

让世界制药工业插上智慧的翅膀

Equip global pharmaceutical manufacturing industry with intelligent wings.

TRUKING

Contents 目录



AOCL 系列安瓿立式超声波清洗机 - 03 - ← AQCL Series Vertical Ultrasonic Washing Machine KSZ 系列隧道式灭菌干燥机 - 05 -- ALX 系列直线型安瓿洗烘灌封联动线 - 01 -KSZ Series Sterilizing & Drying Tunnel **ALX Series Ampoule Compact Line For** Washing, Sterilizing & Drying, Filling & Sealing AGFH 系列安瓿灌封机 - 07 - ← AGFH Series Ampoule Filling & Sealing Machine KOCL 系列西林瓶立式超声波清洗机 - 11 - 🕳 KQCL Series Vertical Ultrasoni Washing Machine KLX 系列西林瓶洗烘灌封联动线 - 09 -KLX Series Linear Shape Vial (Liquid) Compact Line For Washing, KSZ 系列隧道式灭菌干燥机 - 13 -KSZ Series Sterilizing & Drying Tunnel Sterilizing & Drying, Filling & Plugging, Sealing KGSA12A、KGSA6A 系列西林瓶灌装加塞机 - 15 -KGSA12\KGSA6 Series Linear Filling & Plugging Machine KGSB 系列西林瓶灌装加塞机 - 17 -・KLXF 系列西林瓶粉针分装洗烘灌封联动线 - 21 -KGSB Series L Shape Filling & Plugging Machine KLXF Series Vial (Powder) Compact Line For Washing, Sterilizing & Drying, Filling & Plugging, Sealing ZG 系列西林瓶轧盖机 - 19 - ← **ZG Series Capping Machine** PDA 系列西林瓶螺杆分装机 - 22 - -PDA Series Powder Auger Filling & Plugging Machin 预灌封无菌分装联动线 - 26 -PDS 系列气流插管式粉末分装机 - 24 - -PFS primary packaging line PDS Series Intubation Powder Packager SMART-N 系列预灌封无菌分装系统 - 26 - -SMART-N Series PFS Solution YLX 系列口服液瓶洗烘灌封联动线 - 34 -ULTRA-N 系列预灌封无菌分装系统 YLX Series Oral Liquid Compact Line For Washing, **ULTRA-N Series PFS Solution** Sterilizing & Drying, Filling & Sealing ROBOTIC-N 系列预灌封无菌分装系统 - 30 -**ROBOTIC-N Series PFS Solution** EXTREME-N 系列预灌封无菌分装系统 - 32 - -**EXTREME-N Series PFS Solution**

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公司简介 Company Profile



楚天科技股份有限公司成立于2000年,是中国医药装备行业的领军企业,也是世界医药装备行业的知名企业之一。 主营业务系医药装备及其整体技术解决方案,并率先推动智慧医药工厂的研究与开发。公司系中国A股上市公司。旗下拥有德国ROMACO集团、楚天华通、四川省医药设计院、楚天飞云、楚天源创、楚天微球、楚天思优特、楚天思为康、楚天华兴、楚天长兴、楚天科仪、楚天净邦、楚天派特、楚天博源、楚天新材料、楚天智能机器人等十多家全资或控股子公司,全球员工总数9000余人,总资产110亿元。

公司已有长沙和德国两大运营总部,建有长沙中央技术研究院、欧洲技术研究院和四川省医药设计院等研发机构。设有国家级企业技术中心,国家级创新基地,博士后科研工作站,院士专家工作站等多个技术与创新平台。截至2023年12月31日,共提出5466项中国专利申请,授权专利4313项,有效专利3090项。另提出54件PCT国际专利申请,在美国、俄罗斯、印度、韩国、德国、印尼、日本、欧洲等多国获得26项专利授权。牵头制订了本系统国家行业产品技术标准20多项。集团产品与服务已累计覆盖180多个国家和地区,国际市场占有率正逐年快速提升。

Founded in 2000, Truking Technology Limited has become a leading pharmaceutical equipment company in China and renowned worldwide. The company specializes in pharmaceutical equipment and integrated solutions and takes the initiative to push forward the R&D of smart pharmaceutical factories. It is a listed A-share company with multiple wholly-owned or holding subsidiaries, such as Germany-based Romaco Group, Truking Watertown, Sichuan Pharmaceuticals Design Institute, Truking Feiyun, Truking Ingenuity, Truking Micro-Sphere, Truking SUT, Truking Gene, Wachine, Truking Changxing, Truking Scientific Instrument, Truking Jingbang Engineering Technology, Truking Pitide Biotechnology, Truking Boyuan Intelligent Technology, Truking New Material, Truking Intelligent Robot etc. Truking has over 9000 employees around the globe, with a total asset of over 11 billion RMB.

Truking has two operational headquarters in Changsha, China, and Germany, with research and development institutions including Changsha Central Technology Research Institute, Europe Technology Research Institute, and Sichuan Pharmaceuticals Design Institute. It has established many platforms for technology innovation, such as the National Enterprise Technology Center, National Innovation Center, Post-Doctoral Scientific Research Station, and Academician Expert Workstation. By December 31, 2023, a total of 5,466 patent applications from China have been submitted, with 4,313 patents granted and 3,090 patents currently in force. Additionally, 54 PCT international patent applications were filed, resulting in 26 patents granted in multiple countries including the United States, Russia, India, South Korea, Germany, Indonesia, Japan, and Europe. The company has led the development of over 20 national industry product technical standards for this system. The products and services of the group have now reached over 180 countries and regions, with its international market share steadily increasing year by year.

ALX 系列安瓿洗烘灌封联动线

ALX Series Ampoule Compact Line For Washing, Sterilizing & Drying, Filling & Sealing



主要用途 / Main Application

本联动机组由 AQCL 系列立式超声波清洗机、KSZ 系列隧道式灭菌干燥机、 AGFH 系列安瓿灌封机三台单机组成。每台可单机使用,也可联动生产,联动生产时可完成喷淋水、超声波清洗、机械手夹瓶、翻转瓶、冲水 (瓶内、瓶外)、冲气 (瓶内、瓶外)、预热、烘干灭菌、冷却、(前冲气)、灌装、(后充氮)、预热、封口等二十多个工序。主要用于制药厂针剂车间小容量注射剂生产。通用型既可用于安瓿瓶针剂,也可用于抗生素瓶针剂的多功能生产。

This line is composed of AQCL Series vertical ultrasonic washing machine, KSZ Series sterilizing & drying tunnel, AGFH Series filling & sealing machine. Each machine can run independently, or be connected as a compact line. It can finish processing procedures such as: water spraying, ultrasonic washing, clamping & overturning ampoules by manipulator, water flushing (internal and external), air flushing(internal and external), pre-heating, drying & sterilizing, depyrogenation, cooling, (pre-nitrogen), filling, (post-nitrogen), preheating, sealing and etc. It is mainly used for production of small volume injectable products in pharmaceutical factories. The combined type is suitable for both ampoule and vial production.

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性能优势 / Performance Advantage

- 立式超声波清洗机采用超声波清洗与水气独立分开压力喷射冲洗相结合方式,是目前国际最流行、可见异物检测效果最好的清洗设备。整个水气压力喷射清洗过程中,三种介质均采用独立喷针,每一根喷针只固定一种清洗介质,完成一种冲洗工序,避免了交叉污染;
- 隧道式灭菌干燥机采用层流原理和热空气高温灭菌工艺,使容器在密闭隧道内的A级层流环境下完成预热、干燥、灭菌、去热原和冷却的无菌生产工艺流程,是目前国际最流行、灭菌效果最好的烘干灭菌设备,其热分布均匀,去热原效果好;
- 安瓿灌封机采用变速拨轮进瓶、步进式定位灌装、 拉丝、封口,阳台式结构。其运行平衡性好,成品 合格率高;
- 采用 PLC 控制、人机界面操作,能联动控制和单机操作,自动化程度高,操作人员少,劳动强度低。

- + Vertical ultrasonic washing machine adopts ultrasonic washing and alternant jetting water and airflow. It is the most popular washing equipment with highest clarity in the world. In whole washing process, three washing media adopt independent needles, each group of needles only flush one washing medium, avoids cross contamination.
- + Sterilizing & drying tunnel adopts the principle of laminar flow and hot air high temperature sterilization process, which can make containers finishing aseptic production from pre-heating, drying, sterilizing and cooling under class A laminar flow in closed tunnel. It is the most popular sterilizing & drying equipment with best sterilizing effect. It has good heat distribution and depyrogenation effect.
- Ampoule filling & sealing machine adopts variable speed starwheel to infeed ampoules, stepping type positioning for filling & sealing and balcony structure. It has good running stability and high qualified product rate.
- It adopts PLC control with HMI operation, which can control the whole line running or independent machine. It ensures normal running of the compact line with high automation, less operator and low labor intensity.

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产品参数 / Product Parameters

型무 Model	适应规格 Suitable Sizes	针数 Needle Number	生产能力 Output	电容量 (正常工作耗量) Power (Normalconsumption)	净质量 Net Weight	外形尺寸 (含层流罩高度) Overall Dimensions (Including LF)
ALX1 ∼ 5-G2	1-5ml	16	20000-35000pcs/h	95.45kW (60kW)	10200kg	11000×2820×2340mm
ALX1 ∼ 20-F2	1-20ml	12	10000-32000pcs/h	95.45kW (60kW)	10200kg	11000×2820×2340mm
$\rm ALX1 \sim 10\text{-}F1$	1-10ml	12	10000-32000pcs/h	86.15kW (51kW)	9200kg	10300×2620×2340mm
ALX1 ∼ 20-E2	1-20ml	10	3600-28000pcs/h	86.15kW (51kW)	9200kg	10300×2620×2340mm
ALX1 ∼ 5-E1	1-5ml	10	10000-28000pcs/h	69.5kW (41kW)	8500kg	9000×2620×2340mm
ALX1 ∼ 20-D	1-20ml	8	3600-23000pcs/h	63.65kW (41kW)	8200kg	8300×2620×2340mm
ALX1 ∼ 20-C1	1-20ml	6	5500-18000pcs/h	63.65kW (41kW)	7800kg	7900×2620×2340mm
ALX1 ~ 20-C2	1-20ml	4	3000-12000pcs/h	43.5kW (28kW)	7200kg	7500×2510×2340mm

AQCL 系列安瓿立式超声波清洗机

AQCL Series Vertical Ultrasonic Washing Machine



🌊 主要用途 / Main Application

主要用于制药厂安瓿瓶的清洗,也可用于抗生素瓶、口服液瓶等药用玻璃容器的清洗。

Mainly used for washing of ampoules in pharmaceutical factories; it also can be used for washing other glass containers such as vials and oral liquid bottles.

🗻 性能优势 / Performance Advantage

本机为立式转鼓结构,采用超声波清洗和三水三气交替喷射冲洗的原理,对容器逐个清洗。循环水、压缩空气、注射用水均使用独立的喷针,插入瓶内冲洗;无交叉污染,水、气无压力损失,节约能源,且清洗效果好。同时还可目测到整个清洗过程,操作维护方便。

This machine uses vertical gyration structure. It adopts the principle of ultrasonic cleaning and alternant jetting water & airflow washing to clean the vials one by one. Circulation water, compressed air and WFI adopt independent needles which are inserted into vial to flush, no cross contamination, no water and air loss, energy saving, and good washing effect. It can observe whole washing process, and is convenient for operation and maintenance.

⚠ 产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	耗水量 Water Consumption	耗气量 Air Consumption	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
AQCL28/6	1-20ml	18000-38000 pcs/h	0.2-0.3mPa 1.4m³/h	0.6MPa70m ³ /h	28kW	4000kg	2530×2850×1620mm
AQCL28/5	1-20ml	18000-32000 pcs/h	0.2-0.3mPa 1.2m³/h	0.6MPa60m ³ /h	28kW	4000kg	2530×2850×1620mm
AQCL28/4	1-20ml	18000-28000 pcs/h	0.2-0.3mPa 1.0m³/h	0.6MPa50m ³ /h	28kW	4000kg	2530×2850×1620mm
AQCL20/6	1-20ml	10000-32000 pcs/h	0.2-0.3mPa 1.0m³/h	0.6MPa50m ³ /h	19kW	2400kg	2400×2400×1620mm
AQCL20/5	1-20ml	6000-27000 pcs/h	0.2-0.3mPa 0.9m³/h	0.6MPa45m ³ /h	19kW	2400kg	2400×2400×1620mm
AQCL20/4	1-20ml	6000-23000 pcs/h	0.2-0.3mPa 0.8m³/h	0.6MPa40m ³ /h	19kW	2400kg	2400×2400×1620mm
AQCLS12/4	1-20ml	4800-12200 pcs/h	0.25-0.35mPa 0.6m³/h	0.6MPa35m ³ /h	26kW	2200kg	2230×2750×1450mm
AQCLS12/5	1-20ml	6000-11000 pcs/h	0.25-0.35mPa 0.6m³/h	0.6MPa35m ³ /h	26kW	2200kg	2230×2750×1450mm
AQCLS20/4	1-20ml	8000-20400 pcs/h	0.25-0.35mPa 0.8m³/h	0.6MPa40m ³ /h	27kW	3400kg	2530×2850×1840mm
AQCLS20/6	1-20ml	12000-30600 pcs/h	0.25-0.35mPa 1m³/h	0.6MPa50m ³ /h	27kW	3400kg	2530×2850×1840mm
AQCLS20/7	1-10ml	12000-30600 pcs/h	0.25-0.35mPa 1.1m³/h	0.6MPa55m ³ /h	27kW	3400kg	2530×2850×1840mm
AQCLS28/5	1-20ml	14000-35700 pcs/h	0.25-0.35mPa 1.2m³/h	0.6MPa60m ³ /h	28kW	3400kg	2530×2850×1840mm
AQCLS28/6	1-20ml	16000-42800 pcs/h	0.25-0.35mPa 1.4m³/h	0.6MPa70m ³ /h	28kW	3400kg	2530×2850×1840mm

KSZ 系列隧道式灭菌干燥机

KSZ Series Sterilizing & Drying Tunnel



🗻 主要用途 / Main Application

主要用于制药厂安瓿瓶的烘干、灭菌、去热原,也可用于抗生素瓶、口服液瓶等药用玻璃容器的烘干 灭菌。 This machine is mainly used for sterilizing, drying and depyrogenation of ampoules and other glass containers such as vials and oral liquid bottles in pharmaceutical factories.

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性能优势 / Performance Advantage

本机为整体隧道式结构。分为预热、高温灭菌、冷却三部分。采用热空气层流原理和热空气高温灭菌工艺对容器进行灭菌、去热原,采用负压密封,分流技术等核心专利技术,热分布均匀、去热原效果好。

The tunnel is divided into three zones: pre-heating zone, sterilizing zone and cooling zone. It adopts the principle of laminar flow and hot air high temperature sterilization process to realize containers' sterilization and depyrogenation; adopts core patent technologies such as negative pressure sealing and air flow dividing, and has good heat distribution and depyrogenation effect.

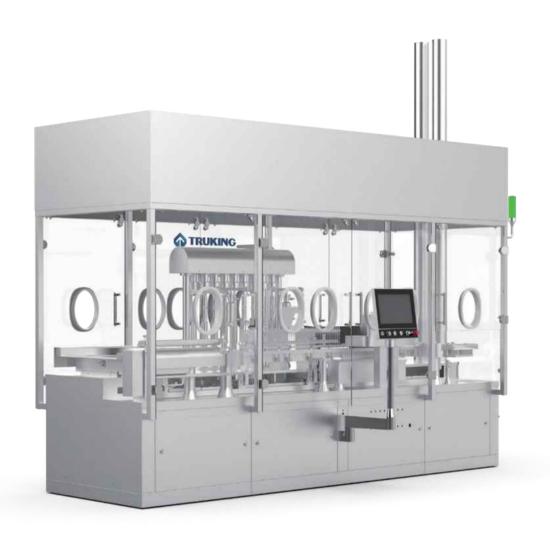
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产品参数 / Product Parameters

型믁 Model	适应规格 Suitable Sizes	生产能力 Output	输送带 有效宽度 Valid Width of Conveyor Belt	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KSZ620/60B	1-20ml	12000-67000pcs/h	600mm	72kW	4500kg	4310x1700x2410mm
KSZ620/43B	1-20ml	8000-45000pcs/h	600mm	55kW	4000kg	3680x1700x2410mm
KSZ620/43-EA	1-20ml	8000-45000pcs/h	600mm	54kW	3600kg	2760x1565x2410mm
KSZ420/20B	1-20ml	4000-22000pcs/h	400mm	35kW	2800kg	2360x1465x2350mm

AGFH 系列安瓿灌封机

AGFH Series Ampoule Filling & Sealing Machine



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主要用途 / Main Application

主要用于制药厂安瓿瓶在无菌条件下的灌装和封口。

It is mainly used for filling and sealing of ampoule under aseptic conditions in pharmaceutical factories.

📤 性能优势 / Performance Advantage

- 本机为多工位步进式传输系统,阳台式结构,能完成绞龙分瓶拨轮进瓶、前充氮、灌装、后充氮、预热、拉丝封口等工序。采用匀速拨轮进瓶,步进式定位灌装、封口,其运行平稳性好,成品合格率高。其灌装形式可根据用户的要求配置玻璃泵、金属泵、陶瓷泵或蠕动泵进行灌装。
- 本机为我公司集成和延伸的各种先进技术基础上,结合现代灌装原理,设计、开发的一种无菌安瓿灌封机可选配 ORABS 系统和灌装 CIP/SIP 系统等。本机高配时完全符合 EUcGMP 和 USFDA 等国际标准.
- + This machine's structure is multi-stations stepping conveying system with balcony structure. It can finish procedures such as ampoule conveying, pre-nitrogen, filling, post nitrogen, pre-heating and sealing etc. It adopts invariant speed starwheel to infeed ampoules and stepping type positioning for filling and sealing, it has good running stability and high qualified product rate. It can be equipped with glass pump, stainless steel pump, ceramic pump or peristaltic pump for filling as per customer's requirement.
- + Based on all kinds of advanced technology in our company, together
 with the modern filling principle, we designed and developed
 this kind of high speed ampoule sterile filling& sealing machine.
 There are options for ORABS, CIP&SIP for filling system. The high
 configuration of this method can fully meet EU cGMP and FDA
 standard.

🏩 产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	燃气耗量 Gas Consumption	氧气耗量 Oxygen Consumption	电容量 Power	净质量 Net Weight	外形尺寸 (含层流罩高度) Overall Dimension Including LF
AGFH20/16	1-5ml	10000-38000 pcs/h	0.03-0.05mPa 0.8m³/h	0.3-0.5mPa 2.4m³/h	12.8kW (7kW)	4000kg	4100×1800×1900mm
AGFH20/12	1-20ml	8000-28800 pcs/h	0.03-0.05mPa 0.6m³/h	0.3-0.5mPa 1.8m³/h	11.2kW (7kW)	4000kg	4100×1800×1900mm
AGFH16/12	1-10ml	8000-28800 pcs/h	0.03-0.05mPa 0.6m³/h	0.3-0.5mPa 1.8m³/h	10.9kW (6.7kW)	3400kg	3600×1800×1900mm
AGFH16/10	1-20ml	6000-24000 pcs/h	0.03-0.05mPa 0.5m³/h	0.3-0.5mPa 1.5m³/h	10.1kW (6.7kW)	3400kg	3600×1800×1900mm
AGFH8	1-20ml	6000-19000 pcs/h	0.03-0.05mPa 0.4m³/h	0.3-0.5mPa 1.2m³/h	8.55kW (5kW)	2600kg	3120×1800×1840mm
AGFH8/6	1-20ml	6000-18000 pcs/h	0.03-0.05mPa 0.3m³/h	0.3-0.5mPa 0.9m³/h	6.95kW (4.2kW)	2200kg	2800×1800×1840mm
AGFH8/4	1-20ml	3000-12000 pcs/h	0.03-0.05mPa 0.2m3/h	0.3-0.5mPa 0.6m3/h	6.15kW (4.2kW)	2200kg	2800×1800×1840mm

KLX系列西林瓶洗烘灌封联动线

KLX Series Linear Shape Vial (Liquid) Compact Line For Washing, Sterilizing & Drying, Filling & Plugging, Sealing



≙ 主要用途 / Main Application

本联动线组由 KQCL 系列立式超声波洗瓶机、KSZ 系列隧道式灭菌干燥机、KGSA 系列灌装加塞机、ZG 系列轧盖机四台单机组成。每台可单机使用,也可联动生产,联动生产时可完成喷淋水、超声波清洗、机械手夹瓶、翻转瓶、冲水(瓶内、外)、冲气(瓶内、外)、预热、烘干灭菌、去热原、冷却、理瓶、(前充氮)、灌装、(后充氮)、理塞、压塞、理盖、轧盖等二十多个工序。主要用于制药厂西林瓶水针剂和冻干粉针剂的生产。

This line is composed of KQCL series vertical ultrasonic washing machine, KSZ series sterilizing & drying tunnel, KGS series filling & plugging machine, ZG series capping machine. Each machine can run independently, or be connected as a compact line. It could finish processing procedures such as: water spraying, ultrasonic washing, clamping & overturning vials by manipulator, water flushing(internal and external), air flushing(internal and external), pre-heating, drying & sterilizing, depyrogenation, cooling, vial orienting, (pre-nitrogen), filling, (post-nitrogen), stoppers orienting, plugging, caps orienting, capping and so on. It is mainly used for production of vial liquid and lyophilized products in pharmaceutical factories.

△ 性能优势 / Performance Advantage

- 立式超声波清洗机采用超声波清洗与水气独立分开压力喷射冲洗相结合方式,是目前国际最流行、可见异物检测效果最好的清洗设备。整个水气压力喷射清洗过程中,三种介质均采用独立喷针,每一根喷针只固定一种清洗介质,完成一种冲洗清洗工序,避免了交叉污染;
- + Vertical ultrasonic washing machine adopts ultrasonic washing and alternant jetting water and airflow. It is the most popular washing equipment with highest clarity in the world. In whole washing process, three washing media adopt independent needles, each group of needles only flush one washing medium, avoids cross contamination

- ◎ 隧道式灭菌干燥机采用层流原理和热空气高温灭菌工艺,使容器在密闭隧道内的A级层流环境下完成预热、干燥、灭菌、去热原和冷却的无菌生产工艺流程,是目前国际最流行、灭菌效果最好的烘干灭菌设备,其热分布均匀,去热原效果好;
- 西林瓶灌装加塞机采用同步带 V 型块进行定位,灌装针头进行往复跟踪灌装,直线连续式上塞、旋转式压塞,是目前国际最流行、定位、灌装、加塞合格率最高的设备;
- 轧盖机采用小单刀旁置随动滚压式轧盖原理,且轧刀在上下、圆周方向均有微调量,其轧盖合格率高,适应性好;
- 采用 PLC 控制人机界面操作,能联动控制和单机操作,保证了整个机组的正常运行,其自动化程度高,操作人员少,劳动强度低。

- + Sterilizing & drying tunnel adopts the principle of laminar flow and hot air high temperature sterilization process, which can make containers finish aseptic production from pre-heating, drying, sterilizing and cooling under class A laminar flow in closed tunnel. It is the most popular sterilizing & drying equipment with best sterilizing effect. It has good heat distribution and depyrogenation effect.
- + The vial filling and stoppering machine adopts synchronous belt V-shaped block for positioning, filling needle for reciprocating tracking filling, linear continuous stopper feeding, rotary stopper pressing, it is the most popular equipment for positioning, filling and stoppering with the highest qualified rate in the world.
- + Vial filling & plugging machine adopts synchronous belt with V block to locate, reciprocating tracking filling, linear continuous stopper taking and rotary stopper plugging, it has the most popular and highest qualified rate on bottle orienting, filling and plugging in the world. Capping machine adopts single knife capping method. There is fine-tuning on top, bottom and circle direction. It has high capping qualified rate and good adaptability.
- It adopts PLC control with HMI operation, which can control the whole line running or independent machine. It ensures normal running of the compact line with high automation, fewer operator and low labor intensity.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimensions
KLX2 ∼ 20-D	2-30ml	6000-30000pcs/h	132.5kW	11000kg	12000×2800×2400mm
KLX2 ∼ 20-C	2-30ml	6000-27000pcs/h	112kW	8700kg	12000×2600×2340mm
KLX2 ∼ 20-B	2-30ml	6000-18000pcs/h	90kW	7600kg	10300×2600×2340mm
KLX2 ∼ 20-A	2-30ml	6000-12000pcs/h	73.5kW	7100kg	9400×2600×2340mm
KLX2~20-E	2-100ml	6000-36000pcs/h	196KW	21000kg	20800×4150×2400mm

10 TRUKING

KQCL 系列西林瓶立式超声波清洗机

KQCL Series Vertical Ultrasoni Washing Machine



主要用途 / Main Application

主要用于制药厂西林瓶的清洗,也可用于安瓿瓶、口服液瓶等药用玻璃容器的清洗。

This machine is mainly used for washing of vials in pharmaceutical factories; It also can be used for washing glass containers such as ampoules and oral liquid bottles.

🏩 性能优势 / Performance Advantage

本机为立式转鼓结构,采用机械手夹瓶、翻转和喷针作往复跟踪方式;利用超声波清洗和三水三气交替喷射冲洗的原理,对容器逐个清洗。循环水、压缩空气、注射用水均使用独立的喷针,插入瓶内冲洗,无交叉污染,水、气无压力损失,节约能源,且清洗效果好。同时还可目测到整个清洗过程,操作维护方便。

This machine uses vertical gyration structure. Vertical drum compact structure, adopts the manipulator to clamp the bottle and turn over; and the spray needles make reciprocating tracking motions; It adopts the principle of ultrasonic cleaning and alternant jetting water & airflow washing to clean the vials one by one. Circulation water, compressed air and WFI adopt independent needles which are inserted into vial to flush, no cross contamination, no water and air loss, energy saving, and good washing effect. It can observe whole washing process, and is convenient for operation and maintenance.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	耗水量 Water Consumption	耗气量 Air Consumption	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KQCL28/5	1-20ml	8000-32000 pcs/h	0.2-0.3MPa 1.2m³/h	0.6mPa60m ³ /h	28kW	4000kg	2530×2850×1620mm
KQCL28/4	1-25ml	8000-26000 pcs/h	0.2-0.3MPa 1.0m³/h	0.6mPa50m ³ /h	28kW	4000kg	2530×2850×1620mm
KQCL28/3	1-30ml	6000-19000 pcs/h	0.2-0.3MPa 0.9m³/h	0.6mPa45m³/h	28kW	4000kg	2530×2850×1620mm
KQCL20/5	1-20ml	6000-29000 pcs/h	0.2-0.3MPa 0.9m³/h	0.6mPa45m ³ /h	19kW	2400kg	2510×2400×1840mm
KQCL20/4	1-25ml	6000-23000 pcs/h	0.2-0.3MPa 0.8m³/h	0.6mPa40m³/h	19kW	2400kg	2510×2400×1840mm
KQCL20/3	1-30ml	6000-17000 pcs/h	0.2-0.3MPa 0.6m³/h	0.6mPa35m³/h	19kW	2400kg	2510×2400×1840mm
KQCL20/2	1-100ml	2400-11000 pcs/h	0.2-0.3MPa 0.5m³/h	0.6mPa30m³/h	19kW	2400kg	2510×2400×1840mm
KQCLS12/3	1-50ml	3600-9200 pcs/h	0.25-0.35MPa 0.5m³/h	0.6mPa30m³/h	26kW	2200kg	2230×2750×1450mm
KQCLS12/4	1-30ml	4800-12200 pcs/h	0.25-0.35MPa 0.6m³/h	0.6mPa35m³/h	26kW	2200kg	2230×2750×1450mm
KQCLS20/3	1-100ml	6000-15300 pcs/h	0.25-0.35MPa 0.6m³/h	0.6mPa35m³/h	27kW	3400kg	2530×2850×1840mm
KQCLS20/4	1-40ml	8000-20400 pcs/h	0.25-0.35MPa 0.8m³/h	0.6mPa40m³/h	27kW	3400kg	2530×2850×1840mm
KQCLS20/5	1-30ml	10000-25500 pcs/h	0.25-0.35MPa 0.9m³/h	0.6mPa45m³/h	27kW	3400kg	2530×2850×1840mm
KQCLS20/6	1-25ml	12000-30600 pcs/h	0.25-0.35MPa 1.0m³/h	0.6mPa50m³/h	27kW	3400kg	2530×2850×1840mm
KQCL28/5H	2-100ml	8000- 36000pcs/h	0.2-0.3MPa 1.2m³/h	0.6mPa60m³/h	28KW	4400kg	2970×2440×1990mm

KSZ 系列隧道式灭菌干燥机

KSZ Series Sterilizing & Drying Tunnel



≙ 主要用途 / Main Application

主要用于制药厂西林瓶的烘干、灭菌、去热原。也 可用于安瓿瓶、口服液瓶等药用玻璃容器的烘干灭 菌。 This machine is mainly used for sterilizing, drying and depyrogenation of vials and other medical glass bottles such as ampoules and oral liquid bottles in pharmaceutical factories

TRUKENG

性能优势 / Performance Advantage

本机为整体隧道式结构,分为预热、高温灭菌、冷却三部分。采用热空气层流原理和热空气高温灭菌工艺对容器进行灭菌、去热原,采用负压密封,分流技术等核心专利技术,热分布均匀、去热原效果好。

The tunnel is divided into three zones: pre-heating zone, sterilizing zone and cooling zone. It adopts the principle of laminar flow and hot air high temperature sterilization process to realize containers' sterilization and depyrogenation; adopts core patent technologies such as negative pressure sealing and air flow dividing, and has good heat distribution and depyrogenation effect.



产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	输送带 有效宽度 Valid Width of Conveyor Belt	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KSZ920/100B	2-100ml	2500-47000pcs/h	900mm	129kW	7200kg	5730×2050×2400mm
KSZ620/75B	2-100ml	780-31800pcs/h	600mm	90kW	5200kg	4940×1700×2410mm
KSZ620/60B	2-100ml	780-24000pcs/h	600mm	72kW	4500kg	4310×1700×2410mm
KSZ620/43B	2-100ml	600-16000pcs/h	600mm	54kW	4000kg	3680×1700×2410mm
KSZ420/20	2-100ml	300-8100pcs/h	400mm	35kW	2800kg	2360×1465×2350mm
KSZ1200/60	10-100ml	2200-22000pcs/h	1220mm	78kW	7000kg	4410 ×2310×3175mm
KSZ1200/100	10-100ml	3600-35000pcs/h	1220mm	143kW	11000kg	5510 ×2310×3175mm
KSZ1200/120	10-100ml	4200-41000pcs/h	1220mm	146kW	14000kg	7930 ×2310×3175mm
KSZ1200/160	10-100ml	5800-57000pcs/h	1220mm	191kW	18000kg	9030 ×2310×3175mm
KSZ1200/180	10-100ml	6400-60000pcs/h	1220mm	214kW	21000kg	9430×2310×3175mm
KSZ1200/240	10-100ml	8400-82000pcs/h	1220mm	278kW	36000kg	13000×2310×3175mm
KSZ1200/60M	2-100ml	2200-41000pcs/h	1220mm	129kW	9000kg	4428×3068×3025mm

14 TRUKING

KGSA12A、KGSA6A 系列西林瓶灌装加塞机

KGSA12\KGSA6 Series Linear Filling & Plugging Machine



主要用途 / Main Application

主要用于制药厂西林瓶水针剂和冻干粉针剂的灌装 和加塞。

It is mainly used for filling and plugging of vial liquid and lyophilized products in pharmaceutical factories.

🏩 性能优势 / Performance Advantage

- 本机采用单排水平同步带输瓶、由伺服电机控制拨 轮进瓶、灌针直线水平往复跟踪、整体式吸盘加塞 及出瓶,自动完成理瓶、进瓶、(前充氮)、灌装、(后 充氮)、理塞、加塞等工序,可选择性完成半加塞或 全加塞工艺;
- ◎ 本机为我公司集成和延伸的各种先进技术基础上,结合现代灌装原理,设计、开发的一种新型全伺服控制的高速无菌灌装加塞机,可选配 ORABS 系统、在线 IPC 称重计量系统和灌装 CIP/SIP 系统等。本机高配时可完全符合 EUcGMP 和 USFDA 等国际标准。
- + This machine adopts single row synchronous belt for conveying, and servo motor control for following movement: infeed via starwheel, filling needle up and down & fro and back, integral type sucker plugging and outfeed. It can automatically finish procedures of vial orienting, conveying, (pre-nitrogen), filling,(post-nitrogen), stopper orientation, plugging etc. For the plugging, it can do full plugging and half plugging.
- + Based on all kinds of advanced technology in company, together with the filling principle, we designed and developed this kind of high speed sterile filling machine with all servo system. There are options for ORABS, IPC weighing system, CIP&SIP for filling system. The high configuration of this method can fully meet EU cGMP and FDA standard.

TRUKENG P

产品参数 / Product Parameters

型묵 Model	适应规格 Suitable Sizes	生产能力 Output	灌装 头数 Filling Heads	压塞 头数 Stoppering Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KGSA12A/16	2-100ml	6000- 33000pcs/h	16	12/18/24	32KW	7000kg	5975×2070×1900mm
KGSA14	2-100ml	6000- 36000pcs/h	14	16/24/32	35KW	7000kg	6065×3377×1900mm
KGSA12A	2-100ml	7200- 30000pcs/h	12	12/18/24	30kW	6800kg	5975×2070×1900mm
KGSA12A/10	2-100ml	6000- 27000pcs/h	10	12/18/24	28kW	6800kg	5975×2070×1900mm
KGSA12A/8	2-100ml	5400- 24300pcs/h	8	12/18/24	26kW	6800kg	5975×2070×1900mm
KGSA6A	2-100ml	3600- 16200pcs/h	6	12/18/24	25kW	5400kg	4830×2470×1900mm
KGSA6A/4	2-100ml	2400- 10800pcs/h	4	12/18/24	23kW	5400kg	4830×2470×1900mm

16 TRUKING

KGSB 系列西林瓶灌装加塞机 KGSB Series L Shape Filling & Plugging Machine



🗻 主要用途 / Main Application

本机主要用于制药行业中 2-100ml 规格的西林瓶的 灌装加塞。

本机采用行走梁形带式的传输方式、直线式灌装与 抓取式加塞(KGSB4A)/旋转式加塞(KGSB8A) 的结构,自动完成从理瓶、前称重、灌装、后称重、 上塞、加塞到出瓶的全套生产过程。

本机为楚天与德国 Romaco 集团共同联合开发,引入欧洲研究院的先进技术,确保了全称重灌装机的稳定运行及精准装量.整机运行稳定,生产速度高,处于国内顶尖技术水平。

Mainly used for filling and stoppering of 2-100ml vials in the pharmaceutical industry.

The running beam bottle transmission mode, the structure of linear filling and grab-type stoppering (KGSB4A)/rotary stoppering (KGSB8A), can automatically complete the whole process from unscramble bottles, pre-weighing, filling and post-weighing, stopper putting, stoppering and the outfeed.

This machine introduces the advanced technology of the European Research Institute to ensure the stable operation, accurate filling and high-speed production.

TRUKEIG

性能优势 / Performance Advantage

- 采用全伺服控制系统,可确保设备长期运行平稳、 精准,故障率及碎瓶率最低;并调节、维护简单快捷 及后期运行维护费用更低。
- 进瓶方式为理瓶盘+转盘+扇形拨块进瓶,降低理瓶盘转速一半,避免了因理瓶盘转速过快导致瓶子 在理瓶盘到瓶的风险。
- ◎ 改变传统滚压式上塞加塞方式,引入德国 ROMACO 高端技术采用先进的机器手抓取式取塞方式,上塞 平稳、不倒瓶。彻底解决了以前绞龙输瓶引起的倒瓶、瓶塞对位不准、加塞不到位以及跳塞等现象,有效 的保证了上塞的合格率。还可以根据用户的需求(生产工艺的不同)配方化管理从而精准的实现全加塞或半加塞。本公司独创已申报专利 KGSB4A 适用。
- The full-servo control system can ensure the equipment runs smoothly and accurately for a long time, with the lowest failure rate and bottle-broken rate, with the lower adjustment and maintenance costs
- The bottle feeding through the combination of bottle unscrambler + tray + fan-shaped dial, which reduces the rotation speed of the bottle unscrambler by half, and avoids the risk of the bottle-backing.
- + Introduced European advanced robot grab-stopper technology. It completely solves the problem of bottle backing, inaccurate bottle stopper alignment, inaccurate stoppering and jumping stopper caused by auger conveying bottle in the past. Optional full-stoppering and half-stoppering solutions according to users' needs.

TRUK BG

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	灌装 头数 Filling Heads	压塞 头数 Stoppering Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KGSB8A	2-100ml	3000- 19200pcs/h	8	12/24	35kW	6500kg	5370×2086×1900mm
KGSB8A/6	2-100ml	2400- 14400pcs/h	6	12/24	35kW	6500kg	5370×2086×1900mm
KGSB8A/8	2-100ml	3000- 9600pcs/h	4	12	35kW	6500kg	5370×2086×1900mm
KGSB4A	2-100ml	1500- 9000pcs/h	4	4	31kW	4500kg	5300×2020×1900mm
KGSB4A/2	2-100ml	1500- 4500pcs/h	2	2	31kW	4500kg	5300×2020×1900mm

ZG 系列西林瓶轧盖机 ZG Series Capping Machine





主要用途 / Main Application

主要用于制药厂西林瓶的轧盖封口

This machine is mainly used for capping of vials in pharmaceutical factories.

性能优势 / Performance Advantage

- ◎ 本机采用旁置单刀柔性滚压轧盖结构,自动完成输 瓶、上盖、轧盖等工序。根据设备放置房间洁浄级 别的不同,选择以下不同功能配置的机型;
- + This machine adopts single knife following capping structure, It can automatically finish vial conveying, cap infeeding and capping etc. According to different cleaning levels of machine room, it can choose the following model with different function configuration.



企 产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	轧盖头数 Capping	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
ZG6A	2-50ml	1800-6000 pcs/h	6	5.2kW	900kg	1740×1900×2000mm
ZG15A	2-100ml	3600-24000 pcs/h	15	7.6kW	1700kg	2360×2300×2000mm
ZG10A	2-250ml	3000-18000 pcs/h	10	11kW	2500kg	1985×2020×1900mm
ZG16A	2-100ml	9000-33000 pcs/h	16	12kW	3500kg	3460×2010×1900mm
ZG16S	2-100ml	9000-36000pcs/h	16	17KW	3500kg	2705×2550×1900mm

KLXF 系列西林瓶粉针分装洗烘灌封联动线

KLXF Series Vial (Powder) Compact Line For Washing, Sterilizing & Drying, Filling & Plugging, Sealing



全主要用途 / Main Application

主要用于制药厂西林瓶无菌粉针剂类药物的生产。

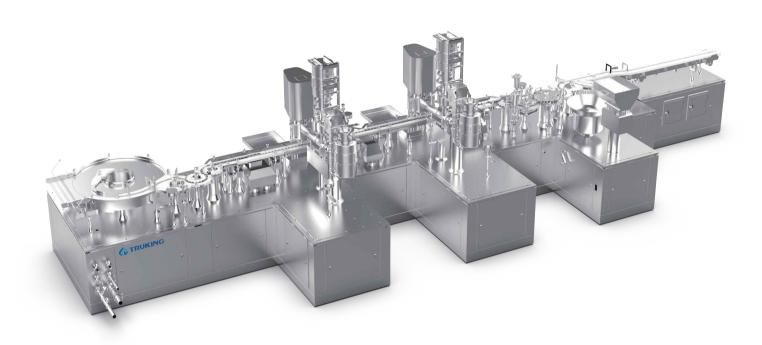
Mainly used in the production of sterile powder filling & stoppering of vials in pharmaceutical factories.

⚠ 产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	分装形式 Filling Method	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
KLXF5 ~ 100-A	5-100ml	1000-7200pcs/h	Augertype	76kW	8000kg	10000×2600×2340mm
KLXF5 ∼ 100-B	5-30ml	6000-18000pcs/h	Augertype	90kW (68kW)	9000kg	11000×2600×2340mm

PDA 系列西林瓶螺杆分装机

PDA Series Powder Auger Filling & Plugging Machin



🌊 主要用途 / Main Application

主要用于制药厂西林瓶无菌粉针剂类药物的分装和加塞

It mainly used for sterile powder filling & plugging of vial in the pharmaceutical industry.

性能优势 / Performance Advantage

- 本机采用全伺服结构,自动完成原点定位,减少安装调试时间,自动完成包材的理瓶、输送、分装、理塞、加塞等工序;
- PDA 系列螺杆分装机采用扇形块+行走梁的结构, 可实现柔性进瓶、间歇灌装;
- 国际先进的五连杆行走梁走瓶结构,清洁方便,无卫生死角,整机间歇走瓶,分装精度高,操作便捷;
- ◎ 采用震动送粉和螺杆送粉两种方式应对不同药粉;
- ◎ 配置全称重系统,实现高精度分装,且自动化程度高,为当前最领先技术,完全符合 EUcGMP 和 USFDA 标准;
- ◎ 选配异物检测功能,增强品质把控。

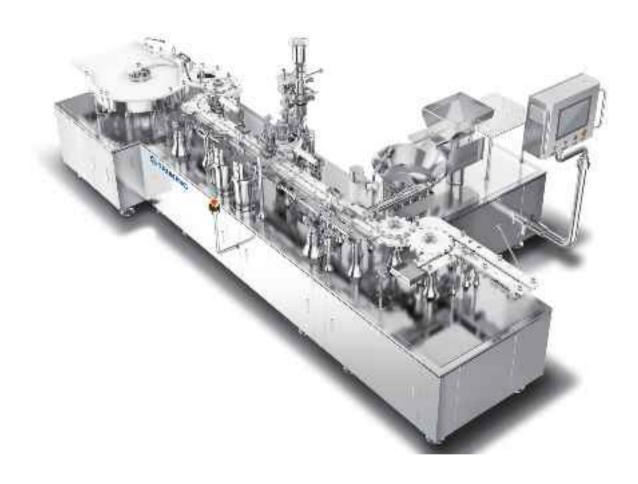
- The full-servo system, which automatically completes the origin positioning, reduces the installation and debugging time, and automatically completes the processes of bottle unscrambling, conveying, packing, stopper unscrambling and stoppering;
- + The structure of running beam and fan-shaped dial, which can realize the flexible bottle feeding and intermittent filling;
- Advanced 5-link running beam bottle transmission mode structure, easy to clean, intermittently bottles running, high packaging precision, convenient operation;
- Vibration powder feeding and screw powder feeding solutions to deal with different drugs;
- Equipped with a full-weighing system to achieve high-precision packaging and a high degree of automation, EUcGMP and USFDA compliant;
- + Foreign bodies detection function optional.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable sizes	生产能力 Output	分装范围 Filling range	分装头数 Filling heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall dimension
PDA2	5-100ml	1000-7200pcs/h	0.2-25g	2	20kW	3600kg	5900×2985×2100mm
PDA4	5-100ml	1000-13000pcs/h	0.2-25g	4	30KW	6500kg	7500×2985×2100mm

PDS 系列气流插管式粉末分装机

PDS Series Intubation Powder Packager



📤 主要用途 / Main Application

主要用于西林瓶无菌粉针类药物定量分装,并同机 完成加塞的机器;可用于与隧道烘箱、自动进出料系统联机运行或独立运行。

It is mainly used for quantitative packing of sterile powder needle drugs in cillin bottle, and the machine with which the plug is added; it can be used for on-line operation or independent operation with tunnel oven, automatic feeding system.

性能优势 / Performance Advantage

- PDS4系列全伺服粉末分装机采用行走梁结构、相对静止时定位灌装、间歇式压塞,是目前国际流行且加塞合格率高的设备;
- ◎ 采用全伺服驱动系统,无机械传动;
- ◎ 适应规格 2-100ml, 灌装范围 20mg-1500mg, 精度 ±0.5%-±5%;
- ◎ 采用气流式分装,无机械磨损;
- ◎ 采用行走梁结构,易清洁,无卫生死角;
- ◎ 采用间歇式压塞结构,规格切换无需人工操作;
- ◎ 规格件免工具快速更换;
- ◎ 可配置在线 IPC 称重计量系统;
- ◎ 可配置充氮功能(灌装前、灌装中、灌装后、压塞前);
- ◎ 可配置隔离器;
- 遵循 21CFR part11、GAMP5,符合 EU cGMP 和 US FDA 等国际标准。

- PDS4 series of full servo powder packer adopts walking beam structure, positioning filling at relative rest, intermittent pressing plug.
- + Adopt full servo drive system, no mechanical drive;
- + Suitable Specification 2-100 ml, Filling Range 20 mg-1500mg, Precision 0.5%-±5%;
- + Air-flow sub-loading, no mechanical wear;
- + Adopt walking beam structure, easy to clean, no sanitary dead angle;
- Intermittent plug structure is adopted. No manual operation is required for specification switching.
- + Specification parts without rapid replacement of tools;
- + Configurable online IPC weighing system;
- + Can be equipped with nitrogen filling function (before filling, during filling, after filling, before pressing);
- + Configurable isolator;
- + follow 21 CFR part11、GAMP5, comply with international standards such as EU cGMP and US FDA.

🏩 产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	分装范围 Fillimg Range	分装头数 Filling Heads	电容量 Power	净质量 Net Weight	外形尺寸 Overall Dimension
PDS2	2-100ml	2000pcs/h	20mg- 1500mg	2 (1+1)	25kW	4500kg	4500×2200×2300mm
PDS4	2-100ml	4500pcs/h	20mg- 1500mg	4 (2+2)	30KW	4500kg	4500×2200×2300mm
PDS4- AB	2-100ml	4500pcs/h	20mg- 1500mg	8 (4+4)	32KW	5400kg	5500×2200×2300mm
PDS4- ABC	2-100ml	4500pcs/h	20mg- 1500mg	12 (4+4+4)	35KW	6000kg	7900×2200×2300mm
PDSH16	2-100ml	12000pcs/h	20mg- 1500mg	16 (8+8)	30KW	6500kg	8000×2980×2100mm
PDSM	2-100ml	3600pcs/h (粉) 15000pcs/h (液)	20mg- 1500mg	4 (2+2)	30KW	5000kg	4500×2200×2300mm

SMART-N 系列预灌封无菌分装系统 SMART-N Series PFS Solution



📤 主要用途 / Main Application

SMART-N系列预灌封无菌分装线是一种适用于中试生产、小批量产能的预灌封分装解决方案。灵活的模块化设计能够进一步满足小批量,多批次的生产需要。同时整体结构紧凑,空间占用小,整线可根据需求灵活配置隔离系统,包含:ORABS、CRABS、ISOLATOR。可以完全兼容卡式瓶、西林瓶及预充针等不同规格的巢式包材,通过拆外包、拆内包、灌装及加塞,实现药品的无菌分装,可配置充氮、真空加塞、真空灌装等功能。系列下可选机型包括:PDBM手动拆外包机,PDLM手动拆内包机,PFSS 预灌封中试灌装加塞机。

SMART-N series is a nested container primary packaging solution for the trial phase and small batch production. The flexible modular can meet the production needs of small and multiple batches. At the same time, the overall structure is compact, and the space occupation is small, the entire line can be configured with ORABS, CRABS and ISOLATOR. It can be fully compatible with different container such as nested cartridges, nested vials and PFS. Not only the common process as de-bagging, de-lidding, filling and stoppering, but also the nitrogen filling/stoppering, vacuum filling/stoppering and other customized functions the system can provide. Optional models under the series include: PDBM(maunal de-bagging machine), PDLM(manual de-lidding machine), PFSS(filling and stoppering machine for trial).

26 TRUKING

🗻 优势特点 / Performance Features

- ◎ 占地面积小,使用更灵活
- ◎ 伺服驱动,精度高
- 兼容性高,可适用目前市面上所有的巢式预充针、 卡式瓶与西林瓶
- ◎ 人员需求少
- ◎ 故障率低,稳定性高,维护时间少
- ◎ 污染风险小,安全系数高
- ◎ 生产速度可无极调节
- ◎ 配置灵活,可根据需求选择灌装及加塞系统
- ◎ 功能丰富,可配置充氮、真空灌装、真空加塞等功能
- ◎ 灵活配置隔离系统: ORABS、CRABS、ISOLATOR
- ◎ 适用于混悬液、高粘度等特殊产品

- + More compact, more flexible
- + Full servo driven, high precision
- + High compatibility, applicable to all nested container currently on the market
- + Few personnel requirements
- + Low failure rate, high stability, less maintenance time
- + Low risk of contamination, high safety
- + Production speed can be adjusted steplessly
- + Flexible configuration, filling and stoppering system can be selected
- Rich functions, can be configured with nitrogen filling, vacuum filling, vacuum stoppering, etc
- + Suitable for ORABS, CRABS, ISOLATOR
- + Suitable for special products such as suspension and high viscosity

🗻 主要技术参数 / Technical Data

机型 Model	最大产能 Max Capacity	灌装头数 Filling Heads	能耗 Power	重量 Weight	外形尺寸 (LxWxH)Dimension(LxWxH)
PFSS2	4100pcs/h	2	14kW	1500kg	2300×1150×1900mm
PFSS5	7300pcs/h	5	16kW	1500kg	2300×1150×1900mm

(注:最大产能基于 1ml 预充针 / Maximum production capacity is based on 1ml syringe)

ULTRA-N 系列灌封无菌分装系统 ULTRA-N Series PFS Solution



TRUKE

主要用途 / Main Application

ULTRA-N 系列预灌封无菌分装线是一种适用于血液制品、生物药等中等批量商业化生产的预灌封分装解决方案。整线全伺服控制,运行稳定,高度自动化,可以有效减少人员干预,进一步提高药品生产的无菌保障,整线可根据需求灵活配置隔离系统,包含:ORABS、CRABS、ISOLATOR。适用于巢式预充针、卡式瓶与西林瓶,通过拆外包、拆内包、灌装、加塞,实现药品的无菌分装,同时可以配置IPC取样称重、充氮、真空灌装、真空加塞等功能。系列下可选机型包括:PDBA自动拆外包机/PDBS半自动拆外包机,PDLA自动拆内包机,PFSA预灌封中高速自动灌装加塞机。

ULTRA-N series is a nested container primary packaging solution suitable for medium-batch commercial production of blood products and biological drugs. The whole line is fully servo controlled, stable in operation, and highly automated, which can effectively reduce human intervention and further improve the sterility guarantee of pharmaceutical production. The entire line can be configured with ORABS, CRABS and ISOLATOR. It can be fully compatible with different container such as nested cartridges, nested vials and PFS. Not only the common process as de-bagging, de-lidding, filling and stoppering, but also the nitrogen filling/stoppering, vacuum filling/stoppering and other customized functions the system can provide. Optional models under the series include: PDBA(Automatic de-bagging machine)/ PDBS(semi-auto de-bagging machine), PDLA(automatic de-lidding machine), PFSA(filling and stoppering machine).

⚠ 优势特点 / Performance Features

- ◎ 采用直线布局,操作维护便捷
- ◎ 伺服驱动,动作灵敏、定位精度高
- ◎ 故障率低,稳定性高,维护时间少
- 兼容性高,可适用目前市面上所有的巢式预充针、 卡式瓶与西林瓶
- ◎ 自动化程度高,人员配置少,少至2人
- ◎ 污染风险小,安全系数高
- ◎ 生产速度可无极调节
- ◎ 配置灵活,可根据需求选择灌装及加塞系统
- ◎ 功能丰富,可实现 IPC 取样称重、充氮、真空灌装、 真空加塞
- ◎ 灵活配备隔离系统: ORABS、CRABS、ISOLATOR
- ◎ 适用于混悬液、高粘度等特殊产品

- + Straight-line layout is adopted, which is convenient for operation and maintenance
- + Full servo driven, sensitive action, high positioning accuracy
- + Low failure rate, high stability, less maintenance time
- High compatibility, applicable to all nested container currently on the market
- + High degree of automation, less staffing, as few as 2 people
- + Low risk of contamination, high safety
- + Production speed can be adjusted steplessly
- + Flexible configuration, filling and stoppering system can be selected
- + Rich functions, can be configured with IPC nitrogen filling, vacuum filling, vacuum stoppering, etc
- + Suitable for ORABS, CRABS, ISOLATOR
- + Suitable for special products such as suspension and high viscosity

📤 主要技术参数 / Technical Data

机型 Model	最大产能 Max Capacity	灌装头数 Filling Heads	能耗 Power	重量 Weight	外形尺寸 (LxWxH)Dimension(LxWxH)
PFSA2	4800 pcs/h	2	21kW	3000kg	2400×1200×1900mm
PFSA5	9800 pcs/h	5	23kW	3000kg	2400×1200×1900mm
PFSA10	15000pcs/h	10	27kW	3000kg	2400×1200×1900mm

(注:最大产能基于 1ml 预充针 / Maximum production capacity is based on 1ml syringe)

ROBOTIC-N 系列灌封无菌分装系统

ROBOTIC-N Series PFS Solution



TRUKES

主要用途 / Main Application

ROBOTIC-N 系列预灌封无菌分装线是一种适用于CDMO等高柔性使用场景的分装线。整线采用两台智能无菌机器人,功能高度集成,极大降低设备的复杂度的同时,可以保障环境的无菌性,提供卓越的运行稳定性,整线可根据需求灵活配置隔离系统,包含:ORABS、CRABS、ISOLATOR。适用于巢式预充针、卡式瓶与西林瓶,通过拆外包、拆内包、灌装及加塞,实现药品的无菌分装,同时可以配置IPC 取样称重、充氮、真空灌装、真空加塞等功能。系列下可选机型包括:PDBA 自动拆外包机 /PDBS 半自动拆外包机,PDLR 机器人拆内包机,PFSR 预灌封机器人自动灌装加塞机。

ROBOTIC-N series is a nested container primary packaging solution suitable for medium-batch commercial production of blood productions and biological drugs. The whole line adopts two intelligent sterile robots with highly integrated functions, which greatly reduces the complexity of the equipment, while ensuring the sterility of the environment and providing excellent operational stability. The entire line can be configured with ORABS, CRABS and ISOLATOR. It can be fully compatible with different container such as nested cartridges, nested vials and PFS. Not only the common process as de-bagging, de-lidding, filling and stoppering, but also the nitrogen filling/stoppering, vacuum filling/stoppering and other customized functions the system can provide. Optional models under the series include: PDBA(automatic de-bagging machine)/ PDBS(semi-auto de-bagging machine), PDLR(robotic de-lidding machine), PFSR(robotic filling and stoppering machine).

30 TRUKING

优势特点 / Performance Features

- ◎ 采用直线布局,操作维护便捷,美观大方
- ◎ 机器人驱动,动作灵敏、定位精度高
- ◎ 结构极大简化,进一步提高无菌保障
- 兼容性高,可适用目前市面上所有的巢式预充针、 卡式瓶与西林瓶
- ◎ 自动化程度高,人员配置少,少至2人
- ◎ 故障率低,稳定性高,维护时间少
- 采用超洁净无菌机器人,机构更简洁,污染风险更小, 安全系数高
- 灌装精度高,配置高精度柱塞泵或蠕动泵进行灌装, 每个泵可独立微调
- ◎ 配置灵活,可根据需求选择灌装及加塞系统
- ◎ 功能丰富,可实现 IPC 取样称重、充氮、真空灌装、 真空加塞
- ◎ 灵活配置隔离系统: ORABS、CRABS、ISOLATOR
- ◎ 适用于混悬液、高粘度等特殊产品

- + Straight-line layout is adopted, which is convenient for operation and maintenance, beautiful and generous
- + Robot driven, sensitive movement and high positioning accuracy
- + The structure is greatly simplified, and the sterility guarantee is further improved
- high compatibility, applicable to all nested container currently on the market
- + High degree of automation, less staffing, as few as 2 people
- + Low failure rate, high stability, less maintenance time
- Using ultra-clean sterile robots, the mechanism is more concise, the pollution risk is smaller, and the safety factor is high
- High filling accuracy, equipped with high-precision plunger pump or peristaltic pump for filling, each pump can be fine-tuned independently
- + Flexible configuration, filling and stoppering system can be selected
- Rich functions, can be configured with IPC nitrogen filling, vacuum filling, vacuum stoppering, etc
- + Suitable for ORABS, CRABS, ISOLATOR
- + Suitable for special products such as suspension and high viscosity

📤 主要技术参数 / Technical Data

机型 Model	最大产能 Max Capacity	灌装头数 Filling Heads	能耗 Power	重量 Weight	外形尺寸 (LxWxH) Dimension (LxWxH)
PFSR2	4800 pcs/h	2	26kW	4000kg	2750×1200×1900mm
PFSR5	9800 pcs/h	5	27kW	4000kg	2750×1200×1900mm
PFSR10	15000pcs/h	10	29kW	4000kg	2750×1200×1900mm

(注:最大产能基于 1ml 预充针 / Maximum production capacity is based on 1ml syringe)

EXTREME-N 系列灌封无菌分装系统

EXTREME-N Series PFS Solution



🗻 主要用途 / Main Application

EXTREME-N 系列预灌封无菌分装线是一种适用于疫苗、GLP-1等大批量商业化生产的高速预灌封分装线。拆内包机采用洁净无菌机器人撕膜,提高设备的运行稳定性及无菌保障,同时去盒盖纸及内衬纸分工位设计,满足整线高速运行需求。整线可根据需求灵活配置隔离系统,包含:ORABS、CRABS、ISOLATOR,通过拆外包、拆内包、灌装及加塞,实现药品的无菌分装,同时可以配置IPC取样称重、充氮、真空灌装、真空加塞等功能。系列下可选机型包括:PDBH高速自动拆外包机,PDLH高速自动拆内包机,PFSH预灌封高速自动灌装加塞机。

EXTREME-N series is a high-speed nested container primary packaging solution suitable for large-scale commercial production of vaccines and GLP-1. The de-lidding machine adopts a clean aseptic robot to tear the lid to improve the operation stability and aseptic guarantee of the equipment. At the same time, the separate station removing lid and the liner are designed to meet the needs of high-speed operation of the entire line. The entire line can be configured with ORABS, CRABS and ISOLATOR. Not only the common process as de-bagging, de-lidding, filling and stoppering, but also the nitrogen filling/stoppering, vacuum filling/stoppering and other customized functions the system can provide. Optional models under the series include: PDBH(high speed de-bagging machine), PDLH(high speed de-lidding machine), PFSH(high speed filling and stoppering machine).

优势特点 / Performance Features

- ◎ 采用直线布局,操作维护便捷,美观大方
- ◎ 伺服加机器人驱动,动作灵敏、定位精度高
- ◎ 自动化程度高,人员配置少,少至2人
- ◎ 故障率低,稳定性高,维护时间少
- ◎ 采用超洁净无菌机器人,提供更好无菌保障
- ◎ 产能高至 57000pcs/h, 生产速度可无极调节
- ◎ 配置灵活,可根据需求选择灌装及加塞系统
- ◎ 功能丰富,可实现 IPC 取样称重、充氮、真空灌装、 真空加塞;
- ◎ 灵活配置隔离系统: ORABS、CRABS、ISOLATOR
- ◎ 适用于混悬液、高粘度等特殊产品

- + Straight-line layout is adopted, which is convenient for operation and maintenance, beautiful and generous
- + Servo and robot drive, sensitive movement and high positioning accuracy
- + High degree of automation, less staffing, as few as 2 people
- + Low failure rate, high stability, and less maintenance time
- + Using ultra-clean aseptic robots to provide better aseptic protection
- + The production capacity is as high as 57000pcs/h, and the production speed can be adjusted steplessly
- + Flexible configuration, filling and stoppering system can be selected
- + Rich functions, can be configured with IPC nitrogen filling, vacuum filling, vacuum stoppering, etc
- + Suitable for ORABS, CRABS, ISOLATOR
- + Suitable for special products such as suspension and high viscosity

📤 主要技术参数 / Technical Data

机型 Model	最大产能 Max Capacity	灌装头数 Filling Heads	能耗 Power	重量 Weight	外形尺寸 (LxWxH) Dimension(LxWxH)
PFSH10	32000pcs/h	10	29kW	6000kg	4700×1200×1900mm
PFSH1001	36000pcs/h	10	29kW	6000kg	4700×1200×1900mm
PFSH16	52000pcs/h	16	31.5kW	6000kg	4700×1200×1900mm
PFSH1601	57600pcs/h	16	31.5kW	6000kg	4700×1200×1900mm

(注:最大产能基于 1ml 预充针 / Maximum production capacity is based on 1ml syringe)

YLX 系列口服液瓶洗烘灌封联动线

YLX Series Oral Liquid Compact Line For Washing, Sterilizing & Drying, Filling & Sealing



主要用途 / Main Application

本联动线组由 YQCL 系列立式超声波洗瓶机、KSZ 系列隧道式灭菌干燥机或远红外热风循环隧道式灭菌干燥机、YGZ 系列液体灌轧机三台单机组成,分为清洗、干燥灭菌、灌装轧盖三个工作区。每台单机可单机使用,也可联动生产,联动生产时可完成喷淋水、超声波清洗、机械手夹瓶、翻转瓶、冲水(瓶内、瓶外)、冲气(瓶内、瓶外)、预热、烘干灭菌、冷却、灌装、理盖、轧盖等二十多个工序。主要用于口服液瓶及其它小剂量溶液的生产。

This line is composed of YQCL series vertical ultrasonic washing machine, KSZ series sterilizing & drying tunnel, YGZ series filling & capping machine, divided into three working zone of washing, sterilizing & drying, filling & capping. Each machine can run independently, or be connected as a compact line. It could finish processing procedures such as: water spraying, ultrasonic washing, clamping & overturning vials by manipulator, water flushing(internal and external), air flushing(internal and external), pre-heating, drying & sterilizing, depyrogenation, cooling, filling, capping and so on. It is mainly used for production of oral liquid and other small volume solution in pharmaceutical factories.

34 TRUKING

△ 性能优势 / Performance Advantage

- 立式超声波清洗机采用超声波清洗与水气独立分开压力喷射冲洗相结合方式,是目前国际最流行、可见异物检测效果最好的清洗设备。整个水气压力喷射清洗过程中,清洗介质均采用独立喷针,每一根喷针只固定一种清洗介质,完成一种冲洗工序,避免了清洗介质的交叉污染,更加符合新版 CMP 要求;
- 热风循环隧道式灭菌干燥机采用热空气层流原理和 热空气高温灭菌工艺对容器进行灭菌、去热原。远 红外隧道式灭菌干燥机采用远红外石英管热辐射灭 菌工艺,灭菌效果好;
- 液体灌轧机采用大拨轮输瓶,灌针往复跟踪灌装, 单刀旁置随动滚压式轧盖原理或三刀轧盖原理,还 可选择防盗轧原理,其瓶子交接次数少,轧盖合格 率高,适应性好;
- 采用 PLC 控制人机界面的操作,能联动控制和单机操作,保证了整个机组的正常运行,其自动化程度高,操作人员少,劳动强度低。

- + Vertical ultrasonic washing machine adopts ultrasonic washing and alternant jetting water and airflow. It is the most popular washing equipment with highest clarity in the world. In whole washing process, three washing media adopt independent needles, each group of needles only flush one washing medium, avoids cross contamination, meets requirement of the new version of GMP.
- + Hot air sterilizing & drying tunnel adopts the principle of laminar flow and hot air high temperature sterilization process, to sterilize and depyrogenate containers. Far infrared sterilizing & drying tunnel adopts thermal radiation sterilization technology through far infrared quartz tube. has good sterilizing effect.
- + Filling & capping machine adopts large starwheel to infeed bottles, reciprocating tracking filling, and single knife capping method or three knives capping principal, and can adopt tamperproof capping principal. It has less bottle transferring, high capping qualified rate and good adaptability.
- It adopts PLC control with HMI operation, can control the whole line running or independent machine. It ensures normal running of the compact line with high automation, less operator and low labor intensity.

产品参数 / Product Parameters

型号 Model	适应规格 Suitable Sizes	生产能力 Output	电容量 (正常工作耗量) Power (Normal Consumption)	净质量 Net Weight	外形尺寸 Overall Dimensions
YLX5 ∼ 25-B	5-25ml	24000-33000pcs/h	113kW(38kW)	15000kg	9663×2886×2306mm
YLX5 ∼ 25-A	5-25ml	15600-24000pcs/h	77.8kW(38kW)	10000kg	7522×2438×2306mm



服务理念

400-9988-900



秉承"一切为客户着想,为一切客户着想, 为客户着想一切"的理念,以"为客户创造价值"为己任,楚天专注于打造一流的研发、 设计、销售、制造、服务团队及服务管理体系, 为客户提供高效、优质的产品与服务。





◎ 项目规划支持

楚天拥有系列专业医药设计院、产品研究院,一批行业 资深科研技术人员,无菌制药工艺的验证专家、教授等, 为客户的项目提供科学、有效的技术规划支持。



◎ 走进园区服务

楚天作为设备供应商,不仅仅将行业法规标准融入到产 品设计、制造中,还让法规标准以讲座、交流的形式走 进园区,与药企的工艺、生产形成互动与融合。



◎ 过程保障服务

楚天推出的医药装备整体解决方案,实现药品生产过程 的全自动化、无菌化,智能检测、分选,以及计算机验 证保障,生产出让市场"放心"的产品。



◎ 设备管理咨询服务

楚天致力于满足客户效益最大化需求,提供一揽子的设 备管理模式,协同药厂实现投入最小化,产出最大化。

- 坚持"以客户为中心",以匠人之心打造 极致服务体验,为客户创造更多价值
 - **34** 全国 34 个省(市)
 - **365** 全年 365 天
 - **7x24** 7X24 小时服务时间

- 我们随时待命为客户单位设备正常运行保驾护航
- + 现场安装、调试、验收
- + 设备工艺、操作、维护等相关培训
- + 周期性的定期上门维护与回访
- + 设备各部件性能的检测与保养
- + 备品备件的及时供应
- + 产品技术升级与技术二次开发
- + 设备大修



400-9988-900



Adhering to concept of "all for customers, for all customers", and with the mission of "creating value for customers", TRUKING focuses on building first-class R&D, design, sales, manufacturing, service teams and service management system to offer high-efficient and high-quality products and services for the customers.



Project Planning Support

TRUKING has a series of professional medical and pharmaceutical design institutes, product research institutes, a group of senior scientific research and technical personnel, aseptic pharmaceutical process verification experts, professors, etc., to provide scientific and effective technical planning support for customers' projects.

Service In The Park

As an equipment supplier, TRUKING not only integrates industrial regulations and standards into product design and manufacturing, but also introduces the industrial regulations and standards into Truking industrial park in the form of lectures and exchanges to interact and integrate with the technology and production of pharmaceutical enterprises.

- Adhere to the philosophy of "customer-centric", TRUKING creates the extraordinary service experience with the spirit of the craftsman, to create more value for customers.
- We are always ready to escort the normal operation of the customer's equipment.

Process Assurance Service

TRUKING launched the overall solution for medical & pharmaceutical equipment realizing the full automation and aseptic production process, intelligent detection and sorting of the drug, as well as computer verification assurance so as to produce assured products for market.

Equipment Management Consultation Service

TRUKING aims to satisfy the maximum benefited demands of the customer and to provide a package of equipment management services to realize minimization investment and maximization production output together with pharmaceutical factories.

- + Onsite equipment installation, commissioning, acceptance
- + Training for equipment process, operation and maintenance
- + Periodic door-to-door maintenance and return visit
- + Performance test and maintenance for machinery parts
- + Timely supply of spare parts
- Product technology upgrading and secondary development
- + Equipment overhaul



www.truking.com



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