

一步干燥

中国干燥制粒研究开发中心

CHINA RESEARCH CENTER OF DRYING AND GRANULATING



江苏省著名商标
JIANGSU FAMOUSE TRADEMARK



ISO9001

ISO14001



干燥 制粒 混合 包衣

Dryer, Granulator, Mixer, Coater

ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ

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Телефоны: +7 (495) 7774788, 7489626, (925) 5007155, 54, 65

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让我们以
十五年的历史与积淀，
十五年的坚持与不悔，
十五年的诚挚与热情，
携手奋斗，勇往直前！

*With our
History and precipitation of 15 years,
Persistence and unregretfulness of 15 years,
Sincerity and enthusiasm of 15 years,
Let's struggle together and march forward courageously!*





江苏省著名商标

一步干燥，是江苏省高新技术企业、江苏省AAA级重合同守信用企业，拥有国家发明专利多项，产品多次荣获国家金奖。“一步”荣获“江苏省著名商标”称号。企业已通过ISO9001、ISO14001认证，且多项产品通过CE认证。

公司推崇科技创新，与上海、武汉、重庆等地的医药设计院，化工部沈阳化工研究院、清华大学、上海交通大学、大连理工大学、华南理工大学、华南农业大学、常州大学、河海大学、江南大学等多家科研院校合作开发，致力于干燥、制粒、混合等相关粉粒体工程的新工艺、新技术的研究，每年都推出多个新产品引领市场。公司为方便用户，备有多种试验样机，欢迎客户带料试验和考察订货。

自1998年经国家外经贸部批准，成为全国第一家具有“自营进出口权”的干燥设备企业。公司产品畅销国内外，遍布全球50多个国家和地区。

“一步”一个脚印，迈向成功！

Changzhou Yibu Drying Equipment Co. Ltd is a high-tech enterprise in Jiangsu Province, an enterprise of honoring contracts and keeping promise of grade AAA, with a number of national invention patents, our products have won national gold medal many times. "YIBU" awarded the tile of "Jiangsu Famous Trademark". The company has passed ISO9001 and ISO14001 certification, and many products passed CE certification.

The company esteems the technological innovation, and cooperated with Pharmaceutical Industry Design Institute Shanghai, Wuhan, Chongqing and other places, Shenyang Research Institute of the Ministry of Chemical Industry, Tsinghua University, Shanghai Jiaotong University, Dalian University of Technology, South China University of Technology, South China Agricultural University, Changzhou University, Hohai University, Jiangnan University and many Scientific Research Institutes and academies on research and development, committed to the research of the new process and technology such as project of drying, granulating, mixing and related powder, so we introduce many new products to lead the market every year. The company also prepares many test samples and welcome customers to investigate and order.

Since 1998, our company is approved by the National Foreign Trade and Economic Cooperation, and became the first manufacturer of drying equipment with the right of self-management import and export in China. The company products sell well both at domestic and foreign, and export to more 50 countries and areas.

"YIBU", step by step, march towards success!



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YIBU Drying

中国干燥制粒研究开发中心
中国干燥设备行业协会副理事长单位
中国制药装备行业协会理事单位
中国化工装备总公司的定点生产企业

CHINA RESEARCH CENTER OF DRYING AND GRANULATING
DEPUTY DIRECTOR-GENERAL OF CHINA ASSOCIATION FOR DRYING EQUIPMENT
DIRECTOR-GENERAL OF CHINA ASSOCIATION FOR PHARMACEUTICAL EQUIPMENT
CHINA CHEMICAL EQUIPMENT COMPANY OF FIXED-POINT PRODUCTION ENTERPRISE



ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ
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Leading at Every Step

感谢您与“一步”

一步干燥，始终
以技术与服务为重，
成为国内外众多著名
企业有力的合作伙伴。

YIBU always take the
technologies and services
as the important thing,
and has become the
excellent partner of many
well-known enterprises in
domestic and foreign.





销售区域

Sales Region

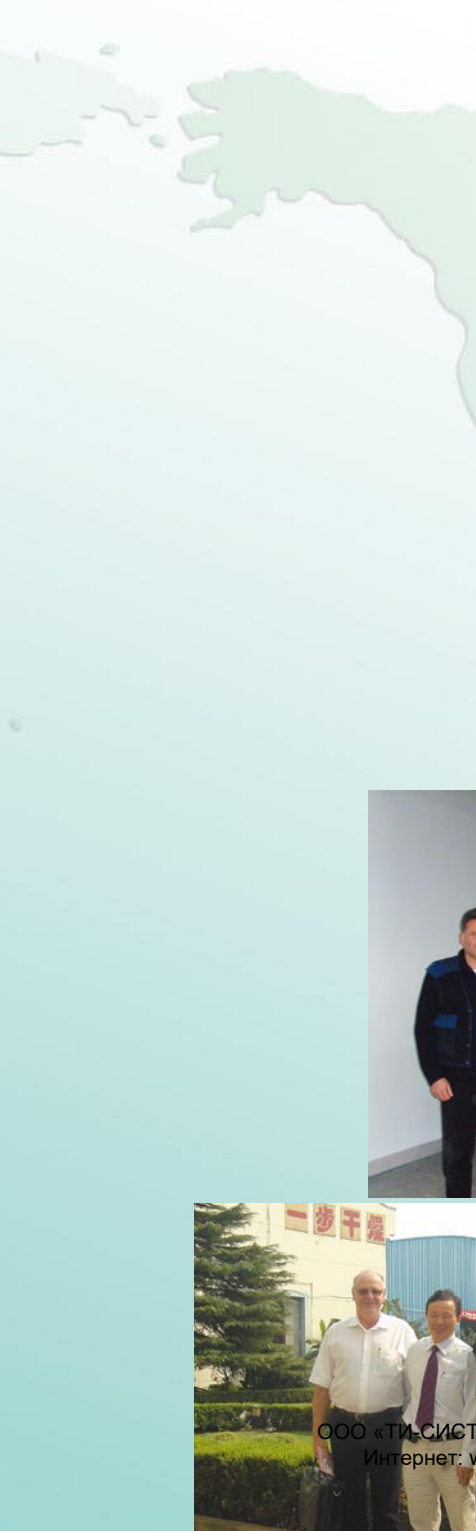
- 美国 United States
- 加拿大 Canada
- 阿根廷 Argentina
- 巴西 Brazil
- 哥伦比亚 Colombia
- 墨西哥 Mexico
- 秘鲁 Peru
- 牙买加 Jamaica
- 阿尔及利亚 Algeria
- 危地马拉 Guatemala
- 澳大利亚 Australia
- 新西兰 New Zealand
- 孟加拉国 Bangladesh
- 缅甸 Myanmar
- 印度 India
- 印度尼西亚 Indonesia
- 日本 Japan
- 约旦 Jordan
- 马来西亚 Malaysia
- 也门 Yemen
- 伊朗 Iran
- 以色列 Israel
- 巴基斯坦 Pakistan
- 菲律宾 Philippines
- 新加坡 Singapore
- 韩国 South Korea
- 朝鲜 North Korea
- 叙利亚 Syria
- 泰国 Thailand
- 土耳其 Turkey
- 乌兹别克斯坦 Uzbekistan
- 越南 Vietnam
- 塞浦路斯 Cyprus
- 法国 France
- 德国 Germany
- 希腊 Greece
- 白俄罗斯 Belarus
- 乌克兰 Ukraine
- 葡萄牙 Portugal
- 俄罗斯 Russia
- 西班牙 Spain
- 英国 United Kingdom
- 尼日利亚 Nigeria
- 坦桑尼亚 Tanzania
- 毛里求斯 Mauritius
- 埃及 Egypt
- 乌干达 Uganda
- 加纳 Ghana
- 南非 South Africa
- (台湾、香港、澳门)中国 China

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企业荣誉

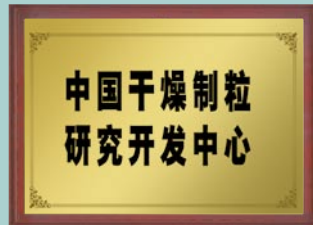
Honor of Enterprise





江苏省著名商标

CERTIFICATE AND OUR HONOR



ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ
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制粒系列

Series Granulator



Page 1

FL系列沸腾制粒干燥机
FL Series Fluidized Granulator



Page 4

PGL-B系列喷雾干燥制粒机
PGL-B Series Spray Drying Granulator



Page 6

YS系列流化床料斗提升卸料机
YS Series Fluid Bed Hopper Lifting Machine



Page 7

GHL系列高速混合制粒机
GHL Series High Speed Mixing Granulator



Page 9

DLB系列多功能制粒包衣机
DLB Series Multi-Function Granulator & Coater



Page 11

LBZ系列离心包衣制粒机
LBZ Series Centrifugal Granulator & Coater



Page 12

QZL系列球形制丸机
QZL Series Ball Granulating Machine



Page 13

GK系列干式造粒机
GK Series Dry Granulating Machine



Page 14

GZL系列干法辊压造粒机
GZL Series Roller Pressing Granulator

流化床系列

Series Fluid Bed



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GFG系列高效沸腾干燥机
GFG Series High-Efficiency Fluidizing Dryer



Page 18

FG系列立式沸腾干燥机
FG Series Vertical Fluidizing Dryer



Page 19

XF系列卧式沸腾干燥机
XF Series Horizontal Fluidizing Dryer



Page 21

NLG系列内加热流化床干燥机
NLG Series Inner Heating Fluid Bed Dryer



Page 22

GZQ系列振动流化床干燥机
GZQ Series Rectilinear Vibrating-Fluidized Dryer



气流干燥系列

Series Air Stream Dryer



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XSG系列快速旋转闪蒸干燥机
XSG Series Flash Dryer



Page 26

DG系列淀粉气流干燥机
DG Series Air Stream Dryer for Starch



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JG/QG/FG系列气流干燥机
JG/QG/FG Series Air Stream Dryer

喷雾干燥系列 Series Spray Dryer



Page 30
LPG系列高速离心喷雾干燥机
LPG Series High-Speed Centrifugal Spray Dryer



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YPG系列压力式喷雾(冷却)干燥机
YPG Series Pressure Spray (cooling) Dryer



Page 37
QPG系列气流喷雾干燥机
QPG Series Air Stream Spray Dryer



Page 38
ZLG系列中药浸膏专用喷雾干燥机
ZLG Series Spray Dryer for Chinese Traditional Medicine Extract



Page 41
XLP系列闭路循环喷雾干燥机
XLP Series Sealed Circulation Spray Dryer



Page 42
WPG系列无菌喷雾干燥机
WPG Series Aseptic Spray Dryer

真空、传导式干燥系列 Series Vacuum and Conductive Style Dryer



Page 43
SZG系列双锥回转真空干燥机
SZG Series Conical Vacuum Dryer



Page 46
YZG/FZG系列真空干燥机
YZG/FZG Series Vacuum Dryer



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GZLS系列真空冷冻干燥机
GZLS Series Vacuum Freeze Dryer



Page 51
ZPD系列真空耙式干燥机
ZPD Series Vacuum Harrow Dryer



Page 52
PLG系列盘式连续干燥机
PLG Series Continuous Plate Dryer



Page 57
GZG系列管束式干燥机
GZG Series Pipe Bundle Dryer



Page 59
HYG系列回转滚筒干燥机
HYG Series Rotating Barrel Dryer



Page 60
HG系列滚筒刮板干燥机
HG Series Drum Dryer



Page 61
QJ系列空心桨叶干燥机
QJ Series Hollow Blade Dryer



Page 64
DZ系列单效外循环蒸发器
DZ Series Single-Effect External Circulation Evaporator



Page 65
SZ系列三效多能蒸发器
SZ Series Triple-Effect Multi-Function Evaporator

箱式干燥系列 Series Cabinet Dryer



Page 66
CT-C系列热风循环烘箱
CT-C Series Hot Air Circulating Drying Oven



Page 69
JCT系列药品专用烘箱
JCT Series Special Oven for Pharmaceutical



Page 71
GM系列高温灭菌烘箱
GM Series High-Temperature Sterilizing Oven



Page 72
DW系列带式干燥机
DW Series Mesh-Belt Dryer



Page 76
MSD系列带式微波灭菌干燥机
MSD Series Microwave Belt Sterilizing Dryer



Page 77
HD系列微波真空干燥机
HD Series Microwave Vacuum Dryer

辅助设备

Auxiliary Machine



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JRF/RYL系列
热风炉

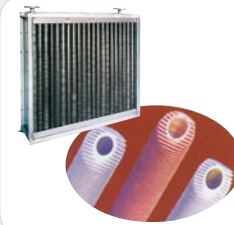
JRF/RYL Series Hot
Air Furnace



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MC系列脉冲
布袋除尘器

MC Series Plus Dust
Filter With Cloth Bag



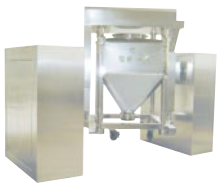
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SQR系列
散热器

SQR Series Heat
Exchanger

混合设备

Series Mixer



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HLD系列料斗
混合机

HLD Series Hopper
Mixing Machine



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SYH系列三维
运动混合机

SYH Series Three
Dimensions Mixer



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EYH系列二维
运动混合机

EYH Series Two
Dimensions Mixer



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SZH系列双锥
混合机

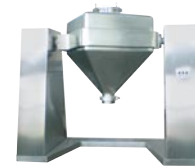
SZH Series Conical
Mixer



Page 87

DSH系列双螺
旋锥形混合机

DSH Series Double
Screw Cone Mixer



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FZH系列方锥
混合机

FZH Series
Square-Cone Mixer



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CH系列槽
形混合机

CH Series
Guttered Mixer



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WLDH系列卧
式螺带混合机

WLDH Series
Horizontal Ribbon
Mixer



Page 89

WZ系列无重
力混合机

WZ Series Zero-
Gravity Mixer



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ZKH(V)系列
混合机

ZKH(V) Series
Mixer

药机类

Series Pharmaceutical Machine



Page 90

KZL系列快速
整粒(粉碎)机

KZL Series High
Speed Grinding
Granulator



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JZL系列挤压
造粒机

JZL Series Extruding
Granulating Machine



Page 91

YK系列摇摆
式颗粒机

YK Series Swaying
Granulator



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WFJ系列微
粉碎机

WFJ Series
Micro-Particle
Grinder



Page 92

高效粉碎
机(组)

High Effect Grinding
Machine(set)



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FS系列方
形振荡筛

FS Series Square
Vibration Screen



Page 93

ZS系列
振荡筛

ZS Series
Vibration Screen

FL 系列沸腾制粒干燥机

FL Series Fluidized Granulator



应用 Applications

- ◆ 制药工业中的造粒：片剂颗粒、冲剂颗粒、胶囊剂颗粒。
- ◆ 食品工业的造粒：可可、咖啡、奶粉、颗粒果汁、调味品等。
- ◆ 其它行业的造粒：农药、饲料、化肥、颜料、染料化工等。
- ◆ 粉状或颗粒状湿物料的干燥。
- ◆ 包衣：颗粒、丸剂保护层、着色、缓释、薄膜、肠溶包衣等。
- ◆ Pharmaceutical industry: tablet capsule, low sugar or no sugar granule of Chinese traditional medicine.
- ◆ Foodstuff: cocoa, coffee, milk powder, juice of granulate, flavoring and so on.
- ◆ Other industries: pesticide, feed, chemical fertilizer, pigment, dyestuff and so on.
- ◆ Drying: powder or granule state of wet material.
- ◆ Coating: protection layer, color, controlled release, film, or bowels solved coating of granules and pills.

全国干燥行业首批推荐产品

FL 沸腾制粒机

常州市一步干燥设备厂制造

中国通用机械干燥设备行业协会
一九九九年五月

The quality of FL Series Fluidized Granulator reaches the level of same kinds of products both at home and abroad approved by specialists of State Medicine Bureau.

前言 Preface

- ◆ “一步”干燥始终认为：沸腾制粒应是机械设计与制剂工艺有机的结合，因此本公司无论是为中国、美国、日本、印尼，还是伊朗所提供的百余台制粒机，都是根据物料工艺特别设计。
- ◆ 时至今日，我们已制造了十个规格，共150种满足不同要求的机型，这些实际中的经验，都将使过去和未来的合作伙伴深受其益。
- ◆ “YIBU” considers that Fluidized Granulating is an organic combination of mechanical design and manufacture technology. Therefore hundreds of Granulating machines either for China or exported to USA, Japan, Indonesia, Iran and many other countries are designed in accordance with the process of raw materials.
- ◆ We have manufactured decades specifications and 150 different machines to meet different needs. These practical experiences will be very beneficial to customers.

特点 Features

- ◆ 通过粉体造粒，改善流动性，减少粉尘飞扬；
- ◆ 通过粉体造粒，改善其溶解性能；
- ◆ 混合、制粒、干燥在一机内完成一步法制粒；
- ◆ 采用抗静电滤布，设备操作安全；
- ◆ 防爆型设置压力泄放孔，一旦发生爆炸，设备人员不受伤害；
- ◆ 设备无死角，装卸料轻便快速，清洗干净，满足GMP规范。
- ◆ The flow ability is improved and the dust is reduced, because of granulator.
- ◆ Because of powder granulating, its solubility is improved.
- ◆ The processes of mixing, granulating and drying are completed in one step inside the machine.
- ◆ The operation is safe because the anti-static filter cloth adopted.
- ◆ It's safe for operator if explosion take place, because explosion device is adopted.
- ◆ No dead angle. Therefore the loading and unloading are quick, light and clean, meet the requirements of GMP.





江苏省著名商标

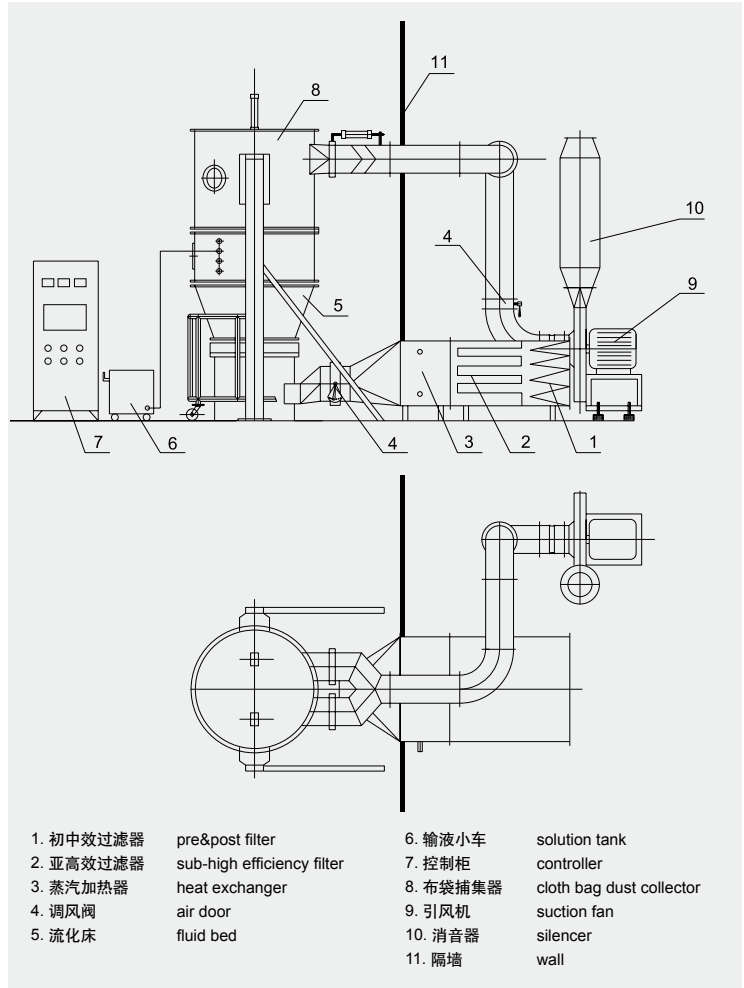
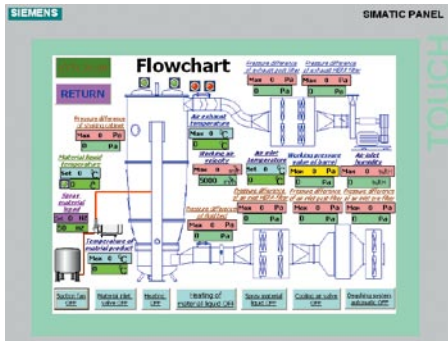
FL 系列沸腾制粒干燥机

FL Series Fluidized Granulator

原理 Principle

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

◆ The powder granule in vessel (fluid bed) appears in the state of fluidization. It is preheated and mixed with clean and heated air. At the same time the solution of adhesive is sprayed into the container. It makes the particles become granulating that contains adhesive. Being of unceasing dry through hot air, the moisture in the granulating is evaporated. The process is carried out continuously. Finally it forms ideal, uniform and porous granules.



技术参数 Technical parameters

项目 item			型号 spec		FL							
			3	5	15	30	60	120	200	300	500	1000
原料容器 vessel	容量 volume	L	12	22	45	100	220	420	670	1000	1500	3000
	直径 diameter	mm	300	400	550	700	1000	1200	1400	1600	1800	2200
生产能力 capability	最小 min.	kg	1.5	4	10	15	30	80	100	150	250	800
	最大 max.	kg	4.5	6	20	45	90	160	300	450	750	1200
风机 fan	风量 velocity	m ³ /h	1000	1200	1400	1800	3000	4500	6000	7000	8000	13670
	风压 pressure	mmH ₂ O	375	375	480	480	950	950	950	950	950	1400
	功率 power	kW	3	4	5.5	7.5	11	18.5	30	37	45	90
蒸汽消耗量 steam consumption	kg/h	15	23	42	70	141	211	282	366	451	750	
压缩空气耗量 compressed air consumption	m ³ /min	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.5	3.0	4.0	
主机重量 weight of the main body	kg	500	700	900	1000	1100	1300	1500	1800	2500	3500	
蒸汽压力 steam pressure	MPa	0.1~0.4										
温度 temperature	°C	室温至120°C范围内可调节 (adjustable at the range from room temperature to 120 °C)										
作业时间 working time	min	随物料特性而定 45~90 (decided in accordance with the properties of raw materials)										
物料收得率 collect rate	%	≥99										
噪声 noise	dB(A)	风机与主机隔离安装, 噪声 ≤75dB(A) (when do installation, main machine is separated from fan.)										
主机外形尺寸 dimensions of main machine (LxWxH)	m	1.0x0.6 x2.1	1.2x0.7 x2.3	1.25x0.9 x2.5	1.6x1.1 x2.5	1.85x1.4 x3	2.2x1.65 x3.3	2.34x1.7 x3.8	2.8x2.0 x4.5	3x2.25 x5.0	4x2.8 x7.2	

典型用户 Typical customers

- ◆ 吉林吴太集团
- ◆ 哈药集团三精制药有限公司
- ◆ 安丘鲁安药业有限公司
- ◆ 山东禹王制药有限公司
- ◆ 青岛六和药业有限公司
- ◆ 上海三维制药有限公司
- ◆ 华东医药集团
- ◆ 宁波绿之健药业有限公司
- ◆ 浙江长兴制药有限公司
- ◆ 江苏晨牌药业有限公司
- ◆ 南通联农农药制剂研究开发有限公司
- ◆ 宜昌人福药业有限公司
- ◆ 东北制药集团股份有限公司
- ◆ 哈慈股份有限公司(集团)
- ◆ 湖南千金湘江药业股份有限公司
- ◆ 广州白云山制药股份有限公司
- ◆ 广东一力集团有限公司
- ◆ 李锦记食品有限公司
- ◆ 安士制药有限公司
- ◆ 海南先声药业集团
- ◆ 内蒙古元和药业有限公司
- ◆ 田中食品株式会社
- ◆ 出口美国、俄罗斯、乌克兰、墨西哥、印尼、伊朗、秘鲁、埃及、越南等国
- ◆ Jilin Wutai Group
- ◆ Sanjing Pharmaceutical Co., Ltd.
- ◆ Anqiu Lu'an Pharmaceutical Co., Ltd.
- ◆ Shandong Yuwang Industrial Co. Ltd.
- ◆ Qingdao Liuhe Pharmaceutical Co., Ltd.
- ◆ Shanghai Sunve Pharmaceutical Co., Ltd.
- ◆ Huadong Medicine Group
- ◆ Ningbo Green-Health Pharmaceutical Co., Ltd.
- ◆ Zhejiang Changxing Pharmaceutical Co., Ltd.
- ◆ Jiangsu Chenpai Pharmaceutical Co., Ltd.
- ◆ Nantong Liannong Pesticide Preparation Investigative Develop Co., Ltd.
- ◆ YiChang Humanwell Pharmaceutical Co., Ltd.
- ◆ Northeast Pharmaceutical Group Co., Ltd.
- ◆ Hacı Group
- ◆ Hunan Qianjin Xiangjiang Pharmaceutical Co., Ltd.
- ◆ Guangzhou Baiyunshan Pharmaceutical Co., Ltd.
- ◆ GuangDong Yili Pharmaceuticals Group Co., Ltd
- ◆ Lee Kum Kee Foods Co., Ltd.
- ◆ Anshi Pharmaceutical Co., Ltd.
- ◆ Simcere Pharmaceutical Group
- ◆ Neimenggu Yuanhe Pharmaceutical Co., Ltd.
- ◆ Tanaka Foods Co., Ltd.
- ◆ Export to USA, Russia, Ukraine, Mexico, Indonesia, Iran, Peru, Egypt, Vietnam and so on



由江苏省科技厅组织的防爆沸腾制粒机和多功能包衣机的新产品现场鉴定会。

Technical conference for explosion proof fluidized granulator and multi-function coater organized by the Provincial Science & Technology Office of Jiangsu.



美国大美药业公司订购FL200A制粒机二台。
USA Daimy Pharmaceutical Company order two sets of FL200A.



脉冲式沸腾干燥制粒机
Pulse Fluidizing Drying Granulator



江苏省著名商标

PGL-B系列喷雾干燥制粒机

PGL-B Series Spray Drying Granulator

应用 Applications

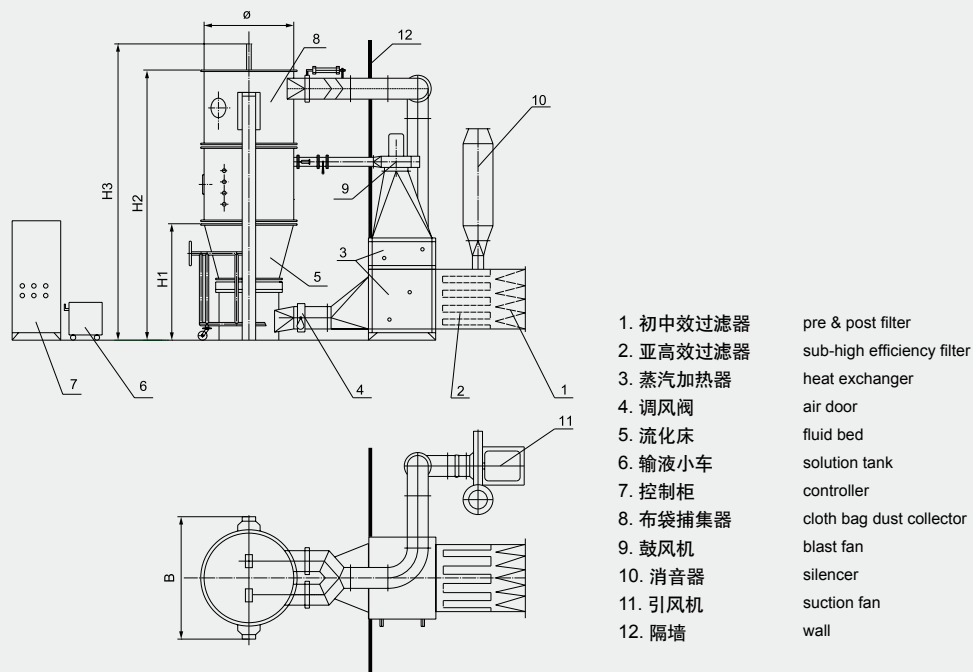
- ◆ 制药工业：片剂、冲剂、胶囊剂颗粒；低糖、无糖的中成药颗粒。
- ◆ 食品：可可、咖啡、奶粉、颗粒果汁、调味品等。
- ◆ 其它行业：农药、饲料、化肥、颜料、染料等。
- ◆ Pharmaceutical industry: tablet, medicinal granules, capsule granule, granule of chinese medicine with no or low sugar.
- ◆ Foodstuff: cocoa, coffee, milk powder, juice of granule, flavoring and so on.
- ◆ Other industries: pesticides, feed, chemical fertilizer, pigment, dyestuff and so on.

特点 Features

- ◆ 集喷雾干燥和流化制粒于一体，实现液态物料一步法制粒。
- ◆ 采用喷雾工艺，特别适用微辅料，热敏性物料，功效比FL沸腾制粒机高1-2倍。
- ◆ 一些产品终水份可达0.1%，配备返粉装置，成粒率 $\geq 85\%$ ，可制0.2-2mm颗粒。
- ◆ 改进设计的内混式多流体雾化器，可处理一些比重达 $1.3\text{g}/\text{cm}^3$ 的浸膏。
- ◆ 目前该系列产品已做到PGL-150B，每批可处理500kg。
- ◆ Integrate spraying, drying fluid granulating in one body to realize granulating from liquid in one step.
- ◆ Using the process of spraying, it is particularly suitable for micro auxiliary raw materials and heat sensitive raw materials. Its efficiency is 1-2 times than FL fluidized granulator.
- ◆ The final moisture of some products can reach 0.1%. It is equipped with powder returning device. The rate of granule forming is more than 85% with 0.2-2mm of diameter.
- ◆ The improved inner roller multi-flow atomizer can treat the liquid extract with $1.3\text{g}/\text{cm}^3$ of gravity.
- ◆ At present, this series of machine we can make the type of PGL-150B which can process 500kg/batch.



安装示意图 Schematic of installation



PGL-B系列喷雾干燥制粒机

PGL-B Series Spray Drying Granulator

技术参数 Technical parameters

项目 item		型号 spec	PGL-3B	PGL-5B	PGL-10B	PGL-20B	PGL-30B	PGL-80B	PGL-120B
流浸膏 liquid extract	最小 Min.	kg/h	2	4	5	10	20	40	55
	最大 Max.	kg/h	4	6	15	30	40	80	120
沸腾能力 fluidization capacity	最小 Min.	kg/批	2	6	10	30	60	100	150
	最大 Max.	kg/批	6	15	30	80	160	250	450
液体比重 specific gravity of the liquid		g/cm ³	≤1.30						
原料容器量 volume of material vessel		L	26	50	220	420	620	980	1600
容器直径 diameter of vessel		mm	400	550	770	1000	1200	1400	1600
引风机功率 power of suction fan		kW	4.0	5.5	7.5	15	22	30	45
辅风机功率 power of auxiliary fan		kW	0.35	0.75	0.75	1.2	2.2	2.2	4
蒸汽 steam	耗量 consumption	kg/h	40	70	99	210	300	366	465
	压力 pressure	MPa	0.1~0.4						
电加热功率 power of electric heater		kW	9	15	21	25.5	51.5	60	75
压缩空气 compressed air	耗量 consumption	m ³ /min	0.9	0.9	0.9	0.9	1.1	1.3	1.8
	压力 pressure	MPa	0.1~0.4						
作业温度 operating temperature		°C	室温~130°C 自动调节 automatically regulated from indoor temperature to 130°C						
产品水份 water content of product		%	≤ 0.5%(视具体物料而定 depends on the material)						
物料收得率 rate of product collection		%	≥ 99%						
设备噪音 noise level of machine		dB	≤ 75						
主机尺寸 dimensions of main machine	∅	mm	400	550	770	1000	1200	1400	1600
	H ₁	mm	940	1050	1070	1180	1620	1620	1690
	H ₂	mm	2100	2400	2680	3150	3630	4120	4740
	H ₃	mm	2450	2750	3020	3700	4100	4770	5150
	B	mm	740	890	1110	1420	1600	1820	2100
重量 weight		kg	500	800	1200	1500	2000	2500	3000

◆ 选型例：要求每批次处理流浸膏量I=120kg(含固量为30%)、种子量II=60kg，可由I、II得出理论成品量
 $M=mI+mII=120\text{kg}\times 30\%+60\text{kg}=96\text{kg}$ ，工作时间 $T=120\text{kg}/30\text{kg}/\text{h}=4\text{h}$ ，技术参数栏中可查出沸腾量为标准载荷范围，故以每班完成两个批次，选用PGL-30B型较为适宜。

◆ Example of model choice: Suppose that are 120kg liquid extract I (include 30% solid) and 60kg seed II in one vessel, from I and II, we can get theoretical product amount $M=mI+mII=120\text{kg}\times 30\%+60\text{kg}=96\text{kg}$, working time $T=120\text{kg}/30\text{kg}/\text{h}=4\text{h}$, from the parameter table we can find that the fluidization amount is inside the standard loading range. If we require two batches in one duty time, PGL-30B is OK.

典型用户 Typical customers

- ◆ 株洲千金药业有限公司
- ◆ 吉林紫鑫药业有限公司
- ◆ 长春人民药业有限公司
- ◆ 马应龙药业集团
- ◆ 河北世济唐威药业有限公司
- ◆ 河北药都集团制药有限公司(药都集团)
- ◆ 杭州天厨蜜源保健品有限公司
- ◆ 常州药业健民制药厂
- ◆ 上海蔡同德堂制药厂
- ◆ 上海艾克药业有限公司
- ◆ 广东嘉应制药股份有限公司
- ◆ 广州陈李济药厂
- ◆ 安徽华佗国药股份有限公司
- ◆ 四川禾正制药有限责任公司
- ◆ 妙一(厦门)生物科技有限公司
- ◆ 出口马来西亚、台湾
- ◆ Zhuzhou Qianjing Pharmaceutical Co., Ltd.
- ◆ Jinlin Zixin Pharmaceutical Co., Ltd.
- ◆ Changchun People Pharmaceutical Co., Ltd.
- ◆ MaYinglong Pharmaceutical Group Co., Ltd.
- ◆ Hebei Shijitangwei Pharmaceutical Co., Ltd.
- ◆ Yaodu Group
- ◆ Hangzhou Tienchu Miyuan Protection Products Co., Ltd.
- ◆ Changzhou Jianmin Pharmaceutical Factory
- ◆ Shanghai Caitongdetang Pharmaceutical Factory
- ◆ Shanghai Aike Pharmaceutical Co., Ltd.
- ◆ Guangdong Jiaying Pharmaceutical Co., Ltd.
- ◆ Guangzhou Chenliji Pharmaceutical Factory
- ◆ Anhui Huatuo State-owned Pharmaceutical Co., Ltd.
- ◆ Sichuan Hygien Pharmaceutical Co., Ltd.
- ◆ Xiamen Miaoyi Bioscience Corporation
- ◆ Export to Malaysia, Taiwan



江苏省著名商标

YS系列流化床料斗提升卸料机

YS Series Fluid Bed Hopper Lifting Machine

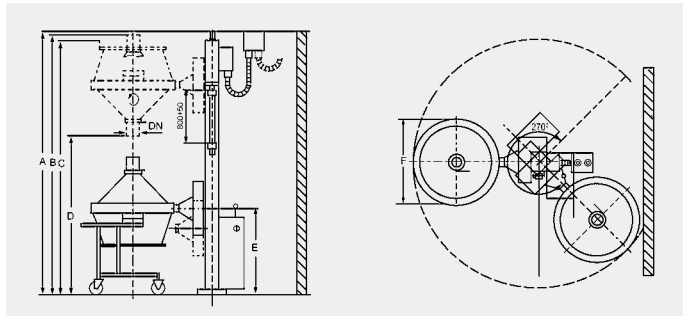


应用 Applications

- ◆ 本机是为满足GMP技术规范而设计的提升卸料装置。
- ◆ 本机与FL、PGL等一步制粒机、GFG、FG等沸腾干燥机配套，从而实现无尘装、卸料操作。
- ◆ It's designed to meet GMP standard;
- ◆ Integrated with FL, PGL, GFG and FG series of fluid bed to realize dust-free discharge.

特点 Features

- ◆ 采用液压控制，安全可靠
- ◆ 可与流化床料斗紧密配合，达到封闭操作
- ◆ GMP规范设计、制作
- ◆ Adopt hydraulic control, it is safe and reliable;
- ◆ Integrated with fluid-bed to realize seal operation ;
- ◆ GMP standard design and manufacturing.



技术参数 Technical parameters

项目 item	型号 spec	YS 60	YS 120	YS 200	YS 300	YS 500
标准负荷 capacity	kg	150	250	350	500	750
容器净重 product container weight(empty)	kg	85	120	160	220	250
电机功率 motor power	kW	1.1	1.1	2.2	3.0	3.0
提升速度 lifting speed	m/min	0~4	0~4	0~4	0~3.5	0~3
A	mm	4000	4000	4000	4000	4000
B	mm	3900	3900	3900	3900	3900
C	mm	3700	3700	3700	3700	3700
D	mm	2200	2200	2200	2200	2200
E	mm	1400	1400	1600	1700	1800
F	mm	1095	1290	1495	1690	1890

典型用户 Typical customers

- ◆ 海南康芝药业股份有限公司
- ◆ 海南先声药业集团
- ◆ 广州白云山制药股份有限公司
- ◆ 白云山威灵药业有限公司
- ◆ 武汉天天好生物制品有限公司
- ◆ 吉林吴太集团
- ◆ 吉林华港制药有限公司
- ◆ 常州制药有限公司
- ◆ 李锦记(香港)食品有限公司
- ◆ Hainan Honz Pharmaceutical Co., Ltd.
- ◆ Simcere Pharmaceutical Group
- ◆ Guangzhou Baiyunshan Pharmaceutical Co., Ltd.
- ◆ Baiyunshan Weiling Pharmaceutical Co., Ltd.
- ◆ Wuhan Tallyho Biological Product Co., Ltd.
- ◆ Jilin Wutai Group
- ◆ Jilin Huagang Pharmaceutical Co., Ltd.
- ◆ Changzhou Pharmaceutical Co., Ltd.
- ◆ Lee Kum Kee (Hong Kong) Foods Co., Ltd.

GHL系列高速混合制粒机

GHL Series High Speed Mixing Granulator



标准型 Standard type

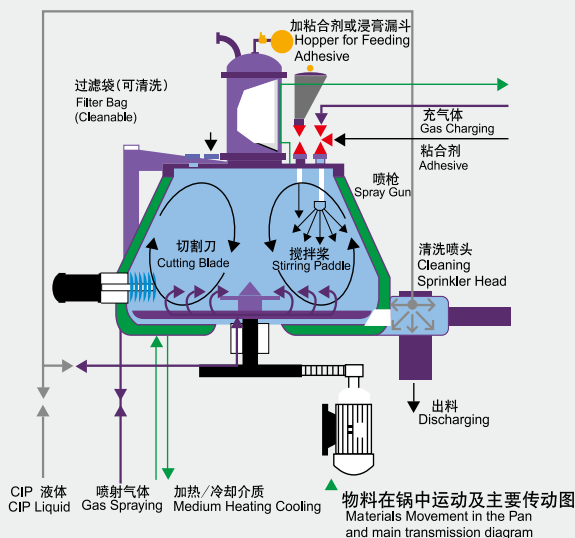


夹套型 Jacket type

原理 Principle

- ◆ 粉体物料与粘合剂在圆筒形容器中由底部混合浆充分混合成湿润材料，然后由侧置的高速粉碎桨切割成均匀的湿颗粒。
- ◆ The powder raw material and adhesive in a cylinder are fully mixed at the bottom to become a humid soft material. Then it is cut by high-speed cutter and become uniform granules.

夹套型工艺流程 Flow chart of Jacket

与制粒工艺相配套的组件
Auxiliary Parts Related to the Technique of Granulation

特点 Features

- ◆ 本机采用卧式圆筒构造，结构合理。
- ◆ 充气密封驱动轴，清洗时可切换成水。
- ◆ 流态化造粒，成粒近似球形，流动性好。
- ◆ 较传统工艺减少25%粘合剂，干燥时间缩短。
- ◆ 每批次干混2分钟，造粒1-4分钟，工效比传统工艺提高4-5倍。
- ◆ 在同一封闭容器内完成，干混-湿混-制粒，工艺缩减，符合GMP规范。
- ◆ 整个操作具有严格的安全保护措施。
- ◆ 可根据用户要求做成夹套型。
- ◆ The machine adopts horizontal cylinder structure, its structure reasonable.
- ◆ Air filled seal shaft for to drive. When washing, it can be changed to water.
- ◆ Fluidized granulation, the granule is around ball shape. Its flow ability is good.
- ◆ Compared to traditional process, 25% of adhesive can be reduced and the drying time is short.
- ◆ The dry mixing time is 2 minutes and the granulating time is 1-4 minutes. Compared to the traditional process, 4-5 times of efficiency is raised.
- ◆ Dry mixing, humid mixing and granulating are finished in the same sealed container. It is in conformity with the requirements of GMP.
- ◆ The whole operation has strict safe and protective measures.
- ◆ Jacket type might be adopted on request



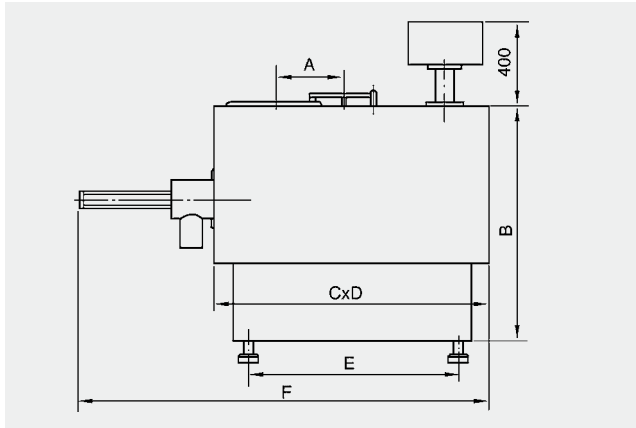
GHL系列高速混合制粒机

GHL Series High Speed Mixing Granulator

技术参数(标准型) Technical parameters (Standard Type)

项目 item	型号spec	GHL							
		10	50	150	200	250	300	400	600
容积 volume	L	10	50	150	200	250	300	400	600
产量 capacity	kg/batch	3	15	50	80	100	130	200	280
混合速度 mixing speed	r/min	300/600	200/400	180/270	180/270	180/270	140/220	106/155	80/120
混合功率 mixing power	kW	1.5/2.2	4/5.5	6.5/8	9/11	9/11	13/16	18.5/22	22/30
切割速度 cutting speed	r/min	1500/3000	1500/3000	1500/3000	1500/3000	1500/3000	1500/3000	1500/3000	1500/3000
切割功率 cutting power	kW	0.85/1.1	1.3/1.8	2.4/3	4.5/5.5	4.5/5.5	4.5/5.5	6.5/8	9/11
压缩空气耗量 compressed air consumption	m ³ /min	0.6	0.6	0.9	0.9	0.9	1.1	1.5	1.8
重量 weight	kg	250	500	800	1000	1300	1800	2200	2600

外形尺寸 Overall dimensions



型号spec	A	B	CxD	E	F
10	270	750	1000x650	745	1350
50	320	950	1250x800	970	1650
150	420	1000	1350x800	1050	1750
200	500	1100	1650x940	1450	2050
250	500	1160	1650x940	1400	2260
300	550	1200	1700x1000	1400	2310
400	670	1300	1860x1100	1550	2410
600	750	1500	2000x1230	1750	2610

典型用户 Typical customers

- ◆ 湖南千金湘江药业股份有限公司
- ◆ 广州市奥海生物科技有限公司
- ◆ 山东新华制药股份有限公司
- ◆ 海南康芝药业有限公司
- ◆ 北京广源益农化学有限公司
- ◆ 宁波立华制药有限公司
- ◆ 杭州高级技工学校
- ◆ 国家中成药工程技术研究中心
- ◆ 上海傲珈生物有限公司
- ◆ 南京东元制药有限公司
- ◆ 合肥今越制药有限公司
- ◆ 大连天龙生物药业有限公司
- ◆ 陕西怡悦制药有限公司
- ◆ 石家庄市华龙药业有限公司
- ◆ 沃德(天津)营养保健品有限公司
- ◆ 诺氏制药(中国)有限公司
- ◆ 田中株式会社
- ◆ 出口埃及、俄罗斯等国
- ◆ Hunan Qianjin Xiangjiang Pharmaceutical Co., Ltd.
- ◆ Guangzhou Aohai Biological Technology Co., Ltd.
- ◆ Shandong Xinhua Pharmaceutical Co., Ltd.
- ◆ Hainan Honz Pharmaceutical Co., Ltd.
- ◆ Beijing Grand AgroChem Co., Ltd.
- ◆ Ningbo Lihua Pharmaceutical Co., Ltd.
- ◆ Higher Technical School in Hangzhou
- ◆ State Research Center of Chinese Traditional Patent Medicine Engineering and Technology
- ◆ Shanghai Aojia Biotechnology Co., Ltd.
- ◆ Nanjing Dongyuan Pharmaceutical Co., Ltd.
- ◆ Hefei Jinyue Pharmaceutical Co., Ltd.
- ◆ Dalian Tianlong Pharmaceutical Co., Ltd.
- ◆ Shanxi Yirui Pharmaceutical Co., Ltd.
- ◆ Shijiazhuang Hualong Pharmaceutical Co., Ltd.
- ◆ World (Tianjin) Nutrition & Health Products Co., Ltd.
- ◆ Lokis Pharmaceutical Co., Ltd.
- ◆ Tanaka Co., Ltd.
- ◆ Export to Egypt, Russia and so on



江苏省著名商标

DLB系列多功能制粒包衣机

DLB Series Multi-Function Granulator & Coater

概述 Descriptions

◆ DLB系列多功能制粒包衣机是一种将喷雾干燥制粒技术和流化床、喷动流化床技术以及旋转造粒技术结合为一体的新型固体制剂设备。主要适用于中、西药、食品、化工等行业的制粒、制丸、包衣。如压片前的颗粒、硬胶囊颗粒、中、西药颗粒剂和饮料中固体饮料(固体速溶颗粒)，特别适用于缓释胶囊、颗粒。

◆ DLB Series Multi-Function Granulator & Coater is a new type of solid ingredients/ material preparation equipment, that integrates granulating, coating, fluidizing and rotating granulating together. It is mainly applicable for granulating, pill making and coating in pharmaceutical, chemical, foodstuff and so on industries, such as granules to be pressed to tablets, or to be filled into capsules, granules for other Chinese and Western Medicine, solid drinks, especially controlled release capsules and granules.

应用 Applications

◆ 混合：对于可以流化的物料，如粉末、颗粒、微丸等都可在本设备中得到均匀混合，由于空气的立体运动(水平、射线和切线方向)，混合效果非常优越。

◆ 制粒：喷射黏合剂予粉末状物料，可产得各种颗粒范围的产品。

◆ 包衣：非常有效的物料床底喷系统，并采用新型三层结构喷嘴，为粉末、颗粒或微丸作薄膜包衣。

◆ 热熔包衣：可用热熔材料，如热蜡为粉末、颗粒及微丸作薄膜包衣。

◆ 喷雾干燥：将悬液液喷附在粉末上。

◆ 冷却：以干燥的冷空气使物料流化沸腾而达到冷却产品的目的。

◆ Mixing: For various kinds of fluidizable materials, such as powder, granules, micro-granule etc. Because of multi-dimensional movement(horizontal, tangent and radial direction), the mixing effect is very good.

◆ Granulating: Spray adhesive onto powder to produce granules with various diameters.

◆ Coating: Efficient for to coat powder, granules and micro-granules.

◆ Thermal Material Coating: Suitable for coating powder, granules and micro-granules with thermal wax.

◆ Spray Drying: Spray liquid or suspension onto powder so they should be dried.

◆ Cooling: This equipment might also be used for cooling powder or granules.



典型用户 Typical customers

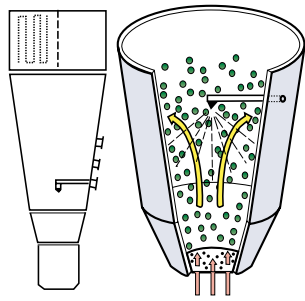
- ◆ 西安安健制药有限公司
- ◆ 广东兴达动物药业有限公司
- ◆ 成都坤宏动物药业有限公司
- ◆ 太阳石唐山药业有限公司
- ◆ 广西花红药业有限公司
- ◆ 广东食品药业有限公司
- ◆ 南京易亨制药有限公司
- ◆ 烟台布鲁拜尔生物制药有限公司
- ◆ 保定市复兴化工有限公司
- ◆ 无锡美华化工有限公司
- ◆ 出口印度
- ◆ XiAn Anjian Pharmaceutical Co., Ltd.
- ◆ Guangdong Xingda Animal Pharmaceutical Co., Ltd.
- ◆ Chengdu Kun Hong Animal Pharmaceutical Co., Ltd.
- ◆ SunStone Pharma Co., Ltd.
- ◆ Hahong Pharmaceutical Co., Ltd
- ◆ Guangdong Food Pharmaceutical Co., Ltd.
- ◆ Nanjing Yiheng Pharmaceutical Co., Ltd.
- ◆ Yantai, Bulubaier Biological Pharmaceutical Co., Ltd.
- ◆ Baoding Fuxing Chemical Co., Ltd.
- ◆ Wuxi Meihua Chemicals Co., Ltd.
- ◆ Export to India



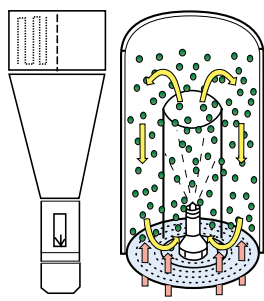
江苏省著名商标

DLB系列多功能制粒包衣机

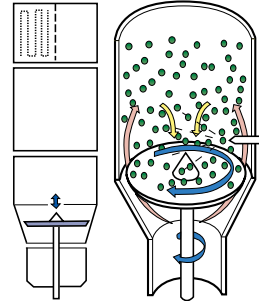
DLB Series Multi-Function Granulator & Coater



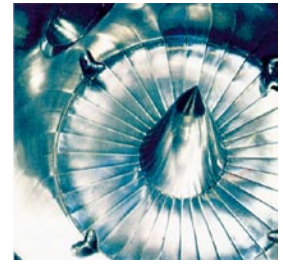
顶喷示意图
Diagram of Top Spray



底喷示意图
Diagram of Bottom Spray



切线喷示意图
Diagram of Tangent Spray

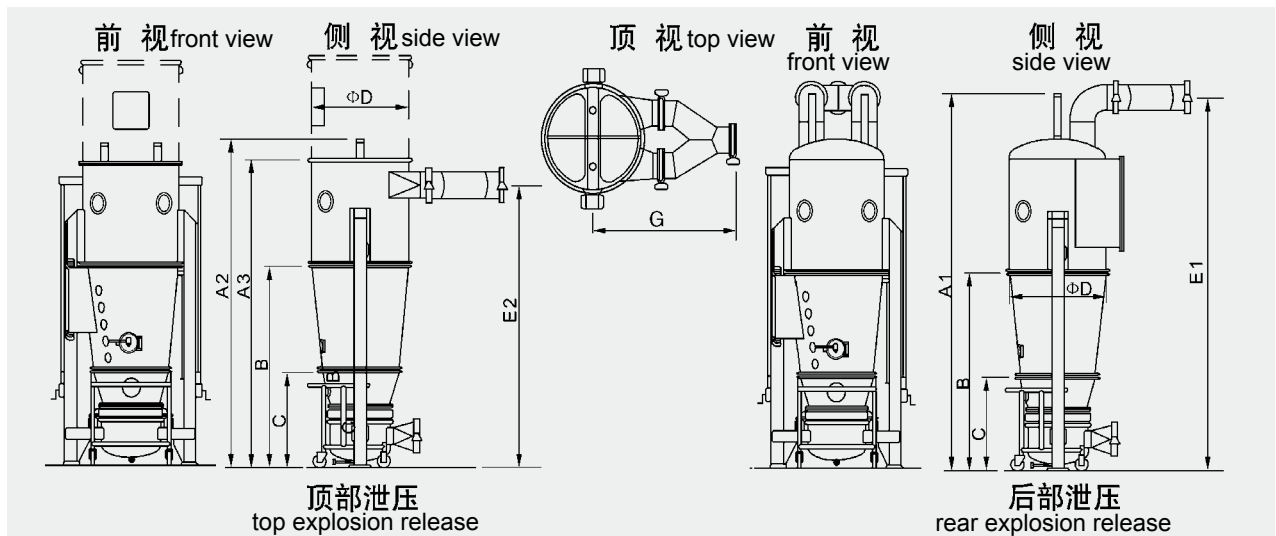


旋流包衣示意图
Diagram of Spinning Coater

技术参数 Technical parameters

项目 item	型号 spec	DLB-5	DLB-15	DLB-30	DLB-60	DLB-120	DLB-300	DLB-500
最大工作容积 (L) max. working capacity	顶喷top spray	22	45	100	420	620	1100	2000
	底喷bottom spray	15	35	90	400	550	900	1600
电加热功率 electric heater power (kW)		21	27	45	81	135	234	315
温度范围 range of temperature (°C)		0-120自动调节automatically regulated						
蒸汽耗量 consume of steam (kg/h)		60	100	180	220	366	600	1000
引风机功率power of fan (kW)		5.5	11	15	22	30	55	75
压缩空气总耗量amount of compressed air (m³/min)		0.6	0.6	0.9	1.1	1.3	3.0	4.0
整机重量 weight (kg)		1450	1800	2600	3450	4000	6500	8000

外形尺寸 Overall dimensions



尺寸size	A1	A2	A3	B	C	ØD	E1	E2	G
5	3210	3210	2810	2140	920	500	3260	2610	740
15	4060	4060	3660	2280	970	800	4100	3410	970
30	4400	4400	4000	2520	1130	1200	4600	3750	1420
60	4800	4800	4400	2900	1180	1400	5000	4100	1620
120	5100	5100	4700	3000	1380	1500	5300	4400	1620
300	5760	5760	5490	3465	1840	1800	6500	5090	1990
500	6630	6630	6360	4145	2145	2700	7590	5960	2960

LBZ系列离心包衣制粒机

LBZ Series Centrifugal Granulator & Coater

特点 Features

- ◆ 具有起母、造粒、包衣三种基本功能；
- ◆ 用于缓释性药剂制粒、肠溶性药剂制粒、丸粒等的制造；
- ◆ 还可用于食品、农药、洗涤剂及其他化学制品；
- ◆ 本机具有造粒速度快、球粒真球度高、大小均匀、合格率高、粘接团块量少、药剂利用率高等特点；
- ◆ 本机由离心式主机、供粉机、电控柜、鼓风机组、空气加热器、除尘器等设备组成。

- ◆ With three functions of make cores, granulation and coating.
- ◆ Applicable to make controlled release granules, intestine soluble granules and pill etc.
- ◆ Also applicable in foodstuff, pesticide, washing detergent and other chemical industries.
- ◆ The machine has features of high granulating speed, sphericity and uniformity of product, high quality, low percentage of blocks, and high utilizing efficiency of medicine.
- ◆ Consists of centrifugal main machine, powder feeder, electric control cabinet, blast fan section, air heater and dust filter etc.



技术参数 Technical parameters

项目item	型号spec	LBZ-360				LBZ-750				LBZ-1000				LBZ-1300			
		LBZ-360		LBZ-750		LBZ-1000		LBZ-1300		LBZ-360		LBZ-750		LBZ-1000		LBZ-1300	
生产能力capacity	kg	1-5		10-25		30-50		60-90		1-5		10-25		30-50		60-90	
主机功率power of main machine	kW	0.55		3		4		5.5		0.55		3		4		5.5	
风机功率power of fan	kW	2.2		3		3		7.5		2.2		3		3		7.5	
转速speed	r/min	500		200		200		150		500		200		200		150	
外形尺寸overall dimensions(LxWxH)	mm	1480x710x1900		1955x1340x1318		2500x1200x1680		2100x2200x2050		1480x710x1900		1955x1340x1318		2500x1200x1680		2100x2200x2050	
重量weight	kg	500		900		2000		3000		500		900		2000		3000	



江苏省著名商标

QZL系列球形制丸机

QZL Series Ball Granulating Machine



特点 Features

1. 生产的球形颗粒尺寸介于0.5~2.0mm。
 2. 可将长条颗粒搓成圆颗粒。
 3. 操作简单，生产时间短。
1. Produce pellet size between 0.5~2.0mm.
 2. Process long granule becomes pellet.
 3. Simple operation & effective operation time.

应用 Applications

◆ 通过特别设计的转子结构,使各种湿颗粒加工成美丽的球形颗粒。是制备胶囊、中药丸剂的理想设备。

1. 制药工业、食品工业
2. 化妆品、染料、色素
3. 陶瓷工业

◆ With the special design of rotor structure, the machine makes various wet grains into the perfect ball shape pellets. It is the desired equipment for making the capsules and pills of traditional Chinese medicine.

1. Pharmaceutical, Food Industries
2. Cosmetic, Dyestuff, Coloring Industries
3. Ceramic Industry

典型用户 Typical customers

- ◆ 杭州天农生物营养技术有限公司
- ◆ 桂林漓源佳益生物技术有限公司
- ◆ 广州市兴达动物药业有限公司
- ◆ 宜兴天石饲料有限公司
- ◆ 成都坤宏动物药业有限公司
- ◆ Hangzhou Tiannong Bio-nutrition Technology Co., Ltd.
- ◆ Guilin Liyuan Jiayi Biological Co., Ltd.
- ◆ Guangzhou Xingda Animal Pharma Co., Ltd.
- ◆ Yixing Tianshi Feed Co., Ltd.
- ◆ Chengdu Kunhong Animal Pharma Co., Ltd.

原理 Principle

◆ 本机是通过设置旋转离心盘、鼓风机、气动喷枪，将湿颗粒制成美丽的球丸。将前道工序做成的湿颗粒投入旋转离心盘内，启动鼓风机后再将旋转离心盘启动，使湿颗粒受到环隙空气浮力、旋转离心力、自身重力作用，呈环周绳股状运动，从而形成真球度极高的球丸。

◆ This machine makes damp granule into beautiful pellet by setting rotating centrifugal disk, blower, and pneumatic nozzle. Feed damp granule into rotating centrifugal disk, start fan then start rotating centrifugal disk. It can make the damp granule in float and circle by the air from gap, rotating centrifugal strength and itself gravity, appear circle rope-turning movement and become high-degree ball shape pellet.

技术参数 Technical parameters

规格 spec	项目 item	功率 power (kW)	生产能力 production capacity (kg/h)
	Ø230	0.75	10~100
	Ø400	2.2	20~150
	Ø700	3.7	30~200
	Ø1000	5.5	40~300

GK系列干式造粒机

GK Series Dry Granulating Machine



原理 Principle

- ◆ 利用物料中的结晶水，直接将粉料制成颗粒的新设备，结构合理，性能稳定可靠，清洗维修方便。
- ◆ 所制颗粒可压片剂、作冲剂，灌胶囊等。主要用于制药、食品、化工和其他行业造粒。特别适用于湿法无法解决的物料造粒。
- ◆ By using the crystallization water in the materials, the equipment can directly make the powder materials into the grains. It is a kind of new equipment. The structure is rational. The machine is stable and reliable in the performance and easy in maintenance.
- ◆ The grains to be made can be used for pressed pills, instant soluble agent, capsule and etc. The machine is mainly used for the grain making in pharmacy, food, chemical and other industries and it is suitable for the grain making for which the wet method can not settle it.

技术参数 Technical parameters

项目item 型号spec	生产能力 capacity (kg/h)	料斗容积 volume of hopper (L)	轧辊尺寸 roller size (mm)	轧辊最大预压力 max.roller pressure (MPa)	液压系统最大工作预压力 max. operation pressure (MPa)	辊轮及送料速度调节形式 roller and material conveying speed
40	5-20	3	Ø120x40	6	8	变频调速 inverter control
80	20-60	3	Ø200x80	10	15	变频调速 inverter control
120	30-100	5	Ø200x120	10	15	变频调速 inverter control

应用 Applications

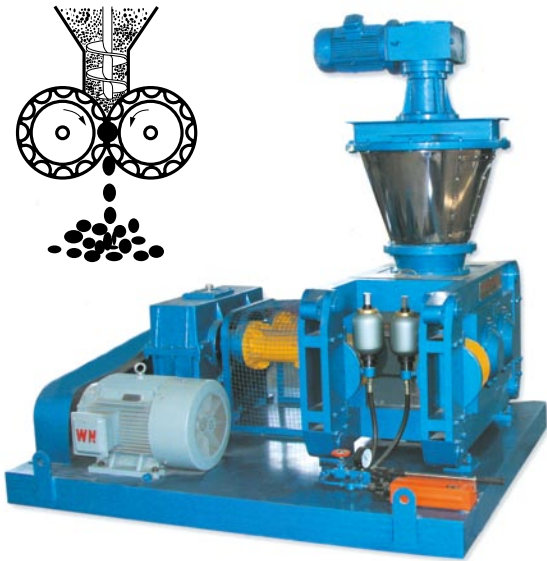
- ◆ 医药：压片颗粒、胶囊填充颗粒等
- ◆ 食品：食品制造用颗粒、调味颗粒等
- ◆ 塑料：各种塑料成型颗粒
- ◆ 化工：催化剂、颜料、洗涤剂颗粒
- ◆ Pharmacy: grains for pressed pill, and for capsule filling grains and etc.
- ◆ Food: grains for food manufacturing, for seasoning.
- ◆ Plastics: various plastics shaping grains.
- ◆ Chemical: catalyst, color, detergent and other grains.

特点 Features

- ◆ 干粉颗粒密度均匀，崩解度好，成料率高。
- ◆ 特殊的送料结构，保证有效送料。
- ◆ 轧辊水循环冷却，保证不会出现物料粘辊现象。
- ◆ 不需要水或乙醇等润湿剂，不需要二次加热干燥，工序少，工效高，成本低。
- ◆ 采用先进的电动液压，操作简单可靠，自动化程度高。
- ◆ 密封操作无污染，满足药品卫生要求。
- ◆ The dry powder grain density is uniform. The disintegration is good. The grain making rate is high.
- ◆ The special material conveyor structure will ensure the effective material sending.
- ◆ The roll cool circulation will ensure that there is no phenomenon that the materials stick to the roll.
- ◆ It is not necessary to use the water, alcohol and other wet agent. There is no need of twice heating and drying. The operation procedure is less. The machine is high in operation efficiency and low in the cost.
- ◆ The machine uses the advanced electric and hydraulic driving. It is simple and reliable in the operation and high in the automation grade.
- ◆ With the enclosed operation, there is no pollution, which meets the pharmacy health requirements.

GZL系列干法辊压造粒机

GZL Series Roller Pressing Granulator



原理 Principle

- ◆ 各种干粉物料从设备顶部加入，经脱气、螺旋预压进入两个平等轧辊，轧辊相对旋转，物料被强制送入两辊之间，轧辊将物料咬入辊隙进行压缩，物料通过压缩区后，物料的表面张力和重力使之自然脱出。脱出后的指条状团块进入碎粒机由旋转刀排破碎，被破碎的物料进入整粒机通过滚动刀排使颗粒和部分粉状物料进入旋振筛进行筛分。合格品通过输送机被送入成品仓。粉状筛下物料通过输送机再次被送回原料仓进行二次辊压，挤压力的大小可根据造粒操作的需要由液压油缸的压力进行调节。
- ◆ 通过改变辊面开槽形式，可得到片状、条状、扁球状物料。
- ◆ Dry material powder is fed from the top of the equipment, de-air, screw-pre-press, enter into the gap between the two rollers that are rotating in opposite directions. The pressed material falls down because of surface tension and gravity when passes through pressing section. The noddles shaped material then enters into breaking machine, been smashed by rotating knife. The smashed material enters into granulator, and then the particles and part of powder material enters into sieve by the rolling knife, and then the product is separated. The product up to standard will be conveyed to product silo by conveyor; the material under the sieve should be fed back and should be pressed again. The pressure might adjust by the hydraulic oil cylinder according the requirements of granulation.
- ◆ Sheet, bar and other shape of product might be procured by choose the relative shape of the grooves on the surface of the roller.

概述 Descriptions

- ◆ GZL系列干法辊压造粒机是采用干法挤压工艺技术，对含水量<10%的粉状物料进行压缩成片，再经过破碎、整粒、筛分工艺，使片块状物料变成符合使用要求的颗粒状物料。
- ◆ 干法辊压造粒主要是靠外部加压方式，使物料强制通过两个反面旋转的辊轮间隙，压缩成片。在辊压过程中，物料的实际密度能增大1.5-3倍，从而达到一定的强度要求。
- ◆ Compressing the lower than 10% water content in the powder by dry extrusion technology and then processing it into required particles through breaking, granules treatment and screening process.
- ◆ The material is pressed by exterior force, and passes through the gap between the two rollers which are rotating in different directions, and then it's pressed into sheets. The mass density of material might increase 1.5-3 times, so to achieve required strength.

特点 Features

- ◆ 物料经机械压力强制压缩成型，可以不添加任何湿润剂，产品纯度得到保证。
- ◆ 干粉直接造粒，无需后续干燥过程，更有利于现有生产流程的衔接和改造。
- ◆ 颗粒强度高，堆积比重的提高较其它造粒方式都更为显著。尤其适用于增加产品堆积比重的场合。
- ◆ 可控制环境污染，减少粉体浪费和包装成本，提高产品运输能力。
- ◆ 结构紧凑，维修方便，操作简单，工艺流程短，能耗低，效率高，故障率低，适合原料范围广，辊压力可根据不同物料自由调整。
- ◆ 加料和喂料装置采用变频无级调速控制，自动化程度高，可实现一人多机控制，劳动强度低及可长期连续运转等特点。
- ◆ 主要传动部件均采用优质合金材料、不锈钢材料、钛材、铬和其他表面合金制作，大大提高了耐磨损、耐腐蚀、耐高温及耐压能力，使该机具有较长的使用寿命。
- ◆ The material is forced and to be pressed by mechanical force, without any additional ingredients, so to ensure purity.
- ◆ The dry material is made into granules directly, no need any further drying process. So it's good for product process.
- ◆ The strength of the particles are high, the mass density is increased more apparently compare to other method of granulation. It's especially applicable for to increase the mass density of product.
- ◆ The pollution of enviroment is controlled, the wasted powder is reduced, the packaging fee is decreased and the product is easier in transportation.
- ◆ The structure is compact, the maintenance is convenient, the operation is simple, the process is short, the energy consumption is low, the efficiency is high, the probability of fault is low, the application range is wide, and the pressure of roller might be adjusted freely according to the property of material.
- ◆ The material feeding adopts non-step inverter control, the automation level is high. One operation might control multi-units of machine. The labor intensity is low, and the the machine might run continuously in long time.
- ◆ Adopt high quality alloy, stainless steel, Ti, Cr and other metal for driving parts, the wear-resistance, corrosion-resistance, thermo-resistance and pressure-resistance is highly increased. The service life is long.

GZL系列干法辊压造粒机

GZL Series Roller Pressing Granulator



江苏省著名商标

工艺流程 Flow chart

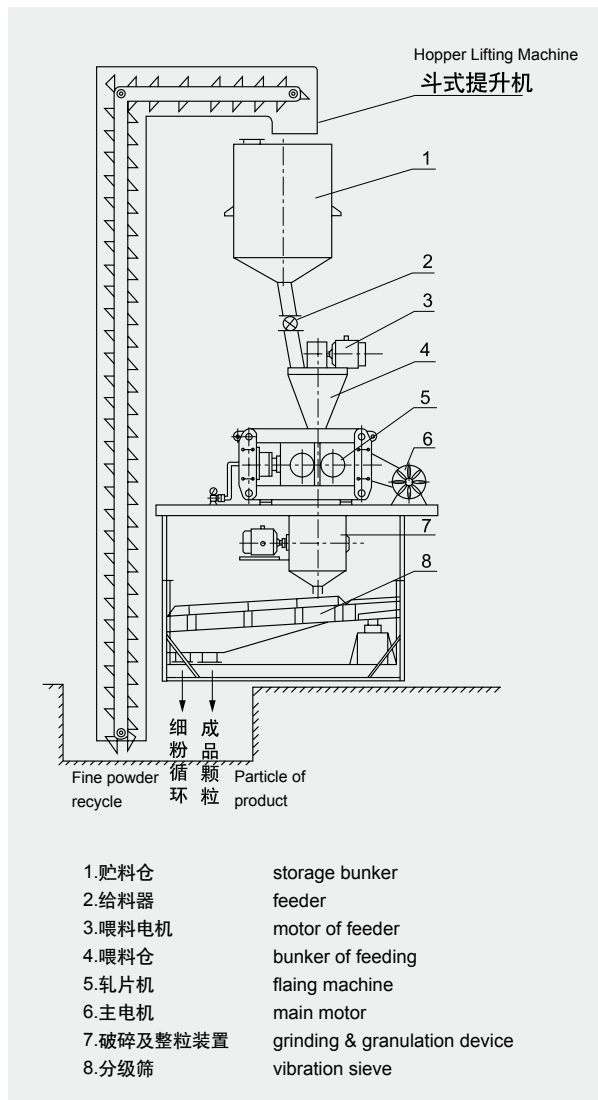
◆ 原料由加料口通过螺旋输送机进入斗式提升机，由斗式提升机将原料粉末送入振动式原料仓，通过定量加料机将物料送入变频式螺旋喂料机，对物料进行预压缩，经预压缩的物料被压入两个相对转动的两对压辊中间进行压实，其压实力是通过油缸的推力由压辊传递给物料的，被压实的片状物料自动脱槽进入破碎机，将其破碎成大小不均的颗粒体，然后进入整粒机进行修整。被修整的颗粒通过带网孔的筛板被挤压出来进入筛分机，成品颗粒通过筛分后进入斗式提升机被送入成品仓。筛分下来的粉状物通过螺旋输送机返回原料仓，再次压实由此完成一个封闭式循环。

◆ The material enters into the hopper lifting machine through spiral conveyor from the feeding port, and then it's delivered to vibration material silo. A metered feeder will feed the material into inverter controlled spiral feeder, and the material is then pre-pressed. The pre-pressed material enters into the gap between the two rollers that are rotating in opposite directions, and then it's firmly pressed. The firmly pressing force is transferred to the material through the pushing force of oil cylinder. The firmly pressed material sheet falls into the breaking machine automatically, and been smashed into granules of different sizes, and then enters the granulator to be trimmed. The trimmed granules is squeezed out into the sieve through a mesh board. The final product enters into hopper lifting machine, and then it's conveyed to final product silo. The material sieved out should be fed back to the material silo by spiral conveyor, so to perform the next circulation.

应用 Applications

石油化工，精细化工，医药，食品，金属粉末
生物工程，农药，肥料，矿产，煤炭

Petro-chemical, fine chemical, pharmaceutical, foodstuff, metal powder, bio-engineering, pesticide, fertilizer, mine and coal.



技术参数 Technical parameters

项目item	型号spec	GZL-240	GZL-360	GZL-450
轧辊直径diameter of roll	(mm)	Ø240	Ø360	Ø450
轧辊有效使用宽带width of roll	(mm)	80-160	180-500	220-1000
轧辊转速revolution of roll	(r/min)	15,20,26,32,	14,18,24,30	10-25
最大成形压力Max. prssure of roll	(MPa)	12	16	21
轧片最大厚度Max. thickness of pill	(mm)	4	8	8
轧片产量capacity of pill	(kg/h)	200-500	500-3000	800-5000
成品粒度diameter of finished pill	(mm)	0.5-6	0.5-8	0.5-6
成品产量capacity of finished product	(kg/h)	160-400	400-2400	680-4000
主机功率power of main machine	(kW)	7.5	22-37	45
装机总容量total power	(kW)	20	50	80
外形尺寸overall dimensions(LxWxH)	(mm)	1500x1300x5000	2000x2000x9000	2500x2500x10000
重量weight	(t)	6	10	13



江苏省著名商标

GFG系列高效沸腾干燥机

GFG Series High-Efficiency Fluidizing Dryer



原理 Principle

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

◆ Purified and heated air is introduced from the bottom through suction fan and passed through the screen plate of raw material. In the work chamber, the state of fluidization is formed through stirring and negative pressure. The moisture is evaporated and removed rapidly and the raw material is dried quickly.

应用 Applications

◆ 机制螺杆挤压颗粒、摇摆颗粒、湿法高速混合制粒颗粒的干燥。

◆ 医药、食品、饲料、化工等领域湿颗粒和粉状物料的干燥。

◆ 大颗粒，小块状，粘性块粒状物料的干燥。

◆ 魔芋等干燥时体积变化物料的干燥。

◆ Screw extruded granules, sway produced YK series granules and granules produced by GHL series granulator.

◆ Suitable for drying humidity block or powder raw material in pharmaceutical, foodstuff, feed, chemical industries and so on fields.

◆ Large granules, small blocks and adhesive materials.

◆ The materials that volumes might vary during drying process.

特点 Features

◆ 流化床为圆形结构避免死角。

◆ 料斗设置搅拌，避免潮湿物料团聚及干燥时形成沟流。

◆ 采用翻倾卸料，方便迅速彻底，亦可按要求设计自动进出料系统。

◆ 密闭负压操作，气流经过过滤。操作简便，清洗方便，是符合GMP要求的理想设备。

◆ 干燥速度快，温度均匀，每批干燥时间一般在20-30分钟。

◆ The structure of fluidization bed is of round so as to avoid dead corner.

◆ Inside the hopper there is a stirring device in order to avoid agglomeration of raw material and forming canal of flow.

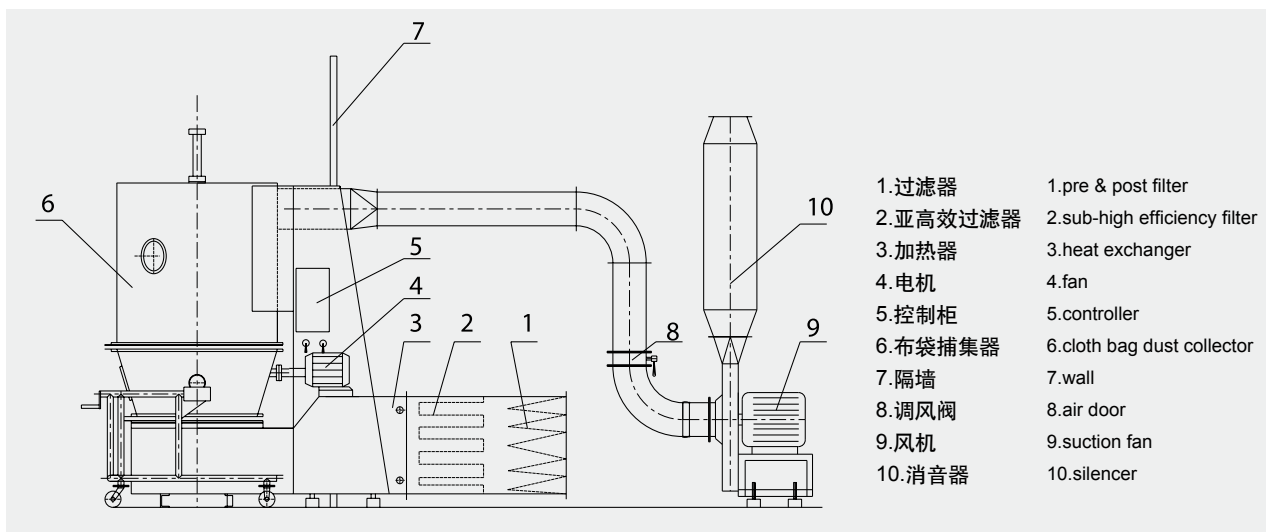
◆ The granule is discharged through the method of turning over. It is very convenient and full. The discharged system can be designed as request.

◆ It is operated at the conditions of negative pressure and seal. The air is filtered. Therefore it is simple in operation and convenient for cleaning. It is an ideal equipment that is in conformity with the requirements of GMP.

◆ The drying speed is fast and the temperature is uniform. The drying time is 20-30 minutes normally.



安装示意图 Installation diagram



技术参数 Technical parameters

项目 item		型号spec	GFG-60	GFG-100	GFG-120	GFG-150	GFG-200	GFG-300	GFG-500	GFG-1000
投料 capacity	kg		60	100	120	150	200	300	500	1000
风机 fan	风量 velocity	m ³ /h	2361	3488	4000	4901	6032	7800	10800	15000
	风压 air pressure	mmH ₂ O	594	533	533	679	787	950	950	1200
	功率 power	kW	7.5	11	15	18.5	22	30	45	75
搅拌功率 stirring power	kW	0.55	0.55	0.55	0.55	0.75	1.5	1.5	2.2	
搅拌转速 stirring speed	r/min	11								
蒸气耗量 consume of steam	kg/h	141	170	170	240	282	366	451	800	
操作时间 time of operation	min	15-30(视具体物料而定depends on material)								
主机高度 height of main machine	mm	2700	2900	2900	2900	3300	3800	4200	5800	

典型用户 Typical customers

- ◆ 山东新华制药股份有限公司
- ◆ Shandong Xinhua Pharmaceutical Co., Ltd.
- ◆ 太平洋医药科技集团
- ◆ Pacific Pharmaceutical Technology Group
- ◆ 青岛明月海藻集团有限公司
- ◆ Bright Moon Seaweed Groups
- ◆ 内蒙古赤峰蒙欣药业有限公司
- ◆ Mysun Pharmaceutical Co., Ltd.
- ◆ 广州珠江制药厂
- ◆ Guangzhou Zhujiang Pharmaceutical Factory
- ◆ 广东西陇化工有限公司
- ◆ Guangdong Xilong Chemical Co., Ltd.
- ◆ 湖南三金制药有限责任公司
- ◆ Hunan Sanjin Pharmaceutical Co., Ltd.
- ◆ 兰溪市绿香园食品有限公司
- ◆ Lanxi LXyuan Food Co., Ltd.
- ◆ 安徽云鹏药业有限公司
- ◆ Anhui Yunpeng Pharmaceutical Co., Ltd.
- ◆ 海南康芝药业有限公司
- ◆ Hainan Honz Pharmaceutical Co., Ltd.
- ◆ 乐山市瑞和祥动物保健药业有限公司
- ◆ Leshan Recondex Animal Health Co., Ltd.
- ◆ 出口乌克兰
- ◆ Exports to Ukraine



江苏省著名商标

FG系列立式沸腾干燥机

FG Series Vertical Fluidizing Dryer



应用 Applications

- ◆ 本机主要用于医药、食品、化工等行业粉末或颗粒物料的干燥。
- ◆ The machine is main used for drying powder or granules from pharmaceutical, foodstuff, chemical and so on industries.

特点 Features

- ◆ 流态化干燥、热质传递快;
- ◆ 在封闭负压下操作, 无粉尘飞扬;
- ◆ 采用抗静电过滤材料, 操作安全;
- ◆ 设备无死角, 清洗彻底, 无交叉污染;
- ◆ 满足GMP规范要求。
- ◆ Fluid bed to achieve fast heat transmission of medium.
- ◆ Seal negative pressure operation, there is no dust.
- ◆ Because of using anti-static material as filter, it is safe in operation;
- ◆ The equipment has no dead corner so it is easy to clean fully and there is no cross pollution;
- ◆ It is in conformity with the requirements of GMP.

典型用户 Typical customers

- ◆ 郑州市生物化工厂
- ◆ 沈阳红梅集团
- ◆ 广东溢多利生物科技股份有限公司
- ◆ 广东顺峰药业有限公司
- ◆ 上海宝龙药业有限公司
- ◆ 罗地亚(无锡)制药有限公司
- ◆ 江阴汇通精细化工有限公司
- ◆ 海南先声药业集团
- ◆ 出口日本、伊朗
- ◆ Zhenzhou Biota Chemical Factory
- ◆ Shengyang Hongmei Group
- ◆ Guangdong VTR Bio-Tech Co., Ltd.
- ◆ Guangdong Shunfeng Pharmaceutical Co., Ltd.
- ◆ Shanghai Baolong Pharmaceutical Co., Ltd.
- ◆ Rhodia(Wuxi) Pharmaceutical Co., Ltd.
- ◆ Jiangyin Huitong Chemical Co., Ltd.
- ◆ Simcere Pharmaceutical Group
- ◆ Export to Japan, Iran



技术参数 Technical parameters

项目 item		型号 spec	规格								
			3	5	30	60	120	200	300	500	1000
原料容器 container of raw material	直径 dim.	mm	300	400	700	1000	1200	1400	1600	1800	2200
	容积 volume	L	12	22	100	220	420	670	1000	1500	2500
生产能力 production capacity	最小 Min.	kg/batch	1.5	4	15	30	80	100	150	250	500
	最大 Max.	kg/batch	4	6	36	72	140	240	360	600	1100
蒸汽耗量 consume of steam		kg/batch	12	23	70	140	211	282	366	465	800
压缩空气量 amount of compressed air		m ³ /min	0.3	0.3	0.3	0.6	0.6	0.9	0.9	0.9	1.5
风机功率 power of fan		kW	2.2	4	5.5	11	18.5	22	30	45	75
温度 temperature		°C	常温~120自动调节, Adjustable from ambient temperature to 120								
物料收得率 collection rate		%	> 99								
操作时间 time of operation		min	15~30(视具体物料而定 depends on material)								
终湿含量 content of final product		%	~ 0.2(视具体物料而定 depends on material)								
噪音 noise		dB	≤75								
主机高度 height of main machine		mm	2100	2300	2500	3000	3300	3800	4000	4800	6200

XF系列卧式沸腾干燥机

XF Series Horizontal Fluidizing Dryer

概述 Descriptions

◆ 沸腾干燥机，又称流化床，经过30多年的使用、改进，目前在制药、化工、食品、粮食加工等方面，越来越体现它的重要作用。它是由空气过滤器、沸腾床主机、旋风分离器、布袋除尘器、高压离心通风机、操作台组成。由于干燥物料的性质不同，配套除尘设备时，可按需要而进行，可同时选择旋风分离器、布袋除尘器，也可选择其中的一种。一般来说，比重较大的物料只需选择旋风分离器。比重较轻的物料需配套布袋除尘器，并备有气力送料装置供选择。本设备有连续型与间隙式两种操作方式。

◆ Fluidizing dryer is also called fluid bed. Through operation and improvement over 30 years, it has play an active part in the fields of pharmaceutical, chemical, foodstuff, grain and so on industries. It consists of air filter, fluid bed, cyclone separator, dust collector, high-speed centrifugal fan, control cabinet and so on. Because of the difference of property from raw material, it is necessary to equip dust remover in accordance with practical needs. It may select cyclone separator and dust collector both or one of them. In general, cyclone separator can be selected if the raw material is larger and the dust collector may be selected if the raw material is light. Moreover, there is pneumatic feeding device for your selection. There are two kinds of operation for this machine, continuous and intermittent type.

原理 Principle

◆ 洁净的热风经阀板分配进入床体内，从加料器进入的湿物料被热风形成沸腾状态。由于热风与物料广泛接触，增强了传热传质的过程，因此在较短时间内就可干燥。如用连续型，物料从床体的一头进入，经过几十秒至几分钟沸腾干燥，自动从床体另一头流出。本设备一般进行负压操作。

◆ The clean and hot air enters into fluid bed through distributor of valve plate. The wet material is fed from the feeder forms the fluid state by hot air. Because of the wide contact between hot air and raw materials, the time of drying is short. If use continuous type, the material enters from the front of bed, fluidized in bed for several minutes, and float another side of bed. The machine works in negative pressure.

该系列产品行业标准由我公司起草并发布。
行业标准号：JB/T 20107



应用 Applications

◆ 医药药品、化工原料、食品、粮食加工、饲料的干燥作业。如：原料药、压片颗粒、中药冲剂、保健食品、饮料冲剂、玉米胚芽、饲料、塑料树脂、柠檬酸和其它粉粒状物料的干燥除湿。适用物料粒径一般为0.1~6mm，最佳粒径为0.5~3mm。

◆ Drying process of medicines, chemical raw material, foodstuff, grain processing, feed and so on. For example, raw medicine, tablet, Chinese medicine, foodstuff of health protection, drinks, maize germ, feed, resin, citric acid and other powders. The suitable diameter of raw material is normally 0.1-0.6mm. The most applicable diameter of raw material will be 0.5-3mm.

技术参数 Technical parameters

型号 spec	项目 item	干燥能力 drying capacity (kg/h)	风机功率 power of fan (kW)	风压 air pressure (Pa)	风量 air velocity (m ³ /h)	进风温度 Tem. of inlet air (°C)	最大能耗 Max consume (J)	进料形式 Form of feeding
XF10		10~15	7.5	5.5x10 ³	1500	60~200	2.0x10 ⁸	1.星形加料器： shape valve 2.气力自行输送： pneumatic conveying
XF20		20~25	11	5.8x10 ³	2000	60~200	2.6x10 ⁸	
XF30		30~40	15	7.1x10 ³	3850	60~200	5.2x10 ⁸	
XF50		50~80	30	8.5x10 ³	7000	60~200	1.04x10 ⁹	

注：干燥能力以干燥梅晶初含水份20%，终含水份5%，进风温度计130℃时测定，其它物料的干燥能力按具体干燥情况为准，选型时注意，A型：配旋风分离器；B型：内袋式；C型：既带旋风，又配布袋除尘器。

Notes: the drying capacity is measured based on the primary moisture of crystal of plum is 20% and its final moisture is 5% and the temperature of air inlet is 130°C. The drying capacity of other raw materials will be based on the practical drying condition. When choose models, please note that: Model A should be matched with cyclone separator and Model B with inside bag dust collector and Model C with cyclone separator and bag dust collector.



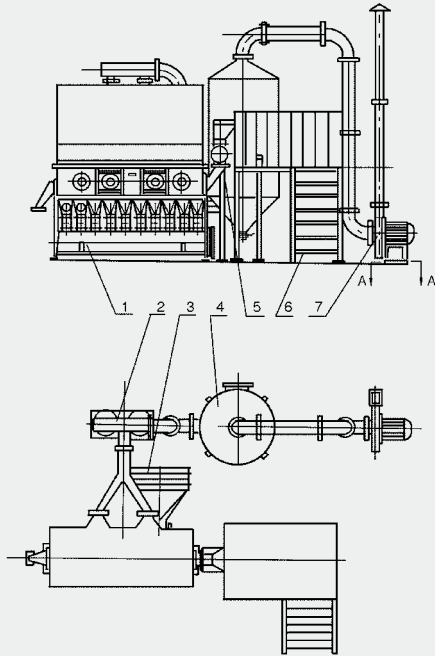
江苏省著名商标

XF系列卧式沸腾干燥机

XF Series Horizontal Fluidizing Dryer

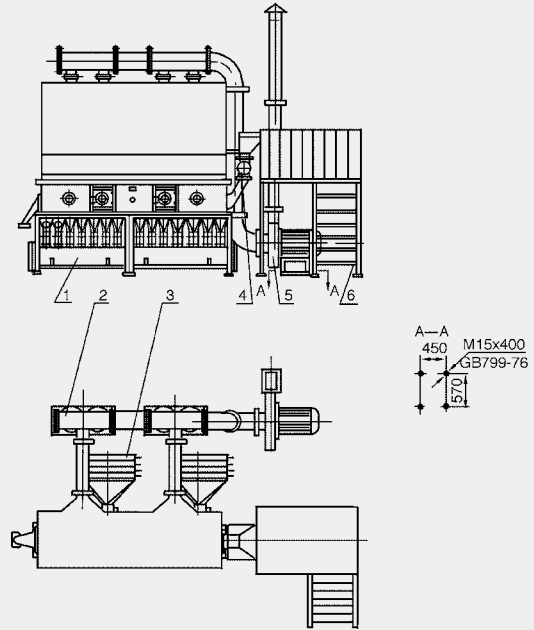
安装示意图 Schematic of installation

旋风+布袋式 Cyclone separator and bag



- | | | | |
|---------|------------------------------|-------|--------------|
| 1.主机 | 1.main machine | 5.加料器 | 5.feeder |
| 2.旋风分离器 | 2.cyclone separator | 6.操作台 | 6.controller |
| 3.加热器 | 3.heater | 7.引风机 | 7.fan |
| 4.布袋除尘器 | 4.dust filter with cloth bag | | |

旋风式 Cyclone separator



- | | | | |
|---------|---------------------|-------|--------------|
| 1.主机 | 1.main machine | 4.加料器 | 4.feeder |
| 2.旋风分离器 | 2.cyclone separator | 5.引风机 | 5.fan |
| 3.加热器 | 3.heater | 6.操作台 | 6.controller |

安装说明 Explanation to installation

- ◆ 各设备需摆放平整，用底脚螺丝固定，各部件密封良好。
- ◆ 风机可摆放于室外或自建消音室内。平面布置可根据具体情况酌情调整。
- ◆ All equipment should be horizontal and fixed with foundation screw on the ground. All parts should be sealed well.
- ◆ The fan may be installed outside door or in the special noise free room. The plan can be adjusted slightly in accordance with the real conditions.

典型用户 Typical customers

- | | |
|-----------------|--|
| ◆ 云南白药集团 | ◆ Yunnan Baiyao Group Co., Ltd. |
| ◆ 浙江天益食品添加剂有限公司 | ◆ Zhejiang Tianyi Food Additives Co., Ltd. |
| ◆ 安徽海鑫中药饮片有限公司 | ◆ Anhui Haixin Chinese Medicine Pieces Co., Ltd. |
| ◆ 广州星群药业有限公司 | ◆ Guangzhou Xingqun Pharmaceutical Co., Ltd. |
| ◆ 河北保定味宝食品有限公司 | ◆ Hebei Baoding Weibao Food Co., Ltd. |
| ◆ 亳州白云山制药有限公司 | ◆ Haozhou Baiyunshan Pharmaceutical Co., Ltd. |
| ◆ 江西青峰药业有限公司 | ◆ Jiangxi Qingfeng Pharmaceutical Co., Ltd. |
| ◆ 甘肃抚正药业有限公司 | ◆ Gansu Fuzhen Pharmaceutical Co., Ltd. |
| ◆ 广西万通制药有限公司 | ◆ Guangxi Wantong Pharmaceutical Co., Ltd. |
| ◆ 河北金木药业有限公司 | ◆ Hebei Jinmu Pharmaceutical Co., Ltd. |
| ◆ 新乡华青医药有限公司 | ◆ Xinxiang Huaqing Pharmaceutical Co., Ltd. |
| ◆ 山东中圣药业有限公司 | ◆ Shandong Zhongsheng Pharmaceutical Co., Ltd. |
| ◆ 常熟新特化工有限公司 | ◆ Changshu New-Tech Chemical Co., Ltd. |
| ◆ 上海安而信化学有限公司 | ◆ Shanghai Ansin Chemical Co., Ltd. |
| ◆ 连云港德邦精细有限公司 | ◆ Lianyungang Debang Fine Chemical Co., Ltd. |
| ◆ 盐城东吴化工有限公司 | ◆ Yancheng Dongwu Chemical Co., Ltd. |
| ◆ 青海雪牛生物工程有限公司 | ◆ Qinghai Snow Yak Bioengineering Co., Ltd. |
| ◆ 青海雪峰牦牛乳业有限公司 | ◆ Qinghai Xuefeng Yak Dairy Co., Ltd. |

NLG系列内加热流化床干燥机

NLG Series Inner Heating Fluid Bed Dryer

概述 Descriptions

◆ 内加热流化床干燥机是在常规流化床干燥和间接加热式干燥基础上发展起来的一种新型干燥技术，将热交换器沉浸在流态化干燥物料中，物料脱水所需热量分别由管式热交换器和流化用热空气提供，可以较小的风量满足物料流化干燥的要求。由于大部分热量是由内置热交换器提供，热空气主要是作为保证正常流态化的动力媒体，因此比常规流化床干燥机所需热空气量大大降低，电耗及尾气热损失大幅度减少。

◆ Inner heated fluid bed dryer is developed based on normal fluid bed dryer and indirect heated dryer. Immerse the heat exchanger in the material that is fluidized and dried. The heat required for dewatering is provided by tube heat exchanger and fluidizing hot air. The air velocity required for dry the material is less. The main heat is provided by the heat exchanger inside, the hot air is mainly for fluidization of material, so the hot air velocity required is much less compare to normal fluid bed dryer, power consumption and heat lost with the tail gas are sharply reduced.

典型用户 Typical customers

- ◆ 福建麦丹生物集团有限公司
- ◆ 黑龙江省成福食品集团有限公司
- ◆ Fujian Maidan Biology Co., Ltd.
- ◆ Helongjiang Chengfu Foods Group

应用 Applications

◆ 适用物料: 氯化胺、硝酸铵、氯化钙、甲酸钙、葡萄糖钙、硫酸钙、纤维素衍生物、磷酸二铵、磷酸二钙、成粒肥料、对苯二酚、硫酸铁、乙烯、丙烯、聚苯乙烯、碳酸钾、氯化钾、硝酸钾、磷酸钾、酒石酸钠钾、硫酸钠、聚氯乙烯、碳酸氢钠、溴化钠、甲酸钠、过硼酸钠、硫酸钠、酒石酸、对苯二甲酸、尿素、维生素。硫酸钡、硫酸镁、硫酸锌、硫酸铝、硫酸镍、硫酸铵、食盐、氯化钠、钛白粉、溴化钾、溴化铵、碳酸钠、碱式碳酸镍、碱式碳酸锌、碱式碳酸铬、碳酸钙、偏硅酸钠、红矾钠、醋酸钾、苯钾酸钠、丙烯酰胺单体、聚丙烯酰胺、尼龙1010、聚丙烯树脂、涤纶切片、聚四氟乙烯、醛树脂、土霉素、四环素、酞酐素、腐植酸、腐植酸钠、赖氨酸。

◆ Applicable materials: Hydrogenated amines, ammonium nitrate, calcium chloride, calcium formate, calcium gluconate, calcium sulfate, cellulose derivatives, diammonium phosphate, calcium phosphate, calcium phosphate, fertilizer granule, Hydroquinone, ferric sulfate, ethylene, propylene, polystyrene ethylene, potassium carbonate, potassium chloride, potassium nitrate, potassium phosphate, sodium potassium tartrate, sodium chloride, PVC sodium bicarbonate, sodium bromide, sodium formate, sodium perborate, sodium sulfate, tartaric acid, terephthalic acid, urea, vitamins. Barium sulfate, magnesium sulfate, zinc sulfate, aluminum sulfate, nickel sulfate, ammonium sulfate, salt, sodium fluoride, titanium dioxide, potassium bromide, ammonium bromide, sodium carbonate, basic nickel carbonate, basic zinc carbonate, basic chromium carbonate, calcium carbonate, sodium metasilicate, sodium dichromate, potassium acetate, potassium sodium benzene, formaldehyde acryloyl monomer, polyacrylamide amine, 1010, polypropylene resin, polyester chips, polytetrafluoroethylene, phenolic resin, soil neomycin, tetracycline, anhydride cool factors, humic acid, humic acid sodium, lysine.

技术参数 Technical parameters

项目item 型号spec	流化面积(m ²) fluidized area	装机功率(kW) power	蒸汽压力(MPa) steam pressure	蒸汽消耗(kg/h) steam consumption	进风口温度℃ Tem. of inlet air	外形尺寸(LxWxH)mm overall diemensions	占地面积(m ²) occupying area
NLG2.0	2	50	0.2-1.0	400-1000	100-300	3000x1300x4500	45
NLG2.5	2.5	65	0.2-1.0	600-1200	100-300	3500x1300x4500	55
NLG3.0	3	85	0.2-1.0	1400-2200	100-300	3600x1400x4500	65
NLG3.5	3.5	95	0.2-1.0	1000-2000	100-300	4000x1500x4500	80
NLG4.0	4.0	110	0.2-1.0	1200-2000	100-300	4600x1600x5000	90
NLG5.5	5.5	130	0.2-1.0	1400-2200	100-300	5000x1650x5000	100
NLG6.0	6	140	0.2-1.0	1600-2800	100-300	6000x1700x5000	110
NLG7.0	7	165	0.2-1.0	1800-3200	100-300	6600x1750x5000	120
NLG8.0	8	170	0.2-1.0	2000-2800	100-300	7500x1800x5000	130
NLG10	10	210	0.2-1.0	2400-3600	100-300	10000x1850x6000	140
NLG15	15	300	0.2-1.0	3200-4400	100-300	15000x1900x6500	200
NLG20	20	320	0.2-1.0	4000-6000	100-300	20000x2000x7000	240



特点 Features

- ◆ 节能高效，运行成本低。
- ◆ 干燥空气量小，系统电耗低。
- ◆ 干燥强度高，设备体积小，系统占地面积小。
- ◆ 操作弹性大，系统操作稳定。
- ◆ 特殊布风板，可防止漏料并有利于大颗粒物料的排出。
- ◆ 采用两级除尘，可达到环保排放要求。
- ◆ High energy saving, low running cost
- ◆ The amount of drying air is less; the power consumption is low.
- ◆ The drying capacity is high; the volume of equipment is small; the area occupied is less.
- ◆ The operation flexibility is high; the operation of system is steady.
- ◆ To avoid leakage of material, and it's good for discharging material of big particles by adopting special air distributing board.
- ◆ To meet exhaust requirements of environment by adopting two grades of dust filter.



江苏省著名商标

GZQ系列振动流化床干燥机

GZQ Series Rectilinear Vibrating-Fluidized Dryer



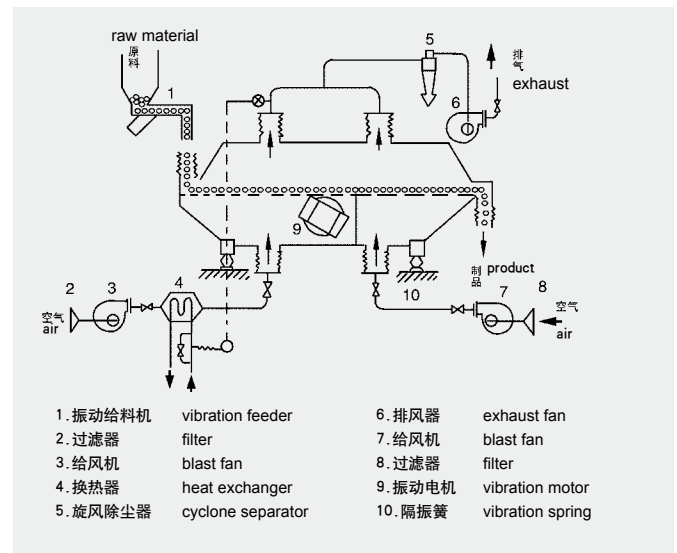
特点 Features

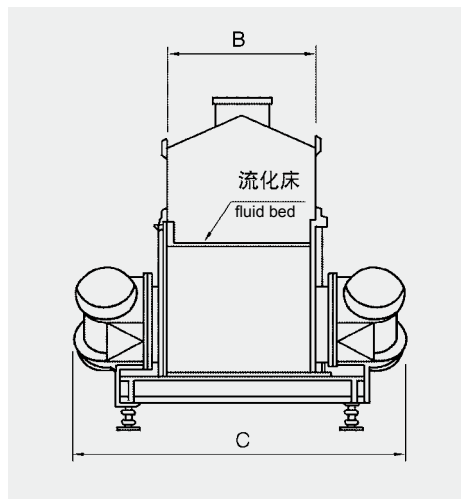
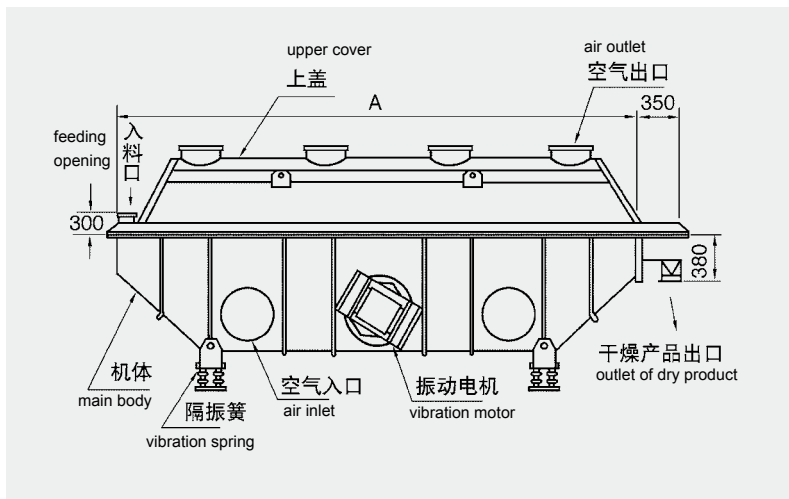
- ◆ 振动源是采用振动电机驱动，运转平稳，维修方便，噪音低，寿命长。
- ◆ 流态化匀称，无死角和空隙及吹穿现象，可以获得均匀的干燥、冷却制品。
- ◆ 可调性好，适应面宽。料层厚度和在机内移动速度以及全振幅变更均可实现无级调节。
- ◆ 对物料表面的损伤小，可用于易碎物料的干燥；物料颗粒不规则时亦不影响工作效果。
- ◆ 采用全封闭式的结构，有效地防止了物料与空气交叉感染，作业环境清洁。
- ◆ 机械效率与热效率高，节能效果好，比一般干燥装置可节能30~60%。

- ◆ Adopt vibration motor, it is smooth in running and convenient in maintenance. The noise is low and the service life is long.
- ◆ The state of fluidization is uniform and no dead gaps or broken phenomenon so to even dry, cool product.
- ◆ It is good in adjustment and wide in the field of application. The thickness of raw material and the speed of raw material to be moved inside the machine and the change of vibration range can be steeples.
- ◆ The damage the surface of raw material is small. So it can be used for raw materials that are easily to be broken. If the granule is not normal, the effect of process can not be effected.
- ◆ The structure is fully seal, it is effective to prevent from cross pollution of raw materials and the working environment is clean.
- ◆ The mechanical and heat are high and its effective of energy saving, compared to ordinal dryer, 30-60% of energy is saved.

应用 Applications

- ◆ 适用于化工、制药、食品、脱水蔬菜、粮食、矿产等行业的粉状、颗粒状物料的干燥、冷却等作业。如：柠檬酸、味精、硼砂、硫酸、复合肥、萝卜丝、豆粕、酒糟、种子、矿渣、砂糖等。
- ◆ It is applicable for drying, cooling of powder or granule state materials, such as citric acid, monosodium glutamate, borax, ammonium sulphur, compound fertilizer, piece of radish, bean, lees, seed, mine residue and sugar, in chemical, pharmaceutical, foodstuff, grain, mine and so on industries.





技术参数 Technical parameters

项目item 型号spec	床体fluid bed		外形尺寸(mm) overall dimensions			振动电机功率(kW) power of motor	重量(kg) weight
	宽(W)	长(L)	A	B	C		
GZQ-3x30	300	3000	3505	450	1050	0.37x2	1240
GZQ-3x45	300	4500	5005	450	1050	0.75x2	1570
GZQ-6x45	600	4500	5005	750	1350	1.1x2	1967
GZQ-6x60	600	6000	6510	750	1350	1.1x2	2743
GZQ-6x75	600	7500	8010	750	1750	1.5x2	2886
GZQ-9x60	900	6000	6510	1050	1750	1.5x2	3540
GZQ-9x75	900	7500	8010	1050	1750	2.2x2	4219
GZQ-12x75	1200	7500	8010	1400	2200	3x2	5223
GZQ-15x75	1500	7500	8010	1700	2500	4x2	6426
GZQ-18x80	1800	8000	8520	2000	2800	4x2	8600

典型用户 Typical customers

- ◆ 四川省禾浦化工有限公司
- ◆ Sichuan Hepu Chemical Co., Ltd.
- ◆ 株洲千金药业有限公司
- ◆ Zhuzhou Qianjing Pharmaceutical Co., Ltd.
- ◆ 浙江富利达纤维有限公司
- ◆ Zhejiang Fulida Fiber Co., Ltd.
- ◆ 郑州生物化学厂
- ◆ Zhengzhou Biota Chemical Co., Ltd.
- ◆ 金柠檬(青岛)食品添加剂公司
- ◆ Citrus (Qingdao) Food Additives Co., Ltd.
- ◆ 山东禹城福田制药有限公司
- ◆ Shandong Yucheng Futian Pharmaceutical Co., Ltd.
- ◆ 湖北采花茶业有限公司
- ◆ Hubei Caihua Tea Industry Co., Ltd.
- ◆ 欧劳福林(天津)香料有限公司
- ◆ Olaofulin (Tianjin) Spices Co., Ltd.
- ◆ 李锦记(美国)食品有限公司
- ◆ Lee Kum Kee (USA) Foods Co., Ltd.
- ◆ 上海福新化工有限公司
- ◆ Shanghai Fortune Chemical Co., Ltd.
- ◆ 宁夏亿美乳业生物科技有限公司
- ◆ Ningxia Yimei Dairy Industry Co., Ltd.
- ◆ 出口印尼、日本、菲律宾、埃及
- ◆ Export to Indonesia, Japan, Philippines, Egypt



XSG系列快速旋转闪蒸干燥机

XSG Series Flash Dryer

概述 Descriptions

- ◆ 该机是我公司与化工部沈阳化工研究院，在消化和吸收国外先进设备和技术基础上，开发的用来干燥膏粘状、滤饼状和热敏性物料的新型干燥设备。本公司设有实验样机，可为用户进行各种物料的干燥试验，提供数据和协助选型。
- ◆ Our company and Shenyang Chemical Research Institute of the Chemical Ministry of the State have developed this machine based on absorbing the foreign advanced equipment and technology. This is a new kind of drying equipment used for drying the materials, such as paste state, cake state, thixotropy, thermal sensitive powder and particles. Our factory is equipped with the testing machine, which can be used for carrying out the drying tests of various materials for our users and for to provide the parameters to select the applicable machine.



原理 Principle

- ◆ 热空气切线进入干燥器底部，在搅拌器带动下形成强有力的旋转风场。膏状物料由螺旋加料器进入干燥器内，在高速旋转搅拌桨的强烈作用下，物料受撞击、磨擦及剪切力的作用下得到分散，块状物料迅速粉碎，与热空气充分接触、受热、干燥。脱水后的干物料随热气流上升，分级环将大颗粒截留，小颗粒从环中心排出干燥器外，由旋风分离器和除尘器回收，未干透或大块物料受离心力作用甩向器壁，重新落到底部被粉碎干燥。
- ◆ The hot air enters into the bottom of the dryer in tangent direction. Under the driving of the stirrer, a powerful rotating wind area is formed. The paste state materials enter into the dryer through the screw charger. Under the powerful effect of stirring at high-speed rotation, the materials are distributed under the function of strike, friction and shearing force. The block state materials will soon be smashed and contact the hot air fully and the materials are heated and dried. The dried materials after the de-watering will go up with the hot-air flow. The grading rings will stop and keep the big particles. Small particles will be discharged out of the dryer from the ring center and will be collected in the cyclone separator and dust collector. The not-fully-dried or big piece materials will be sent to the wall of the equipment by centrifugal force and be smashed again after they fall down to the bottom.

特点 Features

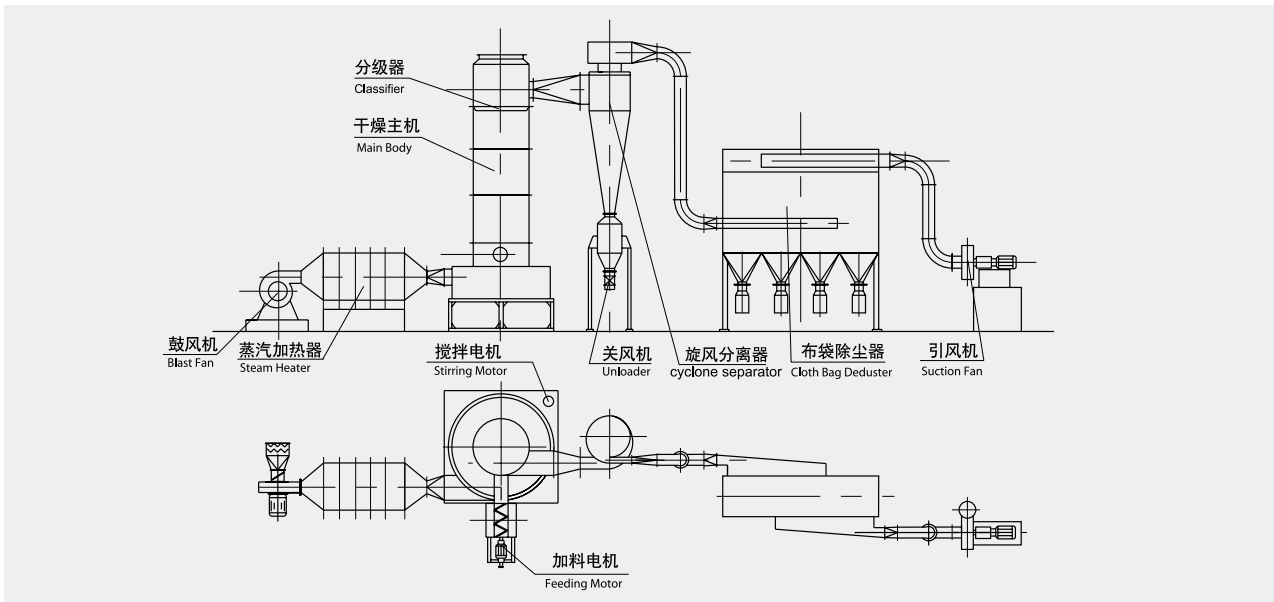
- ◆ 旋流、流化、喷动及粉碎分级技术的有机结合。
- ◆ 设备紧凑，体积小，生产效率高，连续生产，实现了“小设备、大生产”。
- ◆ 干燥强度大，能耗低，热效率高。
- ◆ 物料停留时间短，成品质量好，可用于热敏性物料干燥。
- ◆ 负压或微负压操作，密闭性好，效率高，消除环境污染。
- ◆ This machine combines the whirl technology with the fluidity, ejection and smashing step technologies.
- ◆ The equipment is compact and small in size, high in production efficiency and continuous in the production. It has realized that "small equipment can perform the large production".
- ◆ The drying capacity for this machine is big but its energy consumption is low. Its heat efficiency is high.
- ◆ The material stay time is very short. The quality of the final products is very good. The machine can be used for drying the heat sensitive materials.
- ◆ For the negative pressure or the micro-negative pressure operation, the machine is good for its tightness and high in the efficiency so as to eliminate the environmental pollution.

XSG系列快速旋转闪蒸干燥机

XSG Series Flash Dryer



结构示意图 Schematic of structure



技术参数 Technical parameters

项目item 型号spec	筒体直径(mm) barrel diameter	主机尺寸(mm) dimensions of main machine	主机功率(kW) main machine power	处理风量(m ³ /h) air velocity	蒸发水量(kg/h) water evaporation capacity
XSG-200	200	250 x 2800	5~9	300~800	10~20
XSG-300	300	400 x 3300	8~15	600~1500	20~50
XSG-400	400	500 x 3500	10~17.5	1250~2500	25~70
XSG-500	500	600 x 4000	12~24	1500~4000	30~100
XSG-600	600	700x 4200	20~29	2500~5000	40~200
XSG-800	800	900 x 4600	24~35	3000~8000	60~600
XSG-1000	1000	1100 x 5000	40~62	5000~12500	100~1000
XSG-1200	1200	1300 x 5200	50~89	10000~20000	150~1300
XSG-1400	1400	1500 x 5400	60~105	14000~27000	200~1600
XSG-1600	1600	1700 x 6000	70~135	18700~36000	250~2000

典型用户 Typical customers

- ◆ 江苏好收成韦恩农化股份有限公司
- ◆ Jiangsu Good Harvest-Weien Agrochemical Co., Ltd.
- ◆ 江苏辉丰农化股份有限公司
- ◆ Jiangsu Huifeng Agrochemical Co., Ltd.
- ◆ 南通秋之友生物科技有限公司
- ◆ Nantong Qiuzhiyou Bioscience & Biotechnology Co., Ltd.
- ◆ 河北双吉化工有限公司
- ◆ Hebei Shuangji Chemical Co., Ltd.
- ◆ 河北华旭化工有限公司
- ◆ Hebei Huaxu Chemical Co., Ltd.
- ◆ 河南平顶山易成碳化硅制品有限公司
- ◆ Henan Pingdingshan Yicheng Silicon Carbide Products Co., Ltd.
- ◆ 湖南昊华化工有限公司
- ◆ Hunan Haohua Chemical Co., Ltd.
- ◆ 安徽丰乐农化有限公司
- ◆ Anhui Fengle Agrochemical Co., Ltd.
- ◆ 湖南凯丰新材料有限公司
- ◆ Hunan Kaifeng New Material Co., Ltd.
- ◆ 山东嘉沂化工有限公司
- ◆ Shangdong Jiayi Chemical Co. Ltd.
- ◆ 鸡西丹峰磨料磨具有限公司
- ◆ Jixi Danfeng Abrasives & Grind Tools (Holding) Co., Ltd.
- ◆ 加拿大能达化学有限公司
- ◆ Canada Nengda Chemical Co., Ltd.
- ◆ 云南泽昌钛业有限公司
- ◆ Yunnan Zechang Titanium Co., Ltd.
- ◆ 宁夏启元药业有限公司
- ◆ Ningxia Qiyuan Pharmaceutical Co., Ltd.
- ◆ 江西海天药业有限公司
- ◆ Jiangxi Haitian Pharmaceutical Co., Ltd.
- ◆ 出口伊朗、澳大利亚、印尼等国
- ◆ Export to Iran, Australia, Indonesia and so on



江苏省著名商标

DG系列淀粉气流干燥机

DG Series Air Stream Dryer for Starch



概述 Descriptions

- ◆ DG系列气流干燥机组是用于湿法加工玉米，薯类及其它原料淀粉脱水后烘干的成套设备。也可用于其它要求快速干燥的热敏性粉状或片状物料的烘干。
- ◆ DG Series Air Stream Dryer is drying plant for to dry maize, potato alike and other starch material processed by wet method after dewatering process. It's also for to dry heat sensitive powder or slice state material with fast speed.

原理 Principle

- ◆ 在气流干燥机中热气流高速运行，使粉粒状的物料悬浮其中，并得到干燥。由于气流速度高，物料颗粒悬浮于气流中，气固之间的传热表积极大，传热系数高，干燥时间短(多数物料的干燥过程只需几秒钟)，所以特别适用于热敏性物料的干燥。
- ◆ 在干燥过程中，经过过滤的冷空气经空气加热器加热后与从螺旋加料机送过来经扬升器进入风管的湿淀粉混合，使其瞬间得到干燥，干燥的淀粉经旋风分离器、关风器排出，废气经风机排入大气。
- ◆ In the dryer, high-speed hot air stream sustain raw material in the suspending state, then the material is dried. Since air stream speed is very high, and material is suspending in air stream, the heat transfer surface between air and solid is large, heat transfer rate is high, and drying time is short(usually within several seconds). It's specially suitable for drying heat sensitive materials.
- ◆ In drying process, clean cool air is heated by air heater, and mixed with wet starch sent by spiral feeder and material raiser. Wet starch is dried momentarily. Dry starch is discharged though centrifug seperator and star shape unloader. Exhaust air is let out into atmosphere.

典型用户 Typical customers

- ◆ 甘肃临洮县腾胜蔬菜土特产购销有限责任公司
- ◆ 黑龙江嵩天薯业集团有限公司
- ◆ 平顺鑫源绿色产业开发有限公司
- ◆ 内蒙古四子王旗润凯农业开发公司
- ◆ 广州雄迪食品有限公司
- ◆ 出口印度尼西亚、加纳
- ◆ Gansu Lintao Tengsheng Vegetables and Native Products Co., Ltd.
- ◆ Heilongjiang Songtian Potato Industry Group Co., Ltd.
- ◆ Pingshun Xinyuan Green Industry Develop Co., Ltd.
- ◆ Inner Mongolia Siziwangqi Run Kai Agricultural Development Company
- ◆ Guangzhou Xiongdi Food Co., Ltd.
- ◆ Export to Indonesia, Ghana



甘肃临洮气流干燥现场
DG Air Stream Dryer in Gansu Lintao

技术参数 Technical parameters

项目item 型号spec	淀粉产量(t/h) capacity of starch	总功率(kW) total power	耗用蒸汽量(kg/kg水) steam consume	成品淀粉含水量 finished starch moisture
DG-0.5	0.5	16.3	1.8-2.0	12-14%
DG-0.8	0.8	21.6	1.8-2.0	12-14%
DG-1	1	24.6	1.8-2.0	12-14%
DG-1.2	1.2	26.6	1.8-2.0	12-14%
DG-1.6	1.6	30.1	1.8-2.0	12-14%
DG-2	2	47.6	1.8-2.0	12-14%
DG-2.6	2.6	59.5	1.8-2.0	12-14%
DG-3.2	3.2	75	1.8-2.0	12-14%
DG-3.6	3.6	95	1.8-2.0	12-14%
DG-5	5	123.4	1.8-2.0	12-14%
DG-6	6	170	1.8-2.0	12-14%
DG-10	10	223.5	1.8-2.0	12-14%
DG-20	20	440	1.8-2.0	12-14%

JG 系列气流干燥机

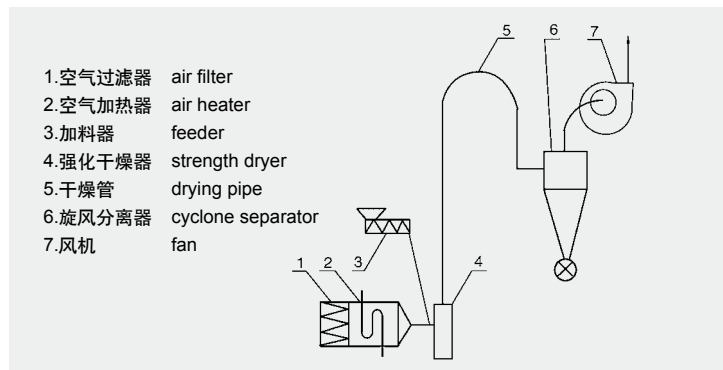
JG Series Air Stream Dryer

应用 Applications

◆ 本机特别适合含湿量比较大的，呈膏糊状的湿物料，以及用其他气流干燥方法无法干燥的物料，如：醋酸乙烯及氯乙烯的共聚物，醋酸纤维絮，催化剂、C.M.C、CT-1树脂、煅石膏、电解二氧化锰、蒽醌磺酸铵盐、氟石、硅藻土、硅胶催化剂、骨粉、过氯酸钾磺铵类药物、合成树脂、活性面筋、活性白土、化学滤饼、金红石型钛白粉、癸二酸、硫酸铜、硫酸铝、硫酸钠、磷酸钙、磷酸酯化淀粉、染料、柠檬酸钙、煤泥、粘土、粘土水泥、氢氧化铝、氢氧化钡、乳酸钙、食品、三聚氰酸、石膏浆、石灰、生物制品、碳黑、碳酸钙浆、污泥渣、有机化学品硬脂酸铝、氧化铁、有机燃料、玉米蛋白饲料、阴湿泥浆、云母粉、药剂、颜料、重铬酸钾纸浆、酒糟渣等。

◆ This dryer is suitable for the raw materials that contains high moisture and appear paste state and other raw materials that can not be dried with other drying methods. For example, copolymer of vinyl acetate and chloroethylol, cellulose acetate, catalyst, C.M.C., CT-1 resin, burnt plaster, electrolytic manganese dioxide, anthraquinone ammonium sulphamate, fluor, diatomaceous, silica gel catalyst, born powder, potassium perchlorate sulfonamide, synthesis resin, active gluten, active argil, chemical filter cake, titanium dioxide, decanoic acid, copper sulphate, Aluminum sulphate, sodium sulphate, calcium phosphate, starch, dyestuff, calcium citrate, coal earth, cement, aluminum hydroxide, barium hydroxide, slurry of calcium carbonate, residue of sludge, organic compounds, ferric oxide, organic fuel, maize albumen feed, mica powder, medicine, dyestuff, paper pulp of potassium prodromata, lees residue and so on.

流程图 Flow chart



原理 Principle

◆ 气流干燥能从易于脱水的颗粒、粉末状物料中，迅速除去水份(主要是表面水份)。在气流干燥中，由于物料在干燥器内停留时间短，使干燥成品的品质得到最佳的控制。我公司强化型气流干燥是在基本型上增加一套转速可以无级调节的强化器组成，湿物料通过螺旋加料器进入强化器后和热气流充分混合，在飞速旋转的击刀击碎和推进下，物料被破碎成细颗粒，在干燥同时向出口移动，最后在风力吸引下进入干燥管，进一步均匀干燥。风力无法吸引的湿重颗粒继续被击碎、干燥、直至能被风吸起进入干燥管。

◆ Air stream dryer can remove moisture from the surface of raw materials of granules or powder that are easy to dehydrate. Under the air stream drying process; the quality of finished products can be controlled to the best because of raw material stays a short time. The dryer of our company is developed on the basis of basic spec to add a reinforced device of steeples speed exchange. When the humidity raw material is fed through screw, it is mixed with air fully and is broken and pushed by rotating knives, the surface of raw material is broken to fine granule. It moves to the outlet at the same time of drying. Finally it enters into drying pipe under the absorbing of air force, it is dried further there. The humid and heavy granule that is not absorbed by air is broken and dried continuously till entering the drying pipe.

技术参数 Technical parameters

(以玉米淀粉为准 calculated based on maize starch)

项目 item 型号 spec	蒸发水份(kg/h)(以表面水份计算) moisture to be evaporated (calculated based on the surface moisture)	装机功率(kW) power	占地面积(m ²) area to be occupied	高度(m) height
JG 50	50	10	20	9
JG 100	100	20	32	11
JG 200*	200	31	40	11
JG 250	250	32	64	13
JG 500*	500	54	96	13
JG 1000*	1000	135	120	15
JG 1500*	1500	175	200	16

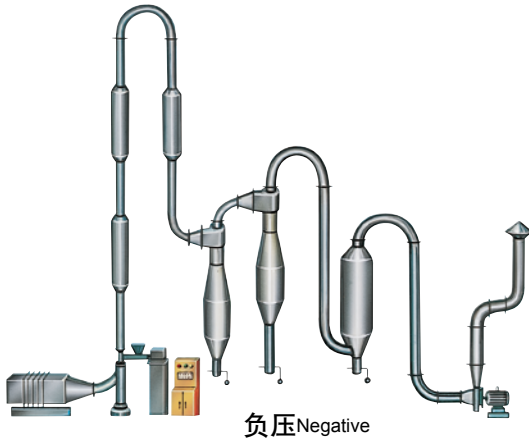
注：1、有*号者为二级干燥 2、装机功率、占地面积以蒸汽加热方式计算。

Note: 1. Marked with "*" has two grades for drying. 2. Its power and area to be occupied are calculated based on steam heating.



QG系列气流干燥机

QG Series Air Stream Dryer



原理 Principle

◆ 具有分散作用的风机，特别适合热敏物料的气流干燥作业。高速飞旋的风机叶轮，能把湿的、甚至结块的物料解碎，直至分散，在分散过程中同时搅拌、混和，然后物料和热气流平行地流动。这种类型的设备，适应干燥滤饼结块的，但还属于表面水份的物料，含湿量 $\leq 40\%$ ，如果处理量大或者成品要求干至 15% 以下时，可采用二级气流干燥。当物料含湿量超过 40% ，但 $\leq 60\%$ 时，进料较困难，应采用混料器，通过混进干料的方法以降低进料水份，此时，干燥设备的总产量就有较大幅度的下降，这在经济上是不合算的。因此，用户应先用机械的方法（离心脱水或压滤）尽可能的降低进料水份，以确保干燥作业的顺利进行。

◆ It is equipped with fan that has the function of dispersing. So it is suitable for heat sensitive raw material specially. The impeller of fan with high speed can crush the wet and blocked raw material till dispersing. During the period of dispersing, it is stirring and mixed. Then the raw material and air are flowing in parallel. It's applicable for drying raw materials that are blocked cake but only surface moisture less than 40% . If the amount to be treated is large or the moisture required of finished products is less than 60% , two grades drying can be used. If the moisture of raw materials is between 40% and 60% , the feeder is difficulty. It is necessary to adapt mixer. Through the method of mixing dry raw material into it to decrease the moisture of raw material. At this time, the total output of dryer will be decrease greatly. It is not suitable in economy. Therefore customer should remove the moisture using machinery method (centrifugal or press) so as to decrease its moisture as possible in order to guarantee the drying operation can be carried out freely.

应用 Applications

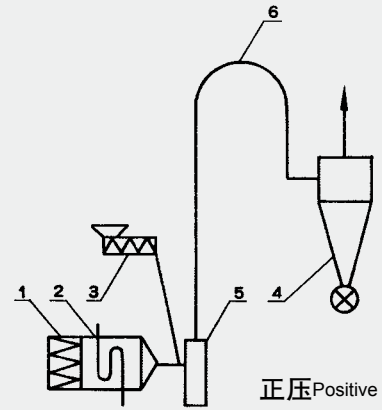
◆ 这种类型的设备，适应的物料比较多，除基本型提及的物料外，还有：安眠酮、A.B.C中间体、A.B.S树脂、A.S.C、白炭黑、苯茶吡唑酮、茶粕、草酸催化剂、促进剂m、d.m、触媒、沉淀炭粉、对乙酰氨基苯磺酰氨、对氨基水杨酸、哆耳玛托、对苯二酸、二乙苯铵、二氧化钛、活性炭、氟硅酸钠、氟石矿、副产硫酸铵、硅胶粉末、合成树脂、磺酸钙、聚丙烯树脂、金霉素、焦硅酸钠、糠氨酸咖啡渣、口服葡萄糖、硫酸钠、硫化矿、磷矿粉、兰BB、P.V.C、熔融磷肥、四环素、三氧化铁、碳酸钙、钛铁矿、铜矿、土豆粉、尾煤、硬脂酸盐、玉米蛋白、药品、药剂、氧化铁、酒渣等。

◆ The equipment can meet different needs of raw materials. Besides the mentioned raw materials in basic model, there are methaqualone, A.B.C intermediate, ABS resin, white carbon black, tea, catalyst of oxalic acid, promote agent m, d.m, catalyst, deposited carbon powder, N-acetyl-sulfanyl chloride, p-aminosalicylic acid, p-phthalic acid, diethyl aniline, titanium dioxide, active carbon, sodium fluosilicate, ammonium sulphate, powder of silicon glue, synthesis resin, calcium polysilicate, PP resin, aureomycin, sodium polysilicate, oral glucose, sodium polysilicate, mine of sulphate, mine of phosphorus, BB blue, melting phosphorus fertilizer, tetracycline, ferric oxide, calcium carbonate, titanium/ferric mine, copper mine, powder of white potato, tail coal, stearate, zein, medicine, medical agent, ferric oxide, lees so on.

流程图(Flow chart)

基本型的气流干燥设备

1. 空气过滤器
 2. 空气加热器
 3. 进料量可无级调速的加料器
 4. 旋风分离器
 5. 排风机
 6. 干燥管道、连接件所组成
- Basic spec air stream dryer
(1) air filter
(2) air heat exchanger
(3) adjusting feeder steeples
(4) cyclone separator
(5) exhaust fan
(6) consists of drying pipe and connecting parts



技术参数 Technical parameters

型号 spec	蒸发水份 moisture to be evaporated (kg/h)	装机功率 (kW) power	占地面积 (m ²) area to be occupied	高度 (m) height
QG 50	50	7	20	14
QG 100	100	13	32	14
QG 200*	200	21	40	15
QG 250	250	24	64	15
QG 500	500	43	96	18
QG 1000*	1000	100	120	18
QG 1500*	1500	150	200	20

注：1、有*号者为二级干燥 2、装机功率、占地面积以蒸汽加热方式计算。

Notes: 1. marked with "*" has two grades for drying. 2. Its power and area to be occupied are calculated based on steam heating.

FG系列正负两级气流干燥机

FG Series Positive and Negative Two Grades Air Stream Dryer



应用 Applications

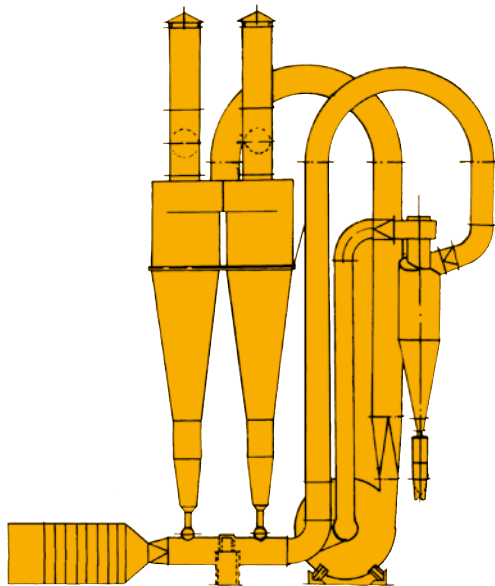
◆ 本设备广泛地用于食品、化工、医药、建材等行业的粉状、颗粒状物料的干燥。已用该系列干燥过的产品有：淀粉、葡萄糖、鱼粉、砂糖、食糖、酒糟、饲料、面筋、塑料树脂、煤粉、染料等。

◆ The equipment is widely used for drying granules and powder raw materials from foodstuff, chemical, pharmaceutical and construction materials industries. The products used this kind of equipment for drying are as follows; starch, glucose, fish powder, sugar, edible sugar, lees, feed, plastic resin, coal powder, dyestuff and so on.

原理 Principle

◆ FG系列干燥机的工作原理是将湿物料的干燥分为两步完成。原料先由二级干燥的尾气和补充热气的混合体进行一级正压干燥，使用后的高温低湿尾气排出机外，干燥后的半成品由新鲜的热空气进行二级负压干燥。干燥后的成品计量包装。使用过的高温低湿尾气用作一级干燥，从而完成良好的循环干燥过程，补充的热风量可根据需要随意调节，因而机器适用性广。

◆ The working principle is as follows: the drying of raw material is divided into two steps. First, raw material is dried with the mixing air of the tail air from the second dry and compensating hot air under positive pressure. The dried tail air is discharged to atmosphere. Second, the dried semi-finished product is carried to the second drying with fresh hot air under negative pressure. The finished product is measured and packaged. The used high temperature and low moisture tail air is used for the first grade drying. In this way the good circulating process is completed. The supplementary hot air may be adjusted freely. Therefore the machine has a wide application.



技术参数 Technical parameters

项目item		型号spec	FG 0.25	FG 0.5	FG 0.9	FG 1.5	FG 2.0	FG 2.5	FG 3.0	FG 3.5
蒸发水份 moisture to be evaporated	kg/h		113	225	450	675	900	1125	1150	1491
功率配备power	kW		11	18.5	30	50	75	90	110	110
占地面积area to be occupied	m ²		3.5x2.5	7x5	7x6.5	8x7	11x7	12x8	14x10	14x10
热效率heat efficiency	%		> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60



江苏省著名商标

LPG系列高速离心喷雾干燥机

LPG Series High-Speed Centrifugal Spray Dryer

概述 Descriptions

◆ 喷雾干燥是液体工艺成形和干燥工业中应用最广泛的工艺。最适用于从溶液、乳液、悬浮液和糊状液体原料中生成粉状、颗粒状固体产品。因此，当成品的颗粒大小分布、残留水份含量、堆积密度和颗粒形状必须符合精确的标准时，喷雾干燥是一道十分理想的工艺。

◆ Spray drying is the technology most widely used in the liquid technology shaping and in the drying industry. The drying technology is most suitable for producing solid powder or particle products from liquid materials, such as: solution, emulsion, suspension and pumpable paste states. For this reason, when the particle size and distribution of the final products, residual water contents, volume density and the particle shape must meet the precise standard, spray drying is one of the most desired technologies.

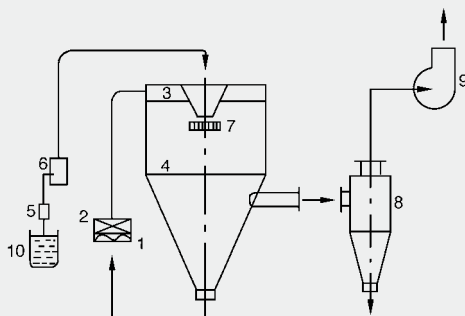


原理 Principle

◆ 空气经过滤和加热，进入干燥器顶部空气分配器，热空气呈螺旋状均匀地进入干燥室。料液经塔体顶部的高速离心雾化器，（旋转）喷雾成极细微的雾状液珠，与热空气并流接触在极短的时间内可干燥为成品。成品连续地由干燥塔底部和旋风分离器中输出，废气由风机排空。

◆ After been filtered and heated the air enters into the air distributor on the top of the dryer. The hot air enters into the drying room in the spiral form uniformly. Passing through the high-speed centrifugal sprayer on the top of the tower, the material liquid will rotate and be sprayed into the extremely fine mist liquid beads. Through very short time of contacting the heat air, the materials can be dried into the final products. The final products will be discharged continuously from the bottom of the drying tower and from the cyclones. The waste gas will be discharged from blower.

流程图 Flow chart



- | | |
|----------|----------------------|
| 1. 空气过滤器 | air filter |
| 2. 加热器 | heat exchanger |
| 3. 热风分配器 | hot air distributor |
| 4. 干燥室 | drying cabinet |
| 5. 过滤器 | filter |
| 6. 泵 | pump |
| 7. 喷头 | nozzle/sprayer |
| 8. 旋风分离器 | cyclone separator |
| 9. 风机 | fan |
| 10. 料液槽 | material liquid tank |



◆ 成都养元兽药有限公司猪血蛋白干燥用喷雾干燥机三台
◆ Chengdu Yangyuan Animal Pharmaceutical Co., Ltd: Three units of spray dryer for albumen of pork blood

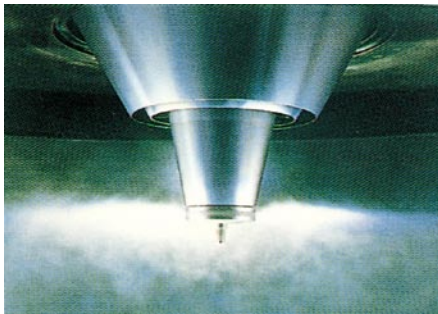
◆ 实验型喷雾干燥机，为客户来料试样
◆ There are some experimental spray dryers, they are used for make a trial for customers.

LPG系列高速离心喷雾干燥机

LPG Series High-Speed Centrifugal Spray Dryer



离心雾化器
Centrifugal sprayer



特点 Features

- ◆ 干燥速度快，料液经雾化后表面积大大增加，在热风气流中，瞬间就可蒸发95%~98%的水份，完成干燥时间仅需数秒种，特别适用于热敏性物料的干燥。
- ◆ 产品具有良好的均匀度、流动性和溶解性，产品纯度高，质量好。
- ◆ 生产过程简化，操作控制方便。对于湿含量40~60%(特殊物料可达90%)的液体能一次干燥成粉粒产品，干燥后不需粉碎和筛选，减少生产工序，提高产品纯度。对产品粒径、松密度、水份，在一定范围内可通过改变操作条件进行调整，控制和管理都很方便。
- ◆ The drying speed is high when the material liquid is atomized, the surface area of the material will increase greatly. In the hot-air flow, 95%-98% of water can be evaporated at a moment. The time of completing the drying is only several seconds. This is especially suitable for drying the heat sensitive materials.
- ◆ Its final products own the good uniformity, flow ability & solubility. And the final products are high in purity and good in quality.
- ◆ The production procedures are simple and the operation and control are easy. The liquid with moisture contents of 40-60% (for special materials, the contents might be up to 90%) can be dried into the powder or particle products once a time. After the drying process, there is no need for smashing and sorting, so as to reduce the operation procedures in the production and to enhance the product purity. The product particle diameters, looseness and water contents can be adjusted through changing the operation condition within a certain range. It is very convenient to carry out control and management.

应用 Applications

- * **化学工业** 氟化钠(钾)、碱性染料颜料、染料中间体、复合肥、甲醛硅酸、催化剂、硫酸剂、氨基酸、白炭黑等。
- * **塑料树脂** AB, ABS乳液、尿醛树脂、酚醛树脂、密胶(脲)甲醛树脂、聚乙烯、聚氯乙烯等。
- * **食品工业** 富脂奶粉、酪朊、可可奶粉、代乳粉、猪血粉、蛋清(黄)等。
食物及植物：燕麦、鸡汁、咖啡、速溶茶、调味香料肉、蛋白质、大豆、花生蛋白质、水解物等。
糖 类：玉米浆、玉米淀粉、葡萄糖、果胶、麦芽糖、山梨酸钾等。
- * **陶 瓷** 氧化铝、瓷砖材料、氧化镁、滑石粉等。
- * **Chemical Industry** Sodium fluoride (potassium), alkaline dyestuff and pigment, dyestuff intermediate, compound fertilizer, formic silicic acid, catalyst, sulphuric acid agent, amino acid, white carbon and so on.
- * **Plastics and resin** AB, ABS emulsion, uric acid resin, phenolic aldehyde resin, urea -formaldehyde resin, formaldehyde resin, polythene, poly-chloroprene and etc.
- * **Food Industry** Fatty milk powder, protein, cocoa milk powder, substitute milk powder, egg white (yolk), oats, chicken juice, coffee, instant dissolvable tea, seasoning meat, protein, soybean, peanut protein, hydrolysate, corn syrup, corn starch, glucose, pectin, malt sugar, sorbic acid potassium and etc.
- * **Ceramic** aluminium oxide, ceramic tile material, magnesium oxide, talcum and so on.



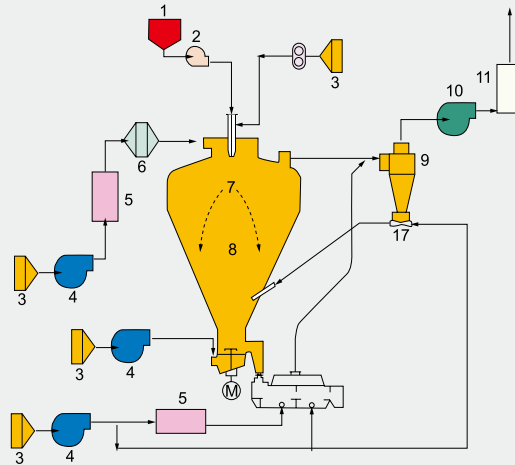
江苏省著名商标

LPG系列高速离心喷雾干燥机

LPG Series High-Speed Centrifugal Spray Dryer

流动造粒雾化干燥机 Fluidized Granulating and Atomizing Dryer

用于精密化工、食品行业。
It is used in chemical industry and foodstuff.



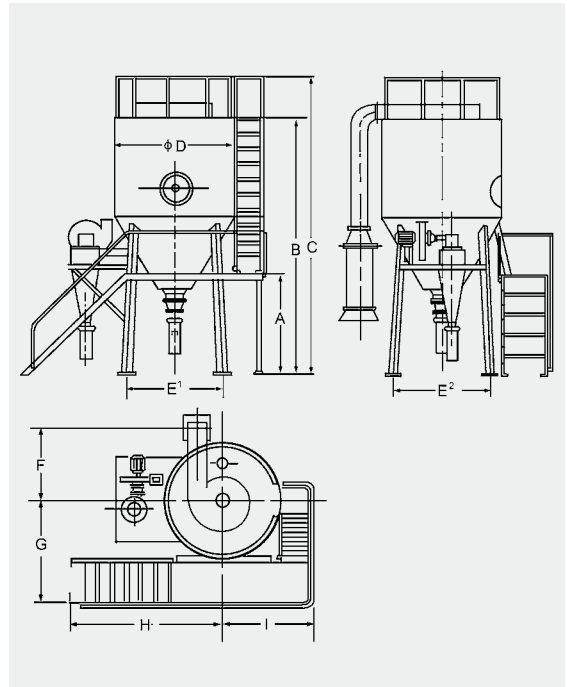
- 1.料液罐
 - 2.送料泵
 - 3.空气过滤器
 - 4.送风机
 - 5.空气加热器
 - 6.热风过滤器
 - 7.雾化器(离心式、喷嘴式)
 - 8.干燥室
 - 9.旋风分离器
 - 10.排风机
 - 11.细粉回收装置(袋滤器/湿式除尘器)
- 1.material groove
 - 2.feeding pump
 - 3.air filter
 - 4.suction fan
 - 5.air heater
 - 6.hot air filter
 - 7.sprayer (centrifugal, nozzle)
 - 8.drying room
 - 9.seperator
 - 10.exhaust fan
 - 11.powder recover(bag filter/humid dust filter)



订货须知 Attention to order

- ◆ 料液名称、物料性质: 含固量(或含水量)、粘度、表面张力、PH值。
- ◆ 干燥后粉料容量、允许残余含水量、粒度、允许最高温度。
- ◆ 产量、每天工作时间。
- ◆ 可供能源: 蒸气压力可供量, 电容量, 可供燃煤、油、气量。
- ◆ 控制要求: 进、出口温度是否需要自控。
- ◆ 收粉要求: 是否安装袋式捕集器, 环境对排放尾气要求。
- ◆ 其它特殊要求。
- ◆ Liquid name and property: solid contents (or water contents), viscosity, surface tension and PH value.
- ◆ Dry powder density, residual water contents allowed, particle size, and maximum temperature allowed.
- ◆ Output, daily shift time.
- ◆ Energy that can be supplied: steam pressure, electricity properly, fuel of coal, oil and natural gas.
- ◆ Control requirement: whether or not the inlet and outlet temperatures should be controlled.
- ◆ Powder-collecting requirement: whether it's necessary to use cloth bag filter and the requirement of the environment of the exhausted gas.
- ◆ Other special requirements.

外形尺寸 Overall dimension



型号spec	项目item	A	B	C	D	E ¹	E ²	F	G	H	I
LPG-25		1290	3410	4260	1800	1200	1200	1000	1700	1300	1550
LPG-50		1730	4245	5100	2133	1640	1640	1250	1750	1800	1600
LPG-100		2500	5300	6000	2560	2100	2100	1750	1930	2600	1780
LPG-150		2800	6000	7000	2860	2180	2180	1970	2080	3050	1960
LPG-200		2800	6600	7300	3200	2300	2300	2210	2250	3050	2100
LPG-300		2800	8000	8700	3700	2800	2800	2520	2400	3050	2250

LPG系列高速离心喷雾干燥机

LPG Series High-Speed Centrifugal Spray Dryer



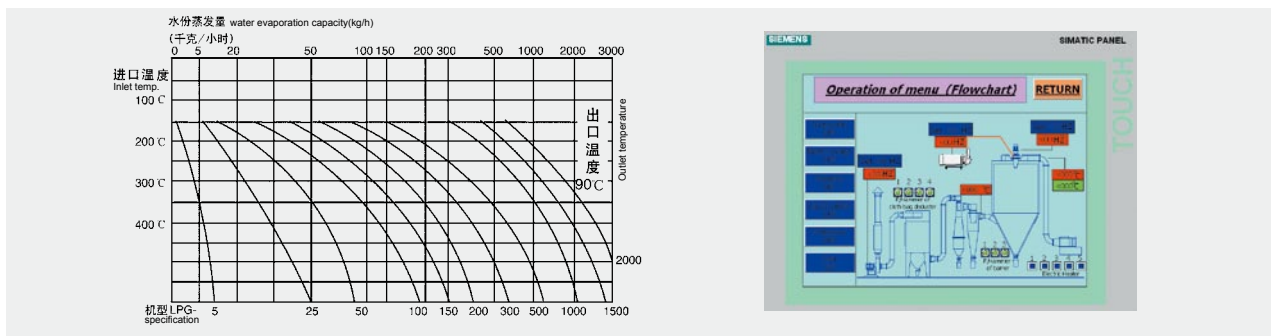
喷雾干燥

技术参数 Technical parameters

项目item	LPG					
	5	25	50	100	150	200-2000
入口温度(°C) inlet temperature	140-350 自控automatically controlled					
出口温度(°C) outlet temperature	~ 80-90					
水份最大蒸发量 (kg/h) Max. Water evaporation capacity	5	25	50	100	150	200-2000
离心喷雾头传动形式 centrifugal spraying nozzle transmission mode	压缩空气传动 Compressed air transmission			机械传动 Mechanical transmission		
转速 (r/min) Rotation speed	25000	18000	18000	18000	15000	8000-15000
喷雾盘直径 (mm) spraying disc diameter	50	100	120	140	150	180-340
热源 Heat supply	电 Electricity	电+蒸汽 Electricity + steam	电+蒸汽、燃油、煤气 Electricity + steam, fuel oil and gas			由用户自行解决 Settled by users themselves
电加热最大功率 (kW) Max. Electric heating power	9	36	63	81	99	
外形尺寸(LxWxH) (m) overall dimensions	1.8×0.93×2.2	3×2.7×4.26	3.7×3.2×5.1	4.6×4.2×6	5.5×4.5×7	根据具体情况确定 depends on the concrete conditions
干粉回收率 (%) dried powder collecting	≥95	≥95	≥95	≥95	≥95	≥95

* 注：水份蒸发量与物料的特性及热进、出口温度有关，可参阅下图

* Note: for water evaporation capacity, material property, the inlet and outlet temperatures, please refer the following diagram for reference.



典型用户 Typical customers

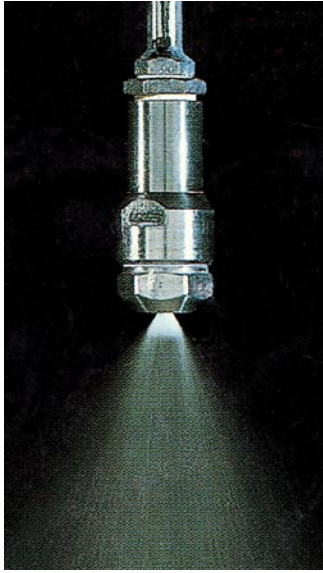
- ◆ 南通光合生物技术有限公司
- ◆ 南通醋酸化工股份有限公司
- ◆ 南京农业大学食品科技学院
- ◆ 江苏恒瑞医药股份有限公司
- ◆ 包头罗地亚稀土有限公司
- ◆ 包头兴源科技化工有限公司
- ◆ 广东恒兴集团
- ◆ 北京宝德瑞食品科技有限公司
- ◆ 北京仁和利华化工有限公司
- ◆ 中南大学
- ◆ 成都养元兽药有限公司
- ◆ 山东富氏生物科技有限公司
- ◆ 浙江华圣生物有限公司
- ◆ 河南漯河中大生物有限公司
- ◆ 沈阳红梅企业集团
- ◆ 新源纳米材料有限公司
- ◆ 上海化工研究院
- ◆ 上海天坛助剂有限公司
- ◆ 沧州华海生物有限公司
- ◆ 出口印尼、印度、泰国、俄罗斯、美国、墨西哥、法国、埃及等国家和地区
- ◆ Nantong Photosynthesis Biological Technology Co., Ltd.
- ◆ Nantong Acetic Acid Chemical Co., Ltd.
- ◆ Nanjing Agricultural University
- ◆ Jiangsu Hengrui Medicine Co., Ltd.
- ◆ Baotou Rhodia Rare Earth Co., Ltd.
- ◆ Baotou Xingyuan Technology Chemical Co., Ltd.
- ◆ Guangdong Evergreen Group Co., Ltd.
- ◆ Beijing Powdery Food Co., Ltd.
- ◆ Beijing Renhe Lihua Chemical Co., Ltd.
- ◆ Central South University
- ◆ Chengdu Yangyuan Animal Pharmaceutical Co., Ltd.
- ◆ Shandong Fushi Biotechnology Co., Ltd.
- ◆ Zhejiang Huasheng Biological Co., Ltd.
- ◆ Henan Zhongda Biological Engineering Co., Ltd.
- ◆ Hongmei Group
- ◆ New Source of Nano Material Co., Ltd.
- ◆ Shanghai Research Institute of Chemical Industry
- ◆ Shanghai Tiantan Auxiliaries Co., Ltd.
- ◆ Cangzhou Huahai Refinery and Petrochemical Co., Ltd.
- ◆ Export to Indonesia, India, Thailand, Russia, USA, Mexico, France, Egypt and so on



江苏省著名商标

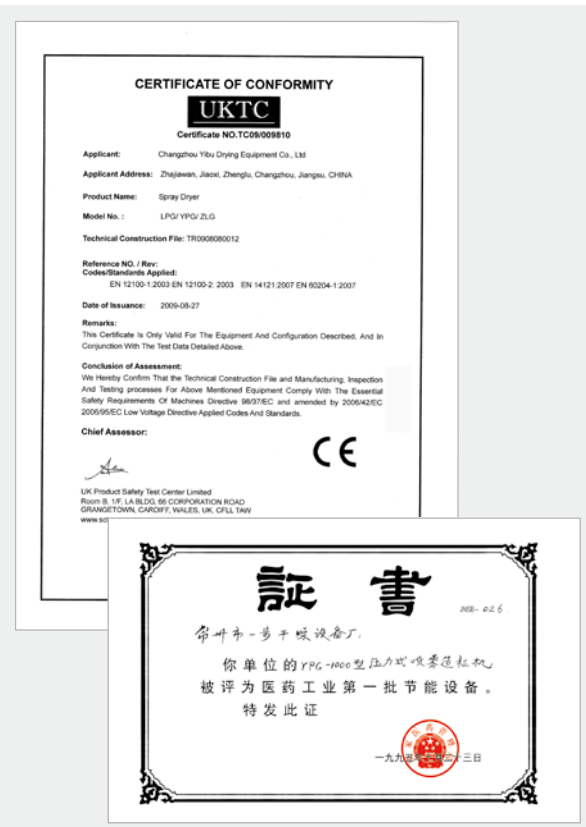
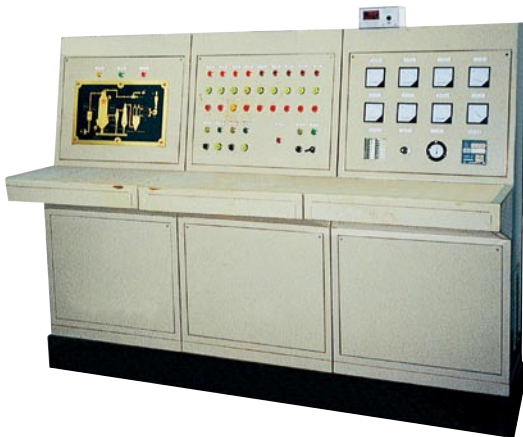
YPG系列压力式喷雾(冷却)干燥机

YPG Series Pressure Spray(cooling) Dryer



关于实验 Test

- ◆ 由于不同的产品具有不同的干燥工艺和粉粒规则，没有能适用各种不同要求的单一喷雾干燥机型。喷雾至今仍被视作一种技艺，实验是正确选型的基础。“一步”公司所装备的本机型专供用户进行物料工艺试验，这种务实的态度，使我们先后完成了洗衣粉、聚合树脂、白炭黑、 Mn_3O_4 、豆奶、脂肪酶、山梨酸钾、海参中药冲剂等交钥匙工程。
- ◆ Because of different products have different drying technologies and particle rules, there is no single type of the spray drying machines that meet all kinds of different requirements. Now spraying is still regard as a kind of technology. The test is the base of correctly choosing the types. The machine equipped by the “YIBU” Company is used specially for the carry out the technological test of the materials. This kind of pragmatic manner helps us have completed many turn-key projects, such as: detergent powder, polymerized resin, white carbon, Mn_3O_4 , soybean milk, lipase, sea cucumber Chinese traditional medicine and etc.

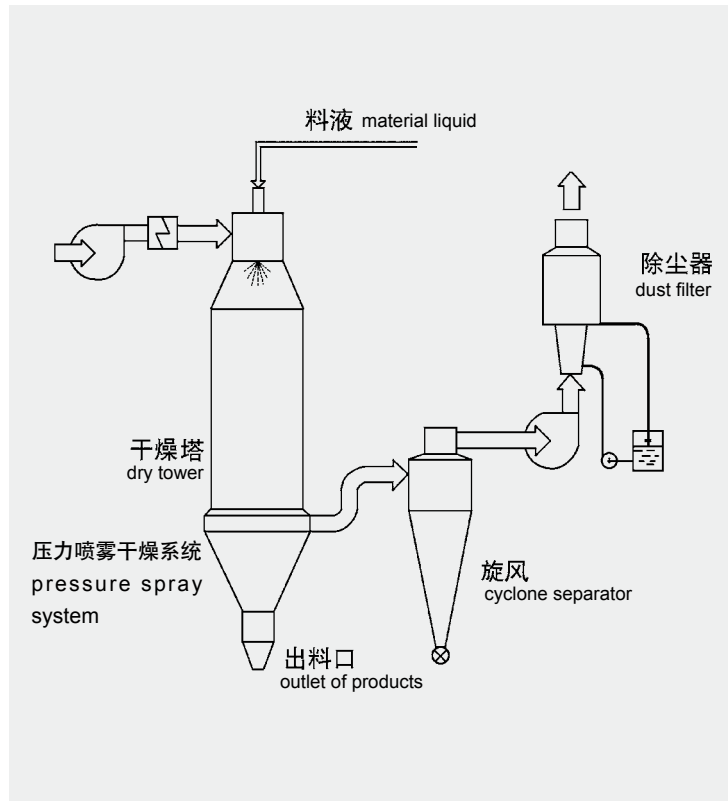


YPG系列压力式喷雾(冷却)干燥机

YPG Series Pressure Spray(cooling) Dryer



流程图 Flow chart



概述 Descriptions

- ◆ 本机是将料液压入位于塔体顶部的喷嘴雾化成微小雾滴，同塔顶热风平行而下完成干燥。该机具有收尘率高，无粘壁、节能高效等特点，特别适用于热敏性物料干燥。广泛应用于食品、染料、中间体等行业。
- ◆ The material is sprayed into fine mist by nozzle on the top of tower. Follow the heat wind, the material is dried. The machine's characteristic is high collection rate, no stick onto the wall, energy saving, high efficiency, especially applicable for heat sensitive material. It's widely used in food, dyestuff, chemical industry and so on.

技术参数 Technical parameters

项目 item	型号 spec	50	100	150	200	300	500	1000
水份蒸发量 water evaporation capacity	kg/h	50	100	150	200	300	500	1000
外形尺寸 overall dimensions (ØxH)	mm	1600x8900	2000x11500	2400x13500	2800x14800	3200x15400	3800x18800	4600x22500
高压泵压力 high-pressure pump pressure	MPa	2~10						
功率 power	kW	8.5	14	22	24	30	82	30
进风温度 temperature of air inlet	°C	300 ~ 350						
产品含水量 product water contents	%	< 5(可达0.5) less than 5 percent, and 0.5 percent can be achieved.						
物料回收率 collection rate	%	> 97						
电加热 electric heater	kW	75	120	150	温度低于200°C时，具体按实际计算。When the temperature is lower than 200°C, the parameters should be calculated according to the practical condition.			
电加蒸汽 electricity + steam	MPa+kW	0.5+54	0.6+90	0.6+108				
热风炉 hot air furnace	kcal/h	100000	150000	200000	300000	400000	500000	1200000



江苏省著名商标

YPG系列压力式喷雾(冷却)干燥机

YPG Series Pressure Spray(cooling) Dryer



应用 Applications

- ◆ **食品工业:** 全脂奶粉、脱脂奶、可可奶粉、代乳粉、蛋清(黄)等。燕麦、鸡汁、咖啡、速溶茶、调味香料肉、蛋白、大豆、花生蛋白质、蛋白质水解物等。玉米浆、玉米淀粉、葡萄糖、果胶、麦芽糖、山梨酸钾、南瓜粉等。
- ◆ **医药品:** 中药浸膏、药胶、酵母、维生素、抗生素、淀粉酶、脂肪酶等。
- ◆ **塑料树脂:** AB、ABS乳液、尿醛树脂、酚醛树脂、密胺(脲)甲醛树脂、聚乙烯、聚氯乙烯等。
- ◆ **洗涤剂:** 高级洗衣粉、普通洗衣粉、肥皂粉、苏打粉、乳化剂、增白剂、磷酸剂等。
- ◆ **化学工业:** 氟化钠(钾)、碱性染料颜料、染料中间体、 Mn_3O_4 、甲基硅酸、催化剂、硫酸剂、氨基酸、白炭黑等。
- ◆ **陶瓷:** 氧化铝、瓷砖材料、氧化镁、滑石等。
- ◆ **其它:** 氢氧化铝、氯化钙、硬脂酸剂等冷却喷雾。
- ◆ **Food Industry :** Fatty milk powder, protein, cocoa milk powder, substitute milk powder, egg white (yolk), oats, chicken juice, coffee, instant dissolvable tea, seasoning meat, protein, soybean, peanut protein, hydrolysate, corn syrup, corn starch, glucose, pectin, malt sugar, sorbic acid potassium and etc.
- ◆ **Medicine :** Traditional Chinese medicine extract, ointment, yeast, vitamin, antibiotic, amylase, lipase and etc.
- ◆ **Plastics and resin:** AB, ABS emulsion, uric acid resin, phenolic aldehyde resin, urea -formaldehyde resin, formaldehyde resin, polythene, poly-chloroprene and etc.
- ◆ **Detergent :** Common washing powder, advanced washing powder, soap powder, soda ash, emulsifier, brightening agent, orthophosphoric acid and etc.
- ◆ **Chemical Industry :** Sodium fluoride (potassium), alkaline dyestuff and pigment, dyestuff intermediate, Mn_3O_4 compound fertilizer, formic silicic acid, catalyst, sulphuric acid agent, amino acid, white carbon and so on.
- ◆ **Ceramic :** aluminium oxide, ceramic tile material, magnesium oxide, talcum and so on.
- ◆ **Other :** Aluminum hydroxide, Calcium chloride, stearic acid agent and the cooling spray.

典型用户 Typical customers

- | | |
|--------------------|--|
| ◆ 广东南方新元食品生物工程有限公司 | ◆ Southern New Well Food Bioeng Co., Ltd. |
| ◆ 广东溢多利生物科技股份有限公司 | ◆ Guangdong VTR Bio-Tech Co., Ltd. |
| ◆ 广州一品食品有限公司 | ◆ Guangzhou Yiping Food Co., Ltd. |
| ◆ 迈克斯(东阳)化工有限公司 | ◆ Mayquez (Dongyang) Chemical Co., Ltd. |
| ◆ 南昌常茂化工有限公司 | ◆ Nanchang Changmao Chemical Co., Ltd. |
| ◆ 神华煤制油研究所 | ◆ Shenhua CTL Research |
| ◆ 辉旭微粉技术(上海)有限公司 | ◆ FineShine Technology (Shanghai) Co., Ltd. |
| ◆ 青海展大生物科技有限公司 | ◆ Qinghai Zhangda Biotechnology Co., Ltd. |
| ◆ 万年县万年红食品有限公司 | ◆ Wannian Wannianhong Food Co., Ltd. |
| ◆ 河北星宇化工有限公司 | ◆ Hebei Xingyu Chemical Co., Ltd. |
| ◆ 滨州中大牧业有限公司 | ◆ Binzhou Zhongda Livestock Husbandry Co., Ltd. |
| ◆ 山东沂源高分子材料有限公司 | ◆ Shandong Yiyuan Polymer Plant Co., Ltd. |
| ◆ 辽宁科海食品化学工程有限公司 | ◆ Liaoning Kehai Food Chemical Engineering Co., Ltd. |
| ◆ 浙江新和成股份有限公司 | ◆ Zhejiang NHU Co., Ltd. |
| ◆ 湖南特种金属材料厂 | ◆ Hunan Special Metal Materials Factory |
| ◆ 出口印尼 | ◆ Export to Indonesia |

QPG系列气流喷雾干燥机

QPG Series Air Stream Spray Dryer



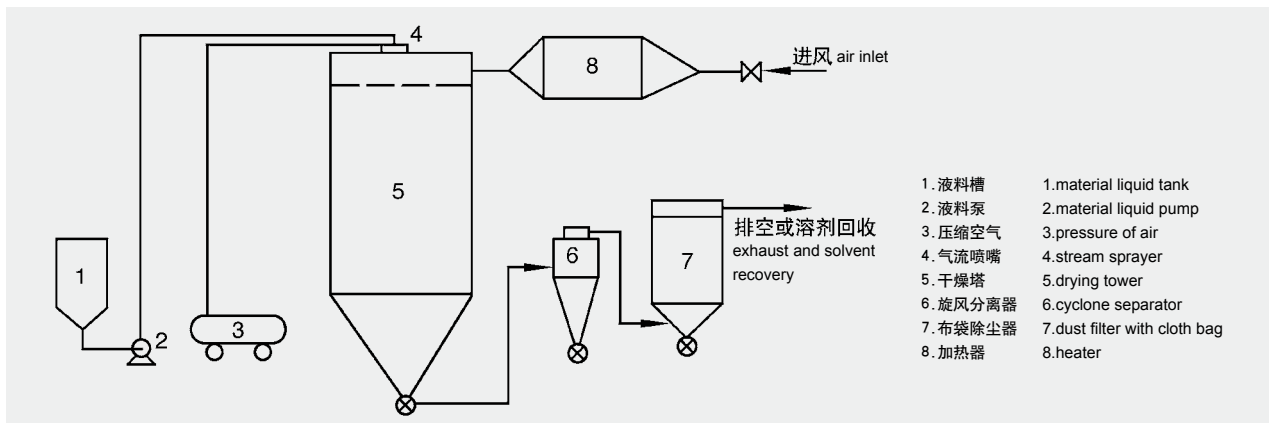
原理 Principle

- ◆ 洁净空气加热后进入干燥塔，在塔内热风中用二流体(或三流体)喷嘴将各种料液雾化成微小液滴，与热风进行快速热交换，蒸发掉液料中的水份(或溶剂)，并随热风排出，得到粉状产品。
- ◆ The clean air is heated and entered into the drying tower, the raw material inside the tower is atomized into fine mist through muzzles of two or three flows. The raw materials carry out heat exchange with the hot air rapidly to evaporate the moisture(solvent) in the raw materials. The moisture or solvent is discharged accompany with hot air, then the powder product is produced.

特点 Features

- ◆ 尤其对粘性大、膏状、浆糊状物料效果佳，其它设备无法替代。
- ◆ 实验型多品种、低温干燥应用广。
- ◆ 喷嘴结构简单，维修方便，运行费用低。
- ◆ It is good for raw materials that are large in viscosity, paste material, which the other equipment can not replace it.
- ◆ More varieties and wide application in drying with lower temperature.
- ◆ The nozzle is simple in structure, convenient in maintenance and low cost in operation.

流程图 Flow chart



技术参数 Technical parameters

参数 parameters	型号 spec	5	25	50	100	150	200
蒸发量 amount of evaporation (kg/h)	$\Delta t=150^{\circ}\text{C}\sim 90^{\circ}\text{C}$	1.5	7.5	15	30	45	60
	$\Delta t=200^{\circ}\text{C}\sim 100^{\circ}\text{C}$	2.5	12.5	25	50	75	100
	$\Delta t=250^{\circ}\text{C}\sim 100^{\circ}\text{C}$	3.75	18.75	37.5	75	112.5	150
	$\Delta t=300^{\circ}\text{C}\sim 100^{\circ}\text{C}$	5	25	50	100	150	200
	$\Delta t=350^{\circ}\text{C}\sim 110^{\circ}\text{C}$	6	30	60	120	200	240
压缩空气 compressed air (m^3/min)		0.9	0.9	1.1	1.5	2.7	3.4
压缩气压 pressure of compressed air (MPa)		0.4	0.6		0.7		
热源方式 heat resource		电. 电+蒸汽, 燃煤(油)热风炉 electricity, electricity+steam, coal(oil)combustion furnace					
供热量 consumption of heat 10^4 (kcal/h)		1	5	10	20	30	40
风机功率 power of fan (kW)		0.75	4	7.5	11	15	18.5

注: 1. 本设备大于200型可按实际需要代为设计制造; 2. 风机功率为标准流程, 如加布袋除尘和回收溶剂则要增加。

Note: (1) If the equipment is bigger than 200, it might be designed and manufactured in accordance with the requirements of customers.

(2) The power of fan is suitable of standard flow chart. If add the cloth bag to remove dust or recover solvent, it should be increased.

ZLG系列中药浸膏专用喷雾干燥机

ZLG Series Spray Dryer for Chinese Traditional Medicine Extract



该产品行业标准由我公司起草并发布。
行业标准号：JB/T 20132



概述 Descriptions

◆ 该机采用全封闭式，配有三级净化装置，过滤后的空气达十万级要求。筒体装有冷壁装置，使壁温 $<80^{\circ}\text{C}$ ，物料在壁上停留不会有焦化变质现象，大大增加了收粉率(达95%以上)，而且不会产生混药现象和粘壁现象。

◆ 基本原理：中药浸膏高速离心喷雾装置是离心式喷雾干燥技术在特定物料干燥中的应用，也是利用高速离心式雾化器使物料分散成雾状，与热空所充分接触，完成瞬间干燥，形成粉状成品的干燥装置。

◆ 中药浸膏专用喷雾干燥机是专门用来解决中药浸膏和植物提取液的喷雾干燥机，它解决了物料在原LPG高速喷雾干燥机在中药浸膏干燥中出现的以下情况：

1. 物料粘壁，收粉率低；
2. 物料在壁上停留时间长，产生物料的焦化变质现象；
3. 难以清洗，不符合GMP要求；
4. 产量低：LPG-150型喷雾干燥机，只能处理50-60kg/h料液。

◆ 鉴于以上状况，我公司根据中药浸膏的物料性质与工艺要求设计了中药浸膏专用干燥机难题，干燥后的物料颜色好、不变质，大大地提高了工厂的经济效益，中药浸膏与LPG高速离心喷雾干燥机相比有以下特点：

- (1) 采用了三级空气净化，使进风达到30万级要求；
- (2) 采用了冷壁装置，使内壁温度达到 80°C ，物料在壁上停留也不焦化；
- (3) 整个体积是原LPG标准离心喷雾的3.5倍；
- (4) 采用快开冲洗装置，适用于多品种生产要求；
- (5) 除尘采用了湿式除尘，使粉尘无外出，符合环保要求；
- (6) 采用气扫装置，其效果更令人满意；
- (7) 提供雾化器2台，并采用变频调速；
- (8) 采用了PLC控制，程控系统屏幕显示；
- (9) 可以配带冲洗装置；
- (10) 可以配采用干空气密闭输送。

◆ The machine adopts full seal form. It is equipped with three grades of filter. The filtered air is one hundred thousand grades. The cooling device of wall is installed at the cylinder body. It makes the wall temperature less than 80°C . Air sweeping device is installed inside the drying tower. The product will not be burnt or deteriorated even stays on the way. The collection rate of powder is raised greatly. Moreover will not cause medicine mixed or wall stick.

◆ Basic principle: high-speed centrifuge atomizing for the extract of traditional Chinese medicine is an application of centrifuge atomizing technique. It is an high-speed atomizing dryer. The following problems are solved.

1. Raw material is stick to the wall and the rate of powder collecting is low.
2. Because the staying time of raw material at wall is long, the phenomenon of burnt and degeneration can be produced.
3. It is difficult to clean and can not meet the requirement of GMP.
4. Low in output: Model LPG-150 atomizing centrifuge dryer can process 50-60 kg/h of raw material liquid. In view of this, according to the properties and process requirements of the extract of traditional Chinese medicine, our factory researched and designed the special dryer for the extract of traditional Chinese medicine and won two items of china patent. It solves the historical difficult problems in drying the extract of traditional Chinese medicine. The color of dried raw material is good. The dried raw material does not degenerate. It raises the economic benefit greatly. Compared to ordinary LPG high-speed atomizing dryer, it has the following features:

- (1) Adopted three-grade air filter, the inlet air is one hundred thousand grades.
- (2) Adopted wall cooling device, the temperature of inner wall will be no more than 80°C . Even if raw material is stayed on the wall, it will not be burnt.
- (3) Its whole volume is 3.5 times of standard LPG high-speed atomizing dryer.
- (4) Adopted quick washing device, it is can meet the requirements of production for varieties if products.
- (5) Adopted wet-dedusting, there is no powder dust out. It is in conformity with the requirement of GMP.
- (6) Adopted air sweeping device, the clean effect is satisfied.
- (7) Equipped with two sets of atomizer and adopted frequency inverter control.
- (8) Adopted PLC control and display, and adapted frequency control.
- (9) Equipped with washing device on request.
- (10) Adopt the seal transport by dry air on request.

ZLG系列中药浸膏专用喷雾干燥机

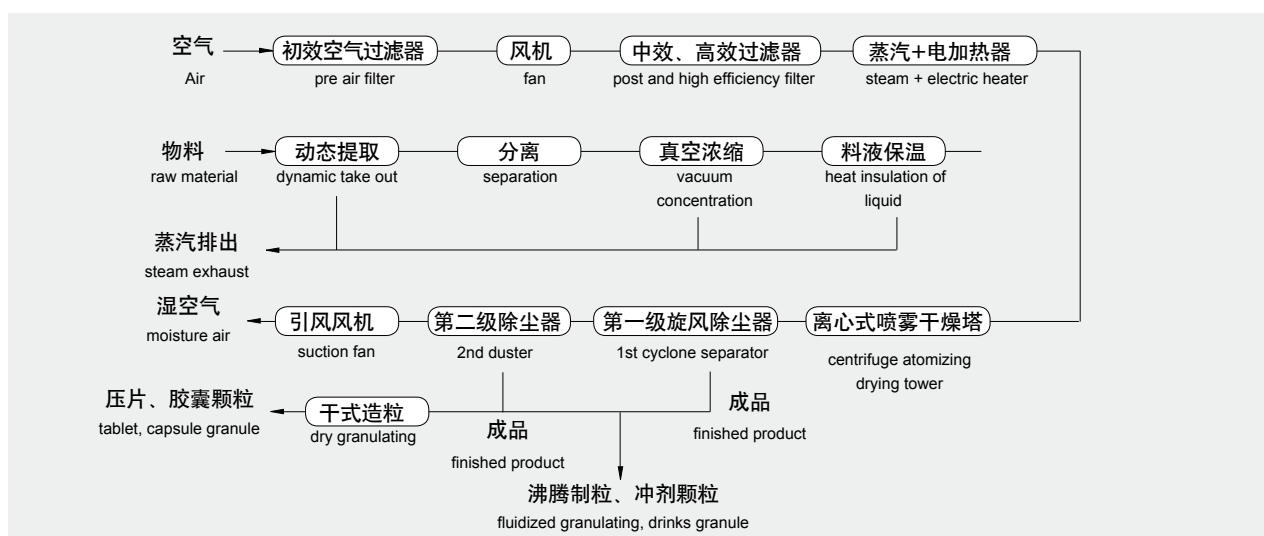
ZLG Series Spray Dryer for Chinese Traditional Medicine Extract

江苏省著名商标

特点 Features

- | | |
|---|---|
| 1、塔体具有冷风夹套。
2、塔体上装有自动振打装置。
3、塔体、管路配有快开清洗孔及排污孔。
4、可以配自动控制恒温加料罐。
5、可以配手工高压洗塔随机附件。
6、与物料接触的部分采用不锈钢材料制作；(或全不锈钢制造)。
7、物料收集采用两级旋风除尘装置，或一级旋风除尘器和湿式除尘器。
8、进风温度实现自动控制及连续装置。
9、可以配气扫装置。 | 1.Tower body has air cooled jacket.
2.Tower body is equipped with automatic vibration device.
3.Tower body and pipe line have cleaning hole and sewage discharge hole that can open quickly.
4.Thermostat feeding tank on request.
5.Manual high pressure washing machine on request.
6.The parts that can contact raw material are made of stainless steel (all entirely stainless steel).
7.The collecting of raw material adopts two grades cyclone or one-grade cyclone and one-grade wet-method-deduster.
8.The temperature of inlet air can be controlled automatically and continuously.
9.Equipped with air sweeping device on request. |
|---|---|

流程图 Flow chart



技术参数 Technical parameters

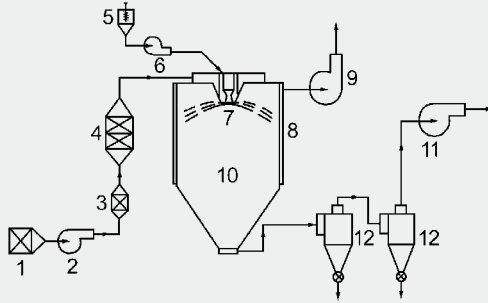
项目item	型号spec	ZLG-25	ZLG-50	ZLG-80	ZLG-100	ZLG-150	ZLG-200	ZLG-300
水份蒸发量evaporation capacity (kg/h)		25	50	80	100	150	200	300
料液处理量process amount of material liquid(kg/h)		25~34	50~68	80~108	100~135	150~203	200~270	300~406
成品产量capacity of finished product(kg/h)		4.8~7.2	9.2~14	14.8~22.4	18.4~28	28~42	36.8~56.4	55~85
湿物料含固量solid content of material liquid (%)		18~25						
成品含水率moisture content of finished product (%)		3~5						
电功率electric power(kW)		63	99	132	153	204	246	330
加热源heat source		蒸汽加电steam plus electricity						
产品捕集方式及效率 collecting method of product and its efficiency		两级旋风除尘器或一级旋风除尘器及一级湿式除尘器 95% two-grade cyclone or one-grade cyclone and one-grade wet-method dedusted of 95%						
自控仪表automatic control meters and instruments		热风温度及排风温度指标, 自动调节温控仪indicator of hot air and exhaust air temperature.						
进风温度temperature of air inlet (°C)		150~200						
出风温度temperature of air outlet (°C)		80~100						
外形尺寸overall dimensions (mm)	长L	7000	8000	9800	11000	12200	14100	15000
	宽W	4000	5000	5700	6200	7000	7800	9000
	高H	6900	7400	8000	8900	10000	11000	12000

ZLG系列中药浸膏专用喷雾干燥机

ZLG Series Spray Dryer for Chinese Traditional Medicine Extract

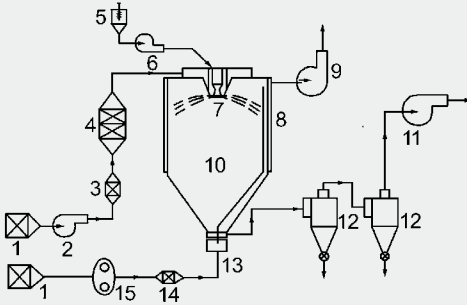
安装示意图 Schematic of installation

示意图A



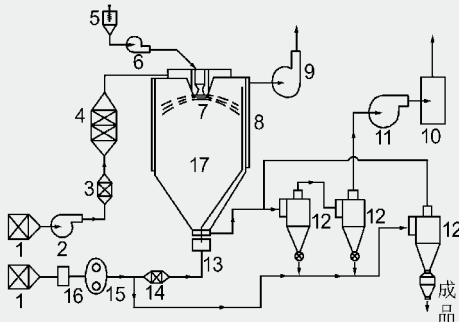
- | | |
|-------------|-----------------------------------|
| 1.初效空气过滤器 | 1.pre air filter |
| 2.送风机 | 2.blower |
| 3.中、高效空气过滤器 | 3.post and high efficiency filter |
| 4.电加热器 | 4.electric heater |
| 5.料桶 | 5.material vessel |
| 6.给料泵 | 6.feeding pump |
| 7.雾化器 | 7.atomizer |
| 8.冷风夹套 | 8.cooling jacket |
| 9.冷风风机 | 9.fan of cool air |
| 10.干燥塔 | 10.drying tower |
| 11.引风风机 | 11.suction fan |
| 12.旋风分离器 | 12.cyclone separator |

示意图B



- | | |
|-------------|-----------------------------------|
| 1.初效空气过滤器 | 1.pre air filter |
| 2.送风机 | 2.blower |
| 3.中、高效空气过滤器 | 3.post and high efficiency filter |
| 4.电加热器 | 4.electric heater |
| 5.料桶 | 5.material vessel |
| 6.给料泵 | 6.feeding pump |
| 7.雾化器 | 7.atomizer |
| 8.冷风夹套 | 8.cooling jacket |
| 9.冷风风机 | 9.fan of cool air |
| 10.干燥塔 | 10.drying tower |
| 11.引风风机 | 11.suction fan |
| 12.旋风分离器 | 12.cyclone separator |
| 13.气扫装置 | 13.air sweeping device |
| 14.加热器 | 14.heater |
| 15.气扫风机 | 15.fan for air sweeping |

示意图C



- | | |
|-------------|-----------------------------------|
| 1.初效空气过滤器 | 1.pre air filter |
| 2.送风机 | 2.blower |
| 3.中、高效空气过滤器 | 3.post and high efficiency filter |
| 4.电加热器 | 4.electric heater |
| 5.料桶 | 5.material vessel |
| 6.给料泵 | 6.feeding pump |
| 7.雾化器 | 7.atomizer |
| 8.冷风夹套 | 8.cooling jacket |
| 9.冷风风机 | 9.fan of cool air |
| 10.干燥塔 | 10.drying tower |
| 11.引风风机 | 11.suction fan |
| 12.旋风分离器 | 12.cyclone separator |
| 13.气扫装置 | 13.air sweeping device |
| 14.加热器 | 14.heater |
| 15.气扫风机 | 15.fan for air sweeping |
| 16.除湿机 | 16.dehumidifier |
| 17.干燥塔 | 17.drying tower |

典型用户 Typical customers

- ◆ 修正药业集团产业有限公司
- ◆ 吉林长白山集团有限公司
- ◆ 吉林抚松中药有限公司
- ◆ 本溪阳光保健品有限公司
- ◆ 大连富生制药有限公司
- ◆ 株洲千金药业有限公司
- ◆ 河南羚锐制药股份有限公司
- ◆ 河北药都制药集团有限公司
- ◆ 太阳石福莱药业有限公司
- ◆ 德阳欧博生物技术有限公司
- ◆ 广东嘉应制药股份有限公司
- ◆ 无限极中国有限公司
- ◆ 安徽海鑫中药饮片有限公司

- ◆ Xiuzheng Pharmaceutical Group
- ◆ Jilin Changbaishan Group Co., Ltd.
- ◆ Jilin Fusong Chinese Medicine Co., Ltd.
- ◆ Benxi Sunshine Health Products Co., Ltd.
- ◆ Dalian Fusheng Pharmaceutical Co., Ltd.
- ◆ Zhuzhou Qianjing Pharmaceutical Co., Ltd.
- ◆ Henan Lingrui Pharmaceutical Company Ltd.
- ◆ Hebei Yaodu Pharmaceutical Group Co., Ltd.
- ◆ Taiyangshi Bulai Pharmaceutical Co., Ltd.
- ◆ Deyang Oubo Biotechnology Co., Ltd.
- ◆ Guangdong Jiaying Pharmaceutical Co., Ltd.
- ◆ Infinitus Co.,Ltd. China
- ◆ Anhui Haixin Chinese Medicine Pieces Co., Ltd.

XLP系列闭路循环喷雾干燥机

XLP Series Sealed Circulation Spray Dryer



江苏省著名商标

喷雾干燥

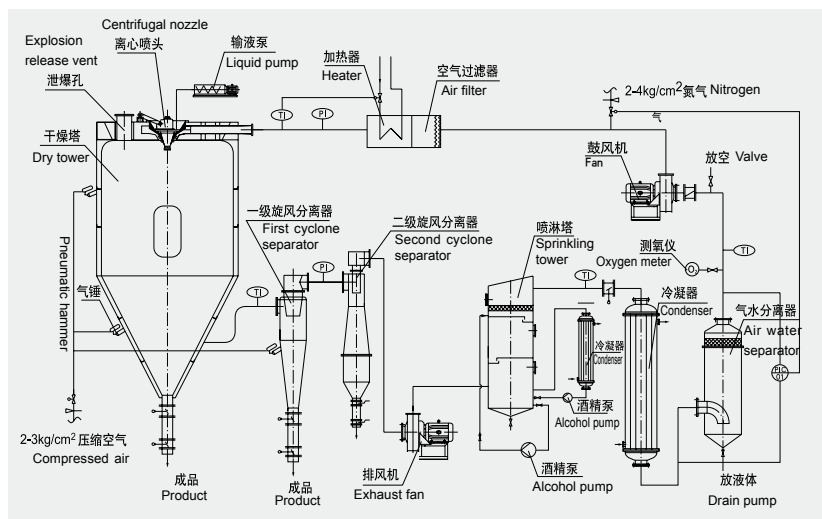


原理 Principle

◆ 闭式循环喷雾干燥系统是在密闭的环境下工作，干燥介质为惰性气体，一般为 N_2 ，适用于有机溶剂的物料干燥有毒性的物料或干燥过程中易发生氧化的物料的干燥；该系统采用惰性气体作为循环气体，对干燥的物料具有保护作用，循环气体经历载湿、去湿的过程，介质可重复使用；氮气经加热器加热后进入干燥塔，液体物料经螺杆泵输送至离心喷头处，液体被高速循环的雾化器雾化成液滴，在干燥塔内完成热质交换过程，被干燥后的粉状物料从塔底排出，被蒸发的有机溶剂气体在风机负压的压力下，把夹在气体中的粉尘经旋风分离器、喷淋塔除尘后饱和的有机溶剂气体经冷凝器冷凝成液体排出冷凝器，不凝性气体介质连续加热后作为干燥载体在系统内重新循环使用。而常规的普通的离心喷雾干燥是通过不断的送风、排风达到排湿的目的，这也是防爆型闭式离心喷雾干燥设备与普通离心喷雾干燥设备的一个明显区别；干燥系统内干燥介质为 N_2 ，内部为正压操作，保持一定的正压值，如果内部压力下降，由压力变送器来自自动控制 N_2 进量，保证系统压力平衡。

◆ Seal circulation spray drying system works in a seal circumstance. The drying gas is usually inert gas, such N_2 . It's applicable for drying material with organic solvent, toxic gas and the material easy to be oxidized. adopt inert gas as circulation gas, so to protect the material to be dried. The inert gas circulates after dehumidification process. N_2 is heated and then enters into drying tower. Liquid material is conveyed to centrifugal nozzle by screw pump, and then it's atomized into the liquid mist by the atomizer, the heat transferring process is finished in the drying tower. The dry product is discharged at the bottom of tower, the evaporated organic solvent is sucked by the vacuum generated by the fan. Power or solid material will be separated in the cyclone and sprinkling tower. The saturated organic gas is drained out after it's condensed in the condenser. The gas not condensed recycles in the system after it's heated continuously. Ordinary normal centrifugal spray drying process is realized by air conveying and exhausting process. This is the obvious difference between explosion proof type sealed circulation centrifugal spray dryer and ordinary centrifugal spray dryer. The drying media in drying system is N_2 , the interior is under positive pressure. To keep positive pressure stable, the pressure transmitter controls the inlet amount of N_2 automatically.

流程图 Flow chart



典型用户 Typical customers

- ◆ 扬子江药业集团
- ◆ 上海立得催化剂有限公司
- ◆ 上海化工研究院
- ◆ 北京化工研究院
- ◆ 吉化集团吉林市天龙催化剂有限公司
- ◆ Yangtze River Pharmaceutical Group
- ◆ Shanghai Lide Catalyst Co., Ltd.
- ◆ Shanghai Research Institute of Chemical Industry
- ◆ Beijing Research Institute of Chemical
- ◆ Jilin Tianlong Catalyst Co., Ltd.



江苏省著名商标

WPG系列无菌喷雾干燥机

WPG Series Asepsis Spray Dryer

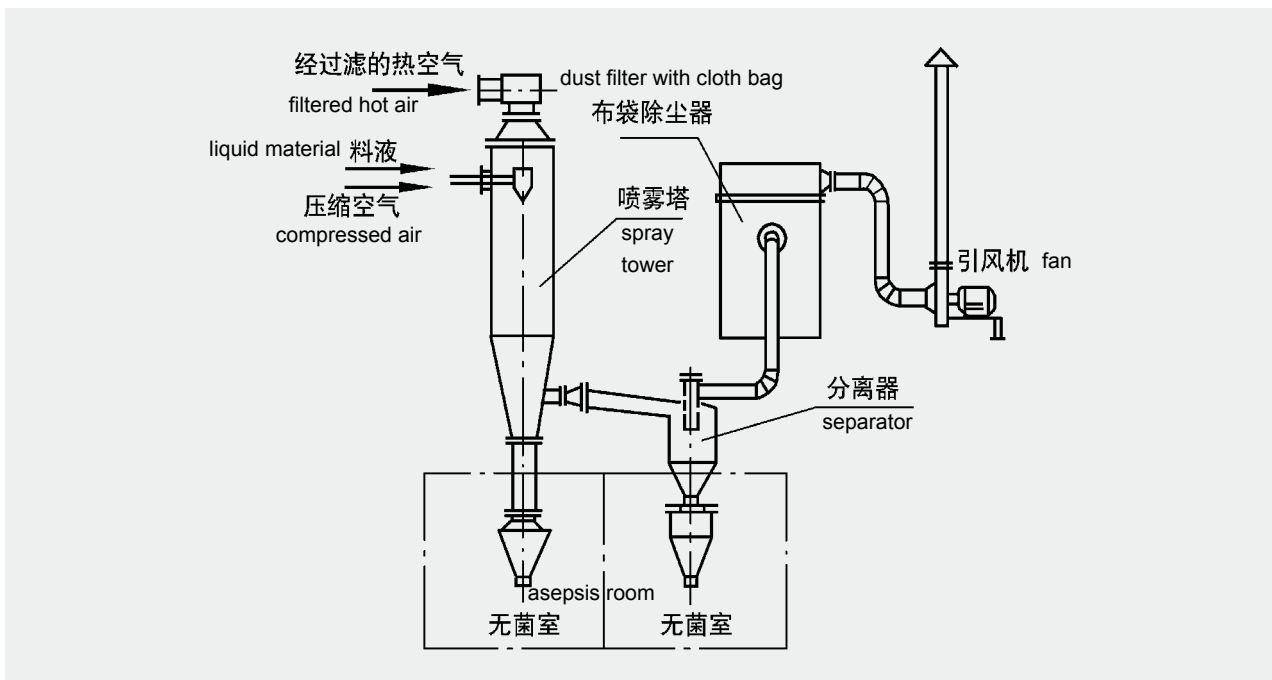
概述 Descriptions

- ◆ 无菌喷雾干燥装置是医药工业中粉针剂生产的主要设备，不少抗生素药品如：硫酸链霉素、硫酸庆大霉素、卡那霉素硫酸盐等，在其生产过程中都要使用无菌喷雾干燥来制备成品。
- ◆ 在无菌喷雾干燥系统中，所有进入系统的物料和空气都必须除菌。产品的收集也必须在无菌室内进行，为此对需喷雾料液要经过滤除菌后方能送至喷雾器。对喷雾用的压缩空气也需净化后方能使用。（上列二项用户自理）
- ◆ 干燥用空气经初效、中效过滤器，高效过滤器过滤后得净化空气，再经过加热器升温去喷雾干燥器。干燥后的成品和空气去旋风分离器分离。成品在无菌室净化工作台收集包装。尾气经袋滤器净化后排空。
- ◆ The drying device with asepsis and spray is key equipment for manufacturing powder injection in pharmaceutical industry. Many antibiotics, such as streptomycin sulfate, gentamicin sulfate, kanamycin sulfate and so on, need the drying device with asepsis and spray to manufacture during the process of production.
- ◆ In the system of the drying device with asepsis and spray, all raw materials and air entered into the system must sterilize. The collect of product should be carried out in the asepsis chamber. Therefore the spray liquid can be transferred to the sprayer after it is sterilized. The compressed air can be used after purification too. (The above mentioned two items should be completed by customers.)
- ◆ The air used for drying should be purified through primary and middle effective filters, blower and high effective filter. Then the purified air is heated through heater and transferred to the dryer. The dried finished products and air are separated through cyclone separator. The finished products should be packaged at the working table in asepsis room. The tail air is discharged through filter.

特点 Features

- ◆ 本装置采用二流式气流喷雾器，结构简单，气流接触好，雾化均匀，能达到无菌喷雾要求。
- ◆ 喷雾塔内设有扫塔装置，便于清理塔壁附粉。
- ◆ 热空气净化选用初效、中效和高效三级过滤系统，故空气净化质量高，达到GMP药品生产要求
- ◆ The device adopts sprayer with two ways of flow. Its features are simple in structure, good in contact of flow, uniform in atomization. The requirement of asepsis spraying can be reached.
- ◆ There is cleaning system in the tower, it's easy to clean the powder on the inside wall of tower.
- ◆ Because the hot air passes through the primary and middle and high effective filters, the purified quality of air is high. It is in conformity with the requirements of GMP.

流程图 Flow chart



SZG系列双锥回转真空干燥机

SZG Series Conical Vacuum Dryer



概述 Descriptions

- ◆ SZG双锥真空干燥机是我公司在结合国内同类产品技术所开发新一代干燥装置，“一步”双锥真空具备皮带、链条两级弹性联接方式，因而设备运行平稳。特别设计的工装，充分体现了两支轴的良好同心，热媒及真空系统均采用可靠的美国技术的旋转接头。在此基础上，我们开发了SZG-A，它既可无级调速，又能进行恒温控制。
- ◆ 作为专业干燥设备制造公司，我们以每年百余台服务于用户，公司产品从高温导热油为热媒介质、中温蒸汽及低温热水一应俱全。干燥粘性物料时，本公司将在罐内为您特别设计“抄板”结构或设置滚珠。目前最大可做到8000L。
- ◆ SZG Series Conical Vacuum Dryer is a new generation of drying device developed by our company on the basis of combining the technology of similar equipment. It has two connecting ways, belt or chain. Therefore it is stable in operation. The special design guarantees two shafts to realize good concentricity. Heat medium and vacuum system all adopt reliable rotating connector with the technology from USA. On this basis, we also developed SZG-A. It can carry out steeples speed change and constant temperature control.
- ◆ As a specialized company in drying industry, we supply hundred sets to the customers every year. As for working medium, it may be thermal oil or steam or hot water. For drying the adhesive raw material, we have designed specially a stirring plate buffer for you. The biggest may be 8000L.

原理 Principle

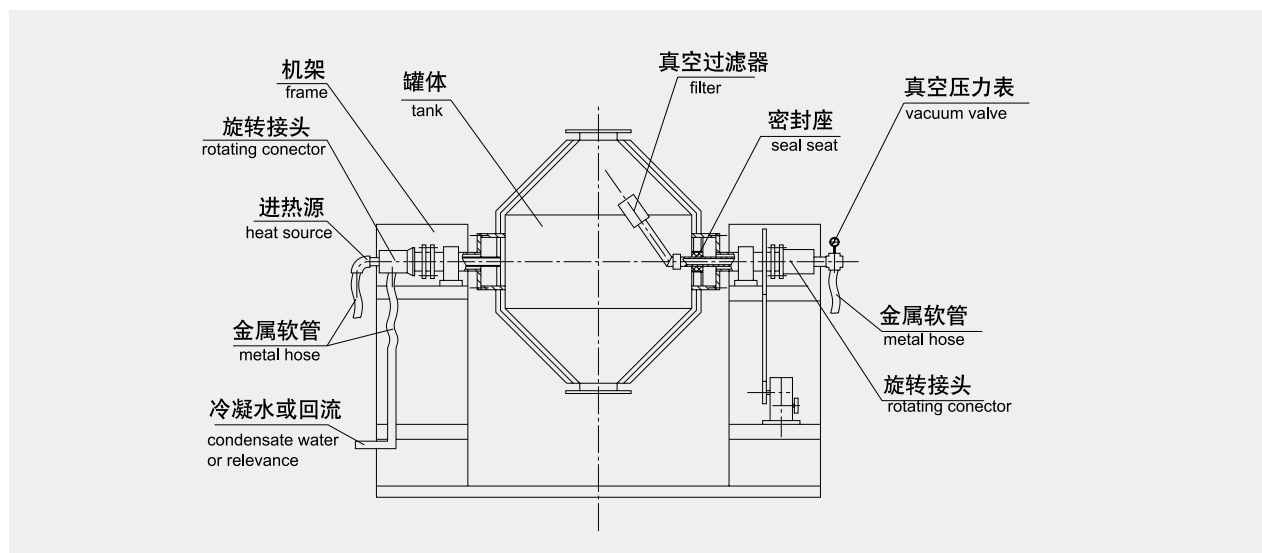
- ◆ 在密闭的夹层中通入热能源（如热水，低压蒸汽或导热油），热量经内壳传给被干燥物料。
- ◆ 在动力驱动下，罐体作缓慢旋转，罐内物料不断地混合，从而达到强化干燥的目的。
- ◆ 物料处于真空状态，蒸汽压下降使物料表面的水份（溶剂）达到饱和状态而蒸发了，并由真空泵及时排出回收。物料内部的水份（溶剂）不断地向表面渗透、蒸发、排出，三个过程不断进行，物料在很短时间内达到干燥目的。
- ◆ Let heat source (for example, low pressure steam or thermal oil) pass through the sealed jacket. The heat will be transmitted to raw material to be dried through inner shell;
- ◆ Under driving of power, the tank is rotated slowly and the raw material inside it is mixed continuously. The purpose of reinforced drying can be realized;
- ◆ The raw material is under vacuum. The drop of steam pressure makes the moisture (solvent) at the surface of raw material reach the state of saturation and evaporate. The solvent will be discharged through vacuum pump and recovered in time. The inner moisture (solvent) of raw material will infiltrate, evaporate and discharge continuously. The three processes are carried out unceasingly and the purpose of drying can be realized within a short time.



SZG系列双锥回转真空干燥机

SZG Series Conical Vacuum Dryer

简易结构图 Sketch of structure



应用 Applications

- ◆ 适用化工、制药、食品等行业的粉状、粒状及纤维状物料的浓缩、混合、干燥及需低温干燥的物料（如生化制品等），更适用于易氧化、易挥发、热敏性、强烈刺激、有毒性物料和不允许破坏结晶体的物料的干燥。
- ◆ It is suitable for the raw materials that need to concentrate, mixed and dried at low temperature (for example, biochemistry products) in chemical, pharmaceutical and foodstuff industries. Particularly it is suitable for the raw materials that are easy to be oxidized, volatilized and have heat sensitivity and is toxic and not permitted to destroy its crystal in drying process.

技术参数 Technical parameters

项目 item	机 型 spec	机 型 spec											
		100	200	350	500	750	1000	1500	2000	3000	4000	5000	
总容积 total volume	L	100	200	350	500	750	1000	1500	2000	3000	4000	5000	
工作容积 working volume	L	50	100	175	250	375	500	750	1000	1500	2000	2500	
加热面积 heating area	m ²	1.16	1.5	2	2.63	3.5	4.61	5.58	7.5	10.2	12.1	14.1	
转速 speed	r/min	6						5	4	4	4		
功率 power	kW	0.75	1.1	1.5	1.5	2	3	3	4	5.5	7.5	7.5	
回转高度 rotating height	mm	1810	1910	2090	2195	2500	2665	2915	3055	3530	3800	4180	
整机重量 total weight	kg	825	1050	1350	1650	1800	2070	2250	3000	4500	5350	6000	
罐内设计压力 design pressure inside the tank	MPa	-0.09~0.096											
夹层设计压力 design pressure of jacket	MPa	0.3											

- ◆ 电机可根据用户要求选配调速电机，转速为0~6r/min。
 1. 以上技术参数物料比重按0.6g/cm³计算,如超过，定货时需提出；
 2. 用户如需压力容器证书，定货时需提出；
 3. 如内胆材料采用搪玻璃，定货时需提出；
 4. 物料如为易燃易爆性，定货时以实验数据为准。
- ◆ Speed adjusting motor of 0-6r/min might be chosen according to the user's requirements. The following aspects should be point out when to order.
 1. The above-mentioned parameters are calculated based on material density of 0.6g/cm³. If it's over, please point out.
 2. If certificate for pressure vessel is required, please point out.
 3. If glass lining for interior surface is required, please point out.
 4. If the material is explosive, or flammable, the calculation should be made according to trial result.

SZG系列双锥回转真空干燥机

SZG Series Conical Vacuum Dryer



真空干燥

特点 Features

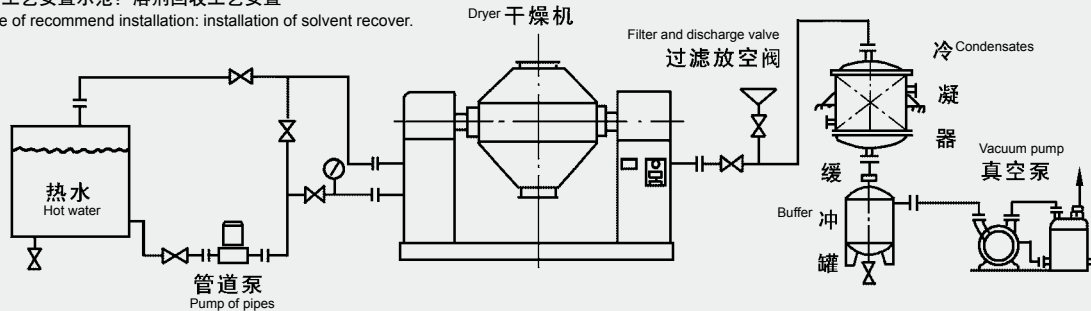
- ◆ 油加热时，采用自动恒温控制，可以干燥生化制品和矿物原料，温度可在20~160℃之间。
- ◆ 热效率高，比一般烘箱提高2倍以上。
- ◆ 间接加热，物料不会被污染，符合GMP要求。设备维修操作简便，易清洗。

- ◆ When oil is used to heat, use automatic constant temperature to control. It can be used for drying biology products and mine. Its temperature of operation can be adjusted form 20 -160°C.
- ◆ Compared to ordinal dryer, its heat efficiency will be 2 times higher.
- ◆ The heat is indirect. So the raw material can not be polluted. It is in conformity with the requirement of GMP. It is easy in washing and maintenance.

安装示意图 Schematic of installation

推荐的工艺安置示范：溶剂回收工艺安置

Example of recommend installation: installation of solvent recover.



典型用户 Typical customers

- ◆ 珠海联邦制药有限公司
- ◆ 珠海丽珠集团
- ◆ 日本东丽公司
- ◆ 东北制药集团股份有限公司
- ◆ 吉林正豪改性淀粉科技开发有限公司
- ◆ 江苏江山制药有限公司
- ◆ 昆明制药集团有限公司
- ◆ 株洲千金湘江药业有限公司
- ◆ 安徽皖北药业有限公司
- ◆ 浙江横店得邦化学有限公司
- ◆ 杭州宝晶生物有限公司
- ◆ 齐鲁制药有限公司
- ◆ 大连绿源药业有限公司
- ◆ 潍坊世华化工有限公司
- ◆ 广东肇庆星湖生物科技有限公司
- ◆ 东莞石排原塑塑料厂
- ◆ 出口美国、乌克兰

- ◆ Zhuhai United Laboratories Pharmaceutical Co., Ltd.
- ◆ Livzon Pharmaceutical Group Inc.,
- ◆ Japan's Toray Company
- ◆ Northeast Pharmaceutical Group Co.,Ltd.
- ◆ Jilin zhenghao Modified starch Science & technology Development Co., Ltd.
- ◆ Aland (Jiangshu) Nutraceutical Co.,Ltd.
- ◆ Kunming Pharmaceutical Group Corporation, Ltd.
- ◆ Hunan Qianjin Xiangjiang Pharmaceutical Co., Ltd.
- ◆ Anhui Wanbei Pharmaceutical Co.,Ltd.
- ◆ Zhejiang Hengdian Debang Chemical Co., Ltd.
- ◆ Hangzhou Bioking Biochemical Engineering Co.,Ltd.
- ◆ Qilu Pharmaceutical Co.,Ltd.
- ◆ Dalian Lvyuan Pharmaceutical Co., Ltd.
- ◆ Weifang Shihua Chemical Co., Ltd.
- ◆ Star Lake Bioscience Co.,Inc. Zhaoqing Guangdong
- ◆ Dongguan Shipai Yuansu Plastic Factory
- ◆ Export to the USA, Ukraine



◆ 东北制药总厂八台SZG-4500装车发运。

◆ Northeast Pharmaceutical Group Co.,Ltd. buy 8 sets of SZG-4500 in one time.



◆ 双锥回转真空干燥机制作现场。
◆ Manufacturing site of SZG Series Conical Vacuum Dryer



◆ 珠海联邦制药有限公司订购的4台SZG-8000装车发运。

◆ Zhuhai United Laboratories Pharmaceutical Co., Ltd. buy 4 sets of SZG-8000 in one time.



◆ 香港天厨味精厂调试现场。
◆ Our products is running in Hongkong Tianchu Gourmet Power Factory.



江苏省著名商标

YZG/FZG系列真空干燥机

YZG/FZG Series Vacuum Dryer



应用 Applications

- ◆ 适用于在高温下易分解，聚合和变质的热敏性物料的低温干燥；被广泛地采用在制药、化工、食品、电子等行业。
- ◆ It is suitable for drying heat sensitive raw materials that can decompose or polymerize or deteriorate at high temperature. It is widely used in pharmaceutical, chemical, foodstuff and electronic industries.

原理 Principle

- ◆ 所谓真空干燥，就是将干燥物料在真空条件进行加热干燥，如果利用真空泵进行抽气抽湿，则加快了干燥速率。
- ◆ 注：如采用冷凝器，物料中的溶剂可通过冷凝器加以回收；如溶剂为水，可不用冷凝器，节省能源投资。
- ◆ It is well known that vacuum drying is to put raw material under the state of vacuum for heating and drying. If use vacuum to pump air and humidity out, the dry speed will be faster.
- ◆ Note: if use condenser, the solvent in raw material can be recovered. If the solvent is water, condenser might be canceled and the investment and energy could be saved.

特点 Features

- ◆ 真空下物料溶液的沸点降低，使蒸发器的传热推动力增大，因此对一定的传热量可以节省蒸发器的传热面积。
- ◆ 蒸发操作的热源可采用低压蒸汽或废热蒸汽。
- ◆ 蒸发器热损失少。
- ◆ 在干燥前可进行消毒处理，干燥过程中无任何不纯物混入，符合GMP要求。
- ◆ 属于静态真空干燥器，故干燥物料的形体不会损坏。
- ◆ Under the condition of vacuum, the boiling point of raw material will decrease and make the evaporation efficiency higher. Therefore for a certain amount of heat transfer, the area of heat transfer for evaporator can be saved.
- ◆ The heat source for evaporation may be low pressure steam or surplus heat steam.
- ◆ The heat loss is less.
- ◆ Before drying, the treatment of disinfection may be carried out. During the period of drying, there is no impurity material mixed. It is in conformity with the requirement of GMP.
- ◆ It belongs to static dryer. So the shape of raw material to be dried should not be destroyed.

YZG/FZG系列真空干燥机

YZG/FZG Series Vacuum Dryer



江苏省著名商标

真空干燥

技术参数 Technical parameters

项目 item	型号spec	YZG-600	YZG-1000	YZG-1400	FZG-15
箱内尺寸 (mm) interior size of chamber		Ø600x976	Ø1000x1527	Ø1400x2054	1500x1220x1400
箱外尺寸 (mm) exterior size of chamber		1153x810x1020	1740x1226x1385	2386x1657x1800	2060x1513x1924
烘架层数 layers of baking shelf		4	6	8	8
层间距离 (mm) interval of baking shelf		81	98	102	122
烘盘尺寸 (mm) size of baking tray		310x600x45	460x640x45	460x640x45	460x640x45
烘盘数 number of baking tray		4	12	32	32
干燥能力(烘盘数x2 kg) Drying capacity (kg)		8	24	64	64
烘架管内充压(MPa) permitted pressure inside the pipe of baking shelf		≤0.784	≤0.784	≤0.784	≤0.784
箱内温度(°C) temperature inside chamber		≤150	≤150	≤150	≤150
箱内空载真空度 vacuum level inside chamber without load		-0.09~0.096			
不用冷凝器, 真空泵型号、功率 type and power of vacuum pump without condenser		SK-1.5 4kW	SK-3 5.5kW	SK-6 11kW	SK-6 11kW
干燥箱重量(kg) weight of drying chamber		250	800	1000	2100

上述数据, 仅供参考, 如有特殊要求, 本厂提供设计, 咨询服务。

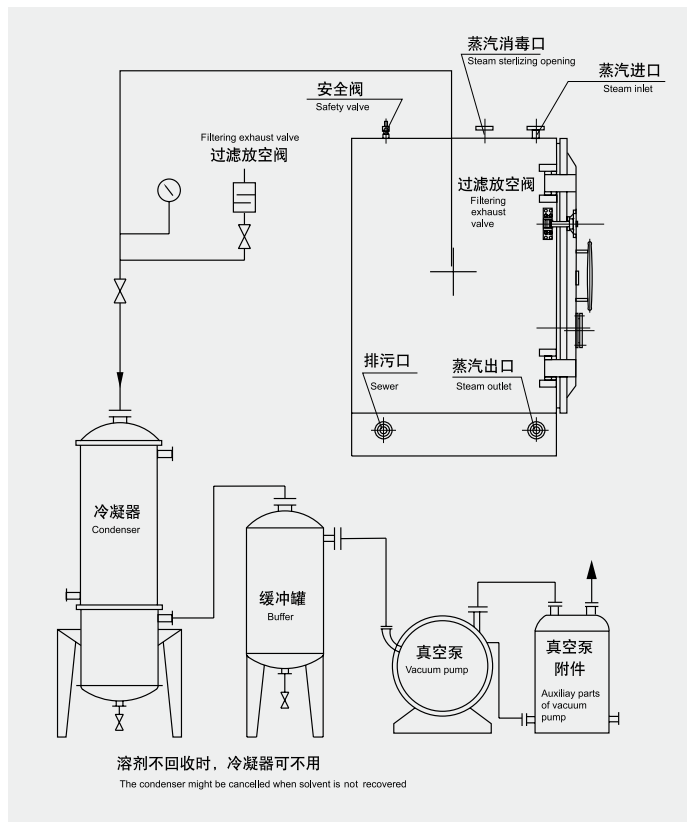
The above mentioned data is for reference only. For any special requirements, the factory can provide the service of consultation and design.

除YZG600外, 其它型号烘架均可采用移动推移式结构。All specifications adopt movable structure except YZG600.

典型用户 Typical customers

- ◆ 常州制药厂
- ◆ 江苏恒瑞医药股份有限公司
- ◆ 株洲千金药业有限公司
- ◆ 湖北汇中制药有限公司
- ◆ 泰华医药化工有限公司
- ◆ 北京森隆药业有限公司
- ◆ 山东省科学院生物研究所
- ◆ 长春人民制药有限公司
- ◆ 李锦记(广州)食品有限公司
- ◆ 天津中新药业隆顺制药厂
- ◆ 云南白药集团股份有限公司
- ◆ 云南昆明制药集团股份有限公司
- ◆ 广东省食品工业研究所
- ◆ 太阳石福莱药业有限公司
- ◆ Changzhou Pharmaceutical Factory
- ◆ Jiangsu Hengrui Medicine Co., Ltd.
- ◆ Hunan Qianjin Pharmaceutical Co., Ltd.
- ◆ Hubei Huizhong Pharmaceutical Co., Ltd.
- ◆ Taihua Pharmaceutical Chemical Co., Ltd.
- ◆ Sunlon Pharmaceutical Co., Ltd.
- ◆ Biology Institute of Shandong Academy of Sciences
- ◆ Changchun People Pharmaceutical Co., Ltd.
- ◆ Lee Kum Kee (Guangzhou) Foods Co., Ltd.
- ◆ Tianjin zhongxin Longshun pharmaceutical factory
- ◆ Yunnan Baiyao Group Co., Ltd
- ◆ Yunnan Kunming Pharmaceutical Group Co., Ltd.
- ◆ Guangdong Food Industry Institute
- ◆ Taiyangshi Fulai Pharmaceutical Co., Ltd.

流程图 Flow chart





江苏省著名商标

GZLS系列真空冷冻干燥机

GZLS Series Vacuum Freeze Dryer



概述 Descriptions

◆ 真空冷冻干燥是目前物质脱水的一种较为先进的方法，该技术是将含水物质在低温下冻结，而后使其中的水份在真空状态下直接升华，并用冷凝的方法捕凝升华的水汽，达到物质脱水干燥的目的。

◆ 经真空冷冻干燥的物质，其物理、化学和生物状态基本不变，物质中挥发性成份和受热变性的营养成份损失很小，冻干后的物质呈多孔状，其体积与干燥前基本相同。故加水后由于接触面积大，能很快地复原，在密封容器内有较长的保存期。

◆ The vacuum freeze dryer is an advanced method for the material dewatering. It freezes the moisture material in the low temperature and makes the water inside sublimate directly in the vacuum condition. Then it collects the sublimated vapor by means of the condensing way so as to dewater and dry the material.

◆ Being processed by the vacuum freeze drying, the physical, chemical and biological states of the material are basically unchanged. The volatile and nutritious contents in the material, which are easy to be denatured in a warm condition, will be lost a little. When the material is freezing dried, it will be formed into a porous one and its volume be basically the same as that before drying. Therefore, as its large contact area, the processed material can be recovered quickly after being watered, and it can be stored for a long period in a sealed vessel.

应用 Applications

食品工业：

真空冷冻干燥技术可用于果蔬、肉禽、水产、调味品、方便食品及名优特产等干燥，可达到保持食品原有的色、香、味、形、新鲜度不变的目的，且复水性好，成品便于储存和运输，费用降低，保存期延长。

营养保健：

在干燥蜂王浆、人参、龟、鳖、蚯蚓等营养保健品，采用真空冷冻干燥工艺，更使人们相信该营养品纯真自然。

医药工业：

可将真空冷冻干燥法应用于血清、血浆、疫苗、酶、抗生素、激素等中西药品的脱水与保存。

生物研究：

利用真空冷冻干燥技术长期保存的血液、细菌、动脉、骨骼、皮肤、角膜、神经组织和各种器官，在使用时只需供给水份即可再生，仍保持其生化物理特性。

其它：

如在航天隔热陶瓷制作，考古中木帛制品保存，标本制作，特殊材料制备等的应用，可收到独特的效果。

Food industry:

Vacuum freeze dryer can be used in the drying vegetables, meet, fish, condiment instant food and specialty etc, keeping the food's original fresh look, smell, taste, shape. The freeze-dried products can regain water competently and can be easily longer stored and less-costly transportation.

Nutrition and health care industry:

Vacuum freeze-dried nurture products such as royal jelly, ginseng, turtle terrapin, earthworms etc are more natural and original.

Pharmaceutical industry:

Vacuum freeze dryer can be used in the drying of chinese and western medicine such as blood serum, blood plasma, bacterin, enzyme, antibiotics, hormone etc.

Biomedicine research:

Vacuum freeze dryer can long-term store blood, bacteria, arter, bones, skin, cornea, nerve tissue and organs etc which can regain water and rebirth competently.

Others:

Producing adiabatic ceramic in space industry; storing of spcimens and relic in archaeological industry.



江苏省著名商标

GZLS系列真空冷冻干燥机(医药用)

GZLS Series Vacuum Freeze Dryer(For Pharmaceutical Industry)

特点 Features

- ◆ GZLS系列真空冷冻干燥机按GMP要求设计和制造, 采用整体式结构, 占地面积小, 安装运输方便。
- ◆ 整机操作具有手动, 自动程序或电脑控制等方法, 加装抗干扰装置后可靠性更强。
- ◆ 箱体、板层、水汽凝结器、真空管道及液压装置等金属部件均采用不锈钢材料。
- ◆ 搁板装有性能优越的加塞装置, 冻干后的制品能在无菌状态下自动加塞, 减轻了劳动强度, 提高了产品质量。
- ◆ 搁板采用间接制冷和间接加热的方法, 采用高效换热器, 减少了板层的温差。
- ◆ 制冷系统采用美国、德国和意大利原装的半封闭压缩机、中冷器、电磁阀、膨胀阀及分油器等。关键部件采用进口件, 保证了理想的制冷温度, 大大提高了整机的可靠性, 能耗低。是国内一流的节能产品。
- ◆ 真空度、温度、产品电阻、停水、停电、超温自动报警、自动保护均采用数字控制仪显示。
- ◆ 可视式卧式立式补水器完全能避免误操作, 补水能力为同类机的1.5倍。
- ◆ 自动关闭、开启气阀, 停水、停电保护。
- ◆ 按用户要求可附加CIP自动喷淋系统, SIP在位蒸汽消毒系统。
- ◆ 按用户要求, 配有验证孔, 以备检测。
- ◆ 可进行冻干终点判断。
- ◆ 可按用户要求进行特殊设计。
- ◆ 可为用户提供相应的冻干曲线。
- ◆ 采用先进的干箱放气装置, 制品含水率可在1%以下。
- ◆ 承诺优良的售后服务、安装调试维修、技术培训等全方位服务。
- ◆ Designed and manufactured based on the GMP requirement ,GZLS vacuum freeze dryer adopts a solid construction with a small occupied area and convenient installation and transportation .
- ◆ Its operation can be controlled by hand ,automatic program or computer. It will be more reliable if being equipped with the antijamming unit.
- ◆ The metal components as the case ,plate ,vapor condenser, vacuum pipeline and hydraulic device and all made of stainless steel .
- ◆ Since the shelf is equipped with an advantageous stoppered device, and the freeze-dried material will be stoppered automatically in a bacteria-free condition so as to decrease the labor intensity and improve the product quality.
- ◆ Adopting the indirect freezing and heating ,the shelf is equipped with a high-efficiency heat exchanger in order reduce the temperature differences between plates .
- ◆ The refrigerating system adopts the semi-closed compressor, inter cooler, solenoid valve, expansion valve and oil distributor that original made in USA, Germany and Italy. The key components are imported, so ensure the cooling temperature, improved the reliability and lower energy of the whole machine, is the domestic first-class energy-saving products.
- ◆ The vacuum, temperature, product resistance, water interruption, power interrupting, automatic over temperature alarming and automatic protection are all displayed by the digital control instrument.
- ◆ The visual-type horizontal water collector can absolutely avoid the mis-operation. Its collecting capacity is 1.5 times of that of similar collectors.
- ◆ The air valve can be closed or opened automatically, the protection for water and power interruptions is also equipped .
- ◆ The SIP steam sterilizing system or CIP automatic spraying can also be attached based on the customer requirement.
- ◆ The relevant freeze drying curve can be supplied to customers.
- ◆ With the help of the advanced drying case exhaust device, the rate of water content can be lower than 1%.
- ◆ An all-round service including the satisfied after-sale service, installing, commissioning, repairing and technical training is committed.

技术参数 Technical parameters (适用于医药行业 For Pharmaceuycal Industry)

项目 item	型号 spec	0.5	0.8	1	2	3	6	8	10	14	20	40	
负荷面积 capacity area	m ²	0.5	0.8	1	2	3	6	8	10	14	20	40	
(有效)板层数 valid layers	layers	2	3	4	4	4	5	7	7	7	10	18	
最高装置 max. bulk	mm	1052	1578	2104	4208	6312	11835	16519	23092	29456	42080	84160	
板层间距 layer distance	mm	120 (可按用户需要调整, It is adjustable to meet diffrent requirement)											
板层温度 layer temp.	°C	-45 ~ +70											
板层温差 layer's difference in temperature	°C	≤ ± 1											
加塞装置 corks		手动 manual					液压 hydraulic						
箱内最高真空 vacuum	Pa	1											
水汽凝结器冰负荷量 condensation capacity	kg	5	8	10	20	30	60	80	100	140	200	400	
水汽凝结器工作温度 condensor working temp.	°C	-55~-80											
化霜方法 method of defrosting		喷淋加水淹 showering and watering											
使用环境 working enviroment		1.温度 temperature:5 ~ 35°C 2.相对湿度 relative humidity:≤80%											
冷却水温度 cooling water	°C	≤ 28											
机组尺寸 dimensions of set LxWxH	mm	1400x1000 x2000	1400x1000 x2000	2450x900 x2400	2800x1250 x2500	3200x1600 x2800	3900x1950 x3000	4200x2250 x3500	4200x2250 x3500	4500x2250 x3800	5000x2700 x4200	6000x3500 x4200	
功率 power	kW	5.0	6.5	7.5	12	20	40	50	55	75	100	180	
冷却水量 colling water capacity	t/h			2	3	5	10	13	15	20	30	60	
控制 controller		程控 programming											
整机重量 weight	kg	1000	1150	1300	2500	3500	6000	8000	9000	12000	16000	23000	
附注 note		风冷 air cooling					水冷 water cooling						



江苏省著名商标

GZLS系列真空冷冻干燥机(食品用)

GZLS Series Vacuum Freeze Dryer (For Foodstuff)

特点 Features

- ◆ 电气控制部分配有各种先进的测量系统，保证了冻干制品的工艺质量。
- ◆ 干燥箱、冷凝器、蒸发器、真空管道等部件，材质为不锈钢材料，符合GMP要求。
- ◆ 制冷机采用单级或双级制冷，能达到极理想的制冷温度，维修、操作方便。
- ◆ 真空系统采用双级真空，使真空度处于最佳状态，以缩短整个冻干时间。
- ◆ Electric control unit has advanced measure system which can guarantee the quality of products.
- ◆ The material of drying box, condensator, evaporator, vacuum tube is stainless steel according to the requirement of GMP.
- ◆ The refrigeration system is unipolar or bipolar which can reach the perfect low temperature and can be conveniently operated and repaired.
- ◆ The vacuum system is bipolar which can keep products in the best vacuum condition in order to have the drying process in a shorter term.

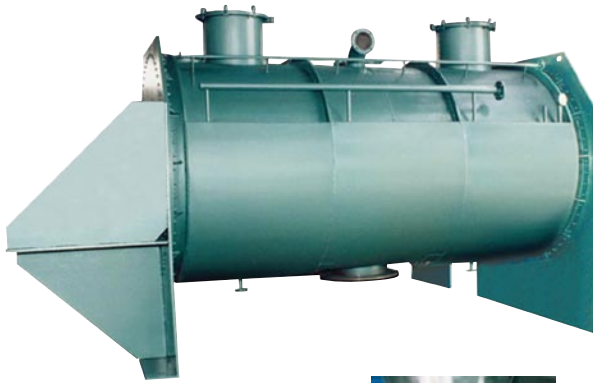
技术参数 Technical parameters (适用于食品行业 For Foodstuff)

项目 item	型号 spec	0.5	1	2	3	5	8	10
干燥箱尺寸(ØxL)m drying box's dimension		Ø0.5x0.5	Ø0.7x0.7	Ø0.8x0.9	Ø0.9x1.0	Ø1.0x1.2	Ø1.1x1.5	Ø1.2x1.5
有效搁板面积(m ²) effective drying plank area		0.5	0.7	2	3	5	8	10
搁板工作温度(°C) drying plank's working temperature		-35°C ~ 60°C						
搁板温差(°C) drying plank's difference in temperature		±1°C						
冷凝器温度(°C) condensator's temperature		-50°C ~ -60°C						
冷凝器捕水量(kg) condensator's water-catching weight		7	12	25	40	60	100	120
箱内最高真空(Pa) max working vacuum prssure		3						
冷却水(≤25°C)流量(t/h) cooling water's flux		1	2	3	5	5	8	8
化霜方法 method of defrosting		喷淋加水淹 showering and watering						
使用环境 working condition		温度 temperature 5°C ~ 30°C 相对湿度 relative humidity <75%						
总功率(kW) total power		15	18	22	25	28	33	40
设备安装面积与高度(m ² xm) installation area and height		4x2	8x2.5	15x2.5	20x2.5	25x2.5	30x2.5	35x2.5

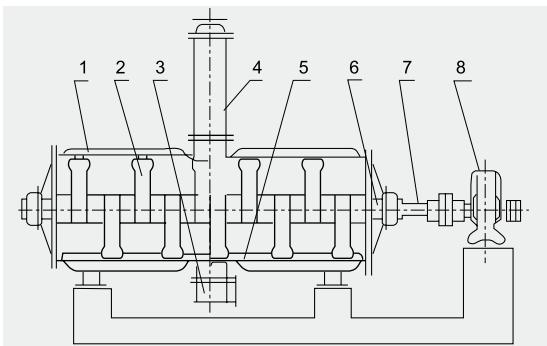
项目 item	型号 spec	12	15	20	25	30	35	40	50
干燥箱尺寸(ØxL)m drying box's dimension		Ø1.3x1.7	Ø1.3x1.9	Ø1.4x1.9	Ø1.5x2.3	Ø1.5x2.3	Ø1.6x2.3	Ø1.7x2.5	Ø1.8x2.5
有效搁板面积(m ²) effective drying plank area		12	15	20	25	30	35	40	50
搁板工作温度(°C) drying plank's working temperature		-35°C ~ 60°C							
搁板温差(°C) drying plank's difference in temperature		±1°C							
冷凝器温度(°C) condensator's temperature		-50°C ~ -60°C							
冷凝器捕水量(kg) condensator's water-catching weight		150	200	250	300	350	400	550	700
箱内最高真空(Pa) max working vacuum prssure		3	3	3	3	3	5	9	13
冷却水(≤25°C)流量(t/h) cooling water's flux		10	10	15	20	25	25	35	40
化霜方法 method of defrosting		喷淋加水淹 showering and watering							
使用环境 working condition		温度 temperature 5°C ~ 30°C 相对湿度 relative humidity <75%							
总功率(kW) total power		45	50	60	70	90	110	130	150
设备安装面积与高度(m ² xm) installation area and height		40x2.5	40x2.5	45x2.5	45x2.5	50x2.5	50x2.5	60x2.5	60x2.5

ZPD系列真空耙式干燥机

ZPD Series Vacuum Harrow Dryer



抄板式耙叶
blade of rake



- | | |
|---------------------------|------------------------|
| 1. 壳体Shell | 5. 粉碎棒Grinding rod |
| 2. 耙齿Harrow | 6. 密封装置Airproof device |
| 3. 出料装置Discharging device | 7. 搅拌轴Stirring shaft |
| 4. 加料装置Feeding device | 8. 传动装置Driving device |

特点 Features

- ◆ 本机采用大面积夹层加热方式，传热面大，热效率高。
- ◆ 本机设置搅拌，使物料在筒内形成连续循环状态，进一步提高了物料受热的均匀度。
- ◆ 本机设置搅拌，从而可顺利进行浆状、膏状、糊状物料干燥。
- ◆ Being adopted the big area heating way, its heat conducting area is large and its heat efficiency is high.
- ◆ Being installed stirring in the machine, it makes raw material in cylinder from the state of continuous circle inside the cylinder, so the uniformity to be heated of raw material is raised greatly.
- ◆ Being installed stirring in the machine, pulpiness, paste-like mixture or powder raw materials can be dried easy.

原理 Principle

- ◆ 本机是一种新型卧式间歇式真空干燥设备，湿物料经传导蒸发，带有刮板搅拌器不断清除热面上的物料，并在容器内推移形成循环流，水份蒸发后由真空泵抽出。
- ◆ It is an innovation horizontal batch-type vacuum dryer. The moisture of wet material will be evaporated by heat transmission. The stirrer with squeegee will remove material on hot surface and move in the container to form cycle flow. The evaporated moisture will be pumped by vacuum pump.

应用 Applications

医药、食品、化工等行业进行以下物料干燥：

- ◆ 适用于浆状、膏糊状、粉状物料。
- ◆ 要求低温干燥的热敏性物料。
- ◆ 易氧化、易爆、强刺激、剧毒物料。
- ◆ 要求回收有机溶剂的物料。

The following raw materials from pharmaceutical industry, foodstuff industry, chemical industry and so on can be dried.

- ◆ Suitable for pulpiness, paste-like mixture or powder raw materials.
- ◆ Thermal sensitive raw materials having the requirement to dry at lower temperature.
- ◆ Raw materials that are easy to oxidize or explode and have strong irritative or toxic.
- ◆ Raw materials that need to recover solvent.

技术参数 Technical parameters

项目 Item	型号 spec	ZPD-500	ZPD-750	ZPD-1000	ZPD-1500	ZPD-2000	ZPD-3000	ZPD-5000
工作容积 working volume	L	300	450	600	900	1200	1800	3000
内筒尺寸 dimensions of inner	mm	Ø600x1500	Ø800x1500	Ø800x2000	Ø1000x2000	Ø1000x2600	Ø1200x2600	Ø1400x3400
搅拌转速 stirring revolution	r/min	5~25		5~12		5		
功率 power	kW	4	5.5	5.5	7.5	11	15	22
夹层设计压力 design pressure of jacket	MPa	≤ 0.3						
筒内压力 pressure in the cylinder	MPa	-0.09~-0.096						

注：水份蒸发量与物料的特性及干燥温度有关。随着产品不断更新，有关参数变更，恕不预先通知。

Note: The evaporated amount of water its related to the characteristics of raw materials and the drying temperature. With renew products unceasingly, the related parameter will be exchanged, it does not announce in advance, pardon!

PLG系列盘式连续干燥机

PLG Series Continuous Plate Dryer



概述 Descriptions

◆ 盘式连续干燥器是一种高效的传导型连续干燥设备。其独特的结构和工作原理决定了它具有热效率高、能耗低、占地面积小、配置简单、操作控制方便、操作环境好等特点，广泛适用于化工、医药、农药、食品、饲料、农副产品加工等行业的干燥作业。在各行业使用实践中深受好评。现生产制造常压、密闭、真空三大类型，1200、1500、2200、3000四种规格，A(碳钢)、B(接触物料部分均匀不锈钢)、C(在B的基础上，增加蒸汽管路、主轴及支架为不锈钢，筒体和顶盖内衬不锈钢)。三种材质，干燥面积4~180m²，共几百种型号的系列产品，并能提供与之相配套的种辅助设备，可满足用户对各种物料进行干燥的需要。

◆ PLG series continuous plate dryer is a kind of high efficiency conducting and continuous drying equipment. Its unique structure and operating principle provide advantages of high heat efficiency, low energy consumption, less occupying area, simple configuration, easy operation and control as well as good operating environment etc. It is widely used in drying process in the fields of chemical, pharmaceuticals, agricultural chemicals, foodstuff, feedstuff, process of agricultural and by-products etc., and is well received by various industries. Now there are three big categories, normal pressure, closed and vacuum styles and four specifications of 1200, 1500, 2200 and 2500; and three kinds of constructions A (carbon steel), B(stainless steel for contact parts) and C (on the basis of B to add stainless steel for steam pipes, main shaft and support, and stainless steel linings for cylinder body and top cover). With a drying area of 4 to 180 m², now we have hundreds of models of series products and various kinds of auxiliary devices available to meet requirements of various products.

原理 Principle

◆ 湿物料自加料器连续地加到干燥器上部第一层干燥盘上，带有耙叶的耙臂作回转运动使耙臂作回转运动使耙叶连续地翻抄物料。物料沿指数螺旋线流过干燥盘表面，在小干燥盘上的物料被移到外缘，并在外缘落到下方的大干燥盘外缘，在大干燥盘上物料向里移动并从中间落料口落入下一层小干燥盘中。大小干燥盘上下交替排列，物料得以连续地流过整个干燥器。中空干燥盘内通入加热介质，加热介质形式有饱和蒸汽、热水和导热油，加热介质由干燥盘的一端进入，从另一端导出。已干物料从最后一层干燥盘落到壳体的底层，最后被耙叶移到出料口排出。湿份从物料中逸出，由设在顶盖上的排湿口排出，真空型盘式干燥器的湿气由设在顶盖上的真空泵口抽出。从底层排出的干物料可直接包装。通过配加翅片加热器、溶剂回收冷凝器、袋式除尘器、干料返混机构、引风机等辅机，可提高其干燥的生产能力，干燥膏糊状和热敏性物料，可方便地回收溶剂，并能进行热解和反应操作。

◆ Wet materials are fed continuously to the top drying layer in the dryer. They will be turned and stirred continuously by harrows when the harrow's arm rotates, the material flows through the surface of the drying plate along the exponential helical line. On the small drying plate the material will be moved to its exterior edge and drop down to the exterior edge of the large drying plate underneath, and will then be moved inward and drop down from its central hole to the small drying plate on the next layer. Both small and large drying plates are arranged alternately so as materials can go through the whole dryer continuously. The heating media, which could be saturated steam, hot water or thermal oil will be led into hollow drying plates from one end to other end of the dryer. The dried product will drop from the last layer of the drying plate to the bottom layer of the shell body, and will be moved by harrows to the discharge port. The moisture exhausts from materials and will be removed from the moist discharge port on the top cover, or sucked out by the vacuum pump on the top cover for vacuum-type plate dryer. The dried product discharged from the bottom layer can be packed directly. The drying capability can be raised up if equipped with supplementary devices such as finned heater, condenser for solvent recovery, bag dust filter, return and mix mechanism for dried materials and suction fan etc. solvent in those paste state and heat sensitive materials can be easily recovered, and thermal decomposition and reaction can be also carried out.

PLG系列盘式连续干燥机

PLG Series Continuous Plate Dryer

特点 Features

(一)调控容易、适用性强

- 1、通过调整料层厚度、主轴转速、耙臂数量、耙叶型式和尺寸可使干燥过程达到最佳。
- 2、每层干燥盘皆可单独通入热介质或冷介质，对物料进行加热或冷却，物料温度控制准确、容易。
- 3、物料的停留时间可以精确调整。
- 4、物料流向单一，无返混现象，干燥均匀、质量稳定、不需再混合。

(二)操作简单、容易

- 1、干燥器的开车、停车操作非常简单。
- 2、停止进料后，传送物料后耙叶能很快地排空干燥器内的物料。
- 3、通过特殊的大规格检视门的视镜，可以对设备内进行很仔细的清洗和观察。

(三)能耗低

- 1、料层很薄，主轴转速低，物料传送系统需要的功率小，电耗少。
- 2、以传导热进行干燥，热效率高，能量消耗低。

(四)操作环境好，可回收溶剂，粉尘排放符合要求

- 1、常压型：由于设备内气流速度低，而且设备内湿度分布上高下低，粉尘很难浮到设备顶部，所以顶部排湿口排出的尾气中几乎不含有粉尘。
- 2、密闭型：配备溶剂回收装置，可方便地回收载湿气体中的有机溶剂。溶剂回收装置简单，回收率高，对于易燃、易爆、有毒和易氧化的物料，可用氮气作为载湿气体进行闭路循环，使之安全操作。特别适用于易燃、易爆、有毒物料的干燥。
- 3、真空型：在真空状态下操作的盘式干燥器，特别适用于热敏性物料的干燥。

(五)安装方便、占地面积小

- 1、干燥器整体出厂，整体运输，只需吊装就位，安装定位非常容易。
- 2、由于干燥盘层式布置、立式安装，即使干燥面积很大，占地面积也很小。

1. Easy control, wide application

- (1) Regulate thickness of materials, rotating speed of main shaft, number of harrow's arm, style and sizes of harrows achieve best drying process.
- (2) Each layer of drying plate can be fed with hot or cold media individually to heat or cold materials and make temperature control accurate and easy.
- (3) Dwell time of materials can be accurately adjusted.
- (4) Single flowing direction of materials without return flowing and mixing, uniform drying and stable quality, no re-mixing is required.

2. Easy and simple operation

- (1) It's very sample to start and stop.
- (2) After material feeding is stopped, they can be easily discharged out of the dryer by harrows.
- (3) Careful cleaning and observation can be carried inside the equipment through large-scale viewing window.

3. Low energy consumption

- (1) Thin layer of materials, low speed of main shaft, small power and energy required for conveying system of materials.
- (2) Dry by conducting heat so it has high heating efficiency and low energy consumption.

4. Good operation environment, solvent can be recovered and powder discharge meet the requirements of exhaust.

- (1) Normal pressure type: as low speed of air flow inside the equipment and moisture being high in upper part and low in lower part, dust powder couldn't float to the equipment, so there is almost no dust powder in tail gas discharged from the moist discharge port on the top.
- (2) Closed type: equipped with solvent recovery device that can recover organic solvent easily from moist-carrier gas. The solvent recovery device has simple structure and high recovery rate, and nitrogen can be used as moist-carrier gas in closed circulation for those subject to burning, explosion and oxidation, and poisonous materials in order for safe operation. Especially suitable for drying of flammable, explosive and poisonous materials.
- (3) Vacuum type: if the plate dryer is operating under vacuum state, it is particularly suitable for drying heat sensitive materials.

5. Easy installation and small occupying area.

- (1) As the dryer is in a whole for delivery, it is quite easy to install and fix at site only by hoisting.
- (2) As drying plates being arranged by layers and installed vertically, it takes a small occupying area though drying area is large.



江苏省著名商标

PLG系列盘式连续干燥机

PLG Series Continuous Plate Dryer

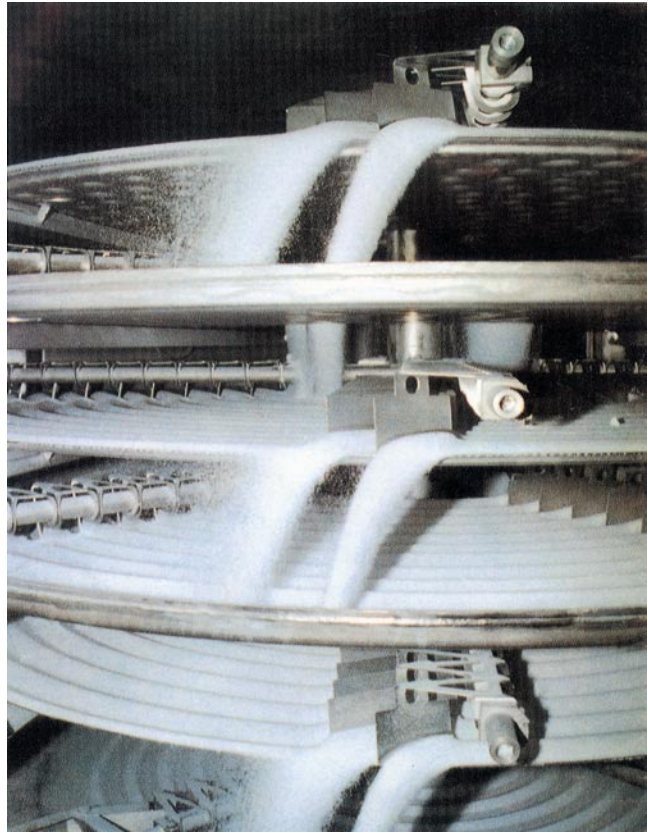
应用 Applications

干燥 热解 燃烧 冷却 反应 升华

- (一)有机化工产品
- (二)无机化工产品
- (三)医药、食品
- (四)饲料、肥料

Drying, heat decomposition, combustion, cooling, reaction, and sublimation

1. Organic chemicals
2. Mineral chemicals
3. Pharmaceutical and foodstuff
4. Feed and fertilizer



技术参数 Technical parameters

规格 spec	外径(mm) diameter	高度(mm) height	干燥面积 (m ²) area of dry	功率(kW) power	规格 spec	外径(mm) diameter	高度(mm) height	干燥面积(m ²) area of dry	功率(kW) power
1200/4	1850	2608	3.3	1.1	2200/18	2900	5782	55.4	5.5
1200/6		3028	4.9		2200/20		6202	61.6	
1200/8		3448	6.6	1.5	2200/22		6622	67.7	7.5
1200/10		3868	8.2		2200/24		7042	73.9	
1200/12		4288	9.9		2200/26		7462	80.0	
1500/6		3022	8.0		2.2		3000/8	4050	
1500/8	3442	10.7	3000/10	4650		60			
1500/10	3862	13.4	3.0	3000/12		5250	72		
1500/12	4282	16.1		3000/14		5850	84		
1500/14	4702	18.8		3000/16		6450	96		
1500/16	5122	21.5		3000/18		7050	108		
2200/6	2900	3262	18.5	3.0	3000/20	7650	120	13	
2200/8		3682	24.6		3000/22	8250	132		
2200/10		4102	30.8		4.0	3000/24	8850		144
2200/12		4522	36.9			3000/26	9450		156
2200/14		4942	43.1	5.5	3000/28	10050	168	15	
2200/16		5362	49.3		3000/30	10650	180		

PLG系列盘式连续干燥机

PLG Series Continuous Plate Dryer

技术特性 Features of technology

(一) 干燥盘

1. 设计压力：一般为0.4MPa,最大可达1.6MPa.
2. 最高使用压力：一般 ≤ 0.4 MPa，最高可达 1.6MPa.
3. 加热介质：蒸汽、热水、导热油，干燥盘温度 100°C 时用热水加热， $100^{\circ}\text{C} \sim 150^{\circ}\text{C}$ 时用 ≤ 0.4 MPa饱和水蒸汽或过热蒸汽加热， $150^{\circ}\text{C} \sim 320^{\circ}\text{C}$ 时用导热油加热， $>320^{\circ}\text{C}$ 时可采用电、导热油、熔盐等方式加热。

(二) 物料传送系统

1. 主轴转速：1~10转/分，电磁或变频无级调速。
2. 耙臂：每层干燥盘上有2~8支固定在主轴上的耙臂。
3. 耙叶：绞接在耙臂上，能随盘面上下浮动保持接触，有多种形式。
4. 碾滚：对易结块和需要破碎的物料，在适当位置配加碾滚，可以强化传热和干燥过程。

(三) 壳体

有常压、密闭、真空三种型式

1. 常压型：圆筒或八棱柱形，有整体和对开两种结构。加热介质进出口主管道可以在壳体内，也可以在壳体外。
2. 密闭型：圆筒形壳体，能承受5kPa内压，加热介质进出口主管道可以在壳体内，也可以在壳体外。
3. 真空型：圆筒形壳体，设计压力为外压0.1MPa，加热介质进出口主管道在壳体内。

(四) 空气加热器

一般在蒸发量较大的情况下使用，以增强干燥效率。

1. Drying plate

- (1) Designing pressure: general is 0.4MPa, Max. can reach 1.6MPa.
- (2) Work pressure: general is less than 0.4MPa, and max. can reach 1.6MPa.
- (3) Heating medium: steam, hot water, oil. When the drying plates' temperature is 100°C , hot water can be used; when $100^{\circ}\text{C} \sim 150^{\circ}\text{C}$, it will be saturated water steam ≤ 0.4 MPa or steam-gas, and when $150^{\circ}\text{C} \sim 320^{\circ}\text{C}$, it will be oil; when $>320^{\circ}\text{C}$ it will be heated by electric, oil or fused salt.

2. Material transmission system

- (1) Main shaft revolution: 1~10r/min, electromagnetism of transducer timing.
- (2) Harrow arm: There are 2 to 8 pieces arm that be fixed on the main shaft on the every layers.
- (3) Harrow's blade: Surrounding the harrow's blade, float together with the surface of the plate to keep contact. There're various of types.
- (4) Roller: for the products easily agglomerate, or with the requirements of grinding, the heat transfer and drying process might be reinforced by placing roller(s) at the appropriate place(s).

3. Shell

There're three types for option: normal pressure, sealed and vacuum

- (1) Normal pressure: Cylinder or eight-sided cylinder, there are whole and dimidiate structures. The main pipes of inlet and outlet for heating media can be in the shell, also can be in the outer shell.
- (2) Sealed: Cylindrical shell, could bear the interior pressure of 5kPa, the main ducts of the inlet and outlet of heating media might be inside of the shell or outside.
- (3) Vacuum: Cylindrical shell, could bear the exterior pressure of 0.1MPa. The main ducts of inlet and outlet is inside of the shell.

4. Air heater

Normal for the application of big evaporation capacity to increase drying efficiency.

典型用户 Typical customers

- | | |
|----------------|--|
| ◆ 常州常茂生物工程有限公司 | ◆ Changzhou Changmao Biology Engineering Co., Ltd. |
| ◆ 山东富新材料有限公司 | ◆ Shandong Fuxin New Material Co., Ltd. |
| ◆ 徐州华瑞工贸有限公司 | ◆ Xuzhou Huarui Industry & Trade Co., Ltd. |
| ◆ 清华大学 | ◆ Tsinghua University |
| ◆ 云南陆良化工实业有限公司 | ◆ Yunnan Luliang Chemical Co., Ltd. |



PLG系列盘式连续干燥机

PLG Series Continuous Plate Dryer

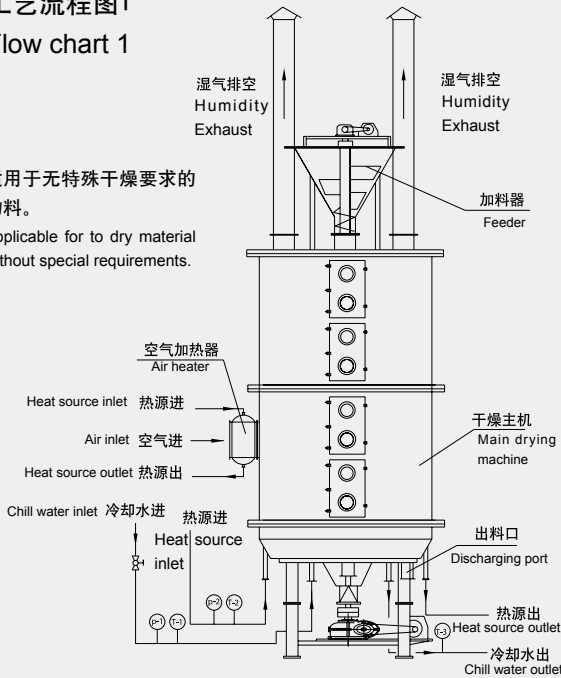
工艺流程图 Flow chart

工艺流程图1

Flow chart 1

适用于无特殊干燥要求的物料。

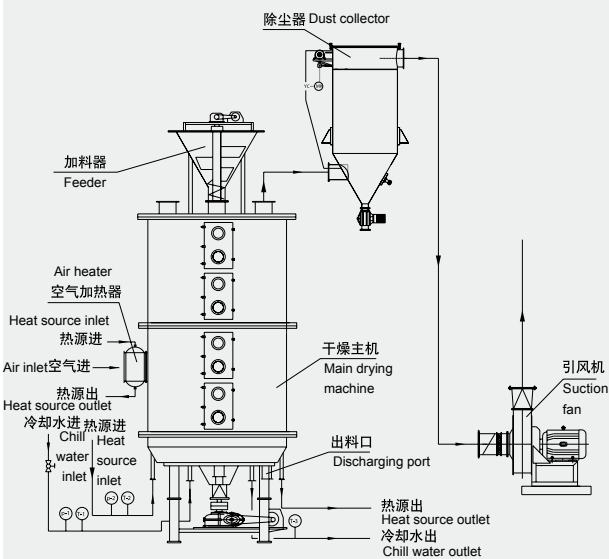
Applicable for to dry material without special requirements.



备注：一般在蒸发量较大的情况下才配备空气加热器，以增大干燥效率。
Remarks: to enhance drying efficiency, air heater is normally applied for high evaporation capacity

工艺流程图2

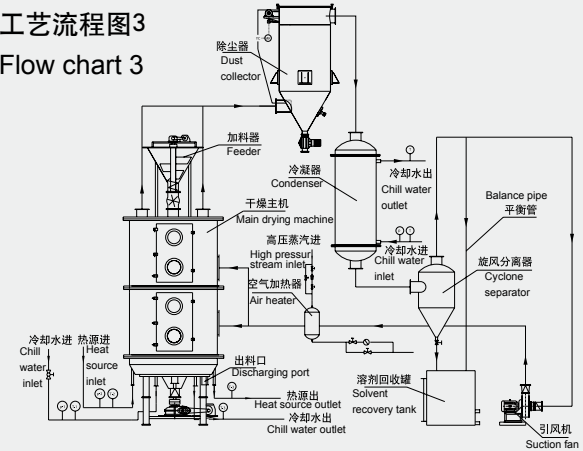
Flow chart 2



适用于干燥物料的粉末需要回收或具有一定的有害粉末。
Applicable for drying material with requirements of powder recovery or the powder is toxic.

工艺流程图3

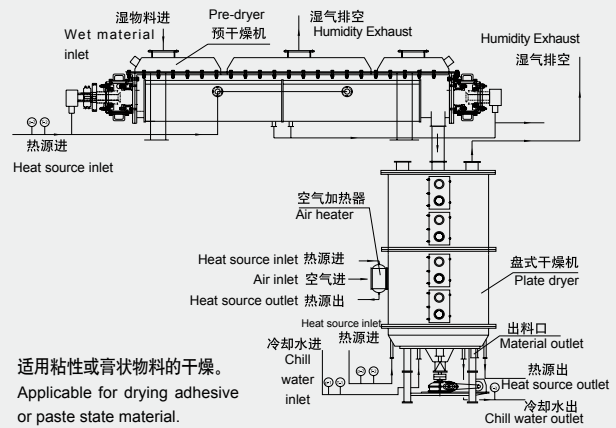
Flow chart 3



适用于对干燥过程中所蒸发出来的溶剂进行回收或是对干燥所用气体要求不能外泄的场合。
Applicable for the drying process with solvent recovery or without leakage of evaporated gas.

工艺流程图4

Flow chart 4

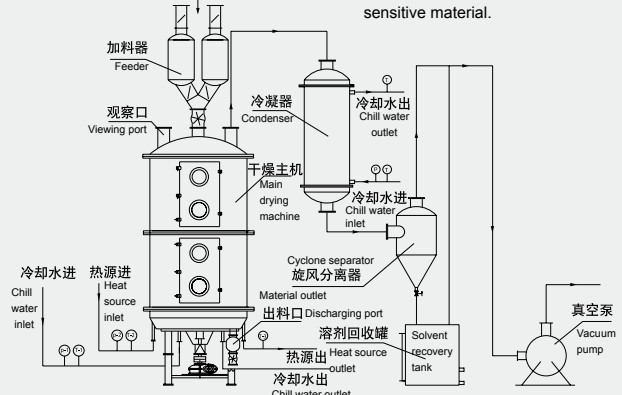


适用粘性或膏状物料的干燥。
Applicable for drying adhesive or paste state material.

工艺流程图5

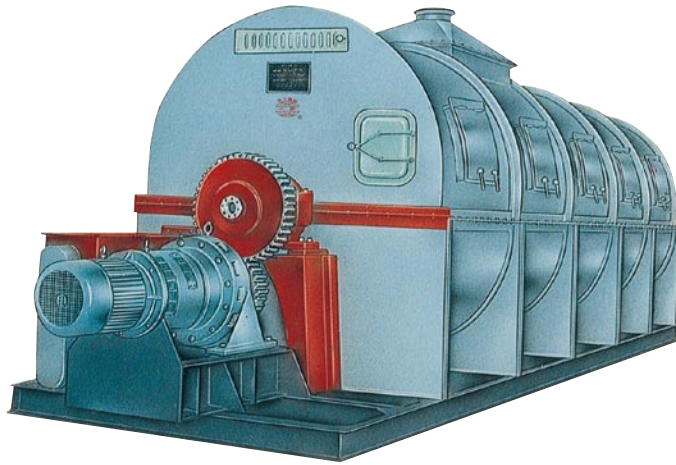
Flow chart 5

适用于热敏性物料的干燥。
Applicable for drying heat sensitive material.



GZG系列管束式干燥机

GZG Series Pipe Bundle Dryer



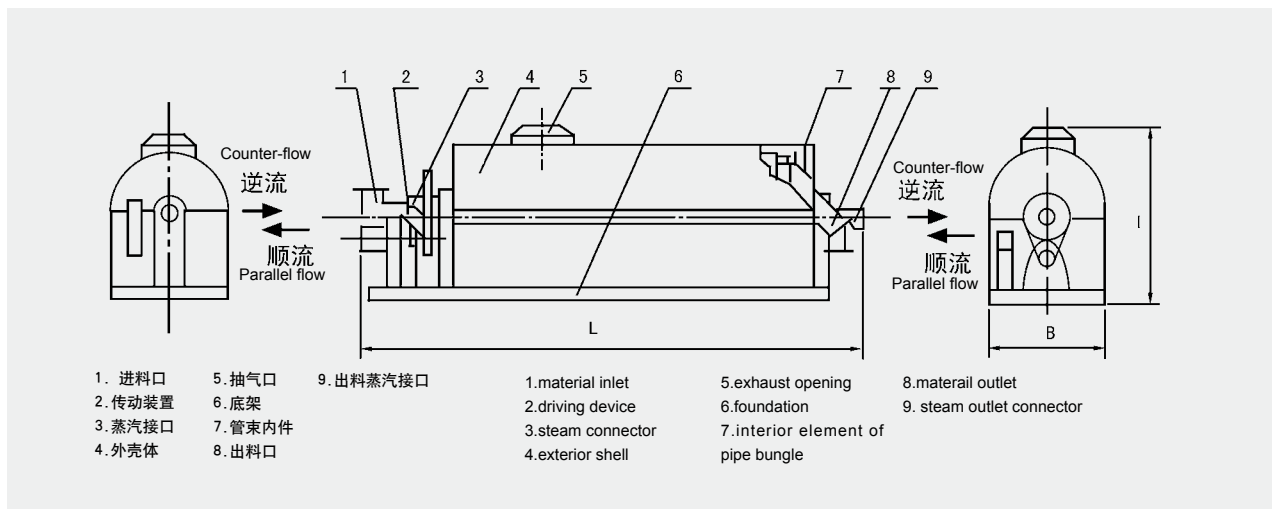
应用 Applications

- ◆ 适用于粉状、颗粒状、片状类无大颗粒的松散类物料的干燥。
- ◆ 应用于化工、轻工、食品、粮食、饲料等行业,如淀粉厂、饲料厂、肉联厂、酒厂、啤酒厂等。
- ◆ The drying machine is suitable for drying the loose materials, such as: powder, particle and slice shape without big particles.
- ◆ Application in chemical industry, food industry, feed industry and other industries, such as: starch factory, feed factory, meat processing factory, wine factory, beer factory and so on.

特点 Features

- ◆ GZG管束式干燥机是间接加热接触式干燥机,既可顺流干燥也可逆流干燥。是目前大部分国家使用的最广泛、最先进的干燥机之一。其主要优点是经济实用。在各种干燥设备中,动力消耗最低,热耗低,每蒸发1公斤水仅需要量1.5~2公斤蒸汽。是沸腾式干燥机的50%。烘干1吨发酵草粉耗电仅需要15千瓦/时,是流化床的25%,电耗气耗均达到国外同类产品的先进水平。可干燥高水份物料,干燥弹性大(能视不同的物料性质和水份要求对干燥时间进行调整);连续生产(自动化程度高)也可间歇生产(适合于特殊生产工艺)。该机附加配套设备少,占地面积小,工艺紧凑,受磨损件极少,易于安装。
- ◆ GZG pipe bundle drying machine is the indirect heated, contact type drying machine which can be both parallel flow and the counter-flow drying. Its major advantages are economic and practical. Among all kinds of the drying machines, it is the lowest in its power consumption and heat consumption. To evaporate 1 kg of water only consume 1.5kg to 2kg of steam, only 50% of the fluidizing dryer. To drying one ton of fermented grass powder consumes 15kW/h, only 25% compare to fluid bed. Both the electric power consumption and the steam consumption reach the advanced level of the same kind products. The materials with high water content can be dried, the drying flexibility is wide. The drying time can be adjusted according to the materials property and moisture requirement. It can be continuous operation of high automation, or intermittent operation for special technical process. The machine has less accessories, parts occupy small area, has compact technical process and easy for installation.

安装示意图 Schematic of installation





江苏省著名商标

GZG系列管束式干燥机

GZG Series Pipe Bundle Dryer

技术参数 Technical parameters

项目item 型号spec	转速 (r/min) speed of rotation	主机功率 (kW) main machine power	热交换面积 (m ²) heat exchange area	干燥能力 (蒸发kg水/m ² h) drying capacity (evaporate kg of water/m ² h)	外形尺寸 (L x W x H) mm overall dimensions	重量 (t) weight
GZG50	5~8	5.5	50	4.7	8032x1712x2250	9.0
GZG100	5~8	7.5	100	4.7	9100x1912x2470	14.0
GZG150	5~8	11	150	4.7	8500x2212x2810	18.5
GZG200	5~8	11	200	4.7	10000x2212x2810	20.0
GZG250	5~8	15	250	4.7	10200x2212x2810	23.0
GZG300	5~8	22	300	4.7	10784x2488x3383	26.0
GZG350	5~8	30	350	4.7	12048x2488x3383	28.0
GZG400	5~8	30	400	4.7	13048x2488x3383	30.0
GZG500	5~8	45	500	4.7	11298x2982x3965	40.0
GZG600	5~8	75	600	4.7	12298x2982x4165	45.0
GZG700	5~8	75	700	4.7	13298x2982x4365	51.0

物料特性 Features of Materials

常见物料类型 轻工部分 normal material in light industry	进机水份 water contents before the entering the machine	出机水份 water contents of dried product	干燥强度蒸发 kg H ₂ O/m ² h drying strength evaporation	能耗 (kJ/蒸发kg水) energy consumption (kJ/evaporate kg of water)
秸秆 straw	55%	3~5%	2.5~3	3500~3800 [kJ/蒸发kg水] {840~910[LCal/蒸发kg水]} [折合约1.45~1.50kg标准饱和 蒸气] (kJ/evaporate kg of water) (840 - 910 <LCal/evaporater kg of water>) <amount to about 1.45 - 1.50 kg of standard saturated steam>
玉米纤维 corn fibre	60%	10~12%	4.8	
发酵草粉 fermented grass powder	45%	12~13%	4.7	
木片木屑 wooden piece and wooden chip	20%	2~3%	4.3	
薯类纤维 potato fibre	65%	10~12%	4.8	
啤酒糟、白酒糟 distiller's grains for beer or spirit	65%	10~12%	4.9	
饲料载体 feed carrier	16%	6~8%	4.2	
油菜籽 rape seed	60%	5~7%	4.5	
猪血、发酵粉 pig blood fermented powder	35%	10%	4.4	
骨粉 bone powder	40%	10%	4.6	

HYG系列回转滚筒干燥机

HYG Series Rotating Barrel Dryer

概述 Descriptions

◆ 湿物料从干燥机一端投入后，在内筒均布的抄板器翻动下，物料在干燥器内均匀分布与分散，并与并流（逆流）的热空气充分接触，加快了干燥传热、传质推动力。在干燥过程中，物料在带有倾斜度的抄板和热气流的作用下，可调控地运动至于干燥机另一段星形卸料阀排出成品。

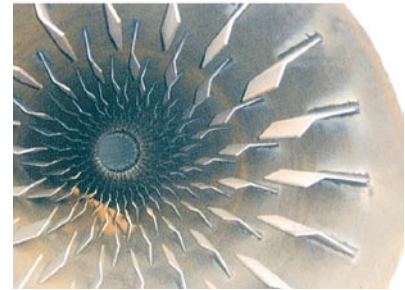
◆ Wet material is loaded from one head of the dryer, and then it is stirred by the bafflers that is uniformly distributed in the barrel. Material is uniformly distributed and dispersed in the dryer, fully contact the hot air of parallel (or counter) flow, so the drying process is expedited, and the impulsion power of media transfer is enhanced. During the drying process, material is under the effect of angled baffler and hot air, moves to the star shape unloader that is at the other head of the dryer.



应用 Applications

◆ 适用于化工、矿山、冶金等行业大颗粒，比重大物料干燥，如：矿山、高炉矿渣、煤、金属粉末、磷肥、硫铵；对有特殊要求的粉末，颗粒状物料的干燥，如：HP发泡剂、酒精渣、轻质碳酸钙、活性白土、磁粉、石墨、药渣；要求低温干燥，且需大批量连续干燥的物料。

◆ Applicable for drying big particles, heavy particles in chemical, mining, and metallurgy, such as mining area, cinder of blast furnace, coal, powder of metal, phosphate fertilizer and thiamine. For drying the powder or particles with special requirements, such as HP foaming blowing agent, residue of alcohol, light calcium carbonate, active clay, magnetic powder, graphite, and residue of medicine. For materials to be dried under low temperature and large lot continuous production.



特点 Features

◆ 转筒干燥机械化程度高，生产能力较大；

◆ 流体通过筒体阻力小，功能消耗低；

◆ 对物料特性的适应性比较强；

◆ 操作稳定，操作费用较低，产品干燥的均匀性好。

◆ The high motorization level of the barrel and the great production capacity;

◆ The small resistance that the material passes through the barrel, and the low power consumption.

◆ The high application capability to different characters of materials.

◆ The stable operation, the low operation fee, and the good uniformity of product.

技术参数 Technical parameters

项目 item	形式 form	直接加热顺流式 direct heating clockwise flow spec	直接加热顺流式 direct heating clockwise flow spec	直接加热逆流式 heat directly countercurrent spec	直接加热逆流式 heat directly countercurrent spec	复合加热 complex heat	复合加热 complex heat
物料种类 kinds of raw material		矿石 ore	HP发泡剂 vesiccant	高炉矿渣slag of blast fumace	硫铵 ammonium sulfate	磷肥phosphorus fertilizer	煤 coal
处理量 amount to be treated (kg/h)		1000	466	15000	20000	12000	5000
初含水量 primary moisture (%)		30	13	6	1.5	5	6.5
终含水量 final moisture (%)		15	0.3	1	0.1	0.1	0.1
平均粒径 average diameter (mm)		6.5	0.05	4.7	0.5-1.7	0.5	5
物料堆积重度 bulk density of raw material (kg/m ³)		770	800	1890	1100	1500	750
入口气体温度 temperature of air inlet (°C)		600	165	500	180	650	570
物料出口温度 temperature of raw material outlet (°C)		100	42	100	70	80	75
加热方式 way of heating		煤气 gas	蒸气或电加热 steam or electric heating	重油 heavy oil	燃煤热风炉 coal fuel hot furnace	重油 heavy oil	重油 heavy oil
装料系数 loading coefficient (%)		8	6.3	7	7.5	7.8	18
转速 revolution (r/min)		4	4	3.5	3	4	2
倾斜度 gradient (m/m)		0.04	0.005	0.03	0.05	0.05	0.043
干燥器直径 diameter of dryer (m)		2.0	1.5	2	2.3	外筒2内筒0.84 out cylinde2, inner cylinder0.84	外筒2.4内筒0.95 out cylinde2.4, inner cylinder0.95
干燥器长度 length of dryer (m)		20	12	17	15	10	16
驱动功率 driving power (kW)		22	7.5	15	11	11	15



江苏省著名商标

HG 系列滚筒刮板干燥机

HG Series Drum Dryer



概述 Descriptions

◆ 滚筒刮板干燥机是一种内加热传导型转动连续干燥设备。旋转的滚筒通过其下部料槽，粘附着一厚度的料膜，热量通过管道输送至滚筒内壁，传导到滚筒外壁，再传导给料膜，使料膜中的湿分得到蒸发、脱湿、使含湿分的物料得到干燥。干燥好的物料被装置在滚筒表面的刮刀铲离滚筒，到置于刮刀下方的螺旋输送机，通过螺旋输送机再将干物料集中、包装。

◆ Drum dryer is a kind of rotating continuous drying equipment with the style of internal heating conducting. Certain thickness of materials film attach to the drum from material liquid vessel under the drum. Heat is transferred to the internal wall of the cylinder through pipes and then to the external wall and to materials film, to evaporate the moisture in materials film so as to dry materials. Dried products are then scraped off by the blade fitted on the surface of the cylinder, fall down to the spiral conveyor under the blade, and are conveyed, collected and packed.

特点 Features

1. 热效率高。因滚筒刮板干燥机传热机理属热传导，传热方向在整个操作周期中保持一致，除盖散热和热辐射损失外，其余热量全都用于筒料膜湿分的蒸发上，热效率可达70%-80%。
2. 操作弹性大,适用性广。可调整滚筒刮板干燥机的诸多干燥因素。如进料的浓度、涂料料膜的厚度、加热介质的温度、滚筒的转动速度等，都可以改变滚筒刮板干燥机的干燥效率，且诸多因素互无牵连。这给滚筒刮板干燥操作带来很大方便，使之能适应多种物料的干燥和不同产量的要求。
3. 干燥时间短。物料的干燥周期一般只有10-300秒，在适合于热敏性物料。若将滚筒干燥机设置在真空中，则可在减压条件下运行。
4. 干燥速率大。由于涂抹于筒壁的料膜很薄，一般在0.3-1.5mm，且传热、传质方向一致，料膜表面可保持20-70kg·H₂O/m²·h的蒸发强度。

1. High heat efficiency. The principle of heat transfer of the cylinder dryer is heat conduction and the conducting direction keeps identical in the whole operation circle. Except heat loss of end cover and radiation loss, all heat can be used for evaporation of wet materials on the wall of the cylinder. The efficiency can reach 70-80%.

2. Large operation elasticity and wide application. Various drying factors of the dryer can be adjusted, such as concentration of feeding liquid, thickness of material film, temperature of heating medium, rotating speed of the drum etc. Which can change drying speed of the under dryer. As these factors have no interrelations each other, it brings great convenience to dry operation, and makes it applicable to dry various materials and to meet different requirements of production.

3. Short drying period. The drying period of materials is normally 10 to 300 seconds, so it is suitable for heat sensitive materials. It also can be run under the reduced pressure if it is put in vacuum vessel.

4. Fast drying rate. As film of materials coated on the wall of the cylinder is very thin. Normal, thickness is 0.3 to 1.5 mm, plus directions of heat and mass transmitting are identical, the evaporation strength on the surface of the film can be 20-70 kg·H₂O/m²·h.

应用 Applications

◆ 适用于化工、染料、制药、食品、冶金等行业液体或较粘稠物料的干燥。

◆ It is suitable for drying liquid raw materials or thick liquid in chemical, dyestuff, pharmaceutical, foodstuff, metallurgy and so on industries.

技术参数 Technical parameters

项目 item 型号 spec	滚筒尺寸 mm sizes of cylinder diameter x length	有效加热面积 m ² effective heating area	干燥能力 kg H ₂ O/m ² ·h drying capacity	蒸汽耗量 kg/h steam consumption	电机功率 kW power of motor	外形尺寸 (LxWxH) mm overall dimensions	重量 kg weight
HG-600	Ø600x800	1.12	40-70	100-175	2.2	1700x800x1500	850
HG-700	Ø700x1000	1.65	60-90	150-225	3	2100x1000x1800	1210
HG-800	Ø800x1200	2.26	90-130	225-325	4	2500x1100x1980	1700
HG-1000	Ø1000x1400	3.30	130-190	325-475	5.5	2700x1300x2250	2100
HG-1200	Ø1200x1500	4.24	160-250	400-625	7.5	2800x1500x2450	2650
HG-1400	Ø1400x1600	5.28	210-310	525-775	11	3150x1700x2800	3220
HG-1600	Ø1600x1800	6.79	270-400	675-1000	11	3350x1900x3150	4350
HG-1800	Ø1800x2000	8.48	330-500	825-1250	15	3600x2050x3500	5100
HG-1800A	Ø1800x2500	10.60	420-630	1050-1575	18.5	4100x2050x3500	6150

注：如客户要求，可为客户设计制造上部进料双滚筒干燥机。 Note: We can also design double-cylinder with upper material feeding on request.

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江苏省著名商标

QJ 系列空心桨叶干燥机

QJ Series Hollow Blade Dryer



概述 Descriptions

- ◆ 该产品可对膏状、颗粒状、粉状、浆状物料间接加热或冷却，可完成干燥、冷却、加热、灭菌、反应、低温燃烧等单元操作。设备中特殊的楔型搅拌传热桨叶，具有较高的传热效率和传热面自清洁功能。
- ◆ 空心轴上密集排列着楔型中空桨叶，热介质空心轴流经桨叶。单位有效容积内传热面积很大，热介质温度从-40℃到320℃，可以是水蒸汽，也可以是液体型：如热水、导热油等。间接传导加热，没有携带空气带走热量，热量均用来加热物料。热量损失仅为通过器体保温层向环境的散热。楔型桨叶传热面具有清洁功能。物料颗粒与楔型面的相对运动产生洗刷作用，能够洗刷掉楔型面上附着物料，使运转中一直保持着清洁的传热面。桨叶干燥机的壳体为Ω型，壳体内一般安排二到四根空心搅拌轴。壳体有密封端盖与上盖，为防止物料粉尘外泄而充分发挥作用。传热介质通过旋转接头，流经壳体夹套及空心搅拌轴，空心搅拌轴依据热介质的类型而具有不同的内部结构，以保证最佳的传热效果。
- ◆ Applicable for drying or cooling of paste, particle, powder and slurry state of material, perform the process of drying, cooling, heating, sterilizing, reacting and combustion under low temperature. The special stirring and heating transferring blade, makes high heat transferring efficiency, and provide self-cleaning function. The special chock shaped stirring and heat transferring blade has high heating efficiency and self-cleaning function of the heating transferring surface.
- ◆ Hollow chock shaped blades are concentrated on the hollow shaft. Heat media flow through the blade from the hollow shaft. The heat transferring area in the effective volume is very high. The temperature range of heating media is from -40°C to 320°C. It might be steam, or liquid state, such as steam, thermal oil etc. Indirect heating, there's no heat carried out by air. All heat is utilized for to drying the material except the lost of heat insulation layers. The surface of chock shaped blade has self-cleaning function. The relative movements of the product particles and the chocked shaped surface might clean the material attached to the chock shaped surface, so to keep the cleanliness of heat transferring surface during working. The shell of hollow blade dryer is Ω shape. 2 or 4 pieces of hollow stirring shaft are usually equipped in the shell. To avoid any leakage of material, there're sealed terminal cover and top cover with the shell. The heat transferring media flow through the rotation connector, jacket of shell and hollow stirring shaft. To ensure best transferring effect, the hollow stirring shaft adopts different interior structure in accordance with different heating media.

特点 Features

- ◆ 桨叶干燥机能耗低：由于间接加热，没有大量携带空气带走热量，干燥器外壁又设置保温层，对浆状物料，蒸发1kg水仅需1.2kg水蒸汽。
- ◆ 桨叶干燥机系统造价低：单位有效容积内拥有巨大的传热面，就缩短了处理时间，设备尺寸变小。就极大地减少了建筑面积及建筑空间。
- ◆ 处理物料范围广：使用不同热介质，既可处理热敏性物料，又可处理需高温处理的物料。常用介质有：水蒸汽、导热油、热水、冷却水等。既可连续操作也可间歇操作，可在很多领域应用。
- ◆ 环境污染小：不使用携带空气，粉末物料夹带很少。物料溶剂蒸发量很小，便于处理。对有污染的物料或需回收溶剂的工况，可采用闭路循环。
- ◆ 操作费用低：该设备正常操作，仅1小时/天·人。低速搅拌及合理的结构。磨损量小，维修费用很低。
- ◆ 操作稳定：由于楔型桨叶特殊的压缩-膨胀搅拌作用，使物料颗粒充分与传热面接触，在轴向区间内，物料的温度、湿度、混合度梯度很小，从而保证了工艺的稳定性。
- ◆ The heat consumption of blade is low: No heat carried out by the air because of indirect heating; there's no heat insulation layer with the exterior wall of the dryer. It consumes 1.2 kg of steam to evaporate 1 kg of water for to drying slurry state of material.
- ◆ The cost of the blade dryer is low: The unit effective volume has very large heat transferring surface, so the processing time is shorted, the size of the equipment becomes small. The building area and place are sharply decreased.
- ◆ The range of material to be processed is wide: Heat sensitive material and the materials to be processed under high temperature might be processed with different heating media. The normal media are: steam, thermal oil, hot water and chill water. It might be continuous or batch operation, widely used in many areas.
- ◆ The pollution is less: Without any carrying air, so little powder is carried out. The solvent evaporated is very few, it's easy to be processed. For the material that might cause pollution or the solvent to be recovered, it might adopt sealed circulation.
- ◆ The operation cost is low: 1 hour/day. One operator is enough for normal operation. Low stirring speed and reasonable structure, the worn amount is few, and the maintenance fee is low.
- ◆ Steady operation: The material particles fully contact heat transferring surface, because of the special compressing and swell-stirring effect of the chock shaped blade. In the axial interval, the temperature, humidity and mixing effect are very small, so to ensure the stability of process.

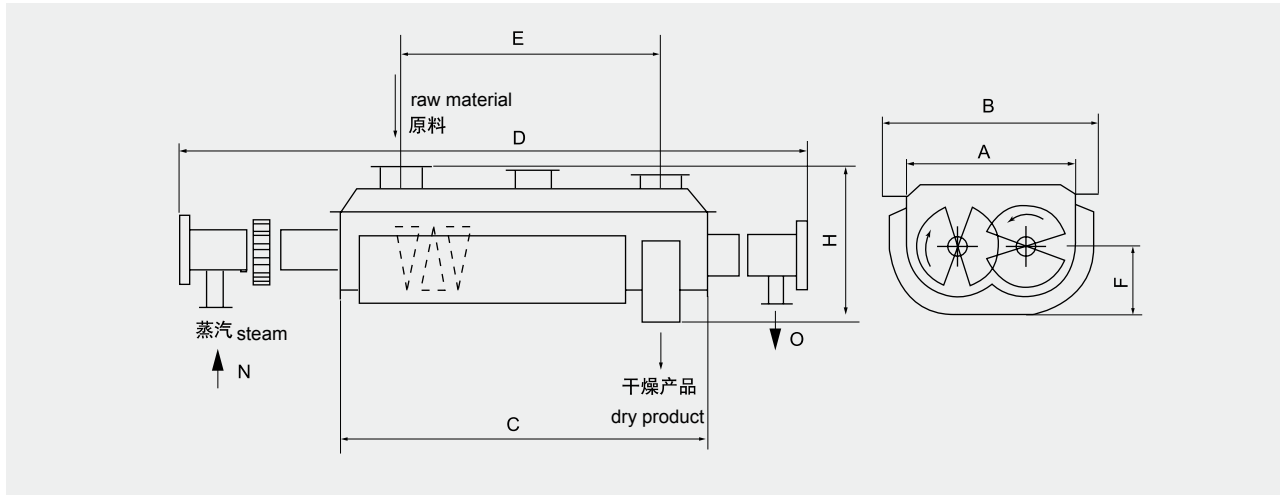


江苏省著名商标

QJ 系列空心桨叶干燥机

QJ Series Hollow Blade Dryer

结构示意图 Schematic of structure



应用 Applications

◆ 桨叶干燥机已成功地用于食品、化工、石化、染料、工业污泥等领域。设备传热、冷却、搅拌的特性使之可以完成以下单元操作：燃烧（低温）、冷却、干燥（溶剂回收）、加热（融化）、反应和灭菌。搅拌桨叶同时又是传热面，使单位有效容积内传热面积增大，缩短了处理时间。楔型桨叶传热面又具有自清洁功能。压缩—膨胀搅拌功能使物料混和均匀。物料沿轴向成“活塞流”运动，在轴向区间内，物料的温度、湿度、混合度梯度很小。用导热油做热介质，桨叶干燥机可完成低温燃烧工作。如：二水硫酸钙 ($\text{Ca}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}$) 燃烧转化为半水硫酸钙 ($\text{Ca}_2\text{SO}_4 \cdot 1/2\text{H}_2\text{O}$)。碳酸氢钠 (NaHCO_3) 经燃烧转化为纯碱 (Na_2CO_3) 等。通入冷却介质，如水、冷却盐水等即可用来冷却。如：使用于纯碱行业的桨叶式凉碱机，取代老式的空气冷却凉碱机，节省了能源及尾气处理设备，降低了操作费用。干燥，设备最主要的功能，不使用热空气，使溶剂回收、能源消耗、环境控制处于易处理的理想状态。对需回收溶剂、易燃易氧化热敏性物料尤为适应。已广泛用于精细化工、石化、染料行业。轴向区间内，温度、湿度、混合度的均匀性，使得设备可用来加热或融化，或进行一些固体物料反应。在复合肥及变性粉行业均已成功使用。桨叶干燥机可用来对食物和面粉进行灭菌处理。单位有效容积内大的加热面积，很快就将物料加热到灭菌温度，避免了长时间加热而改变物料品质。

◆ The blade dryer is successfully applied in foodstuff, chemical, petrochemical, dyestuff, and industrial mud etc. The heating transferring, cooling and stirring characters enable it to perform the following unit operation: combustion (low temperature), cooling, drying (recovery of solvent), heating (melting), reacting and sterilizing. The stirring blade is heat transferring surface too, so to increase heat transferring area of unit effective volume is increased, and decrease processing time. The chock shaped heat transferring surface has self-cleaning function. Compressing and swell-stirring functions make the material mixed uniformly. The material perform the movement of "piston flow" along the shaft. The temperature, humidity and mixing effect of the material are very small in the axial interval. The blade dryer is capable to perform combustion under low temperature if we adopt thermal oil as heating media, such as $\text{Ca}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}$ is combusted into $\text{Ca}_2\text{SO}_4 \cdot 1/2\text{H}_2\text{O}$, NaHCO_3 is combusted into Na_2CO_3 and so on. It's capable for cooling process with water and chill salted water etc, such as base cooling machine in Na_2CO_3 industry, instead of the old style base air cooler, so to save power and the processing equipment for tail air, and save operation cost. Drying is the main function of this machine. Drying without hot air makes the process of solvent recovery, energy consumption, control of environment ideal, easy to teat. It's specially applicable for recovery of solvent and heat sensitive material that is easy to be combusted or oxidized. It has been widely used in fine chemical, petrochemical, and dyestuff industries. The uniformity of temperature, humidity and mixing effect in axial interval make the equipment capable for heating and melting, or reaction of solid material. It's successfully applied in mixed fertilizer and character transformed starch industries. The blade dryer is also capable for sterilizing food and starch. The big heating area in unit effective area, dry the material to sterilizing temperature very fast, so to avoid quality change caused by long time heating.



技术参数 Technical parameters

项目 item	型号 spec	QJ3	QJ9	QJ13	QJ18	QJ29	QJ41	QJ52	QJ68	QJ81	QJ95	QJ110
传热面积 heat transferring area (m ²)		3	9	13	18	29	41	52	68	81	95	110
有效容积 effective volume (m ³)		0.06	0.32	0.59	1.09	1.85	2.8	3.96	5.21	6.43	8.07	9.46
转速范围 range of rotating speed(r/min)		15-30	10-25	10-25	10-20	10-20	10-20	10-20	10-20	5-15	5-15	5-10
功率 power (kW)		2.2	4	5.5	7.5	11	15	30	45	55	75	95
器体宽A width of vessel (mm)		306	584	762	940	1118	1296	1474	1652	1828	2032	2210
总宽B total width (mm)		736	841	1066	1320	1474	1676	1854	2134	1186	2438	2668
器体长C length of vessel (mm)		1956	2820	3048	3328	4114	4724	5258	5842	6020	6124	6122
总长D total length (mm)		2972	4876	5486	5918	6808	7570	8306	9296	9678	9704	9880
进出料距E distance of material inlet & outlet (mm)		1752	2540	2768	3048	3810	4420	4954	5384	5562	5664	5664
中心高F height of center (mm)		380	380	534	610	762	915	1066	1220	1220	1220	1220
总高H total height (mm)		762	838	1092	1270	1524	1778	2032	2362	2464	2566	2668
进口口N steam inlet (寸inch)		3/4	3/4	1	1	1	1	1 1/2	1 1/2	1 1/2	1 1/2	2
出水口O water outlet (寸inch)		3/4	3/4	1	1	1	1	1 1/2	1 1/2	1 1/2	1 1/2	2

典型用户 Typical customers

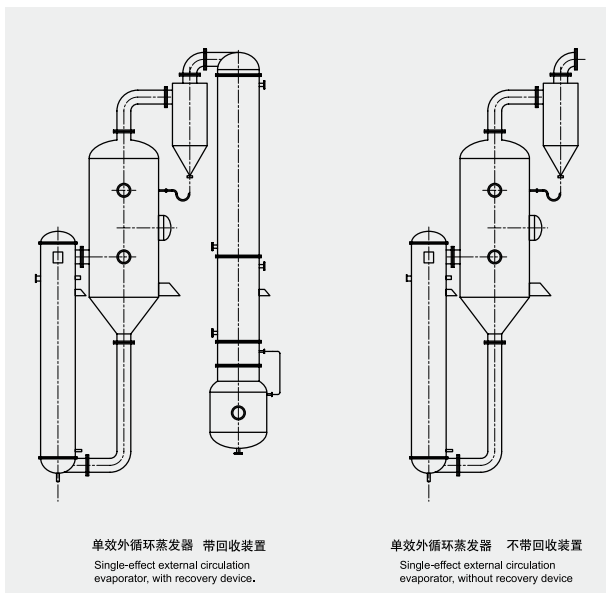
- ◆ 翁开尔集团
- ◆ H.JUNKEL LTD.
- ◆ 潍坊世华化工有限公司
- ◆ Weifang Shihua Chemical Co., Ltd.
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- ◆ Liaoyang City Hongwei District Synthetic Catalyst Factory
- ◆ 台湾新弘科技股份有限公司
- ◆ Taiwan Xinhong Technology Shares Co., Ltd.
- ◆ 台湾锌安工业股份有限公司
- ◆ Taiwan Xinan Industry Shares Co., Ltd.
- ◆ 出口至德国、印尼、台湾等
- ◆ Export to Germany, Indonesia, Taiwan and so on.



江苏省著名商标

DZ系列单效外循环蒸发器

DZ Series Single-Effect External Circulation Evaporator



特点 Features

- ◆ 本设备主要由列管式外加热器和真空蒸发器及辅助装置组成，物料受热时间短，蒸发速度快，能较好地保持热敏性物料有效性。
- ◆ 本设备采用两级除沫，显著减少料液损失。
- ◆ 结构简单，清洗方便。
- ◆ 浓缩比重大，最大比重可达1.35g/cm³。
- ◆ 凡与物料接触处均采用优质不锈钢制作，符合制药食品卫生要求。
- ◆ This equipment consists of tubular external heater, vacuum evaporator and auxiliary device. It features short heating time, rapid evaporation speed and can keep the effectivity of thermosensitive materials well.
- ◆ It adopts foam-removing with two-grade and can reduce the loss of feed liquid greatly.
- ◆ Simple structure, easy cleaning.
- ◆ Large concentration ratio, the largest could be 1.35 g/cm³.
- ◆ The parts touched with materials are made of good quality of stainless steel, which meet the health requirement of pharmacy and food.

应用 Applications

- ◆ 本设备适用于制药、食品、化工、轻工等行业液体物料的蒸发浓缩工艺过程。
- ◆ This equipment is suitable for the evaporation process of liquid materials in the industries of pharmacy, food, chemical industry, light industry, etc.

技术参数 Technical parameters

型号spec	DZ-350	DZ-500	DZ-700	DZ-1000	DZ-1500	DZ-2000
项目item						
蒸发量evaporating quantity (kg/h)	350	500	700	1000	1500	2000
蒸汽压力steam pressure (MPa)	0.25	0.25	0.25	0.25	0.25	0.25
加热面积Heating area (m ²)	7	8	10.5	18	25	35
冷凝面积condensing area (m ²)	13	16	20	30	50	70
冷却面积cooling area (m ²)	1.5	2	3	5	7	10
真空度vacuum degree(MPa)	0.08	0.08	0.08	0.08	0.08	0.08



江苏省著名商标

SZ系列三效多能蒸发器

SZ Series Triple-Effect Multi-Function Evaporator



特点 Features

- ◆ 本浓缩器适应于中药、西药、葡萄糖、淀粉、味精、食乳品、化工等液料的浓缩，尤其适用于热敏性物料的低温真空浓缩。
- ◆ This concentrator is suitable for concentration of liquid materials such as chinese herbal medicine, western medicine, glucose, starch, gourmet, foodstuffs, milk product and chemical product, especially suitable for heat sensitive materials for their vacuum concentration under the low temperature.

应用 Applications

- ◆ 本设备采用列管式循环外加热工作原理，物料受热时间短、蒸发速度快、浓缩比重大，有效保持物料原效。
- ◆ 节能效果显著，比单效蒸发器节约蒸气量70%左右。物料在密封系统中蒸发浓缩，环境清洁舒适；且本系统设置独特的除沫装置，防止跑料现象。
- ◆ 凡与物料接触部分均采用不锈钢制做，并进行抛光处理，设备耐腐蚀性好，清洗更方便，更符合制药、食品卫生法规要求。可配微机控制系统，使用更简便，效果更稳定。
- ◆ This equipment adopts the principle of tubular circulation out-heating working principle to keep the short heating time of materials, rapid evaporation speed, large concentration ratio, so as to keep the raw-effect of materials effectively.
- ◆ Steam energy will be well saved 70% than single-effect evaporator. Materials are evaporated & concentrated under sealed state which are clean and comfortable. Besides, it is equipped with special foam-removing device to prevent the material running phenomenon.
- ◆ All the parts touched with materials are made of stainless steel and be polished. The equipment has the properties of good corrosion-proof, easy of cleaning in accordance with requirements of Pharmacy, Food Hygiene. It can be matched with PC control system and be easy of operation and stable effects.

技术参数 Technical parameters

项目 item 型号 spec	蒸发量 evaporation quantity H ₂ O(kg/h)	换热面积 heat exchanging area(m ²)	冷凝面积 condensing area(m ²)	蒸发温度 evaporating temperature (°C)			真空度 vacuum degree (MPa)			外形尺寸 overall dimensions LxWxH (m)
				一效	二效	三效	一效	二效	三效	
				first effect	second effect	third effect	first effect	second effect	third effect	
SZ-500	500	15	7.5	85	75	60	0.02	0.06	0.08	5.9x1.25x2.49
SZ-1000	1000	30	15	85	75	60	0.02	0.06	0.08	6.8x1.45x3.5
SZ-2000	2000	60	30	85	75	60	0.02	0.06	0.08	9.3x1.8x4.2



江苏省著名商标

CT-C 系列热风循环烘箱

CT-C Series Hot Air Circulating Drying Oven



概述 Descriptions

◆ CT-C型系列热风循环烘箱配用低噪音耐高温轴流风机和自动控温系统，整个循环系统全封闭，使烘箱的热效率从传统的烘房3~7%提高到目前的35~45%，最高热效率可达50%。CT-C型热风循环烘箱的设计成功，使我国的热风循环烘箱达到了国内外先进水平。为我国节约了大量能源，提高了企业的经济效益。1990年由国家医药管理局发布了行业标准，统一型号为RXH。

◆ CT-C series hot air circulating oven adopts noise elimination and thermal stable axial flow fan and automatic temperature control system. The entire circulation system is enclosed to make that the heat efficiency of the drying oven increases from 3-7% of the traditional drying oven to 35-40% of the present one. The highest heat efficiency can be up to 50%. The successful design of CT-C hot air circulating oven makes that the hot air circulating drying oven in our country reach the advanced level in the world. It saves energy and increases the economic benefit. In 1990, the medical management bureau of the State issued the industry standard and the uniform type is RXH.

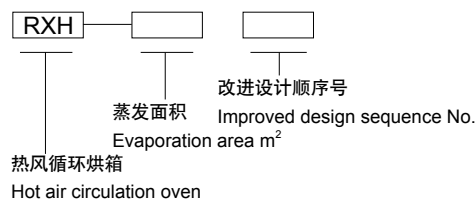
应用 Applications

◆ 适用于制药、化工、食品、农副产品、水产品、轻工、重工等行业物料及产品的加热固化、干燥脱水。如原料药、生药、中药饮片、浸膏、粉剂、颗粒、冲剂、水丸、包装瓶、颜料、染料、脱水蔬菜、瓜果干、香肠、塑料树脂、电器元件、烘漆等。

◆ This drying oven is suitable for material and product hot solidification and dry de-watering in the pharmaceutical, chemical, food, farming side-product, aquatic product, light industries, heavy industries and others industries. Such as: raw material medicine, crude drug, prepared herbal medicine of Chinese traditional medicine, plaster, powder, particle, drinking agent, pill, packing bottle, pigment, dyestuff, de-watering vegetable, dried fruit piece, sausage, plastics, resin, electric component, baking varnish and etc.

说明 Explanation

国家行业标准型号(The standard type made by the industry of the State)



- 一、加热源有蒸汽、电、远红外、气电两用供用户选择。
- 二、使用温度：蒸汽加热50~130℃，最高140℃。
- 三、用电、远红外温度50~300℃。可配套自控系统或电脑控制系统，供用户选择。
- 四、常用蒸汽压力0.2~0.8MPa(2~8kg/cm²)。
- 五、配用电加热按I型计算15kW，实用5~8kW/h。
- 六、特殊要求在定货时表明。
- 七、使用温度大于140℃或小于60℃，要在订货时注明。
- 八、本公司出厂的烘车，烘盘尺寸统一，可以互换。
- 九、烘盘尺寸：460x640x45mm。

- 1.Options of heat source: steam, electricity, or far infrared, or both steam electricity.
- 2.Drying temperature: steam heating 50-130°C, Max.140°C.
- 3.Electricity and far infrared:50-300°C.Automatic control system and computer control system on request.
- 4.Commonly using steam pressure 0.2-0.8MPa(2-8 bar).
- 5.For CT-C-I, electric heated, rated power consumption:15kW, real consumption : 5-8kW/h.
- 6.The special requirements should be indicated at the time of order.
- 7.For operation temperature of over 140°C or less than 60°C, please indicate when order.
- 8.The ovens and baking trays made by our factory are uniform in dimensions, and can be exchanged each other.
- 9.Baking plate dimensions:460x640x45mm.

CT-C 系列热风循环烘箱

CT-C Series Hot Air Circulating Drying Oven

特点 Features

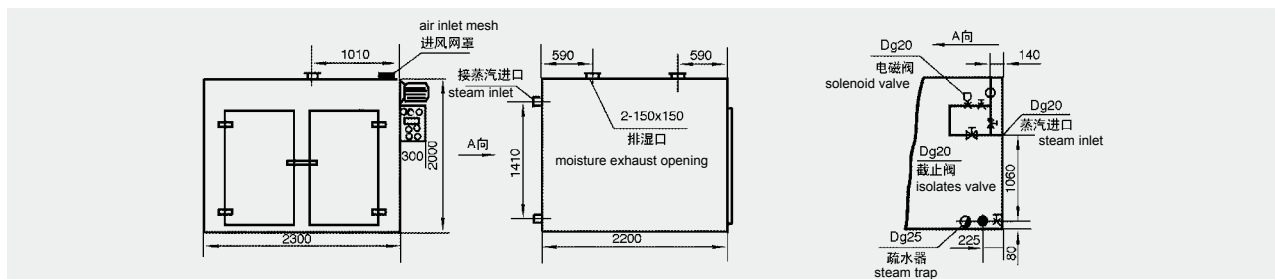
◆ 大部分热风在箱内循环，热效率高，节约能源。利用强制通风作用，箱内设有可调式分风板，物料干燥均匀。热源可采用蒸汽、热水、电、远红外，选择广泛。整机噪音小，运转平衡。温度自控，安装维修方便。适用范围广，可干燥各种物料，是通用干燥设备。

◆ Most hot air is circulated in the oven. The heat efficiency is high and the energy is saved. By using the forced ventilating function, there are adjustable air distribution plates inside the oven, the materials can be dried uniformly. The heating source might be steam, hot water, electricity and far infrared, with a wide selection. The whole machine is low in the noise. The operation is in balance. The temperature is controlled automatically. The installation and maintenance are easy. The application is wide. The machine can be used for drying various materials and is a versatile drying equipment.

技术参数 Technical parameters

行业标准型号 Spec. of industry standard	型号规格 specification	每次干燥量 batch drying capacity (kg)	配用功率 power(kW)	耗用蒸汽 steam to be consumed (kg/h)	散热面积 heat exchange area (m ²)	风量 velocity (m ³ /h)	上下温差 temperature different of the top and the bottom (°C)	配用烘盘 baking trays (只)	外形尺寸 overall dimensions (LxWxH) mm	配套烘车 matched baking trolley (辆 set)
RXH-5-C	CT-C-0	25	0.45	5	5	3400	±2	8	1400 x 1200 x 1600	0
RXH-14-C	CT-C-IA	50	0.45	10	10	3400	±2	24	1400 x 1200 x 2000	1
RXH-14-C	CT-C-I	100	0.45	18	20	3450	±2	48	2300 x 1200 x 2000	2
RXH-27-C	CT-C-II	200	0.9	36	40	6900	±2	96	2300 x 2200 x 2000	4
RXH-41-C	CT-C-III	300	1.35	54	80	10350	±2	144	2300 x 3220 x 2000	6
RXH-54-C	CT-C-IV	400	1.8	72	100	13800	±2	192	4450 x 2200 x 2000	8
RXH-25-A	高效高温远红外灭菌烘箱 high efficiency and high temperature far infrared sterilizing oven								1200 x 1000 x 1600	1

CT-C-II型烘箱尺寸示意图 Dimensional diagram of CT-C-II drying oven.



典型用户 Typical customers

- ◆ 吉林修正药业有限公司
- ◆ 吉林吴太集团
- ◆ 哈药集团三精制药有限公司
- ◆ 海南先声药业集团
- ◆ 云南昆明制药集团股份有限公司
- ◆ 湖南回春堂制药有限公司
- ◆ 武汉总医院
- ◆ 宜昌人福药业有限责任公司
- ◆ 常州制药厂
- ◆ 南京新百药业有限公司
- ◆ 上海三维制药有限公司
- ◆ 澳诺(中国)制药有限公司
- ◆ 河南惠丰制药有限公司
- ◆ 洛阳君山制药有限公司
- ◆ 赤峰天奇药业有限公司
- ◆ 四川川东农药化工有限公司
- ◆ 宁夏伊正回药有限公司
- ◆ 黑龙江多多药业有限公司
- ◆ Xiuzheng Pharmaceutical Group
- ◆ Jilin Wutai Group
- ◆ Sanjing Pharmaceutical Co., Ltd.
- ◆ Simcere Pharmaceutical Group
- ◆ Yunnan Kunming Pharmaceutical Group Co., Ltd.
- ◆ Hunan Huichuntang Pharmaceutical Co., Ltd.
- ◆ Wuhan General Hospital
- ◆ YiChang Humanwell Pharmaceutical Co., Ltd.
- ◆ Changzhou Pharmaceutical Factory
- ◆ Nanjing Xinbai Pharmaceutical Co., Ltd.
- ◆ Shanghai Sunve Pharmaceutical Co., Ltd.
- ◆ Aonuo (China) Pharmaceutical Co., Ltd.
- ◆ Henan Huifeng Pharmaceutical Co., Ltd.
- ◆ Luoyang Junshan Pharmaceutical Co., Ltd.
- ◆ Chifeng Tianqi Pharmaceutical Co., Ltd.
- ◆ Sichuan Chuandong Agriculture Pharmaceutical Co., Ltd.
- ◆ Ningxia Yizheng Pesticidel Co., Ltd.
- ◆ Heilongjiang Duoduo Pharmaceutical Co., Ltd.

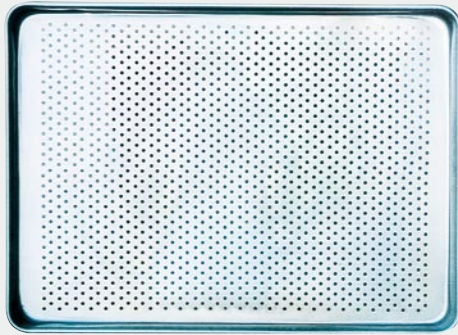


江苏省著名商标

CT-C 系列热风循环烘箱

CT-C Series Hot Air Circulating Drying Oven

配套产品 Fittings



一次成型打眼盘
Once shaped punched baking trays



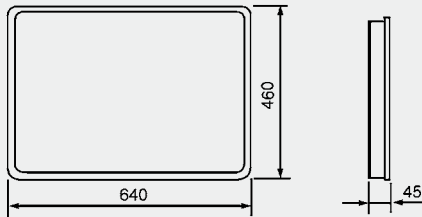
手工井字网盘
Manual multi-square mesh baking trays



一次成型压制盘
Once shaper pressed baking trays

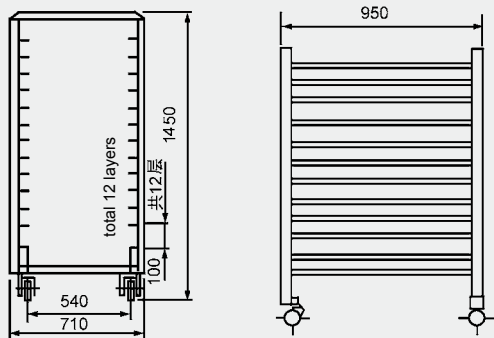
定型压制烘盘 材质：不锈钢、防锈铝合金

Shaped pressed baking trays
Material: stainless steel , rustproof aluminium alloy



定型烘车 材质：不锈钢、A3钢

Shaping Baking trolley
Material: stainless steel, A3 steel



轴流风机
Axial fan

JCT 系列药品专用烘箱

JCT Series Special Oven for Pharmaceutical

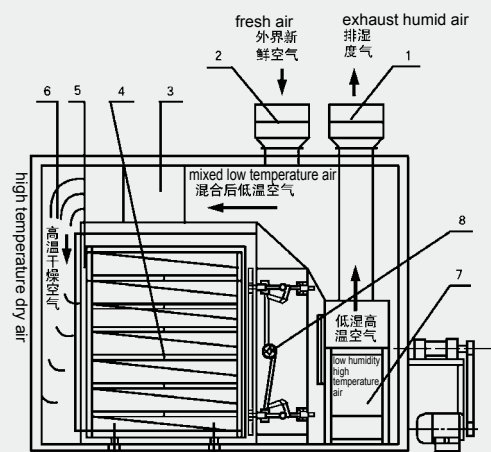


特点 Features

- ◆ 热风每一循环均通过中效或高效过滤器，能有效避免空气中夹带物料在循环加热过程中发生变质，对药品的污染，完全符合药品生产规范。
- ◆ 穿流式烘箱比平流式干燥能力大，每层物料装料厚度为平流式烘箱的三倍以上。
- ◆ 穿流式烘箱面积大、效率高、能力比平流式烘箱大几倍、成本较低。
- ◆ 适合各种颗粒状、块状物料的干燥。
- ◆ 操作容易，清洗更换便捷，故障率较低。
- ◆ 空气进出口都有空气过滤器，不会污染物料，影响其品质。
- ◆ 烘箱加热热源可采用蒸汽、导热油或电加热。
- ◆ To avoid pollution of product caused by circulation air, all circulation air passes through post or high efficiency filters. It is in conformity with the requirements of GMP.
- ◆ Compared to traditional horizontal chamber dryer, its capacity of drying is larger. The thickness of raw materials each layer can be over three times.
- ◆ Compared to traditional horizontal chamber dryer, its drying area is large and its efficiency is high. Its capacity of drying might be several times higher, the cost is reasonable.
- ◆ Applicable to dry various kinds of granules and block of materials.
- ◆ Easy in operation, convenient in parts exchanging, low in faults.
- ◆ There are air filters at air inlet and air outlet. Therefore the dried raw materials can not be polluted and the quality of product can not be effected.
- ◆ The hot source can adopt steam, oil or electric heater.

原理 Principle

- ◆ 在传统的水平流箱式干燥器中，气流只在物料表面流过，其缺点是传热系数低、热利用率差、物料干燥时间长，且由于结构的缺陷，无法完全符合GMP药品生产规范。为了克服以上缺点，我公司根据国外先进技术设计开发了穿流式干燥器。
- ◆ 本机由风机将一部分新鲜空气经初、中高三效过滤，达到十万级净化，经蒸汽热交换器，使空所升温至一定温度，通过过滤热空气净化后，再由左侧分流板至各层，使热风平均通过每层被干燥的物料。湿空气从烘盘底下的倾斜风道抽出后经离心风机使一部分湿空气排出烘箱，另一部分空气继续循环加热，达到干燥目的。
- ◆ The air steam passes through only the surface of raw material in traditional chamber dryer. The disadvantage is that the coefficient of raw material only in traditional level chamber dryer. The disadvantage is that the coefficient of heat transfer is low, the drying time is long, and it has defects in structure, can not be in conformity with the requirements of GMP. In order to overcome the shortage, we designed and developed the penetrating air stream chamber dryer on the basis of absorbing foreign advanced technology. The principle of work is shown in the diagram below.
- ◆ The fresh air is sucked by fan and then filtered by pre, post and sub-high efficiency to achieve 100,000 grades clean effect. Pass through steam heat exchanger the temperature of air rises to a certain temperature. The heated air passes through flow distributor enters every layer, passes through each layer of raw material to be dried, humid air is exhausted through the inclined air channel under the drying tray. Part of the air circulates in the system.



- | | |
|--------------|---------------------------------------|
| 1.排湿过滤器 | 1. humidity exhaust filter |
| 2.新风过滤器 | 2. filter for fresh air |
| 3.加热器 | 3. heater |
| 4.烘车 | 4. baking trolley |
| 5.亚高效(高效)过滤器 | 5. sub-high(high) efficiency filter |
| 6.导流片 | 6. flow inducing sheet |
| 7.离心风机 | 7. centrifugal fan |
| 8.吸风压紧机构 | 8. pressing mechanism for air suction |

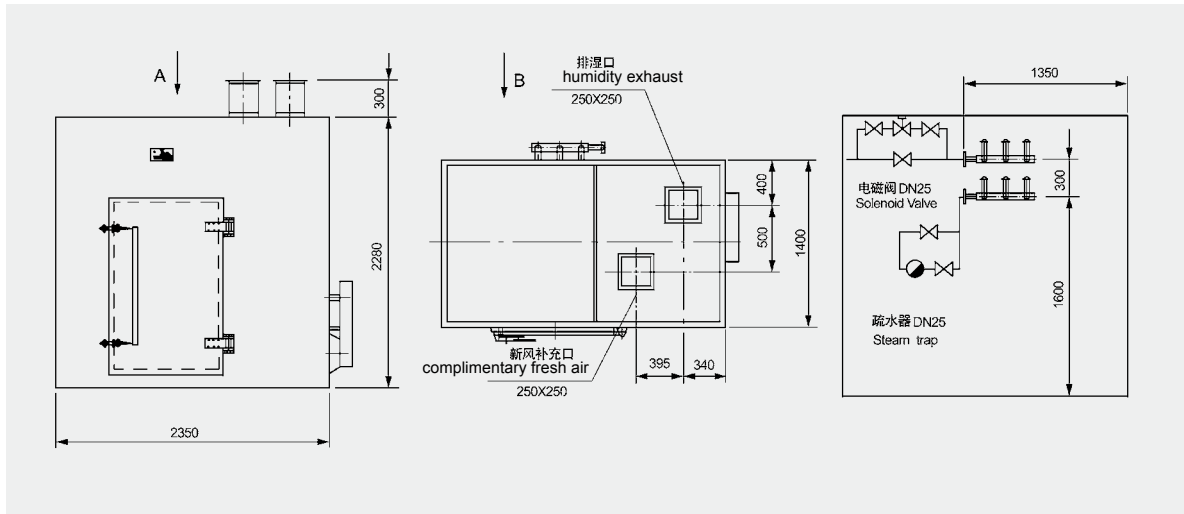


江苏省著名商标

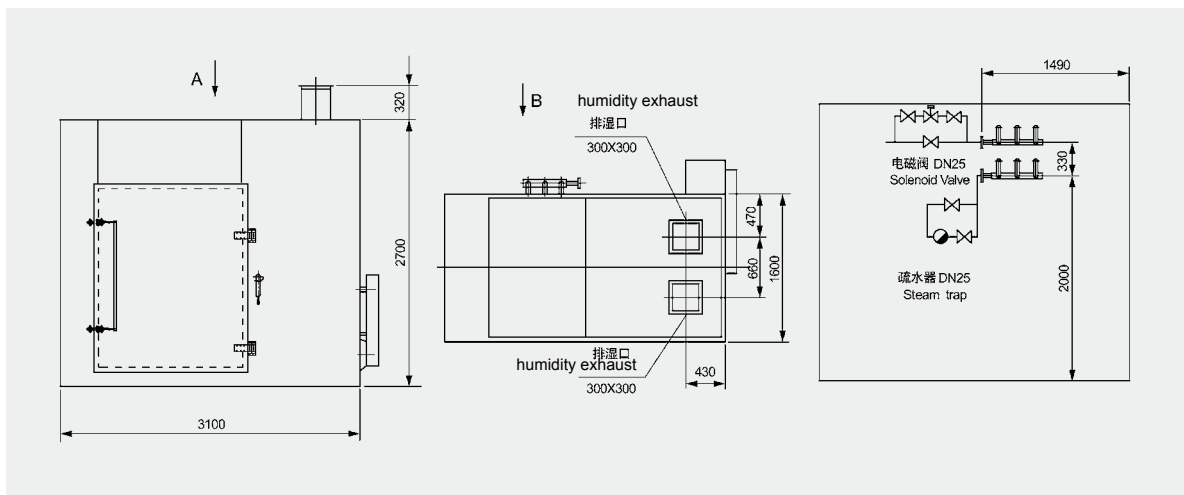
JCT 系列药品专用烘箱

JCT Series Special Oven for Pharmaceutical

JCT-C-I 型烘箱示意图 Sketch of model JCT-C-I oven



JCT-C-II 型烘箱示意图 Sketch of model JCT-C-II oven



技术参数 Technical parameters

项目 item	每次干燥量(kg) dry amount of each batch	配用 功率(kW) power	耗用蒸汽 consumption (kg/h)	加热面积 (m ²) area of heat	风量(m ³ /h) amount of air	上下温差(°C) temperature difference between up and low	烘盘尺寸(mm) size of drying tray	烘盘数 quantity of drying tray	外形尺寸(mm) overall dimensions	重量 (kg) weight
型号 spec										
JCT-C-I	100	4	40~80	50	4000~7300	±2	550x610x80	10	2350x1400x2280	2200
JCT-C-II	200	7.5	80~120	80	7200~15800	±2	530x610x80	20	3100x1600x2700	4000

物料 materials	颜料 dyestuff	医药品 pharmaceutical	催化剂 catalyst	树脂 resin	窑制品 product of kiln	氨基酸 amino acid
处理量 capacity (kg)	200	260	370	350	100	200
初含水量 initial moisture (%)	60	65	-	35	31	50
终含水量 final moisture (%)	0.3	0.5	-	10	3	2
堆积密度 mass density (kg/L)	0.56	0.5	0.92	0.8	0.51	0.5
热风温度 temperature of hot air (°C)	60	80	400	150	100	80
干燥时间 drying time (h)	5	6	-	3	40	1
干燥面积 drying area (m ²)	6.5	5.8	4.6	6.3	6.6	6.8
热源 heat source	蒸汽 steam	蒸汽 steam	气体 air	蒸汽 steam	电力 electricity	蒸汽 steam

GM系列高温灭菌烘箱

GM Series High-Temperature Sterilizing Oven

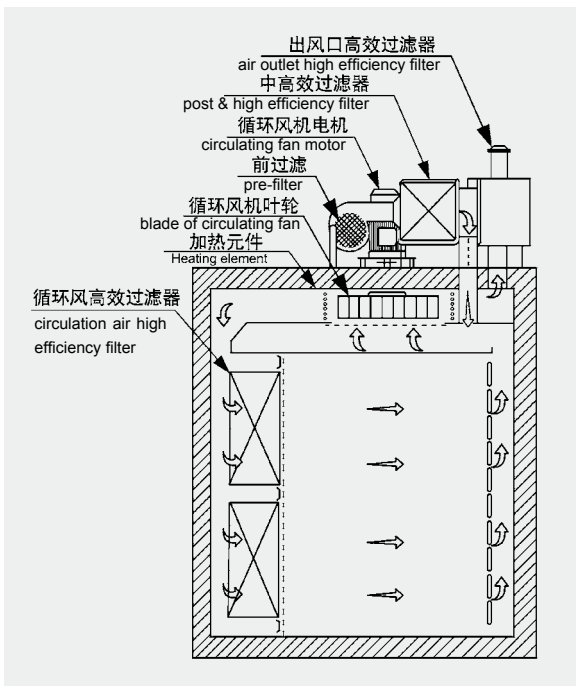


概述 Descriptions

- ◆ 本机适合于制药行业的GMP管理，对药品及器具进行灭菌和干燥。
- ◆ 我公司通过积累三十年制造各种烘箱的经验并结合国外经验和国内GMP要求，精心设计、制造、提供可靠的GM100系列产品，在医药行业享有盛誉。
- ◆ This dryer is suitable for GMP management in pharmaceutical industry to sterilize and dry medicines and appliances.
- ◆ Through our accumulated experiences to producing various kinds of ovens over the past thirty years, plus the foreign experiences and domestic requirement of GMP, our company provides you with reliable GM100 series products which are designed and manufactured meticulously, and had the reputation in medical and pharmaceutical industries.

原理 Principle

- ◆ 以电能为热源，可长期在250°C温度下进行干燥或灭菌。
- ◆ 内部热风为平流式，保证了有效空间的热风达100级洁净等级。
- ◆ 工作温度由程序控制，对操作温度进行自动控制。
- ◆ 自动控制程序为：升温-排湿-恒温-降温-停机等均自动为自动控制。
- ◆ 具体操作见说明书或进行技术培训。
- ◆ With heating resource of electricity, it can dry and sterilize under 250°C for a long time.
- ◆ Parallel flow of internal hot air to ensure hot air in effective space to be at class 100 cleanness.
- ◆ Operating temperature is program-controlled to automatically operating temperature.
- ◆ Automatic control procedures are: heating - moist removing - temperature stabilizing - temperature lowering - stop machine etc., all of these are automatically controlled.
- ◆ Detailed operations can be acquired on operating manual or via technical training.



技术参数 Technical parameters

项目 item 型号 spec	工作温度(°C) working temperature	外形尺寸(mm) overall dimensions			有效空间(mm) effective space			净风风机风量 在250°C时 clean air capacity of fan(at 250°C)	净风风机风压 在250°C时 clean air pressure of fan(at 250°C)	层流净化 等级 purifying grade of layered flow	加热 功率(kW) heating power	重量 (kg) weight	温度控 制偏差 temperature tolerance of control	各点温差 temp. difference between points
		A	B	H	A1	B1	H1							
GM100-I	常温~250°C ambient temperature to 250°C	1950	1300	2000	800	850	1100	1000m ³ /h	700Pa	100	13.5	800	≤2°C	≤3°C
GM100-II			2150		1700		3000m ³ /h	24			1200			



江苏省著名商标

DW系列带式干燥机

DW Series Mesh-Belt Dryer

概述 Descriptions

◆ 该机是穿流连续式干燥设备，用于透气性较好的片状、条状、颗粒状物料的干燥，对于脱水蔬菜，中药饮片等含水率高，而温度不允许高的物料尤为合适；该系列干燥机具有干燥速度快，蒸发强度高，产品质量好的优点。对脱水滤饼状的膏状物料，需经造粒或制成棒状后亦可干燥。

◆ This machine is a continuous penetrating flow drying equipment applied for drying pieces strip and particles state materials with good ventilation. The machine is suitable for the materials such as de-watering vegetable, herbal medicine of traditional Chinese medicine and others, for which the water contents are high and high drying temperature is not allowed. The machine owns the advantages, of fast drying speed, high evaporation capacity and good product quality. The de-watered & filtered cake state paste material should be made into particles or strips before drying process.

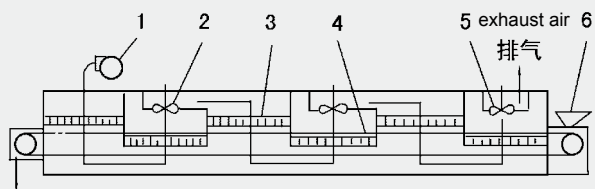


DW多层干燥机 DW multi-layer drying machine

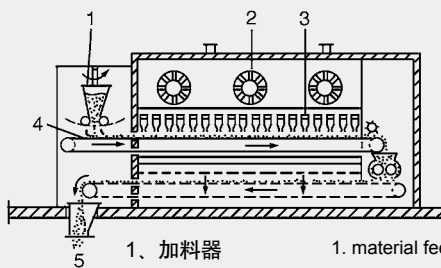


DW标准型 DW standard

DW(标准型 standard)



- | | | | | | |
|---------------------|---------------------------|-----------------|----------------------|-------------------------|-------------------|
| 1、进气风机 | 2、循环风机 | 3、蒸汽加热器 | 4、输送带 | 5、排湿风机 | 6、加料斗 |
| 1. inlet air blower | 2. circulation air blower | 3. steam heater | 4. transmission belt | 5. moisture exhaust fan | 6. feeding hopper |



- | | | | | |
|--------------------|--------|-------------------|----------------------|-------------------|
| 1、加料器 | 2、风机 | 3、热空气喷嘴 | 4、输送带 | 5、干燥产品 |
| 1. material feeder | 2. fan | 3. hot air nozzle | 4. transmission belt | 5. drying product |



DW系列带式干燥机

DW Series Mesh-Belt Dryer



江苏省著名商标

原理 Principle

◆ 物料由加料器均匀地铺在网带上，网带一般采用12-60目不锈钢丝网，由传动装置拖动在干燥机内移动。干燥机由若干单元组成，每一单元热风独立循环，部分尾气由专门排湿风机排出，废气由调节阀控制，热气由下往上或由上往下穿过铺满物料的网带完成热量与质量传递的进程，带走物料水份。网带缓慢移动，运行速度可根据物料温度自由调节，干燥后的成品连续落入收料器中。上下循环单元根据用户需要可灵活配备，单元数量亦可根据需要选取。

◆ The materials are uniformly distributed on the mesh-belt by the material feeder. The mesh-belt generally adopts 12-60 mesh stainless steel mesh and it is drawn by a transmission device and move inside the dryer. The dryer is composed of several sections. For each section the hot air is circulated separately. Part of exhausted gas is exhausted by a special moisture exhaust blower. The waste gas is controlled by an adjustment valve. The hot air passes through the mesh-belt covered with bring water material away. The mesh-belt moves slowly, running speed can be freely adjusted according to the material property. The final products after the drying process will fall into the material collector continuously. The top and low circulation units can be freely equipped according to the user's requirements. The number of section might be selected according to the production demands.

应用 Applications

◆ 脱水蔬菜、颗粒饲料、味精、椰蓉、有机颜料、合成橡胶、丙稀纤维、药品、药材、小木制品、塑料制品、电子元器件老化、固化等。

◆ De-watering vegetable, particle feed, gourmet powder, shredded coconut stuffing, organic color, compound rubber, acral fibre, medicine product, medicine material, small wooden product, plastic product, aging and solidification for the electronic component and device.



技术参数 Technical parameters

项目 item	型号 spec	DW-1.2-8	DW-1.2-10	DW-1.6-8	DW-1.6-10	DW-2-8	DW-2-10
单元数 unit number		4	6	4	6	4	6
带宽 belt width	m	1.2	1.2	1.6	1.6	2	2
干燥段长 drying section length	m	8	10	8	10	8	10
铺料厚度 thickness of the material	mm	10~80					
使用温度 temperature	°C	60~130					
蒸汽压力 steam pressure	MPa	0.2~0.8					
蒸汽耗量 steam consumption	kg steam/kgH ₂ O	2.2~2.5					
干燥强度 drying strength	kg/m ² ·h	6~20					
风机总功率 total power of the blower	kW	3.3	4.4	6.6	8.8	12	16
设备总功率 total power of the equipment	kW	4.05	5.15	7.35	9.55	13.1	17.1

典型用户 Typical customers

- ◆ 中国旺旺控股有限公司合肥分公司
- ◆ Wang Wang China Holdings Limited Hefei Branch
- ◆ 株洲千金药业有限公司
- ◆ Zhuzhou Qianjing Pharmaceutical Co., Ltd.
- ◆ 长沙九芝堂药业有限公司
- ◆ Changsha Jiuzhitang Pharmaceutical Co., Ltd.
- ◆ 青岛普罗顿生物技术有限公司
- ◆ Qingdao Pluodun Esligma Blo-Tech Co., Ltd.
- ◆ 棒师傅食品科技公司
- ◆ Top Chef Food Technologies Co., Ltd.
- ◆ 福寿堂制药有限公司
- ◆ Fushoutang Pharmaceutical Co., Ltd.
- ◆ 亳州市中信药业有限公司
- ◆ Bozhoushi Zhongxin Parmaceutical Co., Ltd.
- ◆ 武汉市福星生物药业公司
- ◆ Wuhan Fuxing Biological Pharmacy Co., Ltd.
- ◆ 吉林仁亿饲料有限公司
- ◆ Jilin Yiren Feed Co., Ltd.
- ◆ 出口至印尼、泰国、乌克兰等
- ◆ Export to Indonesia, Thailand, Ukraine and so on.

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江苏省著名商标

DW系列带式干燥机

DW Series Mesh-Belt Dryer

蔬菜专用机

Specialized machine for vegetable

出口埃及烘干洋葱用。
Export to Egypt for onion drying



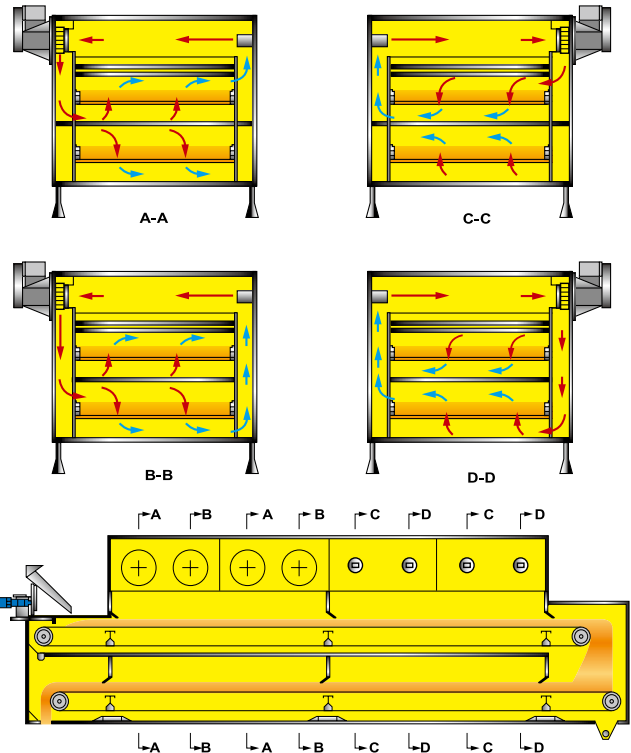
设备名称 equipment name 项目 item		型号 spec	三台串联蔬菜专用机 three units in series specialized machine for vegetable		五层蔬菜专用机(框架式) five layers specialized machine for vegetable (Frame type)
			DWP-2-10-3	DWF-2-10-3	DW-5-3-12
有效带宽 effective belt width	m	2	2	3	
有效带长 effective belt length	m/unit	10	10	12	
串联台数 units in series		3	3		
层数 layers				5	
蔬菜处理量 vegetable capacity	kg/h	600	720	2000	
蒸发强度 evaporate strength	kg/h	400-510	480-640	1440~1800	
蒸汽耗量 consumption of steam	kg steam/kg H ₂ O	2.2-2.5	2.2-2.5	2.2-2.4	
散热面积 heat radiation area	m ²	900	1440	2600	
装机总功率 total power of the machine	kW	70	52	150	
设备外形尺寸 overall dimensions	m	33.2x2.58x2.8	33.2x2.27x2.85	15.3x4.3x8.5	
热源形式 heat source type		蒸汽/导热油/热风炉/电 steam, thermal conductivity oil, hot air furnace, electric			

饲料专用机 Specialized machine for feed (frame type)



饲料专用机(框架式)

项目 item		型号 spec	DW-3x12
有效带宽 effective belt width	m		3
有效带长 effective belt length	m/unit		12
使用温度 using temperature	°C		80~130
蒸汽压力 pressure of steam	MPa		0.4~0.8
干燥时间 drying time	min		35~50
料层厚度 thickness of material	cm		5~8
干燥强度 drying strength	kg/m ² ·h		6~20
蒸汽耗量 consumption of steam	kg steam/kg H ₂ O		2~2.4
装机总功率 total power of the machine	kW		76
设备外形尺寸 overall dimensions	m		15.1x4.3x3.4



DWP系列带式干燥机

DWP Series Mesh-Belt Dryer

原理 Principle

◆ DWP型喷射气流带式干燥类型，热风从狭缝或孔束流向下或向上同时喷向输送带上的物料，由于喷射气流高达15m/s以上，故对流传热的膜极薄，传热系数大，干燥速度快。该设备用于不透气类物料时，上面喷射气流仍返回上面，下面喷出的气流仍返回下面，再参与循环。对透气性物料气流束具有强穿透性及物料内部的扩散性。使用热源可以是蒸汽、电、热风炉及燃油烟通气等。

◆ For DWP type air jet mesh-belt dryer, the hot air flows. Through narrow seams or holes, downward or upward to the materials on the transmission belt. Because the spray air speed is up to more than 15m/s, the heat transmitting film is very thin, the heat transmitting co-efficiency is big and the drying speed is fast. When the machine is used for the air tight grains, the above air jet flow will return to the top and the bottom flow will return to the bottom, take part in circulation. For some materials, the air flows will pass through the inside of the materials, the heat source can be steam, electricity, thermal furnaces and combustion oil flue and etc.

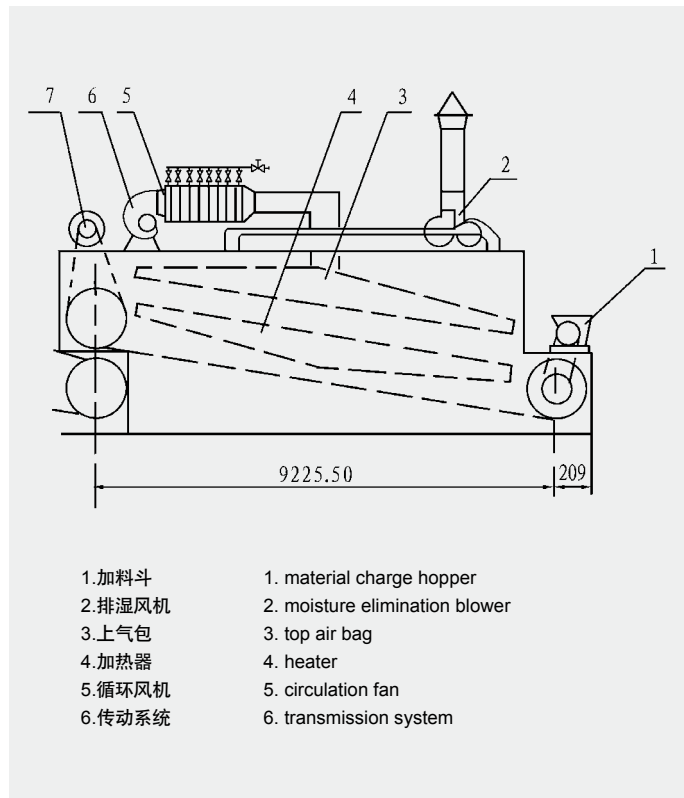
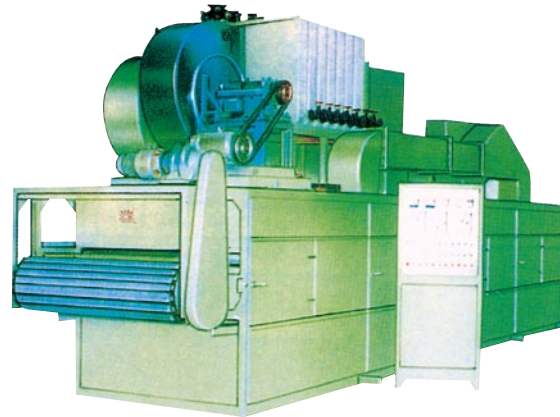
应用 Applications

◆ DWP型喷射气流带式干燥机主要用于纤维板、石膏板、纸箱板、纸浆模、涂布干燥等，也适用于片状物料及一些特殊物料的干燥。

◆ DWP type spray air mesh-belt drying machine is mainly used for drying the fiber plate, plaster plate, carton board, pulp film, coated cloth and etc. The machine is also suitable for drying the sheet state material and some special materials.

技术参数 Technical parameters

项目 item	型号 spec	DWP-1.2-8	DWP-1.2-10	DWP-1.6-8	DWP-1.6-10	DWP-2.0-8	DWP-2.0-10
带宽 belt width	m	1.2	1.2	1.6	1.6	2	2
干燥段长 drying section length	m	8	10	8	10	8	10
铺料厚度 thickness of the material	mm	10~80					
使用温度 operation temperature	°C	60~130					
蒸汽压力 steam pressure	MPa	0.2~0.8					
蒸汽耗量 steam consumption capacity	kg steam/kg H ₂ O	2.2~2.5					
干燥强度 drying strength	kg/m ² ·h	6~20					
风机总功率 total power of fan	kW	5.5	7.5	7.5	11	11	15
设备总功率 total power of machine	kW	6.25	8.25	8.25	11.75	11.75	15.75





江苏省著名商标

MSD系列带式微波灭菌干燥机

MSD Series Microwave Belt Sterilizing Dryer



特点 Features

- ◆ 加热速度快物料干燥时间短且均匀性好。
- ◆ 节能高效，由于含有水分的物质容易吸收微波而发热，因此除少量的传送损耗外，几乎无其他损耗，故热效应高、节能。它比红外线加热节能1/3以上。
- ◆ 易于控制，操作灵活方便，微波功率和传输速度均可调。应用人机界面和PLC可进行加热和加热工艺规范的可编程控自动化控制。
- ◆ 无粉尘污染、易清洗、符合GMP要求。
- ◆ High heating speed, short drying time and good uniformity.
- ◆ As the substance with water is easy to absorb microwave to be heated, so except for a small quantity of energy wastage, it is almost no other wastage in this process. This is the reason why this machine with high efficient and save energy can save energy over 1/3 than infrared ray.
- ◆ Control easily, operation flexible. Microwave power and transport speed are all adjustable, The programmed automatic control for heating progress and its technique criterion can be realized with this machine to choose man-machine interface and PLC.
- ◆ No dust pollution and cleaning easily, it is complied with GMP standard.

应用 Applications

- ◆ 用于粉状、颗粒状、片状或胶体状等食品、添加剂、调味品、药品、中草药材原料、营养保健品、农副土特产品非油炸(或节油)方便面、面粉、豆制品、牛肉干、肉脯、鱼干、茶叶、烟草等的干燥、杀菌；杏仁、桃仁、花生仁、板栗等的高燥蜕皮、焙烤；休闲食品、薯片、土豆片、虾片、鱼肚等的膨化；口服液、酱菜、各种小包装食品的防雾、杀菌保鲜；冷冻鱼、肉禽的“回温”解冻；大豆干燥脱腥；冶金化工产品的干燥、脱硫、还原；印染、陶瓷、玻纤、化纤、棉纱、木材、皮革竹制品、蜂窝纸板制品、瓦楞纸板等工业产品的干燥。
- ◆ It is used for drying and sterilizing powder, granule and slice or colloid, etc, shape's food, additive, condiment, medicine, Chinese medicine and herb materials, nutrition health product, farming byproduct-non-fried instant noodle, flour, bean, beef jerky, meet slice, fish jerky, tea, tobacco. Exuviating and roasting almond, peach kernel, peanut kernel, millet etc. Expanding potato chip, shrimp slice and fish stomach. Sterilizing Such us which take orally, pickles, etc. Product's fog proof, ice out for frozen fish, meat, etc. To dry bean and eliminate fresh smell for it; dry, separate sculpture for metallurgy manufacturing; dry for dye, chinaware, glass fiber, chemical fiber, cotton yarn, wood, leather, bamboo, etc.

技术参数 Technical parameters

项目 item	型号 spec	MSD-8	MSD-10	MSD-12	MSD-16	MSD-20	MSD-24	MSD-30
工作频率 working frequency (MHz)		2450 ± 50						
输出功率 output power (kW)		8	10	12	16	20	24	30
脱水能力 dehydration capability (kg/kW·h)		0.5 - 0.8						
铺料厚度 depth for material (mm)		≤ 50						
传送带速度 (m/min) conveyor belt speed		0.2-15 (可调 adjustable)						
微波泄漏 microwave leakage (mw/c)		Complied with international standard 符合国际标准 ≤ 5						
外型尺寸 (参考) (m) overall dimensions (reference)		6x0.7x1.8	7x0.7x1.9	8x0.7x1.9	10x0.7x1.9	12x0.7x1.9	12.6x0.7x1.9	16x0.7x1.9

说明：该设备外型尺寸可以根据用户要求及所需功率确定 remark: this equipment dimension is confirmed with user requirement and machine power



江苏省著名商标

HD系列微波真空干燥机

HD Series Microwave Vacuum Dryer



应用 Applications

◆ 本机用于热敏性中药固体制剂低温干燥，真空浓缩设备的使用，干燥速度极快，能大幅度提高产品质量，具有高效、加热均匀、易控、安装维修方便等特点，可用于药品、生物制品、农副产品的干燥、加温、灭菌、熟化，对各种丸剂、颗粒状物料的干燥效果特别优异。微波低温真空干燥设备还具有杀毒、杀菌之功效、功率线性可调，智能化控制，温度可控，生产出的产品安全卫生可延长保质期。

◆ This machine is suitable for low temperature drying of thermo-sensitive Chinese solid preparations. Concentration equipment is characterized by high speed of drying, the improvement of the product, high efficiency, uniform heating, control easily and convenient installation, etc. It is widely used for drying, heating, sterilizing, riped of medicine, biology product and farming byproduct, it has special excellent efficient for several kinds of pellet, granule drying. Likewise, this microwave vacuum dryer is with sterilizing function and has features of adjustable power, intelligent control, adjustable temperature. It can produce health safety products with long guarantee period.

特点 Features

- ◆ 高效：与常规干燥技术相比可提高工效四倍以上。
- ◆ 加热均匀：用微波加热，是物料内外同时加热，物料的内外温差很小，不会产生常规加热中出现的内外加热不一致的状况，而使干燥质量大大提高。
- ◆ 易控：便于连续生产及实现自动化，由于微波功率可快速调整及无惯性的，易于即时控制，便于工艺参数的调整和确定，还可形成大规模生产。
- ◆ 设备体积小：内部装有监视器，可以观察干燥全过程。
- ◆ 产品质量好：所加工的产品质量有较大幅度的提高。
- ◆ 此外微波设备还具有消毒、杀菌功效，加工的产品安全卫生，保质期长。对脱水植物加工，工艺性能、经济效益、产品质量有较好的提高。
- ◆ High efficient: It enhances fourfold efficiency than the common dry technology.
- ◆ Heating uniformity: It is heating to material inner and exterior at same time by microwave, temperature difference between material inner and exterior is very small inconsistencies within and outside the heating; instead, it advances drying quality.
- ◆ Control easily: It is easy to realize manufacture continuously and automatically, as microwave power can be adjusted quickly and no inertia, the instant control is easy to get and be convenient to set and confirm the technique parameters, also it's good to use in capacity production.
- ◆ Small volume with this machine: monitor is inside the machine so as to inspect whole process.
- ◆ Good quality: product quality is enhanced more by this machine.
- ◆ Furthermore, microwave equipment has other function of sterilizing, so its product is safety, sanitation, and with long period of good quality. Also to dehydrated foliage machining, it is enhanced more for technique capability, economic benefit and product quality by this machine.

技术参数 Technical parameters

项目item	型号spec	HD-06R	HD-10R	HD-15R	HD-24F	HD-48F
微波功率microwave power (kW)		6	10	15	24	48
微波频率microwave frequency(MHz)		2450 ± 15				
铺料面积area for material (m ²)		1	1.5	2	4	8
蒸发能力steamed capability (kg/h)		6-9	10-13	15-20	24-30	40-60
转盘转速rotating speed(r/min)		0~5				
真空度vacuum degree(MPa)		≥0.095				
微波泄漏microwave leakage(mw/c)		<5 符合国际标准 Complied with international standard				
外型尺寸LxDxH		1500 × 1800	1600 × 1800	1850 × 2400	3100 × 2700	3100 × 2700
overall dimensions (m)		× 2100	× 2100	× 2200	× 2000	× 2200



江苏省著名商标

JRF系列燃煤热风炉

JRF Series Coal Combustion Hot Air Furnace

概述 Descriptions

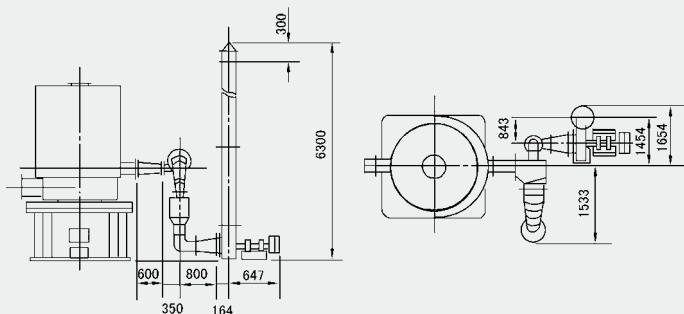
◆ 该炉为通用性热风装置，与各种物料的干燥设备配套使用。该炉集燃烧与换热为一体以炉体高温部位进行换热的最新间接加热技术，烟和空气各行其道，加热绝对无污染，热效率高(达60~75%)，升温快，体积小，安装方便，使用可靠。采取了耐高温措施，从而使其寿命比列管式热风炉大大延长，并采用了烟气纵向冲刷散热片和负压式排烟方式，换热部位不积灰尘，无须清理，热性能稳定。可用各种煤或柴作燃料，并配有二次进风装置燃烧完全。该炉的各项技术经济指标均达到了国内领先水平。

◆ The furnace is the versatile hot air equipment. It is used with other equipment for drying various materials. The furnace combines the combustion with the heat exchange, using the latest indirect heating technology that the heat exchange is taken place at the position of the high temperature in the furnace. The smoke and the air go into the different channels, without any pollution for the heating. The heat efficiency rate is high (up to 60 - 75%). The temperature increase is fast. The furnace is small in size, easy in the installation. The furnace uses the high temperature resistant method so that its life is much longer than the life of the pipe arrangement hot air furnace. The furnace uses the smoke and air longitudinal splashing heat radiation sheets and the negative pressure smoke elimination mode. There is no dust collected on the heat exchange position. There is no need to carry out the cleaning. The heat feature is stable. Various coal and wood can be used as the fuel. The furnace is equipped with the air leading device and the combustion is complete. All the technical and economic indexes of the furnace have reached the advanced level at home.



安装示意图

Schematic of installation



技术参数 Technical parameters

项目 Item	型号 spec	JRF-15	JRF-20	JRF-30	JRF-40	JRF-60	JRF-80	JRF-100
内筒直径 diametral of interior barrel (mm)		760	760	1170	1170	1470	1670	1870
外筒直径 diametral of exterior barrel (mm)		1280	1280	1840	1840	2200	2460	2700
总高 total height (mm)		3500	3500	4260	4760	4810	5110	5310
设备重量 total weight of equipment (t)		3.15	3.65	6.8	7.5	9.8	11.7	13.5
热风出口直径 diameter of hot air outlet opening (mm)		300	300	500	500	500	600	600
热风出口高度 height of hot air outlet opening (mm)		1585	1585	1670	1670	1670	1770	1770
烟气出口直径 diameter of flue outlet opening (mm)		250	250	250	250	250	300	320
烟气出口高度 height of flue outlet opening (mm)		2050	2050	2220	2220	2220	2385	2385
牛角弯头型号 specification of angle head		XZD/G Ø578			XZD/G Ø810			
每小时耗煤量 coal consumption per hour (kg)		43	57	85	115	170	230	286
煤的燃烧值 combustion value of coal (kcal/h)		5000						
热效率 Heat efficiency		70~75%				75~80%		
引烟风机型号 suction fan of flue		Y5-47-3.15C -1.5kW	Y5-48 -4C-2.2kW	Y5-48-4C-3kW		Y5-47 -4C-3kW	Y5-47 -4C-4kW	Y5-47 -5C-7.5kW

敬告注意:

- ◆ 环境基准温度标准按 $18^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ，煤的热值以5000kcal/kg计算。
- ◆ 表中热风温度是按输出风量确定的。热风炉JRF4型的热风温度最高可达 200°C 以上，JRF5、JRF6型热风温度最高可达 300°C 以上(特殊制造可达 500°C 以上)，用户根据需要进行调整。
- ◆ 热风炉烟囱配置高度：JRF4型3~5米，JRF5、JRF6型为5~8米。
- ◆ 表中外形尺寸对应位置见热风炉安装示意图。
- ◆ 炉膛下部内侧壁上的耐火层以炉篦处为起点，其高度：JRF4-4型为0.5米，可现场安装。
- ◆ JRF6型为链条炉排式燃烧装置。

Cautions:

- ◆ The environmental datum temperature standard takes $18 \pm 2^{\circ}\text{C}$. The thermal value for the coal takes 5000kcal/kg for the calculation.
- ◆ The hot air temperature in the table is decided according to the air output. The maximum hot air temperature for JRF4 spec hot air furnace can be up to more than 200°C . The maximum hot air temperature for JRF5 and JRF6 specs can be up to more than 300°C (for the special manufacturing furnace, the maximum temperature can be up to more than 500°C). The temperature can be adjusted according to the demand.
- ◆ Hot air furnace chimney height: for JRF4 spec, it is 3 - 5 m; and for JRF5 and JRF6 specs, they are 5 - 8 m.
- ◆ For the overall dimension corresponding positions in the above table, please see the diagram for installing the hot air furnace.
- ◆ The fire-resistant layer on the internal wall at the low section of the furnace hearth begins at the furnace wall. Its height: for JRF4-4, it is 0.5m; The fire-resistant layer can be installed on site.
- ◆ JRF6 spec is the chain-furnace arrangement-spec combustion device.



江苏省著名商标

RLY系列燃油热风炉

RLY Series Oil Combustion Hot Air Furnace



概述 Descriptions

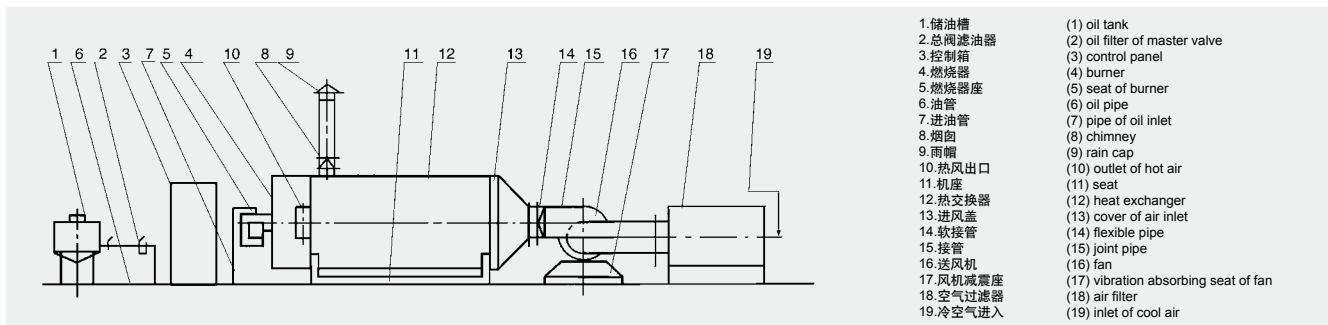
◆ 燃料通过燃烧器燃烧,产生高温燃气。并借助具有强化换热措施的热风炉将高温燃气的热量传导给被加热的空气,高温燃气经热量散发后温度降低至250°C后排到大气中。需加热的空气通过选配的鼓风机强送入热风炉、吸热后温度升值额定值从热风出口送出、当热风温度达到额定的上限温度时。燃烧器会自动停止燃烧或自动转为小火焰燃烧,当热风温度降低到额定的下限温度时,燃烧器又会重新点燃运行或转为大火燃烧,升温的速度可调进风阀来实现。

◆ 应用于金属表面涂装、制药、粮食、食品、木材加工、纺织印染、化工、汽车等行业。

◆ The fuel is burnt at firebox and the high temperature is produced. The quantity of heat will conduct to air to be heated through heat exchange device. Through heat exchange, the temperature of air is dropped to less than 250°C and the air will be discharged. The air to be heated is sent to hot air furnace through distribution blow fan. After absorbed heat to the rated value, the air will be sent from the vent of hot air. When the temperature of hot air reaches the rated upper limit, the burner can stop or turn to small fire automatically. When the temperature of hot air drops to the rated low limit, the burner can burn or turn to big fire automatically.

◆ The furnace is widely used in Metal surface covering or coating, Medicine, Grain processing, Foodstuff, Wood processing, Textile, Printing and Dyeing, Chemical industry, Automobile and so on.

安装示意图 Schematic of installation



技术参数 Technical parameters

项目item 型号spec	燃烧器型号 combustion device spec	燃油量kg/h oil combustion heat supply	供热量10 ⁴ kcal/h capacity	外形尺寸(L×W×H) mm overall dimensions	热风口(L×W) mm hot air opening	总重 kg total weight
RLY1	RIELLO.G3/DL3FS	1.3-1.6	1	1200x1200x1600	Ø200	460
RLY4	RIELLO.G10/DL10FS	5-6.5	4	1700x1300x1600	Ø250	850
RLY10	RIELLO.G20/DL23FS	13-16	10	2300x1568x1870	Ø300	2200
RLY20	PRESS.1G/DL34FS	26-32	20	2800x1568x1870	Ø400	2670
RLY30	RL50/DL55FT	39-48	30	3400x1568x1870	Ø450	3060
RLY40	RL70/DL75FT	52-64	40	4440x1768x2070	Ø550	5600
RLY60	RL100/DL100FT	78-96	60	5140x1868x2070	Ø600	8460
RLY100	PRESS.4G/DL120FT	130-140	100	6440x2480x2300	550x600	12800
RLY160	P300/DL250FT	200-300/270	160	7470x2920x3480	750x900	15780
RLY200	P300/DL300FT	260-300	200	8175x2920x3480	750x900	18500
RLY360	GI510	480-620	360	9300x2920x3480	...	21000



江苏省著名商标

MC系列脉冲布袋除尘器

MC Series Plus Dust Filter With Cloth Bag

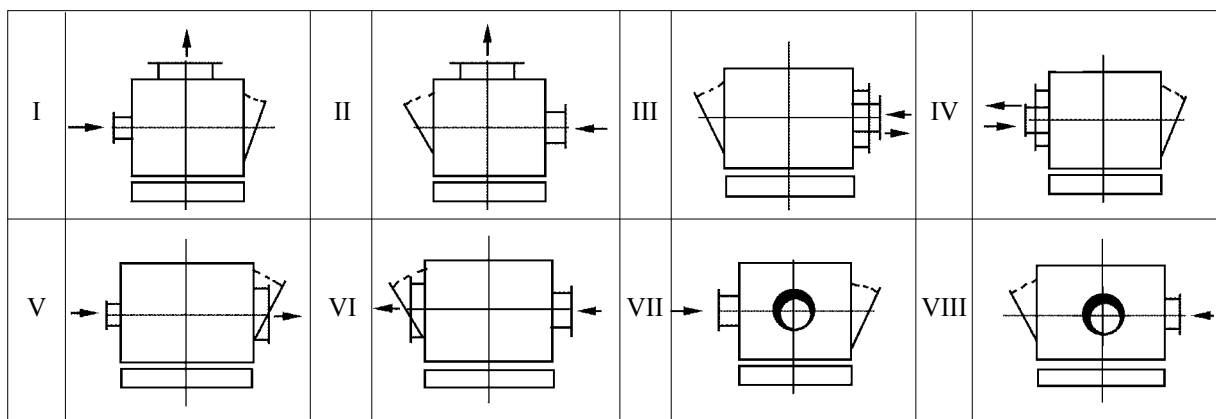
概述 Descriptions

◆ MC-II方型脉冲布袋除尘器是在MC-I型的基础上经改进修改而成的，它除了具有I型除尘效率高、处理风量大、性能稳定、操作维修方便等特点外，还具有比I型使用效果好、不易积粉、应用范围广等特点，广泛适用于粮食食品、饲料、冶金化工、建材、医药等行业的通风除尘和粉尘回收。

◆ On the basis of MC-I spec, the square spec pulse dust filter with cloth bag MC-II is the amended and improved one. In addition to the advantages that MC-I spec is high in the dust removing efficiency, big in the air capacity, stable in the performance, easy in operation and maintenance, MC-II has the better result than MC-I. Such as: it is not easy to build up the powder and its application is wide and so on. The device is widely used for the ventilation, dust removing and powder restoration in the grain, food, feed, metallurgical, chemical, building material, medical and other industries.



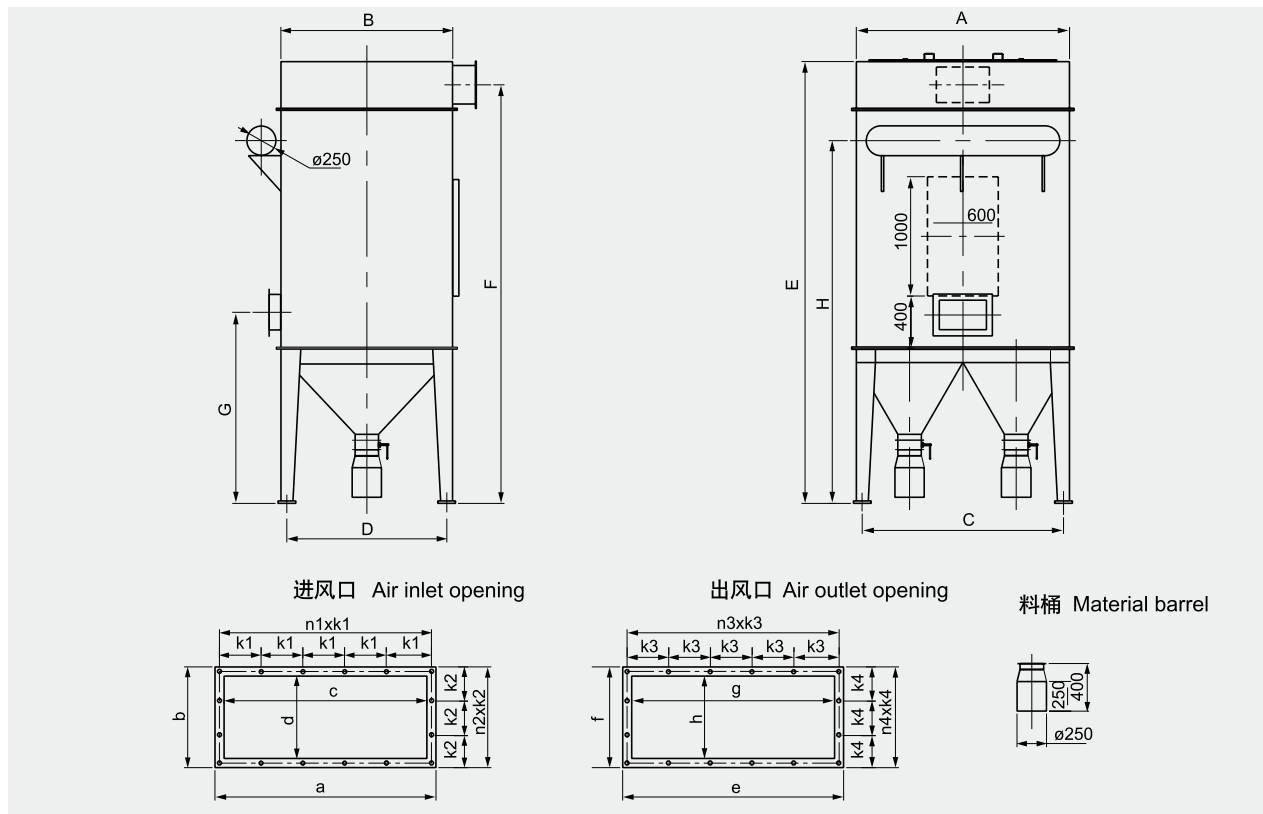
装配型式 Spec of installation



技术参数 Technical parameters

项目 item	型号 spec	MC24	MC36	MC48	MC60	MC72	MC84	MC96	MC120
过滤面积 filtering area (m ²)		18	27	36	45	54	63	72	90
滤袋数量 (只) filtering bag number (piece)		24	36	48	60	72	84	96	120
过滤风速 filtering air speed (L/m ² · s)		20~40	20~40	20~40	20~40	20~40	20~40	20~40	20~40
过滤风量 filtering air volume (m ³ /h)		1300~2600	1950~3900	2600~5200	3240~6480	3900~7800	4550~9100	5200~10500	6500~13000
最大外形尺寸 (mm)	长 L	1000	1400	1800	2200	2600	3000	3560	4360
	宽×高 W × H	1450 × 3700			1450 × 3850			1450 × 4100	
清灰装置 dust remover	脉冲阀数量 pulse valve number	4	6	8	10	12	14	16	20
	耗用压缩空气量 compressed air consumption (m ³)	0.07~0.30	0.11~0.40	0.15~0.50	0.18~0.60	0.22~0.60	0.25~0.90	0.29~0.90	0.37~0.90
	压缩空气压力 compressed air pressure (kg/cm ²)	5 ~ 7							

安装示意图 Schematic of installation



主要尺寸 Main Dimension

项目 item	型号 spec	MC24	MC36	MC48	MC60	MC72	MC84	MC96	MC120
A		1000	1400	1800	2200	2600	3000	3560	4360
B		1450							
C		780	1180	1600	2000	2400	1400+1400	1670+1670	2080+2080
D		1230							
E		3700			3850			4100	
F		3500			3600			3850	
G		1700			1750			2000	
H		3040			3090			3300	
a		476	576	876	876	1076	676	776	876
b		336	376						
c		400	500	800	800	1000	600x2	700x2	800x2
d		260	300			300x2			
e		576	576	876	876	1076	1276	1326	1436
f		276	376						
g		500	500	800	800	1000	1200	1250	1360
h		200							
K1 x n1		110x4	108x5	120x7	120x7	120x7+	110x4+	110x5	120x7
K1 x 2		=440	=540	=840	=840	100x2=1040	100x2=640	95x2=740	=840
K2 x n2		150x2=300	113.3x3=340						
K3 x n3		108x5	108x5	120x7	120x7	120x7+	124x10	120x9+	120x10+
K3 x 2		=540	=540	=840	=840	100x2=1040	=1240	105x2=1290	100x2=1400
K4 x n4		120x2=240	113.3x3=340						
排灰口蝶阀直径 diameter of dust discharge outlet flange		150	150	150	150	150	200	200	200



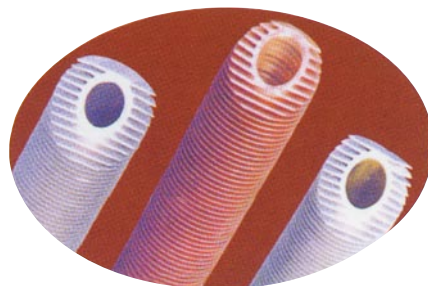
江苏省著名商标

SQR系列散热器

SQR Series Heat Exchanger

概述 Descriptions

- ◆ 我公司生产的螺旋翅片式空气热交换器，又名散热器、散热排管，是以冷热媒质进行冷却或加热空气的换热装置中的主要设备。
- ◆ 散热器用于热风采暖、空调、冷却、除湿、烘干等工程，适用于蒸汽或高温水可以加热空气，通入盐水或低温水可以冷却空气。它在工矿企业、轻工、造纸、化工、国防、纺织、电力、乳品、陶瓷、医院、剧场等空调系统中得到广泛的应用，其结构是由螺旋翅片管组成，采用螺旋翅片管制成系列产品，各种型号有大小不同规格。
- ◆ The spiral fin air heat exchanger produced by our company, is also named as heat radiator. It's the main equipment of cooling device with chill media, or the heating device for air heating
- ◆ Heat exchanger is applied in hot air warming, air conditioning, cooling, dehumidifying, drying and so on industries. It's used for to heat air with steam or hot water, or to cool air with salt water or chill water. It's widely used for air conditioning system in mineral industry, light industry, paper making, chemical, national defense, textile, power, dairy, ceramic, hospital and theater. It's constructed of spiral fin type tubes. The series product of spiral fin type tubes have different specification for different types.



订货须知 Attention to order

1、订货时，必须说明产品型号、名称，指明管长、管数及排数。

2、订货时，如有特殊规格和要求需另议。

1. Please provide specification, name, length and quantity of tube, and the rows when to order.

2. If there's any special requirements, or for special specification, please consult us.

◆ 可配套各种干燥设备使用，规格品种多样，使用材质有：铝合金、不锈钢、A3钢表面镀锌、钢铝复合、铜制、钢管绕铝片。另外，散热器可单独用于室内及库房的加热除湿，我公司可为用户设计制作。

◆ The heat exchanger can be used for various drying equipment. There are many specifications and type. The materials to be used are aluminium alloy, stainless steel, A3 steel coated with zinc copper and steel tube with Al-fin. In addition, it can be used for the heating and dehumidification indoors and warehouses. We can carry out the design and manufacturing for customers.

热源为热水蒸汽或导热油时翅片规格 Specification of fins when the heat source is hot water or thermal oil

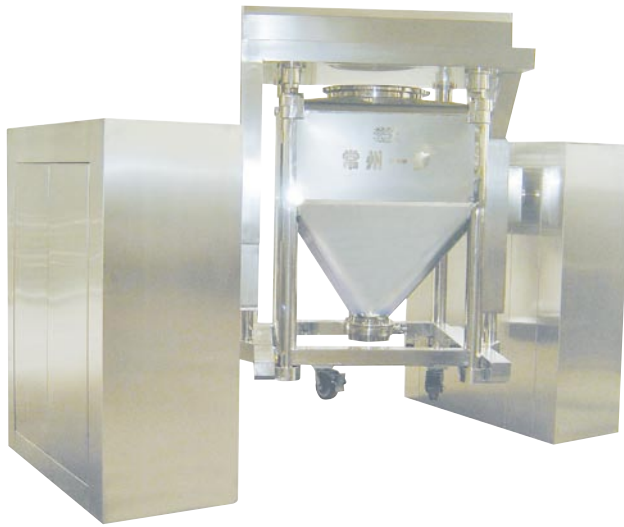
项目item	规格spec	不锈钢stainless steel	碳钢carbonaceous steel	铝Al
管径规格pipe diameter specification (mm)		Ø18x2	Ø19x2	—
翅片外径diameter of fin (mm)		Ø38	Ø39	—
翅片厚度thickness of fin (mm)		0.24	—	0.4
换热面积系数factor of heat exchanging area (m ² /m)		0.64		

热源为热空气时翅片管规格 Specification of fins when the heat source is hot air

管径规格pipe diameter specification (mm)	Ø63x3
翅片外径diameter of fin (mm)	Ø103
翅片厚度thickness of fin (mm)	0.5
换热面积系数factor of heat exchanging area (m ² /m)	1.5

HLD系列料斗混合机

HLD Series Hopper Mixing Machine



应用 Applications

◆ 料斗混合机是国际制药界使用最普遍的固体粉状药物的混合设备。它混合均匀度高，料斗可移动，极大地方便装料、混合、出料及清洗；能与前后工艺设备有机地衔接成流水线，有效地克服了由于反复转料造成的交叉污染与粉尘；该机能配不同规格的料斗，以满足大批量、多品种的混合要求。该机是药厂总混、批混的理想设备，同时在化工、食品、轻工等行业亦有广泛的用途。

◆ It's widely used as the mixing machine for solid medicine powder in pharmaceutical industry worldwide. The mixing uniformity is high, the material vessel is movable, these are very convenient for material loading, mixing, discharging and cleaning. It's easy to integrate with the upstream and downstream process, the problem of cross pollution and fly-dust caused by multi-material-transferring are solved. Various of material vessel might be equipped with this machine, so to meet the mixing requirement of large batch capacity, and multi-varieties.

原理 Principle

- ◆ 常州一步在广泛吸收，深入研究国内外多种机型的基础上，经多年的吸收、消化、比较、研究，结合国情精心研制出HLD系列料斗混合机。
- ◆ 料斗混合机的最大结构特点是：回转体（料斗）与回转轴线成30°夹角。随料斗回转上下翻动外，亦同时做沿斗壁方向切向运动，该二种运动的叠加，使每个质点运动轨迹复杂而各异，随时改变了所处位置，达到了很高的混合效果。
- ◆ Through years of studying, comparing and absorbing both domestic and foreign machines, we develop our own design of HLD series hopper mixing machine.
- ◆ The main structure feature of the mixer is: the mixing body (material vessel) and the rotating axis form a angle of 30°. When the material is rotating, the material also makes tangent movement along the wall of the vessel. The function of these to movements makes all points of material moves in complicated ways, changes their positions all the time, so to have very high mixing efficiency.

特点 Features

- 1、该机结构合理，采用双丝杆提升，电动回转，柔性轴联更适合我国国情。性能更稳定可靠；保养、维护更简单；杜绝了因泄漏造成的安全隐患，无后顾之忧。
- 2、该机使用了完全符合药厂工艺要求的程序操作系统；工艺参数设定系统，安全保护停机系统；自动精确对位系统；操作及自动记录打印系统，实现了全自动生产，操作十分简便。
- 3、该机采用质量优良的外购件，能有效保证整机的质量。
- 4、该机配有精制的完全符合GMP要求料斗，出料不残留，清洗方便。
- 5、我厂生产物料输送的系列产品，与料斗混合机一起可组成先进的工艺流程。

备注：用户如有特殊需要，可以定制。

1. The structure is reasonable, adopting double hoisting devices, motor rotation, flexible coupler. The performance is stable, the upkeep and maintenance and simpler, and there's no problem of leakage.
2. Adopt programmed control system, technical parameters setting system, machine stops system for safety, automatic accurate positioning system, operation, and automatic record printing system, that fully meet processing equipments of pharmaceutical companies. Fully automatic production is realized, and the operation is very simple.
3. To ensure the quality of the machine, we adopt outsourcing parts with high quality for this machine.
4. Equipped with fine manufactured hopper that fully meet the requirements of GMP, no residues of discharge, and it's easy for cleaning or washing.
5. We supply series product for material conveying. It forms advanced process together with the hopper mixing machine.

Remarks: If customer has any special requirements, please customize.

典型用户 Typical customers

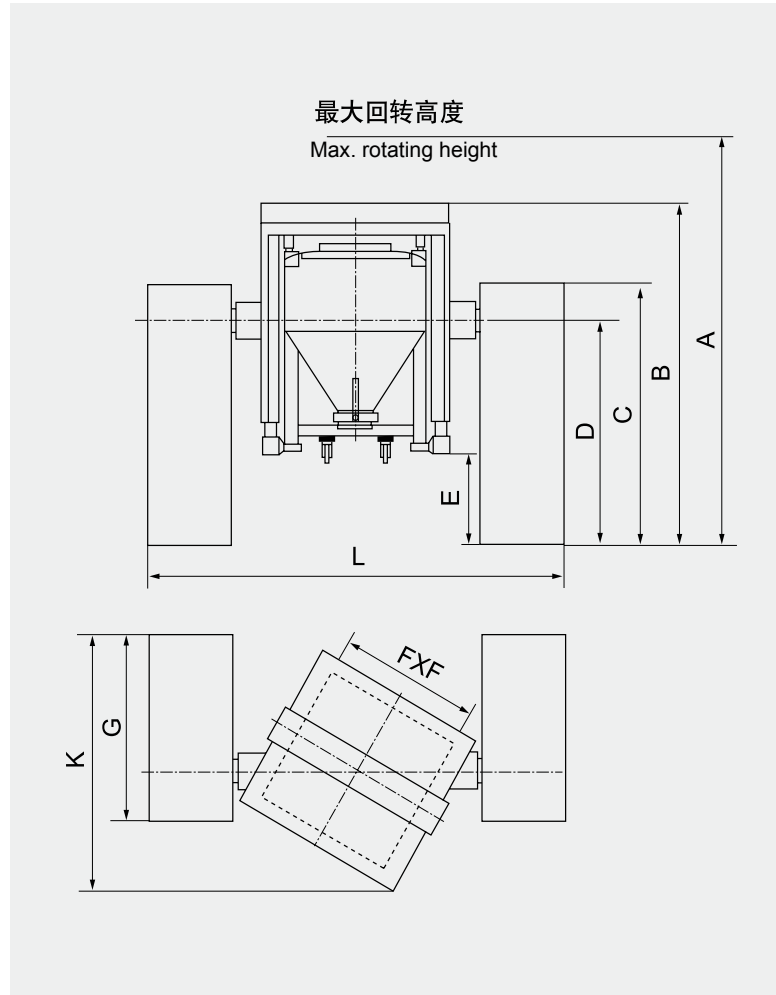
- ◆ 上海三维制药有限公司
- ◆ 通辽梅花生物科技有限公司
- ◆ 武汉天天好生物有限公司
- ◆ 出口孟加拉等国家
- ◆ Shanghai Sunve Pharmaceutical Co., Ltd.
- ◆ Tongliao Meihua Biotechnology Co., Ltd.
- ◆ Wuhan Tallyho Biological Product Co., Ltd.
- ◆ Export to Bangladesh and so on



江苏省著名商标

HLD系列料斗混合机

HLD Series Hopper Mixing Machine



技术参数 Technical parameters

型号spec	HLD-800	HLD-1000	HLD-1200	HLD-1500	HLD-2000
项目item					
A	2900	3100	3175	3350	3770
B	2550	2600	2700	2850	3300
C	1850	1900	1950	2100	2650
D	1600	1650	1700	1800	2050
E	700	700	700	700	700
F	1000	1200	1200	1200	1200
G	1500	1500	1500	1600	1600
L	3050	3300	3400	3550	3550
K	2000	2150	2150	2200	2200
功率power(kW)	7	7	7	9.7	9.7
净载荷net load(kg)	400	500	600	750	1000
重量weight(kg)	2500	2800	3000	3500	4000

SYH系列三维运动混合机

SYH Series Three Dimensions Mixer



特点 Features

- ◆ 装料的筒体在主动轴的带动下，作连续的平移、转动和翻滚等复合运动，促使物料沿着筒体作三向复合运动，从而实现多种物料的互相流动、扩散、积聚、掺杂，以达到均匀混合的目的。
- ◆ The barrel for charging the materials is driven by the driving shaft. The barrel body carries on the repeated level movement, rotation, turning and other complex movements so that the materials will carry out the three dimensions and complex movements along the barrel body so as to realize the various movements of the materials. Through disseminating, gathering, agglomerating and mixing to realize uniform mixing.

应用 Applications

- ◆ 本机混合筒多方向运动，物料无离心力作用，无比重偏析及分层、积聚现象，各组分可有悬殊的重量比，混合率高，是目前各种混合机中较理想产品。
- ◆ 筒体装料率大，最高可达90%(普通混合机仅为50%)，效率高，混合时间短。
- ◆ 筒体的各处为圆弧过渡，经过精密抛光处理。
- ◆ 用于制药、化工、食品、轻工、电子、机械、矿冶、国防工业以及各种科研单位的粉状、颗粒状物料的高均匀度混合。
- ◆ The mixing barrel of the machine moves in multi-direction. For the materials, there is no centrifugal function, without the specific gravity segregation and the layer division. For each of build-up phenomenon, there is the remarkable weight rate. The mixing rate is high. The machine is the desired one of various mixers at present.
- ◆ The material charge rate of barrel is big. Maximum rate can be up to 90%. (while normal mixer has only 40-50% of charge rate.). It is high in efficiency and short in mixing time.
- ◆ The barrel adopts arc shape connections and its well polished.
- ◆ The machine is used for mixing the powder state and grain state materials to achieve high uniformity in the pharmaceutical, chemical, food, light-industry, electronic, mechanical, metallurgical, nation defense industries and other science and technology institutes.

技术参数 Technical parameters

项目 item	型号 spec	SYH-5	SYH-15	SYH-50	SYH-100	SYH-200	SYH-400	SYH-600	SYH-800	SYH-1000	SYH-1200	SYH-1500	SYH-2000
料筒容积 volume of barrel (L)		5	15	50	100	200	400	600	800	1000	1200	1500	2000
最大装料容积 charge volume (L)		4.5	13.5	45	90	180	360	540	720	900	1080	1350	1800
最大装料重量 charge weight (kg)		1.5~2.7	4~8.1	15~27	30~54	50~108	100~216	150~324	200~432	250~540	300~648	400~810	500~1080
主轴转速 rotation speed of main shaft (r/min)		0~20	0~20	0~20	0~20	0~15	0~15	0~13	0~10	0~10	0~9	0~9	0~8
电机功率 motor power (kW)		0.25	0.37	1.1	1.5	2.2	4	5.5	7.5	11	11	15	18.5
外形尺寸 (LxWxH) overall dimensions (mm)		600x1000 x1000	800x1200 x1000	1150x1400 x1300	1250x1800 x1550	1450x2000 x1550	1650x2200 x1550	1850x2500 x1750	2100x2650 2000	2150x2800 x2100	2000x3000 x2260	2300x3200 x2500	2500x3600 x2800
重量 weight (kg)		100	200	300	800	1200	1200	1500	1700	1800	2000	2400	3000

备注：如物料比重超过 $0.6\text{g}/\text{cm}^3$ ，订货时需提出，以便按比重设计。

Remarks: Please point out if the density of material is over $0.6\text{g}/\text{cm}^3$. The calculation should be made accordingly.



江苏省著名商标

EYH系列二维运动混合机

EYH Series Two Dimensions Mixer

原理 Principle

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

◆ EYH Series Two dimensions mixer mainly consists of three big parts, rotating cylinder, swinging rack and frame. The rotating cylinder lies on the swinging rack, supported by four wheels and its axial fixation is done by two stop wheels. Two of the four wheels are driven by rotating system to make the cylinder rotate. The swinging rack is driven by a set of crankshaft swinging bar which is mounted on the frame and the swinging rack is supported on the frame.

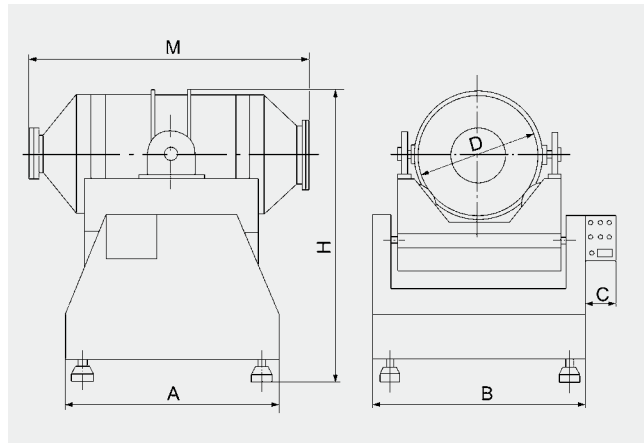
特点 Features

◆ EYH二维运动混合机的转筒可同时进行二个运动，一个为转筒的转动，另一个为转筒随摆动架的摆动。被混合物料在转筒内随转筒转动、翻转、混合的同时，又随转筒的摆动而发生左右来回的掺混运动，在这两个运动的共同作用下，物料在短时间内得到充分的混合。该机适合所有粉、粒状物料的混合。

◆ The rotating cylinder of EYH Two Dimensions Mixer can make two motions at the same time. One is the rotation of the cylinder and the other is swinging of the cylinder along the swinging rack. Materials to be mixed will rotate when the cylinder is rotating, and will be mixed from left to right and vice versa when the cylinder is swinging. As the result of these two motions, materials can be mixed fully in a short time. EYH Two Dimensions Mixer is suitable for mixing of all powder and granule materials.



外形示意图 Structure Diagram



技术参数 Technical parameters

项目 item 型号 spec	容积(L) gross volume	装料系数 feed rate	装料重量(kg) feed weight	外形尺寸 overall dimensions (mm)						功率 power(kW)	
				A	B	C	D	M	H	转动 rotation	摆动 sway
EYH100	100	0.5	30	860	900	200	400	1000	1500	1.1	0.75
EYH300	300	0.5	90	1000	1100	200	580	1400	1650	1.1	0.75
EYH600	600	0.5	180	1300	1250	240	720	1800	1850	1.5	1.1
EYH800	800	0.5	240	1400	1350	240	810	1970	2100	1.5	1.1
EYH1000	1000	0.5	300	1500	1390	240	850	2040	2180	2.2	1.5
EYH1500	1500	0.5	450	1800	1550	240	980	2340	2280	3	1.5
EYH2000	2000	0.5	600	2000	1670	240	1100	2540	2440	3	2.2
EYH2500	2500	0.5	750	2200	1850	240	1160	2760	2600	4	2.2
EYH3000	3000	0.5	900	2400	1910	280	1220	2960	2640	5	4
EYH5000	5000	0.5	1500	2700	2290	300	1440	3530	3000	7.5	5.5
EYH10000	10000	0.5	3000	3200	2700	360	1800	4240	4000	15	11
EYH12000	12000	0.5	3600	3400	2800	360	1910	4860	4200	15	11
EYH15000	15000	0.5	4500	3500	3000	360	2100	5000	4400	18.5	15

物料堆积比重按 $0.6g/cm^3$ 为计，如超出，订货时请标明 The bulk density of material is made based on $0.6g/cm^3$. Please point out if it's over.

SZH系列双锥混合机

SZH Series Conical Mixer

应用 Applications

- ◆ 本机适用于医药、化工、食品、建材等行业的粉状、粒状物料的混合。
- ◆ It is suitable for mixing the powder and grain state materials in pharmacy, chemical, food, building material and other industries.

特点 Features

- ◆ 本机将粉末或粒状物料通过真空输送或人工加料到双锥容器中，随着容量的不断旋转，物料在容器中进行复杂的撞击运动，达到均匀的混合。
- ◆ 本机节约能源、操作方便、劳动强度低、工作效率较高。
- ◆ Through the vacuum conveyor for the machine, send the powder or grain state materials into the double-taper container, or send the materials into the container manually.
- ◆ It's energy saving, easy for operation, the labor intensity is low, and the working efficiency is high.



规格 spec	项目item total volume	总容积(L)	工作容积(L)	投料量(kg)	投料转速(r/min)	动力(kW)	重量(kg)
50	50	25	15	25	0.55	500	
150	150	75	45	20	0.75	650	
300	300	150	90	20	1.1	820	
500	500	250	150	18	1.5	1250	
1000	1000	500	300	15	3	1800	
1500	1500	750	450	12	4	2100	
2000	2000	1000	600	12	5.5	2450	
3000	3000	1500	900	9	5.5	2980	
4000	4000	2000	1200	9	7.5	3300	
5000	5000	2500	1500	8	7.5	3880	
6000	6000	3000	1800	8	11	4550	
8000	8000	4000	2400	6	15	5200	
10000	10000	5000	3000	6	18.5	6000	

DSH系列双螺旋锥形混合机

DSH Series Double Screw Cone Mixer

概述 Descriptions

- ◆ 本机是一种新型、高效、高精度的混合设备，广泛适用于制药、化工、饲料等行业的各种粉状物料的混合。
- ◆ 该机自转均有一套电机及摆线针轮减速机来完成，采用两螺杆非对称搅拌，使物料搅拌范围大，混合速度快，对比重大的物料混合更为适合。
- ◆ This machine is a newly-designed mixer with high efficiency and precision ,it is widely used for mixing all kinds of powder state materials in pharmaceutical ,chemical ,feedstuff and so on.
- ◆ The Self-rotation of this machine is achieved by a set of motor and cycloid pinwheel reducer,non-Symmetry blending is achieved by two sets of screws as to let the large area mix and have fast mixing. It is especially used for mixing the materials with big difference of bulk density and mixing proportion .



项目item	型号spec	DSH0.3	DSH0.5	DSH1	DSH2	DSH4	DSH6	DSH10
全容积total volume	m ³	0.3	0.5	1	2	4	6	10
装载系数feeding rate		0.4~0.6						
混合物料粒度diameter of materials to be mixed	μm	40~3000						
工作条件operation condition		常温、常压、粉尘密封Ambient temperature, normal pressure, sealed to dust						
每次产量production capacity ρ =1g/cm ³	kg	180	300	600	1200	2400	3600	6000
功率power	kW	2.2	2.2	5.5	5.5	11	20.7	30.7
混合时间 time of mixing	min	4~10 (特殊物料由实验确定Special material to be determined by trial.)						
整机重量weight	kg	500	1000	1200	1500	2800	3500	4500



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FZH系列方锥混合机

FZH Series Square-Cone Mixer



概述 Descriptions

- ◆ 将物料装入方锥形密闭混合桶内，料斗对称的轴线与回转轴轴成一夹角，不同成份物料在密闭的料门中进行三维空间运动，产生强烈翻转和扩散作用，达到最佳的混合效果。整机设计新颖、结构紧凑、外形美观、混合均匀度达到99%，体积装料系数达0.8。
- ◆ 回转高度低、运转平稳、性能可靠、操作方便；方锥为料车形式，可实现物料的密闭输送，避免污染，符合GMP要求；桶体内外壁均经表面抛光，无死角、易出料、易清洗。

- ◆ Materials are charged into a closed square-cone mixing barrel, the symmetrical axes of hopper and the axes of rotating shaft form an included angle, materials with different constituents are strenuously rolling over in the closed hopper and producing high shear to achieve the best effect of mixing. The whole machine features novel design, compact structure, and good appearance, the evenness of mixing reaches 99%, and the volume charge coefficient reaches 0.8.
- ◆ Low rotating height, smooth running, reliable performance, easy operation. Highly polished inner and outer surfaces of the barrel, no dead corner, easy to discharge materials, easy to clear, no cross contamination. Conforming to the requirement of GMP.

技术参数 Technical parameters

项目item	型号spec	FZH-300	FZH-500	FZH-1000	FZH-1500	FZH-2000	FZH-3000
全容积 total volume (L)		300	500	1000	1500	2000	3000
最大装料容积 charge volume (L)		210	350	700	1050	1400	2100
最大装料重量 charge weight (kg)		150	250	500	750	1000	1500
主轴转速 rotation speed of main shaft (r/min)		14	13	12	10	8	6
电机功率 motor power (kW)		1.5	2.2	4	5.5	7.5	11
加料口直径 inlet diameter (mm)		380	380	560	560	560	560
出料口直径 outlet diameter (mm)		200	200	200	200	200	200
外形尺寸(mm) overall dimensions	(L)	1850	2200	2800	2915	3160	3800
	(W)	1280	1550	2000	2300	2500	3200
	(H)	1970	2260	2850	2950	3200	3850
整机重量 weight(kg)		500	700	1000	1500	2000	3000

CH系列槽形混合机

CH Series Guttered Mixer



概述 Descriptions

- ◆ 用于混合粉状或湿性物料，使不同比例主辅料混合均匀。本机与物料接触处均采用不锈钢制造，桨叶与桶身间隙小，混合无死角，搅拌轴两端设有密封装置，能防止物料外泻，广泛用于制药、化工、食品等行业。
- ◆ CH type mixer is widely used for mixing powder or wet raw materials and can make the main and auxiliary raw materials with different proportion uniform. The places where contact the raw materials are made of stainless steel. The gap between blades is small and there is no dead corner. At the ends of stirring shaft there are seal devices. It can prevent from the raw material leakage. It is widely used in pharmaceutical, chemical, foodstuff and so on industries.

技术参数 Technical parameters

容量 volume (L)	100	150	200	400
电机功率 power (kW)	2.2	3	4	5.5
搅拌转速 speed (r/min)	24	24	24	24
倒料角度 tilt angle (°)	105	105	105	105
重量 weight (kg)	350	500	650	1200
外形尺寸 overall dimensions(mm)	880x880x1350	1600x1600x1100	1800x700x1200	2000x820x1460

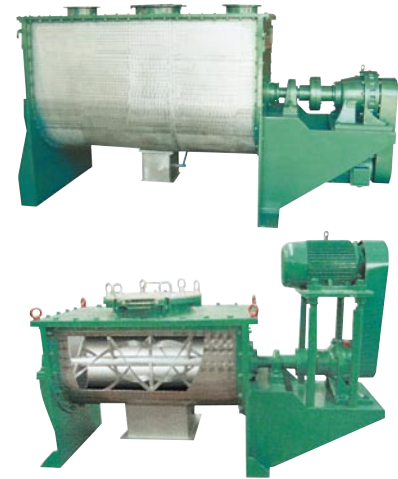
WLDH系列卧式螺带混合机

WLDH Series Horizontal Ribbon Mixer

概述 Descriptions

◆ 该机型由容器、螺旋搅拌叶片和传动部件组成；螺旋叶片一般做成双层或三层，外层螺旋将物料从两侧向中央汇集，内层螺旋将物料从中央两侧输送，形成对流混合。一般用于粘性或有凝聚性的粉粒体的混合以及粉粒体中添加液体及糊状物料的混合，由于该机装载系数大、设备占地面积小及粘性物料清洗困难的特点，适用于产量大、不经常更换品种的场所混合。

◆ This machine is composed of container, screw stirring paddles and transitional parts; the screw paddle are generally made into 1 layer or 3 layers, the outer screw converge is the material to the centre from two sides, and the inner layer of screw conveys the material to the two sides from the centre, so as to from convection mixing. It is generally used in the mixing of viscous or adhesive powder material, or the mixing of powder which needs to add liquid, and paste material. The machine is characterized by big coefficient of loading, small occupied area and difficult to clean viscous material. So it is suitable for the mixing case, where the output is large and there is no need of displacing material variety frequently.



技术参数 Technical parameters

项目item	型号spec	WLDH-0.1	WLDH-0.3	WLDH-0.5	WLDH-1	WLDH-1.5	WLDH-2	WLDH-3	WLDH-4	WLDH-6	WLDH-8	WLDH-10
一次混合mixed amount/batch (kg)		30~50	100~150	200~300	400~600	600~900	800~1200	1200~1800	1600~2400	2400~3600	3200~4800	4000~6000
电机功率power (kW)		1.5-4	3-5.5	4-11	7.5-15	11-18.5	15-22	18.5-30	22-37	37-55	37-55	45-75
设备重量weight (kg)		300	500	900	1400	1900	2500	3100	3600	5300	6800	7800

WZ系列无重力混合机

WZ Series Zero-Gravity Mixer

概述 Descriptions

◆ 本系列混合机以强烈、高效混合为特点，卧式筒体内两根搅拌轴等速反向旋转，轴上特殊布置的桨叶确保物料径向、环向、轴向三向运动、形成复合循环，在极短的时间内达到均匀混合。筒盖上布置雾化装置可实现固液混合。主要应用于化学药品、洗涤剂、涂料、树脂、玻璃硅、颜料、农药、化肥、饲料、饲料添加剂、小麦粉、奶粉、香料、微量成分、咖啡、味精、食盐、砷添加剂、塑料及各种浆料、粉料的干燥与混合。

◆ This series machine takes a strong and high effective mixing as its features the two mixing axles rotate reversely at an identical revolution in the horizontal drum body. The paddles, specially distributed on the axle ensure that the material move radically, circularly, and axially, so as to form a compound motion, and in an extremely short time, the material is mixed evenly. The atomizing device can be distributed on the cylinder cover to realize the solid-liquid mixing. It is suitable for the drying and mixing of the following materials: chemicals, detergent, fertilizer, feedstuff, feedstuff additive wheat flour, milk power, perfume, micro ingredient, coffee, gourmet power, salt, plastic and all kinds of pulp, power material



技术参数 Technical parameters

项目item	型号spec	WZ-0.05	WZ-0.1	WZ-0.3	WZ-0.5	WZ-1	WZ-2	WZ-3	WZ-4	WZ-6
一次混合mixed amount/batch	kg	24~30	40~60	120~180	200~300	400~600	800~1200	1200~1800	1600~2400	2400~3600
装机功率 power	kW	2.2	3	4~5.5	5.5~7.5	7.5~11	11~15	18.5~22	22~30	30~37
设备重量 weight	kg	250	360	750	880	2100	2740	3800	5100	6200



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ZKH(V)系列混合机

ZKH(V) Series Mixer



技术参数 Technical parameters

规格 spec	项目 item	总容积(L) total volume	工作容积(L) working volume	投料量(kg) working capacity	投料转速(r/min) rotating speed	动力(kW) power	重量(kg) weight
50		50	25	15	25	0.55	500
150		150	75	45	20	0.75	650
300		300	150	90	20	1.1	820
500		500	250	150	18	1.5	1250
1000		1000	500	300	15	3	1800
1500		1500	750	450	12	4	2100
2000		2000	1000	600	12	5.5	2450
3000		3000	1500	900	9	5.5	2980
4000		4000	2000	1200	9	7.5	3300
5000		5000	2500	1500	8	7.5	3880
6000		6000	3000	1800	8	11	4550
8000		8000	4000	2400	6	15	5200
10000		10000	5000	3000	6	18.5	6000

注：物料堆积比重按0.6g/cm³为计，如超出，订货时请标明。Note: The bulk density of material is made based on 0.6g/cm³. Please point out if it's over.

KZL系列快速整粒(粉碎)机

KZL Series High Speed Grinding Granulator



技术参数 Technical parameters

项目 item	型号 spec	100	180	300
定子直径 stator diameter	mm	100	180	300
定子长度 stator length	mm	98	178	298
生产能力 capacity	kg/h	20~150	100~1500	200~2500
功率 power	kW	1.1	1.5	3
转速 speed	r/min	180~1400	175~1400	200~1400

原理 Principle

- ◆ 工作时发热小，粉尘少
- ◆ 定子筛网由不锈钢板加工而成，不易损坏
- ◆ 粉碎刀与筛网间隙可调
- ◆ 可处理粘性、树胶状、热和湿润物料
- ◆ There is less heat and dust in work.
- ◆ The fixed screen is made of stainless steel and it is easy to damage.
- ◆ It can process adhesive, glue, thermal and wet raw materials.

应用 Applications

- ◆ 干式、湿式颗粒均匀化、整粒
- ◆ 团块物料的粉碎、整粒
- ◆ 湿料制粒
- ◆ 热敏性物料粉碎
- ◆ Make dry or wet granule uniform.
- ◆ Crush and granulate blocks.
- ◆ Make granule from wet material.
- ◆ Crushing and granulating of heat sensitivity material.

JZL系列挤压造粒机

JZL Series Extruding Granulating Machine

应用 Applications

- ◆ 本机是制药、食品、冲剂、化工、固体饮料等行业的理想机械。
- ◆ The machine is the desired machinery in the pharmaceutical, food, instant soluble powder, chemical, solid drinks and other industries.

原理 Principle

- ◆ 将搅拌好的物料制成所需颗粒，对粘性较高的物料尤为适合。该机制粒成型率高、颗粒美观、自动出料、避免了人工出料造成的颗粒破损，适合与流水作业操作。
- ◆ 本机结构合理，外形美观。
- ◆ The machine makes the materials mixed into the desired grains. It is especially suitable for the materials that have high viscosity. It is high in the grain making and shaping rate, perfect in the grain exterior appearance. Its automatic material discharge will avoid the grain damage caused by manual material discharge.
- ◆ The machine is suitable for the flow production. The machine's structure is reasonable and its external appearance is beautiful.



技术参数 Technical parameters

项目item 型号spec	碾刀尺寸(mm) extrusion knife size	制粒直径(mm) granulating diameter	重量(kg) weight	电机功率(kW) motor power	生产能力(kg/h) productivity	外形尺寸(mm) overall dimensions
JZL-250	250	1~3	350	3	80~200	700x540x1400
JZL-300	300	1~3	480	5.5	100~300	800x650x1400

YK系列摇摆式颗粒机

YK Series Swaying Granulator

概述 Descriptions

- ◆ 本机适用于制药、食品、化工、固体饮料等行业的制粒，将搅拌好的物料制成所需尺寸的颗粒，或将结块状物料打成小颗粒。
- ◆ The machine is applicable for pharmaceutical, foodstuff, chemical, solid drink and so on industries. It can make well stirred raw materials become granules of required size or crush the blocked raw materials into small granules.

技术参数 Technical parameters

项目item 型号spec	YK160	YK320
生产能力 capacity (kg/h)	50-200	50-400
电机功率 power (kW)	2.2	7.5
滚筒转速 speed (r/min)	65	65
摇摆角度 sway angle(°)	360	360
滚筒直径 diameter (mm)	Ø160	Ø320
重量 weight (kg)	450	750
外形尺寸 overall dimensions(mm)	1000x800x1300	1500x1200x1500

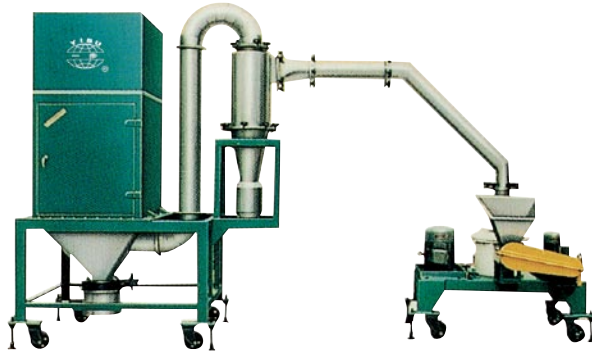




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WFJ系列微粉碎机

WFJ Series Micro-Particle Grinder



概述 Descriptions

◆ 本机由主机、辅机、电控箱三部分组成,具有风选式,无筛网,粒度均匀等多种性能,生产过程连续进行,适用于化工、制药、食品等行业脆性物料的粉碎。

◆ The equipment consists of main machine, assistant machine and control cabinet. The process of produce is continuous. The machine is extensively used in chemical, pharmaceutical, food industries for pulverizing dry brittle materials.

技术参数 Technical parameters

项目item	型号spec	WFJ-15	WFJ-18	WFJ-32
生产能力production capacity	kg	10~200	20~450	60~800
进料粒度 inlet material diameter	mm	<10	<10	<15
出料粒度outlet material diameter	mesh	80~320	80~450	80~450
总功率power	kW	13.5	17.5	46
主转速main rotating speed	r/min	3800~6000	3800~6000	3800~4000
外形尺寸overall dimensions(LxWxH)	mm	4200x1200x2700	4700x1200x2900	9000x1500x3800
重量weight	kg	850	980	1500

高效粉碎机(组)

High Effect Grinding Machine(set)



概述 Descriptions

◆ 本机(组)适用于化工、医药、食品、农药等行业脆性物料的粉碎,用途极为广泛。

◆ The machine(set) is extensively used in chemical, pharmaceutical, food and pesticide industries for grinding dry brittle materials.

技术参数 Technical parameters

项目item	型号spec	20B/20B机组Set	30B/30B机组Set	40B/40B机组Set	60B/60B机组Set
生产能力 productive capacity	kg/h	60-150	100-300	160-800	500-1500
主轴转速 speed of main shaft	r/min	4500	3800	3400	2800
进料粒度 feeding granule size	mm	6	10	12	15
粉碎细度 fineness of pulverization	mesh	60-150	60-120	60-120	60-120
粉碎电机功率 grinding motor power	kW	4	5.5	11	15
吸尘风机功率 fan power	kW	1.5	1.5	1.5	2.2
重量 weight	kg	250	320	550	680
外形尺寸 overall dimensions (LxWxH)	mm	550×600×1250	600×700×1450	800×900×1550	1000×900×1680
外形尺寸(机组)overall dimension (set)(LxWxH)	mm	1100×600×1650	1200×650×1650	1350×700×1700	1550×1000×1750

FS系列方形振荡筛

FS Series Square Vibration Screen

概述 Descriptions

◆ 该机是由进出口筛网筛箱、振动源及减震器三大部件构成。机座与筛箱连接有4-6组软橡胶减震器上下固定，开机即产生离心力，振幅有偏心块、减震器对应控制，从而达到需要的最佳工作性能，使物料有一个抛震和松动的过筛过程。广泛适用于制药、食品、化工、冶金、电子等行业筛选的理想设备。

◆ The Machine consists of screen box at material inlet and outlet, vibrator and shock absorber. There are 4-6 sets of flexible rubber shock absorber connected between base and screen box in up-down order. Centrifugal force is generated upon starting the machine. Control shock absorber against amplitude eccentric device correspondingly for best performance and material screening process in throwing vibration and loose. It is the ideal choice for pharmaceutical, food, chemical, metallurgy and electronic industries.



技术参数 Technical parameters

项目item 型号spec	生产能力 capacity (kg/h)	过筛目数 meshes (mesh)	电机功率 power (kW/h)	振动频率 Vibration frequency (r/min)	激振力 Vibration power (kN)	上出口高度 the height of upper exit(mm)	中出口高度 the height of mid exit(mm)	下出口高度 the height of lower exit(mm)	外形尺寸 overall dimension (LxWxH)(mm)	净重 weight (kg)
FS-0.5M2-X	450	2-150	0.2x2	1400	0-2.5x2	800	680	500	1300x770x1060	220
FS-0.7M2-X	650	2-150	0.2x2	1400	0-2.5x2	850	750	530	1700x680x1100	280
FS-0.8M2-X	750	2-150	0.2x2	1400	0-2.5x2	850	750	530	1600x830x1150	320
FS-1.2M2-X	1100	2-150	0.4x2	960	0-5x2	880	760	520	1900x980x1220	450

ZS系列振荡筛

ZS Series Vibration Screen

概述 Descriptions

◆ 本机由料斗、振荡室、联轴器、电机组成。振荡室内有偏心轮、橡胶软管、主轴、轴承等组成。可调节的偏心重锤经马达驱动传达到主轴中心线，在不平衡的状态下产生离心力，使物料强度改变在筛内形成轨道旋涡。重锤调节器的振幅大小可根据不同物料和筛网进行调节。

◆ 整机结构紧密、体积小、不扬尘、噪音低、质量高、能耗低、移动维修方便。

◆ The machine consist of hopper, vibrating chamber, coupler and motor. There are eccentric wheel, rubber software, main shaft and shaft-bearing in the vibration chamber. The adjustable eccentric hammer is driven to the center line through the motor, cause centrifugal force under the state of unbalance and so that the materials form regular eddy. The amplitude of the hammer may be adjusted according to the property of material and the mesh screen.

◆ It is compact in structure, small in volume, tightens dust free, noise-free, high output, low in energy consumption, easy to move and easy to maintain.

技术参数 Technical parameters

项目item 型号spec	ZS-350	ZS-515	ZS-650	ZS-800	ZS-1000	ZS-1500
生产能力capacity (kg)	40-500	60-600	80-800	150-1200	300-2000	350-2800
过筛目数 meshes	12-200	12-200	12-200	12-200	5-325	5-325
电机功率 power (kW)	0.55	0.55	0.55	0.75	1.5	2.2
主轴转速speed (r/min)	1380	1370	1370	1500	1500	1500
外形尺寸overall dimensions(mm)	540x540x1060	710x710x1290	880x880x1350	1000x1000x1400	1100x1100x1200	1600x1600x1200
净重weight (kg)	100	180	250	300	350	400

