





技术参数
 1离心机型号PSD1320NC
 2转鼓直径1320mm
 3转鼓有效高度560mm
 4拦液口直径810mm
 5转速1000r/min
 6转鼓容积430L
 7最大装料量530kg
 8分离因数740
 9电机型号/功率YB180M-4/18.5kw
 10外形尺寸2180*1640*1500mm
 整机重量3200kg

2	PSD1250NC-2-0	主轴部件	1	部件			
1	PSD1250NC-1-0	机座部件	1	部件			
序号	代号	名称	数量	材料	单件重量	总计重量	备注
				平板吊袋离心机		张家港徐林化工机械	
						总装	
						PSD1320NC-00	
标记		处数	更改文件名	签字	日期		
设计			2016.8			图样标记 重量 比例	
						1:8	
						共 张 第 张	

8	LCKZF-0	料层控制部件	1	部件			
7	PSD1250NC-7-0	拦液板部件金信	1	部件			
6	PSD1250NC-6-0	电机部件	1	部件			
5	PSD1250NC-5-0	平衡缸部件	2	部件			
4	PSD1250NC-4-0	翻盖部件	1	部件			
3	PSD1250NC-13-0	转鼓部件金信	1	部件			

Catalogue

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1、 General provisions

After negotiation between the supplier and the buyer, This technical agreement serves as (the demander) Zhangjiagang Xulin Chemical Industry Machinery Co., Ltd. (Supplier) The signed technical documents shall come into force with the signing and effectiveness of the procurement contract.

2、 Product introduction and working principle

PSD1320N type centrifuge is a flat plate type upper discharge hanging bag centrifuge. This type of centrifuge has the advantages of simple structure, reliable performance, convenient operation and maintenance, arbitrary filtration time, sufficient washing of filter residue, no damage to solid particles and convenient cleaning of filter bag. No foundation installation, canceling the traditional hanging foot and simplifying the installation process; The structure is simple, the appearance is beautiful, and the cleaning is convenient. The equipment foundation plate is the working operation platform, which is convenient for operation and maintenance.

It can be fed during operation or when the drum stops running. The volume and weight of materials must be controlled during stopping feeding, otherwise liquid running or overload will occur. Under the action of centrifugal force, the material tends to the drum wall, the liquid phase passes through the filter hole of the drum wall through the filter medium covered on the drum wall, tends to the inner wall of the shell, falls into the chassis, and is discharged through the liquid outlet. The solid materials are stored in the drum and can be fully washed, so as to complete the solid-liquid separation. After shutdown, open the shell flap, use a special lifting device to take out the filter bag to the blanking place for unloading. After unloading, install the liquid blocking plate and filter bag into the drum, lock the liquid blocking plate, close the flap and lock it, and then start the second working cycle.

3、 Centrifuge design data sheet

project	Manufacturer's design data	Customer requirements
Centrifuge model	PSD1320N	
Feeding mode	Lateral distribution pipe	
Discharging mode	Manual bag upper unloading	
Cover opening form	Spring assisted	
Centrifuge support mode	Four point support	
Damping system	High viscosity liquid damper	
Host drive mode	Inverter start	
Braking mode	Energy consumption braking	
Main design parameters of centrifuge		
Inner diameter of drum (mm)	1320	
Effective height of drum (mm)	560	
Thickness of liquid baffle (mm)	16	
Drum thickness (mm)	12	
Flap thickness (mm)	4	
Shell thickness (mm)	4	
Flap flange thickness (mm)	27	
Shell flange thickness (mm)	27	
Thickness of frame outer lining (mm)	2	
Thickness of liquid outlet tank lining (mm)	3	
Diameter of liquid trap (mm)	810	
Drum volume (L)	422	
Maximum loading limit (kg)	530	
Speed (RPM)	1000	
Maximum separation factor (g)	740	
Filtering area (M2)	2.5	
Overall weight (kg)	4000	
Overall dimension (LxWxH) (mm)	2550x1810x1780	
Drum rotation direction	Clockwise (looking down at the machine)	
Main motor power kw	YB3 180M-4/B5(18.5kW)	Energy saving motor

Noise level (1m away from the aircraft)	≤85dBA	
Residual cake thickness	No residual filter cake	
Installation method of filter bag	Single stainless steel expansion ring	
External detection mode	Through the mirror hole	
Service conditions of centrifuge		
Ambient temperature ° C	-10 ~ 45 air relative humidity not greater than 85%	
Design temperature ° C	-10 ~ 80	
Design pressure (mbar)	100	
Washing liquid pressure	≥2bar	
Nitrogen source pressure	2-3bar	
Nitrogen purity	≥99%	
Nitrogen flushing diameter	D16	
Main power supply	3Phase5wiresystem/50Hz/380V	
Executive standard of centrifuge		
Design and manufacturing standards	JB/T10769.1-2007、 JB/T10769.2-2007	
Centrifuge performance test method	GB/T10901-2005	
Centrifuge safety requirements	GB19815-2005	
Nondestructive testing of forging and welding parts of separator	JB/T9095-2008	
Strength design and calculation of centrifugal drum	Comply with GB / t28695-2012	
Centrifuge vibration detection	Comply with GB / t10895-2004	
Drum detection	100% NDT	
Setting of connecting pipe orifice and machine cover hole		
Feeding pipe	DN65 (standard flange PN1.0)	
Washing pipe	DN25 (standard flange PN1.0)	
Mirror flushing pipe	D10 (quick connector)	
Nitrogen filling pipe	D16 (quick connector)	
Emptying pipe	DN50 (quick connector)	
Outlet pipe	DN100 (standard flange PN1.0)	
Lamp mirror	φ130x10	
Mirror	φ180x10 (with scraper)	
Material of main parts		
Materials of parts in contact with materials	Stainless steel 316L	

Base	The base adopts Q235A large flat plate, and the outer surface (upper) Side (lower) lining stainless steel 304	
Casing	The casing and large flange are made of stainless steel 316L	
drum	The drum body and liquid baffle plate are made of stainless steel 316L, Manufacture of stainless steel 316L lining for drum bottom casting	
Flip	The flap and large flange are made of stainless steel 316L	
Feeding pipe, washing pipe, liquid outlet pipe, etc External nozzle	Stainless steel 316L	
Liquid damper	Made of carbon steel and painted on the outer surface	
principal axis	40Cr and quenching and tempering treatment	
Flap balance cylinder	Stainless steel 304	
Sealing element	silica gel	
surface treatment		
Stainless steel surface	The polishing treatment Ra of the inner surface in contact with the material shall not be greater than 1.6, and the outer surface of stainless steel not in contact with the material Polishing treatment RA not greater than 1.6	
Carbon steel surface	Stainless steel lining or anti-corrosion treatment	
Connecting parts and welding parts	Smooth transition and fillet treatment	
drive system		
main bearing	Wafangdian	
Power source	Motor	
Phase / frequency / voltage	3/50/380	
Degree of protection	IP55	
Explosion proof grade	EX.d II BT4	
Centrifuge speed control	Frequency conversion control	
Braking mode	Energy consumption braking	
Braking time	Not less than 250s	
Transmission form	Belt drive	
Bearing lubrication	2# extreme pressure compound lithium grease	

Main control cabinet		
Placement area	control room	
Degree of protection	IP40	
Cable channel	Bottom in and out	
Panel settings	Speed button, stop button and touch screen of each section (non Explosion proof)	
texture of material	Carbon steel plastic spraying	
Field button		
Placement area	scene	
Degree of protection	IP65	
Explosion proof grade	EX.D II CT6	
Panel settings	Speed button and stop button of each section	
texture of material	engineering plastic	
Explosion proof button brand	New dawn	
Nitrogen replacement tank		
Placement area	scene	
texture of material	304	
Explosion proof grade of air control components	EX.d II BT4	
Function description	Replace the oxygen content in the centrifuge to a safe range, protect the shaft seal, and clean the centrifuge Small flow supplement for internal pressure loss	
Security settings		
Cover opening protection	have	
Over vibration protection	have	
Motor overheating and overload protection	have	
Emergency stop	have	
Grounding connection	have	

4、 Centrifuge design, manufacture and inspection standards

1. 1.Product executive standard:

1. 1. 1.1.Gb19815-2005 safety requirements for centrifuges
1. 2. 1.2.JB/T10769.1-2007 tripod and plate centrifuges Part 1: types and basic parameters
1. 3. 1.3.JB/T10769.2-2007 tripod and plate centrifuges Part 2: technical conditions
1. 4. 1.4.Gb10901-2005 centrifuge performance test method
1. 5. 1.5.JB / t6418-2010 method for determination of cleanliness of separation machinery
1. 6. 1.6.GB / T 10894-2004 test method for noise of separation machinery
1. 7. 1.7.GB / T 10895-2004 test method for mechanical vibration of centrifuge separator
1. 8. 1.8.JB / t7217-2008 general technical conditions for painting of separation machinery
1. 9. 1.9.GB / t28695-2012 code for strength calculation of centrifuge drum
1. 10. 1.10.JB / t9095-2008 nondestructive testing of forged and welded parts of centrifuge separator
1. 11. 1.11.JB / t10411-2004 ultrasonic testing and quality rating of austenitic steel forgings for centrifuge separators
1. 12. 1.12.JB / zq3011 general technical conditions for welding parts of installation Machinery
1. 13. 1.13.Gb4237 hot rolled stainless steel plates
1. 14. 1.14.GB / T 191-2000 Pictorial marking of packaging, storage and transportation

2. 2.Detection means and methods:

2. 1. 2.1."X" ray flaw detection of drum body
2. 2. 2.2.Overall dynamic balance correction of drum
2. 3. 2.3.Magnetic particle flaw detection and tempering treatment of main shaft
2. 4. 2.4.Vibration stress relief treatment of engine base and bearing base
2. 5. 2.5.Surface treatment inspection
2. 6. 2.6.Centrifuge cleanliness test
2. 7. 2.7.Temperature rise detection of main bearing
2. 8. 2.8.Drum speed detection
2. 9. 2.9.Noise detection of centrifuge
2. 10. 2.10.Centrifuge vibration detection
2. 11. 2.11.Centrifuge running current detection



5、 Structure description and control requirements of centrifuge

1. 1.Main features of centrifuge:

1. 1. 1.1.Vibration damping and flat structure are convenient for installation and maintenance of the machine;
1. 2. 1.2.The structure of large flap is more convenient for overhaul, maintenance and cleaning;
1. 3. 1.3.Butterfly large flap design, with better strength and stiffness, can effectively prevent the influence of flap deformation on sealing performance;
1. 4. 1.4.Humanized design: no basic structure, wide operation platform, explosion-proof lamp, observation mirror, various warning and warning signs, etc;
1. 5. 1.5.Safety protection device: cover opening protection, over vibration protection, over-current protection, overload protection, etc. to ensure the safe use of the machine;

2. 2.Description of main machine structure of centrifuge

2. 1. 2.1.Body parts:

2. 1. 1. 2.1.1.Flat plate structure reduces the center of gravity of the machine and runs smoothly;The equipment foundation plate can be used as an operation platform, which is convenient for operation and maintenance;
2. 1. 2. 2.1.2.The shell and the base are rigidly connected and fully loaded;
2. 1. 3. 2.1.3.Four point support damping system and high viscosity liquid damping shock absorber are adopted, with excellent damping effect;

2. 2. 2.2.Flip parts:

2. 2. 1. 2.2.1.Large flap structure is adopted, which is convenient for maintenance and cleaning;
2. 2. 2. 2.2.2.The balance cylinder (spring) flap is adopted without other power devices;
2. 2. 3. 2.2.3.The matching part with the machine body adopts the combined structure of flange and sealing ring, and is equipped with sealing ring;
2. 2. 4. 2.2.4.Fully processed large flange to ensure reliable sealing with base flange;
2. 2. 5. 2.2.5.Equipped with explosion-proof lighting lamp and observation mirror, it is convenient to observe the working condition of the inner cavity of the centrifuge;

2. 3. 2.3.Drum parts:

2. 3. 1. 2.3.1.The centrifuge drum is welded, and the action balance correction is carried out after heat treatment;
2. 3. 2. 2.3.2.100% NDT for longitudinal welds of drum;

- 2. 3. 3. 2.3.3.The drum has no reinforcing hoop, which reduces the sanitary dead angle and is convenient for cleaning;
- 2. 4. 2.4.Transmission components:
 - 2. 4. 1. 2.4.1.Independent bearing seat structure, bearing seat design, reliable performance, convenient disassembly and maintenance;
 - 2. 4. 2. 2.4.2.The shaft seat and bearing cover are made of steel castings with good strength;
 - 2. 4. 3. 2.4.3.Large bearing length and good bearing performance;

2. 4. 4. 2.4.4.The spindle and the top of the drum adopt double-layer O-ring sealing structure, which has good sealing effect;

2. 4. 5. 2.4.5.The combination of static O-ring and skeleton oil seal is adopted at the joint between the main shaft and the drum bottom to avoid the direct corrosion of mist liquid and gas to the main shaft and greatly improve the corrosion resistance of the main shaft;

2. 4. 6. 2.4.6.Equipped with refueling device, easy maintenance.

2. 5. 2.5.Liquid baffle components:

2. 5. 1. 2.5.1.It is made of all stainless steel, and a fixed groove for fixing the filter cloth is processed near the drum.The expansion hoop can be used to quickly install and replace the filter cloth.Three lifting grooves are set on the liquid barrier plate to facilitate lifting.The lifting device (accessories) is made of stainless steel, which is reliable, safe and convenient.

2. 6. 2.6.Motor components:

2. 6. 1. 2.6.1.Equipped with energy-saving motor and on-site operation button;

2. 6. 2. 2.6.2.Equipped with motor protective cover and belt protective cover to effectively protect the motor during cleaning;

3. 3.Control requirements:

3. 1. 3.1.The main motor is started by variable frequency speed regulation, and the starting is stable;

3. 2. 3.2.Adopt energy consumption braking to realize electric braking;

3. 3. 3.3.Equipped with on-site explosion-proof button, which is connected with the electric control box to realize remote control;

3. 4. 3.4.The main motor is a vertical explosion-proof energy-saving motor;

3.5.Phase / frequency / voltage: 3-phase / 50Hz / 380V;

3. 6. 3.6.Explosion proof grade of motor: Exd II BT4;

3. 7. 3.7.Motor protection grade: IP55;

3. 8. 3.8.Cable channel: bottom in and bottom out;

3. 9. 3.9.Transmission mode: Antistatic V-belt transmission;

6、 Supply scope of centrifuge and brand of purchased parts

1. 1.Supply scope and brand of single centrifuge

Serial number	Equipment name	Specification and model	quantity	Manufacturer	remarks
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1	Centrifuge host	Host as a whole	1 platform	Xu Lin chemical machinery	
		Main motor	1	Jiangyin Dazhong	Installed
2	Electric control cabinet	Floor type control cabinet	1	Suzhou Tiangang	random
		Frequency converter	1	Ourui, Cornwall, Yingjie Si or other equivalent products	Installed cabinet
		PLC	1	Xinjie	Installed cabinet
		touch screen	1	Xinjie	Installed cabinet

		Low voltage electrical apparatus	1 set	Delixi	Installed cabinet
3	Field explosion-proof button		1 only	New dawn	random
4	Special tools	Refueling device	1 set	Xu Lin chemical machinery	random
		Drum remover	1 set	Xu Lin chemical machinery	random
		Spreader	1 set	Xu Lin chemical machinery	random

2. 2.Single random file

Serial number	Name	Supply time	quantity	remarks
1	Centrifuge operation manual	random	1	
2	Instructions for frequency converter	random	1	
3	Drum welding flaw detection report	random	1	
4	Material certificate	random	1	
5	No load test report of the whole machine	random	1	
6	Experimental report on drum dynamic balance	random	1	
7	Complete machine certificate	random	1	
8	Packing list	random	1	
9	Outline structure drawing	random	1	
10	Installation foundation drawing	random	1	
11	Electrical schematic diagram	random	1	
12	Quality guarantee of main purchased parts	random	1	

7、 Attached drawing of centrifuge

1. 1.Outline structure drawing
2. 2.Foundation drawing

3. 3.Hoisting diagram