



www.highfinegroup.com

技术领先 · 行业典范
TECHNOLOGY LEADER · INDUSTRY MODEL

HIGHFINE
南通海发

Integral solution of
oral liquid preparation
口服液制剂整体解决方案

HIGHFINE

南通海发制药设备有限公司
HIGHFINE ENGINEERING LTD.

上海销售中心/Marketing

地址：上海市中环商务中心（普陀区真北路915号8F）邮编：200333
电话 / 传真：86-21-32513468 网址：www.highfinegroup.com

Add: Zhonghuan Business Center, Shanghai, China
(8F, No.915, Zhenbei road, Putuo district, Shanghai) P.C.: 200333
Tel/Fax: +86-21-32513468 http://www.highfinegroup.com

制造中心/Factory

一区地址：江苏省海门市三厂工业区中华西路129号 邮编：226121
二区地址：江苏省海门市三厂工业区中华东路373号
三区地址：江苏省海门市三厂工业区环城东路387号
电话：0513-82601128 传真：0513-82745028
邮箱：highfinegroup@126.com 网址：www.highfinegroup.com

Add (Zone One): No.129 West Road of Zhonghua, Sanchang Industrial Park,
Haimen City, Jiangsu Province P.C.: 226121
Add (Zone Two): No.373 East Road of Zhonghua, Sanchang Industrial Park,
Haimen City, Jiangsu Province
Add (Zone Three): No.387 East Road of Zhonghua, Sanchang Industrial Park,
Haimen City, Jiangsu Province
Tel: +86-513-82601128 Fax: +86-513-82745028
E-mail: highfinegroup@126.com http://www.highfinegroup.com

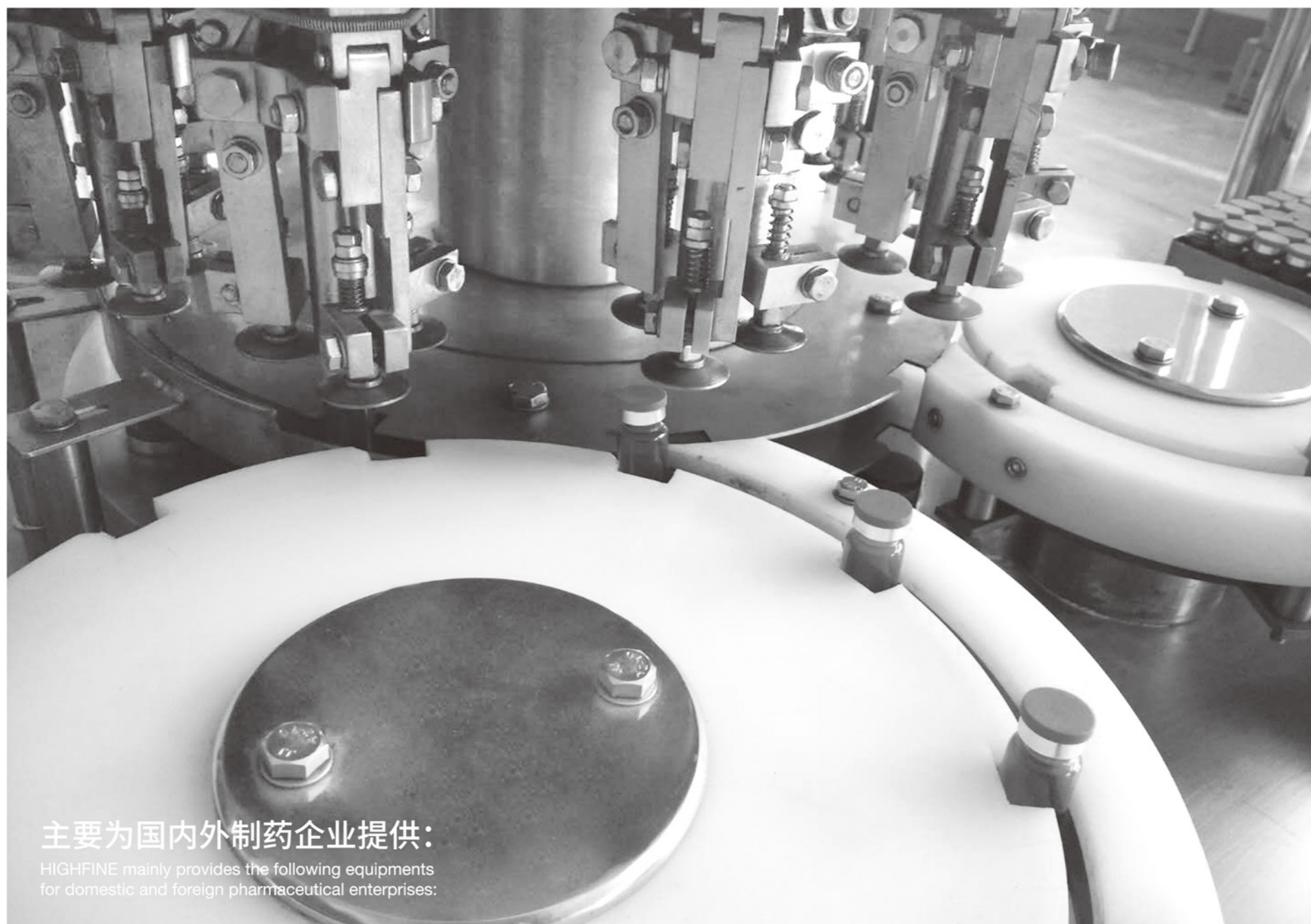
全国服务热线：400-153-1588
National Service Hotline



符合FDA标准的灌装系列设备
全球灌装系列设备主流供应商
FDA standard filling equipment
Mainstream supplier of global filling equipment

口服液制剂整体解决方案

Integral solution of oral liquid preparation



主要为国内外制药企业提供：

HIGHFINE mainly provides the following equipments for domestic and foreign pharmaceutical enterprises:

关于海发 About us >>

HIGHFINE 主要从事吹瓶 - 灌封 - 封口一体机 (BFS)、非 PVC 膜软袋大输液生产线、西林瓶冻干粉针、西林瓶粉针分装、安瓿小容量、口服液大小容量联动生产线；预灌封注射器自动化生产线等灌装设备的研发、生产、销售与服务。公司拥有国内领先的研发、设计能力，为制药企业提供专业化、个性化的灌装系统整体解决方案。

HIGHFINE 秉承“科技兴邦，造福人类”的使命，企业的最终奋斗目标：成为中国制药工业灌装系统设备的主流供应商，最终成为全球制药工业灌装系统设备的领军者和主流供应商。

Highfine is mainly engaged in R & D, production, sales and service of BFS (Blow-Fill -Sealing), non-pvc film soft bag in infusion production line, lyophilized vials, powder vials, small volume ampoules, oral liquid linkage line and PFS (pre-fill system) etc. The company can provide professional and personalized filling system overall solution for pharmaceutical enterprises with our advanced R & D and design capability.

Highfine adhering to the "science and technology development, for the benefit of mankind" mission, the final goal of the enterprise: become a mainstream supplier of filling system of China, and eventually become the global pharmaceutical industry filling system leader and main supplier.

寸金的光阴堆积起来的二十多年，转眼即逝。我们从年青走向了成熟，从过去的满怀热情变成了今天的更执着、更严谨，因为我们深深的感受到责任重于泰山。

时间把我们的理想变得具体，赋予了它真正的意义。如果由于我们的努力，使人类的生存环境得到了更好的改善，那我们将感到，海发人的智慧是无穷的。

Over 20 years, Time passed quickly. We from young to mature, from full of enthusiasm in the past into today's more persistent and more rigorous, because we deeply feel that the responsibility be weightier than mountain.

Time made our ideal specific, given its true meaning. If human's living environment better improved as our efforts, then we will feel that HighFine's wisdom is infinite.



主要用途 Main application

本联动生产线由 HQCLA 系列立式超声波洗瓶机、HSDH 系列隧道式热风循环灭菌烘箱、HKGZ 系列口服液灌装轧盖机组成。既可联动使用，也可单机使用。联动生产时可完成喷淋注水、超声波清洗、冲水（瓶内外壁）、冲气（瓶内外壁）、预热烘干、干燥灭菌去热源、冷却出瓶、灌装、理盖、轧盖等工序。

本联动线能满足 5-30ml 口服液瓶、50-500ml 各类输液瓶、糖浆瓶洗瓶、干燥灭菌去热源、灌装和轧盖的生产工艺要求。

The linkage line consists of HQCLA series vertical ultrasonic washing machine, HSDH series hot air circulation sterilization tunnel, HKGZ series oral liquid filling and capping machine. The model can be used in combination or in a single machine. The linkage line can complete water spray filling, ultrasonic cleaning and flushing (internal and external), CA flushing (internal and external), preheating, drying and sterilizing to remove heat source, cooling, filling, sealing, capping and other processes.

This line can meet the size range from 5-30ml 50-500ml all kinds of oral liquid bottles, infusion bottles, bottles of syrup bottle which can reach the process requirements of heat source removal, filling and capping etc.

性能特点

立式超声波洗瓶机采用超声波粗洗与循环水、注射用水和洁净压缩空气交替喷射清洗的方式对容器进行清洗，洗净澄明度和可见异物检测效果理想，是当今国际上最流行的清洗设备。

隧道式灭菌烘箱采用热空气层流原理和高温灭菌工艺对容器进行预热、干燥灭菌去热源、冷却的灭菌生产工艺，是当今国际上最流行的烘干灭菌设备。

灌装轧盖机采用大拨轮输瓶、往复跟踪式灌装，单刀或三刀轧盖形式，轧盖合格率高，是当今国际上最流行的灌装轧盖设备。

本联动生产线采用 PLC 控制触摸屏操作，既可联动控制，也可单机操作。控制运行稳定，自动化程度高。



Characteristics

Vertical ultrasonic washing machine using ultrasonic rough washing, circulating water, WFI and clean compressed air spray and clean the container alternately. Cleaning clarity and visible material detection effect is ideal; it is the most popular cleaning machine in the world today.

The sterilization tunnel adopts the principle of hot air laminar flow and high temperature sterilization process to preheat, dry, sterilize, remove heat and sterilization process. It is the most popular drying and sterilizing machine in the world.

The filling and capping machine adopts big wheel transfer, and reciprocating tracking filling, single or three knife form, with high capping rate, it is the most popular filling and capping machine in the world today.

The interlocking production line adopts PLC control and touch screen operation, which can be used for linkage control or stand-alone operation. The control runs stably and with high automation.

主要技术参数 Main technical parameters

产品型号 Product model	HKGL8	HKGL16
适应规格 Suitable sizes (ml)	5-30ml 口服液瓶 (oral liquid)	
生产能力 Output (pcs/min)	150-200	300-400
灌装针数 Filling heads	8	16
电源 Power supply	380V 50Hz	
电容量 Power capacity (kW)	77	88
总重量 Total weight (kg)	7900	8500
外形尺寸 Overall dimensions (mm)	8550×2200×2245	9200×2200×2245

HQCLA series vertical ultrasonic washing machine

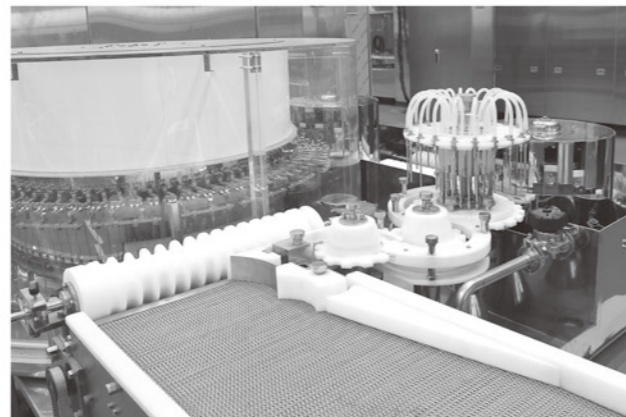
HQCLA系列立式超声波洗瓶机



主要用途 Main application

HQCL 系列立式超声波洗瓶机主要适用于制药企业口服液瓶的清洗，也可用于西林瓶、安瓿瓶等容器的清洗。

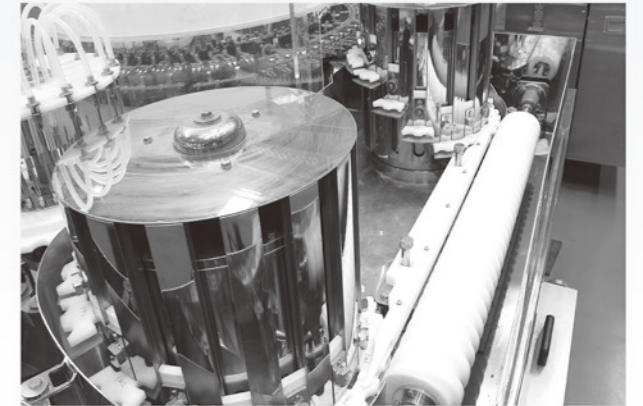
HQCL series vertical ultrasonic washing machine is mainly applicable to the cleaning of oral liquid bottles in pharmaceutical enterprises. It can also be used for cleaning bottles such as vials and ampoules.



性能特点 Characteristics

本机为立式转鼓结构，采用机械手夹瓶、翻转和喷针插入作往复跟踪方式，利用超声波粗洗与循环水、注射用水和洁净压缩空气交替喷射清洗的方式对容器进行清洗，完成瓶内壁三水三气和瓶外壁一水一气的清洗。整个清洗过程中，每组喷针固定对应一种清洗介质，无交叉污染，符合无菌生产要求。洗净澄明度和可见异物检测效果最理想，是当今国际上最流行的清洗设备。

This machine is a vertical drum structure, by mechanical hand, overturning and needles reciprocating tracking mode, by using rough ultrasonic washing and recycling water, water for injection and clean compressed air alternating jet cleaning method, finishing washing of internal 3times water washing, 3times CA washing, and external 1time water washing and 1time CA washing. In the whole cleaning process, each spray needle is fixed corresponding to a cleaning medium, without cross contamination, and meets the requirements of aseptic production. Cleaning, clarity and visible substances can be tested with good results; it is the most popular cleaning machine in the world today.



主要技术参数 Main technical parameters

产品型号 Product model	HQCL60A	HQCL100A
适应规格 (ml) Suitable sizes	5-30ml 口服液瓶 (oral liquid)	
生产能力 (pcs/min) Output	200-300	350-500
碎瓶率 (%) Breakage rate	≤0.1%	
注射水耗量 WFI consumption	0.4-0.6m ³ /h 0.3-0.5MPa	0.8-1.0m ³ /h 0.3-0.5MPa
压缩空气耗量 CA consumption	35-40m ³ /h 0.4-0.6MPa	50-60m ³ /h 0.4-0.6MPa
电源 Power supply	380V 50Hz	
电容量 (kW) Power capacity	13	
总重量 (kg) Total weight	2200	2400
外形尺寸 (mm) Overall dimensions	2200×2200×1450	2200×2200×1450

HSDH series hot air circulation sterilizing tunnel

HSDH系列隧道式热风循环灭菌烘箱



主要用途 Main application

HSDH 系列隧道式热风循环灭菌烘箱主要适用于制药企业口服液瓶的干燥、灭菌、去热源，也可用于西林瓶、安瓿瓶等容器的干燥、灭菌、去热源。

HSDH series hot air circulation sterilization tunnel is mainly suitable for drying, sterilizing and removing heat sources of oral liquid bottles in pharmaceutical enterprises. It can also be used for drying, sterilizing and removing heat sources of vials such as vials and ampoules.

性能特点 Characteristics

本机为隧道式结构，整个隧道腔体分为预热区、高温灭菌区、冷却区三部分。采用热空气层流原理和高温灭菌工艺对容器进行干燥、灭菌、去热源，采用负压密封结构，再配合独特的热空气导流等核心技术，热分布均匀，是当今国际上最流行的烘干灭菌设备。

This machine is a tunnel structure, and the whole tunnel is divided into three parts: preheating zone, high temperature sterilization zone and cooling zone. The use of hot air laminar flow principle and high temperature sterilization process for the container drying, sterilization, heat source, the use of negative pressure sealing structure, coupled with the unique hot air diversion and other core technologies, thermal distribution, is the most popular in today's world of the drying and sterilization machine.

主要技术参数 Main technical parameters

产品型号 Product model	HSDH600/3600	HSDH600/4250
适应规格 (ml) Suitable sizes	5-30ml 口服液瓶 (oral liquid)	
生产能力 (pcs/min) Output	300-450	350-500
网带有效宽度 (mm) Mesh belt width	600	600
灭菌温度 (°C) Temperature	280-350°C可调	
碎瓶率 (%) Breakage rate	≤0.05%	
电源 Power supply	380V 50Hz	
电容量 (kW) Power capacity	60	71
总重量 (kg) Total weight	4500	4800
外形尺寸 (mm) Overall dimensions	3600×1750×2245	4250×1750×2245

HKGZ series oral liquid filling and capping machine

HKGZ系列口服液灌装轧盖机



性能特点 Characteristics

本机集灌装和轧盖为一体机，采用大拨轮输瓶、往复跟踪式灌装，单刀或三刀轧盖形式，轧盖合格率高，是当今国际上最流行的灌装轧盖设备。

This machine combines filling and capping as one machine. It adopts big wheel transfer and reciprocating tracking filling model, Single or three knife form, with high capping rate, it is the most popular filling and capping machine in the world today.

主要用途 Main application

HKGZ 系列口服液灌装轧盖机主要适用于制药企业口服液的灌装和轧盖封口。

HKGZ series oral liquid filling and capping machine is mainly suitable for filling and capping of oral liquid bottles in pharmaceutical enterprises.



主要技术参数 Main technical parameters

产品型号 Product model	HKGZ8	HKGZ16
适应规格 (ml) Suitable sizes	5-30ml (oral liquid)	5-30ml (oral liquid)
生产能力 (pcs/min) Output	120-250	250-450
灌装头数 Filling heads	8	16
灌装精度 (%) Filling accuracy	≤±2%	
封口合格率 (%) Qualified rate	≥99.9%	
碎瓶率 (%) Breakage rate	≤0.1%	
电源 Power supply	380V 50Hz	
电容量 (kW) Power capacity	4	4
总重量 (kg) Total weight	1200	1300
外形尺寸 (mm) Overall dimensions	2750×1350×1700	2750×1350×1700