acid and solvent medium.
- UP-type applicable for conveying the corrosivity medium for clear liquid within $100\text{ }^\circ\text{C}$.

2.3 Typical application industry and post:

- Sulphuric acid phosphate fertilizer industries: pumping of diluted acid, mother liquid, sewage, sea water, fluosilicic acid with silica gel content, phosphate pulp, and other medium.
- Non-ferrous metallurgical industry: especially suitable for pumping of acid liquids from hydrometallurgy of lead, zinc, gold, silver, copper, manganese, cobalt, rare earth etc., and corrosive ore pulp, material pulp (for filtering press), electrolyte, sewage, etc.
- Chemical and other enterprises: sulphuric acid, hydrochloric acid, alkaline, oil liquor or pulp positions; titan white, iron-red powder production, dye and pigment production, nonmetallic mineral processing, etc.
- Alkali chloride industry: hydrochloric acid, liquid caustic soda, electrolyte, etc.
- Water treatment industry: purifying, high purifying, sewage and waste water of leather, electroplating, electronics, paper making, textile, food, pharmaceutical industries and sanitary sewage.
- Steel enterprise: sulphuric acid, hydrochloric acid position of acid washing system, impurity waste water.
- Wet desulphurizing circulation pump: suitable for alkali, acid, corrosive positions all.
- Pumping of corrosive liquid, coal pulp of coal industry and coal chemistry. And for coal washing and selection.
- Working condition similar to other relevant industries.

III. Model labeling



IV. Sealing Structure Diagram

4.1 Diagram and Brief Instruction for K-type Dynamic Sealing Structure

Without Cooling Water

1.Locking nut	7.Vane shim	13.Sealing box cover
2.Swirl-prevention nut	8.Shaft sleeve	14.Shaft sleeve shim
3.Washer	9.Sealing box shim	15.Acrid baffle
4.L gasket for locking nut	10.Sealing box cushion block	16.Main shaft
5.Vane	11.Sealing box	
6.Case	12.K-type sealing ring	

With Cooling Water

1.Locking nut	7.Vane shim	13.Sealing box cover	19.Water sealing ring
2.Swirl-prevention nut	8.Shaft sleeve	14.Shaft sleeve shim	20.K-type sealing ring
3.Washer	9.Sealing box shim	15.Main shaft	
4.L gasket for locking nut	10.Sealing box cushion block	16.Acrid baffle	
5.Vane	11.Sealing box	17.Top ring	
6.Case	12.Cooling water nozzle	18.O-type sealing ring	

● **Working principle:** this seal is mainly composed of auxiliary impeller (or auxiliary vane) and parking seal. While service, since the centrifugal force produced by auxiliary impeller (or auxiliary vane) ensure that the sealing cavity is in negative pressure status to prevent the liquid leaking outward, right now, the parking seal fails. The lip of rubber oil seal loosens due to negative pressure to produce certain gap to give rise to reducing the abrasion between them and prolong the service life; while halting, since the auxiliary impeller (or auxiliary vane) suspends the rotating, the sealing cavity is changed as positive pressure from negative pressure and the parking seal begins to work, and the lip of rubber oil seal tightly encases the shaft sleeve to reach the sealing purpose. If the cooling water is permitted to be seeped into the medium, the K-type dynamic sealing with cooling water can be selected, and then the externally cooling water device can be added to prolong the service life of oil seal. This oil seal of sealing is made from fluororubber and is applicable for conveying such corrosivity medium as slurry including the solid particles and impurities (the cooling water used for K-type dynamic sealing with cooling water is of clean tap water, within 0.05MPa for appropriate pressure).

4.2 G4-type Mechanical Sealing Structure

G4 seal is a kind of mechanical seal used for improved-type particle resistance pump designed by this company voluntarily; the moving and stationary rings are made of silicon carbide or the hard alloy uniformly and can be used for conveying the corrosivity liquid including a large number of particles. With comparison to similar in-built mechanical sealing, the tapered sealing ring and the stainless cushion block are set between the stationary ring and the sealing box to ensure that the hard particles can't enter into the gap between stationary ring and the sealing box as well as are more stable and reliable. The displacement around the stationary ring is free to overcome the

1.Locking nut	16.Acrid baffle
2.Swirl-prevention nut	17.Shaft sleeve rating nut
3.L gasket for locking nut	18.Main shaft
4.Vane	19.Shaft sleeve shim
5.Case	20.Water sealing ring
6.Dynamic ring	21.O-type sealing ring
7.Stationary ring	22.Spring
8.Tapered seal ring	23.O-type ring cushion bed
9.O-type ring cushion block	24.O-type sealing ring
10.Sealing box	25.Sealing box cushion block
11.Stationary seal ring seat	26.Sealing box shim
12.Cooling water nozzle	27.Dynamic ring shim
13.Sealing box cover	28.Vane shim
14.Spring seat	29.Washer
15.Shaft sleeve	

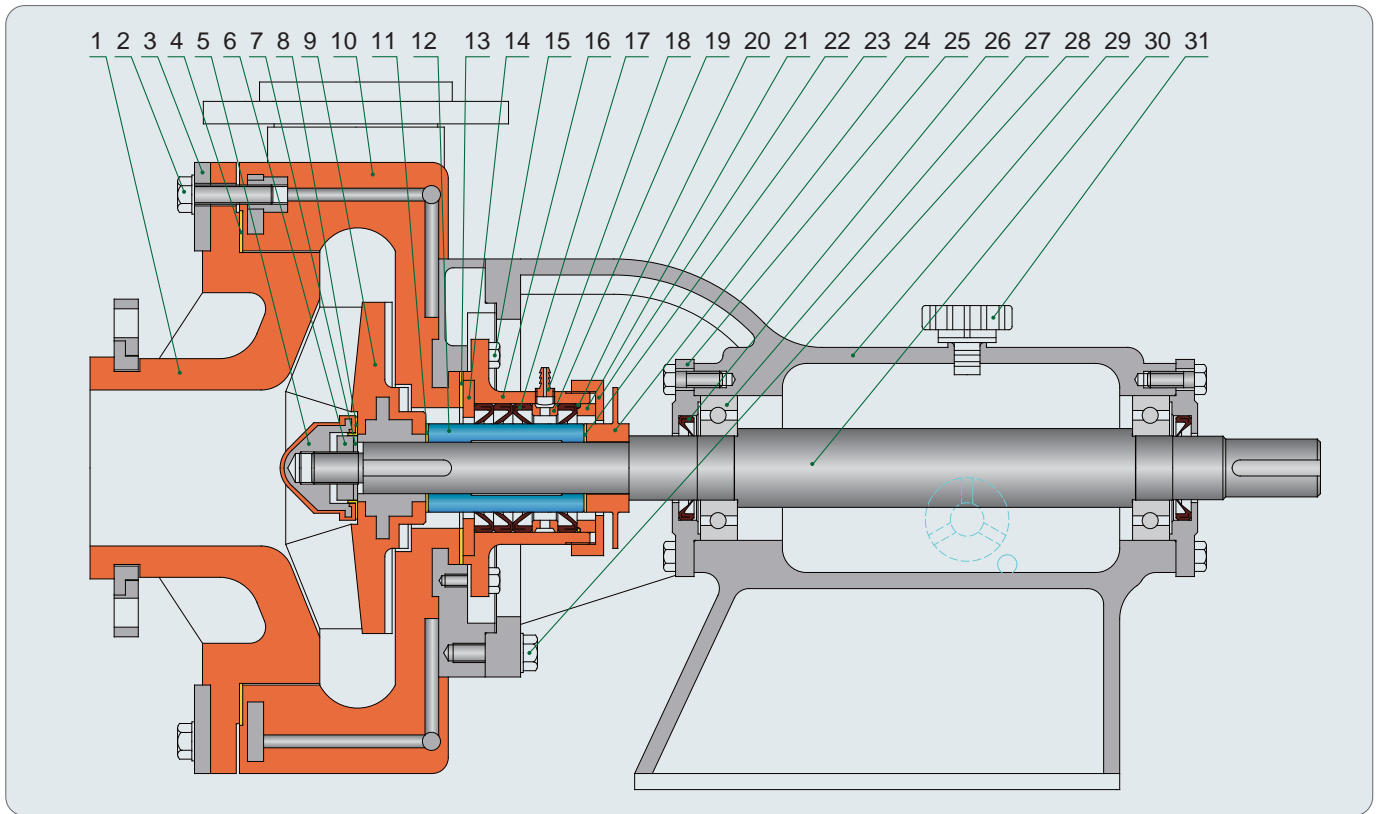
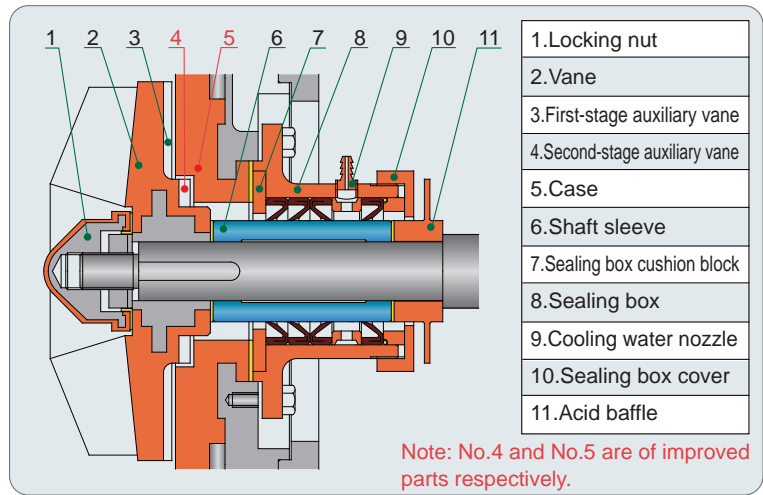
shortcoming that the original "Card Sand" with particle sealing resistance is disabled. This seal is of a kind of patented product in this company.

4.3 Diagram and Brief Instruction for B-type Structure

B-type structural pump is a kind of pump improved from anticorrosive and abrasion-resistant pump (referring to right diagram). Difference between them: the ordinary pump is of non-step type back vane; B-type structural pump is of step type back vane structure (referring to No.4 in Diagram). The impeller after being improved is divided into two stages; there is a bulged step between two-stage back vanes. The matched pump shell is also provided with recessed step. The purpose to set the step of back vane is to block the fluid pressure at the outlet of pump towards the backflow pressure of shaft seal as well as ensure and prolong the service life of shaft seal.

V. Structural Diagram for Pump

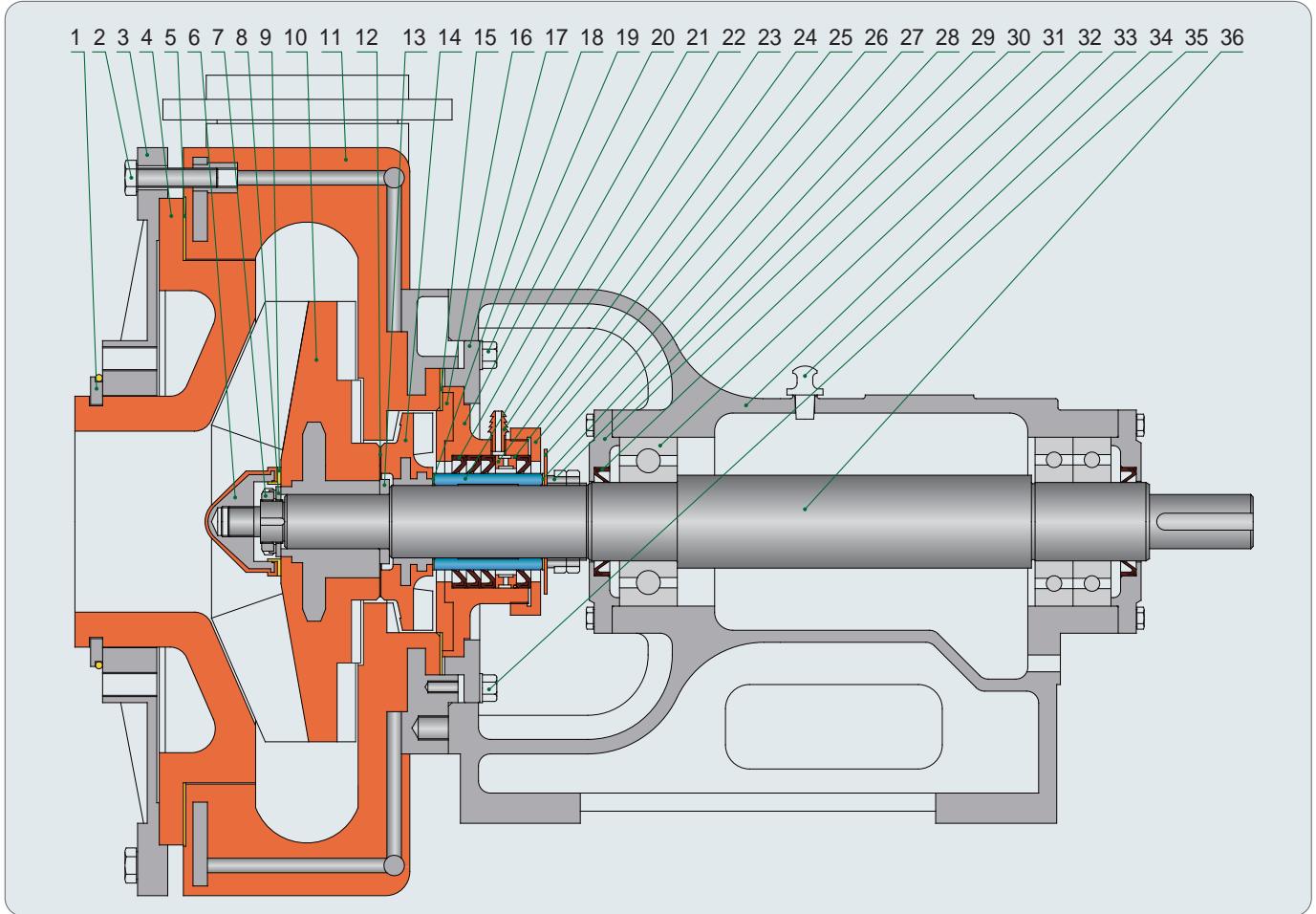
5.1 Structural Diagram without Auxiliary Vane Pump



No.	Parts Name	Material	No.	Parts Name	Material	No.	Parts Name	Material
√ 1	Cover	UHMWPE	√ 12	Shaft sleeve	99 Porcelain	√ 23	Shaft sleeve shim	F26B
2	Connecting bolts of cover	45#(Zinc coating)	√ 13	Sealing box shim	F26B	24	Acid baffle	FRP
3	Compaction ring of cover	QT	14	Sealing box cushion block	FRP	25	Bearing side cover	HT-200
4	Cover backing plate	F26B	15	Connecting bolts of sealing box	45#(Zinc coating)	26	Bearing oil seal	Neoprene
√ 5	Locking nut	UHMWPE/A3	√ 16	Sealing box	FRP	27	Bearing	
6	Swirl-prevention nut	A3	√ 17	K-type sealing ring	F4/F26B	28	Connecting bolts of bearing seat	45#(Zinc coating)
√ 7	Washer	A3	18	Cooling water nozzle	PP	29	Bearing seat	HT-200
√ 8	L gasket for locking nut	F26B	√ 19	Water sealing ring	FRP	30	Main shaft	40Cr
√ 9	Vane	UHMWPE/A3	√ 20	O-type sealing ring	F26B	31	Oil plug	
√ 10	Case	UHMWPE/A3	21	Top ring	FRP			
√ 11	Vane shim	F26B	22	Sealing box cover	FRP			

Note: The one with “√” in front of serial number is of quick-wear part to be used for reference while the user purchases the spare parts.

5.2 Structural Diagram with Auxiliary Vane Pump



No.	Parts Name	Material	No.	Parts Name	Material	No.	Parts Name	Material
1	Imported half ring and O-type ring	A3/F26B	13	Adjusting ring of impeller	45#	√ 25	O-type sealing ring	F26B
2	Connecting bolts of cover	45#(Zinc coating)	√ 14	Sub vane	UHMWPE/A3	26	Sealing box cover	FRP
3	Cover plate	QT	√ 15	Sealing box shim	F26B	27	Acid baffle	FRP
√ 4	Cover	UHMWPE	16	Sealing box cushion block	FRP	√ 28	Shaft sleeve shim	F26B
5	Cover backing plate	F26B	17	Sealing box pressure cover	QT	29	Shaft sleeve rating nut	45#(Zinc coating)
√ 6	Locking nut	UHMWPE/A3	√ 18	Sub vane shim	F26B	30	Bearing side cover	HT-200
7	Swirl-prevention nut	A3	19	Connecting bolts of pressure cover	45#(Zinc coating)	31	Bearing oil seal	Neoprene
√ 8	Washer	A3	√ 20	Sealing box	FRP	32	Bearing	
√ 9	L gasket for locking nut	F26B	√ 21	K-type sealing ring	F4/F26B	33	Bearing seat	HT-200
√ 10	Vane	UHMWPE/A3	√ 22	Shaft sleeve	99 Porcelain	34	Oil plug	
√ 11	Case	UHMWPE/A3	23	Cooling water nozzle	PP	35	Connecting bolts of bearing seat	45#(Zinc coating)
√ 12	Vane shim	F26B	√ 24	Water sealing ring	FRP	36	Main shaft	40Cr

Note: The one with "√" in front of serial number is of quick-wear part to be used for reference while the user purchases the spare parts.

VI. Performance Parameters

No.	Model	Flow Rate (m³/h)	Hoisting Height (m)	Rotation Speed (r/min)	Power		Diameter of Inlet and Outlet (mm×mm)
					Shaft Power	Motor	
1	32UHB-UF-3-13	3	13	2900	0.3	0.75	32×25
2	32UHB-UF-5-12	5	12	2900	0.42	0.75	
3	32UHB-UF-7-10	7	10	2900	0.5	0.75	
4	32UHB-UF-5-5	5	5	1450	0.25	0.75	
5	32UHB-UF-8-5	8	5	1450	0.32	0.75	
6	32UHB-UF-3-18	3	18	2900	0.4	0.75	
7	32UHB-UF-5-15	5	15	2900	0.55	1.1	
8	32UHB-UF-8-12	8	12	2900	0.7	1.1	

No.	Model	Flow Rate (m ³ /h)	Hoisting Height (m)	Rotation Speed (r/min)	Power		Diameter of Inlet and Outlet (mm×mm)
					Shaft Power	Motor	
9	32UHB-UF-5-20	5	20	2900	0.72	1.1	32×25
10	32UHB-UF-8-18	8	18	2900	1.2	1.5	
11	32UHB-UF-12-15	12	15	2900	1.3	2.2	
12	32UHB-UF-5-25	5	25	2900	1.5	2.2	
13	32UHB-UF-10-20	10	20	2900	1.6	2.2	
14	32UHB-UF-15-15	15	15	2900	1.7	2.2	
15	40UHB-UF-10-18	10	18	2900	1.6	2.2	40×32
16	40UHB-UF-15-15	15	15	2900	1.7	2.2	
17	40UHB-UF-10-30	10	30	2900	2.2	3	
18	40UHB-UF-15-25	15	25	2900	2.7	3	
19	40UHB-UF-18-20	18	20	2900	2.6	3	
20	40UHB-UF-5-7.5	5	7.5	1450	0.25	0.75	
21	40UHB-UF-8-7.5	8	7.5	1450	0.32	0.75	
22	50UHB-UF-10-35	10	35	2900	3.2	4	50×40
23	50UHB-UF-20-20	20	20	2900	3	4	
24	50UHB-UF-25-18	25	18	2900	3.2	4	
25	50UHB-UF-30-15	30	15	2900	3.1	4	
26	50UHB-UF-15-32	15	32	2900	3.5	5.5	
27	50UHB-UF-20-30	20	30	2900	4.3	5.5	
28	50UHB-UF-25-28	25	28	2900	5	5.5	
29	50UHB-UF-10-40	10	40	2900	4.3	5.5	
30	50UHB-UF-15-40	15	40	2900	5.4	7.5	
31	50UHB-UF-10-7.5	10	7.5	1450	1.1	2.2	
32	65UHB-UF-30-25	30	25	2900	5.3	5.5	65×50
33	65UHB-UF-30-20	30	20	2900	5.1	5.5	
34	65UHB-UF-40-15	40	15	2900	4.5	5.5	
35	65UHB-UF-30-32	30	32	2900	6.5	7.5	
36	65UHB-UF-35-25	35	25	2900	6.2	7.5	
37	65UHB-UF-40-20	40	20	2900	6.1	7.5	
38	65UHB-UF-15-7.5	15	7.5	1450	0.68	1.1	
39	65UHB-UF-10-40	10	40	2900	4.2	5.5	
40	65UHB-UF-M2-10-30	10	30	1450	1.72	2.2	
41	65UHB-UF-M2-20-27	20	27	1450	3	4	
42	65UHB-UF-M2-30-25	30	25	1450	4.2	5.5	
43	65UHB-UF-M2-40-20	40	20	1450	4.4	5.5	
44	65UHB-UF-20-50	20	50	2900	8.7	11	
45	65UHB-UF-30-50	30	50	2900	12	15	
46	65UHB-UF-30-40	30	40	2900	9.6	11	
47	65UHB-UF-10-55	10	55	2900	8.6	11	
48	65UHB-UF-20-45	20	45	2900	9.4	11	
49	65UHB-UF-10-70	10	70	2900	8.4	11	
50	65UHB-UF-15-70	15	70	2900	11.2	15	
51	65UHB-UF-25-66	25	66	2900	15.8	18.5	
52	65UHB-UF-30-60	30	60	2900	18.5	22	
53	80UHB-UF-45-20	45	20	2900	10.2	11	80×65
54	80UHB-UF-35-45	35	45	2900	10.8	11	
55	80UHB-UF-50-30	50	30	2900	10.2	11	
56	80UHB-UF-40-35	40	35	2900	10.2	11	
57	80UHB-UF-45-50	45	50	2900	14.8	15	
58	80UHB-UF-60-30	60	30	2900	12.7	15	
59	80UHB-UF-55-40	55	40	2900	15.8	18.5	
60	80UHB-UF-II-20-11	20	11	1450	1.2	2.2	
61	80UHB-UF-II-30-9	30	9	1450	1.47	2.2	
62	80UHB-UF-II-25-10	25	10	1450	1.36	2.2	
63	80UHB-UF-II-45-32	45	32	1450	7.8	11	
64	80UHB-UF-II-50-30	50	30	1450	8.16	11	
65	80UHB-UF-II-40-35	40	35	1450	8.57	11	
66	80UHB-UF-II-60-28	60	28	1450	9.14	11	
67	80UHB-UF-II-30-36	30	36	1450	5.88	7.5	
68	80UHB-UF-M-40-60	40	60	1450	13.1	15	
69	80UHB-UF-M-30-63	30	63	1450	10.3	15	
70	80UHB-UF-M-50-55	50	55	1450	14.9	18.5	
71	80UHB-UF-M-45-56	45	56	1450	13.7	15	
72	80UHB-UF-M-60-40	60	40	1450	13	15	
73	80UHB-UF-20-75	20	75	2900	13.4	15	
74	80UHB-UF-20-60	20	60	2900	10.3	15	
75	80UHB-UF-25-70	25	70	2900	14.8	15	
76	80UHB-UF-30-65	30	65	2900	18.2	22	
77	80UHB-UF-35-65	35	65	2900	22.5	30	
78	80UHB-UF-40-60	40	60	2900	22.6	30	
79	100UHB-UF-50-11	50	11	1450	4.2	5.5	100×80
80	100UHB-UF-60-10	60	10	1450	4.1	5.5	
81	100UHB-UF-60-35	60	35	2900	14.5	18.5	
82	100UHB-UF-100-20	100	20	2900	15	18.5	
83	100UHB-UF-50-50	50	50	2900	17.5	18.5	
84	100UHB-UF-60-40	60	40	2900	16.8	18.5	

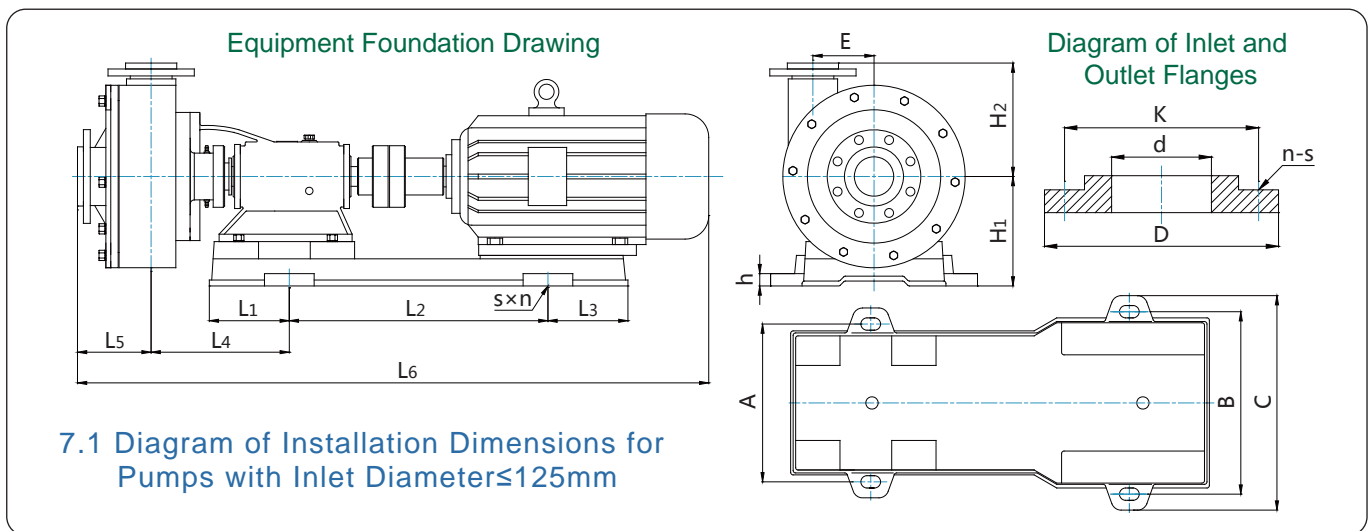


No.	Model	Flow Rate (m ³ /h)	Hoisting Height (m)	Rotation Speed (r/min)	Power		Diameter of Inlet and Outlet (mm×mm)	
					Shaft Power	Motor		
85	100UHB-UF-80-35	80	35	2900	17.8	22	100×80	
86	100UHB-UF-80-30	80	30	2900	17.5	18.5		
87	100UHB-UF-100-25	100	25	2900	17.9	22		
88	100UHB-UF-100-20	100	20	2900	17.2	18.5		
89	100UHB-UF-120-15	120	15	2900	17.1	18.5		
90	100UHB-UF-140-10	140	10	2900	16.4	18.5		
91	100UHB-UF-50-60	50	60	2900	20.5	22		
92	100UHB-UF-60-50	60	50	2900	22.8	30		
93	100UHB-UF-70-45	70	45	2900	23.5	30		
94	100UHB-UF-80-50	80	50	2900	27	30		
95	100UHB-UF-100-40	100	40	2900	26.5	30		
96	100UHB-UF-145-28	145	28	2900	28.5	30		
97	100UHB-UF-II-80-32	80	32	1450	18.7	22		
98	100UHB-UF-II-100-30	100	30	1450	15.7	18.5		
99	100UHB-UF-II-120-25	120	25	1450	13.1	15		
100	100UHB-UF-II-60-35	60	35	1450	12.3	15		
101	100UHB-UF-II-70-33	70	33	1450	12.1	15		
102	100UHB-UF-M-60-65	60	65	1450	33.6	37		
103	100UHB-UF-M-50-70	50	70	1450	31.4	37		
104	100UHB-UF-M-80-60	80	60	1450	30.9	37		
105	100UHB-UF-M-80-50	80	50	1450	30.3	37		
106	100UHB-UF-M-100-60	100	60	1450	47.8	55		
107	100UHB-UF-M-120-60	120	60	1450	50.5	55		
108	100UHB-UF-M-120-50	120	50	1450	39	45		
109	100UHB-UF-100-80	100	80	2900	41	45		
110	100UHB-UF-80-85	80	85	2900	35.6	45		
111	100UHB-UF-70-80	70	80	2900	29.8	37		
112	100UHB-UF-60-80	60	80	2900	25.3	30		
113	100UHB-UF-80-70	80	70	2900	29.4	37		
114	125UHB-UF-120-20	120	20	2900	17.2	18.5		125×100
115	125UHB-UF-140-18	140	18	2900	21	22		
116	125UHB-UF-100-40	100	40	2900	28.8	30		
117	125UHB-UF-120-35	120	35	2900	29.6	37		
118	125UHB-UF-140-25	140	25	2900	25	30		
119	125UHB-UF-120-32	120	32	2900	26.8	30		
120	125UHB-UF-140-28	140	28	2900	27.6	30		
121	125UHB-UF-160-24	160	24	2900	28.1	30		
122	125UHB-UF-II-60-15	60	15	1450	4.8	5.5		
123	125UHB-UF-II-80-13	80	13	1450	5.9	7.5		
124	125UHB-UF-II-100-35	100	35	1450	18.3	22		
125	125UHB-UF-II-120-30	120	30	1450	18.8	22		
126	125UHB-UF-II-140-26	140	26	1450	19.5	22		
127	125UHB-UF-II-110-33	110	33	1450	19	22		
128	125UHB-UF-M-100-50	100	50	1450	33.2	37		
129	125UHB-UF-M-120-40	120	40	1450	32.1	37		
130	125UHB-UF-M-100-60	100	60	1450	40.5	45		
131	125UHB-UF-M-120-55	120	55	1450	41	45		
132	125UHB-UF-M-100-65	100	65	1450	47.6	55		
133	125UHB-UF-M-120-60	120	60	1450	49.2	55		
134	125UHB-UF-M-140-56	140	56	1450	46.9	55		
135	125UHB-UF-M-150-50	150	50	1450	48.3	55		
136	125UHB-UF-M-170-40	170	40	1450	47.5	55		
137	150UHB-UF-220-25	220	25	1450	28.2	30	150×125	
138	150UHB-UF-250-23	250	23	1450	29.1	37		
139	150UHB-UF-200-28	200	28	1450	28.9	37		
140	150UHB-UF-150-40	150	40	1450	42	45		
141	150UHB-UF-200-32	200	35	1450	43.1	45		
142	150UHB-UF-250-30	250	30	1450	41.5	45		
143	150UHB-UF-300-25	300	25	1450	42.3	45		
144	150UHB-UF-150-35	150	35	1450	26.9	30		
145	150UHB-UF-180-35	180	35	1450	32.3	37		
146	150UHB-UF-200-26	200	26	1450	26.7	30		
147	150UHB-UF-250-20	250	20	1450	25.6	30		
148	150UHB-UF-300-20	300	20	1450	30.8	37		
149	150UHB-UF-270-20	270	20	1450	36.8	45		
150	150UHB-UF-80-11	80	11	980	8.9	11		
151	150UHB-UF-100-9	100	9	980	8.8	11		
152	150UHB-UF-AH-120-70	120	70	1450	45.8	55		
153	150UHB-UF-AH-150-70	150	70	1450	58.9	75		
154	150UHB-UF-AH-180-70	180	70	1450	68.6	75		
155	200UHB-UF-320-24	320	24	1450	37.3	45		200×150
156	200UHB-UF-350-20	350	20	1450	37.1	45		
157	200UHB-UF-400-18	400	18	1450	38.3	45		
158	200UHB-UF-500-13	500	13	1450	38.6	45		
159	200UHB-UF-320-32	320	32	1450	50.8	55		
160	200UHB-UF-350-28	350	28	1450	45.2	55		

No.	Model	Flow Rate (m³/h)	Hoisting Height (m)	Rotation Speed (r/min)	Power		Diameter of Inlet and Outlet (mm×mm)
					Shaft Power	Motor	
161	200UHB-UF-400-25	400	25	1450	70	75	200×150
162	200UHB-UF-200-45	200	45	1450	74	90	
163	200UHB-UF-300-37	300	37	1450	68.9	75	
164	200UHB-UF-350-35	350	35	1450	68.3	75	
165	200UHB-UF-215-10	215	10	980	15.6	18.5	
166	200UHB-UF-210-14	210	14	980	18.4	22	
167	200UHB-UF-250-16	250	16	980	20.5	22	
168	200UHB-UF-350-13	350	13	980	23.4	30	
169	200UHB-UF-300-15	300	15	980	23.1	30	
170	250UHB-UF-400-32	400	32	1450	76.8	90	
171	250UHB-UF-500-26	500	26	1450	78.3	90	
172	250UHB-UF-400-45	400	45	1450	108.9	110	
173	250UHB-UF-500-37	500	37	1450	100.7	110	
174	250UHB-UF-600-30	600	30	1450	98	110	
175	250UHB-UF-500-45	500	45	1450	123.8	132	
176	250UHB-UF-650-45	650	45	1450	137.8	160	

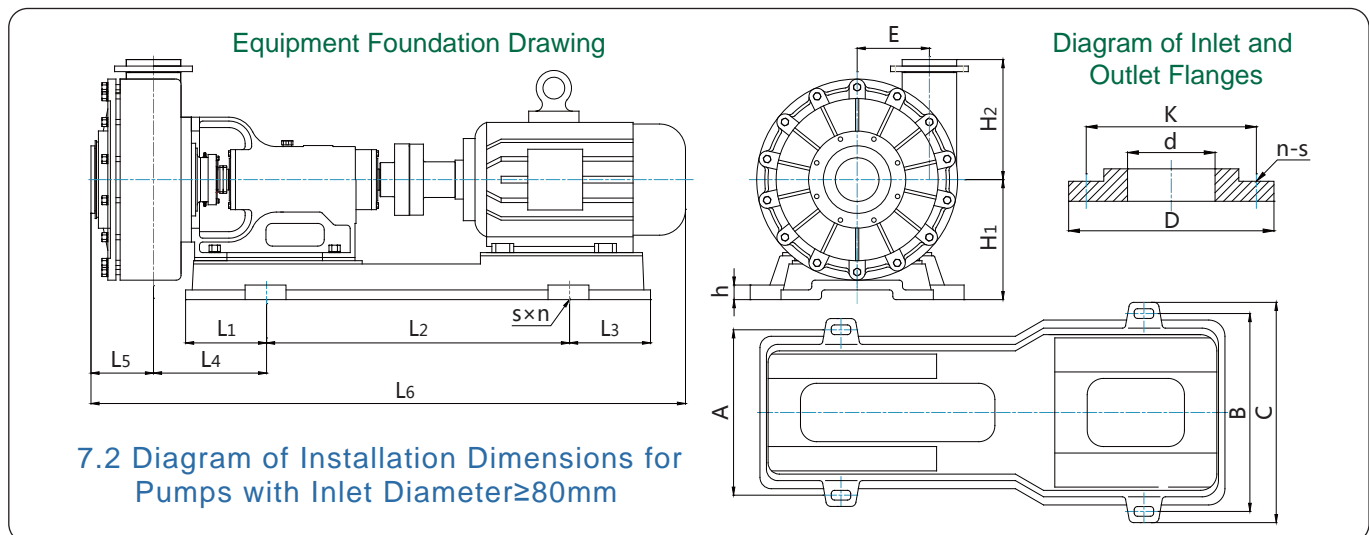
Note: The shaft power in the list is of the power shaft when the density is $\gamma=1$; when the electric motor is provided, the selected power is equal to or greater than shaft power $\times \gamma$ (specific gravity of material).

VII. Overall and Installation Dimensions



7.1 Diagram of Installation Dimensions for Pumps with Inlet Diameter ≤ 125mm

No.	Model	Motor(KW)	A	B	C	E	H ₁	H ₂	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	h	s×n
1~9	32UHB-UF	0.75~1.1KW-2	260	260	315	85	160	170	100	335	100	225	110	800	25	16×4
10~14	32UHB-UF	1.5~2.2KW-2	260	260	315	85	165	170	100	335	100	225	110	830	25	16×4
15、16	40UHB-UF	2.2KW-2	260	260	315	92	165	185	100	335	100	240	120	860	25	16×4
17~19	40UHB-UF	3KW-2	260	260	315	92	170	185	120	335	120	256	120	910	25	16×4
20、21	40UHB-UF	0.75KW-4	260	260	315	92	160	185	100	335	100	245	120	830	25	16×4
22~25	50UHB-UF	4KW-2	320	320	380	97	208	200	160	400	160	280	135	1040	25	16×4
26~30	50UHB-UF	5.5~7.5KW-2	320	320	380	97	208	200	160	400	160	280	135	1090	25	16×4
31	50UHB-UF	2.2KW-4	320	320	380	97	208	200	160	400	160	280	135	1015	25	16×4
32~37	65UHB-UF	5.5~7.5KW-2	320	320	380	112	208	215	160	400	160	280	145	1100	25	16×4
38	65UHB-UF	1.1KW-4	320	320	380	112	208	215	160	400	160	280	145	985	25	16×4
39	65UHB-UF-M2	2.2KW-4	320	320	380	165	218	245	160	400	160	280	155	1035	25	16×4
40	65UHB-UF-M2	4KW-4	320	320	380	165	218	245	160	400	160	280	155	1060	25	16×4
41~42	65UHB-UF-M2	5.5KW-2	320	320	380	165	218	245	160	400	160	280	155	1115	25	16×4
43	65UHB-UF	5.5KW-2	320	320	380	125	208	225	160	400	160	280	145	1010	25	16×4
44~50	65UHB-UF	11~15KW-2	320	370	435	125	222	225	165	525	165	280	145	1225	35	25×4
51	65UHB-UF	18.5KW-2	320	370	435	125	222	225	165	570	165	280	145	1270	35	25×4
52	65UHB-UF	22KW-2	396	485	555	125	285	225	210	670	210	250	145	1335	35	25×4
53~58	80UHB-UF	11~15KW-2	320	370	435	124	222	230	165	525	165	280	150	1230	35	25×4
59	80UHB-UF	18.5KW-2	320	370	435	124	222	230	165	570	165	280	150	1275	35	25×4
79、80	100UHB-UF	5.5KW-4	410	460	530	128	280	240	190	705	190	335	170	1300	40	25×4
81~84、86、88~90	100UHB-UF	18.5KW-2	410	460	530	128	280	240	190	705	190	308	170	1460	40	25×4
85、87、91	100UHB-UF	22KW-2	410	460	530	128	280	240	190	705	190	308	170	1485	40	25×4
92~96	100UHB-UF	30KW-2	395	485	555	128	305	240	210	670	210	345	170	1560	40	25×4
114	125UHB-UF	18.5KW-2	410	460	530	128	280	250	190	705	190	318	170	1470	40	25×4
115	125UHB-UF	22KW-2	410	460	530	128	280	250	190	705	190	318	170	1495	40	25×4
116~121	125UHB-UF	30~37KW-2	395	485	555	128	305	250	210	670	210	355	170	1570	40	25×4



7.2 Diagram of Installation Dimensions for Pumps with Inlet Diameter ≥ 80mm

No.	Model	Motor(KW)	A	B	C	E	H ₁	H ₂	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	h	s×n
60~62, 67	80UHB-UF-II	2.2kw-4, 7.5KW-4	425	365	495	197.5	300	335	200	600	200	355	155	1435	25	25×4
63~66	80UHB-UF-II	11KW-4	460	460	525	197.5	300	335	210	800	210	320	155	1485	25	30×4
73~75	80UHB-UF	15KW-2	460	460	525	197.5	300	335	210	800	210	305	155	1495	50	30×4
77	80UHB-UF	22KW-2	460	460	525	197.5	300	335	210	800	210	305	155	1575	50	30×4
77, 78	80UHB-UF	30KW-2	420	536	580	197.5	335	335	250	700	300	320	155	1635	50	30×4
97, 98	100UHB-UF-II	18.5~22KW-4	460	460	525	192.5	300	335	210	800	210	310	160	1560	25	30×4
99~101	100UHB-UF-II	15KW-4	460	460	525	192.5	300	335	210	800	210	310	160	1535	25	30×4
109, 110	100UHB-UF-II	45KW-2	420	586	670	192.5	350	335	250	840	190	345	160	1680	50	30×4
111~113	100UHB-UF-II	30~37KW-2	420	536	606	192.5	335	335	250	700	300	345	160	1645	50	30×4
122, 123	125UHB-UF-II	5.5~7.5KW-4	425	365	495	187.5	300	335	200	600	200	366	165	1455	25	25×4
124~127	125UHB-UF-II	22KW-4	460	460	525	187.5	300	335	210	800	210	330	360	1605	25	30×4
68, 69, 71, 72	80UHB-UF-M	15KW-4	510	510	580	255	400	495	250	850	165	365	165	1590	20	30×4
70	80UHB-UF-M	18.5KW-4	510	510	580	255	400	495	250	850	165	365	165	1615	20	30×4
102~105, 108	100UHB-UF-M	37~45KW-4	510	610	700	248	427	510	260	935	205	380	170	1780	20	30×4
106, 107	100UHB-UF-M	55KW-4	510	660	750	248	427	360	260	1000	180	380	170	1885	22	30×4
128~131	125UHB-UF-M	37~45KW-4	510	610	700	248	427	525	260	935	205	380	175	1815	20	30×4
132~136	125UHB-UF-M	55KW-4	510	660	750	248	427	525	260	1000	180	380	180	1895	22	30×4
137, 144, 146, 147	150UHB-UF	30KW-4	510	510	580	223	395	370	250	850	165	375	350	1915	20	30×4
138~143, 145, 148, 149	150UHB-UF	37~45KW-4	510	610	700	223	427	370	260	935	205	385	350	1990	20	30×4
150, 151	150UHB-UF	11KW-6	510	510	580	223	400	370	250	850	165	375	350	1785	20	30×4
152	150UHB-UF-AH	55KW-2	510	660	750	265	420	405	260	1000	180	385	345	2050	30	30×4
153, 154	150UHB-UF-AH	75KW-2	510	660	750	265	450	405	220	1000	350	330	345	2117	30	30×4
155~158, 168, 169	200UHB-UF	30KW-6, 45KW-4	510	610	680	215	370	385	250	935	250	405	220	1880	50	30×4
159, 160	200UHB-UF	55KW-4	510	660	750	215	425	385	260	1000	180	405	220	1960	22	30×4
161, 163, 164	200UHB-UF	75KW-4	510	660	750	215	450	385	220	1000	350	350	220	2030	22	30×4
162	200UHB-UF	90KW-4	510	660	750	215	450	385	220	1000	350	350	220	2080	22	30×4
165~167	200UHB-UF	18.5~22KW-6	510	510	580	215	400	385	250	850	165	395	220	1805	20	30×4
170, 171	250UHB-UF	90KW-4	770	770	850	290	660	665	300	1200	390	485	255	2470	30	30×4
172~174	250UHB-UF	110KW-4	770	770	850	290	660	665	300	1200	530	485	255	2590	30	30×4
175, 176	250UHB-UF	132~160KW-4	770	770	850	290	660	665	300	1200	530	485	255	2640	30	30×4

7.3 Chart of flange connection dimensions Standard: GB9116-88 PN 1.0MPa

d	25	32	40	50	65	80	100	125	150	200	250	300	350
D	115	140	150	165	185	200	220	250	285	340	395	445	505
K	85	100	110	125	145	160	180	210	240	295	350	400	460
n-s	4-Φ14		4-Φ18			8-Φ18			8-Φ22		12-Φ22		16-Φ22

VIII. Instructions for Starting, Running, Maintenance & Disassembling

8.1 Starting, Running & Maintenance

8.1.1 Check before start

Manually turn the shaft coupling or shaft before commissioning to see if its direction is correct and turning smoothly, if it is stuck or with abnormal noise, check to see if the coupling shaft to be horizontal, and inspect from the oil mirror hole on the bearing support to see if the position of lubrication oil is nearby the central line of the oil mirror (release some if it is too much, and add if too low), turning the shaft while checking, if the problem persists then it is required to open the case to check and clear foreign substances, and contact us for resolving the issue. (Please refer to diagram of structure and procedures found on this manual when disassembling.)

8.1.2 Start steps

- Fill the pump with liquid;
- Open the inlet valve timely (manual operation not needed for single check valve);
- Turn-on power;
- Open the outlet valve.

8.1.3 Running

When abnormality such as strange noise or heat motor occurs during running, stop to check the same way as 8.1.1.

8.1.4 Stop Pump

- Close the outlet valve first.
- Cut off power and close the inlet valve timely. (manual operation not needed for single check valve).

8.1.5 Maintenance

- Replace the lubricating oil in the bearing support periodically, every six months under normal conditions.
- If the pump freezes after use in cold weather, turn on cooling water on the sealing position and pour in hot water to defrost if necessary, then manually turn the coupling shaft until it turns smoothly, and start the pump in accordance with the procedures.
- Turn on cooling water before starting for pumps equipped with water cooling mechanism, and keep it on under normal running, or turn it off if conditions not allow. There is no specific requirement for flow rate and pressure of the cooling water, tap water will be ok.
- Running with outlet valve closed is called closed-pressure running status. For full plastic bump or plastic lining pump, ensure it runs in closed-pressure status as short as possible, limited to five minutes for ordinary temperature medium and two minutes for high temperature medium.
- The pumps will not withstand the weight of inlet and outlet pipes, keep the inlet pipes as short as possible and the vertical height from the outlet to the valve as low as possible.
- Keep the motor from water, prevent it from get wet.

8.2 Disassembling

Dismantling sequence for the pump without auxiliary impeller: (referring to Structural Diagram of Pump on Page P3)

- Loosen the connecting bolt 2 between compaction ring of pump cover 3 and pump shell 10; dismantle the pump cover 1 and pump cover cushion 4;
- Loosen the locking nut 5 and rotating-resistant nut 6 ; dismantle the L cushion 8 of locking nut, washer 7, impeller 9 and impeller cushion 11;
- Loosen the connecting bolt 28 between pump housing 10 and bearing seat 29; dismantle the pump shell 10 (connect the sealing combination) ;
- Loosen the connecting bolt 15 between sealing box 16 and pump shell 10; dismantle the sealing assembling elements;
- Unscrew the sealing-box cover 22 on the sealing box 16. Take out the top ring 21 and O-type seal ring. Take out K-type seal ring 17 and water seal ring 19 in turn.

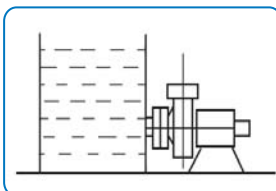
The installation sequence is opposite to the dismantling sequence, notice:

- After the impeller cap is assembled tightly, inspect the gap between impeller and pump shell, this gap is required to be around 2mm.
- After the pump cover is installed properly, inspect the gap between the pump cover and impeller (inspect it from the exit to inner), this gap should be ensured to be around 2mm. When the pump is used for high-temperature medium, this gap is required to be around 2mm.
- When the gap between the impeller and pump shell doesn't reach the requirement, adjust it by adding and reducing the gasket between impeller and shaft sleeve.
- When the gap between the impeller and pump shell doesn't reach the requirement, adjust it by adding and reducing the gasket between the pump shell and pump cover.

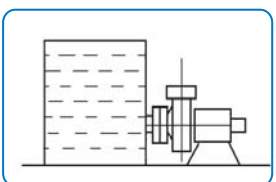
Dismantling sequence of pump with auxiliary impeller: (referring to Structural Diagram of Pump on Page P4)

- Loosen the connecting bolt 2 between cover plate of pump 3 and pump shell 11; dismantle the O-type ring on the imported Haff ring of pump and Haff ring 1; dismantle the pump cover 4 and pump cover cushion 5;
- Loosen the locking nut 6 and rotating-resistant nut 6; dismantle the L cushion 9 of locking nut, washer 8, impeller 10 and impeller cushion 12; take out the adjusting ring of impeller 13;
- Loosen the connecting bolt 35 between pump shell 11 and bearing seat 33; dismantle the pump shell 11 (connect the sealing combination) ;
- Loosen the connecting bolt 19 between gland of sealing box 17 and pump shell 11; take out the sealing combination and auxiliary impeller 14;
- Unscrew the sealing-box cover 26. Take out K-type seal ring 21 and water seal ring 24 in turn.

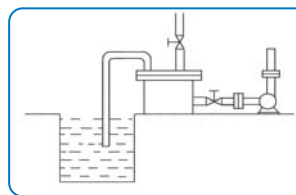
IX. Installation Diagram and Ins



A. Head Tank Positive Pressure
Characteristics: the pump is positioned on the bottom of the tank and the medium is in positive pressure status, upon opening the inlet valve the liquid is flowed by itself into the pump. **This is the most ideal installation type for the UHB-UF series pumps.**



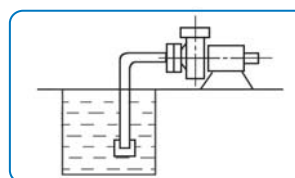
B. Head Tank Negative Pressure
Characteristics: the pump is positioned on the bottom of the tank and the medium is in negative pressure status in the closed tank. For the selection of pumps for this application, obtain precise data of the negative pressure in the tank and then contact us for deciding.



C. Lower Tank w/o Bottom Valve but with Siphon-Tank

Characteristics: the pump is positioned above the tank and a siphon-tank is installed nearing the inlet of the pump to help start it. Fill liquid fully in the siphon-tank before first use, and no need to do it later. Produce the siphon-tank with proper material and process according to the properties of the

medium, the most important requirement of the siphon-tank is its tightness, no leakage allowed. Use the following formula to calculate the size required of the siphon-tank: $V=(3\sim5)\times\frac{\pi d^2}{4}\times L$ d: inlet diameter; L: total length of the inlet pipe; V: volume of the siphon-tank. The decide the diameter and height of the siphon-tank according to the volume and materials available.



D. Lower Tank with Bottom Valve

Characteristics: the pump is positioned above the tank and a bottom valve is installed on the bottom end of the inlet pipe. For every start, fill liquid fully into the pump, no empty running allowed.

Other Main Products in this Company



UHB-ZK Series



UHB-UM Series



UHB-HM Series



HFM Series



FSZ Series



UT Series



FZB Series



FS Series



FP Series



RGB Series



UHB-Z Series



IHF Series



UHB-ZK-III Series



FSB Series



YU Series, YUF Series (with stirring)

A50 new type of anticorrosive and abrasion resistant pipeline

Temperature resistance $\leq 120^{\circ}\text{C}$, abrasion resistance; applicable for conveying various corrosive slurry and clear liquid.



Production License
XK06-003-00176



Yixing Zeus Pump Co., Ltd.

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

Post Code: 214225