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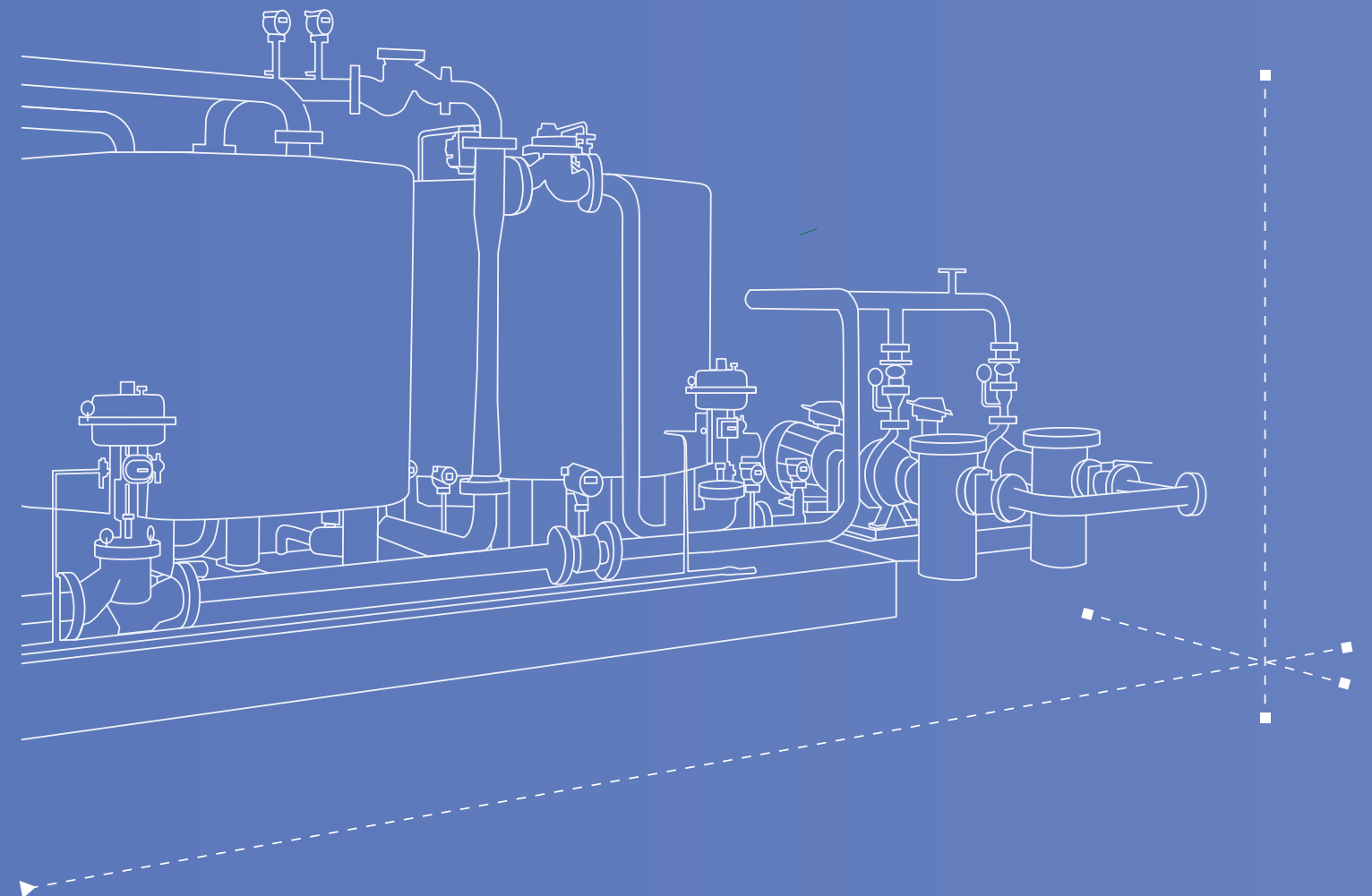


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TIAN'S 天俱时

Intelligent Instantaneous Sterilizing Equipment

智能瞬时连消机



天俱时工程科技集团有限公司

TIAN'S Engineering Technology Group Co.,Ltd.

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TJS-2309-CE1000-20230724

无菌『一触即达』

ONE-BUTTON STERILIZE

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智能瞬时连消机

Intelligent Instantaneous Sterilizing Equipment

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TIANS Group

天俱时集团

20^{+年}

始创于1998年，国内领先的先进智能装备制造商、工程技术服务商。总部位于石家庄，上海、天津、济南、武汉设分公司及办事处；瑞士设生物医药咨询创新中心。

Founded in 1998, TIANS is a leading domestic advanced intelligent equipment manufacturer and engineering technology service provider. Headquartered in Shijiazhuang, with branches and offices in Shanghai, Tianjin, Jinan and Wuhan; and a biomedical consulting and innovation center in Switzerland.

60^{+百强}

中国医药工业百强企业战略合作伙伴，已为60多家医药百强企业提供服务。

It is a strategic partner of top 100 enterprises in China's pharmaceutical industry, and has provided services to more than 60 top 100 pharmaceutical enterprises.

500^{+客户}

涉及发酵原料药、合成原料药、无菌原料药、生物制品、药物制剂、中成药、医疗器械和环保等工程技术领域。

Customers are involved in the fields of engineering science and technology such as fermented APIs, synthetic APIs, sterile APIs, biological products, pharmaceutical preparations, proprietary Chinese medicines, medical apparatus and instruments and environmental protection engineering.

2000^{+项目}

覆盖全国 20 多个省、市、自治区，数十项国家级、省级优质工程。

The projects cover more than 20 provinces, cities and autonomous regions, and dozens of national and provincial quality projects.

主营业务

智能装备

Intelligent Equipment



T-EPC 工程总承包
T-EPC



工程咨询与设计
Engineering Consulting & Design



机电工程
Electromechanical Engineering



洁净工程

Clean Room Engineering



自动化与信息化工程

Automation and Information Engineering



环保技术与工程

Environmental Technology and EPC



调试 / 试生产

Commissioning and Trial Production

TIANS Equipment

天俱时装备

天俱时智能制造装备事业部致力于为生物发酵企业提供先进的智能装备及一站式工程解决方案。

掌握生物发酵、灭菌、节能环保等数十项核心专利技术，建有国内领先的科技创新实验室和高标准、自动化、设备齐全的装备制造中心。核心专家具有 20 余年智能装备制造经验，能提供研发、设计、制造、安装、调试的全方位专业服务。设备远销国内外多个国家及地区，市场占有率稳居前列。

TIANS Intelligent Manufacturing Equipment Business Division engages in manufacturing advanced intelligent equipment for biological fermentation, providing one-stop solution for the industry.

We have mastered many core technologies, including bio-fermentation, sterilization, energy conservation and environmental protection technologies; we are also holding over 10 patents related to continuous sterilization system and wastewater treatment technology. We have an advanced technological innovation laboratory and a high-standard, automated and fully equipped workshop for advanced equipment manufacturing. Our core experts have more than 20 years of experience of designing and manufacturing of Intelligent Equipment, and pharmaceutical and chemical wastewater treatment equipment. We are able to provide services in R&D, design, manufacturing, installation and debugging of intelligent instantaneous sterilization equipment. With the equipment exported to many countries and regions, our market share is firmly in the forefront of the market.



Enterprise Qualification

企业资质

设计资质 Design qualification

- 化工石化医药行业甲级 · Class A in chemical, petrochemical and pharmaceutical industry
- 建筑行业（建筑工程）甲级 · Class A in construction industry(construction engineering design)
- 轻纺行业（轻工工程）乙级 · Class B for light industry engineering in light textile industry
- 环境工程设计专项水污染防治工程甲级 · Special Class A for environmental engineering
-

施工资质 Construction qualification

- 机电工程施工总承包壹级 · Grade I general contracting of mechanical and electrical engineering construction
- 建筑工程施工总承包贰级 · Grade II general contracting of construction engineering
- 电子与智能化工程专业承包壹级 · Grade I professional contracting of electric and intelligent engineering
- 防水防腐保温工程专业承包壹级 · Grade I professional contracting of waterproof, anti-corrosion and thermal insulation engineering
- 市政公用工程施工总承包贰级 · Grade II general contracting of municipal public works construction
- 消防设施工程专业承包贰级 · Grade II professional contracting of fire fighting facilities engineering
- 电力工程施工总承包叁级 · Grade III general contracting of power engineering construction
-

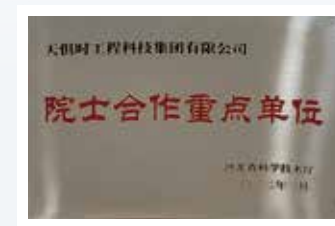
其他资质 Other qualification

- 工程咨询单位甲级资信（化工、石化、医药） · Grade A credit of engineering consulting company
- 压力容器设计：固定式压力容器规则设计 · Rules design for fixed pressure vessel
- 承压类特种设备安装、修理、改造：工业管道安装（GC2） · Installation, repair and transformation of pressure bearing special equipment: Industrial pipe installation GC2
- 压力管道设计：工业管道（GC1） · Pressure piping design+industrial piping GC1
-

Enterprise Honor

企业荣誉

- 国家级专精特新小巨人企业
- 国家高新技术企业
- 国家知识产权优势企业
- 中国产学研合作创新示范企业
- 博士后科研工作站分站
- 外国院士工作站
- 河北省优秀民营企业
- 河北省政府质量奖提名奖
- 河北省企业技术中心
- 河北省国际科技合作基地
- National "Little Giant" SRDI Enterprise
- National High-tech Enterprise
- National Advanced Intellectual Property Enterprise
- Demonstration Enterprise for Industry-University-Research Institute Cooperation and Innovation
- Post-doctoral Research and Development Sub-workstation
- Foreign Academician Workstation
- Hebei Excellent Private Enterprise
- Nominee Award for Hebei Provincial Government Quality Award
- Hebei Enterprise Technology Center
- Hebei Province International Science and Technology Cooperation Base



Patent

专利

163 项

知识产权
Intellectual Property



135 项

授权专利
Authorized Patents



28 项

软件著作权 | 著作权
Software Copyrights |
Copyrights

- 一种新型连续灭菌多段维持器
A new type of continuous sterilization multi-stage maintainer
- 基于高效预热冷却器的连消系统
Continuous cooling system based on high-efficiency preheater
- 一种新型连续灭菌保温维持罐
A new type of continuous sterilization and insulation maintenance tank
- 一种新型连续灭菌维持器
A new type of continuous sterilization maintainer
- 连消装置
Continuous Sterilization Equipment
- 板式保温维持器
Plate type insulation maintainer
- 易于调整的低流量维持器
Easy-control low flow maintainer
- 满足洁净无菌要求的螺旋板换热器
Spiral plate heat exchanger that meets the requirements of cleanliness and sterility
- 一种无过热水罐的连续灭菌方法
Easy-control low flow maintainer
- 新型连续灭菌自动控制系统 [简称: 新型连消自控系统] V1.0
A continuous sterilization method without Superheated water tank
- 连消成套设备自动化控制管理系统 V1.0
Automatic control and management system of continuous sterilization device V1.0
- 智能瞬时连消机控制系统 [简称瞬时连消机] v1.0
Intelligent instantaneous sterilizing equipment control system v1.0
- 智能瞬时连消机(蒸汽消毒)工艺设计图著作权
Process design for intelligent instantaneous sterilizing equipment (sterilizing with steam)
- 智能瞬时连消机(过热水消毒)工艺设计图著作权
Process design for intelligent instantaneous sterilizing equipment (sterilizing with overheated water)

Expert Team

专家团队



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Principle

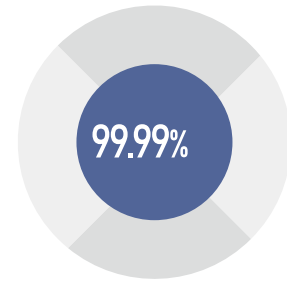
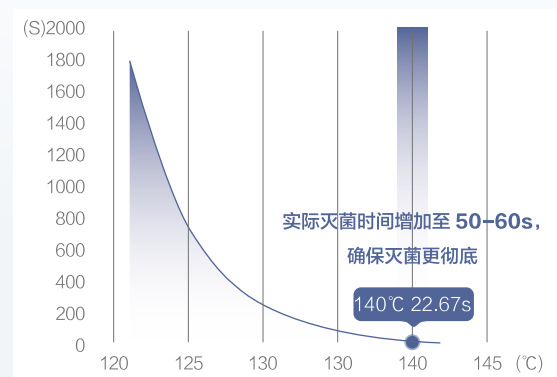
设备原理

智能瞬时连消机是一种采用高温瞬时灭菌，结合高效换热器、新型维持器和喷射器，并通过智能算法运行的灭菌设备。该设备节能环保、无菌保障率高，操作方便、运行稳定，广泛应用于抗生素、氨基酸、酶制剂、新材料、食品饮料等行业的液体物料灭菌领域及生物制药废水灭活领域。

设计原理

根据等效灭菌曲线，常规物料在 121℃，30min 所达到的灭菌效果和 138℃，36s 所达到的灭菌效果一致。而消毒过程对物料营养物质的破坏主要由灭菌时间所决定（遇热极敏感的材料除外）。

根据高温短时灭菌原理，加入一定保险系数，采用 138~140℃，50~60s，设计出此套新型连消系统。



Intelligent instantaneous sterilization equipment is a sterilization equipment that uses high temperature instantaneous sterilization, combines efficient heat exchanger, new maintainer and injector, and operates through intelligent algorithm. The equipment is energy saving, environmental protection, high sterility assurance rate, convenient operation and stable operation. It is widely used in the field of liquid material sterilization in antibiotic, amino acid, enzyme preparation, food and beverage industries.

Sterilization principle

According to the equivalent sterilization curve, the sterilization effect of conventional materials at 121℃, 30min is the same as that at 138℃, 36s. However, the destruction of nutrients in materials during disinfection is mainly determined by the sterilization time (except for materials that are extremely sensitive to heat). According to this principle of high temperature and short time sterilization, after adding a certain safety factor, our company has designed this new type of continuous disinfection system by using the sterilization temperature of 138~140℃ and the maintenance time of 50~60s.



识别二维码观看装备制造中心介绍
Identify QR code and Watch the introduction of equipment manufacturing center



识别二维码观看设备 3D 演示
Identify QR code and watch 3D display of equipment

Classification

设备类型

智能瞬时连消机分类方式

Classification method of intelligent instantaneous sterilizing equipment



根据加热方式不同分类

Classification according to different heating methods

- 直接加热
Direct heating

- 间接加热
Indirect heating



根据消毒方式不同分类

Classification according to different disinfection methods

- 蒸汽消毒（空消）
Steam disinfection (steam disinfection)

- 过热水消毒（水消）
Superheated water disinfection (water disinfection)

智能瞬时连消机分为 4 个系列

Intelligent instantaneous sterilizing equipment is divided into 4 series

I 型智能瞬时连消机 - 直接加热空消智能瞬时连消机

II 型智能瞬时连消机 - 直接加热水消智能瞬时连消机

III 型智能瞬时连消机 - 间接加热空消智能瞬时连消机

IV 型智能瞬时连消机 - 间接加热水消智能瞬时连消机

Type I intelligent instantaneous sterilizing equipment - direct heating and steam disinfection

Type II intelligent instantaneous sterilizing equipment - direct heating and water disinfection

Type III intelligent instantaneous sterilizing equipment - indirect heating and steam disinfection

Type IV intelligent instantaneous sterilizing equipment - indirect heating and water disinfection

Composition

设备构造

自控系统

采用西门子 S7-1200PLC 控制系统，配备触摸屏以方便现地控制，智能系统可多点采样设备的温度，压力，流量值，采样周期 100ms。系统对所有温度、压力、流量信号进行判断并采取相应措施，对于高危险报警，强制中断流程，切换为安全模式。系统支持 ODBC/SQL 标准数据库，可提供 OPC、DP、MODBUS 接口，可作为 SERVER 端，也可作为 CLIENT 端。必要时提供协议等参数，可以接入发酵车间主 DCS 控制系统进行控制。



维持器

选择特殊流道尺寸，在线清洗，结构紧凑，无存料死角，阻力小，不结垢、无焦化物、无物料黏结。

喷射器

充分利用蒸汽汽化潜热，结构紧凑，阻力小，无震动；
特殊流道尺寸、高流速设计及合适的清洗方案避免物料本身颗粒物长期运行造成物料残存；
特殊构造保证加热均匀，避免物料局部温度过高产生焦化而结垢。

换热器

采用整张板材卷制而成，中间无焊缝，全部自动焊接，对板材无损伤，不会造成板材穿孔，不会内漏。换热器两端封条打坡口，保证焊透，减小应力。焊接时由里及外释放应力；焊接完成后，经过振动处理释放应力，避免外漏。



Composition

设备构造

Automatic Control

Siemens S7-1200PLC control system is adopted and touch screen is equipped to facilitate on-site control. The intelligent system can multi-point sample the temperature, pressure and flow value of equipment with a sampling period of 100 ms. The system judges all temperature, pressure and flow signals and takes corresponding measures. For high-risk alarm, the system forcibly interrupts the process and switches to the safety mode.



Maintainer

Special runner size is selected, on-line cleaning is carried out, the structure is compact, no dead corners of materials exist, the resistance is small, no scaling, no coking matter and no material adhesion are realized.



Ejector

Make full use of latent heat of vaporization of steam, with compact structure, small resistance and no vibration. Special flow channel size, high flow rate design and appropriate cleaning scheme can prevent the material from remaining due to the long-term operation of particles in the material.



Heat Exchanger

It is rolled from the whole plate, with no welding seam in the middle, and all automatic welding has no damage to the plate, and will not cause perforation or internal leakage of the plate.



Advantage

设备优势

1 卓越技术 无菌率高达 99.99%

- 根据等效灭菌曲线确定灭菌时间，并加入保险系数
- 更可靠：百余台设备验证，无菌不空谈
- 更彻底：设备完全排空，无残留，灭菌才彻底
- 更高效：升级式螺旋板换热器，热量传输更高效

2 节能环保

- 设备投资回收期短
- 实现冷热料热量交换，蒸汽节约 70% 以上
- 换热后物料无需二次降温，冷却水节约 90% 以上

3 智能控制 设备的最强大脑

- 依据蒸汽压力变化智能确定灭菌温度及时间，确保灭菌效果稳定可靠
- 智能处理异常的生产技术指标，保证产品质量
- 空 / 水消、连消、清洗、放空排污等操作自动切换，方便快捷
- 实时显示现场各监测点压力、温度等数据，查询历史灭菌曲线，导出数据报表

4 独具匠心

- 精准设计每一寸细节
- 设备集成化设计，便于运输安装
- 维持器选择特殊流道尺寸，不结垢
- 喷射器高流速设计，运行更稳定
- 全冲氩焊接，机械开孔，无菌更有保障
- 拥有核心专利技术的换热器，采用特殊工艺焊接，杜绝内漏外漏

1 Marvelous Technology, Sterilization Rate up to 99.99%

- Sterilization time is precisely calculated based on the equivalent curve, and an assurance coefficient in addition
- More Reliable: With more than a hundred sets of equipment been installed and run, the sterilization effect is promised
- More Completely: Equipment are completely emptied out, no residual left behind. A realization of complete sterilization
- More Efficient: Upgraded Spiral plate heat exchanger lead to a more efficient heat exchange

2 Energy Saving & Eco-Friendly

- Short payback period
- Through heat exchange process of hot and cold material, more than 70% of steam could be saved
- Without secondary cooling in the heat exchange process, more than 90% of circulating ware could be saved

3 Intelligent Control System – The “Super Brain” of the Equipment

- The sterilization temperature and time are smartly determined based on the change of steam pressure. The stability and reliability of the sterilization effected are promised
- The abnormal technical index can be found and handled smartly. The quality of the product is ensured
- A more convenient solution that can switch among continuous steam and water sterilizing, cleaning, venting, and other operations automatically
- With a real-time display of the pressure, temperature, and other data of each monitoring point in the field, the historical sterilization curve could be queried and data report could be exported at any time

4 Strict Process

- Details are precisely designed inch by inch
- Integrated designed equipment which are easy for transportation
- A non-fouling maintainer with specially selected channel size
- Design of the high-flow ejector makes a more stable performance
- Equipment sets are assembled with TIG welding arc, grooves are made mechanically. Sterilization efficacy is promised
- No leakage from inside to outside due to the exclusive kernel technique applied to the heat exchanger and a characteristic welding process

Contrast

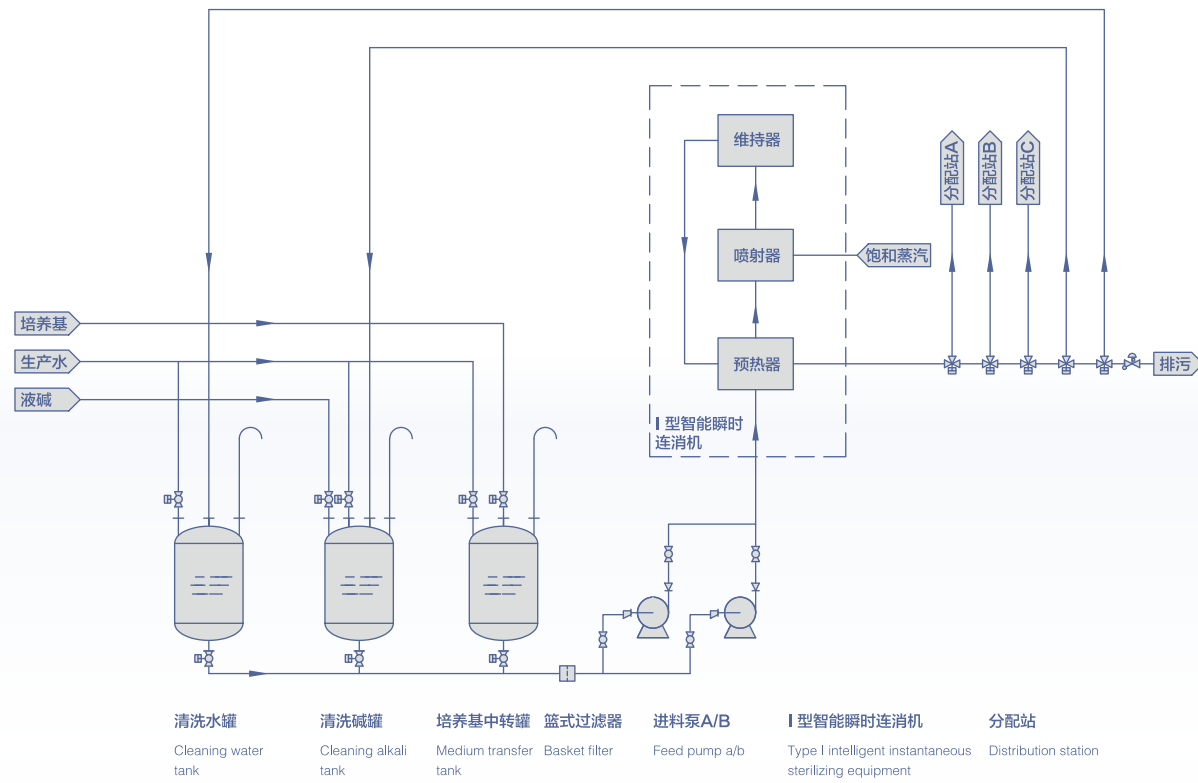
不同方式对比表

指标 Index	方式 Mode	实消 Actual Sterilizing	传统连消 Traditional Continuous Sterilization	智能瞬时连消机 Intelligent Instantaneous Sterilizing Equipment
灭菌温度 Sterilization Temperature		121℃	127–135℃	138–140℃
灭菌时间 Sterilization Time		30min	5–10min	50–60s
无菌率 Sterility Rate		99.99%	N/A	99.99%
无菌稳定性 Sterility Stability		操作人员水平决定 Determined by On-Set Operators	不同厂家，数据不同 Determined by Equipment supplier	控制单元依据蒸汽压力变化，智能确定灭菌温度和灭菌时间，智能处理异常生产指标，保证灭菌效果稳定 Smart Control System Lead to Reliable and Stable Sterilization
培养基破坏程度 Destruction of Culture Medium		高温时间长，破坏严重 Severe damage	高温时间较长，破坏较严重 Rather Severe Damage	高温时间短，基本无破坏 Almost No Damage
蒸汽用量/100吨物料 Steam Consumption/100t Raw Material		20–25t	10t–12t	4t
循环水用量/100吨物料 Circulating Water Consumption/100t Raw Material		800t	400t	≈0
操作 Operate		劳动强度大，工作时间长 High labor intensity and long working hours	劳动强度较大，工作时间较长 Rather high labour intensity and long working hours	采用自动控制方式，提高工作效率，减少劳动强度 Auto Control System Lead to High-Efficiency and Low Intensity Work
环保 Environmental protection		大量高温异味尾气排出 Large amount of high-temperature exhaust gas is discharged	密闭环境中进行，无高温异味尾气排出 No exhaust gas discharged due to confined space	密闭环境中进行，无高温异味尾气排出 No exhaust gas discharged due to confined space
泄漏 Leakage		N/A	板式换热器，容易穿孔，漏料，维修难 Plate heat exchanger are easily damaged and hard to restore	换热器、维持器采用特殊工艺焊接而成，对板材无损伤，不会造成板材穿孔 Heat exchanger and retainer are welded with special technique that cause no damage to the plate

Process

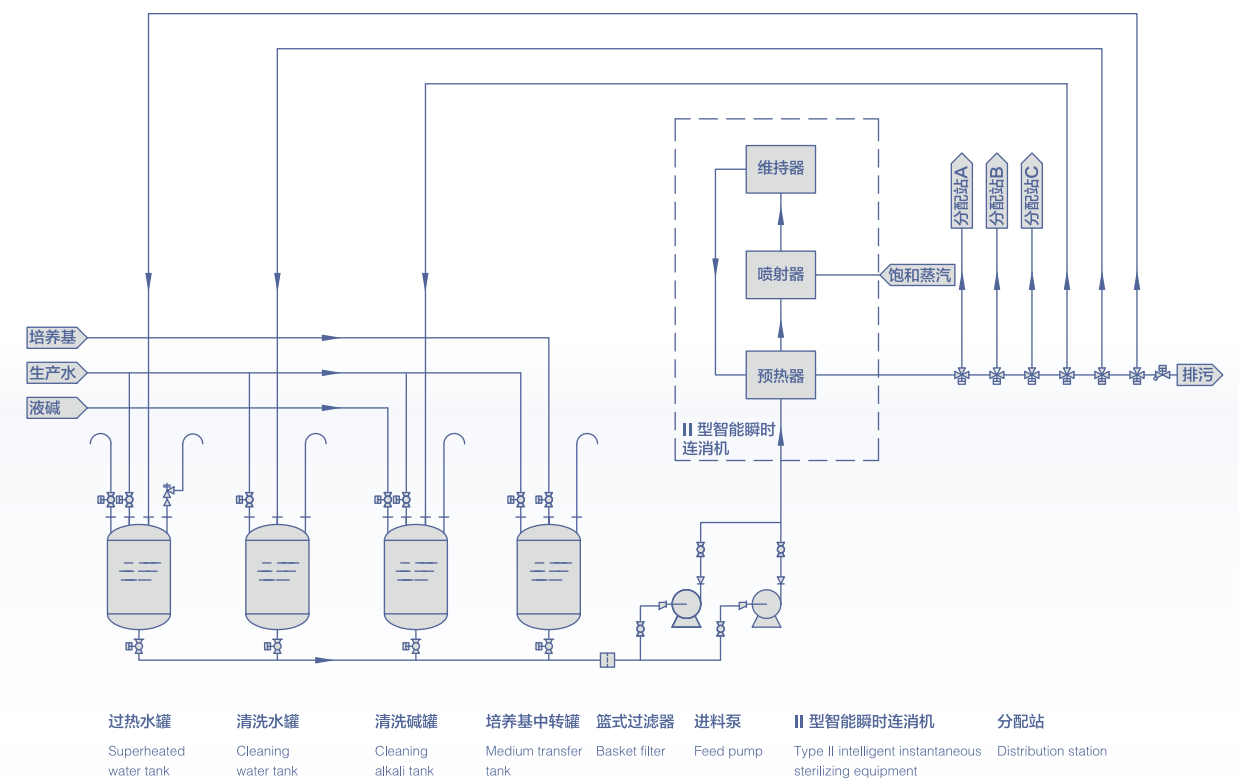
工艺流程

I 型智能瞬时连消机 – 直接加热空消智能瞬时连消机
Type I intelligent instantaneous sterilizing equipment



序号 Serial number	流量 (m³/h) Flow (m³/h)	进出口管径 (DN) Inlet and outlet pipe diameter (DN)	机组尺寸(长 × 宽 × 高 mm) Unit size (length × wide × height mm)	机组净重 (kg) Unit net weight (kg)	运行重量 (kg) Operating weight (kg)
1	3	32	3500 × 1700 × 2100	2500	2800
2	6	40	4000 × 2000 × 2100	3500	3900
3	10	50	4800 × 2100 × 2200	5000	5600
4	15	65	5100 × 2200 × 2200	5800	6800
5	30	80	5300 × 2500 × 3000	7800	9500
6	40	100	6200 × 2800 × 3000	12000	15000
7	50	100	6500 × 3000 × 3000	14000	17600
8	80	125	8500 × 3000 × 3000	24000	32500
9	100	150	9000 × 3000 × 3000	28000	40000

II 型智能瞬时连消机 – 直接加热水消智能瞬时连消机
Type II intelligent instantaneous sterilizing equipment

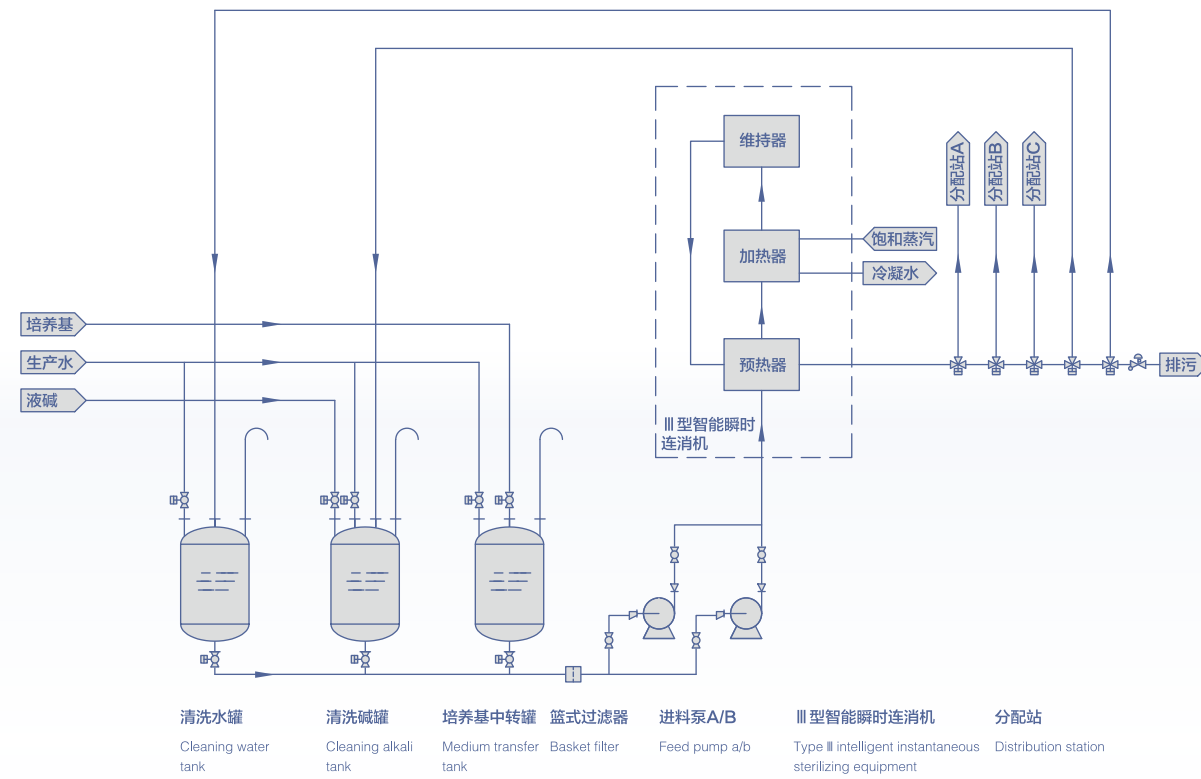


序号 Serial number	流量 (m³/h) Flow (m³/h)	进出口管径 (DN) Inlet and outlet pipe diameter (DN)	机组尺寸(长 × 宽 × 高 mm) Unit size (length × wide × height mm)	机组净重 (kg) Unit net weight (kg)	运行重量 (kg) Operating weight (kg)
1	3	32	3500 × 1700 × 2100	2500	2800
2	6	40	4000 × 2000 × 2100	3500	3900
3	10	50	4800 × 2100 × 2200	5000	5600
4	15	65	5100 × 2200 × 2200	5800	6800
5	30	80	5300 × 2500 × 3000	7800	9500
6	40	100	6200 × 2800 × 3000	12000	15000
7	50	100	6500 × 3000 × 3000	14000	17600
8	80	125	8500 × 3000 × 3000	24000	32500
9	100	150	9000 × 3000 × 3000	28000	40000

Process

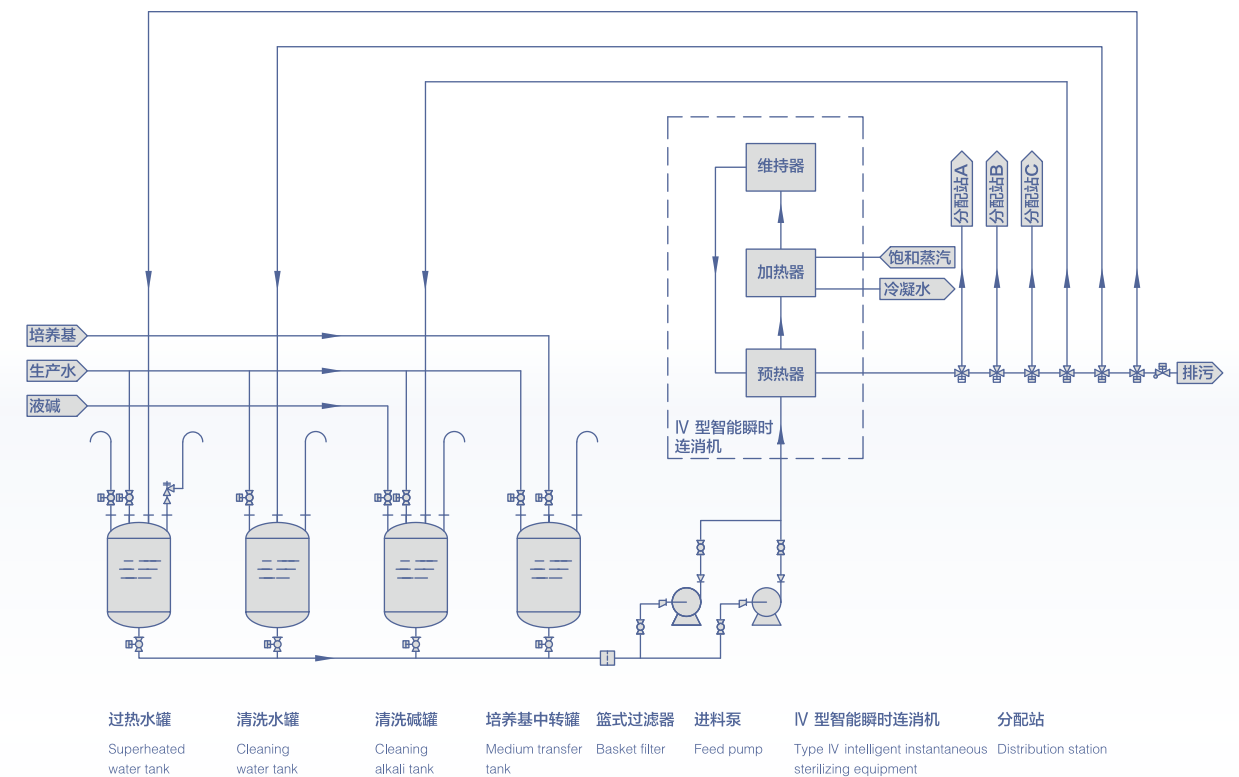
工艺流程

III 型智能瞬时连消机 – 间接加热空消智能瞬时连消机
Type III intelligent instantaneous sterilizing equipment



序号 Serial number	流量 (m ³ /h) Flow (m ³ /h)	出入口管径 (DN) Inlet and outlet pipe diameter (DN)	机组尺寸(长 × 宽 × 高 mm) Unit size (length × wide × height mm)	机组净重 (kg) Unit net weight (kg)	运行重量 (kg) Operating weight (kg)
1	3	32	5000 × 1700 × 2100	2700	3000
2	6	40	5500 × 2000 × 2100	3800	4200
3	10	50	6600 × 2100 × 2200	5500	6100
4	15	65	7000 × 2200 × 2200	6600	7600
5	30	80	7400 × 2500 × 3000	9400	11100
6	40	100	8500 × 2800 × 3000	14100	17100
7	50	100	8800 × 3000 × 3000	16600	20200
8	80	125	10800 × 3000 × 3000	28200	36700
9	100	150	11400 × 3000 × 3000	33200	45200

IV 型智能瞬时连消机 – 间接加热水消智能瞬时连消机
Type IV intelligent instantaneous sterilizing equipment



序号 Serial number	流量 (m ³ /h) Flow (m ³ /h)	出入口管径 (DN) Inlet and outlet pipe diameter (DN)	机组尺寸(长 × 宽 × 高 mm) Unit size (length × wide × height mm)	机组净重 (kg) Unit net weight (kg)	运行重量 (kg) Operating weight (kg)
1	3	32	5000 × 1700 × 2100	2700	3000
2	6	40	5500 × 2000 × 2100	3800	4200
3	10	50	6600 × 2100 × 2200	5500	6100
4	15	65	7000 × 2200 × 2200	6600	7600
5	30	80	7400 × 2500 × 3000	9400	11100
6	40	100	8500 × 2800 × 3000	14100	17100
7	50	100	8800 × 3000 × 3000	16600	20200
8	80	125	10800 × 3000 × 3000	28200	36700
9	100	150	11400 × 3000 × 3000	33200	45200

Project Case

典型案例



齐鲁制药（内蒙古）有限公司
Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.

医药行业
Pharmaceutical Industry



凯赛（金乡）生物材料有限公司
Cathay (Jinxiang) Biomaterial Co., Ltd.

新材料行业
New Material Industry



山东胜利生物工程有限公司
Shandong Shengli Bioengineering Co., Ltd.

医药行业
Pharmaceutical Industry



味丹国际（越南）股份有限公司
VEDAN (VIETNAM) Enterprise Co., Ltd.

食品健康行业
Food and Health Industry



内蒙古伊品生物科技有限公司
Inner Mongolia Eppen Biotech Co., Ltd.

氨基酸行业
Amino acid industry



山东蔚蓝生物科技有限公司
Shandong Vland Biotech Inc.

酶制剂行业
Enzyme Industry



安琪酶制剂（宜昌）有限公司
Angel Yeast (Yichang) Co., Ltd.

酶制剂行业
Enzyme Industry



福建省福抗药业股份有限公司
Fujian Fukang Pharmaceutical Co., Ltd.

医药行业
Pharmaceutical Industry

Performance List

业绩清单

建设单位 Employer	项目名称 Project Name	处理能力 Capacity	采购数量 Purchase Quantity	采购年份 Purchase Date
华睿生物技术(滁州)有限公司 Huarui Biotechnology (Chuzhou) Co., Ltd.	氨基酸发酵连消项目 Continuous Sterilization for Amino Acid Fermentation	20m³/h 30m³/h	2	2023
河北泮川生物科技有限公司 Hebei Fengchuan Bio-Technology Co., Ltd.	黄原胶发酵连消项目 Continuous Sterilization for Xanthan Fermentation	50m³/h	1	2023
联邦制药(内蒙古)有限公司 The United Laboratories (Inner Mongolia) Co., Limited	青霉素发酵连消项目 Continuous Sterilization for penicillin Fermentation	110m³/h	1	2022
青岛根源生物技术集团有限公司 Qingdao GBW Group Co., Ltd.	微生态发酵连消项目 Continuous Sterilization for Microbial Fermentation	15m³/h	1	2022
牡丹江佰佳信生物科技有限公司 Mudanjiang Bioseen Bio-Technology Co., Ltd.	泰妙菌素发酵连消项目 Continuous Sterilization for Tylosin Fermentation	50m³/h	1	2022
山东蔚蓝生物科技有限公司 Shandong Vland Biotech Inc.	酶制剂(淀粉、豆粕等) Enzyme Preparation (Starch, Soybean Cake Powder, etc.)	15m³/h	1	2022
鄂尔多斯市中轩生化股份有限公司 Deosen Biochemical(ordos)Ltd.	黄原胶 Xanthan	75m³/h	1	2022
山东润德生物科技有限公司 Shandong Runde Biotechnology Co., Ltd.	氨基葡萄糖(培养基、液糖) Glucosamine (culture medium, concentrated sugar)	30m³/h	1	2022
山东蓝湾新材料有限公司 Shandong blue bay new materials co., Ltd.	酶制剂(葡萄糖、尿素、酵母膏、无机盐) Enzyme Preparation (amylaceum, carbamide, yeast extracts, and inorganic salt)	20m³/h	1	2022
福建省福抗药业股份有限公司 Fujian Fukang Pharmaceutical Co.,Ltd.	金霉素(淀粉、豆粕等) Aureomycin (Starch, SMB)	30m³/h	1	2022
宁夏伊品生物科技股份有限公司 Ningxia Eppen Biotech Co., Ltd	味精(浓玉米浆) Aginomoto (concentrated corn syrup)	50m³/h	1	2022
安琪酶制剂(宜昌)有限公司 Angel Yeast (Yichang) Co., Ltd.	酶制剂连消项目 Continuous sterilization for enzyme preparation	30m³/h	1	2022
凯赛(太原)生物科技有限公司 Cathay (Taiyuan) Biotech Inc.	氨基酸发酵底料连消 Continuous sterilization for amino acid fermentation backing material	100m³/h	12	2022
凯赛(太原)生物科技有限公司 Cathay (Taiyuan) Biotech Inc.	液糖连消项目 Continuous sterilization for corn starch sugar	100m³/h	8	2022
凯赛(太原)生物科技有限公司 Cathay (Taiyuan) Biotech Inc.	二级种子连消项目 Continuous sterilization for secondary seed	80m³/h	4	2022

建设单位 Employer	项目名称 Project Name	处理能力 Capacity	采购数量 Purchase Quantity	采购年份 Purchase Date
凯赛(太原)生物科技有限公司 Cathay (Taiyuan) Biotech Inc.	总氮连消项目 Continuous sterilization for TN	80m³/h	4	2022
凯赛(太原)生物科技有限公司 Cathay (Taiyuan) Biotech Inc.	癸二酸发酵连消项目 Continuous sterilization for decanedioic acid fermentation	50m³/h	1	2021
凯赛(太原)生物科技有限公司 Cathay (Taiyuan) Biotech Inc.	癸二酸发酵连消项目 Continuous sterilization for decanedioic acid fermentation	100m³/h	1	2021
凯赛(乌苏)生物材料有限公司 Cathay (Wusu) Biotech Inc.	氨基酸发酵连消项目 Continuous sterilization for amino acid fermentation	40m³/h	1	2022
凯赛(乌苏)生物材料有限公司 Cathay (Wusu) Biotech Inc.	氨基酸发酵连消项目 Continuous sterilization for amino acid fermentation	100m³/h	1	2019
宁夏伊品生物科技股份有限公司 Ningxia Eppen Biotech Co., Ltd.	浓糖、二级种子连消项目 Continuous sterilization for concentrated sugar and secondary seed	6m³/h	2	2022
安徽福方高科生物科技有限公司	液糖、无机盐 Corn starch sugar, inorganic salt	50m³/h	1	2022
广东肇庆星湖生物科技股份有限公司 Guangdong Zhaoqing Star Lake Bioscience Co, Inc.	浓糖、脯氨酸发酵、肌苷发酵 Fermentation of concentrated sugar proline and inosine	50m³/h	1	2022
广东肇庆星湖生物科技股份有限公司 Guangdong Zhaoqing Star Lake Bioscience Co, Inc.	肌苷、鸟苷发酵连消项目 Continuous sterilization for fermentation of inosine and vernine	50m³/h	1	2021
广东肇庆星湖生物科技股份有限公司 Guangdong Zhaoqing Star Lake Bioscience Co, Inc.	肌苷、鸟苷发酵连消项目 Continuous sterilization for fermentation of inosine and vernine	50m³/h	1	2017
广东肇庆星湖生物科技股份有限公司 Guangdong Zhaoqing Star Lake Bioscience Co, Inc.	肌苷、鸟苷发酵连消项目 Continuous sterilization for fermentation of inosine and vernine	50m³/h	1	2016
神舟生物科技有限责任公司 Shenzhou Biological Technology Dexian Liability Company	液糖连消项目 Continuous sterilization for corn starch sugar	15m³/h	1	2022
内蒙古新威远生物化工有限公司 Inner Mongolia New Veyong Bio-chemical Co., Ltd.	阿维菌素连消项目 Continuous sterilization for abamectin	50m³/h	4	2021
鲁抗医药股份有限公司 Shandong Lukang Pharmaceutical Co., Ltd.	大观霉素发酵连消项目 Continuous sterilization for spectinomycin fermentation	50m³/h	1	2021
鲁抗医药股份有限公司 Shandong Lukang Pharmaceutical Co., Ltd.	泰乐菌素发酵连消项目 Continuous sterilization for tylosin fermentation	80m³/h	1	2021

Performance List

业绩清单

建设单位 Employer	项目名称 Project Name	处理能力 Capacity	采购数量 Purchase Quantity	采购年份 Purchase Date
山东胜利生物工程有限公司 Shandong Shengli Bioengineering Co., Ltd.	莫能发酵连消项目 Continuous sterilization for monensin fermentation	50m³/h	1	2021
山东胜利生物工程有限公司 Shandong Shengli Bioengineering Co., Ltd.	泰妙菌素发酵连消项目 Continuous sterilization for tiamulin fermentation	50m³/h	1	2020
味丹国际(越南)股份有限公司 VEDAN (VIETNAM) enterprise Co., Ltd.	氨基酸发酵连消项目 Continuous sterilization for amino acid fermentation	100m³/h	1	2021
味丹国际(越南)股份有限公司 VEDAN (VIETNAM) enterprise Co., Ltd.	氨基酸发酵连消项目 Continuous sterilization for amino acid fermentation	100m³/h	1	2019
联邦制药(内蒙古)有限公司 United Laboratories (Inner Mongolia) Co., Ltd.	克拉维酸钾发酵连消项目 Continuous sterilization for potassium clavulanate fermentation	80m³/h	1	2021
河南金丹乳酸科技有限公司 Henan Jindan Lactic Acid Technology Co., Ltd.	乳酸发酵连消项目 Continuous sterilization for lactic acid fermentation	80m³/h	1	2021
重庆乾泰生物医药有限公司 Chongqing Qiantai Bio-pharmaceutical Co., Ltd.	洛伐他汀发酵连消项目 Continuous sterilization for lovastatin fermentation	200L/h	1	2020
重庆乾泰生物医药有限公司 Chongqing Qiantai Bio-pharmaceutical Co., Ltd.	洛伐他汀发酵连消项目 Continuous sterilization for lovastatin fermentation	50m³/h	1	2019
新拓洋生物工程有限公司 New Tuoyang Bio-engineering Co., Ltd.	VC发酵连消项目 Continuous sterilization for VC fermentation	30m³/h	2	2021
新拓洋生物工程有限公司 New Tuoyang Bio-engineering Co., Ltd.	异VC发酵连消项目 Continuous sterilization for erythorbic acid fermentation	18m³/h	1	2020
凯赛(金乡)生物材料有限公司 Cathay (Jinxiang) Biotech Inc.	二元酸发酵 Dibasic acid fermentation	80m³/h	1	2022
凯赛(金乡)生物材料有限公司 Cathay (Jinxiang) Biotech Inc.	二元酸发酵 Dibasic acid fermentation	5m³/h	1	2021
凯赛(金乡)生物材料有限公司 Cathay (Jinxiang) Biotech Inc.	二元酸发酵 Dibasic acid fermentation	50m³/h	1	2020
凯赛(金乡)生物材料有限公司 Cathay (Jinxiang) Biotech Inc.	二元酸发酵 Dibasic acid fermentation	50m³/h	1	2018
精晶药业股份有限公司 Jing Jing Pharmaceutical Co., Ltd.	氨基酸发酵连消项目 Continuous sterilization for amino acid fermentation	10m³/h	1	2020

建设单位 Employer	项目名称 Project Name	处理能力 Capacity	采购数量 Purchase Quantity	采购年份 Purchase Date
齐鲁制药(内蒙古)有限公司呼伦贝尔分公司 Hulun Buir Branch of Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.	阿维菌素等抗生素发酵 Fermentation of abamectin and other antibiotics	80m³/h	3	2019
齐鲁制药(内蒙古)有限公司呼伦贝尔分公司 Hulun Buir Branch of Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.	阿维菌素等抗生素发酵 Fermentation of abamectin and other antibiotics	100m³/h	1	2019
齐鲁制药(内蒙古)有限公司呼伦贝尔分公司 Hulun Buir Branch of Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.	阿维菌素等抗生素发酵 Fermentation of abamectin and other antibiotics	50m³/h	3	2019
齐鲁制药(内蒙古)有限公司呼伦贝尔分公司 Hulun Buir Branch of Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.	阿维菌素等抗生素发酵 Fermentation of abamectin and other antibiotics	60m³/h	1	2019
山东蔚蓝生物科技有限公司 Shandong Vland Biotech Inc.	多肽发酵连消项目 Continuous sterilization for polypeptide fermentation	30m³/h	1	2019
博瑞生物医药泰兴市有限公司 BrightGene Bio-Medical Technology Co., Ltd.	多拉菌素发酵连消项目 Continuous sterilization for doramectin fermentation	15m³/h	1	2019
山东齐发药业有限公司 Shandong Qilu King-phar Pharmaceutical Co., Ltd.	阿维菌素发酵连消项目 Continuous sterilization for abamectin fermentation	50m³/h	1	2018
山东齐发药业有限公司 Shandong Qilu King-phar Pharmaceutical Co., Ltd.	阿维菌素、大观霉素发酵连消项目 Continuous sterilization for abamectin and spectinomycin fermentation	80m³/h	3	2018
山东齐发药业有限公司 Shandong Qilu King-phar Pharmaceutical Co., Ltd.	安普霉素、卡那霉素发酵连消项目 Continuous sterilization for apramycin and kanamycin fermentation	30m³/h	1	2015
齐鲁制药(内蒙古)有限公司 Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.	阿维菌素发酵连消项目 Continuous sterilization for abamectin fermentation	50m³/h	3	2017
齐鲁制药(内蒙古)有限公司 Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.	阿维菌素发酵连消项目 Continuous sterilization for abamectin fermentation	60m³/h	1	2017
齐鲁制药(内蒙古)有限公司 Qilu Pharmaceutical (Inner Mongolia) Co., Ltd.	阿维菌素发酵连消项目 Continuous sterilization for abamectin fermentation	100m³/h	1	2016
北京听大洋科技发展有限公司 Beijing Smistyle Sci&Tech Development Co., Ltd.	酶制剂发酵连消项目 Continuous sterilization for enzyme preparation fermentation	10m³/h	1	2018
内蒙古拜克生物有限公司 Inner Mongolia Biok Biology Co., Ltd.	阿维菌素发酵连消项目 Continuous sterilization for abamectin fermentation	50m³/h	1	2017
山东立海润生物技术有限公司 Shandong LHR Bio-Technology Co., Ltd.	7-ACA发酵连消项目 Continuous sterilization for 7-ACA fermentation	50m³/h	1	2016

Our Customers

我们的客户

超越客户预期
EXCEED CLIENT EXPECTATIONS

The image displays a grid of 100 logos of various pharmaceutical and biotechnology companies. The logos are arranged in a grid that is roughly 10 columns wide and 10 rows high. The companies represented include:

- Row 1:** 齐鲁制药 (Qilu Pharmaceutical), CATHAY, VEOAN INTERNATIONAL, Angel 安琪, EPPEN 伊品, 蓝蓝生物 (Vland), 福抗药业 (FUKANG PHARMACEUTICALS), 鲁抗 (LUKANG), 金丹 (JINDAN), 星湖科技 (STARLAKE), 拜克生物 (BAIYE BIOTECH).
- Row 2:** 联邦制药 (UNITED LABORATORIES), 超越客户预期 (EXCEED CLIENT EXPECTATIONS), 山东胜利生物工程有限公司 (SHANDONG SHENG LI BIOTECHNOLOGY ENGINEERING CO., LTD.).
- Row 3:** 昕大洋 (XINDAYANG), 人福医药 (RUFU PHARMACEUTICALS), 山东齐发药业有限公司 (SHANDONG QIFAYAOYAN YUAN SI GONG SI), KDN 康地恩生物 (KANDIEN BIOTECH), 威远生化 (WEIYUAN SHENG HUA), BrightGene, Bluepha 蓝普生物 (LANPU BIOTECH), 君实生物 (TOP ALLIANCE), BeiGene, 康希诺生物 (CANSINO BIO), 微芯生物 (CHIPSCREEN), Mabwell 迈威生物 (MAIWEI BIOTECH), 中国医药集团 (SINO PHARMACEUTICAL GROUP), VALIANT 中誉东方制药有限公司 (VALIANT CORPORATION LIMITED).
- Row 4:** 科伦集团 (KELUN GROUP), Fushine 富祥股份 (FUSHINE), HISUN 海正药业 (HAIZHENG PHARMACEUTICALS), 以岭药业 (YILING PHARMACEUTICALS), 广药白云山 (GUANGYAO BAIYUNSHAN), 常山药业 (CS BIO), 康龙化成 (PHARMARON), 华北制药 (HUABEI PHARMACEUTICALS), 东阳光药 (DONGYANG GUANGYAO), 升华拜克 (SHENGLUO), 甘李 (GANLI), FOSUN PHARMA 复星医药 (FOSUN PHARMACEUTICALS), 石药集团 (SINO PHARMACEUTICALS).
- Row 5:** 正大天晴 (CHITAI TIANQING), 人福医药 (RUFU PHARMACEUTICALS), 武明康德 (WUMING KANGDE), SPH 上海医药 (SHANGHAI PHARMACEUTICALS), 乐普生物 (LEPU BIOTECHNOLOGY), 天科 (荆州) 制药有限公司 (TIANKE (JIANGZHOU) PHARMACEUTICALS CO., LTD.), Acebright 创诺医药集团 (CHUANO PHARMACEUTICALS GROUP), NHU 新和成 (XINHECHENG), APELOA 普洛 (APELOA), 新兴际华集团 (XINXING JI HUA INTERNATIONAL GROUP), 天地药业 (TIANDI PHARMACEUTICALS), 倍特药业 (BEIT PHARMACEUTICALS), OBiO 和元上海 (OBI O HEYUAN SHANGHAI), StemRNA.
- Row 6:** CHEERLAND 利士生物药业 (LISHI BIOTECHNOLOGY), INNOCARE, OPM 奥浦迈 (AUMAI), 金济药业 (JINJI PHARMA), 丽珠医药 (LIZHUO), 中国科技 (CHINA TECH), HTBT 天壹生物 (TIAN YI BIOTECHNOLOGY), 恒润达生 (HENG RUNDASHENG), ABA CHEM 雅本化学 (YABEN CHEMICALS), Hepalink, 倍特药业 (BEIT PHARMACEUTICALS), Bimeda, YOU CARE.
- Row 7:** Pfizer, 杭州多禧生物科技有限公司 (HANGZHOU DUOXI BIOTECHNOLOGY CO., LTD.), 天广实 (Mabworks), 弘达集团 (HONGDA GROUP), 常州康普药业有限公司 (CHANGZHOU KANGPU PHARMACEUTICALS CO., LTD.), 四川方向药业 (SICHUAN FANGXIANG PHARMACEUTICALS), 白敬宇制药 (BAIJIANGYU PHARMACEUTICALS), FRONT 福元 (FUYUAN), 浙江东恩药业有限公司 (ZHEJIANG DONGEN PHARMACEUTICALS CO., LTD.), 黄山胶囊 (HUANGSHAN CAPSULES), WEGO 威高 (WEI GAO), 苑东生物 (YUANDONG BIOTECHNOLOGY), IS 东圣 (DONGSHENG), LONZEAL 龙泽制药 (LONGZE PHARMACEUTICALS).