

智能 制造 绿色 世界

INTELLIGENT MANUFACTURING OFFER GREEN WORLD

山东博力达机械
BOLIDA MACHINERY

山东宇冠机械
ROTEXMASTER

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创新引领大国智造 重塑工匠精神

Innovation leads intelligent manufacturing in
big countries and reshapes craftsman spirit



• 愿景篇
VISION

精工智造焕绿色新世界
SEIKO SMART CREATES A NEW GREEN WORLD

积累 沉淀 匠心 创新
ACCUMULATION INGENUITY INNOVATE

2017

山东博力达机械有限公司
Shandong Bolida Machinery Co.,Ltd

2013

山东宇冠机械有限公司
Shandong Rotex Machinery Co.,Ltd

2006

金冠钢结构材料厂
JinGuan Steel Structure Materials Factory

2008

瑞和钢结构厂
RuiHe Steel Structure Factory

2001

金海机械加工厂
JinHai Machinery Processing Factory

· 实力篇
STRENGTH

生物质颗粒机团体标准第一起草者
FRIST GROUP STANDARD DRAFTER OF BIOMASS PELLET MACHINE



· 实力篇

STRENGTH

30

技术团队：拥有核心技术团队30余人。

Technical team: it has more than 30 core technical teams.

65

国家专利：拥有国家发明专利65项。

Nave:Have 65 national patents.

260

员工人数：在职员工260余人。

Number of employees: more than 260 employees.

80000

占地面积：80000平方米。

Cover an area: 80000 square meters

认证体系：

Certification system:

ISO9001质量管理体系 ISO1400环境管理体系

ISO45001职业健康体系

CE认证 专精特新 技术中心



· 客户篇 CUSTOMER

8

8大服务系统确保出厂设备质量。

8 major service systems ensure the quality of the delivered equipment.

30

国内覆盖30多个省市地区

Covering 30 provinces and autonomous regions in China

100

国外覆盖100多个国家地区

Covering 100 countries and regions abroad

6000

累计服务全球客户6000余位，涉及1600余台主机，2000余台辅机，涉及400余条生产线。

Serving more than 6000 customers worldwide, more than 1600 main machines, more than 2000 auxiliary machines, involving more than 400 production lines.

建设国内首家单体秸秆年产10万吨项目，印度尼西亚年产10万吨生物质颗粒项目
马来西亚年产5万吨木屑颗粒项目。

Build the first project with annual output of 100000 tons of single straw in China

Indonesia biomass pellet project with annual output of 100000 tons

Malaysia wood pellet project with annual output of 50000 tons

服务企业：

Service Enterprise



· 图集篇
PHOTOGRAPH



垃圾衍生燃料(RDF)在亚洲国家的发展现状

随着亚洲地区发展中国家人口的增加和经济活动的扩大，目前东亚和太平洋地区每年产生的废物约为2.07亿吨。世界银行对2025年的预测表明，到2025年，预计人均固体废物将从人均每天0.95公斤增加到人均每天1.5公斤。在日本和欧洲国家，将固体废物从填埋场中转移，并制成RDF作为替代燃料已成为社会和经济上可行的选择。RDF来源于固体废物以及工业垃圾。这些垃圾由纸张、塑料、纺织品和其它有机垃圾组成，是一种潜在的能源。在国家力主碳达峰、碳中和的大背景下，RDF燃料在市场前景将非常广阔。

秸秆生物质能市场规模及发展

我国能源相对短缺，以化石能源消费为主(占95%以上)，进口依存度高(超过30%)，这种能源消费格局不仅造成巨大温室气体排放，而且影响我国能源安全。因此，我国迫切需要转变能源生产和消费方式，大力提高清洁可再生资源生产和消费比例，秸秆生物质能源作为可再生、清洁能源，无疑成为解决环境污染和可替代能源的重要新能源之一。我国未来生物质秸秆处理行业的市场规模将保持一个稳定增长的态势，预计到2026年，整个行业的市场规模将达到3475亿元。

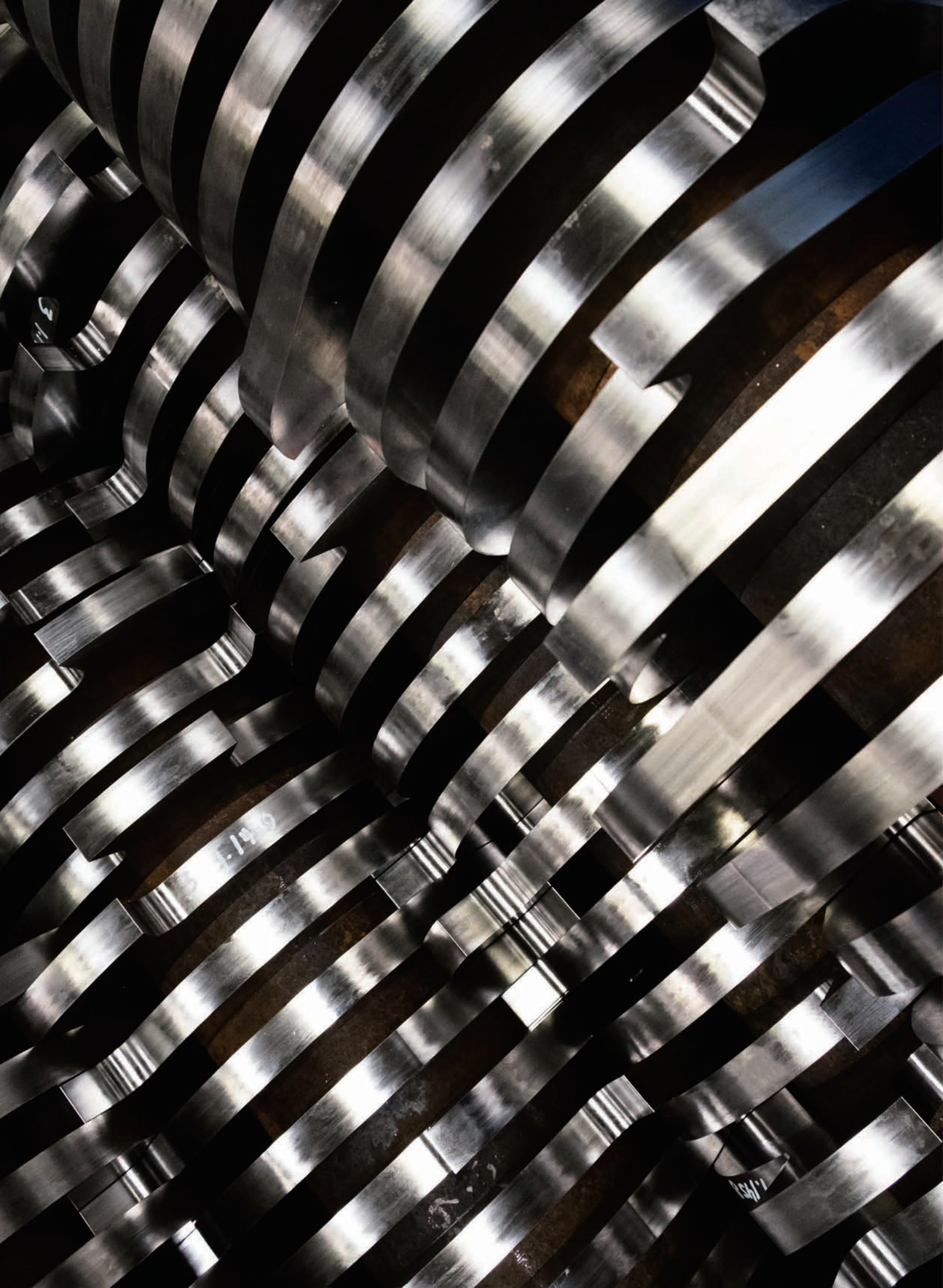
饲草行业市场规模发展现状

2021年是“十四五”规划开局之年，农业农村部印发了关于《“十四五”全国畜牧兽医行业发展规划》(以下简称“《规划》”)，提出优化区域布局与产品结构，重点打造“2个万亿级产业+4个千亿级产业”的目标，要求饲草总产值达到2 000亿元，并明确提出优质饲草自给率达到80%以上，全株青贮玉米收储量 5 000万t以上(折干草重)，优质苜蓿产量500 万t以上

专业与分工

山东 博力达：固废减容 利废降本 饲草秸秆处理 山东 宇冠：生物质固体成型燃料专家





固废减容解决方案

SOLID WASTE VOLUME REDUCTION SOLUTION

撕碎机系列 Shredder Series

混合生活垃圾资源化处理方案 Mixed Domestic Garbage Resource Treatment System



原材料——上料输送机——粗破碎机——磁选机——细破碎机——磁选机——滚筒筛——混料仓——RDF成型机——成品
该预处理线的最终产物只有三种：粒径95%小于60mm的优质替代燃料（RDF/SRF）、以无机物为主的替代原料、可回收铁。整个处理过程高自动化，物料兼容性好不惧大件垃圾、弹簧床垫等异物，核心的破碎机和分选设备稳定度高，RDF制备成本低。

Raw materials - feeding conveyor - coarse crusher - magnetic separator - fine crusher - magnetic separator - rotary screener - mixing bin - RDF forming machine - finished products

There are only three final products of the pretreatment line: high-quality alternative fuels (RDF/SRF) with particle size of 95% less than 60mm, alternative raw materials based on inorganic substances, and recyclable iron. The whole treatment process is highly automated, with good material compatibility, no fear of large garbage, spring mattresses and other foreign matters, high stability of the core crusher and sorting equipment, and low preparation cost of RDF.

固废减容系列 Solid Waste Volume Reduction

撕碎机系列 Shredder Series

大件垃圾处理系统 Large Garbage Treatment System



原材料——抓手——链板输送机——双轴破碎机——磁选机

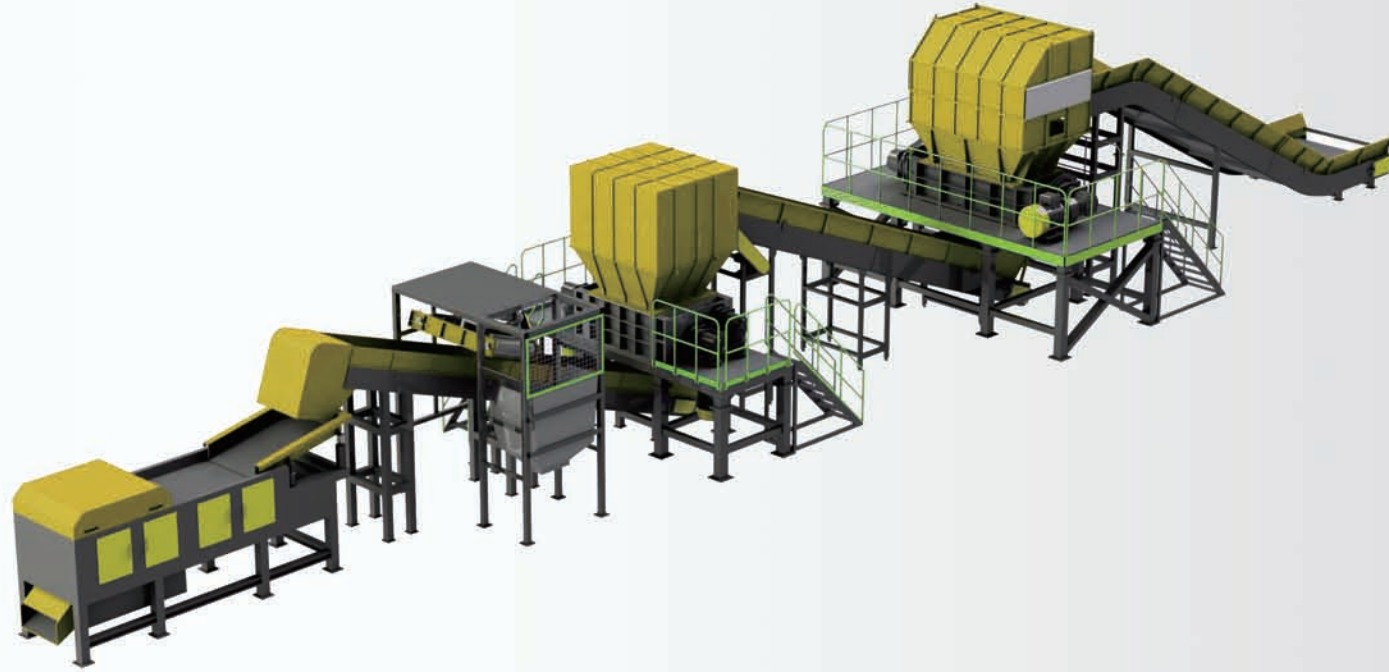
此方案主要适用于混合型大件垃圾的快速减容处理，其紧凑合理的布局及全程密封结构搭配负压除尘的设计，能够充分有效地抑制粉尘泄漏，实现无尘化工作环境；核心设备为电机驱动双轴撕碎机，独特的破碎撕碎方式可轻松将任意类型的大件垃圾进行快速破碎，具有处理量大、性能稳定、维护方便等特点，其多重密封的结构设计还可保证设备在恶劣环境下长期稳定运行。

Raw materials - gripper - chain conveyor - double shaft crusher - magnetic separator

This scheme is mainly applicable to the rapid volume reduction treatment of mixed large garbage. Its compact and reasonable layout and whole process sealing structure combined with the design of negative pressure dust removal can fully and effectively restrain dust leakage and achieve a dust-free working environment; The core equipment is a motor-driven double shaft shredder. The unique crushing and shredding method can easily crush any type of large garbage quickly. It has the characteristics of large processing capacity, stable performance, convenient maintenance, etc. its multiple sealing structure design can also ensure the long-term stable operation of the equipment in harsh environments.

撕碎机系列 Shredder Series

报废汽车破碎分选处理系统 End-Of-Life Vehicles Crushing, Sorting Treatment System



报废汽车破碎机可以把汽车外壳、轻薄金属、废旧家电等金属物料破成碎片，以便进行后期加工。输入的废料被剪切成碎片，具有能耗低、产量高、效率高及维护保养成本低的特点。

报废汽车破碎机是一款低转速、大扭矩、高产出的回转式剪切破碎机，主要含破碎机主体、机架、接料斗、控制柜等；通过配备的高效电机减速机来实现系统的主要及辅助功能。破碎机主要通过剪切、挤压和撕裂来破碎物料；主要用于报废汽车的前期撕碎工作，达到减容作用。

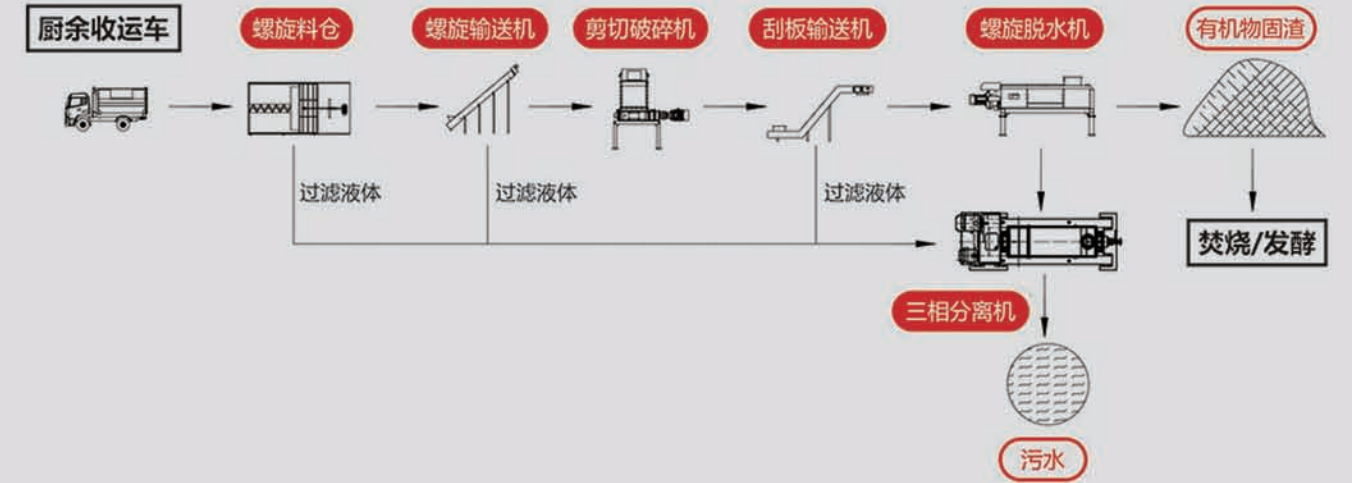
Scrapped automobile crusher can break metal materials such as automobile shell, light metal and waste household appliances into fragments for later processing. The input waste is cut into fragments, which has the characteristics of low energy consumption, high output, high efficiency and low maintenance cost.

The scrapped automobile crusher is a rotary shear crusher with low speed, high torque and high output, mainly including crusher body, frame, receiving hopper, control cabinet, etc; The main and auxiliary functions of the system are realized through the equipped high-efficiency motor reducer. Crusher mainly breaks materials by shearing, extruding and tearing; It is mainly used for the early shredding of scrapped vehicles to reduce the volume.

固废减容系列 Solid Waste Volume Reduction

撕碎机系列 Shredder Series

厨余垃圾预处理系统 Kitchen Waste Pretreatment System



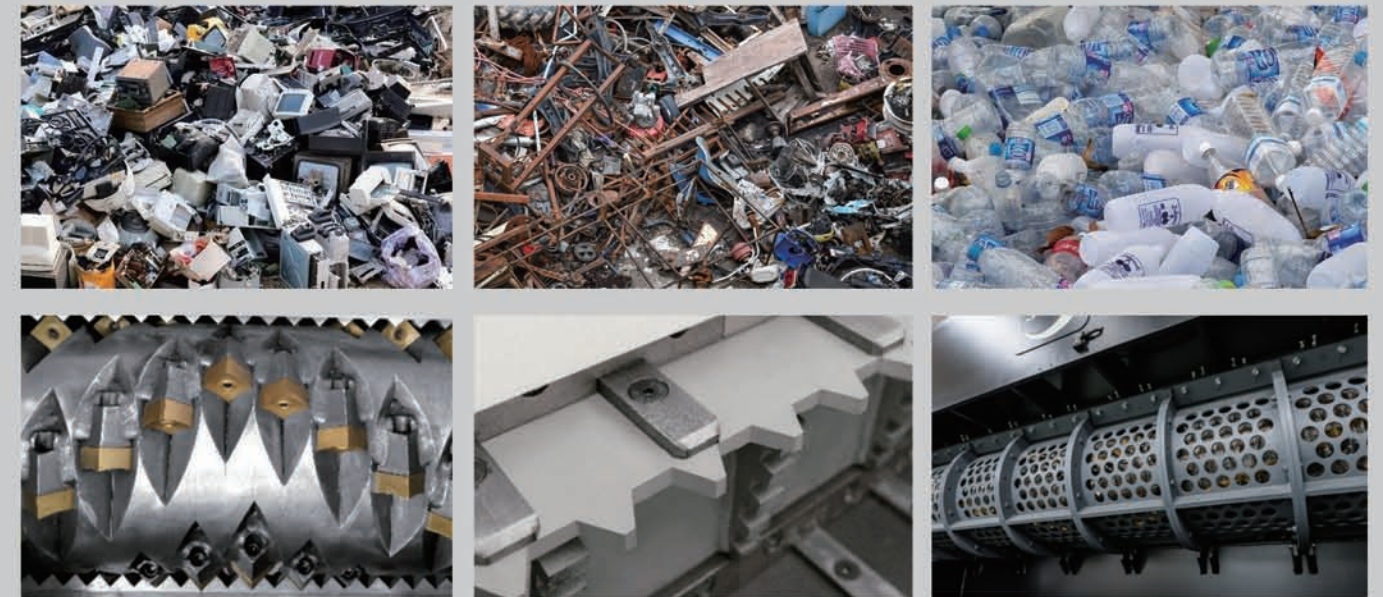
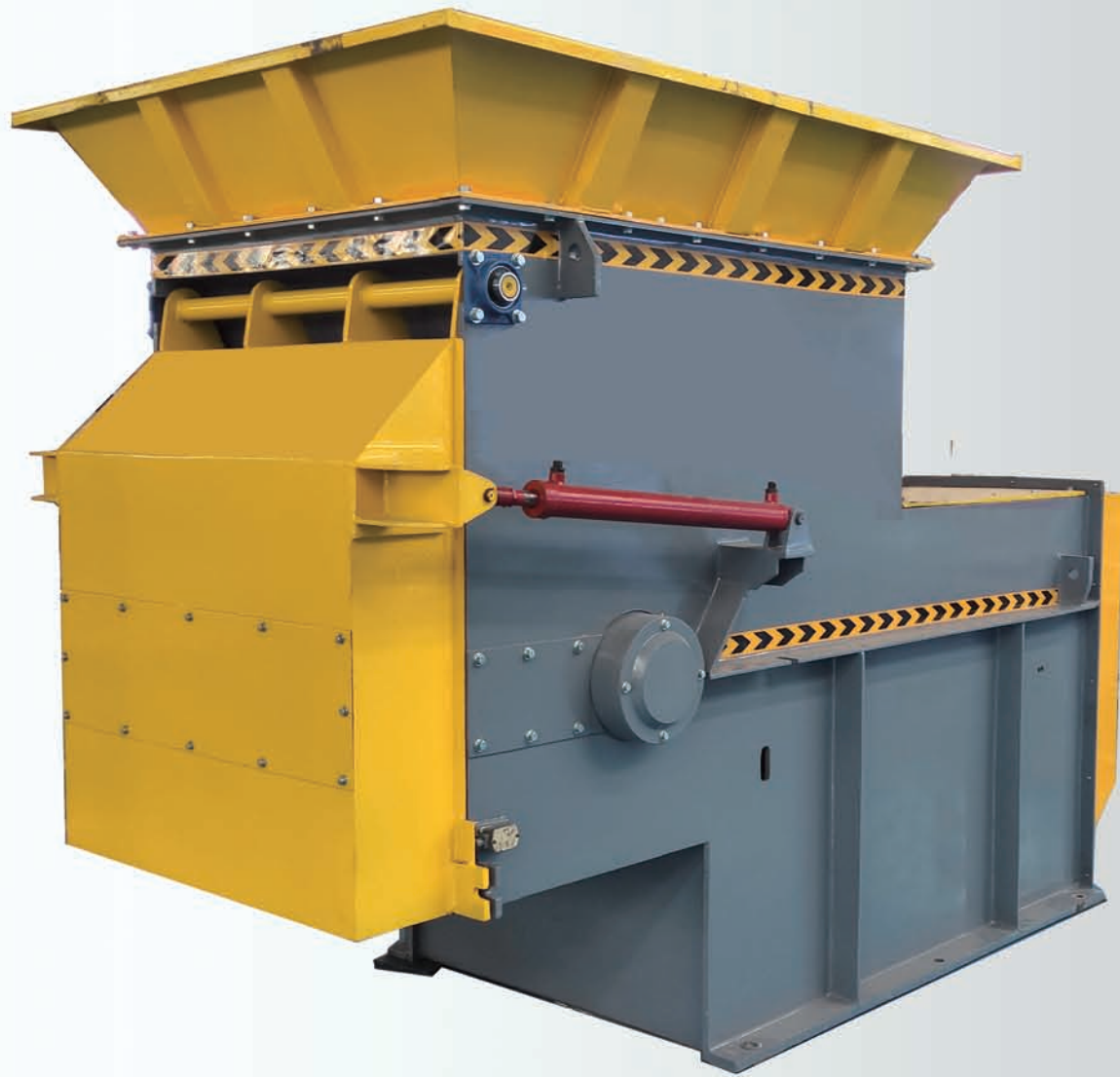
厨余垃圾处理系统，主要包括螺旋进料、破碎、脱水、螺旋出料，后端处理可发酵，厌氧，堆肥。厨余垃圾经破碎预处理、发酵后，体积可减量至原来的5-10%。新研发的螺旋脱水系统，动态智能控制动力，能根据物料要求调压，稳定系统压力，脱水率达80%。破碎机刀具耐磨不易损，适用破碎混杂物料，多重防尘防水，运营寿命长。

该系统主要适用于5-10t/h的小产量厨余垃圾和餐厨垃圾固液分离预处理，物料破碎脱水后得到固相和液相，液相视情况配置三相分离器或直接进入污水处理系统，固相后续大多进入好氧发酵系统。

The kitchen waste treatment system mainly includes spiral feeding, crushing, dehydration and spiral discharging, and the back-end treatment is fermentable, anaerobic and compostable. After crushing pretreatment and fermentation, the volume of kitchen waste can be reduced to the original 5-10%. The developed spiral dehydration system can dynamically and intelligently control the power, adjust the pressure according to the material requirements, stabilize the system pressure, and the dehydration rate reaches 80%. The cutter of the crusher is wear-resistant and not vulnerable. It is suitable for crushing mixed materials. It has multiple dustproof and waterproof functions and long service life.

The system is mainly applicable to the solid-liquid separation pretreatment of small output kitchen waste and food waste of 5-10t/h. After the materials are crushed and dehydrated, the solid impurities and liquid phase are obtained. The liquid phase is configured with a three-phase separator or directly enters the sewage treatment system according to the situation. Most of the solid phase is subsequently entered into the aerobic fermentation system.

单轴撕碎机 Single Shaft Shredder



单轴撕碎机特点如下：液压可调的内置屏板，整齐排放的V型转子和大容量破碎能力，方便使用者操作。独特的模块化设计，使得其应用领域之广泛。该撕碎机有80多个可选择模块，其中有许多可以进行改型，从而满足了客户的需要。

单轴撕碎机在使用中常见的可选模块：液压冷却系统和变速箱，油水平和垂直梳齿板，管垫片，伸缩式计数器刀片，转子冷却系统，液压可调式升降屏幕，

按钮配置，料斗扩展配置，液压涡轮，分段式机器基底，超切V型转子。

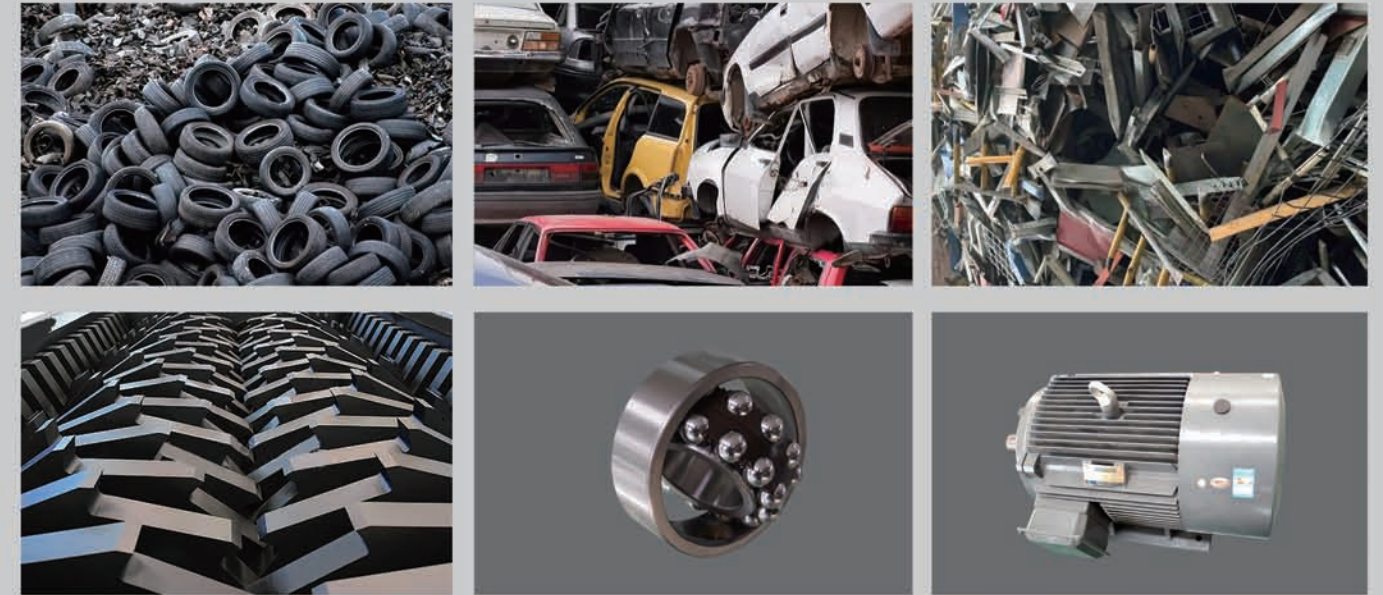
The features of the single shaft shredder are as follows: hydraulic adjustable built-in screen, neatly arranged V-shaped rotors and large capacity crushing capacity, which are convenient for users to operate. The unique modular design makes it widely used in many fields. The shredder has more than 80 optional modules, many of which can be modified to meet the needs of customers.

Common optional modules of single shaft shredder in use: hydraulic cooling system and gearbox, oil horizontal and vertical comb plates, pipe gaskets, telescopic counter blades, rotor cooling system, hydraulic adjustable lifting screen.

Button configuration, hopper expansion configuration, hydraulic turbine, segmented machine base, super cut V-shaped rotor.

型号 (model)	产量 (t/h)	电机功率 (kw)	重量 (t)	尺寸 (mm)	锤片 hammer
YGRC-2000	3-5	55+3	4.5	5100*3320*2330	144
YGRC-3000	5-8	110+4	6.8	5860*4270*2430	198

双轴撕碎机 Double Shaft Shredder



双轴撕碎机可满足各行业对废料的回收，适用于难破碎的物料如：•废旧电视机、洗衣机、冰箱外壳 废旧轮胎 大型管材、管件 叉车托板 各种包装桶 废旧汽车外壳 铝合金、发动机外壳、废旧铸铝件 铜及厚度小于10mm的废钢板和废铁，可回收物料种类繁多，经过撕碎后的物料可直接回收利用或根据要求进一步细化粉碎处理。

双轴撕碎机主体采用高品质钢板整体加工焊接而成，确保设备在长时间负荷的稳定性。

双轴撕碎机可以分为单驱动双轴和双驱动双轴，刀片材质和结构：采用铬钼钒优质合金钢，有多种材质和不同结构的刀片可供客户选择。

The double shaft shredder can meet the recycling of waste materials in various industries. It is suitable for materials that are difficult to be broken, such as waste TV sets, washing machines, refrigerator shells, waste tires, large pipes, pipe fittings, forklift pallets, various packaging barrels, waste automobile shells, aluminum alloys, engine shells, waste aluminum castings, copper and waste steel plates and scrap iron with a thickness of less than 10mm. There are a wide range of recyclable materials, The shredded materials can be directly recycled or further refined and crushed as required.

The double shaft shredder can be divided into single drive double shaft and double drive double shaft. The material and structure of the blade are chrome molybdenum vanadium high-quality alloy steel. There are many kinds of blades with different materials and structures for customers to choose from.

型号 (model)	破碎腔口径 (mm)	刀片数量 (blade)	电机功率 (kw)	处理能力 (T)	出料粒度大小 (mm)
BS200	420×490	16	7.5	0.5--1	25-150
BS400	630×560	24	15	1.5--2.5	25-150
BS600	750×640	24	30	2--5	30-150
BD800	990×730	30	30*2	4--8	30-150
BD1000	1580×890	36	75*2	5--10	40-150
BD1200	1625×1020	30	90*2	6--12	50-150
BD1500	1925×1140	36	90*2	6--12	50-150
BD2000	1905×1250	30	110*2	8--15	50-150

综合破碎机 Comprehensive Wood Crusher



综合破碎机是由机座、刀辊、上下喂料机构、送料装置和液压缓冲系统组成，主要用于建筑模板、拆迁料、模板等物料的破碎粉碎。

木材破碎机其主要是靠冲击能来完成破碎木材作业。锤式综合破碎机工作时，电机带动转子作高速旋转，木材均匀的进入综合破碎机腔中，高速回转的锤头冲击、剪切撕裂木材致木材被破碎，同时木材自身的重力作用使木材从高速旋转的锤头冲向架体内挡板、筛条，在转子下部，设有筛板、粉碎木材中小于筛孔尺寸的粒级 通过筛板排出，大于筛孔尺寸的木材阻留在筛板上继续受到锤子的打击和研磨。主要用于圆木、小径木、枝丫、枝条、板皮、板条、毛竹等物料的破碎。

Comprehensive crusher is composed of machine base, knife roller, upper and lower feeding mechanism, feeding device and hydraulic buffer system. It is mainly used for crushing building formwork, demolition materials, formwork and other materials.

The wood crusher mainly relies on the impact energy to complete the crushing of wood. Comprehensive hammer crusher is working, the motor drives the rotor high-speed rotation, wood evenly into comprehensive crusher cavity, high-speed rotary hammer impact, shear timber wood is broken, torn and wood's own gravity to make wood from the high-speed rotating hammer head to the body panel, screen, at the bottom of the rotor and sieve plate, crushing wood smaller than the screen mesh size fraction Through the sieve plate, is greater than the screen hole size of wood resistance continues to hit by the hammer on the sieve plate and grinding.

型号 (model)	产量 (t/h)	电机功率 (kw)	进料尺寸 (mm)	削片尺寸 (blade)
YMPJ 216	4-6	55+3+4+1.5	545*230	30-1100
YMPJ 218	6-10	110+5.5+5.5+1.5	710*360	30-1100
YMPJ 2113	15-25	315+11+11+3	1100*530	30-1100
YMPJ1300-300	6-10	110+5.5+5.5+1.5	1300*300	30-1100
YMPJ1300-600	12-15	160+7.5+7.5+3	1300*600	30-1100
YMPJ1400	15-20	220+7.5+7.5+3	1400*600	30-1100
YMPJ1650	18-25	220+11+7.5+3+4	1650*600	30-1100

移动式木片机 Mobile Wood Crusher



移动式削片机是我公司推出的一款灵活性更强的削片设备，采用柴油机作为动力，可牵引户外生产，移动性强、流动生产效果更好，主要适用于树枝、树干、竹子、麻杆、烟杆、秸秆等物料的粉碎处理，粉碎后物料1-3cm，厚度5mm，是处理废弃木质类物料的更好选择。

移动式削片机优点：

- 1、柴油机作动力，可移动，灵活性高
- 2、进料口尺寸大，适应物料广
- 3、进料辊正反可调，防止物料堵塞

The mobile wood chipper is a more flexible chipping device produced by Rotexmaster. as driving force, can be traction outdoor production, high mobility, better mobile production. The mobile wood chipper Mainly used for crushing branches, trunks, bamboo, hemp pole, tobacco rods, straw and other materials. Crushed material size 1-3cm, thickness 5mm. The mobile wood chipper is the better choice for processing waste wood materials.

Advantages of mobile wood chipper:

1. Diesel engine as driving force, machine mobile, high flexibility.
2. Large inlet size, suit to wide range of materials.
3. Feeding roller positive and negative adjustable to prevent material clogging
4. Fixed knife and rotary knife combination, effectively control the size of crushed material.

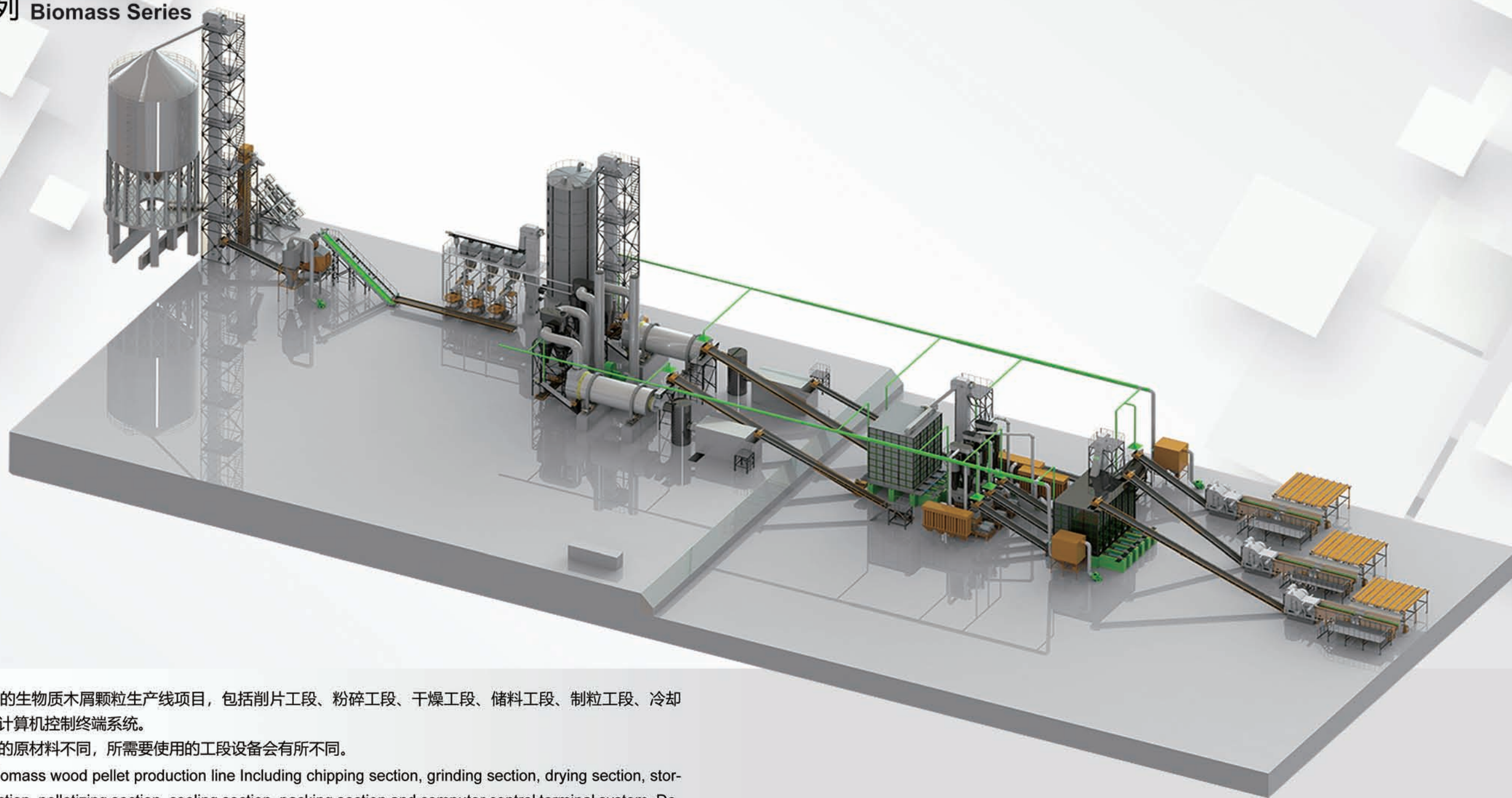
型号 (model)	产量 (t/h)	电机功率 (kw)	进料口尺寸 (mm)	削片尺寸 (blade)
YPMJ40C	1-2	30	300*200	30*30*5
YMPJ216C	3-5	75	545.280	30*30*5
YMPJ218C	6-10	150	710*360	30*30*5
YMPJ1300	8-12	150	1300*600	30*30*5
YMPJ1400	15-20	250	1400*700	30*30*5



生物质能源解决方案

BIOMASS PELLET ENERGY EQUIPMENT SOLUTION

生物质系列 Biomass Series



博力达定制的生物质木屑颗粒生产线项目，包括削片工段、粉碎工段、干燥工段、储料工段、制粒工段、冷却工段、包装段和计算机控制终端系统。

根据所使用的原材料不同，所需要使用的工段设备会有所不同。

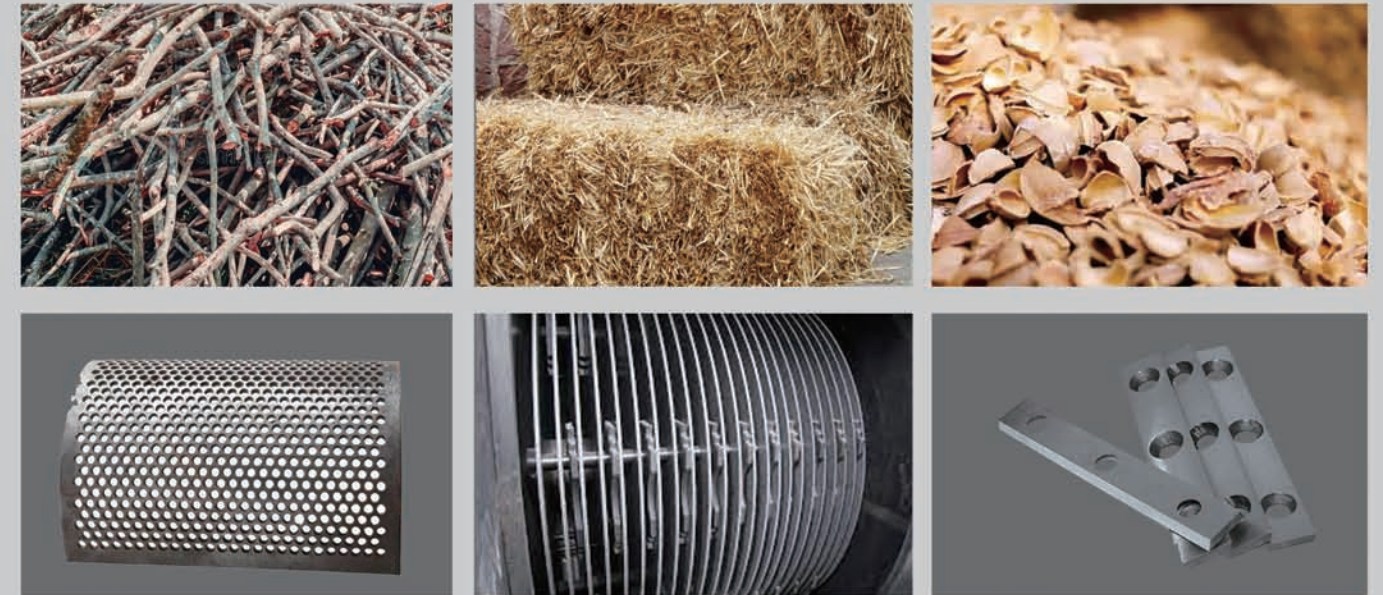
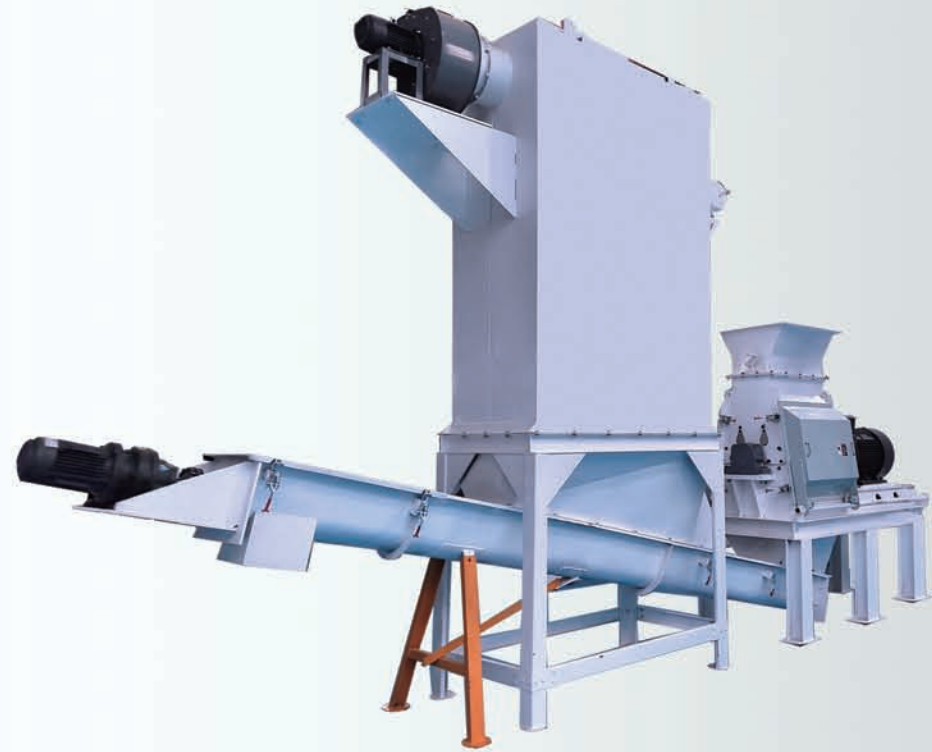
The complete biomass wood pellet production line including chipping section, grinding section, drying section, storing materials section, pelletizing section, cooling section, packing section and computer control terminal system. Depending on the raw materials used, the equipment used will vary.

名称 Name	剥皮 Debarker	劈木 Splitting	削片 Chipping	粉碎 Grinding	烘干 Drying	制粒 Pelletizing	包装 Packing
水分 water content	50%	50%	50-48%	48-46%	48-13%	13-11%	11-10%
成型率 Forming rate	98%	99%	98%	99.9%	99.9%	98-99%	99.9%
除尘率 Dust removal rate	/	/	/	/	沙克龙 $\leq 50\text{mg}/\text{m}^3$ 泄压筒 $\leq 35\text{mg}/\text{m}^3$ 沉灰室 $\leq 20\text{mg}/\text{m}^3$	$\leq 30\text{mg}/\text{m}^3$	$\leq 50\text{mg}/\text{m}^3$
进料量 Feed quantity	1.799	1.799	1.799	1.730	1.666	1.034	1

生物质颗粒解决方案 Biomass Pellet Production Line Solution



高效粉碎机 High Efficiency Hammer Mill



高效粉碎机是让物料进入粉碎室，通过高速旋转的转子产生的冲击力、剪切力和物料间的相互撞击力把物料粉碎，经筛网筛选后达到指定规格的产品。：

- 1.电机跟转子直连，转速达3000r/min，动力损耗低，效率高。
- 2.双侧筛网出料，增加出料面积，提高产能。
- 3.机身独特结构设计，下料流畅，无死角。
- 4.筛网孔径可调，保证成品粒度需求旋风除尘、布袋除尘相结合除尘效果好。

High efficiency hammer mill working principle is that the raw material go into the grinding room, then will be grinding by the impact force and shear force caused by high speed rotating rotor and collision force caused by the high speed rotating rotor, then pass through the screen to get the eligible products.

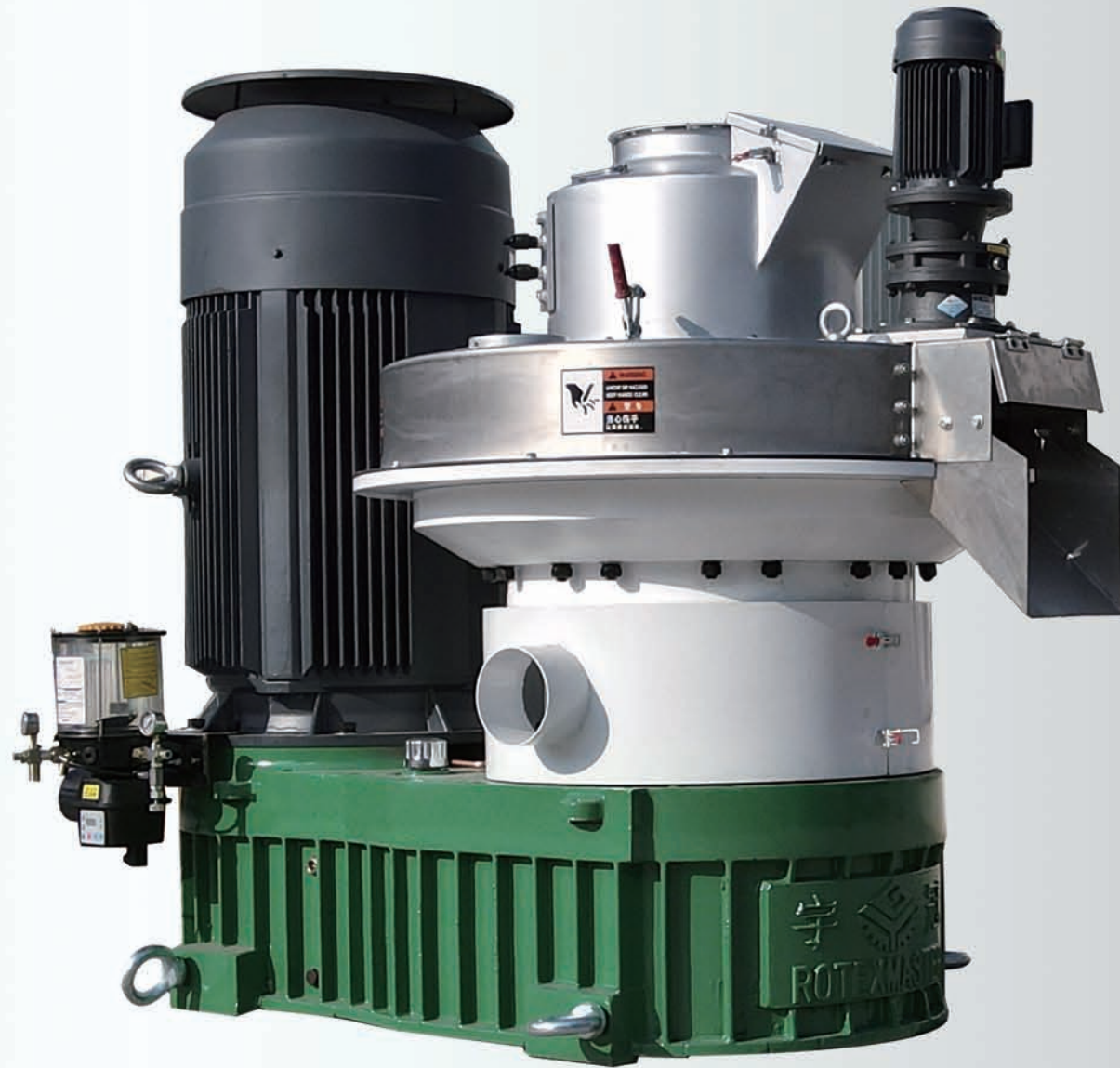
- 1.The motor connect rotor directly, the rotating speed can be 3000r/min, lower power loss and higher efficiency.
- 2.Discharge from both sides, increased the discharge area and improved capacity.
- 3.The machine body adopts unique structural design, discharge smoothly with seamless.
- 4.The particle of screen can be adjusted, ensure finished products requirement.
- 5.Work with Cyclone and Bag Dust Collector, more better dedusting efficiency.

型号 (model)	产量 (t/h)	电机功率 (kw)	外形尺寸 (mm)	锤片 (hammer)
YPFS65*55	1-2	37/45	2300*1165*2100	72
YMFS65*75	2-3	55/75	2755*1165*2100	108
YMFS65*100	3-4	90/110	3100*1165*2100	144
YMFS120*75	4-6	132/160	3475*1860*2906	108
YMFS120*100	6-8	160/200	3145*1820*3060	144

生物质颗粒系列 Biomass Pellet Series

生物质颗粒机 Biomass Wood Pellet Machine

生物质颗粒机团体标准第一起草者
Frist group standard drafter of biomass pellet machine



新式立式离心制粒机是目前国内最新型颗粒机。此结构颗粒机采用大模数硬齿面斜齿减速箱，主轴强化，动力输出强，设备使用稳定，故障率低，生产成本低。是生物质行业首选主机机型。

设备特点：

- 1、自动化程度强，运行稳定，无需专人照看。
- 2、出料面积增加，提高产能
- 3、压辊无锁母结构设计，油耗少，轴承寿命延长
- 4、重型减速箱传动，齿轮强度加强5-10倍，故障率低，稳定性强
- 5、循环齿轮油润滑，降低油耗成本，保护轴承

The new vertical centrifugal pellet machine is the latest pellet machine in China. The pellet machine adopts a large modulus hard toothed helical gearbox, strengthened spindle, strong power output, equipment stable operation, low failure rate, low production cost. It is the preferred machine model in the biomass industry.

- 1.Strong automation, stable operation, no need special care.
- 2.Increase discharging area, increase production capacity.
- 3.Roller without lock, less grease consumption, extended bearing life.
- 4.heavy-duty gearbox transmission, gear strength is enhanced 5-10 times, low failure rate, strong stability.
- 5.Circulating gear oil lubrication, reduce greasel consumption costs, protect bearings.

型号 (model)	产量 (t/h)	电机功率 (kw)	外形尺寸 (mm)	颗粒规格 (mm)
YGKJ560	1-2	90/110/132	2200*1280*1640	6-12
YGKJ700	2-3	160/200	2450*1400*1950	6-12
YGKJ880	3-4	220/250	2800*1720*2130	6-12

单筒烘干机

Biomass Rotary Dryer



生物质颗粒系列 Biomass Pellet Series



滚筒烘干机主要由筒体、辊圈、底座挡辊、尾部除尘设备组成，通过热风 and 物料在筒体内接触，经过筒内扬料板结构设计，使物料和热风充分接触从而达到烘干效果的烘干设备

产品特点：

- 1、筒体内扬料板设计多角度，使物料在筒体内形成料幕
- 2、物料和热风接触面高，热效率利用高，烘干效果好
- 3、结构设计合理，利于维护

物料适用范围广，可用户粉末、木片、丝状物料等的烘干

The rotary dryer is mainly composed of a cylinder body, a roller ring, a base retaining roller and a tail dust removing device. The hot air and the material are contacted in the cylinder body, and the material is designed to make the material and the hot air fully contact to achieve the drying effect.

Features:

- 1. The design of the lifting plate in the cylinder is Multi-angle,so that the material forms a curtain in the cylinder.
- 2, The material and hot air contact surface is high, the thermal efficiency is high, and the drying effect is good.
- 3,The structure design is reasonable, which is conducive to maintenance
- 4,The material has a wide range of applications, can be used for the drying of powder, wood chips, silk materials, etc.

型号 Model	功率 Power	蒸发量 Evaporation	倾斜角度 Tilt Angle	壁厚 Wall thickness
YGHG1.2*12	5.5+15+2.2+1.5 kw	0.3-0.6T/H	2-3°	10mm
YGHG1.5*12	11+18.5+3+2.2kw	0.47-0.91T/H	2-3°	12mm
YGHG1.8*18	18.5+37+3+2.2 kw	1.01-1.90T/H	2-3°	12mm
YGHG2.0*18	18.5+55+5.5+2.2kw	1.25-2.3T/H	2-3°	14mm
YGHG2.2*24	22+90+5.5+2.2 kw	2.02-3.36T/H	2-3°	14mm
YGHG2.5*24	22+90+5.5+3 kw	2.61-4.16T/H	2-3°	14mm
YGHG3.0*24	30+132+5.5+3kw	3.76-5.6T/H	2-3°	16mm

三筒烘干机 Three Cylinder Dryer



生物质颗粒系列



三筒烘干机是由三道筒体设计组成，物料经过三道筒体内回旋，充分利用热能将物料烘干到指定的水分要求。

产品特点：

- 1、三道筒体设计，热效率利用率高，产能大。
- 2、三道筒体结构，占地面积少。
- 3、适用锯末、粉末料等大型烘干生产线。

Machine introduction:

The three-cylinder dryer is composed of three cylinders. The material is swirled through three cylinders to fully utilize the heat to dry the material to the specified moisture requirements.

Features:

1. Three-tube design, high thermal efficiency utilization and large production capacity;
2. Three-tube structure, save space;
3. Suitable for large drying production lines such as sawdust and powder materials.

型号 Model	功率 Power	蒸发量 Evaporation	转速 Speed
YSHG1.8×10×3	2.2*4+37+3+2.2 Kw	0.8-1.4	4-10 r/min
YSHG2.2×10×3	3×4+55 +5.5+3Kw	1.2-1.8	4-10 r/min
YSHG2.5×10×3	5.5*4+75+5.5+3 Kw	2.0-3.0	4-10 r/min
YSHG3.0×10×3	5.5*4+90+5.5+3Kw	2.8-4.0	4-10 r/min
YSHG3.5X10X3	7.5*4+110+5.5+3KW	3.5-6.0	4-10 r/min

生物质燃烧机 Biomass Burner



生物质燃烧机是以农林废弃物燃料颗粒、木片、木粉等为燃料，以悬浮、沸腾、半气化裂解燃烧方式，产生高温炙热火焰；以辐射、对流传热方式将高温火焰热量传递给热力设备。主要有自动上料系统、风机、高温裂解半气化燃烧室、喷火口、点火系统组成的一种高效、环保型燃烧设备，为化石燃料设备改清洁能源提供了全新的改造技术方案，备受客户青睐，被广泛用于食品加工行业、印染业、喷涂业、烤漆、取暖、洗浴等行业改造上。

- 1.环保特点：生物质燃烧排放，二氧化碳零排放、氮氧化物、二氧化硫排放低；
- 2.设备投资少、资金回收快；
- 3.运输方便、运输半径小、燃料价格稳定；
- 4.设备操作方便、安全、使用寿命长；
- 5.负荷调节范围宽、适应性强；

Biomass burner use biomass pellets, wood chips etc as fuel, in suspension, boiling, half gasification pyrolysis combustion way, produce hot flame, through radiation, convection heat transfer send the high temperature to thermal equipment. It's a high efficiency and environmental equipment which mainly make up of automatic feeding system, fan blower, high temperature pyrolysis half gasification burning room, bocca, ignition system, provide brand new rebuilt technical plan for fossil fuel equipment change to clean fuel, get customers' favour, widely used in food processing industry, printing industry, coating industry, baking varnish, heating, bath etc industry.

- 1.Environmental protection features: biomass burning emissions, zero emissions of carbon, nitrogen oxides, sulfur dioxide dioxide emissions is low;
- 2.Less investment, quick capital recovery;
- 3.Convenient transportation, transportation radius small, fuel price stability;
- 4.Convenient operation, safe, long service life;
- 5.Wide range of load adjusting, strong adaptability.

型号 (Model)	热功率 (万Kcal)	主机功率 (KW)	外形尺寸 (MM)
YSKR45	45	0.75+1.1	1800*950*2040
YSKR60	60	1.5+2.2	1900*1000*2250
YSKR90	90	1.5+2.2	2200*1050*2250
YSKR120	120	1.5+2.2	2500*1200*3400
YSKR180	180	3+4+1.5+1.5	3270*1900*3440
YSKR240	240	3+5.5+1.5+1.5	3500*2100*3730

生物质颗粒系列 Biomass Pellet Series

手烧炉 Hot Air Stove

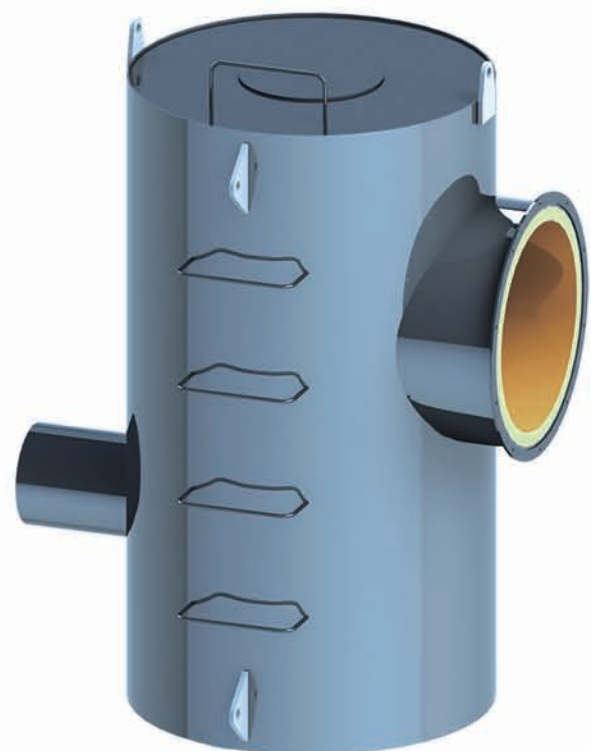


链排式锅炉 Chain Boiler



沉降室 Setting Room

立式旋风炉 Vertical Cyclone Stove



沼气/天然气燃烧机 Biogas / Natural Gas Burner



生物质颗粒系列 Biomass Pellet Series

逆流式冷却机 Counter Flow Cooler



逆流式冷却器是目前国际上比较先进的一种新型冷却器，它是利用逆流冷却原理对高温、高湿度的颗粒料进行冷却。自然风垂直穿过料层，先与料层相接触，逐步变热的热风与热料相接触，风流方向与料流方向相反，使颗粒料顺向逐步冷却，可避免因冷风与高温颗粒料直接接触，使颗粒骤冷而引起的颗粒表面开裂。空气从其底部全方位进入冷却器，进风面积大，利用率高，能耗低，操作简便，冷却效果显著。颗粒冷却充分、均匀，采用独特的滑阀震动是机械排料、运转平稳、排料流畅、冷却后的颗粒温度为室温±10-15℃。

Counter flow cooler is one of the most advanced new cooler in international currently; it uses the principle of countercurrent, cooling the high temperature and high humidity materials.

The natural wind pass through the material layer vertically, and touch the materials first, then the wind turn hot gradually and touch with the hot pellets, the wind direction is opposite with the material direction, make the pellets cooled gradually, avoid the pellets surface cracks due to its sudden cooling by touching with the cold wind. The air enters into the cooler from its bottom fully, wide entering area, high utilization rate, low energy consumption, easy operation, the cooling effect is remarkable.

Particles cooled sufficiently and evenly, using a unique slide valve is a mechanical vibration nesting, smooth operation, nesting smooth, granular temperature after cooling is for room temperature ±10-15℃.

型号 (Model)	产量 (T/h)	冷却容 (m³)	冷却时间 (min)	冷却后料温 (°C)	配用总功率 (kw)	吸风量 (m³/h)
YSKLN1.2	0.8-1.2t/h	1.2	≥10min	室温±10-15℃	0.55+0.55+5.5	3407-3852m³/h
YSKLN1.5	1.2-2.0t/h	1.5	≥10min	室温±10-15℃	0.55+1.1+7.5	3130-4792m³/h
YSKLN2.5	2.0-4.0t/h	2.5	≥10min	室温±10-15℃	0.55+1.1+11	3130-4792m³/h
YSKLN4	4.0-6.0t/h	4.0	≥10min	室温±10-15℃	1.1+1.1+22	6032-9500m³/h
YSKLN6	5.0-8.0t/h	6.0	≥10min	室温±10-15℃	1.5+2.2+37	6590-11017m³/h
YSKLN10	8.0-10t/h	10	≥10min	室温±10-15℃	1.5+3.0+45	8588-13525m³/h

生物质颗粒系列 Biomass Pellet Series

滚筒筛 Rotary Screener



滚筒筛主要有电机、减速机、滚筒装置、机架、密封盖、进出口组成。滚筒装置倾斜安装于机架上。电动机经减速机与滚筒装置通过联轴器连接在一起，驱动滚筒装置绕其轴线转动。当物料进入滚筒装置后，由于滚筒装置的倾斜与转动，使筛面上的物料翻转与滚动，使合格物料（筛下产品）经滚筒后端底部的出料口排出，不合格的物料（筛上产品）经滚筒尾部的排料口排出。由于物料在滚筒内的翻转、滚动，使卡在筛孔中的物料可被弹出，防止筛孔堵塞。

The rotary screen is mainly composed of motor, reducer, rotary device, frame, sealing cover and inlet and outlet. The rotary device is installed on the frame obliquely. The motor is connected with the rotary device through a reducer by a coupling to drive the rotary device to rotate around its axis. After the materials enter the rotary device, due to the inclination and rotation of the rotary device, the materials on the screen surface turn over and roll, so that the qualified materials (products under the screen) are discharged through the discharge port at the bottom of the rear end of the roller, and the unqualified materials (products on the screen) are discharged through the discharge port at the tail of the roller. Due to the overturning and rolling of the materials in the roller, the materials stuck in the screen holes can be ejected to prevent the screen holes from being blocked.

型号 (Model)	产量 (t/h)	尺寸 (mm)	功率 (kw)
YGTS100x2	1-2	2800x1300x1460	1.5
YGTS130x3	1.5-4	4420x1500x3800	3
YGTS150x4	3-5	5160x1700x4400	4
YGTS180x5	5-10	6300x2200x2600	4
YGTS200x6	8-12	7000x2500x5000	5.5

吨包秤 Ton Bag Packing Machine



电脑定量包装秤 Computer Controlled Packaging Machine



生物质颗粒系列 Biomass Pellet Series

集装箱颗粒装箱系统 Container Pellet Packing System



吨包秤广泛应用于精细化工、粮油、建材、橡塑等行业的颗粒状、片状、粉状物料的定量包装。吨包装半自动包装机适用于500~2000kg的定量计量包装。产品选型根据被包装物料的具体特性而灵活选用不同的产品型号，如重力式給料方式、螺旋給料方式等不同类型吨包装秤。包装控制精度为0.1级。根据物料的特性和用户现场的安装空间可以灵活选用不同类型的包装机。

Ton Bag Packing Machine is widely used to pack pellets, chips or powder from fine chemicals, food and oil industry, building material, rubber or plastics fields. The weighing scope of semi-automatic packing machine is 500-2000 kg per bag with exact calculation. According to material features and clients' factory, we will recommend different machine types for you, such as gravity feed for packing machine, screw feed one.

Technical Parameters:

Precision: $\pm 0.1\%$ FS

Weighing Scope: 500~2000(kg/bag) (can be a adjusted freely

电脑定量包装秤主要由自动称重装置、输送装置、缝包装置、电脑控制等四大部分组成。具有结构合理，造型美观，运行平稳，节能省电，操作方便，称重精确的特点。

主机采用螺旋式下料，快、中、慢三速控制计量，先进的数字变频技术、采样处理技术、抗干扰技术，并实现误差自动补偿和修正。

广泛应用于各类颗粒物料的称重包装，利用物料本身的重量即可完成給料，典型物料，饲料，化肥，塑料粒子，种子，粮食，化工原料等。

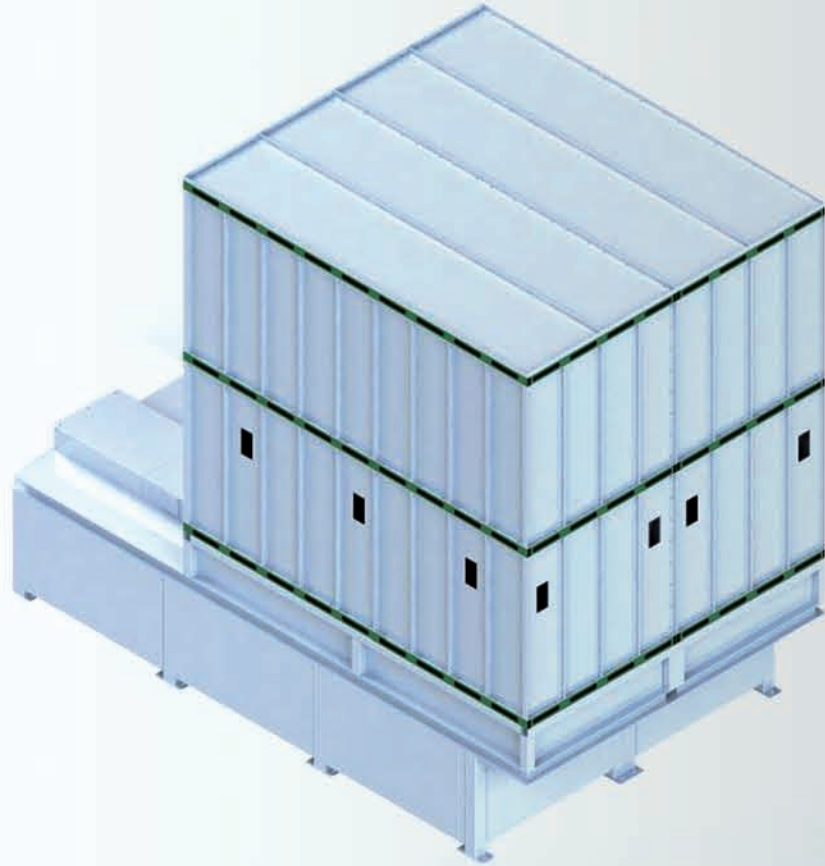
Controlled Packaging Machine is mainly composed by automatic weighing device, conveyor, sewing equipment, computer control box, etc.

It is advanced design and combines weighing and packing. It saves labor and improves wood pellet bagging efficiency. What's more, it can largely improve the precision of pellet packing and at the same time will lower the damage to the pellets comparing with the labor work.

The packing machine adopt screw feeding with large, medium, small, three-speed control measure. It possesses top digital inverter and sampling technology, interference and achieve error automatic compensation and correction.

The packaging machine is widely used in kinds of materials package by the gravity themselves, such as feed pellet, fertilizer, plastic seeds, food or chemicals.

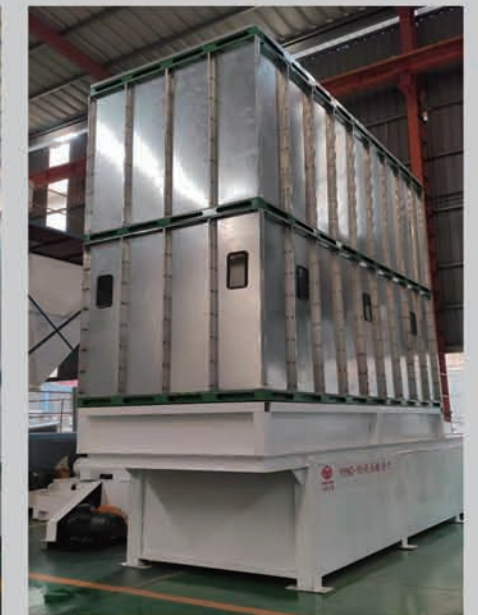
液压推杆式料仓 Hydraulic Push Rod Type Silo



液压料仓在仓底布置多组液压推杆作为出料器，实现了无堵塞不间断连续出料，巧妙的解决了草类等原材料结块抱团的难题，而且还具有结构紧凑，现场安静整洁，工作稳定可靠，操作维护简单等优点。

Hydraulic silo at the bottom of the silo arrangement of multiple groups of hydraulic push rod as the discharging device, to achieve non-blocking continuous discharging, cleverly solve the problem of grass and other raw materials lumped together, but also has the advantages of compact structure, quiet and clean site, stable and reliable work, simple operation and maintenance.

型号 (Model)	液压油站功率kw Hydraulic oil station power	尺寸 (Size)	液压缸型号 Type of hydraulic cylinder	存料量 Material stock
YYHC50	22Kw-4-B5 1个液压油站	7000*2000*6000	φ140-70 行程500 1个油缸	10-15t/h
YYHC100	22Kw-4-B5 2个液压油站	7000*4000*6000	φ140-70 行程500 2个油缸	20-25t/h
YYHC200	22Kw-4-B5 4个液压油站	7000*8000*6000	φ140-70 行程500 4个油缸	40-50t/h



生物质颗粒系列 Biomass Pellet Series

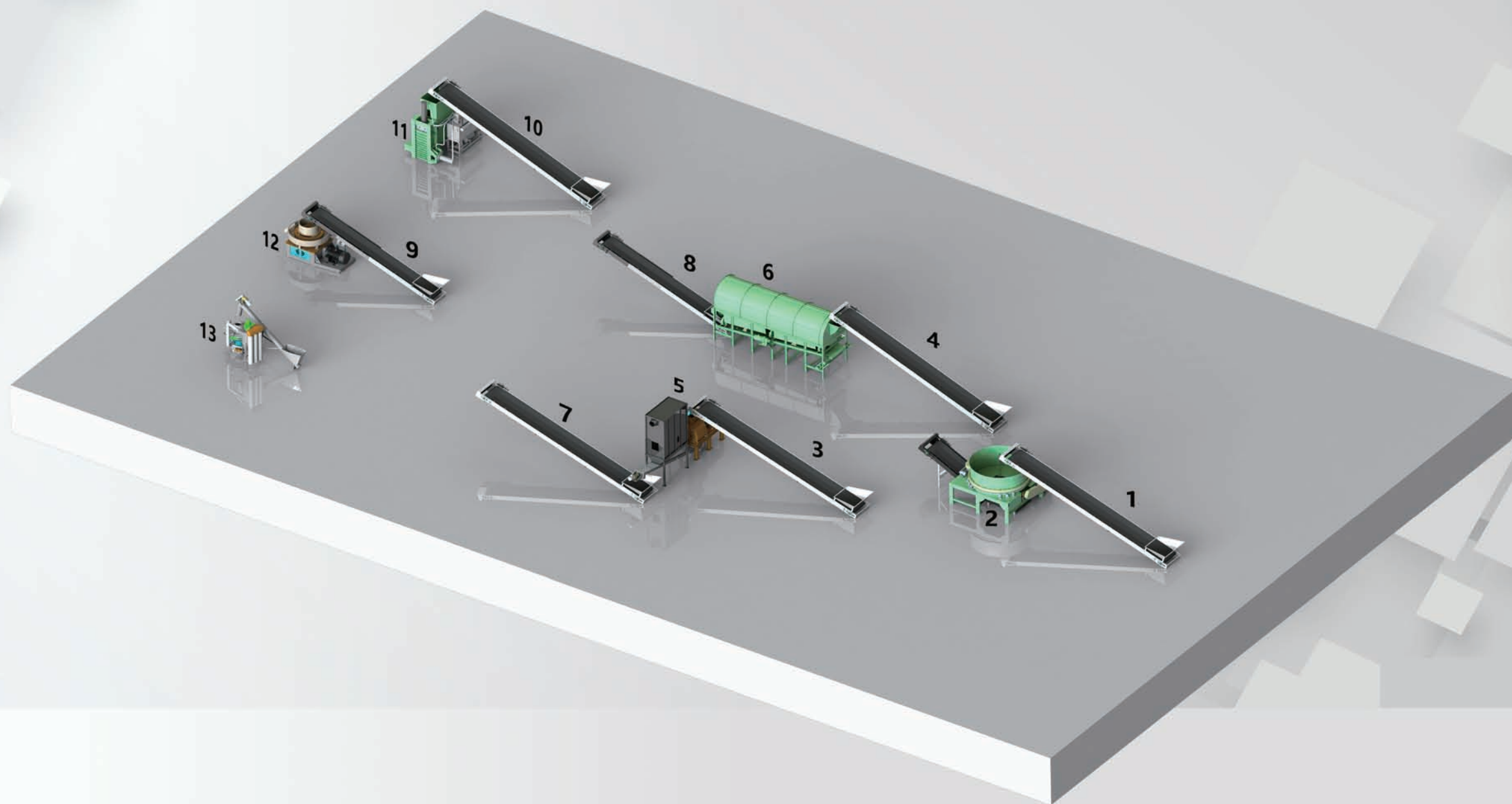


饲草加工处理解决方案

FORAGE GRASS PROCESSING SOLUTIONS

饲草加工系列 Forage Grass Process Series

饲草加工系列 Forage Grass Process Series

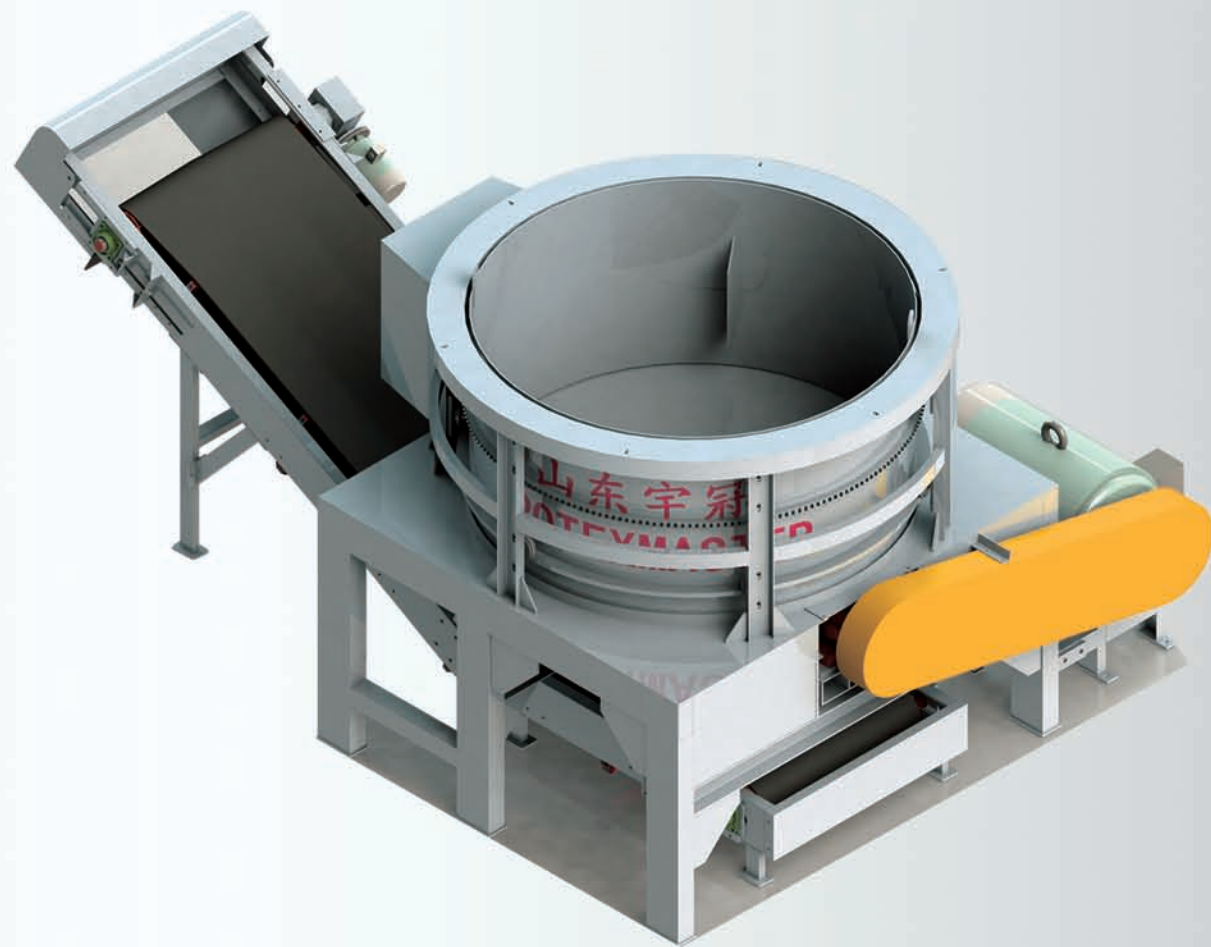


- 1 皮带输送机 Belt conveyor 3 皮带输送机 Belt conveyor 5 粉碎机 Hammer mill 7 皮带输送机 Belt conveyor 9 皮带输送机 Belt conveyor 11 打包机 Packing machine 13 颗粒机 Wood pellet machine
 2 秸秆旋切机 Straw rotary cutter 4 皮带输送机 Belt conveyor 6 无轴滚筛 Shaftless rotary screener 8 皮带输送机 Belt conveyor 10 皮带输送机 Belt conveyor 12 压块机 Briquetting machine

秸秆打包设备 Straw packing equipment	原材料—旋切机—无轴滚筛—打包机—打包成品 Raw materials - Rotary cutting machine - Shaftless roller screen - Packing machine - Finished products
秸秆压块设备 Straw briquetting equipment	原材料—旋切机—无轴滚筛—压块机—压块成品 Raw materials - Rotary cutting machine - Shaftless roller screen - Briquetting machine - Briquetting finished products
秸秆颗粒设备 Straw pelletizing equipment	原材料—旋切机—粉碎机—颗粒机—颗粒成品 Raw materials - Rotary cutting machine - Hammer mill - Wood pellet machine - Pellet

饲草加工解决方案 Forage Grass Process Solution

秸秆旋切机 Straw Rotary Cutter



秸秆旋切机是一款专门处理打捆秸秆物料的粗粉碎设备，通过高转速的转子，将成捆的物料切断成3-5公分的成品物料。设备设计紧凑合理，性能稳定，操作方便，主要适用于打捆的麦秆、玉米秸秆、稻秆、大豆秸秆、烟秆等物料的粉碎处理。

喷式旋切机特点：

- 1、进料口径大，进料方便，投料迅速，
- 2、产能输出量大，效率高
- 3、采用齿轮驱动旋转拨料，粉碎无死角
- 4、喷式出料，出料顺畅，提高产能

Straw rotary cutter is a professional crushing equipment to crush bundled straw material, cutting the bundles of material into 3-5 cm through the high speed running of the rotors. The compact structure and reasonable design, stable performance, easy to operate, mainly used for crushing bundled straw, corn stalks, rice straw, soybean stalks, tobacco etc.

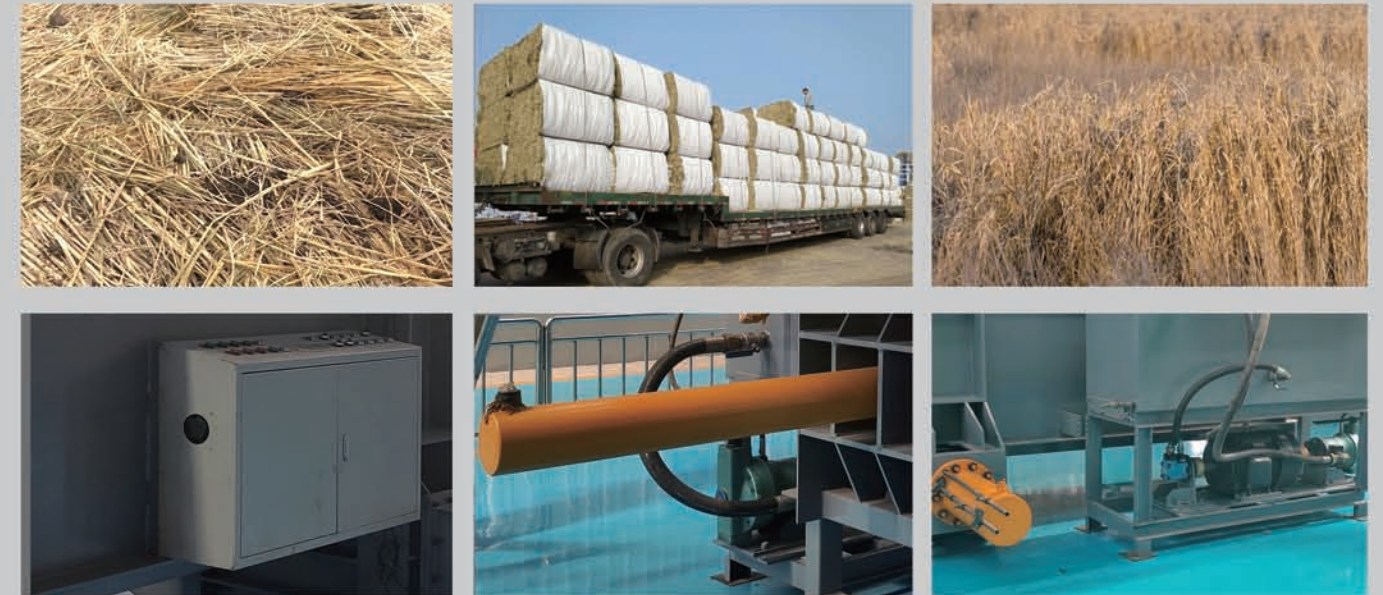
Features of straw rotary cutting machine.

1. Large feeding size, easy to feeding materials, feeding quickly.
2. High capacity, high efficiency.
3. Adopts gear-driven rotation dialing, crushing the raw materials thoroughly.
4. Spray out of the material, smooth discharging, improve production capacity.

型号 (model)	产量 (t/h)	电机功率 (kw)	重量 (t)	尺寸 (mm)	锤片 hammer
YGRC-2000	3-5	110+4+3	4.5	5100*3320*2330	144
YGRC-3000	5-8	160+5.5+3	6.8	5860*4270*2430	198

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液压打包机 Hydraulic Baler



液压打包机主要适用于各种农作物秸秆（玉米秸秆、芦苇、稻草、燕麦草等）粉碎后的青贮物料，主要用于青贮行业，进行饲草的打包，方便运输和储存。还可以应用于纸箱包装行业、废纸废塑料等垃圾回收行业、棉花加工行业等。可改善农村秸秆焚烧带来的空气污染和城市垃圾造成的环境污染。

1. 所有驱动结构均采用液压驱动，可选择手动或PLC自动控制操作；
2. 减少储存占地面积、提高运输能力、减少火灾可能性；
3. 安装无需底脚螺丝，在无电源的地方，可采用柴油机作动力；
4. 压缩室尺寸和包块尺寸可根据客户要求定制；
5. 可与我公司生产的旋切揉丝机、无轴滚筛配套使用，组成一条完整的饲草生产线，机械进料给旋切揉丝机后，全程自动化控制。
6. 打捆效果结构紧凑，密度大；
7. 占地面积小，操作简单，效率高

Silage hydraulic baler is mainly suitable for all kinds of crop straw (corn straw, reed, straw, oat grass, etc.) after crushing silage materials, mainly used for the silage industry, forage packaging, convenient transportation and storage. It can also be used in carton packaging industry, waste paper and plastic recycling industry, cotton processing industry, etc. It can improve the air pollution caused by rural straw burning and the environment pollution caused by urban garbage.

1. All drive structures are hydraulic driven, manual or PLC automatic control operation is optional;
2. Reduce the storage area, improve transportation capacity and reduce the possibility of fire;
3. Installation without foot screws, where there is no power supply, diesel engine can be used as power;
4. Compression chamber size and package size can be customized according to customer requirements;
5. It can be used together with the rotary cutting and kneading machine and shaftless rolling screen produced by our company to form a complete forage production line. After mechanical feeding to the rotary cutting and kneading machine, the whole process of automatic control is achieved.
6. The baling effect has compact structure and high density;
7. Small footprint, simple operation and high efficiency

型号	功率(kw)	工作压力 (Mpa)	产量(t/h)	打包尺寸 (mm)	备注
YHDB300	55	25	5-8	1250×1150×850	变速智能液压系统
YHDB400	45*2	25	8-12	1400×1200×800	双液压系统

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压块机 Briquetting Machine



生物质压块机是将经过粉碎后的秸秆（5cm以内）或者锯末原材料，在水分控制在10-25%范围内的情况下，通过主轴转动带动压辊旋转，产生离心力将物料从模具孔中挤压出3cm块状成品的一款机器。

生物质压块机特点：

- 1、操作简单使用方便，自动化程度高，用工少，效率高。
- 2、采用双压辊结构：使主轴受力均匀，机器运转平稳、降低功耗。
- 3、模具和压辊采用特种合金材质，耐磨、耐压、耐高温，连续工作不变形，使用寿命是原来的3-4倍。
- 4、设备采用全自动注油方式，全时间定时供油，省心、省力、省时，大大提高了使用寿命。
- 5、设备适用物料范围广：农作物秸秆、农作物果壳、锯末等农林废弃物。

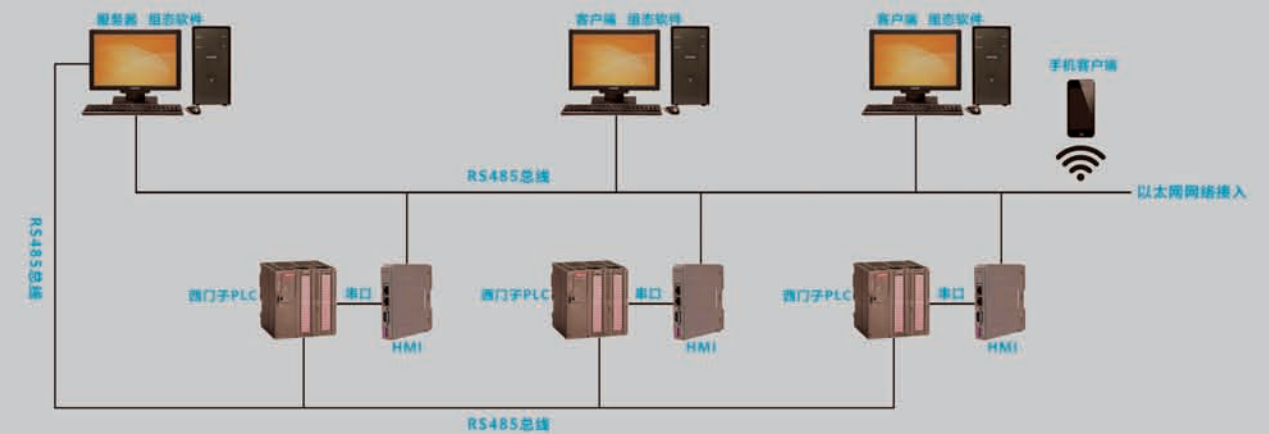
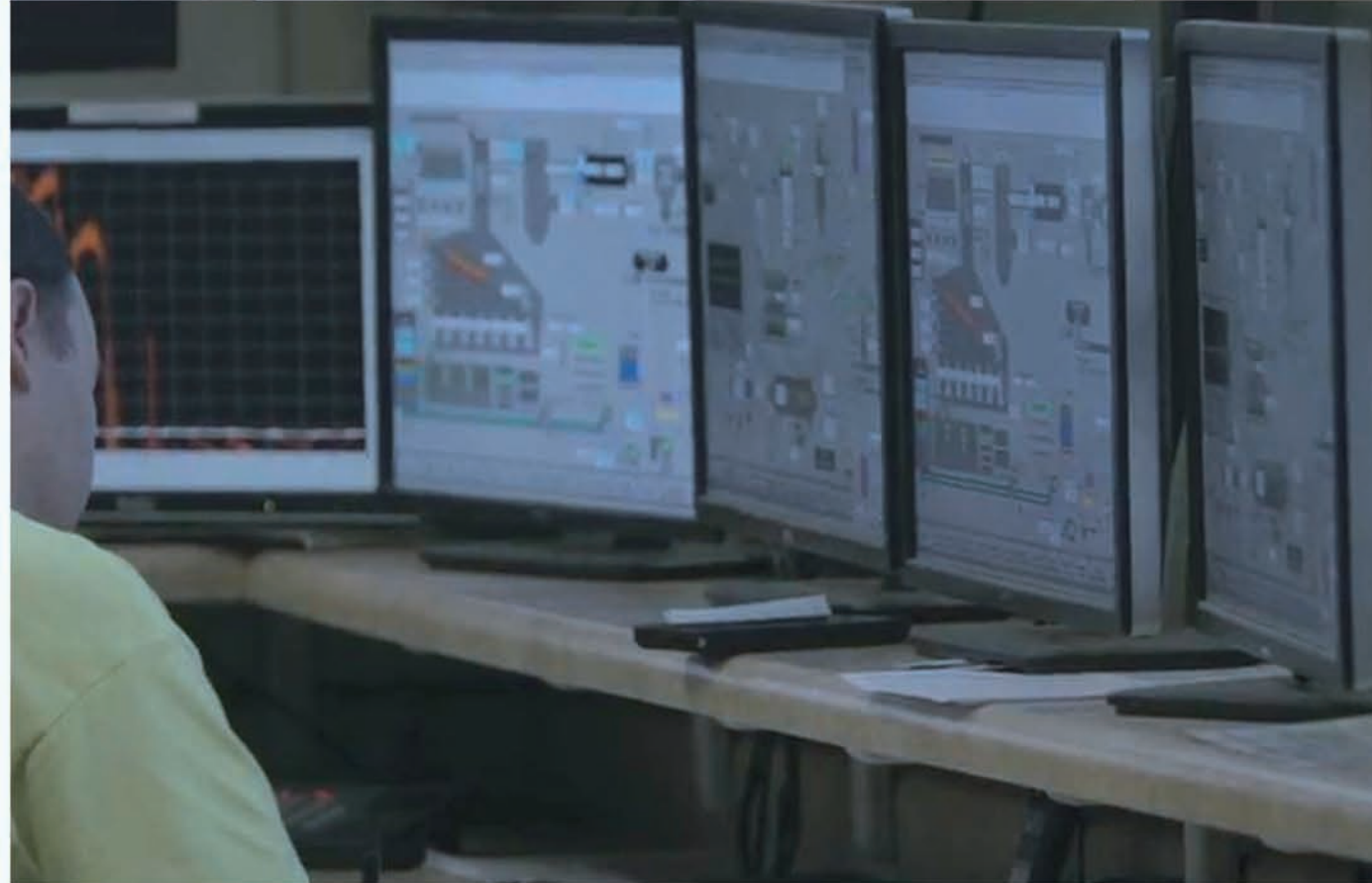
Biomass briquetting machine is one equipment which use smashed straw (within 5cm or less) or sawdust material that moisture controlled among 10-25% as raw material. By spindle rotates to drive the pressure roller to rotate, the machine produce centrifugal force to press the material from the die hole. The machine produce wood briquette with size of 3cm as finished product.

Biomass briquetting machine features:

1. easy operation, convenient to use, high automation, less labor and high efficiency.
2. Adopt double roller structure: main shaft forcing evenly, machine running smoothly, reduce power consumption.
3. Mold and roller are made of special alloy material, wear-resistant, pressure resistant, high temperature resistant, can continuous work without deformation, service life is 3-4 times than original.
4. The equipment adopts full automatic oil filling mode. The whole time supplies oil regularly, saving energy, saving time and greatly improving the service life.
5. Equipment for a wide range of materials: crop straw, crop husk, sawdust and other agricultural and forestry waste.

型号	功率(kw)	孔数 (hole count)	产量(t/h)	成型尺寸 (mm)	备注
YKJ2000	75	55	1.5-2.5	32*32	皮带传动
YKJ3500	110	72	2.5-3.5	32*32	减速机

数据采集与监视控制系统(SCADA)



数据采集和历史归档: SCADA系统可以对生产线运行数据、报警数据进行采集。

1. 生产线联动控制: 可实现联动控制开关, 当发生应急事件时, 一键急停
2. 生产线自动控制: 手机APP, wechat进行控制
3. 生产线分布控制, 在各生产工段前, 有分布控制器, 便于随时观察, 随时操作
4. 企业大屏显示生产线上实时数据, 设备运行状态, 软件与网页随时登陆, 让管理者随时掌握生产线运行状况

Data collection and historical archiving: SCADA system can collect production line operation data and alarm data.

1. Production line linkage control: linkage control switch can be realized, when there is an emergency, one button emergency stop
2. Automatic production line control: mobile phone APP and wechat control
3. Production line distribution control, in front of each production section, distribution controller, easy to observe and operate at any time
4. The large screen displays the real-time data on the production line, the running status of equipment, and the login of software and web pages at any time, so that managers can master the running status of the production line at any time

马来西亚时产10吨木屑颗粒生产线 MALAYSIA 10T/H WOOD PELLET PRODUCTION LINE



江苏时产20吨木屑颗粒生产线 JIANGSU 20T/H WOOD PELLET PRODUCTION LINE



菲律宾时产10吨棕榈壳颗粒生产线 PHILIPPINES 10T/H PALM SHELL PELLET PRODUCTION LINE



蒙牛时产40吨牛粪烘干生产线 MENGNIU 40 TON COW DUNG DRYING EQUIPMENT



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