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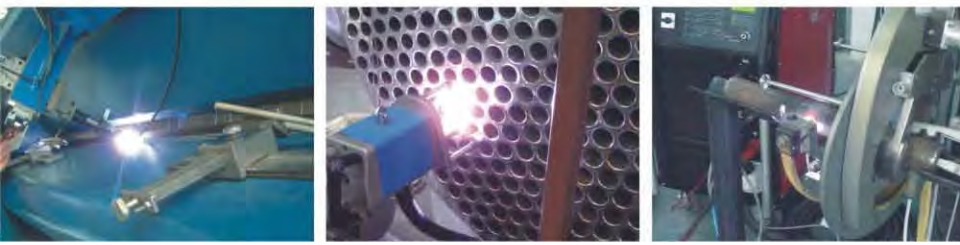
PUREYMECH

温州普锐机械有限公司



Professional pharmaceutical
equipment manufacturer
专业制药设备制造商





Production Equipment

生产装备

以最先进的生产工艺、技术要求，实施车、刨、钻、削、铣、磨等工艺对工件关键部件进行机械加工，确保产品质量。

运用崭新的工业概念及精悍的技术力量，自行设计制造一流的产品，使产品彻底实现作业简单化、程序化，彻底实现产品一致性。

With the most advanced production processes and technical requirements, the key parts of workpieces are subject to mechanical machining through such processes lathing, planing, drilling, cutting, milling and grinding to ensure product quality.

By applying brand-new industrial concepts and powerful technical strength, we independently design and manufacture first-class products to completely realize simple and programmed operations and thoroughly achieve product consistency.



Inspection Equipment

检测设备

生产全过程的监控是产品质量的保证。不让一点瑕疵出现，不让质量问题损害我们的品牌是我们的宗旨。我们建立了一整套完善的、有序的质量保证体系，追求产品“0缺陷”是我们的质量目标。

Monitoring the whole process of production is the guarantee of product quality. It is our tenet to avoid the occurrence of any defect and prevent quality problems from damaging our brand. We have established a complete set of reasonable and orderly quality assurance system. Our quality goal is to pursue "zero failure" of products.



Engineering Project

工程项目

主要经营范围包括：制药装备、乳制品、食品、饮料、啤酒发酵成套设备，过滤、干燥、制粒包衣成套设备，中药提取、浓缩、醇沉、酒精回收成套设备，不锈钢卫生级管件、阀门及其工程安装、调试等。

The main business scope includes: pharmaceutical equipment, dairy, food, beverage and beer fermenting whole-set equipment, filtering, drying, granulating and coating whole-set equipment, traditional Chinese medicine extraction, concentration, alcohol precipitation and alcohol recovery whole-set equipment, stainless steel sanitary pipe fittings, valves and engineering installation and commissioning.



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LBLX SERIES CENTRIFUGAL GRANULATING AND COATING MACHINE

LBLX系列离心式制粒包衣机



LBLX-1000 离心式制粒包衣机
LBLX-1000 Centrifugal Granulating and Coating Machine

我公司具有20多年的离心式制粒包衣机主机生产经验，现致力于打造高质量的离心式制粒包衣机，已推出实验型、生产型制粒包衣机。离心式制粒包衣机具有起母、造粒、包衣三种基本功能。

■ 离心制粒法制备微丸的优点

用离心式制粒方法制备微丸具有以下优点：

1. 粒径均匀，真球度好；
2. 同时可完成起母、成丸、包衣的全过程，原辅料损失少，生产周期短，成品率高；
3. 微丸的硬度好，便于包衣等操作；
4. 产品质量易于控制，易于实现生产线管理、
5. 余料处理，生产过程产生的余料经干燥、粉碎后可调节浆液浓度后直接起母或放大，生产的微丸性质与原来相同，这些方法决定优势，基本无浪费。
6. 工艺可控性好、重复性好、易于操作。常用该法制作的药品品种有：奥美拉唑、克拉霉素、对乙酰氨基酚、利巴韦林、麝香保心微丸、孕妇金花微丸、布洛芬、吡哌美辛、硝苯地平、盐酸文拉法辛、硝苯地平缓释微丸胶囊等等。



LBLX-480 离心式制粒包衣机
LBLX-480 Centrifugal Granulating and Coating Machine

With more than 20 years of experience in the production of centrifugal granulating and coating machines, our company is now devoted to creating high quality centrifugal granulating and coating machines and has developed experimental type and production type granulating and coating machines. The centrifugal granulating and coating machine has three basic functions such as powder-like particle formulation, granulating and coating.

■ Advantages of Making Pellets Through Centrifugal Granulating Process

The advantages of making pellets through centrifugal granulating process are shown as follows:

1. Even grain size and good sphericity
2. The whole process of powder-like particle formulation, pelletizing and coating can be completed simultaneously with low loss of raw and auxiliary materials, short production cycle and high rate of finished products.
3. The pellets have good hardness, making coating and other operation convenient.
4. It is easy to control product quality and realize production line management.
5. As for the handling of residual materials, after drying and crushing of residual materials produced during production, their slurry concentration can be adjusted for direct powder-like particle formulation or magnification. The nature of pellets produced is the same as that of the previous ones. These methods have determined the advantage of almost no waste.
6. With good controllability and repeatability, the process is easy to operate. The drugs produced by commonly adopting this method include: omeprazole, clarithromycin, paracetamol, ribavirin, Shexiang Baoxin pellets, Yunfu Jinhua pellets, ibuprofen, indomethacin, nifedipine, venlafaxine hydrochloride and nifedipine controlled-onset extended-release pellet capsules.

LBLX SERIES CENTRIFUGAL GRANULATING AND COATING MACHINE

LBLX系列离心式制粒包衣机



LBLX-360 离心式制粒包衣机
LBLX-360 Centrifugal Granulating and Coating Machine



LBLX-300 离心式制粒包衣机
LBLX-300 Centrifugal Granulating and Coating Machine

■ 设备特点

1. 主机环缝控制：我公司生产的主机通过特殊的热处理，将加工后的环缝变形量控制到一个很小的范围，并通过环缝公差控制及均匀度控制，使得起母、放大过程的成品率得到提高，并使生产出来的微丸均匀度和致密度质量都得到很大的改善。
2. 主机加工：主机圆弧过渡曲面采用一体加工，一体同磨，表面冷作硬化的方式，在形成均匀、圆弧过渡的同时，减少了成粒过程中粒子的破碎度，避免了大小粒，多粘结粒的出现，对成粒过程中球粒的圆度，球度提高提供了有力保证。
3. 转盘的独有加工处理技术：为了实现在药粒生产过程中对转盘的保护，采用了独特的表面冷作硬化处理工序，在提高转盘表面光洁度，硬度的同时，增加了对转盘表面的硬层保护，使转盘更耐用。
4. 转盘跳动平衡处理技术：为了保证药粒在涡流旋转运动的过程中受力均匀，粒子成粒均匀，对转盘的端面跳动量，径向跳动量控制在很小的范围，保证粒子成丸率。
5. 人性化的人机界面：设备在使用中考虑到操作的难易程度，采用了图形动画控制的人机交互界面，使用起来更直观，更方便。

■ Equipment Features

1. Circular seam control of main machine: The main machine produced by our company is subject to special heat treatment to control the circular seam deformation after processing within a very small range, and through circular seam tolerance control and evenness control, the rate of finished products during the process of powder-like particle formulation and magnification is increased, and the evenness and density of the pellets produced are greatly improved.
2. Machining of main machine: The arc transition curve of the main machine adopts integral machining with integral grinding and surface cold-work hardening. While even arc transition is formed, the degree of fragmentation of particles during the granulating process is lowered, the occurrence of particles of uneven sizes and many bonded particles is avoided, so as to provide powerful guarantee for improving roundness and sphericity of spherical particles during the granulating process.
3. Unique processing treatment technology of rotary table: In order to realize protection of the rotary table during the production of pellets, the unique surface cold-work hardening treatment is adopted. While rotary table surface fineness and hardness are enhanced, hard layer protection of the rotary table surface is also increased, so that the rotary table is more durable.
4. Rotary table runout balancing treatment technology: In order to ensure even force bearing of pellets and uniform granulating during the vortex rotary movement, the face runout and radial runout of the rotary table are controlled within a very small range to ensure the rate of pelletizing.
5. User-friendly human-machine interface: Taking into account the operation difficulty, the equipment adopts graphic animation controlled human-machine interaction interface, which is more direct and more convenient during the use.

DJFL EXPERIMENTAL TYPE MULTIFUNCTIONAL FLUIDIZED BED

DJFL实验型多功能流化床



■ 概述

本公司在消化吸收国内外知名的流化床制造商同类产品优点的基础上，通过多名高级工程师技术人员的潜心研究，经国内知名药企进行不断的实验，总结经验，不断技术改进创新，最新推出的一系列产品，该系统主要有柜体、进风系统、排风系统、加热系统、雾化系统、蠕动泵及电气控制系统等部分组成。进风排风系统均配备高效过滤器，风量由变频风机控制，具有能耗低、噪音低等优点。广泛应用于医药食品化工等行业。

■ Summary

On the basis of digesting and absorbing the advantages of similar products of nationally and internationally famous fluidized bed manufacturers, it is a product newly developed after concentrated study by many senior engineering technicians, continuous experiments, accumulated experience and constant technical improvement and innovation by many nationally famous pharmaceutical enterprises. The system is mainly composed of cabinet, air inlet system, exhaust system, heating system, atomizing system, peristaltic pump and electric control system. The air inlet and exhaust system are equipped with high-efficiency filters with air volume controlled by the frequency conversion fans. It has such advantages as low energy consumption and low noise. It is widely used in such industries as medicine, food and chemical industry.

■ 主要特色

1. 密闭式的操作系统，避免交叉污染。
2. 温度控制精确，波动范围小。
3. 双过滤室系统，保证了持续的流化状态。
4. 形象化的动画操作界面，直观、便于操作、且易掌握。
5. 设备结构简单、拆卸方便、无死角、易于清洗、符合GMP规范要求。
6. 精心设计的气流分布结构，气流分布更均匀、生产效率更高、产品质量更稳定且重现性好。

■ Main features

1. The closed operation system avoids cross contamination.
2. The temperature is controlled precisely with low fluctuation.
3. The double filtration chamber system ensures continuous fluidizing status.
4. The visualized animation operation interface is direct, convenient to operate and easy to learn.
5. With such features as simple structure, convenient disassembly, no dead corners and easy cleaning, the equipment meets GMP requirements.
6. The elaborately designed air flow distribution structure makes the distribution of air flow more even, production efficiency higher and product quality more stable with good reproducibility.



■ 技术参数 Technical parameters

项目 Item Machine model	工作容积 Working Volume	空气流量 Air flow	加热温度 Heating Temperature	压缩空气 Compressed Air	电压 Voltage	整机功率 Machine Power	主机重量 Machine weight	外形尺寸 Outline dimensions
	L	M³/h	°C	Mpa	V	Kw	Kg	l*W*H
DJ-FL-1.5	3	210	室温~100°C	0.4~0.6	380	5	180	1450*800*2200

DJFG SERIES HIGH-EFFICIENCY FLUID BED DRYER

DJFG系列高效沸腾干燥机



■ 原理

空气经加热净化后，由引风机从下部导入，穿过料斗的孔网板，在工作室内，经搅拌和负压作用形成流态化，水份快速蒸发后，随着排气带走，物料快速干燥。

■ Principle

After heated and purified, the air is introduced from the bottom of the induced draft fan, and then goes through the screen plate of the hopper. In the working chamber, fluidizing is formed under the action of mixing and negative pressure. After rapidly evaporated, the water is taken away with the exhaust, and the materials are dried quickly.

■ 应用范围

1. 机制螺杆挤压颗粒、摇摆颗粒、湿法高速混合、制粒颗粒干燥。
2. 医药、食品、饲料、化工等领域湿法颗粒和粉状物料干燥。
3. 大颗粒、小块状、粉性块状物料干燥。
4. 魔芋、聚丙烯酰胺干燥时体积变化的物料干燥。
5. 缓控释微丸、空白微丸、中药微丸等干燥。

■ 特点

流化床为圆形结构避免死角，料斗设置搅拌装置、避免潮湿物料团聚及干燥时形成沟，采用翻倾卸料，方便迅速彻底，可按要求设置为自动进出料系统，密闭负压操作，气流经过过滤，操作方便，是符合“GMP”要求理想的干燥设备、干燥速度快，温度均匀，每批干燥时间一般在20-60分钟。

■ Application range

1. Drying of machine-made screw extrusion particles, oscillating particles, and particles made by wet type high-speed mixing and granulating
2. Drying of wet type granular and powder materials in medicine, food, feedstuff and chemical industry
3. Drying of large granules, small block and powder materials
4. Drying of materials whose volume may change during drying such as konjak and polyacrylamide
5. Drying of sustained and controlled release pellets, blank pellets and traditional Chinese medicine pellets

■ Features

The fluid bed adopts a round structure, which avoids dead corners. The hopper is equipped with mixer, avoiding agglomeration of wet materials and the formation of grooves during drying. It adopts tilting discharging to ensure quick and thorough discharging. The automatic feeding and discharging system can be set according to the requirements. It adopts closed negative pressure operation. The operation is convenient after the air flow is filtered. With high drying speed and even temperature, it is an ideal piece of drying equipment that meets GMP requirements. The drying time for each batch is generally 20-60 minutes.

FL FLUIDIZING, GRANULATING AND COATING DRYER

FL 流化制粒包衣干燥机



■ 概述 Summary

物料粉末粒子，在原料容器（流化床）中呈环形流化状态，受到经过净化后加热空气预热和混合，将粘合剂溶液雾化喷入，使若干粒子聚集成为含有粘合剂的团粒，由于热空气对物料的不断干燥，使用粒中水份蒸发，粘合剂凝固，此过程不断重复进行，形成理想，均匀的多微球状颗粒。

The powder materials are in a circular fluidizing status in the raw material vessel (fluidized bed). After the materials are preheated and mixed by the purified hot air, the adhesive solution is atomized and sprayed to make the particles agglomerate into lumps under the action of the adhesive. Due to continuous drying of materials by the hot air, the moisture in the lumps is evaporated, and the adhesive coagulates. This process is carried out repetitively, so that ideal and even microporous ball granules are formed.

■ 应用范围 Application range

1. 制药工业中制粒：压片颗粒、冲剂颗粒、胶囊用颗粒。
 2. 食品造粒及包衣：砂糖、咖啡、可可粉末、奶油、粉末果汁、氨基酸、调味料、膨化食品
 3. 其它行业造粒：农药、饲料、化肥、颜料、染料化工
 4. 粉状：颗粒、块状湿物料干燥
 5. 包衣：丸剂保护层、包色、缓释、肠溶、薄膜包衣
1. Granulation in the pharmaceutical industry: granules for tablet pressing, medicinal granules, granules for capsules
 2. Food granulation and coating: sugar, coffee, cocoa powder, cream, powdered fruit juice, amino acid, seasoning, puffed food
 3. Granulation in other industries: pesticide, feedstuff, fertilizer, pigment, dye, chemical industry
 4. Powder: drying of granular and block wet materials
 5. Coating: pill protective layer, color preparation, slow release, enteric coating, film coating

■ 特点 Features

1. 通过粉体造粒，改善流动性，减少粉尘飞扬。
2. 混合制粒干燥包衣在一机内完成一步制造。
3. 设置压力泄放孔，一旦发生爆炸，设备人员不受伤。
4. 通过粉末体造粒改善其溶解性能。
5. 采用防静电滤布，设备操作安全。
6. 设备内表面无死角，装卸料轻便快速易于冲洗干净，符合“GMP”要求。
7. 密闭式的操作系统避免交叉污染。
8. 温度控制精准，波动范围小。
9. 形象化的动画操作界面、直观、便于操作，且容易掌握。
10. 精心设计的 airflow 分布结构，气流分布均匀，生产效率高，产品质量更稳定且重现性好。

■ 工艺流程 Process flow

1. 制粒：
进风气流自下而上推动物料向上运动，粘合剂通过喷嘴自上而下喷入，将粘合剂雾化成极细小的液滴喷入，方向与物料运动方向相反，物料和物料粘是通过粘合剂的液桥粘合力作用粘在一起，形成体积不断扩大，最终开成一定大小的颗粒。
2. 干燥：
流化过程中颗粒悬浮在空气中，颗粒表面与热空气完全接触，达到了最佳的热交换状态，这保证了颗粒受热均匀，多余水分均能由外到内的蒸发，防止了局部过热的现象。在物料温度超过室温的情况下，可以使用较高的进风温度以加快干燥速度。
3. 包衣：
进风气流自下而上通过底部的气流分布板，颗粒循环地从隔圈内上升，从隔圈外下降，包衣液滴通过雾化喷嘴在隔圈内自下而上地喷射，与隔圈内的物料方向相同。当雾化液滴接触到隔圈内的颗粒时，在颗粒表面铺展、接合。当颗粒流合到扩展室时，包衣液中多余的水份被蒸发掉。颗粒表面开成厚薄均匀连续的包衣膜的距离降到最少，以便液滴在颗粒表面能良好的铺展，形成均匀的薄膜。

HELICAL
VIBRATION DRYER
螺旋振动干燥机



■ 适用范围 Application range

螺旋振动干燥机主要适用于中药丸剂的干燥，也可适用于化工、制药、食品、塑料、建材、饲料等行业的颗粒状、短条状、球状物料的干燥。

The helical vibration dryer is mainly suitable for drying of TCM pills, and is also used for drying of granular, short strip and globular materials in such industries as chemical industry, medicine, food, plastics, building materials, feedstuff, etc.

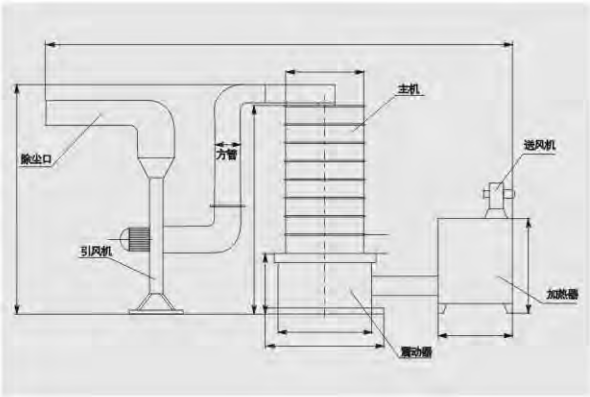
■ 工作原理 Principle

湿物料自顶部加料口进入螺旋床内，在周向激振力及重力的作用下，物料沿螺旋床自上而下作跳跃运动直至最底层；同时，洁净的热风由螺旋床底部进入，与分布在床上的物料进行充分的传热和传质后，由顶部排湿口排出。从而使物料达到了干燥的目的。

The wet materials enter the helical bed from the feeding port at the top. Under the action of circumferential exciting force and gravity, the materials make jumping movement from the top to the bottom along the helical bed until they reach the bottom layer. Meanwhile, the clean hot air enters from the bottom of the helical bed, and after sufficient heat transfer and mass transfer with the materials distributed on the bed, the air is discharged from the moisture outlet at the top, so as to achieve the purpose of drying the materials.

■ 产品特点

- 1. 热风多次穿过物料层与物料逆向流动，使热交换充分，热效率高。
- 2. 结构紧凑，占地面积小。
- 3. 物料在床内停留时间可调节，操作方便。
- 4. 物料沿螺旋床自下而上作圆周运动的同时，自身也产生跳跃，从而增加了物料与热风的接触，增强了干燥效果。
- 5. 连续的进出料适合于流水线，并且易达到“GMP”规范，可代替传统箱式干燥。
- 6. 对物料的表面及形状基本没有损伤，不仅保证了丸剂的圆度，而且大大的降低了丸剂的破碎率。



■ Features

- 1. The hot air passes through the material layer and makes countercurrent flow with materials for many times to realize sufficient heat exchange with high heat efficiency.
- 2. Compact structure and small floor space.
- 3. The retention time of materials in the bed is adjustable with convenient operation.
- 4. While making circumferential motion from the bottom to the top along the helical bed, the materials also jump, so as to increase their contact with hot air and enhance the drying effect.
- 5. The continuous feeding and discharging is suitable for flow lines, and it is easy to meet the GMP requirements. It can replace the traditional box type drying.
- 6. There is no damage to the material surface and shape. Not only the roundness of pills is ensured, but the breakage rate of pills is greatly reduced.

■ 技术参数

振动床直径		1000mm			
振动电机		2*1.5kw			
外形尺寸		1200*1200*2500			
生产能力		80-120kg			
进风温度		60-200℃			
引风机	3kw	流量	1410-1704m ³ /h	压力	3507-3553Pa
送风机	1.1kw	流量	1248-2258m ³ /h	压力	1150-839Pa
电加热功率		45.6kw			

EYH MODEL TWO-DIMENSIONAL
MOVEMENT MIXER
EYH型二维运动混合机



■ 运行特点

二维混合机的转筒可同时进行二个运动，一个为转筒的转动，另一个为转筒随摆动架的摆动。被混合物料在转筒内随转筒转动，翻转混合的同时，又随转筒的摆动而发生左右来回的掺混运动，在两个运动的共同作用下物料短时间内得到充分的混合。二维混合机适合所有粉体、颗粒状物料的混合，混合筒的出料口偏离混合筒部分的中心线，使该机具有混合迅速混合量大出料便捷等特点。

■ Running features

The drum of the two-dimensional movement mixer can carry out two movements simultaneously; one is the rotation of the drum and the other is the oscillation of the drum along with the oscillating frame. While the materials to be mixed carry out rotation, turning and mixing along with the drum, they also make reciprocating mixing movement along with the oscillation of the drum. Under joint action of the two movements, the materials are sufficiently mixed within a short time. The two-dimensional movement mixer is suitable for mixing all powder and granular materials. The discharge outlet of the mixing drum deviates from the central line of the mixing drum, making the machine have such features as rapid mixing, high mixing volume and convenient discharging.

■ 用途

本机广泛适用于医药、化工、食品、染料、饲料、化肥、农药行业。尤其应用于大吨位（1000L~10000L）各种固相物料的混合。

■ 结构原理

二维混合机主要转筒、摆动架、机架三大部分构成，转筒装在摆动架上，由四个滚轮支撑并由两个挡轮对其进行轴向定位，在四个支撑滚轮中，其中两个传动轮，由转动动力系统拖动使转筒产生转动，摆动架由一组曲柄摆杆机构来驱动，曲柄摆杆机构装在机架上，摆动架由轴承组件支撑在机架上。

■ Purpose

The machine is widely used in such industries as medicine, chemical industry, food, dye, feedstuff, fertilizer and pesticide. It is especially suitable for mixing various solid materials of high tonnage (1000L~10000L).

■ Structure principle

The two-dimensional mixer is mainly composed of three parts such as the drum, oscillating frame and machine frame. The drum is installed on the oscillating frame, supported by four rollers and positioned axially by two catch wheels. In the four supporting rollers, the two driving wheels are pulled by the rotation power system to make the drum turn. The oscillating frame is driven by a group of crank rocker mechanism, which is installed on the machine frame. The oscillating frame is supported on the machine frame by the bearing assembly.

MULTIFUNCTIONAL EXTRACTING TANK

多功能提取罐

本设备适用于制药、生物、饮料、食品、化工等行业的植物、动物的常压、加压水煎、温浸、热回流、强制循环、渗漉、芳香油提取及有机溶剂回收等工程操作，特别是使用动态提取或逆流提取效果更佳，时间短，药液含量高。

The equipment is applicable to the operations such as decoction of plants and animals at normal pressure and high pressure, warm soaking, hot reflux, forced circulation, percolation, aromatic oil extraction and organic solvent recovery in pharmacy, biology, beverage, food, chemical industry, etc. It is especially suitable for dynamic extraction or counter-current extraction, with short operating time and a high liquid medicine content.



正锥型提取罐 TQ-Z
Normal taper type extracting tank TQ-Z



直筒型提取罐 TQ-T
Straight cylindrical type extracting tank TQ-T



倒锥型提取罐 TQ-D
Upside-down taper type extracting tank TQ-D



蘑菇型提取罐 TQ-M
Mushroom type extracting tank TQ-M

MULTIFUNCTIONAL EXTRACTING TANK

多功能提取罐

■ 配备

罐体配备CIP清洗自动旋转清洗球、温度表、压力表、防爆视镜灯、视镜、快开式投料口等，确保操作简便，符合GMP标准。设备内筒体材质为进口SUS304、SUS316L。采用硅酸铝保温。

■ Accessories

The tank body is equipped with the CIP automatic rotary spray cleaning ball, thermometer, pressure gauge, explosion-proof aperture lamp, sight glass, quick open type feeding inlet and etc., ensuring convenient operation and complying with the GMP standard. The cylinder inside the equipment is made of imported SUS304 or 316L. Aluminum silicate is adopted for heat insulation.

■ 自动化的提取车间

1. 工艺状态的实时监控管理
2. 过程稳定使控制过程更加完美
3. 简单易懂的操作界面，操作方便
4. 过程参数在线检测、实时显示并记录存档
5. 实时在线分析、在线解决问题和历史查询
6. 加强生产数据管理，保证产品质量

■ Automatic extraction workshop

1. Real-time monitoring and management of process status
2. Process setting makes the control process more perfect.
3. The operation interface is simple, easy to understand and convenient to operate.
4. The process parameters are detected on the line, displayed in real time and kept on file.
5. Real-time online analysis, online problem solving and history inquiry
6. The production data management is reinforced to ensure product quality.

■ 排渣门开启方式可选

The opening modes of the residue discharging door are optional.

可自动开闭罐盖，采用了三气缸控制，同时增设保险装置，防止意外操作，安全系数较高。适合中小型出渣口使用。

The tank cover can be automatically opened and closed. It adopts three-cylinder control and is provided with safety device to avoid accidental operation and provide high safety factor. It is suitable for use in small and medium-sized residue discharging vents.

全自动开闭罐盖；可以实现高温高压提取，转环式可达到3Bar以上，给提取工艺提供了更多的选择，也可以适应一些特殊的工艺要求，安全可靠，具有充分的安全保障功能、提取罐无泄漏。

The tank cover can be automatically opened and closed. High temperature and high pressure extraction can be realized, and more than 3Bar can be achieved in the swivel type product. It provides more selection for extracting technology. It can also meet some special technological requirements. With good safety and reliability, it has sufficient safety guarantee functions and the extracting tank has no leakage.

可全自动开闭罐盖；可以实现高温高压提取，给提取工艺提供了更多的选择，此出渣门适合大口径倒锥型提取罐的出渣方式，安全系数高。

The tank cover can be automatically opened and closed. High temperature and high pressure extraction can be realized to provide more selection for extracting technology. With high safety factor, the residue discharging door is suitable for residue discharging of large-diameter upside-down taper type extracting tank.



快开保险式出渣门
Quick open safety type residue discharging door



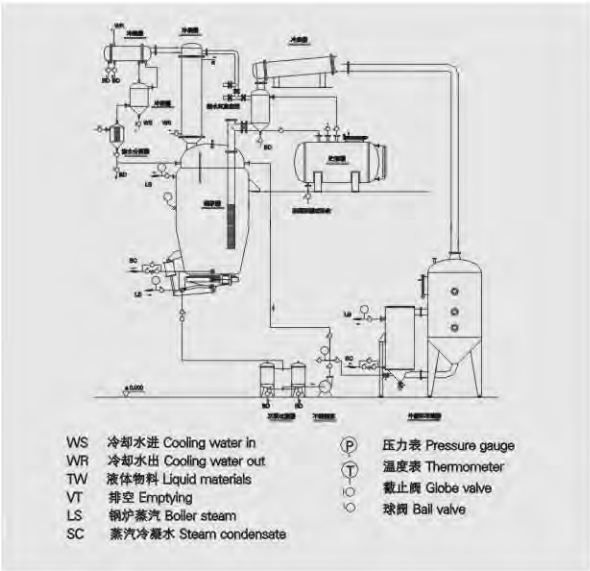
旋转式出渣门
Rotary residue discharging door



爪式出渣门
Claw type residue discharging door

DSRH HEAT REFLUX EXTRACTING AND CONCENTRATING UNIT

DSRH热回流提取浓缩机组



设备说明

机组由提取罐、过滤器、药液泵、加热器、蒸发器、冷凝器、冷却器、油分离器、升温器、工控机等组成。
中药经浸泡加热后，浸出液由泵从提取罐底部泵入外加热器加热。多余泵液切向进入提取罐底部回流，起到局部搅拌作用。提取液由加热器加热后，经分离浓缩器闪蒸分离。二次蒸汽切向进入提取罐，一方面把热量传给提取罐内溶剂，一方面起搅拌作用。
余气一路进入冷凝器冷成溶剂，回流进入提取罐。一路进入冷凝器升温器进行热交换，使冷凝液温度接近提取罐沸点，余气进入冷凝器。由于溶剂回流量大，药材与溶剂中含溶质的密度保持高梯度，溶质快速溶出。由于是一面提取，一面浓缩，且浓缩液不断排出，流程时间大大缩短，仅需4-6小时。由于能使冷凝液回流温度接近提取罐溶液沸点，能耗低。整个机组为密闭操作，溶剂消耗少。
整个机组由工控机控制，操作程序，加热温度、蒸发温度、回流温度、系统真空压力、提取罐溶剂液面，浓缩液浓度、蒸发浓缩罐液面均能设定和控制，使工艺流程运行可靠、稳定、安全。

技术参数 Technology Parameters

提取罐容积 Extracting tank volume	0.5	1	2	3	6
浓缩器蒸发量 Concentrator evaporation (L)	250	500	800	1000	2000
水提温度 Water extraction temperature (°C)	90~100				
醇提温度 Alcohol extraction temperature (°C)	78~83				
提取时间 Extraction time	5~6小时/批				
真空度 Vacuum degree (Mpa)	-0.05~-0.08				
设计压力 Design pressure (Mpa)	0.09~0.3				

Z SERIES EXTRACTING AND CONCENTRATING PILOT-SCALE TEST UNIT

Z系列提取浓缩中试机组



设备特点

1. 机组由提取罐，列管式加热器、蒸发器、冷凝器、油分离器。收油器、药液泵、计量槽、贮液罐、过滤器、真空泵、配电柜等组成。提取罐、蒸发器顶蒸汽出口均设置了沫器。无蒸汽加热的单位，可加配导热油系统。
2. 可进行热回流循环提取、浓缩，常规提取、浓缩、水沉（醇沉）、渗漉等操作。
3. 能在负压、常压、正压状态下工作。可适应水提、醇提或溶剂提取，符合GMP要求。
4. 机组在多功能、高效率、节能、操作范围广等方面具有很大优势。在综合性能方面，国内领先。它是天然植物药提取方面的中试设备。

Equipment Features

1. The unit is composed of extracting tank, tubular heater, evaporator, condenser, oil separator, oil collector, medical liquid pump, measurement tank, liquid storage tank, filter, vacuum pump, power distribution cabinet and etc. The defoamer is set at the extracting tank and the steam outlet of at the top of the evaporator. For the units that have no steam heating, the unit can be equipped with the heat transfer oil heating system.
2. The operations such as heat reflux circulating extraction, concentration, normal extraction, concentration, water precipitation (alcohol precipitation) and percolation can be carried out.
3. It can be operated under negative pressure, normal pressure and positive pressure. It is suitable for water extraction, alcohol extraction or solvent extraction, conforming to GMP requirements.
4. The unit has many advantages in such aspects as multiple functions, high efficiency, energy saving and wide operation range. As for the comprehensive performances, it is leading in China. It is the best pilot-scale test equipment for extraction of natural plants and medicines.

我们先进的多功能型提取浓缩回收中试设备，是市场上销售最好的设备之一，特别适用于科研机构、大专院校、工厂中试使用，或贵重药品的提取浓缩，或植物鲜品低温提取浓缩，它已在工厂得到成功应用。设备因其功能多、性能好、结构紧凑、加工精良，已成功进入国外市场。

Our advanced multifunctional extracting, concentrating and recycling pilot-scale test unit is one of the best-selling equipment on the market. It is especially suitable for extraction and concentration of valuable medicines and low temperature extraction and concentration of fresh plant products in scientific research institutes, colleges and universities, and pilot-scale rooms in factories. It has been successfully applied in factories. It has successfully entered domestic and overseas markets due to its multiple functions, good performance, compact structure and fine machining.

技术参数 Technology Parameters

规格型号 Model and specification		TNH-50	TNH-100	TNH-200	TNH-300	TNH-500
提取罐 Extracting tank	容量 Volume(L)	65	125	250	375	550
	夹套工作压力 Working pressure in the jacket(Mpa)	0.15	0.15	0.15	0.15	0.15
	容器工作压力 Working pressure in the vessel(M pa)			0.09		
浓缩罐 Concentrating tank	容量 Volume(L)	65	125	250	375	550
	罐内真空度 Vacuum degree in the tank(Mpa)			0.08		
	加热管工作压力 Working pressure in the heating pipe(Mpa)			0.09		
真空泵 Vacuum pump	热回流工作回流量 Reflux quantity in the heat reflux work(L/H)	20	40	80	120	180
	电压 voltage(V)	380	380	380	380	380
	功率 Power(Kw)	1.5	1.5	2.2	3	3
水泵 Water pump	功率 Power(Kw)	0.75	0.75	0.75	0.75	0.75

SLG MODEL
PERCOLATING TANK

SLG型渗漉罐



本设备适用于中药、食品、化工等行业的渗漉操作。

渗漉法是往药材粗粉中不断添加浸取溶剂使其渗透药粉，从下端出口流出浸取液的一种方法。渗漉时，溶剂渗入药材层。渗漉法是以药材层不断添加浸取溶剂使溶剂由上而下穿过药材层中溶解大量的可溶性物质，浓度增加，密度增大后向下移动，与上层的浸取溶剂或稀浸液置换位置，造成良好的浓度差，使扩散较好的自然进行，故浸取效果优于浸渍法，提取也较完全。

The equipment is applicable to percolation operation for such industries as traditional Chinese medicine, food, chemical industry, etc.

The percolation method is to continuously add leaching solvent into the rough powder of medicine materials to make it filtrate the medicine powder, and then the leaching liquid will flow from the bottom outlet. During the percolation, after the solvent filters into the cell of medicine material and dissolves large amount of soluble matters, the concentration increases, and it will move downward after the density increases. The leaching solvent at the upper layer or the thin leaching liquid will exchange the position and produce good concentration difference to make the scattering carried out smoothly. Thus, the leaching effect is better than the dipping method, and the extraction will be comparatively complete.

■ 技术参数 Technical parameters

型号规格 Model and specification	SLG0.5	SLG1	SLG2	SLG3
全容积 Total volume (L)	600	1200	2300	3200
罐内设计压力 Design pressure in tank (MPa)	常压 Normal pressure			
加料口直径 Feeding inlet diameter (mm)	300	400	400	400
出渣口直径 Residue discharge outlet diameter(mm)	400	600	800	800

WZ SINGLE-EFFECT EXTERNAL
CIRCULATION VACUUM CONCENTRATOR

WZ 单效外循环真空浓缩器



■ 设备特点

单效外循环真空浓缩器，由加热器、蒸发器、除沫器、冷凝器、冷却器、受液罐等组成，凡与物料接触部件均采用优质不锈钢制作，本装置适用于制药、食品、化工、轻工等行业液体物料的蒸发浓缩。本设备浓缩时间短，蒸发速度快，能较好地保持热敏性物料不致破坏。



■ Equipment Features

The single-effect external circulation vacuum concentrator is composed of heater, evaporator, defoamer, condenser, cooler and liquid receiving tank. The parts that contact materials are all made of stainless steel. The equipment is applicable to evaporation and concentration of liquid materials in pharmacy, food, chemical industry, light industry and etc. The concentrating time is short and the evaporating speed is high, which can better protect the heat sensitive materials from being damaged.

■ 系列单效蒸发器有三种型式

1. WZ 单效外循环真空浓缩器为普通型，用于水溶液的蒸发。
2. WZH 单效外循环真空浓缩回收器为酒精回收型，用于酒精溶液的蒸发，较大的冷凝冷却面积，确保酒精回收，回收浓度达到 70~85°，酒精损耗率 < 5%，酒精回收后温度 < 40℃。
3. WZS 单效外循环真空浓缩膏器，用于单效蒸发及收浓膏。在单效正常蒸发后，关闭加热室与蒸发室连接管及循环管的阀门，将料液全部进入蒸发室，通过蒸发室的夹套加热，进行常压式减压浓缩，提高物料的浓缩比重至 1.2~1.3。

■ The series of single-effect evaporators have three forms

1. The WZ single-effect external circulation vacuum concentrator is the ordinary type, which is used for evaporation of water solution.
2. The WZH single-effect external circulation vacuum recovery concentrator is the alcohol recovery type, which is used for evaporation of alcohol solution. It has higher cooling area to ensure the alcohol recovery. Its recovery strength reaches 70~85° , the alcohol consumption rate is less than 5% and the alcohol temperature after the recovery is less than 40℃.
3. The WZS single-effect external circulation vacuum ointment collection concentrator is used for single-effect evaporation and thick ointment collection. After the normal single-effect evaporation, the valves connecting the spraying tube and circulating tube in the heating chamber and evaporating chamber will be closed. The liquid materials will fully enter the evaporating chamber and through the jacket heating in the evaporating chamber, normal pressure type or pressure relief type concentration will be carried out. The concentration specific gravity of materials will be increased to 1.2~1.3.

■ 技术参数 Technical parameters

规格 Gauge	型号 Type	WZ-500	WZ-1000	WZ-1500	WZ-2000
蒸发量 Evaporation (kg/h)		500	1000	1500	2000
回收酒精浓度 Recycle alcohol concentration (%)		80~85			
蒸汽压 Steam pressure(MPa)		0.1~0.25			
真空度 Vacuum degree (Mpa)		-0.05~-0.08			
蒸发室容积 Evaporation chamber volume (m³)		1.0	1.5	2	2.5
受液槽容积 Liquid receiving tank volume (m³)		0.3	0.5	0.8	1.0
耗汽 Steam consumption (Kg/h)		520	1050	1550	2100
耗水 Water consumption (T/h)		7	10	15	20
加热蒸汽口 Heating steam port (mm)		40	50	80	100
冷却水进出口 Cooling water inlet and outlet(mm)		40	50	65	80

DUAL-EFFECT
CONCENTRATOR

SJN双效浓缩器



■ 用途

本浓缩器适用于中药、西药、淀粉糖、食乳品等液料的浓缩，尤其适用于热敏性物料的低温真空浓缩。

■ Purpose

The concentrator is applicable to concentration of liquid materials of traditional Chinese medicine, Western medicine, starch sugar, food and dairy products, and it is especially applicable to low temperature vacuum concentration of heat sensitive substances.

■ 设备特点

1. 节能效益，按SJN-1000型计算，年节约蒸气3500吨左右，节约水9万吨左右，节约电8万度左右，折人民币10-15万元。(与单效对比)
2. 本浓缩器采用负压外加热自然型循环式的蒸发方式，蒸发速度快，浓缩比重大，可达1.2-1.35(一般中药浸膏)。
3. 本浓缩器采用二效同时蒸发，二次蒸气得到使用，耗能总量与单效浓缩器相比降低40%，一年的节能费可收回本浓缩器的全部投资。
4. 多功能操作特点：
(1)可回收酒精浓度80%左右；
(2)单效、二效可以反复并锅收膏；
(3)可以间歇、连续进料。
5. 本浓缩器与物料接触部位均采用优质不锈钢制作，符合cGMP要求标准。外形美观。加热器、蒸发器外均设有保温层，保温层外用不锈钢板制作外壳，表面做镜面或亚光处理。

■ Equipment Features

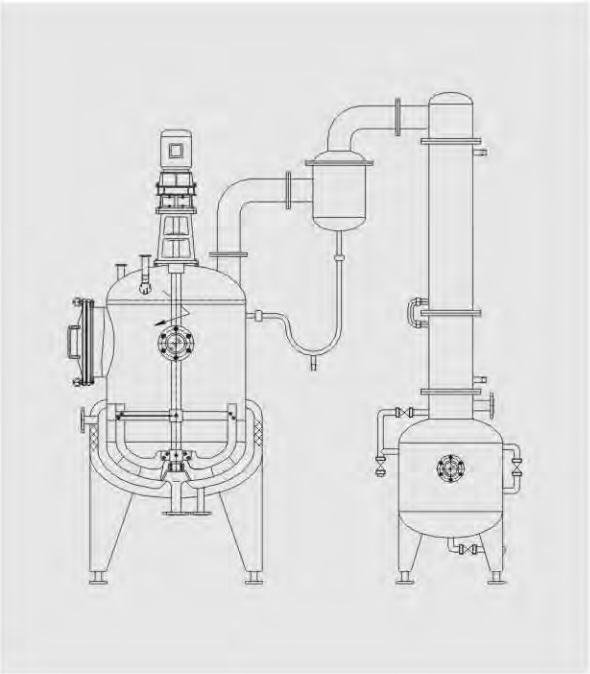
1. Energy saving benefit. Taking SJN-1000 type for calculation, in a year, approximately 3,500 tons of steam, 90 thousand tons of water and 80 thousand electrical degrees can be saved, thus, cost of nearly RMB 100-150 thousand Yuan is reduced (compared with single-effect).
2. The concentrator adopts negative pressure external heating natural cycling evaporation mode, with instant evaporation and great concentrated specific gravity up to 1.2-1.35 (common TCM extract).
3. The concentrator adopts dual-effect simultaneous evaporation and uses twice steam. Therefore, the energy can be saved by 40% when compared with single-effect concentrator. The investment saved in a year can be up to total investment on the concentrator.
4. Multiple functions:
(1) The concentration of alcohol that can be reclaimed is approximately 80%.
(2) The boiler can reclaim creams repetitively with the circulation of first effect and second effect.
(3) Materials can be fed continuously and at intervals.
5. The parts of the concentrator that contact materials are all made of stainless steel, which is in accordance with cGMP standard. It has beautiful appearance. The heater and evaporator are provided with heat insulation layer. The heat insulation layer adopts stainless steel sheet as the shell. The surface adopts mirror polishing or matte treatment.

■ 技术参数 Technical parameters

规格 Gauge		型号 Type	SJN II 500	SJN II 1000	SJN II 1500	SJN II 2000
蒸发量 Evaporation (kg/h)			500	1000	1500	2000
耗汽量 Consumption (Kg/h)			≤ 250	≤ 500	≤ 750	≤ 1000
外型尺寸(长×宽×高) (m) Outline dimensions(L×W×H)			4X1.5X3.3	5X1.6X3.5	6X1.6X3.7	6.5X1.7X4.3
循环耗水量 Circulating water consumption (T/h)			6	12	15	18
蒸发温度 (°C) Evaporation temperature	一效 First-effect	80-90	真空度 Vacuum degree Mpa	一效 First-effect	0.02-0.04	
	二效 Second-effect	55-70		二效 Second-effect	0.05-0.06	
蒸气压力 Vapor pressure (Mpa)			< 0.1		浓缩比重 Enrichment ratio	1.2-1.3

ZN VACUUM PRESSURE
REDUCED CONCENTRATION CAN

ZN 真空减压浓缩罐



本设备主要包括浓缩罐、冷凝器、汽液分离器、冷却器、受液桶五部件，浓缩罐为夹套结构，冷凝器为列管式，冷却器为盘管结构。本设备适用于制药、食品、化工等行业对料液的浓缩，并且可作为回收酒精和简单的回流提取之用。设备与物料接触部分采用优质不锈钢制造，具有良好的耐腐蚀性，并且符合GMP标准要求。

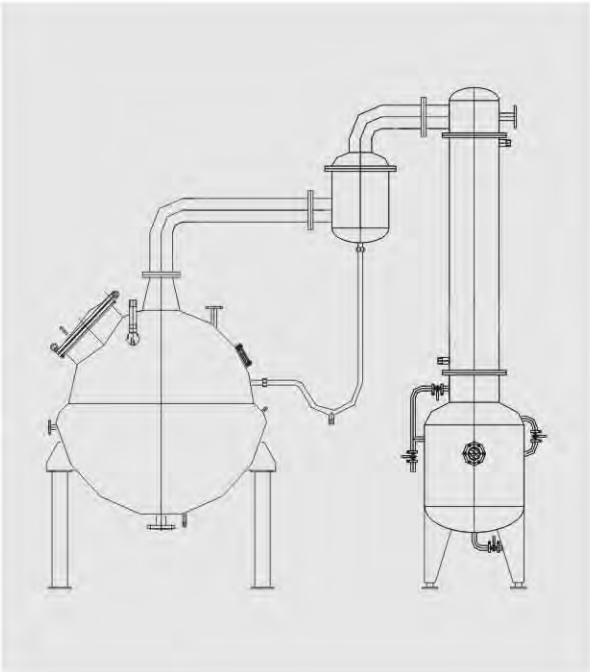
The equipment is mainly composed of five parts such as concentrating tank, condenser, steam-liquid separator, cooler and liquid receiving tank. The concentrating tank is of jacketed structure, the condenser is of tubular structure and the cooler is of coil structure. The equipment is used for concentration of materials in pharmacy, food, chemical industry etc. industries, and can also be used for alcohol recovery and simple reflux extraction. The parts of the equipment that contact materials are all made of high quality stainless steel with good anticorrosive performance, which meets GMP requirements.

■ 技术参数 Technical parameters

规格 Gauge	型号 Type	ZN-50	ZN-100	ZN-200	ZN-300	ZN-500	ZN-700	ZN-1000
容 积 Volume (L)		50	100	200	300	500	700	1000
受液槽容积 Liquid receiving tank volume(L)		35	45	60	76	100	125	165
夹层压力 Pressure in the jacket(Mpa)		0.09						
真空度 Vacuum degree (mmHg)		600-700						
加热面积 Heating area (m²)		0.25	0.59	0.8	1.1	1.45	1.8	2.2
冷凝面积 Condensation area (m²)		1.2	1.7	2.4	3.0	3.3	3.6	4.1
冷却面积 Cooling area (m²)		0.29	0.35	0.45	0.6	0.7	0.85	1.05
外型尺寸 Outline dimensions (mm)	Φ	1200	1350	1700	1700	2100	2400	2390
	宽 W	600	750	800	1000	1200	1300	1300
	高 H	2200	2200	2700	3400	3400	3400	3720

QN BALL-SHAPED CONCENTRATING TANK

QN 球形浓缩罐



球形浓缩罐主要由浓缩罐主体、冷凝器、汽液分离器、受液桶四个部分组成，可用于制药、食品、化工等行业对料液的浓缩、蒸馏及有机溶剂的回收等工艺。由于采用减压浓缩，故浓缩时间短，且不会破坏热敏性物料的有效成份。本设备与物料接触部分均为优质不锈钢制造，具有良好的耐腐蚀性能，经久耐用，符合GMP要求。

The ball-shaped concentrating tank is mainly composed of four parts such as concentrating tank body, condenser, steam-liquid separator and liquid receiving tank. It can be used for concentration, distillation, recovery of organic solvent and other processes of liquid materials in such industries as pharmacy, food, chemical industry and etc. As it adopts pressure relief concentration, the concentrating time is short, and will not damage the effective components of heat sensitive materials. The parts of the equipment that contact materials are all made of stainless steel with good anticorrosive performance and excellent durability, which meets GMP requirements.

■ 技术参数 Technical parameters

规格 Gauge		型号 Type					
		QN-300	QN-500	QN-700	QN-1000	QN-1500	QN-2000
蒸发量 Evaporation (Kg/h)		70	120	145	195	250	350
容积 Should the product (L)		300	500	700	1000	1500	2000
球内径 Ball inner diameter(mm)		800	990	1115	1250	1400	1600
蒸汽压 Steam pressure (Mpa)		0.15					
真空度 Vacuum (mmHg)		-0.05~-0.08					
加热面积 Heating area		1.6	2	2.3	3.2	4	5.2
冷凝面积 Cooling area		3.9	5	5.8	8.2	11	16
外型尺寸 Outline dimensions (mm)	长 L	1900	2030	2100	2335	2500	2750
	宽 W	1100	1200	1300	1520	1700	1800
	高 H	2300	2500	2600	2765	2900	3100
耗水 Water consumption(T/H)		5	5	8	8	10	12
蒸汽进口 Steam inlet(mm)		32	32	32	40	40	40
水进口 Water inlet (mm)		32	32	40	40	50	50

CIP AUTOMATIC CLEANING SYSTEM

CIP自动清洗系统



■ 工作原理

通过设置程序（程序可调）由CIP清洗自动配制清洗液，经气动控制阀与送液泵、回液泵来完成清洗液的输送及回流循环清洗、排放、回收整个清洗过程。通过电导率检测仪及PLC触摸屏组成的控制系统达到了自动在线清洗。

■ Working principle

Through program setting (adjustable program), the CIP cleaning system automatically prepares the cleaning liquid. The pneumatic control valve, liquid conveying pump and liquid return pump carry out its transportation and complete the whole cleaning process including return flow, circulative cleaning, discharging and recycling. The automatic CIP cleaning is achieved through the control system composed of the electric conductivity detector and PLC touch screen.

■ Application fields

Currently, the intelligent CIP cleaning system is widely applied in industries that have high requirements for cleaning such as biological fermentation, pharmacy, etc., so as to achieve the sanitary and aseptic effect.

■ System composition

The intelligent CIP system is a centralized system, which is composed of the injection water tank, CIP tank, double tubesheet heat exchanger, pipe filter, liquid conveying pump, liquid return pump, temperature controller, liquid level controller, electric conductivity detector, PLC touch screen, control cabinet and system valves and pipe fittings.

Biological pharmacy: used for CIP/SIP of equipment and pipes for culture medium preparation, fermentation, harvesting, ultra filtration, purification, inactivation and material transferring

Aseptic preparations: used for CIP/SIP of equipment and pipes for material preparation, material transferring and aseptic connection

Aseptic power injections and liquid injections: used for CIP/SIP of equipment and pipes for material preparation, material transferring and aseptic connection

Sterile bulk drugs: used for CIP/SIP of equipment and pipes for material preparation, material transferring and aseptic connection

Enhancing process traceability, effectively validating and revalidating reliability of production equipment, and reducing production risk

■ 应用领域

目前，智能型CIP就地清洗系统广泛应用于生物发酵、制药等对清洗要求较高的行业，并达到卫生无菌的效果。

■ 系统组成

智能型CIP系统为一中央集成系统，包含注射水罐、CIP罐、双管板换热器、管道过滤器、送液泵、回液泵、温度控制仪、液位控制仪、电导率检测仪、PLC触摸屏、控制柜及系统管阀件等组成。

生物制药: 应用于培养基配制、发酵、收获、超滤、纯化、灭活及物料转移设备和管道的在线CIP/SIP。

无菌制剂: 用于物料配制，物料转移，无菌对接设备和管道的在线CIP/SIP。

无菌粉针、水针: 用于物料配制，物料转移，无菌对接设备和管道的在线CIP/SIP。

无菌原料药: 用于物料配制，物料转移，无菌对接设备和管道的在线CIP/SIP。

提高制程可追溯性，有效验证与再验证生产设备的可靠性，降低生产风险。

JH ALCOHOL
RECOVERY TOWER

JH 酒精回收塔



■ 用途

酒精回收塔由塔釜、塔身、冷凝器、冷却器、流量计、气液分离器、高位贮罐七个部分组成，适用于制药、食品、轻工、化工等行业的稀酒精回收，本设备与物料接触部分均采用SUS304不锈钢制造，具有良好的耐腐蚀性能，并且节能、环保、降低生产成本、提高效率的优点。本装置可将稀酒精蒸馏到93度-95度，残液排放含醇度低符合环保要求。本装置采用高效不锈钢波纹填料。接触物料部分全部采用优质不锈钢制作符合GMP标准。
酒精回收塔可实现间歇精馏与连续精馏。

■ Purpose

The alcohol recovery tower is composed of the seven major parts such as tower kettle, tower body, condenser, cooler, flow meter, gas-liquid separator and high position storage tank. It is suitable for thin alcohol recovery in such industries as pharmacy, food, light industry and chemical industry. The parts of the equipment that contact materials are all made of SUS304 stainless steel, which has good anticorrosive performance. It has such advantages as energy saving, environmental protection, cost reduction and high efficiency. The device can distill thin alcohol to 93~95 degrees, and the alcohol content in the residual liquid is low, which is in conformity with the environmental protection requirements. The device is made of high efficient stainless steel corrugated filler. The parts that contact the materials are all made of stainless steel, which is in accordance with GMP standard.
The alcohol recovery tower can realize intermittent and continuous distillation.

■ 技术参数 Technical parameters

规格 Gauge		型号 Type					
		JH-200	JH-300	JH-400	JH-500	JH-600	JH-800
塔体直径 Tower diameter(mm)		200	300	400	500	600	800
塔身高度 Tower body height(mm)		6000	7000	7500	9000	9000	11500
塔釜容积 Volume of tower kettle (L)		640	1220	1450	2300	2500	3200
回收能力 Recovery capacity(kg/h)		50~60	90~100	180~200	280~320	380~440	600~650
填料形式 Filler form		不锈钢波纹填料 Stainless steel corrugated filler					
回收浓度 Recycling concentration (%)		93~95%					
外型尺寸 Outline dimensions (mm)	长 L	2.3	2.6	2.5	3	3.5	4.2
	宽 W	0.7	0.8	1	1.2	1.4	1.8
	高 H	8.5	9.5	11	12	13	14

JC ALCOHOL
PRECIPITATION TANK

JC 酒精沉淀罐



■ 用途

本设备适用于中药、口服液、食品、保健品、化工等的酒精沉淀，酒精沉淀罐系醇沉专用设备，主要用于中药水煎液浓缩后浓缩液进行冷冻或常温酒精沉淀的操作，也可用于中药醇提后浓缩液进行水沉淀的操作。

■ Purpose

The equipment is suitable for alcohol precipitation of TCM, oral liquids, food, health products and chemical products. The alcohol precipitation tank is special equipment in the alcohol precipitation process. It is mainly used for freezing or normal temperature alcohol precipitation of concentrated solution after concentration of TCM decoctions and can also be used for water precipitation of concentrated solution after alcohol extraction of TCM.

■ 性能

本设备全部用不锈钢制作，配有自动喷淋清洗系统，夹套中可通低温冷却水，传动部位采用机械密封，防爆电机确保生产过程安全与符合cGMP质量标准。夹套可选用米络板蜂窝、夹套二种型式。

■ Performance

The equipment is fully made of stainless steel, equipped with automatic spraying and cleaning system. Low temperature cooling water can pass the jacket. The transmission part adopts mechanical seal and the explosion-proof motor ensures that the production process is safe, which meets the cGMP quality standard. The jacket adopts Miller board honeycombed jacket.

■ 技术参数 Technical parameters

规格 Gauge		型号 Type						
		JC-300	JC-500	JC-1000	JC-1500	JC-2000	JC-3000	JC-6000
容积 Volume (m³)		0.3	0.5	1.0	1.5	2.0	3.0	6.0
换热面积 Heat exchange area (m2)		1.8	3.0	4.5	6.5	7.5	8.5	13
工作温度 Working temperature (℃)		常温 Normal temperature--15						
夹套设计压力 Jacket design pressure(MPa)		0.09 ~ 0.4						
罐内压力 Pressure in the tank (MPa)		常压 Normal pressure						
搅拌功率Mixing power(KW)		0.75	0.75	1.5	2.2	2.2	3.0	5.0
搅拌转速 Mixing rotation speed (r/min)		72	72	72	72	72	72	125
外型尺寸 Overall dimensions (mm)	内径 d	600	800	1000	1200	1300	1500	1600
	外径 D	800	1000	1200	1400	1500	1700	2000
	高 H	900	1350	1700	2200	2700	2900	2700

FH REACTION
KETTLE/REACTION TANK

FH 反应釜 / 反应罐



FH系列容器适用于制药、生物工程、精细化工、化学合成等行业之用。材质均采用SUS304或SUS316L。罐体设有夹套，夹套结构形式分为标准夹套、外盘管夹套、米络板蜂窝式夹套三种供选择。可加热、冷却，内表面采用镜面抛光，无卫生死角，全封闭的设计确保物料始终处在无菌状态下。封头均经旋压加工，符合GMP标准。搅拌装置采用卫生级机械密封，容器保温采用聚氨酯或硅酸铝，接口采用ISO标准快装卡箍式，方便卫生，外表采用抛光、喷砂、磨砂或冷轧原色亚光等多种式，使容器在任何场地都能显示它的卓越品质。设备配备无菌空气呼吸器，CIP清洗喷头、视镜、法兰式快开人孔等装置。

The FH series vessels are used in such industries as pharmacy, biological engineering, fine chemical industry, chemical synthesis, etc. The equipment is made of SUS304 or SUS316L. The tank body is provided with jacket for heating and cooling. The jacket structural forms for selection include three types such as standard jacket, external coil jacket and Miller plate honeycombed jacket. The interior surface adopts mirror polishing without any dead corner of sanitation. The fully closed design ensures that the materials are always in an aseptic status. The seal head is subject to spinning process, conforming to GMP standard. The mixing device adopts sanitary mechanical seal, and the vessel adopts PU or aluminum silicate for heat insulation. The interface adopts ISO standard quick-installed clamp type, which is convenient and sanitary. The exterior surface adopts polishing, sandblasting, dull polishing, cold rolling original color semi luster, etc., so that the vessel can display its prominent quality at any site. The equipment is provided with such devices as aseptic spiracle, CIP cleaning spray nozzle, sight glass, flanged quick opening manhole, etc.

■ 技术参数 Technical parameters

规格 (L) Specification	内筒直径 φ (mm) Inner cylinder diameter	夹套直径 φ (mm) Jacket diameter	电动机功率 (KW) Motor power	减速机型号 Speed reducer model	搅拌转速 (r.p.m) Mixing rotation speed
30	400	500	0.6~1.1	M2	60~85
50	500	600	0.6~1.1	M3	60~85
100	550	650	1.1~1.5	M4	60~85
150	600	700	2.2	M6	60~85
200	650	750	2.2	M6	60~85
300	800	900	2.2	M6	60~85
500	900	1000	2.2	M6	60~85
800	1100	1200	4	M8	60~85
1000	1200	1300	4	M8	60~85
1500	1300	1400	4	M8	60~85
2000	1400	1500	4	M8	60~85
2500	1400	1500	7.5	BLB7.5-4-13	90
3000	1400	1500	7.5	BLB7.5-4-13	90
3500	1400	1500	7.5	BLB7.5-4-13	90
4000	1500	1600	7.5	BLB7.5-4-13	63
5000	1600	1700	7.5	BLB7.5-4-13	63
6000	1800	1900	15	BLB7.5-4-13	100
8000	2000	2100	15	BLB7.5-4-13	100
32000	3000	3200	37	BLB450-11-45	50~100

STORAGE TANK

贮罐



本公司生产的CG型贮罐，设计合理、工艺先进、符合GMP认证要求。罐体采用立式或卧式单层或双层结构，并根据用户要求填充保温材料。内胆抛光到Ra0.45 μ m，外部采用镜面板或磨砂板保温。顶部开设进水口、回流口。消毒口、人孔并安装0.45 μ m空气呼吸器。



With reasonable design and advanced technology, the CG model storage tank produced by our company conforms to GMP requirements. The tank body adopts vertical or horizontal single-layer or double-layer structure, and is filled with heat insulation materials according to user requirements. The inner tank is polished to Ra0.45 μ m insulation. The water inlet, reflux vent, sterilization vent and manhole are provided at the top and the 0.45 μ m spiracle is installed.

■ 产品规格

1M³、2m³、3m³、4m³、5m³、6m³、8m³、10m³以上。

■ Product specification

1M³、2m³、3m³、4m³、5m³、6m³、8m³、10m³ and above.

■ 技术参数 Technical parameters

规格 Gauge	型号 Type	CG-1000	CG-2000	CG-3000	CG-4000	CG-5000	CG-6000	CG-10000
容积 Volume (L/m³)		1000	2000	3000	4000	5000	6000	10000
外型尺寸 Overall dimensions (mm)	直径 φ	900	1200	1500	1600	1600	1800	2000
	宽							
	高	2000	2800	2200	2500	2900	3900	3900

LOW TEMPERATURE
STORAGE TANK

低温贮罐



■ 技术参数 Technical parameters

几何容积(m³) Geometric volume	有效容积(m³) Effective volume	工作压力(Mpa) Working pressure	设计温度(℃) Design temperature	外形尺寸(mm) Outline dimensions	净重(Kg) Net weight	满载重量(Kg) Full-load weight	绝热方式 Heat insulation mode	安装方式 Installation mode
5	4.5	0.8	-196	φ 2012×5300	4180	6310	真空粉末绝热 Vacuum powder heat insulation	立式 Vertical
10	9	0.8		φ 2412×6080	6100	10360		
15	13.5	0.8		φ 2616×7041	8250	14640		
20	18	0.8		φ 2716×8090	10100	18620		
30	27	0.6		φ 3016×9000	12700	25480		
	27	0.8		φ 2816×10640	14300	27080		
30	27	0.6		10240×2816×3100	13910	26690		卧式 Horizontal
	27	0.7		10240×2816×3100	13910	2690		
	27	0.8		10240×2816×3100	14360	27140		
50	45	0.6		12800×3016×3390	18240	39540		
	45	0.7		12800×3016×3390	18900	40200		
	45	0.8		12800×3016×3390	19650	40950		

MULTI-LEVEL
VERTICAL FILTER

多层立式过滤机



■ 设备特点

本设备是我公司自行研究设备的新产品，为多层滤室叠加而成的压滤及吸滤设备。该机操作方便，滤板的启开和压紧采用机械装置完成，极大地减轻了工人的劳动强度，过滤速度快，滤渣含水率低，提高了滤液质量，增加产品回收率，改善了环境。

设备适用于医药、化工、食品、染料、陶瓷、冶金等企业或科研部门的物料固液分离。

■ Machine Features

The equipment is a new product independently researched by our company. It is a piece of pressure filtration and suction filtration equipment through superposition of multi-level filter chambers. The machine is convenient to operate. The opening and pressing of the filter plate are completed by adopting mechanical device. It can greatly reduce labor intensity of workers with high filtering speed and low moisture content of filter residues. It enhances the quality of filtrate, increases recovery rate of products and improves the environment.

The equipment is suitable for solid and liquid separation of materials in enterprises or scientific research departments in such industries as medicine, chemical industry, food, dye, ceramics, metallurgy, etc.

■ 管口表 Pipe mouth table

符号 Symbol	口径 (DN) Nominal diameter	连接形式 Type of connection	用途 Purpose
a	25	快开卡箍 Quick opened ferrule	进液口 Liquid inlet
b	25	快开卡箍 Quick opened ferrule	出液口 Liquid outlet
c	12	快开卡箍 Quick opened ferrule	进气口 Air inlet

■ 技术参数 Technical parameters

过滤面积 Filter area		m²	0.6	1	2	4
滤板直径 Filter plate diameter		mm	500		700	1000
滤板数量 Filter plate quantity			2	4	5	5
过滤压力 Filter pressure		Mpa	0.2			0.2
吸滤负压 Suction filtration negative pressure		Mpa	0.066			0.066
拉开行程 Opening travel		mm	250~300		300~350	400~500
滤板拉开方式 Filter plate opening mode			滤板逐块拉开 Piece-by-piece opening of filter plates			
有效容积 Effective volume		m³	0.12	0.2	0.37	1.1
生产能力 Production capacity		t/h	0.5~0.8	0.9~1.2	2~3	4~5
电机功率 Motor power		kw	2.2		3	5.5
外形尺寸 Outline dimensions	长 long	mm	940		980	1380
	宽 wide	mm	720		780	1120
	高 high	mm	2235	2725	2300	3131
参考重量 Reference weight		kg	1390	1605	1800	4210

HIGH-EFFICIENCY FILTER UNIT

高效过滤机组



■ 设备特点

该设备是我公司在原有机机械多层立式滤机的基础上研制开发一款新型高效大流量过滤设备，该设备克服了传统过滤工艺的不能连续过滤、换滤材困难，渗漏等缺点，新型过滤器对可压缩、高粘度、高分散性的难以分离物料也可进行高效分离，实现了过滤工艺的高精度，大流量，连续过滤，运行周期长，无滤液损失、节能环保，为用户创造了巨大的经济效益和社会效益。

■ Machine Features

The equipment is a new type of high-efficiency and high flow filtering equipment researched and developed by our company on the basis of the previous mechanical multi-level vertical filter. The equipment has conquered the defects of being unable to carry out continuous filtration and hard replacement of filter materials in traditional filtering processes. The new filter can carry out efficient separation of compressible, highly viscous and highly dispersed materials that are hard to be separated to realize such features as high precision, high flow, continuous filtration, long operation cycle, no loss of filtrate, energy saving and environmental protection, creating enormous economic and social benefits for users.

■ 与传统过滤设备在过滤工艺上对比优点

1. 过滤精度高，过滤流量稳定，流量大，过滤周期长，节能环保，运行成本低，无需维护，使用寿命长。
2. 高效过滤设备所有零部件全部采用304不锈钢制成，外形美观大方。
3. 传统过滤设备的滤层多是垂直结构，液体压力难以均衡支持滤饼，在重力的作用下滤饼脱落造成穿滤。
4. 传统过滤设备使用滤芯，滤网等构件，在滤材表面容易形成漆皮状阻塞层，降低流量和发生阻塞终止过滤。
5. 传统过滤设备清洗繁琐尾液损件大，造成滤液浪费，工作环境污染。
6. 传统过滤设备，滤材和易损件消耗大生产成本低。
7. 传统过滤设备维护保养费用高。
8. 本机尤其是针对传统设备解决不了的絮状物分离，取得良好分离效果，可解决絮状物分离难题。
9. 本设备广泛应用于医药、化工、食品、饮料、果汁、酒业、工业用油等行业精滤。

■ 设备过滤系统特点

1. 采用多层板框水平层重叠结构，滤饼直接由重力支持，避免因滤饼脱落造成的漏滤和精度不稳，过滤系统内辅以精密导流分布设计，保证全过程的稳定精度。
2. 采用动态添加滤质原理，使滤层的构筑处于动态调整中，保持足够通透性，保证连续稳定的大流量，提高生产效率。
3. 采用助滤过滤，助滤介质能捕捉架空溶液中各种杂质，避免溶液过滤中产生漆皮状阻塞层形成，流量衰减极慢。过滤时间长，极大延长过滤周期。
4. 整个系统无渗漏，无反清洗，无残留，滤饼干燥排放，全过程几乎无损失，利于环保。
5. 设备操作简单化，整个系统运行实现自动控制、节约劳动力，提高效率，整个设备无易损件、免维护，使用寿命长。

■ Advantages in terms of filtering processes in comparison with traditional filtering equipment

1. High filtration precision, stable filtration flow, high flow, long filtration cycle, energy saving, environmental protection, low running costs, no need of maintenance, long service life.
2. All parts of the high-efficiency filtering equipment is made of 304 stainless steel with beautiful appearance.
3. The filtering layer in traditional filtering equipment mostly adopts a vertical structure. The hydraulic pressure is hard to support filter cakes in a balanced way, and the filter cakes will drop under the action of gravity, causing filtration failure.
4. The components such as filter elements and filter screens adopted in traditional filtering equipment may easily cause the formation of paint coat-shaped blocking layer on the surface of filter materials, reduce flow, cause blocking and terminate filtration.
5. It is tedious to clean the traditional filtering equipment and the tail washings greatly damage the parts, causing the waste of filtrate and pollute the working environment.
6. In the traditional filtering equipment, the consumption of filter materials and wearing parts is great, causing high production costs.
7. The maintenance and servicing costs of traditional filtering equipment are high.
8. The machine has good separation effect especially for the separation of flocs that cannot be solved by traditional equipment.
9. The equipment is widely applied for fine filtration in such industries as medicine, chemical industry, food, beverage, fruit juice, alcohol, industrial oil, etc.

■ Equipment filtering system features

1. It adopts multi-level plate and frame horizontal overlaying structure. The filter cakes are supported by gravity, avoiding missed filtration and unstable precision caused by dropping of filter cakes. The precise diversion distribution design is adopted inside the filtering system to ensure stable precision in the whole process.
2. It adopts the principle of dynamic feeding of filtration media to make the construction of filtering layer in dynamic adjustment, so as to maintain sufficient permeability, ensure continuous and stable high flow, and improve production efficiency.
3. It adopts aided filtration. The filtration media can capture various impurities in solution, avoid the formation of paint coat-shaped blocking layer during the filtration of solution. The flow reduction is very slow. The filtration time is long and the filtration cycle is greatly prolonged.
4. The whole system has no leakage, no back cleaning and no residuals. The filter cakes are discharged after dried. There is almost no loss in the whole process. It is environmentally friendly.
5. The equipment is simple to operate. The whole system realizes automatic control during its running, saving labor and improving efficiency. The whole equipment has such features as no wearing parts, free from maintenance and long service life.

与传统工艺相比，过滤精度超高，优势越明显。

以1微米的过滤精度来过滤水基液体为例，流量为2吨每小时，几种常用设备对比如下：

	板式压滤机 Plate filter press	管式压滤机 Tubular filter press	高效过滤系统 High-efficiency filtering system
过滤面积 Filtration area (m ²)	10-30	20-40	2-4
精度变化 Precision change	有 have	有 have	无 No
滤饼脱落 Filter cake dropping	有 have	有 have	无 No
滤液损失 Filtrate loss	3%-10%	2%-5%	无 No
反清洗 Back cleaning	需要 need	需要 need	不需要 Don't No
腔隙残液 Cavity interval residual liquids	有 have	有 have	无 No
工作周期 Work cycle(h)	0.3-1.2	0.5-1.1	1.0-168
占地面积 Floor space(m ²)	15.0-20.0	5.0-10.0	3.0-8.0
滤渣排放 Residue discharge	湿 wet	湿 wet	干 dry
杂质滤除率 Impurities filtering rate	≤50%	≤65%	≤95%
耗材 Consumptive materials	滤板、滤布 Filter plate, filter cloth	专用滤管（陶瓷、金属） Special filter tubes (ceramic, metal)	助滤剂滤膜、滤纸 Filter aid filter film, filter paper
人工 Labor	2-3人	2-3人	1人
使用寿命(年) Service life (year)	4-6	4-6	15-20

MEMBRANE SEPARATION EQUIPMENT

膜分离设备



本设备是我公司多年从事传统过滤设备生产和国内纤维膜制作基础上研发一款新型错流过滤设备，基本原理，是通过循环泵将要过滤的物质在不同孔径的滤膜孔道中做高速循环运动。在压力的作用下，滤液以切线通过的方式滤出；滤液由于高速运动而形成湍流，不断冲洗膜棒的内表面，将少量附着在膜上的固形物带走，增加自动定时反冲洗功能，从而防止了滤膜的阻塞，保持过滤的正常进行。未滤液不断循环，固形物浓度愈来愈大，当浓度到达一定程度后自动排出，最终达到固液分离的目的。

■ 应用 Application

本设备涉及医药、饮用水、食品、饮料、酒类、生物工程、动植物提取液和中水回用等方面。公司尤其擅长于食品饮料、酒类和生物发酵液的澄清、除菌、分离、提纯、浓缩等应用。

■ 设备特点 Equipment Features

1. 无论清洗或过滤都处于密闭状态，可实现自动进行、连续生产，极大地提高生产效率。
2. 对环境无污染、无废料排放，损失小，可实现“清洁化”生产。
3. 大大降低生产成本。
4. 自动化程度高，维修方便。
5. 无需使用助滤剂。
6. 适合过滤药液、饮用水、口服液、饮料、酒类、生物工程、提取浓缩等。

STAINLESS STEEL PLATE
AND FRAME FILTER PRESS

不锈钢板框压滤机



本设备采用组合金工技术和时效热处理工艺，板框无变形，接触面不需硅胶密封件，操作时不需要按顺序排列，均能达到无泄漏。特别是采用精密镶套工艺技术彻底阻挡了料液中的纤维絮状物，透过紊流进入洁净的滤液中，符合GMP规范要求。

The equipment adopts combined metalworking technology and ageing thermal treatment. There is no deformation of plate and frame. The contact surface does not need silicone seals. During operation, arrangement in sequence is not required. There is no leakage. In particular, the use of precision inseting technology completely prevents the fiber floccules from entering the clean filtrate through the turbulent flow, conforming to GMP requirements.

■ 设备特点

本设备亦称无菌压滤机，滤液在密闭的机体内过滤，不受外界空气等污染，适用于制药、食品、化工、环保等行业各类悬浮液的液固分离，特别适用于含有溶媒环境的抗生素原料药、针剂、酏剂、无菌过滤。也适用于口服液、油脂、果汁、糖浆等。

本设备根据原料液PH值数据，采用304、316L或钛材料制作，结构满足不同工艺要求，工作压力大，过滤速度快。

■ 技术参数 Technical parameters

规格 Specifications	工作压力 Work stress (Mpa)	过滤量 Filter capacity (N/T)	参考尺寸 Reference dimensions(mm)			参考重量 Reference weight(kg)
			L	H	B	
2m²	0.3	1.2	1080	800	460	300
4m²	0.3	2	1500	800	460	460

FULLY CLOSED HORIZONTAL
LAYERED STAINLESS STEEL FILTER

全封闭水平层叠式不锈钢过滤器



■ 设备概述

该设备是一种板框层叠式精密液体过滤机，经我厂多年来生产过滤机的实践经验制造而成，具有单位空间内液体过滤面积大、速度快、流量大、效率高等特点。它们广泛用于制药、化工、生物工程、食品、啤酒、矿泉水、饮料、水处理、酿造、石化、电子、电镀、印染、环保等行业，是各类液体进行较大容量过滤、澄清、提纯分离及各种悬浮液进行固液分离的理想设备。

■ Equipment description

The equipment is a kind of plate and frame layered precision liquid filter, which is manufactured on the basis of our years of practical experience in producing filters. It has such features as large liquid filtration area, high speed, large flow rate and high efficiency in a unit space. It is widely used in such industries as pharmacy, chemical industry, biological engineering, food, beer, mineral water, beverage, water treatment, brewage, petrochemical industry, electronics, electroplating, printing and dyeing, environmental protection, etc. It is an ideal piece of equipment for larger capacity filtration, clarification, purification and separation of various liquids as well as solid-liquid separation of various suspensions.

■ 技术参数 Technical parameters

规格 Specifications	层数 Layer quantity	过滤面积(m²) Filtration area	过滤尺寸(mm) Filtration size	过滤压力(Mpa) Filtration pressure	理论流量(t/h) Theoretical flow
φ 300	10	0.7	310	0.2-0.6	4
φ 300	20	1.4	310	0.2-0.6	8
φ 300	30	2.1	310	0.2-0.6	12
φ 400	20	2.5	410	0.2-0.6	14
φ 400	30	3.9	410	0.2-0.6	21
φ 400	40	5.0	410	0.2-0.6	28
φ 500	20	3.9	510	0.2-0.6	25
φ 500	40	7.8	510	0.2-0.6	50
φ 600	20	5.6	610	0.2-0.6	60
φ 600	30	8.4	610	0.2-0.6	90
φ 600	40	11.3	610	0.2-0.6	120
φ 700	20	7.7	710	0.2-0.6	100
φ 700	40	15.3	710	0.2-0.6	160
φ 800	30	15.0	810	0.2-0.6	160
φ 800	40	20.0	810	0.2-0.6	220
φ 1000	30	23.5	1010	0.2-0.6	250
φ 1000	40	31.4	1010	0.2-0.6	350

BAG FILTER

袋式过滤器



■ 设备特点

袋式过滤器是一种结构新颖、体积小、操作简便灵活、节能、高效、密闭工作、适用性强的多用途过滤设备。袋式过滤器是一种压力式过滤装置，主要由过滤筒体、过滤筒盖、快开机构、不锈钢滤篮等部件组成。过滤器内部由金属网蓝支撑滤袋，液体由过滤器外壳的旁侧入口流进滤袋，经滤袋过滤后从出口流出，杂质被拦截在滤袋中。该机更换滤袋十分方便，过滤基本无物料消耗。

■ Equipment Features

The bag filter is a kind of multi-purpose filter with strong adaptability featured by novel structure, small volume, simple and flexible operation, energy saving, high efficiency and closed running. The filter is a kind of pressure type filter, mainly composed of filter cartridge, filter cartridge cover, quick-opening mechanism, stainless steel filter basket, etc. Inside the filter, the filter bag is supported by the metal mesh. The liquid flows into the filter bag from the side inlet near the filter housing and flows out after filtered by the filter bag. The impurities are stopped in the filter bag. The filter bag can be easily replaced and there is no material consumption during filtration.

■ 技术参数 Technical parameters

单袋式参数规格表 Parameter and specification table of single-bag type

规格型号 Specification type	滤袋编号 Filter bag Number	滤袋数量 Filter bag quantity	过滤面积 Filtration area	进口口径 Inlet diameter	工作压力 Working pressure	筒体直径 Cartridge diameter	理论流量 Theoretical flow
DL-1P4S	4#	1	0.15m ²	25	0.6Mpa	160	12T/H
DL-1P1S	1#	1	0.25m ²	32	0.6Mpa	200	20T/H
DL-1P2S	2#	1	0.05m ²	50	0.6Mpa	219	40T/H

滤袋参考表 Filter bag reference table

产品 Products	规格 (直径) Specification (diameter)	精度 Precision	过滤面积 Filtration area	理论流量 Theoretical flow
一号滤袋 No. 1 filter bag	180*430	0.5-200 μ m	0.25m2	20T/H
二号滤袋 No. 2 filter bag	180*810	0.5-200 μ m	0.5m2	40T/H
三号滤袋 No. 3 filter bag	106*230	0.5-200 μ m	0.1m2	5T/H
四号滤袋 No. 4 filter bag	106*380	0.5-200 μ m	0.15m2	12T/H



■ 设备特点

1. 袋式过滤处理量大、体积小、容污量大。
2. 基于袋式过滤系统的工作原理和结构，更换滤袋方便快捷，而且过滤机免清洗，省工省时。
3. 滤袋侧漏机率小，有力的保证了过滤品质。
4. 袋式过滤可承载更大的工作压力，压损小运行费用低，节能效果明显。
5. 滤袋过滤精度不断提高，目前已达到0.5 μ m。
6. 过滤器滤袋清洗后可反复使用，节约成本。
7. 袋式过滤应用范围广，使用灵活，安装方式多样。

■ Equipment Features

1. The bag filter has such features as large filtration capacity, small volume, and large filth allowance.
2. Based on the working principle and structure of the bag filter, it is convenient and quick to replace the filter bag, and the filter is free from cleaning, saving time and labor.
3. There is little possibility of side leakage of the filter bag, so that filtration quality is effectively ensured.
4. The bag filter can bear greater working pressure, with low pressure loss, low operating costs and obvious energy saving effect.
5. The filtering precision of the filter bag has been continuously improved and now it has reached 0.5 μ m.
6. The filter bag can be reused after cleaning to save costs.
7. The bag filter has a wide application range, flexible use and diverse installation methods.

OINTMENT VACUUM EMULSIFYING
WHOLE-SET EQUIPMENT

膏霜真空乳化成套设备



■ 优点

本机组采用上部同轴三重搅拌器，液压升降开盖，快速均质搅拌器转速：0-3500r/min(变频调速)、慢速刮壁搅拌器转速：10-100r/min(变频调速)、均质头采用高剪切涡流式乳化搅拌机，慢速刮壁搅拌器自动紧贴锅底及锅壁。采用真空吸料、特别对粉体物料利用真空吸入避免粉尘飞扬。整个工序在真空条件下进行，防止物料在高速搅拌后产生气泡，能达到卫生无菌要求。本系统配有 CIP 清洗系统、容器与物料接触部分采用SUS316L材料制造、内表面镜面抛光300EMSH(卫生级) 为了确保控制部分的稳定、电器控制部分采用德国西门子公司产品、按钮采用日本富士公司产品、触摸屏采用西门子产品、乳化电机采用ABB产品、减速机采用爱德利产品、变频器采用日本松下电工、真空泵采用西门子公司产品。本机组完全符合GMP要求制造，是目前国内最先进、最理想的膏、霜生产设备。

■ 技术参数 Technical parameters

型号规格 Model and specification	100型	200型	350型	蒸汽、电加热二种 Two types such as steam and electric heating
工作容积Working volume(L)	100	200	350	
预处理锅 Pre-treating pot(KW)	0.55 × 2	0.75 × 2	1.1 × 2	减速机 Speed reducer
刮板搅拌器 Scraper mixer(KW)	(10-100r/min)1.5	1.5	1.5	变频调速 Frequency conversion speed adjustment
均质搅拌器 Homogenizing mixer(KW)	(0-3500r/min) 3	4	5.5	变频调速 Frequency conversion speed adjustment
油相锅 Oil-phase pot(L)	100	200	300	蒸汽、电加热 Steam Electricity heating
水相锅 Water-phase pot(L)	80	160	250	蒸汽、电加热 Steam Electricity heating
真空泵 Vacuum pump(KW)	1.45	1.45	2.35	水环式 Water loop type
液压系统 Hydraulic system(KW)	1.5	1.5	1.5	电磁控制 Electromagnetic control
外型尺寸 Outline dimensions(mm)	2000X850X2150	2000X850X2250	2250X1000X2400	锅盖未开 The pot cover is not opened.
(长X宽X高) (L*W*H)	2000X850X3050	2000X850X3150	2250X1000X3300	锅盖升起 The pot cover is lifted.

■ 用途

本机组适用于化妆品厂、药厂的膏、霜类产品的生产，尤其对基质粘度大，固料含量比较高的物料配制乳化更显著功效。

■ Purpose

The unit is suitable for production of ointments and creams in cosmetic and pharmaceutical plants. The emulsification effect is more prominent for materials of high base viscosity and high solid content.

ZRJ真空乳化机是引进德国先进技术，根据化妆品、药膏类产品的制膏工艺而专门设计的，本机组由预处理锅、真空乳化搅拌锅、真空泵、液压系统、倒料系统、电器控制系统、工作平面等部分组成。

The ZRJ vacuum emulsifier is specially designed according to the ointment production process of cosmetics and ointments by introducing advanced technology from Germany. The unit is composed of pre-treating pot, vacuum emulsifying and mixing pot, vacuum pump, hydraulic system, dumping system, electric control system and work platform.

■ Advantages

The unit adopts upper coaxial triplex mixers and hydraulic lifting for cover opening. The rotation speed of the high-speed homogenizing mixer: 0-3500r/min (frequency conversion speed adjustment). The rotation speed of low-speed wall-scraping mixer: 10-100r/min (frequency conversion speed adjustment). The homogenizing head adopts high-shear eddy current type emulsifying mixer. The low-speed wall-scraping mixer is automatically kept close to the pot bottom and pot walls. Vacuum material suction is adopted. Vacuum suction is particularly used for powder materials to avoid dust. The whole procedure is carried out under vacuum to prevent materials from producing bubbles after high-speed mixing and meet the sanitary and aseptic requirements. The system is provided with CIP cleaning system. The parts of the vessel that contact the materials are made of SUS316L. The interior surface adopts mirror polishing 300EMSH (sanitary). In order to ensure the stability of the control part, the electrical control part adopts products of Germany Siemens, the pushbutton adopts products of Japan Fuji, the touch screen adopts products of Siemens, the emulsifying motor adopts products of ABB, the speed reducing motor adopts products of Adlee, the frequency converter adopts products of Japan Panasonic, and the vacuum pump adopts products of Siemens. The unit is manufactured in accordance with GMP requirements. It is currently the most advanced and ideal production equipment for ointments and creams in China.

OINTMENT VACUUM EMULSIFYING WHOLE-SET EQUIPMENT

膏霜真空乳化成套设备



■ 用途 Purpose

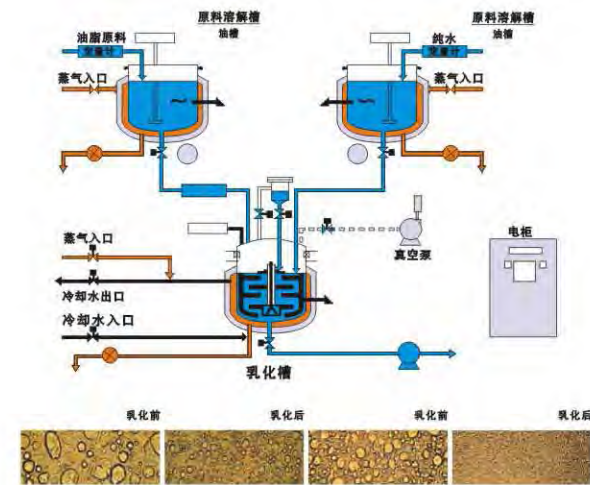
本机组适用于化妆品厂、药厂的膏、霜类产品的生产，尤其对基
质粘度大，固料含量比较高的物料配制乳化更显功效。

The unit is suitable for production of ointments and creams in cosmetic
and pharmaceutical plants. The emulsification effect is more prominent for
materials of high base viscosity and high solid content.

■ 设备特点 Equipment Features

本机组具有操作简便、性能稳定、均质性好、生产效率高、清洗
方便、结构合理、占地面积少、自动化程度高等特点。

The unit is featured by simple operation, stable performance, good
homogenizing performance, high production efficiency, convenient cleaning,
reasonable structure, small floor space, high automatic degree, etc.



■ 技术参数 Technical parameters

型号	工作容量	乳化马达		搅拌马达		外型尺寸			
		KW	min/r	KW	min/r	LENGTH	WIDTH	HEIGHT	MAXH
DQZRJ-50	50	4	0-3500	1.5	0-60	2800	2000	2000	2700
DQZRJ-100	100	4	0-3500	1.5	0-60	2900	2100	2200	3000
DQZRJ-150	150	4	0-3500	1.5	0-60	3100	2100	2200	3100
DQZRJ-200	200	4	0-3500	1.5	0-60	3150	2200	2200	3100
DQZRJ-350	350	5.5	0-3500	2.2	0-60	3650	2600	2500	3650
DQZRJ-500	500	5.5	0-3500	2.2	0-60	3950	2800	2700	3900
DQZRJ-750	750	7.5	0-3500	3.7	0-60	4000	3200	3050	4350
DQZRJ-1000	1000	11	0-3500	3.7	0-60	4200	3400	3150	4550

VESSEL EQUIPMENT

容器设备



储罐
Storage tank



结晶罐
Crystallizing tank



发酵罐
Fermentation tank



不锈钢配液罐
Stainless steel dispensing tank



不锈钢配液罐
Stainless steel dispensing tank



种子罐
Seed tank



不锈钢反应罐
Stainless steel reaction tank



磁力搅拌罐
Magnetic power mixing tank



移动配液罐
Moveable dispensing tank



移动细菌培养罐
Moveable bacterial culture tank



固定式夹层锅
Fixed jacket pot



夹层锅
Jacket pot

ENGINEERING
AUXILIARY EQUIPMENT

工程配套设备

 微孔膜筒式过滤器 Microporous membrane cartridge filter	 过滤设备 Filtering equipment	 双联过滤器 Duplex filters
 板式换热器 Panel heat-exchanger	 双管板换热器 Double tube sheet heat exchanger	 缠绕式换热器 Spiral wound heat exchanger
 过滤设备 Filtering equipment	 JM 胶体磨 JM Colloid mill	 转子泵 Rotor pump
 单级乳化泵 Single Stage Emulsification Pump	 卫生级离心泵 Sanitation grade centrifugal pump	 卫生级CIP自吸清洗泵 Sanitation grade CIP self-priming cleaning pump

MANHOLE / VALVE

人孔/阀门

 卫生人孔(法兰式) Sanitary manhole (Flanged)	 快开式卫生人孔 Quick-opening sanitary manhole	 YAA型卫生级人孔 YAA model sanitary manhole	 快开式卫生人孔 Quick-opening sanitary manhole
 卫生级焊接式蝶阀 Sanitary grade welded butterfly valves	 卫生级快装蝶阀 Sanitary grade quick-installed butterfly valves	 气动蝶阀 Pneumatic butterfly valve	 卫生级直通式快装球阀 Sanitation grade straight-way type quick-install ball valve
 卫生级无滞留球阀 Sanitary retention-free ball valve	 卫生级无死角球阀 Sanitary dead-corner-free ball valve	 三片式法兰球阀 3PC type ball valves flange type	 二片式内螺纹球阀 2PC with internal thread ball valve
 三片式螺纹球阀 3PC type ball valve with internal thread	 气动角座阀 Pneumatic angle seat valve	 卫生级气动隔膜阀 Sanitary pneumatic diaphragm valve	 气动罐底阀 Pneumatic tank bottom valve
 卫生级罐底隔膜阀 Sanitary tank bottom diaphragm valve	 卫生级隔膜阀 Sanitary grade diaphragm valve	 卫生级止回阀 Sanitary check valve	 无菌取样阀 Aspesis sample valve



PIPE FITTINGS
管件

卫生级弯头
Sanitary grade elbow

卫生级三通
Sanitary grade three-end

卫生级直管
Sanitary straight pipe

180° 快装弯头(3A标准)
180° fast-assembly elbow (3A standard)

卫生级四通
sanitation four-way

卫生级大小头
sanitation grade big-end small-end

卫生级软管接头
sanitation grade joint for soft tube

T型清洗器
T-shaped cleaner

卫生级旋转式洗罐器
Sanitation grade revolved spray cleaning ball

卫生级固定喷雾清洗球
Sanitation grade fixed-type spray cleaning ball

卫生级旋转清洗球
Sanitation grade revolved cleaning ball

卫生级快装活接头(卡箍式活接头)
Sanitary quick-installed union (clamp type union)

卫生级一体化视镜灯
Sanitary integral sight glass

卫生级不锈钢视镜
Sanitary stainless steel sight glass

卫生级无死角视镜
Sanitary dead-corner-free sight glass

卫生级恒压调节阀
Sanitary constant pressure control valve

不锈钢管支架
Stainless steel bracket

SYSTEM INTEGRATION
系统集成

