

卧式螺旋卸料离心机

Horizontal spiral discharge centrifuge



卧式螺旋卸料沉降离心机



LW常规型



LWX向心泵出液型



LWS三相分离型



LWZ沉降过滤离心机



LWFX隔爆型

卧式螺旋卸料过滤离心机



LLWZ型浓缩过滤离心机



LLW常规型



LLW液压型



LLW螺旋进料型

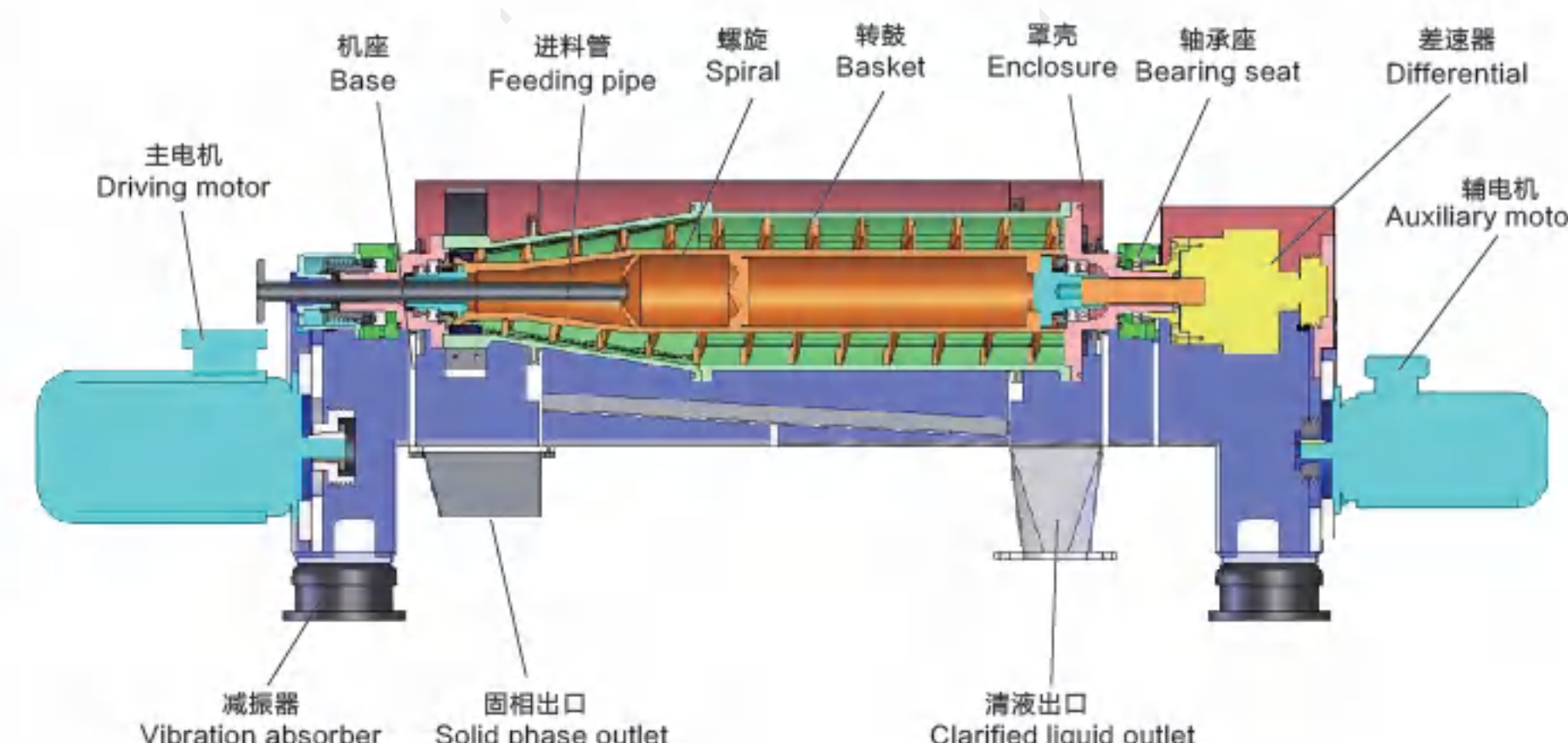
LW卧式螺旋卸料沉降离心机 LW DECANTER CENTRIFUGE

产品介绍

DESCRIPTION

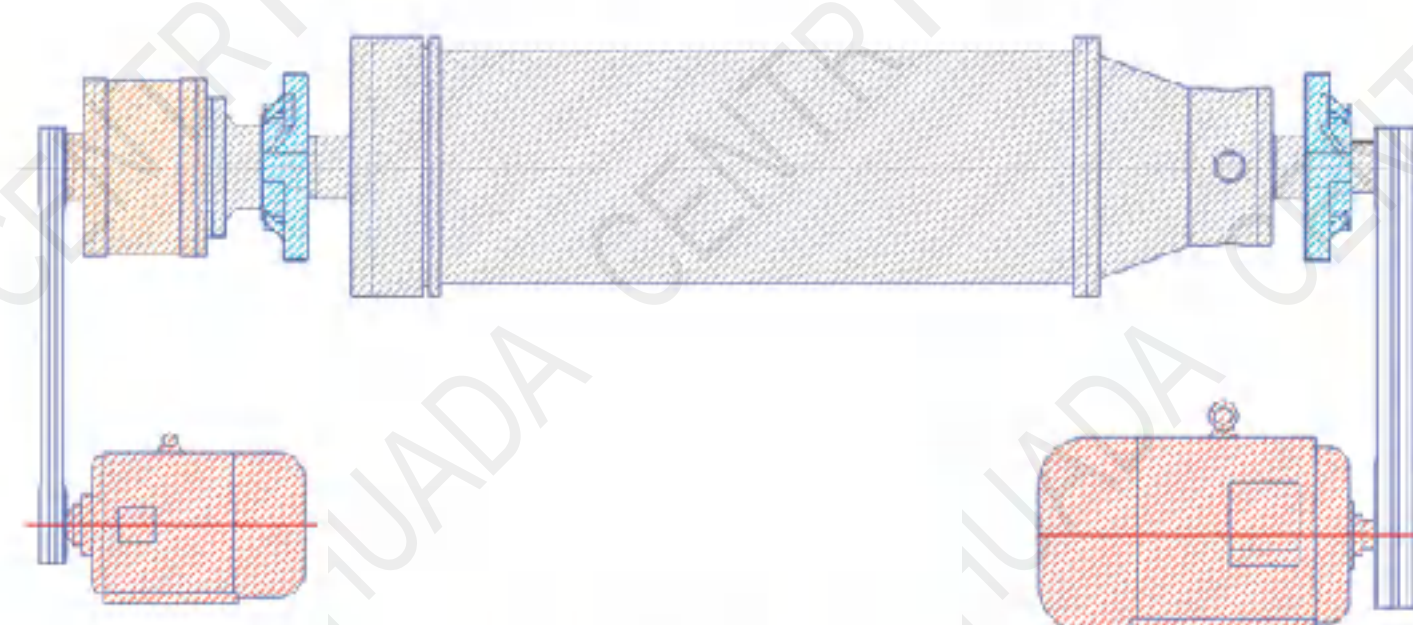
LW系列是连续工作型卧式螺旋卸料沉降离心机，主要用于物料的固液分离、脱水、分级、澄清与浓缩等。根据物相密度的差异，在转鼓高速旋转产生的离心力作用下，将固相和液相进行分离，固相通过螺旋输送至转鼓锥端排出，液相由转鼓大端溢流口排出。该产品具有设计简洁、高效，配置科学合理的特点，已广泛应用于化工、制药、环保、食品、矿山、能源等行业。

LW series products are decanter centrifuges that can work continuously and are mainly used for solid-liquid separation, dehydration, fractionation, clarification, and concentration of materials. Based on different phase densities, it separates the solid phases and liquid phases under the action of the centrifugal force generated by the high-speed revolution of the bowl. The solid phases are conveyed to the conical end of the bowl through a spiral and then discharged, and the liquid phases are discharged out from the overflow port at the big end of the bowl. Characterized by simple design, high efficiency and scientific configuration, this product has been widely applied to chemical, pharmaceutical, environmental protection, food, mining, energy and other industries.



驱动技术

DRIVING TECHNOLOGY



共轭直流母线驱动系统
Conjugate DC Bus Driving System

采用双电机+双变频驱动，便于差速调整；
对于工况变化适应性更强，确保分离效果；
动力回馈设计，有效降低能耗。

Dual-motor and dual-frequency driving mode is adopted for better differential regulation;
It is more adaptive to the change of working conditions to ensure the separation effect;
Dynamic feedback design is employed to reduce power consumption effectively.

LW型离心机设备优势

ADVANTAGES OF LW CENTRIFUGES

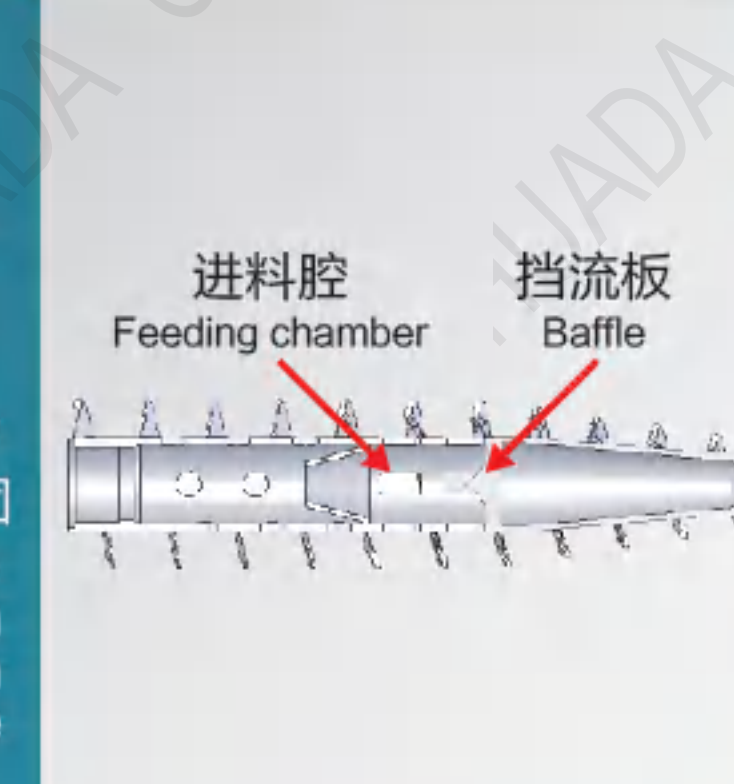
结构设计

STRUCTURAL DESIGN

A

大长径比设计 (≥4)
Large Length-to-Diameter Ratio (L/D) Design (≥4)

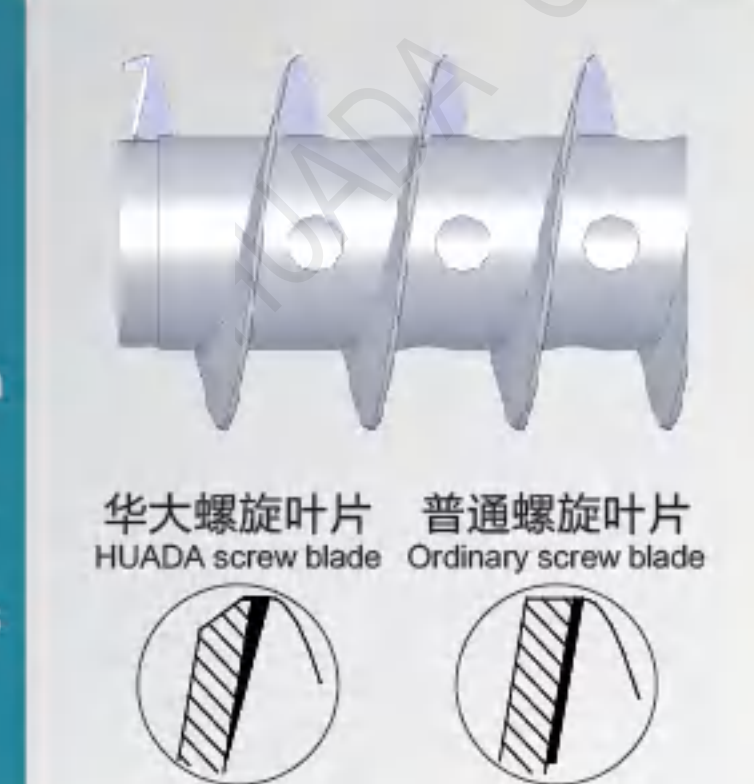
提高处理量
Increase the handling capacity
增加沉降时间、降低清液含固量，物料回收率最高可达99%
Extend the decanting duration and reduce the solid content in the clarified liquid to achieve 99% recovery of materials.



D

螺旋优化设计
Optimized Spiral Design

采用独特涡流设计
Adopt the special vortex design
减少物料冲击
Reduce the impact on materials
避免物料堵塞
Avoid the blockage of materials
降低清液含固量
Reduce the solid content in clarified liquid



G

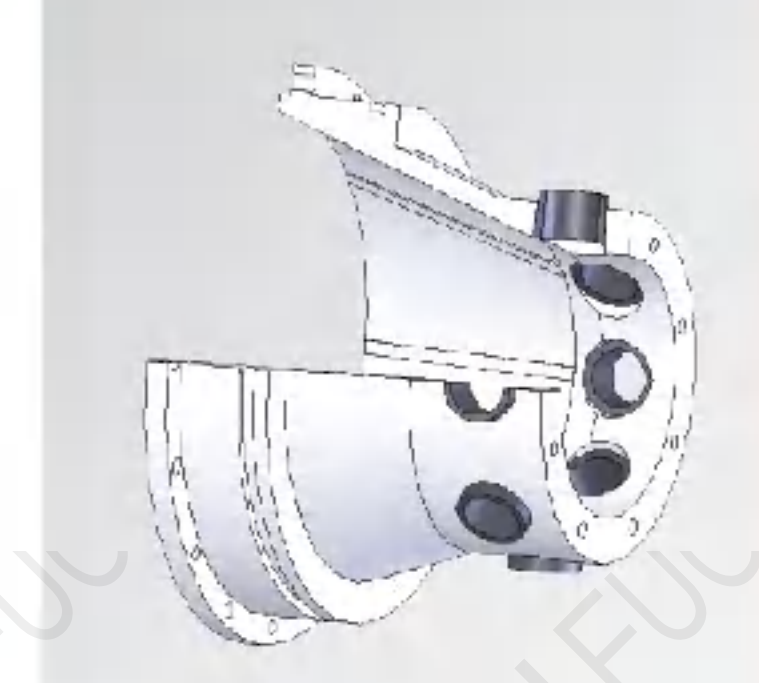
独特的螺旋叶片设计
Special Screw Blade Design

减小与物料的摩擦力
Reduce the friction with materials
降低推料扭矩
Reduce the material-pushing torque
减小粘料
Decrease the adherence of materials

B

离心铸造工艺设计
Centrifugal Casting Process Design

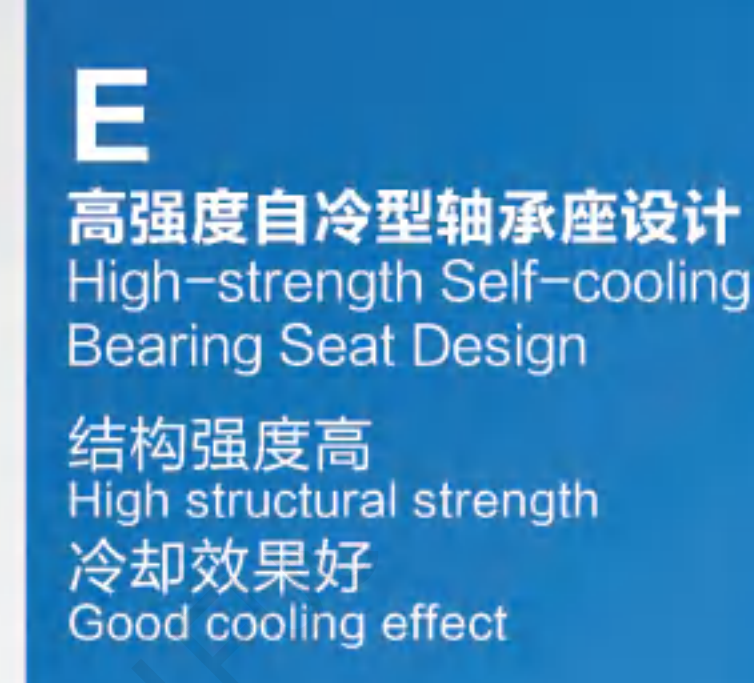
转鼓和螺旋轴采用离心浇注工艺，大大提高结构强度
Centrifugal casting is adopted for manufacturing the basket and spiral shaft to improve the structural strength significantly



E

高强度自冷型轴承座设计
High-strength Self-cooling Bearing Seat Design

结构强度高
High structural strength
冷却效果好
Good cooling effect



C

先进的防磨损技术
Advanced Anti-wear Technology

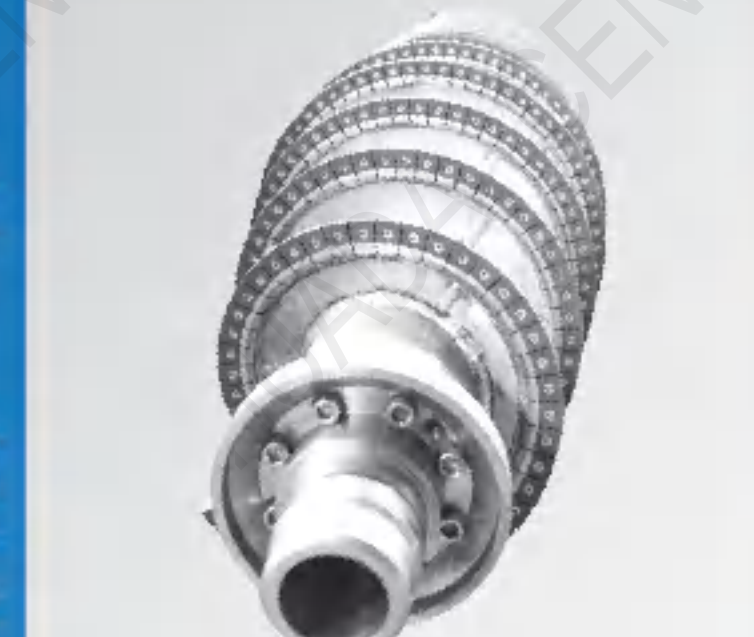
优点：耐磨保护、延长使用寿命、维护成本低
Advantages: wear resistance, prolonged service life and low maintenance cost



F

物料不易结团

转鼓采用使用轴向耐磨筋进料口、出渣口采用可更换耐磨衬套（硬质合金或陶瓷套）
Resistance to Clotting of Materials
Axial wear-resistant steel is adopted for the bowl, and replaceable wear-resistant sleeve (hard alloy or porcelain sleeve) is adopted for the feeding port and deslagging port



H

螺旋叶片热喷硬质合金、镶嵌硬质合金块或者高耐磨陶瓷片
Hot-sprayed hard alloy sheets, inlaid hard alloy sheets or high wear-resistant porcelain sheets are configured for screw blades

液压型螺旋差速系统

HYDRAULIC SPIRAL DIFFERENTIAL SYSTEM

◇始终保持最小的泥饼含湿量
Moisture content in the mud cake is always maintained at the minimum

◇处理后的液体澄清度高
The liquid after treatment is highly clarified

◇输送固体物质的功率随负荷而变
The power to transport the solid substances varies with load

◇无齿轮传动装置
Gearless driving device is applied

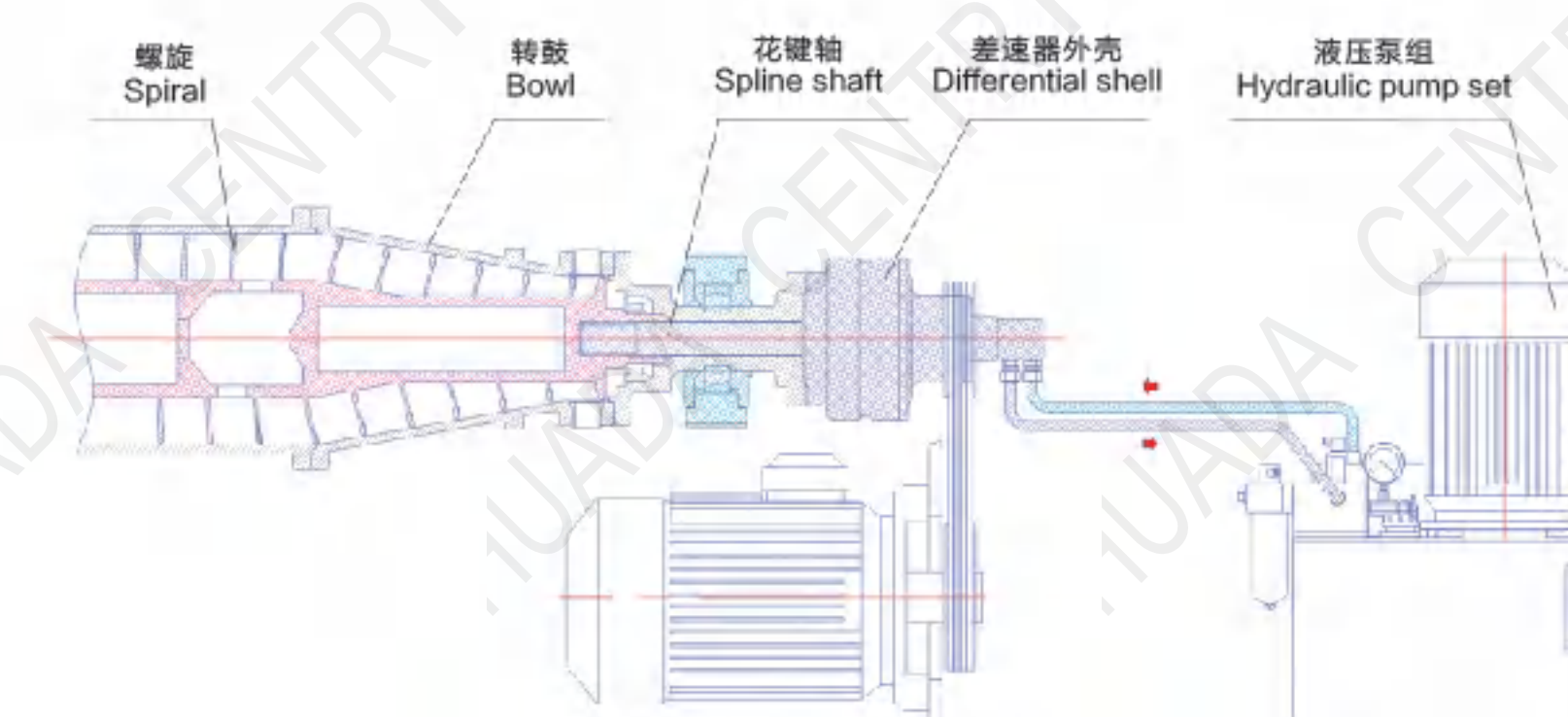
◇无扭转振动（颤振）
Torsion-free vibration (flutter)

◇不会因超负荷而使零件断裂
Breakage of parts caused by excess load is avoided

◇“恒定”的泥饼湿度
"Constant" humidity of mud cake

◇安全销设计确保安全运行
Safety pin design ensures operation safety

◇对送料量的增减不敏感，堵塞的可能性最小
Being insensitive to the increase/decrease of feeding quantity, it minimizes the material blocking possibility



液压螺旋驱动差速工作原理图
Schematic Diagram of the Hydraulic Spiral Differential System



LW卧式螺旋卸料沉降离心机（常规型）

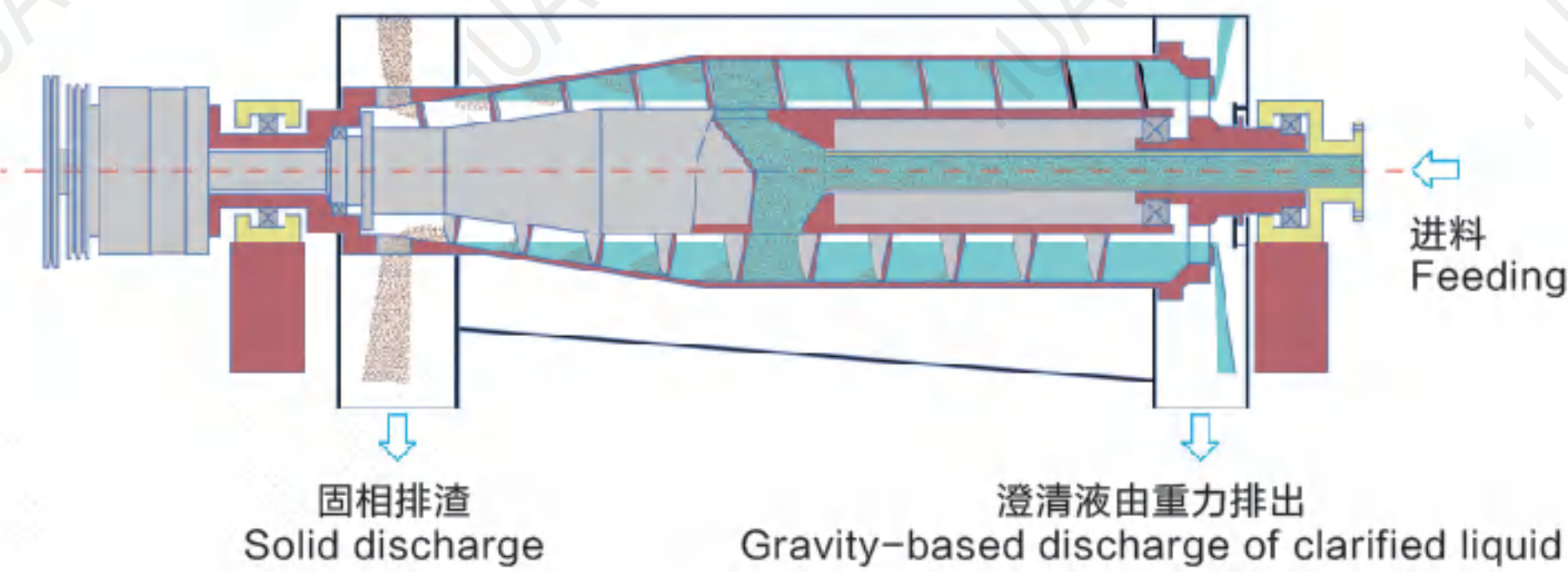
LW DECANTER CENTRIFUGE (STANDARD TYPE)

► 产品介绍

DESCRIPTION

LW系列常规机型转鼓两端采用迷宫式密封，简洁高效，分离后固相由螺旋推至固相出口，经高速旋转产生的离心力排出转鼓；分离后澄清液由转鼓大端溢流口排出。该机型操作简便，运行平稳、高效，可实现24小时连续运行，自动化程度高，适应范围广。

Labyrinth seal is adopted for both ends of the bowl of the standard type of the LW series, which is simple yet efficient. After separation, the solid phases are pushed to the solid discharge outlet through a spiral and then discharged out of the bowl under the action of the centrifugal force generated from high-speed revolution, and the clarified liquid is discharged out of the overflow port at the big end of the bowl. Featuring simple operation, stable operation, high efficiency and high automation, and continuous working of 24 hours, this type is widely applied.



► LW系列离心机技术参数

TECHNICAL PARAMETERS OF LW CENTRIFUGE SERIES

型号 Model	转鼓直径 (mm) Bowl Diameter	长径比 L/D L/D	转鼓转速 (r/min) Bowl Speed	分离因数 Separation Factor	主电机功率 (kw) Power of Driving Motor	机器重量 (kg) Weight	外形尺寸 (长 x 宽 x 高) (mm) Dimension (LxWxH)
LW220x880	220	4	4800	2840	11	1000	2660x740x780
LW300x1290	300	4.3	4400	3250	15	1500	3250x960x1000
LW355x1460	350	4.17	4000	3130	22-30	2200	3550x1010x1030
LW450x1800	450	4	2800-3200	1575-2580	30-37	3500	4150x1090x1250
LW450x2050	450	4.5	3200-3600	2580-3265	30-37	4000	4350x1090x1250
LW530x2120	530	4	2800-3200	2330-3040	45-55	5300	4850x1230x1450
LW530x2650	530	5	2500	1850	55	6000	5400x1230x1450
LW650x2800	650	4.3	2500	2270	90	9600	5400x1750x1600
LW720x2880	720	4	2000	1610	110	11000	5300x2050x1750
LW850x3200	720	3.76	2000	1900	160	16000	6750x2280x1900
LW1000x3000	1000	3	1500	1260	132	16000	5200x2500x2000

LWX卧式螺旋卸料沉降离心机（向心泵出液型）

LWX DECANTER CENTRIFUGE (CENTRIPETAL PUMP TYPE)

► 产品介绍

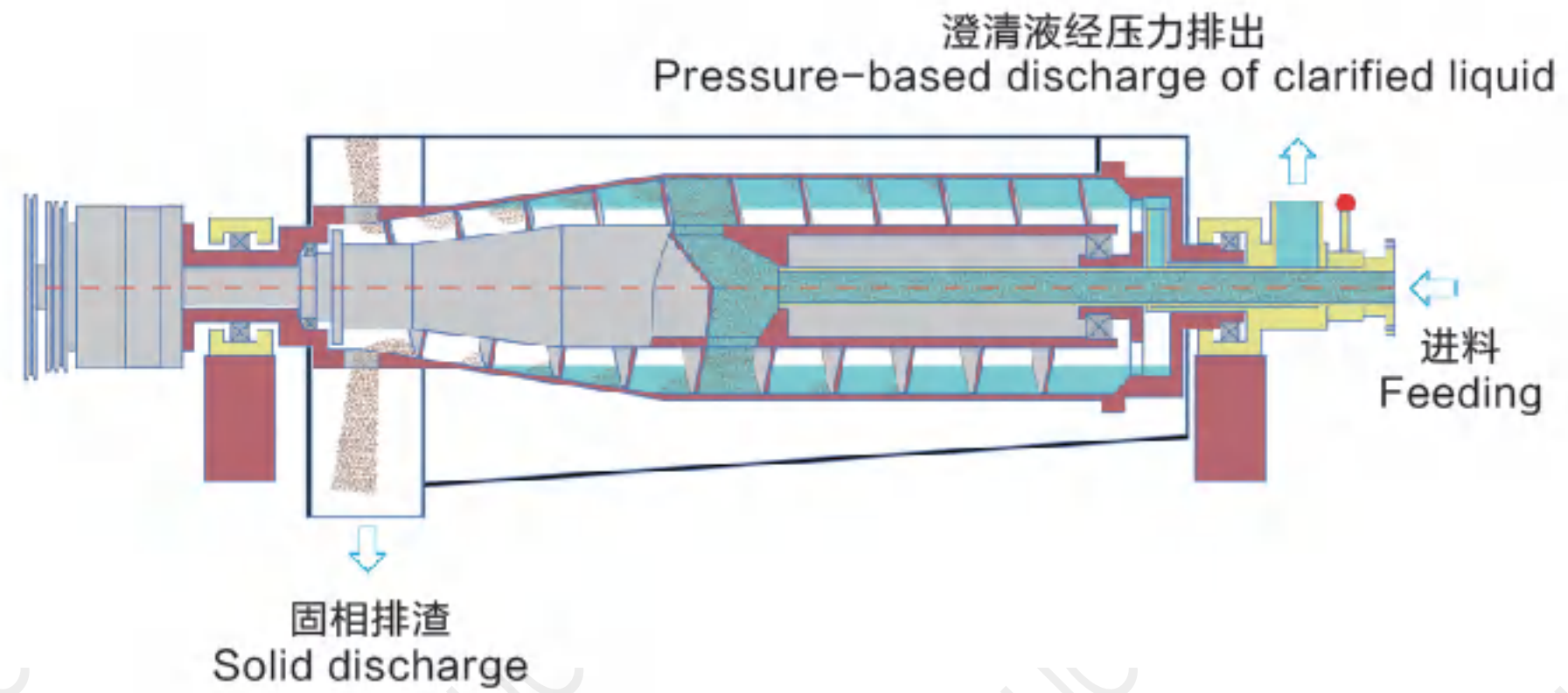
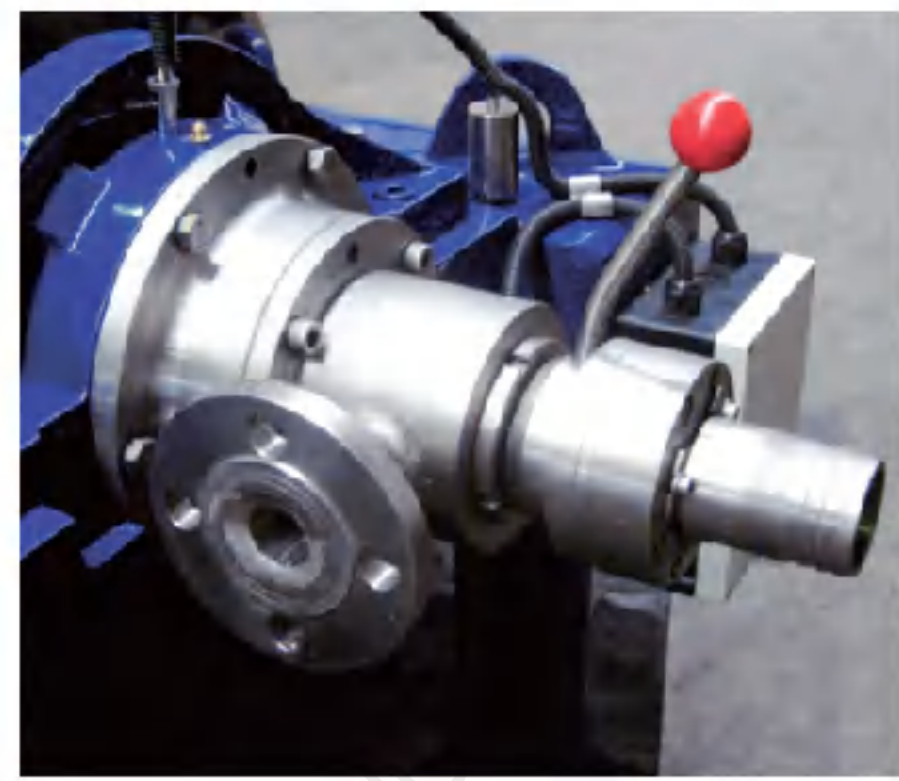
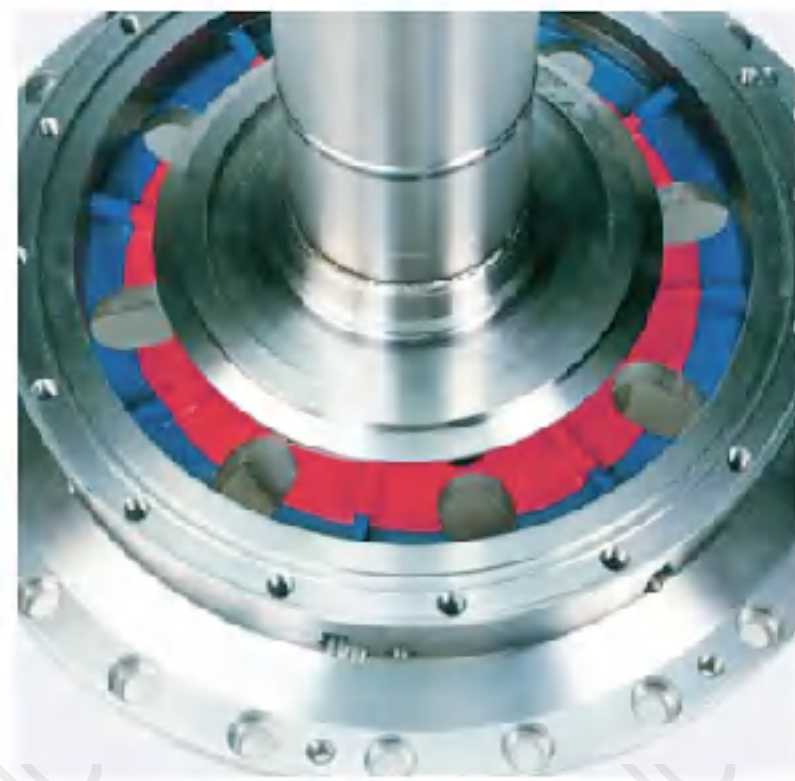
DESCRIPTION

物料经进料管进入，在离心力作用下，固相物料沉积在转鼓壁上形成沉渣层，液相物料形成液相环，由转鼓壁开始向内依次形成固相层和液相层。螺旋将沉积在转鼓壁上的固相物料连续不断的推至转鼓锥端，经排渣口排出机外，液相由转鼓大端向心泵排出。

分离后的液体由向心泵排出，具有一定的压力，可以将母液水平输送至一定的距离，代替一台中转泵，节省了能源；另外，液体由向心泵排出，与固体排出不在同一个腔体，完全杜绝了母液排出后的微小液滴与固相再次接触的可能，洁净程度高，适用于药物与食品等生产领域。

Materials enter the equipment through the feeding pipe. Under the action of centrifugal force, the solid phases will deposit to form a sediment layer on the bowl wall, and the liquid phases will form a liquid ring, successively forming a solid layer and liquid layer inward from the bowl wall. The spiral works continuously to push the solid matters on the bowl wall to the conical end of the bowl and then discharge them out of the equipment through the slag discharging port. And the liquid phases are discharged out through the centripetal pump at the big end of the bowl.

As the liquid after separation is discharged through the centripetal pump with certain pressure, the mother liquid can be conveyed horizontally for a certain distance, thus to replace a relay pump and save energy. Meanwhile, the possibility of a secondary contact between the tiny droplets and solid matters after the discharge of mother liquid can be completely avoided as they are at different cavities when discharged, so high-degree cleanliness can be ensured, making the product applicable to pharmaceutical and food production, and other fields.



► LWX系列离心机技术参数

TECHNICAL PARAMETERS OF LWX CENTRIFUGE SERIES

型号 Model	转鼓直径 (mm) Bowl Diameter	长径比 L/D L/D	转鼓转速 (r/min) Bowl Speed	分离因数 Separation Factor	主电机功率 (kw) Power of Driving Motor	机器重量 (kg) Weight	外形尺寸 (长 x 宽 x 高) (mm) Dimension (LxWxH)
LWX355x1460	350	4.17	4000	3130	22-30	2200	3450x1010x1030
LWX420x1680	420	4	3600	3050	30-37	4000	3500x1450x1300
LWX530x2120	530	4	3200	3040	45-55	5500	4100x1600x1450
LWX720x2880	720	4	2000	1610	110	11000	5300x2050x1750

LWS系列螺旋卸料沉降离心机（三相分离型）

LWS DECANTER CENTRIFUGE (THREE-PHASE TYPE)

► 产品介绍

DESCRIPTION

该机型主要用于固-液-液分离，即对一种固相（密度最大）与两种不同密度的液相进行分离。转鼓和螺旋以差速同向高速旋转，物料经进料管进入，在离心力作用下，固相物料沉积在转鼓壁上形成沉渣层，两种液相物料分别形成轻液相环和重液相环，由转鼓壁开始向内依次形成固相层、重液相层和轻液相层。螺旋将沉积在转鼓壁上的固相物料连续不断的推至转鼓锥端，经排渣口排出机外。轻液相由转鼓大端的溢流口连续溢出，重液相经转鼓大端向心泵排出，从而连续实现三相分离。

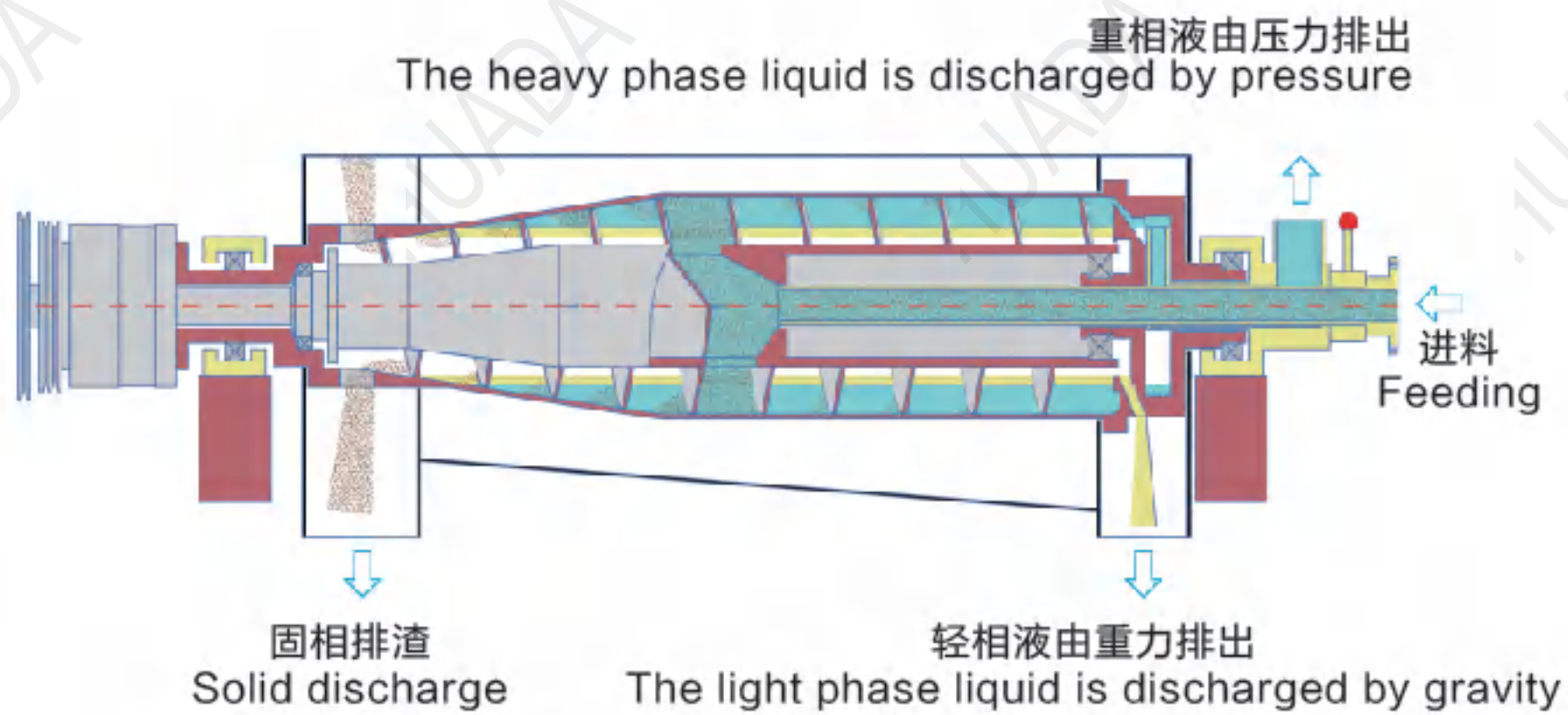
This type is mainly used for solid-liquid-liquid separation, which means to separate a solid phase (with its density being the maximum) with two liquid phases of different densities. Based on a certain differential, the basket and spiral revolve in the same direction at high speeds, and the materials enter the equipment through the feeding pipe. Under the action of centrifugal force, the solid matters will deposit to form a sediment layer on the basket wall, and the two liquid phases will form a light liquid ring and a heavy liquid ring respectively, successively forming a solid layer, light liquid layer and heavy liquid layer inward from the basket wall. The spiral works continuously to push the solid matters on the basket wall to the conical end of the basket and then discharge them out of the equipment through the slag discharging port. The light liquid phase continuously flows out of the overflow port at the big end of the basket, while the heavy liquid phase is discharged out through the centripetal pump also at the big end. Thus, continuous separation of three phases is realized.



► LWS系列离心机技术参数

TECHNICAL PARAMETERS OF LWS CENTRIFUGE SERIES

型号 Model	转鼓直径 (mm) Basket Diameter	长径比 L/D L/D	转鼓转速 (r/min) Basket Speed	分离因数 Separation Factor	主电机功率 (kw) Power of Driving Motor	机器重量 (kg) Weight	外形尺寸 (长 x 宽 x 高) (mm) Dimension (LxWxH)
LWS355x1460	350	4.17	4000	3130	22-30	2200	3450x1010x1030
LWS420x1680	420	4	3600	3050	30-37	4000	3500x1450x1300
LWS530x2120	530	4	3200	3040	45-55	5500	4100x1600x1450
LWS720x2880	720	4	2000	1610	110	11000	5300x2050x1750



LWZ沉降过滤离心机

LWZ SCREEN DECANTER CENTRIFUGE

► 产品介绍

DESCRIPTION

LWZ系列离心机融合了离心沉降与离心过滤两种分离方式，将其优点融于一身；同时又互为补充、相互加强，强化了分离效果与分离效率、扩大了产品适用范围，从而达到最佳的适用效果。特别适用于具有良好沉降性能的结晶体、颗粒或纤维等悬浮液的固、液分离。
在粒度分布图中， $d \geq 0.08\text{mm}$ 尺寸的颗粒；
进入离心机中的固体进料浓度为5~60Wt%；
亦可用于含有少量有机物或粘性物质（如焦油等）物料的分离。
LWZ centrifuge series are integrated with the advantages of both centrifugal sedimentation and centrifugal filtration, which are also designed to be mutually complementary to enhance the separation effect and separation efficiency and expand the scope of product application, so as to realize optimal application. It is especially applicable to the solid-liquid separation of suspension liquids containing crystals, particles, fibers or others.
In the particle size scattergram, the particles with $d \geq 0.08\text{mm}$;
The feeding concentration of solid matters entering the centrifuge is 5~60Wt%;
It can also be used for separating the materials containing a small amount of organic or adhesive substances (such as tar).



已成功应用 / Successful Applications

硫酸铵废水及工艺产品的分离
Separation of ammonium sulfate wastewater and process products

氯化铵废水及工艺产品分离
Separation of ammonium chloride wastewater and process products

硫酸钾产品分离
Separation of potassium sulfate products

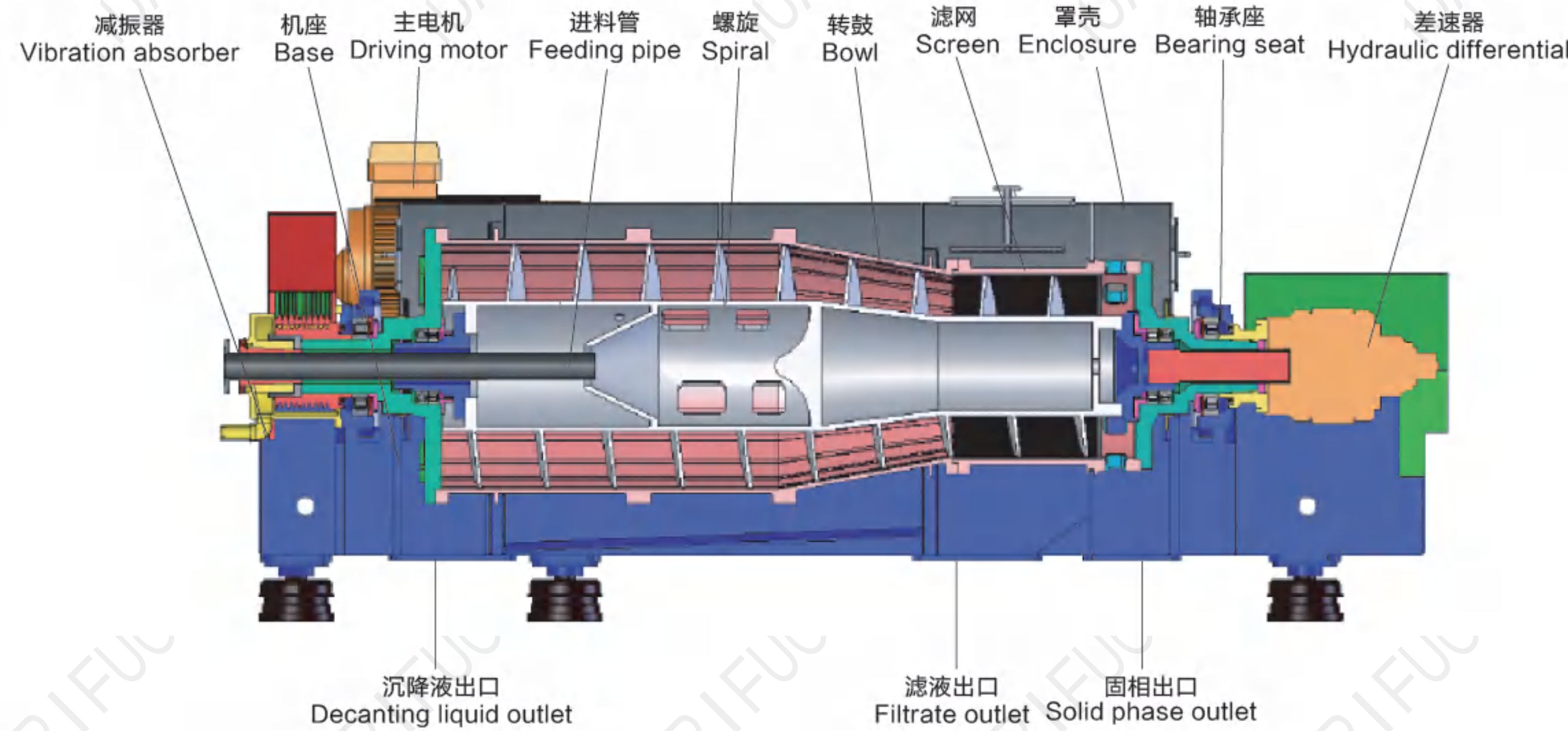
氯化钾产品分离
Separation of potassium chloride products

硝化棉产品分离
Separation of nitro-cotton products

可降解塑料类产品分离
Separation of degradable plastic products

CPE 绝缘材料类产品分离
Separation of CPE insulating materials

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► LWZ系列离心机技术参数

TECHNICAL PARAMETERS OF LWZ CENTRIFUGE SERIES

型号 Model	转鼓直径 (mm) Bowl Diameter	长径比 L/D L/D	转鼓转速 (r/min) Bowl Speed	分离因数 Separation Factor	主电机功率 (kw) Power of Driving Motor	机器重量 (kg) Weight	外形尺寸 (长 x 宽 x 高) (mm) Dimension (LxWxH)
LWZ530x2120	530	4	2800	2330	45-55	5500	4870x1230x1520
LWZ650x1950	650	3	2500	2260	90	7500	4750x1720x1560
LWZ1000x3000	720	3	1500	1260	132	16000	5200x2500x2000

LWFX卧式螺旋卸料沉降离心机（隔爆型）

LWFX DECANTER CENTRIFUGE (EXPLOSION-PROOF TYPE)

► 产品介绍

DESCRIPTION

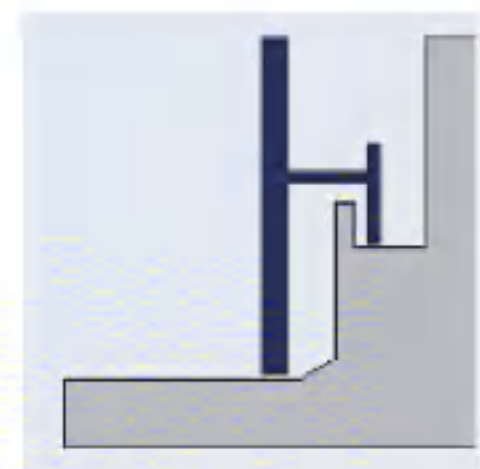
该机型主要用于化工、石化、制药等行业的易燃易爆场合，固、液分离过程中气体不允许泄漏到外部空气中，或外部空气进入到机器内部引起爆炸可能的固液分离。带有自动补偿功能的气密式密封，在离心机运行过程中，在离心机内部形成一个微正压的动态密闭空间，以达到良好的密闭隔爆效果。

This type of centrifuge is mainly used in the chemical, petrochemical and pharmaceutical industries involving flammable and explosive occasions. In the process of solid-liquid separation, gases are not allowed to leak into the extraneous air, or extraneous air is not allowed to enter the equipment, or it may lead to explosion. The product is configured with an airtight seal with automatic compensation function, which allows a dynamic enclosed space with micro-positive pressure to be formed inside the centrifuge during the process of operation, so as to realize good sealing and explosion-proof effect.

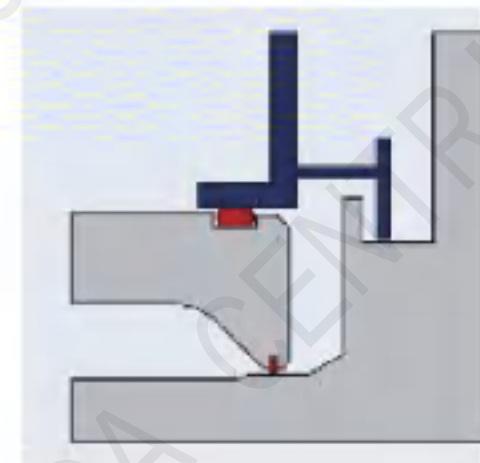


► 独特密封结构

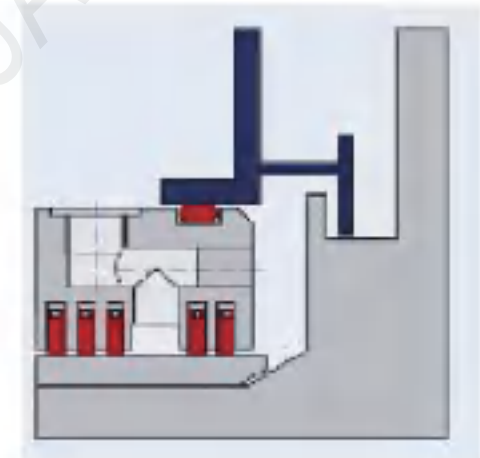
UNIQUE SEALING STRUCTURE



开式密封
用于机内物料或气体不会散发到环境中，并且不必将离心机转鼓同环境大气隔开的分离场合。
Open sealing
It is applied in the occasions where no material or gas inside the equipment will be emitted to the environment and it is not necessary to separate the bowl from the ambient atmosphere.



汽密式密封
用于工艺介质会散发并污染大气或者不希望工艺介质同大气接触的场所。
Vapor-tight sealing
It is applied in the occasions where the process medium will disperse and pollute the atmosphere, or the process medium is not expected to contact the atmosphere.

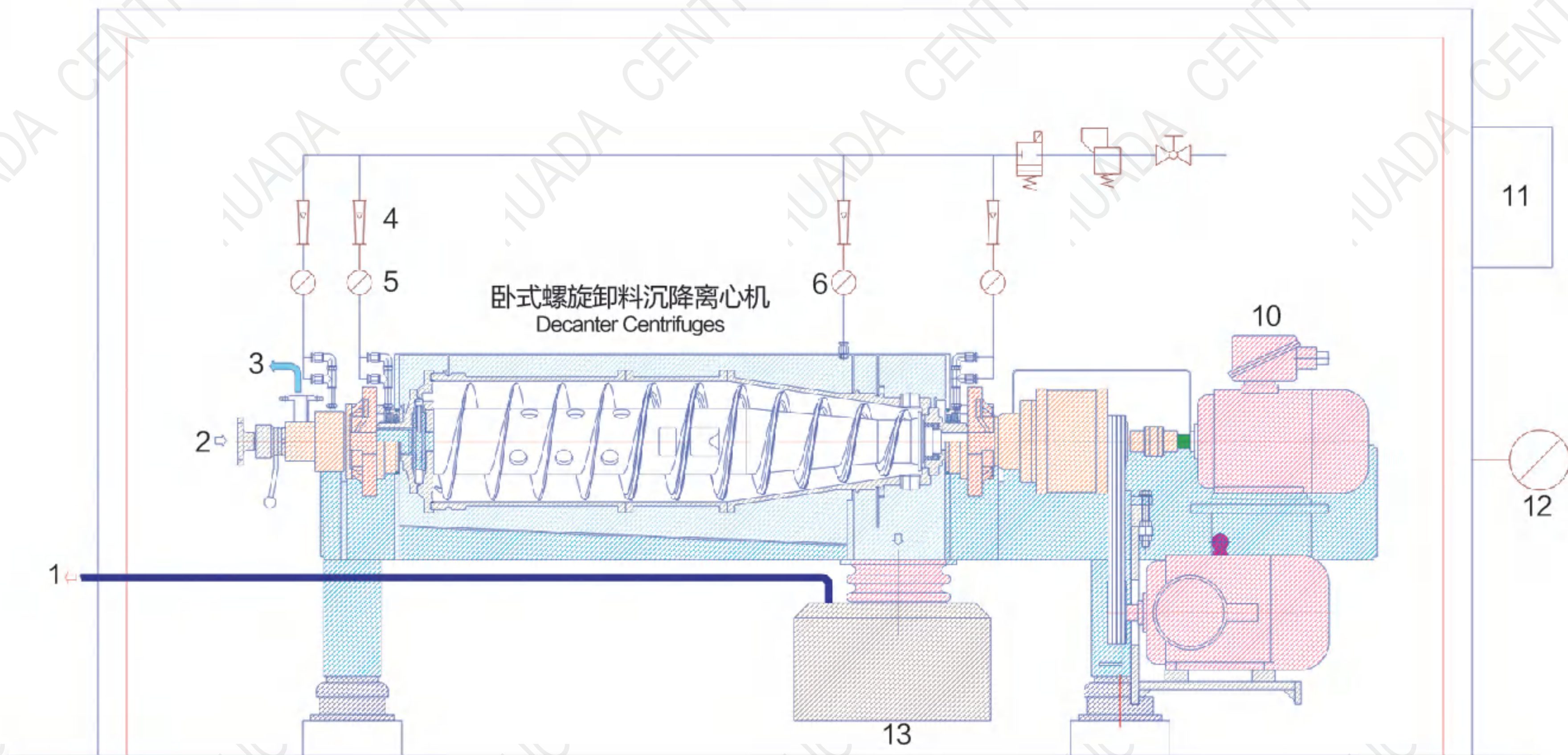


气密式密封
在机器密封处加入堕性气体，用于有毒、腐蚀性或易燃介质的场合下安全操作。
Air-tight sealing
It is applied to ensure operation safety in the occasions where inert gases are added to the equipment from the sealing position and toxic and corrosive or flammable medium is used.



► LWFX卧式螺旋卸料沉降隔爆离心机系统

LWFX EXPLOSION-PROOF DECANTER CENTRIFUGE SYSTEM



1 用后有杂质的氮气排空
Exhaust of nitrogen with impurities

2 进料 Feeding

3 液体压力排放 Liquid pressure release

4 流量计 Flowmeter

5 差压表 Differential pressure gauge

6 压力表 Pressure gauge

7 电磁阀 Solenoid valve

8 减压阀 Pressure relief valve

9 氮气气源 Nitrogen source

10 防爆电机 Explosion-proof motor

11 环境危险气体检测仪器 Hazardous gas detector

12 环境气体压力 Ambient gas pressure

13 固体排放 Solid discharge

注意：由于密封的原理所致，部分加注的惰性气体会逸出至周围环境中，应确保人员的操作环境存在足够的氧气。建议安装一个附加的环境监测系统（如气体检测仪），从而在故障状态及打开离心机进行维修时保证人身安全。

Note: According to the principle of sealing, partial inert gas injected to the equipment will diffuse to the ambient, so sufficient oxygen shall be guaranteed in the operating environment. An environmental monitoring system (such as gas detector) is recommended to ensure personal safety during the maintenance or in case of failure of the centrifuge.

► LWFX系列离心机技术参数

TECHNICAL PARAMETERS OF LWFX CENTRIFUGE SERIES

型号 Model	转鼓直径 (mm) Bowl Diameter	长径比 L/D L/D	转鼓转速 (r/min) Bowl Speed	分离因数 Separation Factor	主电机功率 (kw) Power of Driving Motor	机器重量 (kg) Weight	外形尺寸 (长 x 宽 x 高) (mm) Dimension (LxWxH)
LWFX355x1460	350	4.17	4000	3130	22-30	2200	3450x1010x1030
LWFX420x1680	420	4	3600	3050	30-37	4000	3500x1450x1300
LWFX530x2120	530	4	3200	3040	45-55	5500	4100x1600x1450
LWFX720x2880	720	4	2000	1610	110	11000	5300x2050x1750