



### 上海本优机械有限公司

Shanghai Beyond Machinery Co., Ltd.

地址：上海市金山区亭林工业区亭谊路680号

邮编：201505

电话：021-57172333

传真：021-57172728

手机：13918792095

Add: No.680, Tingyi Road, Tinglin Industrial Park, Jinshan District, Shanghai, China.

PC.: 201505

Tel: +86-21-57172333

Fax: +86-21-57172728

M.T.: +86-13918793199

Http://www.shbenyou.com

www.sh-beyond.com

E-mail:master@shbenyou.com

### 江苏本优机械有限公司

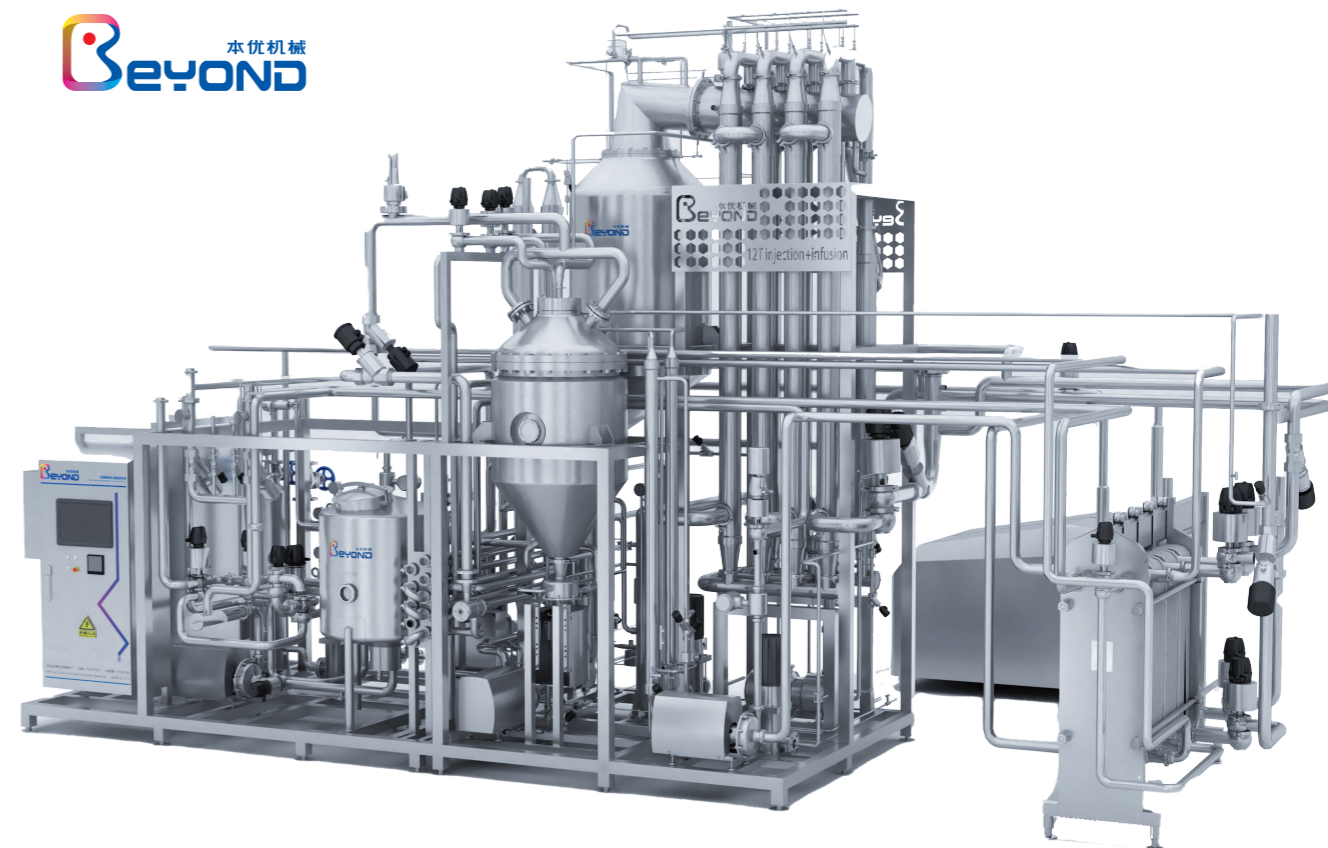
Jiangsu Beyond Machinery Co., Ltd.

地址：江苏省徐州市经济开发区桃山路68号

Add: No. 68, Taoshan Rd, Xuzhou Economic Development Zone, Xuzhou City, Jiangsu

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**BEYOND MACHINERY**  
**HIGH PROTEIN & HIGH FAT KEY EQUIPMENT**  
**SUPPLIER**

**本优机械**

高蛋白、高脂肪核心装备供应商



直喷式杀菌机  
DIRECT INJECTION  
STERILIZER



立式熔融锅  
VERTICAL  
MELTING POT



卧式熔融锅  
HORIZONTAL  
MELTING POT



高粘真空乳化机  
HIGH VISCOSITY  
VACUUM EMULSIFIER



真空剪切混料机  
VACUUM  
SHEAR MIXER



# 直喷杀菌机 DIRECT INJECTION STERILIZER

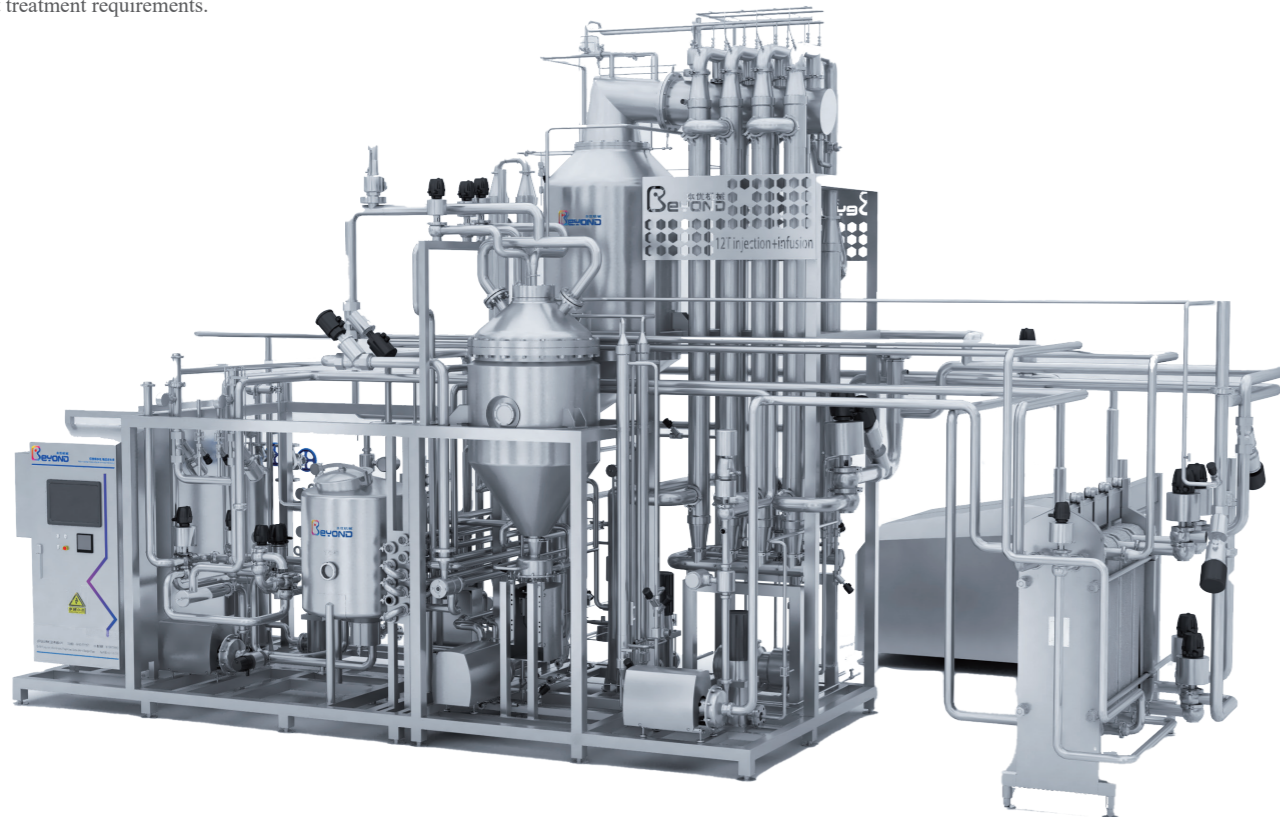
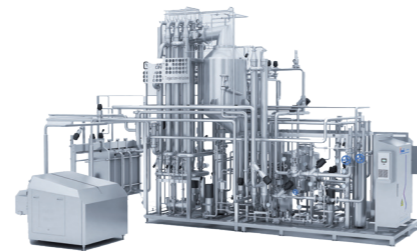
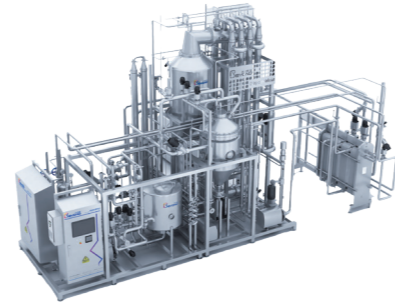
与传统间接式加热方式（板式或列管等）相比，直接加热杀菌机由于物料与蒸汽直接混合急速升温，保温后再闪蒸急速降温，物料受热时间大大缩短，在活性营养成分、风味物质等保留上，媲美巴氏杀菌机。

Compared to traditional indirect heating methods (such as plate or tubular heat exchangers), direct heating sterilizer rapidly heats the product by directly mixing it with steam, followed by rapid cooling through flash evaporation after the holding period. This significantly reduces the heating time for product, comparable to pasteurization in preserving active nutrients and flavor substances.

超高温的方式提高了灭菌效率，大大延长保质期，有利于乳品企业扩大销售半径，增加市场份额；  
The ultra-high temperature used in direct heating greatly enhances sterilization efficiency and significantly extends the shelf life of dairy products. This benefits dairy companies by allowing them to expand their sales radius and increase market share.

直接加热杀菌机适用于低温保鲜奶、豆奶、高热敏性产品和部分无法使用传统杀菌方式的产品等；  
Direct Heating Sterilizer is applicable to low-temperature fresh milk, soy milk, heat-sensitive products and certain products that are not compatible with traditional sterilization methods.

直喷式和浸入式杀菌方式整合到一个系统里，生产模式更灵活，同时可根据生产需要切换不同生产工艺，以适用不同热处理需求。  
Combining direct injection and infusion sterilization methods into one system enables a more flexible production mode, allowing for the switching of different processing techniques according to production needs to meet diverse heat treatment requirements.



## 典型应用 TYPICAL APPLICATIONS

### 低温产品（INF低温鲜奶）

Low-temperature products (INF low-temperature fresh milk)



Sterilization at 143-158°C → 0.09s holding → Flash evaporation → Homogenization at 65°C → Discharge at 1-4°C.

### 常温产品（稀奶油、椰乳）

Ambient temperature products (whipping cream, coconut milk)



Sterilization at 135-142°C → 4/6s holding → Flash evaporation → Homogenization at 82°C → Discharge at 10-25°C.

### 热敏性产品（燕麦浆）

Heat-sensitive products (oat milk)



Sterilization at 115-140°C → 5/10/15/30/60s holding → Flash evaporation → 85°C → Discharge at 60-70°C.

# BYTLJ-130L立式熔融锅

BYTLJ-130L VERTICAL MELTING POT

BYTLJ-130L 立式熔融锅是上海本优机械有限公司在消化吸收国外先进技术的基础上，结合国内实际情况而研制开发的新产品。它具有结构紧凑、合理；功能全面；适用范围广；控制先进；自动化程度高；卫生安全美观大方等特点。

BYTLJ-130L vertical melting pot is a new product developed by Shanghai Beyond Machinery Co., Ltd. on the basis of assimilating foreign advanced technology and combining with domestic actual conditions. It has the characteristics of compact and reasonable structure; comprehensive functions; wide application range; advanced control; high degree of automation; hygienic, safe and beautiful. It fills the blank of this type of product in China and is an ideal equipment to replace imported equipment.

它填补了国内该类型产品的空白，是替代进口产品的理想设备。

It fills the gap of this type of product in China and it is an ideal equipment to replace imported products.

## 主要特点

### MAIN FEATURE

整体支架，可独立使用，也可配套生产线；  
Integral support, can be used independently or matched with the production line;

功能全面，适用范围较广；  
Comprehensive functions and wide application range;

加工过程全自动控制模式，西门子 PLC+ 彩色触摸屏自动操作界面，根据产品需求，授权进行参数调整。

Fully automatic control mode of the production process, Siemens PLC+ color touch screen automatic operation interface, technical parameter can be adjusted according to product requirements;

可自动出料，特殊的出料结构保障出料无死角；  
It can discharge automatically, and the special discharge structure ensures that there is no dead angle in the discharge;

可在线 CIP 清洗；  
Suitable for online CIP cleaning;

生产参数自动记录，实现生产过程可追溯；  
Production parameters are automatically recorded to realize the traceability of the production process;

根据产品需求，可以配方的形式定制自动控制程序。  
According to product requirements, the automatic control program can be customized in the form of formula.



## 主要功能用途

### MAIN FUNCTION

物料的粉碎：可以用于食品、药品、调料等大块状物品的粉碎，切割，打散。  
Crushing of materials: It can be used for crushing, cutting and breaking up of bulky items such as food, medicine, and seasoning.

物料的混合：可以用于两种或几种不同的物料的充分搅拌混合，尤其适用于黏度高、有颗粒状或块状的较难混合的物料混合。  
Mixing of materials: It can be used for full mixing of two or several different materials, especially for materials with high viscosity, granular or lumpy materials that are difficult to mix.

物料的解冻，解胶，融化：可以用于各类冷藏，冷冻物品的解冻融化和打散。  
Thawing, degumming, and melting of materials: It can be used for thawing, thawing, and breaking up of various refrigerated and frozen products.

物料加热或冷却。  
Materials cooling or heating

物料在正压或负压条件下的蒸煮，熟化  
Cooking and curing of materials under positive or negative pressure conditions

物料的真空脱气，除湿。  
Vacuum degassing and dehumidification of materials.

物料的乳化。  
Emulsification of materials.

物料的定量加水，加汽等。  
Quantitative addition of water and steam to materials.

该机器的最大优点是可以将以上的几种功能同时或顺序完成，较少需要人工操作，因此可以避免繁重的人工劳动，避免二次污染，时间短，效率高，损耗少。

The biggest advantage of this machine is that the above functions can be completed simultaneously or sequentially, and less manual operation is required, so heavy manual labor can be avoided, secondary pollution can be avoided, the time is short, the efficiency is high, and the loss is small.

## 典型适用场合

### TYPICAL APPLICABLE OCCASIONS

奶酪生产  
cheese preparation process

调料，沙司生产  
seasoning, sauce production

婴儿食品生产  
baby food production

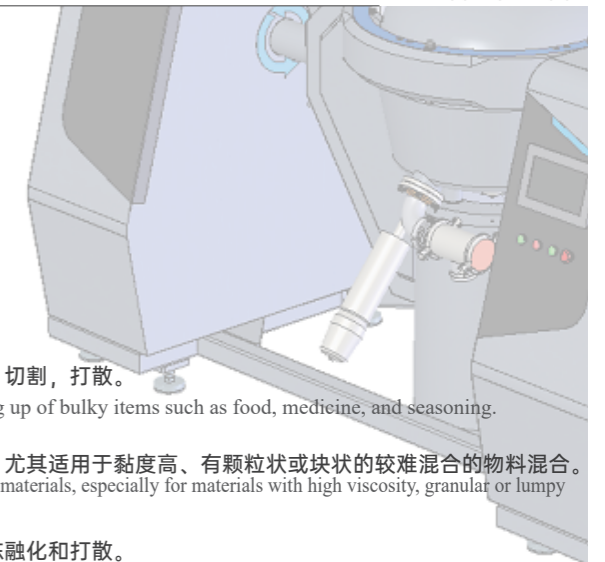
黄油生产  
butter preparation process

各类糖果生产  
Various types of candy production process

蛋黄酱，番茄酱生产  
Mayonnaise, ketchup production

各类冷冻能够冷藏食品的生产  
Processing of various frozen and refrigerated foods.

制药生产  
pharmaceutical production process, etc.



## BYTLJ-130L立式熔融锅主要设计数据

BYTLJ-130L VERTICAL MELTING POT MAIN DESIGN DATA

### 机器数据

MACHINE DATA

项目 Item	参数 Parameter	单位 Unit	备注 Remark
容量 (至蒸煮锅的上边缘) Volume (to upper edge of cooking pot)	130	L (升)	
最大有效装载容积 Effective loading volume	90	L (升)	根据物料不同 According to different materials
净重 Net weight	1250	kg (公斤)	
内锅设计压力 Inner pot design pressure	-0.1~0.18	MPa	
内锅最大工作正压 Maximum working positive pressure of inner pot	0.09	MPa	
内锅最大真空度 Maximum vacuum degree of inner pot	-0.095	MPa	
内锅安全阀起爆压力 Inner pot safety valve explosion pressure	0.13	MPa	
内锅设计温度 Inner pot design temperature	-30~128	°C	
内锅工作温度 Working temperature of inner pot	-25~125	°C	
内锅水压试验压力 Inner pot hydrostatic test pressure	0.23	MPa	
夹层设计压力 Jacket design pressure	0.24	MPa	
夹层最大工作压力 Jacket Max. pressure	0.2	MPa	
夹层工作温度 Jacket design temperature	133	°C	
外形尺寸 Size	2580X1277X2100	MM	长L*宽W* 高H

### 能耗参数及接口

ENERGY CONSUMPTION PARAMETERS AND INTERFACES

项目 Item	参数 Parameter	单位 Unit	备注 Remark
纯蒸汽压力 Pure steam pressure	0.2~0.35	MPa	注入锅内 Injecting into pot
纯蒸汽口径 Pure steam caliber	DN20	MM	注入锅内 Injecting into pot
纯蒸汽耗量 Pure steam consumption	240	Kg/h	注入锅内 Injecting into pot
工业蒸汽压力 Industrial steam pressure	0.2~0.35	MPa	夹层用 Jacket use
工业蒸汽口径 Industrial steam caliber	DN20	MM	夹层用 Jacket use
工业蒸汽耗量 Industrial steam consumption	300	Kg/h	取决于物料过程批量等 Depends on material process batch, etc.
纯净水压力 Pure water pressure	0.2~0.35	MPa	配料用 For ingredients preparation
纯净水耗量 Pure water consumption	60	L/min	配料用 For ingredients preparation
纯净水口径 Pure water caliber	DN25	MM	配料用 For ingredients preparation
自来水压力 Pure water pressure	0.2~0.6	MPa	为真空泵供水 Water supply for vacuum pump
自来水耗量 Tap water consumption	120	L/H	为真空泵供水 Water supply for vacuum pump
自来水口径 Tap water caliber	DN15	MM	
压缩空气压力 Compressed air pressure	0.5~0.8	MPa	
压缩空气口径 Compressed air caliber	G1/4	英寸 Inch	

### 电气参数

ELECTRICAL PARAMETERS

项目 Item	参数 Parameter	单位 Unit	备注 Remark
总电源 Main switch	380V, 50Hz		
控制电源 Control power	24V直流50W 24V DC 50W		
总功率 Total power	35	Kw	
主电机功率 Main motor power	30	Kw	
主电机转速 Main motor speed	300~3000	r/min	
搅拌电机功率 Stirring motor power	1.1	Kw	
搅拌转速 Stirring speed	24	r/min	1430r/min 1: 60
真空泵电机功率 Vacuum pump motor power	0.75	Kw	
开盖电机功率 Open cover motor power	2.2	Kw	



# 500L卧式熔融锅 500L HORIZONTAL MELTING POT

## 设备特点

### APPLICATION AREAS

## 设备优势

### EQUIPMENT ADVANTAGE

比传统的热水拉伸法产量更大;  
Higher output than the traditional hot water stretching method;

在蒸汽拉伸过程中, 因为所有的水都在过程中被产品吸收, 无须再提纯脂肪液;  
In the steam stretching process, because all the water is absorbed by the product in the process, fat solution concentration on necessary.

蒸汽直接注入产品或进入夹套中;  
Reduced heating and stretching time due to steam injection;

由于蒸汽喷射而减少加热和拉伸时间;  
Reduced heating and stretching time due to steam injection;

真空上料系统加持, 提高工作效率与安全性;  
Vacuum feeding system blessing to improve work efficiency and safety;

PLC 自动控制, 精准高效、方便快捷;  
PLC automatic control, accurate, efficient, convenient and quick;

自带出料系统;  
Self-contained discharge system.

## 应用领域

### APPLICATION FIELD

马苏里拉奶酪, 水牛马苏里拉奶酪, 披萨奶酪, Kashkaval, 仿真马苏里拉素 奶酪, 涂抹干酪和加工奶酪。  
Mozzarella, Buffalo Mozzarella, Pizza Cheese, Kashkaval, Imitation MozzarellaCheese, spreads and processed cheeses.

它适用于加工新鲜和工业凝乳块, 水牛凝乳, 奶粉, 凝乳酶干酪素, 淀粉, 与植物或动物脂肪;

It is suitable for processing fresh and industrial curd block, buffalo curd, milk powder, rennet casein, starch, with vegetable or animal fats;

处理量: 1.5~2T/H, 500L 每批次; (实际以物料特性、配方决定的生产速度为准)  
Processing capacity: 1.5~2T/H, 500L per batch;  
(The actual production speed depends on the material characteristics and formula)



产品拉伸可以通过直接蒸汽喷射产品, 或者让蒸汽流入双壁蒸汽夹层;  
Product stretching can be done by direct steam injection of the product, or by allowing steam to flow into a double-walled steam interlayer;

整个装置采用 AISI316 不锈钢制造, 配备认证过的双壁大桶, 在 4bar 时将 蒸汽注入蒸汽夹层内;  
The entire unit is made of AISI 316 stainless steel and is equipped with certified double-walled vats to inject steam into the steam sandwich at 4 bar;

2 个螺旋钻由独立的电机减速器控制, 变频器调整速度;  
The 2 augers are controlled by independent motor reducer, and the frequency converter adjusts the speed;

所有与产品接触的部件都采用镜面抛光工艺, 避免涂层污染;  
All parts in contact with the product are mirror-polished to avoid coating contamination;

全自动温度控制系统;  
Fully automatic temperature control system;

机器自带自动 CIP 清洗系统;  
The machine comes with automatic CIP cleaning system;

该机器集成 304 不锈钢制成电气控制柜, 带有触摸屏操作面板和 PLC;  
The machine integrates an electrical control cabinet made of 304 stainless steel with touch screen operation panel and PLC;

PLC 管理配方使得机器更容易操作;  
PLC management recipes make the machine easier to operate;

蒸汽消毒过滤器配套滤筒;  
Steam sterilization filter matching cartridge;

气动门进行产品卸载;  
Pneumatic doors for product unloading;

真空上料系统介入, 提高生产效率的同时, 也能降低蒸汽、机械可能给人带来的伤害;  
The vacuum feeding system intervenes to improve production efficiency while reducing the damage that steam and machinery may cause;

称重计量系统;  
Weighing and measuring systems;

配方水计数系统;  
Formulated water counting system;

高效出料系统;  
Efficient discharging system;

### 500L卧式熔融锅配置表

5500 L HORIZONTAL MELTING POT CONFIGURATION TABLE

产能 T/H Capacity T/H	1.5~2	接液材质 Material contact parts	S31603
尺寸 mm Size mm	3700*2300*3000	卫生等级 Sanitation level	食品级 Food grade
重量 kg Weight kg	3600	水 Water	配方水、软水 Formula water, soft water
电 Electricity	380V 50Hz三相	压缩空气 compressed air	6bar
蒸汽 Steam	380V 50Hz three phase	重量控制系统 weight control system	●
真空进料 Vacuum feeding	4bar	计时系统; timing system	●
温度自控 Temperature control	●	配方水计数 Formula Water Count	●
配方管理 Recipe management	●	自动补水 Automatic water replenishment	●
自动出料 Automatic discharge	●	双蛟龙拉伸技术 Double cage stretching technology	●
CIP系统 CIP system	●	物料泵 Material pump	螺杆计量泵 screw metering pump
粉体分离技术 Powder Separation Technology	●	阀门 Valve	一线国内品牌 First-class domestic brands
压力显示 pressure display	●	温度传感器 Temperature Sensor	进口品牌 Import brand
温度显示 temperature display	●	CIP泵 CIP pump	国内一线品牌 First-class domestic brands
工业蒸汽处理系统 Industrial Steam Treatment Systems	●	称重系统 weighing system	进口品牌 Import brand
洁净蒸汽预留口 Clean steam reserved port	●	调节脚 Adjust feet	●
高温保护 High temperature protection	●	系统版本 system version	本优拉伸V1.0 Beyond Stretch V1.0
声光警报功能 Sound and light alarm function	●	外观设计 appearance design	本优工业设计2.0 Beyond Industrial Design 2.0

1. ●表示有此配置; ○表示无此配置;

2. 为更好的满足客户需求, 本优不断对设备进行研发和改进, 市场销售机型的部分配置及规格可能与本配置表有所不同, 具体细节请以实机为准;

3. 本配置表自2023年5月适用;

1. ● indicates that there is including the configuration; ○ indicates that there is no such configuration;

2. In order to better meet customer needs, Beyond continues to develop and improve equipment. Some configurations and specifications of models sold in the market may be different from this configuration table. Please refer to the actual machine for specific details;

3. This configuration table is applicable from May 2023;

## 高粘真空乳化机 HIGH VISCOSITY VACUUM EMULSIFIER

真空乳化机主要应用于食品、化工、日化、医药等行业产品生产加工。乳化机是专为小批量生产膏霜类、蜜类、乳液乳剂类等乳化产品而设计制造的, 本机造型美观、体积小、重量轻、与物料接触部分全部采用不锈钢(注: 医用采用 316L); 锅体内部各连接处均采用平滑圆弧过度, 锅底放料以及倾倒放料保证锅内无残料; 高剪切均质头, 定转子结构设计为爪式对偶咬合, 物料从定转子的上部与下部同时吸入, 剪切概率成倍提高, 同时避免上部物料易产生死角的问题。适用于精细的乳化、高品质的分散及高效率的混合。

Vacuum emulsifiers are mainly used for the production and processing of products in industries such as food, chemical, daily chemical, and pharmaceutical. The emulsifier is specifically designed and manufactured to emulsify products such as creams, honey, emulsions, and other emulsion-based products in small-scale production. The machine has an attractive appearance, compact size, and lightweight construction, and all parts in contact with the product are made of stainless steel (note: medical-grade machines use 316L stainless steel). The connections inside the vessel are smooth and rounded to ensure no residue is left in the pot during product discharge. The high shear homogenizing head is designed with a fixed rotor structure that bites in a claw-like manner, allowing the product material to be sucked in simultaneously from the upper and lower parts of the rotor. This greatly increases the shear probability and avoids the problem of dead corners in the upper part of the product material. It is suitable for fine emulsification, high-quality dispersion, and efficient mixing.

### 真空乳化机的主要结构功能

#### MAIN STRUCTURE AND FUNCTIONS OF THE VACUUM EMULSIFIER

##### 搅拌功能 Stirring Function

双向搅拌机构, 框式搅拌或聚四氟乙烯刮板搅拌设计, 可大大增加筒内液料的循环, 涡流及翻动, 促进物料均质、分散、乳化, 实现 360 度无死角搅拌, 提高物料的充分利用率。

The vacuum emulsifier features the bi-directional stirring mechanism, with options for frame-type stirring or polytetrafluoroethylene (PTFE) scraper stirring design. This design greatly enhances the circulation, vortexing, and flipping of the liquid material inside the vessel, promoting homogenization, dispersion, and emulsification of the product material. It achieves 360-degree stirring without dead corners, improving the utilization of the product material.

##### 均质功能 Homogenization Function

主锅包含均质, 定转子结构能够对物料进行高速运转产生切割、压缩、折叠湍流, 从而使物料的细腻程度达到很高的水准。

The main vessel includes homogenization. The structure of fixed rotor enables high-speed operation, resulting in cutting, compression, folding, and turbulent flow of the product material, achieving a high level of fineness.

##### 电气控制功能 Electrical Control Function

PLC 面板控制, 可以根据物料的不同加工工艺进行简单操作, 实现快捷灵活的人机对话。Equipped with the PLC panel control system, it allows for simple operation based on different processing techniques, enabling quick and flexible human-machine interaction.

##### 真空功能 Vacuum Function

具有抽真空脱气泡功能, 让膏体更加有光泽和延展性, 均质器在真空状态的处理条件下, 可以获得高质量的乳化混合效果。

The vacuum emulsifier has the capability of vacuum degassing to eliminate air bubbles, giving the paste a glossy appearance and improved spreadability. Under vacuum conditions, the homogenizer achieves high-quality emulsification and mixing effects.

##### 加热功能 Heating Function

加热方式采用电加热, 能够短时间高效对物料进行加热、冷却;

真空乳化机主要由反应釜、水油锅、机架、真空系统、管路系统、控制柜等部分组成。

The heating method adopts electric heating, allowing for quick and efficient heating and cooling of the product material.

##### 升降功能 Lifting Function

通过控制系统可以简单控制锅盖的升降, 十分方便。

The lid of the vessel can be easily controlled and lifted through the control system, providing convenience.

## 设备结构优点

Advantages of Equipment Structure

均质装置密封采用机械密封，密封耐用、可靠，采用 ABB 电机驱动，采用进口轴承，先进工艺，可靠性高，保障设备连续平稳运行，高效节能，降低运营成本。

The homogenization device adopts mechanical seal, which is durable and reliable. It is driven by the ABB motor and uses imported bearings, employing advanced technology for high reliability. This ensures continuous and smooth operation of the equipment, high efficiency, energy savings, and reduced operating costs.

采用吸进、挤压、剪切型均质装置。由高速旋转产生的离心力对物料进行强劲挤压和剪切，使物料在锅内自然形成翻滚而消灭死角，物料都能得到较高质量的均质。

The equipment adopts the sucking, extrusion, and shear-type homogenizing device. The centrifugal force generated by high-speed rotation exerts strong squeezing and shearing effects on the product material, naturally eliminating dead corners as the material rolls inside the vessel. This ensures high-quality homogenization of the materials.

采用特殊型式的框式搅拌装置，能通过变频调速器来调节搅拌冲击力，可在 0 ~ 60 转 / 分转速范围内任意调整。转向从上向下看为顺时针方向，能适应各种粘度物料的乳化加工。

The equipment utilizes the special type of frame-type stirring device, which can adjust the stirring impact force within the range of 0 - 60 rpm using the frequency converter. The rotation direction is clockwise when viewed from the top to down, allowing for emulsification processing of various viscosity materials.

反应釜锅体为三夹套结构。内锅与物料接触的部分均采用不锈钢及无害材料，保证制品质量；外层充填硅酸铝保温棉，以降低能耗。锅盖上有视镜、香料斗、过滤器、真空压力表等。

The reactor vessel has a triple-jacketed structure. The parts in contact with the product material are made of stainless steel and harmless materials, ensuring product quality. The outer layer is filled with silica-aluminum insulation cotton to reduce energy consumption. The vessel cover is equipped with the sight glass, spice hopper, filter, vacuum pressure gauge, etc.

真空乳化机主要由反应釜、水油锅、机架、真空系统、管路系统、控制柜等部分组成。

The vacuum emulsifier is mainly composed of reactor, water and oil pot, frame, vacuum system, pipeline system, control cabinet and other parts.



## 真空剪切混料机 VACUUM SHEAR MIXER

### 设备应用

Equipment Application

真空混料机是一种高效的真空即时加工单元，应用广泛。采用高剪切真空混合的方法，在液体中重组、溶解和分散粉末。

The vacuum mixer is one kind of highly efficient vacuum immediate processing unit that is widely used. It adopts high-shear vacuum mixing to reconstitute, dissolve, and disperse powders in liquids.

### 应用范围 Applications

复原乳的配制

Preparation of reconstituted milk

婴幼儿奶粉的配制

Preparation of infant formula

饮料配制

Beverage preparation

乳剂食品的配制

Preparation of emulsified food products

胶体、浆体分散乳化

Colloid and slurry dispersion and emulsification

冰淇淋、酸奶、甜点配料

Ingredients for ice cream, yogurt, and desserts

### 设备规格

Equipment Specifications

混合罐容积：1000L 2000L 3000L

Mixing tank volume: 1000L, 2000L, 3000L

设备产能：14000L/H 28000L/H 42000L/H;

Equipment capacity: 14000L/H, 28000L/H, 42000L/H

备注：最终产能取决于被溶解、乳化物料的特性；

Note: The final capacity depends on the characteristics of the product materials to be dissolved and emulsified.



## 设备组成及应用原理

Equipment Composition and Operating Principle

### 设备组成 Equipment Composition

真空混料机由混料罐、乳化机、真空上料、脱气系统、进出料系统、液位保护系统、无死角粉料阀组、称重计量系统组成；

The vacuum mixer consists of mixing tank, emulsifier, vacuum feeder, degassing system, product inlet and outlet system, liquid level protection system, powder valve assembly without dead corners, and weighing and measuring system.

### 应用原理 Operating Principle

液体料和粉体料在混合器的作用下分散，从混合器底部的循环口挤出后，经带有调节流量功能的旁通回到物料顶层。如此循环往复，从而实现先进先出，后进后出的分散顺序。

Under the action of the mixer, the liquid and powder materials are dispersed. After being extruded from the circulation port at the bottom of the mixer, they return to the top of the product material layer through the bypass with adjustable flow rate. This cyclic process ensures the sequential dispersion with the first-in-first-out and last-in-last-out order.

旁路流切向急速返回的物料，会迫使罐内物料产生旋涡。强制涡旋意味着液体将沿着罐壁“上升”，因此自由液体的表面积将大大大于罐的直径。

The rapid return of the bypass flow forces the product material in the tank to form the vortex. The forced vortex means that the liquid will "rise" along the tank wall, resulting in a significantly larger free liquid surface area compared to the diameter of the tank.

罐为真空罐，粉末通过无死角粉料阀组输送到罐中。粉末 / 空气混合物直接进入液体表面以下的液体中，由于涡旋和密度的差异，空气 / 气体和液体的分离会很快发生。空气 / 气体位于罐的中心，随后被抽出。大的自由液体表面进一步提供了一个有效的和连续的产品脱气。不像传统的混合物，通常在混合过程中夹带空气。这将有助于减少氧化，提高产品质量和一致性。

The tank is the vacuum tank, and the powder is conveyed into the tank through the powder valve assembly without dead corners. The powder/air mixture directly enters the liquid below the liquid surface. Due to the vortex and density difference, the separation of air/gas and liquid occurs quickly. The air/gas is located in the center of the tank and is subsequently extracted. The large free liquid surface further provides effective and continuous product degassing. Unlike traditional mixtures, which often trap air during the mixing process, this helps reduce oxidation and improve product quality and consistency.

如果产品必须进行间接加热 / 冷却，强制涡旋会大大提高热交换效率（大的换热表面积和高的线速度）

If the product requires indirect heating/cooling, the forced vortex significantly improves heat exchange efficiency (Large heat exchange surface area and high line speed).



真空混料机配置表  
CONFIGURATION TABLE OF VACUUM MIXER

规格 L Volume (L)	1000/2000/3000	接液材质 Material contact parts	S31603
尺寸 mm Size mm	2800*2000*3900	卫生等级 Sanitation level	食品级 Food grade
重量 kg Weight kg	2500	水 Water	配方水、软水 Formula water, soft water
电 Electricity	380V 50Hz三相 380V 50HZ 3-phase	压缩空气 Compressed air	6bar
蒸汽 Steam	○	温度显示 Temperature display	○
真空进料 Vacuum feeding	●	重量控制系统 Weight control system	
快速检修支架 Quick access support	●	计时系统; Timing system	●
配方管理 Recipe management	●	配方水计数 Formula Water Count	○
自动出料 Automatic discharge	●	称重模块 Weighing module	进口品牌 Import brand
CIP系统 CIP system	●	压力显示 Pressure display	●
旋涡分离技术 Vortex separation technique	●	粉体进口自清洁技术 Powder imported self-cleaning technology	●
声光警报功能 Sound and light alarm function	●	外观设计 Appearance design	本优工业设计2.0 Beyond industrial design 2.0

1. ●表示有此配置；○表示选配装置；

● Indicates configuration present; ○ Indicates Configuration Optional;

2. 为更好的满足客户需求，本优不断对设备进行研发和改进，市场销售机型的部分配置及规格可能与本配置表有所不同，具体细节请以实机为准；

In order to better meet customers' requirements, we continuously conduct research, development, and improvement of our equipment. Some configurations and specifications of the models available on the market may differ from the ones listed in this configuration table. Please refer to the actual machine for specific details.

3. 本配置表自2023年5月适用；

This configuration table is applicable as of May 2023.