



目 录/Index

公司简介/About US	02
---------------	----

企业技术优势/Key Feature	04
--------------------	----

原料设备篇/Raw Material Processing	06
-------------------------------	----

球磨机系列（包括上料系统、二层平台） Ball Mill	07
---------------------------------	----

皮带输送机 Belt Conveyor	07
------------------------	----

平浆搅拌机 Agitator(Blade-paddle))	08
----------------------------------	----

螺旋桨搅拌机 Agitator(Propeller)	08
-------------------------------	----

高速散机 High-velocity Breakup Machine	09
---------------------------------------	----

电磁除铁器 Magnetic Separator	09
-----------------------------	----

振动筛 Vibrating Sieve	10
------------------------	----

油压泥浆柱塞泵 Piston Pump	10
------------------------	----

气动隔膜泵 Pneumatic Diaphragm Pump	11
-----------------------------------	----

成型设备篇/Casting Machines	12
------------------------	----

智能座便器全自动高压成型生产线 Automatic High Pressure Casting Machine for Intelligent Toilet	13
---	----

连体式座便器全自动高压成型生产线 Pressure Casting Machine for One-piece WC Pan	14
---	----

分体式座便器全自动高压成型生产线 Pressure Casting Machine for Two-piece Toilet Suite	15
---	----

水箱全自动高压成型生产线 Automatic High Pressure casting Machine for Tank	16
--	----

盆类/蹲便高压成型机 High Pressure Casing Machine for Basins/Squatting Pan/Lids	17
--	----

日用瓷高压成型机 High Pressure Casting Machine for Tablewares	19
--	----

可翻转低压快排水成型机 Spagless anddRotating Casting Machine	20
--	----

低压快排水立浇线 Spagless Casting Bench	21
------------------------------------	----

吊链提升立浇线 Chain Hoist Casting Bench	22
--------------------------------------	----

普通立浇线 General Plaster Casting Bench	22
--	----



干燥设备篇 ······ 23

Drying Machines

快速干燥室 ······	24
Fast Drying Chamber	

干坯检验设备篇 ······ 25

Dry-body Inspection

半成品检验流水线 ······	26
Dry-body inspection line	

施釉设备篇 ······ 27

Glazing Machines

施釉橱 ······	28
Glazing Booth	
循环施釉线 ······	29
Glazing Line	
机器人施釉工作 ······	30
Glazing Robot	

烧成设备篇 ······ 31

Firing Machines

隧道窑 ······	32
Tunnel Kiln, Shuttle Kiln	

成瓷检验设备篇 ······ 33

Sanitaryware Inspection Machines

成瓷检验线 ······	34
Fired Ceramics Inspection Line	
座便器漏水检验机 ······	35
Toilet Water Leak Detection Machine	

造型设备篇 ······ 36

Moulding Machines

石膏自动喂料、称重、搅拌设备 ······	37
Plaster Auto Feeding, Weighing and Mixing Equipment	
高压树脂模具设计制造 ······	38
Resin Mold Design and Manufacturing for High Pressure Casting	
低压快排水石膏模具设计制造 ······	39
Spagless Mold Design and Manufacturing	

环保设备篇 ······ 40

Industrial Environmental Protection Equipemnt

袋式除尘器 ······	41
Dust Collector	
污水处理站 ······	42
Sewage Treatment Station	
脱硫脱硝装备 ······	42
Desulfurization and Denitration Equipment	

公司简介

一、企业概况

森兰特科技集团总职工人数 470 余人，其中管理、技术人员 86 人，是一家专门从事卫生陶瓷生产装备以及卫生陶瓷的科技公司，国家级高新技术企业，其下属有四个子公司：1、北京森兰特科技有限公司；2、河北大厂森兰特工贸有限公司；3、唐山森兰瓷科技有限公司；4、唐山泰科科技有限公司。

目前公司已拥有 28 项实用新型专利，10 项发明专利，3 项外观专利和一座“唐山市卫浴陶瓷工业自动化工程技术研究中心”。

企业拥有占地面积 53200 平米的生产车间，可承接大、中型卫生陶瓷企业的整体工艺设计、设备安装调试及售后技术服务，是国内外卫生陶瓷行业普遍认可的“卫生陶瓷技术装备方案提供商、设备制造商、技术服务商”。

公司主要业务范围：

- 1、卫生陶瓷生产整厂设计规划和设备配套。
- 2、脱硫脱硝、除尘及污水处理装备。
- 3、各种自动化生产流水线设计及机器人等装备配套。

Sunlets Technology Group is a national high-tech enterprise specializing in sanitary ceramics production equipment and sanitary ceramics which has more than 470 employees, including 86 managers and experts. Sunlets Technology Group has four subsidiaries:

1. Beijing Sunlets Technology Co., LTD.
2. Hebei Dachang Sunlets Industry and Trade Co., LTD.
3. Tangshan Sunlets Technology Co., LTD.
4. Tangshan Taik Technology Co., LTD.

As a Group supported by technical force, Sunlets already has a research center named “Tangshan Sanitary Ceramics Industrial Automation Engineering Technology Research Center” which owned 28 utility model patents, 10 invention patents and 3 appearance patents.

With an area of 53200 square meters production workshop which can undertake large and medium-sized sanitary ceramics enterprise overall process design, equipment installation and debugging and after-sale technical services, Sunlets is widely recognized as “sanitary ceramics technology equipment solution provider, equipment manufacturer, technology service provider” in sanitary ceramics industry at home and abroad.

Main business scope of Sunlets:

1. Whole plant planning, and form a complete set of equipment.
2. Desulfurization, denitration, dust removal and sewage treatment equipment.
3. A variety of automatic production line design and robot equipment matching.



二、企业智能化发展

企业于 2012 年全面通过 ISO9001 质量管理体系认证，所生产、销售的“SUNLETS”系列卫生陶瓷机械产品，均具有自主知识产权，主导产品“系列卫生陶瓷高压注浆成型机”、“卫生陶瓷低压快排水注浆成型机”“座便器立浇线吊链提升机”等多次荣获省、市级技术创新奖。

2015 年公司又推出了全自动化的机器人打磨，机器人施釉技术，以及各生产环节之间的自动化流水线。2016 又推出全球第一条智能坐便高压生产线。

“SUNLETS Robot M-10iA”是我公司与哈尔滨工业大学共同研发的多功能机器人。该技术采用高刚性的手臂和先进的伺服控制技术，具有良好的防尘防水性能，达到缩短工作时间、提高生产效率的目的。企业可根据作业范围和承载力不同，配有标准型、短臂型、长臂型等不同机型。

森兰特科技建有完善的国内外营销网络体系，与科勒、东陶、美标、恒洁、乐家、箭牌、九牧、东鹏、翔华、梦佳等多家陶瓷企业建立了密切的业务合作关系，产品覆盖全国各大陶瓷产区以及东南亚地区，深受用户的青睐。

Intelligence Development

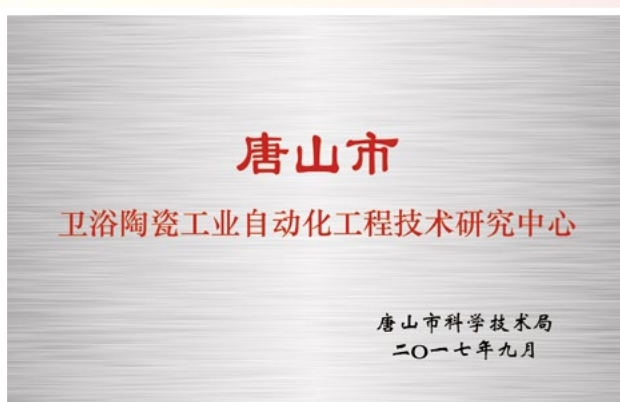
In 2012, the Group passed the ISO9001 quality management system certification, and the "SUNLETS" series sanitary ceramic machinery products have independent intellectual property rights. With the leading products such as "Series Sanitary Ceramics High-pressure Casting Machine", "Sanitary Ceramics Spagless Casting Machine" and "Chain Hoist Casting Bench", Sunlets has won provincial and municipal technical innovation awards for many times.

In 2015, the company launched fully automated robot grinding, robot glaze technology, and automatic assembly line connecting all production links. In 2016, launched the world's first intelligent toilet high-pressure production line.

"SUNLETS Robot M-10iA" is a multi-functional Robot jointly developed by our company and Harbin Institute of Technology. The technology adopts high rigidity arm and advanced servo control technology, with good dustproof and waterproof performance, to achieve the purpose of shortening working time and improving production efficiency. It can be equipped with standard type, short arm type, long arm type and other different models according to the working range and bearing capacity.

Sunlets Technology Group has a perfect domestic and foreign marketing network system, and has established close business cooperation with KOHLER, Imex, American Standard, HEGII, Roca, ARROW, JOMOO, DONGPENG, XIANGHUA, MONGA and many other ceramic enterprises. Our products cover major ceramic production areas in China and southeast Asia, and are favored by users.





原料设备篇/Raw Material Processing

球磨机/Ball Mill

皮带输送机/Belt Feeder

平浆搅拌机/Blade-Paddle Agitator

螺旋桨搅拌机/Propeller Agitator

高速分散机/High-Velocity Breakup Machine

电磁除铁器/Magnetic Separator

振动筛/Vibrating Seive

油压泥浆柱塞泵/Double Piston Pump

气动隔膜泵/Pneumatic Diaphragm Pump

球磨机系列（包括上料系统、二层平台） Ball Mill Series



该系列产品是湿法间歇式细磨设备，用于陶瓷原料及其它原料的精磨与混合，出料粒度可达 100 目以上，精磨后的泥浆通过过筛、除铁等处理后用于陶瓷生产。

This series of ball mill is wet intermittent superfine-grinding equipment which applicable to the mixture and superfine-grinding of the raw material for ceramic and others. The material-slurry with the particle size over 100mesh discharged from ball mill thought 100net/cm²-sieve could be used for ceramic casting process.

皮带输送机 Belt Feeder

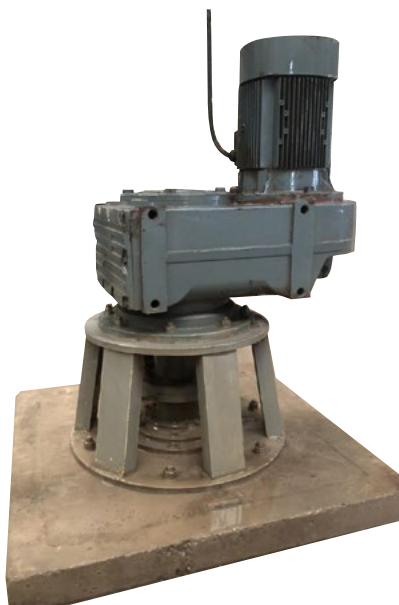


皮带输送机是大型球磨机装料的辅助装置，与斗提式升降机配合可有效的降低工人的劳动强度，而且下料均匀、快速、操作简单。可根据用户的要求设计制作。

The unit is auxiliary equipment for larger ball mill, consists of belt type and chain-plate type, with main function of constant-feeding and constant-proportion feeding, with feature of compact structure, easy installation and operation, safe running.

平浆搅拌机

Blade-paddle Agitator



主要是在建筑卫生陶瓷行业中用来搅拌泥浆，使贮存在泥浆搅拌池内的固体颗粒不发生沉淀，经搅拌叶的旋转搅动，达到保持泥浆均匀悬浮的目的。

This unit is mainly applicable to the agitation of clay-slurry in ceramic industry. Through the rotation of the blade-paddle, two aims could be reached, one is to avoid the sedimentation of the solid particle which contained in the slurry-agitation pool, another is to keep the slurry suspensibility uniformly.

型号 Model	功率 (kw) Power (kw)	搅拌轴转速 (rpm) Rev of axle(rpm)
SLPJ-1800	3	12
SLPJ-2700	4	12
SLPJ-3600	5.5	12
SLPJ-4500	5.5	12

螺旋桨搅拌机

Propeller Agitator



该机主要使用于陶瓷行业的废坯回坯池搅拌，同时亦使可用于釉浆的搅拌以及普通泥浆池的搅拌。

The unit is special applicable to the agitation of clay-slurry and glaze-slurry in the process of raw material preparation in ceramic industry. The material-slurry stored in the slurry-pool would be keep even density without deposit caused by rotating of vane. It also could be used for agitating-with-water of various ceramic base and mix-agitating them for the material-slurry preparation in even condition.

型号 Model	桨叶直径 (mm) dia.of propeller(mm)	转速 (rpm) Rev of propeller(rpm)	功率 (KW) Power(KW)
SLLJ630	630	165, 300	5.5, 7.5
SLLJ750	750	165, 300	7.5, 11

高速分散机

High-velocity Breakup Machine



高速液压搅拌机，是对各种浆体进行搅拌、溶解和分散的高效设备，广泛应用于制釉、涂料、油墨、塑料、造纸、橡胶等行业。

Both high-velocity breakup machine and slow-velocity agitator are high effective equipment for the breakup, agitating, dissolving of the different liquid. The unit is special equipment wide-applicable to coat, printing-ink, plastic, adhesive staff-material, papermaking ing, rubber, lacquer-mixed, and dissolvent

功率 Power	转速 Rev	中心距 Center distance	搅拌杆长度 Max height of unit
7.5KW、11KW	120-1400rpm	850mm	1600m
高度 Height of installation	上升距离 Max space between vane and ground	分散盘直径 Diameter of vane	降底高度 Min space between vane and ground
1955mm	1000mm	260mm	275mm

电磁除铁器

Magnetic Separator



本机主要通过高强磁性来除去泥浆及釉料中的铁质成份，达到净化原料的目的。

The unit is mainly used to dislodge the iron-element contained in the clay-slurry and glaze-slurry so as to attain the aim of medium purification.

技术参数：

生产能力：5 吨 / 小时

磁力强度：12000~14000GS

工作电压：220V

工作电流：5~7A

Main technical data:

Production capacity: 4~7 tons/h

Working magnetic density: 12000~14000 GS

Power supply: 220V

Working current: 5~7A

Temperature-resistance of coil: 100°C

Weight: 300~420KG

振动筛 Vibrating Sieve



该机具有结构紧凑、体积小、耗能低、效率高等特点，适用于陶瓷、化工、造纸、医药、电子及食品等行业以干法或湿法制备的物料分级和精制。

The machine has compact structure, small volume, low energy consumption and high efficiency, suitable for ceramic industry, chemical industry, paper making, medicine, electronic and food industries it could be served under wet or dry process as different technique requirement and could provide excellent filtering capacity

主要技术参数:

筛面直径: $\phi 400 - \phi 1000\text{mm}$

工作筛层数: 1-3 层

筛网规格: 80-200 目

振动频率: 1380 次 /min

电机功率: 1.5kw

Technical Date:

Effctive dia. Of screen mesh: $\phi 400 - \phi 1000\text{mm}$

Dects: 1~3

Screen mesh: 80~200mesh

Vibrating frequency: 1380/min

Motor power: 1.5kw

油压泥浆柱塞泵 Double piston pump



油压泥浆柱塞泵在陶瓷行业中用于泥浆输送、压滤脱水等，因其具有压力大、能耗低、效率高、使用寿命长等优点而被广泛使用。

Double piston pump are used for slip conveying, filter pressing etc. which is with the feature of high pressure, low energy consumption, high output and long life, so it is widely use.

技术参数:

最大压力: 2.5Mpa

工作压力: 0.5~2Mpa

吸入高度: 4 米

柱塞直径: $\Phi 140\text{mm}$ 、 $\Phi 200\text{mm}$

Technical date:

Max pressure: 2.5Mpa

Operating pressure: 0.5~2Mpa

Height of slip drawn: 4m

Piston dia: $\Phi 140\text{mm}$ 、 $\Phi 200\text{mm}$

气动隔膜泵

Pneumatic Diaphragm Pump



气动隔膜泵是一种新型的输送泵，该泵以压缩空气为动力，主要用于陶瓷行业输送泥、釉浆，其中尼龙材质泵可直接用于施釉，从而取消施釉压力罐，减少对釉浆可能造成的污染。

As a new type of conveying-dump, pneumatic diaphragm pump is adopted with compressed-air-power. The unit is mainly applicable to the suction, discharge and the delivery of clay-slurry or glaze-slurry in the ceramic industry.

成型设备篇/Casting Machines

智能座便器全自动高压成型生产线
Automatic High Pressure Casting System for Intelligent Toilet

连体式座便器全自动高压成型生产线
Pressure Casting Machine for One-Piece WC Pan

分体式座便器全自动高压成型生产线
Pressure Casting Machine for Two-Piece WC Pan

水箱全自动高压成型生产线
High Pressure Casing Machine for Tank

盆类 / 蹲便高压成型机
High Pressure Casing Machine for Basins/Squatting Pan/Lids

日用瓷高压成型机
High Pressure Casting Machine for Tablewares

中压成型机
Mid-Pressure Casting Machine for sanitarywares
可翻转低压快排水成型机
Spagless and Rotating Casting Bench

低压快排水立浇线
Spagless Casting Bench
吊链提升立浇线
Chain Hoist Casting Bench
普通立浇线
General Casting Bench

智能座便器全自动高压成型生产线

Automatic High Pressure Casting Production Line for Intelligent Toilet



智能座便器全自动高压成型生产线是我公司自主研发的卫生陶瓷高压成型设备，是全球第一条智能马桶高压生产线。与传统智能马桶生产线相比，具有三大优势：作业人员节省 70%、占地面积节省 70%、能源消耗节省 70%。

pressure casting equipment for sanitary ceramics that independently developed by our company, which is the first intelligent toilet high-pressure production line in the world. Compared with the traditional intelligent toilet production line, it has three advantages: 70% savings in workers, 70% savings in occupied area and 70% savings in energy consumption.

主要技术参数 /Main Technical Parameter

总功率 /Total	145KW
模型数量 /Application of mould	10 套 /sets
日产量 /Daily output	500-600 件

连体式座便器全自动高压成型生产线

Pressure casting line for water-colset



- 标准机装载坐便类模具 10x2 套（投入机台数可根据生产变更）
- 可同时生产 10 种品种
- 采用树脂模成型，模具不需要干燥处理，可连续生产。
- 日注浆总量 500 件
- 占地面积 L45*W12*H7 • 全自动的注浆、脱模和搬送工艺，减轻了工人的劳动强度。
- 工人只需在输送线上对制品进行加工即可。
- 采用 PLC 和触摸屏控制，设备操作简便，简单易学，可远程调控程序。
- 设计有简便的参数修改平台，可根据泥浆的性能变化及时调整参数。
- 模具压力系统分为独立的 10 组，当其中一台发生故障时不会影响到其他机台的正常运行。

- The standard line with 10*2sets mould, permit different type of wc mould.
- With plastic mould.
- Produce for about 500pes per 24hr
- Machine dimension is L45*W12*H7
- Automatic to casting,demould,with automatic working-line.
- Use PLC and screen to control,change the parameter is very easy and safe.
- The every cylinder is independent,so if one of them break,others can running normally.

分体式座便器全自动高压成型生产线

Pressure casting line for water-colset



- 标准机装载坐便类模具 10 套（投入机台数可根据生产变更）
- 圈采用卧式压力独立注浆。
- 可同时生产 10 种品种
- 采用树脂模成型，模具不需要干燥处理，可连续生产。
- 日注浆总量 500 件
- 占地面积 L35*W6*H4 • 全自动的注浆、脱模和搬送工艺，减轻了工人的劳动强度。
- 工人只需在输送线上对制品进行加工即可。
- 技能要求低，对新工人 10 天培训即可上岗
- 设备总装机容量 55KW, 时间运转率为 10%
- 采用 PLC 和触摸屏控制，设备操作简便，简单易学，可远程调试程序。
- 设计有简便的参数修改平台，可根据泥浆的性能变化及时调整参数。
- 模具压力系统分为独立的 10 组，当其中一台发生故障时不会影响到其他机台的正常运行。

- The standard line with 10sets mould, permit different type of wc mould.
- With plastic mould.
- Produce for about 500pes per 24hr
- Machine dimension is L35*W6*H4
- Automatic to casting,demould,and carring.
- Power is 55KW.
- Use PLC and screen to control,change the parameter is very easy and safe.
- The every cylinder is independent,so if one of them break,others can running normally.

水箱全自动高压成型生产线

Pressure casting line for tank



- 标准线装载双模水箱模具 10 套。
- 可同时生产 10 种品种。
- 采用树脂模成型，模具不需要干燥处理，可连续生产。
- 日注浆总量 1500 件以上。
- 占地面积 L28*W6*H5。
- 全自动的注浆、脱模和搬运工艺，减轻了工人的劳动强度。
- 工人只需在输送线末端将制品搬下进行加工即可。
- 设备总装机容量 60KW 时间运转率为 20%。
- 采用 PLC 和触摸屏控制，设备操作简便，简单易学，可远程调试程序。
- 设计有简便的参数修改平台，可根据泥浆的性能变化及时调整参数。
- 模具压力系统分为独立的十组，当其中一台发生故障时不会影响到其他机台的正常运行。

- The standard line with 10sets mould, 10 mould permit different type of tank mould
- With plastic mould
- Produce More than 1500pes per 24hr
- Machine dimension is L28*W6*H5
- Automatic to casting, demould, and carring
- Total need workers 9-12 for 3shift
- Power is 60KW.
- Use PLC and screen to control, change the parameter is very easy and safe
- The every cylinder is independent. so if one of them break, others can running normally

盆类 / 蹲便高压成型机

Pressure casting line for washbasin



- 标准机装载盆模具 12 套。
- 本机可用来生产盆和蹲便柱类产品。
- 采用树脂模成型，模具不需要干燥处理，可连续生产。
- 日注浆总量 600 件。
- 占地面积 L16*W6*H4。
- 全自动的注浆工艺，减轻了工人的劳动强度。
- 工人只需在脱模时使用脱型板将产品搬到加工线进行加工即可。
- 设备总装机容量 18KW, 时间运转率为 15%。
- 采用 PLC 和触摸屏控制，设备操作简便，简单易学，可远程调试程序。
- 设计有简便的参数修改平台，可根据泥浆的性能变化及时调整参数。

- The standard line with 12 sets mould, permit different type of washbasin mould.
- With plastic mould.
- Produce for about 600 pcs per 24hr
- Machine dimension is L16*W6*H4
- Automatic to casting, manual demould and carrying.
- Power is 18KW.
- Use PLC and screen to control, change the parameter is very easy and safe.

日用瓷高压成型机

Pressure casting line for tableware



- 采用树脂模成型，模具不需要干燥处理，可连续生产
- 日注浆总量 50 – 120 件.
- 占地面积 L1.5*W2.4*H2.2
- 全自动的注浆工艺，减轻了工人的劳动强度。
- 全自动脱型。
- 设备总装机容量 6KW.
- 采用 PLC 和触摸屏控制，设备操作简便，简单易学。
- 设计有简便的参数修改平台，可根据泥浆的性能变化及时调整参数。

- The standard line with 1set mould
- With plastic mould
- Produce for about 50-120pes per 24hr
- Machine dimension is L1.5*W2.4*H2.2
- Automatic to casting, demould and carring
- Power is 6KW
- Use PLC and screen to control, change the parameter is very easy and safe

中压成型机

MID Pressure casting machine for washbasin



- 标准机装载盆模具 8-12 套
- 本机可用来生产盆和蹲便类产品
- 采用高强石膏模或中压树脂模成型，模具不需要干燥处理，可连续生产。
- 日注浆 15-35 次。
- 占地面积 L12*W5*H3
- 全自动的注浆工艺，减轻了工人的劳动强度。
- 工作人员三班共 6~7 人
- 设备总装机容量 12KW, 时间运转率为 15%
- 采用 PLC 和触摸屏控制，设备操作简便，简单易学。
- 设计有简便的参数修改平台，可根据泥浆的性能变化及时调整参数。

- The standard line with 8-12sets mould.
- With Mid-pressure plastic mould or high strength plaster mould.
- Produce for about 15-35times per 24hr
- Machine dimension is L12*W5*H3
- Automatic to casting,manual demould and carring.
- Total need workers 6~7 for 3shift.
- Power is 12KW.
- Use PLC and screen to control,change the parameter is very easy and safe.

可翻转低压快排水成型机

Spagless and Rotating casting machine



• 可翻转低压快排水成型机是森兰特公司自行研发的卫生陶瓷成型设备，适用于几乎所有产品的注浆成型

- 采用机械化升降、翻转、脱模作业，极大提高了工作效率，降低劳动强度。
- 日注浆次数可达到 6-9 次。
- 通过排水脱模，坯体很容易脱离模具，开裂变形少，大大降低滑石粉使用量，降低现场粉尘污染，改善作业环境。
- 通过配套的低压快排水系统，模具快速排出水份，进行下次注浆，从而实现连续生产。
- 采用的低压快排水工艺，模具现场不需要干燥，有效降低现场温度，改善环境。
- 便捷的操作控制，先进的工艺流程，是未来陶瓷成型的发展趋势。

- Spagless and Rotating casting machine is design by SUNLETS, suitable to casting for almost all the sanitaryware
- Lifting, Rotating, demoulding by machine, greatly improve the working efficiency, reduce labor intensity
- Produce for about 6-9times per 24hr
- Through drainage, demoulding is easy, less cracking deformation, reduce the dust pollution,improve the working environment
- Through drainage system, mould rapidly discharge the water, eed not to be dry. so the mould could continuous casting
- Convenient operation control, advanced technological process,is the future of the ceramic feasting

低压快排水立浇线

Spagless casting bench



- 适用范围：盆、蹲便、水箱盖、其他小件等。

利用配套的低压快排水系统快速排出模具水份，进行下次注浆，达到连续生产的要求。日注浆次数可达到 6—9 次。

- 通过排气脱模，坯体很容易脱离模具，开裂变形少，大大降低滑石粉使用量，降低现场粉尘污染，改善作业环境。

- 采用的低压快排水模具现场不须夜间干燥，有效降低现场温度，改善环境。

- 极快的工作效率，先进的工艺流程，是未来陶瓷成型的发展趋势

- Spagless casting bench is design by SUNLETS, suitable to casting for washbasin, un iral cover etc

- Produce for about 6-9 times per 24hr

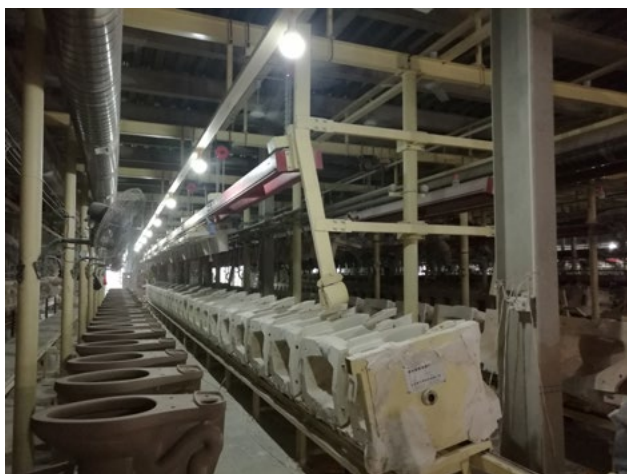
- Through drainage, demoulding is easy, less cracking deformation, reduce the dust pollution, improve the working environment

- Through drainage system, mould rapidly discharge the water, need not to be dry. so the mould could continuous casting.

- Advanced technological process, is the future of the ceramic feasting

吊链提升立浇线

Chain hoist casting bench



- 该设备主要用于分体、连体座便器的注浆成型。
- 可采用人工供浆和自动供浆两种方式。
- 采用机械化升降、气动翻坯作业，极大降低了工人的劳动强度。

- This equipment is mainly used in watercloset.
- Two way to casting: Manual or automatic
- Lift by chain hoist, take over the watercloset body by air cylinder, greatly reduces the labor intensity of workers.

普通立浇线

General casting bench



- 该设备主要用于座便器、盆、蹲便等的注浆成型。
- 可采用人工供浆和自动供浆两种方式。
- 降低了工人的劳动强度，节省了占地面积。

- This equipment is mainly used in watercloset, washbasin, uniral etc.
- Two way to casting: Manual or automatic
- Reduce the labor intensity of workers, save area, equipment cost is low

干燥设备篇/Dryers

快速干燥室/Fast Drying Chamber

快速干燥室

Fast drying chamber



本设备主要适用于成型车间湿坯干燥和模具车间的模具干燥。干燥室通过自动控制器对干燥室内的温湿度精确控制和调节，形成可靠有效的温湿度曲线，保证品质的条件下，在最短的时间内干燥坯体或模具。整套设备实现全自动控制，采用先进的 PLC + 触摸屏形式，可视化效果好，操作简单，温湿度调节方便。此设备占地面积小，工作效率提高，是适合陶瓷生产企业新技术革新改造的重要一环，此干燥室亦可设计成连续干燥的形式。

This equipment is mainly used for the forming workshop drying wet blank. The drying chamber through the automatic control of temperature and humidity on the drying chamber of the accurate control and adjustment, the formation of the curve of temperature and humidity is reliable and effective, ensure the quality, in the drying of green in the shortest time. The realization of automatic control equipment, using advanced PLC+ touch screen, good visual effect, simple operation, easy to adjust the temperature and humidity. This device has the advantages of small occupation area, high work efficiency, is an important part for transformation innovation ceramics factory new technology. This drying room can also be designed as a continuous drying form.

干坯检验设备篇

Dry-body Inspection Line

半成品检验流水线
Semi-finished Product Inspection Line

半成品检验流水线

Drybody checking line



半检流水线是用于干坯在线检验的自动化搬送设备，只需要工人在线对干坯进行擦拭和检验，坯体的搬送通过流水线自动输送，能够有效的减少坯体的搬放次数，提高生产效率，降低坯体破损率，降低工人劳动强度，同时取消搬送车，改善现场环境。

Drybody check line is used to check the dry body on carrying line, only need workers online for drybody cleaning and inspection, body move automatically by the pipeline, can effectively decrease the times of body's putup and down, improve production efficiency, reduce the body breakage, reduce the labor intensity of workers, cancel the carrying car at the same time beautify the environment

施釉设备篇/Glaze Equipment

施釉橱/Glazing Booth

循环施釉线/Glazing Line

机器人施釉工作站/Robot Glazing Station

施釉橱 Glazing Booth



一、用途

施釉橱专用于卫生陶瓷行业坯体的施釉。整体结构采用不锈钢或塑料板制成，釉浆可以充分回收再利用，可根据客户的需求或现场配置制作集中除尘式或单独水浴除尘式施釉橱。

二、技术参数

- (1) 工作台回转直径：1200-1500mm
- (2) 隔釉帘层数：3 层
- (3) 除尘形式：集中除尘或水浴除尘
- (4) 风机功率：3kW 2900rpm

The shower-dedust glazing booth, with feature of glaze recycle, integrate structure of stainless steel or plastic plate, is special used for the base-glazing in sanitary ceramic industry.

Technical Data

Rotary diameter of working table: 1200-1500mm

Number of air-glaze-separate-curtain: 3 layers

Type of dedust: shower dedust or together dedust

Specification of draught fan: 3kW 2900rpm

循环施釉线 Glazing line



该设备可用于不同规格卫生洁具坯体的除尘、施釉及釉浆回收，此施釉线为自动循环线，可一线完成坯体吹尘、清洗、喷釉、贴标等多道工序，保证产品品质的均一性。具有低功率、低噪音、清洁环保等特点，可有效提高施釉效果，减轻工人的劳动强度，极大的提高工作效率。

The device can be used in different specifications sanitary ware dust removal, glazing and glaze recycle, this line is automatic cycle line, it can be finished the body blowing dust, cleaning, spraying, glazing, labeling, such as multi processes, ensure product quality homogeneity. low power, low noise, can effectively improve glazing effect, reduce the labor intensity of workers, and greatly improve work efficiency.

机器人施釉工作站
Robot glazing station



机器人施釉工作站，采用机器人双工位施釉，改变了施釉人员与釉料直接接触的传统施釉方式，改善了工作环境，降低了工人的劳动强度，提高了施釉效率，降低了用工成本。同时，通过本站施釉后的产品，釉厚均匀、质量稳定、合格率高。

The robot glazing station adopts the robot double working position to apply the glaze, which changes the traditional way of glazing in direct contact with the glaze, improves the working environment, reduces the labor intensity of workers, improves the efficiency of glaze application and reduces the labor cost. At the same time, through this station after glazing products, glaze thickness uniformity, quality stability, high pass rate.

主要技术参数 /Main Technical Parameter

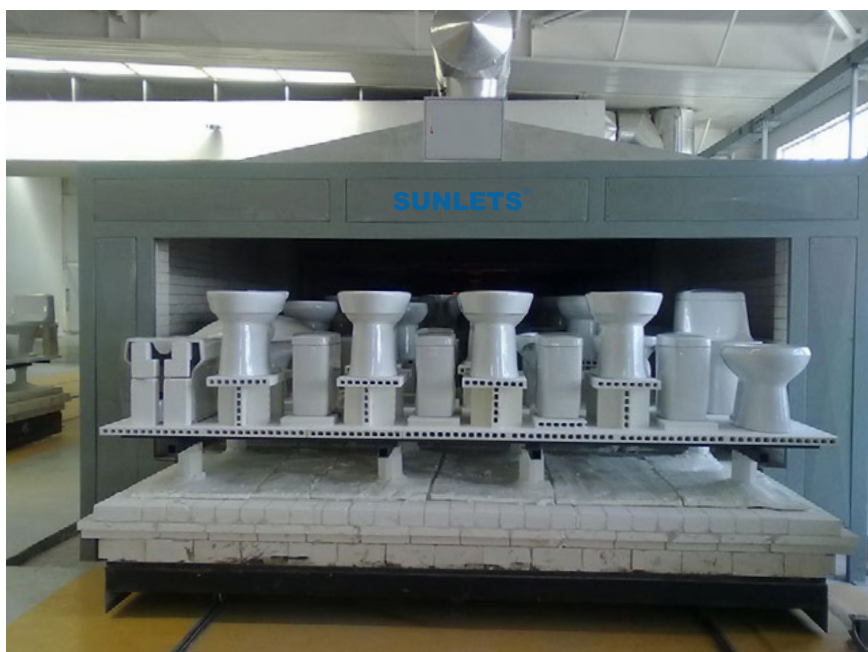
机器人重复定位精度 repeat position accurate of robot	± 0.06mm
工作室外形尺寸（长 x 宽 x 高） Overall size of working station	4300x3560x2550mm (L)x(M)x(H)
釉量转换的响应时间 Reaction time for glazing amount convert	≤ 0.3s

烧成设备篇/Firing Equipment

隧道窑/Tunnel Kiln

隧道窑

Shuttle kiln



烧成温度：1150–1280

烧成周期：12–18 小时

燃料：天然气，焦炉煤气

年产量：60–80 万件

上述产品的电控系统、传输方式、配套设备、窑炉长度等均可按用户要求设计施工。

Firing temperature: 1150-1280 C, cycle time: 12-18hr, fuel: natural gas,

Annual output: 600,000-800,000 pieces

As for the custom electric control, drive method and auxiliary equipments of above kiln could be available according to client's requirement.

主要技术参数 /Main Technical Parameter

名称	烧成温度	烧成周期	燃料	年产量
卫生瓷隧道窑系列	1150–1280	12–18	天然气、煤气	60–80 万件
日用瓷隧道窑系列	1260–1380	14–18	天然气、煤气	200–1500 万件

成瓷检验设备篇 Fired Ceramics Inspection Equipment

成瓷检验线/Ceramics Inspection Line
座便器漏水检验机/Leak Detection Machine

成瓷检验线

sanitaryware Inspection line



成瓷检验线实现了卫生制品从外观检验、性能检测、打包装箱等步骤的流水线作业。主线由传动辊、皮带进行制品传送，配有外观检查台、漏水检验机、冲水试水检验机、水件装配装置，打包装箱装置等（根据客户需求安装）

该套设备可有效的降低产品破损率，减轻工人的劳动强度，规范了检验步骤，避免漏检提高效率

sanitaryware Inspection line to achieve a sanitaryware from appearance checking, performance testing, packaging boxes and other steps of assembly line. Main products by drive roller, belt transmission, equipped with appearance inspection, leakage test machine, flushing water testing machine, assembly plant, packaging boxes devices This set of equipment can effectively reduce the damage rate products, reduce the labor intensity of workers, standardize the inspection steps

座便器漏水检验机

Leakage Detector For One-piece Water Closet



一、技术特点：

座便器漏水检验机是用于连体座便器漏水检验的专用设备，该机采用真空方式检验座便器是否漏气，从而判定其是否漏水。本机采用全自动控制，运行平稳，安全有效，是中高档陶瓷产品必备的检验设备。

二、技术性能：

最大工作真空度：-0.09Mpa

气缸最大压力：1800N

气缸直径：63mm

气缸行程：250mm、450mm

适用座便器类型：平口型水箱或分体坐便器

适用座便器最大高度：720mm

Leakage detector is a special equipment for the one-piece water closet, through vacuum to inspect if the product aleak.

Technical Data:

Vacuum limit: -0.09 Mpa

Maximum pressure of cylinder: 1800N

Cylinder dia.:63mm

Cylinder throw out: 250mm,450mm.

Suit for: Water Closet & flat-rim One-piece Water Closet

Applicable maximum height:720mm.

造型设备篇/Molding Equipment

石膏自动喂料、称重、搅拌设备
高压树脂模具设计制造
低压快排水石膏模具设计制造

Plaster Auto Feeding, Weighing and Mixing Equipment
Resin Mold Design and Manufacturing for High Pressure Casting
Spagless Plaster Mold Design and Manufacturing

石膏自动喂料、称重、搅拌设备

Plaster Automatic feeding, weighing and mixing equipment



由除尘机、料仓、螺旋给料机、除尘管道、自动称量平台、搅拌机等构成。

主要技术性能及参数

- 1、适用范围：造型车间现场石膏粉储存、称重、搅拌
- 2、生产能力：4-20 吨 / 日（用户选择）
- 3、选用除尘机：6000m³ / hr
- 4、振动电机：1. 1kw
- 5、螺旋给料机：0. 75kw
- 6、控制形式：自动控制

This machine is mainly composed of duster, stock bin, screw feeder, dust removal pipeline, automatic weighing platform, etc.

The main technical parameters

- 1, application: Storage, weighing and mixing of gypsum powder on site in plastic shop
- 2, production capacity: 4-20 tons/day
- 3, duster machine: 6000 m³/hr
- 4, vibration motor: 1.1 kw
- 5, screw feeder: 0.75 kw
6. control forms: automatic control

高压树脂模具设计制造

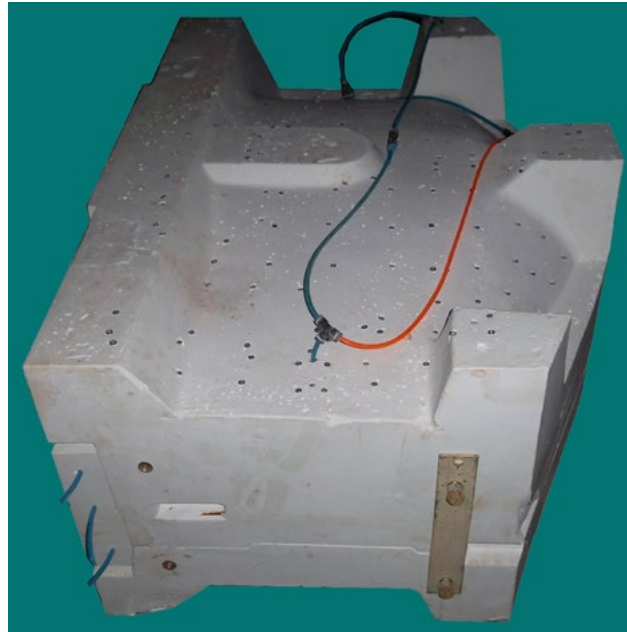
SUNLETS Resin Mold Design and Manufacturing



- 均匀的微孔结构：避免脱模时的粘接，使制品表面更光洁。
 - 寿命长：最低可使用 15000 次，很多都超过了 30000 次。
 - 分区式脱型系统，可有效改善局部脱模不佳的问题。
 - 可重复使用的增强铁框，使模具使用更安全。
 - 脱水管采用快插接头连接方式，使模具更换更加简捷，快速。
 - 模具材料不易与水发生反应，模具维护更方便。
-
- The microhole is very equably,is good for demould and produce.
 - The mould life more than 30000 times.
 - There are 3~6 independent area in one mould,can easily adjust local air pressure.
 - Every mould with a iron frame,let the mould more stronger.and the frame could be use repeatde
 - Mould air pipe use quick lock tie-in,so the mould replacing coluld be very quickly.

低压快排水石膏模具设计制造

SUNLETS Spagless Mold Design and Manufacturing



- 石膏模具使用面内侧均匀分布排水通气管路结构。
 - 模具设立分区控制，保证坯体不同部位软硬度和吃浆厚度。
 - 寿命长：最低可使用 100 次。
 - 气管采用快插接头连接方式，使模具更换更加简捷，快速。
-
- Spagless mould using the inside surface evenly distributed drainage pipe structure.
 - mould made of zone control to ensure the hardness and thickness of the greenbody's different parts is same
 - Long life: minimum can be used 100 times.
 - Trachea use fast connection-peg connection mode, make the mould replacement more fast.

环保设备篇

Industrial Environmental Protection Equipment

袋式除尘器
污水处理站
脱硫脱硝装备

Dust Collector
Sewage Treatment Station
Desulfurization and Denitration Equipment

袋式除尘器

The working principle of bag type dust collector



含尘气体进入除尘器后，由于气流断面突然扩大及气流分布板作用，气流中一部分粗大颗粒在动和惯性力作用下沉降在灰斗；粒度细、密度小的尘粒则进入滤尘室，通过布朗扩散和筛滤等组合效应，使粉尘沉积在滤料表面上。阻力达到某一规定值时，电磁脉冲阀自动开启，压缩空气在上箱体内迅速膨胀，涌入滤袋，使滤袋膨胀产生振动，并在逆向气流冲刷的作用下，吸附在滤袋外表面上的粉尘被剥离落入灰斗中。净化后的气体进入净气室由排气管经风机排出。

The dust laden gas into the dust collector, the air section sudden enlargement and air distribution plate, a part of coarse particles in the air and under the force of inertia settlement in the hopper: fine grain size, low density of the dust into the dust filtering chamber, through the Brown diffusion and filter combination effect, so that the dust deposition in the on the surface of the filter media. Resistance to a specified value, electromagnetic pulse valve open, compressed air in the upper part of the box expands rapidly, into the bag, the bag expansion vibration, and in reverse flow under the action of adsorption of dust in the filter bag, the outer surface of the stripped into ash hopper. The purified air enters a clean air chamber by an exhaust pipe through the fan discharge.

污水处理站

Sewage treatment station



污水处理站的作用是对生产、生活污水进行处理，达到规定的排放标准，是保护环境的重要设施。现代污水处理技术，按处理程度划分，可分为一级、二级和三级处理，一般根据水质状况和处理后的水的去向来确定污水处理程度。经过混凝沉淀法，砂滤法三级处理后的污水达到水污分离的效果，经过脱水和干燥设备后，污泥被最后利用，而污水则经过循环系统回收利用。

The purpose of this sewage treatment station is to process daily consumed water of domestic and production to reach to the standard of discharge, which is a key facility to protect environment. Modern technology can be divided into three stages and shall be applied according to the status of sewage and where it goes after processing. After coagulation and sedimentation, sand filtration of three stages it can be done that sewage separated from water. Sludge is recycled after dehydrating and water will be again used for cleaning work within workshops to achieve zero sewage release.

脱硫脱硝装备

Desulfurization and Denitrification Equipment



我公司自主生产的烟气脱硫脱硝塔主要用于窑炉烟气脱硫脱硝，产品以玻璃钢为主要材质，经过喷淋悬流 + 尿素液湿法脱硝 + 湿法脱硫工艺，将烟气中的氮氧化物、二氧化硫进行中和处理，从而降低排放浓度，达标排放。

The tower that manufactured by us is mainly used for tunnel kiln exhaust desulfurization and denitrification. The product is mainly made of FRP. After spraying suspension + urea liquid wet denitrification + wet desulfurization process, the nitrogen oxides and sulfur dioxide in exhaust gas were neutralized, so as to reduce the emission concentration and meet the emission standards.



® 森兰特科技



Beijing Sunlets Technology Co., Ltd.

Tel: 0086 10 8291 2819

Fax: 0086 10 8291 2819

Add: 911 Tower E, LongQi Plaza ChangPing District,
Beijing CHINA 102208

Sales Contact:

M/WhatsApp: 0086 1350 1122904

E_mail: sales01@sunletsgroup.com

www.sunlets.net