



早餐谷物食品生产线
SYSTEMS FOR
BREAKFAST CEREAL PRODUCTION

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Company Introduction

公司简介



HESHAN MACHINERY CO.,LD,specializes in the research and manufacture of food machinery.Since the establishment in 1998,we've been working hard to revolutionise the automatic noodle production.With the ccoperration of SIMENS,we had taken the lead in designing an fully-automatic operation system for the instant noodle production line,which leads the industry into new age.

Competitive with high technology,HESHAN is developing very fast.Since 2004 we've invested up to US\$8,500,000,00 in our new factory.Our favtory has 160 employees,covers 286,000,00 sq.feet including two modern factory workshops covering 88,000,00 sq.feet and one modern office covering 9,850,00 sq.feet.We not only provide all kinds of high quality food machinery under the supervision and management of ISO2000,but also provides thoughtful and considerate services including pre-sales,ongoing-sales service and after-sales services.We've gained our reputation with more and more appreciation from customers,and we've been looking forward to sharing more joy with our customers.

河山（中国）公司是专业从事食品机械的研究和制造企业，自1998年成立之日起，创新的信念就伴随着自动化方便面生产行业不断发展，河山率先与西门子合作，开发了方便面生产线自动化控制系统，从而将该行业记住引领到新纪元。

河山随着具有高科技和富有竞争力的产品深入市场而不断壮大，2004年起至今河山（湛江）累计投资US\$8,500,000,00，让新厂区更加引人注目，286,000,00平方英尺的全新厂区内屹立着两幢88,000,00平方英尺的现代化生产车间和9,850,00平方英尺的富有时代感办公楼。河山160名高素质员工严格施行ISO2000的管理模式,不仅为全球客户提供高质量的各类食品机械设备，更能热诚为每位客商提供尽善尽美的售前、售中和售后全方位的优质服务。河山因为有众多客户的赏识而出类拔萃，河山也时刻期待着和客户分享更多的喜悦。



A COMPREHENSIVE CAPABILITY IN BREAKFAST CEREAL PRODUCTION 早餐谷物食品生产线的综合能力

HESHAN combines a high-class unit machines with the process knowledge and engineering expertise to create different kinds of breakfast cereal product.

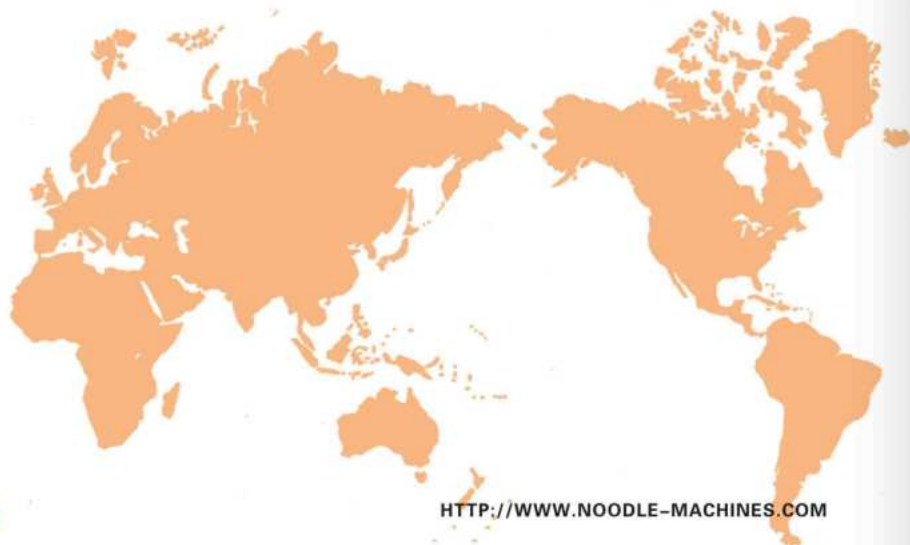
河山公司结合专业的技术知识和高品质单机组设计出早餐谷物生产线可生产出多样化的早餐谷物产品。

Heshan can offer complete systems for the production of both traditional and extruded breakfast cereals.

河山公司提供整套的早餐谷物生产线既可生产传统的又可生产挤压式早餐谷物。

Established businesses work with Heshan to add interest and variety to product ranges and install additional capacity.

与河山建议业务合作共同致力于产品多样性研发及创造附加产能。



LEADERS IN INNOVATION 创新

With years of researching and studying the corn flakes machine technology and invest millions in the R&D of the production technology of the corn flakes, Heshan has successfully developed the high speed double rolling corn flakes machines and a serial of production lines that are compactible to the lines used by the major producers after we produced a high speed twin-screw extruder of which the capacity is as high as 1000 kg/h.

河山公司经过多年对国外玉米片生产技术和设备的研究，投入数百万元进行玉米片生产工艺的研究和生产设备的开发，继开发生产出产量达到1000KG/H的高扭矩双螺杆挤压机后，又成功开发出了对辊式高速玉米片压片机。



COATED CORN FLAKES
涂层玉米片



EXTRUDED CORNFLAKES
挤出玉米片



MULTI GRAIN(RICE/WHEAT)FLAKES
多谷(大米/小麦)片



ALMOND FLAKE
杏仁片



WHEAT RINGS
麦圈



CHOCALATE COATED EXPANDED RICE
巧克力涂层膨化米



WHEAT BRAN STICKS
麦麸条



COCOA BALLS
可可球



OAT BAKED FILLED PILLOWS
燕麦烘焙夹产品



CREAM FILLED PILLOWS
奶油夹心

EQUIPMENT OVERVIEW

生产线工艺流程图



TECHNOLOGY PROCESS

工艺流程图



SPECIFICATION 参数:

Model型号	BC-150	BC-300	CFM-600	CFM-1200
Capacity 产量	150 KG/H	300 KG/H	600 KG/H	1200 KG/H
Power 功率	150 KW	220 KW	250 KW	380 KW
Steam Consumption 蒸汽量	300KG/H	400KG/H	600KG/H	800KG/H
Operators 操作人员	4	5	6	7
Overall Dimension 外形尺寸	LXWXH(M) 35X10X6	LXWXH(M) 40X10X6	LXWXH(M) 45X12X6	LXWXH(M) 45X20X6

MASTER TWIN-SCREW EXTRUDER 双螺杆挤压机



The twin-screw configuration with blocks structure in high torque capacity, high rotating speed and high output. Thoughtful design ensures that cleaning, changeover and maintenance costs are kept to a minimum while clear and intuitive controls help operators to maximize efficiency.

双螺杆挤压机配有积木式螺杆组合结构，高效的大扭矩设计，高转速，高产量。体贴的设计确保清洗，更换及维护成本降到最低，同时，清晰直观的设计帮助操作者发挥最高的效率。

SPECIFICATION 参数：

Model型号	HSE-50	HSE-72	HSE-92	HSE-133
Extruder dia (MM) 螺杆直径	50.5	71.7	92.4	133
Slot Depth (MM) 槽深	9	12.5	15.5	23.5
Length/D 长径比	32-52	32-52	32-52	32-48
Power (KW) 电机功率	45	110	250	480
Capacity (KG/H) 生产能力	150	300	600	1200



DESIGN FEATURES 主要特点：

- The extruder is cordwood structure, it can be flexible assembled and disassemble
螺杆是积木式组合结构，可根据生产需要任意组合使用；
- It is circulation layer design for the middle layer of the tank, it can be heating and cooling circularly
筒体中间层是加热、冷却介质循环层；
- The tank is made of anti-corrosion and wear-resistance material. Each model can be assembled and extended the length if required
筒体采用防腐蚀及耐磨损的材料制造，各种机型的筒体可根据需要组合和加长；
- Unique design of the cutter, accurate positioning, stable cutting and high precision cutting
独特切制机设计，定位精确、切割稳定、切割精度高；
- PLC automatic control system, easy operation
PLC自动化控制系统，操作简便



MASTER TWIN-SCREW EXTRUDER 双螺杆挤压机



** SCREWS 螺杆:

- * Segmented agitator easily configured for different products
- * Splined shafts have high torque capacity for versatility and reliability
- * Low wear materials



** CUTTER 切割系统:

- * Unique cutter with inclined side changes moving type, high precision and easy maintenance. 独特的斜侧推移式切割机设计，维护简单，精确度高。



** GERA BOX 齿轮箱:

- * High torque capacity – improves reliability and increases range of products that can be made. 高效的大扭矩设计，提高安全性和
- * Reliable and durable 安全性高，耐用
- * Low noise 低噪音



** CONTROL SYSTEM 控制系统:

- * Touch-screen visual intelligent control system 配有高智能化的触摸屏，变速调速，挤压程序完全自动化
- * All of the production data can be accurately recorded and they are traceable 直观明了的记录了所有生产数据，使生产完全具备追溯性

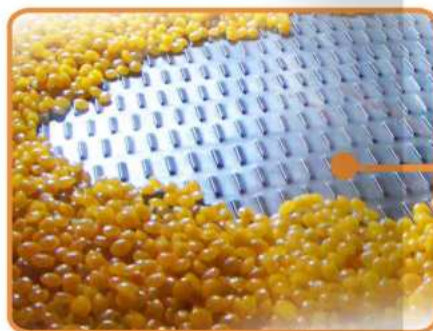
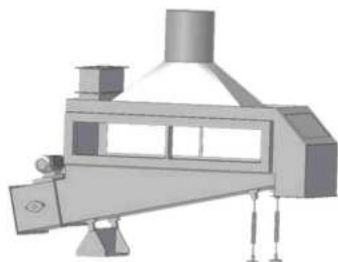


PULSE DRYER 脉动干燥机



DESIGN FEATURES 主要特点:

- It can be flexible adjusted the flow air and pulse frequency, to ensure the dried material can be flew evenly
空气流动和脉冲频率均可灵活调节, 保证被干燥物料均衡流动;
- The material would be leap itself by enlarging the contact area between the material and hot air.
物料在风力作用下自身跳跃, 从而增加了物料与热风的接触面, 增强了干燥效果;
- It can propagate heat rapidly and shorten the drying and cooling time
传热快速, 缩短干燥和冷却时间;
- It can economize the energy, the consumption can be saved about 30-50%
节约能源, 能耗比普通流化床少 30-50%;
- It can ensure that each is flaked individually
保持颗粒个体, 颗粒分离, 无粘连;
- It can reduce the pollutants and the cleaning time
减少污染物的堆积和清洗时间



SPECIFICATION 参数:

Model 型号	加热方式 Heating Way	加热面积 Heating Area (m2)	电机 Power (kw)	工作温度 Working Temperature (°C)	产量 Capacity kg/h
HPD-S150	STEAM	1.5	0.55	60~180	300
HPD-S250	STEAM	2.5	0.75	60~180	600
HPD-S360	STEAM	3.5	1.1	60~180	1200
HPD-L150	LPG(GAS)	1.5	0.55	60~180	300
HPD-L250	LPG(GAS)	2.5	0.75	60~180	600
HPD-L360	LPG(GAS)	3.5	1.1	60~180	1200

FLAKING ROLLER 压片机



Heshan's Flaking Roll delivers consistent high quality flakes. Process conditions are accurately controlled for optimum flaking performance, while increased hygiene levels and easy access to all machine parts contribute to reduced production downtime.

压片机用于生产高质量熟谷物压片。各部分生产都经精准控制以达优质出片的目的，同时，良好的卫生和设各部分易于操作&检修的特点，亦使得故障率大大降低。

DESIGN FEATURES 主要特点:

● Accurate roll surface temperature control

稳定、精确的辊面温度控制

- ✱ A constant roll surface temperature is maintained to ensure optimum flake consistency
维持恒定的辊面温度，以确保玉米片的最佳一致性
- ✱ Contra flow water cooling system distributes cooling evenly over roll surface
逆流水冷系统使得辊面冷却均匀
- ✱ Water chambers close to surface for maximum cooling effect
水冷装置离（辊）面近，达到最佳冷却效果
- ✱ Closed loop system controls water temperature to within a 0.2 °C tolerance band
闭环系统控制水温，差值不超过0.2℃
- ✱ Water temperature can be set as required by operator
温度要求可依操作员设定值。

● Precise Gap Control

精准的辊隙控制

- ✱ Simple adjustment achieved via operator interface on control panel
简单调节通过控制面板上的人机界面实现
- ✱ PLC automatically avoids rolls touching during breaks in product feed
进料中断时，PLC系统自动调节恢复，不需手动操作压辊。

● Regulated infeed of cooked grains ensures that each is flaked individually

配有调速辊式进料器确保颗颗分离

● It is hydraulic gap control and electronic surveillance.

配液压、电子监视按钮

● Roller surface is nicochrome alloy steel with high abrasion resistance, anti-cracking, and Anti-stripping. The hardness is HS74 78

镍铬合金外层压辊，硬度HS74-78，具有良好的耐磨性、抗热性、抗剥落性能



FLAKING ROLLER 压片机

SPECIFICATION 参数:

Model 型号	Power 功率	Roller Size (Φ*L) 压辊尺寸	Gap Force 辊缝力	Safe Gap 安全辊隙	Circumferential Speed 圆周速度	Hydraulic pressure 液压压力
HFR-300*400	40 KW	300*400	640KN	0.2MM	3.8-6.5 m/sec	6.3Mpa
HFR-400*600	50 KW	400*600	640KN	0.2MM	3.8-6.5 m/sec	6.3Mpa
HFR-600*800	60KW	600*800	800KN	0.2MM	3.8-6.5 m/sec	6.3Mpa
HFR-800*1000	70KW	800*1000	800KN	0.2MM	3.8-6.5 m/sec	6.3Mpa





DESIGN FEATURES 主要特点:

- **Energy efficient**
It is hot-air recycle system to save energy.
热风循环使用, 节约能源;
- **Consistently high productivity**
 - ✱ Fluidized bed gives gentle, even toasting over entire surface of product
保证产品受热均匀
 - ✱ PLC control provides repeatable process settings, also can hydrofuge
PLC自动智能控制温度, 让产品按需受热及排湿
 - ✱ Two zones with independent setting of temperature and airflow rates allow process conditions to be tailored to product
温度及气流率分开单独设定, 可生产不同产品
- **The flaker is crispy and good taste after baking at 280°C high temperature**
280°C高温烘焙, 玉米片酥脆可口
- **Optional choice for direct heating or indirect heating.**
直接加热或间接加热随意选择.



FLUID BED TOASTER 流化床烘炉

SPECIFICATION 参数:

TYPICAL	OUTPUT (Cornflakes)	DIMENSION		
		L	W	H
0.4M WIDE	400KG/H	7800MM	1500MM	3300MM
0.6M WIDE	700KG/H	8800MM	1750MM	3500MM
1.0M WIDE	1250KG/H	8800MM	2150MM	3600MM
1.3M WIDE	1500KG/H	8800MM	2450MM	3700MM



HESHAN®
W



VERTICAL CONVEYOR & COOLER 垂直输送冷却机

Vertical vibrating conveyor & cooler is a new design conveyor, it can convey solid material such as grain, bulk and powder material.

垂直输送冷却机是一种新型的垂直振动输送和冷却设备，本机对颗粒状、块状、粉状的固体物料(粘度不大)都可以输送。

DESIGN FEATURES 主要特点:

- Small floor space required and easy to set up the machine
产品占地面积小，便于工艺布置
- It can be upward conveying or downward conveying
物料可向上输送，亦可向下输送。
- Low noise, quick efficient installation, easy maintenance
噪音低，结构简单，安装、维修便利。
- Simple and reasonable structure, energy efficient, high wear resistance
结构简单合理，能耗小，节约电能，料槽磨损小。

SPECIFICATION 参数:

Model 型号	CAPACITY 输送量 (t/h, Corn/kaoli)	CONVEYOR PIPE DIA 输送管道直径(MM)	CONVEYOR WIDTH 输送宽度(mm)	CONVEYOR HEIGHT 输送高度(m)	VIBRATING FREQUENCY 振动频率(min)	DOUBLE-AMPLITUDE 双振幅(mm)	POWER 电动机功率(kw)	WEIGHT 重量(kg)
HVC300	0.7	300	77	≤2.0	960	6~7	2×0.4	680
HVC500	1.3	500	140	≤3.0	960	6~8	2×0.75	1010
HVC600	1.6	600	163	≤4.0	960	6~7	2×1.5	13210



COATING FINAL DRYING SYSTEMS 喷涂烘干系统



COATING CREATES THE OPPORTUNITY TO DEVELOP NEW CEREAL PRODUCTS WITH ADDED VALUE AND ADDITIONAL CONSUMER APPEAL THROUGH ENHANCED FLAVOUR AND APPEARANCE.

喷涂系统



SPECIFICATION 参数:

MODEL 型号	MAX COATING 最大喷涂量	DRYING TEMPERATURE 干燥温度	POWER 功率	CAPACITY 产量
HCD-500	40%	120℃	6kw	200-400kg/h
HCD-800	40%	120℃	11kw	500-800kg/h
HCD-1000	40%	120℃	15kw	1000-1400kg/h

DESIGN FEATURES 主要特点:

- It combines with coating and drying to prevent the flakes gathering into a rounded mass 喷涂、干燥一体，解决了喷涂糖浆时产品易结块成团的问题。
- It can measure the solid material and coating liquid material in proportion precisely 固体颗粒物料、喷涂的液体物料精确计量，喷涂量按设定比例自动调整。
- Automatic control system for hot air temperature, the air volume and speed can be adjustable at requirement 热风温度自动控制，风量、风速可根据需要调整。
- Special design for air inlet mesh, smooth inlet will prevent the materials and dust dropping into the air channel and causing pollution 进风筛网采用特殊结构的设计，进风顺利，物料及粉尘不会落入风道，造成污染。
- Continuous inlet and outlet is good for flow line production, and easily up to the GMP standard 连续的进料适合流水线生产，并易于达到GMP规范。
- All materials contact with food IS made of stainless steel 304, surface polishing, no sticking nor residue 与物料接触部分全部采用304不锈钢材料，表面抛光，不沾料，无残留。
- The temperature of the coating liquid material can be adjusted and controlled automatically 液体物料喷涂时的温度可自动设定和控制。
- High efficient and even drying 干燥效率高，均匀。



DOUBLE-PERIOD CONDITIONER 调质器



DESIGN FEATURES 主要特点:

- It is designed to separate the mixing part and aging part, to ensure the aging time
混合段与保持段分开, 确保混合效果和物料的停留时间;
- The inlet is designed to be right above the outlet, be easy to assemble it with the extruder
物料进口处于物料出口正上方, 便于与挤压机配套安装;
- It has many inlets to feed kinds of material to the Conditioner
设置有多多个液体物料进口, 可同时向调质器中添加多种物料;
- It is designed to have an easy opened door to clean the inner of Conditioner easily
可开启的清洁门便于清理调质器内部;
- The material can be pre-processing with the double-screw extruder
与双螺杆挤压机配套对物料进行预处理, 组合成系统;
- The powder material is used for continuous feeding and mixing liquid material such as the vapour, water, syrup and etc.
粉体物料用于连续添加蒸汽、水、糖浆等液体物料的混合。

SPECIFICATION 参数:

Model 型号	功率(KW) Power	产量(KG/H) Capacity	调质时间 (S)	最大加水量 Max.	蒸汽压力 Pressure
HDC-150	4	200	120 ~ 180	30%	0.2Mpa
HDC-300	6.5	400	120 ~ 180	30%	0.2Mpa
HDC-600	12.5	800	120 ~ 180	30%	0.2Mpa
HDC-1500	16.5	1500	120 ~ 180	30%	0.2Mpa

