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Build the largest one-stop comprehensive platform for ecological environment products and services in China



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Supporting Equipment for Sewage Treatment Plants



INTRODUCTION



Liaoning Innovation Environment Industry Group Co., Ltd. is located in the "Innovation Environmental Industrial Park" in Beipiao City, Liaoning Province, the hometown of the dragon bird. It covers a total area of 270 mu and has a total planned construction area of 140,000 square meters.

Innovation Environment focuses on advanced environmental protection technology research and development and integrated environmental protection equipment manufacturing. It has now formed an "8 + 4" business model consisting of eight product series and four operation services in the field of environmental governance. It is an enterprise with the most complete product line in the domestic environmental governance field and also the largest single manufacturing production base in China, forming a leading domestic one-stop product and service platform for environmental governance with a complete product line.

The eight product series include: ① Integrated sewage treatment and supporting equipment for water plants; ② Integrated equipment for water plant construction; ③ Landfill leachate treatment equipment; ④ Decentralized sewage treatment equipment; ⑤ Sodium hypochlorite disinfection equipment; ⑥ UED high-difficulty and high-concentration wastewater treatment equipment; ⑦ Livestock and poultry manure resource utilization equipment; ⑧ Latrine revolution supporting biogas digesters.

The four operation services include: ① Entrusted operation and maintenance service for sewage treatment stations; ② Landfill leachate treatment service; ③ Sewage emergency treatment service; ④ Treatment service for three-high wastewater (high toxicity, high salt, high concentration).

Innovation Environment takes "Beautiful China, Green Ecology" as its mission. It is the first in China to propose the concept of carbon cycle in rural areas and put it into practice in product implementation. It integrates various R & D resources at home and abroad, introduces advanced technologies, contributes to building a beautiful China, and acts as a loyal guardian of the ecological environment!



CULTURE

Corporate Culture

Learning · Innovation · Responsibility

Corporate Mission

Faithful Guardian of Ecological Environment

Corporate Vision

Building the largest one-stop comprehensive product and service platform for ecological environment in China



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I. Pretreatment Equipment Series

(Bar Screen, Conveyor, and Press)

CF Type Rotary Solid-Liquid Separator

1. Application

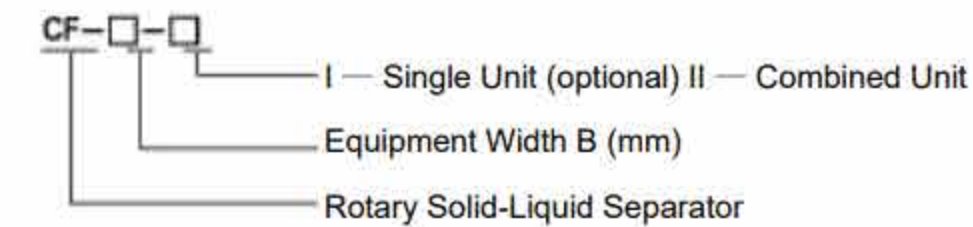
The CF Type Rotary Solid-Liquid Separator (also known as Rotary Bar Screen Cleaner) is an advanced solid-liquid separation device for water treatment. It is mainly used at the inlets of municipal wastewater treatment plants, residential community pretreatment units, municipal storm and sewage pump stations, waterworks, and power plant cooling water systems. This equipment is also widely applied in wastewater treatment projects across industries such as textiles, dyeing, food processing, aquaculture, papermaking, brewing, slaughtering, and leather manufacturing. It is regarded as an ideal solid-liquid separation device in the water treatment field.

2. Structure and Working Principle

The equipment operates in a rotary manner. Specially shaped plow-type rake teeth are arranged in sequence on a horizontal shaft to form a rake chain. According to the water flow rate, the rake teeth are assembled with different spacing and installed at the inlet of a pump station or water treatment system. When the drive unit moves the rake chain upward from the bottom, debris in the water is lifted by the rake teeth while water passes through the gaps between them. After the rake chain reaches the top position, its movement direction reverses and moves downward. The collected debris falls off the rake teeth by gravity. When the rake chain returns to the bottom, another cycle begins. This continuous reciprocating operation removes debris from the water and achieves solid-liquid separation.



3. Model Description



4. Main Technical Parameters and Installation Dimensions Table

Model		CF-500	CF-600	CF-700	CF-800	CF-900	CF-1000	CF-1100	CF-1200	CF-1300	CF-1400	CF-1500	
Parameter		500	600	700	800	900	1000	1100	1200	1300	1400	1500	
Equipment Width B (mm)		B+100											
Channel Width B ₁ (mm)		B-157											
Effective Channel Width B ₂ (mm)		B+200											
Foundation Bolt Center Distance B ₃ (mm)		B+350											
Total Equipment Width B ₄ (mm)	t=100	1 < b < 10											
	t=150	10 < b < 50											
Installation Angle α (°)		60 ~ 85											
Channel Depth H (mm)		800 ~ 12000											
Height from Discharge Outlet to Platform H ₁ (mm)		600 ~ 1200											
Total Equipment Height H ₂ (mm)		H+H ₁ +1500											
Rear Frame Height H	t=100	≈1000											
	t=150	≈1100											
Rake Chain Running Speed v (m/min)		≈2.1											
Motor Power N (kW)		0.55 ~ 1.1			0.75 ~ 1.5		1.1 ~ 2.2			1.5 ~ 3.0			
Head Loss (mm)		≤20 (when unobstructed)											
Soil Bearing Capacity	P ₁ (KN)	20							25				
	P ₂ (KN)	8							10				
	ΔP (KN)	1.5							2.0				

Note: P is calculated based on H = 5.0 m. For every additional 1 m increase in H, the total load P = P (or P) + ΔP, where t represents the rake chain pitch.

CF Type Rotary Solid-Liquid Separator

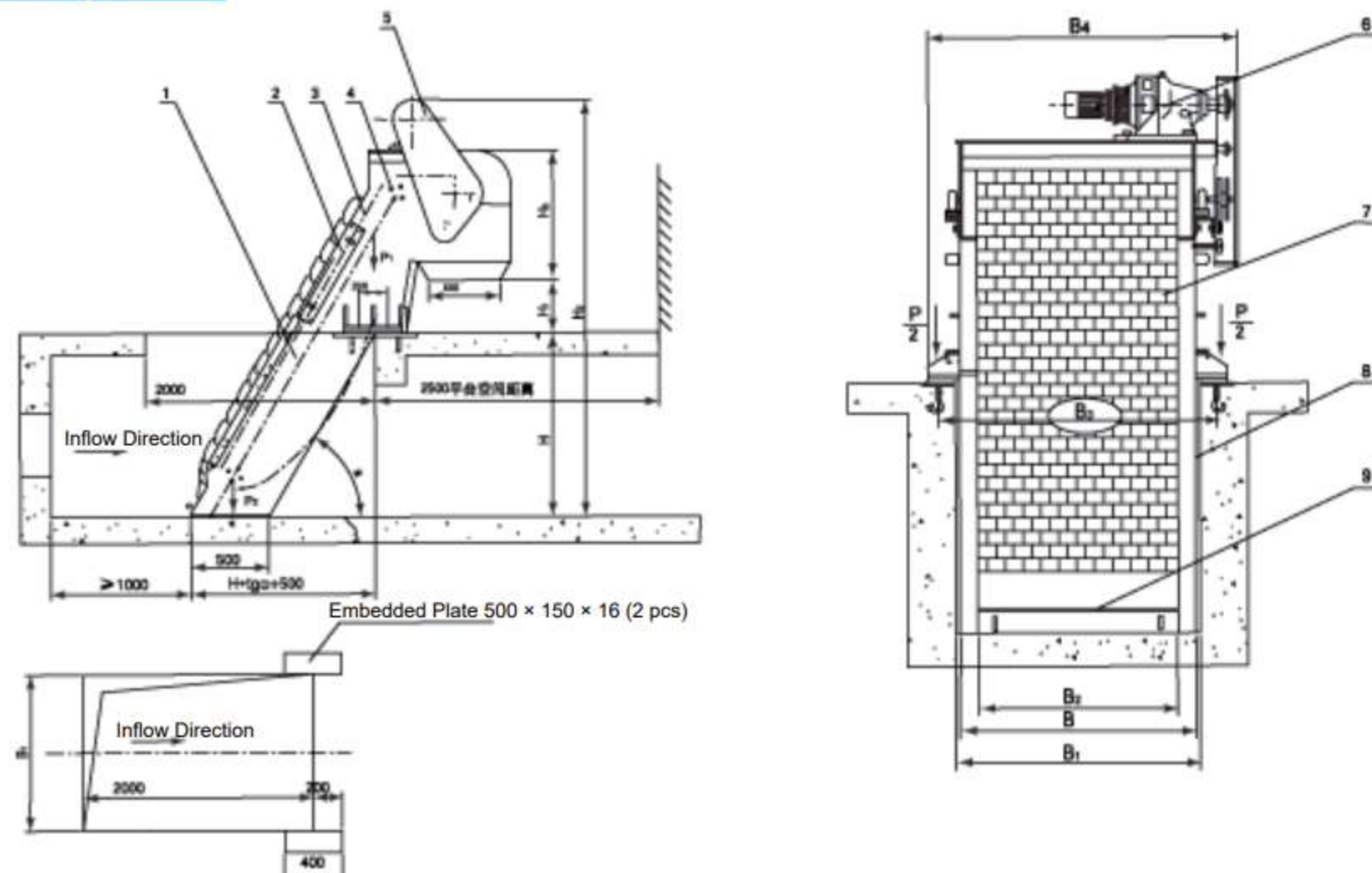
5. Main Features

- The drive unit adopts a cycloidal pinwheel or helical gear reducer motor for direct drive, featuring low noise, compact structure, and stable operation.
- The frame adopts an integrated structural design with high rigidity, ensuring easy installation and minimal daily maintenance.
- Two rake-tooth specifications are available: coarse bar screen rake teeth with a pitch of $t = 150$ mm, and fine bar screen rake teeth with a pitch of $t = 100$ mm.
- The equipment is easy to operate and can be controlled either locally or remotely.
- To prevent accidental overload, the equipment is equipped with dual protection consisting of a mechanical shear pin and overcurrent protection, ensuring safe and reliable operation.
- When the equipment width exceeds 1500 mm, a parallel dual-unit configuration is adopted to ensure the overall structural strength of the equipment.

6. Flow Capacity Table

Model		CF-500	CF-600	CF-700	CF-800	CF-900	CF-1000	CF-1100	CF-1200	CF-1300	CF-1400	CF-1500
Parameter	Upstream water depth H_s (m)	1.0										
	Flow velocity through the grate V (m/s)	0.8										
Gap b (mm)	1	0.03	0.04	0.05	0.06	0.07	0.08	0.08	0.09	0.10	0.11	0.12
	3	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26
	5	0.09	0.11	0.14	0.16	0.18	0.21	0.23	0.26	0.28	0.31	0.33
	10	0.11	0.14	0.17	0.21	0.24	0.27	0.30	0.33	0.37	0.40	0.43
	15	0.13	0.16	0.20	0.24	0.27	0.31	0.34	0.38	0.42	0.45	0.49
	20	0.14	0.17	0.21	0.25	0.29	0.33	0.37	0.41	0.45	0.49	0.53
	25	0.14	0.18	0.22	0.27	0.31	0.35	0.39	0.43	0.47	0.51	0.55
	30	0.15	0.19	0.23	0.27	0.32	0.36	0.40	0.45	0.49	0.53	0.57
	40	0.15	0.20	0.24	0.29	0.33	0.38	0.42	0.46	0.51	0.55	0.60
	50	0.16	0.20	0.25	0.29	0.34	0.39	0.43	0.48	0.52	0.57	0.61

7. Outline and Installation Dimension Diagram



1. Frame 2. Inspection Hole Cover Plate 3. Traction Chain 4. Guiding Device 5. Motor Cover 6. Drive Unit 7. Rake Teeth 8. Side Stop Plates 9. Bottom Stop Plate

LF Type Chain Plate Rotary Bar Screen Cleaner

1. Application

LF Type Chain Plate Rotary Bar Screen Cleaner (also called Rotary Bar Screen Cleaner) is suitable for intercepting and removing floating debris in municipal wastewater treatment, including stormwater and sewage stations, water supply lifting pump stations, and inlet pump rooms of sewage treatment plants. It is a widely applicable and efficient sewage cleaning device.

2. Structure and Working Principle

The equipment operates in a chain-plate rotary mode. A fixed grid bar assembly forms the water-passing surface. When sewage flows through, debris larger than the grid spacing is intercepted. The rake teeth on the rake plate extend into the gaps between the grid bars. As the drive unit moves the traction chain in a rotary motion, the rake teeth lift the intercepted debris upward along the grid surface to the discharge outlet. The debris then falls off by gravity into a conveyor or waste trolley through the discharge port, after which it is transported away or further processed.



3. Model Description



4. Main Technical Parameters and Installation Dimensions Table

Parameter	Model	LF-800	LF-1000	LF-1200	LF-1400	LF-1600	LF-1800	LF-2000	LF-2200	LF-2400	LF-2600	LF-2800	LF-3000
Equipment Width B (mm)		800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Channel Width B_1 (mm)		$B+100$											
Effective Channel Width B_2 (mm)		$B-166$											
Foundation Bolt Center Distance B_3 (mm)		$B+200$											
Total Equipment Width B_4 (mm)		$B+350$											
Bar Spacing b (mm)		20~100											
Installation Angle α (°)		60~80											
Channel Depth H (mm)		2000~12000 (to be determined according to user requirements)											
Height from Discharge Outlet to Platform H_1 (mm)		600~1200 (to be determined according to user requirements)											
Total Equipment Height H_2 (mm)		$H+H_1+1500$						$H+H_1+1600$					
Rake Length L (mm)		(Maximum water depth + 600) / $\sin \alpha$ (to be determined according to user requirements)											
Chain Rotation Speed V (m/min)		≤ 3.0											
Motor Power N (kW)		0.75~1.5				1.1~2.2				1.5~3.0			
Soil Bearing Capacity	P_1 (KN)	18.0				22.5				30.0			
	P_2 (KN)	8.0				12.5				20.0			
	ΔP (KN)	1.0				1.5				2.0			

Note: P is calculated based on $H = 5.0$ m. For every additional 1 m increase in H , the total load $P = P(P) + \Delta P$.

LF Type Chain Plate Rotary Bar Screen Cleaner

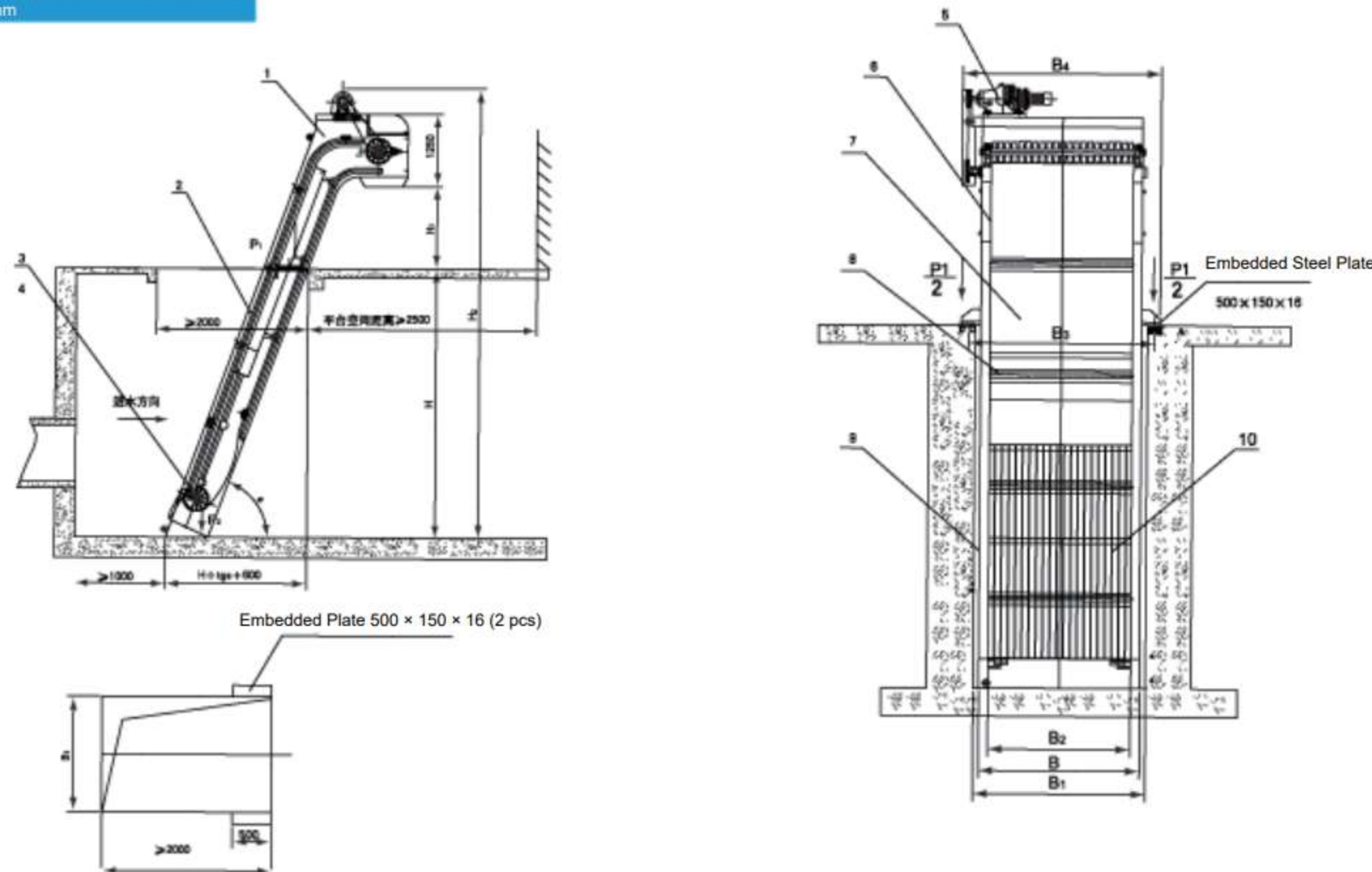
5. Main Features

- The drive unit adopts a cycloidal pinwheel or helical gear reducer motor, driven by chain or coupling, featuring low noise, compact structure, and stable operation.
- The rake plates are precisely machined with high accuracy and an attractive appearance. The spacing between two rake plates is 2.0 - 2.5 m, with an additional scraper plate in between, effectively removing larger debris.
- The frame is an integrated welded structure with high rigidity, easy installation, and minimal maintenance.
- The equipment is easy to operate and can be controlled either locally or remotely.
- To prevent overload, the equipment is equipped with mechanical shear pin and overcurrent dual protection, ensuring safe and reliable operation.

6. Flow Capacity Table

Model		LF-800	LF-1000	LF-1200	LF-1400	LF-1600	LF-1800	LF-2000	LF-2200	LF-2400	LF-2600	LF-2800	LF-3000
Parameter													
Upstream Water Depth H_1 (m)		2											
Flow Velocity Through Grid v' (m/s)		0.8											
Bar Spacing b (mm)	20	0.57	0.76	0.94	1.12	1.30	1.48	1.66	1.84	2.03	2.21	2.39	2.57
	30	0.65	0.85	1.05	1.26	1.46	1.67	1.87	2.07	2.28	2.48	2.69	2.89
	40	0.69	0.91	1.12	1.34	1.56	1.78	2.00	2.21	2.43	2.65	2.87	3.08
	50	0.72	0.95	1.17	1.40	1.63	1.85	2.08	2.30	2.53	2.76	2.99	3.21
	60	0.74	0.97	1.21	1.44	1.67	1.90	2.14	2.37	2.60	2.84	3.07	3.30
	70	0.75	0.99	1.23	1.47	1.71	1.94	2.18	2.42	2.66	2.90	3.13	3.37
	80	0.77	1.01	1.25	1.49	1.73	1.98	2.22	2.46	2.70	2.94	3.18	3.43
	90	0.78	1.02	1.27	1.51	1.76	2.00	2.24	2.49	2.73	2.97	3.22	3.47
	100	0.78	1.03	1.28	1.53	1.77	2.02	2.27	2.51	2.76	3.01	3.26	3.50
	Overflow Discharge Q (m ³ /s)												

7. Outline and Installation Dimension Diagram



1. Frame 2. Traction Chain 3. Guiding Device 4. Bottom Moving Rake Bar 5. Drive Unit 6. Inspection Hole Cover Plate 7. Support Stop Plate 8. Rake Tooth Plate 9. Side Stop Plates 10. Grid Bars

LZ Type Three-Rope Wire Rope Bar Screen Cleaner

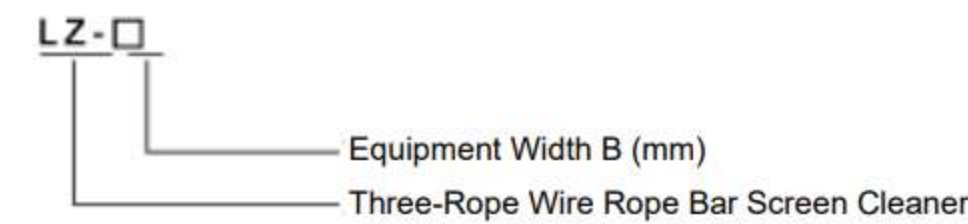
1. Application

LZ Type Three-Rope Wire Rope Bar Screen Cleaner (also called Wire Rope Type Bar Screen Cleaner) is suitable for large and medium-sized waterworks, stormwater/sewage lifting pump stations, wastewater treatment plants, and power plant inlets. It is designed to intercept and remove coarse floating debris and bottom sediment in water, thereby protecting pump impellers and reducing the treatment load on subsequent process equipment.

2. Structure and Working Principle

The frame of the equipment is fixed at the top of the channel. A fixed grid bar assembly forms the water-passing surface, where debris larger than the grid spacing is intercepted as sewage flows through. The rake bucket is first driven by the rake-flipping motor to complete the opening and flipping action, then stops. It is then driven by the lifting motor, which, under the control of a height limiter, lowers it along the guide rails on both sides to the bottom of the grid well, where it stops again. The rake-flipping motor automatically restarts to close the rake, then stops. Next, the lifting motor starts again, and the rake bucket, pulled by the wire rope, moves upward through the grid bars, scooping up intercepted debris. The bucket ascends along the grid surface and debris baffle plate. When it reaches the discharge position, the height limiter stops the lifting motor. A cleaning scraper mounted on the upper frame automatically removes the debris from the rake bucket as it rises, allowing the debris to fall through the discharge outlet into a conveyor or waste trolley. This completes one full cleaning cycle.

3. Model Description



4. Main Technical Parameters and Installation Dimensions Table

Model	LZ-1000	LZ-1100	LZ-1200	LZ-1300	LZ-1400	LZ-1500	LZ-1600	LZ-1700	LZ-1800	LZ-2000	LZ-2500	LZ-3000	
Parameter													
Equipment Width B (mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	2000	2500	3000	
Channel Width B_1 (mm)	$B+100$												
Effective Width B_2 (mm)	$B-130$												
Embedded Plate Center Distance B_3 (mm)	$B+200$												
Total Equipment Width B_4 (mm)	$B+340$												
Bar Spacing b (mm)	20~100												
Installation Angle α (°)	75~90												
Channel Depth H (mm)	≤ 12000												
Height from Discharge Port to Platform H_1 (mm)	1000~1200												
Bar Length L (mm)	$(\text{Maximum water depth} + 600) / \sin \alpha$ (according to user requirements)												
Rake Movement Speed V (m/min)	≤ 6.0												
Lifting Motor Power N_1 (kW)	1.1~2.2						1.5~3.0						
Rake Motor Power N_2 (kW)	0.55~0.75						0.75~1.1						
Number of Embedded Plates per Side n (mm)	$n = H \cdot \sin \alpha + 1000 (w \geq 2)$												
Ground Load	P_1 (KN)	20.0						30.0					
	P_2 (KN)	15.0						20.0					
	ΔP (KN)	2.5											

Note: P (P_1) is calculated at $H = 5.0$ m.
For every 1 m increase in H , the total load $P = P_1 + \Delta P$.

LZ Type Three-Rope Wire Rope Bar Screen Cleaner

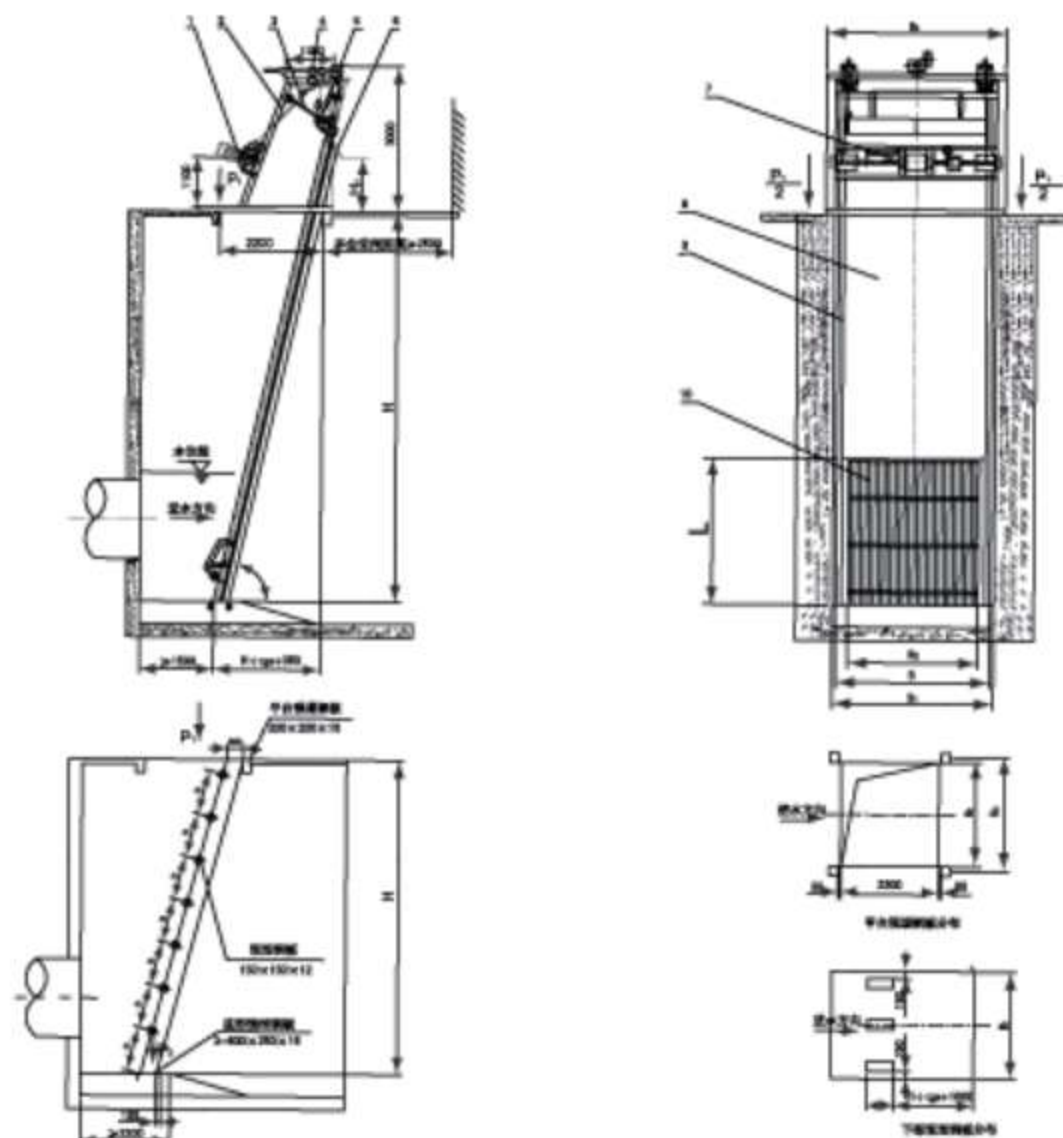
5. Main Features

- The frame structure is independent and adopts a split design, meaning the upper frame and the lower grid section are not integrated.
- The rake bucket uses a special large-capacity, heavy-duty "grab-type" design. It operates smoothly through side guide rollers and wire rope traction.
- A discharge scraper is installed on the upper frame to effectively remove debris from the rake bucket and discharge it through the outlet.
- The lifting and opening mechanisms of the rake bucket form two independent drive systems, operating automatically according to the preset program under electrical control.
- The equipment is easy to operate and can be controlled either locally or remotely.

6. Flow Capacity Table

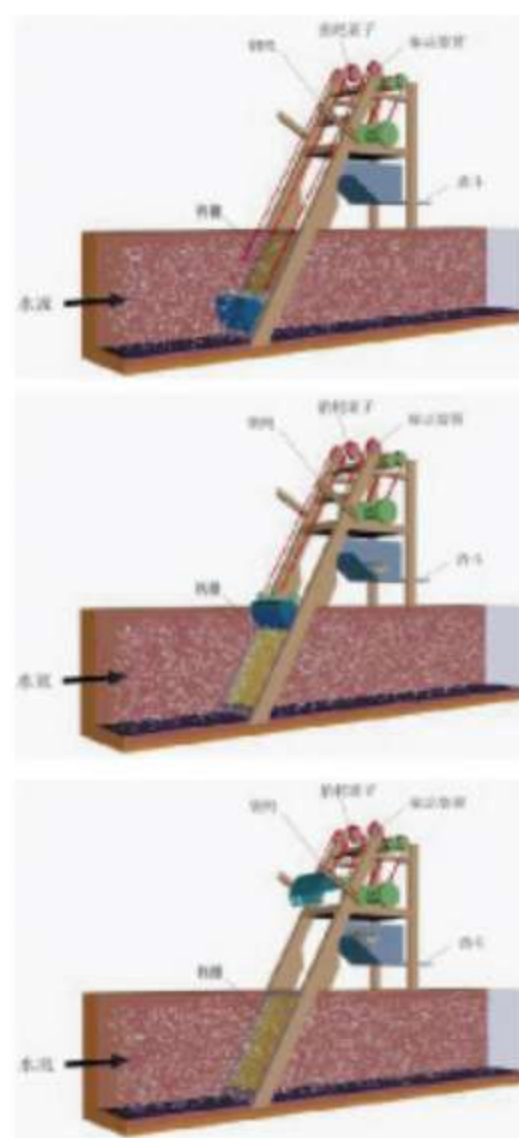
Model		LZ-1000	LZ-1100	LZ-1200	LZ-1300	LZ-1400	LZ-1500	LZ-1600	LZ-1700	LZ-1800	LZ-2000	LZ-2500	LZ-3000
Parameter	Upstream Water Depth H_1 (m)	2											
	Flow Velocity Through Grid v' (m/s)	0.8											
Bar Spacing b (mm)	20	0.87	0.97	1.07	1.17	1.27	1.37	1.47	1.57	1.67	1.87	2.36	2.86
	30	0.98	1.09	1.20	1.31	1.42	1.54	1.65	1.76	1.87	2.10	2.66	3.22
	40	1.04	1.16	1.28	1.40	1.52	1.64	1.76	1.88	2.00	2.24	2.84	3.43
	50	1.08	1.21	1.33	1.46	1.58	1.71	1.82	1.96	2.08	2.33	2.95	3.58
	60	1.12	1.24	1.37	1.50	1.63	1.76	1.88	2.01	2.14	2.40	3.04	3.68
	70	1.14	1.27	1.40	1.53	1.66	1.79	1.92	2.06	2.19	2.45	3.10	3.76
	80	1.16	1.29	1.42	1.56	1.69	1.82	1.95	2.09	2.22	2.49	3.15	3.82
	90	1.17	1.31	1.44	1.58	1.71	1.84	1.98	2.11	2.25	2.52	3.19	3.86
	100	1.18	1.32	1.46	1.59	1.73	1.86	2.00	2.14	2.27	2.54	3.22	3.90

7. Outline and Installation Dimension Diagram



1. Lifting Motor 2. Upper Frame 3. Sludge Removal Device 4. Rake-Flipping Motor 5. Rake Bucket 6. Discharge Outlet 7. Main Shaft and Sheath 8. Support Roller and Stopper 9. Guide Rail 10. Grid Bars

8. Working Schematic Diagram



OA1 Type Wedge Screw Bar Screen Cleaner

1. Application

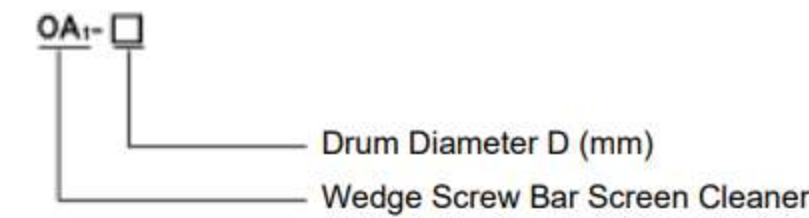
OA1 Type Wedge Screw Bar Screen Cleaner is a new-generation device developed and manufactured by our company through independent research, incorporating advanced foreign technology and adapting it to the specific conditions of water treatment projects in China. It is designed for fine screening in municipal wastewater treatment plants and integrates three functions—waste interception and collection, conveying, and pressing—into one unit.

2. Structure and Working Principle

The equipment consists of a circular wedge-shaped drum composed of a series of circular grid rings, installed in the channel at an angle of 35° to the horizontal. When sewage enters the grid drum from the inlet, debris larger than the grid spacing is intercepted and accumulates on the inner surface of the drum. Toothed scrapers driven by a motor rotate to push the trapped debris upward along the drum, allowing it to fall off by gravity. When the motor reverses, the scrapers rotate in the opposite direction, and the cleaning plate removes the remaining debris from the drum surface into the collection trough. The collected residue is then conveyed, pressed, and dewatered by a central screw, and finally discharged through the outlet into a material bin or conveyor for external disposal.



3. Model Description



4. Main Technical Parameters and Installation Dimensions Table

Model		OA1-600	OA1-800	OA1-1000	OA1-1200	OA1-1400	OA1-1600	OA1-1800	OA1-2000	OA1-2200	OA1-2400	OA1-2600	
Parameter	Equipment Width B (mm)	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	
	Channel Width B _c (mm)	620	820	1020	1220	1440	1640	1840	2040	2240	2440	2640	
	Bar Spacing b (mm)	6-12											
	Installation Angle α (°)	35											
	Channel Depth H (mm)	$H_1+300-500$											
	Height from Discharge Port to Platform H ₂ (mm)	1000-1500											
	Rotation Speed n (r/min)	≈ 6											
	Motor Power N (kW)	1.1			1.5				2.2				
Installation Dimensions (mm):	L	$b=6$	820	1010	1190	1400	1660	1870	2280	2490	2670	2990	3050
		$b=10$	--	1010	1190	1400	1660	1880	2280	2490	2670	2990	3050
	L ₁	$b=6$	430	540	620	740	840	900	1260	1300	1340	1370	1490
		$b=10$	460	550	630	750	850	950	1260	1300	1340	1370	1490
	L ₂		500	650	700	800	900	1000	1100	1200	1300	1400	1600
	L ₃		1230	1420	1420	1310	1590	1590	1590	1520	1520	1520	1520
H ₃		300	350	480	590	750	850	950	1150	1250	1400	1490	
Foundation Load	P ₁ (KN)	7.2	8.3	10.4	11.76	19.5	22.0	25.0	38.0	41.0	46.0	56.0	
	P ₂ (KN)	3.5	4.1	5.2	5.8	9.75	11.0	12.2	18.7	20.4	22.9	27.9	

OA1 Type Wedge Screw Bar Screen Cleaner

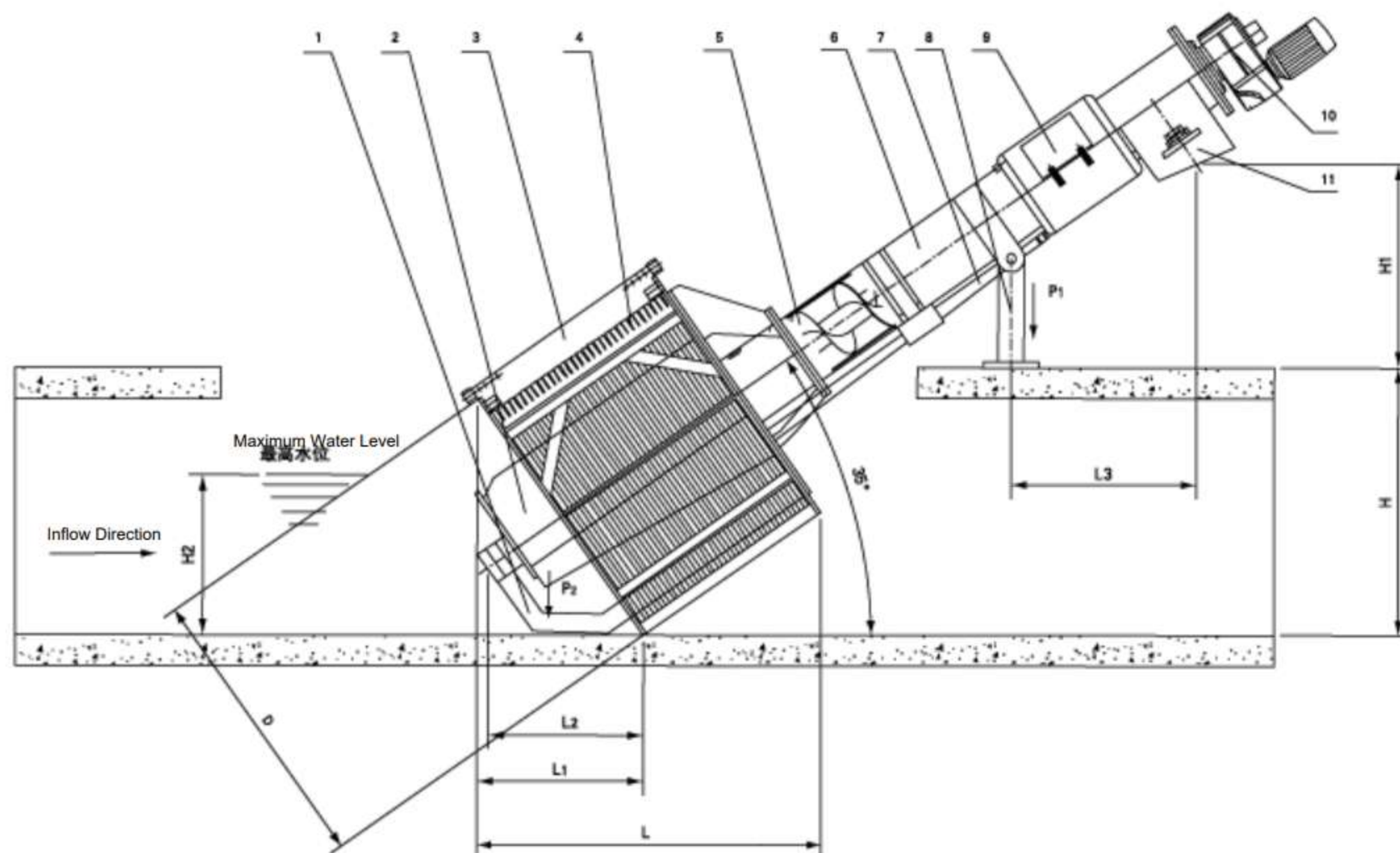
5. Main Features

- The equipment has a compact structure and small footprint, making installation, operation, and maintenance convenient.
- The spacing between the screen bars is small, generally designed within the range of 6 - 12 mm.
- It has high debris removal efficiency and uses enclosed conveying, preventing environmental pollution.
- The equipment supports fully automatic control, operating smoothly with low energy consumption and minimal noise.
- During operation, it performs automatic cleaning to prevent clogging and ensure continuous performance.

6. Flow Capacity Table

Model		OA1-600	OA1-800	OA1-1000	OA1-1200	OA1-1400	OA1-1600	OA1-1800	OA1-2000	OA1-2200	OA1-2400	OA1-2600
Parameter	Upstream Water Depth H_1 (mm)	300	350	480	590	750	850	950	1150	1250	1400	1490
	Flow Velocity Through Grid v' (m/s)	0.8										
Bar Spacing b (mm)	6	83	130	200	300	419	630	850	---	---	---	---
	10	91	151	241	346	482	638	878	1061	1315	1750	2150
	Overflow Discharge Q (m ³ /s)											

7. Outline and Installation Dimension Diagram



1. Scraper 2. Collection Hopper 3. Drum Body 4. Cleaning Plate 5. Transmission Pressing Roller Shaft 6. Transmission Pressing Roller Cylinder 7. Return Pipe 8. Support 9. Washing Cylinder 10. Drive Unit 11. Discharge Outlet

OA2 Type Drum Screw Bar Screen Cleaner

1. Application

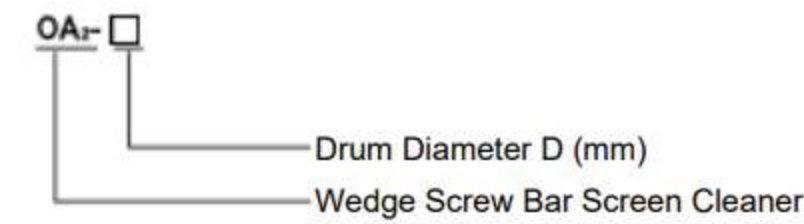
OA2 Type Drum Screw Bar Screen Cleaner is a new-generation device independently developed and manufactured by our company, incorporating advanced foreign technology and adapted to the specific conditions of water treatment projects in China. It is designed for fine screening in municipal wastewater treatment plants and integrates three functions—interception and collection of screened waste, conveying, and pressing—into one unit.

2. Structure and Working Principle

The equipment adopts a drum screw design, using a circular screening drum as the grid surface, installed in the channel at an angle of 35° to the horizontal. When sewage enters the drum from the inlet, debris larger than the grid spacing is intercepted and accumulates on the inner surface of the drum. The entire drum is driven by a motor to rotate, while the cleaning brush and flushing system above the drum wash the screen surface, dislodging the trapped debris into the central collection trough. The screw conveyor then lifts the residue, presses and dewateres it, after which it is discharged through the outlet into a material bin or conveyor for external transport and disposal.



3. Model Description



4. Main Technical Parameters and Installation Dimensions Table

Model		OA2-600	OA2-800	OA2-1000	OA2-1200	OA2-1400	OA2-1600	OA2-1800	OA2-2000	OA2-2200	OA2-2400	OA2-2600	
Parameter	Equipment Width B (mm)	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	
	Channel Width B_1 (mm)	620	820	1020	1220	1440	1640	1840	2040	2240	2440	2640	
	Bar Spacing b (mm)	1-5											
	Installation Angle α (°)	35											
	Channel Depth H (mm)	$H_1+300 \sim 500$											
	Height from Discharge Port to Platform H_2 (mm)	1000-1500											
	Rotation Speed n (r/min)	= 6											
	Motor Power N (kW)	1.1			1.5			2.2					
Installation Dimensions (mm)	L	860	1100	1340	1580	1810	2040	2280	2670	2700	3080	3410	
	L_1	330	450	560	660	780	910	1000	1120	1230	1350	1460	
	L_2	125	125	125	125	125	125	125	125	125	125	125	
	L_3	1230	1420	1420	1310	1590	1590	1590	1520	1520	1520	1520	
	H_2	400	520	670	800	930	1110	1230	1300	1500	1680	1750	
Foundation Load	P_1 (KN)	6.6	7.7	9.8	11.0	18.7	21.0	23.4	26.1	36.6	40.4	45.0	
	P_2 (KN)	3.3	3.86	4.9	5.5	9.4	10.5	11.7	13.1	18.3	20.2	22.3	

OA2 Type Drum Screw Bar Screen Cleaner

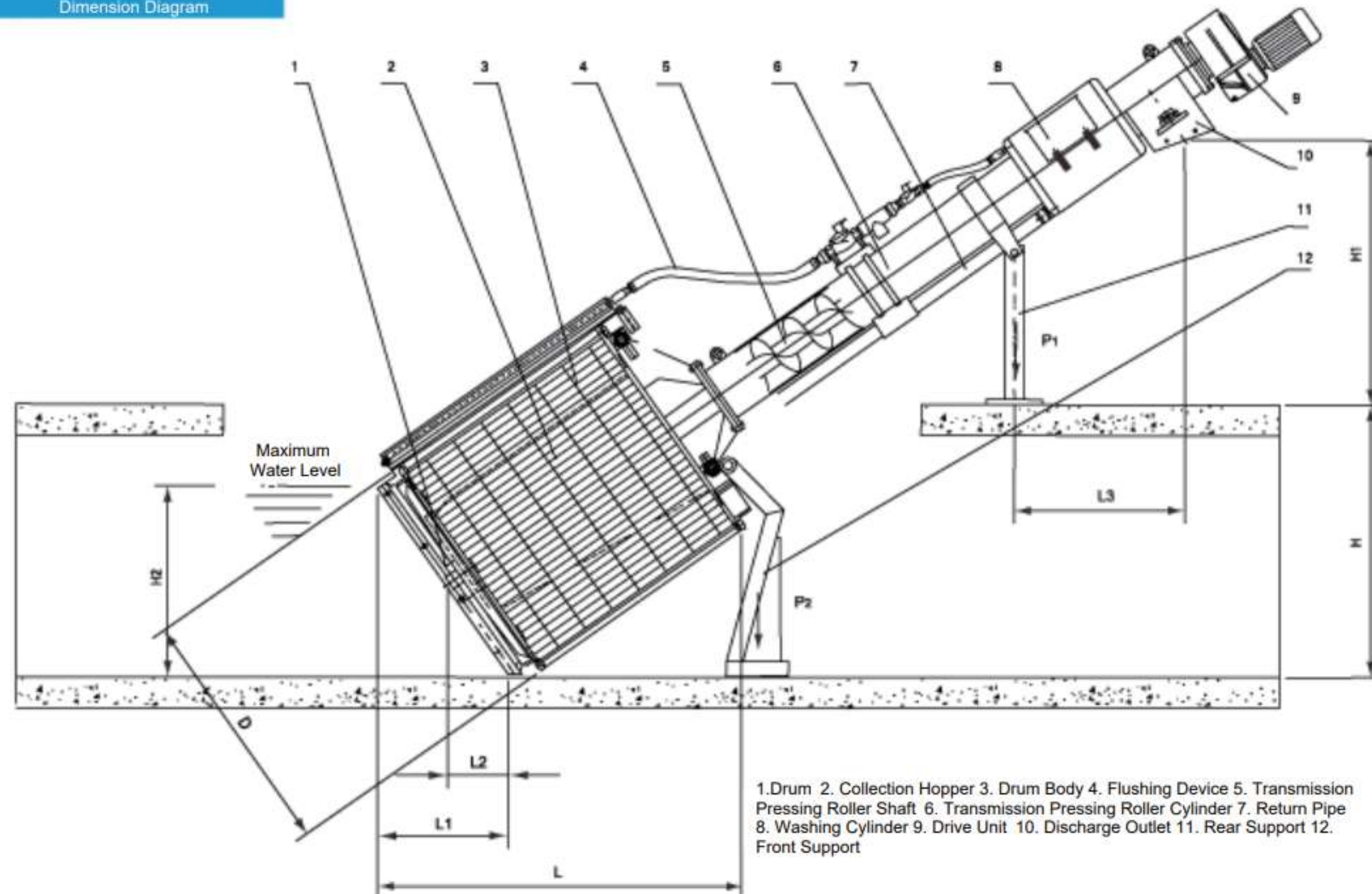
5. Main Features

- The equipment has a compact structure and small footprint, making installation, operation, and maintenance easy.
- The spacing between the screen bars is small, generally designed within the range of 1 - 5 mm.
- It offers high debris removal efficiency with enclosed conveying, preventing environmental pollution.
- The equipment supports fully automatic control, operating smoothly with low energy consumption and minimal noise.
- During operation, it performs automatic cleaning, ensuring continuous, clog-free performance.

6. Flow Capacity Table

Model		OA2-600	OA2-800	OA2-1000	OA2-1200	OA2-1400	OA2-1600	OA2-1800	OA2-2000	OA2-2200	OA2-2400	OA2-2600	
Parameter													
Water depth before the grid H _b (mm)		400	520	670	800	930	1110	1230	1300	1500	1680	1750	
Flow velocity through the grid v' (m/s)		0.8											
Gap b (mm)	Q _{max} (L/s)	1	36	60	100	—	—	—	—	—	—	—	—
		2	54	90	154	214	306	402	510	—	—	—	—
		3	65	110	192	262	373	490	622	768	928	1104	1516
		4	68	120	203	280	402	572	756	930	1122	1300	1710
		5	70	130	224	310	400	616	815	1020	1213	1456	1840

7. Outline and Installation Dimension Diagram



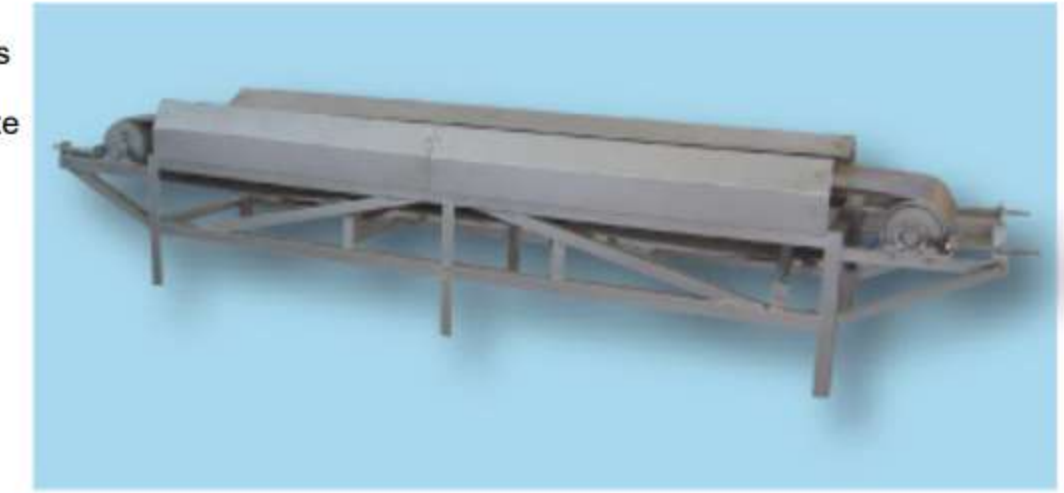
PD Type Belt Conveyor

1. Application

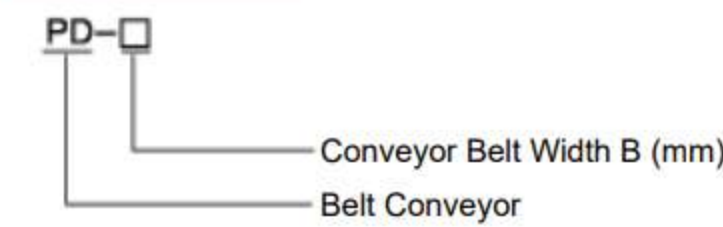
PD Type Belt Conveyor is suitable for industries such as chemical, metallurgy, coal mining, hydropower, and building materials. It can transport various bulk materials in block or granular form and is therefore often used in conjunction with bar screens or dewatering machines in municipal wastewater systems to convey screened residue or dewatered sludge.

2. Structure and Working Principle

The equipment adopts a continuous trough-type belt structure. Material discharged from the bar screen or dewatering machine falls onto the conveyor belt. Driven by the electric drum, the material moves from one end to the other, where the belt connects to a waste bin for subsequent handling or further processing.



3. Model Description



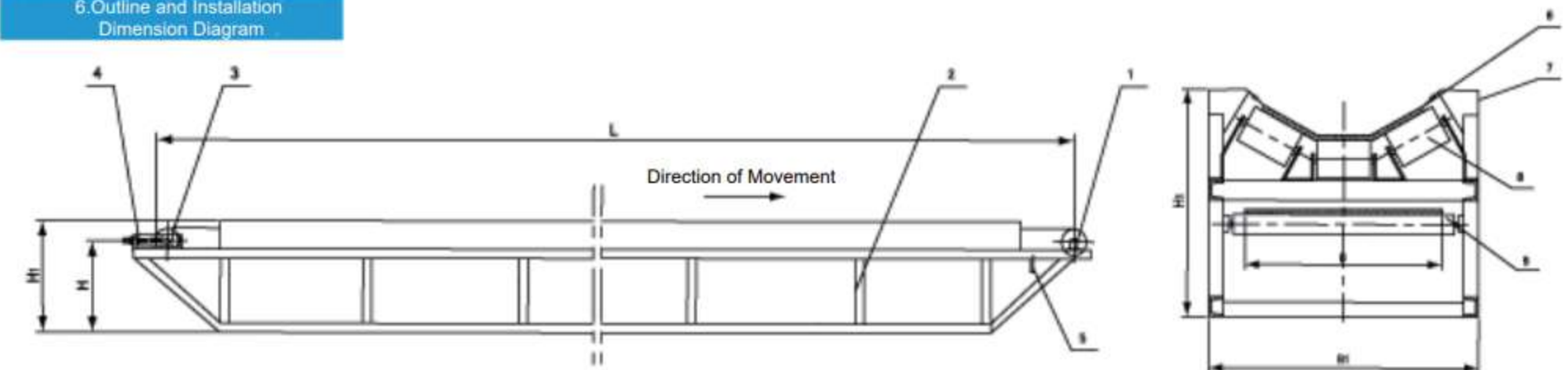
4. Main Technical Parameters and Installation Dimensions Table

Parameter		Model	PD-500	PD-650	PD-800	PD-1000
Conveyor belt width B (mm)			500	650	800	1000
Conveying capacity Q (m ³ /h)	Installation angle α (°)	0	25	32	50	75
		10	22.5	28.8	45	67.5
		15	18.75	24	37.5	36.25
		20	15	19.2	30	45
Belt speed V (m/s)			0.6~1.0			
Motor power N (kW)			0.75 - 22.0 (determined by length)			
Motor pulley diameter D (mm)			220, 240, 315, 400, 500 (determined by length)			
Installation dimensions (mm)	B1	B+250				
	L	Determined according to user requirements				
	H	Determined according to user requirements				
	H1	H+80+(D/2)				

5. Main Features

- The equipment operates reliably, offers large conveying capacity and long conveying distance, and supports multi-point loading and continuous conveying.
- The drive unit uses an oil-cooled automatic drum motor with IP55 protection, featuring compact structure, small footprint, and easy maintenance.
- The screw-type tensioning device ensures safe, reliable, and efficient operation of the conveyor belt.
- The conveyor belt is made of neoprene rubber and uses vulcanized joints for easy cleaning, corrosion resistance, and long service life.
- The upper trough rollers are equipped with side baffles to prevent sewage and debris from spilling, keeping the environment clean.
- It is easy to operate, clog-free, and convenient to maintain; it can be installed horizontally or at an incline, making it ideal for conveying screened residue.
- The equipment can be linked with other devices for integrated control or equipped with an independent local control cabinet.

6. Outline and Installation Dimension Diagram



1. Electric Drum Drive 2. Frame 3. Directional Drum 4. Tensioning Device 5. Scraper 6. Conveyor Belt 7. Protective Cover 8. Trough-shaped Idler Roller 9. Lower Idler Roller

LS-W Type Shaftless Screw Conveyor

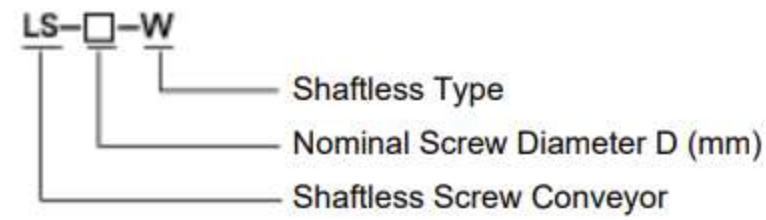
1. Application

The LS-W Type Shaftless Screw Conveyor is suitable for handling bar screen residue in municipal wastewater treatment plants, residential sewage pretreatment units, municipal stormwater/sewage pump stations, and waterworks. It is mainly used together with bar screens or dewatering machines to convey screened residue or dewatered sludge.

2. Structure and Working Principle

The equipment adopts a continuous trough-type belt design. Material discharged from the bar screen or dewatering machine falls onto the conveyor belt. Driven by the electric drum, the material moves from one end to the other, where the belt connects to a waste bin for subsequent disposal or further processing.

3. Model Description



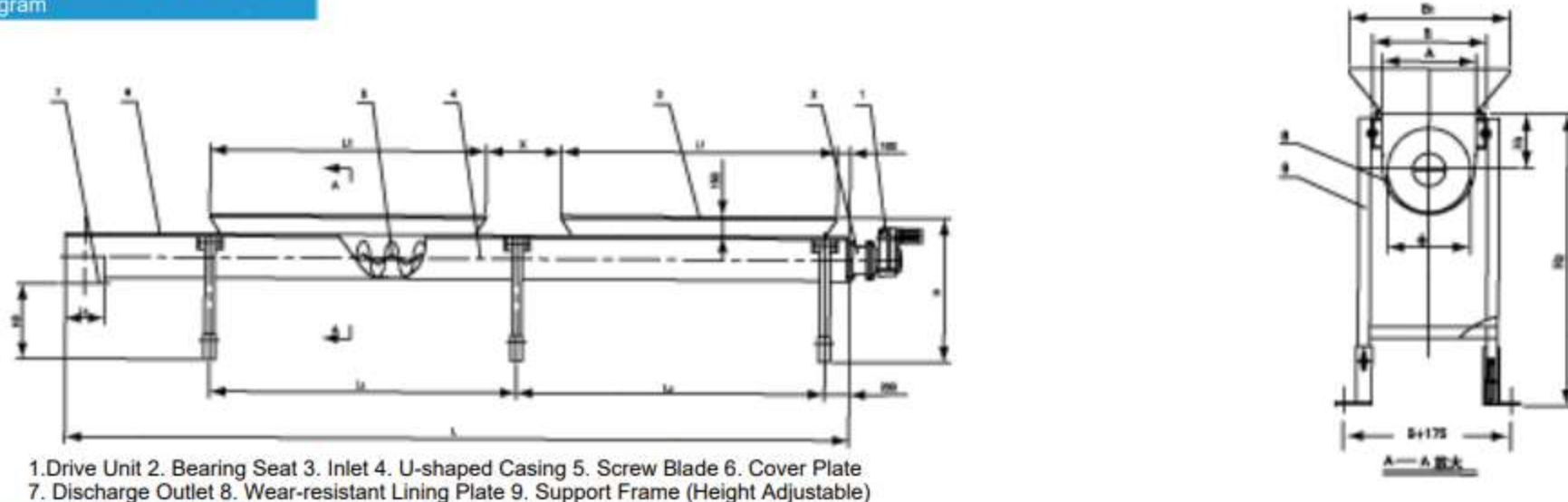
4. Main Technical Parameters and Installation Dimensions Table

Parameter	Model	LS-200W	LS-250W	LS-300W	LS-350W	LS-400W
Nominal screw diameter D (mm)		200	250	300	350	400
Screw pitch Φ (mm)		185	235	285	320	385
Capacity Q (m³/h)	Installation angle α (°)					
	0°	1.50	3.60	6.00	8.40	11.70
	5°	1.35	3.24	5.40	7.56	10.53
	15°	1.05	2.52	4.20	5.88	8.19
	25°	0.90	2.16	3.60	5.04	7.02
Screw speed n (r/min)		12~16				
Motor power N (kW)		0.75~5.5 (determined by length and installation angle)				
Installation dimensions (mm)	A	Φ+40				
	B	Φ+110				
	B ₁	Matched with corresponding equipment				
	L	Determined according to user requirements				
	L ₁	Matched with corresponding equipment				
	L ₂	(L-1000)/2~(L-1000)/3				
	L ₃	250	250	300	350	400
	H	Matched with corresponding equipment				
	H ₁	140	165	188	210	240
	H ₂	H-150				
H ₃	Matched with corresponding equipment					

5. Main Features

- The drive unit adopts a horizontal or inclined shaft helical gear reducer, featuring a compact structure, stable operation, and safe performance.
- The conveying direction is determined by the rotation of the screw blade and motor, allowing bidirectional conveying.
- The U-shaped trough is equipped with an internal liner that provides strong wear resistance, long service life, and easy replacement.
- The system enables large-volume conveying with smooth, clog-free, and reliable operation, low noise, and convenient maintenance.

6. Outline and Installation Dimension Diagram



1. Drive Unit 2. Bearing Seat 3. Inlet 4. U-shaped Casing 5. Screw Blade 6. Cover Plate 7. Discharge Outlet 8. Wear-resistant Lining Plate 9. Support Frame (Height Adjustable)

YS Type Screw Conveyor with Press Integration

1. Application

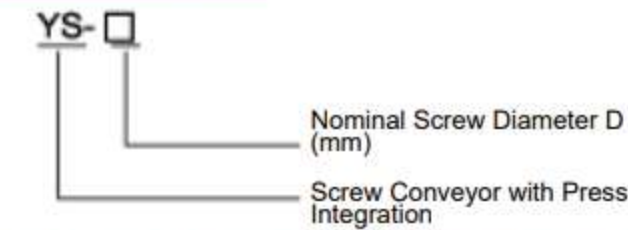
YS Type Screw Conveyor with Press Integration is suitable for handling bar screen residue in municipal wastewater treatment plants, residential sewage pretreatment units, municipal stormwater/sewage pump stations, and waterworks. It is mainly used in conjunction with bar screens and similar equipment to convey, press, and dewater the collected residue.

2. Structure and Working Principle

The equipment adopts a shaftless screw design. When material enters through the feed hopper of the screw press conveyor, the rotating screw blade pushes and slides the material forward along the U-shaped trough to the compaction zone. Under the counter-spring pressure of the pressing tube and discharge door cover, the bar screen residue is pressed and dewatered. The dewatered residue then forces open the pressure plate and falls into a waste trolley for external transport, while the squeezed filtrate flows back into the bar screen chamber through the return pipeline.



3. Model Description



4. Main Features

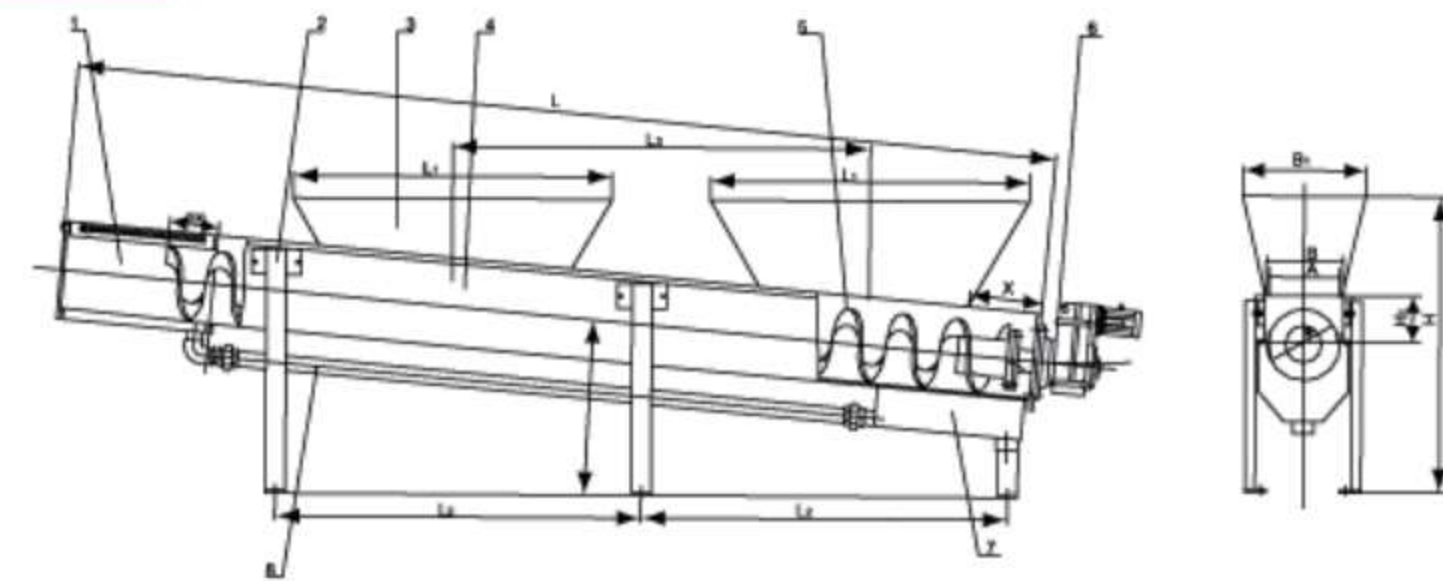
- The drive unit adopts a horizontal or inclined shaft helical gear reducer motor, featuring compact structure, stable operation, and safe performance.
- The U-shaped trough is equipped with an internal liner that provides high wear resistance and long service life.
- It uses a shaftless screw blade and a spring-loaded discharge door plate structure, integrating conveying, pressing, and dewatering functions in one unit.

5. Main Technical Parameters and Installation Dimensions Table

Model	YS-250	YS-300	YS-350	
Nominal screw diameter D (mm)	250	300	350	
Screw pitch Φ (mm)	235	285	320	
Capacity Q (m³/h)	2.0	4.0	6.0	
Installation angle α (°)	1~5			
Screw speed n (r/min)	8~12			
Motor power N (kW)	1.5~3.0 (determined by length)			
Installation dimensions (mm)	A	Φ+40		
	B	Φ+110		
	B ₁	Matched with corresponding equipment		
	L	Determined according to user requirements		
	L ₁	Matched with corresponding equipment		
	L ₂	(L-1000)/2~(L-1000)/3		
	H	Matched with corresponding equipment		
	H ₁	160	188	210
	H ₂	Matched with corresponding equipment		
	H ₃	Matched with corresponding equipment		
X	300~500			

Note: The treatment capacity is calculated based on n = 8 r/min.

6. Outline and Installation Dimension Diagram



1. Compaction Body 2. Support Frame 3. Receiving Hopper 4. Conveyor Casing 5. Screw Blade 6. Drive Mechanism 7. Drainage Hopper 8. Drain Pipe

XLC Type Cyclone Grit Chamber Sand Remover

1.Application

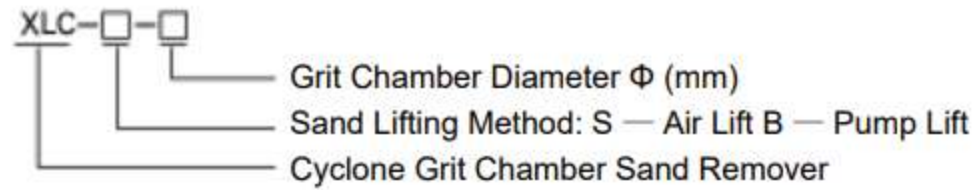
The XLC Type Desander is mainly used in cyclone grit chambers of municipal wastewater treatment plants. This equipment utilizes hydraulic cyclone action to effectively separate sand and organic matter, making it an ideal device for grit removal.

2.Structure and Working Principle

The cyclone grit chamber adopts a circular tank with a conical bottom, equipped with an impeller separator. Sewage enters tangentially and rotates about 270° (clockwise in plan view) before discharging through the outlet channel. The inflow velocity drives the liquid to move tangentially along the inner wall, creating a swirling flow. With the help of impeller agitation, a combination of tangential and axial vortices is formed, accelerating the sedimentation of sand particles and effectively separating them from organic matter. Because the flow cross-section decreases toward the center, the velocity increases, and the bottom flow velocity grows centrifugally, causing the settled sand to move spirally toward the central sand hopper. Organic matter rises in the center and is carried out with the effluent, while the settled sand is lifted by the sand pump to the sand-water separator. After separation, the wastewater returns to the bar screen chamber.



3.Model Description



4.Main Technical Parameters and Installation Dimensions Table

Parameter	Model	XLC-1830	XLC-2130	XLC-2430	XLC-3050	XLC-3650	XLC-4870	XLC-5480	XLC-5800	XLC-6100	
Tank diameter Φ (mm)		1830	2130	2430	3050	3650	4870	5480	5800	6100	
Capacity Q (m³/h)		180	360	720	1080	1980	3170	4750	6300	7200	
Blade separator	Blade diameter Φ (mm)	1000				1500					
	Blade speed v (r/min)	12~20									
	Motor power N (kW)	0.75			1.1		1.5				
Blower	Air volume Q (m³/min)	1.43	1.79	1.75	1.75	2.03	1.98	1.98	2.01	2.01	
	Air pressure P (KPa)	34.3	34.3	39.2	39.2	44.1	53.9	53.9	58.8	58.8	
	Power N (kW)	1.5	2.2		3.0		4.0				
Pump	Flow rate Q (m³/min)	25			30		40				
	Head H (m)	2~3									
	Power N (kW)	2.2			3.0		4.0				
Installation dimensions (mm)	A	1830	2130	2430	3050	3650	4870	5480	5800	6100	
	B	1000									
	C	305	380	450	610	750	1000	1100	1200	1200	
	D	610	760	900	1200	1500	2000	2200	2400	2400	
	E	300				400					
	F	1400	1400	1550	1550	1700	2200	2200	2500	2500	
	G	300	300	400	450	600	1000	1000	1300	1300	
	H	300			510		610		760		
	J	300	300	400	450	580	600	630	700	750	
	K	1000									
L	1100	1100	1150	1350	1450	1850	1850	1950	1950		
Working load (kN)	30										
Maximum torque (N·m)	600		850			1195					

Note:
1. Hydraulic surface load: 200 m³/m²·h
2. Hydraulic retention time: 20 - 30 s
3. Inlet flow rate: when Q = Qmax (40 - 80 %), v = 0.6 - 0.9 m/s; when Q = Qmax, v > 0.15 m/s
4. The included angle between inlet and outlet channels shall not be less than 270°.

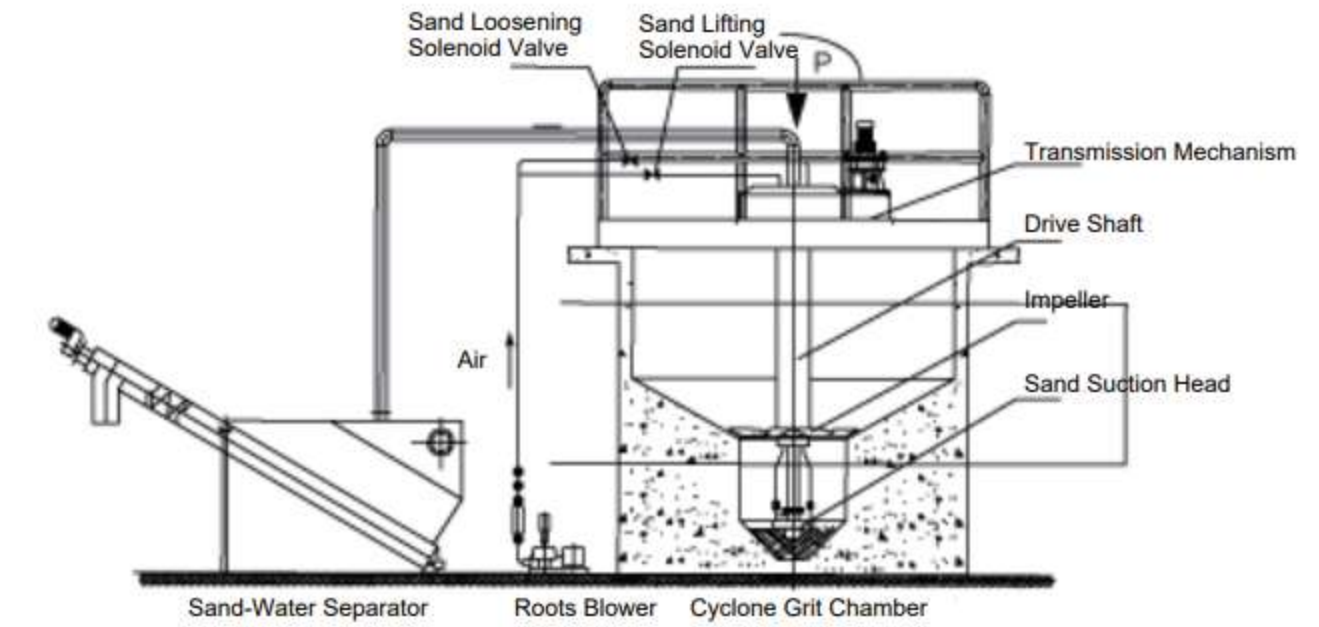
XLC Type Cyclone Grit Chamber Sand Remover

5.Main Features

- There are two sand lifting methods: air lift and pump lift. The air lift method provides better treatment performance, while the pump lift method offers lower operating cost.
- The system performs efficiently, achieving a removal rate of over 85% for particles larger than 0.2 mm.
- For treatment capacities below Q < 1080 m³/h, the tank is typically made of steel; for Q ≥ 1080 m³/h, it is generally constructed of reinforced concrete.
- The system uses PLC automatic control for sand washing and discharge cycles, ensuring safe and reliable operation.

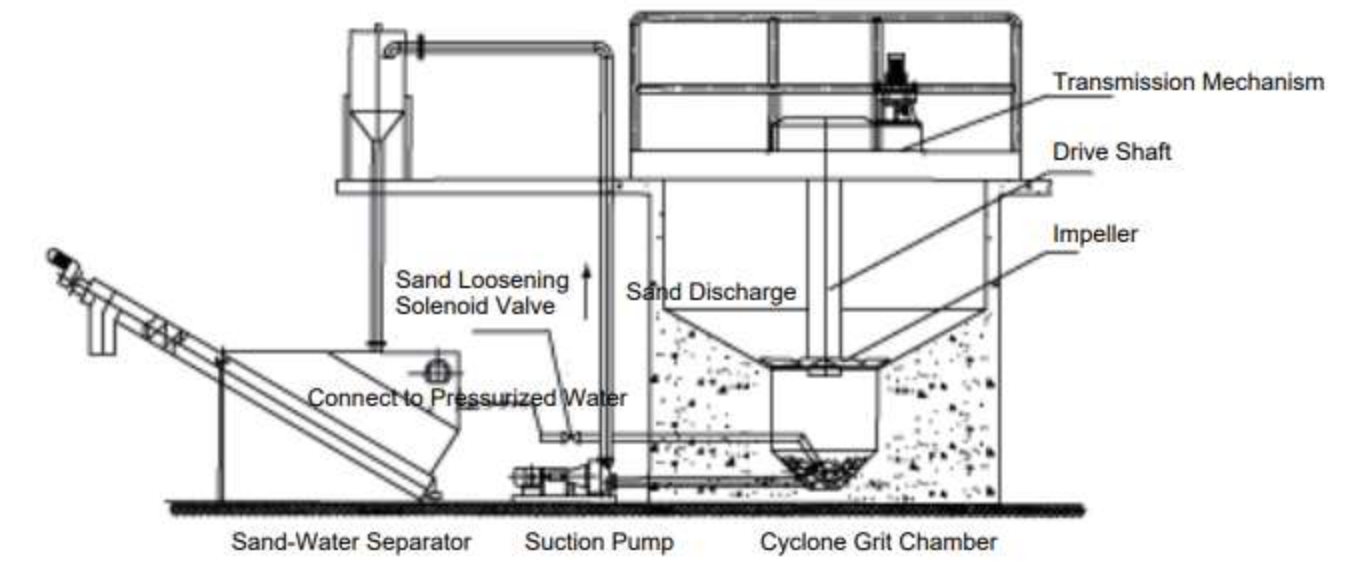
6.Outline and Installation Dimension Diagram

Air-Lift Sand Removal



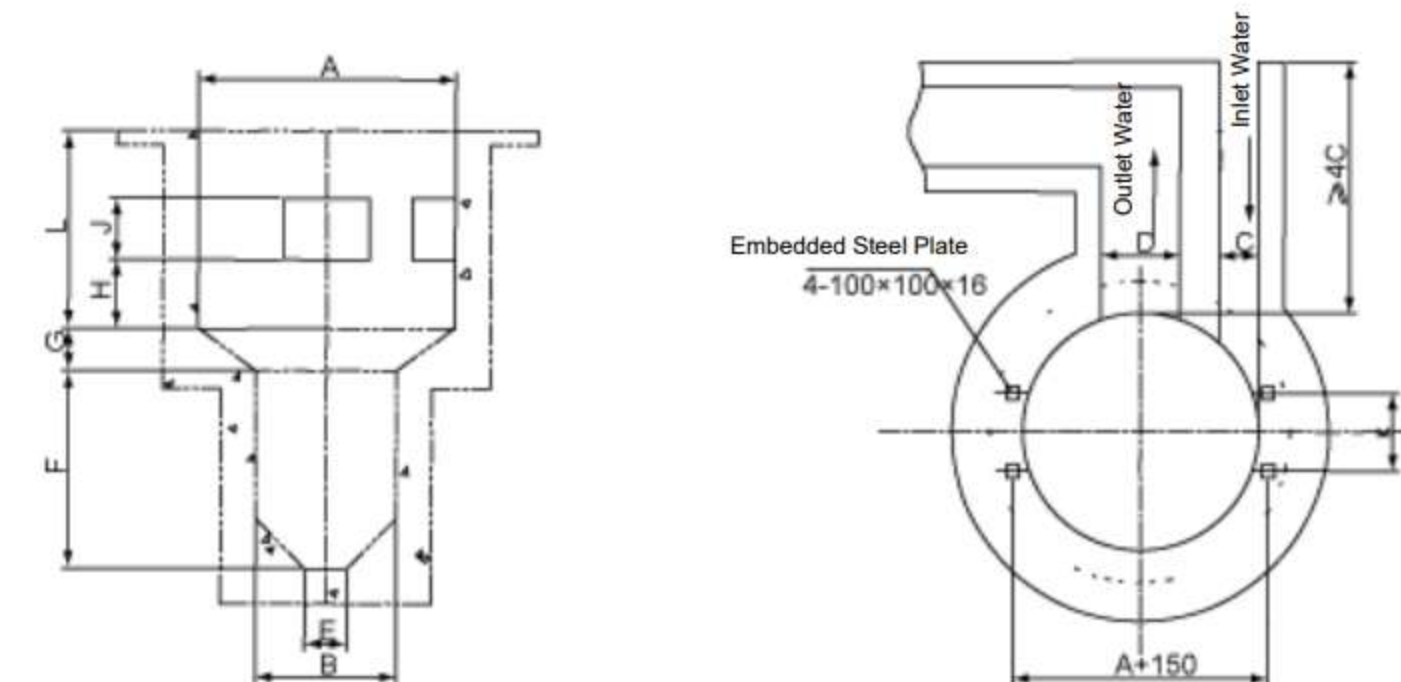
Air-Lift Sand Removal Layout Diagram

Pump-Lift Sand Removal



Pump-Lift Sand Removal Layout Diagram

Civil Engineering Drawing



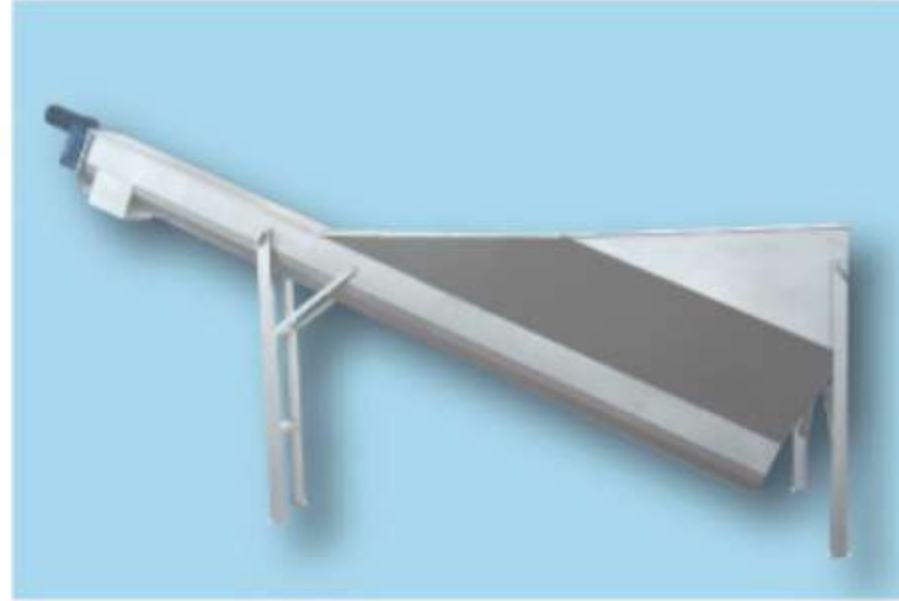
LSF Type Sand-Water Separator

1.Application

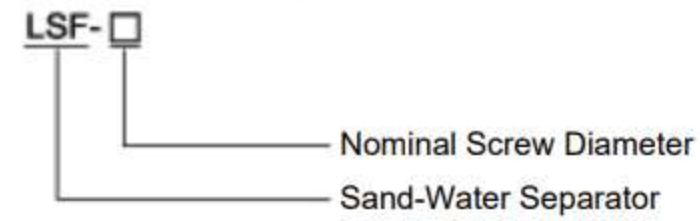
The LSF Type Sand-Water Separator is used for sand treatment in grit chambers of municipal wastewater treatment plants. It is mainly applied together with cyclone grit removal units or bridge-type sand suction machines to further separate the discharged sand-water mixture.

2.Structure and Working Principle

The equipment adopts a shaftless screw design. The sand-water mixture enters from the upper part of the separator. Sand and gravel settle by gravity in the separation trough, and the rotating shaftless screw gradually pushes the sand along the U-shaped trough (inclined at 25%) toward the outlet. The separated sand then falls into a receiving hopper for external transport, while the separated water overflows from the outlet of the separation trough, improving the operating environment and facilitating material handling.



3.Model Description



4.Main Technical Parameters and Installation Dimensions Table

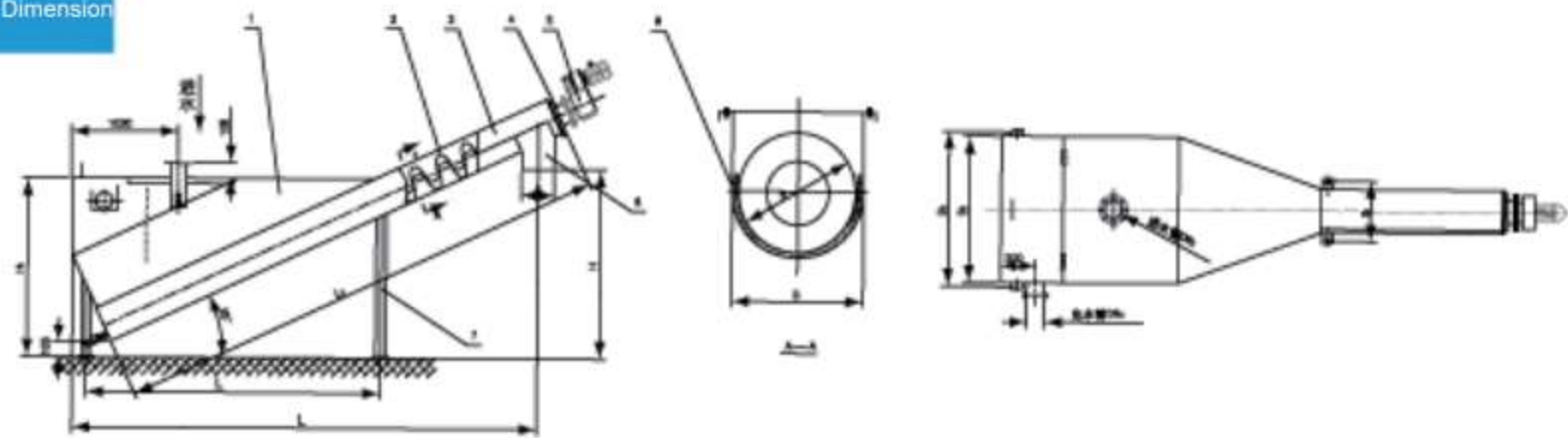
Parameter	Model	LSF-260	LSF-300	LSF-350	LSF-400
Nominal screw diameter D (mm)		260	300	350	400
Screw pitch Φ (mm)		235	285	320	385
Capacity Q (L/s)		5~12	12~20	20~27	27~35
Installation angle α (°)		25			
Screw speed n (r/min)		4.8			
Motor power N (kW)		0.37		0.55	0.75
Recovery rate (particle size ≥ 0.2 mm) (%)		≥ 96			
Moisture content after sand separation (%)		< 65			
Installation dimensions (mm)	ΦA	220	270	320	390
	B	260	310	345	410
	B ₁	710			
	B ₂	1200	1360	1500	1800
	B ₃	B ₂ +80			
	DN ₁	100	150	200	250
	DN ₂	150	200	250	300
	L	2800	3000	3200	
	L ₁	3840	4380	5760	6150
	L ₂	2800	2800	3800	3800
	H	1550	1750	2400	2550
H ₁	1600	1700	2150	2150	

Note:
The inlet and outlet pipe flanges are manufactured according to GB9116.6, PN0.6 MPa.

5.Main Features

- The drive unit adopts a horizontal or inclined shaft helical gear reducer motor, featuring compact structure, stable operation, and safe performance.
- After separation, particles larger than 0.2 mm have a recovery rate of up to 96%.
- The U-shaped trough is equipped with an internal liner, providing high wear resistance, long service life, and easy replacement.
- The whole machine operates in a fully enclosed mode, ensuring a clean environment. The frame is fixed with expansion bolts, requiring no embedded parts.

6.Outline and Installation Dimension Diagram



1. Separator Tank 2. Screw Blade 3. U-shaped Trough 4. Bearing Seat 5. Drive Unit 6. Sand Discharge Outlet
7. Support Frame 8. Wear-resistant Lining Plate

QXS Type Bridge Sand Retriever

1.Application

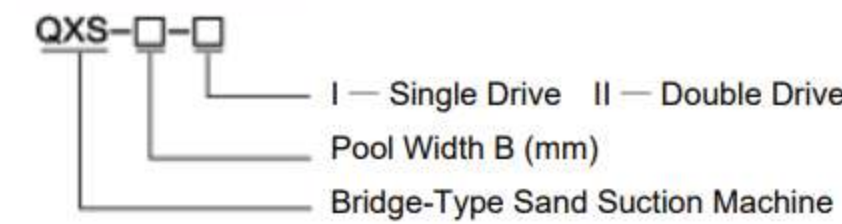
The QXS Type Bridge Sand Suction Machine is mainly used for sand and water treatment in grit chambers of municipal wastewater treatment plants or waterworks. It removes sand particles, coal slag, and other coarse solids that have settled at the bottom by lifting the sand-water mixture to the grit discharge tank. Depending on user requirements, oil removal and scum removal units can be added.

2.Structure and Working Principle

The equipment adopts a mobile bridge-type, pump-suction design. When idle, the sand suction unit stays at the inlet end. During operation, the traveling bridge moves automatically under electric control. In the forward direction, along the water flow, the scum board is lowered to collect and push floating scum into the steel scum trough at the tank end. When moving in reverse, the scum rake is lifted above the liquid surface to prevent backflow of scum. Meanwhile, sand and water from the tank bottom are pumped through suction pipes into the side sand collection trough and then flow through pipelines into the sand-water separator for further processing. This continuous reciprocating movement achieves the combined functions of sand suction, sand discharge, and scum removal.



3.Model Description



4.Main Technical Parameters and Installation Dimensions Table

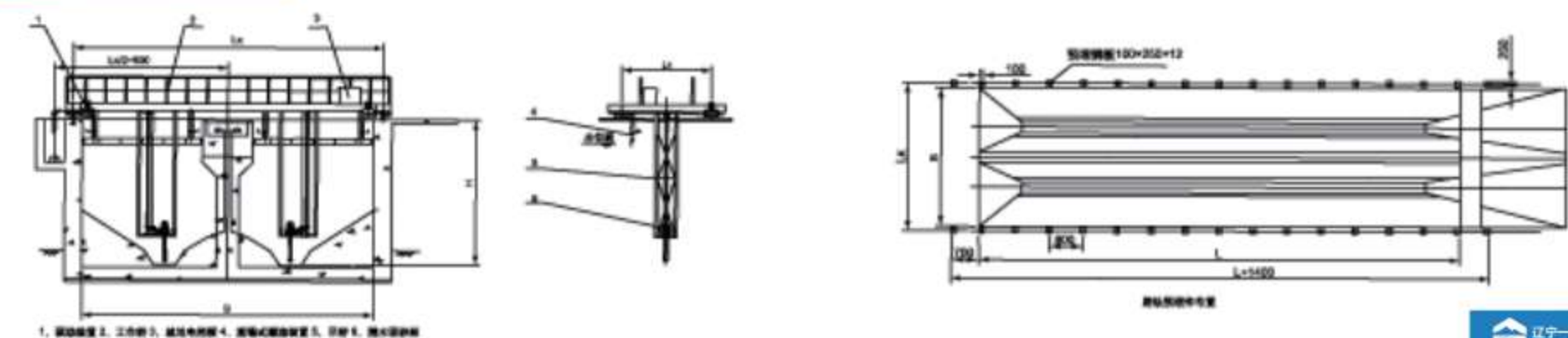
Model	QXS-3	QXS-4	QXS-6	QXS-8	QXS-10	QXS-12
Tank width B (m)	3	4	6	8	10	12
Track gauge Lx (m)	B+0.4					
Tank depth H (m)	3.0 - 7.0 (determined according to user requirements)					
Tank length L (m)	Determined according to user requirements					
Wheelbase L _w (mm)	1500		1800		2000	
Travel speed v (m/min)	1.5 - 2.0					
Travel motor power N (kW)	0.37		2×0.25		2×0.37	
Submersible pump	Capacity Q (m ³ /h)		20		30	
	Head h (m)		2.0			
	Power Na (kW)		0.75		1.1	
Number of submersible pumps	1			2		
Wheel diameter d (mm)	250					
Rail weight (kg/m)	15(GB/T 11246-1989)					
Wheel pressure P (kN)	10			14		

Note:
The inlet and outlet pipe flanges are manufactured according to GB9116.6, PN0.6 MPa.

5.Main Features

- The reciprocating sand suction design is compact, efficient, and simple in structure.
- The system adopts a jet-type submersible pump for sand suction, requiring no water priming, offering clog-free, wear-resistant, safe, and reliable operation. It supports unidirectional flow and keeps the tank surface clean.
- The grit chamber uses air agitation to keep the sand fluidized, ensuring organic matter is fully washed off and discharged sand is odorless.
- The equipment is easy to operate and can be controlled locally or remotely.

6.Outline and Installation Dimension Diagram



Microfilter (External Water Inlet, Rotary Fine Bar Screen)

1. Product Features

- 1.Simple structure, high reliability
- 2.Compact design, minimal space required for the same treatment capacity
- 3.The rotating grid surface is formed by trapezoidal bars, providing optimal hydraulic performance
- 4.Available bar spacing: 0.25, 0.5, 0.75, 1.0, 1.5, 2.0, 3.0 mm
- 5.The treatment capacity has a linear relationship with bar spacing and grid width
- 6.Material options: stainless steel SS304 or SS316L



2. Overall Dimensions

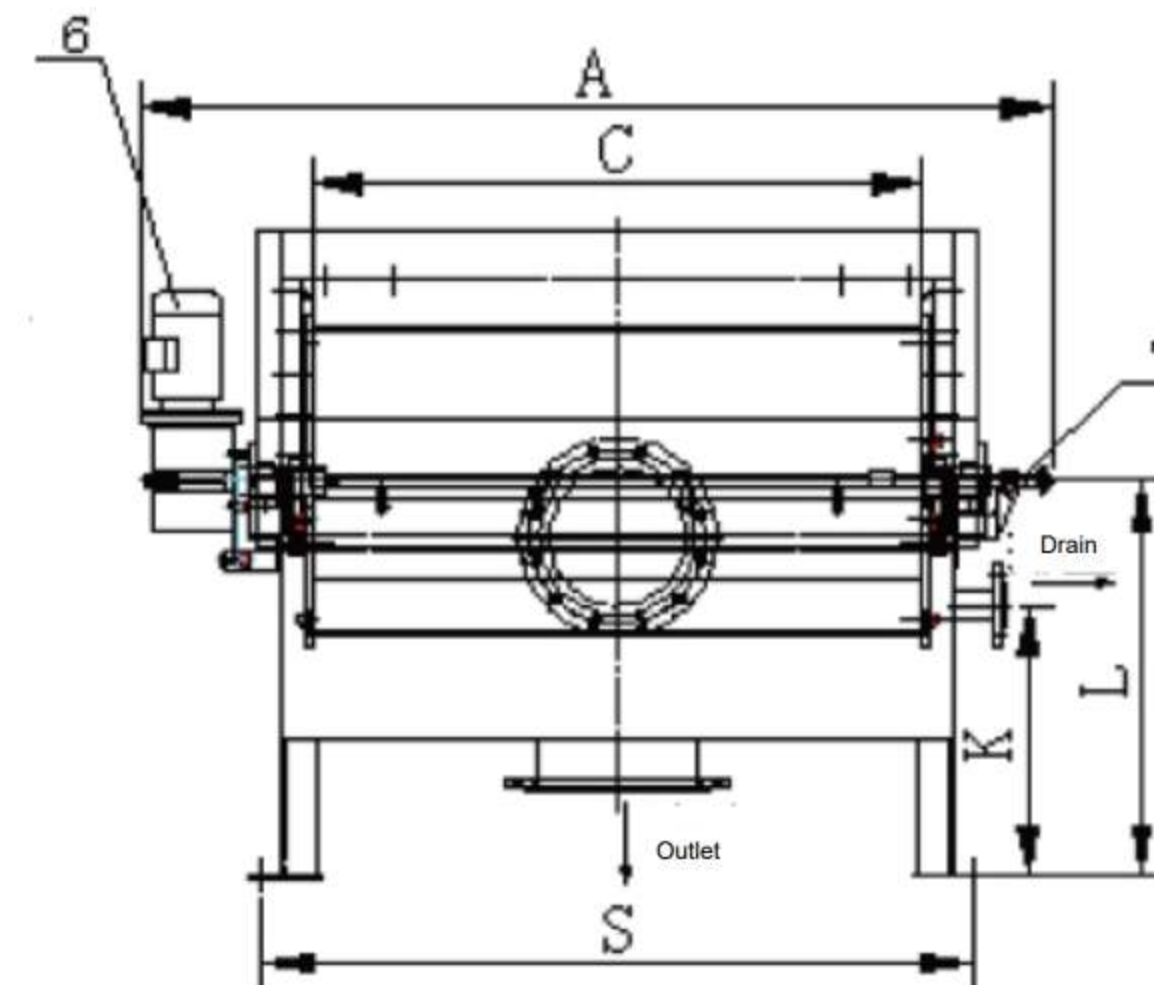
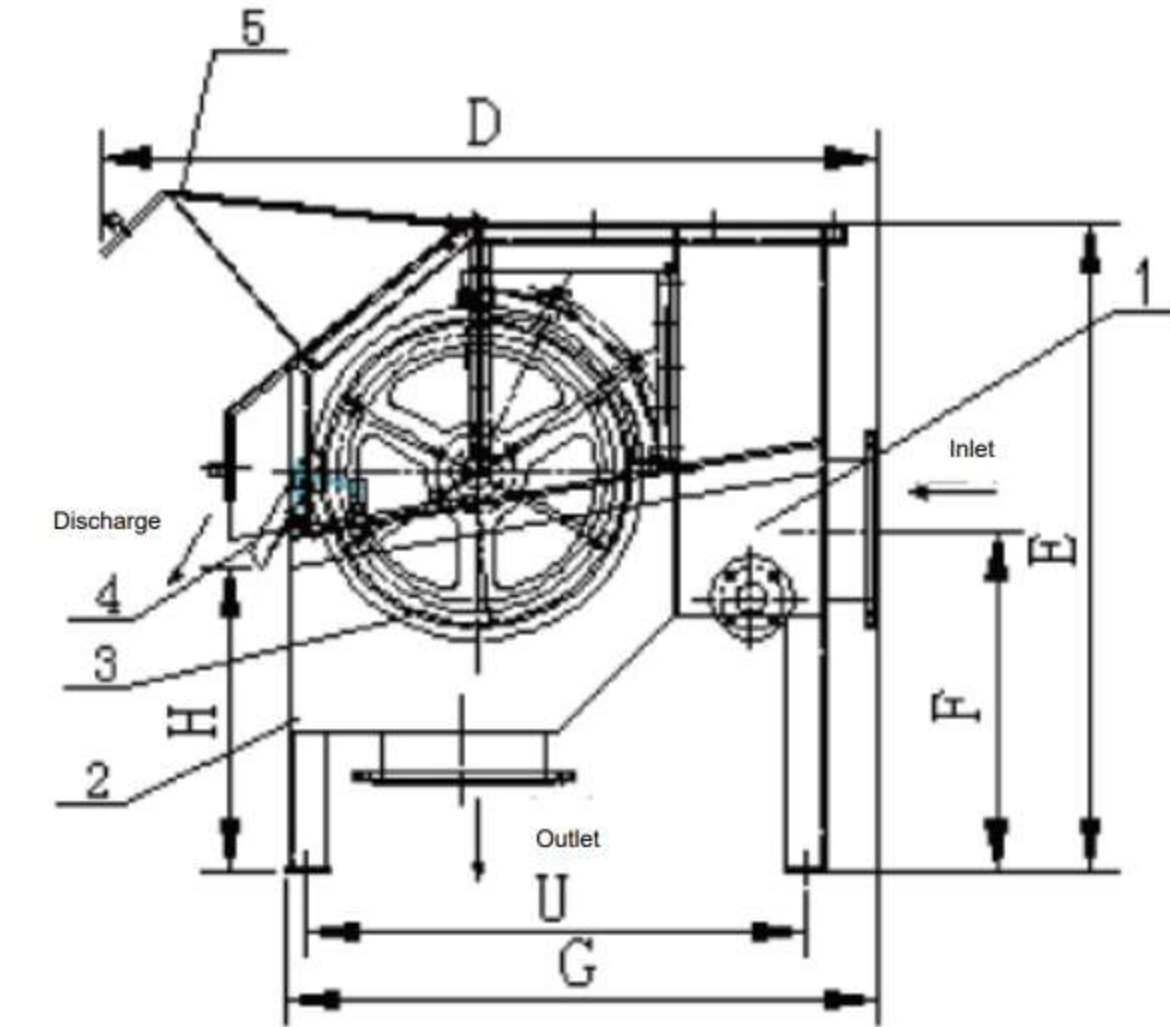
Model	Inlet pipe	Outlet pipe	Washing water pipe	A	C	D	E	F	G	H	K	L	S	U
WGL 3560	DN 100	DN 150	DN 15	11 60	60 0	95 0	14 70	10 80	70 0	10 55	98 5	11 40	67 6	55 0
WGL 610	DN 150	DN 200	DN 15	12 50	61 0	15 50	16 00	98 0	11 75	94 0	84 1	10 91	80 6	99 5
WGL 1220	DN 200	DN 250	DN 20	18 35	12 20	15 50	13 00	68 0	11 79	60 4	54 1	79 1	14 16	99 5
WGL 1830	DN 250	DN 300	DN 25	24 45	18 30	15 50	16 00	98 0	11 75	94 0	84 1	10 91	20 26	99 5
WGL 81830	DN 250	DN 300	DN 25	25 10	18 30	18 30	22 80	15 45	12 40	14 50	13 88	16 16	20 26	10 50

Note:
The height of the rotary screen filter can be adjusted according to actual conditions.
All height dimensions shown in the drawing are for illustrating their relative positions only.

Bar spacing	0.25	0.5	0.75	1.0	1.5	2.5	Drum diameter (mm)	Drum length (mm)
Model	Treatment capacity (m³/h)							
WGL 3560	8	15	20	25	32	42	350	600
WGL 610	33	60	81	100	130	170	610	610
WGL 1220	65	120	162	200	260	340	610	1220
WGL 1830	100	180	243	306	397	520	610	1830
WGL 81830	175	315	436	535	695	912	800	1830

2. Note: Other bar spacings can be customized.

Microfilter (External Water Inlet, Rotary Fine Bar Screen)



1. Water Storage Tank 2. Frame 3. Drum 4. Baffle Plate 5. Inspection Door 6. Reducer Motor 7. Backwash Water Inlet

QS Series Hoist

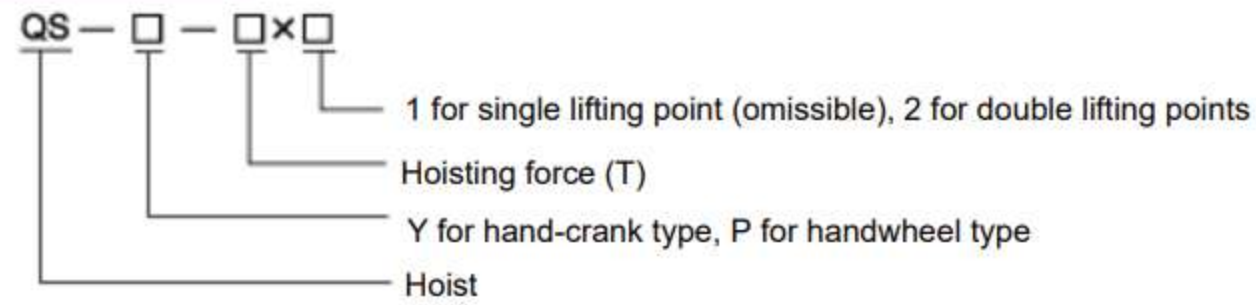
1. Purpose

The QS hoist adopts screw transmission, enabling the lifted component to move up/down or rotate. It is widely used in water supply and drainage projects, water conservancy projects for opening/closing gates, valves, etc.

2. Structure and Working Principle

The QS hoist is divided into handwheel type, hand-crank type, and electric-hand dual-purpose type. The electric-hand dual-purpose type can be further divided into ordinary type and mechatronics type. Its working principle is that the handwheel or motor drives the hoist nut (or screw) to rotate. Under the action of trapezoidal threads, the screw (or hoist nut) drives the gate body to move up and down to achieve opening and closing.

3. Model Description



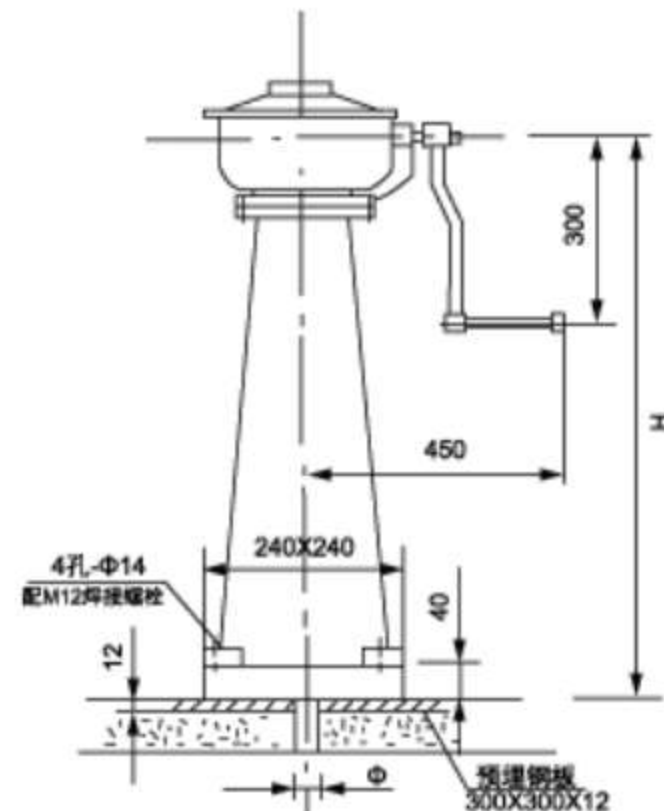
4. Main Technical Parameters and Installation Dimension Table

Model	QS-1	QS-2	QS-3	QS-4	QS-5
Hoisting Force (T)	1	2	3	4	5
Screw Diameter d (mm)	32	42	44	44	44
Reduction Ratio i	1:2	1:2	1:2	1:4	1:4
Installation Dimension (mm)	Φ	100	100	150	150
	H	800	800	800	800

5. Main Features

- Each thrust nut is equipped with a plane bearing, with a simple and reasonable structure and low manual operation force.
- The driving device adopts oil bath lubrication. The gear material is low-alloy steel with carburizing treatment, and the tooth surface hardness is not less than HRC58. The bearing life is not less than 100,000 hours. In any case, the oil bath gearbox is sealed and requires no maintenance.

6. External Installation Dimension Drawing



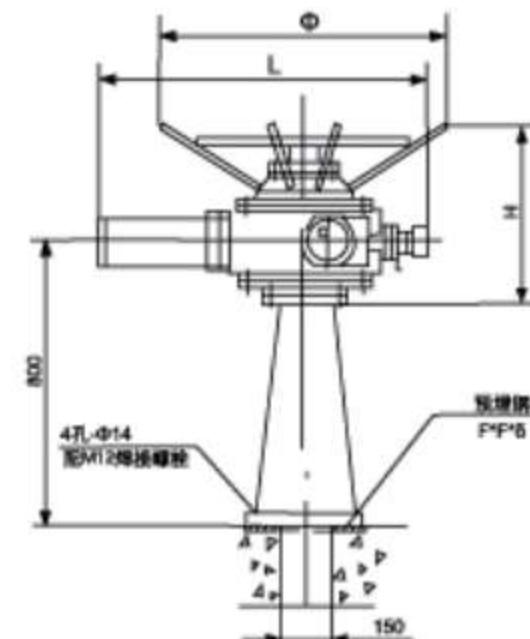
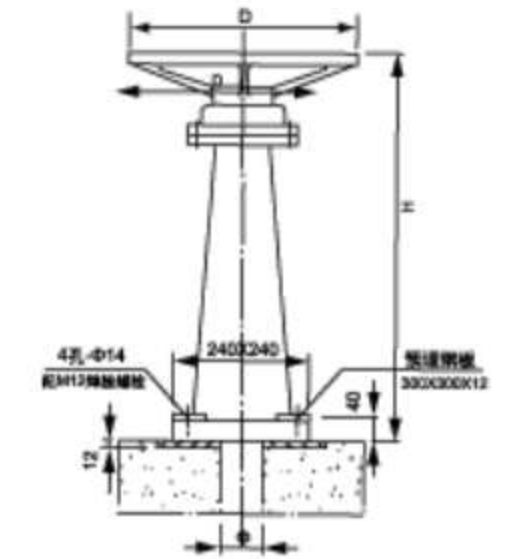
QS Series Hoist

1. Main Technical Parameters and Installation Dimension Table

Model	QS-0.5	QS-1.0	QS-1.5	QS-2.0	QS-3.0
Hoisting Force t (T)	0.5	1.0	1.5	2.0	3.0
Handwheel Diameter D (mm)	280	300	300	400	430
Screw Diameter d (mm)	32	32	38	40	44
Installation Dimension (mm)	Φ	100	100	120	150
	H	800	800	800	800

Model	QS-0.5	QS-1	QS-2	QS-3	QS-5	QS-6	QS-8	QS-10	QS-15	QS-20	QS-25
Hoisting Force t (T)	0.5	1	2	3	5	6	8	10	15	20	25
Screw Diameter d (mm)	40	40	40	44	44	54	54	70	70	75	75
Output Speed n (r/min)	24	24	24	24	24	24	24	24	24	24	24
Motor Power N (kW)	0.37	0.55	0.75	1.1	1.5	2.2	3.0	4.0	5.5	7.5	10.0
Output Torque M (N·m)	150	200	300	600	450	900	1200	1800	2500	3500	5000
Installation Dimension (mm)	Φ	365	365	365	470	470	550	550	600	600	650
	L	590	590	590	810	810	830	830	870	870	1170
	H	320	320	320	440	440	450	450	600	600	710
	F	300	300	300	300	300	300	500	500	500	600
	δ	12	12	12	14	14	14	16	16	16	20

2. External Installation Dimension Drawing



Electric-hand Dual-purpose Type

Mechatronics Type

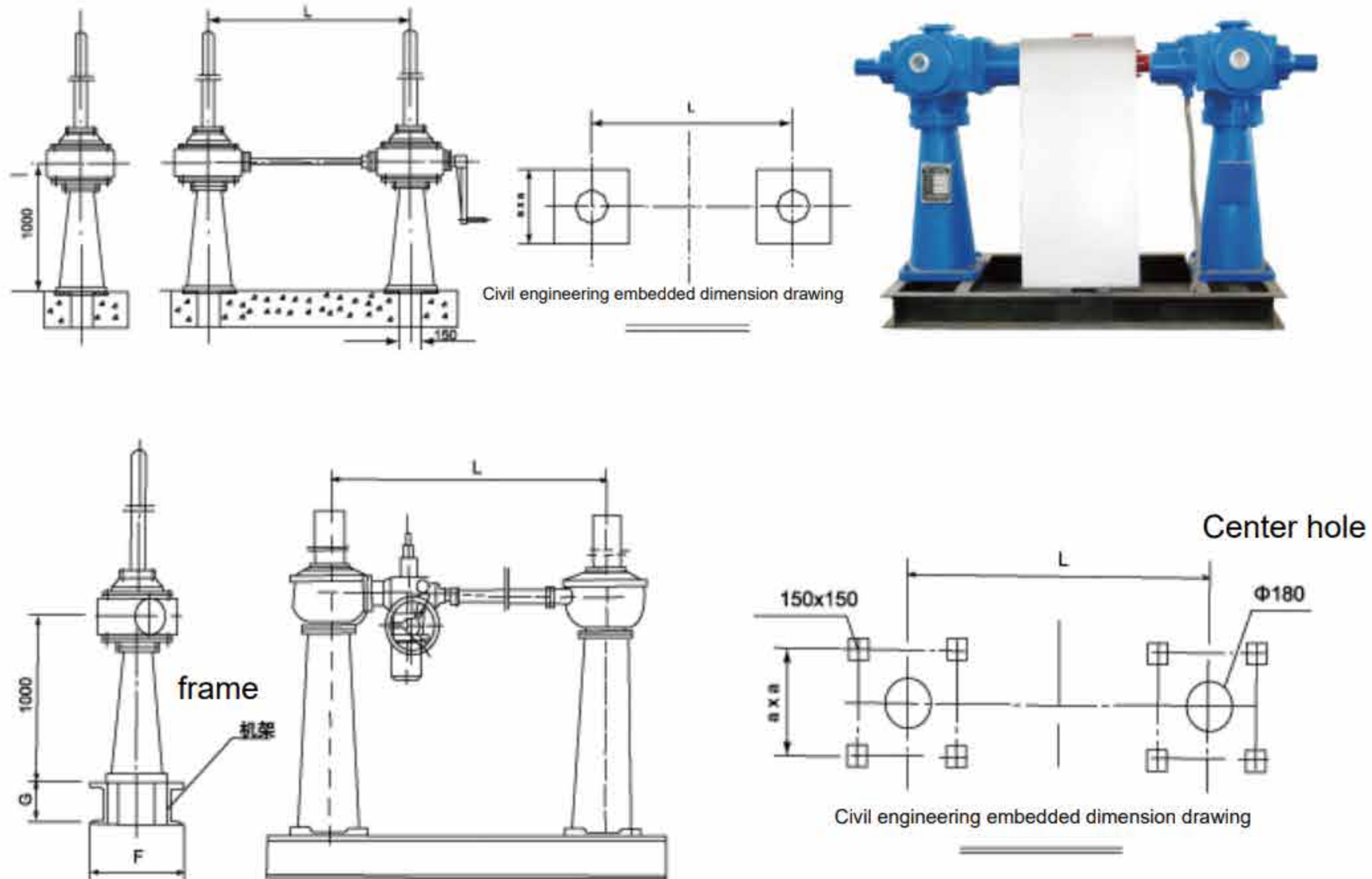
QS Series Hoist

1. Main Technical Parameters and Installation Dimension Table

Parameter	Model	QS-1×2	QS-2×2	QS-3×2	QS-4×2	QS-5×2
Hoisting Force t (T)		2	4	6	8	10
Screw Diameter d (mm)		38	40	44	46	54
Reduction Ratio i		1:2	1:2	1:2	1:3	1:3
Installation Dimension (mm)	a	300	300	500	500	500
	L	1000-3000				

Parameter	Model	QS-5×2	QS-8×2	QS-10×2	QS-15×2	QS-20×2	QS-25×2
Hoisting Force t (T)		10	16	20	30	40	50
Screw Diameter d (mm)		48	55	60	75	75	80
Output Speed n (r/min)		24	24	24	18	18	18
Motor Power N (kW)		3.0	4.0	5.5	7.5	10.0	12.0
Output Torque M (N·m)		2400	3600	5000	7000	10000	12500
Installation Dimension (mm)	a	550	550	650	650	800	800
	F	500	500	600	600	750	750
	G	180	180	250	320	320	320
	L	1000-1500	1600-2000	2100-2500	2600-3000	3100-3300	3400-3500

2. External Installation Dimension Drawing



2. Sedimentation tank, scraper and suction sludge machine series equipment

ZBG Peripheral Drive Sludge Scraper

1. Purpose

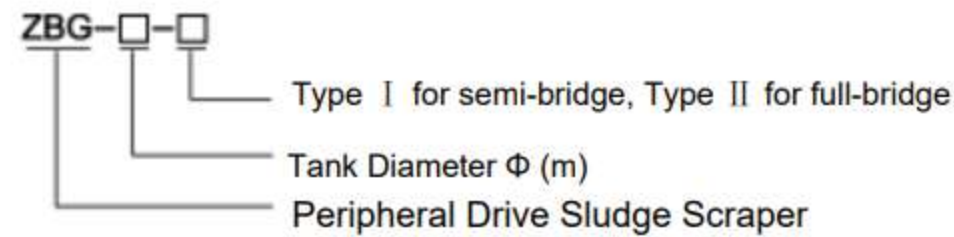
The ZBG peripheral drive sludge scraper is suitable for medium and large radial sedimentation tanks with central water inlet, peripheral water outlet, and central sludge discharge. It is mainly used for sludge discharge in the primary sedimentation tank of urban sewage treatment plants. This equipment obtained the certificate of the Ministry of Construction's Scientific and Technological Achievement Promotion Project in 2002.

2. Structure and Working Principle

This equipment adopts peripheral drive. Sewage flows into the tank from the inlet pipe at the tank center, and after diffusing through the steady-flow cylinder, it flows out uniformly in a radial pattern to the periphery. Suspended sludge settles and deposits at the tank bottom after sedimentation. The driving device drives the working bridge to rotate along the periphery, and drives the scraping arms and sludge scraping plates to rotate, scraping the sludge from the tank periphery to the central sludge collection trough. Then, the sludge is discharged out of the tank by the sludge discharge pipe under the static water pressure in the tank. The scum on the water surface is skimmed to the tank edge by the scum skimming device, and then scraped into the scum discharge hopper by the scum scraper and discharged out of the tank. The supernatant is discharged into the water outlet trough by overflowing through the triangular outlet weir plate.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

Parameter	Model	ZBG-16	ZBG-20	ZBG-25	ZBG-30	ZBG-35	ZBG-40	ZBG-45	ZBG-50	ZBG-55
Tank Diameter Φ (m)		16	20	25	30	35	40	45	50	55
Peripheral Tank Depth H (m)		3.5~4.5 According to user requirements								
Water Depth at Tank Edge H2(m)		3.0~4.0 According to user requirements								
Peripheral Linear Speed V (m/min)		2.0~3.0								
Travel Wheel Size (mm)		Φ400×120				Φ420×150				
Motor Power N (kW)		1.1	1.5	2.2	3.0			4		
Installation Dimension (mm)	Φ ₁	1100	1100	1200	1200	1500	1500	1800	1800	1800
	Φ ₂	2500	2500	2500	3500	4000	4500	5000	5500	6000
	Φ ₃	2600	3000	3800	4500	4500	4500	5000	6000	6000
	Φ ₄	2100	2300	3500	4000	4000	4000	4500	4500	4500
	H ₂	500	500	600	760	760	760	760	760	760
	B	According to user requirements								
	H ₃	According to user requirements								
	L	According to user requirements								
Peripheral Wheel Pressure P1(KN)		9.0	11.5	15	19	22	25	28	30	32
Central Platform Vertical Load P2 (KN)		17	23	30	37	82	100	112	122	175
Central Platform Horizontal Load P2 (KN)		9.5	13	17	22	28	28	30	32	40

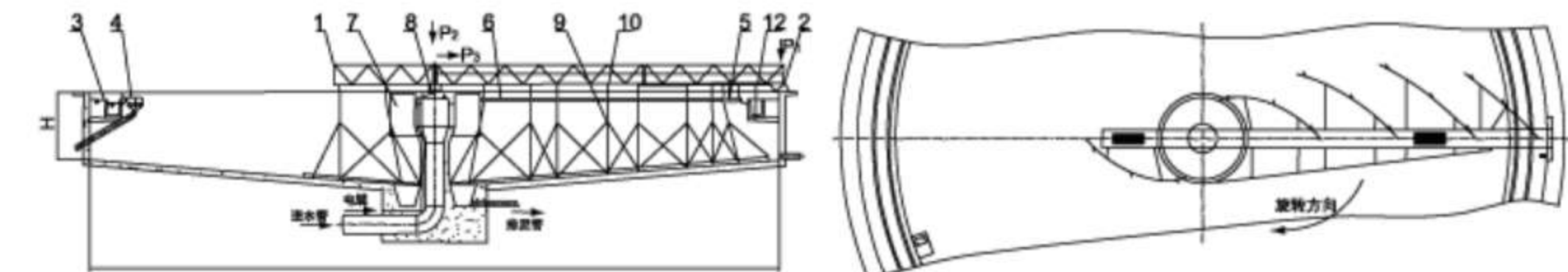
5. Main Features

- The working bridge can adopt a semi-bridge type or a full-bridge type, and its material can be carbon steel, stainless steel, aluminum alloy, etc.
- The driving device adopts a shaft-mounted helical gear reducer directly connected with the driving roller, with a compact structure and relatively high mechanical efficiency.
- The scraper collects mud along a logarithmic spiral trajectory, with good continuity and relatively high mud collection efficiency; when the slope of the pool bottom is 1:10, the resistance during mud scraping can be reduced.

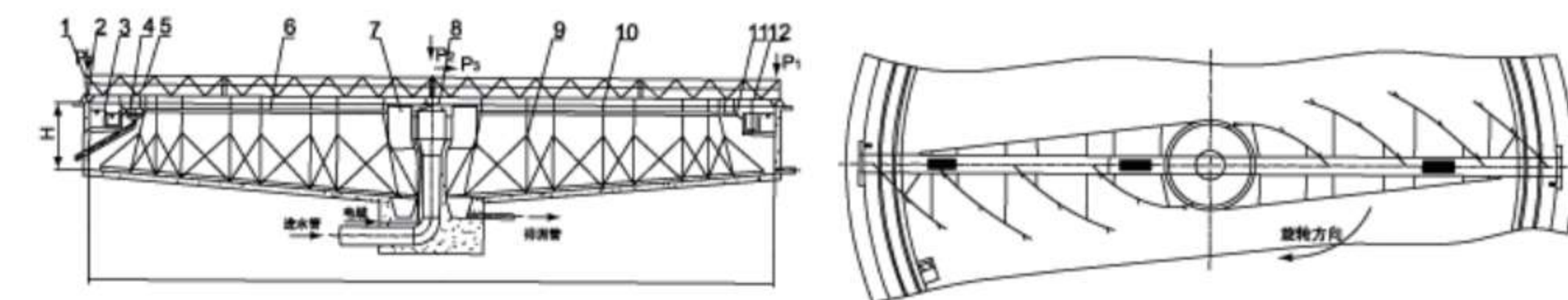
ZBG Peripheral Drive Sludge Scraper

6. External Installation Dimension Drawing

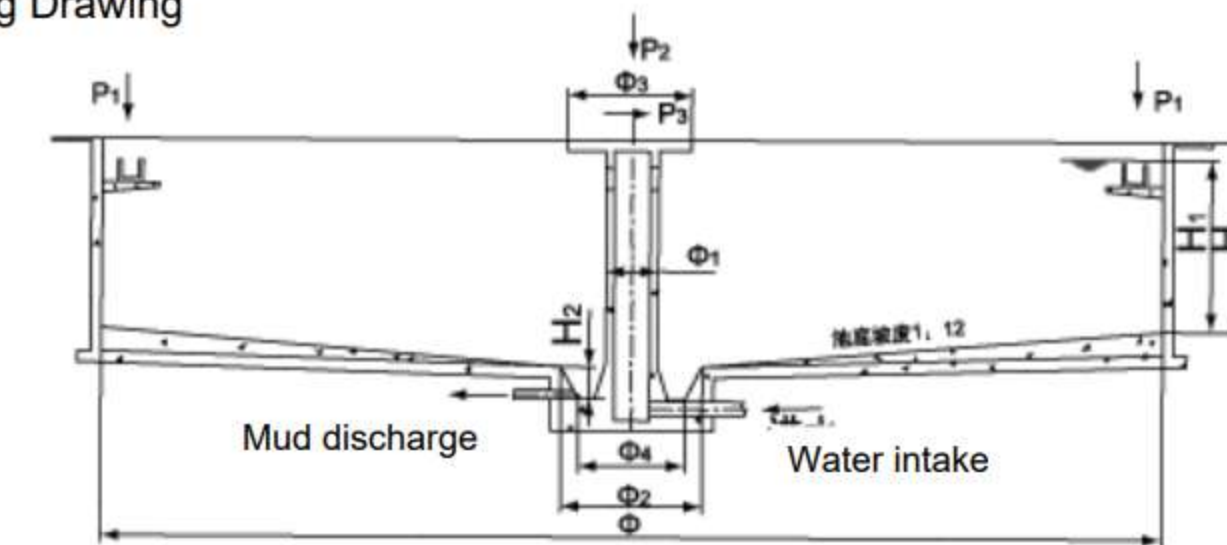
Half-bridge



Full-bridge

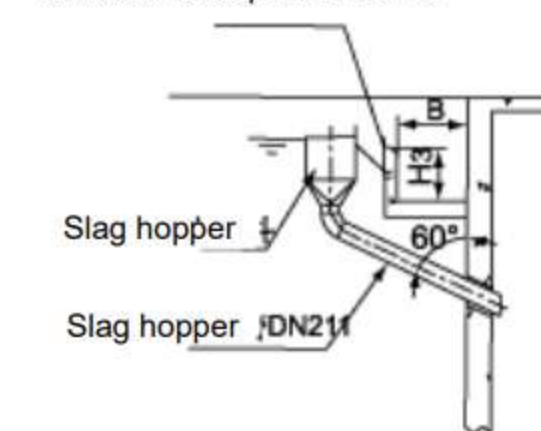


Civil Engineering Drawing



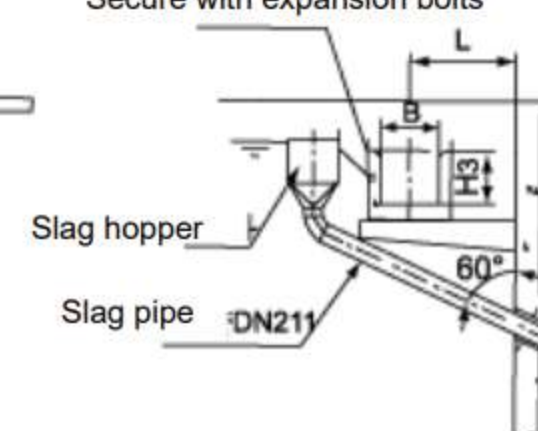
Evenly spaced embedded steel plates

Secure with expansion bolts



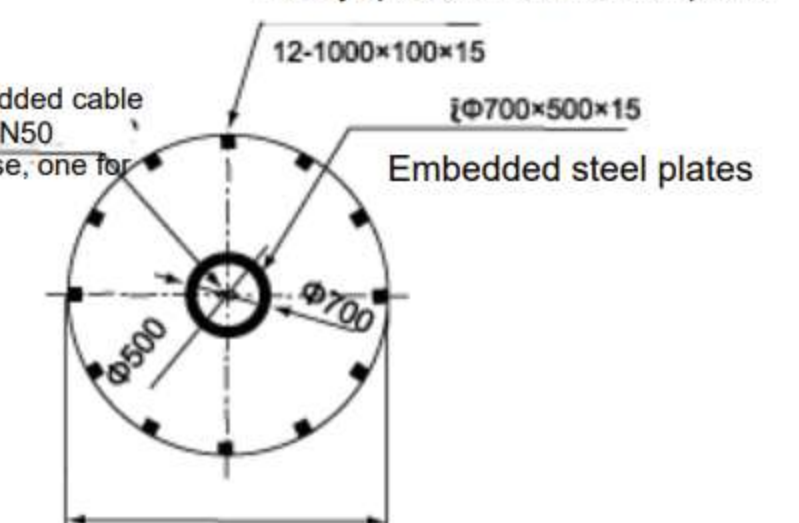
Overflow Weir and Slag Hopper Installation Diagram Single-Side Water Outlet

Secure with expansion bolts



Overflow Weir and Slag Hopper Installation Diagram Dual-Side Water Outlet

Two embedded cable conduits DN50 (one for use, one for backup)



Center Platform Embedded Parts Layout

- Working bridge
- End beam drive unit
- Outlet weir plate
- Slag hopper
- Slag scraper
- Slag skimmer
- Flow stabilizer
- Support and current collector
- Sludge scraping system
- Truss
- Slag baffle
- Sink water brush

ZBG Peripheral Drive Sludge Scraper

1. Purpose

The ZBGX type peripheral transmission sludge suction and scraping machine is suitable for radial sedimentation tanks with central water inlet, peripheral water outlet, and central sludge discharge, for large, medium, and small tank diameters. It is mainly used for sludge suction and discharge in urban sewage treatment plants or sedimentation tanks.

2. Structure and Working Principle

This equipment adopts peripheral transmission. Sewage flows into the water inlet pipe at the center of the tank, and after being diffused by the flow stabilizer cylinder, it flows out uniformly in a radial pattern to the periphery. The suspended sludge settles at the bottom of the tank after sedimentation. The driving device drives the working bridge truss to rotate along the periphery, and also drives the suction pipe system and the sludge collecting scraper to rotate. After the scraper collects the sludge, the suction pipe suctions it to the sludge collecting trough by relying on the hydrostatic pressure inside the tank, and then discharges it into the central mud cylinder. Then, it is discharged out of the tank through the central sludge discharge pipe. The floating slag on the water surface is guided into the slag discharge hopper by the rotating slag skimming device and discharged out of the tank. The supernatant overflows into the water outlet trough through the triangular outlet weir plate and is discharged.

3. Model Description

ZBGX-□-□
I : Plate bridge type
II : Full bridge type
Tank diameter Φ (m)
Peripheral drive scraper



4. Main Technical Parameters and Installation Dimension Table

Model		ZBGX-16	ZBGX-20	ZBGX-25	ZBGX-30	ZBGX-35	ZBGX-40	ZBGX-45	ZBGX-50	ZBGX-55
Parameter										
Tank Diameter Φ (m)		16	20	25	30	35	40	45	50	55
Peripheral Tank Depth H (m)		3.5~4.5 According to user requirements								
Water Depth at Tank Edge H2(m)		3.0~4.0 According to user requirements								
Peripheral Linear Speed V (m/min)		1.8~2.2								
Travel Wheel Size (mm)		$\Phi 420 \times 120$					$\Phi 420 \times 150$			
Motor Power N (kW)		0.37			0.55			0.75		
Installation Dimension (mm)	Φ_1	1100	1100	1200	1200	1500	1500	1800	1800	1800
	Φ_2	2500	2500	2500	3500	4000	4500	5000	5500	6000
	Φ_3	2600	3000	3800	4500	4500	4500	5000	6000	6000
	Φ_4	2100	2300	3500	4000	4000	4000	4500	4500	4500
	H ₂	500	500	600	760	760	760	760	760	760
	B	According to user requirements								
	H ₃	According to user requirements								
L	According to user requirements									
Peripheral Wheel Pressure P1(KN)		9.0	11.5	15	19	22	25	28	30	32
Central Platform Vertical Load P2 (KN)		17	23	30	37	82	100	112	122	175
Central Platform Horizontal Load P2 (KN)		9.5	13	17	22	28	28	30	32	40

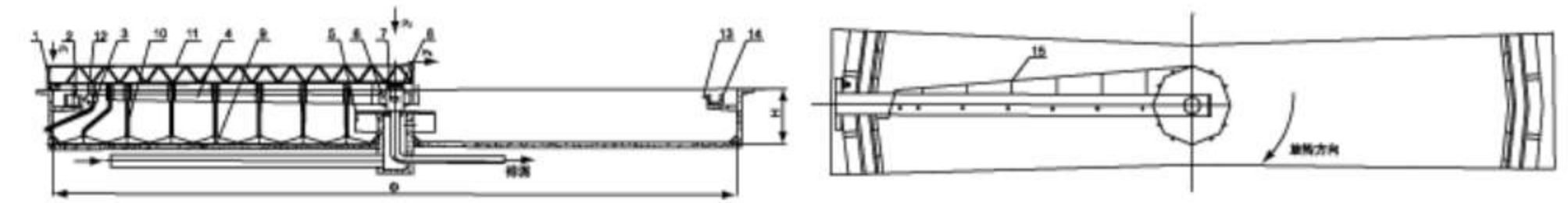
5. Main Features

- The working bridge can be of semi-bridge type or full-bridge type, and its material can be carbon steel, stainless steel, aluminum alloy, etc.
- The driving device adopts a shaft-mounted helical gear reducer directly connected with the driving roller, featuring a compact structure and relatively high mechanical efficiency.
- The suction pipe adopts a bell-mouth form, with good mud suction effect. There are two mud suction methods: self-priming type and siphon type (the former is commonly used).

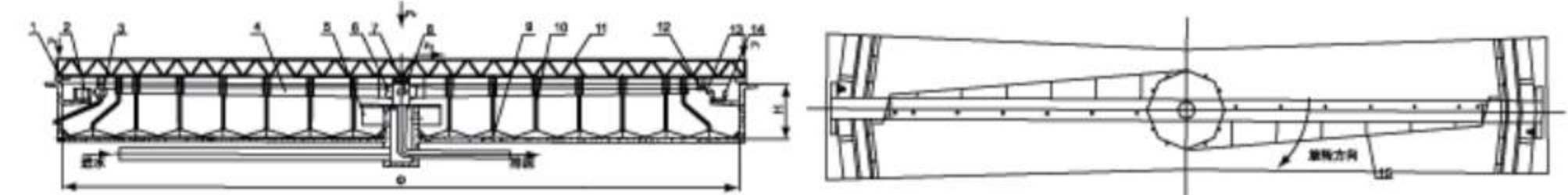
ZBG Peripheral Drive Sludge Scraper

6. External Installation Dimension Drawing

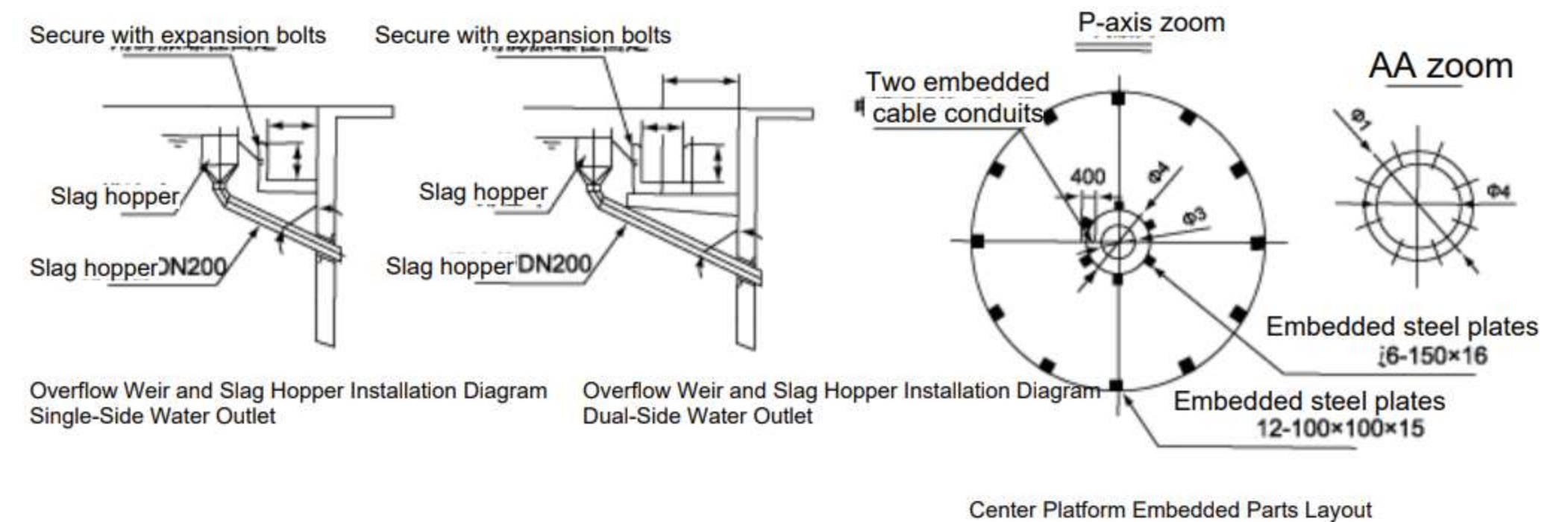
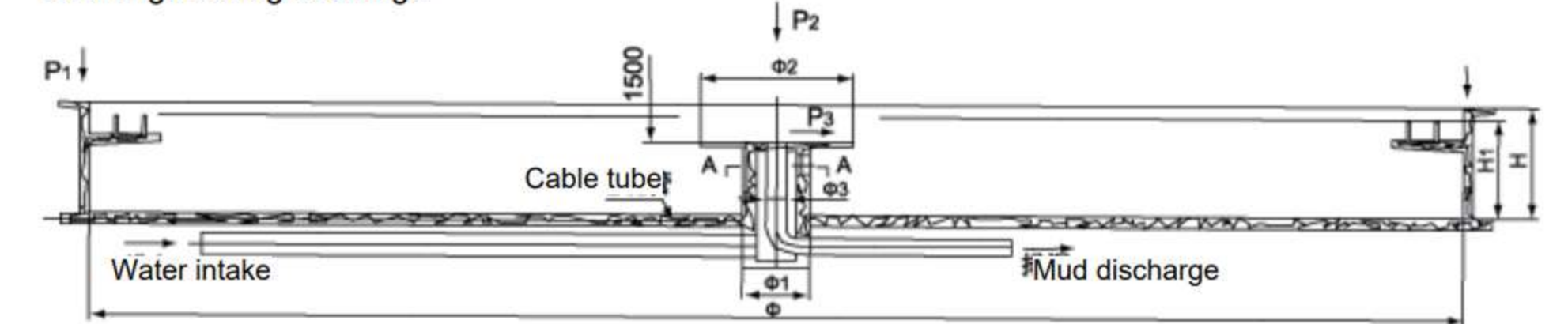
Half-bridge (single-side drive)



Full-bridge (double-side drive)



Civil engineering drawings



- End Beam Driving Device
- Water Tank Cleaning Brush
- Slag Discharge Hopper
- Sludge Collection Trough
- Flow Stabilizer Cylinder
- Central Mud Cylinder
- Central Support
- Current Collection Device
- Suction Inlet and Sludge Collection Plate
- Suction Pipe
- Working Bridge
- Slag Scraping Rake
- Floating Slag Baffle
- Outlet Weir Plate
- Skimming Plate

ZCG Type Suspended Central Drive Sludge Scraper

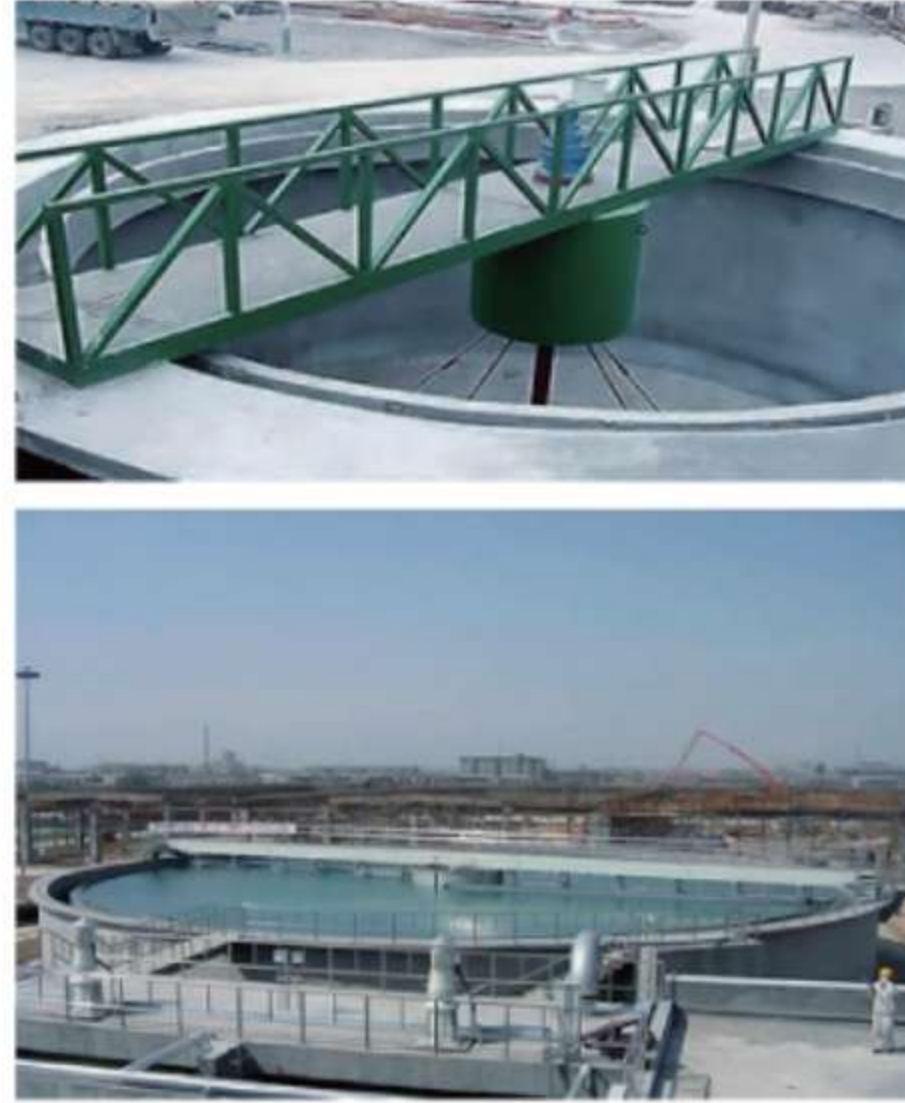
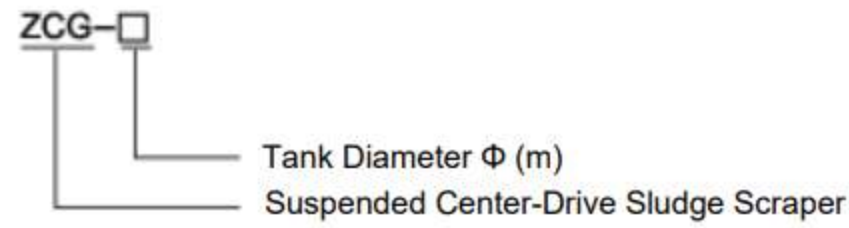
1. Purpose

The ZCG type suspended center-drive sludge scraper is suitable for radial flow sedimentation tanks with small and medium-sized diameters, featuring central water inlet, peripheral water outlet, and central sludge discharge. It is primarily used for sludge removal in sedimentation tanks in urban sewage treatment plants or industrial wastewater treatment projects.

2. Structure and Working Principle

This equipment utilizes a central drive. Sewage flows from under the working bridge into the water pipe, diffuses through the diversion tube, and then evenly flows radially outward. Suspended sludge settles on the tank bottom after sedimentation. The drive mechanism rotates the central vertical shaft, which in turn drives the scraper arm and scraper blade. The scraper collects the sludge, which is then sucked into the sludge collection trough by the sludge suction pipe under the hydrostatic pressure within the tank and discharged into the central sludge tank. The sludge is then discharged out of the tank through the central sludge discharge pipe. Surface sludge is guided by a rotating skimmer into the sludge hopper for discharge. The supernatant overflows through the triangular outlet weir plate and is discharged into the outlet trough.

3. Model Description



4. Main Technical Parameters and Installation Dimension Table

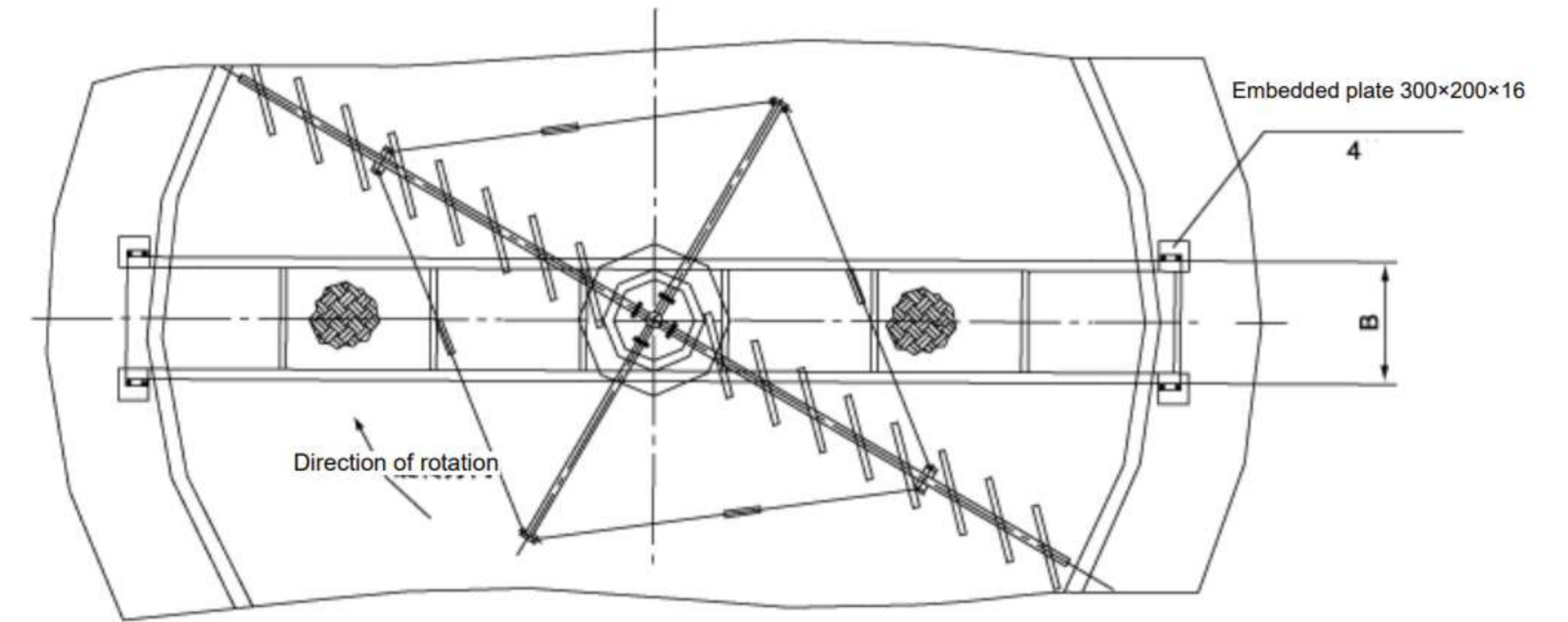
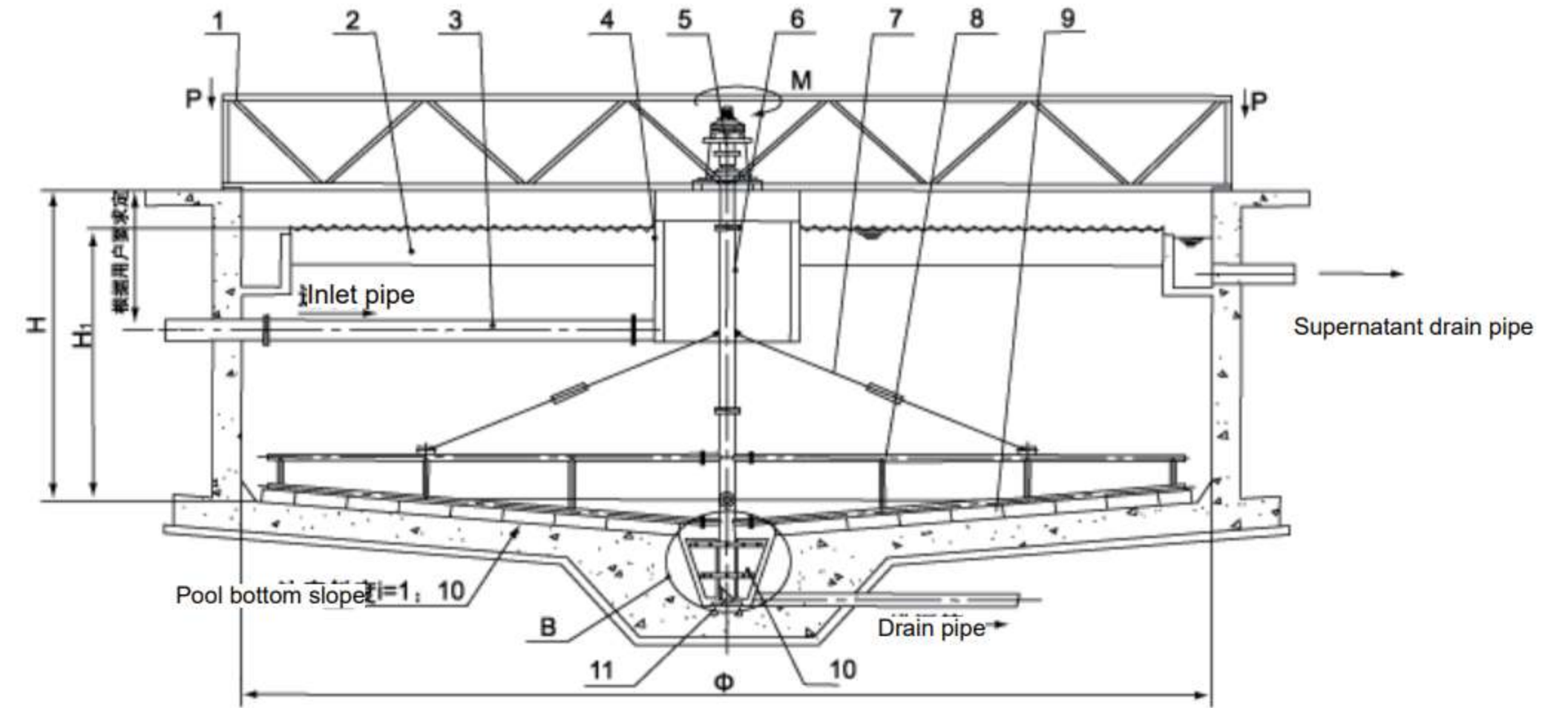
Parameter	Model	ZCG-5	ZCG-6	ZCG-8	ZCG-10	ZCG-12	ZCG-14	ZCG-16
Tank Diameter Φ (m)		5	6	8	10	12	14	16
Peripheral Tank Depth H (m)		3.5~4.5 (According to user requirements)						
Water Depth at Tank Edge H ₂ (m)		3.0~4.0 According to user requirements						
Outer edge linear speed V (m/min)		2.0~3.0						
Motor Power N (kW)		0.37			0.55			0.75
Installation Dimension (mm)	B	1050			1250			
	Φ_1	1000			1200			
	Φ_2	500			800			
	H ₁	700			1000			
	B ₁	According to user requirements						
Load P at both ends of the working bridge (KN)		30	33	36	40	48	55	65
Maximum operating torque (N.m)		19	22.5	45	56	67	100	122

5. Main Features

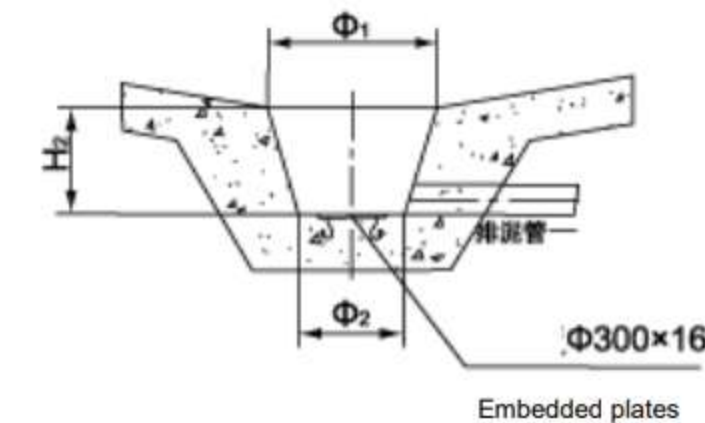
- The working bridge is a full-bridge design, available in carbon steel, stainless steel, or concrete.
- The drive unit utilizes a vertical three-stage cycloid reducer or a combination of a helical and worm gear reducer to ensure high torque and speed.
- The scraper blades are linear.
- The lower end of the scraper shaft is equipped with a submerged bearing and scraper blade to prevent shaft deflection and sludge accumulation in the sludge collection tank.
- Dual mechanical and electrical overload protection ensures safe and reliable operation.
- The equipment is easy to operate, allowing for direct local or remote control.

ZCG Type Suspended Central Drive Sludge Scraper

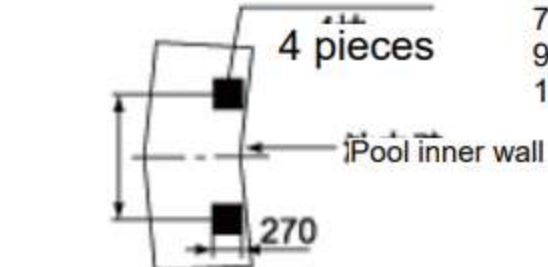
6. External Installation Dimension Drawing



B-axis magnification
Mud pit embedded parts



Embedded plates 300x200x16



- Working Bridge
- Outlet Weir Plate
- Water Inlet Pipe
- Diversion Cylinder
- Driving Device
- Intermediate Vertical Shaft
- Tie Rod
- Scraper Arm
- Scraper
- Bottom Scraper
- Bottom Bearing

ZCCG Vertical Frame CenterDrive Sludge Scraper

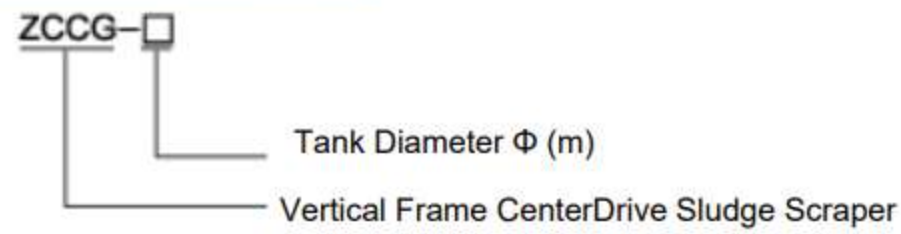
1. Purpose

The ZCCG Vertical Frame CenterDrive Sludge Scraper is suitable for radial flow sedimentation tanks with central inlet, peripheral outlet, and central sludge discharge, with medium and large diameters. It is primarily used for sludge removal from secondary sedimentation tanks in urban sewage treatment plants.

2. Structure and Working Principle

This equipment features a central drive and vertical frame. Sewage flows from the inlet pipe into the diversion tube, where it is diffused and evenly flows radially outward. Suspended sludge settles on the tank bottom after sedimentation. The drive rotates the central vertical frame, which in turn drives the scraper arm and scraper blades, scraping sludge from the tank perimeter into the central sludge collection trough. The sludge is then discharged from the tank through the sludge discharge pipe under the hydrostatic pressure. Surface sludge is skimmed to the edge by a skimmer and then scraped by a scraper rake into the sludge discharge hopper for discharge. The supernatant overflows through the triangular outlet weir plate and is discharged into the outlet trough.

3. Model Description



4. Main Technical Parameters and Installation Dimension Table

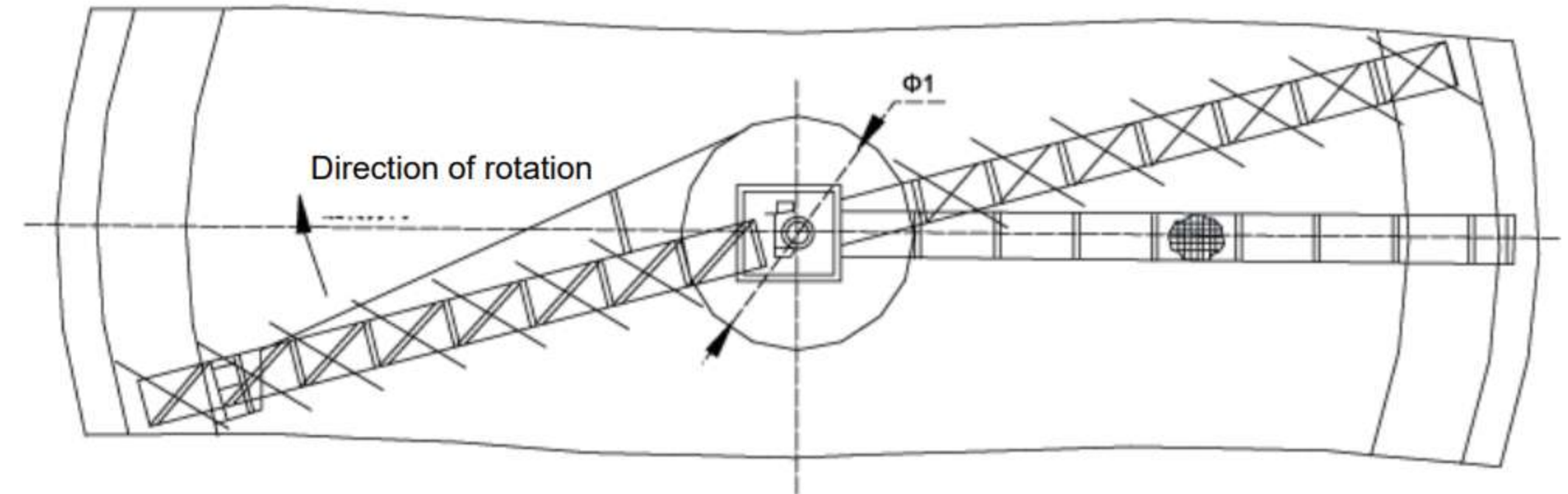
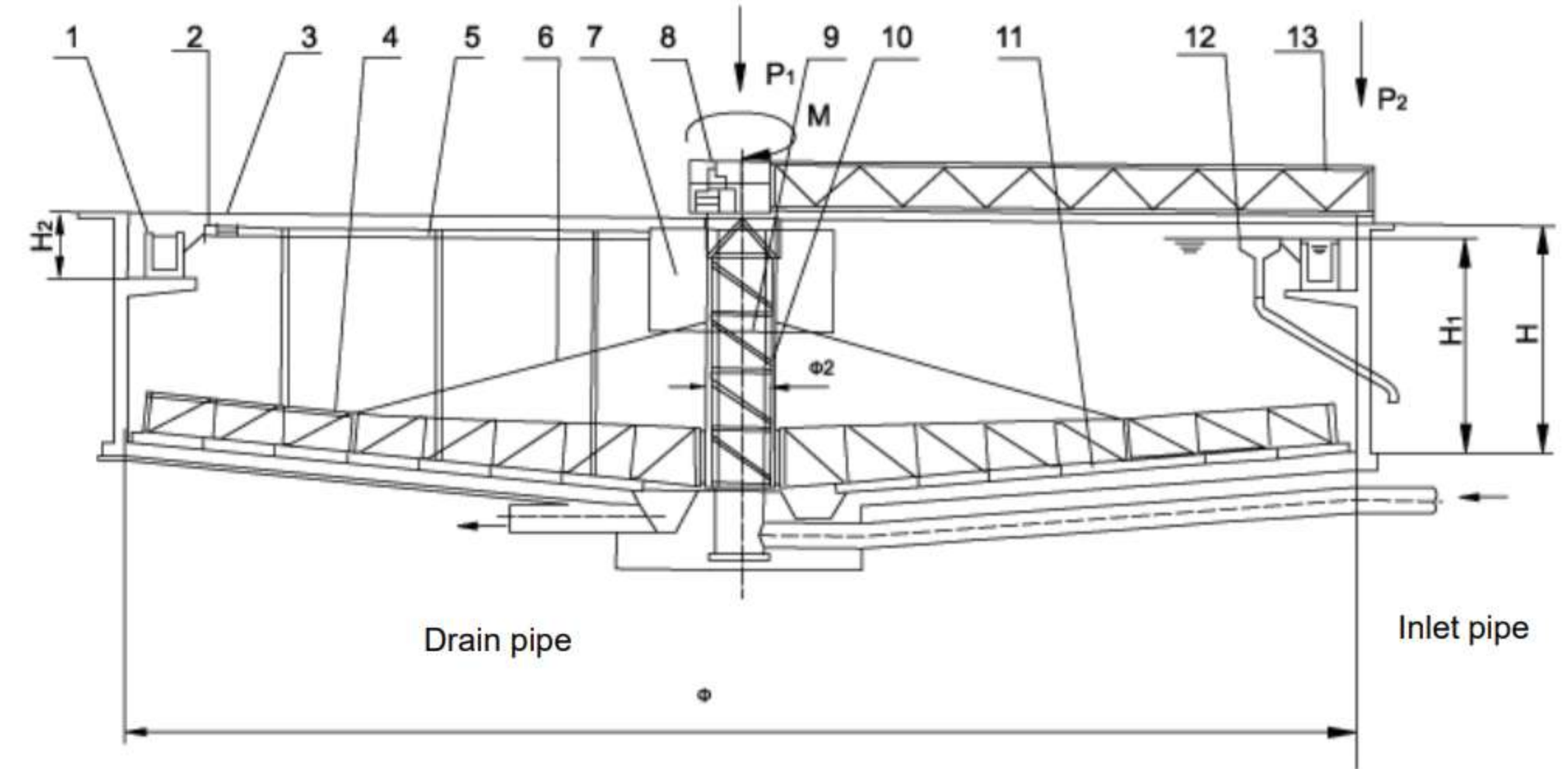
Parameter	Model	ZCCG-20	ZCCG-25	ZCCG-30	ZCCG-35	ZCCG-40	ZCCG-45	ZCCG-50
Tank Diameter Φ (m)		20	25	30	35	40	45	50
Peripheral Tank Depth H (m)		3.5~4.5 According to user requirements						
Water Depth at Tank Edge H ₂ (m)		3.0~4.0 According to user requirements						
Outer edge speed V (m/min)		2.0~3.0						
Motor Power N (kW)		0.37	0.55	0.55	0.75	1.1	1.1	1.1
Installation Dimension (mm)	B	1000~1200						
	Φ ₁	3000	3000	3500	3500	4000	5000	6000
	Φ ₂	600	600	800	800	1000	1200	1200
	Φ ₃	900	900	1100	1100	1300	1500	1500
	Φ ₄	2200	2600	2800	3000	3200	3700	3700
	Φ ₅	3000	3400	3600	3800	4000	4500	4500
	H ₂	900	1100	1100	1200	1200	1400	1400
	B ₁	According to user requirements						
H ₃	According to user requirements							
L	According to user requirements							
Center column platform vertical load P ₁ (KN)		48	65	70	90	98	120	155
Working bridge end load P ₂ (KN)		5.0	6.5	7.2	9.5	10.0	13.5	17.0
Maximum operating torque (N.m)		75.5	140	168	268	448	505	560

5. Main Features

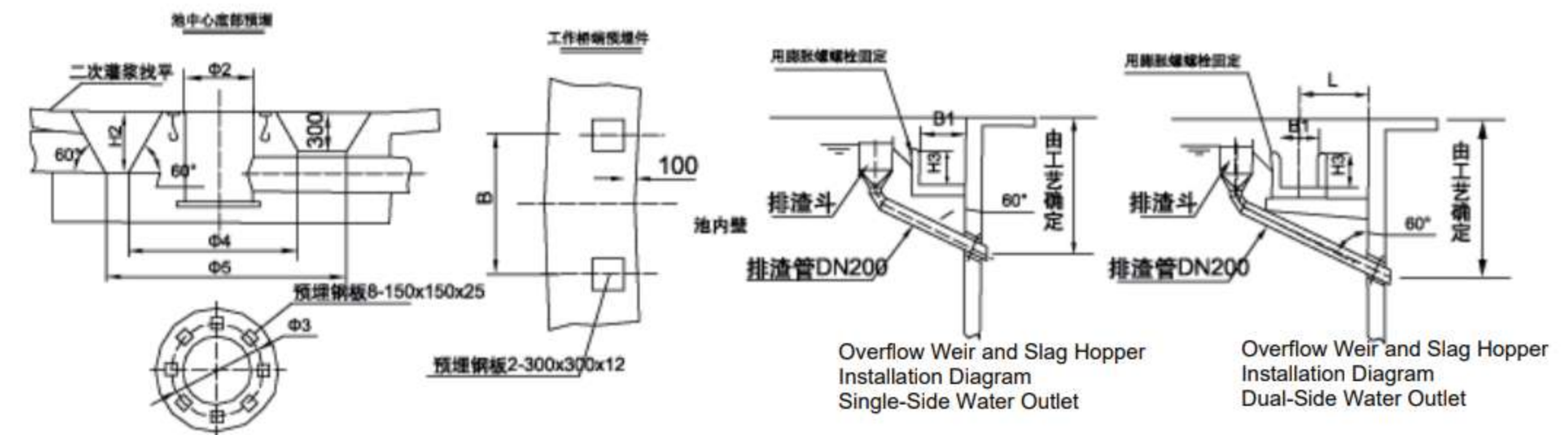
- The working bridge is a half-bridge type, available in either carbon steel or stainless steel.
- The drive unit utilizes a combination of a helical gear reducer and a worm gear reducer, ensuring consistent output torque and speed, and delivering high transmission efficiency.
- The reducer is equipped with an over-torque protection device, ensuring safe and reliable operation. The equipment is easy to operate, allowing for direct local or remote control of its operation.

ZCCG Vertical Frame CenterDrive Sludge Scraper

6. External Installation Dimension Drawing



- Outlet Weir Plate
- Floating Slag Baffle
- Slag Scraping Rake
- Scraping Arm
- Skimming Plate
- Cable
- Flow Stabilizer Cylinder
- Driving Device
- Central Column
- Central Transmission End Beam
- Scraper
- Slag Discharge Hopper
- Working Bridge



YQG Bridge-Type Sludge Scraper

1. Purpose

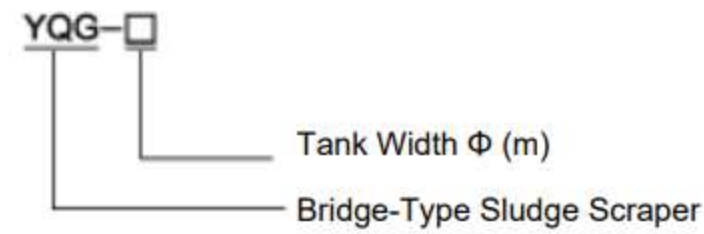
The YQG Bridge-Type Sludge Scraper is primarily used for sludge removal from horizontal flow sedimentation tanks in urban sewage treatment plants and waterworks. This machine is a one-way scraper and can be equipped with a skimming and sludge removal device upon request.

2. Structure and Working Principle

This equipment utilizes a mobile bridge. When the scraper is not operating, it stops at the water inlet. When operating, the scraper moves with the current, lowering the skimmer plate to remove sludge from the tank surface into the steel skimmer chute at the end of the tank, while the scraper plate is lifted off the tank bottom. When moving in the opposite direction, the scraper plate is lowered to scrape sludge from the tank bottom into the sludge collection trough at the end of the tank, while the skimmer plate is lifted off the liquid surface to prevent sludge from flowing back into the tank. This reciprocating motion achieves both sludge and sludge removal.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

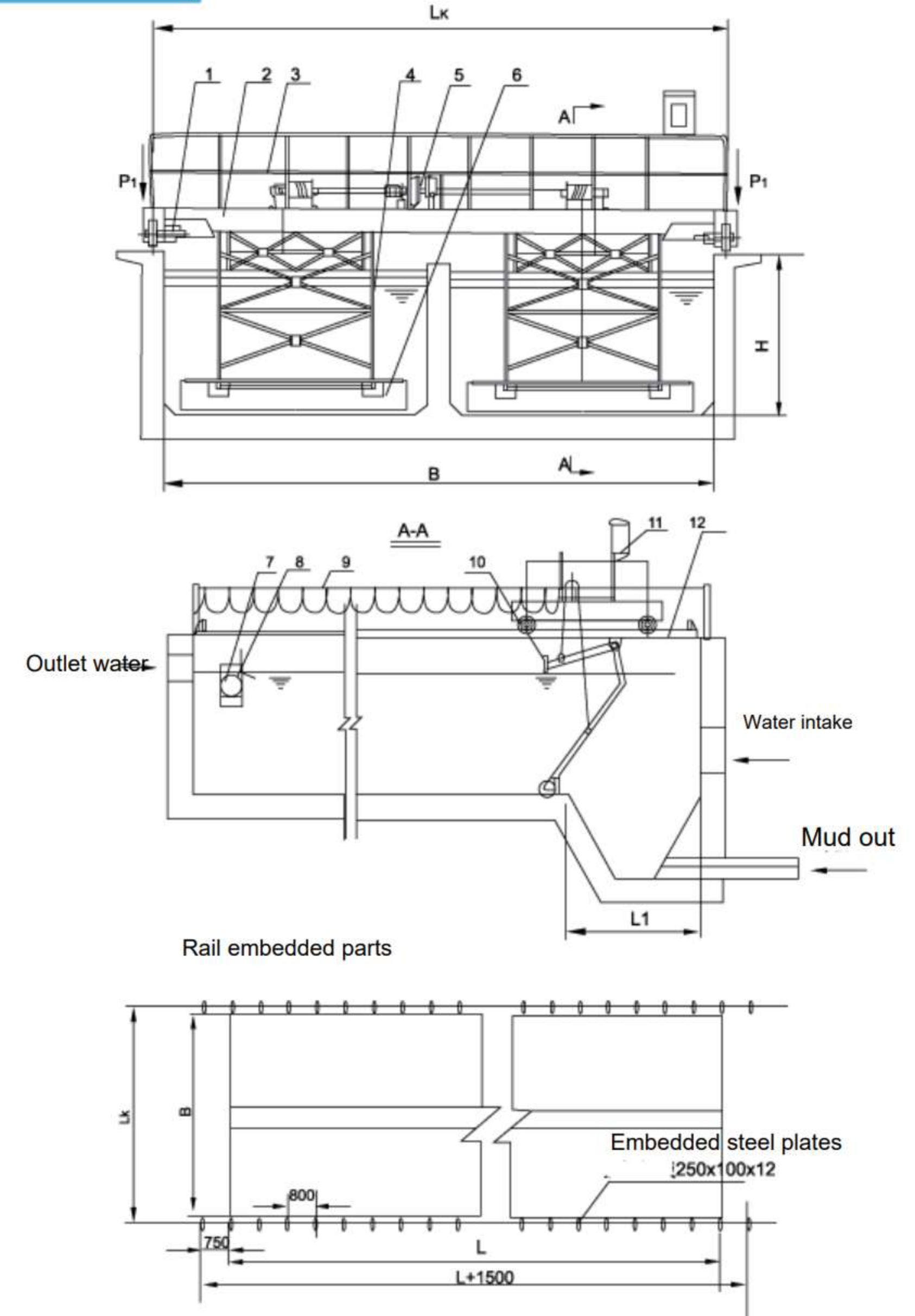
Parameter	Model	YQG-5	YQG-6	YQG-8	YQG-10	YQG-12	YQG-15	YQG-20
Tank width B (m)		5	6	8	10	12	15	20
Track gauge LK (m)		B+0.4						
Tank depth H (m)		3.0~5.0						
Tank length L (m)		According to user requirements						
Travel speed V (m/min)		1.5~2.0						
Travel motor power N1 (kW)		0.25×2		0.37×2		0.55×2		
Rake motor power N2 (kW)		0.37~0.75						
Drum diameter d (mm)		250						
Rail gauge (kg/m)		15 (GB/T11246-1989)						
Installation dimensions (mm)	B ₁	1500		2200		2900		
	L ₁	According to user requirements						
Wheel pressure P1 (kN)		15		22		30		
Drum horizontal load P2 (kN)		6		8		10		

5. Main Features

- Double-sided drive, with synchronized roller transmission on both sides, ensures smooth operation;
- The underwater carriage uses steel wheels for travel, while the underwater scraper uses rubber rollers for travel;
- Dessication and sludge scraping operate in opposite directions;
- Easy operation, with direct on-site or remote control of the equipment.

YQG Bridge-Type Sludge Scraper

6. External Installation Dimension Drawing



- End Beam Driving Device
- Main Beam
- Railing
- Sludge Scraping Frame
- Winch Mechanism
- Sludge Scraping System
- Slag Discharge Valve
- Floating Slag Collection System
- Mobile Cable
- Skimming Mechanism
- Local Control Box
- Track

YQX Bridge-Type Sludge Suction Machine

1. Purpose

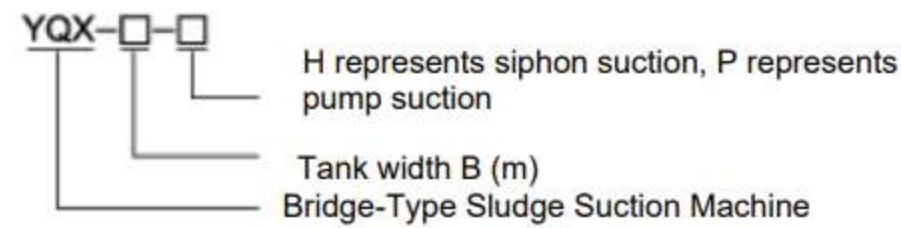
The YQX Bridge-Type Sludge Suction Machine is primarily used for suction and discharge of sludge from rectangular secondary sedimentation tanks in urban sewage treatment plants or horizontal flow sedimentation tanks in waterworks. Oil and slag skimming devices can be added upon request.

2. Structure and Working Principle

This equipment utilizes a mobile bridge and offers two sludge suction methods: siphon suction and pump suction. Siphon suction machines are generally used for surface sedimentation tanks, while pump suction machines are used for semi-underground sedimentation tanks.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

Model	YQX-5	YQX-6	YQX-8	YQX-10	YQX-12	YQX-15	YQX-20
Tank width L (m)	5	6	8	10	12	15	20
Track gauge Lk (m)	B+0.4						
Tank depth H (m)	3.0~7.0 According to user requirements						
Tank length L (m)	According to user requirements						
Travel speed V (m/min)	1.0~2.0						
Travel motor power N1 (kW)	0.25×2		0.37×2		0.55×2		
Drum diameter d (mm)	250						
Rail gauge (kg/m)	15			22			
Wheelbase B1 (mm)	1500		2200			2900	
Wheel pressure P (kN)	15		22			30	
Drum horizontal load P2 (kN)	6		8			10	

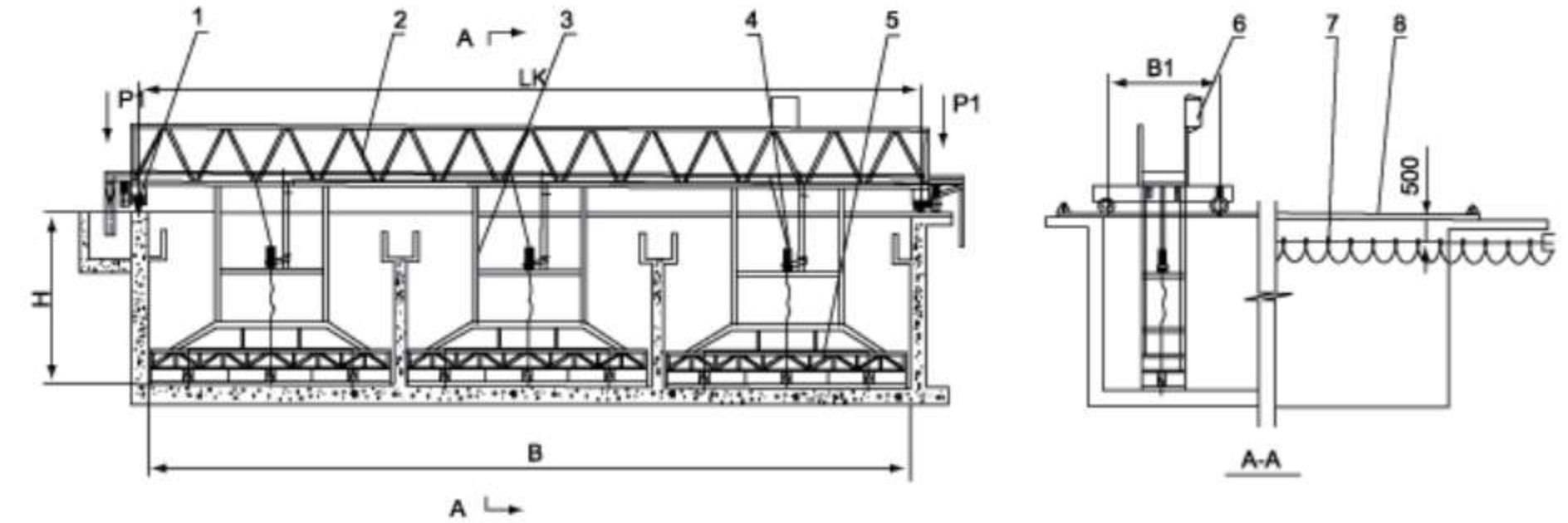
5. Main Features

- Reciprocating sludge suction and skimming, high efficiency, simple structure;
- Double-sided drive, synchronized roller transmission on both sides, smooth operation;
- Unidirectional skimming, cleaner pool surface;
- Flat pool bottom;
- Easy operation, with direct on-site/remote control of equipment operation.

YQX Bridge-Type Sludge Suction Machine

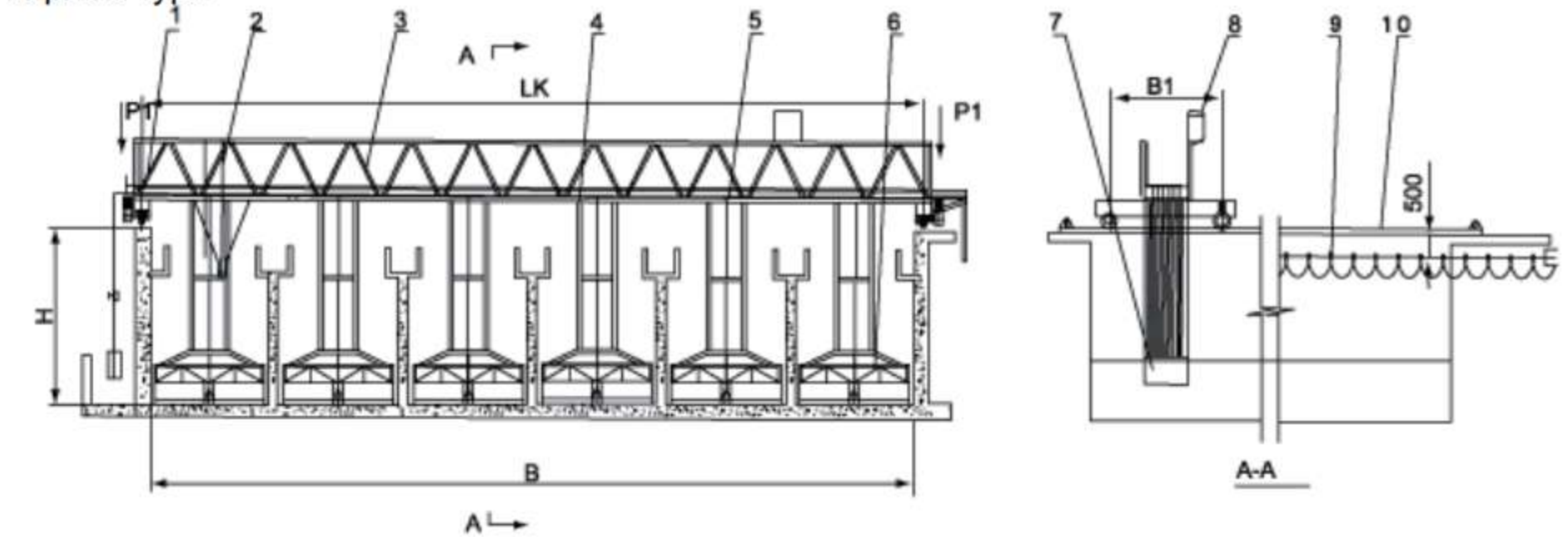
6. External Installation Dimension Drawing

Pump Suction Type



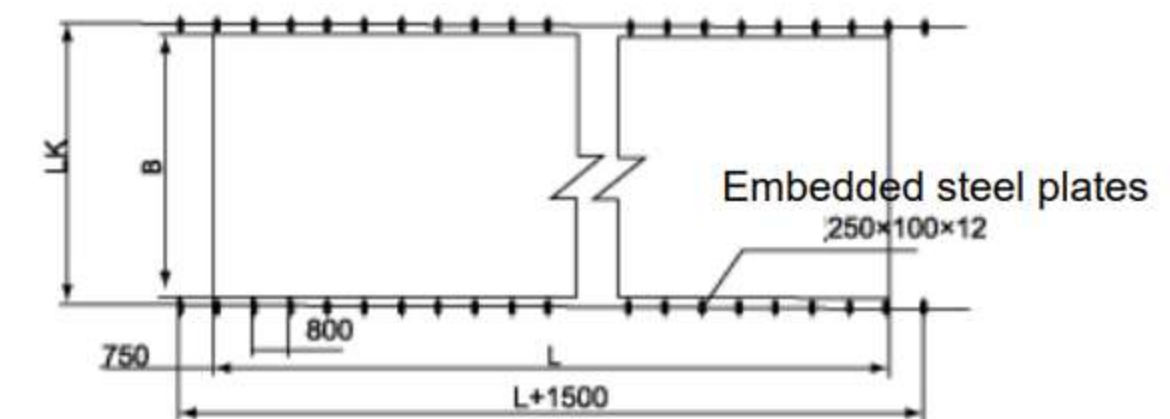
- End Beam Driving Device
- Working Bridge
- Support
- Pump Suction System
- Scraper and Hanger
- Local Control Box
- Mobile Cable
- Track

Siphon Type



- End Beam Driving Device
- Vacuum System
- Working Bridge
- Support
- Sludge Suction System
- Scraper and Suspension Bridge
- Water Seal Tank
- Local Control Box
- Mobile Cable
- Track

Rail diagram



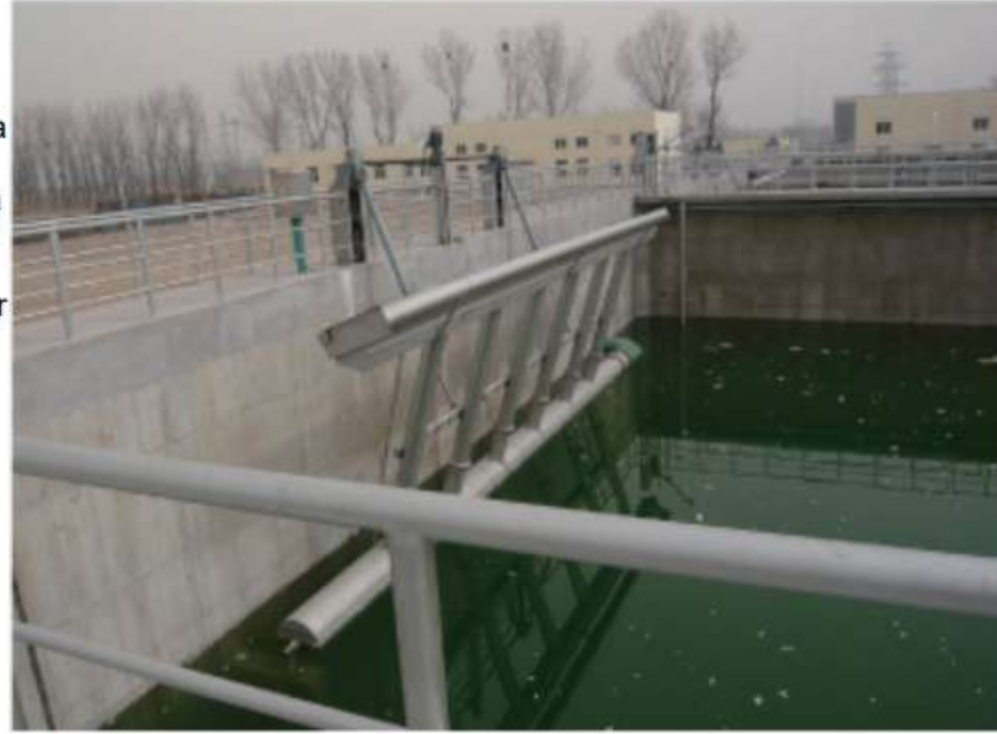
XBS Rotary Decanter

1. Purpose

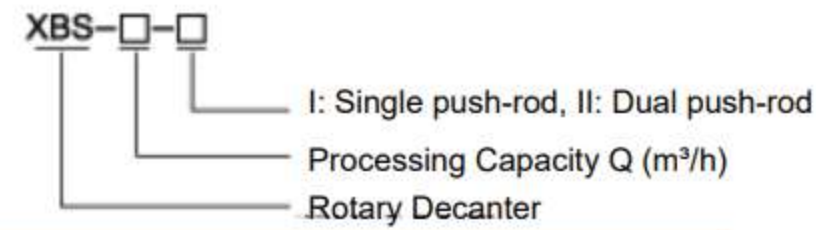
The XBS Rotary Decanter is widely used in treating municipal sewage and various industrial wastewaters, including those from papermaking, brewing, leather making, and pharmaceutical industries. It is used to decant the treated supernatant from the surface during the drainage phase and is a key piece of equipment in the XBS process.

2. Structure and Working Principle

This device utilizes a rotary, electric push-rod mechanism and is installed in a reaction tank or sedimentation tank. During operation, a drive mechanism drives the push-rod, gradually lowering the decanter to the water surface at a specified speed (within a specified stroke range), submerging the weir below the water surface. Supernatant flows through the weir, is collected through the branch pipes, and then discharged into the main pipe. When the decanter stops, the push-rod also lifts the decanter, raising the weir above the water surface, thus completing the decanting process.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

Model	XBS-200	XBS-300	XBS-400	XBS-500	XBS-600	XBS-700	XBS-800	XBS-900	XBS-1000	XBS-1200	XBS-1500	XBS-1800	XBS-2000	XBS-2500	XBS-3000	
Processing capacity Q (m³/h)	200	300	400	500	600	700	800	900	1000	1200	1500	1800	2000	2500	3000	
Weir length L (mm)	2000	3000	4000	5000	6000	7000	8000	8000	8000	9600	12000	14400	16000	20000	24000	
Maximum decanting depth (mm)	1400~3000															
Motor power N (kW)	0.55		0.75		1.1			1.5			2.2			3.0		
Installation dimensions (mm)	Φ ₁	320	350	420	500	550	550	600	600	650	690	750	600	600	690	750
	Φ ₂	350	380	450	530	580	580	630	630	690	730	790	640	640	740	790
	L ₁	400			600			800								
	L ₂	1900	2900	3900	4900	5900	6900	7900	7900	7900	9500	11900	14300	15900	19900	23900
	L ₃	1500	2000	2500	3000	3500	4000	4500	4500	4500	5300	6500	7700	8500	10500	12500
	L ₄	-	-	-	-	-	-	-	-	-	2000	2400	3000	3600	4500	5000
	H ₁	300			350			450								
Civil load Pr (KN)	P ₁ (KN)	20		30		40			45			60				
	P ₂ (KN)	8		10		15			20			30				

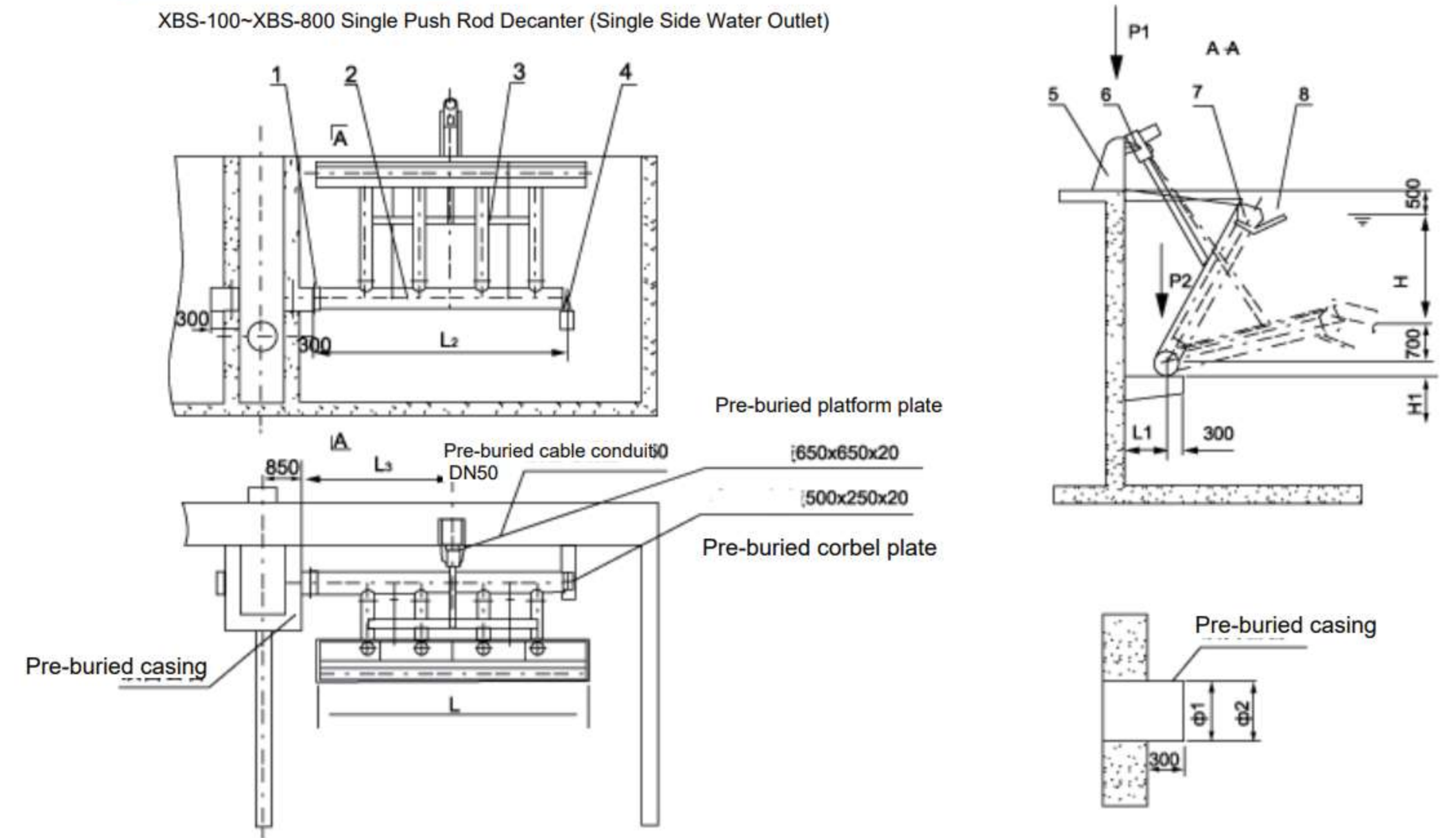
5. Main Features

- The equipment has a compact structure, operates smoothly, and is easy to install as a whole with low operating costs;
- It has strong adaptability to changes in water quality and quantity, and the decanting depth can reach 3.0m;
- When the treatment capacity Q < 1000m³/h, a single push rod is used; when Q ≥ 1000m³/h, a double push rod is used;
- A floating slag baffle is installed outside the decanting weir to ensure that the equipment at the weir has variable frequency speed regulation, PLC automatic and process control during operation, making operation and management convenient.

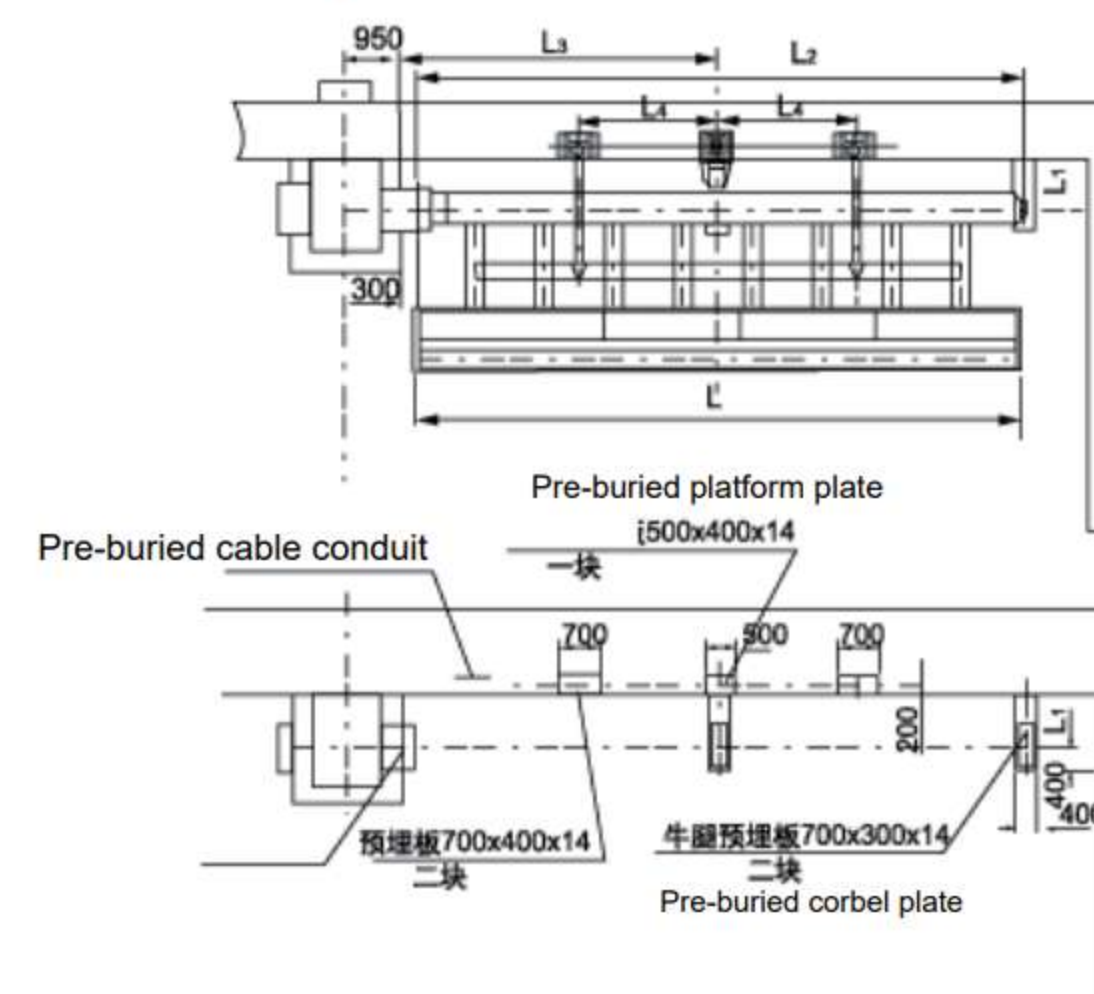
XBS Rotary Decanter

6. External Installation Dimension Drawing

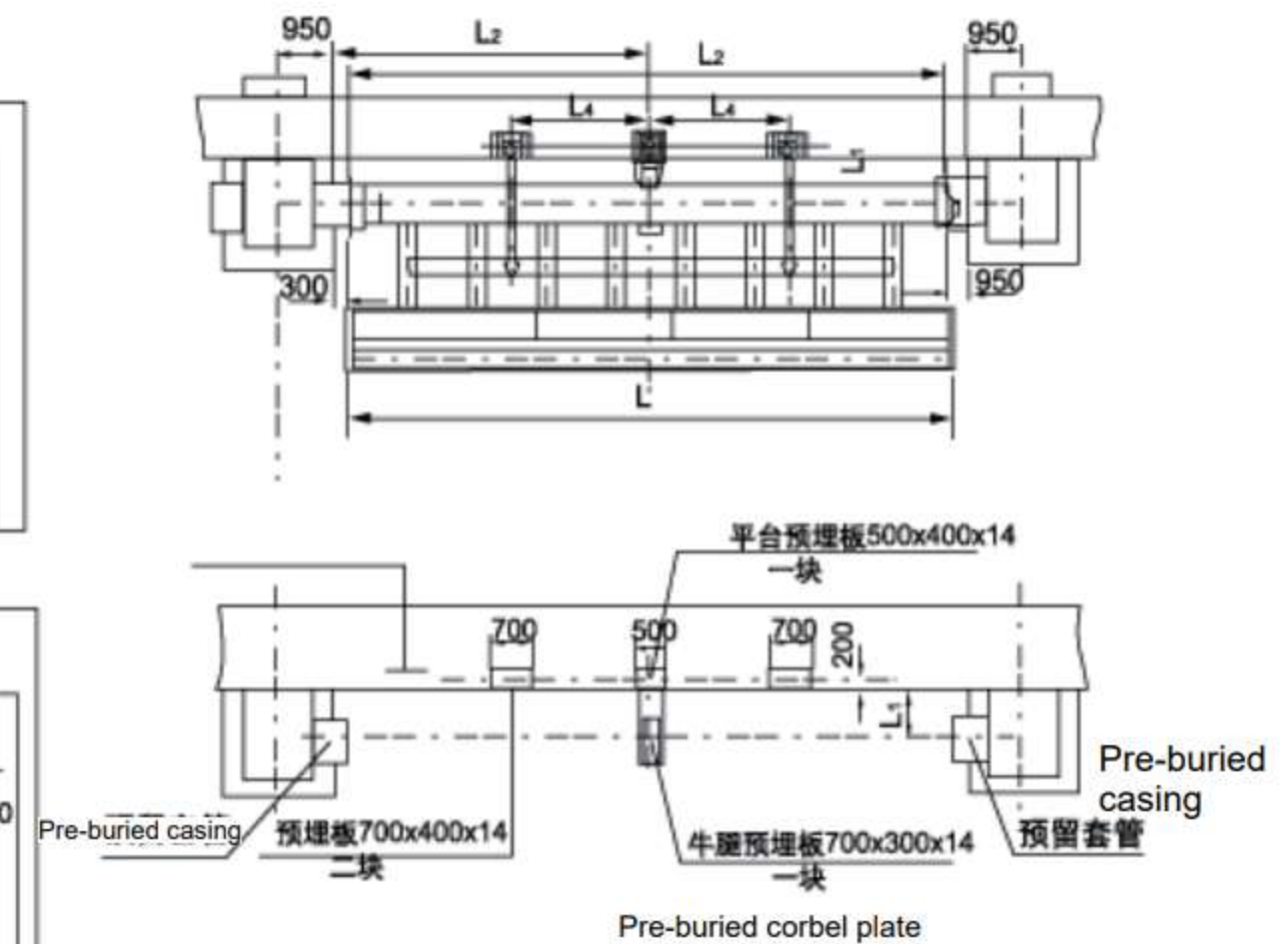
XBS-100~XBS-800 Single Push Rod Decanter (Single Side Water Outlet)



XBS-1000~XBS-2000 Double Push Rod Decanter (Single Side Water Outlet)



XBS-2000~XBS-3000 Double Push Rod Decanter (Double Side Water Outlet)



1. Rotating Body 2. Main Water Collection Pipe 4. Tail Support Seat 5. Upper Frame Electric Push Rod
7. Decanting Trough 8. Slag Blocking Float

3. Aeration Series Equipment

YZB Rotary Disc Aerator

1. Purpose

The YZB Rotary Disc Aerator is suitable for the Obel oxidation ditch process for the biochemical treatment of municipal and various industrial wastewaters, oxygenating the water within the oxidation ditch.

2. Structure and Working Principle

This device is a horizontal shaft surface aerator. Each disc consists of two semicircular discs connected to the main shaft by a flange and evenly arranged on the main shaft. The disc surface is densely covered with trapezoidal protrusions, circular depressions, and air holes. When the drive unit drives the main shaft and the discs, they begin to rotate, thoroughly agitating, pushing, and mixing the wastewater. The special surface of the discs increases the amount of air introduced into the water and forcibly divides and evenly divides bubbles, thereby greatly improving oxygenation capacity.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

Parameter	Model	YZB— 1400×3000	YZB— 1400×4000	YZB— 1400×5000	YZB— 1400×6000	YZB— 1400×7000	YZB— 1400×8000	YZB— 1400×9000	YZB— 1400×10000
	Disc diameter D (mm)		1400						
Horizontal span C (mm)		3000	4000	5000	6000	7000	8000	9000	10000
Number of discs n (plates)		11	15	19	24	28	30	36	40
Effective water depth H (m)		2.5~5.0 (According to user requirements)							
Immersion depth h (mm)		300~500							
Rotational speed n (r/min)		51	47	47	47	47	47	47	47
Motor power N (kW)		7.5	11.0	15.0	18.5	22.0	30.0	30.0	37.0
Oxygenation capacity per disc Q (kgO ₂ /h)		0.8~2.0							
Oxygenation capacity at 500mm immersion q (kgO ₂ /h)		17.5	26.5	33.5	42.0	49.0	56.0	63.0	70.0
Power efficiency k (kgO ₂ /kW·Oh)		1.8~2.2							
Disc installation density (plates/m)		3~5							
Installation dimensions (mm)	L ₁	160	160	160	160	160	160	160	160
	L ₂	640	640	640	640	640	640	640	640
	L ₃	800	800	800	800	800	800	800	800
	H	235	250	290	290	290	290	290	290
	A	400	400	400	400	400	400	400	400
	B	233	295	360	360	360	360	360	360
	C	180	240	270	270	270	270	270	270
Civil engineering load	E	91	115	128	128	128	128	128	128
	P ₁ (KN)	16	18	20	24	26	28	30	32
	P ₂ (KN)	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
	M(N.m)	1460	2140	2920	3600	4285	5840	5840	7200

5. Main Features

- The drive unit utilizes a vertical outdoor motor and a conical cylindrical gear reducer with hardened tooth surfaces, resulting in high load capacity, compact structure, small size, and light weight.
- An elastic pin-gear coupling ensures high torque transmission with minimal bulk, allows for radial and angular misalignment, and simplifies installation.
- The disc is extruded from reinforced polypropylene or high-strength, lightweight fiberglass, offering high strength, corrosion resistance, excellent rigidity, and heat resistance.
- The tail unit utilizes a self-aligning bearing and floating support to mitigate installation errors, achieve automatic alignment, and compensate for shaft expansion and contraction due to temperature differences, ensuring proper operation.

ZSB Rotary Brush Aerator

1. Purpose

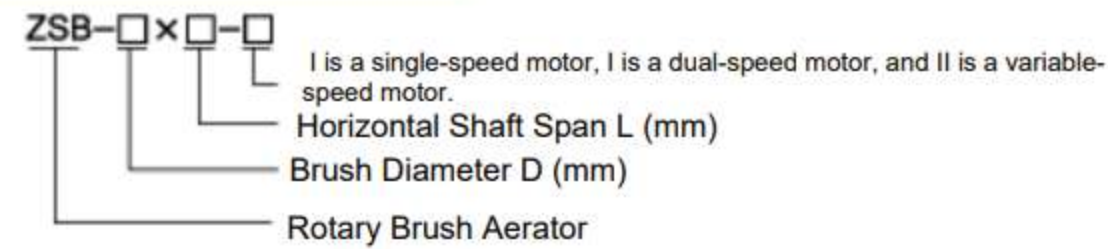
The ZSB Rotary Brush Aerator is primarily suitable for three-tank or alternating oxidation ditch processes for the biochemical treatment of municipal sewage and various other wastewaters, oxygenating the water within the oxidation ditch.

2. Structure and Working Principle

This device is a horizontal-shaft surface aerator with brushes evenly arranged on the main shaft. When the drive mechanism rotates the main shaft, the brushes begin to spin. The brushes come into contact with the water, throwing it into the air and forming a hydraulic jump. This allows the water to fully come into contact with the air, allowing the air to quickly penetrate the water, completing the oxygenation process and promoting water circulation within the oxidation ditch.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

Parameter	Model	ZSB-700×3000	ZSB-700×4500	ZSB-700×6000	ZSB-1000×3000	ZSB-1000×4500	ZSB-1000×6000	ZSB-1000×7500	ZSB-1000×9000
Brush Diameter D (mm)		700			1000				
Horizontal Axis Span C (mm)		3000	4500	6000	3000	4500	6000	7500	9000
Effective Water Depth H (m)		2.5~3.0			3.0~3.5				
Immersion Depth h (mm)		200			300				
Speed n (r/min)		85			72				
Oxygenation Capacity (kgO ₂ /m ³ ·h)		75.0	11.0	15.0	18.5	22.0	30.0	37.0	45.0
Total Oxygenation Capacity Q (kgO ₂ /h)		3.75			8.0				
Brush Width (mm/brush)		10	17	22	24	36	48	60	72
Power Efficiency k (kgO ₂ /kw·h)		50~76							
Flow Rate (m ³ /h)		1.8~2.2							
Disk Installation Density (disks/m)		155	230	300	500	750	1000	1250	1500
Installation dimensions (mm)	L ₁	120	120	120	120	120	120	120	120
	L ₂	640	640	640	640	640	640	640	640
	L ₃	-	-	-	800	800	800	800	800
	H	235	235	235	250	290	290	290	290
	A	-	-	-	440	440	440	440	440
	B	233	233	233	295	360	360	360	360
	C	180	180	180	240	270	270	270	270
	E	91	91	91	115	128	128	128	128
Civil engineering load	h	200	200	200	200	200	200	200	200
	P ₁ (KN)	20	21.5	22	23	24	27	30	32
	P ₂ (KN)	4.5	5.0	5.2	5.4	5.5	6.0	6.5	7.0
	M(N.m)	860	1260	1720	2030	2980	4050	5000	6080

Note: The maximum trench width for a single unit is 10m. If the trench width is greater than 10m, intermediate supports are required, but not exceeding 15m.

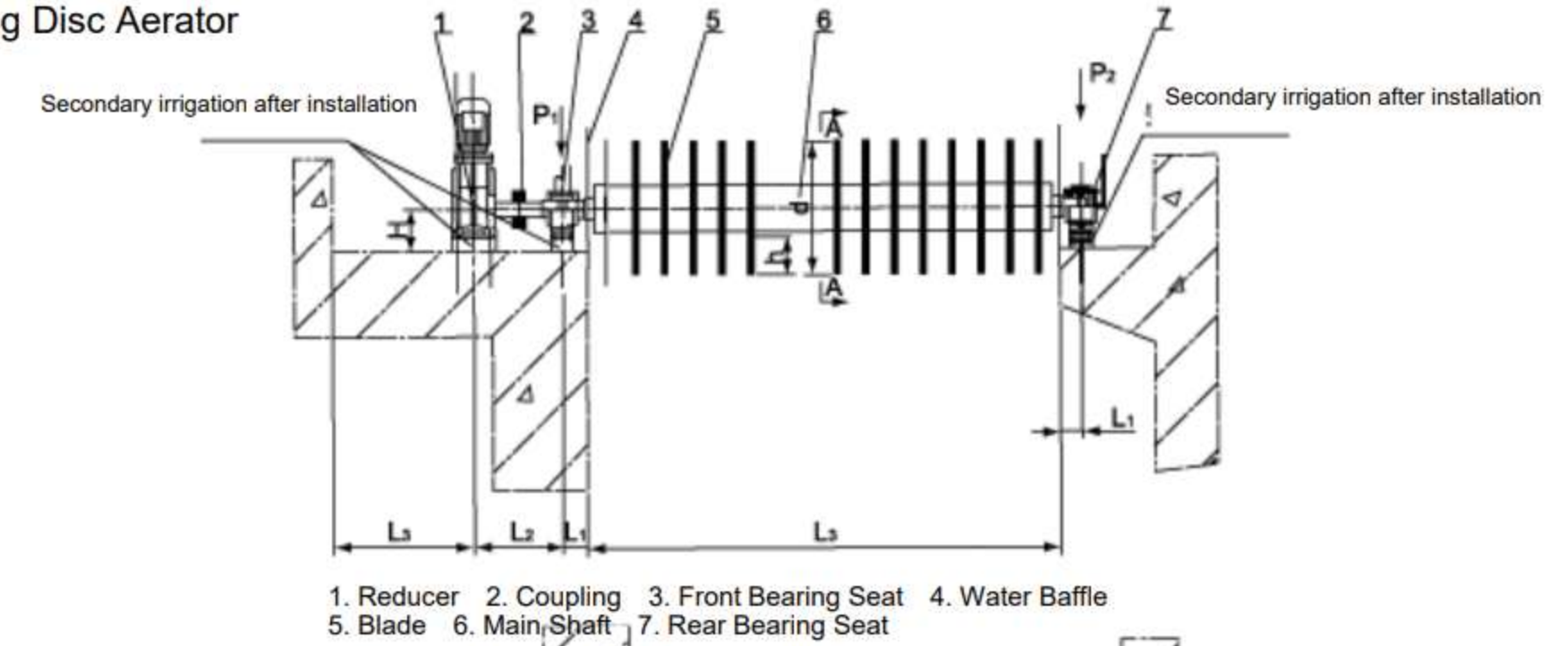
5. Main Features

- The drive unit utilizes a vertical outdoor motor and a conical cylindrical gear reducer with hardened tooth surfaces, resulting in high load capacity, compact structure, light weight, and smooth operation.
- An elastic pin-gear coupling is used, enabling high torque transmission with minimal bulk, allowing for limited radial and angular tolerances and simplifying installation.
- The brush blades are constructed of high-quality carbon steel (galvanized) or stainless steel, assembled in a clamp-type, spiral arrangement for uniform water entry, stable load, and easy installation and maintenance.
- The tail section utilizes a self-aligning bearing and floating support to mitigate installation errors and achieve automatic centering. Furthermore, they compensate for expansion and contraction of the brush shaft due to temperature differences, ensuring proper operation.

ZSB Rotary Brush Aerator

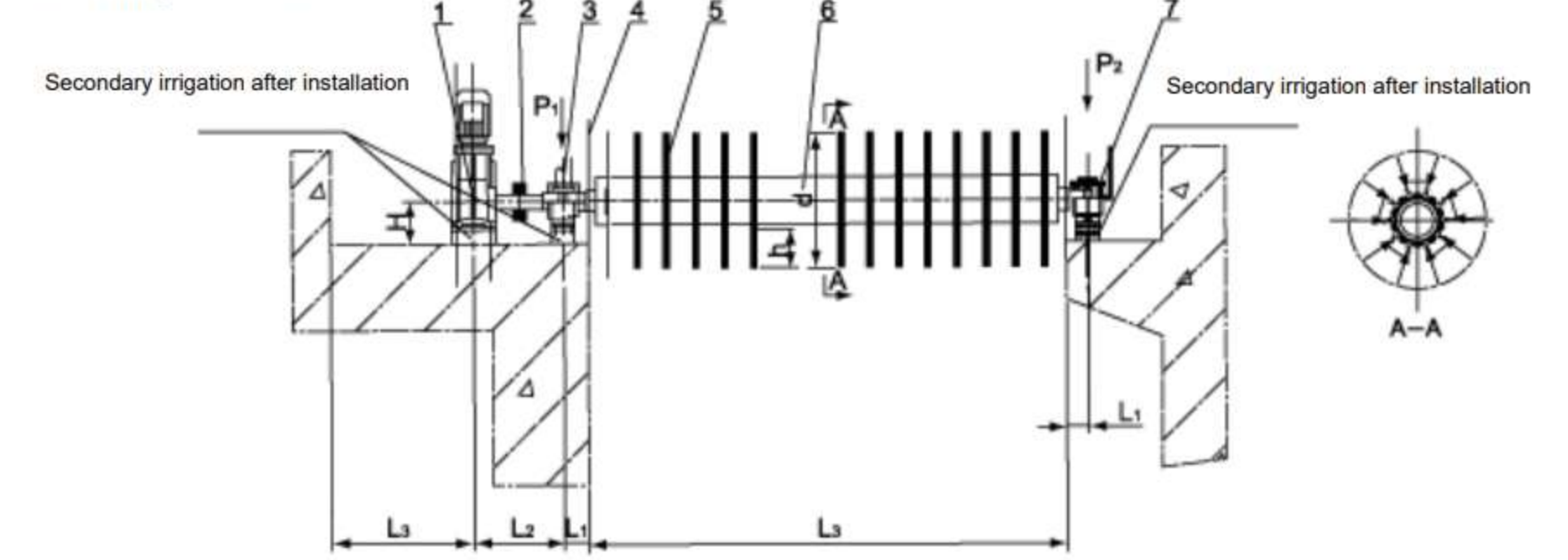
6. External Installation Dimension Drawing

Rotating Disc Aerator



1. Reducer 2. Coupling 3. Front Bearing Seat 4. Water Baffle 5. Blade 6. Main Shaft 7. Rear Bearing Seat

Rotating brush aerator



1. Reducer 2. Coupling 3. Front Bearing Seat 4. Water Baffle 5. Blade 6. Main Shaft 7. Rear Bearing Seat

BBE Pump-Impeller Surface Aerator

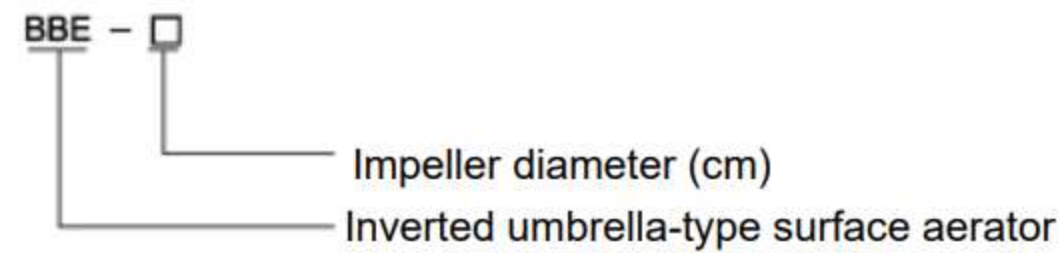
1. Purpose

- The BBE Pump-Impeller Surface Aerator uses the constant-speed rotation of its pump-type impeller to renew the sewage surface, creating a negative pressure zone for oxygen absorption and a water jump, achieving oxygenation and mixing. This device, based on the experience of similar domestic and international models, has been redesigned and standardized. It is suitable for oxidation ditches and similar-sized aerators. It features:

- Smooth rotation and high power efficiency;
- Can operate continuously or intermittently, either alone or in combination, with strong adaptability to changes in water quality and volume;
- Easy installation, operation, and maintenance;



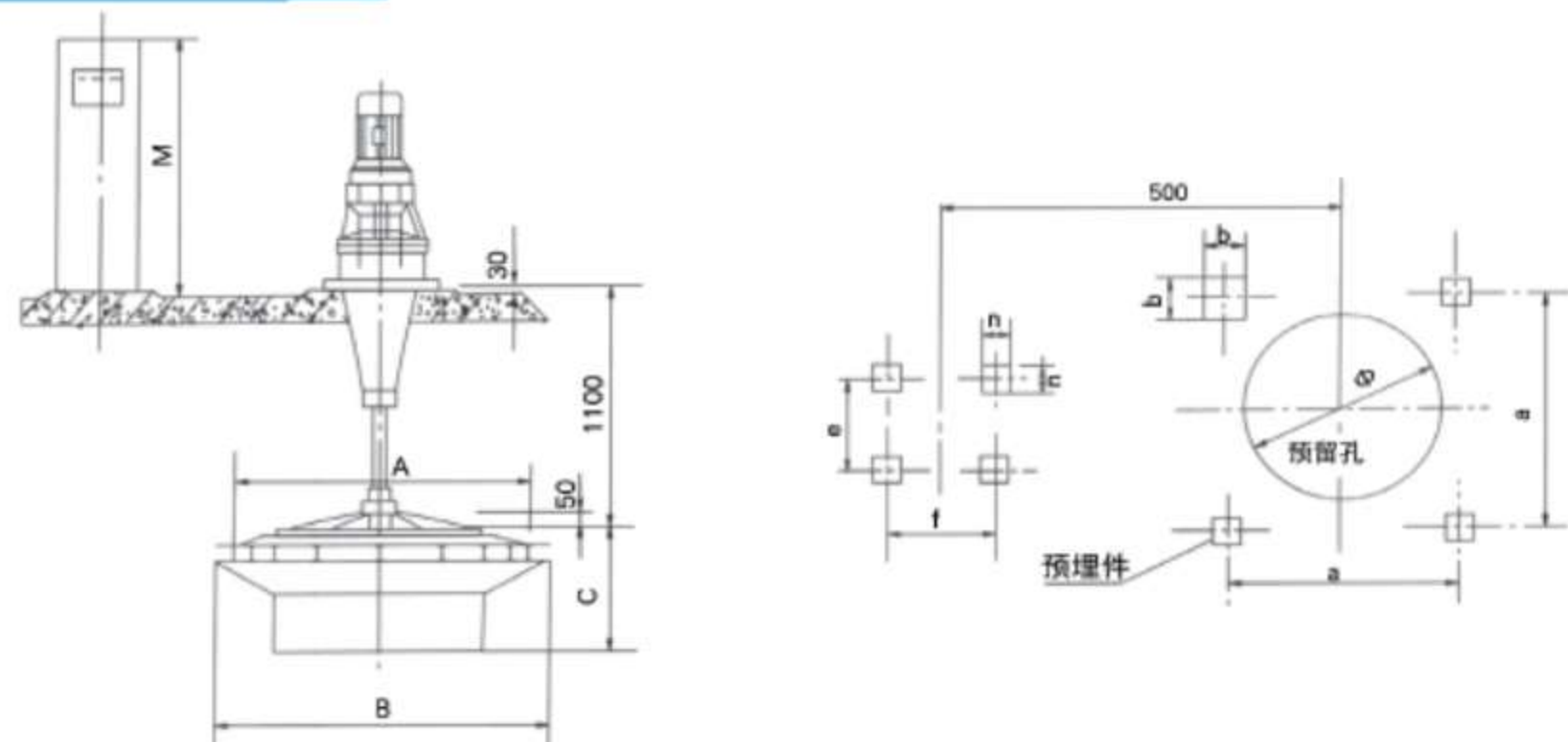
2. Model Description



3. Main Technical Parameters and Installation Dimension Table

Model Specification	Impeller		Motor Power (kW)	Oxygenation Capacity (kgO ₂ /h)	External and Installation Dimensions (mm)									
	Diameter A (mm)	Speed (r/min)			B	C	M	P	W	a	b	e	n	Φ
BBE-85	850	101	7.5	18.8	994	377	1200	50	820	400	80	600	50	360
BBE-100	1000	86	9	27.5	1100	396			960	415	100			360
BBE-120	1200	72	11	36	1332	475			1070	4300	120			400
BBE-150	1500	57	30	55	1665	594			1850	600	150			600
BBE-180	1800	48	40	77.2	1998	712.8			2800	800	200			830

4. External Installation Dimension Drawing



BBE Pump-Impeller Surface Aerator

1. Purpose

The underwater aerator mixes part of the water in the pool with air in the ejector first, providing a good condition for oxygenation and oxygen transfer. To avoid equipment quality issues caused by submersible pumps, we selected imported high-efficiency submersible sewage pumps as the working pumps. Taking all these factors into consideration, the BQS underwater aerator offers the following advantages:

1. Strong oxygenation capacity and low oxygen supply energy consumption (imported pumps offer a 3040% higher flow rate than domestic pumps at the same pressure);
2. Complete mixing of sewage and sludge, evenly distributing oxygen throughout the mixture;
3. Highly turbulent flow and high flow rates prevent sludge sedimentation;
4. Self-aspiration, requiring no blower to supply pressurized air, resulting in a quiet operation;
5. No blower room or air pipelines are required, resulting in lower capital investment than other aeration methods;
6. Low maintenance costs and easy installation, allowing installation during sewage treatment plant operation.



2 Working Principle

Underwater aerators are a new, high-efficiency aeration method developed based on jet aeration. They consist of a submersible pump and an ejector. The high-efficiency water flow from the submersible pump is ejected through the ejector nozzle, creating a vacuum in the suction chamber. Air, driven by a pressure differential, enters the ejector from the water surface through the air intake pipe. Entrained by the turbulent high-speed water flow, it is intensely mixed with the water, shattering the air into tiny bubbles and forming a uniform air-water emulsion. After being ejected from the ejector, the air-water emulsion forms a strong vortex in the pool, and a large amount of oxygen enters the pool along with the water flow.

3. Main Technical Parameters and Installation Dimension Table

Model	Oxygen Supply (kg/h)	Rated Motor Power (kW)	Motor Speed (rpm)	Maximum Working Water Depth (m)	Total Equipment Weight (kg)	Service Area (m)	Maximum Width (W)	Net Equipment Height (H)	Total Length (L)
BQS-1	1.4-1.9	1.2	2800	4.5	70	4×3.3	0.22	0.74	1.0
BQS-2	2.9-3.8	2.4	2850	4.5	105	5×5	0.29	0.92	1.50
BQS-3	5.3-6.6	4.4	2855	4.5	150	6×6	0.29	1.10	1.70
BQS-4	8.8-11	7.4	2900	4.5	185	7×7	0.34	1.20	2.0

5 Supporting Ancillary Equipment

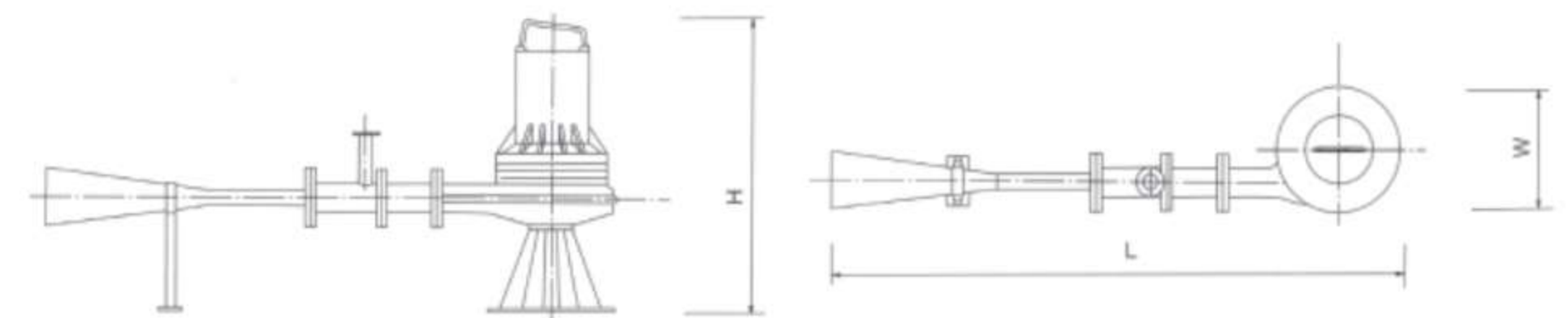
Model	Inlet Pipe Diameter	Muffler Length (mm)	Connection Method
BQS-1	DN40	400	Flange
BQS-2	DN40	400	Flange
BQS-3	DN50	400	Flange
BQS-4	DN80	400	Flange

6 Scope of Application

This equipment can be used as an oxygenation device in industries such as sewage treatment or aquaculture. Its applicable working environment should meet the following requirements:

1. The water temperature does not exceed 40°C.
2. The pH value of the water body is between 6 and 11.
3. The water quality is a non-flammable liquid.

6. External Installation Dimension Drawing



GWP Microporous Disc Aerator

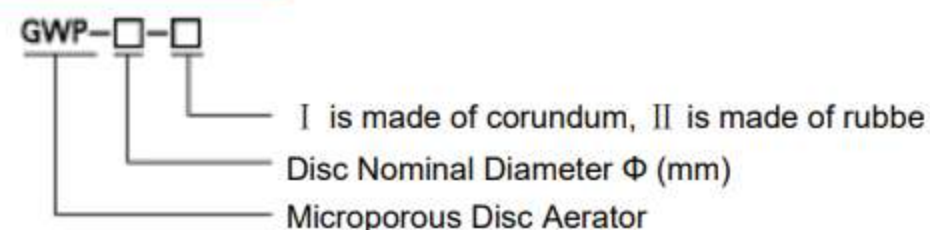
1. Purpose

The GWP Microporous Disc Aerator is suitable for oxygenating the water in biochemical tanks in urban sewage treatment plants and waterworks.

2 Working Principle

This disc-type aerator uses a uniform arrangement of aeration discs and air distribution piping within the tank, based on the air supply and tank shape. This aeration system provides oxygen to the tank, providing the oxygen necessary for microbial metabolism. It also stirs and mixes the water, ensuring full contact between microorganisms, dissolved oxygen, and suspended solids. This promotes microbial degradation and allows dissolved gases and volatile substances in the water to escape into the atmosphere, ultimately improving water clarity.

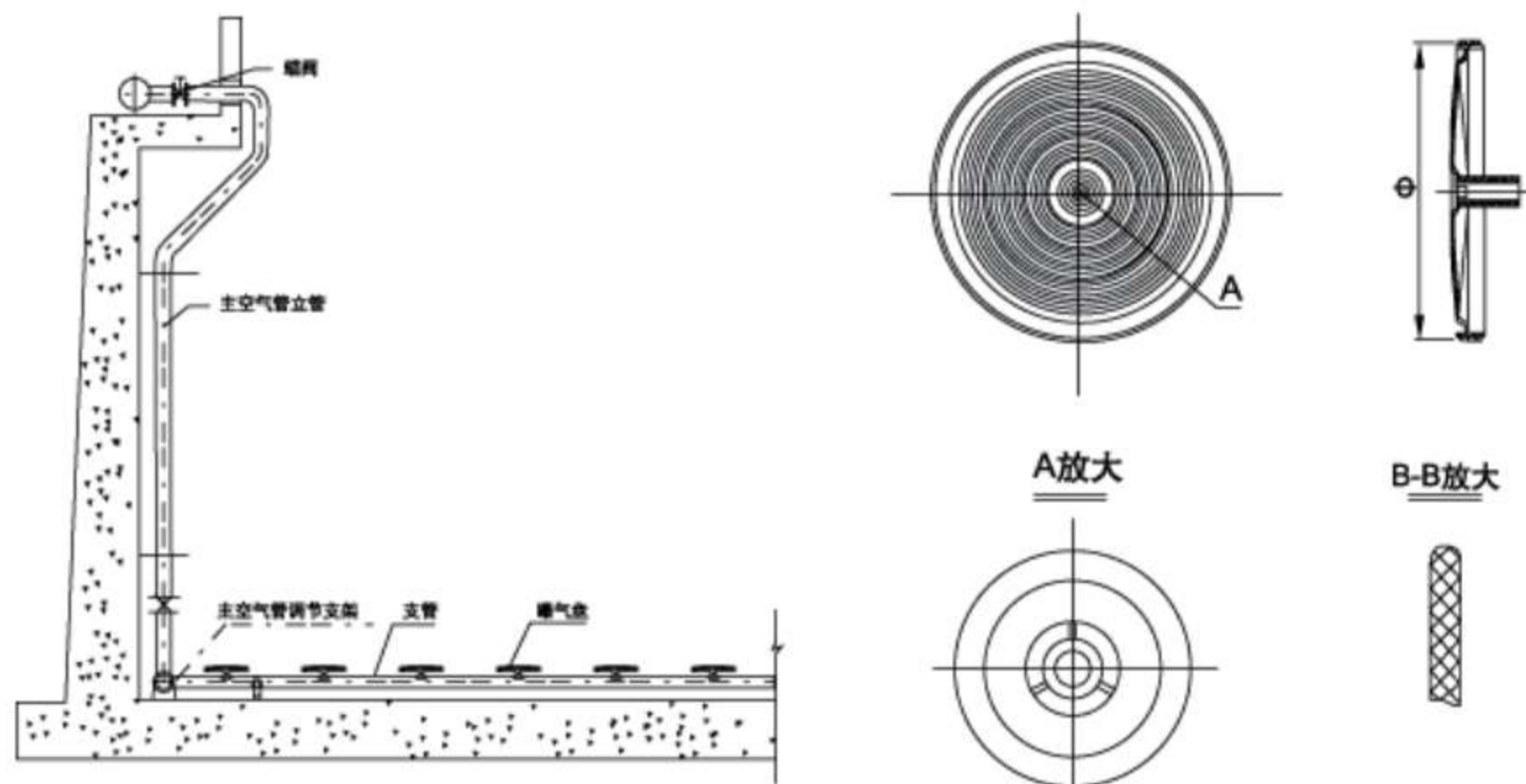
2. Model Description



3. Main Technical Parameters and Installation Dimension Table

Parameter	Model	GWP-178	GWP-215	GWP-235	GWP-260	GWP-300
Disc Nominal Diameter Φ (mm)		178	215	235	260	300
Micropore Diameter d (mm)		0.8~1.9				
Service Area (m ² /piece)		0.3~0.5	0.3~0.5	0.3~0.6	0.3~0.7	0.3~0.8
Aeration Rate (m ³ /piece h)		0.5~2.5	0.5~3.0	0.5~4.0	0.5~4.5	0.5~5.0
Oxygen Utilization Rate (%)		20~35%				
Oxygenation Power Efficiency (kgox/piece h)		4.5~5.2	4.5~5.2	4.5~5.2	4.5~5.5	4.5~5.5
Resistance Loss (mmH ₂ O) (at 4m water depth)		180~280				

4. External Installation Dimension Drawing



GWP Microporous Disc Aerator

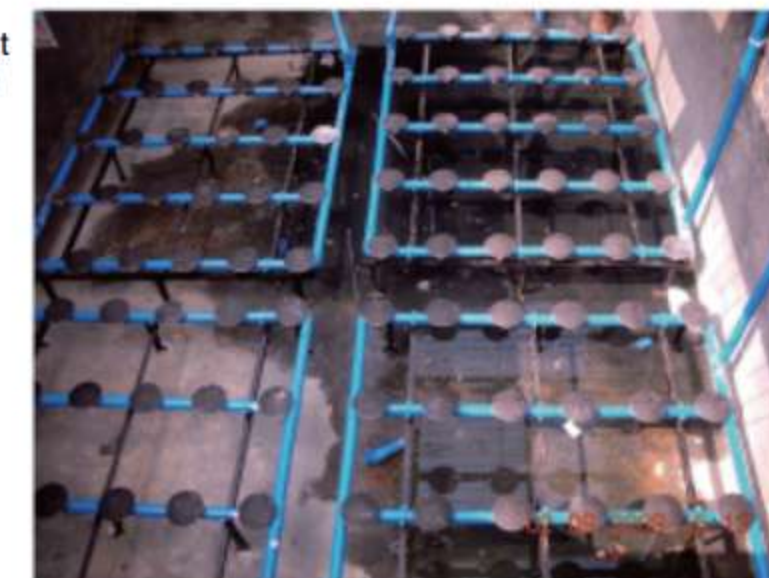
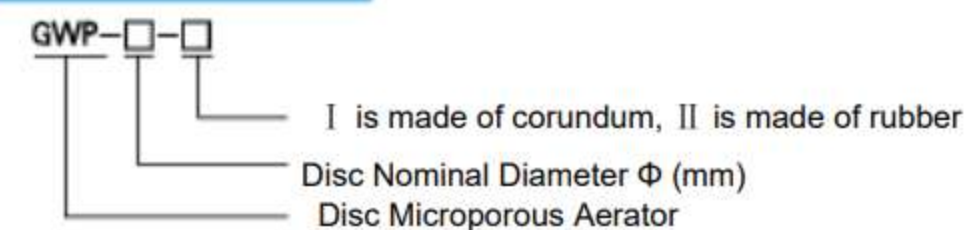
1. Purpose

The GWP-G tubular microporous aerator is suitable for oxygenating the biochemical tanks of urban sewage treatment plants and waterworks.

2 Working Principle

The GWP-G tubular microporous aerator is a new type of microporous aeration equipment used in the biochemical treatment of industrial and municipal wastewater. It features high airflow per tube, low bottom resistance, strong lifting capacity, and high oxygenation efficiency. Its key component, the diaphragm, has numerous perforations. When air is supplied, the perforations open, forming microbubbles. When air is stopped, the perforations automatically close, preventing sewage and debris from entering the pipes and clogging the aeration head.

2. Model Description



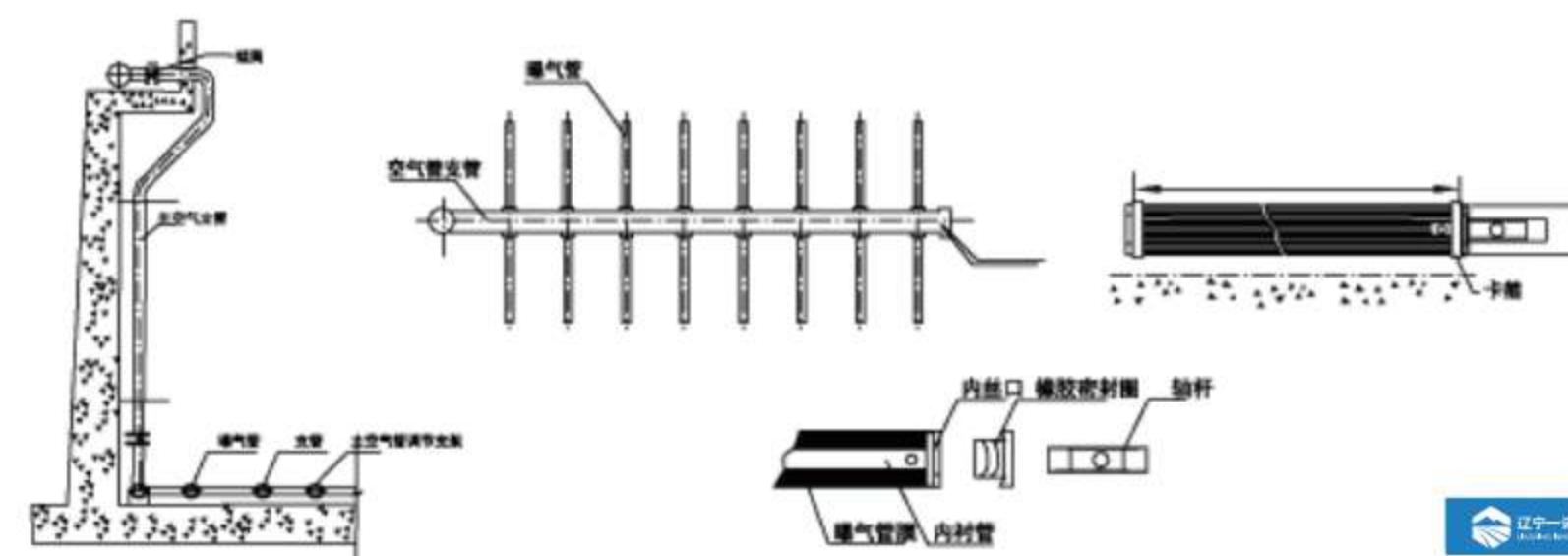
3. Main Technical Parameters and Installation Dimension Table

Parameter	Model	GWP-G-67×550	GWP-G-67×1000	GWP-G-90×550	GWP-G-90×1000
Pipe Diameter Φ (mm)		67	67	90	90
Pipe Length L (mm)		550	1000	550	1000
Pore Diameter d (mm)		0.8~1.9			
Service Area (m ² /piece)		0.5~0.8	0.5~1.9	0.8~1.9	0.8~1.9
Aeration Volume (m ³ /piece h)		0.5~6.0	0.5~10.0	0.5~12.0	0.5~20.0
Oxygen Utilization Rate (%)		20~35%			
Oxygenation Power Efficiency (kgox/piece h)		4.5~5.2	4.5~5.2	4.5~5.2	4.5~5.5
Resistance Loss (mmH ₂ O) (at 4m water depth)		180~280			

4. Main Features

- The aeration tube is made of synthetic rubber through high-pressure, one-shot injection molding. It is UV-resistant, acid and alkali-resistant, abrasion-resistant, and aging-resistant, with a long service life.
- The check valve design prevents siltation, blockage, water seepage, and leakage, ensuring safe and reliable operation.
- Small bubbles, uniform air distribution, high aeration efficiency and oxygen utilization rate, and low power consumption.
- Simple equipment structure, easy installation and maintenance.
- For smaller aeration tanks (width ≤ 8m), the entire installation can be lifted, eliminating the need to shut down the tank for maintenance, making it more convenient.

5. External Installation Dimension Drawing



4. Sludge Dewatering, Dosing Equipment, and Agitation Equipment Series

DNT Belt-Type Thickener and Dehydrator

1. Purpose

The DNT Belt-Type Thickener and Dehydrator is primarily used for thickening and dehydrating excess sludge or mixed sludge from municipal wastewater biochemical treatment. It is a highly efficient dehydration device that forms sludge cakes. It is suitable for sludge dehydration in various industries, including water supply and drainage, papermaking, foundry, leather, textiles, chemicals, and food.

2 Working Principle

This equipment primarily consists of a belt thickener and a dewatering unit. After the sludge is treated with flocculant and thoroughly mixed in a sludge mixer, it flows into the gravity dewatering section. Under the action of gravity, a large amount of free water in the sludge flows out through the gaps in the filter belt and into a water collection tank. The sludge is then guided through a wedge-shaped pre-pressing section, where it is gradually flattened and gently squeezed for further dewatering. It then enters the S-shaped multi-roller pressing section, where the sludge is sandwiched between upper and lower filter cloths and repeatedly squeezed by rollers of varying diameters. This shearing action promotes further dewatering, forming a sludge cake. Finally, a scraper removes the cake and transports it away, while the upper and lower filter belts are rinsed and reused.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

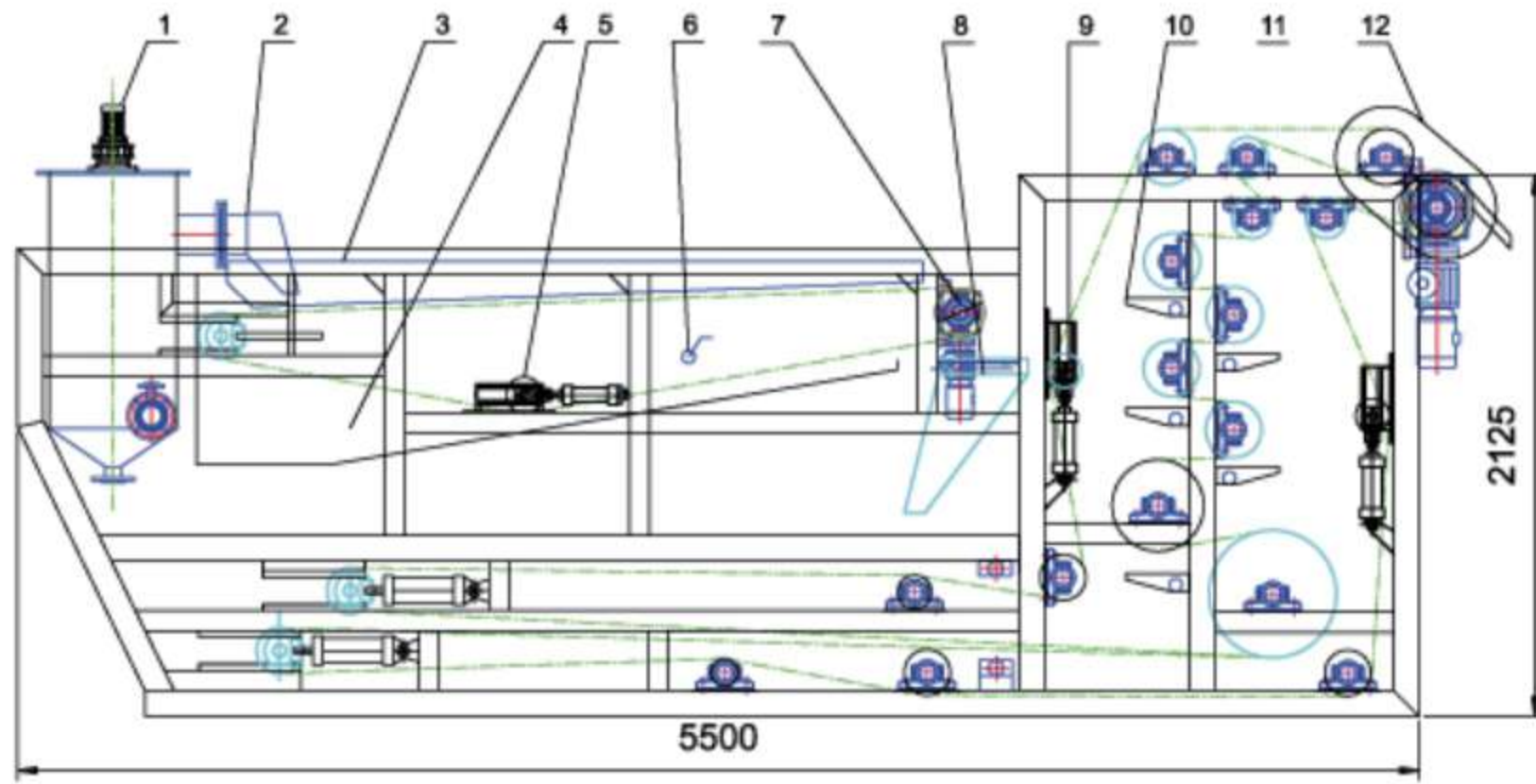
Parameter	Model	DNT-500	DNT-1000	DNT-1500	DNT-2000	DNT-2500	DNT-3000
Belt Width B (mm)		500	1000	1500	2000	2500	3000
Processing Capacity Q (m ³ /h)		5~10	10~20	20~30	30~40	40~60	60~80
Dimensions (W×L×H)		920×4490 ×1900	1420×5500 ×1900	1920×4490 ×1900	1920×5500 ×1900	2920×5500 ×1650	3420×5500 ×1650
Belt Speed V (m/min)		3.0~15 (concentration stage) 1.2~6.0 (dehydration stage)					
Concentration Motor Power N1 (kW)		0.55	0.55	0.75	1.1	1.5	1.5
Dehydration Motor Power N2 (kW)		0.75	1.5	1.5	2.2	3.0	5.0
Discharge Port Height h (mm)		1600	1600	1600	1600	1600	1600
Rinse Water	Water Consumption (m ³ /h)	4.0	7.5	12.0	15.0	25.0	30.0
	Water Pressure (MPa)	≥0.5					
Compressed Air	Air Consumption (m ³ /h)	0.3	0.3	0.4	0.4	0.4	0.4
	Air Pressure (MPa)	≥0.7					
Residual/ Mixed Sludge	Feed Moisture Content (%)	99.6/99.0					
	Cake Moisture Content (%)	80/78					
	Dry Sludge (kgds/h·m)	110~130					
	Hydraulic Load (m ³ /h·m)	22~26/12~16					

5. Main Features

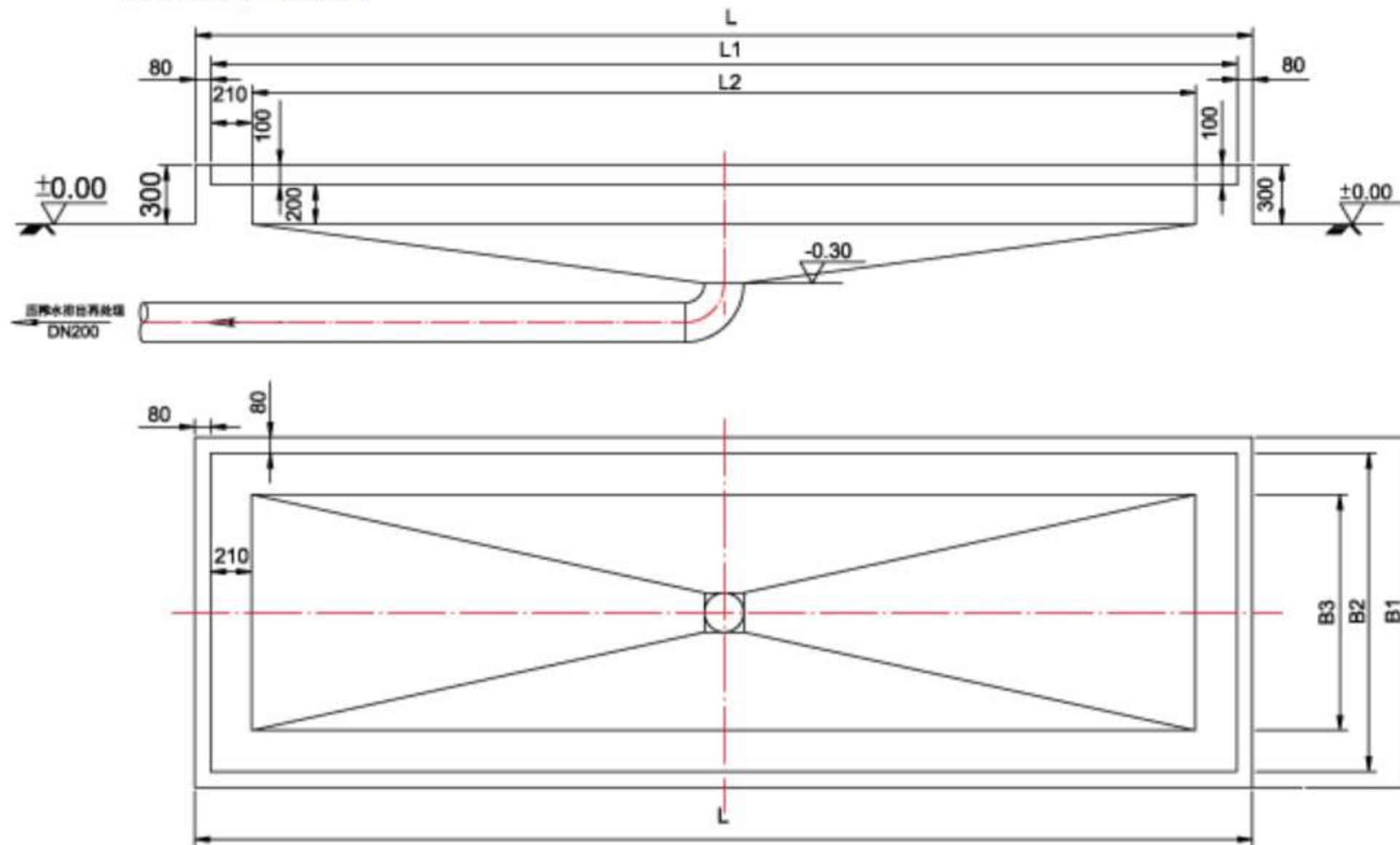
- The steplessly adjustable motor drive allows for instant speed adjustment and high adaptability;
- Specially designed flushing nozzles and anti-clogging devices ensure clean filter belt rinsing;
- The dewatering head rollers feature a T-shaped drain chute for rapid water discharge; the gravity dewatering section features an inclined design, which increases the static head of the sludge, enhancing dewatering efficiency and ensuring full thickening before pressing;
- The machine features a compact structure, automatic filter belt deflection correction, low operating noise, low power consumption, minimal chemical usage, excellent dewatering performance, and low operating costs.

DNT Belt-Type Thickener and Dehydrator

6. External Installation Dimension Drawing



1. Sludge Reaction Tank
2. Feeding Device
3. Distribution Device
4. Concentrating Section Water Pan
5. Concentrating Section Deviation Correction
6. Concentrating Cleaning
7. Concentrating Drive Motor
8. Inclined Hopper
9. Pressing Deviation Correction
10. Pressing Water Pan
11. Pressing Deviation Correction
12. Main Machine Drive



Foundation Dimensions (mm)		DNT-500	DNT-1000	DNT-1500	DNT-2000	DNT-2500	DNT-3000
	L	5380	5380	5380	5380	5380	5380
L1	5220	5220	5220	5220	5220	5220	
L2	4800	4800	4800	4800	4800	4800	
B	1380	1780	2280	2780	3280	3780	
B1	1120	1620	2120	2620	3120	3620	
B2	700	1200	1700	2200	2700	3200	

DYQ Belt-Type Thickener and Dehydrator

1. Purpose

The DYQ Belt-Type Thickener and Dehydrator is primarily used for thickening and dehydrating excess sludge or mixed sludge from municipal wastewater biochemical treatment. It is a highly efficient dehydration device that forms sludge cakes. It is suitable for sludge dehydration in various industries, including water supply and drainage, papermaking, foundry, leather, textiles, chemicals, and food.

2 Working Principle

This equipment primarily consists of a belt thickener and a dewatering unit. After the sludge is treated with flocculant and thoroughly mixed in a sludge mixer, it flows into the gravity dewatering section. Under the action of gravity, a large amount of free water in the sludge flows out through the gaps in the filter belt and into a water collection tank. The sludge is then guided through a wedge-shaped pre-pressing section, where it is gradually flattened and gently squeezed for further dewatering. It then enters the S-shaped multi-roller pressing section, where the sludge is sandwiched between upper and lower filter cloths and repeatedly squeezed by rollers of varying diameters. This shearing action promotes further dewatering, forming a sludge cake. Finally, a scraper removes the cake and transports it away, while the upper and lower filter belts are rinsed and reused.



3. Model Description



4. Main Technical Parameters and Installation Dimension Table

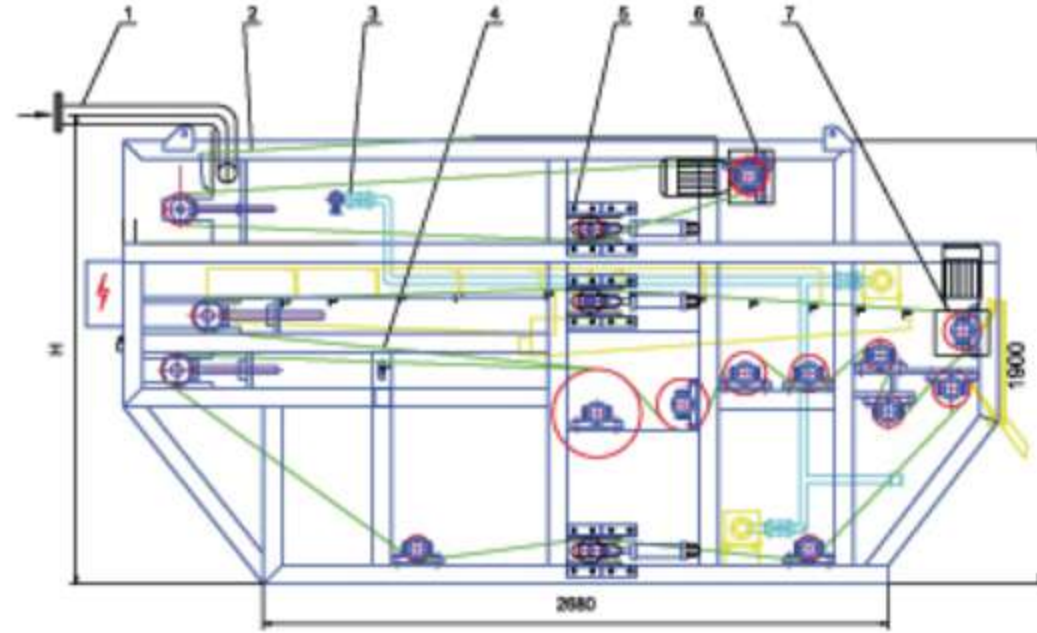
Parameter		Model	DYQ-500	DYQ-1000	DYQ-1500	DYQ-2000	DYQ-2500	DYQ-3000
Belt Width B (mm)			500	1000	1500	2000	2500	3000
Processing Capacity Q (m³/h)			1~5	5~10	10~15	15~20	20~25	25~30
Dimensions (W×L×H)			920×3800 ×1900	1420×3800 ×1900	1920×3800 ×1900	1920×3800 ×1900	2920×3800 ×1650	3420×4000 ×1650
Belt Speed V (m/min)			3.0~15 (concentration stage) 1.2~6.0 (dehydration stage)					
Concentration Motor Power N1 (kW)			0.55	0.55	0.75	1.1	1.5	1.5
Dehydration Motor Power N2 (kW)			0.75	1.5	1.5	2.2	3.0	5.0
Discharge Port Height h (mm)			700	700	700	700	700	700
Rinse Water	Water Consumption (m³/h)		4.0	7.5	12.0	15.0	25.0	30.0
	Water Pressure (MPa)		≥0.5					
Compressed Air	Air Consumption (m³/h)		0.3	0.3	0.4	0.4	0.4	0.4
	Air Pressure (MPa)		≥0.7					
Residual /Mixed Sludge	Feed Moisture Content (%)		99.6/99.0					
	Cake Moisture Content (%)		80/78					
	Dry Sludge (kgds/h·m)		100~120					
	Hydraulic Load (m³/h·m)		22~26/12~16					

5. Main Features

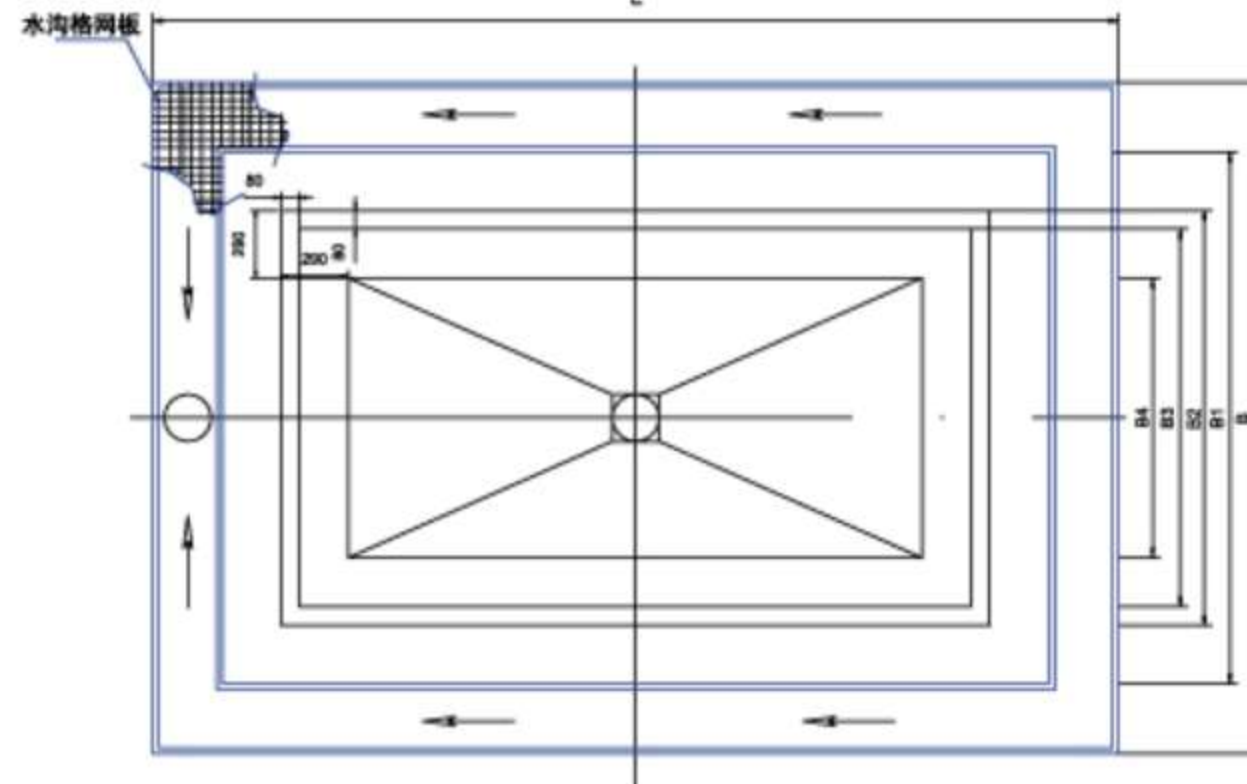
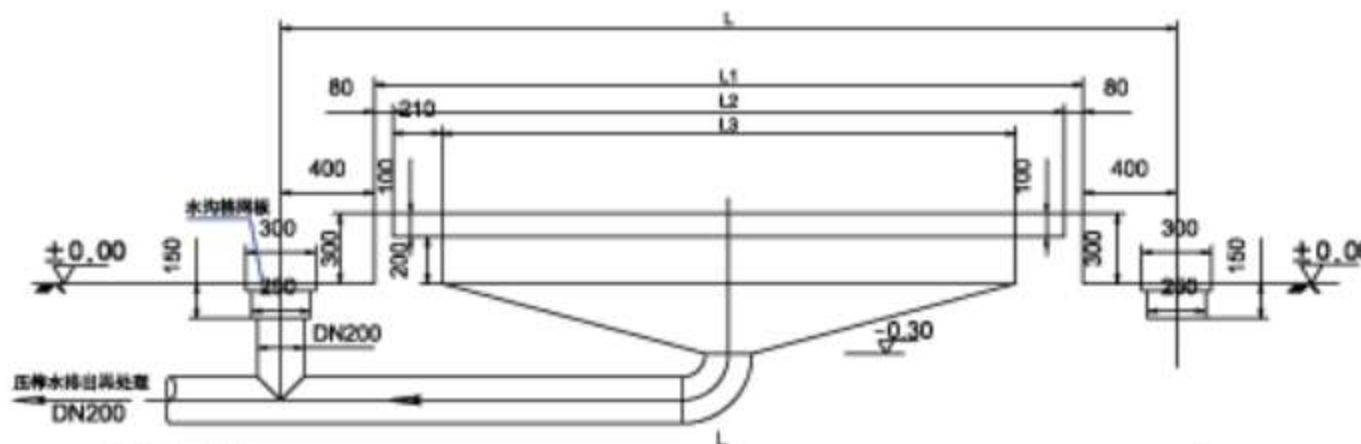
- The steplessly adjustable motor drive allows for instant speed adjustment and high adaptability;
- Specially designed flushing nozzles and anti-clogging devices ensure clean filter belt rinsing;
- The dewatering head rollers feature a T-shaped drain chute for rapid water discharge; the gravity dewatering section features an inclined design, which increases the static head of the sludge, enhancing dewatering efficiency and ensuring full thickening before pressing;
- The machine features a compact structure, automatic filter belt deflection correction, low operating noise, low power consumption, minimal chemical usage, excellent dewatering performance, and low operating costs.

DYQ Belt-Type Thickener and Dehydrator

6. External Installation Dimensions



1. Feed Pipe 2. Feeding Device 3. Concentrating Cleaning 4. Press Filtration Section 5. Concentrating Deviation Correction 6. Concentrating Drive 7. Main Machine Drive



	DYQ-800	DYQ-1000	DYQ-1500	DYQ-2000	DYQ-2500	DYQ-3000
L	3840	3840	3840	3840	3840	3840
L1	3040	3040	3040	3040	3040	3040
L2	2880	2880	2880	2880	2880	2880
L3	2460	2460	2460	2460	2460	2460
B	2380	2880	3380	3880	4380	4880
B1	1780	2280	2780	3280	3780	4280
B2	1780	1780	2280	2780	3280	3780
B3	1120	1620	2120	2620	3120	3620
B4	750	1200	1700	2200	2700	3200

Disc type spiral dehydrator

1. Purpose

The company introduced Japanese technology, combining it with the characteristics of Chinese sludge to launch a new generation of sludge dewatering equipment – the disc-type spiral sludge dewatering machine. This equipment is filter cloth (belt)-free, non-clogging, wear-resistant, and low-energy. This machine overcomes the technical challenges of previous generations of sludge dewatering equipment, such as large footprints, inability to process low-concentration sludge, and difficulty handling special sludge such as oil-containing sludge. The main body of the disc-type spiral sludge dewatering machine consists of a solid-liquid separation device consisting of a rotating fixed ring and a rotating ring, connected by a spiral shaft. The solid-liquid separation zone is divided into a concentration section and a dewatering section. Sludge is squeezed and dehydrated by the spiral shaft, with water seeping out through the gap between the rotating fixed and rotating rings. This machine is unique in that the rotating ring is driven by a dedicated spiral shaft drive mechanism, eliminating friction and wear on the filter components and significantly extending the service life of the entire machine.

2. Product Structure

The core of the disc-type spiral sludge dewatering machine consists of one or more filter units, consisting of a spiral drive shaft, multiple fixed and rotating stacks, and multiple rotating stacks. Each filter unit is divided into a concentration section and a dewatering section. From the wastewater inlet in the concentration section to the sludge cake outlet in the dewatering section, the screw pitch gradually decreases, and the gap between the fixed and movable rings also decreases. A back-pressure plate is installed at the sludge outlet to regulate the pressure within the screw chamber. The stacked screw sludge dewatering machine performs both concentration and squeezing dewatering in a single chamber, replacing traditional filter cloth and centrifugal filtration methods with a unique and sophisticated filter element pattern.

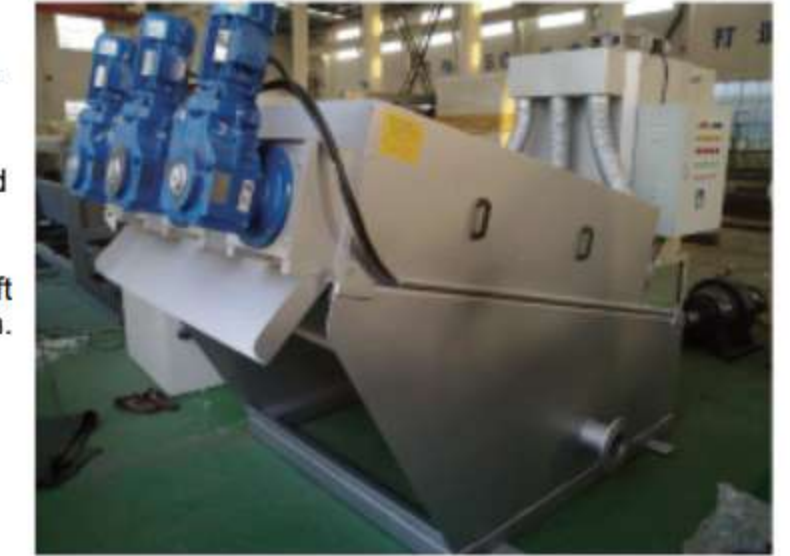
3 Working Principle

Concentration: As the screw drive shaft rotates, multiple fixed and movable discs positioned around the drive shaft move relative to each other. Under the action of gravity, water is filtered out through the gaps between the moving discs, achieving rapid concentration. **Dewatering:** Concentrated sludge is continuously moved forward as the spiral shaft rotates. As the spiral shaft's pitch decreases toward the cake outlet, the gaps between the rings also decrease, shrinking the volume of the spiral chamber. The internal pressure gradually increases under the action of the backpressure plate at the outlet. As the spiral shaft continuously rotates, water in the sludge is squeezed out, the solids content of the filter cake continuously increases, ultimately achieving continuous sludge dewatering.

Self-cleaning: The rotation of the spiral shaft drives the movable rings. The movement between the fixed and movable rings achieves a continuous self-cleaning process, cleverly avoiding the clogging problem common in traditional dewatering machines.

4 Engineering Advantages

Reduced Sludge Treatment Space: Sludge from aeration tanks or secondary sedimentation tanks can be directly treated, eliminating the need for sludge thickening and storage tanks, thus saving space. **Improved Phosphorus Removal:** Sludge is dewatered aerobically, avoiding the release of phosphorus that occurs under anoxic or anaerobic conditions, thereby enhancing the system's phosphorus removal capabilities. **Simple operation and management:** No filter cloths, filter holes, or other easily clogged components ensure safe and simple operation. Combined with a fully automatic dosing system, it enables 24-hour unattended operation. **Reduced system processing load:** Integrated sewage and sludge treatment reduces the need for subsequent biochemical reactors.



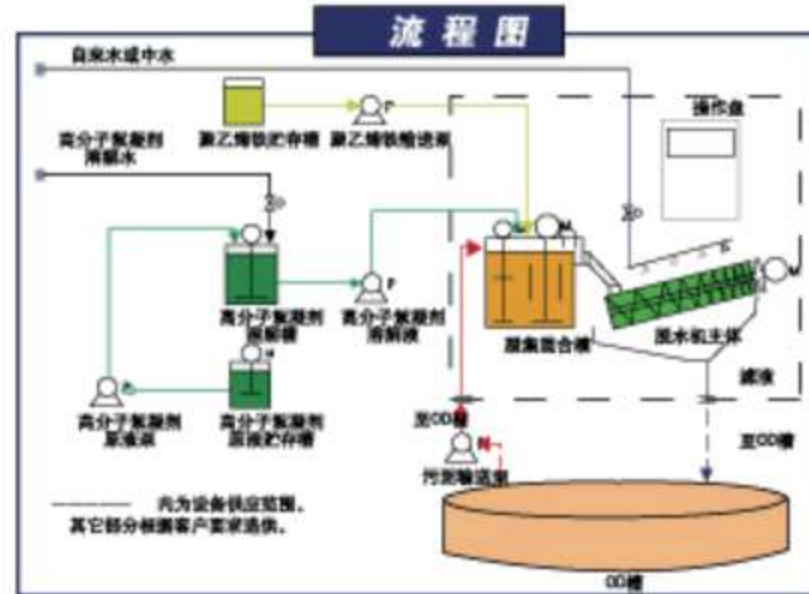
Disc type spiral dehydrator

5. Product Advantages

Suitable for a wide range of sludge concentrations, ranging from 2000mg/L to 50,000mg/L. High resistance to oily sludge, easy separation, and no clogging. Clean and environmentally friendly, odorless, silent, no high-pressure flushing required, and no secondary pollution. Compact and compact, water and energy-efficient, with a power consumption of only 0.1kWh/kgDS and a water consumption of only 0.03t/h. Easy daily maintenance, continuous operation, no need for dedicated personnel, and no oil changes required.



6. Process Flowchart



Analysis of Various Dewatering Operations

Item	Disc Screw Dewatering Machine	Belt Filter Press	Decanter Centrifuge	Plate and Frame Filter Press
Dewatering Method	Dynamic Disc Screw Dewatering	Gravity and Squeeze Dewatering	Centrifugal Dewatering	Pressure Dewatering
Power Consumption	Very Low	Relatively High	Very High	Medium
Water Consumption	Very Low	Very Difficult	Low	Medium
Operating Noise	Very Low	Medium	Very Difficult	Low
Maintenance Difficulty	Easy	Difficult	Very Difficult	Easy
Sludge Viscosity Requirement	Lowest	Highest	Medium	Medium
Cake Moisture Content	Approx. 75-80%	>80%	Approx. 80%	<80%
Degree of Automation	High	High	High	Low
Working Environment	Clean	Poor	Medium	Worst

DL Disc Screw Dewatering Machine Selection Parameters

Model	Theoretical Capacity	Number of Fixed and Moving Plates	Main Motor Power	Flocculation Motor Power	Remarks
DL311	3-5t/m ³ /h	612	1.50	0.75	Single Unit
DL312	6-10t/m ³ /h	1224	1.50×2	0.75	Twin Units
DL313	9-15t/m ³ /h	1826	1.50×3	1.1×2	Triple Units
DL314	12-20t/m ³ /h	2448	1.50×4	0.75×2	Quadruple Units
DL411	6-10t/m ³ /h	758	2.20	1.10	Single Unit
DL412	12-20t/m ³ /h	1516	2.20×2	1.10	Twin Units
DL413	18-30t/m ³ /h	2274	2.20×3	1.50	Triple Units
DL414	24-35t/m ³ /h	3032	2.20×4	1.50×2	Quadruple Units

Note: The above parameters are for reference only. The specific model should be selected reasonably according to the actual sludge properties.

HTJY Fully Automatic Dosing Device

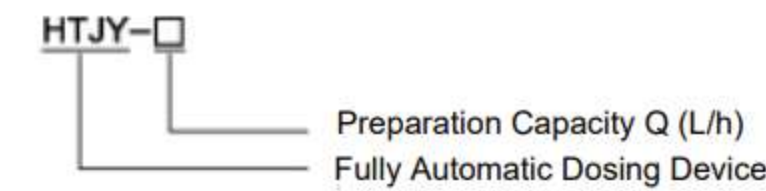
1. Purpose

The HTJY fully automatic dosing device is widely used as an auxiliary device for municipal water treatment and waterproof sludge treatment. It continuously and efficiently combines and mixes polymers to produce a homogeneous active polymer solution.

2 Working Principle

This device utilizes a jet mixer, which uses high-speed hydraulic pressure to disperse the reagent or powder particles, increasing fineness, improving the contact area between the reagent or powder and the water, and reducing dissolution time. The device features a three-tank overflow system for preparation, maturation, and dosing. It utilizes gravity and solubility to create a solution with a specific gravity difference, automatically separating dissolved and undissolved components. A low-speed agitator then stirs the solution to improve uniformity.

3. Model Description



4. Main Technical Parameters and Installation Dimension Table

Parameter	Model	HTJY-500	HTJY-1000	HTJY-1500	HTJY-2000	HTJY-3000	HTJY-4000
Production Capacity Q (L/h)		500	1000	1500	2000	3000	4000
Overall Dimensions (B×L×H)		900×1500×1650	1000×1625×1750	1000×2440×1800	1220×2440×1800	1220×3200×2000	1450×3200×2000
Dry Powder Dosing Motor Power N (kW)		0.18	0.18	0.18	0.18	0.18	0.18
Mixer	Blade Diameter φ (mm)	250	250	250	250	250	250
	Vertical Shaft Speed n (r/min)	96	96	96	96	96	96
	Power N (kW)	0.75×2	0.75×2	0.75×2	0.75×2	0.75×2	0.75×2
Dosing Screw Pump	Flow Rate (m ³ /h)	1.0	1.0	1.5-2.0	1.5-2.0	3.0-5.0	3.0-5.0
	Head (m)	20	20	20	20	20	20
	Power N3 (kW)	1.1	1.1	1.5	1.5	2.2	2.2
Inlet Pipe Diameter DN1(mm)		20	20	25	25	32	32
Outlet pipe diameter DN2(mm)		20	20	25	25	32	32
Installation dimensions	B	900	1000	1000	1220	1220	1450
	L	1500	1625	2440	2440	3200	3200
	H	1650	1750	1800	1800	2000	2000
	H1	800	1050	1050	1050	1350	1350

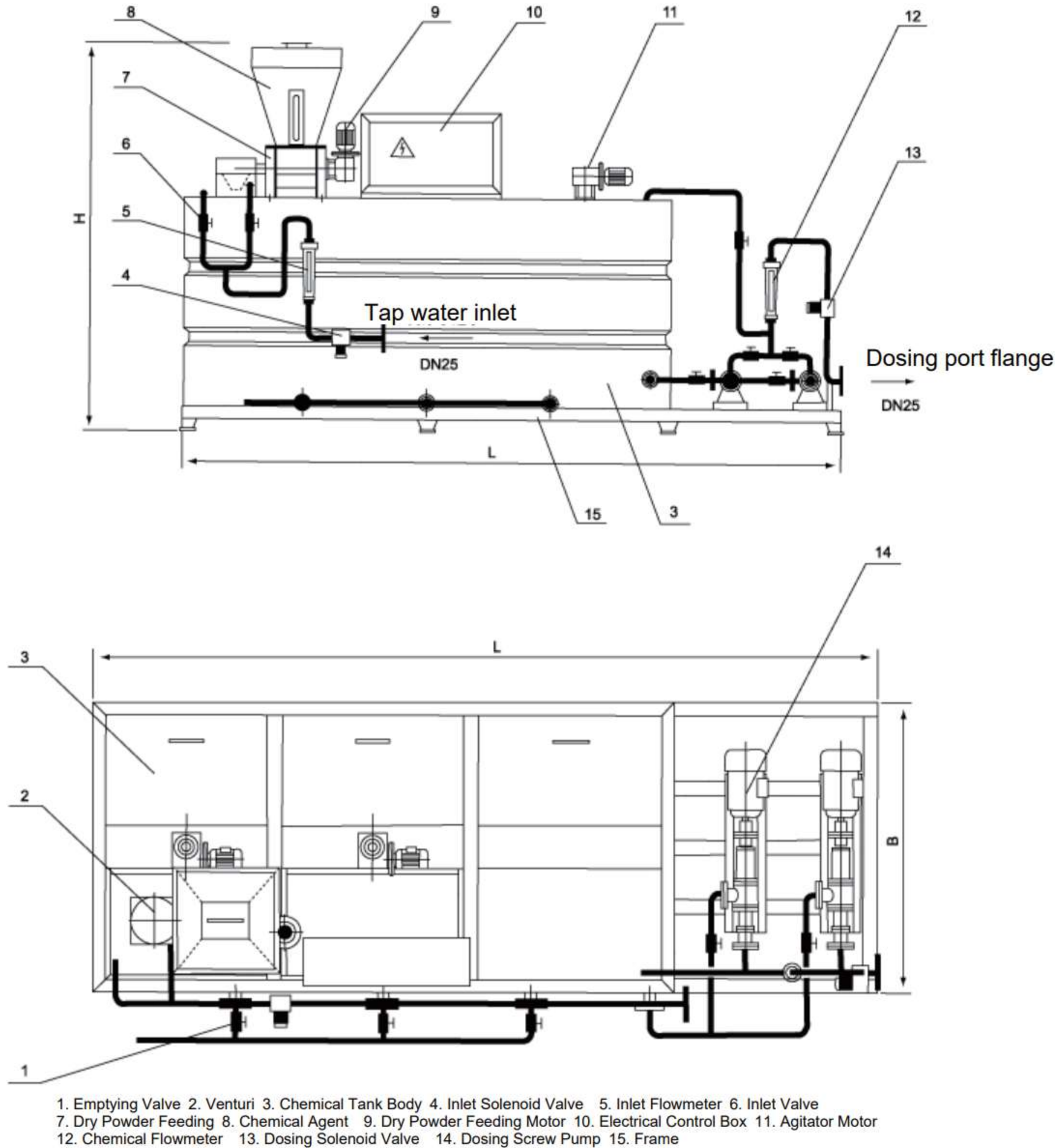
5. Main Features

- Three-tank continuous preparation system for easy operation and maintenance;
- Dual feed options for dry powder or liquid polymers are available to meet diverse needs;
- Fully automated PLC operation saves labor;
- Chemical dosing can be done using either a screw pump or a metering pump (the former is typically used), providing precise and adjustable metering;
- The equipment requires no foundation or mounting brackets, resulting in an attractive appearance, easy maintenance, and low costs.



HTJY Fully Automatic Dosing Device

6. Process Flowchart



JY Type Dosing Device

1. Purpose

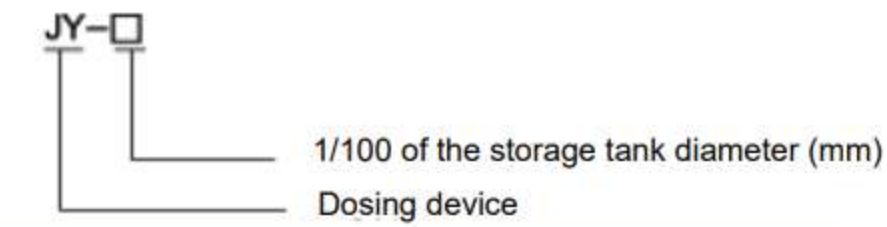
During water supply and wastewater treatment processes, various chemical agents are often added for coagulation, flocculation, coagulant aid, and disinfection and sterilization to achieve water purification. These agents can be solid particles, liquids, or colloids. They must be dissolved, diluted, and dosed according to a specific ratio to achieve optimal results. Therefore, chemical dosing devices are a common piece of equipment in water treatment projects. Depending on the physical and chemical properties of the agents, the dissolution, dilution, and dosing methods, as well as the equipment materials, vary. Our company has developed ideal equipment suitable for a variety of chemical agents to meet the needs of diverse applications. We have also accumulated extensive theoretical experience in wastewater treatment. We offer technical consulting, water quality testing and analysis, treatment process development, engineering design, equipment installation and commissioning, operator training, and general contracting services for water treatment projects. Our services are applicable to water supply and wastewater purification, wastewater treatment, and equipment systems in industries such as chemical, petroleum, power, textile, papermaking, and medicine. This device dissolves, mixes, and metered-dilution solutions for various types of soluble solids, colloids, and highly concentrated liquids.



2 Working Principle

This integrated device consists primarily of a mixer, solution tank, secondary filtration unit, a concentration-matching liquid storage tank, a metering pump, an electrical control cabinet, and a machine frame. A variety of materials and protective layers are used depending on the properties of the liquid. It features a compact structure, a non-clogging dosing system, and easy operation and management.

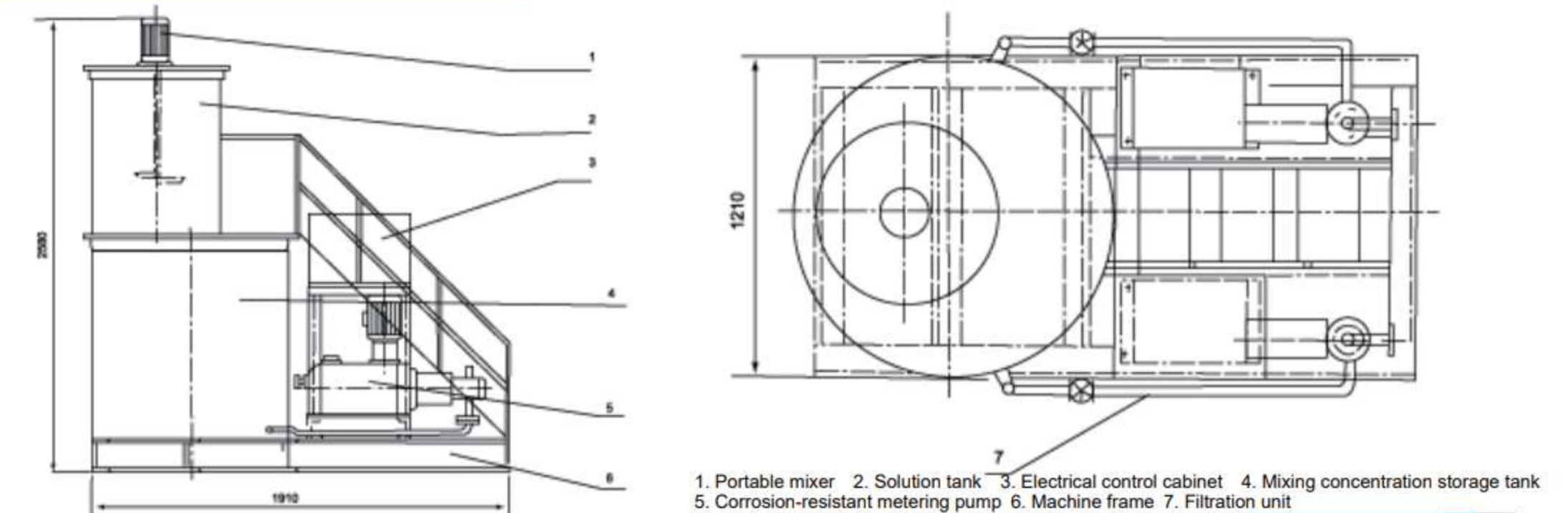
3. Model Description



4. Main Technical Parameters and Installation Dimension Table

Project Name	Parameter	Project Name	Parameter
Overall Dimension (mm) LxBxH	1910x1210x2580	Effective Volume of Dosing Tank (m ³)	0.4
Total Power of Matching Motor (kW)	1.1-1.87	Effective Volume of Chemical Storage Tank (m ³)	1.0
Equipment Operating Weight (kg)	3800		
Main Technical Parameters of Matching Equipment			
Mixer Model	JB-76 Portable Mixer	Rotation Speed	300r/min
Metering Pump Model	Diaphragm or Plunger Type	Flow Rate	According to Design

5. Process Flowchart



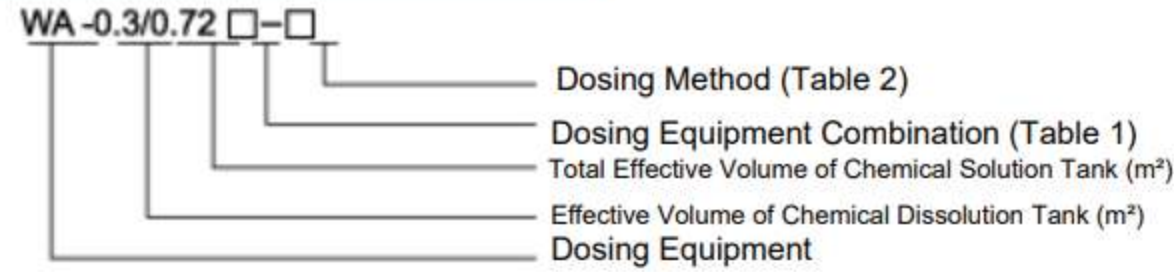


WA Type Dosing Device

1. Purpose

The WA series dosing equipment consists of a fiberglass dissolving tank, an electric mixer, two solution tanks, a dosing system, piping, a steel platform, and a ladder.

2. Model Description



3. Main Technical Parameters and Installation Dimensions

Code	Dosing Equipment Combination
A	One set of dosing equipment
B	Two sets of dosing equipment

Code	Dosing Method
1	Metering Pump
2	Ejector with Rotor Flowmeter
3	Ejector

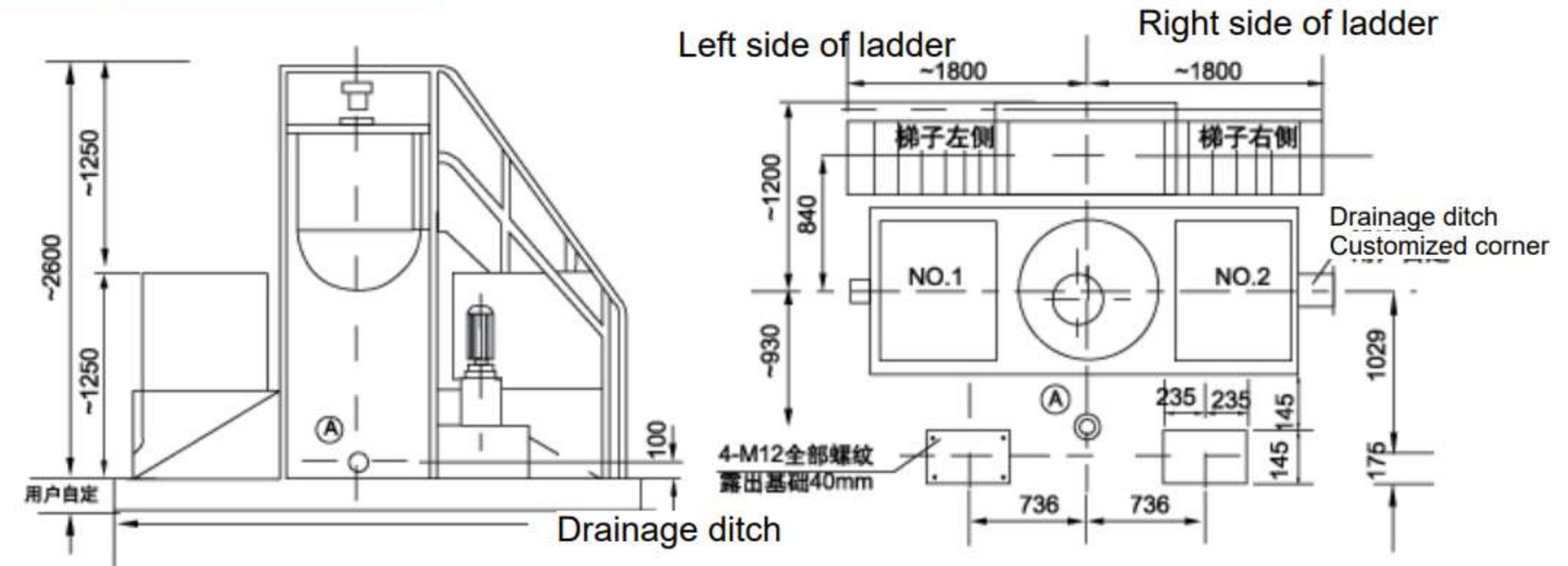


Model	Dosing Method	Overall Dimension (Length×Width×Height) (m)	Motor Power (KW)		Piping Diameter (mm)		Applicable Scope	Chemical Property	Chemical Concentration	Water Temperature °C	Ph	Drainage Ditch	Pipe Inlet Water Pressure	
			Agitator	Metering Pump	Dissolving Tank/Water Pipe A	Injector/Water Pipe B							Dissolving Tank/Water Pipe A	Injector/Water Pipe B
WA-0.3/0.72A-1	Small Base Series Metering Pump (See Note 1)	2.68×1.60×2.35	0.37	2×0.37	1×DN25									
WA-0.6/1.44B-1	Small Base Series Metering Pump (See Note 1)	2.68×2.60×2.35	2×0.37	4×0.37	2×DN25	Water Quality Stabilizer, Coagulant, etc.	Chemical Concentration Generally Formulated Between 1-5%	≤50	≤9	Receive Dissolving Tank, Dissolving Tank, Sewage Drainage	≥9.8×10 ⁵	≥28.4×10 ⁵		
WA-0.3/0.72A-2	Injector with Rotor Flowmeter	2.68×1.60×2.35	0.37		1×DN25									
WA-0.6/1.44B-2	Injector with Rotor Flowmeter	2.68×2.60×2.35	2×0.37		2×DN25									
WA-0.3/0.72A-3	Injector	2.68×1.60×2.35	0.37		1×DN25									
WA-0.6/1.44B-3	Injector	2.68×2.60×2.35	2×0.37		2×DN25									

1. WA type metering pumps can be equipped with WA-63/16- I, II, III, WA-80/10- I, II, III, WA-125/6- I, II, III. Please specify when ordering.
2. Pa (Pascal) is the SI unit of pressure. 9.8×10⁴Pa = 1kgf/cm² = 10.33m.
3. Control methods include manual, program control, and remote control. Please specify when ordering.

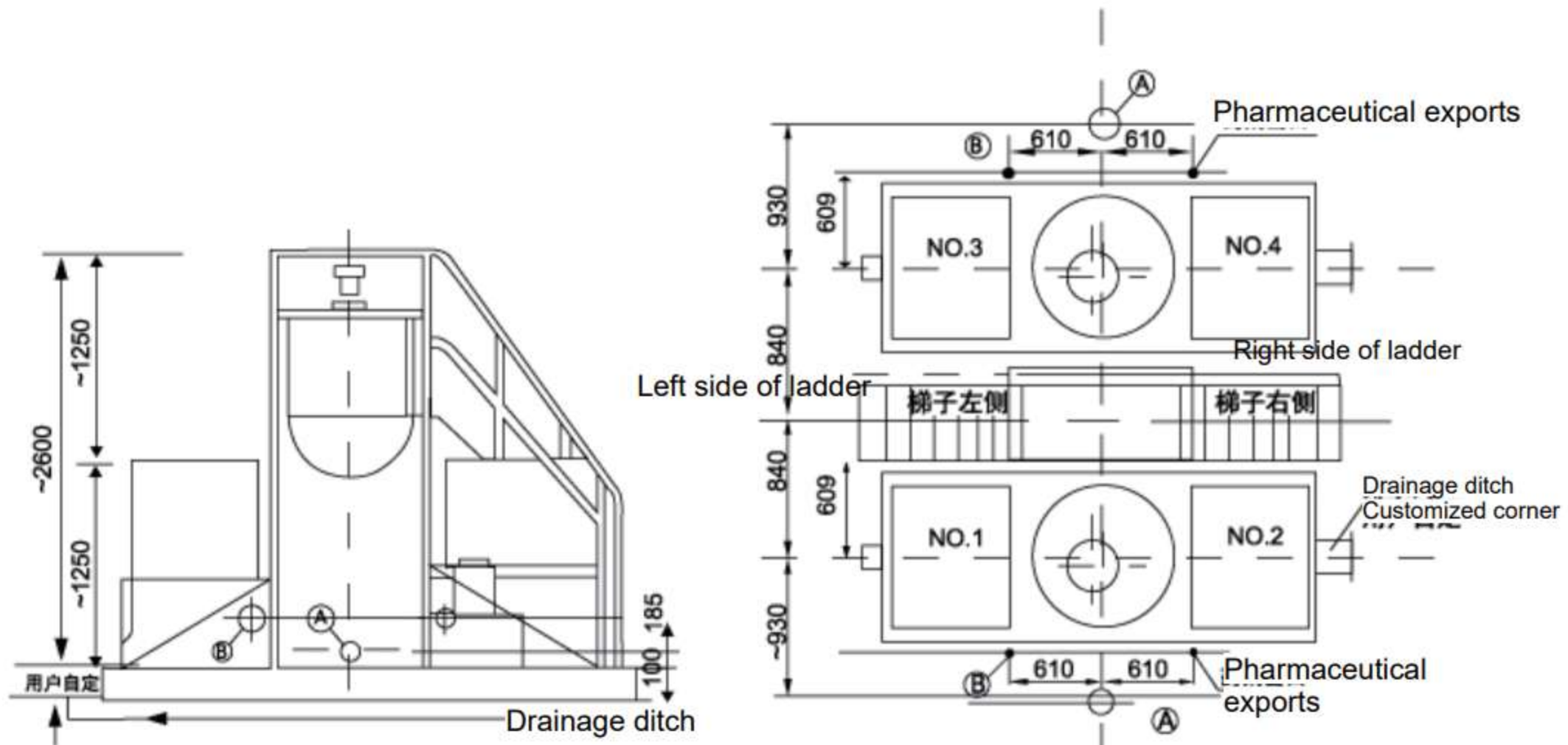
WA Type Dosing Device

4. External Installation Dimensions



Front View
Figure 1—WA-0.3/0.72A-1 Type Dosing Equipment

Plan View
Figure 2—WA-0.3/0.72A-1 Type Dosing Equipment



Front View
Figure 3—WA-0.6/1.44B-2,3 Type Dosing Equipment

Plan View
Figure 4—WA-0.6/1.44B-2,3 Type Dosing Equipment

PFD series integrated dosing device

1. Technical features

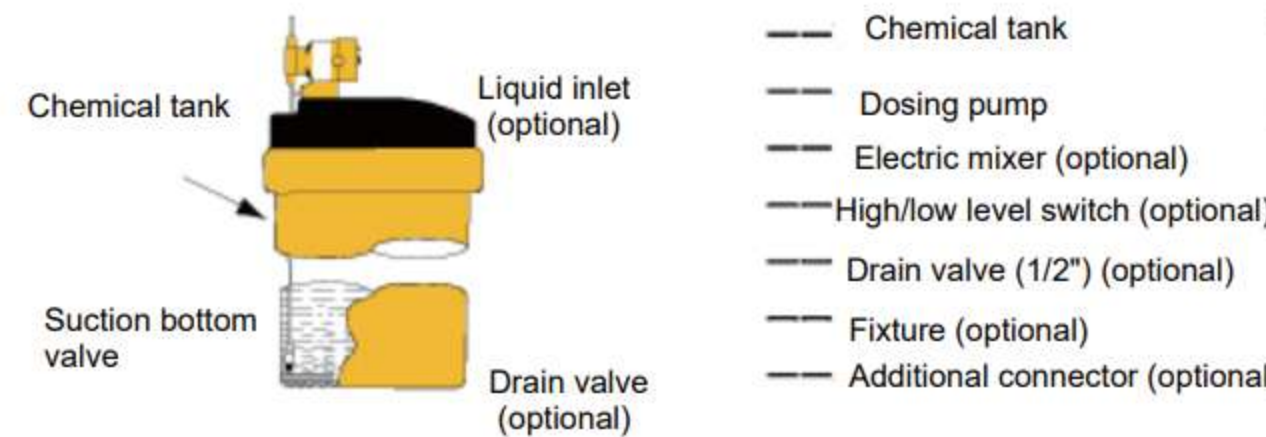
- Cartridge capacity: 40L, 120L, 200L, 500L, 1000L (1)
- Applicable metering pump capacity: from 0.02L/H to 1200L/H
- Barrel material: PE material, chemical corrosion resistance
- Maximum liquid temperature: 60°C
- Dosing/inspection port
 - 40 to 200L barrel: Φ100mm
 - 500 to 1000L barrel: Φ135mm



2. Model description

F series	Capacity	Mixer		Dosing pump		Dosing pump
		Model	Shaft length (mm)	Diameter (Φ)	Height (H)	
FD-40	40L			361	451	As per user's request
FD-120	120L	PFD-120	686	508	794	
FD-200	200L	PFD-200	863	470	1086	
FD-500	500L	PFD-500	1000	800	1150	
FD-1000	1000L	PFD-1000	1000	1000	1450	

3. Typical Applications



- Chemical tank
- Dosing pump
- Electric mixer (optional)
- High/low level switch (optional)
- Drain valve (1/2") (optional)
- Fixture (optional)
- Additional connector (optional)

4 Dosing Pump Selection Table

Metering Pump Series	Flow Range (L/h)	Pressure Range (MPa)
Select by User Requirement	0.79-95	0.17-2.07
	10-1183	0.35-1.0
	1.25-329	1.0-1.24
	130-1100	1.0-2.8

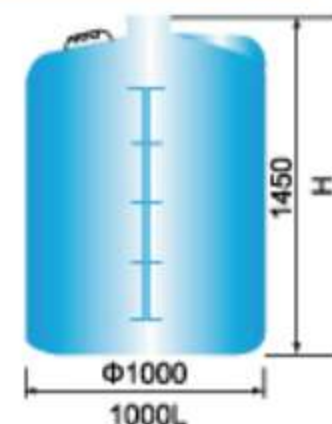
5. Main Accessories

- Corrosion-Resistant Agitator: 220V/50Hz, 160W (Optional)
- High/Low Level Switch: Controls automatic liquid inlet, start/stop dosing, or alarm (Optional)
- Metering Pump: Select according to dosage
- Control Box: Automatically controls liquid inlet/drainage (Optional function), alarm, and power supply (Optional)

-7. Small Mixer and Level Switch Selection

Model	Material	Technical Specifications
FD120	304SS Epoxy Coated	160W/1330rpm 220V/50HZ
FD200		
LV20 LH21/2 (Level Switch)	PP PVDF	Passive Contact 0.6/7.6m

6 Configuration

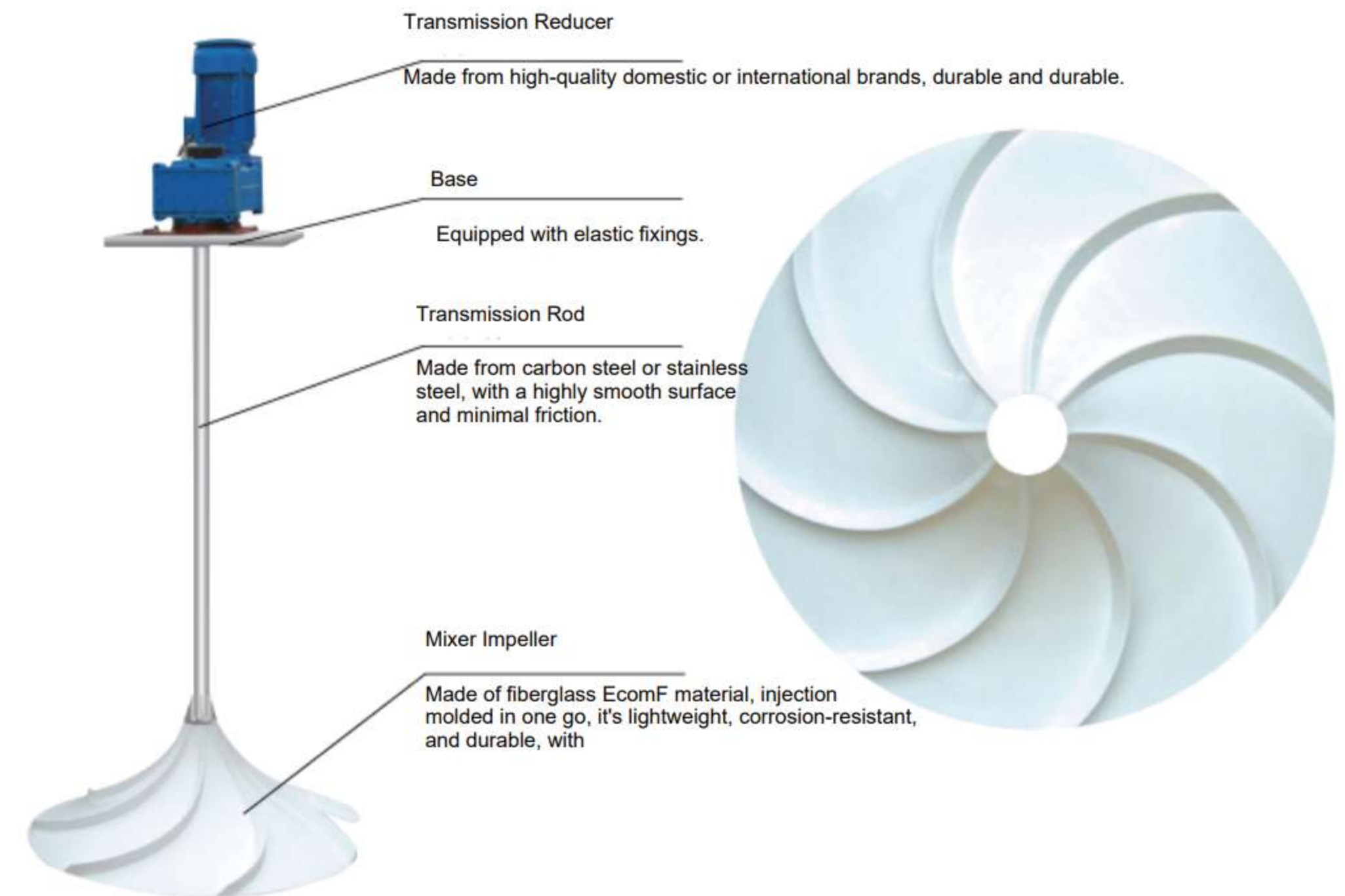


PLB Umbrella-Shaped Vertical Mixer

1. Application and Introduction

The PLB Umbrella-Shaped Vertical Mixer utilizes high-tech mixing technology independently developed by our research center. Its hyperbolic structure, resulting from professional hydraulic calculations and testing, is suitable for agitating and mixing liquids in various applications, including liquids with solids, and liquids with gases. It is particularly well-suited for mixing in sewage treatment projects. Its unique hyperbolic shape and smooth surface create minimal resistance when propulsing water, resulting in extremely high efficiency. The impeller agitates the water, creating a uniform, omnidirectional flow at the bottom of the tank, creating a vertical vortex. Simultaneously, the liquid swirls within the container following the direction of the impeller's rotation, achieving ideal mixing and stirring. This mixer utilizes state-of-the-art fiberglass injection molding technology, resulting in a smooth surface, perfect linear shape and flow pattern, and high strength and corrosion resistance. Furthermore, the motor and reducer are positioned above, eliminating submerged components and ensuring long service life, low energy consumption, and high efficiency, making it an ideal equipment for agitating various liquids.

2. Equipment Structure



Application Site



Production Site



Φ2500 Mixer Impeller



Φ500 Mixer Impeller

PLB Umbrella-Shaped Vertical Mixer

3. Equipment Features

Easy Maintenance, Long Life: Utilizing high-quality domestic or international reducers, the equipment boasts a service life exceeding 100,000 hours. With no submerged wearing parts, maintenance is simple and the equipment is long-lasting.

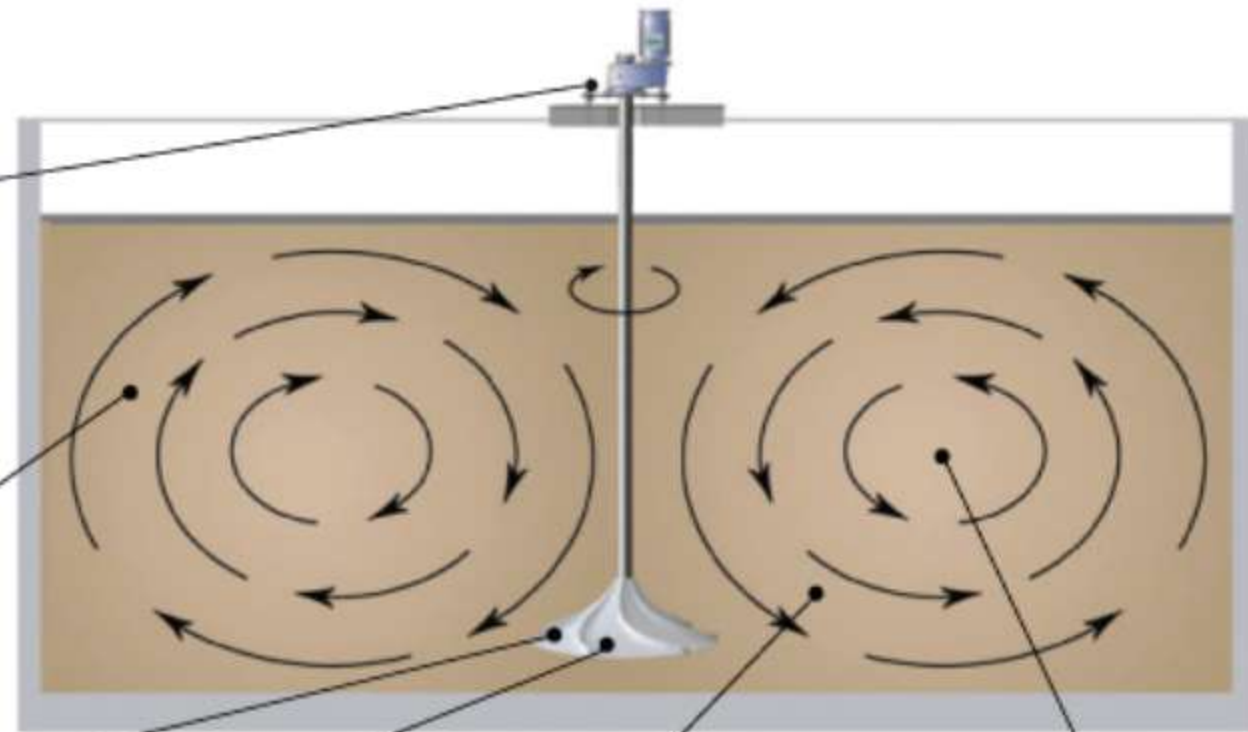
Ideal Mixing Effect: Driven by the impeller, the water forms a vertical vortex. Simultaneously, the liquid swirls within the container following the impeller's rotation, achieving ideal mixing and stirring effects.

Low Energy Consumption, Corrosion Resistance: Utilizing the most advanced fiberglass injection molding process, the equipment boasts a smooth surface, perfect linear shape, and flow pattern, along with high strength and corrosion resistance. Mixing 1 cubic meter of wastewater typically requires only 2 watts, saving over 50% in energy.

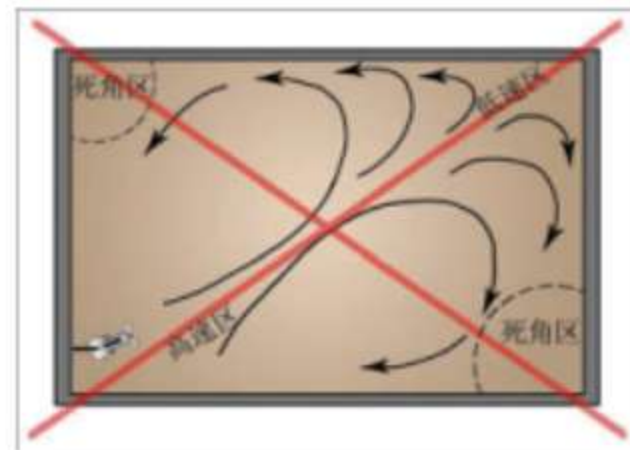
Impeller Entanglement-Free: The impeller's bladeless structure eliminates foreign matter from becoming lodged in the mixer, preventing fiber entanglement and requiring no maintenance during normal operation.

Omnidirectional Flow: The impeller's agitation creates a uniform, omnidirectional flow at the bottom of the tank, with a high flow velocity at the bottom, eliminating dead zones and sedimentation.

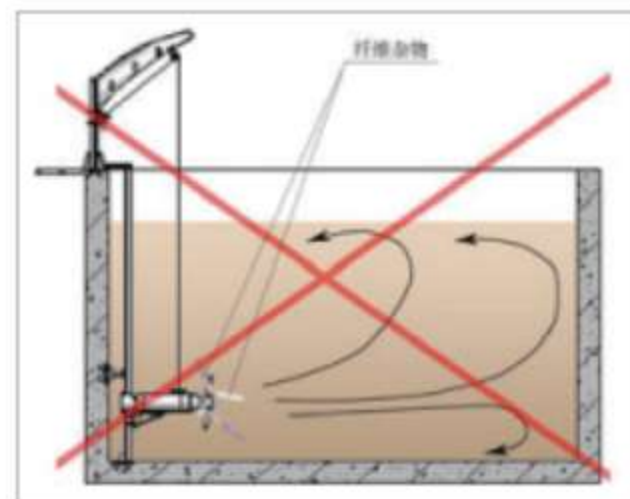
Large Mixing Capacity, Low Investment: Featuring powerful mixing capacity, a single mixer can mix up to 3,000 cubic meters of sewage in typical applications. One mixer can replace three to four traditional mixers, saving investment and operating costs.



4. Disadvantages of Traditional Submersible Mixing



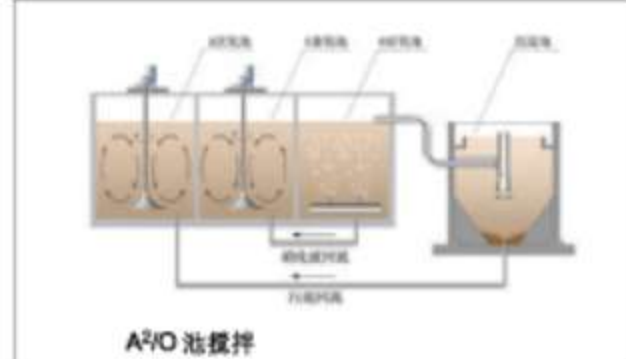
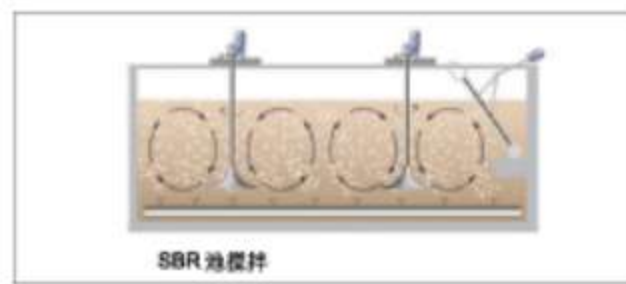
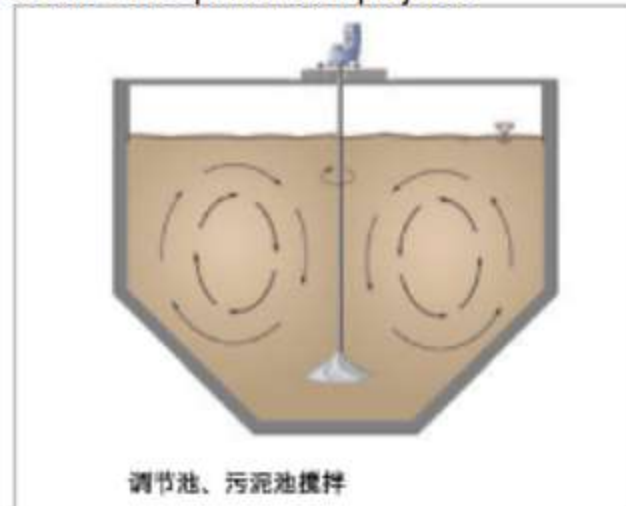
- Uneven flow rate within the tank
- Dead spots - Low volume utilization



- Motor equipment located in the liquid is susceptible to damage
- Easily entangled with debris

5. Scope of Application

The PLB umbrella-shaped vertical mixer is suitable for mixing liquids, solids, and gases in various applications. It is particularly well-suited for mixing in sewage treatment and water purification projects.



- Equalization Tank Agitation
Used for homogenizing and agitating the equalization tank in sewage treatment projects.
- Mixing and Coagulation Agitation
Used for dissolving and agitating chemicals in water treatment and for agitating chemicals and water.
- Disinfection Agitation
Used for contact agitation between liquid chlorine and other disinfectants and water in water treatment.
- Sludge Agitation
Used for agitation during anaerobic digestion of sludge and agitation in the sludge homogenization tank.
- Anaerobic Agitation
Used for agitation during anaerobic wastewater treatment.
- Denitrification Agitation
Used for agitation during denitrification in wastewater denitrification treatment.
- Sequential Batch Reactor Agitation
Used for agitation during denitrification in SBR treatment processes.
- A²O Tank Agitation
Used for agitation during anaerobic phosphorus removal and anoxic denitrification in wastewater A²O processes.

PLB Umbrella-Shaped Vertical Mixer

6. Main Technical Performance Parameters

Model	PLB-500	PLB-1500	PLB-2500
Impeller Diameter	500	1500	2500
Stirring Range	Φ1~Φ3	Φ3~Φ7	Φ6~Φ20
Water Depth	1~3	2~6	3~7
Stirring and Dissolving Capacity	1~25	20~300	200~3000
Installed Power	0.37~0.75	0.55~3	2.2~11

Note: The above stirring range is for a circular tank. For a square tank, the parameters are for the edge. If the diameter or tank side length exceeds the range in the table above, it is advisable to use more than two units.



Mixer without prefabricated walkway



Mixer with stand

7. Equipment Installation

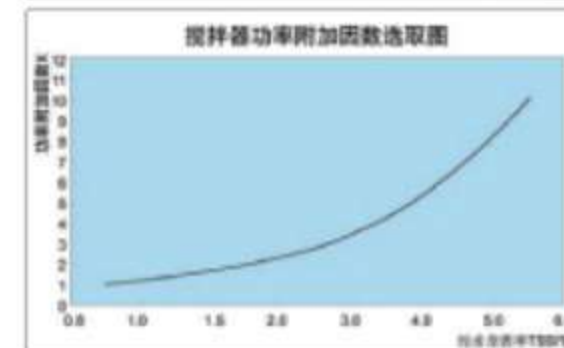
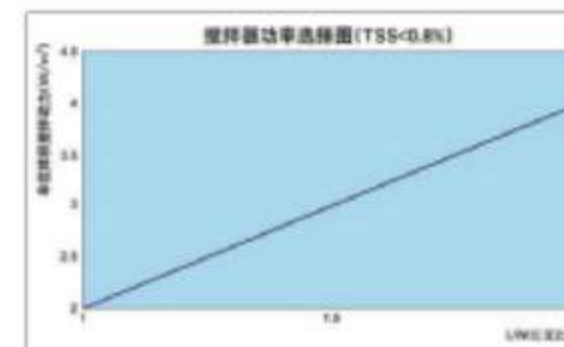
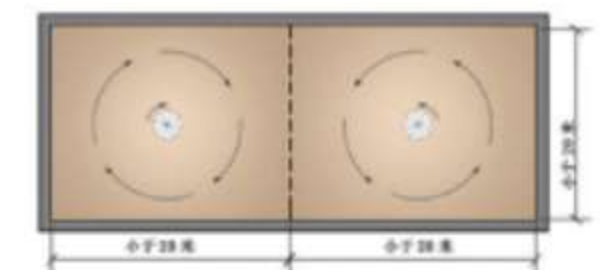
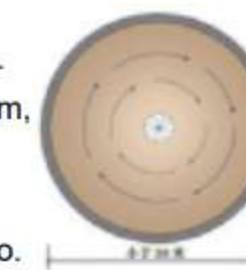
1. With Prefabricated Walkway
Simply secure the reducer to the prefabricated foundation on the walkway and connect the mixer impeller and reducer with a shaft.
2. Without Prefabricated Walkway
The mixer steel support and operating platform are prefabricated in the factory and hoisted and placed inside the tank for installation.



8. Equipment Selection

Tank Shape

- Circular Tanks: For circular tanks with a diameter not exceeding 20m, a single mixer can be used according to the parameter table above. For circular tanks exceeding 20m, multiple mixers may be installed based on the mixing requirements.
- Square Tanks: For rectangular tanks with a single side not exceeding 20m and an aspect ratio not exceeding 2, a single mixer can be used. If the aspect ratio is greater than 2, the tank can be divided into two or more mixing units based on the aspect ratio.



- Mixer Diameter: The mixer can be selected according to the parameter table.
- Power: The mixer power selection depends on the tank shape and the solids content of the liquid.
- For circular or square tanks, and for normal water as the liquid, the mixer power per cubic meter is as shown in the figure to the right (no specific figure is provided here, only text description).

- If the solid content in the water exceeds 0.8%, the power of the mixer needs to be increased. See the figure on the right for details (no specific figure content here, only text description).