



15,000 TPA ANHYDROUS CALCIUM CHLORIDE 94% GRANULE PROJECT

This catalogue contains the technical specifications and information of the main equipment for the 94% calcium chloride granule production plant.

本目录包含94%氯化钙颗粒生产装置主要设备的技术规格和信息



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GRANULATOR

Cylindrical Fluid bed spray drying machine for drying and granulation of calcium chloride solution based on agglomeration and coating mechanism.

基于团聚和包衣机理的流化床喷雾干燥机，用于氯化钙溶液的干燥和造粒



TECHNICAL SPECIFICATIONS

Capacity: 50 ton/day Granule

Parts:

1. High Pressure Liquid Spray System
2. Hot Air Distributor
3. Fluidized Bed
4. Expanded Section
5. Exhaust Rectifier
6. Inlet Combining Pipe
7. Sealing Discharger

Size:

1. Height: 12 m
2. Diameter: 5 m

Materials:

1. Titanium and 2205 Steel for parts in contact with liquid
2. 316L Steel for main body
3. CS for supports and inlet hot air
4. 310 Steel for Expanded and exhaust part

产能：50吨/天颗粒

部分：

1. 高压液体喷雾系统
2. 热风分配器
3. 流化床
4. 扩展部分
5. 排气整流器
6. 进水管
7. 密封卸料器

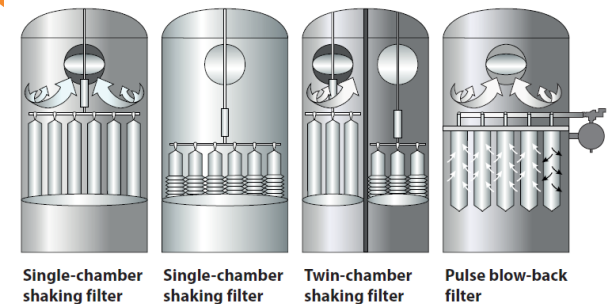
尺寸：

1. 高度：12 m
2. 宽度：5 m



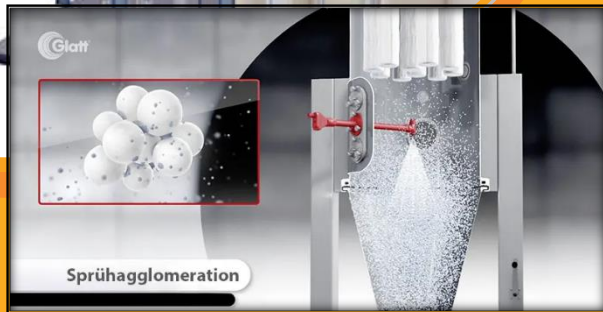
AGGLOMERATION AND GRANULATION PROCESSES:

- » Reduction of fine dust content
- » Improvement of the flowability
- » Elimination of segregation
- » Homogeneous distribution of all components
- » Easier to form into tablets
- » Controllable bulk density
- » Optimized solubility of the product



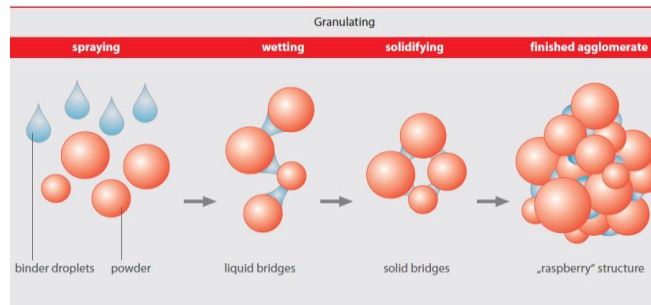
FILTER SYSTEMS

Whether utilizing the single-chamber or the twin-chamber principle, a back-shake or pulse blow-back filter, filter bags or cartridges, fabric or metal filters: Each system has its specific advantages and is recommended and supplied by according to the individual product and the process.



Granulating.

Granulating in the fluid bed is a modern method of creating granulates from powder using liquid bridges. The granulation liquid used for spraying can either be aqueous or contain organic solvents. The moist granulates are dried at the end of the process and, if necessary, cooled. Fluid bed granulates are loose and often porous, and are therefore extremely soluble.





REACTOR

FRP and PP double layer reactor with foam control system and circulation flow to produce calcium chloride solution from limestone.

FRP 和 PP 双层反应器，配有泡沫控制系统和循环流，用于从石灰石生产氯化钙溶液

TECHNICAL SPECIFICATIONS

Volume: 55 m³

D= 3.2 m

H= 7.2 m

Material: FRP Lined with PP (double Layer)

Parts:

1. Body
2. Foaming Control System
3. With Recycle flow
4. Feeding System

* With Complete Control System Connected to DCS System for controlling Temperature, Foam, Level, Pressure, Conversion, and pH

体积：55立方米

D=3.2m

高= 7.2 m

材质：玻璃钢内衬PP（双层）

部分：

1. 身体
2. 发泡控制系统
3. 具有循环流程
4. 喂料系统



ABSORPTION TOWER (REACTION PART)

Three scrubbers of packed column type filled with ceramic random packings to remove hydrochloric acid from the reactors outflow gas. These scrubbers change the exhaust gas from the reactors to environmental standards.

三个填充陶瓷散堆填料的填充塔型洗涤器用于从反应器流出气体中除去盐酸。这些洗涤器将反应器排出的废气改变为环境标准。



TECHNICAL SPECIFICATIONS

Type: Packed Tower With anti-corrosion parts

DN: 2200 mm

Height: 7000 mm

Packing: Ceramic random packing

Material: FRP plus PP

Water Circulation: 25 m³/h

With Spray system and demister

Designed to Reach Environmental Organization standards (Less than 50 mg/m³ HCl)

类型：填料塔

通径：2200毫米

高度：7000毫米

包装：陶瓷散堆包装

材质：玻璃钢

水循环量：25 m³/h

带喷雾系统和除雾器



ABSORPTION TOWER (GRANULATION PART)

Two scrubbers of packed column type filled with ceramic random packings to remove CaCl_2 Dust from the flow of gas exiting the granulator. These scrubbers change the exhaust gas from the granulator to environmental standards.

两个填料塔型洗涤器，填充有陶瓷散堆填料，用于去除离开造粒机的气流中的 CaCl_2 粉尘。这些洗涤器将造粒机排出的废气改变为环境标准。



TECHNICAL SPECIFICATIONS

Type: Packed Tower With anti-corrosion parts

DN: 3000 mm

Height: 8000 mm

Packing: Ceramic random packing

Material: 2205 – FRP - PP

Water Circulation: 120 m³/h

With two layer Spray system and demister

Designed to Reach Environmental Organization standards (Less than 50 mg/m³ CaCl_2 Dust)

类型：填料塔

通径：3000毫米

高度：8000毫米

包装：陶瓷散堆包装

材质：2205-玻璃钢

水循环量：120 m³/h

具有两层喷雾系统和除雾器



FURNACE & BURNER

Furnace and industrial burner to supply the hot air needed for the granulator along with two fans to supply excess air to adjust the temperature, as well as complete control equipment connected to the central control system.

提供造粒机所需热空气的熔炉和工业燃烧器，以及提供多余空气以调节温度的两个风扇，以及连接到中央控制系统的完整控制设备。



TECHNICAL SPECIFICATIONS

Output heating: 5×10^4 kcal/h

Rated Gas burning volume: $600 \text{Nm}^3/\text{h}$

Gas pressure: 7 ~ 15 kPa

Flame diameter: 0.95 m

Flame length: 4.5 m

Materials: SS310 – SS304 – CS

Equipment length: 6.5 m

Hot air outlet diameter: 1.4 m

Thickness of flange: 20mm

With Complete Control System

输出热量： 5×10^4 kcal/h

额定燃气燃烧量： $600 \text{Nm}^3/\text{h}$

气体压力：7 ~ 15kPa

火焰直径：0.95 m

火焰长度：4.5 m

材料：SS310 – SS304 – CS

设备长度：6.5m

热风出口直径：1.4m

法兰厚度：20mm

具有完整的控制系统



VENTURI

Venturi device to increase the efficiency of removing calcium chloride dust particles from the gas outflow from the granulator and also reducing the temperature of the gas flow before entering the scrubbers.

文丘里装置可提高从造粒机流出的气体中去除氯化钙粉尘颗粒的效率，并在进入洗涤器之前降低气流的温度

TECHNICAL SPECIFICATIONS

Model: Venturi Cooler

material: SS 2205 – SS 316L

With 2 spray nozzles to spray CaCl₂ Solution in throat.

Designed to Reach Environmental Organization standards (Less than 50 mg/m³ CaCl₂ Dust)

型号：文丘里冷却器

材质：SS 2205 – SS 316L

带有2个喷嘴，可将CaCl₂溶液喷入喉咙



ROTARY DRUM COOLER

Rotary drum machine for cooling dried calcium chloride granules with cooling water

用冷却水冷却干燥氯化钙颗粒的转鼓机

TECHNICAL SPECIFICATIONS

Model: LQQ1.5x5

material: SS 304 – CS

Power: 5.5 kW

With Fins made of SS 304

With Sight glass (DN 150) and Manhole (DN 300)

Drive mode: Chain

型号：LQQ1.5x5

材质：SS 304 – CS

功率：5.5千瓦

鳍片由 SS 304 制成

带视镜 (DN 150) 和人孔 (DN 300)

驱动方式：链条



HIGH PRESSURE PUMPS

High-pressure pumps for spraying the solution in the granulator and transferring the solution to the filter press with special alloys and anti-corrosion

高压泵·用于喷射造粒机中的溶液并将溶液输送至采用特殊合金和防腐材料的压滤机



TECHNICAL SPECIFICATIONS

Q: 150 L/min

material: SS 316L – SS 2205 – CS – PVDF - PTFE

P: 1.5 MPa

Power: 18 kW

With Variable frequency motor

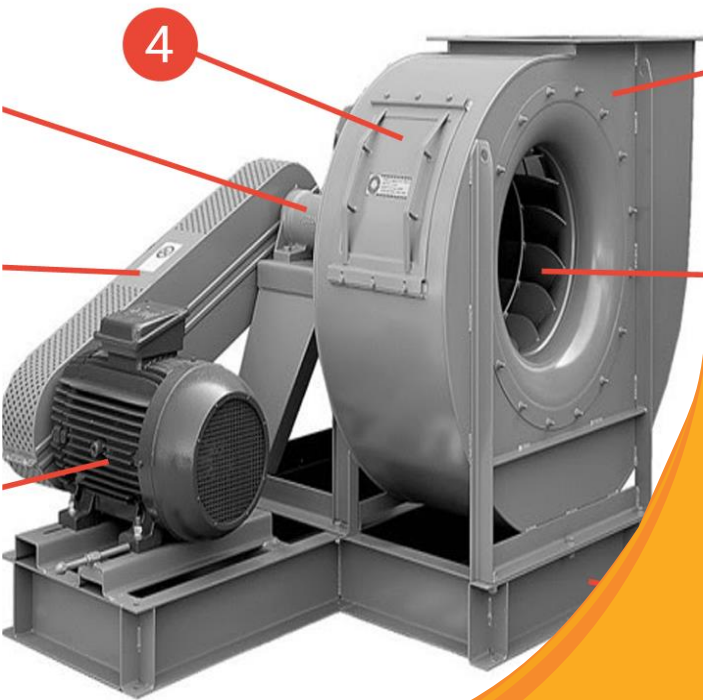
问：150升/分钟

材质：SS 316L – SS 2205 – CS

压力：1.5兆帕

功率：18千瓦

带变频电机



SYSTEM BLOWER & INDUCED FAN

System blower and induced fan to activate the furnace, granulator, cyclone, and absorption towers and complete the production process

系统鼓风机和引风机启动炉子、造粒机、旋风分离器和吸收塔并完成生产过程



TECHNICAL SPECIFICATIONS

Volume: 40000 ~ 85000 Nm³/h

Installation style: Integral support

P: 5 ~ 7 kPa

Power: 132 kW ~ 110 kW ~ 45 kW

Material: 16Mn - CS - 2205

With Vibration-absorbing pad (rubber)

流量：40000 ~ 85000Nm³/h

安装方式: 整体支撑

压力：5 ~ 7kPa

功率：132千瓦 ~ 110千瓦 ~ 45千瓦

材质：16Mn-CS-2205

带减震垫（橡胶）