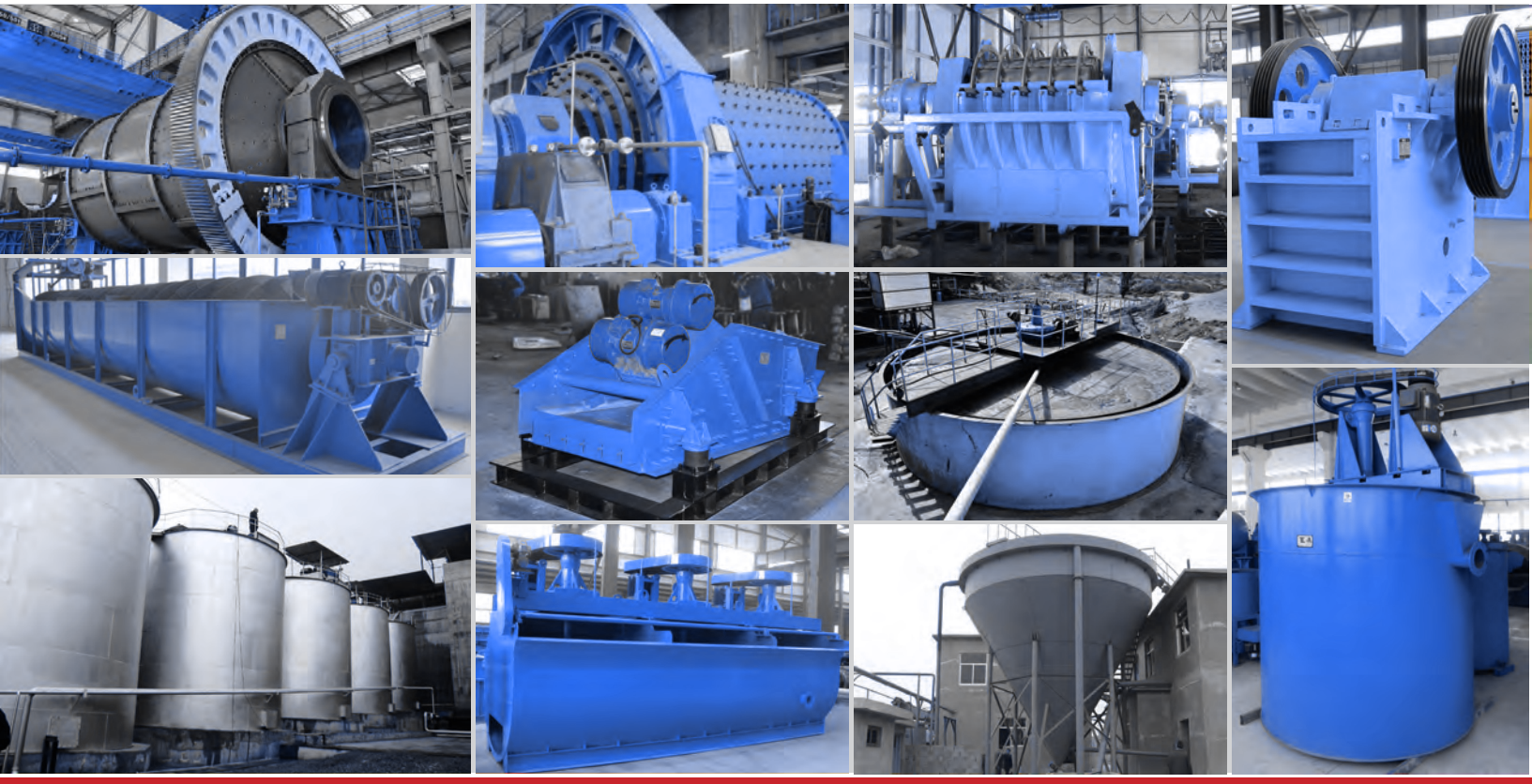
Xinhai®

SHANDONG XINHAI MINING TECHNOLOGY & EQUIPMENT INC.



www.xinhaimining.com

YANTAI, CHINA

TECHNICAL MANUAL OF EQUIPMENT APPLICATION

COMPANY PROFILE

Shandong Xinhai Mining Technology & Equipment Inc. is a stockholding high and new technology enterprise to provide “Turnkey Solution for Mineral Processing Plant” including design and research, machine manufacturing, equipment procurement, management service, mine operation, mine materials procurement & management as well as industry resources integration. Up to now, with 200 mine EPC projects, mining technologies and experience of 70 kinds of ores and 20 patents, Xinhai has established overseas offices in Sudan, Zimbabwe, Tanzania, Peru and Indonesia with products exported to more than 20 countries.

TURNKEY SOLUTION FOR MINERAL PROCESSING PLANT

01

Design and Research

Engineering consultant service, mineral processing test, mineral processing technological process, equipment selection, mineral processing plant design, construction drawing design, etc.

02

Complete Equipment Manufacturing and Procurement

Manufacturing and procurement of mineral processing equipment, mine supporting materials, tools for installation and maintenance, devices for test and chemical test.

03

Commissioning and Delivery

Guidance of plant construction and equipment installation, achievement of equipment commissioning, training of plant staff, providing of spare parts, plant consumables, equipment repair and maintenance, etc.

OPTIMIZED SOLUTIONS FOR YOUR MINE !

CORE COMPETITIVENESS

Strong Technical Strength

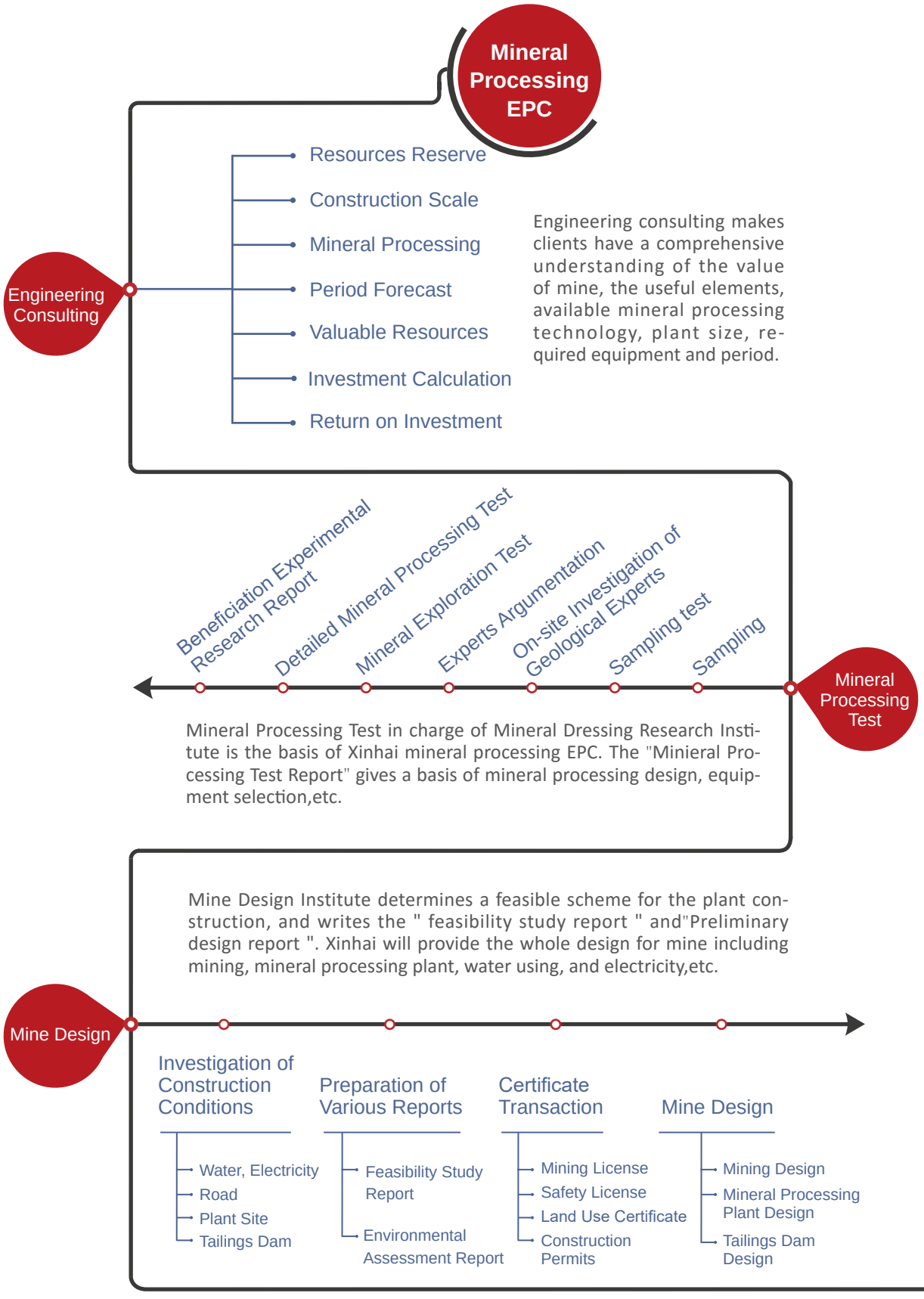
Our Company is always paying great attention to technological self-innovation, and has owned 58 R&D people and 20 patents for invention and utility models; we have conducted the strategic cooperation with many domestic upstream and downstream enterprises; we have strengthened the technological exchanges and cooperation with colleges and universities. Based on technology import and cooperative development, we have not only expanded the technology hard power of “integrated service of mineral processing plant” and improved the production efficiency and economic benefit, but also promoted the technology soft power of safety management, energy conservation and emission reduction, green environmental protection, etc.

Professional Customized Service

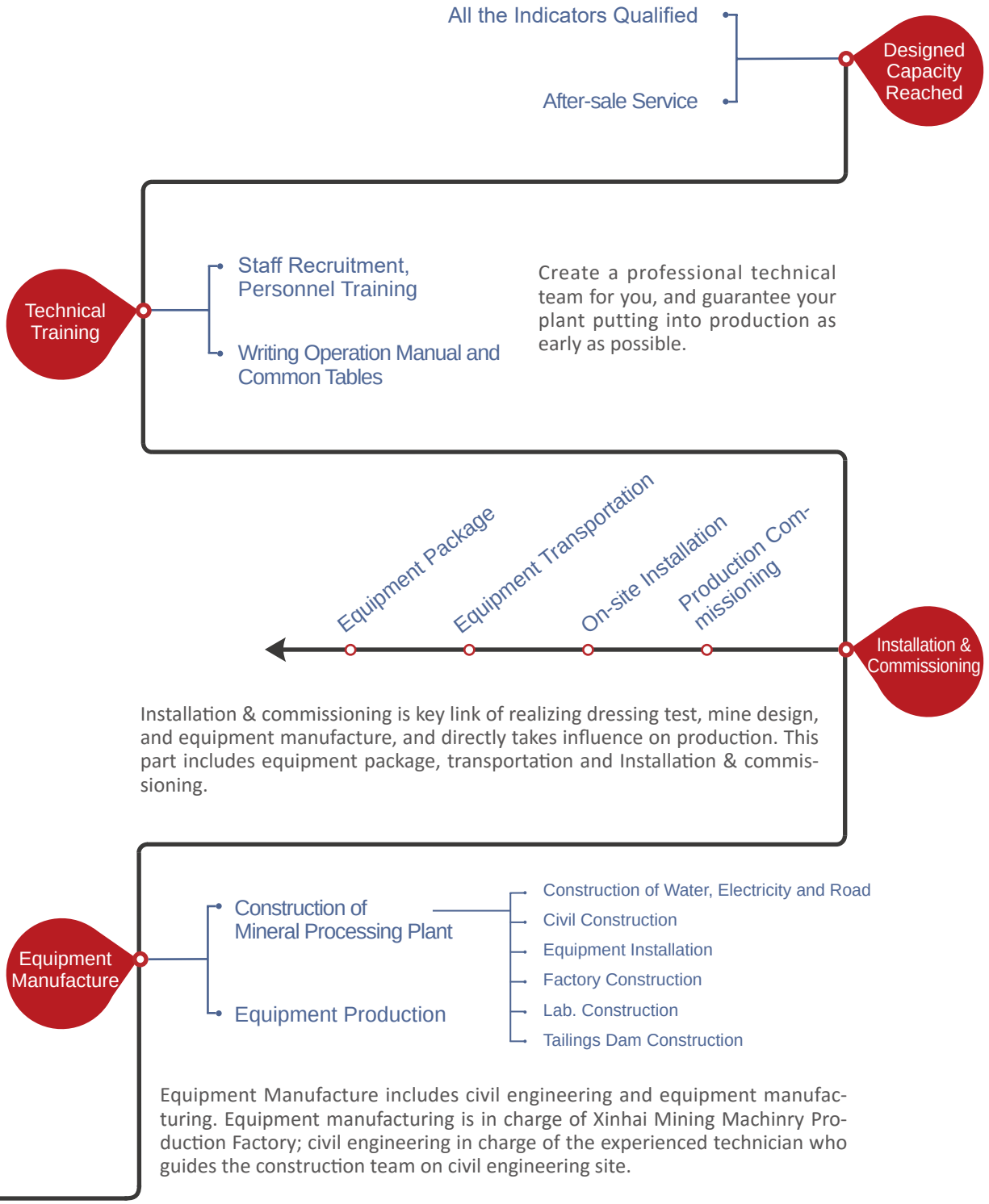
Based on 20-year experience in mineral processing equipment manufacturing and integrated service of mineral processing plant, our company can provide customized services according to clients’ practical requirements. On one hand, we have promoted technical engineers’ level and formed strong technical support power depending on refining labor division, global supporting, and optimizing data on technology; on the other hand, the technical engineers have the ability to conduct plant design and equipment selection, so as to propose the optimum design scheme depending on site exploration and sampling, mineral processing test and research, clients’ practical requirements, etc. Meanwhile, based on site simulation, we have the ability to provide the overview of future plant by using interactive software such as CAD and 3D.

Internationalized Operation System

To provide the clients with high-quality “integrated service of mineral processing plant” conveniently, our company has exported advanced technologies, equipment and talents overseas. At present, we have established overseas offices in many countries, and conducted multi-aspect, multi-level, and multi-form cooperation with local governments and banks. Additionally, we have taken the lead in using internet thinking mode, built our own e-commerce platform, erected a bridge for overseas users, achieved the sound development of business, and created great value for clients! Depending on our outstanding innovation ability, management and control ability, and delivery ability, we have won the trust and cooperation of clients worldwide!


Mineral Processing EPC
Engineering Consulting
Resources Reserve
Construction Scale
Mineral Processing
Period Forecast
Valuable Resources
Investment Calculation
Return on Investment
Engineering consulting makes clients have a comprehensive understanding of the value of mine, the useful elements, available mineral processing technology, plant size, required equipment and period.
Beneficiation Experimental Research Report
Detailed Mineral Processing Test
Mineral Exploration Test
Experts Argumentation
On-site Investigation of Geological Experts
Sampling test
Sampling
Mineral Processing Test
Mineral Processing Test in charge of Mineral Dressing Research Institute is the basis of Xinhai mineral processing EPC. The "Minieral Processing Test Report" gives a basis of mineral processing design, equipment selection,etc.
Mine Design Institute determines a feasible scheme for the plant construction, and writes the " feasibility study report " and"Preliminary design report ". Xinhai will provide the whole design for mine including mining, mineral processing plant, water using, and electricity,etc.
Mine Design
Investigation of Construction Conditions
Water, Electricity
Road
Plant Site
Tailings Dam
Preparation of Various Reports
Feasibility Study Report
Environmental Assessment Report
Certificate Transaction
Mining License
Safety License
Land Use Certificate
Construction Permits
Mine Design
Mining Design
Mineral Processing Plant Design
Tailings Dam Design

Expected recovery rate reached, design capacity reached, the quality of product reached, consumption indicators meeting requirement, effective controlling of production cost and the stable operation of equipment.



Installation & commissioning is key link of realizing dressing test, mine design, and equipment manufacture, and directly takes influence on production. This part includes equipment package, transportation and Installation & commissioning.

Equipment Manufacture includes civil engineering and equipment manufacturing. Equipment manufacturing is in charge of Xinhai Mining Machinry Production Factory; civil engineering in charge of the experienced technician who guides the construction team on civil engineering site.

SCENE CASES

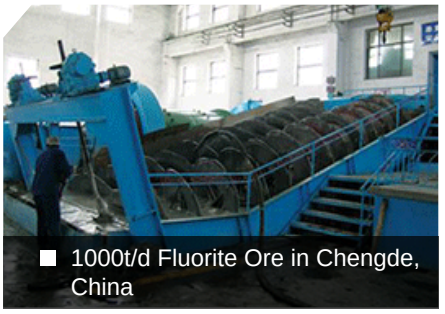
700t/d Gold Plant in Zimbabwe

700t/d Copper Beneficiation Plant in Chile

800t/d Graphite Plant in Vietnam

1200t/d Gold CIL Plant in Tanzania

800t/d Gold Plant in Mali



1000t/d Fluorite Ore in Chengde, China

1500t/d Cu-Pb-Zn Beneficiation Plant in Armenia

6000t/d Gold Flotation Plant in Shandong, China

1000t/d Gold CIL Plant in Sudan

CATALOGUE

CRUSHING

SCREENING

GRINDING

CLASSIFYING

FLOTATING

AGITATING

GRAVITY SEPARATING

MAGNETIC SEPARATING

THICKENING

FILTERING

CYANIDING

GOLD-SMELTING

SLURRY PUMP AND VALVE

NONMETAL PROCESSING

DRYING

FEEDING

TRANSPORTING

DEDUSTING

IRON REMOVING

AUTOMATIC CONTROL

APPENDIX

CRUSHING

- Jaw Crusher
- Spring Cone Crusher
- Single Cylinder Hydraulic Cone Crusher
- Hammer Crusher
- Impact Crusher

CRUSHING

Jaw Crusher

Principle

Through cyclical movement of mobile jaw that swings around fixed jaw, materials between the two jaws are extruded, which causes crushing effect.

Features

Large reduction ratio, optimum design of cavity, and high crushing efficiency.

High revolution speed of mobile jaw and curved jaw plate make high production capacity.

Application

Jaw crusher is widely used in mineral processing, building materials, silicate and chemical industry. In mineral processing industry production, it is commonly used for coarse & intermediate crushing of hard or medium hard ores.

Technical Parameters

Type	Model	Inlet Dimension (mm)	Outlet Dimension (mm)	Max. Feed Size (mm)	Capacity (t/h)	Rotating Speed of Eccentric Wheel (r/min)	Motor Power (kW)	Overall Dimension (mm)	Weight (kg)
Ordinary Crushing	PE100×150	100×150	5~20	80	0.5~2	300	2.2	525×535×605	230
	PE150×250	150×250	10~40	125	2~6	300	5.5	875×745×935	1100
	PE200×350	200×350	10~50	160	6~10	300	7.5	1080×1060×1088	1600
	PE250×400	250×400	20~60	210	8~26	300	15	1108×1090×1392	2396
	ZGPE250×400				8~16			1430×1316×1296	2800
	PE250×500	250×500	20~80	210	13~45	300	18.5	1360×1450×1440	3100
	ZGPE250×500				13~21			1425×1420×1417	3300
	PE400×600	400×600	40~100	350	25~64	275	30	1650×1748×1520	5800
	ZGPE400×600				14~36			1716×1736×1653	6500
	PE500×750	500×750	50~120	400	30~80	275	45	1900×1876×1821	9000
	ZGPE500×750					250		1980×2024×1920	12000
	PE600×900	600×900	75~200	480	56~192	250	75	2280×2245×2320	16700
	ZGPE600×900							2280×2245×2320	14500
	ZGPE750×1060	750×1060	80~235	630	108~256	250	90	2450×2472×2795	28000
	ZGPE900×1200	900×1200	95~265	750	186~398	200	110	3335×3182×3025	50000
	ZGPE1100×1400	1100×1400	150~300	950	250~600	193	132	3900×3040×3875	70000
	ZGPE1200×1500	1200×1500	160~320	1000	280~700	190	160	3800×3040×4150	82000
Fine Crushing	PEX150×750	150×750	18~48	120	8~25	320	15	1210×1572×1045	2800
	ZGPEX150×750		10~40					1240×1586×1025	3500
	PEX200×1000	200×1000	20~55	160	12~50	330	22	1860×1385×1200	5200
	ZGPEX250×750	250×750	20~60	210	10~45	320	30	1751×1400×1515	4900
	PEX250×1000	250×1000	20~50	210	15~50	330	30	1550×1990×1370	6500
	ZGPEX250×1000							1650×1958×1460	6800
	ZGPEX250×1200	250×1200	20~60	210	20~60	320	45	1650×2170×1465	9000
	ZGPEX300×1300	300×1300	25~65	250	20~80	330	55	1980×2456×1740	11500

Note: ZG-Cast steel shell crusher; X-Fine crushing crusher.

Spring Cone Crusher

Principle

The rotation of eccentric sleeve driven by motor makes cranking motions of movable eccentric cone and fixed cone, which achieves the purpose of crushing.

Features

The suspension of moving cone is supported by ball bearings.
Water-sealing dustproof device is used for lasting seal.

Application

Spring cone crusher is mainly used for intermediate & fine crushing of various hardness of ores.

Technical Parameters

Type	Model	Diameter of Crushing Cone (mm)	Inlet Dimension (mm)	Max. Feed Size (mm)	Adjustment Range of Outlet (mm)	Motor Power (kW)	Capacity (t/h)
Standard	PYB-600/75	600	75	65	12~25	30	40
	PYB-900/135	900	135	110	15~50	55	50~90
	PYB-1200/170	1200	170	145	20~50	110	110~168
	PYB-1750/250	1750	250	215	25~60	155	280~480
	PYB-2100/350	2100	350	300	30~60	280/210	500~800
	PYB-2200/350	2200	350			280	500~1000
Middle-sized	PYZ-900/70	900	70	60	8~20	55	20~65
	PYZ-1200/115	1200	115	100	8~25	110	42~135
	PYZ-1750/215	1750	215	180	10~30	155	175~320
	PYZ-2200/275	2200	275	230		280	200~580
Short Head	PYD-600/40	600	40	35	3~13	30	12~23
	PYD-900/50	900	50	40		55	15~50
	PYD-1200/60	1200	60	50	3~15	110	18~105
	PYD-1750/100	1750	100	85	5~15	155	75~230
	PYD-2200/130	2200	130	100		280	125~350

Single Cylinder Hydraulic Cone Crusher

Principle

The motor drives the eccentric shaft to revolve in fixed outer cone through belt pulley and gear assembly centering on the theory vertical line. The movable inner cone and the eccentric shaft revolve at the same time, and the inner cone does the reciprocating rotary oscillation in crushing cavity. When the movable inner cone gets close to the fixed outer cone, the ores between them will be crushed. When the movable inner cone is away from the fixed outer cone, the crushed ores will be discharged because of its own gravity. When the material that cannot be crushed falls into the crushing cavity, the single cylinder hydraulic at the bottom will control the movable inner cone to fall, by which the discharge outlet can be adjusted and the blocked ore can be discharged.

Features

PYY series single cylinder hydraulic cone crusher, is a kind of cone crusher with world advanced technology, high crushing efficiency, low operation cost, and good shape of the end products.

PYY series single cylinder hydraulic cone crusher is designed for optional variety of cavities. By selecting suitable cavities and eccentricity, it ensures the producing demand of customer in maximum and realizes high capacity.

The discharge outlet can be adjusted timely and conveniently with hydraulic adjusting design, which realizes full load operation, lowers wear parts consumption and reduces operation cost.

Adopting advanced hydraulic technology, overload protection can be realized effectively, which simplifies the structures and reduces its weight. All maintenance and inspection can be fulfilled on the top of crusher, which ensures easy maintenance.

Application

It is widely used in mining and gravel aggregate industry, suitable for crushing various materials with medium hardness or above such as iron ore, nonferrous metals ore, granite, limestone, quartzite, sandstone, cobble, etc.

Technical Parameters of PYY Series Single Cylinder Hydraulic Cone Crusher

Model	Cavity	Inlet Dimension (mm)	Max. Feed Size (mm)	Min. Outlet Dimension (mm)			Max. Feed Dimension (mm)			Power (kW)	Weight (t)
				Stroke	Stroke	Stroke	Stroke	Stroke	Stroke		
PYY100				16	22		16	22		90	6
	A	150	120	12	15		39	37			
	B	130	105	10	11		33	31			
	C	100	85	7	9		33	30			
	D	40	32	5	6		31	29			
PYY200				18	25		18	25		160	10.6
	A	220	180	18	22		35	30			
	B	150	120	15	19		35	30			
	C	80	60	9	12		35	30			
	D	40	32	6	8		35	30			
PYY300				25	32		25	32		250	18.5
	A	230	190	20	25		45	40			
	B	150	125	17	20		45	40			
	C	80	60	10	13		40	35			
	D	40	32	6	8		40	35			
PYY500				25	32	40	25	32	40	315	22.5
	A	230	180	22	26	30	50	45	40		
	B	150	125	19	22	26	48	43	38		
	C	100	80	12	14	16	40	35	30		
	D	50	40	8	10	12	30	25	20		

Model	Stroke	Tight Selvedge Outlet (mm) and Corresponding Production Capacity (t/h)								
		8	12	16	20	25	30	35	40	45
PYY100	16	35~40	45~55	55~65	65~75	75~85	90~100	105~115		
	22	45~50	55~65	65~75	75~90	85~105	100~125	115~135		
PYY200	18	65~75	75~90	85~105	100~125	135~150	160~175	170~190		
	25		90~110	110~130	125~155	160~180	185~210			
PYY300	25	100~120	110~135	130~160	150~180	170~200	200~230	230~260	250~290	270~310
	32	110~135	130~150	160~200	180~220	200~250	230~280	260~310	280~320	300~340
PYY500	25	100~120	120~150	140~170	160~190	190~220	220~250	250~280	280~310	330~370
	32		150~170	170~200	200~230	250~270	280~300	310~340	370~420	430~500
	40		180~200	210~240	250~280	300~330	330~380	370~420	430~500	

Technical Parameters of Medium Crushing Type

Model	Cavity	Inlet Dimension (mm)	Max. Feed Size (mm)	Min. Outlet Dimension (mm)			Max. Feed Dimension (mm)			Power (kW)	Weight (t)
				Stroke	Stroke	Stroke	Stroke	Stroke	Stroke		
PYYZ100				16	22		16	22		75-90	8.3
	A	250	210	35	35		65	60			
	B	200	170	35	35		65	60			
PYYZ200				18	25		18	25		110-160	11.8
	A	330	280	27	30		65	60			
	B	250	210	25	28		60	55			
PYYZ300				25	32		25	32		160-250	20
	A	380	320	28	32		73	69			
	B	280	240	26	30		66	62			
PYYZ500				18	25	32	18	25	32	250-315	33
	A	500	420	50	55	60	80	75	70		
	B	380	320	40	45	60	70	65	60		

Model	Stroke	Tight Selvedge Outlet (mm) and Corresponding Production Capacity (t/h)								
		35	40	45	50	55	60	65	70	75
PYYZ100	16	135~150	145~165	155~175	165~185	175~190	180~205			
	20	160~180	170~200	180~210	190~220	200~230	205~235			
PYYZ200	18	160~190	180~210	200~230	230~250	250~270	270~300			
	25	190~240	210~260	230~280	260~310	290~340	310~370			
PYYZ300	25	250~300	290~340	320~350	350~380	380~410	410~440	440~470		
	32	340~390	370~420	400~440	430~470	470~500	500~510	530~540		
PYYZ500	18			300~350	330~380	370~420	400~450	430~480	460~510	500~550
	25				500~550	550~600	600~650	650~700	700~750	750~800
	32				650~700	700~750	750~800	825~875	900~950	950~1000

Hammer Crusher

Principle

Hammer Crusher is composed of rack, rotor, sieve bar, hammer, etc. Motor drives rotor through transmission belt, and materials are crushed due to the collision between hammer and materials produced by the rotation of rotor.

Application

Hammer Crusher is suitable for crushing materials such as coal, gypsum, alum, and limestone. The compressive strength of materials is no more than 1000 kg/cm², and the humidity is no more than 15%.

Technical Parameters

Model	Rotation Diameter (mm)	Discharge Size (mm)	Max. Feed Size (mm)	Capacity (t/h)	Power (kW)
PC-ϕ600×400	ϕ600	10~30	100	12~15	18.5
PC-ϕ600×600	ϕ600	10~30	100	12~18	30
PC-ϕ800×700	ϕ800	10~45	200	13~35	37
PC-ϕ800×800	ϕ800	10~45	200	13~40	37
PC-ϕ1000×1000	ϕ1000	8~60	300	30~80	55
PC-ϕ1000×1300	ϕ1000	8~60	200	35~100	110
PC-ϕ1000×1500	ϕ1000	8~60	300	40~100	132
PC-ϕ1200×1600	ϕ1200	10~70	500	100~250	160

Impact Crusher

Principle

Materials are crushed by impact force. The motor drives high-speed rotation of rotor; materials collide with plate hammer on the rotor, and are crushed due to the high-speed impact of plate hammer; materials affected by crushing will be struck back on lining plate to crush again; finally they will be discharged from outlet.

Adjustment of the clearance between back striking rack and rotor rack can change discharge size and material shape.

Application

Impact crusher is used in metallurgy, mining, cement, chemical, refractory materials and ceramic industry, as well as the highway construction, water conservancy project, crushed stone in architecture, mechanism sand processing, etc.

Technical Parameters

Spec. & Model	Rotor Diameter (mm)	Outlet Clearance (mm)	Max. Feed Size (mm)	Capacity (t/h)	Motor Power (kW)
PF-ϕ1000×700	ϕ1000	≤ 30	250	15~30	37
PF-ϕ1000×1000	ϕ1000	≤ 45	250	30~80	75
PF-ϕ1200×1000	ϕ1200	≤ 45	300	60~120	110
PF-ϕ1200×1400	ϕ1200	≤ 50	300	100~160	132
PF-ϕ1300×1500	ϕ1300	≤ 50	300	100~250	220

SCREENING

- Circular Vibrating Screen
- Auto Centering Vibrating Screen
- Mining Single Shaft Vibrating Screen
- DZS Linear Vibrating Screen
- High-Efficiency High-frequency Dewatering Screen
- High-Frequency Fine Mesh Vibrating Screen

SCREENING

Circular Vibrating Screen

Principle

Circular vibrating screen is mainly composed of screen box, screen mesh, vibrator, damping springs, etc. Mounted on the side plate of the screen box and driven by the motor through V belt, the vibrator rotates, generates centrifugal force, and drives the vibration of the screen box, which is the vibrating object with the motion likely circular movement trail. During the period, materials with the particle size smaller than the diameter of sieve pore will fall down to the lower layer, and become screen underflow. Materials with the particle size larger than the diameter of sieve pore will be discharged from the outlet through continuous jumping. Ultimately, the screening is finally completed.

Features

The motion trail of this kind of vibrating screen is similar to a circle, and therefore, it is referred to as circular vibrating screen. As a kind of high-efficiency new vibrating screen with multi layers, circular vibrating screen has the following features:

Vibrator with eccentric shaft and eccentric block enables stable operation and highly efficient screening.

Step out of materials stuck in the mesh prevents sieve blocking.

Low stress damping spring enables low noise during operation.

Ultra-heavy large clearance bearings enable low operating temperature and long service life.

The frame structure of ring-grooved rivet and plate-type screen box enables high structural strength of screen frame.

World renowned wear-resistant rubber mesh can be provided.

Application

Applicable for material classification in the industries such as mineral processing, coal dressing, construction materials, electric power and chemical engineering; applicable for the dewatering, desliming, medium drainage, etc.

Technical Parameters

Model	Screen Surface			Max. Feed Size (mm)	Capacity (t/h)	Motor		Weight (kg)
	Area (m^2)	Dip Angle (°)	Mesh Size (mm)			Model	Power (kW)	
YA1236	4.3	20	6~50	200	80~240	Y160M-4	11	4905
2YA1236					80~240	Y160M-4		5311
YA1530	4.5				80~240	Y160M-4		4675
YA1536	5.4				100~350	Y160M-4		5137
2YA1536				400	100~350	Y160L-4	15	5624
YAH1536			30~150		160~650	Y160M-4	11	5621
2YAH1536			30~150；6~50		160~650	Y160L-4	15	6045
YA1542	6.5		6~50	200	110~385	Y160M-4	11	5515
2YA1542			6~50		110~385	Y160L-4	15	6098
YA1548	7.2		6~50		120~420	Y160L-4		5918
2YA1548			6~50		120~420	Y160L-4		6321
YAH1548	7.2		30~150	400	200~780	Y160L-4		6842
2YAH1548	7.2		30~150；6~50		200~780	Y160L-4		7404
YA1836	6.5		30~150	200	140~220	Y160M-4	11	5205
2YA1836	6.5		30~150		140~220	Y160L-4	15	5946
YAH1836	6.5		30~150	400	220~910	Y160M-4	11	5900
2YAH1836	6.5		30~150；6~50		220~910	Y160L-4	15	6353
YA1842	7.6		6~150	200	140~490	Y160L-4	15	5829
2YA1842	7.6		6~150		140~490	Y160L-4	15	6437
YAH1842	7.6		30~150	400	450~800	Y160L-4	15	6352
2YAH1842	7.6		30~150；6~50		450~800	Y160L-4	15	7037
YA1848	8.6	20	6~50	200	150~525	Y160L-4	15	6289
2YA1848	8.6			200	150~525	Y160L-4	15	6624
YAH1848	8.6		30~150	400	250~1000	Y160L-4	15	7122
2YAH1848	8.6		30~150；6~50	400	250~1000	Y160L-4	15	7740
YA2148	10		6~50	200	180~630	Y180M-4	18.5	9033
2YA2148	10		6~50	200	180~630	Y180L-4	22	10532
YAH2148	10		13~200	400	270~1200	Y180M-4	18.5	10430
2YAH2148	10		30~150；6~50	400	270~1200	Y180L-4	22	11190
YA2160	12.6		6~80	200	230~800	Y180M-4	18.5	9926
2YA2160	12.6		6~50	200	230~800	Y200L-4	22	11249
YAH2160	12.6		30~150	400	350~1500	Y200L-4	30	12490
2YAH2160	12.6		30~150；6~50	400	350~1500	Y200L-4	30	13858
YA2448	11.5		6~50	200	200~700	Y180 M -4	18.5	9834
YAH2448	11.5		6~50	400	310~1300	Y200L-4	30	11830
2YAH2448	11.5		30~150；6~50	400	310~1300	Y200L-4	30	13012
YA2460	14.4		6~50	200	260~780	Y200L-4	30	12240
2YA2460	14.4		6~50	200	260~780	Y200L-4	30	13583
YAH2460	14.4		30~150	400	400~1700	Y200L-4	30	13096
2YAH2460	14.4		30~150；6~50	400	400~1700	Y200L-4	30	14455

Note: "YA" Single layer "YA"/ "2YA" Double layer "2YA"/ "YAH" Single layer heavy screen "YAH"/ "2YAH" Double layer heavy screen "2YAH".

Auto Centering Vibrating Screen

Principle

Driven by the motor through the pulley, the eccentric main shaft integrated with the screen box rotates and generates centrifugal force, and drives the vibration of circular trail of the screen box.

Features

World renowned wear-resistant rubber meshes with the service life 10- 20 times as long as that of the steel and 4-6 times as long as that of polyurethane can be provided.

World renowned wear-resistant rubber spring with long service life and low noise can be provided. Both the pedestal and hanged type vibrating screen are available.

The eccentricity of 3-5mm between the large pulley and the eccentric shaft balances the overall movement of the large pulley during the vibration of the vibrating screen, and increases the drive stability.

Application

Applicable for the classification of fine-grained materials in the industries such as mines, coal, metallurgy, building materials and chemical engineering.

Technical Parameters

Model	Spec.	Max. Feed Size (mm)	Capacity (t/h)	Motor Model	Motor Power (kW)	Weight (kg)	Remarks
SZZ0918	900×1800	40	20~25	Y100L1-4	2.2	420	Hanged
SZZ0918			10~30			553	Pedestal
2SZZ0918			20~40			570	Pedestal
SZZ1225	1250×2500	100	100	Y132S-4	5.5	1017	Hanged
SZZ1225			100			1466	Pedestal
2SZZ1225			100~150			1320	Hanged
2SZZ1225			100~150			1870	Pedestal
SZZ1530	1500×3000		90~200	Y132M-4	7.5	1850	Hanged
SZZ1530						2665	Pedestal
2SZZ1530						2963	Hanged
SZZ1540	1500×4000	100	90~200	Y160L-4	15	2865	Pedestal
2SZZ1540	1500×4000	400	90~200	Y160L-4	15	3412	Pedestal
SZZ1836	1800×3600	150	100~300	Y160M-4	11	4500	Hanged
2SZZ1836				Y180M-4	18.5	5616	Pedestal

Mining Single Shaft Vibrating Screen

Principle

Driven by the motor through the pulley, the eccentric main shaft integrated with the screen box rotates and generates centrifugal force, and drives the vibration of circular trail of the screen box.

Features

World renowned wear-resistant rubber meshes with the service life 10-20 times as long as that of the steel and 4-6 times as long as that of polyurethane can be provided.

World renowned wear-resistant rubber spring with long service life and low noise can be provided.

Application

Applicable for the classification of fine-grained materials in the industries such as mines, coal, metallurgy, building materials and chemical engineering.

Technical Parameters

Model	Screening Area (m^2)	Screen Layer	Max. Feed Size (mm)	Capacity (t/h)	Mesh Size (mm)	Double Amplitude (mm)	Frequency (time/ min)	Motor Model	Motor Power (kW)	Weight (kg)
ZD918	1.6	1	60	10~30	1~25	6	1000	Y100L-4	2.2	553
2ZD918		2	50							702
ZD1224	2.9	1	100	70~210	6~40	0~7	850	Y112M-4	4	1130
2ZD1224		2								1545
ZD1530	4.5	1		90~270	6~50	6~7		Y132S-4	5.5	1650
2ZD1530		2								2260
ZD1540	6	1				7		Y132M-4	7.5	2070
2ZD1540		2								2850
ZD1836	6.5	1	150	100~300				Y160M-4	11	1960
ZD2160	12	1		230~540	10~50	8	900	Y180L-4	22	6529

DZS Linear Vibrating Screen

Principle

DZS linear vibrating screen is driven by double vibration motors. While two vibration motors doing synchronous rotation or counter-rotation, the exciting force generated by eccentric block is cancelled out with transverse exciting force, and the longitudinal exciting resultant force is passed on the whole screen surface, in this way, the motion track of screening machine is a straight line. There is an inclination between the exciting force direction and screen surface, under the action of resultant force of exciting force and material gravity, the materials on screen surface are thrown up and jumped forward in a straight line. In this way, the materials screening and classification are achieved.

Features

Low motor power, which is generally 1/4-1/5 of other kinds of screens.

High screening efficiency.

Lower load transmitted to the base with no special treatment.

Application

Applicable for dewatering, desliming, fluid exhaustion and heavy medium removal for the beneficiation of heavy medium.

Technical Parameters

Model	Screening Area (m^2)	Amplitude (mm)	Motor Model	Motor Power (kW)	Rotating Speed (r/min)
DZS0412	0.4×1.2	2~4	YZS-3-6	0.25	970
DZS0415	0.4×1.5				
DZS0612	0.6×1.2				
DZS0718	0.7×1.8		YZO-10-6	0.75	960
DZS0816	0.8×1.6				
DZS0912	0.9×1.2				
DZS0918	0.9×1.8		YZU-10-6	0.75	
DZS1018	1.0×1.8	4~6	YZU-16-6	1.1	
DZS1020	1.0×2.0	3~5	YZO-20-6	2	950
DZS1225	1.25×2.5		YZU-16-6	1.1	
DZS1530	1.5×3.0		YZU-20-6B	1.5	960
2DZS1530	1.5×3.0		YZO-20-6	2	950
DZS1536	1.5×3.6		YZU-20-6B	1.5	960
2DZS0918	0.9×1.8	4~6	YZU-25-6B	1.5	960
2DZS1018	1.0×1.8	2~4	YZU-20-6B	1.5	960

High-efficiency High-frequency Dewatering Screen

Principle

Xinhai has much unique technologies in dewatering screen design. The sectional type is used for screen surface: The first section slopes at 5-degree angle, and the discharge end is higher than feeding one; the second section slopes at 45-degree angle which can improve the dewatering effect. With small amplitude and high frequency, the vibration motor makes the screen very stable. The screen cloth is interleaved and easy to be installed and replaced. If it works with Xinhai XCII and XCIII hydrocyclone (As shown in Classifying Part) and Xinhai high frequency multiple & deep cone thickener, the high-efficiency high-frequency dewatering screen can process large capacity of materials with sufficient dewatering and prominent economic effect.

Xinhai dewatering screen is used in domestic silica raw material manufacturing plant, which receives unexpected result. For example, Xinhai hydrocyclone and dewatering screen are used for dewatering in Anhui Tongda quartz sand mine and Fujian Mingda silica sand mine. The water content can be reduced to 10% with smooth and steady operation and low failure rate.

Features

Screen box is riveted overall with high intensity, good stiffness and no thermal stress.

Modularized screen plate and installation with sealing strip make good sealing effect.

The place contacting material is covered with wear-resistant natural rubber so as to have non-corrosibility and wear resistance.

Low concentration slurry overflow pipe is put behind to increase the dewatering speed.

-5-degree screen surface makes lower water content of discharge.

Wear-resistant rubber damping device makes the screen run stably and durably.

Application

It is suitable for concentrate and tailings dewatering in nonmetal mines such as quartz sand, fluorite and feldspar, as well as tailings dewatering in metal mines such as gold (Gold processing and CIP plant), lead zinc, iron and copper.

Theoretical Capacity (Dry Materials t/h)

Model	Min. 30% Solid Feeding Slurry Concentration by Volume						Unit Motor Power (kW) × Quantity (set)	
	Coal Fine Theoretically -0.5+0.1(mm) Specific Gravity 1.5		Coarse Sand Approxilly-5(mm) 100%, -0.6(mm)50%, Specific Gravity 2.7		Fine Sand 90% -1(mm) Specific Gravity 2.7		980 (r/min)	1460 (r/min)
	1460 (r/min)	980 (r/min)	1460 (r/min)	980 (r/min)	1460 (r/min)	980 (r/min)		
VD6	6~8	10~13	14	28	10	21		2 × 2
VD9	9~12	15~20	21	42	16	32	3 × 2	
VD12	15~19	24~30	33	67	25	50	2.6 × 2	4 × 2
VD15	30~35	50~60	63	125	47	94	2.4 × 4	2.25 × 4
VD18	35~45	60~80	77	153	57	115		3.7 × 4
VD21	—	85~100	—	225	—	164	15	—
VD24		95~110		250		190		

High-frequency Fine Mesh Vibrating Screen

Features

High-frequency vibration of screen surface and fixed screen box: With the vibration exciter fixed on the screen box, the exciter force drives the vibration screen surface of the vibrating system. With the vibration system designed in the near-resonant working state, the required vibrating parameters can be achieved with a smaller driving force. As the screen box is fixed without movement, through the second damping bearing, the dynamic load of the whole set is very small. It can be easily placed and installed with no special foundation to be made.

With high-frequency vibration of screen surface, the frequency of 50 Hz, the amplitude of 1-2 mm, and the vibration strength of 8-10 times the gravitational acceleration, the vibration strength of it is 2-3 times that of ordinary vibrating screen. With high screen surface self-cleaning ability, high efficiency, and large capacity, it is very suitable for the screening and dewatering of fine powder materials with the feeding size limit of 15 mm, and particle grading size of 0.043-3 mm.

The screen surface is composed by three layers of different flexible meshes. The bottom layer is polyurethane support layer with steel cord and direct contact with the vibration excitation device. On the support layer, the compound mesh boded by two layers of stainless steel wire mesh is laid in tension. The upper layer of the compound mesh is in contact with the materials. The mesh aperture size should be determined according to the screening requirements. The aperture ratio of the mesh is high with long service life. There are hooks installed at both ends of the mesh, which is convenient for tensioning installation. The feeding buffer screen deck can ensure the smooth and uniformity of materials, reduce the material impacts on the meshes (compound mesh), and prolong the service life.

The installation angle of the screen can be easily adjusted to suit different material properties and different screening operation. As for the wet screening of the plant, the installation angle is generally in the range of $25 \pm 2°$, and that of the dry screening is generally in the range of $33 \pm 2°$.

The vibration parameters of the screen are controlled by computer, and the vibration parameters of each vibration system can be adjusted and set via software. Except the vibration parameters under general conditions, the instantaneous intermittent intensity parameters can be set to clean up the screen mesh at any time and avoid the mesh blocking.

The specially designed electromagnetic vibration system is mainly made of high quality rubber parts with reliable long-term operation and low power consumption, which is only 0.15 kW for each electromagnetic exciter.

Divided into single channel and double-channel, single layer and multi-layers, and with modular design, the screen can be flexibly designed according to the application.

With bending forming steel plates adopted for all the side plates and bulkheads of the screen box, and rectangular tubes & profiles welded and assembled for the frame, the overall stiffness of the screen can be enhanced and the appearance becomes more attractive.

Electric cabinet of different models can be configured according to the needs of the customers, so as to achieve auxiliary functions such as parameter setting, remote control, process recording and fault alarm.

Application

Wet classification is mainly applied in the classification of fine materials in mineral processing with 1-5 layers; and the dewatering series is mainly used for the dewatering of the tailings, quartz sands and slime.

Technical Parameters

Model	Screen Layer	Screen Area (m^2)	Power (kW)	Application
SGPZ2020	1	4	3.8	Wet classification
2SGPZ2020	2	4	3.8	Wet classification
4SGPZ1014	4	5.6	6	Wet classification
5SGPZ1015	5	7	6.48	Wet classification
XGPZ1235	1	4.2	2.6	Dewatering of fine materials
XGPZ2030	1	6	6.2	Dewatering of fine materials

GRINDING

- High-efficiency Autogenous Mill
- Wet Energy-saving Grid Ball Mill
- Wet Energy-saving Overflow Ball Mill
- Cone Grid Ball Mill
- Cone Overflow Ball Mill
- Wet Grid Ball Mill
- Wet Overflow Ball Mill
- Wet Rod Mill
- Wet Long-cylinder Ball Mill
- Special Vertical Mill for Graphite
- MTM Raymond Mill

GRINDING

High-efficiency Autogenous Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the center sleeve at one end of the cylinder and crushed by the falling impacts and autogenous grinding of the ores in the cylinder. Qualified materials flow from center sleeve at the other end of the cylinder through the grid plate by the overflow water.

Features

Low power consumption, no dust pollution, less auxiliary equipment, easy production automation, and stable particle size.

High-efficiency autogenous mill can realize the second and third stage crushing and screening, and part or all crushing and grinding of rod mill or ball mil.

High-efficiency autogenous mill can process coarse ores with intermediate crushing and fine crushing saved, high crushing ratio, which can reach 3000-4000 (feed size 300-400 mm, outlet size below 0.1 mm).

Application

Generally used in the coarse grinding after coarse crushing.

Technical Parameters

Model	Diameter (mm)	Length (mm)	Feed Size (mm)	Main Motor			
				Model	Power (kW)	Voltage (V)	Weight (t)
ZMJ4014	4000	1400	< 350	JR148-8	245	10000	75
ZMJ4018	4000	1800	< 350	JR1410-8	320	10000	82
ZMJ5518	5500	1800	< 400	TDMK800-36	800	10000	175
ZMJ6522	6500	2200	< 400	TDMK1600-40	1600	10000	280
ZMJ7525	7500	2500	< 400	TM2500-16	2500	10000	455
ZMJ7528	7500	2800	< 400	TM2500-16	2500	10000	465

Wet Energy-saving Grid Ball Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel balls and ores in the cylinder. Due to the continuously feeding materials, Materials are pushed to the outlet by the pressure, and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet. In wet grinding, the materials are taken out by the water flow. There is a grid installed in the outlet of the mill with low slurry surface, which can reduce the ore over-grinding, and prevent the steel ball out. Under the same production conditions, production capacity of grid mill is larger with rolling bearing and significant energy conservation.

Features

Large double-row self-aligning rolling bearing with less friction force is used to replace sliding bearing, and easy to start with energy saved by 20-30%.

Corrugated lining plate is used to increase the contact surface of ball and ore, strengthen the grinding, lift the ores, and reduce the energy consumption.

Overall frame is adopted for small size ball mill (Dia < 2.1m) which is much more convenient for civil work and installation;

Large ore outlet and large capacity.

Oil mist lubrication device guarantees the lubrication of all gears.

Application

Generally used in grinding ores with larger particle size.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Motor Model	Motor Power (kW)	Length (mm)	Width (mm)	Height (mm)	Capacity (t/h)	Effective Volume (m^3)	Max. Ball Load (t)	Weight (kg)
MQGg 1212	1200	1200	Y200L2-6	22	3512	2076	1620	0.17~4.1	1.14	2.4	9610
MQGg 1224	1200	2400	Y280M-8	45	5745	2352	1778	0.26~6.15	2.4	4.6	12692
MQGg 1240	1200	4000	JR117-8	80	7990	2210	2262	0.34~8.3	3.8	7.8	15932
MQGg 1515	1500	1500	Y280M-8	45	5740	3075	2280	1.4~4.5	2.2	5	17125
MQGg 1530	1500	3000	JR117-8	80	7253	3070	2280	2.8~9	5	10	21425
MQGg 1536	1500	3600	JR126-8	110	8595	3185	2280	3~11	5.4	11.4	24213
MQGg 1545	1500	4500	JR127-8	130	9680	3254	2370	3.5~12.5	7	12	27346
MQGg 1830	1800	3000	JR136-8	180	8250	3620	2785	4.5~27	6.65	14	31850
MQGg 1836	1800	3600	JR136-8	180	8866	3683	2785	4.5~29	8.2	13.8	35467
MQGg 1845	1800	4520	JR137-8	210	9808	3683	2785	5~35	10.2	19	38909
MQGg 1856	1800	5620	JR137-8	210	10909	3683	2785	6~40	12.2	22	41681
MQGg 1870	1800	7020	JR138-8	245	12404	3783	2735	7~50	15	31.5	45166
MQGg 2122	2100	2200	JR128-8	155	7135	4137.7	3083	5~29	6.6	20	38340
MQGg 2130	2100	3000	JR136-8	180	8220	4220	3083	6.5~36	9	27	43100
MQGg 2136	2100	3600	JR137-8	210	9154.5	4320	3433	7.5~42	10.8	23.5	45833
MQGg 2140	2100	4000	JR137-8	210	9654	4320	3083	7.5~45	12.8	22.5	47262.4
MQGg 2145	2100	4500	JR137-6	280	10350	4253	3125	10~50	13.5	23.6	52648
MQGg 2230	2200	3000	JR137-8	210	8220	3864	3183	7.5~45	9.8	20.6	44600
MQGg 2430	2400	3000	JR138-8	280	9023.5	4836.4	3490	7.2~92	11.5	22.5	59544.5
MQGg 2436	2400	3600	JR138-8	320	9604.5	4836.4	3490	8~100	13.8	25.5	63932.5
MQGg 2442	2400	4200	JR138-8	320	10204.5	4836.4	3490	8~110	16	30	67370
MQGg 2721	2700	2100	JR138-8	245	8300	4786.4	3495	7.2~84	10.7	23	66743
MQGg 2727	2700	2700	JR137-6	280	8901	4786.4	3490	7~110	13.8	29	71030
MQGg 2730	2700	3000	JR1410-8	320	9610	5000	3495	8~115	15.3	32	83909.2
MQGg 2732	2700	3200	JR1410-8	320	10724	5000	3620	8~120	15.7	32	88073
MQGg 2736	2700	3600	JR158-8	380	10409	5150	3620	12~145	17.7	37	95300
MQGg 2740	2700	4000	JR158-8	380	10609	5150	3620	12.5~152	19	42	98454
MQGg 2745	2700	4500	JR1510-8	450	11534	5200	3670	13~160	22	40	100016
MQGg 2747	2700	4700	JR1510-8	475	11779	5571	4175	13~170	23	45	101645
MQGg 2760	2700	6000	JR1512-8	630	13299	5540.6	5140	15~200	30	60	119546
MQGg 2836	2800	3600	JR1510-8	400	10964	5350	3670	13~160	19.7	41	106350
MQGg 3231	3200	3100	TDMK630-36	630	12750	6750	5150	14~180	22.5	45	115430
MQGg 3245	3200	4500	TDMK800-36	800	13896	7200	5152.5	95~110	32.8	65	147588
MQGg 3645	3600	4500	TDMK1250-40	1250	18280	7700	5496	115~170	41.5	76	195727

Wet Energy-saving Overflow Ball Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel balls and ores in the cylinder. Due to the continuously feeding materials, the pressure pushes materials to the outlet and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet. In wet grinding, the materials are taken out by the water flow. There are backpitch impellers in the hollow shaft, which can make the balls and coarse ores in the overflow return to the mill. With simple structure, higher operation rate, and rolling bearing, the energy conservation is significant.

Features

Large double-row self-aligning roller bearing with low friction force is used to replace sliding bearing, and is easy to start with energy saved by 20-30%.

Grooved ring plate liner is used to increase the contact surface of ball and ore, strengthen the grinding, lift the ores, and reduce the energy consumption.

Overall frame is adopted for small size ball mill (Dia < 2.1 m) which is much more convenient for civil work and installation.

Oil mist lubrication device guarantees the lubrication of all gears.

Application

Generally used in the grinding of ores with finer fineness.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Motor Model	Motor Power (kW)	Length (mm)	Width (mm)	Height (mm)	Capacity (t/h)	Effective Volume (m^3)	Max. Ball Load (t)	Weight (kg)
MQYg 0912	900	1200	Y1800L-6	15	3666	1835	1400	0.25~1.2	0.7	1	4265
MQYg 0918	900	1800	Y225M-8	22	4401	2535	2070	0.25~1.6	0.9	1.66	5235
MQYg 1212	1200	1200	Y225S-8	18.5	3512	2076	1620	0.17~4.1	1.14	1.9	9610
MQYg 1224	1200	2400	Y280M-8	45	5745	2352	1778	0.26~6.15	2.4	4.6	12219
MQYg 1240	1200	4000	JR117-8	80	7990	2412	1728	0.34~8.3	3.7	8	15940
MQYg 1515	1500	1500	Y280M-8	45	5740	3075	2280	1.4~4.5	2.2	4.2	17125
MQYg 1530	1500	3000	JR117-8	80	7253	3070	2280	2.8~9	5	10	21129
MQYg 1536	1500	3600	JR126-8	110	8595	3185	2280	2.8~10	5.4	10	23933
MQYg 1545	1500	4500	JR127-8	130	9680	3254	2370	3.5~12.5	7	12	27500
MQYg 1557	1500	5700	JR127-8	130	10880	3254	2370	4.5~16	8.9	15	29359
MQYg 1836	1800	3620	JR136-8	180	8865	3683	2785	4.5~29	8.2	13.8	34970
MQYg 1845	1800	4520	JR137-8	210	9750	3683	2785	5~33	10.2	19	37480
MQYg 1857	1830	5720	JR137-8	210	11009	3683	2785	6~40	12.5	22	42096
MQYg 1863	1800	6320	JR138-8	320	11690	3781	2775	6~45	14.2	25	45520.5
MQYg 1870	1800	7020	JR138-8	245	12599	3783	2735	7~47	15	31.5	45136
MQYg 1875	1800	7520	JR138-8	245	12850	3783	2775	7.5~54	17	30	49450
MQYg 2122	2100	2200	JR128-8	155	7235	4120	3083	5~29	6.6	20	35963
MQYg 2130	2100	3000	JR136-8	180	8220	4220	3083	6.5~36	9	27	40157
MQYg 2136	2100	3600	JR137-8	210	8958	4320	3025	7.5~42	10.8	23.5	44132.5
MQYg 2145	2100	4500	JR138-8	245	10350	4268	3121	10~45	13.5	23.6	42772
MQYg 2430	2400	3000	JR138-8	280	9023.5	4836.4	3490	7.2~92	11.5	22.5	57455.5
MQYg 2436	2400	3600	JR137-6	280	9623.5	4836.4	3490	8~110	13.8	25.5	60861.5
MQYg 2442	2400	4200	JR138-8	320	10204.5	4836.4	3440	8~130	16.5	31.5	63829.5
MQYg 2445	2400	4500	JR1510-8	380	11132.5	5091.4	4065	8.5~140	17.5	31	75923
MQYg 2460	2400	6000	JR1510-8	450	12623.5	5201.4	4060	9~180	23	40	83869
MQYg 2727	2700	2700	JR137-6	280	8901	4786.4	3620	7~110	13.8	29	66201
MQYg 2730	2700	3000	JR137-6	280	9201	4786.4	3620	8~115	15.3	32	72415
MQYg 2732	2700	3200	JR1410-8	320	10729	5000	3620	8~120	15.7	32	83110
MQYg 2736	2700	3600	JR158-8	380	10764	5150	3620	12~145	17.7	37	90441
MQYg 2740	2700	4000	JR1510-8	380	10870	5050	3620	12.5~152	19	40	93537
MQYg 2745	2700	4500	JR1510-8	380	11664	5150	3620	12.5~163	20.5	40	96196
MQYg 2747	2700	4700	JR1510-8	450	11864	5150	3620	13~170	23	45	97605
MQYg 3231	3200	3100	TDMK630-36	630	12550	6750	5150	14~180	21.4	45	112430
MQYg 3245	3200	4500	TDMK630-36	630	13950	7200	5152.5	95~110	32.8	65	141629
MQYg 3660	3600	6000	TDMK1250-40	1250	19780	7700	5496	120~200	55	102	193483

Cone Grid Ball Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel balls and ores in the cylinder. Due to the continuously feeding materials, the pressure pushes materials to the outlet and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet. In wet grinding, the materials are taken out by the water flow. It is generally used in fine grinding operation.

Features

Large double-row self-aligning roller bearing with low friction force, easiness of start and significant energy conservation is used to replace sliding bearing.

Cone design is adopted for the discharge outlet, which can not only increase the volume, but also realize the classification of the materials and balls at the cone end.

The closer to the discharge outlet, the smaller is the ball diameter, which increases repeated grinding.

Grooved ring plate liner is used to increase the contact surface of ball and ore, strengthen the grinding, lift the ores, and reduce the energy consumption.

Overall frame is adopted for small size ball mill (Dia < 2.1m) which is much more convenient for civil work and installation.

Application

Generally used in grinding ores with larger particle size.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Cylinder Rotating Speed (r/min)	Motor Model	Motor Power (kW)	Motor Rotating Speed (r/min)	Length (mm)	Width (mm)	Height (mm)	Effective Volume (m^3)	Max.Ball Load (t)	Weight (kg)
GZMg 0912	ϕ900/ϕ675	900/300	41	Y160L-6	11	970	3271	1815	1400	0.65	1	4363
GZMg 0916	ϕ900/ϕ675	1350/300	41	Y180L-6	15	970	3786	1815	1400	0.83	1.35	4944
GZMg 0918	ϕ900/ϕ675	1500/300	41	Y180L-6	15	970	3936	1815	1400	0.91	1.5	5200
GZMg 0921	ϕ900/ϕ675	1800/300	41	Y200L1-6	18.5	970	4301	1815	1400	0.97	1.67	5448
GZMg 1216	ϕ1200/ϕ900	1200/400	36.4	Y200L26	22	970	3912	2076	1620	1.67	2.87	6610
GZMg 1220	ϕ1200/ϕ900	1600/400	36.75	Y225M-6	30	980	4443	2076	1620	2.14	3.68	7400
GZMg 1224	ϕ1200/ϕ900	2000/400	36.75	Y250M-6	37	980	5088	2138	1670	2.61	4.49	9410
GZMg 1226	ϕ1200/ϕ900	2200/400	36.75	Y250M-6	37	980	5288	2138	1670	2.84	4.88	9757
GZMg 1228	ϕ1200/ϕ900	2400/400	36.75	Y280S-6	45	980	5558	2168	1670	3.07	5.28	10385
GZMg 1520	ϕ1500/ϕ1200	1500/500	30.9	Y280M-8	45	740	4825	2785	2120	2.84	4.88	13011
GZMg 1523	ϕ1500/ϕ1200	1800/500	30.9	YR280S-8	55	723	5335	2785	2120	3.29	5.66	14033
GZMg 1526	ϕ1500/ϕ1200	2100/500	30.9	YR280S-8	55	725	5640	2750	2110	3.74	6.43	14814
GZMg 1529	ϕ1500/ϕ1200	2400/500	30.9	JR117-8	80	725	6173	2785	2120	4.19	7.2	17209
GZMg 1535	ϕ1500/ϕ1200	3000/500	30.9	JR117-8	80	725	6773	2785	2120	5.08	8.74	18710
GZMg 1545	ϕ1500/ϕ1200	4000/500	30.9	JR126-8	110	725	8708	2875	2190	6.6	11	22578
GZMg 1831	ϕ1800/ϕ1390	2510/600	25.4	JR137-8	210	735	7756.87	3683	2785	6.5	11.5	30947
GZMg 1835	ϕ1800/ϕ1390	2910/600	25.4	JR137-8	210	735	8156.87	3683	2785	7.35	13	31349
GZMg 2131	ϕ2100/ϕ1670	2500/600	24.05	JR128-8	155	725	7579	3908	2825	9	16.5	34920
GZMg 2136	ϕ2100/ϕ1670	3000/600	24.05	JR136-8	180	735	8180	4214	3183	10.46	19.2	41640
GZMg 2130	ϕ2100/ϕ1670	2400/600	24.05	JR136-8	180	735	7580	4214	3183	8.75	16	38732
GZMg 2141	ϕ2100/ϕ1670	3500/600	24.05	JR137-8	210	735	8913	4350	3183	11.92	21.5	44626
GZMg 2145	ϕ2100/ϕ1670	3750/750	23.3	JR138-8	245	735	9556	4274	3230	12.5	22.6	48871
GZMg 2430	ϕ2400/ϕ1670	2300/700	22	JR137-6	280	960	9023	4836	3383	11.5	4122	59516
GZMg 2727	ϕ2700/ϕ2100	2285/550	21.62	JR138-8	245	735	8041	5051.4	3650	12.9	25.8	60844
GZMg 2733	ϕ2700/ϕ2287	2750/550	21.6	JR138-8	245	735	8433	4897	4385	15.9	28	69302
GZMg 2736	ϕ2700/ϕ2287	3050/550	21.6	JR157-8	320	750	8735	4897	4385	17.5	33.2	72365
GZMg 2740	ϕ2700/ϕ2287	3450/550	20.76	JR158-8	380	750	9565	5150	3620	19.7	38.2	76852
GZMg 2742	ϕ2700/ϕ2287	3650/550	20.76	JR158-8	380	750	9765	5150	3640	20	41	78979

Cone Overflow Ball Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel balls and ores in the cylinder. Due to the continuously feeding materials, the pressure pushes materials to the outlet and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet. In wet grinding, the materials are taken out by the water flow.

Features

Large double-row self-aligning roller bearing with low friction force, easiness of start and significant energy conservation is used to replace sliding bearing.

Cone design is adopted for the discharge outlet, which can not only increase the volume, but also realized the classification of the materials and balls at the cone end. The closer to the discharge outlet, the smaller is the ball diameter, which increases repeated grinding.

Grooved ring plate liner is used to increase the contact surface of ball and ore, strengthen the grinding, lift the ores, and reduce the energy consumption.

Overall frame is adopted for small size ball mill (Dia < 2.1m) which is much more convenient for civil work and installation.

Application

Generally used for fine grinding operation.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Cylinder Rotating Speed (r/min)	Motor Model	Motor Power (kW)	Motor Rotating Speed (r/min)	Length (mm)	Width (mm)	Height (mm)	Effective Volume (m^3)	Max. Ball Load (t)	Weight (kg)
GZM0912	ϕ900/ϕ675	900/300	41	Y160L-6	11	970	3271	1815	1400	0.65	1	4263
GZM0916	ϕ900/ϕ675	1300/300	41	Y180L-6	15	970	3786	1815	1400	0.83	1.35	4844
GZM0918	ϕ900/ϕ675	1500/300	41	Y180L-6	15	970	3936	1815	1400	0.91	1.5	5100
GZM0921	ϕ900/ϕ675	1800/300	41	Y200L1-6	18.5	970	4301	1815	1400	1.07	1.7	5420
GZM1216	ϕ1200/ϕ900	1200/400	36.4	Y200L2-6	22	970	3911	2076	1620	1.44	2.59	6500
GZM1220	ϕ1200/ϕ900	1600/400	36.75	Y225M-6	30	980	4443	2076	1620	1.79	3.23	7300
GZM1224	ϕ1200/ϕ900	2000/400	36.4	Y250M-6	37	980	5088	2138	1670	2.16	3.89	9300
GZM1226	ϕ1200/ϕ900	2200/400	36.4	Y250M-6	37	980	5288	2138	1670	2.33	4.2	9647
GZM1228	ϕ1200/ϕ900	2400/400	36.8	Y280S-6	45	980	5558	2168	1670	2.52	4.53	10160
GZM1230	ϕ1200/ϕ900	2600/400	36.8	Y280S-6	45	980	5758	2168	1670	2.7	4.85	10510
GZM1241	ϕ1200/ϕ900	3700/400	36.8	Y280M-6	55	980	6908	2168	1670	3.6	6.47	12460
GZM1520	ϕ1500/ϕ1200	1500/500	30.9	Y280M-8	45	740	4825	2785	2120	2.84	4.88	12891
GZM1523	ϕ1500/ϕ1200	1800/500	30.9	YR280S-8	55	723	5335	2940	2110	3.29	5.66	13913
GZM1526	ϕ1500/ϕ1200	2100/500	30.9	YR280S-8	55	725	5640	2750	2110	3.74	6.43	14684
GZM1529	ϕ1500/ϕ1200	2400/500	30.9	JR117-8	80	725	6173	2785	2120	4.19	7.2	17087
GZM1535	ϕ1500/ϕ1200	3000/500	30.9	JR117-8	80	725	6773	2785	2120	5.08	8.74	18590
GZM1545	ϕ1500/ϕ1200	4000/500	30.9	JR126-8	110	725	8708	2875	2190	6.6	11	22460
GZM1831	ϕ1800/ϕ1390	2500/600	25.4	JR128-8	155	735	7756	3620	2785	6.5	11.5	30100
GZM1835	ϕ1800/ϕ1390	2900/600	25.4	JR128-8	155	735	8156	3620	2785	7.4	13	30502
GZM1865	ϕ1800/ϕ1390	5910/600	25.4	JR137-8	210	735	11156	3683	2785	7.35	13	41338
GZM2131	ϕ2100/ϕ1670	2500/600	23.8	JR128-8	155	725	7579	3908	2825	9	16.5	33454
GZM2136	ϕ2100/ϕ1670	3000/600	24.05	JR136-8	180	735	8180	4214	3183	10.45	19.2	41211
GZM2141	ϕ2100/ϕ1670	3500/600	24.05	JR137-8	210	735	8680	4264	3183	11.9	21.5	44354
GZM2145	ϕ2100/ϕ1670	3750/750	23.3	JR137-6	280	980	9556	4274	3230	12.5	22.6	48571
GZM2430	ϕ2100/ϕ1670	2300/700	22	JR137-6	280	960	9023	4836	3383	11.5	19	58010
GZM2727	ϕ2700/ϕ2100	2285/550	21.62	JR138-8	245	735	8095	4826	3430	12.9	25.8	59333
GZM2733	ϕ2700/ϕ2287	2750/550	21.6	JR138-8	245	735	8433	4897	4385	15.9	28	67302
GZM2736	ϕ2700/ϕ2287	3050/550	21.6	JR157-8	320	750	8735	4897	4385	17.5	33.2	70365
GZM2740	ϕ2700/ϕ2287	3450/550	20.76	JR158-8	380	750	9565	5150	3620	19.7	38.2	74982
GZM2742	ϕ2700/ϕ2287	3650/550	20.76	JR158-8	380	750	9765	5150	3640	20	41	76842

Wet Grid Ball Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel balls and ores in the cylinder. Due to the continuously feeding materials, the pressure pushes materials to the outlet and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet. In wet grinding, the materials are taken out by the water flow.

Features

Jack system with easy maintenance.

Hydrostatic and hydrodynamic bearings, steady and reliable operation.

Low speed transmission with easy starting and maintenance.

Oil-mist lubrication device guarantees reliable performance of bearings.

Gas clutch adopts flexible start-up model.

Application

Generally used for grinding coarser ores.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Motor Model	Motor Power (kW)	Length (mm)	Width (mm)	Height (mm)	Effective Volume (m^3)	Max. Ball Load (t)	Weight (kg)
MQG0909	900	900	Y225S-8	18.5	4750	2213	2050	0.45	0.96	4620
MQG0918	900	1800	Y225M-8	22	5000	2280	2050	0.9	1.92	5340
MQG1212	1200	1200	Y225M-8	22	5788	2994	2540	1.14	2.4	11438
MQG1224	1200	2400	Y315S-8	55	6673	2994	2540	2.28	3.96	13200
MQG1515	1500	1500	JR115-8	60	6094	3300	2766	2.5	5	13700
MQG1530	1500	3000	JR125--8	95	7979	3300	2766	5	10	18690
MQG2122	2100	2200	JR128-8	155	7750	4839	3794	6.6	15	45400
MQG2130	2100	3000	JR137-8	210	8744	4394.7	3110	9	20	45790
MQG2430	2400	3000	JR1410-8	280	9728	4956	4018	12.1	22.5	67000
MQG2721	2700	2100	JR1410-8	280	9300	5500	4500	10.7	24	63000
MQG2727	2700	2700	JR148-8	310	9900	5500	4500	13.8	29	68530
MQG2736	2700	3600	TDMK400-32/2150	400	9765	5826.6	4674.5	18.4	41	98020
MQG3231	3200	3100	TDMK630-36	630	12750	6750	5152.5	22.5	45	115103
MQG3236	3200	3600	TDMK630-36	630	14300	6760	5200	24.8	58	119012
MQG3245	3200	4500	TDMK800-36	800	13896	7200	5152.5	32.8	65	137589
MQG3639	3600	3900	TDMK1000-36/3600	1000	15000	7200	6300	36.2	75	145000
MQG3645	3600	4500	TDMK1250-40	1250	15200	7750	6300	41.8	90	159700
MQG3650	3600	5000	TDMK1400-40	1400	17600	7750	6300	46.4	96	158000
MQG3660	3600	6000	TDMK1600-40	1600	17000	8800	6500	55.7	120	189000
MQG4060	4000	6000	TDMK1700-30	1700	17400	9500	7600	69.8	137	214000
MQG4560	4500	6000	TDMK2300-30	2300	17800	10500	7600	87	158	294000

Note: The jack system and static and dynamic pressure bearing should be equipped according to the requirements of the users. As for those with the specification of over ϕ2.7m, the weight of the motor is excluded.

Wet Overflow Ball Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel balls and ores in the cylinder. Due to the continuously feeding materials, the pressure pushes materials to the outlet and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet.

Features

Jack-up device with easy maintenance.

Hydrostatic and hydrodynamic bearings, steady and reliable operation.

Low speed transmission with easy starting and maintenance.

Oil-mist lubrication device guarantees reliable performance of bearings.

Gas clutch adopts flexible start-up model.

Application

Generally used in the grinding of ores with finer fineness.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Motor Model	Motor Power (kW)	Length (mm)	Width (mm)	Height (mm)	Effective Volume (m^3)	Max. Ball Load (t)	Weight (kg)
MQY0918	900	1800	Y225M-8	22	5080	2300	2015	0.9	1.66	6078
MQY1212	1200	1200	Y225S-8	18.5	5788	2994	2540	1.14	2.4	11473
MQY1224	1200	2400	YR280S-8	55	6112	2794	2540	2.28	3.8	12308
MQY1515	1500	1500	JR115-8	60	5766	2945	2600	2.2	6.4	15424
MQY1530	1500	3000	JR125-8	95	7979	2945	2600	5	10	18690
MQY2122	2100	2200	JR128-8	155	8070	4840	3795	6.6	14	47800
MQY2130	2100	3000	JR137-8	210	8870	4840	3795	9	20	47220
MQY2136	2100	3600	JR137-8	210	9300	4840	3795	10.8	22	52010
MQY2145	2100	4500	JR148-6	310	11029	4738.6	3300	13.5	23.8	58305
MQY2430	2400	3000	JR1410-8	280	9710	4778	4120	12.1	23	65880
MQY2721	2700	2100	JR1410-8	280	9400	5600	4700	10.7	24	63900
MQY2736	2700	3600	TDMK400-32	400	13049	5800	4680	17.8	32	96570
MQY2740	2700	4000	TDMK400-32	400	11850	5667	4496	20.4	40	78800
MQY3231	3200	3100	TDMK630-36	630	12750	6760	5150	21.4	45	107660
MQY3245	3200	4500	TDMK630-36	630	14356	7200	5152.5	32.8	65	130283
MQY3254	3200	5400	TM1000-36/2600	1000	15800	6760	5200	37.2	73	121000
MQY3645	3600	4500	TM1000-36/2600	1000	15000	7200	6326	41.8	76	135000
MQY3650	3600	5000	TM1250-40/3250	1250	17157	7755	6326	46.4	86	145000
MQY3660	3600	6000	TM1250-40/3250	1250	19000	7755	6326	55.7	102	154000
MQY3690	3600	9000	TDMK1800-30	1800	28000	4600	5600	83	163	212000
MQY3867	3800	6700	TDMK1600-30	1600	19000	8200	7100	70	130	186000
MQY4067	4000	6700	TDMK1800-30	1800	15600	9600	7300	78	138	207000
MQY4561	4500	6100	TDMK2200-30	2200	18200	10500	7600	93	151	238000

Note: The jack system and static and dynamic pressure bearing should be equipped according to the requirements of the users. As for those with the specification of over ϕ2.7m, the weight of the motor is excluded.

Wet Rod Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel rods and ores in the cylinder. Due to the continuously feeding materials, the pressure pushes materials to the outlet and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet.

Features

Smaller curvature of conical cap of the rod mill enables the regular movement of the steel rod in mill.

Larger diameter of discharging hollow shaft is easy for maintenance, and can reduce the slurry liquid and realize rapid discharging.

Even particle size and little over grinding.

Application

Mainly used for coarse grinding operation. Suitable for the fine crushing and coarse grinding in the first stage grinding, especially for processing brittle materials.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Motor Model	Motor Power (kW)	Motor Revolution (r/min)	Length (mm)	Width (mm)	Height (mm)	Capacity (t/h)	Effective Volume (m^3)	Weight (kg)
MBY0918	900	1800	Y225M-8	22	730	4980	2370	2020	0.62~3.2	0.9	5700
MBYg0924	900	2400	Y225M-8	22	730	5001	1865	1400	0.81~4.3	1.2	6443
MBY1224	1200	2400	Y280M-8	45	730	6450	2800	2500	0.4~4.9	2.28	12308
MBY1530	1500	3000	JR125-8	95	725	7935	3185	2280		5	19990
MBYg1530	1500	3000	JR117-8	80	725	7253	3070	2280	2.4~7.5	5	21210
MBYg2130	2100	3000	JR136-8	180	735	8122	4220	3073	14~35	9	42123.5
MBYg2136	2100	3600	JR137-8	210	735	8958	4320	3025	43~61	10.8	45800.5
MBYg2430	2400	3000	JR138-8	280	735	9004.5	4836.4	3490		11.5	55795
MBYg2732	2700	3200	JR157-8	320	750	10509	5000	3620		15.7	83110
MBYg2736	2700	3600	JR1510-8	380	743	10764	5150	3620	32~86	17.7	90441
MBY2740	2700	4000	TDMK400-32	400	187.5	12300	5700	4700	43~110	20.4	75000
MBY3040	3000	4000	JR1510-8	570	740	9800	3900	3900	54~135	26	90000
MBY3245	3200	4500	TDMK800-36	800	167	14600	7000	5300	64~180	31	113000
MBY3645	3600	4500	TDMK1250-40	1250	150	15200	8800	6800	80~230	41.8	139000
MBY3654	3600	5400	TDMK1600-40	1600	150	15900	8800	6800	100~250	49.7	150000

Wet Long-cylinder Ball Mill

Principle

The main component is a cylinder with diameter and length at a reasonable proportion. Driven by the transmission device, the cylinder rotates with the materials fed from the cylinder inlet and crushed by the falling impacts and autogenous grinding of the steel balls and ores in the cylinder. Due to the continuously feeding materials, the pressure pushes materials to the outlet and the grinded materials are discharged from the cylinder outlet. Qualified materials flow from the cylinder outlet. In wet grinding, the materials are taken out by the water flow; in dry grinding, the materials are taken out by air.

Features

Cylinder length is much larger than the diameter. The cylinder is divided into 2-4 bins with different lengths and functions by the bulkhead.

Application

Mainly used in cement plants, and can also be used for grinding other materials related to the industrial sector.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Cylinder Rotating Speed (r/min)	Ball Load (t)	Feed Size (mm)	Discharge Size (mm)	Output (t/h)	Motor Power (kW)	Weight (kg)
MQT1545	1500	4500	27	14	≤ 25	0.075~0.4	3~6	110	22500
MQT1557	1500	5700	27	15	≤ 25	0.075~0.4	3.5~6	132	25000
MQT1830	1830	3000	24	11	≤ 25	0.075~0.4	4~10	180	28600
MQT1864	1830	6400	24	23	≤ 25	0.075~0.4	6.5~15	210	36536
MQT1870	1830	7000	24	25	≤ 25	0.075~0.4	7.5~17	245	38145
MQT2255	2200	5500	21	30	≤ 25	0.075~0.4	10~22	370	49500
MQT2265	2200	6500	21	30	≤ 25	0.075~0.4	14~26	420	52800
MQT2275	2200	7500	21	33	≤ 25	0.075~0.4	16~29	475	56000

Special Vertical Mill for Graphite

Principle

The machine is composed of cylinder, disc agitator, transmission device, frame, etc. The cylinder is filled with some grinding media (such as steel ball, corundum ball and gravel). Driven by the V-belt, the disc agitator rotates slowly, and the grinding media and materials do multidimensional circular motion and spinning motion. As the media and materials rotate up and down in the cylinder, the materials are effectively grinded by the heavy pressure of grinding media, rotation friction, impact extrusion and shear force. The machine has the comprehensive features of the tower mill, stripping machine and sand mill.

Features

The machine can effectively grind the materials to 10μm or finer.

Low energy consumption, and energy saved by over 50% than that of ordinary horizontal mill.

Adjustable product size and available intermittent , cyclic and continuous production.

Stable and reliable equipment operation, less vibration and low noise of less than 85 db.

Simple structure, easy operation and maintenance, small floor area, and low capital investment.

Technical Parameters

Model	LM-800	LM-1000	SLM1000	LM-1200
Inner Diameter of Cylinder (mm)	800/950	990/1140		1200/1350
Cylinder Height (mm)	990/670	990/670	1300/630	990/670
Effective Volume (m^3)	0.65	1	3.4	1.5
Capacity (t/h)	As per the process	As per the process	As per the process	As per the process
Motor Power (kW)	22	37	37×2	45
Rotating Speed of Main Shaft (r/min)	222	205	231/255	175

MTM Raymond Mill

Principle

Large bulk materials crushed by jaw crusher to the needed size are fed into storage hopper by mine hoist and then fed into grinding chamber of main engine uniformly, quantitatively and continuously by electromagnetic vibrating feeder for grinding. Grinded materials are blown into separator by blower for classification. With the function of impellers in the separator, materials without meeting the requirements of the fineness are fallen into grinding chamber for grinding again; materials meeting the requirements of the fineness are blown into cyclone powder collector with airflow through pipelines for separation and collection. Powder from discharging device is the finished product.Separated airflow is back to blower through return duct on the top of the cyclone powder collector.

Features

Force produced from milling roller connected by pull rod and high pressure spring can avoid damages caused by bulk materials to the equipment. Resilient coupling between main engine and the separator can reduce vibration and noise and improve service life of the equipment.

Because of connecting crushing, drying, grinding, classifying and transmission together with simple system and compact layout, it covers about 50% of the area of the ball mill systemand can be outdoor arrangement, which can reduce the investment cost a lot.

Milling roller devices adopt superimposed multistage sealwith excellent seal performance.

Unique air circulation system with advanced dust remover carries the environmental protection concept through to the end.

Impeller devices withhigh density and high precision increase more than 50% of finished product yield under the same power.Efficient and energy-saving centrifugal induced draft fansimprove the efficiency of induced draft fans greatly. Convenient impeller adjusting devices improve the precision of the finished product.

Application

Feed Size: 25-35mm. Production Capacity: 3-22T/h. Mainly used for powder processing of materials in such industries as construction, chemical, metallurgy, mine, thermal power and coal. All kinds of non-flammable and non-explosive materials with the Mohs hardness of no more than 9.3 and humidity of below 6%, such as cement (raw materials and clinker), coal, talc, feldspar, quartz, slag, mica, calcite, limestone, barite, potassium sulfate,and bentonite.

Technical Parameters

Model	Max. Feed Size (mm)	Finished Product Size (mm)	Production Capacity(t/h)	Rotating Speed of Main Motor (r/min)	Main Motor Power (kw)	Milling Ring Diameter (mm)	Milling Ring Height (mm)	Milling Roller Diameter (mm)	Milling Roller Height (mm)	Milling Roller Qty.	Overall Dimension(m)
MTM75	<15	0.613-0.033	1-3	160	18.5	InnerDiameter 780	150	260	150	3	4.3×3.5×5.1
MTM85	<20	0.613-0.033	1.2-4.6	150	22	Inner Diameter 830	140	270	140	3	5.3×4.1×5.2
MTM100	<25	0.613-0.033	2.1-5.6	130	37	Inner Diameter 950	170	310	170	4	7.1×5.9×7.9
MTM130	<30	0.613-0.033	3-9.5	103	75	Inner Diameter 1280	210	410	210	5	7.85×8×9.7
MTM160	<35	1.6-0.045	5-22	82	132	Inner Diameter 1600	270	440	270	6	12.55×5.7×8.3

CLASSIFYING

- XCI Hydrocyclone
- XCII Classification & Concentration Hydrocyclone
- XCIII Hydrocyclone
- XC ⅠV Hydrocyclone
- High Weir Spiral Classifier
- Submerged Spiral Classifier

CLASSIFYING

XCI Hydrocyclone

Principle

Under the effect of pressure, the slurry enters the shell through the square feeding pipe in involute direction, and does the rotary motion in the shell. The coarse or the dense particles get to the periphery of rotary current because of the centrifugal force and turns into riffling through the spigot; because of the smaller centrifugal force, the fine particles will be in the middle of the rotary current, move up along with flow, and finally become overflow discharged from overflow pipe.

XCI hydrocyclone is a kind of new high effective hydrocyclone with adjustable feeding inlet and dust-setting nozzle. It is designed by Xinhai with professional design theory such as CFD model and 3D model analysis system and has reached the world advanced level. It's more suitable for classifying and dewatering. Three kinds of cyclone: 10°, 15 ° and 20 ° are available.

Features

Because of the three dimensional snail type feeding structure, it achieves circumferential and axial feeding, eliminates the turbulence interference around the overflow pipe which formes up after material getting into hydrocyclone, speeds up the rotary stream that coarse material flows to the underflow port, avoids violent spin during the feeding process, and improves the efficiency of classification.

The square tube feeding type makes material get closer to the inner wall, makes the feeding resistance be the smallest, provides the biggest divergence to material, and causes the smallest damage to the flow box.

Unique cone adjusting device at the feeding inlet can adjust the size of hydrocyclone's entrance quickly, and therefore the efficiency of classification can be improved.

Wedge cone-adjusting valve is a replaceable part of the inlet pipe, and unnecessary to change the whole rubber liner of hydrocyclone.

Super wear-resistant rubber lining has excellent wear resistant property. It can reduce the cost greatly, keep the shape and size of inner flow passage for a longer time, and maintain a stable classification efficiency.

We can provide die pressing super wear-resistant rubber liner and cold bonding super wear-resistant rubber liner, both with long service time.

Customized cyclone selection software realizes rapid and accurate selection.

Technical Parameters

Model	Spec.	Processing Capacity (m^3/h)	Partition Size (μm)	Diameter of Overflow Port (mm)	Diameter of Dust-Setting Nozzle (mm)	Entrance Pressure (MPa)
XC Ⅰ 150	150	10~23	25~74	30~50	8~22	0.06~0.15
XC Ⅰ 200	200	17~38	28~80	40~65	16~32	
XC Ⅰ 250	250	24~53	30~82	65~100	16~40	
XC Ⅰ 300	300	40~100	36~90	65~120	20~40	
XC Ⅰ 350	350	56~118	40~100	80~120	30~70	
XC Ⅰ 400	400	74~157	42~105	90~135	30~70	
XC Ⅰ 450	450	90~192	44~110	100~150	30~70	
XC Ⅰ 500	500	128~300	50~115	130~220	35~100	
XC Ⅰ 550	550	155~368	52~120	140~240	35~100	
XC Ⅰ 600	600	200~468	57~125	160~260	65~110	
XC Ⅰ 660	660	237~524	60~130	180~280	80~150	

Note: The actual parameters vary with model selection results.

XCII Classification & Concentration Hydrocyclone

Principle

Under the pressure, the slurry goes into the shell in involute direction through feeding pipe, and does rotational motion in the shell. With larger centrifugal force, coarse particles or dense particles in slurry are driven to the periphery of rotational flow, and then discharged by dust-setting nozzle as setting sand. With smaller centrifugal force, the fine particles are in rotational flow center and move upward along the liquid flow, finally discharged by overflow pipe as overflow.

XCII Classification Hydrocyclone

The hydrocyclone designed by Xinhai is world advanced. The involute feeding of the inlet is more conducive to increase the centrifugal force, to improve the classification results, and to reduce the wear of feeding box greatly.

Features

It is lined with wear-resistant rubber molded part. The involute feeding of the inlet reduces the turbulence, makes a smooth movement of liquid inside the cyclone, and therefore improves the classification. With rational length proportion of cylinder and insert depth of overflow pipe, the hydrocyclone has high-efficiency classification effect. It is especially suitable for classification operation. In medium and large mines, it can replace spiral classifiers, by which the capacity of ball mill can be increased by 10%-15%.

Technical Parameters of XCII Classification Hydrocyclone

Model	Spec.	Processing Capacity (m^3/h)	Partition Size (μm)	Diameter of Overflow Port (mm)	Diameter of Dust-Setting Nozzle (mm)	Inlet Pressure (MPa)
XC Ⅱ F 150	150	10~23	25~74	30~50	8~22	0.06~0.15
XC Ⅱ F 200	200	17~38	28~80	40~65	16~32	
XC Ⅱ F 250	250	24~53	30~82	65~100	16~40	
XC Ⅱ F 300	300	40~100	36~90	65~120	20~40	
XC Ⅱ F 350	350	56~118	40~100	80~120	30~70	
XC Ⅱ F 375	375	74~157	42~105	90~135	30~70	
XC Ⅱ F 450	450	90~192	44~110	100~150	30~70	
XC Ⅱ F 500	500	128~300	50~115	130~220	35~100	
XC Ⅱ F 550	550	155~368	52~120	140~240	35~100	
XC Ⅱ F 600	600	200~468	57~125	160~260	65~110	
XC Ⅱ F 660	660	237~524	60~130	180~280	80~150	

Note: The actual parameters vary with model selection results.

XCII Concentration Hydrocyclone

The latest hydrocyclone developed by Xinhai is suitable for dry tailings stacking. It has the features of unique inlet structure, more reasonable cylindrical section height and cone section angle, further optimized insert depth of overflow pipe, high concentration efficiency and density, underflow density of 75%, small overflow particle size, and obvious effect in dry tailings stacking application.

Technical Parameters of XCII Concentration Hydrocyclone

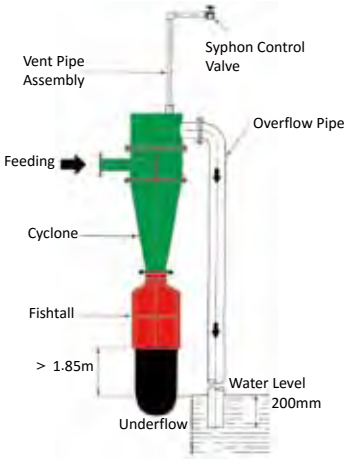
Model	Spec.	Processing Capacity (m^3/h)	Partition Size (μm)	Diameter of Overflow Port (mm)	Diameter of Dust-Setting Nozzle (mm)	Inlet Pressure (MPa)
XC Ⅱ N150	150	11~17	25~74	38、45	8~22	0.08~0.15
XC Ⅱ N200	200	19~31	28~80	50、62	16~32	
XC Ⅱ N250	250	30~47	30~82	62、75	16~40	
XC Ⅱ N300	300	43~69	36~90	75、93	20~40	
XC Ⅱ N 350	350	54~85	40~100	86、105	30~70	
XC Ⅱ N400	400	76~120	42~105	100、119	30~70	
XC Ⅱ N450	450	89~138	44~110	100、120	30~70	

XCIII Xinhai Hydrocyclone

Principle

Under the effect of pressure, the slurry enters the shell through the square feeding pipe in involute direction, and does rotary motion in the shell. The coarse or the dense particles get to the periphery of rotary current because of the centrifugal force and turns into riffling through the dust-setting nozzle; because of the smaller centrifugal force, the fine particles will be in the middle of the rotary current, move up along with flow, and finally become overflow being discharged from overflow pipe.

XC Ⅲ hydrocyclone designed by Xinhai has achieved world advanced level. Because of the specially designed fishtail device out of the dust-setting nozzle and the specially designed siphoning installation on top of overflow box, it has good properties beyond other hydrocyclone. By adjusting the siphoning installation, we can acquire higher density of underflow and lower density of overflow. To silica sand industry, the overflow can even be water and the highest density of underflow reaches to 85%; besides, the fishtail device can keep the density of underflow stable though the feeding capacity, feeding density and feeding pressure change within certain limits.



Features

Adjusting the siphon device to control the fishtail and adjust the density of underflow.

The special designed fishtail will keep a stable underflow discharge density when feeding volume, feeding density and feeding pressure vary under a certain range.

Prevent high overflow density.

Technical Parameters

Model	Spec.	Processing Capacity (m^3/h)	Partition Size (μm)	Diameter of Overflow Port (mm)	Diameter of Dust-Setting Nozzle (mm)	Inlet Pressure (MPa)
XC Ⅲ 50	50	2~3.5	10~74	11~18	4~12	0.1~0.3
XC Ⅲ 75	75	3.7~6.6	20~74	15~20	6~12	0.08~0.25
XC Ⅲ 100	100	5.8~9	35~75	30~40	8~18	0.06~0.15
XC Ⅲ 125	125	12.6~19	35~75	38~60	8~20	
XC Ⅲ 150	150	15~24	35~75	38~60	8~22	
XC Ⅲ 225	225	27.7~43	40~100	57~85	16~38	
XC Ⅲ 250	250	32~53	40~100	65~90	16~40	
XC Ⅲ 300	300	45~70	45~110	65~120	25~50	
XC Ⅲ 380	380	76~120	50~110	94~152	30~72	
XC Ⅲ 455	455	128~203	60~120	114~178	50~140	
XC Ⅲ 500	500	136~215	60~120	144~180	50~140	
XC Ⅲ 600	600	206~325	65~140	178~254	82~140	

Note: The actual parameters vary with model selection results.

XC IV Hydrocyclone

Principle

Under the effect of pressure, the slurry enters the shell through the square feeding pipe in involute direction, and does rotary motion in the shell. The coarse or the dense particles get to the periphery of rotary current because of the centrifugal force and turns into riffling through the dust-setting nozzle; because of the smaller centrifugal force, the fine particles will be in the middle of the rotary current, move up along with flow, and finally become overflow being discharged from overflow pipe.

XC IV hydrocyclone designed by Xinhai has achieved the world advanced level . All the over-current parts are made of wear-resistant rubber. This hydrocyclone has not only a reasonable structure, but also a special designed adjustable tube near the dust-setting nozzle. With this tube, the length of dust-setting nozzle can be precisely adjusted. It makes the hydrocyclone especially suitable for the fine materials classifying and dewatering, and easy to operate with low fluctuation index.

Features

With a special designed adjustable tube near the dust-setting nozzle, the outlet resistance and the classification index of the cyclone can be precisely adjusted.

Reasonable structure design, high classification index and low fluctuation index.

Especially suitable for fine materials classifying and dewatering.

Technical Parameters

Model	Spec.	Processing Capacity (m^3/h)	Partition Size (μm)	Diameter of Overflow Port (mm)	Diameter of Dust-Setting Nozzle (mm)	Inlet Pressure (MPa)
XC IV 75	75	5~15	25~50	10~32	5~15	0.04~0.3
XC IV 150	150	15~70	30~60	20~50	15~32	0.04~0.3
XC IV 230	230	20~150	35~80	58~90	20~58	0.04~0.3
XC IV 300	300	40~250	40~90	76~120	30~72	0.04~0.25

High Weir Spiral Classifier

Principle

The grinded slurry is fed into water tank from the inlet located in the middle of depression area, and the slurry classification depression area is under the inclined water tank. The spiral with low speed rotation stirs the slurry, so that the fine particles suspended in the upper flow into overflow weir and overflow. Meanwhile, the coarse particles sink to the bottom of tank, and then they are delivered to the outlet by the spiral and discharged as sand return. The location of overflow weir is above the bearing center which is under screw shaft, and underneath the upper border of overflow end.

Features

A sand return automotive lifting device is added on sand return end, and the configuration of big spoon bit is canceled for ball mil.

1-1.5 degrees of electricity can generally be saved per ton of ore.

Frequent maintenance of big spoon bit is avoided.

Uneven impact on large and small gear is retarded.

Application

Fit for coarse size classification.

Submerged Spiral Classifier

Principle

The grinded slurry is fed into water tank from the inlet located in the middle of depression area, and the slurry classification depression area is under the inclined water tank. The spiral with low speed rotation stirs the slurry, so that the fine particles suspended in the upper flow into overflow weir and overflow. Meanwhile, the coarse particles sink to the bottom of tank, and then they are delivered to the outlet by the spiral and discharged as sand return.

Features

The whole spiral of overflow end is sunk under the liquid surface of depression area with larger area and depth.

A sand return automotive lifting device is added on sand return end, and the configuration of big spoon bit is canceled for ball mill.

1-1.5 degrees of electricity can generally be saved per ton of ore.

Frequent maintenance of big spoon bit is avoided.

Uneven impact on large and small gear is retarded.

Application

Fit for fine size classification.

Technical Parameters

Type	Model	Rotating Speed of Spiral (r/min)	Capacity of Sand Return (t/d)	Capacity of Overflow (t/d)	Spiral Diameter (mm)	Spiral Length (mm)	Slope of Water Tank	Drive Motor Model	Drive Motor Power (kW)	Lifting Motor Model	Lifting Motor Power (kW)	Weight (kg)
High Weir Single Spiral Classifier	FLG-300	7.7	30~80	10-30	ϕ300	3900	14~18	Y100L1-4	2.2	Manual driven	—	668
	FLG-500	8	145~260	21-32	ϕ500	4390		Y112M-6				1600
	FLG-750	7.8	256~654	31-65	ϕ750	5500		Y132S-6	3			2716
	FLG-1000	6.7	473~1026	85	ϕ1000	6556		Y132M2-6	5.5			4000
	FLG-1200	5,6,7	1145~1600	150	ϕ1200	6500		Y132M2-6	5.5	Y90L-4	1.5	7943
	FLG-1500	2.5,4,6	1140~2740	235	ϕ1500	8265		Y160M-6	7.5	Y100L1-4	2.2	11827
	FLG-2000	3.6,5.5	3890~5940	400	ϕ2000	8700		Y160L-6/4	11；15	Y100L2-4	3	20814
	FLG-2400	3.6	6800	580	ϕ2400	9130		Y200L2-6	22	Y112M-4	4	24194
	FLG-3000	3.2	11625	890	ϕ3000	12500		Y200L-4	30	Y112M-4	4	42188
High Weir Double Spirals Classifier	2FLG-1200	5,6,7	2340~3200	310	ϕ1200	6500		Y132M2-6	5.5×2	Y90L1-4	1.5×2	15840
	2FLG-1500	2.5,4,6	2280~5480	470	ϕ1500	8230		Y160M-6	7.5×2	Y100L1-4	2.2×2	22903
	2FLG-2000	3.6,5.5	7780~11880	800	ϕ2000	8400		Y160L-4	15×2	Y100L2-4	3.0×2	34621
	2FLG-2400	3.63	13600	1160	ϕ2400	9130		Y200L2-6	22×2	Y112M-4	4×2	42460
	2FLG-3000	3.2	23300	1785	ϕ3000	12500		Y200L-4	30×2	Y112M-4	4.0×2	73030
Submerged Single Spiral Classifier	FLC-1000	2.5~7.4	160~700	50-260	ϕ1000	8397		Y132M2-6	5.5	Manual driven	—	5225
	FLC-1200	5~7	1150~1640	120	ϕ1200	8400		Y160M-6	7.5	Y90L-4	1.5	9583
	FLC-1500	2.5~6	1140~2740	185	ϕ1500	10500				Y100L1-4	2.2	14226
	FLC-2000	3.6~5.5	3240~5940	320	ϕ2000	13000		Y160L-4	15	Y100L2-4	3	27753
	FLC-2400	3.6	6800	455	ϕ2400	14130		Y200L1-6	18.5	Y112M-4	4	32467
	FLC-3000	3.2	11650	705	ϕ3000	14300		Y200L-4	30	Y112M-4	4	43500
Submerged Double Spirals Classifier	2FLC -1200	3.8~6	1770~2800	240	ϕ1200	8040		Y160M-6	7.5×2	Y100L1-4	2.2×2	19610
	2FLC-1500	2.5~6	2280~5480	370	ϕ1500	10500						27450
	2FLC-2000	3.6,5.5	7780~11880	640	ϕ2000	12900		Y200L2-6, Y200L-4	22;30	Y100L2-4	3.0×2	50621
	2FLC-2400	3.67	13700	910	ϕ2400	14130		Y25S-4	37	Y112M-4	4.0×2	65283
	2FLC-3000	3.2	23300	1410	ϕ3000	14300		Y225M-4	45	Y112M-4	4.0×2	84900

FLOTATING

- XJ Mechanical Agitation Flotation Cell
- GF Mechanical Agitation Flotation Cell
- SF Mechanical Agitation Flotation Cell
- JJF Mechanical Agitation Flotation Cell
- BF Mechanical Agitation Flotation Cell
- CLF Air-inflation Flotation Cell
- XCF Air-inflation Flotation Cell
- KYF Air-inflation Flotation Cell
- BSK Air-inflation Flotation Cell
- BSF Air-inflation Flotation Cell
- XHF Air-inflation Flotation Cell
- High-efficiency Energy-saving Circular Flotation Cell
- Cyclonic Micro-bubble Flotation Column

FLOTATING

XJ Mechanical Agitation Flotation Cell

Principle

When the slurry is delivered to the center of covering plate by feeding pipe, centrifugal force produced by rotating impeller will fling it out. At the same time, negative pressure will be formed between the impeller and the covering plate, and thus outside air will be sucked in automatically through inlet pipe. The slurry and air will be fully mixed by the intense stirring action of the impeller, and the slurry will be broken into lots of bubbles via air flow. Mineral laden bubbles will rise to the foam layer, and become foam products by the scraper.

Features

Upgrade model of traditional type introduced from Soviet Union with wide application.

Plentiful tiny bubbles produced by impeller cover plate with guide vane can enhance stirring effect.

Application

XJ mechanical agitation flotation cell can be widely used in the classifications of black metal minerals such as iron, non-ferrous metals such as copper and gold, and non-metallic minerals. It is suitable for roughing, scavenging and reverse flotation in small and medium flotation plant.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Motor Power (kW)		Weight of 4 Tanks (kg)
					For Stirring	For Scraper	
XJ-1	0.13	0.05~0.16	200	600	1.5	0.55	1272
XJ-2	0.23	0.12~0.28	250	504	1.5	0.75	1558
XJ-3	0.35	0.15~0.5	300	480	2.2	0.75	1720
XJ-6	0.62	0.3~0.9	350	400	3	1.1	3041
XJ-11	1.1	0.6~1.6	500	330	5.5	1.1	5540
XJ-28	2.8	1.5~3.5	600	280	11	1.1	8453

GF Mechanical Agitation Flotation Cell

Principle

GF mechanical agitation flotation cell is a kind of coarse particle flotation cell, applied in medium and small enterprises to select nonferrous metals, ferrous metals, precious metals and non-metallic minerals. The particle size of the materials to be processed is 0.074 mm, which occupies 45%-98%, and the slurry density is <45%. GF mechanical agitation flotation cell can also be combined with JJF flotation cell, which works as a suction tank for roughing, sweeping and fine selection, while JJF flotation cell works as a direct flow tank with horizontal installation, middling return and no foam pump.

Features

Automatic suction air amount can reach to 1.2m^3/ (m^2.min).

Automatic suction of slurry, capable of feeding by outside automatic suction and foam middling, available to planar configuration between the floatation machines.

Well slurry circulation in the tank, stable surface, no rotation in the tank, and no rolling flower.

High selecting efficiency, and improved recovery rate of coarse and fine minerals.

With low power consumption, compared to the same kind of flotation cell, it can save the power by 15%-20% with plenty suction of air and slurry, long life-span of the wearing parts, especially that of the impeller and stator two times the same kind of flotation cell.

Technical Parameters

Model & Spec.	Volume (m^3)	Tank Size (mm)	Installed Power (kW)	Capacity (m^3/min)	Scrape Motor Power(kW)	Air Suction Volume (m^3/m^2min)	Single Tank Weight (kg)
GF-0.35	0.35	700×700×730	1.5	0.1~0.2	0.75	1.2	470
GF-0.7	0.7	900×900×900	3	0.1~0.4	1.1	1.2	932
GF-1.1	1.1	1100×1100×1000	5	0.2~0.5	1.1	1.2	1370
GF-2	2	1400×1400×1150	7.5	0.3~1.0	1.5	1.2	1750
GF-3	3	1500×1850×1200	11	0.5~1.5	1.5	1.2	2230
GF-4	4	1600×2150×1250	15	0.5~2	1.5	1.2	2585
GF-6	6	2000×2500×1300	22	1~3	1.5	1.2	3300
GF-8	8	2200×2900×1400	30	1~4	1.5	1.2	4130
GF-10	10	2200×2900×1700	30	2~6	1.5	1.2	4500
GF-16	16	2850×3800×1700	45	3~8	2.2	1.2	8320
GF-20	20	2850×3800×2000	45	4~10	2.2	1.2	8670
GF-24	24	3150×4150×2000	55	5~12	2.2	1.2	8970
GF-28	28	3150×4150×2300	55	5~14	2.2	1.2	9480
GF-42	42	3600×4800×2650	75	8~20	3	1.2	19400

SF Mechanical Agitation Flotation Cell

Principle

When the impeller rotates, the centrifugal force with the action of upper and lower vanes is produced, and drives the slurry in upper and lower wheel chambers thrown around, by which the negative pressure area is formed in upper and lower wheel chamber. At the same time, the slurry on top of cover plate is absorbed into upper wheel chamber to form upper circulation via the circular hole on the cover plate. When the slurry is thrown around by the lower vane, the lower slurry flows to the center to complement, by which the lower circulation is formed. And the air is sucked into the upper impeller chamber via suction pipe and center cylinder, mixing with absorbed slurry, and forming a large number of tiny air bubbles. After steady flow through the cover board, these bubbles are evenly dispersed in tank, forming mineral laden bubbles. Then mineral laden bubbles will rise to the foam layer, and become foam products by the scraper.

Features

The impeller with backward-style two-sided vanes ensures double circulation of ore slurry in tank.

Large clearance between impeller and cover plate ensures large amount of air suction.

Low circular velocity of impeller ensures long service life of wear parts.

Forward-style tank body with small dead angle ensures high speed of bubble motion.

Large amount of air suction and low energy consumption.

Long service life of wear parts.

Better for the flotation of coarse-grained minerals.

Special Tips

Mechanical stirring, automatic air and slurry suction.
It can be combined with JJF flotation cell to be a set of flotation cells as suction tanks of each operation.

Application

SF mechanical agitation flotation cell can be widely used in the mineral classifications of non-ferrous metals, black metals, and non-metals. It is suitable for roughing and scavenging in large and medium flotation plant.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Motor Power for Stir (kW)	Motor Power for Scraper (kW)	Single Tank Weight (kg)
SF-0.37	0.37	0.2~0.4	300	352~442	1.5	0.55	468
SF-0.7	0.7	0.3~1.0	350	336~384	3	1.1	629
SF-1.2	1.2	0.6~1.6	450	312	5.5	1.1	1373
SF-2	2	1.5~3	550	280	11	1.5	1879
SF-2.8	2.8	1.5~3.5	550	280	11	1.5	1902
SF-4	4	2.0~4	650	235	15	1.5	2582
SF-6	6	3~6	760	191	30	2.2	3540
SF-8	8	4.0~8	760	191	30	2.2	4129
SF-16	16	5.0~16	850	169~193	45	1.5	7415
SF-20	20	10~12	850	169~193	45	1.5	9828

JJF Mechanical Agitation Flotation Cell

Principle

The rotation of impeller produces the eddy in vertical tube and draft tube that forms the negative pressure, and the air is absorbed from the air inlet pipe, mixing with the slurry from draft tube in the impeller and stator area. The motion of slurry-gas mixing flow generated by impeller is along the tangential direction, and then it is converted to radial motion under the effect of stator, and evenly distributed in flotation cell. Mineral laden bubbles will rise to the foam layer, and become foam products by the scraper.

Features

Shallow tank type, small impeller diameter, low rotating speed and low power consumption.

The clearance between impeller and stator is big, and the stator is a cylinder with oval hole, which makes for the mixture and dispersion of air and slurry.

The stator is lower than the impeller, which makes large circulating amount of slurry that is 2.5 times that of ordinary flotation cell.

Umbrella-shaped scattered cover with hole can separate the eddy produced by impeller from foam layer in order to keep the slurry surface stable.

Large circulating amount of ore slurry that is 2.5 times that of ordinary flotation cell makes for the mineralization of air, medicament and ore.

Large amount of air suction and good effect of dispersion.

Proper stir intensity, good effect of solid particle suspension, no sediment and no need of discharge when stopping;

Wide range of processible particle size and high recovery rate of mineral dressing.

Special Tips

Mechanical stirring, automatic air but no slurry suction, and ladder in necessity during operation (Drop height: 300mm - 400mm).

It can be combined with SF flotation cell as a set of flotation cells, in which SF one serves as a suction tank and JJF one serves as a direct flow tank.

Application

JJF mechanical agitation flotation cell can be widely used in the mineral classifications of non-ferrous metals, black metals, and non-metals. It is suitable for roughing and scavenging in large and medium flotation plant.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Motor Power for Agitation (kW)	Motor Power for Scraper (kW)	Single Tank Weight (kg)
JJF-4	4	2.0~4	410	305	11	1.5	2303
JJF-5	5	2.0~6	410	305	11	1.5	2416
JJF-8	8	4.0~12	540	233	22	2.2	4507
JJF-10	10	5.0~10	540	233	22	1.5	4820
JJF-16	16	5.0~16	700	180	37	1.5	7657
JJF-20	20	5.0~20	770	180	45	1.5	8505

BF Mechanical Agitation Flotation Cell

Principle

When the impeller rotates, the centrifugal force with the action of the impeller is produced, and drives the slurry in the impeller chamber thrown around, by which the negative pressure area is formed. The air is sucked into the impeller chamber via suction pipe and center cylinder, mixing with absorbed ore slurry, and forming a large number of tiny air bubbles. After steady flow through the cover board, these bubbles are evenly dispersed in tank, forming mineral laden bubbles. Then mineral laden bubbles will rise to the foam layer, and become foam products by the scraper.

Features

The impeller composed of closed double truncated cones can produce strong lower circulation of slurry.

Large amount of air suction and low power consumption.

Each tank with triple functions of air suction, slurry suction and flotation can form its flotation circuit without any auxiliary equipment, and the level configuration is easy to change the process.

Reasonable slurry circulation can minimize coarse sand deposits.

Application

BF mechanical agitation flotation cell can be widely used in the mineral classifications of non-ferrous metals, black metals, and non-metals. It is suitable for roughing and scavenging in large and medium flotation plant.

Technical Parameters

Model	Effective Volume (m^3)	L×W×H (mm)	Impeller Diameter (mm)	Circular Velocity of Impeller (m/s)	Air Suction Amount ($m^3/m^2.min$)	Motor Model	Motor Power (kW)	Capacity (m^3/min)	Single Tank Weight (kg)
BF-0.15	0.15	550×550×600	200	6	0.9-1.05	Y112M-6	2.2	0.06~0.16	270
BF-0.25	0.25	650×600×700	250			Y100L-6	1.5	0.12~0.28	370
BF-0.37	0.37	740×740×750	286	7.2		Y90L-4		0.2~0.4	470
BF-0.65	0.65	850×950×900	300	7.35	0.9~1.10	Y132S-6	3	0.3~0.7	932
BF-1.2	1.2	1050×1150×1100	450	7.02		Y132M2-6 Y132M1-6	5.5 4	0.6~1.2	1370
BF-2.0	2	1400×1450×1120	500	7.5		Y160M-6	7.5	1.0~2.0	1750
BF-2.8	2.8	1650×1650×1150	550	8.06		Y180L-8	11	1.4~3.0	2130
BF-4.0	4	1900×2000×1200	650	8		Y200L-8	15	2.4~4.0	2585
BF-6.0	6	2200×2350×1300	700	7.5		Y225S-8	18.5	3.0~6.0	3300
BF-8.0	8	2250×2850×1400	760			Y225M-8	22	4.0~8.0	4130
BF-10	10	2250×2850×1700		7.52				5.0~10	4500
BF-16	16	2850×3800×1700	850	8.7		Y280S-8 Y280M-8	37 45	8.0~16	8320
BF-20	20	2850×3800×2000						10.0~20	8670
BF-24	24	3150×4150×2000	920			Y315S-8	55	12.0~24	8970

CLF Air-Inflation Flotation Cell

Principle

Backward-style blades impeller is equipped on CLF air-inflation flotation cell, and the lower blade shape design is consistent with the slurry through the streamline between the impeller blades. With weak flotation capability, big circulating amount of slurry, and low power consumption, it can fully ensures the coarse particle suspension and air dispersion with the tank and grid plate. CLF air-inflation flotation cell provides good hydrodynamic conditions, and improves the loading capacity of the mineralized foam and the particle size of flotation grinding.

Application

CLF air-inflation flotation cell is mainly used for separating nonferrous and ferrous metals and chemical raw materials, applied to the classification of both coarse particles and fine particles, and belongs to full graded flotation cell with the features of adopting new impeller-stator system, forced circulation channel equipped with false bottom and tank with grid plate, a completely new way of slurry circulation, a stable separation zone and foam layer produced under the function of them.

Technical Parameters

Model		Effective Volume (m^3)	Tank Size (L × W × H) (m)	Installed Power (kW)	Product Capacity (m^3/min)	Air Pressure of Blower (kPa)	Air Consumption of Each Tank (m^3/min)	Feed Size (mm)	Single Tank Weight (kg)
CLF-2	Suction Tank	2	1.2×1.6×1.25	7.5	0.5~2	≥ 14.7	0~3	< 1.0	1591
	Direct Flow Tank			5.5			0~5		1418
CLF-4	Suction Tank	4	1.6×2.1×1.5	15	1~4	≥ 19.6	0~5	< 1.0	3002
	Direct Flow Tank			11			0~7		2702
CLF-8	Suction Tank	8	1.9×2.5×1.95	22	1~6	≥ 23.5	0~8	< 1.0	5168
	Direct Flow Tank			15			0~12		4654
CLF-16	Suction Tank	16	2.5×3.2×2.4	45	1~8	≥ 35	0~14	< 1.0	9230
	Direct Flow Tank			37			0~16		8970

XCF Air-inflation Flotation Cell

Principle

When flotation cell is at work, the rotation of impeller makes the slurry all around via tank bottom absorbed from downside of impeller into inner-vanes of impeller, where low pressure air produced by the blower goes into via hollow shaft and the air distributor of impeller chamber at the same time. After fully mixture of the slurry and air among vanes, they are pushed out in inclined upward direction from upper half of the impeller around, and go into the tank via steady flow and orientation by the stator. Air bubbles rise to the foam stability area, and after concentration process, the foams overflow from the overflow weir into the foam tank. Another part of the slurry flows toward the lower part of impeller, then through the impeller agitation, they are mixed together to form mineral laden bubbles again, and the rest of the slurry will flow to the next tank to become tailings eventually.

Features

The structure and property are similar to that of KYF flotation cell. The difference is that a stator is specially set above the impeller to form a special negative pressure area. It has the function of automatic slurry suction with a little higher power consumption.

Special Tips

Mechanical agitation; automatic slurry but no air suction.

It can be combined with KYF flotation cell to be a set of flotation cells as suction tanks.

Application

XCF air-inflation flotation cell can be widely used in the mineral classifications of non-ferrous metals, black metals, and non-metals. It is suitable for roughing and scavenging in large and medium flotation plant.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Air Pressure of Blower (kPa)	Max. Air Inflation Volume (m^3/m^2.min)	Motor Power for Agitation (kW)	Motor Power for Scraper (kW)	Weight (kg)
XCF-1	1	0.2~1	400	358	≥ 12.6	2	5.5	0.75	1154
XCF-2	2	0.4~2	470	305	≥ 14.7	2	7.5	1.1	1659
XCF-3	3	0.6~3	540	266	≥ 19.8	2	11	1.5	2259
XCF-4	4	1.2~4	620	225	≥ 19.8	2	15	1.5	2669
XCF-8	8	3.0~8	720	175	≥ 21.6	2	22	1.5	3868
XCF-10	10	4~10	720	192	≥ 21.6	2	30	1.5	4800
XCF-16	16	4~16	860	160	≥ 25.5	2	37	1.5	6520
XCF-24	24	4~24	950	153	≥ 30.4	2	37	1.5	8000
XCF-38	38	10~38	1050	136	≥ 34.3	2	55	1.5	11000

KYF Air-inflation Flotation Cell

The design of this type is based on Finland Autoquenpu OK floatation cell

Principle

When flotation cell is at work, the rotation of impeller makes the slurry all around via tank bottom absorbed from downside of impeller into inner-vanes of impeller, where low pressure air produced by the blower goes into via hollow shaft and the air distributor of impeller chamber at the same time. After fully mixture of the slurry and air among vanes, they are pushed out in inclined upward direction from upper half of the impeller around, and go into the tank via steady flow and orientation by the stator. Air bubbles rise to the foam stability area, and after concentration process, the foams overflow from the overflow weir into the foam tank. Another part of the slurry flows toward the lower part of impeller, then through the impeller agitation, they are mixed together to form mineral laden bubbles again, and the rest of the slurry will flow to the next tank to become tailings eventually.

Features

Cone impeller is equipped with the vanes sloping backward at a certain angle, which makes strong agitation ability and simple structure.

The impeller chamber is equipped with multi holes cylinder air distributor, which makes uniform air distribution and good mixing effect of air and slurry.

U-shaped tank and little sand sediment.

Small impeller diameter, low circle velocity, and low power consumption.

Low power consumption with 30%-50% of energy saving.

Full suspension of mineral particles and high flotation index.

Light abrasion of wearing parts and long service life.

Special Tips

Mechanical agitation, no automatic air suction, no automatic slurry suction, and ladder in necessity during operation.

It can be combined with XCF flotation cell to be a set of flotation cells as direct flow tanks.

Application

KYF air-inflation flotation cell can be widely used in the mineral classifications of non-ferrous metals, black metals, and non-metals. It is suitable for roughing and scavenging in large and medium flotation plant.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Air Pressure of Blower (kPa)	Max. Air Inflation Volume (m^3/m^2.min)	Motor Power for Agitation (kW)	Motor Power for Scraper (kW)	Weight (kg)
KYF-1	1	0.2~1	340	281	≥ 12.6	2	4	0.75	903
KYF-2	2	0.4~2	410	247	≥ 14.7	2	5.5	1.1	1419
KYF-3	3	0.6~3	480	219	≥ 19.8	2	7.5	1.5	1885
KYF-4	4	1.2~4	550	200	≥ 19.8	2	11	1.5	2206
KYF-8	8	3.0~8	630	175	≥ 21.6	2	15	1.5	3984
KYF-10	10	4.0~10	630	192	≥ 21.6	2	22	1.5	4406
KYF-16	16	4.0~16	740	160	≥ 25.5	2	30	1.5	5900
KYF-24	24	4.0~24	800	150	≥ 30.4	2	30	1.5	7500
KYF-38	38	10.0~38	880	139	≥ 34.3	2	45	1.5	10300

BSK Air-inflation Flotation Cell

(The design of this type is based on the advantages of Finland Autoquenpu OK floatation cell and America Doyle-Oliver flotation cell)

Features

Main shaft is side-suspended on the frame with light structure and convenient installation.

The impeller is shaped in circular truncated cone with radial pattern stator, which makes strong agitation ability and low power consumption.

U-shaped tank and little sand sediment.

Small impeller diameter, low circle velocity, and low power consumption.

Low power consumption with 30%-50% of energy saving.

Good air dispersion , uniform bubbles scattering, and steady foams.

Full suspension of solid particles without easy to sink, well slurry and air mixing, and high flotation index.

Light abrasion of wearing parts and long service life.

Special Tips

Mechanical agitation, no automatic air suction, no automatic slurry suction, and ladder in necessity during operation (Drop height: 300mm-400mm).

It can be combined with XHF flotation cell to be a set of flotation cells as direct flow tanks.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Air Pressure of Blower (kPa)	Max. Air Inflation Volume (m^3/m^2.min)	Motor Power for Agitation (kW)	Motor Power for Scraper (kW)	Single Tank Weight (kg)
BS-K2.2	2.2	0.5~3	420	260	≥ 15	2~3	5.5	0.75	1750
BS-K4	4	0.5~4	500	212	≥ 15	3~6	7.5	0.75	2777
BS-K6	6	1.0~6	650	197	≥ 21	4~10	15	1.1	3570
BS-K8	8	1.0~8	650	220，230	≥ 15	3~6	15	1.1	4539
BS-K16	16	2.0~16	750	165	≥ 27	6~15	30	1.1	8131
BS-K24	24	7.0~20	830	159	≥ 29	8~18	37	1.1	9820
BS-K38	38	10.0~30	910	141	≥ 34	10~20	45	1.1	11100

BSF Air-inflation Flotation Cell

Principle

The design of this type is based on the advantages of BSK, KCF and KYF floatation cells, and the guide flow and drive of impeller are improved with a small amount of air inflation and good flotation effect.

Special Tips

Mechanical agitation, no automatic air suction, no automatic slurry suction, and ladder in necessity during operation.

It can be combined with XHF flotation cell to be a set of flotation cells as direct flow tanks.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Air Pressure of Blower (kPa)	Max. Air Inflation Volume (m^3/m^2.min)	Motor Power for Agitation (kW)	Motor Power for Scraper (kW)	Single Tank Weight (kg)
BSF-2	2	0.4~2	420	260	≥ 15	2	5.5	1.1	1750
BSF-4	4	0.5~4	500	220	≥ 17	3~6	7.5	0.75	2568
BSF-6	6	1.0~6	550	197	≥ 21	4~10	15	1.1	3760
BSF-8	8	1.0~8	650	190	≥ 27	4~10	15	1.1	6463
BSF-10	10	2.0~10	660	175	≥ 27	4~10	18.5	1.1	6760
BSF-16	16	2.0~15	750	170	≥ 27	6~15	30	1.1	9231
BSF-24	24	7.0~20	830	159	≥ 29	8~18	37	1.1	10107
BSF-38	38	10.0~30	910	141	≥ 34	10~20	45	1.1	12677

XHF Air-inflation Flotation Cell

Principle

The design of this type based on the advantages of various floatation cells is a new one with self-owned intellectual property rights, and has been declared the patent.

Features

Cone-shaped impeller is similar to a centrifugal pump impeller, with large slurry transmission, small pressure head, strong agitation force and simple structure.

Two sets of stator system, good air dispersion, generation of a negative pressure area simultaneously, and automatic ore slurry suction.

U-shaped tank and little solid particles sediment.

Low power consumption.

Good air dispersion effect, uniform distribution of proper size of bubbles, and high flotation recovery.

Not easy to sink.

Full suspension of solid particles and high flotation index.

Light abrasion of wearing parts and long service life.

Automatic slurry suction.

Special Tips

Mechanical agitation, no automatic air suction, and automatic slurry suction.
It can be combined with BSF and BS-K flotation cells to be a set of flotation cells as suction tanks.

Technical Parameters

Model	Effective Volume (m^3)	Capacity (m^3/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Air Pressure of Blower (kPa)	Max. Air Inflation Volume (m^3/m^2.min)	Motor Power for Agitation (kW)	Motor Power for Scraper (kW)	Single Tank Weight (kg)
XHF-1	1	0.2~1	470	358	≥12.6	2	5.5	1.1	1154
XHF-2	2	0.4~2	460	331	≥14.7	2	7.5	1.1	1659
XHF-3	3	0.6~3	540	266	≥19.8	2	11	1.5	2259
XHF-4	4	1.2~4	620	215	≥19.8	2	15	1.5	2669
XHF-6	6	1.0~6	620	205	≥19.8	2	18.5	1.1	3850
XHF-8	8	3.0~8	720	185	≥21.6	2	22	1.1	4332
XHF-10	10	2.0~10	760	195	≥21.6	2	30	1.1	5114
XHF-16	16	4.0~16	860	160	≥25.5	2	37	1.5	8731
XHF-24	24	4.0~24	950	153	≥30.4	2	37	1.5	10146
XHF-38	38	10.0~38	1050	136	≥34.3	2	45	1.5	11707

High-efficiency Energy-saving Circular Flotation Cell

Principle

High-Efficiency energy-saving circular flotation cell with high efficiency and energy conservation can be widely used in mineral classifications of various metals, non-metals. It has the advantages of flexible operation, easy to control, stable running and convenient maintenance. Circular tank is convenient to the on-site construction, reducing occupied area and investment.

Features

Large size: Due to the uniform force distribution of the geometrical shape, there is no defect of stress concentration, which is suitable for the large-size development.

No sink to tank bottom: Good flow mechanics properties of circular tanks ensure no sinking and dead angle compared with square tanks.

Energy-saving and cost-reducing: Flow mechanics properties of impellers and tanks ensure less power consumption, which can reduce by 15-20% compared with the flotation cells with the same specifications.

High recovery rate: Full mixing of ore and agent makes foam rich and stable, and the index of recovery rate is 1-3% greater than that of the flotation cells with the same specifications.

High concentrate grade: Due to the strong agitating power and rich foam, the concentrate grade is 10 ~ 35% higher than that of the flotation cells with the same specifications.

Simple and convenient operation and maintenance: There is no need of ore drawing when to start or stop operation, and no device of scraping bubbles makes simple operation and easy maintenance.

Safety and environmental protection: The flotation tank top can be completely sealed avoiding harmful gases being released into the air.

High degree of automation: The liquid level - air inflation – lubrication automatic control is used to reduce the number of operating personnel and labor intensity.

① Automatic lubrication system ensures well equipment operation and long service life;
② Automatic discharge device of tailings box (middle) can adjust ore discharge automatically;
③ The device of automatic detection of liquid level and control can realize the remote control operation, which increases the operating precision and reduces the operation intensity and error;
④ The device of air volume automatic detection and control can realize the remote control operation, display the air volume online, and ensure the stability of inflating volume;
⑤ The PH value of slurry can be displayed online and detected at any time by PH value detection device;
⑥ The concentration of slurry can be displayed and detected online by the concentration automatic detection device.

Technical Parameters

Spec.	Effective Volume (m^3)	Power(kW)	Min. Inlet Air Pressure (kPa)	Inflating Volume(m^3/m^2 min)
XYF-5	5	11	> 15	0.05~1.4
XYF-10	10	22	> 20	0.05~1.4
XYF-30	30	45	> 31	0.05~1.4
XYF-50	50	75	> 33	0.05~1.4
XYF-70	70	90	> 41	0.05~1.4
XYF-100	100	132	> 46	0.05~1.4

Cyclonic Micro-bubble Flotation Column

Features

The cyclonic micro-bubble flotation column with a large capacity in unit volume and advanced technical index has the features of flotation and reselection, and can realize the functions of roughing, concentration and scavenging in the same cylinder, which makes little pollution, ash content and high recovery of clean coal.

It is completely suitable for the flotation of the coal below 0.5mm or metal fine particles, and especially for the flotation of coal slurry with high ash content, extremely fine particle size and hard classification, or metal fine particles.

Technical Parameters

Parameters \ Model		WFXZ-1.8	WFXZ-2.0	WFXZ-2.5	WFXZ-2.8	WFXZ-3.0
Cylinder Height (mm)		1800	2000	2500	2800	3000
Cylinder Height (mm)		6500	7000	7000	7000	7500
Feeding Concentration (g/L)		50~150	50~150	50~150	50~150	50~150
Feed Size (mm)		-0.5	0.16~0.20	-0.5	-0.5	-0.5
Capacity	Slurry (m^3/h)	100~200	100~200	125~250	150~300	200~300
	Dry Measure (t/h)	5~12	5~12	8~16	10~20	12~20
Micro Bubble Generator Pressure		0.16~0.20	0.16~0.2	0.16~0.20	0.16~0.20	0.16~0.20
Quantity of Micro Bubble Generator		10	10	14	18	20
Cycle Pump	Model	IS(R)150-125-315	IS(R)150-125-315	IS(R)150-125-400	IS(R)200-150-315	LQE200-150
	Motor	Y225M-4	Y225M-4	Y225M-4	Y225M-4	Y280S-4
	Power (kW)	30	30	45	55	75
Oil Consumption (kg/t) Dry Coal Slurry		1.0~1.5	1.0~1.5	1.0~1.5	1.0~1.5	1.0~1.5

AGITATING

- High-efficiency Agitation Tank
- High-temperature Agitation Tank
- Lifting Agitation Tank
- High-concentration Agitation Tank
- Ordinary Agitation Tank
- Cone-bottom Agitation Tank
- Reagent Agitation Tank
- Pickling Agitation Tank

AGITATING

High-eficiency Agitation Tank

Principle

The rotation of the impeller drives the flowing of the slurry, which makes the mineral grains and the agents mix well.

Features

Big diameter impeller and strong agitation capability of the slurry and agent.

Big linear velocity impeller and strong agitation capability of the slurry and agent.

Umbrella-shaped impeller enhances the agitation and circulation capability of the slurry and agent.

With the agitation capability enhanced, the circulation capability of the slurry and agent will also be enhanced.

With a baffle equipped in the tank, strong negative pressure is compressed in a limited space which improves the suction capability and enhances the circulation capability of the slurry and the agent.

The running down pressure of the umbrella-shaped impeller.

Enhances the suction capability and the circulation capability, and further enhances the circulation capability of the agent and ores with the sprayer equipped at the lower part of the baffle.

Only 100% agent of the ore surface ensures higher index.

Application

Used for the slurry agitation before the flotation operation.

Technical Parameters

Model	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Motor Model	Motor Power (kW)	Weight (kg)
GBJ-1000×1000	0.58	530	240	Y112M-6	2.2	548
GBJ-1250×1250	1.15	350	240	Y100L2-4	3	820
GBJ-1500×1500	2.2	320	420	Y132M2-6	5.5	1350
GBJ-2000×2000	5.46	240	560	Y160M-6	7.5	3173
GBJ-2500×2500	11.2	232	560	Y180L-6	15	3939
GBJ-3000×3000	19.1	220	700	Y225S-8	18.5	6676
GBJ-3500×3500	31	248	700	Y225M-8	22	7581
GBJ-4000×4000	45	153	1000	Y250M-8	37	9560

High-temperature Agitation Tank

Applicable for the ore slurry agitation which needs heating and heat preservation, with the peculiar high-temperature resistant inner and the asbestos insulation materials filled into the interlayer.

Technical Parameters

Model	Diameter (mm)	Height (mm)	Volume (m^3)	Proportion of Slurry (t/m^3)	Power (kW)	Weight (kg)
SJJ2.5-2.5	2500	2500	11	≤ 1.6	11	3087
SJJ3.5-3.5	3500	3500	30	≤ 1.4	30	5997

Lifting Agitation Tank

Principle

The high-speed rotation of the centrifugal impeller produces a negative pressure in the impeller center, and the cylinder block, at the bottom of the impeller, sucks the outside slurry into the tank, which makes the surface level growing continuously. When it's up to a certain level, it will flow out along the overflow pipe, and then enhances the lifting capability.

Features

Use Xinhai wear-resistant rubber vane.

The height of agitation can be set according to the requirements of the clients.

Application

This kind of equipment can be used when the dispersion of the slurry is too big because of the equipment configuration, or the dispersion is too small to pump up.

Technical Parameters

Model	Diameter of Tank (mm)	Tank Depth (mm)	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Height of Lifting (mm)	Motor Model	Motor Power (kW)	Weight (kg)
TBJ-1000	1000	1266	0.9	460	300	980	Y132M2-6	5.5	700
TBJ-1250	1250	1510	1.396	460	400	1220	Y160M-6	7.5	780
TBJ-1500	1500	1800	2.8	464	450	1470	Y160L-6	11	1022
TBJ-2000	2000	2000	5.8	312	600	1570	Y200L1-6	18.5	3122
TBJ-2500	2500	2500	11.5	310	600	2070	Y225M-8	22	3760

High-concentration Agitation Tank

Principle

The agitating shaft adopts upper and lower double-impeller structure. Under the condition of the high speed rotation, the upper impeller presses the slurry downward, while the lower impeller lifts the slurry up, and the two stands of the slurry crushes in the middle, then spreads to the surrounding, thus the concentration slurry forms a big circuit in the whole tank and generates the upward stream, which reduces the settling velocity greatly and improves the agitation capability, in order to adapt the agitation of the concentration slurry.

Features

Use wear-resistant rubber vane. The agitating concentration can be up to 75%.

Application

Used for the backfill agitation of the mortar, or the agitation of the high-concentration slurry, such as the thickener underflow buffer.

Technical Parameters

Model	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Motor Model	Motor Power (kW)	Weight (kg)
BJN-1500×1500	2.2	43	700	XLD4-S-35	4	920
BJN-2000×2000	4.4	200	900	Y160M-6	7.5	1860
BJN-3000×3000	19.1	160	1300	Y225M-8	22	4660
BJN-4000×4000	46	120	1000	Y250M-8	30	8153

Ordinary Agitation Tank

Principle

The rotation of the impeller drives the flowing of the slurry, and under the working of the circular cylinder, small circulations are formed in the tank, which realizes the fully agitating.

Features

The cylinder is lined with wear-resistant rubber with strong resistance to wear and corrosion.

Big linear velocity impeller and strong agitation capability.

Application

Used for the slurry agitation stirring before the flotation operation.

Technical Parameters

Model	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Motor Model	Motor Power (kW)	Weight (kg)
BJ-500×500	0.0785	493	160	Y80L-4	0.55	120
BJ-750×750	0.25	530	240	Y100L-6	1.5	240
BJ-1000×1000	0.58	530	310	Y100L-6	1.5	680
BJ-1500×1500	2.2	320	400	Y132S-6	3	790
BJ-1600×1800	2.6	331	400	Y132M2-6	5.5	990
BJ-2000×2000	4.4	230	550	Y132M2-6	5.5	1800
BJ-2000×2500	5.9	230	630	Y160M-6	7.5	2106
BJ-2500×2500	11.2	230	630	Y160M-6	7.5	2766
BJ-3000×3000	19.1	210	700	Y225S-8	18.5	4613
BJ-3500×3500	24	230	850	Y225M-8	22	5980
BJ-4000×4000	45	153	1000	Y250M-8	30	8910

Cone-bottom Agitation Tank

Principle

The rotation of the impeller drives the flowing of the slurry, which realizes the fully agitating of the slurry.

Features

The cylinder is lined with wear-resistant rubber with strong resistance to wear and corrosion.

Strong ore discharging capability.

Application

Used for the slurry agitation before the flotation operation

Technical Parameters

Model	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Motor Model	Motor Power (kW)	Weight (kg)
BJZ-750×750	0.26	530	240	Y90L-4	1.5	240
BJZ-1000×1000	0.62			Y100L-6		680
BJZ-1500×1500	2.38	320	400	Y132S-6	3	1375
BJZ-2000×2000	5.6	230	550	Y132M2-6	5.5	2000

Reagent Agitation Tank

Principle

Through the impeller rotation inside the tank, the liquid is made to flow and fully mix with the agent.

Features

The cylinder is lined with wear-resistant rubber with strong resistance to wear and corrosion.

Strong mixture capability of the liquid and the agent.

Application

Used for the agent preparation before the floatation.

Technical Parameters

Model	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Motor Model	Motor Power (kW)	Weight (kg)
BJW-500×600	0.094	493	200	Y80L-4	0.55	120
BJW-750×750	0.25	530	240	Y100L-6	1.5	230
BJW-750×1000	0.35	530	240	Y100L-6	1.5	270
BJW-1000×1000	0.58	530	240	Y100L-6	1.5	420
BJW-1250×1250	1.15	492	310	Y100L1-4	2.2	490
BJW-1500×1500	2.2	320	400	Y132S-6	3	1310
BJW-2000×2000	5.46	230	550	Y132M2-6	5.5	1720
BJW-3000×3000	14.8	210	700	Y225S-8	18.5	4613

Pickling Agitation Tank

Principle

The rotation of the impeller drives the circulation flowing of the acid liquid, which fully washes the carbon in the tank.

Features

Made of stainless steel or wear-resistant rubber with acid and wear resistance.

Application

Used for carbon pickling after the desorption electrolysis.

Technical Parameters

Model	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Motor Model	Motor Power (kW)	Weight (kg)
BJS-1000×1000	0.86	513	240	Y90L-6	1.1	380
BJS-1250×1250	1.3	492	310	Y100L1-4	2.2	580
BJS-1300×1600	1.8	320	400	Y132S-6	3	750
BJS-1500×1500	1.83	320	400	Y132S-6	3	820

GRAVITY SEPARATING

- Diaphragm Jig
- Centrifugal Separator
- Sawtooth Wave Jig
- XS Shaking Table
- XY Shaking Table
- BLL GRP Spiral Chute

GRAVITY SEPARATING

Diaphragm Jig

Principle

Diaphragm jig is divided into two kinds of models including left-hand machine and right-hand jig cover. With fixed sieve, the jig is suitable for metal ore classification such as placer contained tungsten and gold, tin concentration ore. This jig can be used not only for classification of fine-grained materials but also for that of raw materials with the largest size of 6-8 mm, but in the individual case of placer classification, the largest size is up to 12 mm.

Application

It is used for classifications of gold, tin, tungsten, titanium, iron ore, coal and other minerals, especially widely used in the field of manganese mineral processing.

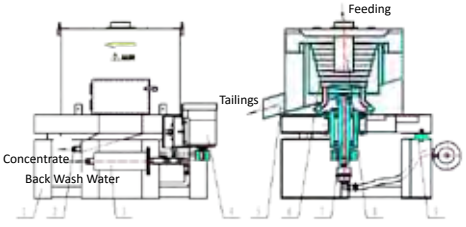
Technical Parameters

Name & Spec.	Jig Chamber	Sieve Chamber Area (m^2)	Feed Size (mm)	Capacity (t/h)	Stroke (mm)	Jig Frequency (time/min)	Adding Water Yield (t/h)	Water Pressure (kg/ cm^2)	Motor		Weight (kg)
									Model	Power (kW)	
100×150 Diaphragm Jig	1	0.015	-3	0.018~0.6	-	420	-	1~1.5	Y80L-4	0.55	130
300×450 Double-Chamber Diaphragm Jig	2	0.27	-12	3~6	0~26	322	2~4	1~1.5	Y90S-4	1.1	745
1000×1000 Bottom Driven Cone Jig	2	2	1~5	10~25	0~26	200~350	60~80	0.6~2	Y100L-6	1.5	1700
370×360 Bottom Driven Cone Diaphragm Jig	2	0.274	6	1~3	5~25	200~250	2~5	-	Y90S-4	1.1	240
Trapezoid Side Driven Diaphragm Jig	3	2.7	-3	12.5~37.5	13~21	170~230	60~90	2	Y90S-4	1.1	2000
670×920 Jig	2	1.44	4~8	7~10	18~24	240~300	-	-	-	-	-

Centrifugal Separator

Principle

Centrifugal separator is a kind of gravity separation equipment. The high-speed rotation can make large centrifugal force with intensifying gravity separation process, and making more effective recovery of the fine ore particle. Experiments show that it is especially effective for monomer gold in vein gold ore. It also can be widely used for the recovery of monomer gold in other metals.



1. Rack 2. Concentrate Outlet 3. Back Wash Water Inlet
4. Motor Drive Part 5. Tailings Launder 6. Rotating Endotheca
7. Rotating Spindle 8. Feed Pipe 9. Isolation Spring

Structural Drawing of Centrifugal Separator

Technical Parameters

Model	Power (kW)	Capacity (t/h)	Slurry Water (L/min)	Back Wash Water (L/min)	Concentrate Output (kg/time)
LX19	0.75	0.25	16	30	1.5~2.5
LX25	1.1	1~1.5	60	50	3~5
LX30	1.5	2~3	120	80	5~8
LX60	5.5	8~12	400	130~180	20~30

Sawtooth Wave Jig

Principle

Sawtooth wave jig is one of the modern gravity separation equipment, due to its great process ability, wide range of particle size classification, and simple operation and maintenance, it is widely used in mineral roughing or concentration of placer gold, tin, titanium, hematite, iron ore, coal, etc., especially in the fields of mineral processing of manganese ore and barite ore.

Traditional jigs are usually driven by circular eccentric force, the jig pulsation curve of which is sinusoidal waveform. The speed and action time of the rise and fall water currents produced by the diaphragm motion are the same, therefore it is bad for the decompaction of jig bed and ore particle layering according to the proportion so as to affect the classification ratio and recovery.

Sawtooth wave jig is a kind of gravity separation equipment revised and manufactured based on traditional jigs according to jig bed theories and layering rules. The jig pulsation curve is in shape of sawtooth, which makes the rising water flow quicker than the falling water flow. The rising time shorter than the falling time solves the problem that the speed and action time of the rise and fall water currents produced by the diaphragm motion are the same, which strengthens the decompaction of jig bed, eases suction impact, makes full sedimentation of heavy ore particles and enhances the classification ratio and recovery. Compared with sine wave jig, Sn is increased by 3.01%, W is increased by 5.5%, Pb is increased by 1.63%, and Zn is increased by 2.04%; water consumption is reduced by 30% - 40%, and covering area is reduced by 1/3. The adjustable stroke with infinitely variable control of jig frequency is driven by electromagnetic adjustment of the motor, the property of which has reached domestic advanced level. Sawtooth wave jig is one of the ideal energy-saving gravity concentrating equipment.

Technical Parameters

Item & Parameters & Model	Jigging Chamber		Diaphragm		Feed Size (mm)	Adding Water Yield Under Screen (m^3/t)	Water Pressure (MPa)	Handling Capacity (t/h)	Motor Power (kW)	Dimension (mm)	Weight (kg)
	Shape	Area (m^2)	Stroke (mm)	Jig Frequency (time/min)							
JT-0.57	Trapezoid	0.57	8.5~12 10~17 12~21	80~180	<6	1~2	≥ 0.05	1.5~3	1.5	1550×780×1530	610
JT1-1	Trapezoid	1.04			<10	2~3		2.5~5	2.2	2270×1110×1890	900
JT2-2	Rectangle	2.28			<10	2~4		5~10	3	3225×1550×2050	1640
JT3-1	Trapezoid	3	12~30	50~125	<10	3~6	≥ 0.05	7.5~15	5.5	2745×2000×3030	3085
JT4-2	Rectangle	4	25~57		<25	4~8		8~20	7.5	4240×1990×2750	3098
JT4-2A	Rectangle	4	25~57		<25	4~8		8~20	4×2	4240×1990×2750	3500
JT5-2	Trapezoid	4.86	12~30		<10	3~6		12~25	7.5	3600×2000×2600	4500

XS Shaking Table

Principle

The table is mainly composed of eight parts including bed head, motor, slope modulator, bed surface, bunker, water tank, rifle bar and lubricating system.

The vertical reciprocating motion of the bed surface is driven by the crank-connecting rod mechanism. The motor through the belt drive makes the pulley drive the rotation of the bent axle with up-and-down motion of the rocker. When the down motion of the rocker, the bracket drives rear axle and reciprocating lever to move backward, by which the spring is compressed. The bed surface is connected with reciprocating lever through linkage base, so at this time it moves backward, and the rocker is pushed by the tension force of the spring when it does the upward motion with the forward motion of the bed surface.

Application

XS shaking table is one of the main equipment of gravity separation, and it is widely used in the mineral classifications of tungsten, tin, tantalum, niobium, gold and other rare metals and precious metals. It is also used for different operations such as roughing, selection, and scavenging; different particle-size classifications of coarse sand (2-0.5 mm), fine sand (0.5-0.074 mm), slurry (-0.074) and so on; classifications of iron, manganese ore and coal. The effective recycling particle size range of table is 2-0.22 mm when processing the minerals such as tungsten and tin.

Technical Parameters

Model		XS 7.6			XS 4.08	XS 1.95	XS 0.5
Bed Surface Type		Coarse Sand Bed Surface	Fine Sand Bed Surface	Slurry Bed Surface	3 Kinds Of Bed Surfaces Selectable		
Beneficiation Area of Bed Surface (m^2)		7.6	7.6	7.6	4.08	1.95	0.5
Bed Surface Dimension	Length (mm)	4500	4500	4500	3000	2100	1100
	Width of Driving End (mm)	1850	1850	1850	1320	1050	500
	Width of Concentration End (mm)	1550	1550	1550	1100	850	430
Max. Feed Size (mm)		2	0.5	0.074	Ore Sand -2 Slurry -0.1	Ore Sand-2 Slurry -0.074	Ore Sand -2 Slurry -0.074
Capacity (t/h)		1~1.8	0.5~1	0.3~0.5	0.4~1.5	0.3~0.8	0.05~0.2
Feed Density (%)		20~30	18~25	15~20	10~30		
Stroke (mm)		16~22	11~16	8~16	6~30	12~28	9~17
Jig Frequency (r/min)		220	250	280	210~320	250~450	280~460
Water Consumption (t/h)		0.7~1	0.4~0.7	0.4~0.7	0.3~1.5	0.2~1	0.1~0.5
Notch Groove Section Shape		Rectangle	Sawtooth Wave	Triangle	Rectangle, Sawtooth Wave and Triangle Selectable		
Motor Power (kW)		1.1	1.1	1.1	1.1	1.1	0.55

XY Shaking Table

Features

The table with smooth surface, good abrasive resistance and sectional repair is sturdy and durable without deformation.

The motion of the bed head with apparent asymmetry has wide adjustment range of the differential to accommodate different feed particle sizes and classification requirements.

Reliable operation of bed head mechanism, less fragile parts, and no oil leak.

Application

It is widely used in gravity separation of tin, tungsten, lead, gold and other non-ferrous, black, rare earth ores with the particle size of 2-0.019 mm.

Technical Parameters

Model	Coarse Sand Bed Surface	Fine Sand Bed Surface	Notch Groove Bed Surface
Bed Surface Dimension (mm)	4436×1825×1536		
Stroke (mm)	16~22	10~16	10~16
Jig Frequency (r/min)	240~290	300~320	330~340
Water Consumption (t/h)	190	80	50
Capacity (t/h)	30	8	8
Feed Size (mm)	2~0.2	0.5~0.037	0.074~0.019
Feed Density (%)	20~25	15~20	15~20
Min. Installation Slope	2°30″	1°50″	0°45″
Outline Dimension (mm)	5454×1825×1242		
Adjustable Range of Stroke (mm)	8~22		
Power (kW)	1.5		
Weight (kg)	1012		

BLL GRP Spiral Chute

Principle

The ore sands are conveyed by the sand pump onto the two feeding inlets on the screw top, then make-up water is added to adjust the pulp density, and the slurry rotationally flows down from the upper point. The inertial centrifugal force is generated from the speed of rotating slope flow. As the differences of ore sand proportion, particle size and shape, and under the action of rotational flow gravity and centrifugal force, the ore is separated from sand, the concentrates flow into concentrate bucket and then be discharged by pipe, while the tailings flow into tailing bucket and flow into sand pond by pipe, then be discharged by sand pump.

Features

High efficiency, high recovery and accurate ore separation. No power. Light weight, rust, wear and corrosion resistance. Low operation cost and long lifespan. Strong adaptability to the variation of feeding quantity, density, particle size and grade. The friction of emery surface makes the mineral processing effect better than that of the other plastic surface.

Application

The fiberglass spiral chute is a kind of new efficient gravity-processing equipment with domestic advanced level. It is applied to process fine grained iron, tin, tungsten, tantalum, niobium, gold, coal, monazite, rutile and zircon whose particle sizes are between 0.3-0.02mm, and also applied to other metal minerals, non-metallic minerals with enough proportion differences.

Technical Parameters

Model		BLL-2000	BLL-1500	BLL-1200	BLL-900	BLL-600	BLL-400
Outside Diameter (mm)		2000	1500	1200	900	600	400
Screw Pitch (mm)		1200	900，675	900，720，540	675，540，405	450，360，270	240，180
Pitch Diameter Ratio		0.6	0.48，0.36	0.75，0.6，0.45	0.75，0.6，0.45	0.75，0.6，0.45	0.6，0.45
Lateral Dip Angle (degree)		9°	9°	9°	9°	9°	9°
Max. Screw Numbers Per Set		3	4	4	4	2	2
Feed Size (mm)		2.00~0.04	0.8~0.037	0.3~0.03	0.3~0.03	0.2~0.02	0.2~0.02
Feed Density (%)		30~55	30~55	25~55	25~55	25~55	25~55
Capacity (t/h)		7~10	6~8	4~6	2~3	0.8~1.2	0.15~0.2
Overall Dimension	Length (mm)	2120	1600	1360	1060	700	460
	Width (mm)	2120	1600	1360	1060	700	460
	Height (mm)	5600	5300	5230	4000	2600	1500
Weight (kg)		900	850/800	700/650/600	450/400/350	120/100/80	50

MAGNETIC SEPARATING

- Dry Separator with Eccentric Rotating Magnetic System
- Permanent Magnetic Roller
- Permanent Magnetic Drum Magnetic Separator

MAGNETIC SEPARATING

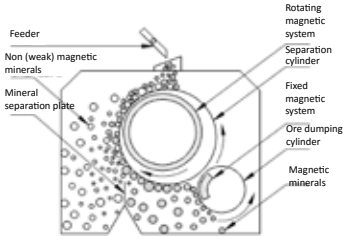
Dry Separator with Eccentric Rotating Magnetic System

Patent product (patent application No.: 201410328639.2)

Principle

As shown in the figure, the separation cylinder without belt outside will enhance the intensity of magnetic field of the separation area. The rotating magnetic system (wrap angle of 360 degree) is set inside the separation cylinder, while the fixed magnetic system (magnetic wrapping angle of less than 90 degree) is set inside the ore dumping cylinder. The rotation direction of the separation cylinder is as the same as that of the ore dumping, but is opposite to that of the rotating magnetic system.

When the materials feeder transports the minerals to the separation area of the separation cylinder, the magnetic minerals will alternate rapidly and repeatedly within a short time through the N pole and S pole of the magnetic field, and the magnetic minerals will do magnetic reversal and magnetic agitation. The non-magnetic (weak) magnetic mineral mingled in the magnetic minerals is not or slightly affected by the adsorption of the magnetic force, moving to the outer layer gradually, and is thrown out by the centrifugal force, gravity and the joint action of magnetic turn and agitation of magnetic minerals.



In the separation area of the separation cylinder, the centrifugal force and gravitation of magnetic minerals mingled with non-magnetic minerals are much less than the magnetic force. With the adsorption of the magnetic force and the joint action of the magnetic turn and agitation of magnetic minerals, the magnetic minerals will move to the inter layer gradually. When the magnetic minerals rotate to the ore unloading area with the separation cylinder, as the rotation magnetic system is eccentric, the magnetic density of the ore unloading area for the separation cylinder is extremely weak, and most of the magnetic minerals can fall off automatically. A small quantity of magnetic minerals not falling off will be adsorbed to the external surface of the ore unloading cylinder with higher magnetic density when rotating to the position nearby the ore unloading cylinder so as to realize the automatic unloading of magnetic minerals.

Features

This patented product is a kind of upgrading equipment based on conventional magnetic roller or conventional dry separator. When it is working, the magnetic minerals will take rapid magnetic reversal and magnetic agitation, which will significantly reduce the number of non-magnetic (weak magnetic) minerals in the magnetic minerals. In this way, the efficient separation of magnetic minerals and non-magnetic (weak magnetic) minerals will be realized, and fine magnetic minerals and coarse magnetic minerals will not get lost.

This patented product solves the eddy current heating problem, ore sticking problem for separation cylinder, and mine unloading problem of conventional 360 degree rotating magnetic dry separator. The conventional 360 degree rotating magnetic dry separator must use the belt to unload the mine by the outside of it, therefore the magnetic minerals are easy to enter the central space between the inside belt and sorting tank. The magnetic minerals attached on the surface of sorting tank cannot fall off automatically (cannot unload mine automatically). As the accumulation grows, the separation effect is affected. What's worse, rapid wear of sorting tank body as well as the belt will be caused, and the normal operation of production will be seriously affected.

Under the condition that the grade of the dry tailings is equal to or even lower than that of conventional magnetic roller or conventional dry separator, for high-grade and lean magnetite with different features, by adjusting corresponding technical parameters and structure, about 10%-30% tailings discharging and about 1.0%-8.7% of concentration grade

can be increased compared to conventional magnetic roller or conventional dry separator. The concentrate grade of dry separation is significantly enhanced compared to the feeding grade. Under the conditions of fine crushing size of below 2 mm and coarse dissemination size, more than 60% grade of the dry separation concentrate can usually be obtained directly.

In the actual production, if one patented product can process 1 million tons of raw ore every year (150 t/h, 1million t/a), it can discharge an extra 0.1-0.3million tons of the qualified dry tailings, and reduce 0.1-0.3 million tons of waste rocks before ore grinding every year, which can reduce the concentration ratio and the cost of production sharply. If the production costs such as the ore grinding, magnetic separation and the wet separation tailing processing is 30 yuan/ton, one set of the patented product can save the production costs of about 3-9 million yuan. Under the condition of the same amount of mining, the output of the iron concentrate basically remains unchanged.

As the amount of the waste rocks into the mill is reduced, the annual capacity of the ball mill is actually increased by (100,000-300,000 t/a) for one patented product, and the iron powder production is correspondingly increased without any investment in plant expansion, increase of grinding and mineral processing equipment, roads, water supply, tailing processing, etc., and with almost no increase of electricity load and labors, the economic and resource environmental benefits are significant.

Before grinding, a large number of qualified dry tailings can be discarded, with the convenient treatment, they can be directly transported to the hillock, and also can be used as building stones or river sand to create certain economic benefits, while by which the number of wet tailings are reduced and the lifespan of tailings pond is improved.

The magnetic wrapping angle is 360 degree. The magnetic systems all adopt Nd-Fe-B magnets with high magnetic energy product and high coercivity, strong magnetic density and high affect depth. The demagnetization rate of the magnetic density within 8 years is no more than 5%.

Covering the magnetic system with non-magnetic stainless steel ensures no peeling off of the magnet.

The separation cylinder is covered with the super wear-resistant rubber produced by our company, thus the service life can be prolonged significantly.

Application

To be applied to the dry preconcentration of high-grade and lean magnetite ore before grinding with the selected granularity below 30mm. The finer the granularity is, the better the result is. Generally, large amount of tailings can be discharged, and the grinding quality can be greatly enhanced. To be applied to dry separation and recycling of the lost magnetite from the abandoned tailings. To be applied to dry separation and recycling of ferromagnetic materials from the abandoned steel slag.

Technical Parameters

Model & Spec.	CTXG-0606	CTXG-0812	CTXG-0818
Diameter of Cylinder (mm)	600	800	800
Length of Cylinder (mm)	600	1200	1800
Surface Magnetic Density (mt)	300~500	300~500	300~500
Feed Size (mm)	-30	-30	-30
Feed Moisture Content	≤ 5%	≤ 5%	≤ 5%
Capacity (t/h)	≤ 35	≤ 100	≤ 150
Motor Power (kW)	5.5×2	11×2	11×2
Total Weight (t)	2.9	5.8	7.9
Overall Dimension (L×W×H) (mm)	2700×1700×1900	3400×2000×2100	4200×2000×2100

Permanent Magnetic Roller

Features

With the design of large magnetic wrap angle ≤ 180°, by increasing the length of sorting belt and magnetic turn, the efficient separation of magnetic and non-magnetic (or weak magnetic) minerals can be realized. Magnetic systems all adopt Nd-Fe-B magnets with high magnetic energy product and high coercivity, strong magnetic density and high affect depth. The demagnetization rate of the magnetic density within 8 years is no more than 5%.

Covering the magnetic system with non-magnetic stainless steel ensures no peeling off of the magnet.

The cylinder adopts non-magnetic stainless steel, covered with the super wear-resistant rubber produced by our company, thus the service life can be prolonged significantly.

The magnetic roller can not only be the driving roller, but also the driven roller.

Application

It is used for the dry preconcentration before entering the grinding mills of the magnetite with the selected particle size of less than 300 mm. Generally, appropriate amount of tailings can be discarded, and the feed grade can be increased to or above geological grade.

Technical Parameters

Model & Spec.	Diameter of Cylinder (mm)	Length of Cylinder (mm)	Width of Belt (mm)	Surface Magnetic Density (mt)	Capacity (t/h)	Feed Size (mm)	Total Weight (t)
CTGG-0812	800	1200	1000	300~500	≤ 100	≤ 200	2.1
CTGG-0814	800	1400	1200	300~500	≤ 120	≤ 200	2.6
CTGG-0816	800	1600	1400	300~500	≤ 150	≤ 200	3.2
CTGG-0818	800	1800	1600	300~500	≤ 180	≤ 200	3.9
CTGG-1018	1000	1800	1600	300~500	≤ 270	≤ 250	4.4
CTGG-1218	1200	1800	1600	300~500	≤ 350	≤ 300	5.0

Permanent Magnetic Drum Magnetic Separator

Features

All are new type and high-efficiency wet magnetic separators
Magnetic systems all adopt Nd-Fe-B magnets with high magnetic energy product and high coercivity, strong magnetic density and high affect depth. The demagnetization rate of the magnetic density within 8 years is no more than 5%.
With gradual change and smooth transition large angle magnetic system, by increasing the length of sorting belt and magnetic turn, the efficient separation of magnetic and non-magnetic (or weak magnetic) minerals can be realized.
Covering the magnetic system with non-magnetic stainless steel ensures no peeling off of the magnet
According to the different uses and flotation conditions, different series of magnetic separators adopt different magnetic systems and groove structures.
The groove structures are all semi counter-flow, and can be made into down flow type according to the beneficiation conditions and the requirements of the clients.
The cylinder adopts non-magnetic stainless steel, and is covered with the super wear-resistant rubber produced by our company, thus the service life can be prolonged significantly.
With strong adaptability to production, it can bear great fluctuation of feeding quantity of slurry and the fluctuation of feed size and slurry concentration.
Excellent beneficiation index with high grade and high rate of recovery can be achieved at the same time.
Magnetic separators of different series can be used together or singly to get excellent beneficiation target.
Reasonable design, reliable running and convenient maintenance.

Application

CTBY permanent cylindrical magnetic separator for preconcentration: Suitable for wet preconcentration of magnetite before entering grinding mills after fine crushing, and the selected particle size should be less than 10mm.
CTBC permanent cylindrical magnetic separator for roughing: Suitable for roughing of magnetite after stage one grinding or multi-stage grinding or the roughing when recycling the magnetite from the tailings after sorting of nonferrous metals. The selected particle size should be less than 4mm.
CTBJ permanent cylindrical magnetic separator for concentration: Suitable for further concentration of coarse magnetite concentrate after grinding and classification and roughing. The selected particle size should be less than 2mm.
CTBN permanent cylindrical magnetic separator for thickening: Suitable for thickening and magnetic separation of magnetite before sending back to grinding mills after grinding, classification and sand returning, or the thickening and magnetic separation of magnetite concentrate before entering the filter press. The selected particle size should be less than 4mm.

Technical Parameters of CTBY Permanent Cylindrical Magnetic Separator for Preconcentration

Model & Spec.	CTBY1018	CTBY1024	CTBY1030	CTBY1218	CTBY1224	CTBY1230
Diameter of Cylinder (mm)	1000	1000	1000	1200	1200	1200
Length of Cylinder (mm)	1800	2400	3000	1800	2400	3000
Surface Magnetic Density (mt)	350~550	350~550	350~550	350~550	350~550	350~550
Rotating Speed of Cylinder (r/min)	23	23	23	20	20	20
Capacity of Dry Ore (t/h)	42~65	53~86	82~124	58~97	71~120	103~158
Feed Size (mm)	0~10	0~10	0~10	0~10	0~10	0~10
Slurry Density (%)	20~50	20~50	20~50	20~50	20~50	20~50
Motor Power (kW)	5.5	7.5	7.5	7.5	11	11
Total Weight (t)	5.2	6.4	7.1	6.7	7.2	8.9
Equipment Length (mm)	3160	3790	4460	3380	4190	4770
Equipment Width (mm)	2250	2250	2250	2460	2460	2460
Equipment Height (mm)	1750	1750	1750	2000	2000	2000

Technical Parameters of CTBC Permanent Cylindrical Magnetic Separator for Roughing

Model & Spec.	CTBC1018	CTBC1024	CTBC1030	CTBC1218	CTBC1224	CTBC1230
Diameter of Cylinder (mm)	1000	1000	1000	1200	1200	1200
Length of Cylinder (mm)	1800	2400	3000	1800	2400	3000
Surface Magnetic Density (mt)	300~500	300~500	300~500	300~500	300~500	300~500
Rotating Speed of Cylinder (r/min)	23	23	23	20	20	20
Capacity of Dry Ore (t/h)	36~54	44~75	66~103	47~82	62~105	83~129
Feed Size (mm)	0~4	0~4	0~4	0~4	0~4	0~4
Slurry Density (%)	20~50	20~50	20~50	20~50	20~50	20~50
Motor Power (kW)	5.5	7.5	7.5	7.5	11	11
Total Weight (t)	5.2	6.4	7.1	6.7	7.2	8.9
Equipment Length (mm)	3160	3790	4460	3380	4190	4770
Equipment Width (mm)	2250	2250	2250	2460	2460	2460
Equipment Height (mm)	1750	1750	1750	2000	2000	2000

Technical Parameters of CTBJ Permanent Cylindrical Magnetic Separator for Concentration

Model & Spec.	CTBJ1018	CTBJ1024	CTBJ1030	CTBJ1218	CTBJ1224	CTBJ1230
Diameter of Cylinder (mm)	1000	1000	1000	1200	1200	1200
Length of Cylinder (mm)	1800	2400	3000	1800	2400	3000
Surface Magnetic Density (mt)	200~300	200~300	200~300	200~300	200~300	200~300
Rotating Speed of Cylinder (r/min)	23	23	23	20	20	20
Capacity of Dry Ore (t/h)	24~36	33~56	46~72	35~45	43~77	54~86
Feed Size (mm)	0~2	0~2	0~2	0~2	0~2	0~2
Slurry Density (%)	20~50	20~50	20~50	20~50	20~50	20~50
Motor Power (kW)	5.5	7.5	7.5	7.5	11	11
Total Weight (t)	5.2	6.4	7.1	6.7	7.2	8.9
Equipment Length (mm)	3160	3790	4460	3380	4190	4770
Equipment Width (mm)	2250	2250	2250	2460	2460	2460
Equipment Height (mm)	1750	1750	1750	2000	2000	2000

Technical Parameters of CTBN Permanent Cylindrical Magnetic Separator for Thickening

Spec. & Model	CTBN1018	CTBN1024	CTBN1030	CTBN1218	CTBN1224	CTBN1230
Diameter of Cylinder (mm)	1000	1000	1000	1200	1200	1200
Length of Cylinder (mm)	1800	2400	3000	1800	2400	3000
Surface Magnetic Density (mt)	260~450	260~450	260~450	260~450	260~450	260~450
Rotating Speed of Cylinder (r/min)	23	23	23	20	20	20
Capacity of Dry Ore (t/h)	35~68	46~86	67~126	52~90	77~126	90~160
Feed Size (mm)	0~4	0~4	0~4	0~4	0~4	0~4
Slurry Density (%)	20~50	20~50	20~50	20~50	20~50	20~50
Motor Power (kW)	5.5	7.5	7.5	7.5	11	11
Total Weight (t)	5.2	6.4	7.1	6.7	7.2	8.9
Equipment Length (mm)	3160	3790	4460	3380	4190	4770
Equipment Width (mm)	2250	2250	2250	2460	2460	2460
Equipment Height (mm)	1750	1750	1750	2000	2000	2000

THICKENING

- Updated High-efficiency Thickener
- High-efficiency Thickener
- Center Transmission Thickener
- Thickener with Peripheral Roller Transmission
- Flocculant Feeding Device
- Thickener with Peripheral Rack Transmission
- Flocculant Agitation Tank
- High-Efficiency Deep-cone Thickener
- Automatic Control Device of High-efficiency Thickener
- Hydraulic Pressure Center Transmission Thickener
- Vibration Inclined-Plate High-efficiency Thickener

THICKENING

Updated High-efficiency Thickener

Principle

The thickener is mainly composed of two major parts including circular thickening tank and rake-type mud scraper: The solid particles suspended in the slurry in the thickening tank is settled by the gravity effect, after that, the clear water is on top, which makes the solid-liquid separation. The slurry deposited at the bottom of the thickening tank is continuously scraped to the center of the tank bottom by rake-type mud scraper and discharged by the outlet, and the clean water overflows from the top edge of the thickening tank.

Features

The deaerating tank is added to avoid solid particles attaching to bubbles and settling as parachute phenomena.

The feeding pipe is installed under the liquid level in order to bring the air when feeding.

The feeding sleeve is moved to a lower position and equipped with a receiving plate in order to make the slurry fed fall evenly and steadily and effectively prevent the rolling phenomena caused by the overbottom pressure from feeding.

The overflow weir in sawtooth shape can reduce part suction phenomena caused by out of level of overflow weir.

The linear of rabble blade is changed from slash to curve, which makes the rise of discharging underflow concentration and the improvement of the treatment capacity.

Application

It can be widely used for the treatment of slime, waste water, and waste residue in metallurgy, mining, coal, chemical industry, building materials, and environmental protection departments.

Technical Parameters

Model	Tank Diameter (mm)	Tank Depth (mm)	Subsidence Area (m^2)	Capacity (t/d)	Motor Model	Motor Power (kW)	Steel Tank Weight (kg)	Weight (kg)
NZSG-2.5	2500	1850	4.9	5~22.4	Y90L-6	1.1	1000	2225
NZSG-3A	3000	1800	7	5~23.3	Y100L-6	1.5	1664	3168
NZSG-3	3600	1800	10.2	5~28.5	Y100L-6	1.5	2097	3680
NZSG-5	5000	2956	16	16~90	Y90L-4	1.5	5160	8031
NZSG-6	6000	2956	28.3	98	Y90L-4	1.5	5769	9200
NZSG-7	7000	3000	38.5	140	Y112M-6	2.2	8800	13862
NZSG-8	8000	3318	50.2	185	Y132S-6	3	12966	19158
NZSG-9	9000	3376	63	210	Y132S-6	3	15418	21733
NZSG-12	12000	3600	113	370	Y132S-6	3	25589	34823
NZSG-15	15000	3600	176	580	Y132S-4	5.5	35800	54315
NZSG-18	18000	4400	255	960	YCT200-4B	7.5	52485	73588
NZSG-20	20000	4400	315	1400	YCT200-4B	7.5	59365	76312

Note: The specification can be designed according to the requirements of the users.
If adding flocculant, the capacity can be improved by 3-6 times.
The concrete structure can be adopted if the thickening diameter is greater than ϕ7m.

High-efficiency Thickener

Principle

The thickener is mainly composed of two major parts including circular thickening tank and rake-type mud scraper: The solid particles suspended in the slurry in the thickening tank is settled by the gravity effect, after that, the clear water is on top, which makes the solid-liquid separation. The slurry deposited at the bottom of the thickening tank is continuously scraped to the center of the tank bottom by rake-type mud scraper and discharged by the outlet, and the clean water overflows from the top edge of the thickening tank.

Features

Produced by introducing American technology.

New mechanical structure strengthens the flocculation on solid particles of the flocculants.

Flocculant adding system can be provided, as well as the automatic control systems of flocculant adding and high-efficiency thickener.

Application

It can be widely used for the treatment of slime, waste water, and waste residue in metallurgy, mining, coal, chemical industry, building materials, and environmental protection departments.

Technical Parameters

Model	Inner Diameter of Tank (mm)	Tank Height (mm)	Subsidence Area (m^2)	Rabble Rotating Speed (r/min)	Lifting Height of the Rabble (mm)	Driving Motor Model	Driving Motor Power (kW)	Lifting Motor Model	Lifting Motor Power (kW)	Steel Tank Weight (kg)	Weight (kg)
GX-3.6	3600	1700	10.2	1.1	200	Y100L-6	1.5	Y100L-6	1.5	2829	6650
GX-5.18	5182	2134	21	0.4	300	Y132S-6	3	PZ0.8AB	0.8	5342	10460
GX-6	6000	2500	28.3	0.8	300	Y132M1-6	4	Y132S-8	2.2	6506	10573
GX-7.5	7500	2800	44.1	0.427	300	Y132M2-6	5.5	Y132S-8	2.2	10258	17320
GX-9	9000	2800	63.6	0.427	300	Y132M2-6	5.5	Y132S-8	2.2	15980	23680
GX-12	12000	3600	110	0.35	300	Y132M-4	7.5	Y100L1-4	2.2	25589	42756
GX-15	15000	4000	177	0.15	300	YCT200-4B	7.5	Y112M-6	2.2	36050	59000
GX-18	18000	4400	254	0.13	400	YCT200-4B	7.5	YTC752A-44	5.5	52485	73296
GX-20	20000	4400	314	0.13	400	YCT200-4B	7.5	YTC752A-44	5.5	59365	76020

Center Transmission Thickener

Principle

The thickener is mainly composed of two major parts including circular thickening tank and rake-type mud scraper: The solid particles suspended in the slurry in the thickening tank is settled by the gravity effect, after that, the clear water is on top, which makes the solid-liquid separation. The slurry deposited at the bottom of the thickening tank is continuously scraped to the center of the tank bottom by rake-type mud scraper and discharged by the outlet, and the clean water overflows from the top edge of the thickening tank.

Features

The electric lifting harrow device is equipped with if it is up to 12 meters or above.

Stable operation of the cross harrow rack makes high efficiency.

Application

It is generally used for the thickening of concentration or the dewatering of tailings before filtering.

Technical Parameters

Model	Thickening Tank Diameter (mm)	Thickening Tank Depth (mm)	Sediment Area (m^2)	Rotating Speed of Harrow Rack (r/min)	Motor Model	Motor Power (kW)	Motor Rotating Speed (r/min)	Capacity (t/d)	Tank Weight (t)	Weight (kg)
NZS1	1800	1800	2.55	0.5	Y90L-6	1.1	910	1.3~5.6	602	1300
NZS2.5	2500	1800	4.9	0.33	Y90L-6	1.1	910	5~10.8	1730	2355
NZS3	3600	1800	10.2	0.33	Y100L-6	1.5	940	5~22.4	1730	3194
NZS5.5	5500	2956	18.8	0.3	Y100-6	1.5	1400	10~50	2020	5980
NZS6	6000	2956	28.3	0.3	Y90L-4	1.5	1400	14~62	5690	8751
NZS8	8000	3318	50.2	0.27	Y132S-6	3	960	25~120	11065	15460
NZS9	9000	3000	63.5	0.25	Y132S-6	3	960	32~150	12188	17288
NZS12	12000	3600	113	0.19	Y132S-6	3	960	50~250	24060	33131
NZS15	15000	3600	177	0.1	Y132M2-6	5.5	1500	70~350	35269	55499
NZS18	18000	4400	254	0.13	YCT200-4B	7.5	960	100~560	Excluding	10139
NZS20	20000	4400	314	0.13	YCT200-4B	7.5	960	200~960		22566
NZS24	24000	4400	452	0.1	Y160L-8	7.5	720	200~1440		24500

Thickener with Peripheral Roller Transmission

Principle

The thickener is mainly composed of two major parts including circular thickening tank and rake-type mud scraper: The solid particles suspended in the slurry in the thickening tank is settled by the gravity effect, after that, the clear water is on top, which makes the solid-liquid separation. The slurry deposited at the bottom of the thickening tank is continuously scraped to the center of the tank bottom by rake-type mud scraper and discharged by the outlet, and the clean water overflows from the top edge of the thickening tank.

Features

Traditional type, simple structure, and low material consumption.

Application

It is suitable for the occasions of large capacity and low product concentration, and mainly used for the thickening of ore concentrate and the dewatering of tailings in mineral processing plants, also for the thickening and purification of the liquid containing solid particles in coal industry, chemical industry, building materials, and water source & sewage treatment industry.

Technical Parameters

Model	Thickening Tank Diameter (mm)	Thickening Tank Center Depth (mm)	Capacity (t/d)	Subsidence Area (m^2)	Motor Model	Motor Power (kW)	Weight (kg)
NG-15	15000	3612	88~390	177	Y132M2-6	5.5	11702
NG-18	18000	3500	127~560	255	Y132M2-6	5.5	9718
NG-24	24000	3400	226~1000	452	Y160M-6	7.5	24000
NG-30	30000	3940	353~1570	707	Y160M-6	7.5	31000
NG-45	45000	5060	790~2400	1590	Y160L-6	11	50640
NG-53	53000	5070	1000~3400	2202	Y160L-6	11	60910

Flocculant Feeding Device

Principle

Flocculant is added to spiral conveyor and then get to the use point through spiral.

Features

Flocculant adding can be adjusted from zero.
Stainless steel.

Application

widely used in chemical agent adding in feed water treatment, sewage treatment and electric power industry.

Technical Parameters

Model	Motor Model	Motor Power (KW)	Weight (kg)	Remarks
XNJ-15	110SZ52	0.185	160	Patented product

Thickener with Peripheral Rack Transmission

Principle

The thickener is mainly composed of two major parts including circular thickening tank and rake-type mud scraper: The solid particles suspended in the slurry in the thickening tank is settled by the gravity effect, after that, the clear water is on top, which makes the solid-liquid separation. The slurry deposited at the bottom of the thickening tank is continuously scraped to the center of the tank bottom by rake-type mud scraper and discharged by the outlet, and the clean water overflows from the top edge of the thickening tank.

Features

Traditional type, high safety coefficient, and high stability.

Application

It is suitable for the occasions of large capacity and low product concentration, and mainly used for the thickening of ore concentrate and the dewatering of tailings in mineral processing plants, also for the thickening and purification of the liquid containing solid particles in coal industry, chemical industry, building materials, and water source & sewage treatment industry.

Technical Parameters

Model	Thickening Tank Diameter (mm)	Thickening Tank Center Depth (mm)	Capacity (t/d)	Subsidence Area (m^2)	Motor Model	Motor Power (kW)	Weight (kg)
NT-15	15000	3500	88~390	177	Y132M2-6	5.5	11702
NT-18	18000	3700	127~560	255	Y132M2-6	5.5	12120
NT-24	24000	3400	226~1000	452	Y160L-8	7.5	28270
NT-30	30000	3940	353~1570	707	Y160M-6	7.5	31000
NT-45	45000	5025	790~2400	1590	Y160L-6	11	58640
NT-53	53000	5070	1000~3400	1964	Y160L-6	11	69410

Flocculant Agitation Tank

Features

Used for the storage of agitated flocculant mixed liquor.

No caking, no sedimentation, and without destroying the flocculant macromolecule chain.

The shaft and the impeller are made of stainless steel materials.

Technical Parameters

Model	Spec.	Effective Volume (m^3)	Impeller Diameter (mm)	Impeller Speed (r/min)	Motor Model	Motor Power (kW)	Weight (kg)
XBJ1.0×1.75	ϕ1000×1750	1.1	450	133	Y132S-8	2.2	600
XBJ1.5×1.5	ϕ1500×1500	2.2	518	320	Y132S-6	3	1260

High-efficiency Deep-cone Thickener

Principle

High-efficiency deep-cone thickener is a new product used in the process of solid-liquid separation technology currently. Because of its less investment, less floor space and high efficiency, both the underflow concentration and the overflow water quality are significantly improved. It also can realize intelligent operation. Normally, its processing capacity is 3-8 times larger than that of traditional thickeners. The underflow concentration is up to 300-800 g/L, and the overflow water quality can meet the state standard of effluent discharge.

The thickener is mainly composed of two major parts including circular thickening tank and rake-type mud scraper: The solid particles suspended in the slurry in the thickening tank is settled by the gravity effect, after that, the clear water is on top, which makes the solid-liquid separation. The slurry deposited at the bottom of the thickening tank is continuously scraped to the center of the tank bottom by rake-type mud scraper and discharged by the outlet, and the clean water overflows from the top edge of the thickening tank.

Features

The height of tank is much greater than the diameter, and the overall tank is in vertical barrel-taper shape.

The slender tank body and the flocculants added in the process of thickening accelerate the process of materials subsidence and the thickening process of overflow water clarification.

Small floor space, large capacity, high degree of automation, and power saving.

Application

It is mainly used for high concentration thickening of minerals in mineral processing plant, also for slurry thickening with fine particle and small density and wastewater treatment.

Technical Parameters

Model	Tank Diameter (mm)	Tank Depth (mm)	Subsidence Area (m^2)	Capacity (m^3/h)
GSNG-3	3000	4400	21	60~70
GSNG-6	6000	8800	85	210~260
GSNG-9	9000	13500	310	570~700
GSNG-12	12000	17500	510	800~1200
GSNG-15	15000	19000	1200	1000~1500
GSNG-18	18000	22000	2000	1400~2100
GSNG-20	20000	22800	2700	2100~2600

Automatic Control Device of High-efficiency Thickener

Features

Monitor the height of flocbed automatically in high-efficiency thickener, and control the underflow pump speed of automatic control high-efficiency thickener hereby, so as to maintain the steady of flocbed.

Frequency-converting control and linear adjustment.

Technical Parameters

Model	Control High-Efficiency Thickener Model	Control Underflow Pump Motor Power (kW)	Max. Control Height of Flocbed (m)
GJK-33	GX-3.6	3	0~2.5
GJK-375	GX-3.6	7.5	0~2.5
GJK-311	GX-3.6	11	0~2.5
GJK-575	GX-5.18	7.5	0~2.5
GJK-511	GX-5.18	11	0~2.5
GJK-5185	GX-5.18	18.5	0~2.5
GJK-1245	GX-12	45	0~2.5
GJK-1255	GX-12	55	0~2.5

Hydraulic Pressure Center Transmission Thickener

Features

Large capacity and high concentration efficiency.

It is driven by hydraulic pressure with overload protection function.

The automatic lifting harrow by hydraulic pressure is realized by the core PLC auto-induction pressure transducer signal.

Automatic dosing system can be set.

Simple structure of the transmission device makes convenient maintenance.

Application

It is mainly used for clarification and concentration of slime water or slurry in mines in order to achieve the purpose of dewatering. It is also used for the dewatering operation of solid-liquid separation in chemical and metallurgical industry.

Technical Parameters

Model	Thickening Tank Diameter (m)	Thickening Tank Center Depth (m)	Subsidence Area (m^2)	Time of Harrow Rack Rotation (min)	Height of Lifting Harrow (mm)	Capacity (t/d)	Drive Power (kW)
NZY-6	6	3~3.2	28	2.5~5	350	50~100	3
NZY-9	9	3.5~3.8	63.6	3~5	350	120~175	3
NZY-12	12	3.5~3.8	113	4~7	350	200~300	4
NZY-15	15	4~4.5	176	5~10	450	350~400	5.5
NZY-18	18	4~4.5	254	8~12	450	600~800	5.5
NZY-20	20	4~4.5	314	8~12	450	800~1000	7.5
NZY-24	24	4.5~5.5	450	9~12	450	1000~1300	7.5
NZY-30	30	4.5~5.5	706	10~14	450	1500~1800	11
NZY-38	38	6.5~8	1134	15~22	600	1800~2200	15
NZY-40	40	6.5~8	1256	15~22	600	2200~2400	15
NZY-45	45	6.5~8	1590	15~22	600	2400~2800	15
NZY-53	53	6.5~8	2206	15~22	600	3000~3500	15
NZY-60	60	7~8.5	2827	16~50	600	3500~5000	18.5
NZY-75	75	8~10	4418	20~80	800	7500~10000	22
NZY-100	100	8~10	7853	35~80	800	10000~15000	30

Vibration Inclined-plate High-efficiency Thickener

Features

Integrated mode of inclined-plate thickening channel integration patterns: Each sedimentation channel with the same feed, grading concentration, sand discharge and overflow function, and the same size of structure, ensures the stability and identity of each grading concentration channel operation.

Modularization of the inclined plate set: By the combination and integration with the same modules of the inclined plate set, the required equipment total subsidence area is formed, which can easily realize the large-scale equipment.

The variant design of inclined plate channel is according to the property differences of the slurry and different partition size, which ensures the optimal performance of the equipment.

The thickening processes complete respectively within each independent inclined plate channel. The fine particle size overflow or clean water is discharged crosswise and directly from the spillwag chute of each channel, which shortens the overflow discharge path, effectively solves the short circuit of the fine particle size and circulation problem in the process of the overflow discharge, and guarantees the high equipment grading thickening efficiency that can reach 70% or above in general.

The interval high frequency micro-vibration of inclined plate set modules ensures automatic cleaning regularly, makes the material on the inclined plate orderly decline, and guarantees no stacking materials on the inclined plate and no blocking among plates, so as to ensure the long-term steady work efficiency of the equipment.

A special material removal device set in thickening cone hopper avoids the accumulation of materials, and realizes forced ore discharge with high concentration underflow up to 70% or above according to users' needs, so as to meet the requirements of dry-tailing stacking and discharging.

This device can be used for both concentration and backwater, also for classification and desliming, and the slurry pretreatment by adding flocculant. It also can be used as a high-efficiency thickener. Small floor space, low power consumption, and low costs on operation and maintenance.

Main technique indexes

Feed concentration: 1-20%; Feed size: ≤ 2.0 mm.
Feed flow: Depending on the material sedimentation velocity, generally ore concentrate: 0.5-1.5 m^3 /h·m^2, and tailings: 0.3-0.8 m^3/h·m^2; underflow concentration: ≥ 10-75%.
Backwater rate: ≥ 75%.

Technical Parameters

Model	Subsidence Area (m^2)	Cone Hopper Number	Length (mm)	Width (mm)	Height (mm)
ZQN16	16	1	3690	1100	4360
ZQN31	31	1	3760	2460	4360
ZQN50	50	1	3690	3300	5260
ZQN63	63	1	5560	2460	5630
ZQN100	100	1	5560	3560	5500
ZQN125	125	1	5510	4400	5660
ZQN150	150	1	7710	3760	7890
ZQN200	200	1	7710	4880	8160
ZQN250	250	1	7710	6000	8500
ZQN300	300	1	8000	7020	7890
ZQN400	400	1	7710	9260	7890
ZQN500	500	1	7710	11500	8500
ZQN600	600	1	14880	7020	7890
ZQN800	800	1	14880	9260	8160
ZQN1000	1000	1、2、4	14880	11460	8500
ZQN2000	2000	4、8	14880	22920	8500

FILTERING

- Ceramic Vacuum Filter
- Automatic Hydraulic Chamber Filter Press
- Fast Open High Voltage Polypropylene Diaphragm Filter Press
- Belt Filter Press
- Disk Vacuum Filter
- Permanent Magnetic Vacuum Filter
- Pressure Water Tank
- Single-cylinder Auto-draining Filtrate Tank
- Electromagnetic Auto-draining Filtrate Tank
- Double-cylinder Auto-draining Filtrate Tank

FILTERING

Ceramic Vacuum Filter

Principle

Ceramic vacuum filter is mainly composed of several parts including roller system, agitation system, feeding and discharging system, vacuum system, filtrate discharge system, scraper system, back flushing systems, joint cleaning (ultrasonic cleaning, automatic acid feeding and cleaning) system, automatic control system, tank, and rack.
It has been widely used in the concentration of nonferrous metals, precious metals, ferrous metals, and non-metallic and the dewatering of the tailings in the mining industry, the dewatering of oxide, electrolysis slag, leaching slag, and slag in the chemical industry, and the sewage, sludge and waste acid treatment of the environment protection industry, etc. The fineness of the materials ranges from -200 to -450 meshes, and even ultra-fine.

Features

Vacuum (vacuum 0.09 - 0.098MPa), and low cake moisture.
Solid content <50ppm. Repeated use and emission reduction.
Compared with conventional ceramic vacuum filter, the filter cake washing is equipped for the material to be washed.
PLC, microcomputer control combined with automatic valves, high degree of automation, and labor intensity reduction.
Compact, small floor area, easy installation and maintenance.
Advanced drain system may be suitable for use under all operating conditions.

Technical Parameters

Model	Filter Area (m^2)	Number of Filter Disc (Circle)	Number of Filter Plate (Piece)	Tank Volume (m^3)	Installed Power (kW)	Operation Power (kW)	Main Frame (L×W×H) (m)
TC-1	1	1	12	0.21	3.5	2.0	1.6×1.4×1.5
TC-4	4	2	24	1.0	7.0	3.0	2.4×2.5×2.1
TC-6	6	2	24	1.2	7.0	6.0	2.4×2.9×2.5
TC-9	9	3	36	1.7	9.0	7.0	2.7×2.9×2.5
TC-12	12	4	48	2.2	11.0	7.5	3.0×2.9×2.5
TC-15	15	5	60	2.7	11.5	8.0	3.3×3.0×2.5
TC-21	21	7	84	4.0	13.5	9.0	4.6×3.0×2.6
TC-24	24	8	96	4.5	16.5	10.5	4.9×3.0×2.6
TC-27	27	9	108	5.0	17.0	11.0	5.2×3.0×2.6
TC-30	30	10	120	5.5	17.5	11.5	5.5×3.0×2.6
TC-36	36	12	144	7.0	23.0	16.0	6.6×3.0×2.6
TC-45	45	15	180	8.5	25.0	19.0	7.5×3.0×2.6
TC-60	60	15	180	12.5	33.0	22.0	7.5×3.3×3.0
TC-80	80	20	240	16.2	40.0	24.0	9.0×3.3×3.0
TC-102	102	17	204	18.5	53.0	35.0	8.8×3.6×3.3
TC-120	120	20	240	20	60.0	40.0	9.7×3.6×3.3
TC-150	150	25	300	24	75.0	47.0	11.2×3.6×3.3

Automatic Hydraulic Chamber Filter Press

Principle

Automatic hydraulic chamber filter press is a kind of intermittent solid-liquid separation equipment designed and manufactured by using mechanical and electrical integration with reasonable structure and easy operation. It can achieve all processes such as filter plate compression, pressure maintaining and filter plate release. The filter chamber is composed of chamber plate, filter frame plate or chamber plate. By the pressure of the feeding pump, the slurry is fed into the filter chamber, and the solid and liquid are separated through the filter medium. It is widely used in the sewage treatment in such industries as mine, chemical and metallurgy.

Technical Parameters

Model	Filter Area (m^2)	Number of Filter Chamber	Spec. of Filter Plate (mm)	Filter Cake Thickness (mm)	Volume of Filter Chamber (m^3)	Filter Pressure (MPa)	Overall Dimension (mm)	Motor Power (kW)	Weight (kg)
X^M_AZ 20/800U	20	20	800×800×60	30	0.287	0.5~1.6	3500×1350×1160	2.2	2750
X^M_AZ 30/800U	30	30			0.453		4110×1350×1160		3130
X^M_AZ 40/800U	40	40			0.605		4720×1350×1160		3420
X^M_AZ 50/800U	50	50			0.756		5330×1350×1160		3700
X^M_AZ 60/800U	60	60			0.907		5940×1350×1160		4110
X^M_AZ 70/800U	70	70			1.059		6550×1350×1160		4400
X^M_AZ 80/800U	80	80			1.21		7160×1350×1160		4740
X^M_AZ 40/900U	40	32	900×900×60	30	0.59	0.5~1.6	4230×1480×1280	2.2	4500
X^M_AZ 50/900U	50	40			0.75		4720×1480×1280		4800
X^M_AZ 60/900U	60	47			0.88		5150×1480×1280		5100
X^M_AZ 70/900U	70	63			1.19		6120×1480×1280		5700
X^M_AZ 60/1000U	60	38	1000×1000×60	30	0.9	0.5~1.6	5450×1560×1360	2.2	7080
X^M_AZ 80/1000U	80	50			1.19		6180×1560×1360		7830
X^M_AZ 100/1000U	100	62			1.48		6910×1560×1360		8680
X^M_AZ 120/1000U	120	75			1.8		7710×1560×1360		9250
X^M_AZ 125/1250U	120	46	1250×1250×65	32	1.9	0.5~1.6	6500×1770×1620	4	10900
X^M_AZ 150/1250U	150	58			2.41		7290×1770×1620		11800
X^M_AZ 180/1250U	180	69			2.88		8020×1770×1620		12700
X^M_AZ 200/1250U	200	77			3.22		8550×1770×1620		13300
X^M_AZ 220/1250U	220	84			3.51		9010×1770×1620		13900
X^M_AZ 250/1250U	250	95			3.98		9740×1770×1620		14800
X^M_AZ 300/1500U	300	77	1500×1500×70	32	4.76	0.5~1.6	10040×2400×1800	5.5	26500
X^M_AZ 320/1500U	320	83			5.14		10460×2400×1800		27190
X^M_AZ 340/1500U	340	88			5.45		10820×2400×1800		27880
X^M_AZ 350/1500U	350	90			5.58		10960×2400×1800		28230
X^M_AZ 380/1500U	380	98			6.08		11530×2400×1800		29260
X^M_AZ 400/1500U	400	103			6.39		11880×2400×1800		29950
X^M_AZ 450/1500U	450	116			7.21		12810×2400×1800		31670
X^M_AZ 500/1500U	500	128			7.96		13660×2400×1800		33390
X^M_AZ 560/2000U	560	80	2000×2000×83	40	11.16	0.5~1.6	10600×2900×2450	11	56500
X^M_AZ 600/2000U	600	86			12.01		12110×2900×2450		58000
X^M_AZ 630/2000U	630	90			12.58		12440×2900×2450		59000
X^M_AZ 670/2000U	670	96			13.43		12950×2900×2450		60500
X^M_AZ 710/2000U	710	101			14.13		13370×2900×2450		62000
X^M_AZ 750/2000U	750	107			14.98		13870×2900×2450		63300
X^M_AZ 800/2000U	800	114			15.97		14460×2900×2450		65200
X^M_AZ 850/2000U	850	121			16.96		15050×2900×2450		67000
X^M_AZ 900/2000U	900	128			17.95		15640×2900×2450		69000
X^M_AZ 950/2000U	950	135			18.94		16220×2900×2450		70600
X^M_AZ 1000/2000U	1000	142			19.92		16810×2900×2450		72300
X^M_AZ 1060/2000U	1060	151			21.2		17570×2900×2450		74500
X^M_AZ 1120/2000U	1120	159			22.33		18240×2900×2450		76800
X^M_AZ 1180/2000U	1180	168			23.61		19000×2900×2450		79000

Note: M- Free flow; A- Underflow.

Fast Open High Voltage Polypropylene Diaphragm Filter Press

Principle

Fast open high voltage polypropylene diaphragm filter press is a kind of intermittent pressure filtration equipment suitable for the solid-liquid separation of various kinds of suspension with wide application, good separation effect, simple structure, and simple, safe and reliable operation. It is mainly used in the fields that need solid-liquid separation such as mining, metallurgy, coal washing, and urban sewage treatment.

This series of fast open high voltage filter press is designed and manufactured by mechanical, electrical, and hydraulic integration. It can consists of different filter area and volume according to the number of the filter plates with the feeding method of intermediate end feeding, fast filtering speed, reasonable structure, simple, safe and reliable operation. It can achieve various procedures including automatic compression, pressure maintaining, pressure filling, release, first, second and third plate drawing.

Equipped with polypropylene diaphragm filter plate, the filter press can change the chamber volume by inflating the diaphragm filter plate, pressing the filter cake, so as to further reduce the moisture content of the filter cake. At world leading level, with brand products of electrical components and flow pressure components, safe and reliable operation, this series fast open high voltage polypropylene diaphragm filter press is ideal filtering equipment for users.

Technical Parameters

Model	Filter Area (m^2)	Number of Filter Chamber	Spec. of Membrane Filter Plate (mm)	Filter Cake Thickness (mm)	Volume of Filter Chamber (m^3)	Filter Pressure (MPa)	Overall Dimension (mm)	Capacity (t/h)	Weight (kg)
KZG100/1500-U	100	26	1500×1500×90	45	2.15	0.5~1.6	8240×3145×2865	12	23220
KZG150/1500-U	150	38			3.17		9820×3145×2865	18	27150
KZG200/1500-U	200	52			4.37		11610×3145×2865	24	31350
KZG250/1500-U	250	64			5.39		13210×3145×2865	30	35150
KZG150/1600-U	150	34	1600×1600×85	40	2.96	0.5~1.6	9360×3240×2965	18	28250
KZG200/1600-U	200	46			4		10910×3240×2965	24	32850
KZG250/1600-U	250	58			5.04		12460×3240×2965	30	37050
KZG300/1600-U	300	70			6.09		14040×3240×2965	36	40060
KZG200/1500×2000-U	200	38	1500×2000×95	45	4.31	0.5~1.6	10330×3165×3200	24	35450
KZG250/1500×2000-U	250	48			5.48		11640×3165×3200	30	38650
KZG300/1500×2000-U	300	58			6.65		12940×3165×3200	36	41750
KZG350/1500×2000-U	350	68			7.82		14380×3165×3200	42	44850
KZG300/2000-U	300	44	2000×2000×95	45	6.93	0.5~1.6	11700×3730×3245	42	42760
KZG400/2000-U	400	58			9.14		13500×3730×3245	55	47960
KZG500/2000-U	500	72			11.16		15530×3730×3245	65	62980
KZG600/2000-U	600	86			13.33		17510×3730×3245	80	68020

Belt Filter Press

Principle

Belt filter press (belt sludge dewatering machine) can be widely used in the sewage sludge dewatering of urban sewage, textile printing and dyeing, electroplating, paper, leather, food processing, mining, coal, petroleum, chemicals, chemistry, pharmaceutical, ceramics and other industries, and can also be used for the solid-liquid separation, or liquid leaching of the industrial production.

Features

Adopting the dewatering way of an integration of super long filter and strong pressing on rollers with large capacity and the filter cake moisture content 10% lower than that of the average machine.

Advanced and reliable filter strip offset adjusting and tensioning device, and air pressure for automatic control.

Super high-strength mechanical properties and corrosion resistance, eight-year warranty for the main part, and five-year warranty for bearing rollers.

24 hours of continuous operation, simple operation, and easy maintenance.

Technical Parameters

Technical Parameters		Model				
		DYQ 1000WP1	DYQ 1500WP1	DYQ 2000WP1	DYQ 2500WP1	DYQ 3000WP1
Power (kW)	Main Frame	1.5	2.2	3	4	5.5
	Complete	10	13	15	19	22
Belt Width (mm)		1000	1500	2000	2500	3000
Capacity (m^3/h)		8~12	10~18	15~28	20~35	30~45
Overall Dimension	Length (mm)	5300	5300	5300	5300	5300
	Width (mm)	1900	2400	2900	3400	3900
	Height (mm)	2000	2000	2000	2100	2100
Total Weight (kg)		3000	4000	5500	7000	8500

Disk Vacuum Filter

Principle

The filtering plate rotates slowly in the slurry tank, making the solid particles adsorbed on the filter cloth of the circular disc by the pressure difference formed by the vacuum pump, and forming the filter cake with a certain thickness. The filtrate will be discharged from the center shaft through the filter cake and filter cloth. The filter cake will fall into the unloading tank with the pressure air generated by the scraper and the blower.

Features

Electromagnetic stepless speed regulating motor—cycloidal-pin wheel reducer—Worm gear drive, which is easy for operation, and can improve efficiency, reduce noise, and cut down energy consumption.

With the sector plate of lattice type made of engineering plastics, the operation performance and service life is highly improved.

Application

It is used for the filtering and dewatering of suspension in coal dressing plants and mineral processing plants, and is also used for the solid-liquid separation in metallurgy, chemical, oil and sewage treatment.

Technical Parameters

Model		PG18-4	PG27-6	PG39-4	PG58-6	PG78-8	PG97-10	PG116-12
Filter Area (m^2)		18	27	39	58	78	97	116
Quantity of Filter Disc		4	6	4	6	8	10	12
Diameter of Filter Disc (mm)		1800	1800	2700	2700	2700	2700	2700
Rotating Speed of Filter Disc (r/min)	1	0.135~0.607	0.135~0.607	0.135~0.607	0.15~0.67	0.15~0.67	0.148~0.66	0.148~0.66
	2	0.254~1.14	0.254~1.14	0.254~1.14	0.254~1.14	0.254~1.14	0.285~1.285	0.285~1.285
	3						0.44~1.98	0.44~1.98
Rotating Speed of Agitator (r/min)		60	60	60	60	60	60	60
Main Drive Motor	Model	YCTL132-4B	YCTL132-4B	YCT160-4A	YCT160-4B	YCT160-4B	YCTL180-4A	YCTL180-4A
	Power (kW)	1.5	1.5	2.2	3	3	4	4
	Rotating Speed (r/min)	1230~125	1230~125	1250~125	1250~125	1250~125	1250~125	1250~125
Drive Motor of Agitator	Model	Y90L-4	Y90L-4	Y90L-4	Y100L1-4	Y100L1-4	Y112M-4	Y112M-4
	Power (kW)	1.1	1.1	1.5	2.2	2.2	4	4
	Rotating Speed (r/min)	1440	1440	1440	1440	1440	1440	1440
Vacuum Pump	Model	SZ-4	2YK-27	SZ-4	SZ-4	SZ-4	2YK-110	2YK-110
	Quantity	1	1	1	2	2	1	1
Blower	Model	SZ-2	SZ-2	SZ-2	SZ-3	SZ-3	SZ-3	SZ-3
	Quantity	1	1	1	1	1	1	1
Weight (kg)		3500	4500	6000	8000	9000	10000	12000
Overall Dimensions: (L×W×H) (mm)		2820×2355×2295	3820×2355×2295	3015×3275×3275	3930×3355×3275	4730×3355×3275	5530×3355×3275	6330×3355×3275

Technical Parameters of Permanent Magnetic Vacuum Filter

Application

It is a kind of top-feeding tube-type outside-filtering permanent magnetic vacuum filter mainly used in the dewatering of the ferromagnetic materials with coarse particles.

Best working conditions

The coefficient of magnetization of the solid phase particles in the slurry is no less than 3000×0.000001 cm^3/g. The particle size is 0.12-0.8 mm, and the feed concentration is 60 %.

Technical Parameters

Model	Filter Area	Cylinder Spec. (mm)	Cylinder Rotating Speed (r/min)	Magnetic Induction (mt)	Filter Cake Moisture (%)	Sucking Rate ($m^3/min.m^2$)	Gauge Pressure (kg/cm^2)	Capacity (t/h)	Motor Model	Motor Power (kW)	Weight (kg)
GYW-3	3	ϕ1600×700	0.5~2	80	8~11	1	0.1~0.3	6.0~9	Y100L-6	1.5	3270
GYW-5	5	ϕ2000×900						14~18			3935
GYW-8	8	ϕ2000×1400		82	5~15			22~45			4755
GYW-12	12	ϕ2000×2000		87				33~65	Y112M-6	2.2	5420
GYW-20	20	ϕ2550×2650						50~108	Y132M2-6	5.5	6550

Technical Parameters of Pressure Water Tank

Technical Parameters

Model	Spec.	Volume (m^3)	Max. Allowable Working Pressure (MPa)	Weight (kg)
YSG1216	ϕ1200×1600	1.5	0.58	650
YSG1224	ϕ1200×2400	2.4		804
YSG1416	ϕ1400×1600	2.3		652
YSG1425	ϕ1400×2500	3.1		900
YSG1616	ϕ1600×1600	2.6		800
YSG1624	ϕ1600×2400	3.7		1185
YSG2028	ϕ2000×2800	7.6		2326
YSG2038	ϕ2000×3800	10		2706

Technical Parameters of Single-cylinder Auto-draining Filtrate Tank

Technical Parameters

Model	Effective Volume (m^3)	Allowable Working Pressure (MPa)	Weight (kg)
LGD-0.2	0.2	0.2	179
LGD-0.4	0.4		395
LGD-0.6	0.6		456
LGD-0.8	0.8		518
LGD-1.0	1		596
LGD-1.2	1.2		692
LGD-1.4	1.4		836

Technical Parameters of Electromagnetic Auto-draining Filtrate Tank

Technical Parameters

Model	Effective Volume (m^3)	Allowable Working Pressure (MPa)	Weight (kg)
LGC-0.2	0.2	0.5	170
LGC-0.4	0.4		250
LGC-0.6	0.6		330
LGC-0.8	0.8		390
LGC-1.0	1		480
LGC-1.2	1.2		548
LGC2.0	2.0		657

Technical Parameters of Double-Cylinder Auto-draining Filtrate Tank

Technical Parameters

Model	Effective Volume (m^3)	Allowable Working Pressure (MPa)	Weight (kg)
LGS-0.2	0.2 (Single-cylinder volume)	0.2	600

CYANIDING

- Double-impeller Leaching Agitation Tank
- Double-deck Scrubbing Thickener
- Cylindrical Filter
- Deoxidation Column
- Triple-deck Scrubbing Thickener
- Spiral Zinc Powder Feeder
- Belt Zinc Powder Feeder
- Automatic Zinc Powder Mixer
- Disc Zinc Powder Feeder
- Power-Driven Zinc Powder Mixer
- Air Lifter
- Carbon-lifting Pump
- Carbon Screen
- High-efficiency Low-consumption Rapid-desorption Electrowinning System
- Carbon Regeneration System

CYANIDING

Double-impeller Leaching Agitation Tank

Principle

Dragged and agitated by the double impellers, the slurry flows from the top to the bottom, spreads through the damping plate, blends with air at the bottom of the shaft with upward circulation, and finally turns to be suspension mixture.

Features

Smooth ore current movement, even slurry mixture, and low dynamic consumption.

The air gets into the tank though the hollow shaft transmission, and spreads on average by the rotation of the impeller.

Compact structure and easy maintenance.

The impeller has rubber liner with low circle speed and long service life.

This machine is produced with technology imported from America.

With multi air feeding for the inflation system.

Application

This series agitation tank is used for the agitation, leaching and carbon adsorption in the gold cyanidation plant with more than 90% of slurry with the particle size of -200 meshes and the concentration of less than 45%. It can also be used for mixing, agitation and leaching operation in such industries as metallurgy, chemical industry, and light industry under corresponding conditions.

Technical Parameters

Model	Tank Spec. (D× H) (mm)	Effective Volume (m^3)	Rotating Speed of Impeller (r/min)	Diameter of Impeller (mm)	Motor Model	Motor Power (kW)	Reducer Model	Tank Weight (kg)	Total Weight (kg)
SJ2.0×2.5	2000×2500	7.07	52	909	Y100L1-4	2.2	XLD2.2-4-29	1609	2144
SJ2.5×2.5	2500×2500	10.8	43	935	Y112M-4	4	XLD4-5-35	2159	2729
SJ2.5×3.15	2500×3150	13.92	52	935	Y100L1-4	2.2	XLD2.2-4-29	2398	3095
SJ3.0×3.0	3000×3000	19	43	1130	Y112M-4	4	XLD4-5-35	3480	4583
SJ3×3.15	3000×3150	20						3480	4160.6
SJ3×3.5	3000×3500	22.97						3211	4334.6
SJ3.15×3.55	3150×3550	25.73		1260				3433.5	4322.8
SJ3.5×3.5	3500×3500	31.3	52	1310	Y132S-4	5.5	XLD5.5-5-29	3480	5025
SJ3.5×4	3500×4000	35.6						4230	5429
SJ3.55×4.0	3550×4000	36.8	43			4	XLD4-5-35	4260	5025
SJ3.7×4.2	3700×4200	42	42		Y112M-4		XLD4-5-43	5266	6153
SJ4.0×4.5	4000×4500	52.78	35	1750	Y132M-4	7.5	XLD7.5-7-43	6397	7569
SJ4.0×6	4000×6000	71	33	1750	Y160M-4	11	GRF137-Y11-4P-44.65-M4	7681	9200
SJ4.5×5.0	4500×5000	74.75	35	1750	Y132M-4	7.5	XLD7.5-7-43	8614	10864
SJ5.0×5.6	5000×5600	104.5	31	2046	Y160M-4	11	XLD11-8-47	8740	14291
SJ5.5×6.0	5500×6000	135.42		2100				12467	18745
SJ6.5×7.0	6500×7000	215	21	2400	Y180L-4	22	GRF147-Y22-4P-70.87	17890	25978
SJ7.0×7.5	7000×7500	269		2400	Y200L2-6	22	XLD22-10-47	20505	29030
SJ7.5×8.0	7500×8000	331	23	2900	Y200L2-6	22	BLD7-43-22L	22552	32796
SJ8.0×8.5	8000×8500	402	18.5	3300	Y250M-8	30	TPS315-3F	30559.5	42467.3
SJ8.5×9.0	8500×9000	480	18.5	3300	Y250M-8	30	TPS315-3F	34130	46623

Double-deck Scrubbing Thickener

Principle

The slurry is fed through the feeding cylinder. The slurry freely settled in the rake area will be further thickened by pressure of the scraper, gradually scraped by the rake to the center of the pond, and discharged into the next pond from the outlet by gravity. The materials will be washed by the clean water flowing through the distribution cabinet into the bottom layer. The overflow at the bottom layer will return to the distribution cabinet and enter the upper layer to wash the materials. The overflow of the first layer will be discharged from the overflow weir, and the materials washed for twice will be discharged from the bottom.

Features

Small floor space and energy saving.

Application

It is mainly used for the countercurrent washing in gold cyanide process, and can also be used for the washing and dewatering operation in wet metallurgy, light industry and chemical industry.

Technical Parameters

Spec.	Diameter (m)	Depth of Center Tank (m)	Subsidence Area (m^2)	Revolution of Harrow Frame (r/min)	Capacity (t/d)	Motor Model	Motor Power (kW)	Weight (kg)	Remarks
2NZS6	6	5.34	56.5	0.25	≤ 50	Y112M-6	2.2	13360	Excluding the pond weight
2NZS7	7	5.41	77		≤ 56			14200	
2NZS8	8	6.08	100.7	0.28	≤ 68	Y132M1-6	4	50449	Including the pond weight
2NZS9	9	5.91	127.3		≤ 88			54628	
2NZS12	12	6.87	226	0.2	≤ 160	Y132M2-6	5.5	40400	Excluding the pond weight
2NZS15	15	6.95	353.3	0.15	≤ 250			51470	

Cylindrical Filter

Technical Parameters

Filter Area (m^2)	Max. Filter Pressure (MPa)	Volume (m^3)	Dismounting Height (m)	Weight (kg)
20	0.05	5	6	3145
40	0.06	9.2		4958

Deoxidation Column

Technical Parameters

Model	Column Size (mm)	Working Pressure Vacuum Degree (MPa)	Working Temperature	Spray Amount ($m^3/m^2.h$)	Weight (kg)
TY-830	ϕ800×3000	0.09~0.096 0.09~0.096	Room temperature	1.56	747
TY-1030	ϕ1000×3000				956
TY-1136	ϕ1100×3600				1168
TY-1236	ϕ1200×3600				1232
TY-1435	ϕ1400×3500				1517
TY-1536	ϕ1500×3600				1632
TY-1840	ϕ1800×4000			2.08	2042
TY-2035	ϕ2000×3500				2642
TY-2036	ϕ2000×3600	0.2		1.8	3803
TY-2440	ϕ2400×4000			2	4524

Note: There are three types: Wood grid packing, wave packing, and new plastic mesh packing.

Triple-deck Scrubbing Thickener

Principle

The slurry is fed through the feeding cylinder. The slurry freely settled in the rake area will be further thickened by pressure of the scraper, gradually scraped by the rake to the center of the pond, and discharged into the next pond from the outlet by gravity. The materials will be washed by the clean water flowing through the distribution cabinet into the bottom layer. The overflow at the bottom layer will return to the distribution cabinet and enter the second layer to wash the materials. The overflow of the second layer will return to the distribution cabinet and enter the first layer to wash the materials. The overflow of the first layer will be discharged from the overflow weir, and the materials washed for three times will be discharged from the bottom.

Features

Small floor space and energy saving.

Application

It is mainly used for the countercurrent washing in gold cyanide process, and can also be used for the washing and dewatering operation in wet metallurgy, light industry and chemical industry.

Technical Parameters

Spec.	Diameter (m)	Depth of Center Tank (m)	Subsidence Area (m^2)	Revolution of Harrow Frame (r/min)	Capacity (t/d)	Motor Model	Motor Power (kW)	Weight (kg)	Remarks
3NZS6	6	7.44	38.5	0.25	≤ 50	Y112M-6	2.2	15360	Excluding the pond weight
3NZS7	7	7.51	115.5		≤ 56			16049	
3NZS8	8	8.58	151	0.28	≤ 68	Y132M1-6	4	50449	Including the pond weight
3NZS9	9	8.7	191		≤ 88			59092	
3NZS12	12	9.17	339	0.2	≤ 160	Y132M2-6	5.5	40500	Excluding the pond weight
3NZS15	15	9.3	530	0.15	≤ 250	Y160M2-8		51470	

Spiral Zinc Powder Feeder

Principle

Electromagnetic adjustable speed motor drives the turbine speed reducer through a belt to further drive the spiral pipe to rotate, and pushes the feeding of the zinc powder in the storage hopper.

Features

Spiral zinc powder feeder is a kind of zinc powder feeding machine newly developed by Xinhai with the following advantages.

With even and continuous spiral feeding, it has solved the problems of difficulty in adjusting zinc powder feeding amount in traditional machinery and uneven feeding amount, and reduced the residual zinc content, which not only reduces the production costs, but also improves the smelting effects.

With small area of zinc exposure in the air, the oxidation of the zinc powder is reduced in the operation, and the replacement effect is improved.

Application

It is applicable in the cyanidation gold process to fill the zinc powder evenly and continuously into the mixer filled with pregnant solution. In addition, it is also widely used for continuous and even feeding of powder materials in the industries such as mineral processing, chemical, pharmaceutical and food.

Technical Parameters

Model	Spiral Spec. (mm)	Feeding Amount (kg/h)	Rotating Speed of Spiral (r/min)	Motor Model	Motor Power (kW)	Weight (kg)
LXG-30	ϕ30×390	Adjustable	4.17~41.7	YCT112-4A	0.55	106

Belt Zinc Powder Feeder

Principle

It is a kind of special equipment used for zinc powder feeding through the belt in the zinc powder replacement process of extraction of gold by cyanidation.

Features

The equipment consists of belt feeder and mixing barrel, and is used to complete the zinc powder feeding and mixing operation of pregnant solution and zinc powder.
The zinc feeding amount every 8h can be laid evenly on the surface of the belt one time, and continuously and automatically added into the mixing tank for 8h after startup.
It can reduce the labor density and reduce the loss of zinc powder.

Application

It is applicable in the zinc powder replacement process to fill the zinc powder evenly and continuously into the mixer filled with pregnant solution. In addition, it is also widely used for continuous and even feeding of powder materials in the industries such as mineral processing, chemical, pharmaceutical and food.

Technical Parameters

Belt Type	Rubber Belt Width (mm)	Central Distance of Roller (mm)	Rubber Belt Speed (mm/min)	Valve Open/ Close Times (times/min)	Motor Model	Motor Power (kW)	Weight (kg)
250×1800	250	1800	3.5	28	Y90S-6	0.75	482

Automatic Zinc Powder Mixer

Technical Parameters

Model	Diameter of Hopper (mm)	Power Driven (Yes or No)	Weight (kg)
ZXH-50	500	No	60

Disc Zinc Powder Feeder

Principle

The structure and working principle of the disc zinc powder feeder is basically as the same as that of the common disc feeder, and is mainly composed of 3 parts including zinc powder hopper, disc and transmission device.

Features

Because of the less amount of the zinc powder, the disk diameter is generally 140~170mm and the rotating speed is about 1r/min. It has the feature that the zinc powder feeding amount can be adjusted according to the capacity and the gold grade of the solution. The equipment is driven by the motor through the V belt and the secondary worm gear reducer, drives the disc on the central shaft to rotate. The powder materials fed into the hopper fall down to the disc by the gravity, and are discharged from the outlet by the scraper as the disc rotates.

Application

It is applicable to the zinc powder replacement process to fill the zinc powder evenly and continuously into the mixer filled with pregnant solution. In addition, it is also widely used for continuous and even feeding of powder materials in the industries such as mineral processing, chemical, pharmaceutical and food.

Technical Parameter

Disc Type	Disc Diameter (mm)	Rotating Speed of Disc (r/min)	Feed Size (mm)	Feed Amount (kg/h)	Motor Model	Motor Power (kW)	Weight (kg)
ϕ140	140	1.13	0~2	1.5~2.4	Y801-4	0.55	65
ϕ170	170	1.14		1.5~3.6			76

Power-driven Zinc Powder Mixer

Technical Parameters

Model	Diameter of Hopper (mm)	Motor Model	Motor Power (kW)	Weight (kg)
DXH-510	510	A06324	0.25	180

Air Lifter

Technical Parameters

Model	Spec. of Suction Pipe (mm)	Spec. of Air Pipe (mm)	Scope of Application
KT60	ϕ50×2.5	DN20	SJ2.0×2.5，SJ2.5×2.5，SJ2.5×3.15，SJ3×3.15，SJ3×3.5，SJ3.15×3.55
KT100	ϕ108×4	DN25	SJ3.55×4，SJ4×4.5，SJ4.5×5，SJ5×5.6，SJ5.5×6，SJ7.5×8，SJ8×8.5
KT125	ϕ133×4	DN32	SJ8.5×9.0，SJ9×9.5，SJ10.5×11
KT150	ϕ159×4	DN40	SJ12×13

Note: The length of carbon suction pipe and air pipe varies by the specification of leaching tank.

Carbon-lifting Pump

Technical Parameters

Model	Head (m)	Flow (m^3/h)	Rotating Speed of Main Shaft (r/min)	Diameter of Discharge Pipe (mm)	Motor Model	Motor Power (kW)	Weight (kg)	Remarks
TB-3	3	5.76	516	50	Y100L1-4	2.2	630	Type 50I
TB-7	7		817		Y112M-4	4	640	Type 50II

Carbon Screen

Technical Parameters

Model	Diameter of Screen Frame (mm)	Length of Screen Frame (mm)	Sieve Size/ Mesh	Weight (kg)
SY100	100	1000	28	10
SY125	125	1000	28	13
SY200	150	1000	28	14
SY250	200	1000	28	16
SY300	300	1000	32	24
SY500	500	1000	32	35

High-Efficiency Low-consumption Rapid-desorption Electrowinning System

Principle

Add some anion more easily absorbed by activated carbon to replace $Au(CN)_2^-$ and realize the desorption of gold. The pregnant solution from desorption of gold loaded carbon will be recycled by the ionization method, so as to get the solid gold.

Features

High temperature, high pressure, cyanide-free desorption, automatic control, high efficiency, low energy consumption, and fast operation;

High efficiency: When the grade of the gold loaded carbon reaches 3000g/t, the desorption rate can reach above 96%. The grade of barren carbon can be reduced by 3-4 times than that of the conventional desorption electrolysis device.

Rapid: The temperature of the desorption electrolysis can reach 150℃ (30-55℃ higher than that of other models at the first stage), and the working pressure of the system can reach 0.5(MPa) (0.2-0.5(MPa) higher than that of other models at the first stage). Therefore, the time for desorption electrolysis is very soon, which is generally 12 hours, with nearly 3 times shortened.

Low consumption: The temperature of desorption electrolysis is the same with no need to heat. As the operation is fast, the total power consumption is 1/2-1/4 of the conventional system.

Cyanide-free: No sodium cyanide is added for desorption electrolysis to realize low costs and no pollution.

High grade of all slime without anti electrolysis with easy extraction of gold mud.

Automatic control: Specially set liquid level control system, temperature control system and automatic control system.

Safe: With triple safety protection measures, namely, self intelligent system, automatic pressure limiting and release system and safety valve.

Application

It is used for the extraction of solid gold from gold loaded carbon by cyanidation.

Capacity List

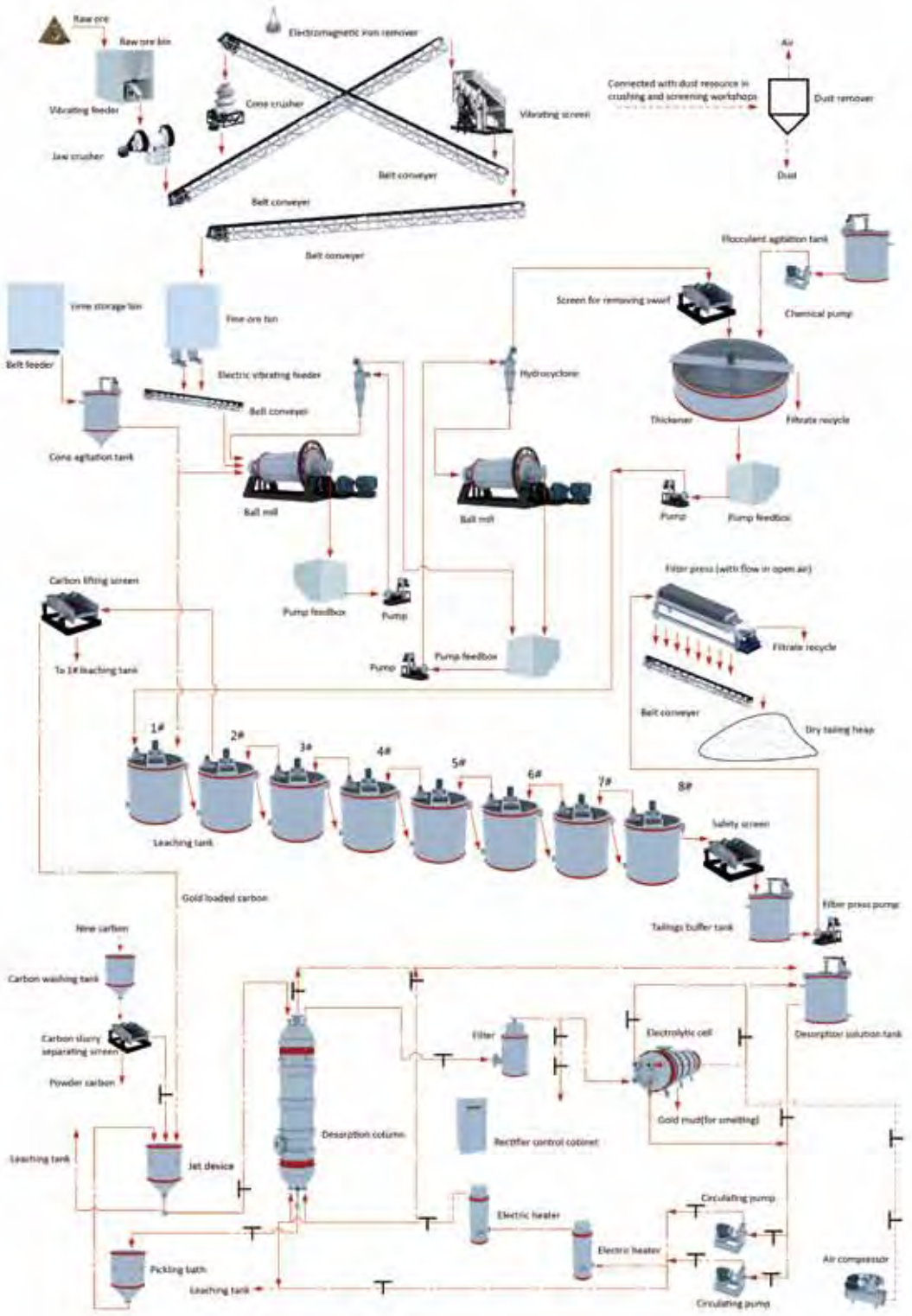
Capacity of Standard Process (kg/d)	Capacity of Overloading Process (kg/d)	Recommended Model (kg/batch)
300	750	XH-200
450	1000	XH-300
650	1700	XH-450
750	1800	XH-500
900	2200	XH-600
1130	2700	XH-750
1500	3600	XH-1000
1800	4500	XH-1200
2250	5500	XH-1500
2700	6500	XH-1800
3000	7500	XH-2000
3750	9000	XH-2500
4500	11000	XH-3000
5200	13000	XH-3500
6000	15000	XH-4000
7500	18000	XH-5000

Technical Parameters

<table>
<tr><th rowspan="2">Model</th><th colspan="2">Suitable Scale</th><th rowspan="2">System Equipment List</th><th rowspan="2">System Instrument List</th><th rowspan="2">Operation Parameters</th></tr>
<tr><th>Mine Scale (t/d)</th><th>Raw Ore Grade (g/t)</th></tr>
<tr><td>GJD-200</td><td>＜ 150</td><td rowspan="12">2~8</td><td rowspan="20">S1 Desorption Column
S2 Filter
S3 Electrolytic Tank
S4 Circulating Pump
S5 Electric Heater
S6 Carbon Ejector
S7 Air Compressor
S8 Desorption Solution Tank
S9 Clarified Water Pump
S10 Acid Storage Tank
S11 Magnetic Pump
S12 Carbon Storage Tank
S15 Control Cabinet
S16 Silicon Rectifier Cabinet
S17 Pickling Tank</td><td rowspan="20">B1 Electric Resistance Remote Transmission Diaphragm-Seal Pressure Gauge
B1 Pressure Indication Adjusting Meter
B2 Diaphragm Pressure Gauge
B3 Vortex Shedding Flowmeter
B3 Flow Integrating Instrument
B4 Thermal Temperature Meter
B5 Temperature Sensor
B5 Temperature Indication Adjusting Meter
P6 Diaphragm Pressure Gauge
B7 Level Meter
B9 Temperature Sensor
B9 Temperature Indication Adjusting Meter</td><td rowspan="20">Desorption Solution:
PH ≥ 13.5
Time of Application:
Infinite
Electrolysis Start:
100-110℃
Electrolysis Ending:
150℃
Electrolysis Current:
350-1250A
Electrolysis Pressure:
2-4V
Pressure at 150℃ :
Upper of Desorption Column:
0.50-0.57MPa
Electrolytic Tank:
0.45-0.52MPa</td></tr>
<tr><td>GJD-300</td><td rowspan="2">150~300</td></tr>
<tr><td>GJD-450</td></tr>
<tr><td>GJD-500</td><td rowspan="3">300~500</td></tr>
<tr><td>GJD-600</td></tr>
<tr><td>GJD-750</td></tr>
<tr><td>GJD-1000</td><td rowspan="4">500~1000</td></tr>
<tr><td>GJD-1200</td></tr>
<tr><td>GJD-1500</td></tr>
<tr><td>GJD-1800</td></tr>
<tr><td>GJD-2000</td><td rowspan="3">1000~2000</td><td rowspan="8">2~20</td></tr>
<tr><td>GJD-2500</td></tr>
<tr><td>GJD-3000</td></tr>
<tr><td>GJD-3500</td><td rowspan="3">2000~3000</td></tr>
<tr><td>GJD-4000</td></tr>
<tr><td>GJD-5000</td></tr>
<tr><td>Especial</td><td>＞ 3000</td></tr>
</table>

Note: No pickling tank in economic process.

Production Line Flow Diagram of Gold Mine All-Sliming CIL Plant



Carbon Regeneration System

The regeneration of activated carbon is necessary supporting equipment in metallurgy system and water treatment system, and is widely used in the activation, regeneration and recycling field of activated carbon after absorbing the gold in the carbon-in-pulp (CIP) process, pond leaching process and heap leaching process. It is not only suitable for large and medium mines, but also suitable for promotion in small gold plant. As for gold mine, the cost on burning activated gold loaded carbon is 5 yuan/g. This kind of product is your ideal choice to reduce the production costs.

I. Activated Carbon Regeneration Furnace

Application

The self-control activated carbon regeneration furnace is suitable for the fire regeneration of various powder activated carbon such as coconut shell charcoal and apricot charcoal, and is widely used in the gold industry, water treatment industry, etc.

Features

Depending on the characteristics of carbon and water, activated carbon regeneration furnace can finish the drying, high-temperature carbonization and activation continuously at one time in the self-control current operation. Meanwhile, it keeps the micro positive pressure in the whole regeneration system. After regeneration, the iodine value of the carbon can be restored to over 95%. The system has the features of high regeneration rate, low consumption, low carbon consumption and reliable operation.

Principle

After the regeneration activated carbon is fed into the hopper and enters the furnace, the carbon will form into flow carbon layer, and the carbon treatment volume will be controlled by the discharging device. According to the moisture content of activated carbon, the residence time is generally 15-25 minutes. The current will be input into the terminal plate through the circuit, and makes the activated carbon self heat through the flow carbon layer so as to achieve drying, activation and carbonization. The temperature control circuit composed of temperature measuring elements and temperature controller makes the temperature in the furnace kept at 700-850 ℃ , which is the optimal temperature for regeneration. Some of the moisture carried by the activated carbon will form into high temperature steam at high temperature, flows the surface of the hot carbon continuously, and achieves the regeneration of activated carbon. It is appropriate when the moisture content of the regenerated activated carbon reaches 5% or so.

Technical Parameters

Model	Capacity (kg/d)	Power (kW)	Voltage (v)	Recovery Rate of Carbon Adsorption	Loss Rate of Carbon	Residence Time of Carbon (min)
HZL800	600~800	50	380	90-95% (Iodine meter)	< 2%	15~25
HZL1600	1000~1600	80	380	90-95% (Iodine meter)	< 2%	15~25
HZL2500	2000~2500	120	380	90-95% (Iodine meter)	< 2%	15~25

II. Activated Carbon Dryer

Technical Parameters

Model	Capacity (kg/d)	Heat Source (specified when ordering)
THGJ-1000	800~1000	Diesel oil, coal, and electricity
THGJ-1500	1000~1500	Diesel oil, coal, and electricity
THGJ-2500	2000~2500	Diesel oil, coal, and electricity

GOLD-SMELTING

- Revolve Gold-Smelting Furnace
- Casting Bogie with Silver Anode
- Casting Mould for Gold and Silver Ingot
- Cone Casting Mould for Alloy
- Silver Electrolytic Cell
- Electrolyte Preparation Vessel
- High Voltage Cell of Silver Electrolyte
- Low Voltage Cell of Silver Electrolyte
- Sump for Electrolytic Waste Solution
- Silver Powder Filter
- Water (Vitriol) Scale Tank
- Generation/Absorption Column
- Pickling Tank
- Liquid-Storage Tank of High Position
- Liquid-Storage Tank of Low Position
- Titanium Reaction Kettle
- Vitreous Enamel Reaction Kettle
- WGR-1 High-frequency Induction Gold-melting Electric Furnace
- Non-core Induction Melting Furnace with Intermediate Frequency
- Titanium Pump Under Liquid

GOLD-SMELTING

Revolve Gold-smelting Furnace

Technical Parameters

Model	Specs.	Fused Bath Depth (mm)	Oil Pressure (MPa)	Air Pressure (Pa)	Air Consumption (m^3/h)	Furnace Tank Specs. (mm)	Charge Weight (kg)	Driving Type	Weight (kg)
LJL112140	ϕ1120×1404	300	0.1	3920~7845	115~164	700×940	230	Manual	4009
LJL95140	ϕ950×1404	235		3920~5880	100	530×940	180		3489

Casting Bogie with Silver Anode

Technical Parameters

Model	Overall Dimension (L×W×H)(mm)	Silver Anode Spec. (L×W×H) (mm)	Casting Method	No. of Blocks Casted	Weight (kg)
YL1-3	1375×440×470	260×190×15	Casting when erecting the formwork	15	556

Casting Mould for Gold and Silver Ingot

Technical Parameters

Model	Materials	Overall Dimension (L×W×H) (mm)	Weight (kg)
Yl1-4	Spherical Graphite Cast Iron	310×113×60	11

Cone Casting Mould for Alloy

Technical Parameters

Model	Materials	Spec. (mm)	Weight (kg)
YL1-5	ZG200-400	ϕ160/30×230	20
YL1-13		ϕ250/350	42

Silver Electrolytic Cell

Technical Parameters

Model	Cell Voltage (V)	Single Cell Dimension (mm)	Current Intensity (A)	Desorption Solution Temperature℃	Cathode Area (Single) (m^2)	Weight (kg)
YL1-7	3~4.5	700×500×600	300	45~55	0.168	472

Electrolyte Preparation Vessel

Technical Parameters

Model	Vessel Spec. (L×W×D) (mm)	Weight (kg)
YL1-8	800×800×800.	162
YL1-22	2000×1200×1000	284

High Voltage Cell of Silver Electrolyte

Technical Parameters

Model	Vessel Spec. (L×W×H) (mm)	Weight (kg)
YL1-9	1200×1000×1000	162

Low Voltage Cell of Silver Electrolyte

Technical Parameters

Model	Vessel Spec. (L×W×D) (mm)	Weight (kg)
YL1-20	2000×2000×1000	355

Sump for Electrolytic Waste Solution

Technical Parameters

Model	Vessel Spec. (L×W×D) (mm)	Weight (kg)
YL1-21	2000×1500(2000)×1000	397(355)

Silver Powder Filter

Technical Parameters

Model	Vessel Spec. (mm)	Materials	Weight (kg)	Remarks
YL1-10	ϕ1000×480	Rigid PVC	86	Circular Section
YL1-14	ϕ1000×1000×480		118	Square Section

Water (Vitriol) Scale Tank

Technical Parameters

Model	Vessel Spec. (Diameter× Height× Wall Thickness) (mm)	Weight (kg)
YL1-17	ϕ600×1200×4	115.5

Generation/Absorption Column

Technical Parameters

Model	Spec. (D×H) (mm)	Weight (kg)	Remarks
FST/XST-0864	ϕ800×6418	800	Plastic Material
FST/XST-1381	ϕ1300×8100	4998（2420）	Plastic Material in the Parenthesis

Pickling Tank

Technical Parameters

Model	Volume (m^3)	Dimension (L×W×H) (mm)	Weight (kg)	Remarks
JDCS(S)-0.48	0.48	1080×1080×500	90	Resin Desorption

Liquid-Storage Tank of High Position

Technical Parameters

Model	Volume (m^3)	Overall Dimension (L×W×H) (mm)	Weight (kg)	Material
JDCG(S)-0.64	0.64	800×800×1000	92	Rigid PVC

Liquid-Storage Tank of Low Position

Technical Parameters

Model	Volume (m^3)	Overall Dimension (L×W×H) (mm)	Weight (kg)	Remarks
JDCS(S)-0.4	0.4	800×650×900	69	Rigid PVC

Titanium Reaction Kettle

Technical Parameters

Model	Electrothermal Power (kW)	Dimension (mm)	Outer Diameter Dimension (mm)	Agitating Motor Power (kW)	Weight (kg)	Remarks
30L	3×2	Φ350	Φ718×1900	0.55	250	Steam boiler heat can be selected for clients.
50L		Φ400	Φ824×2015	0.75	270	
100L	6×2	Φ500	Φ1004×2120	1.1	340	
200L		Φ600	Φ1104×2300	1.5	700	
300L	6×3	Φ700	Φ1208×2495	2.2	700	
500L	9×4	Φ900	Φ1468×2695		930	
1000L	12×4	Φ1200	Φ1896×3110	4.0	1610	
2000L	15×4	Φ1400	Φ2005×3500	5.5	2010	
3000L		Φ1600	Φ2165×3600	7.5	2590	
4000L		Φ1700	Φ2265×3800	11	3160	
5000L	18×5	Φ1800	Φ2370×4000	15	4100	

Vitreous Enamel Reaction Kettle

Technical Parameters

Spec.	Nominal Volume (L)	Actual Volume (L)	Heat Exchange Area (m^2)	Design Pressure (MPa)	Agitating Motor Power (kW)	Weight (kg)
50L	50	70	0.54	0.4/0.6	0.75	486
100L	100	127	0.84		1.1	552
200L	200	247	1.5		1.5	704
300L	300	369	1.9		2.2	945
500L	500	588	2.6		2.2	1104
1000L	1000	1245	4.5		4.0	2085
2000L	1500	1714	5.8		5.5	2550
3000L	2000	2179	7.2		7.5	2782
4000L	3000	3380	9.3		11	4068
5000L	5000	5435	13.4		15	5724

WGR-1 High-frequency Induction Gold-melting Electric Furnace

Technical Parameters

Model	Power Voltage (V)	Input Voltage (V)	Melting Gold Weight (kg)	Output Oscillating Current (A)	Oscillation Frequency (kHz)	Cooling Hydraulic Pressure (MPa)	Melting Time (min)
WGR-1-5	Three-Phase Wire 380	360~410	1	180~700	30-100	0.1-0.3	< 5
WGR-1-10			3-4	180~1200			< 8

Non-Core Induction Melting Furnace with Intermediate Frequency

Technical Parameters

Name	Unit	Model		
		GWJ-0.15	GWJ-0.25	GWJ-0.5
		-100/1	-160/1	-250/1
Rated Power of the Device	kW	110	170	275
Rated Voltage of the Device	V	380	380	380
Rated Frequency of the Device	H	50	50	50
Rated Number of Phases of the Device	t/h	3	3	3
Rated Factor of the Device	kW. t/h	0.85	0.85	0.85
Melting Rate of the Device	t/h	0.12	6.18	0.35
Power Consumption of the Device	V	850	800	750
Water Consumption of the Device	t/h	5	5	10
Inversion Output Voltage	V	750	750	750
Inversion Output Current	A	250	350	550
Rated Current of the Electric Furnace	kW	100	160	100
Rated Frequency of the Electric Furnace	V	650	750	1300
Rated Frequency of the Electric Furnace	H	1000	1000	1000
Number of Phases of the Electric Furnace	phase	1	1	1
Rated Capacity of the Electric Furnace	kg	150	250	500
Rated Temperature of the Electric Furnace	℃	1600	1600	1600
Furnace Body Weight (Without Furnace Lining)	Kg	540	600	1000

Titanium Pump Under Liquid

Technical Parameters

Model	Flow (m^3/t)	Head (m)	Flow Passing Part Material
TYB5-15	5	13	Titanium

SLURRY PUMP AND VALVE

- XPA Wear-resistant Rubber Slurry Pump
- XPAII High-head Wear-resistant Rubber Slurry Pump
- XPB Slurry Pump
- Wear-resistant Pinch Valve
- Clamp Gapless Valve
- Tee Check Valve

SLURRY PUMP AND VALVE

XPA Wear-resistant Rubber Slurry Pump

Principle

Driven by motor, the pump body and inlet line are filled with liquid before starting the pump. With high-speed rotation, the impeller drives the liquid between the vanes to rotate together. Due to the effect of centrifugal force, the liquid is thrown to the outer edge of impeller from the impeller center with kinetic energy increased. After the liquid entering the pump shell, as the flow channel in the volute type pump shell is gradually enlarged, the liquid velocity is decreased gradually, which makes part of the kinetic energy transform into static energy, therefore the liquid with high pressure is discharged along the outlet. At the same time, the impeller center forms a certain vacuum for that the liquid is thrown out. The pressure on liquid level is higher than that of impeller center, so the liquid in suction pipe will flow into the pump under the action of pressure difference. With the constant rotation of impeller, the liquid is sucked and extruded continuously.

Features

Based on the outstanding wear resistance of rubber and the molded rubber flow parts, XPA series wear-resistant rubber lined pump has absolute authority in terms of wear resistance. It has the features of smooth operation, energy convervation, low noise, cost saving, high efficiency, easy maintenance, and durability.

The maximum concentration of pulp delivery should be no more than 60% (weightometer).

The temperature of pulp delivery is among - 40 - + 70 ℃ .

Application

Xinhai rubber pump is suitable for handling corrosive slurry or fluid containing solid materials, exceeding the scope of application of metal and other types of pumps.

Beneficiation-metallurgy plant: Hydrocyclone feeding in grinding ore cycle (including the first stage of grading hydrocyclone); pump delivery, concentration & filtering of tailings, concentrates and intermediate products; all kinds of slurry pump delivery.

Power plant: The delivery of tail ash, slag and coal slurry.

Sand and gravel plant: Sand and gravel transportation, sand and water supply of mining, all kinds of classification and dewatering equipment with remarkable wear resistance by contrast.

Coal preparation plant: Grading, screening and conveying of dense medium; coal slurry transportation.

Chemical plant: The treatments of chemical liquid, acid or base, slurry, and waste water at low and medium temperature.

Water conservancy project: Damming, bed silt displacement, sand and gravel classification, etc.

Paper mill: The treatments of clay slip, paper pulp and waste water.

Ceramic and glass plant: porcelain clay and sand & gravel transportation, hydrocyclones feeding and waste water treatment.

Steel Plant: The delivery of slurry, Oxide skin, and corrosive liquid.

Special instructions should be offered to us if with oil and chemical.

Technical Parameters

Model & Spec.	Flow (m^3/h)	Max. Head (m)	Rotating Speed (r/min)	Max. Rated Power (kW)	Max. Efficiency (%)	Impeller Diameter (mm)	Weight (kg)	Overall Dimension (mm)
XPA 50/50	20~60	38	800~2400	22	51	200	156	725×482×491
XPA 80/80	30~100	45	600~2100	45	53	256	326	915×590×595
XPA 100/100	60~160	50	600~1600	75	57	340	440	999×648×660
XPA 150/125	100~260	47	400~1400	110	63	372	608	1280×736×758
XPA 200/150	160~450	47	450~1200	132	69	433	736	1313×788×822
XPA 250/200	300~900	46	400~1200	250	78	454	1250	1600×812×956
XPA 300/250	400~1500	45	300~900	600	73	610	1956	1698×966×1083

XPAII High-head Wear-resistant Rubber Slurry Pump

Principle

Driven by motor, the pump body and inlet line are filled with liquid before starting the pump. With high-speed rotation, the impeller drives the liquid between the vanes to rotate together. Due to the effect of centrifugal force, the liquid is thrown to the outer edge of impeller from the impeller center with kinetic energy increased. After the liquid entering the pump shell, as the flow channel in the volute type pump shell is gradually enlarged, the liquid velocity is decreased gradually, which makes part of the kinetic energy transform into static energy, therefore the liquid with high pressure is discharged along the outlet. At the same time, the impeller center forms a certain vacuum for that the liquid is thrown out. The pressure on liquid level is higher than that of impeller center, so the liquid in suction pipe will flow into the pump under the action of pressure difference. With the constant rotation of impeller, the liquid is sucked and extruded continuously.

Features

Lined with wear-resistant rubber, and with standard configuration of molded rubber flow parts, XPAII series double-stage wear-resistant rubber pump is a kind of rubber slurry pump with special performance.

Advanced and fresh design of hydraulic power and structure, high efficiency, abrasion resistance, and stable and reliable operation; high head; simple and reliable shaft seal with no leakage; used in filter-press industry without frequency control of motor speed, and with high transportation concentration.

Application

It is used for slurry liquid in mineral processing and chemical plant, especially suitable for feeding pressure and tailings pumps that are specially used for filter press, breaking the limitation of the working condition that is the rubber pump cannot be used in the lift of exceeding 60 meters, and enlarging the application fields of rubber pump.

Technical Parameters

Item / Model	Rotating Speed (r/min)	Flow (m^3/h)	Head (m)	Max. Shaft Power (kW)	Motor (kW)	
					Model	Power
XPA (2)-50	1480	27.5	76.0	22.3	Y225S-4	37
		41.4	72.2			
		55.2	66.1			
		69.0	56.0			
		80.0	43.5			
XPA (2)-65	1480	40.0	76.0	32	Y225M-4	45
		60.0	72.2			
		80.0	66.1			
		100.0	56.0			
		115.0	43.5			
XPA (2)-75	1480	56.0	73.3	49	Y250M-4	55
		85.0	69.0			
		113	62.5			
		150	51.2			
		169	44.0			
XPA (2)-100	1480	70.0	73.5	62.5	Y280S-4	75
		105	71.6			
		140	68.6			
		186	61.9			
		245	48.5			
XPA (2)-100- Ⅰ	1480	79.7	80.0	78.2	Y280M-4	90
		119	78.0			
		159	74.8			
		211	67.5			
		279	52.9			
XPA (2)-100- Ⅱ	1480	58.0	91.8	64.7	Y280M-4	90
		87.0	89.1			
		116	85.7			
		154	77.3			
		203	60.6			

XPB Slurry Pump

Principle

Driven by motor, the pump body and inlet line are filled with liquid before starting the pump. With high-speed rotation, the impeller drives the liquid between the vanes to rotate together. Due to the effect of centrifugal force, the liquid is thrown to the outer edge of impeller from the impeller center with kinetic energy increased. After the liquid entering the pump shell, as the flow channel in the volute type pump shell is gradually enlarged, the liquid velocity is decreased gradually, which makes part of the kinetic energy transform into static energy, therefore the liquid with high pressure is discharged along the outlet. At the same time, the impeller center forms a certain vacuum for that the liquid is thrown out. The pressure on liquid level is higher than that of impeller center, so the liquid in suction pipe will flow into the pump under the action of pressure difference. With the constant rotation of impeller, the liquid is sucked and extruded continuously.

Features

The design is based on liquid-solid two-phase flow theory, and the head can reach 118 m;

Reasonable design of internal structure avoids the interference of pulp impact; no congestion ensures. It can be applied in a variety of working conditions.

Alloy wear-resistant material is used for impeller with large diameter and low speed.

Changeable elastic body or clad lining.

Application

It is used for slurry delivery with strong corrosion and high concentration in metallurgical, mining, coal, power, and building materials industrial departments. This type pump can also be used for multistage-series.

Technical Parameters

Size Range (Outlet)	Flow	Head
50 mm~350 mm	Max. 3798 m^3/h	Max. 118 m, Average 60 m

Wear-resistant Pinch Valve

Principle

Pipeline switch is realized by the screw rotation driving clamping device close to the center line. The ingenious design of internal structure makes the clamping device driven by the screw rotation close to the center line fast, more reliable and faster valve on-off, and lighter damage to the rubber pipe. Super wear-resistant rubber with special “liquid nanometer formula” is used for valve core rubber pipe, which has better elasticity, fatigue resistance and more duration. The wear-resistant degree is 10 times that of ordinary rubber, and the overall dimensions are the same with the valve core of ordinary rubber pipe, so they are interchangeable. Casting is usually used for shell, which can also be made from aluminum alloy.

Features

Manual operation is generally used for Xinhai brake valve products, according to the requirements of the users, power-driven and gas-driven operation can also be used.

Whole section: Almost no flow resistance.

Replaceable linings: The change of linings is simple, and the valve is good as new.

High sealing: Excellent elastic linings are used for sealing solid particles.

Abrasion: Produced with “the liquid nanometer formula, high-frequency curing at normal temperature” technology, the service life of the super wear-resistant rubber is 10-15 times that of the ordinary rubber, and 3-6 times that of polyurethane.

Fatigue resistance: The fatigue resistance of rubber is strong, and the use is more durable, which has a world of difference compared with ordinary rubber.

Part of machinery protection: Only the rubber linings touch the materials which makes part of machinery protection.

Change: The change is very convenient, and the cost is very low.

Application

It is used for mine pipeline transportation of the materials with medium & high abrasion, and high corrosion.

Technical Parameters

Diameter Range DN 20-350 mm.

Maximum Working Pressure of Linings 10.5 kg/cm^2.

Clamp Gapless Valve

Principle

Clamp gapless valve is composed of valve seat, valve liner, gate, support and driving device. Two valve seats make valve liner closely match under the action of assembly pre-tightening force, forming a docking short pipe. When the valve is closed, the gate will wedge between the two seat covers to cut the fluid, and closely match with the valve by the excellent elasticity of wear-resistant rubber valve liner to ensure the seal.

Features

The product has features of compact structure, small volume, light weight, convenient operation and maintenance, and is suitable for the occasions with particles or serious abrasion of sediment. According to different pressure and corrosive state, the material of gate includes stainless steel, ultra-high molecular weight polyethylene and the mixture between them. The injection nozzle set on the valve body can reduce the gate friction and the valve open-close torque.

The valve can be replaced with rubber molded parts. Manual operation is generally used for Xinhai brake valve products, according to the requirements of the users, power-driven and gas-driven operation can also be used. It can not only be made on site but also be controlled remotely. Structure length and flange size can be determined usually according to national standards, and can be also according to users' requirements.

Application

Big open-close is used for clamp gapless valve, and is suitable for installing on hydrocyclones feeding, tailings pipelines or double circuit lines to be as an on-off. The suitable medium includes pulp, ash slurry, acid and base corrosive mediums.

Technical Parameters

Diameter Range: DN50-300 mm.
Working Pressure: 0.6 MPa,1.0 MPa, 1.6 MPa.

Tee Check Valve

Principle

There are two slurry pumps produced, one is used for production, the other is used for standby application. When one of the pumps and valves are opened, there will be a serious congestion between the closed valve and tee joint neck, which causes the difficulty in opening in the future. A tee joint automatic reversing valve is instead of two valves. When opening one of them, the other one has no slurry.

Features

Tee check valve can save a pipe line input by just taking the price of a valve, and can easily realize automation control.

The valve is lined with world-famous wear-resistant rubber.

It is convenient, practical, and durable.

Application

It is used for slurry, slag, tailings, a variety of drainage systems of standby pump, and chemical corrosive medium.

Technical Parameters

Nominal Pressure (MPa)	0.7			
Diameter Range (mm)	DN65-500			
Test Pressure	Seal	1.0	Test Medium	Water
	Intensity	1.5		Water
Working Pressure (MPa)	≤ 1.0			
Working Medium	Slurry, Slag, Tailings, etc.			

NONMETAL PROCESSING

- Hindered Settler
- High-efficiency Agitation Scrubber
- Chamber Agitation Scrubber
- Screw Tank Scrubber
- Decagonal Screen
- Bucket Elevator with Sand-water Separation
- High-efficiency Agitation Tank
- Delivery Processor
- Desliming Bucket
- Slurry Distributer

NONMETAL PROCESSING

Hindered Settler

Principle

Hindered settler is a kind of hindered settling equipment. Its working principle is that the water with a certain velocity and pressure flows into the tank, and forms the turbulent flow through the holes on the steady flow plate into the cylinder. Materials flow into the cylinder through the inlet, and the large particles sink faster than the small ones in water in the same proportion; and in the same size and different specific gravities, the particles with large specific gravity sink faster than the ones with small specific gravity. The materials of a certain grade will keep the state of suspension with the effect of rising water, and the area of which is called turbulent flow area. The larger particles or the ones with larger specific gravity will sink to the bottom through the turbulent flow area, and are discharged from bottom valve; the smaller particles or the ones with smaller specific gravity will not get through the turbulent flow area, but float to the top, and then flow out from the overflow tank. The voltage detector is inserted in the slurry in turbulent flow area, and shows the pressure of the slurry. The continuous separations of materials are according to the above process.

Application

It is used for strict classification of silica sand, or other coarse and fine particle minerals, which can replace the fine screen to control the particle size.

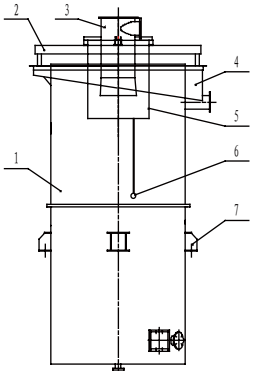
It is used for the separation of minerals with specific gravity difference. (Such as the separation of coal and shale in coal industry);

It is used for the dewatering and desliming of minerals.

Features

Due to the effect of rising water, the particle size classification can be completed for the materials in cylinder body with high production efficiency and low energy consumption.

Equipped with automatic control system, the adjustment of operation parameters can be simple, convenient and easy to control.



1. Cylinder Body
2. Support
3. Feed Inlet
4.Overflow Tank
5. Retaining Ring
6. Pressure Sensor
7. Bearing Seat

Structure Sketch of Hindered Settler

Special equipment is equipped on the water tank located at the bottom of the cylinder. The rising water hole will shut down automatically when cutting off the water supply, and the materials in cylinder body will not block the hole and flow into the tank.

Lined with Xinhai wear-resistant rubber ensures high wear resistance, anti-corrosion, and no iron pollution.

Equipment Structure

The hinder settler is mainly composed of cylinder body, support, feed inlet, overflow tank, retaining ring, bearing seat, pressure sensor, electric valve, automatic control system, etc. As shown in the figure.

Technical Parameters

Model	SZC12	SZC15	SZC18	SZC21	SZC24	SZC30	SZC40	SZC50	SZC60	SZC60
Spec. (mm)	ϕ1200	ϕ1500	ϕ1800	ϕ2100	ϕ2400	ϕ3000	ϕ4000	ϕ5000	ϕ6000	ϕ9000
Feed Size (mm)	0~5	0~5	0~5	0~5	0~5	0~5	0~5	0~5	0~5	0~5
Grading Range (mm)	0.1~1	0.1~1	0.1~1	0.1~1	0.1~1	0.1~1	0.1~1	0.1~1	0.1~1	0.1~1
Capacity (t/h)	5~10	10~15	15~20	20~25	30~40	40~50	50~150	30~100	40~120	50~150
Feeding Water Flow (m^3/h)	30~80	40~120	40~150	60~180	80~300	100~350	200~350	80~350	100~350	200~350
Water Pressure (MPa)	0.08~0.3	0.08~0.3	0.08~0.3	0.08~0.3	0.08~0.3	0.08~0.3	0.08~0.3	0.08~0.3	0.08~0.3	0.08~0.3
Self-Control Power (kW)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Weight (kg)	1103	2040	2630	3872	3770	6167	10900	7190	10550	22125

Note: Water pressure refers to the feed water pressure required by the tank inlet of the hindered settler , and should be steady.

High-efficiency Agitation Scrubber

Features

Hexagonal tank, triple impellers, and good scrubbing effect.

High concentration, high speed, and high efficiency agitation and scrubbing with strong strength.

Vane, shaft and tank are made of or covered with the world-famous super wear-resistant Xinhai rubber.

Technical Parameters

Model	Effective Volume (m^3)	Shape	Impeller		Electric Motor			Weight (kg)
			Diameter (mm)	Rotating Speed (r/min)	Model	Power (kW)	Rotating Speed (r/min)	
GJC×1.5	1.5	hexahedron	ϕ750	200	Y200L-4	30	1470	2400
GJC×2.8	2.8		ϕ1000	150	Y225S-4	37		3935
GJC×4.4	4.4		ϕ1250		Y280L-4	75		6200

Chamber Agitation Scrubber

Features

Quadrangle chamber tank, double impellers, and good scrubbing effect.

Scrubbing with strong force.

Vane, shaft and tank are made of or covered with the world-famous super wear-resistant Xinhai rubber.

Technical Parameters

Model	Effective Volume (m^3)	Impeller Diameter (mm)	Impeller Rotating Speed (r/min)	Motor Model	Motor Power (kW)	Motor Rotating Speed (r/min)	Weight (kg)
CXG1	0.8	500 (up) 450 (down)	300	Y180L-6	15	970	1504

Screw Tank Scrubber

Features

Double screws, especially suitable for scrubbing the ores with slime.

Scrubbing with strong force.

Vane, shaft and tank are made of or covered with the world-famous super wear-resistant Xinhai rubber.

Technical Parameters

Model	Inner Length of Tank (mm)	Inner Width of Tank (mm)	Capacity (t/h)	Feed Size (mm)	Dip Angle	Pitch (mm)	Motor		Weight (kg)
							Model	Power (kW)	
CXK1566	6660	1500	35~40	< 75	10.84°	300	Y200L2-6	22	15800
CXK1676	7360	1600	40~50		10°		Y250M-6	37	17168

Decagonal Screen

Principle

Repeated classification of ores and sands can be conducted with simple structure and high efficiency, using equilateral and decagonal structure with friction resistance, built-in double-threaded screw material accelerator, and three-grading particle screening technology.

Features

The unique structure can reduce the friction of materials on the screen mesh, and increase the service life of the screen mesh.

The screen mesh can be changed conveniently and efficiently according to the wear condition.

A variety of different particle sizes of materials can be acquired simultaneously by the three-grading particle classification.

Technical Parameters

Model	Diameter (mm)	Length (mm)	Rotating Speed (r/min)	No. of Graded Product	Motor Model	Power (kW)
SJS1030	1000	3030	10	2-4	XWD3-5-5X-47	3
SJS1235	1200	3500	10	2-4	XWD2.2-4X-1/29	2.2
SJS1535	1500	3500	14	2-4	XWD5.5-6X-1/29	5.5
SJS1540	1500	4000	14	2-4	XWD11-8170-29	7.5
SJS2040	2000	4000	14	2-4	XWD22-8190-29	22

Bucket Elevator with Sand-water Separation

Features

The equipment is used for both lifting and dewatering.

The equipment is produced according to the Japanese tech introduced.

Auto-dewatering is conducted while the sand-water is being lifted.

Technical Parameters

Bucket Volume (m^3)	Lifting Speed (m/s)	Max. Lifting Capacity (m^3/h)	Transmission System			Weight (kg)
			Model	Power (kW)	Speed Ratio	
0.01	11.8	12	XWD1.5-4-43	1.5	43	883

High-efficiency Agitation Tank

Principle

The mineralization effect of non-metal mineral agent on minerals can be improved effectively, and the problem of rapid mineral sedimentation also can be solved. (Refer to Agitation Equipment for details)

Delivery Processor

Features

It can be used for lifting, desliming, concentration, and decomposition.

The equipment is produced with American technology.

External labyrinth bottom end shaft head.

Vane and tank can be lined with the world-famous super wear-resistant rubber.

Technical Parameters

Model	Feed Size (mm)	Dip Angle (°)	Rotating Speed of Screw Shaft (r/min)	Capacity (t/h)	Motor Power (kW)	Weight (kg)
ϕ540×4600	30	12	23	20~25	7.5	3900
ϕ1070×4600	30		22		7	
ϕ1600×7630	75	10	23	40~50	40	18000
ϕ1800×6000	70			70	55	14200
SX750	30	16	23.36	10~20	11	4530

Desliming Bucket

Principle

It is a kind of simple equipment used for classification, desliming and concentration. Its outline is an inverted cone. The feed cylinder is set in the center of the liquid level, the bottom edge of which is below the liquid level. The pulp is fed into the center cylinder along the tangent direction, and is discharged from the bottom edge after buffering.

The slurry discharged flows out radially around the overflow weir. In this process, the coarse particles that the settling velocity of which is greater than the flow rising component velocity will sink in the tank, and are discharged through the setting sand at the bottom. The fine particles with 2 mm or less in feed size and 75 μm or less in grading size will flow into the overflow tank along with the slurry on the surface.

It is mainly used for raw ore desliming before the hindered settler so as to improve the efficiency of classification; and for the concentration and dewatering of ores set before ore grinding equipment in order to improve the feeding concentration of grinding equipment; also for controlling feeding concentration and capacity before all kinds of slurry separation equipment.

Features

Convenient adjustment and good desliming effect.

Tank can be lined with the world-famous super wear-resistant rubber.

Technical Parameters

Model	TND1500	TND2000	TND2500	TND3000	TND5000
Subsidence Area (m^2)	2	3	4.9	7	20
Volume (m^3)	0.76	1.8	3.5	6.1	33.5
Grading Size (mm)	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07
Feed Size (mm)	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Discharge Concentration (%)	40~60	40~60	40~60	40~60	40~60
Desliming Efficiency (%)	33~45	33~45	33~45	33~45	33~45

Slurry Distributer

Features

Especially suitable for non-mental ore slurry distributed uniformly from one way to two ways or more ones.

Tank can be lined with the world-famous super wear-resistant rubber.

Technical Parameters

Model	Tank Diameter (mm)	No. of Distribution Way	Feed Pipe Diameter (mm)	Rotating Speed of Cylinder (r/min)	Capacity (m^3/h)	Motor		Weight (kg)
						Model	Power (kW)	
KFP700	ϕ700	2~8	120	142	80~150	Y90S-6	0.75	260
KFP900	ϕ900		160	171	120~180	Y90L-6	1.1	280
KFP1000	ϕ1000		180		150~250			340

DRYING

- Rotatory Kiln
- Disc Granulator
- Rotatory Dryer
- Cyclone Separator

DRYING

Rotatory Kiln

Principle

Due to the rotatory kiln has a certain slope and rotates continually, the raw materials flow in a row from the cold end to the hot one. The fuel injected from the hot end burns, releases heat and produces high-temperature gas under the air combustion-supporting. The hot gas flows from the hot end to the cold one under the drive of blower, and the materials and gas in the process of inverse motion exchange the heat to make the raw materials into clinkers.

Features

Rotatory kiln is simple in structure, reliable in production control, less in wearing parts and efficient in running rate.

Application

It is used for calcining high-grade cement in cement plants, and is also widely used in metallurgy, chemical, and construction industry.

Technical Parameters

Model	Straight Cylinder Dry Production	Dry Production	Hot End Expansion	Dry Production	Dry Production of Precalcining	Dry Production
Spec.	ϕ1.9/ϕ1.6×36	ϕ2.4×40	ϕ2.4/ϕ2×40	ϕ2.8/ϕ2.4×50	ϕ3×48	ϕ3.5×70
Inclination	4%	4%	3.50%	4%	3.50%	4%
Capacity (t/h)	2.5~3	6~7	4.5~5.5	7.5~8.5	29.2	20~22
Rotating Speed (r/min)	0.53~1.59	0.173~1.73	0.42~1.25	0.11~1.07	0.57~3.41	0.5~1.27
Number of Seat	3	3	3	3	3	4
Motor Model	JZT2-72-4	JZS2-8-2	JZT382-4	JZS2-9-2	JZS2-10-2	JR126-6
Motor Power (kW)	30	4~40	4~40	6~60	16.7~100	155
Scope of Rotating Speed (r/min)	400~1200	160~1600	400~1200	120~1200	200~1200	350~980

Disc Granulator

Principle

Materials roll in the rotating disc with inclined angle of 35-55 degree. The inclined disc makes a gap between powders which increases the chances for collisions and friction between particles. Materials run along a certain rail and form into a rolling swirl under several forces. After adding a certain amount of water, the particles in the disc will grow from small to big in size with the core increased continually until they become pellets with the required strength, and then roll out along the edge of the disc.

Features

It has the advantages such as even pellet forming, easy powder pellet moisture control, high strength, simple structure, convenient control, low power consumption, stable operation, etc.

Application

Disc granulator as the main equipment for granulation of powder materials is mainly used in cement industry, copper & iron industry and compound fertilizer industry.

Technical Parameters

Model	ϕ2.2	ϕ2.5	ϕ2.8	ϕ3.2	ϕ3.6
Capacity (t/h)	8	10	13~16	15~20	16~22
Revolution (r/min)	16.4	14.4	12.8	11.5	10.5
Dip Angle (°)	35~55	35~55	35~55	35~55	35~55
Motor Model	Y160L-6	Y160L-6	Y180L-6	Y200L1-6	Y200L2-6
Motor Power (kW)	11	11	15	18.5	22.5
Weight (kg)	3500	4500	5000	5400	7800

Rotatory Dryer

Principle

The materials in the rotatory cylinder will be dried during the reentry and lifting process of the spiral blade and intermittent spiral lifter plate between the inner and outer cylinders.

Features

The column structure of the cylinder makes multiple shortening of the dryer length. As the cooling surface is significantly reduced, and the heat loss reduces, while the multiplying heat exchange surface greatly improves the heating efficiency. As for the materials that cannot touch the smoke, inner smoke pipe and circular smoke pipe are equipped in the inner and outer cylinder of the multi-cylinder rotatory dryer. Radial smoke pipe is used for the connection between the smoke pipes, which is efficient and energy-saving.

Application

Rotatory dryer is a heating and drying device for materials.

Technical Parameters

Model	Cylinder Diameter (mm)	Cylinder Length (mm)	Rotating Speed (r/min)	Inclination	Power (kW)	Max. air inlet temperature (℃)	Weight (kg)
HGJ1005	1000	5000	6.3	5%	4	700	5757
HGJ1206	1200	6000	6.1	5%	5.5	700	7418
HGJ1208	1200	8000	6.1	5%	5.5	700	8208
HGJ1512	1500	12000	5	5%	13	700	16682
HGJ1514	1500	14000	5	5%	13	700	17900
HGJ1812	1800	12000	5	5%	17	700	19389
HGJ1814	1800	14000	5	5%	17	700	20846
HGJ2212	2200	12000	4.9	5%	22	700	30313
HGJ2214	2200	14000	4.9	5%	37	700	36077
HGJ2219	2200	14000	4.9	5%	37	700	44850
HGJ2418	2400	18000	3.85	5%	37	700	41215

Note: HGJ2219 is inner circulation heating with hollow shaft.

Cyclone Separator

Principle

The classification chamber of cyclone separator is a cylindrical shell made of steel sheet. In the classification chamber, small fans and spreading plates are fixed on the vertical shaft, rotating through the tape driving device driven by a motor, and generating a strong centrifugal force in classification chamber. The gas and powder mixture in the classification chamber is affected by the centrifugal force. Large or heavy particles greatly affected by centrifugal force are thrown to the edge of the classification chamber, and are no longer affected by the centrifugal force. After falling down naturally, they will be collected as coarse powder and discharged from the pipe for coarse powder; small or light materials slightly affected by the centrifugal force will hover in the classification chamber, brought to the high by the airstream, and then graded or collected within the next component as moving along the pipeline. The centrifugal force in the classification chamber can be adjusted by adjusting the rotating speed through the frequency converter, so as to achieve the material classification with specified particle size.

Features

With the main features of low energy consumption, large processing capacity, and flexible combination structure, the separator can be exchanged with fluidized bed grinder to be crushing classifier, or combined with rough pulverizers such as Raymond mill, ball mill and roller-crushing to separate the ultrafine powder, which plays a role in low energy consumption and low pollution. It can also be directly connected with dryers, conveyors and automatic packaging machines in order to simplify production processes and procedures.

Application

It is applied for the ultra-fine grading of those materials that cannot be graded on a common sorting equipment, and is especially suitable for processing those products that are strictly defined the maximum particle and required narrow distribution density, such as TSP, kaolin, talc, barite powder, paint, mica, graphite, auxin, and aluminum hydroxide. It can grade materials of very demanding granularity segment, and also can meet the requirements of purity and grain shape. Typical materials: Copier toner, laser printer powder, pink cell phone batteries and industrial batteries powder.

Technical Parameters

Model	ϕ1.5	ϕ2.0	ϕ2.5	ϕ3
Rotating Speed of Main Shaft (r/min)	190~380	190	190	190
Capacity (t/h)	12~16	21	33	48
Motor	Y180M-2	Y225M-4	Y280S-4	Y315M-6
Motor Power (kW)	22	45	75	90
Blower Model	4-72-11NO.9C	4-72-11NO.10C	4-72-11NO.12C	G4-73-11NO.14D
Blowing Rate (m^3/h)	22280	37850	68020	96800
Full Pressure (kPa)	2.39	2.31	2.4 9	2.47
Rotating Speed of Blower (r/min)	1600	1250	1120	980

FEEDING

- Heavy-duty Plate Feeder
- Middle-duty Plate Feeder
- Light-duty Slat Feeder
- Chute Feeder
- Disk Feeder
- Pendulous Feeder
- Electromagnetic Vibrating Feeder
- Belt Feeder
- ZSW Vibrating Feeder
- GZG Inertial Vibrating Feeder

FEEDING

Heavy-duty Plate Feeder

Principle

The main work of the feeder is to make the motor power through reducer, drive the connecting rod of the eccentric gear do the reciprocating motion, and also make the pawl push the ratchet to drive the rotation of the chain wheel. Thereby the intermittent motion of the chain plate will begin so as to achieve the purpose of conveying materials.

Features

It can be installed both horizontally and slantly with the maximum slope angle of 12 degrees. In order to avoid materials blowing directly to the feeder, complete unloading is not allowed in the ore bin. The max feed size can reach 1000 mm.

Application

It is used for feeding the materials in ore bin continuously and uniformly to primary breaker in crushing & grading workshop in large mineral processing plant, and in cement or building materials department. The short distance transportation of the materials with big particle size and large specific gravity is also applicable.

Technical Parameters

Model	Chain Plate			Feed Size (mm)	Capacity (m^3/h)	Motor		Overall Dimension (L×W×H) (mm)	Weight (kg)
	Width (mm)	Center Distance of Chain Wheel (mm)	Speed (m/s)			Model	Power (kW)		
Gbz120-4.5	1200	4500	0.05	≤ 500	100	Y160l-4	15	6983×5228×2080	31279
Gbz120-5		5000						7593×5228×2080	33437
Gbz120-5.6		5600						8183×5228×2080	34321
Gbz120-6		6000						8638×5228×2080	35900
Gbz120-8		8000				Y180l-4	22	10533×5293×2080	41342
Gbz120-8.7		8700						11383×5293×2080	43164
Gbz120-10		10000						12583×5293×2080	46962
Gbz120-12		12000						14653×5293×2080	51844
Gbz120-15		15000				Y200l-4	30	17658×5518×2080	62157
Gbz150-4	1500	4000		≤ 600	150	Y160l-4	15	6613×5528×2080	33197
Gbz150-6		6000				Y180l-4	22	8638×5593×2080	39787
Gbz150-7		7000						9633×5593×2080	43352
Gbz150-8		8000						10533×5593×2080	45962
Gbz150-9		9000				Y200l-4	30	11683×5668×2080	50522
Gbz150-12		12000				Y225m-4	45	14653×5888×2080	59915
Gbz180-6	1800	6000		≤ 800	240	Y225m-4	45	8651×6463×2080	46840
Gbz180-8		8000						10533×6188×2080	51360
Gbz180-9.5		9500						12033×6188×2080	57397
Gbz180-10		10000						12593×6188×2080	59632
Gbz180-12		12000						14653×6363.5×2080	66029
Gbz240-4	2400	4000		≤ 1000	400	Y200l-4	30	6613×6718×2080	44780
Gbz240-5		5000						7533×6718×2080	50737
Gbz240-5.6		5600						8133×6718×2080	52447
Gbz240-10		10000				Y225m-4	45	12593×6718×2080	76373
Gbz240-12		12000						14653×6718×2080	85331

Middle-duty Plate Feeder

Principle

The main work of the feeder is to make the motor power through reducer, drive the connecting rod of the eccentric gear do the reciprocating motion, and also make the pawl push the ratchet to drive the rotation of the chain wheel. Thereby the intermittent motion of the chain plate will begin so as to achieve the purpose of conveying materials.

Features

It is used for feeding the materials in ore bin continuously and uniformly to primary breaker in crushing & grading workshop in large mineral processing plants, and in cement or building materials department. The short distance transportation of the materials with big size and large specific gravity is also applicable.

Application

It is suitable for short distance transportation of the block materials with feed size of 400mm or less. It is widely used for feeding the materials in ore bin uniformly and intermittently to crushing or transportation machine in mine, mineral processing plant, chemical industry, cement and building materials department. It can be installed both horizontally and slantly with the maximum upward slope angle of 20 degrees. It usually applies to transport the materials with the loose density of less than 2400 kg/m³, the block weight of less than 500 kg, and the temperature of below 400℃ .

Technical Parameters

Model	Chain Plate			Feed Size (mm)	Capacity (m^3/h)	Motor		Overall Dimension (L×W×H) (mm)	Weight (kg)
	Width (mm)	Center Distance of Chain Wheel (mm)	Speed (m/s)			Model	Power (kW)		
GBH80-2.2	800	2200	0.01~0.053	≤ 300	15~91	Y132M-4	7.5	3840×2850×1185	3722
GBH80-3		3000				XWED106-385-4	4	4868×2705×1060	4014
GBH80-4		4000				Y132M-4	7.5	5640×2986×1185	5087
GBH80-5.8		5800	0.18	≤ 300	15~91	XWED7.5-8215A-231		7760x2823.5x1321	6526.7
GBH100-1.6	1000	1600	≤ 0.15	≤ 350	22~131	Y160M-6		3240×3026×1235	3981
GBH100-3		3000						4640×3114×1235	4548
GBH100-4		4000	0.01~0.053		22~131	XWED106-385-4	4	5648x2890x1160	5086
GBH120-1.8	1200	1800	≤ 0.15	300-400	35~217	Y160M-6	7.5	3440×3314×1235	3965
GBH120-2.2		2200						3840×3314×1285	4238
GBH120-2.6		2600						4240×3314×1285	4572
GBH120-3		3000				XWED7.5-8215A-273		4960×3150×1434	4886(Exclude Reducer)
GBH120-4		4000				Y160M-6		5640×3402.5×1285	6100
GBH120-4.5		4500				XWED7.5-8215A-273		6460×3150×1434	6350.6 (Exclude Reducer)
GBH120-6		6000		300-400	35~217	XWED11-8225B-273	11	7960x3242x1434	8210

Light-duty Slat Feeder

Principle

The main work of the feeder is to make the motor power through reducer, drive the connecting rod of the eccentric gear do the reciprocating motion, and also make the pawl push the ratchet to drive the rotation of the chain wheel. Thereby the intermittent motion of the chain plate will begin so as to achieve the purpose of conveying materials.

Features

It is used for feeding the materials in ore bin continuously and uniformly to primary breaker in crushing & grading workshop in large mineral processing plants, and in cement or building materials department. The short distance transportation of the materials with big particle size and large specific gravity is also applicable.

Application

It is suitable for short distance transportation of the block materials with feed size of 160 mm or less. It is widely used for feeding the materials in ore bin uniformly and continuously to crushing or transportation machine in mine, mineral processing plant, chemical industry, cement and building materials department. It can be installed both horizontally and slantly with the maximum upward slope angle of 20 degrees. It usually applies to transport the materials with the loose density of less than 1200 kg/m³, the block weight of less than 140 kg, and the temperature of below 350 ℃ .

Technical Parameters

Model	Chain Plate			Feed Size (mm)	Capacity (m^3/h)	Motor		Overall Dimension (L×W×H)	Weight (kg)
	Width (mm)	Center Distance of Chain Wheel (mm)	Speed (m/s)			Model	Power (kW)		
GBQ50-6	500	6000	0.16	160	60	Y160M-6	7.5	7476×2745×980	3894
GBQ50-9.5	500	9500						10976×2720×980	5048
GBQ50-12	500	12000	0.1		41			14276×2790×980	6183
GBQ50-14	500	14000	0.16		60	Y160L-6	11	15476×2826×980	7315
GBQ80-6	800	6000			107	Y160M-6	7.5	7476×3045×980	4274
GBQ80-10	800	10000						11476×3045×980	5832
GBQ80-12	800	12000				Y160L-11	11	13476×3126×980	6556

Chute Feeder

Principle

This equipment is generally installed at the bottom of the outlet of ore bin. The ore falls on the bushing at the bottom of the tank, which is installed on the roller wheel, and connected with the double-shaft reducer through eccentric gear, and then joined with the motor through the coupling. In the operation, the motor through coupling drives reducer, and the equipment and the drain cap between feed rack bottom and roller wheel through eccentric disc will do reciprocating rectilinear motions, so as to complete uniform feeding.

Features

Chute feeder can be set up on the ground, and also can be hoisted on the outlet of ore bin. The motion of chute bottom slab is reciprocating, and the stroke can be adjusted by the eccentric wheel drive of transmission, the eccentric distance of which is half of the stroke. According to some production practices in mineral processing plant, the eccentric distance should be not less than 30 mm for sticky ores. The width of the chute feeder is about 2-2.5 times the maximum particle size.

Application

It is suitable for short distance transportation of the block materials with feed particle size of 160 mm or less. It is widely used for feeding the materials in ore bin uniformly and continuously to crushing or transportation machine in mine, mineral processing plant, chemical industry, cement and building materials department.

Technical Parameters

Model	Outlet Dimension (W×H) (mm)	Max. Feed Size (mm)	Feed Capacity (t/h)	Motor Model	Motor Power (kW)	Weight (kg)
CG300×300	300×300	50	10~20	Y90L- 4	1. 5	265
CG400×400	400×400	100	10~30	YCT160-4A	2. 2	640
CG600×500	600×500	200	10~50	Y112M- 4	4	1045
CG700×500	700×500	200	10~60			1100
CG1240×980	1240×980	350	36~90	Y160M- 6	7. 5	1710

Disk Feeder

Principle

Bulk materials are put into the cylinder from the hopper, and stacked on the disk by gravity along the cylinder wall. The clearance between sleeve and disk can be adjusted by adjusting bolt so as to control the angle of repose on the disk. When the disk rotates, materials are evenly scraped to the outside of disk by the unloading knife and fall into the hopper. The uniform feeding operation completes with the disk continuous operation. Adjusting the clearance between the unloading knife and disk can also control the feeding amount. In the operation, the motor through the belt pulley drives the rotation of the disk installed on the worm reducer.

Features

This feeder is sturdy and durable with simple structure and convenient operation, and is the best choice for the uniform feeding of all kinds of particle materials.

Application

As a kind of accessory equipment of transport machinery suspended on the steel structure and installed below the hopper, it is used for the continuous feeding in the plants of mineral processing, smelting, cement, and placer, or in the mechanized foundry.

Technical Parameters

Type	Model	Disk Diameter (mm)	Rotating Speed of Disk (r/min)	Max. Feed Size (mm)	Feed Capacity (t/h)	Motor Model	Motor Power (kW)	Weight (kg)
Close Hanged	YG300	300	10. 0	20 20	0~ 1. 8	Y80L- 4	0. 55	115
	YG400	400	10. 7		0~ 2. 6	Y90L- 6	1. 1	120
	YG500	500			0~ 3. 3			124
	YG600	600	10. 0		0~ 5. 0			130
	YG800	800	9	30	0~ 8. 0	Y80L- 4	0.55	195
	YG1000	1000	9	30	0~ 12	Y90L- 4	1. 5	263
	YG1500	1500	7	40	0~ 22	Y132M2-6	5. 5	755
	YG2000	2000	5	50	0~80	Y160L-6	11	2517
Open Hanged	DK600	600	7. 53	25	1. 8~ 3. 9	Y90L- 6	1. 1	410
	DK800	800	7. 53	30	3. 5~ 7. 6			600
	DK1000	1000	7. 50	40	1.8~ 16.7	Y100L- 6	1. 5	725
	DK1300	1300	6. 5	50	4. 3~27. 9	Y132S- 6	3	846
	DK1600	1600	6	60	7.03~48.6	Y132M1- 6	4	1980
	DK1800	1800	5	70	9.26~60	Y132M2- 6	5.5	3070
	DK2000	2000		80	13.6~88.4	Y132M2- 6		3260

Pendulous Feeder

Principle

This equipment is generally installed blow the outlet of feed bin, from which the ores fall into the feeding tank. In the operation, the motor through coupling drive the rotation of worm reducer and the reciprocating motion of the swing base of feeding tank through the eccentric wheel installed on the output shaft of the reducer, by which the even feeding is completed. The regulation of eccentric distance by adjusting the scale of eccentric disc on the eccentric wheel can realize the adjustment of feeding capacity, which is also by adjusting the revolving speed of adjustable-speed motor to change the swing times.

Features

This feeder is sturdy and durable with simple structure and convenient operation, and is the best choice for the uniform feeding of all kinds of particle materials.

Application

As a kind of accessory equipment of transport machinery suspended on the steel structure and installed below the hopper, it is used for the continuous feeding in the plants of mineral processing, smelting, cement, and placer, or in the mechanized foundry.

Technical Parameters

Model	Inlet (L×W) (mm)	Outlet (L×W) (mm)	Stroke of Eccentric Wheel (mm)	Frequency (n/min)	Max. Feed Size (mm)	Feed Capacity (t/h)	Motor Model	Motor Power (kW)	Rotating Speed of Motor (r/min)	Weight (kg)
BG250×250	250×250	250×(30~125)	0~90	46	25	4.5	Y80L-4	0.55	1390	130
BG300×300	300×300	300×(30~125)		46	30	6.5	Y802-4	0.75	1390	272
BG400×400	400×400	400×(50~130)	0~170	45.5	35	12	Y90S-4	1.1	1410	558
BG600×600	600×600	600×(50~150)	0~157	48	50	40~80	Y100L-4	1.5	940	613

Electromagnetic Vibrating Feeder

Principle

The feeding process of the electromagnetic vibrating feeder is realized by the periodic reciprocating motion of the feeding tank along the tilt direction driven by the electromagnetic vibrator. When the vertical component of the acceleration generated by the vibration of the feeder is greater than the acceleration of gravity, the materials in tank will be thrown up, and carry on the jumping motion forward in accordance with the parabola track. The whole process completes within 1/5 seconds. Every vibration of the feeder can cause every forward jumping of the materials thrown up. In this way, the vibration of the tank with the frequency of 3000 times per minute drives the materials thrown up to jump forward correspondingly, and makes them move forward evenly and continuously so as to realize the feeding.

Features

Simple structure, uniform feeding, good continuous performance, adjustable exciting force; change and control flow at any time with convenient operation; the eccentric block as the excitation source has the features of low noise, less power consumption, good regulation performance, and nonexistence of material clashing; the enclosed body can prevent dust pollution with stable vibration, reliable operation and long service life; the vibration force can be adjusted, and the flow can be changed and controlled at any time, which is convenient and stable; the vibration motor as the excitation source has the features of low noise, less power consumption, good regulation performance, and nonexistence of material clashing; simple structure, reliable operation, convenient adjustment and installation, light weight, small volume, convenient maintenance, and dust pollution prevention when enclosed structure body is used.

Application

It can be widely used in the industries of mining, metallurgy, coal, building materials, light, chemical, electric power, machinery, food, etc., and for feeding the materials in block particle shape and powdery ones uniformly and continuously or quantitatively into the feeding device from the ore bin or hopper, also for automatic batching, quantitative packaging, etc. In addition, it can be applied in the automatic control process to realize the automation of production process.

Technical Parameters

Model	Tank Dimension (L×W×H) (mm)	Feed Size (mm)	Horizontal Feed Amount (t/h)	Feed Amount (t/h)	Power (kW)	Overall Dimension (L×W×H) (mm)	Weight (kg)
GZ1	600×200×100	50	5	7	0.06	910×376×485	80
GZ2	800×300×120		10	14	0.15	1175×608×600	165.5
GZ3	900×400×150	75	25	35	0.2	1325×578×675	223
GZ4	1100×500×200	100	50	70	0.45	1616×762×814	462
GZ5	1200×700×250	150	100	140	0.65	1815×840×980	656
GZ6	1600×900×250	200	150	210	1.5	2410×10925×1500	1252
GZ7	1800×1100×250	250	250	350	3	2800×1330×1710	2017
GZ8	2200×1300×300	300	400	560	4	3302×1556×1995	3153
GZ9	2400×1500×300	350	600	840	5.5	3515×1776×2200	3750
GZ10	2500×1800×375	500	750	1050	4×2	3630×2500×2235	6491
GZ11	2800×2000×375		1000	1400	5.5×2	4060×2640×2919	7680
GZ12	3000×2200×400		1200	1500	15	5260×2860×2563	8840
GZ13	3200×2500×450		1300	1600		6394×3040×2864	9920
GZ14	3500×2500×450	550	1500	1700	18.5	7475×3802×3000	11000

Belt Feeder

Principle

The materials through the feeding hopper flow to the belt surface of the belt feeder. With the rotation of AC adjustable-speed motor, the belt moves forward slowly, and the materials on the surface via the head wheel flow into the next process so as to realize the continuous feeding.

Features

There are two ways for production capacity regulation: One is to adjust the rotating speed of AC adjustable-speed motor, and the other is to adjust the insertion depth of control gate installed on feeding hopper.

Application

It can be widely used for transporting all kinds of block and granular materials with stacking density of 0.5 - 2.5 t/m³ in the departments of metallurgy, mineral processing, building materials, coal, water & electricity, etc.

Technical Parameters

Model	Belt Width (mm)	Center Distance of Head and Tail Wheel or Drum Wheel (mm)	Diameter of Head and Tail Wheel (mm)	Feed Capacity (t/h)	Feed Size (mm)	Motor Model	Motor Power (kW)	Weight (kg)
500×1000	500	1000	219	10~100	0~50	YCT112- 4B	0.75	266
500×1300		1300		10~100	0~50	YCT160 -4A	2.2	345
500×1500		1500		10~100	0~50	Y2.2-1.0-50-32	2.2	767
500×2000		2000		10~100	0~50	Y2.2-1.0-50-32	2.2	609.4
500×2800		2800		10~100	0~50	YCT160- 4A	2.2	670
500×3000		3000		10~100	0~50	YCT160 -4A	2.2	697
500×4000		4000		10~100	0~50	YCT160- 4A	2.2	736
650×1500	650	1500		10~100	0~50	YCT160- 4A	2.2	610
650×2600	650	2600		10~100	0~50	YCT160- 4A	2.2	636
650×4000	650	4000		10~100	0~50	YCT160- 4A	2.2	893
800×2000	800	2000		15~150	0~80	YCT160- 4A	2.2	721
800×3000	800	3000		15~150	0~80	YCT200- 4B	7.5	857.3
800×4000	800	4000		15~150	0~80	YCT200- 4B	7.5	1012
800×4500	800	4500	400	15~150	0~80	YCT160- 4A	2.2	1200
1000×2000	1000	2000		200~450	0~80	YCT160- 4B	3	1549
1000×2500		2500		200~450	0~100	YCT160- 4B	3	2105
1000×6000		6000		200~450	0~100	YCT225- 4A	11	5214

ZSW Vibrating Feeder

Principle

The vibration exciter is composed of two eccentric shafts at specific locations in gear meshing way. Driven by motor, the two eccentric shafts rotate and generate resultant linear vibration force, which impels the body to vibrate on the supporting spring. The materials slide and takes throwing motion under the action of the vibration. In this way, the materials move forward and feeding is realized.

Features

With features of simple structure, easy installation, stable vibration, reliable operation, long lifespan, convenient maintenance and repair, and easy automatic control. ZSW vibrating feeder adopts double-shaft vibrator and linear vibration. With feeding and screening process finished at the same time, it improves the utilization rate of the equipment and reduces the costs. It is not suitable for conveying sticky and wet materials. It can feed the rough crusher continuously and evenly, at the same time, coarse screening of materials can be processed. Variable-frequency and variable-speed motor can be installed, which regulates frequency, changes the production, and is easy to control the feed quantity, without starting frequently.

Application

It is widely used as the crushing and screening combination equipment in the fields of metallurgy, coal mine, mineral processing, building materials, chemical industry, abrasive, etc. This equipment is not suitable for transporting sticky or wet materials.

Technical Parameters

Model	Tank Dimensions (mm)	Max. Feed Size (mm)	Feed Capacity (t/h)	Rotating Speed of Eccentric Shaft (r/min)	Motor Power (kW)	Weight (kg)
ZSW380×95	3800×950	500	96~160	800	11	4082
ZSW420×110	4200×1100	500	110~180	800	15	4149
ZSW490×110	4900×1100	500	115~192	800	15	4263
ZSW590×110	5900×1100	630	350~500	800	22	6130
ZSW600×130	6000×1300	750	400~560	800		7800

GZG Inertial Vibrating Feeder

Features

Inertial vibrating feeder with frequency conversion and speed regulation has the features of advanced design, rational structure, adherence to specification on various technical indicators, good performance, and stable & reliable operation, the amount adjustment of which is long-distance, online, smooth, and electrodeless.

The economic and social benefit are very significant with production rate increased by 50%, electricity reduced by 59% or above, power factor of 0.98, maintenance time reduced by 30%, noise reduced to 80 db, and the weight of equipment reduced by 50% or above.

Service Conditions

The environment temperature is no more than + 40 ℃ ;
When the environment temperature is 20±5℃ , the relative humidity of surrounding medium is no more than 85%;
There is no medium with serious corrosion and influence on electrical insulation.

Application

GZG series self-synchronizing inertial vibrating feeder can be widely used in the industries of mining, metallurgy, coal, building materials, light, chemical, electric power, machinery, food, etc., and for feeding the materials in block particle shape and powdery ones uniformly and continuously or quantitatively into the feeding device from the ore bin or hopper, such as crushing, coal preparation, screening, transportation, and packaging machinery.

Technical Parameters

Item	Tank Dimension (W×L×H) (mm)	Capacity (t/h)		Max. Feed Size (mm)	Vibration Frequency (min^{-1})	Double-Amplitude (mm)	Rated Voltage (V)	Rated Current (A)	Power Frequency (Hz)	Power (kW)	Machine Weight (kg)
		Level	-10 Degree								
GZG403	400×1000×200	30	40	100	1450	4	380	2×0.73	50	2×0.25	171
GZG503	500×1000×200	60	85	150		4		2×0.73		2×0.25	265
GZG633	630×1250×250	110	150	200		4		2×1.53		2×0.55	379
GZG703	700×1029×250	120	170	200		4		2×1.53		2×0.55	389
GZG803	800×1500×315	160	230	250		4		2×1.95		2×0.75	563
GZG903	900×1483×250	180	250	250		4		2×2.71		2×0.75	613
GZG1003	1000×1750×250	270	380	300		4		2×2.71		2×1.1	762
GZG1103	1100×1673×250	300	420	300		4		2×2.71		2×1.1	854
GZG1253	1250×2000×315	460	650	350		4		2×3.51		2×1.5	1099
GZG1303	1300×2040×300	480	670	350		4		2×3.51		2×1.5	1117
GZG1503	1500×2250×300	720	1000	500		3		2×5.91		2×2.2	1503
GZG1603	1600×2500×315	770	1100	500		4		2×6.82		2×3.0	1555
GZG1803	1800×2325×375	900	1200	500		3		2×6.82		2×3.0	2350
GZG2003	2000×3000×400	1000	1400	500		2.5		2×6.82		2×3.0	2705
GZG705	700×1029×250	130	180	200	960	5		2×1.66		2×0.55	385
GZG805	800×1500×250	170	250	250		5		2×1.66		2×0.55	510
GZG905	900×1483×250	200	270	250		5		2×1.66		2×0.55	561
GZG1005	1000×1750×250	290	410	300		5		2×2.14		2×0.75	652
GZG1105	1100×1637×250	320	450	300		5		2×2.97		2×1.1	795
GZG1255	1250×2000×315	500	700	350		5		2×2.97		2×1.1	1002
GZG1305	1300×2040×300	520	720	350		5		2×3.84		2×1.5	1070
GZG1505	1500×2250×300	780	1080	500		5		2×5.55		2×2.2	1414
GZG1605	1600×2500×315	830	1190	500		5		2×5.55		2×2.2	1720
GZG1805	1800×2325×375	970	1320	500		5		2×7.28		2×3.0	2288
GZG1256	1250×2000×315	500	700	350		5		2×3.84		2×1.5	1081
GZG1306	1300×2040×300	520	730	350		5		2×3.84		2×1.5	1117
GZG1506	1500×2250×300	780	1080	500		5		2×5.55		2×2.2	1654
GZG1606	1600×2500×315	830	1190	500		5		2×5.55		2×2.2	1720
GZG1806	1800×2325×375	970	1300	500		5		2×9.56		2×4.0	2985
GZG2006	2000×3000×400	1300	1800	500		5		2×9.56		2×4.0	3166

TRANSPORTING

- TD75 Belt Conveyor
- DT Ⅱ Belt Conveyor
- Belt Conveyor with Waved Guard Side
- Movable Belt Conveyor
- Bucket Lifter
- Screw Conveyor
- Narrow Gauge Wagon

TRANSPORTING

TD75 Belt Conveyor

Principle

Belt conveyor is mainly composed of two end rollers and the closed belt which tightly set on it. The one driving the conveyor belt is named as the driving roller; the other one only used for changing the motion direction of the conveyor belt is named as the bend roller. The driving roller is drived by the motor through the reducer while the conveyor belt is dragged by the friction between the driving roller and the conveyor belt. The driving roller is generally installed on the discharging side to increase the traction and convenience to drug. Materials are fed by the feeding end, dropped on the conveyor belt, and discharged by the discharging end which is driven by the conveyor belt friction.

Features

TD75 belt conveyor is a general series product of belt conveyor.

Application

Widely used in the fields of chemical, coal, metallurgy, mine, power, light, food, transportation, etc. Applied to convey bulk materials with loose density of 0.5-2.5 t/m^2 and unit goods.

Technical Features

The unit weight of materials conveyed by the TD75 belt conveyor should be less than 2.5 t/m^3.

This series is divided into six specifications including 500 mm, 650 mm, 800 mm, 1000 mm, 1200 mm, and 1400 mm by the bandwidth.

Divided into 1.5 kW, 2.2 kW, 3 kW, 4 kW, 5.5 kW, 7.5 kW, 11 kW, 15 kW, 18.5 kW, 22 kW, 30 kW, 40 kW, etc. by the driving power.

Divided into 0.8m/s, 1.0 m/s, 1.25 m/s, 1.6 m/s, 2.0 m/s, 2.5 m/s, 3.15 m/s, 4 m/s, etc., by the belt speed.

Refer to the following table for the max. conveying capacity of this series.

Technical Parameters

Carrying Idler Type	Belt Speed (m/s)	Belt Width B (mm)					
		500	650	800	1000	1200	1400
		Conveying Capacity Q (t/h)					
Trough Idler	0.8	78	131	—	—	—	—
	1.00	97	164	278	435	655	891
	1.25	122	206	348	544	819	1115
	1.6	156	264	445	696	1048	1427
	2.0	191	323	546	853	1284	1748
	2.5	232	391	661	1033	1556	2118
	3.15			824	1233	1858	2528
	4.0					2202	2995

The conveying capacity in the table is calculated under the condition of γ=1 t/m^3 for the material density, 0°-7° for the conveyor inclination angle, and 30° for the material accumulation angle.

DT Ⅱ Belt Conveyor

Principle

DT Ⅱ belt conveyor is a general series product, and it can be widely used in the industries such as metallurgy, mine, coal, port, power station, building materials, chemical, light and oil. The transportation system combined by single or multiple machines is used for conveying materials and applied to convey bulk materials with loose density of 500-2500 kg/m^3 and unit goods

The suitable working environment temperature for DT Ⅱ belt conveyor is generally -25 ～ +40℃ . It is required that the materials temperature shall not be higher than 70℃ ; heat-resistant materials under 120℃ can be conveyed by heat-resistant rubber belt conveyor while it is unfavorable for materials at a higher temperature. Oil-resistant, acid and alkali resistant rubber belt type plastic belt should be applied to convey materials with acidity, alkalinity, oil and organic solvents.

DT Ⅱ belt conveyor shall be designed according to component series. Designers can select models and designs according to the technological requirements for conveying, different terrains, and different operating conditions, then combine into the whole conveyor. This series of components can meet the requirements of horizontal and inclined conveying, and it can also apply the conveying form which combines concave arc, segmental arc and straight line.

The size of materials allowed to convey by the conveyor depends on the belt width, belt speed, trough angle, and inclination angle, and also depends on the frequency of big size materials appearance.

Technical Parameters

Model	DT Ⅱ 500	DT Ⅱ 650	DT Ⅱ 800	DT Ⅱ 1000	DT Ⅱ 1200	DT Ⅱ 1400
Belt Width (mm)	500	650	800	1000	1200	1400
Max. Size (mm)	100	150	200	300	350	350
Belt Speed (m/s)	0.3~1.6			0.3~2.0	0.5~2.5	
Conveying Capacity (m^3/h)	25~138	48~254	75 ~396	121~810	296~1485	412~2065

Belt Conveyor with Waved Guard Side

Principle

"Guard machine" or "high inclination angle belt conveyor" for short, with the advantages of simple structure, reliable operation, and convenient maintenance of general conveyor, and the features of high inclination angle conveying, compact structure, less land occupation, is the ideal equipment for high inclination angle conveying (even for vertical conveying). It is widely used in the fields of coal, metallurgy, building, food, chemical, power, etc., and is also applied to the underground mining, open-pit mining, large self-unloading ship, etc.

Features

With high conveying angle, which can be up to 90°, it is the ideal equipment of the high inclination angle conveying and vertical ascension, which saves land occupation, equipment investment and construction cost, thus obtains good comprehensive economic benefit.

Simple structure. The main components are available for general belt conveyor, which is convenient for operation and maintenance.

Reliable operation. Avoid the chain-block, chain-floatation, chain-scission of buried scraper conveyor and skid, bucket-off of bucket elevator.

Stable operation and less noise.

As there is no digging resistance of loading and internal friction of running, the energy consumption is low.

Horizontal conveying section of any length can be set at the start and end part of vertical guard machine, which is convenient for the connection with other equipment.

Conveying capacity Qv under various parameters while belt speed is 1m/s

Belt Width (mm)		500							650							800							
Guard Side Height (mm)		80		120			160		80		120			160		120			160		200		
Baffle Distance (mm)		126	252	126	252	378	252	378	126	252	126	252	378	252	378	126	252	378	252	378	252	378	504
Dip Angle (β)	30°	39	21	—	52	34	65	45	59	32	—	78	52	105	73	—	99	65	136	94	—	148	113
	40°	31	16	—	40	26	52	34	47	24	—	60	40	85	56	—	76	50	110	72	—	114	87
	50°	25	13	60	32	—	42	27	37	19	90	48	—	68	45	113	60	—	88	58	139	91	—
	60°	20	11	50	26	—	34	23	31	16	75	39	—	55	36	95	49	—	72	47	113	74	—
	70°	17	—	41	21	—	28	18	25	—	62	32	—	45	30	77	40	—	58	38	92	61	—
	90°	10	—	25	—	—	17	—	15	—	38	—	—	28	—	47	—	—	36	—	57	37	—

Belt Width (mm)		1000									1200									
Guard Side Height (mm)		160		200			240				160		200			240			300	
Baffle Distance (mm)		252	378	252	378	504	252	378	504		252	378	252	378	504	252	378	504	336	504
Dip Angle (β)	30°	186	129	—	207	159	—	283	229		223	154	—	250	191	—	342	278	410	350
	40°	150	99	—	160	122	—	231	176		180	118	—	193	147	—	280	213	352	276
	50°	120	79	195	128	—	—	185	141		144	95	235	154	—	—	224	170	290	221
	60°	98	64	159	105	—	229	151	—		117	77	191	126	—	278	183	—	237	180
	70°	80	52	130	85	—	187	123	—		96	63	156	103	—	226	149	—	193	147
	90°	49	—	80	52	—	115	76	—		59	—	96	63	—	139	91	—	118	90

Belt Width (mm)		1400										1600									
Guard Side Height (mm)		200			240			300		400		200			240			300		400	
Baffle Distance (mm)		252	378	504	252	378	504	336	504	420	504	252	378	504	252	378	504	336	504	420	504
Dip Angle (β)	30°	——	299	229	—	422	342	512	437	780	707	—	355	272	—	501	406	614	525	940	852
	40°	281	231	175	—	345	262	440	345	709	614	—	274	208	—	410	311	527	413	855	740
	50°	229	185	—	—	276	210	363	276	634	515	334	220	—	—	328	249	436	331	764	621
	60°	187	151	—	342	225	—	296	225	549	420	272	179	—	406	267	—	355	270	662	507
	70°	115	123	—	279	184	—	241	183	451	343	222	146	—	331	218	—	289	220	543	413
	90°		75	—	171	113	—	148	112	277	210	136	90	—	203	134	—	178	135	333	253

Allowable Max. Size and Max. Velocity with Different Belt Widths, Guard Side Heights and Dip Angles

Belt Width (mm)		500			650			800			1000		
Guard Side Height (mm)		80	120	160	80	120	160	120	160	200	160	200	240
Dip Angle (ß)	30°	2.0	2.0	2.0	1.6	2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5
		100	120	120	100	140	160	140	180	200	180	250	280
	40°	2.0	2.0	2.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5
		100	120	120	100	140	160	140	180	200	180	250	280
	50°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.0
		80	120	140	80	120	140	120	140	180	140	180	220
	60°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
		80	120	140	80	120	140	120	140	180	140	180	220
	70°	1.25	1.25	1.25	1.25	1.25	1.25	1.6	1.6	1.6	1.6	1.6	1.6
		50	60	100	50	60	100	120	100	140	100	140	180
	90°	1.0	1.0	1.0	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		50	60	80	50	60	80	60	80	100	80	100	140
Belt Width (mm)		1200			1400			1600					
Guard Side Height (mm)		160	200	240	300	200	240	300	400	200	240	300	400
Dip Angle (ß)	30°	2.5	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
		160	250	280	310	250	280	350	350	250	280	350	350
	40°	2.5	2.5	3.15	3.15	2.5	3.15	3.15	3.15	2.5	3.15	3.15	3.15
		200	250	280	310	250	280	350	350	250	280	350	350
	50°	1.6	2.0	2.5	2.5	2.0	2.5	2.5	2.5	2.0	2.5	2.5	2.5
		140	180	220	280	180	220	280	320	180	220	280	320
	60°	1.6	1.6	1.6	2.0	1.6	1.6	2.0	2.0	1.6	1.6	2.0	2.0
		140	180	220	280	180	220	280	320	180	220	280	320
	70°	1.6	1.6	1.6	2.0	1.6	1.6	2.0	2.0	1.6	1.6	2.0	2.0
		100	140	180	200	140	180	200	250	140	180	200	250
	90°	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		80	100	140	160	100	140	160	200	100	140	160	200

Note: The upper part of the form is vmax(m/s), and the lower part is amax (mm).

Movable Belt Conveyor

Principle

Belt conveyor is mainly composed of two end rollers and the closed belt which tightly set on it. The one driving the conveyor belt is named as the driving roller; the other one only used for changing the motion direction of the conveyor belt is named as the bend roller. The driving roller is driven by the motor through the reducer while the conveyor belt is dragged by the friction between the driving roller and the conveyor belt. The driving roller is generally installed on the discharging side which increases the traction and convenience to drug. Materials are fed by the feeding end, dropped on the conveyor belt, and discharged by the discharging end which is driven by the conveyor belt friction.

Features

Compact structure, reliable performance, durable service, and convenient transportation.

Application

Widely used in the fields of chemical, coal, metallurgy, mine, power, light industry, food, transportation, etc. Applied to convey bulk materials with loose density of 0.5-2.5 t/m^2 and unit goods.

Technical Parameters

Model	PY50	PY50	PY50	PY65	PY65	PY65	PY80	PY80
Belt Width (mm)	500	500	500	650	650	650	800	800
Belt Speed (m/s)	1.2	1.2	1.2	1.2	1.2	1.2	1.6	1.6
Max. Dip Angle (°)	19	19	19	19	19	19	16	19
Conveying Capacity (m^3/h)	80	80	80	135	135	135	262	296
Conveying Length (m)	10	15	20	10	15	20	15	20
Max. Height (m)	3.73	5.44	7.09	3.73	5.44	7.09	5.1	2.4
Min. Height (m)	0.5	1.27	1.27	0.5	1.27	1.27	2.9	3.0
Motor Model	Y100L2-4	Y112M-4	Y132S-4	Y112M-4	Y132S-4	Y132M-4	Y132M-4	Y132M-4
Motor Power (kW)	3	4	5.5	4	5.5	7.5	7.5	7.5
Weight (kg)	847	1123	1540	1189	1950	2300	2700	3100

Bucket Lifter

I D & HL Bucket Lifter

Principle

The code “D” of bucket lifter means belted, and the specification is represented by bucket width. Compared with chain-type circular chain bucket lifter, it has the remarkable advantages of various specifications, large conveying capacity, high lifting height, stable and reliable operation and long service life. The centrifugal or mixed mode is taken for discharge, and for loading material, or the excavated mode is taken. It is suitable for transporting vertically bulk material with less abradability and adsorbability, 1.5 t/m³ of bulk density, and powdery, graininess or massiveness such as grain, coal, cement and broken ore. It has high lifting height and the material temperature is no more than 60℃ .

HL bucket lifter is suitable for the vertical conveying of powder, granular and small pieces of materials with larger wear resistance, such as grains, coal, cement and broken ores. The max. lifting height is 40 m. The features include simple structure, stable operation, drawing out material loading and mixed or gravity discharge. Combination sprocket equipped on the rim is easy to change, and the lifespan of the chain is long after special processing. The lower part applies gravity automatic tensioning device, which can keep constant tension and avoid slipping or chain off, and also can effectively protect the moving parts while the bucket is blocked. The material temperature is no more than 250℃ .

Technical Parameters

Model	D160	D250	D350	D450	HL250	HL300	HL400
Material Temperature (℃)	(Ordinary Belt)	(Ordinary Belt)	(Heat-Proof Belt)	(Heat-Proof Belt)	Higher than Type D	Higher than Type D	Higher than Type D
S Bucket Conveying Capacity (m^3/h)	8	21.6	42	70	22	28	47
Q Bucket Conveying Capacity (m^3/h)	3.1	11.8	25	48	12	16	30
Max. Material Block Size (mm)	25	35	45	55	35	40	50
Min. Motor Power (kW)	2.2	3	5.5	7.5	4	5.5	5.5
Max. Motor Power (kW)	7.5	7.5	10	10	7.5	10	10
Min. Height of Bucket Lifter (mm)	4820	4480	4300	4540	4480	4660	4520
Max. Height of Bucket Lifter (mm)	30020	30080	30300	29500	30080	30160	30320
Height Grading (mm)	300	400	500	640	400	500	600
Central Height of Tension Roller (mm)	530	620	650	800	620	650	800
Driving Part Height of Chassis (mm)	453	503	550	650	503	600	654
45° Height of Inlet (mm)	1050	1250	1440	1630	1250	1300	1630
60° Height of Inlet (mm)	1310	1540	1770	2000	1540	2280	2670
45° Discharging Outlet Depth (mm)	800	900	1100	1200	900	1120	1200
Horizontal Discharging Outlet Depth (mm)	855	960	1170	1800	960	1190	1280
Side Chassis Dimension (mm)	456	586	710	858	568	638	758
End Chassis Dimension (mm)	906	1106	1236	1458	1106	1338	1458
Max. Dimension of Driving Part Side (mm)	1060×293	1361×365	1521×423	1682×486	1361×365	1512×401	1632×461
Max. Dimension of Driving Part End (mm)	906×800	1281×936	1358×1122	1470×1303	1281×936	1362×1172	1470×1294

II TH Bucket Lifter

Principle

The bucket scoops materials up from the storage, ascends to the top with conveyor belt or chain, passes around the top wheel, then turns down, and the bucket lifter will pour the materials into the receiver tank. The driving belt of bucket lifter applies rubber belt, installed under or on the transmission roller and on both sides of the bend roller. Generally, there are two parallel transmission chains equipped on the chain bucket lifter, one side is a pair of driving sprocket, and the other side is band sprocket. The bucket lifter is equipped with a chassis to prevent the dust floatation in it.

Features

TH series is a kind of circular chain bucket lifter with mixed or gravity discharge and excavating material loading. The traction parts adopt high quality alloy steel and high circular chain. The central case has two forms including single channel and double channels, and is the automatic constant tension of the weight box in the machine. The chain wheel adopts the changeable combined structure of rim with long service life and easy change of rims. The lower part applies gravity automatic tensioning device, which can keep constant tension and avoid slipping or chain-off, and also can effectively protect the components such as the lower shaft when the bucket is blocked caused by accidental factors.

Application

TH bucket lifter is suitable for conveying powder, granular and small pieces of materials without wear resistance or with small wear resistance.

Technical Parameters

Model		TH315		TH400		TH500		TH630		TH800		TH100	
Bucket Type (m^3/h)		Zh	Sh	Zh	Sh	Zh	Sh	Zh	Sh	Zh	Sh	Zh	Sh
Conveying Capacity (mm)		35	60	60	94	75	118	114	185	146	235	235	365
Hopper	Hopper Width (mm)	315		400		500		630		800		1000	
	Hopper Volume (L)	3.75	6	5.9	9.5	9.3	15	14.6	23.6	23.3	37.5	37.6	58
	Hopper Pitch (mm)	512				688				920			
Chain Hopper	Diameter × Pitch	18×64				22×86				26×92			
	Circular Number	7				7				7			
	Number of Chain	2				2				2			
	Single Breaking Load (kN)	> 320				> 480				> 570			
Pitch Diameter of Chain Wheel (mm)		630		710		600		900		1000		1250	
Hopper Running Speed (m/s)		1.1				1.5				1.6			
Revolution of Main Shaft (r/min)		42.5		37.6		35.8		31.8		30.5		24.4	

Screw Conveyor

Principle

It is composed of driving device, closed tank, and screw. The materials in the tank are outputted by the screw rotation, and the weight of materials and the friction between screw conveyor chassis and materials avoid the materials rotating with screw conveyor blades.

Features

Simple structure, small cross section, good seal, reliable operation, low manufacturing cost, convenience for loading and unloading in the middle, and availability of reverse conveying, as well as opposite directions conveying at the same time. Materials can be stirred, fixed, heated, and cooled during the conveying. Materials throughput can be adjusted through loading and unloading valve. While materials with perishable, sticky, easy to agglomerate, big size qualities are not suitable to convey. Materials are easily broken, and the screw and tank are easy worn during the conveying. The unit power is big. During the operation, the sealing of the tank and the proper distance between screw and tank should be guaranteed.

Application

Screw conveyor is mainly used for conveying powdery, granulated and small size materials, such as coal powder, soda ash, renewable rubber powder, zinc oxide, calcium carbonate and small lump coal, while materials with perishable, sticky, easy to agglomerate qualities are not suitable to convey.

Technical Parameters

Model	GX15	GX20	GX25	GX30	GX40	GX50	GX60
Screw Diameter (mm)	150	200	250	300	400	500	600
Conveying Capacity for Magnesium Powder (t/h)	4.5	8.5	16.5	23.3	54	89	139
Conveying Capacity for Cement (t/h)	4.1	7.9	15.6	21.2	51	85	134
Conveying Capacity for Sodium Carbonate (t/h)	3	6.7	10.7	18	35.5	70	97
Width × Height (mm)	272×314	342×384	392×464	468×555	572×685	706×823	806×973
Shortest Layout of Inlet (mm)	190	220	270	300	350	450	550
Dimension of Square Opening of Inlet (mm)	170	220	270	320	420	528	628
Height of Inlet (mm)	75	100	120	140	160	160	180
Dimension of Square Opening of Outlet (mm)	176	226	276	328	428	536	636
Height of Outlet (mm)	135	165	195	225	280	340	430

Narrow Gauge Wagon

Principle

The narrow-gauge railway transport vehicle is used for transporting bulk materials like coal, ore, and waste rock, and is usually pulled by winch or locomotive. Narrow gauge wagon can be loaded by ore drawing gate or loader.

Rims are equipped inside the narrow gauge wagon wheels, and there is a distance between rims and rails. Make the trade of wheels and rails into cone, which keeps the wheels in orbit, reduces the mechanical wear and tear, and lowers the running resistance.

Technical Parameters

Type	Model	Body Volume (m^3)	Max. Loading Weight (kg)	Gauge (mm)	Overall Dimension (L × W × H) (mm)	Ways of Connection Buffer	Weight (kg)
Fixed Wagon Box	YGC0.5-6	0.5	1250	600	1200×850×1000	Rubber	450
	YGC0.7-6	0.7	1750		1500×850×1050		500
	YGC1.2-6(7)	1.2	3000	600(700)	1900×1050×1200		720(730)
Overturn Wagon Box	YFC0.5-6	0.5	1250	600	1500×850×1050		590
	YFC0.7-6	0.7	1750		1650×980×1200		710
Single Bend Side Discharge	YCC1.2-6	1.2	3000		1900×1050×1200		1000
	YCC2-6	2	5000		3000×1250×1300	Spring	1830
Bottom Side Discharge	YDC2-6				3240×1200×1310		2320

DEDUSTING

- RFS Bag Dust Remover
- Chamber Jetting Bag Dust Remover
- HE High-efficiency Dust Remover Assembly
- CCJ/A Dust Remover Assembly
- Spray Wet Dust Remover

DEDUSTING

RFS Bag Dust Remover

Principle

The dusty gas from the air inlet flows into dust remover, through steering gear, the air flow direction changes and large particles of dust fall into ash hopper due to inertial effect. The dusty gas that the direction has changed continues to flow into the filter chamber, and the dust is blocked and attached to the surface of filter bag, then the clean gas under the action of induced draft fan is discharged from the upper air outlet.

Features

RFS bag dust remover can be used with R Raymond mill to solve the afterwind dedusting effectively with 99% in dedusting efficiency.

Application

It is widely used for dust collecting system in metallurgy, machinery, chemical engineering, electric power, building material, cement and other industries.

Technical Parameters

Item		Parameters		
Pulverizer Model		3R2714	4R3216	5R4119
Dust Remover System Model		R3	R4	R5
Airflow (m^3/h)		1120~5600	1800~9360	4000~20000
Resistance (mmH_2o)		80~300	80~300	80~300
Filter Area (m^2)		39	66	140
Qty. of Filter Bag		24	40	72
Dedusting Efficiency (%)		> 99.5	> 99.5	> 99.5
Ash Hopper Volume (m^3)		1	1.5	2.6
Dust Remover Weight (t)		2	2.5	4
Fan	Model	4-72-11NO.4A	4-72-11NO.4A	4-72-11NO.5A
	Power (kW)	5.5	7.5	15
	Rotating Speed (r/min)	2900	2900	2900

Chamber Jetting Bag Dust Remover

Principle

The dusty gas flows in from the air inlet of dust remover (from ash hopper for 32 series), through inclined clapboard, turning to ash hopper. At the same time, the air flow speed becomes lower. Due to inertia effect, the coarse-particle dust in gas falls into ash hopper, and tiny dust particles with air flow go up and into the filter chamber with the dust attached to the filter bag surface. The gas after purification passes through the filter bag and flows into the upper clean room, then it is collected at the air outlet from each clean room, and discharged into the atmosphere through the main air blower of dedusting system.

Features

Combining the advantages of chamber separation blowback and pulse-jet for dedusting, it improves the disadvantages of poor strength on chamber separation blowback and synchronous conduct of pulse-jet dedusting, which enlarges the application range. With the features of chamber separation overall dedusting and use of large-sized pulse valve, the dedusting ability of it is strong, the effect is good, and the service life is long. It is suitable for the management of high-concentration dust with simple dust process flow and lower equipment investment. With compact structure, the product occupies less area, which can reduce the investment and has significant environmental, social and economic benefits, filling in the blank of gas shock pulse dedusting and reaching domestic advanced level.

Application

It is widely used in cement, metallurgy, machinery, chemical engineering and refractory material industries, and especially suitable for crushing, packaging, roofing, and dedusting system of clinker cooler and all kinds of mills, as well as coal mill dedusting. But if it is for the later, more attention should be paid to the flame and explosion precautions , and the dust remover structure should also be changed. It also can be applied to gas dedusting with super high dust concentration. Such as to grinding system of O-SEPA, the dust concentration is up to 1000 g/m^3, and the cyclone dust collector used for roof dedusting can be not equipped.

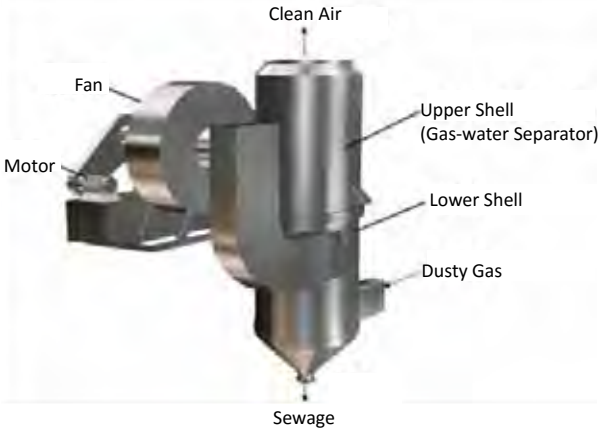
Technical Parameters

Parameters / Model	Airflow (m^3/h)	Velocity of Filtering (m/min)	Filter Area (m^2)	Qty. of Filter Bag (Piece)	Resistance (Pa)	Dust Content (g/m^3)	Insulating Layer Area (m^2)	Weight (kg)
FMPD32-3	6900	1.2~2.0	93	96	1470~1770	<1000	26.5	2880
FMPD32-4	8930		124	128			34	4080
FMPD32-5	11160		155	160			41	5280
FMPD32-6	13390		186	192			48.5	6480
FMPD64-4	17800		248	256			70	7280
FMPD64-5	22300		310	320			94	9960
FMPD64-6	26700		372	384			118	11640
FMPD64-7	31200		434	448			142	13320
FMPD64-8	35700		496	512			166	15000
FMPD96-4	26800		372	384		<1300	110	10452
FMPD96-5	33400		465	480			120	12120
FMPD96-6	40100		557	576			130	14880
FMPD96-7	46800		650	672			140	16920
FMPD96-8	53510		744	768			150	19810
FMPD96-9	60100		836	864			160	21240
FMPD 96-2×5	66900		929	960			175	25200
FMPD 96-2×6	80700		1121	1152			210	30240
FMPD 96-2×7	94100		1308	1344			245	35280
FMPD 96-2×8	107600		1494	1536			280	40320
FMPD 96-2×9	121000		1681	1728			315	45360
FMPD 96-2×10	134500		1868	1920			350	50400
FMPD128-6	67300		935	768			125	24120
FMPD128-9	100900		1402	1152			196	31680
FMPD128-10	112100		1558	1280			205	34680
FMPD128-2×6	34600		1869	1536			323	43920
FMPD128-2×7	15700		2181	1792			247	52680
FMPD128-2×8	179400		2492	2084			262	60000
FMPD128-2×9	201900		2804	2304			277	66480
FMPD128-2×10	224300		3115	2561			292	72000
FMPD128-2×11	247600		3427	2856			307	78480
FMPD128-2×12	269100		3728	3072			322	96400
FMPD128-2×13	291600		4050	3328			337	93600
FMPD128-2×14	314000		4361	3584			252	100800

HE High-efficiency Dust Remover Assembly

Principle

The dusty gas flows into centrifugal dust remover along tangential direction, and under the action of centrifugal force, the big-particle dust is separated out. The dusty gas with fully atomized water goes into wet dynamic washing blower, then crashes, collects and washes together. The gas after purification is dewatered and discharged out due to centrifugal effect in gas-water separator.



Features

The specialized wet mixing dynamic blower has super high dedusting efficiency.

The spiral solid nozzle is taken for water spray system with good atomization effect.

For 1-2 μm super fine dust, the dedusting efficiency is up to 99%.

With low requirement of water quality, the solid content can be ≤ 150 mg/L.

The adaptive range of water pressure is big within the range of 0.2-0.5 MPa.

It can be suitable for all kinds of bad environment of high temperature, humidity, dust concentration, and viscosity.

Application

It is suitable for all kinds of non-hydrophobic dusty gas purification in industries of mining, metallurgy, chemical engineering, power generation, and cement.

Technical Parameters

Model	Air Volume (m^3/h)	Margin Blast Pressure (Pa)	Water Consumption (t/h)	Motor Power (kW)
HE09	4000~6000	1000~1400	1	15
HE12	9000~12000		1.8	22
HE16	14000~21000		3.1~4	37
HE18	23000~26000		4.6~5.2	55
HE22	29000~36000		5.8~7.2	75
HE24	39000~46000		7.8~9.2	90
HE27	49000~66000		9.8~13.2	110
HE32	69000~76000		13.8~15.2	160

CCJ/A Dust Remover Assembly

Principle

The dusty gas is sucked to the inlet of dust remover by fan. The airflow turns down and impacts on water surface, and part of larger dust particles flow into the water. While dusty gas gets through "S" shaped channel between upper and lower blade by the speed of 18-35m/s, a lot of spray is stirred up, and after a good contact with moisture, most of fine dust particles are mixed into water, which fully purified the dusty gas. After getting through the "S" shaped channel, the dust water returns to funnel due to the effect of centrifugal force. After removed water droplets by fog chamber water fender, the purified gas is exhausted from dust removal unit by net gas outlet and fan, while the slurry is discharged regularly slurry discharging valve of funnel.

Features

The arc-shaped upper blade speeds up the gas impacting water surface, and dust removal effect of large particles is good.

"S" shaped channel fully mixes up water and gas, and ultrafine particles are fully purified.

The overflow tank cover is equipped with water level automatic control device, to keep water surface elevation in the best range and ensure efficient processing capacity and water conservation.

Application

This unit is suitable for a wide range, and it can be applied to purify dust gas which is non-fibrous, non-corrosive with the temperature of no higher than 300℃. It is applicable to industries such as metallurgical, mining, coal, chemical, foundry, power generation, building materials and refractory materials. It also has a good dedusting effect in the viscous transportation system.

Technical Parameters

Matching Data \ Model			CCJ/A-5	CCJ/A-7	CCJ/A-10	CCJ/A-14	CCJ/A-20	CCJ/A-30	CCJ/A-40	CCJ/A-60
Dust Remover	Blast Capacity (m^3/h)		5000	7000	10000	14000	20000	30000	40000	60000
	Equipment Resistance (mmH_2O)		100~160							
	Purification Efficiency (%)		>99							
Fan	4-72-II Fan	Model	4A	4.5A	5A	6C	8C	8C	10C	12C
		Revolution (r/min)	2900	2900	2900	2240	1600	1800	1250	1120
		Blast Capacity (m^3/h)	4020~7420	5730~10580	7950~14720	11900~17100	17920~31000	20100~34800	34800~50150	53800~77500
		Total Pressure (mmH_2O)	204~134	258~170	324~224	272~229	252~188	318~241	239~190	277~219
	Motor	Model	Y132S1-2	Y132S2-2	Y160M2-2	Y180M-4	Y180M-2	Y200L2-2	Y225M-4	Y280S-4
		Power (kW)	5.5	7.5	15	18.5	22	37	45	75
Water Consumption	Evaporation (kg/h)		17.5	24.5	35	49	75	105	140	210
	Overflow (kg/h)		150	210	300	420	600	900	1200	1800
	Underflow (kg/h)		425	602	860	1200	1700	2550	3400	5100
Water Filling Volume (m^3)			0.48	0.66	1.04	1.2	1.7	2.5	3.4	5
Unit Weight (kg)			791	956	1196	2426	3277	3955	4989	6765
Remarks			Magnetic valve power of automatic water level control system is 80 VA.							

Spray Wet Dust Remover

Principle

XW superfine atomizing dust suppression technology is introduced from water dust suppression and spray dust suppression technology, and the principle is based on the theory that "probability of adsorption, filtration and condensation is the largest while water mist particle and dust particle are similar in size." Due to compression system, water mist particle of 1-10 μm is generated through spray-head, and then thick atomization area is formed. Dust suspended in the air, especially inhalable dust particles the diameters of which are less than 5μm can be effectively adsorbed and condensed into a group, then settled by gravity, in this way dust suppression is achieved.

XW superfine atomizing dust suppression system generates water mist particles with size of mainly 3-20 μm having strong dust removal effect. It controls and effectively solves the pollution of inhalable dust of less than 10 μm from the pollution source, and effectively solves the present defects and difficulties of unorganized emissions dust pollution treatment.

Features

Dust control is conducted at pollution source.

High efficiency of dust suppression: The treatment effect of inhalable dust less than 10 μm is higher than 99%, and silicosis can be avoided effectively.

Water mist particles are 3-20 μm, thick and dense fog pool is formed at dust suppression point, to suppress dust diffusion.

Small water consumption: The weight ratio increased by material humidity is 0.2%-0.5%, and there is no calorific value loss for material (coal), no secondary pollution.

Small covering area; less equipment investment, and lower operation and maintenance costs.

Easy operation and fully automatic control.

Greatly reduced dust explosion rate.

With no effects on indoor temperature, and normal operation in winter.

Application

It is suitable for unorganized emissions, pollution sources of closed or half closed mining, metallurgy and cement and explosion-proof occasions.

Technical Parameters

Model	XW1/1	XW1/2	XW1/3	XW1/4	XW1/5	XW1/6
Power (kW)	1.1	2	3	4	7.5	11
Voltage (V)	380					
Wire System of Inlet Wire	Three-phase five-wire					
Max. Spray Flow (t/h)	0.3	0.6	0.9	1.25	2	4
Water Inlet Dimension	0.5"/DN15	0.5"/DN15	0.5"/DN15	1"/DN25	1.5"/DN40	2"/DN50
Water Outlet Dimension	1/8"-1	1/8"-1	1/8"-2	1/8"-3	1/4"-2	1/2"-2
Outline Dimension (mm)	1400×700×1600					
Feed Water	Self-sufficient water tank adopts full automatic control.					
Signal	4-20 mA Current signal					
Control System	PLC Programmable control system					

IRON REMOVING

- Electromagnetic Iron Remover
- JTQ Metal Detector

IRON REMOVING

Electromagnetic Iron Remover

Model RCDA: Forced air cooling and manual unloading iron.

Model RCDA: Natural air cooling, manual unloading iron, strong antipollution ability, high reliability and no fan noise.

Model RCDA: Based on RCDA but equipped with an automatic iron unloading system.

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Technical Parameters

Model	Cooling Pattern	Belt Width (mm)	Excitation Power (kW)	Hanging Height (mm)	Thickness of Materials (mm)	Belt Speed (m/s)	Weight (kg)
RCDA-5	Forced Air Cooling	500	1	150	≤ 100	≤ 2.5	450
RCDA-6		600	1.6	175	≤ 150		620
RCDA-8		800	2	250	≤ 200		960
RCDB-5	Natural Air Cooling	500	1	150	≤ 110		400
RCDB-6		600	1.6	175	≤ 140		600
RCDB-8		800	3	250	≤ 200		950
RCDC-5	Forced Air Cooling and Automatic Unloading Iron	500	1.2	150	≤ 100		1100
RCDC-6		600	2.0	175	≤ 150		1300
RCDC-8		800	3.5	250	≤ 200		2200
RCDD-5	Natural Air Cooling and Automatic Unloading	500	1	150	≤ 110		1000
RCDD-6		600	1.8	175	≤ 140		1350
RCDD-8		800	3	250	≤ 200		1600

JTQ Metal Detector

Principle

Effective anti-electromagnetic interference, suitable for magnetic and non-magnetic mines and effectively detecting the ironware in the mines.

With alarm signals of sound and light, the orders sent by control cabinet can control relative equipment.

Technical Parameters

Model	JTQ-500	JTQ -650	JTQ -800	JTQ -1000	JTQ -1200	JTQ -1400
Suitable for Belt Width (mm)	500	650	800	1000	1200	1400
Long Shaft with Inner Bore (mm)	700	850	950	1150	1370	1590
Short Shaft with Inner Bore (mm)	330	330	370	410	510	610
Max. Sensitivity for Normal Ore (mm)	20~25	25~30	25~30	35~40	45~50	55~60
Max. Sensitivity for Magnetic Ore (mm)	30	35	40	50	60	70

AUTOMATIC CONTROL

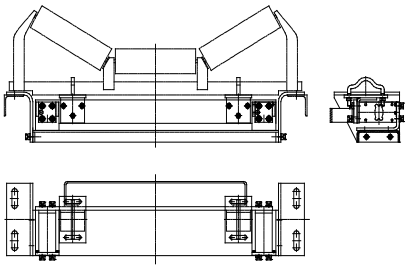
- Electronic Belt Scale
- Numerical Control Agent Feeder
- Flocculant Preparation Equipment
- Auto-control & Measurement Device for Flocculant
- Ultrasonic Slurry Concentration Meter

AUTOMATIC CONTROL

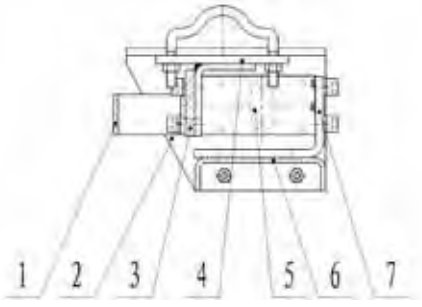
Electronic Belt Scale

Principle

Electronic belt scale is a kind of newly developed product, and has been applied to many mines. It obtained national invention patent (patent No.: 201210507569.8) and utility model patent. With modular design and a high precision single roller, availability for heavy load weighing, the belt scale can be used for production process control and material loading control. With control core of SIEMENS PLC, Swiss high-performance weighing sensor and direct bearing structure, the stability and reliability are greatly ensured and improved.



Structure Diagram



Side View Enlargement

1. Counter-Balanced Carriage; 2. Mounting Plate; 3. Dynamic Connecting Plate;
4. Supporting Plate; 5. Pressure Sensor; 6. Static Base; 7. Sensor Base Plate

Technical Parameters

Model	Suitable Belt Conveyor	Load (kg)	Setting Angle	Belt Speed (m/s)	Weight (kg)
PDC500	TD500	0~300	≤ ±20°	≤ 3	40.5
PDC650	TD650	0~300	≤ ±20°	≤ 3	43.6
PDC800	TD800	0~300	≤ ±20°	≤ 3	47.8
PDC1000	TD1000	0~300	≤ ±20°	≤ 3	53.5
PDC1200	TD1200	0~300	≤ ±20°	≤ 3	59.6

Precision	Better than ± 0.5% (Measuring Range 20%~100%)
Belt Width (mm)	500、650、800、1000、2000
Belt Speed (m/s)	0 ~ 3
Volume (t/h)	Max. 1200
Rated Weighing of Single Weighing Sensor (kg)	150
Setting Angle(°)	≤ ±20°

Numerical Control Agent Feeder

Principle

XHGY-B series numerical control agent feeder is the third generation product of Yantai Xinhai Testing and Control Co., Ltd. (Yantai Xinhai Mining Machinery Co., Ltd.) with the control core of Siemens PLC made in Germany, which strengthens the stability and reliability, and the display of high-end LCD touch screen, which is convenient for the operation.

Widely used in the precise quantitative control of flotation agent of black metals, non-ferrous metals, precious metals, non-metallic minerals and coals, it can completely change the low recovery caused by manual-operated agent inaccuracy.

Features of XHGY-B Numerical Control Agent Feeder

The liquid level is controlled at the same level by height control valve, which ensures the constant flow when the solenoid valve is turned on.

The agent control points can be extended to 256 points, which satisfies the general grading of multiple valuable minerals of large processing plants.

The feeding dosage of agent for each point is 0-3000 ml/min (If it is necessary, by adopting big valve, the single point agent feeding can be up to 5000 ml/min), and is suitable for the quantitative agent feeding for all kinds of acid-base agents; for feeding of large amount of agent, it is required to apply metering pump.

Flow calibration, setting and modification can be performed through good human machine interface.

Multiple agent addition plans should be preset according to different mineral selections and capacities.

Statistics of single point shift and accumulative agent feeding can be made, and the agent dosage can be figured out in category.

The errors between automatic agent feeding and actual measurements are less than 3%, but the precision is much higher than that of manual operation.

Password protection is applied to parameter setting of each agent feeding point, which avoids random changes of the parameters by people.

Safe and reliable: Power-off protection function avoids parameters resetting while the power on.

The system applies open and standardized structure, and the company intranet can be accessed by extended modules.

Features of Equipment

Convenient maintenance: Special agent feeding magnetic valve ensures feeding pipes fluency, and avoids the blocking.

Stable agent feeding: Liquid level constant pressure device controls the liquid at the same level.

Process improvement: Conducive to the management of mineral processing technology, and convenient to adjust index of mineral processing technology.

Economical and practical: Avoid misoperation of artificial feeding, stabilize processing index, and reduce the agent consumption significantly.

Excellent structure: Agent container, constant device for agent liquid and all kinds of valves are made of stainless steel with good corrosion resistance.

Principle

Pour the prepared liquid into the higher agent container (1), then the liquid flows into the lower agent container (6); because of the fluid level, the liquid level constant valve (4) keeps the liquid (in container 6) at a constant level, and the volume of the liquid that flows through the adjusting valve 6 and valve7 depends on the opening of adjusting valve and the opening time of control valve; and the opening time of control valve is automatically controlled by main machine.

Power Supply: AC220V Frequency: 50/60Hz Single-point Power 30W Operating Temperature: 0-40°.

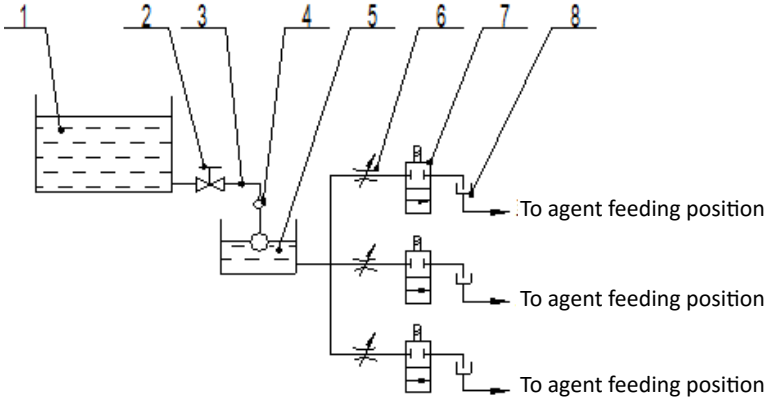


Fig. 2.1 Structure Diagram

1.Higher Agent Container; 2. Ball Valve; 3.Connecting Pipeline; 4. Liquid Level Constant Valve;
5. Lower Agent Container; 6. Adjusting Valve; 7. Control Valve; 8. Liquid Buffer

Notes: In the figure, Part 1, 2, 3 are provided by users themselves, and part 4, 5, 6, 7, 8 are provided as the attachment of the machine.

Flocculant Preparation Equipment

Features

Applied for flocculant preparation of pulp thickening, sewage treatment and other industries with the features of one-time preparation and continuous supply.

With automatic control and the concentration prepared according to the flocculant type.

Secondary dilution can be carried out according to the capacity, which can save agents and reduce product costs.

Stainless steel material.

Technical Parameters

Model	Volume (L)	Agitation Power (kW)	Feed Power (kW)	Vibrator Power (W)	Pump power (kW)	Flow Meter (L/h)	Flocculants Addition (kg/h)
XUNJ-3000	3000	0.75×3	0.25	35	4	400~6000	0.4~4

Auto-control & Measurement Device for Flocculant

Principle

The device is composed of advanced flow metering device, intelligent control instrument and frequency converter, and adopts PLC and frequency converter to control the feeding and measurement of the flocculants.

Features

Feed the prepared flocculant liquid automatically according to the setting. Set freely. Printable and cumulative.

Application

Widely used in such industries as metallurgy, mine, petroleum and chemical.

Technical Parameters

Model	Max. Flow Rate (t/h)	Working Pressure (MPa)	Pipe Diameter (mm)	Metering Accuracy (%)	Ambient Temperature (℃)	Electric Power (kW)	Power of Metering Pump (kW)
DN15-25	0.6	≤ 1.6	25	±0.5	0~40	≤ 40	1.5

Ultrasonic Slurry Concentration Meter

Principle

Specially designed for the concentration monitoring of the beneficiation process, this online monitoring instrument can monitor concentration changing from 0.2% to 80%, which provides reliable guarantee to automatic control of the process.

Performance Indictors

Measure Performance Range: 0.2% - 80% (Measure range will be different because of different media and different sensor).

Resolution: 0.10%.

Precision: ±2.5% FS.

Calibration: Factory calibration, and site calibration is available.

Display: LCD screen showing date, time, measurements, historical trend line, etc.

Output

Simulation Output: Isolation 4-20 mA, Max. load: 500 Ω with 3.8 mA or 21 mA available at failure state.

Relay Output: Upper and lower hysteresis alarm relay output (available for concentration control).

Relay Capacity: 2 A, 250 VAC.

Digital Interface: Communication interfaces RS-485, Profibus DP, MODBUS are optional.

Site Setting: Completed by transmitter button.

Power Supply

Alternating Current: 220 VAC±10%, 50 Hz.

Direct Current: 24 VDC±10%.

Physical Properties

Transmitter Size: 256×270×139 mm.

Sensor Types: Submerged sensor, plug-in sensor, and pipe flange type sensor.

Material : Transmitter: Cast aluminium Sensor: Stainless steel.

Transmitter Weight: 1 Kg.

Sensor Weight: 0.5 Kg.

Sensor Cable: Shield cable 10 meters (Other length can be specified in the order).

Environment Performance

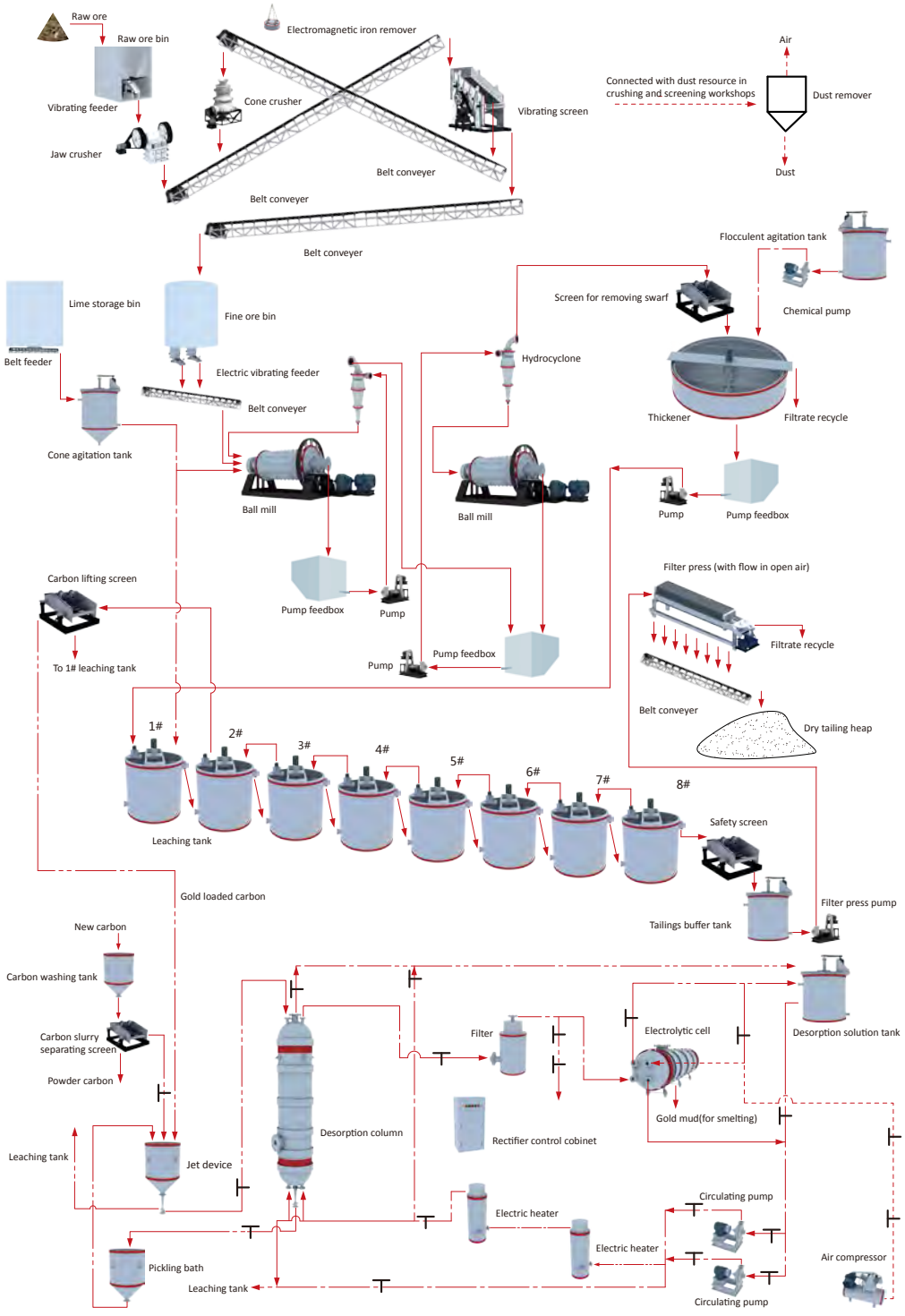
Protection Level: IP65 (transmitter) IP68 (sensor).

Operating Temperature: 0-60℃.

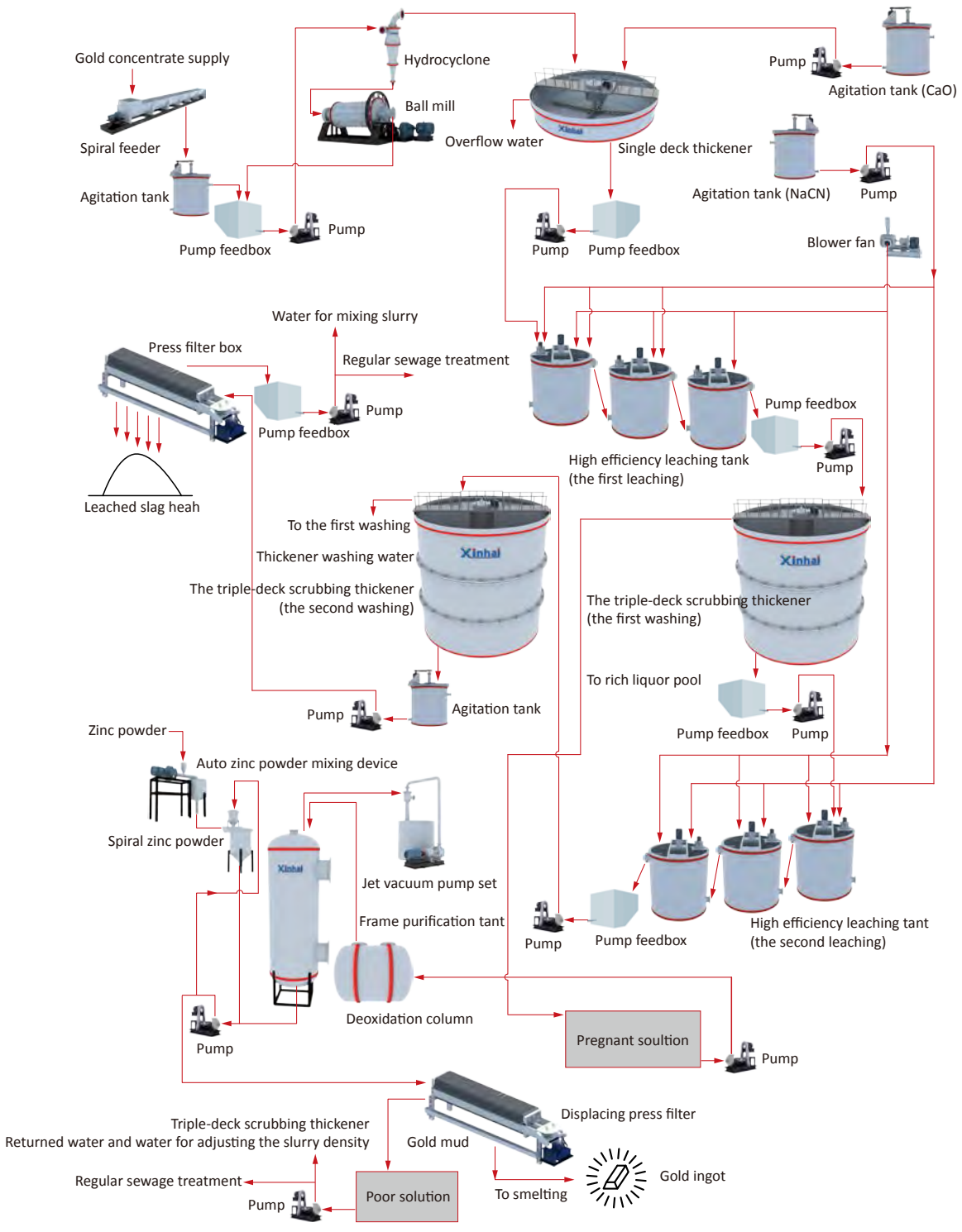
Relative Humidity: 0-95%.

Working pressure: Max. 7.5 Bar.

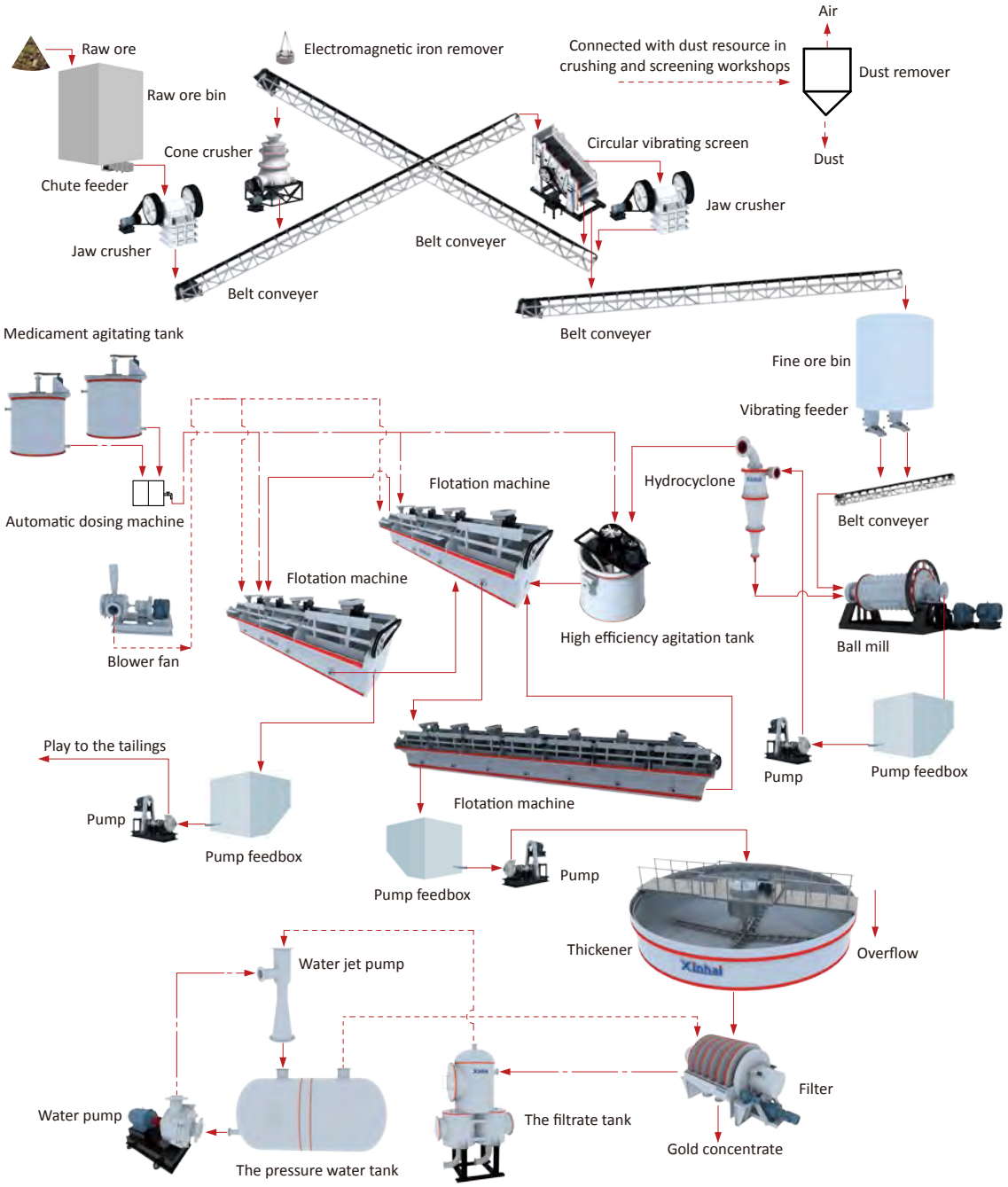
FLOW CHART OF GOLD ALL SLIMING CIL PLANT



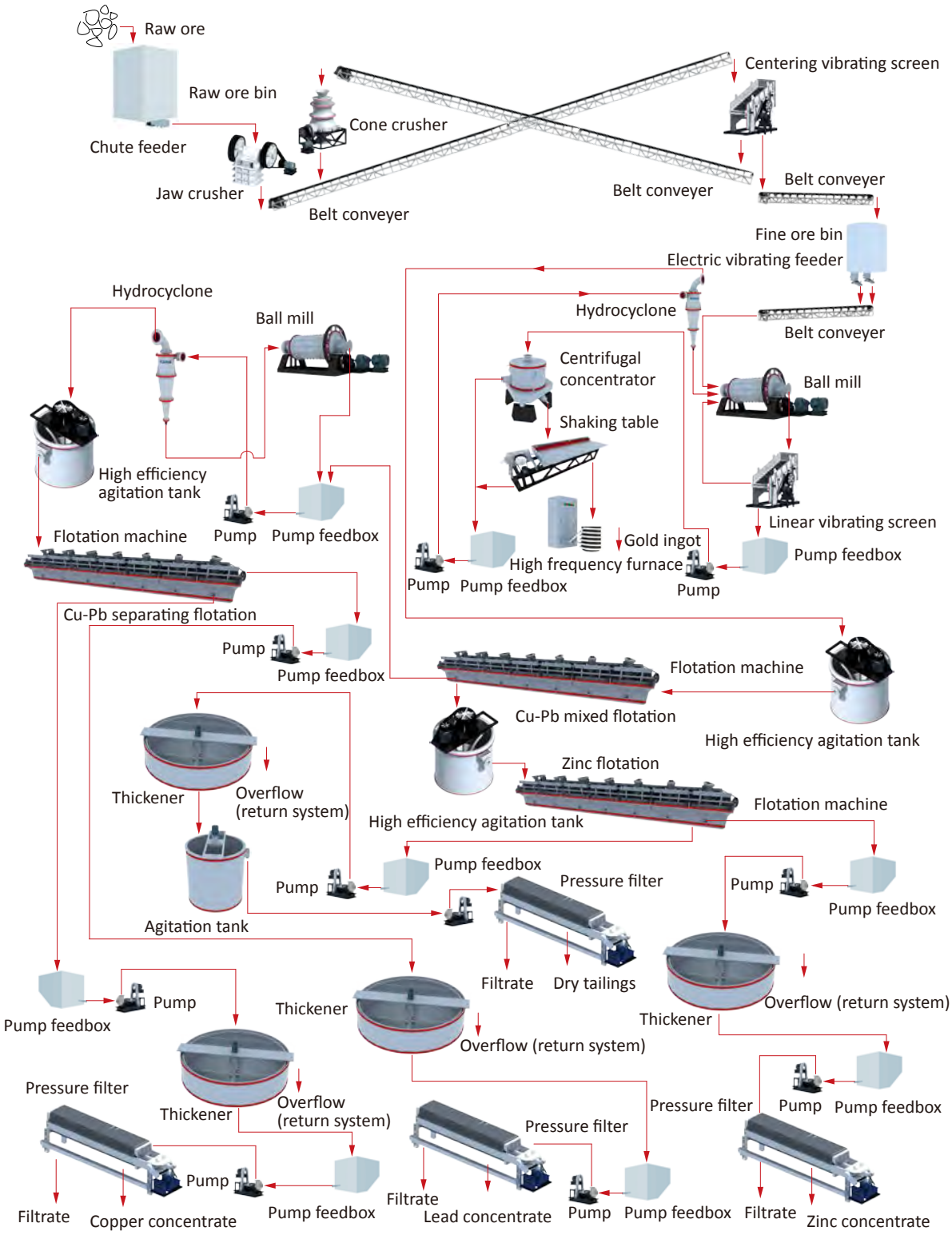
PRODUCTION FLOW CYANIDING PLANT OF GOLD CONCENTRATE



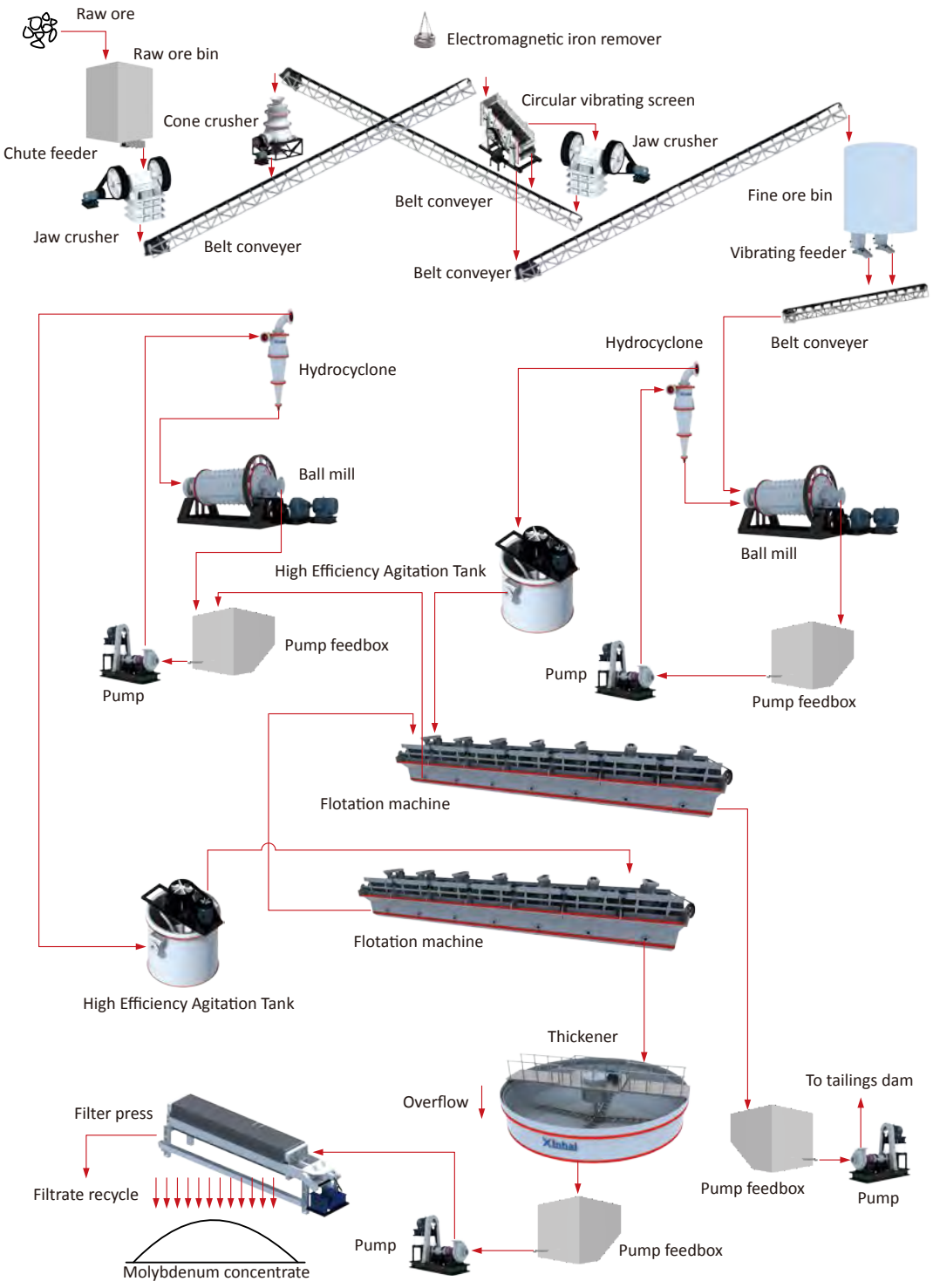
PRODUCTION FLOW OF GOLD FLOATATION PLANT



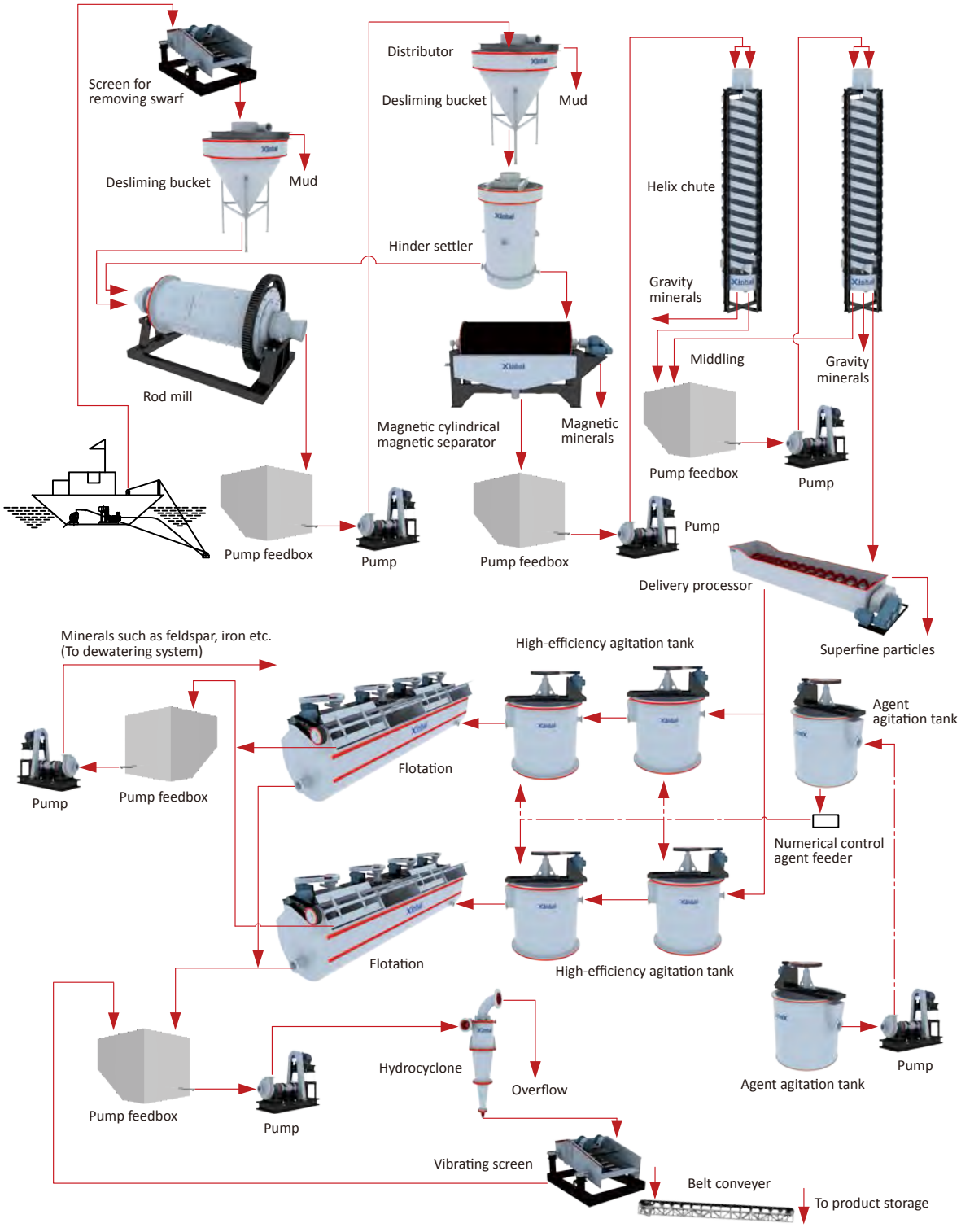
FLOW CHART OF COPPER-LEAD-ZINC DRESSING PLANT



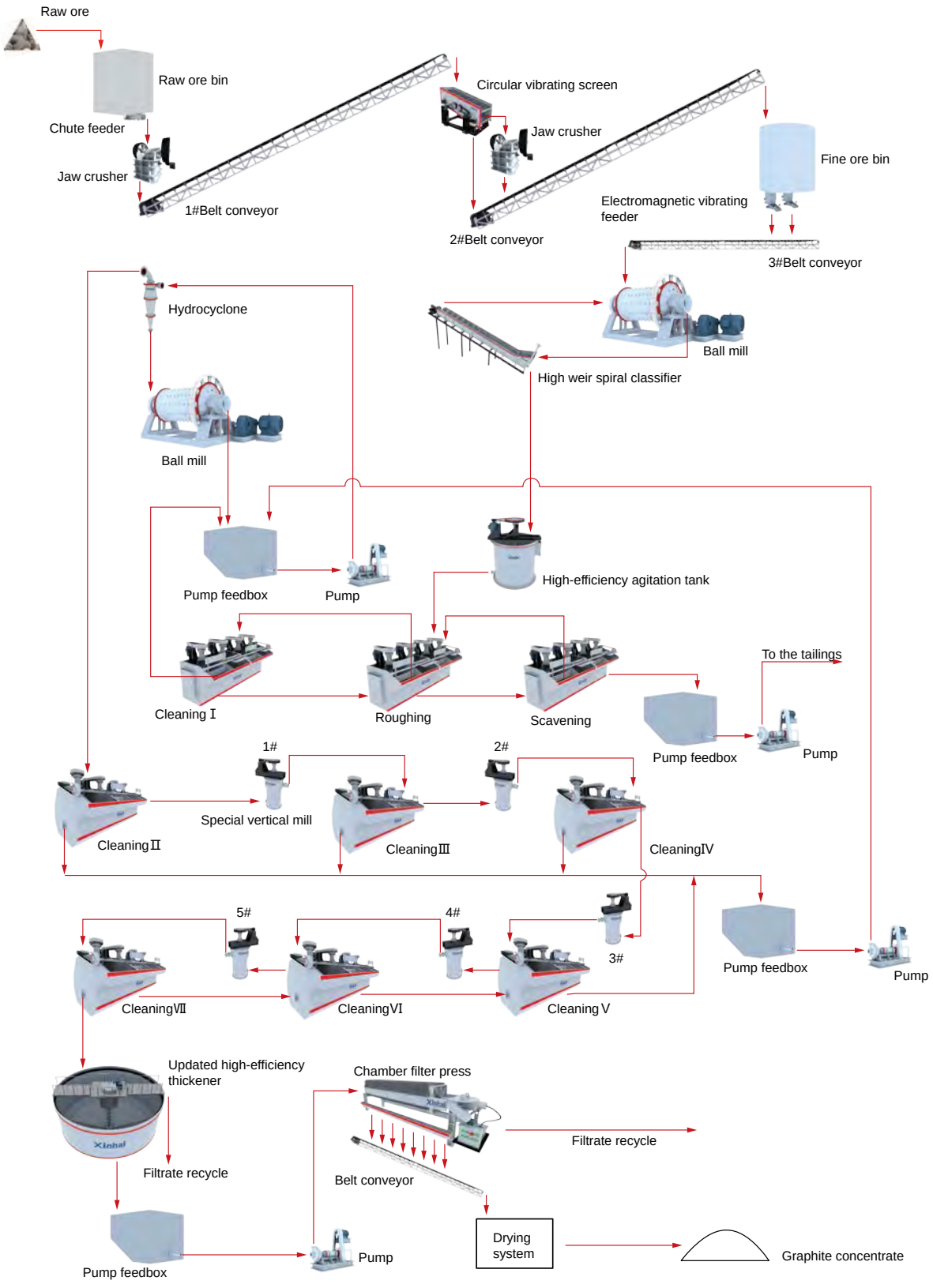
FLOW CHART OF GOLD ALL SLIMING CIL PLANT



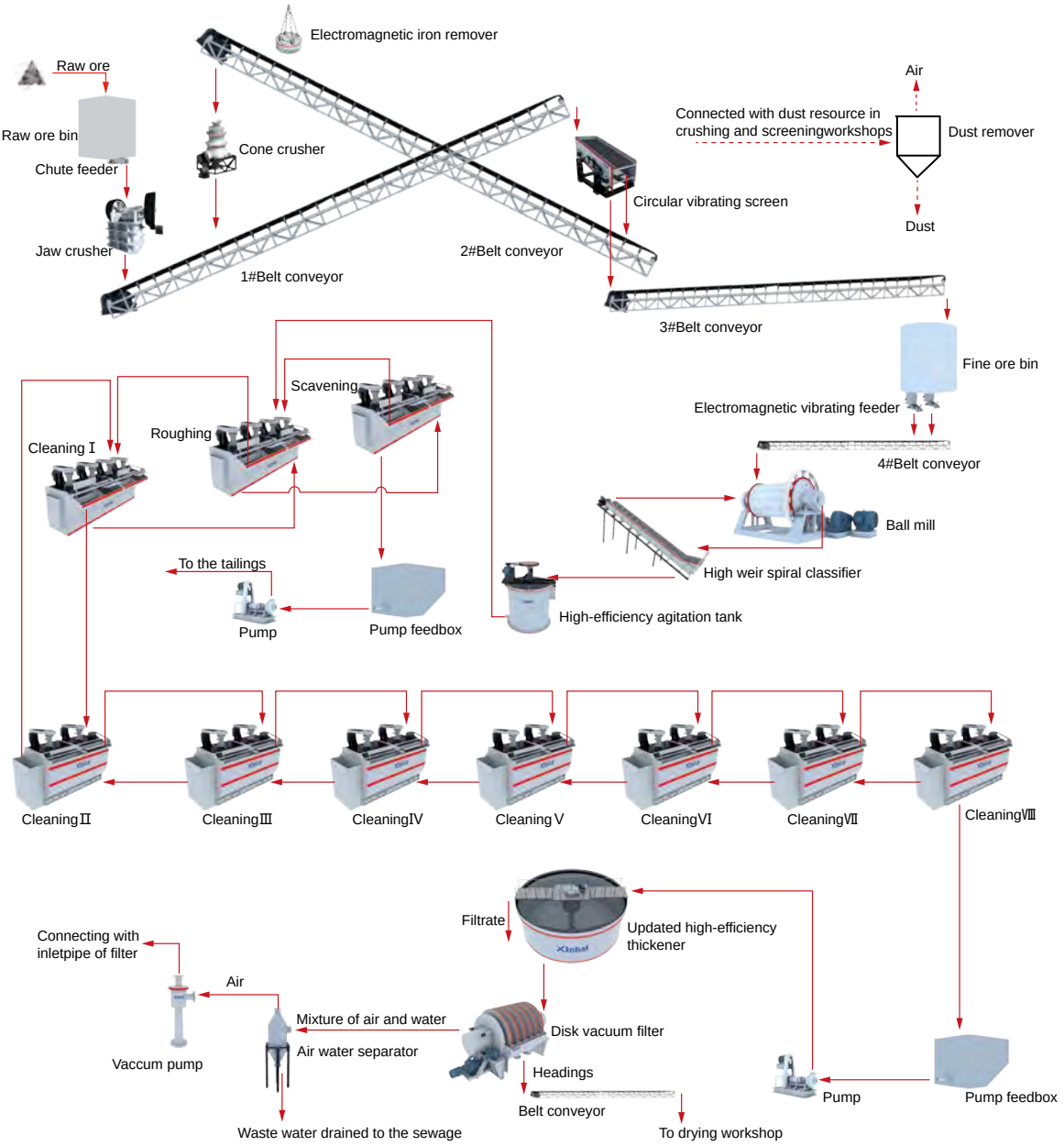
PRODUCTION FLOW OF QUARTZ SAND CONCENTRATE



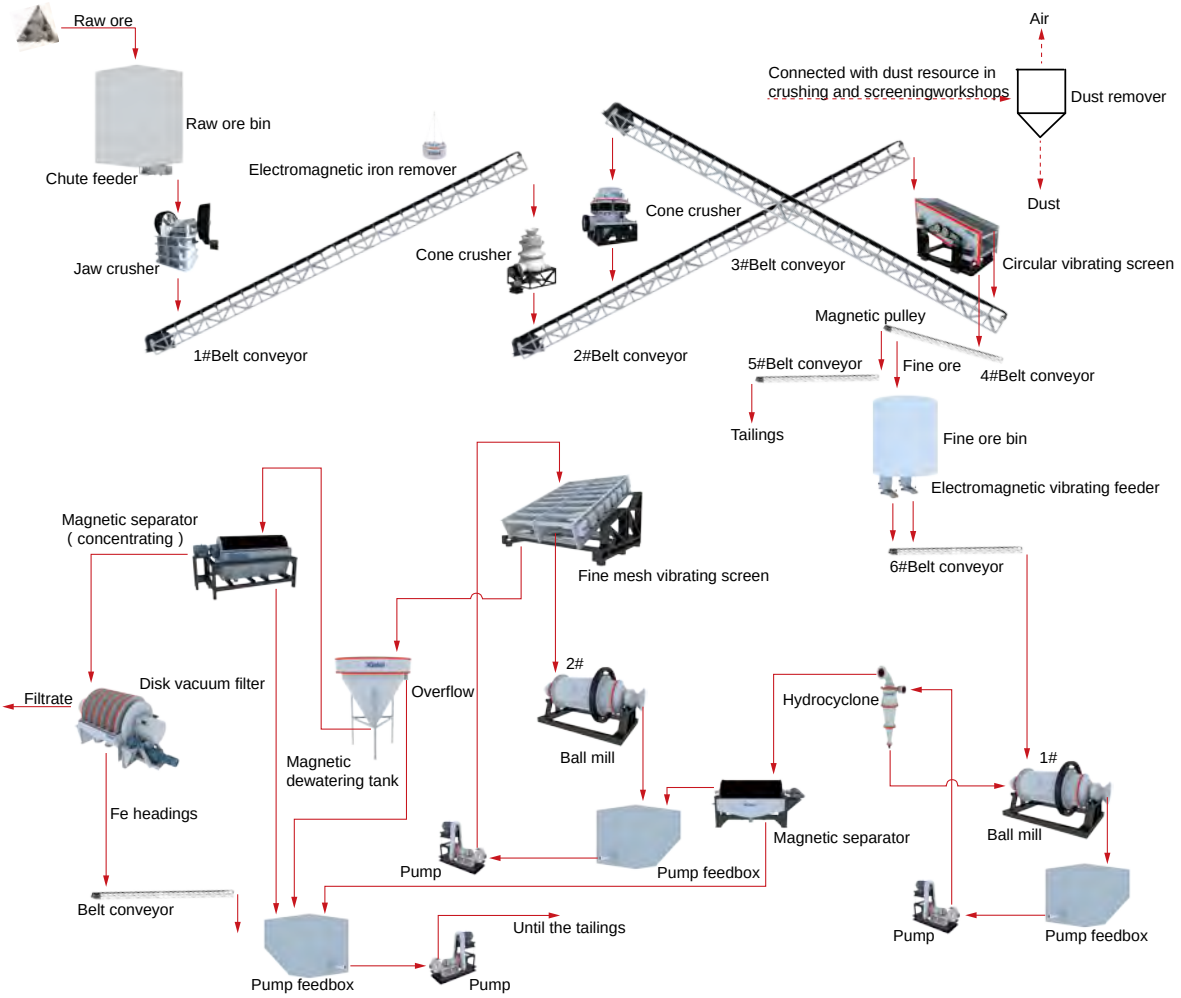
PRODUCTION FLOW CHART OF GRAPHITE PLANT



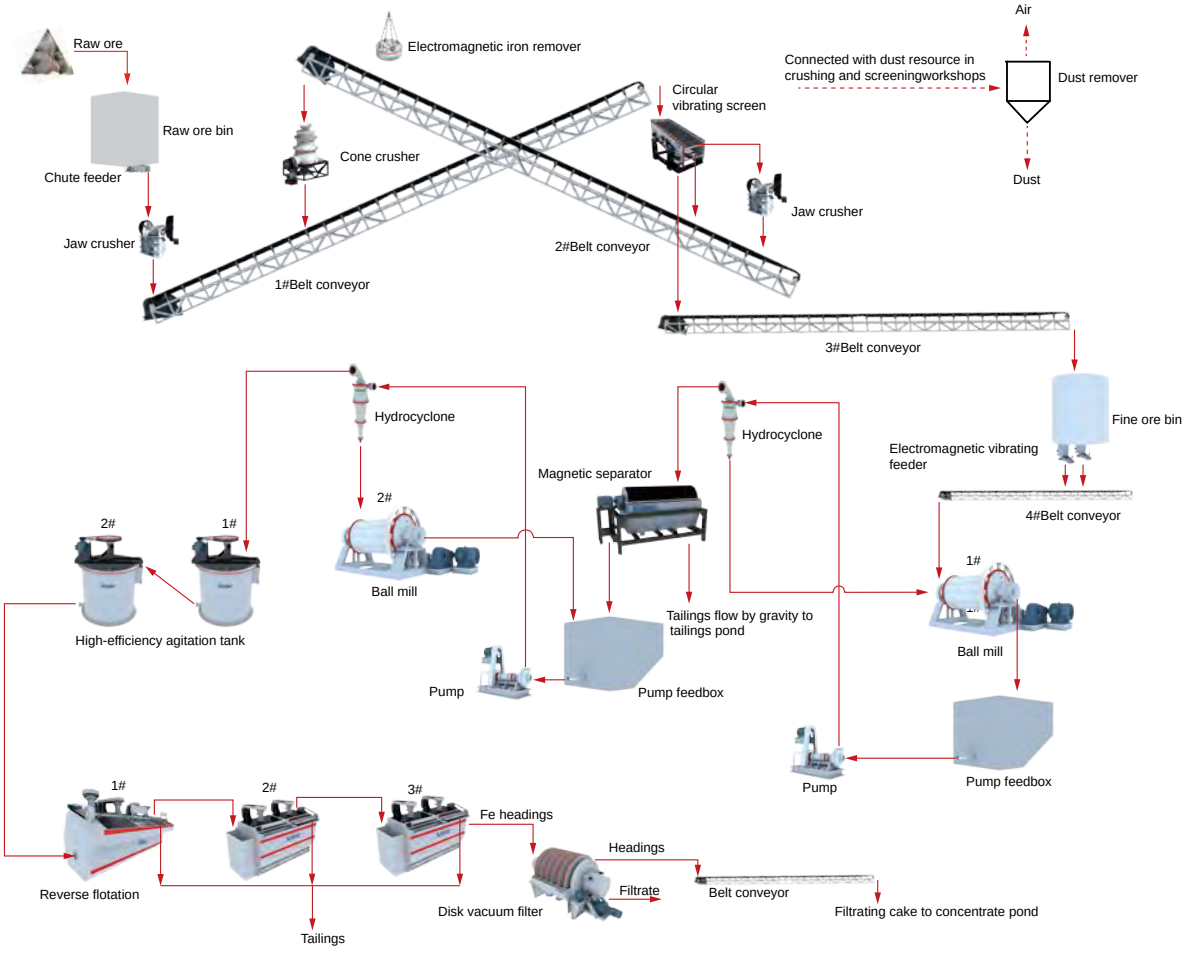
PRODUCTION FLOW OF FLUORITE FLOTATION PLANT



PRODUCTION FLOW OF MAGNETITE STAGE GRINDING & STAGE MAGNETIC SEPARATION MILL PLANT



PRODUCTION FLOW OF HEMATITE MAGNETIC SEPARATION & REVERSE FLOTATION FACTORY



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