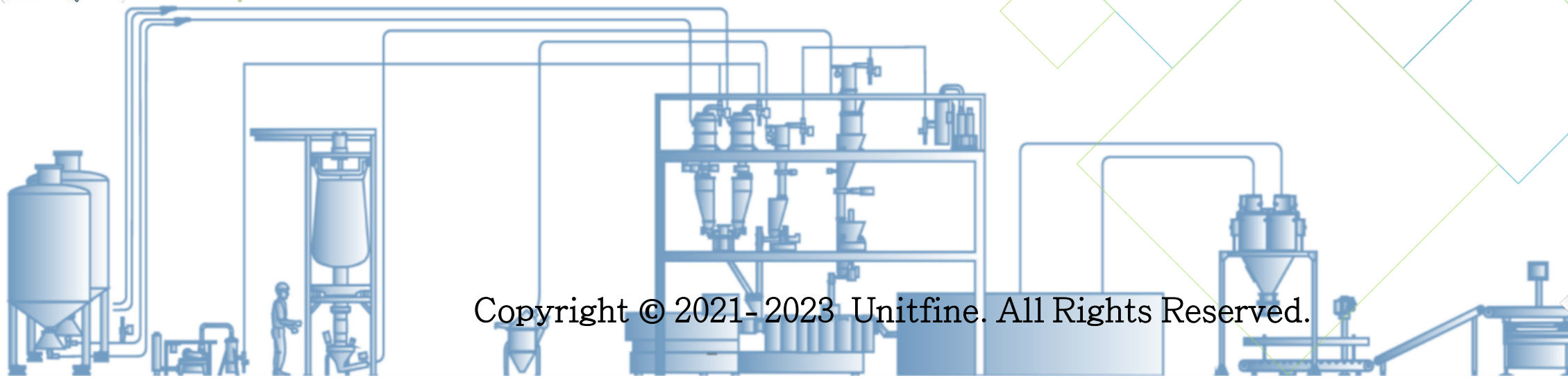




UNITFINE MACHINERY

友帆配料输送系统

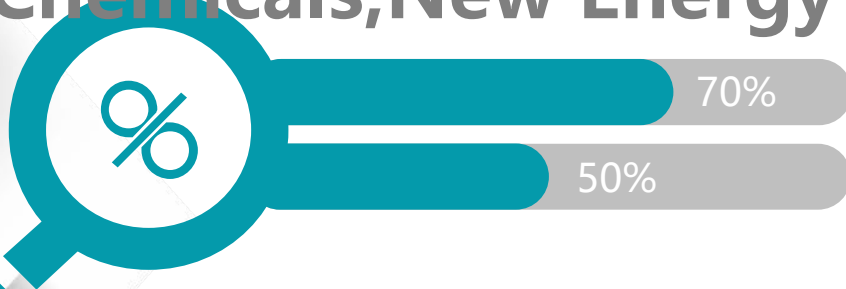
Batching and conveying system



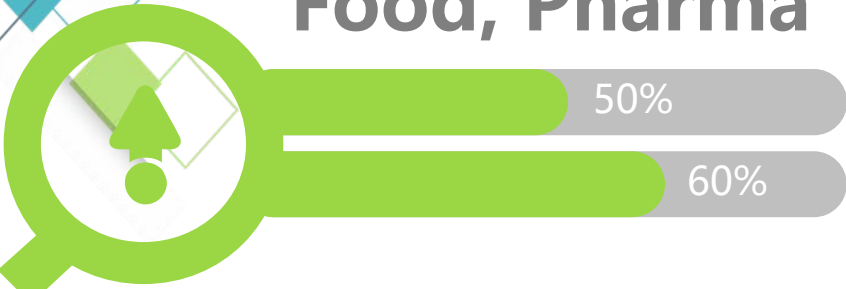
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Applications:

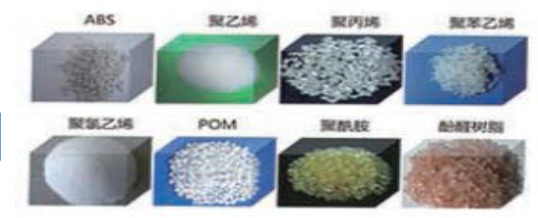
Chemicals, New Energy



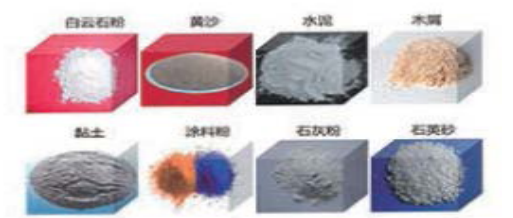
Food, Pharma



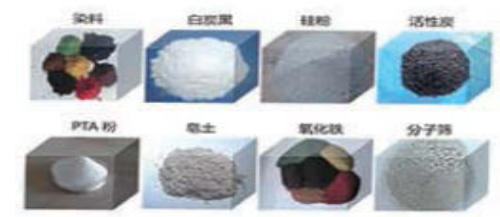
塑料工业 PLASTIC



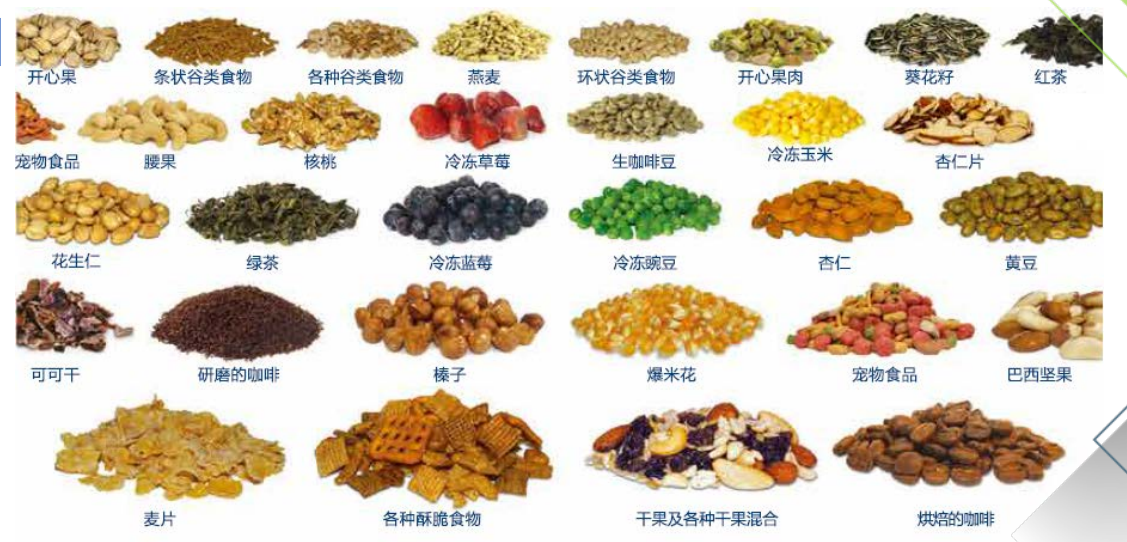
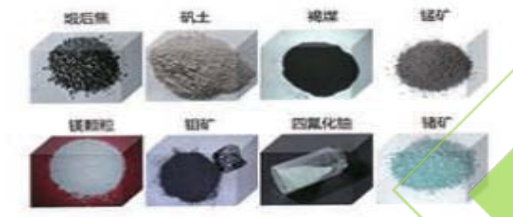
建筑材料 Building Materials



精细化工 Fine chemicals



矿业 Mining



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CONTENTS



Batching equipment
配料设备



Pipe chain conveyor
管链输送机



Vacuum feeder
真空上料机

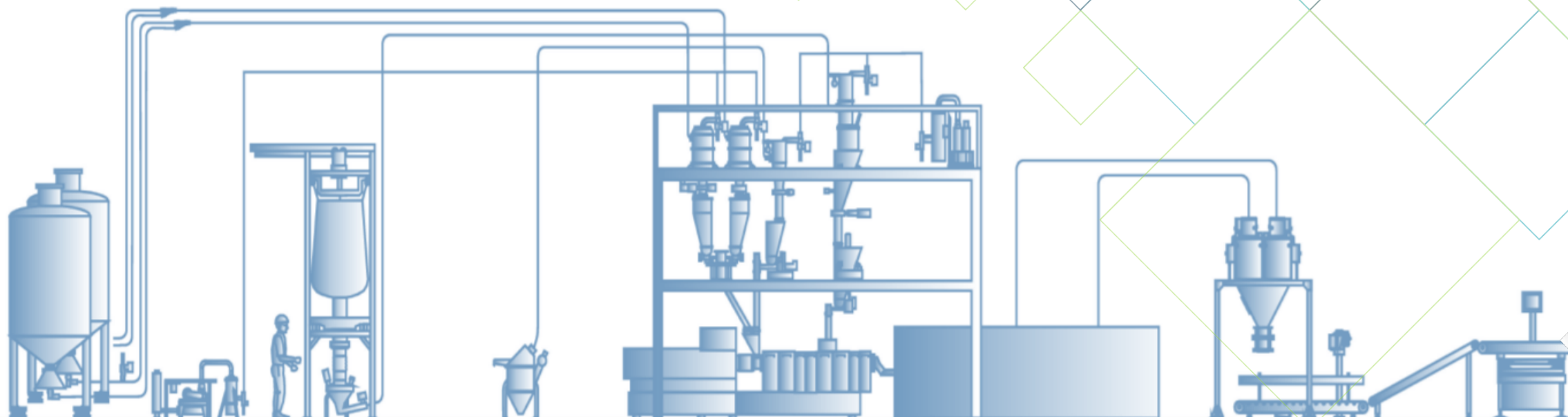


Ton bag unloading station
吨包卸料站

1

Batching equipment 配料设备

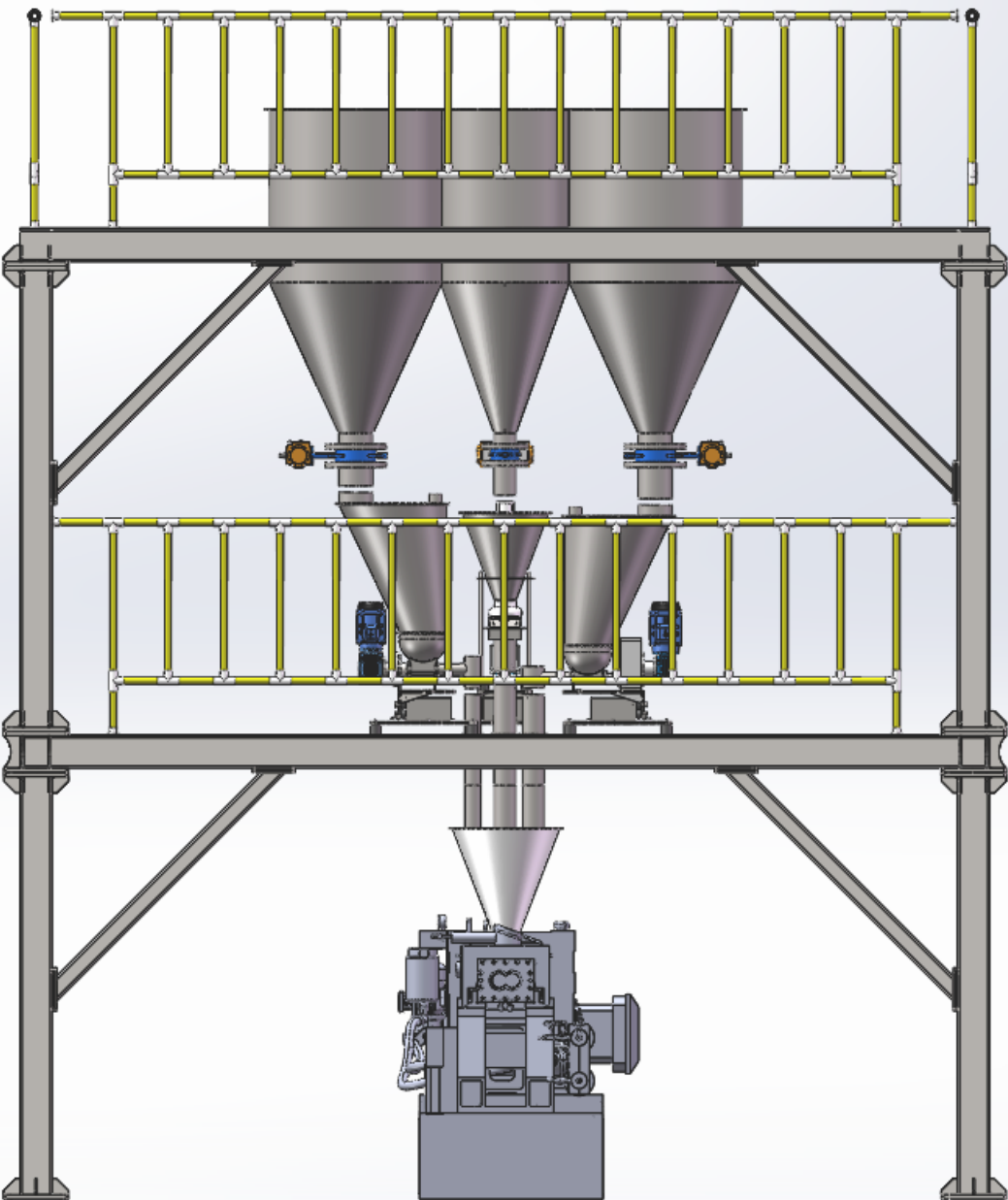
- Dust-Free
- High Stability
- Safe and Efficient
- Eco-Friendly and Energy Saving





产品简介

Product introduction



Batching equipment:

- Twin-Screw Gravimetric Feeder
- Single-Screw Gravimetric Feeder
- Liquid Gravimetric Feeder
- Vibrating Feeder
- Volumetric Feeder



ONE

产品特点
Product features



01

Dust Free

The strong seal prevents material from leaking during operation, which avoids environmental pollution.

02

High Applicability

Choose feeding equipment that suits the material's characteristics.

03

High Stability

The control module quickly stabilizes and filters out external disturbances, ensuring the equipment runs smoothly.

04

Safety

If the equipment has a problem, it will sound an alarm and stop to protect the equipment and prevent human errors.

05

User-Friendly

Using a precise control module, the equipment is easy to install, runs reliably, and has a low chance of problems.

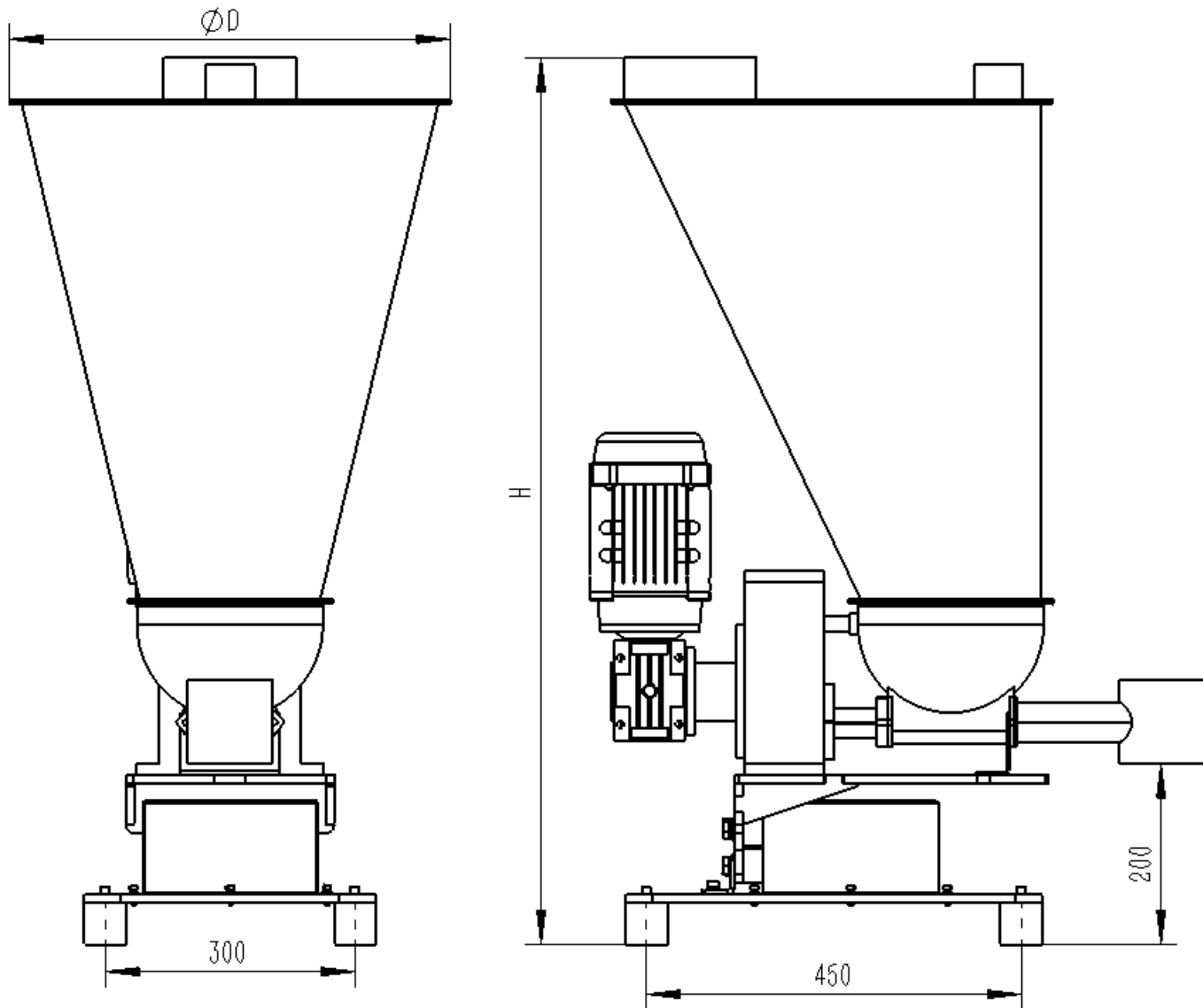


ONE

设备参数 Equipment parameters



Twin-Screw Gravimetric Feeder (Models:T1,T2,T3,T4)



Equipment Composition

- High-precision weighing platform
- Aluminum transmission gearbox
- Stainless steel ball-shaped bucket with a dual-screw feeding mechanism
- Drive motor (optional explosion-proof motor)
- Horizontal mixing mechanism and pneumatic arch-breaking mechanism, with optional vertical mixing
- Stainless steel metering hopper

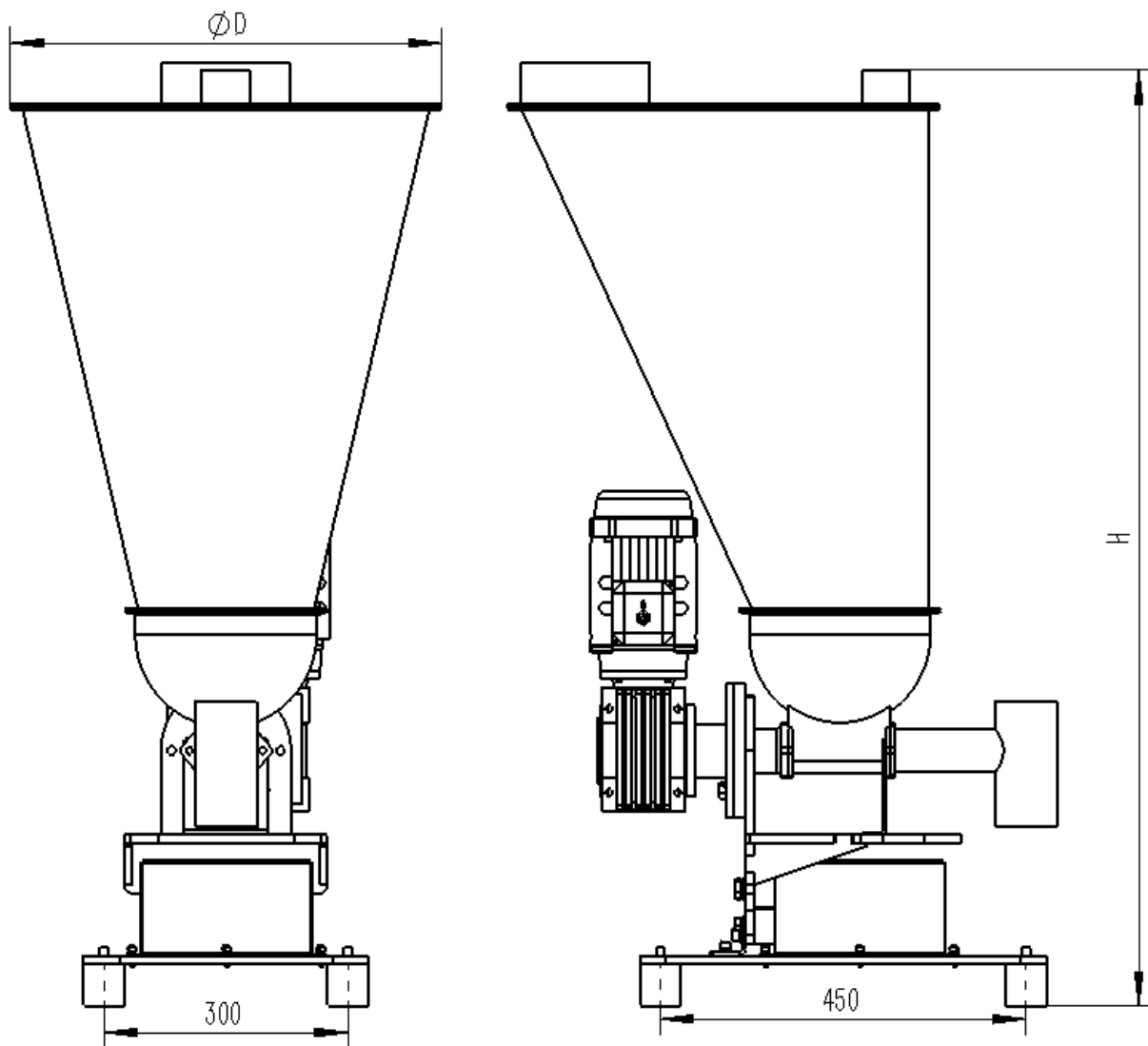
Technical Parameter:

- Reference Output: 1-2000 kg/h (for powder; actual output depends on the equipment model)
- Feeding Accuracy: $\pm 5\%$ (subject to material characteristics and on-site environment)
- Raw Material Temperature: $\leq 80^{\circ}\text{C}$
- Operating Environment: Temperature $0-50^{\circ}\text{C}$, humidity $\leq 80\%$, non-condensing.
- Protection Level: IP54
- Power Supply: 380V/50Hz, 220V/50Hz.

Dimension Comparison Table: (Reference only)

Hopper Volumn	(D)	H
40L	330	1000
60L	430	1100
80L	630	1200

Single Screw Loss-in-Weight Feeder (Models,S1,S4,S7,S9)



Equipment Composition:

- High-precision weighing platform
- Stainless steel ball-shaped bucket with a single-screw feeding mechanism
- Drive motor (optional explosion-proof motor)
- Stainless steel metering hopper

Technical Parameter:

- Reference Output: 1-2000 kg/h (for granular material, crushed material; actual output depends on the equipment model)
- Feeding Accuracy: $\pm 5\%$ (subject to material characteristics and on-site environment)
- Raw Material Temperature: $\leq 80^{\circ}\text{C}$
- Operating Environment: Temperature $0-50^{\circ}\text{C}$, humidity $\leq 80\%$, non-condensing.
- Protection Level: IP54
- Power Supply: 380V/50Hz, 220V/50Hz.

Dimension Comparison:(Reference Only)

Hopper Volumn	(D)	H
40L	330	1050
60L	430	1150
80L	630	1250



ONE

设备参数

Equipment parameters

Liquid Loss-in-Weight Feeder



Equipment Composition:

- High-precision weighing platform
- Plunger-type diaphragm pump (optional explosion-proof motor)
- Stainless steel metering hopper
- Stainless steel storage hopper
- Optional heating feature

Technical Parameter:

- Reference Output: 1-200 kg/h (for liquid; actual output depends on the equipment model)
- Feeding Accuracy: $\pm 5\%$ (subject to material characteristics and on-site environment)
- Raw Material Temperature: $\leq 80^{\circ}\text{C}$
- Operating Environment: Temperature $0-50^{\circ}\text{C}$, humidity $\leq 80\%$, non-condensing.
- Protection Level: IP54
- Power Supply: 380V/50Hz, 220V/50Hz.

Others:

- The storage hopper can be equipped with either a liquid level switch or a weighing structure, allowing for an accurate understanding of the material level inside the storage hopper.
- Various power transmission methods and operational modes are designed to meet the diverse needs of different users.
- Explosion-proof options include heating device explosion-proof, motor explosion-proof, and mechanical structure explosion-proof.
- Heating methods include electric heating, water heating, and oil heating.
- High-quality insulation materials and a high-sealing design are implemented to avoid unnecessary energy loss.



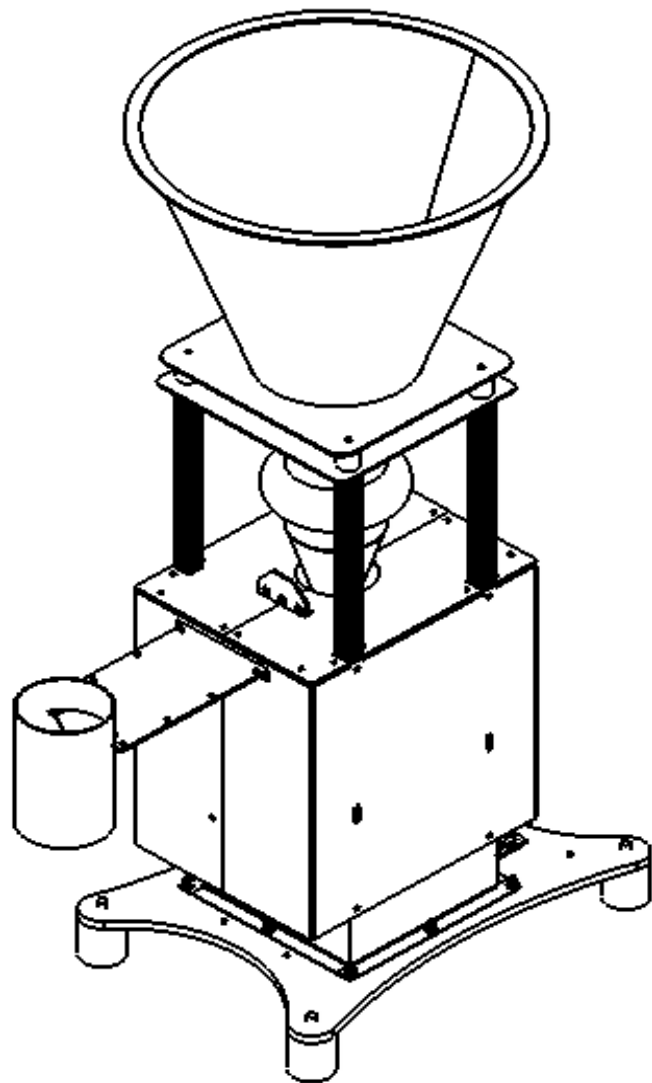
ONE

设备参数

Equipment parameters



Vibrating Batching Machine



Equipment Composition:

- High-precision weighing platform
- Electromagnetic vibrator
- Stainless steel discharge chute
- Stainless steel storage hopper

Technical Parameter:

- Reference Output: 1-500 kg/h (for powder, granular material, crushed material)
- Raw Material Temperature: $\leq 80^{\circ}\text{C}$
- Operating Environment: Temperature $0-50^{\circ}\text{C}$, humidity $\leq 80\%$, non-condensing.
- Protection Level: IP54
- Power Supply: 220V/50Hz.

Others:

- Utilizing an electromagnetic vibrator allows for material conveyance without damage.
- Ensures uniform and stable material conveyance, eliminating the unevenness associated with screw feeding. It is easy to clean and convenient to install.
- Suitable for conveying materials with poor fluidity and high compression ratios, making it versatile for conveying fibrous materials.
- Ideal for batching applications.



ONE

设备参数

Equipment parameters



Volumetric Feeder (S-series, T-series, Vibration-type)



Equipment Composition:

- Aluminum transmission gearbox
- Stainless steel ball-shaped bucket with feeding mechanism
- Drive motor (optional explosion-proof motor)
- Horizontal mixing mechanism and pneumatic arch-breaking mechanism, with optional vertical mixing
- Stainless steel hopper
- Variable frequency drive (adjusts the discharge rate by regulating the frequency).

Technical Parameter:

- Reference Output: 1-2000 kg/h (for powder, granular material, crushed material)
- Raw Material Temperature: $\leq 80^{\circ}\text{C}$
- Operating Environment: Temperature $0-50^{\circ}\text{C}$, humidity $\leq 80\%$, non-ondensing.
- Protection Level: IP55
- Power Specs: 380V 50Hz, 220V/50Hz



TWO

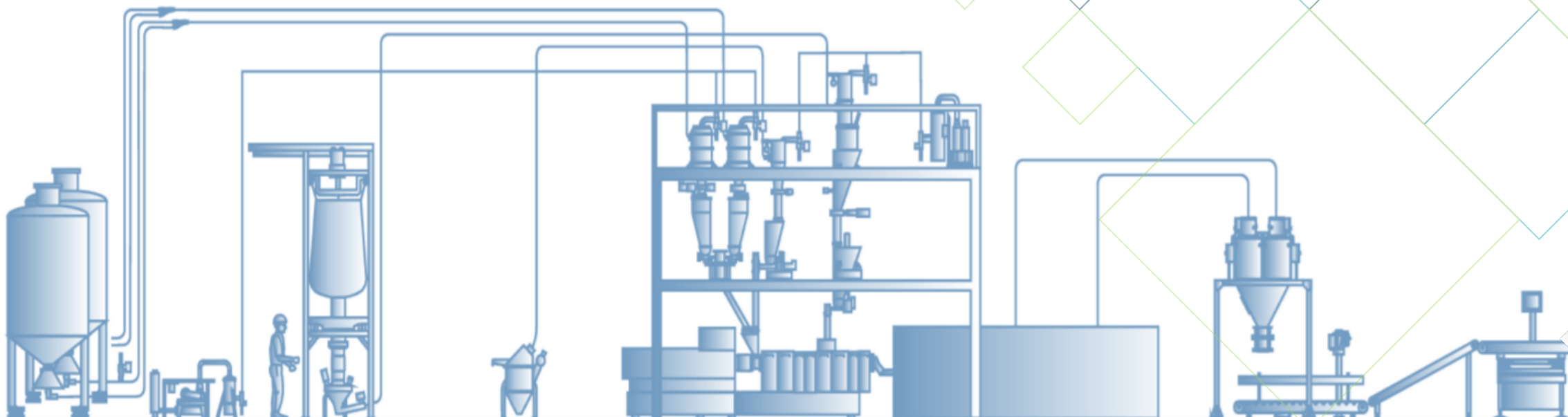
案例介绍

Case introduction



2 Tubular chain conveyor 管链输送机

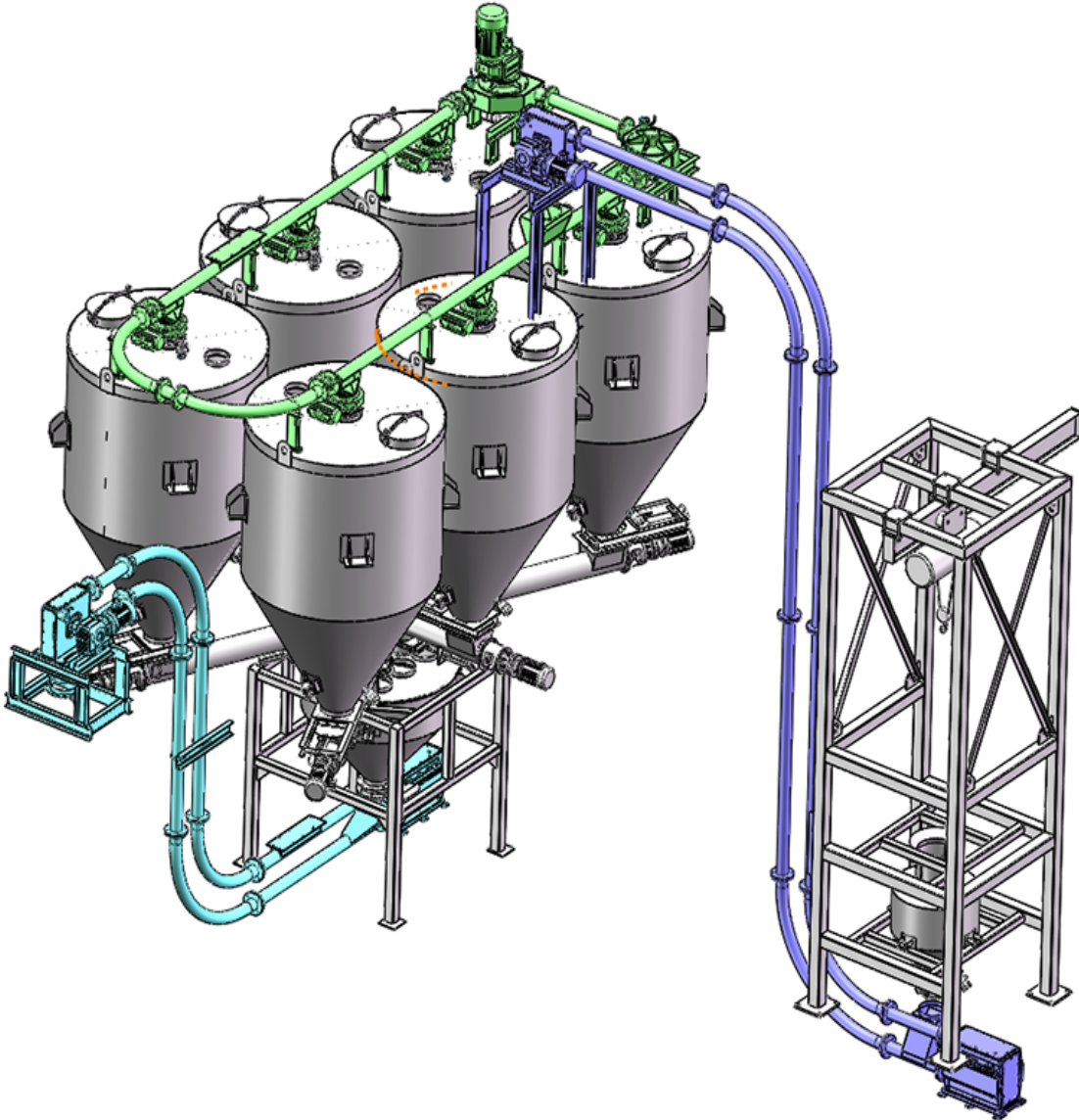
- Dust-free sealing
- Three-dimensional conveying
- Gentle conveying
- Eco-friendly and energy-saving





Advantages of UNITFINE Tubular Chain Conveyors:

1. Simple and Compact Structure: UNITFINE Tubular Chain Conveyors have a straightforward and compact design, allowing for horizontal, vertical, curved, or three-dimensional arrangements.
2. Customizable Feeding and Discharging: Depending on on-site requirements, the conveyors can support multiple inlets and outlets, facilitating a single chain system for multiple feeding and discharging points.
3. Dust-Free Sealing: The conveyed material remains in a sealed state from the inlet to the outlet flange, ensuring no dust leakage into the environment during transportation.
4. No Need for Dust Collectors: Unlike traditional systems, there is no need for a dust collector at the outlet; simple venting is sufficient, meeting modern environmental protection standards.
5. Nitrogen Gas Protection: The conveyors can be filled with nitrogen gas during transport, meeting the requirements for conveying potentially combustible or explosive powdered materials.
6. Gentle Conveying: Materials smoothly progress along the pipe between two disc plates with minimal friction. This minimizes material damage, and the slow, curved transport reduces the likelihood of breakage.
7. Specialized Conveyor Discs: UNITFINE Tubular Chain Conveyors use specially customized conveyor discs with extremely low friction coefficients, high wear resistance, and stable conveying capabilities.
8. Advanced Design Technology: UNITFINE Tubular Chain Conveyors employ independently developed calculation programs, ensuring necessary static friction and tension forces at different parts of the conveyor, including the conveying pipeline and bends. This commitment to high-precision data contributes to the design of low-noise and low-wear tubular chain conveyors.





TWO

产品特点

Product features



Product features

01

Simple Structure:

UNITFINE Tubular Chain Conveyors feature a simple and compact design, allowing for horizontal, vertical, curved, or three-dimensional arrangements.

02

Dust-Free and Eco-friendly:

The pipeline enables fully enclosed conveying, preventing dust spillage and ensuring high efficiency and environmental friendliness.

03

Low Energy Consumption:

During the material conveying process, tubular chain conveyors have the lowest energy consumption for the same conveying capacity, effectively minimizing operational costs.

04

Long distance transporting:

The tubular chain conveyor boasts remarkable capabilities, with a maximum horizontal conveying distance of up to 80 meters, a maximum vertical lifting height of 40 meters, and a substantial maximum capacity of 60 m³/h.

05

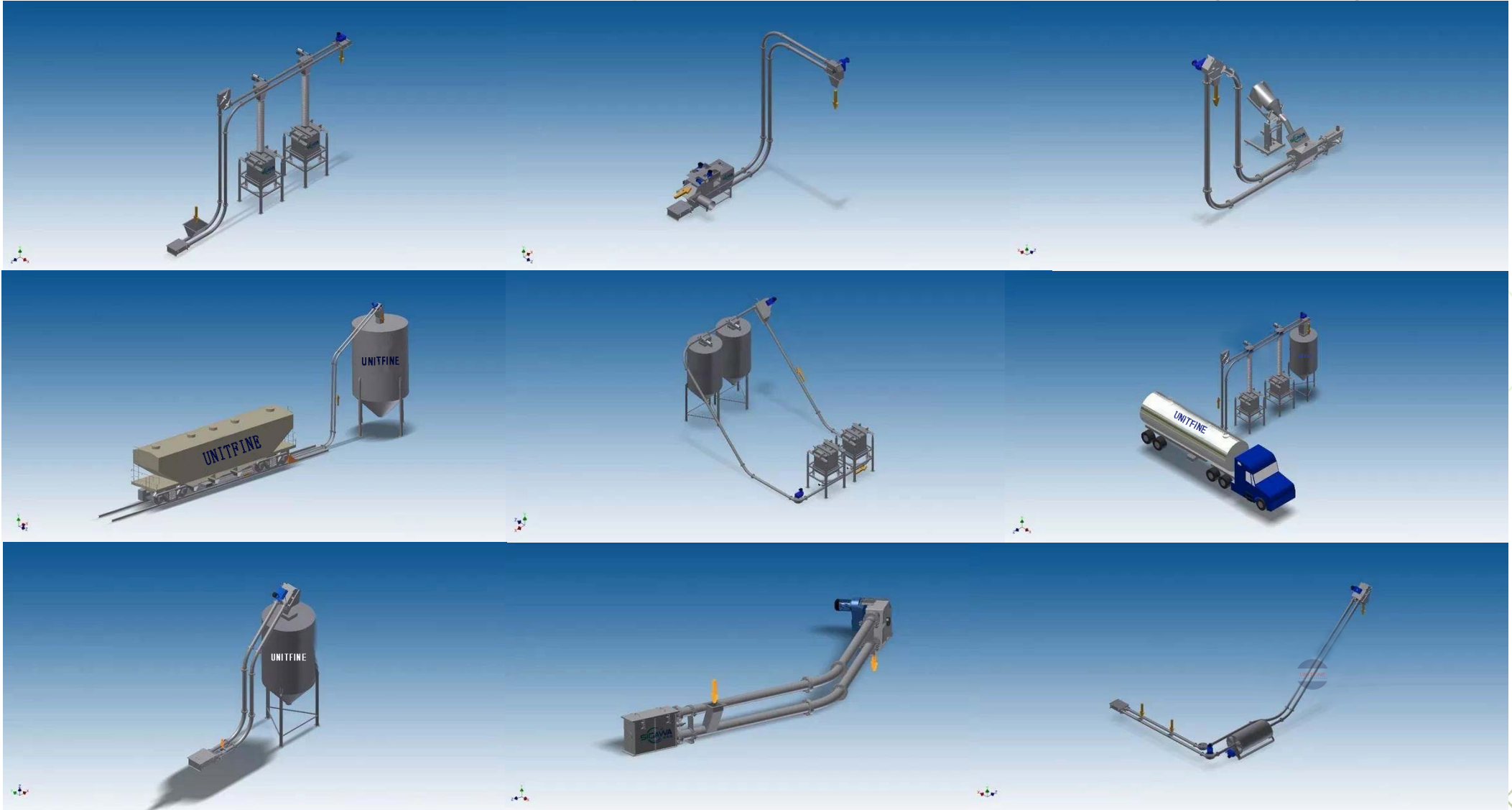
Versatile Configuration:

The system supports multiple inlets and outlets, enabling a single chain system for multiple feeding points and multiple discharge points.



TWO 布局展示

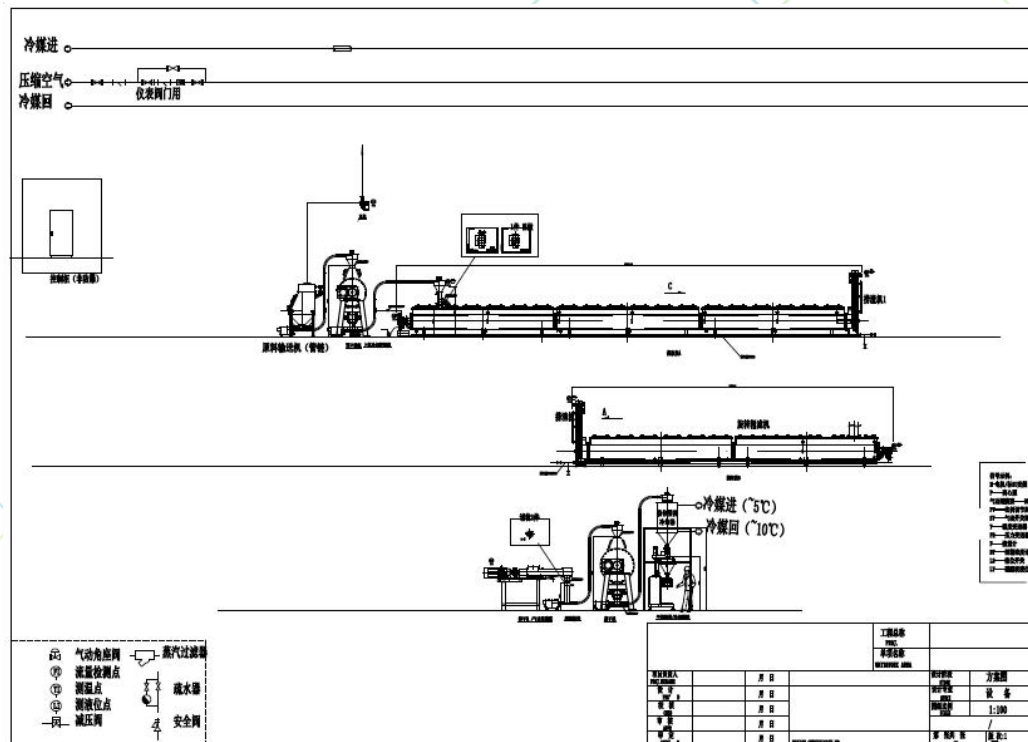
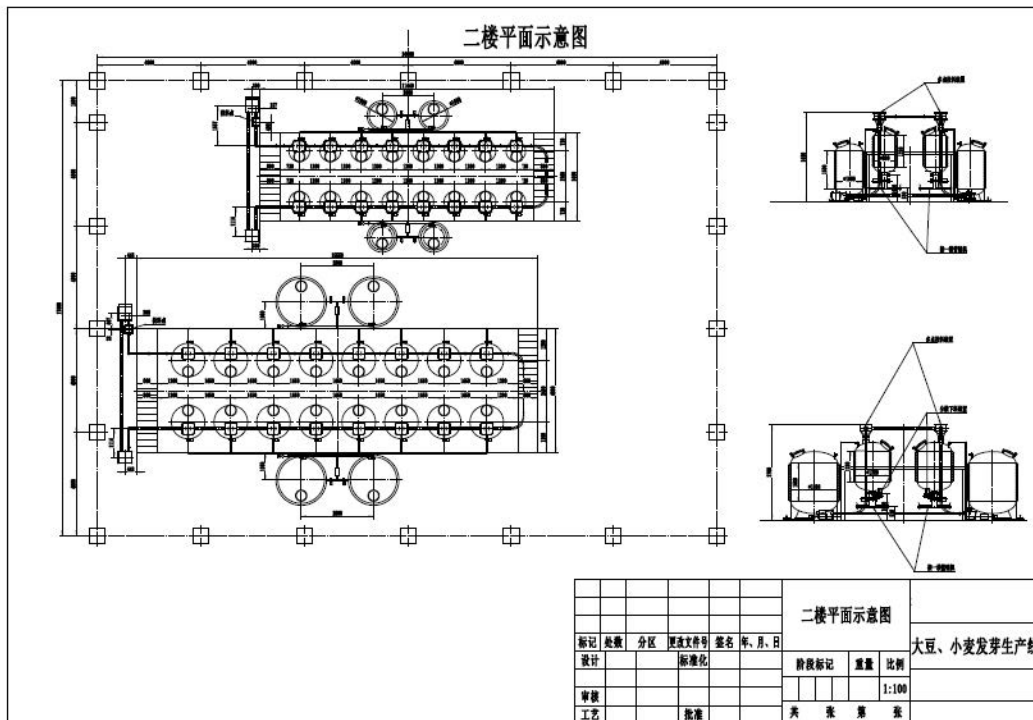
Layout display





TWO

方案支持 Programme support





TWO

参数计算示例

Example of parameter calculation



Capacity T/h					
Running without load			Gearbox Specs Calculatoin		
Current consumption	1.5	A	Name	Value	Unit
Power consumption	0.60	Kw	Conveyor load Design	1092	N. m
Empty Load	600.0	N. m. s	Sprocket Diameter	287	mm
Conveyor load design calculation			Sprocket speed	8	r/Min
Name	Value	Unit	Conveyor Speed	120	mm/s
Pipe Dia. (inner)	72.0	mm	Force consumption	131	N. s
Disc material density	1.4	g/cm ³	Sprocket Torque	156	N. M
Disc Dia.	68.6	mm	Motor Efficiency	1	
Disc Thickness	33.0	mm	Power factor	1	
Disc Pitch	150.0	mm	Power	771	W
Pipe Length	13500.0	mm	Conveyor capacity	572	kg/h
Cable Dia.	8.0	mm			
Cell Nos.	90.0				
Sprocket Weight	21.0	Kg			
Loading Factors	0.7				
Product density	0.5	g/cm ³			
Product weight transported	8.9	Kg			
Dynamic load factor	1.4				
Drag coefficient	1.2				
Sprocket Load Design Value	492.3	N. m			

Pipe Dia.Available

Cabe Conveyor Capacity: (reference only)

DN65 0.5~1.5T/H

DN100 1.5~2.5T/H

DN125 2.5~5.5T/H

Chain Type: (reference only)

DN100 0.5~3T/H

DN125 3~4.5T/H

DN150 4.5~7T/H

DN200 7T~11T/H

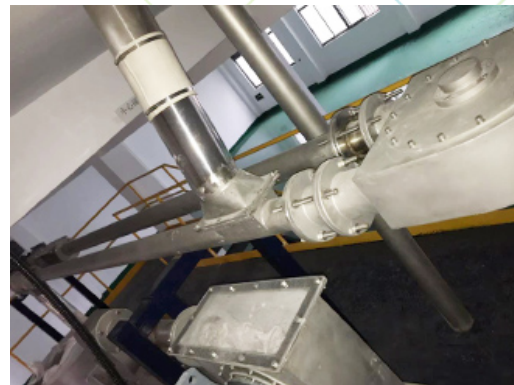
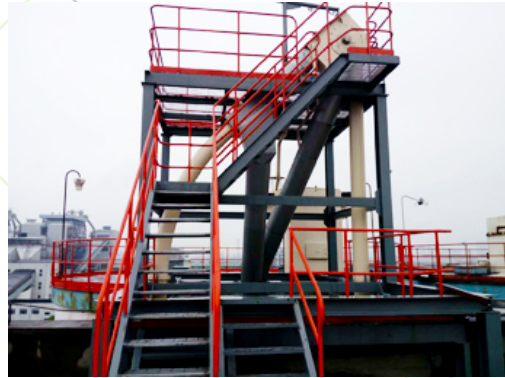
DN250 11T~16T/H



TWO

案例介绍

Case introduction



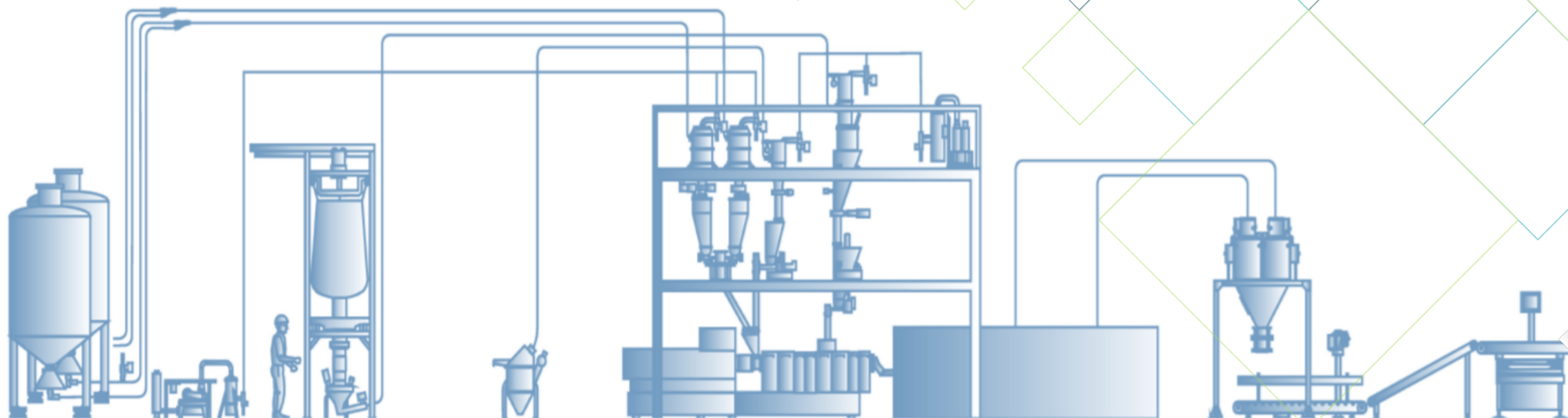


3

Vacuum feeder

真空上料机

- Dust-free sealing
- Three-dimensional conveying
- Gentle conveying
- Eco-friendly and energy-saving





Advantages of the UNITFINE Vacuum Loading Machine:

Zero Leakage During Feeding:

Completely leak-free during the feeding process.

User-Friendly Operation:

Simple operation, easy to load and unload, easy to clean, low noise, and dust-free conveying.

No Stratification:

Absence of layering phenomenon ensures soft landing of particles without breakage.

Built-in Stainless Steel Filter:

Includes an internal stainless steel filter that effectively prevents particle entry into the suction pipeline.

Modular Structure with Polished Surfaces:

Utilizes a modular structure with polished inner and outer walls for quick door opening and material discharge, ensuring minimal wall adherence and bonding.

Imported Dust-Cutting Filtration Device:

Incorporates an imported dust-cutting filtration device known for its high strength, effective dust-cutting performance, and environmentally friendly characteristics.

Continuous Material Conveyance:

Enables the continuous conveying of materials, ensuring stability for long-term use.

Automation and Green Production:

Facilitates automated, unmanned, and environmentally friendly production, contributing to increased productivity.



THREE

产品特点

Product features



Product features

01

Simplicity:

The automatic control system allows users to easily set suction and discharge times within the range of 0 to 99 seconds, making it simple and convenient to operate.

02

Hygiene:

The system features sealed conveying, eliminating dust leakage and preventing cross-contamination. It adheres to GMP standards, meets CIP requirements, and can provide equipment suitable for sterile environments.

03

Efficient Maintenance

The installation process is simple and quick.

04

Clean

The system ensures dust-free operation, eliminating blind spots. It allows for quick and convenient disassembly, cleaning, and material change.

05

Economic:

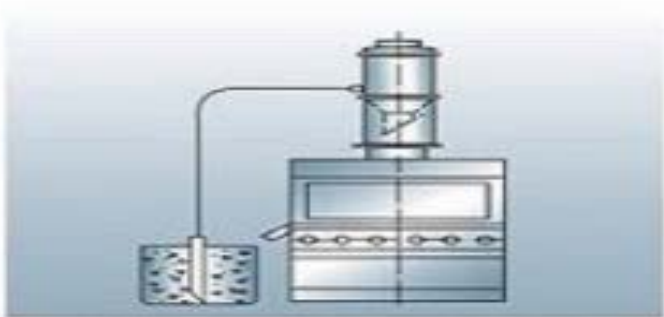
A single machine can be used interchangeably for multiple sets of equipment, promoting efficiency and energy savings. It eliminates the need for warm-up or standby, resulting in low operating and maintenance costs.



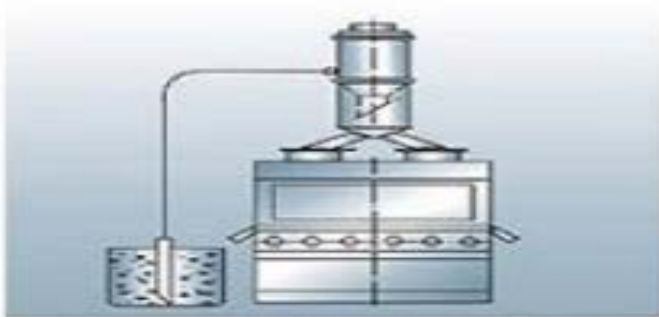
THREE

详细介绍

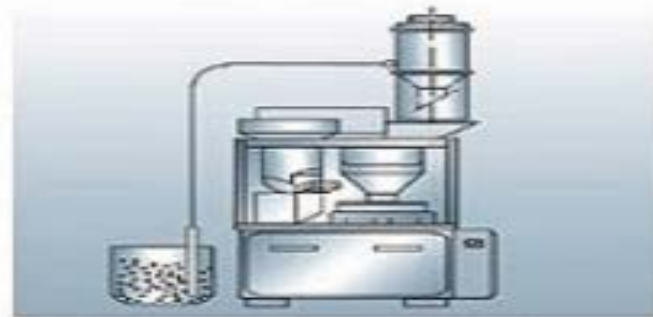
Detailed introduction



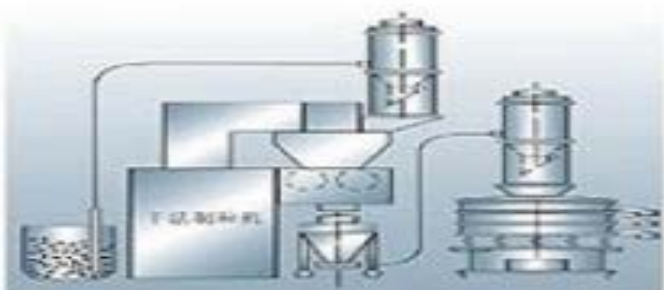
单料筒压片机自动加料



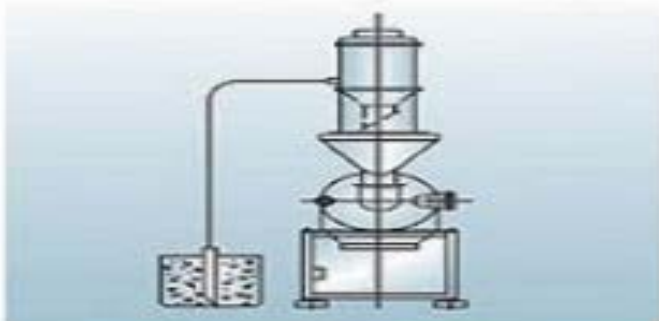
双料筒压片机自动加料



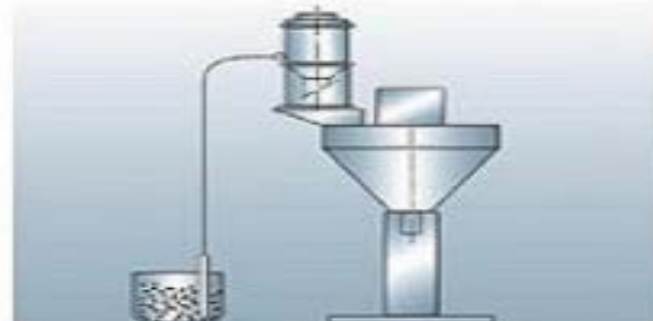
胶囊填充机自动加料



干法制粒、筛分系统自动加料



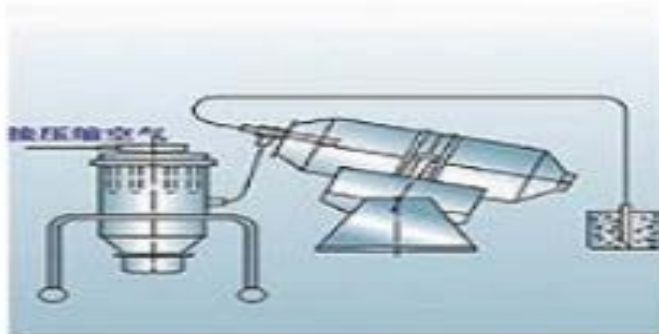
粉碎机自动加料



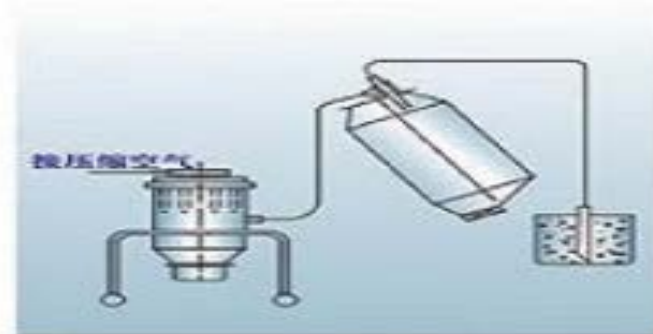
包装机自动加料



湿法制粒机自动加料



二维混合机自动加料



三维混合机自动加料





THREE

参数介绍

Parameter introduction



Items Specs Models	Capacity kg/h	Input kw	Voltage V	Suction gun dia. φmm	Air suction pipe dia. φmm	Noise dBA	V o l u m n L	Hopper (mm)		Control Cabin (mm)		
								H	φ	A	B	C
UFQ-10	240	1.1	380	40	50	74	10	500	262	500	750	400
UFQ-15	450	1.5	380	40	50	80	15	550	262	600	750	400
UFQ-20	600	2.2	380	40	50	82	20	650	262	500	950	530
UFQ-30	1000	3.0	380	40	50	84	30	750	262	600	1050	620



THREE

细节介绍

Details





THREE

案例介绍

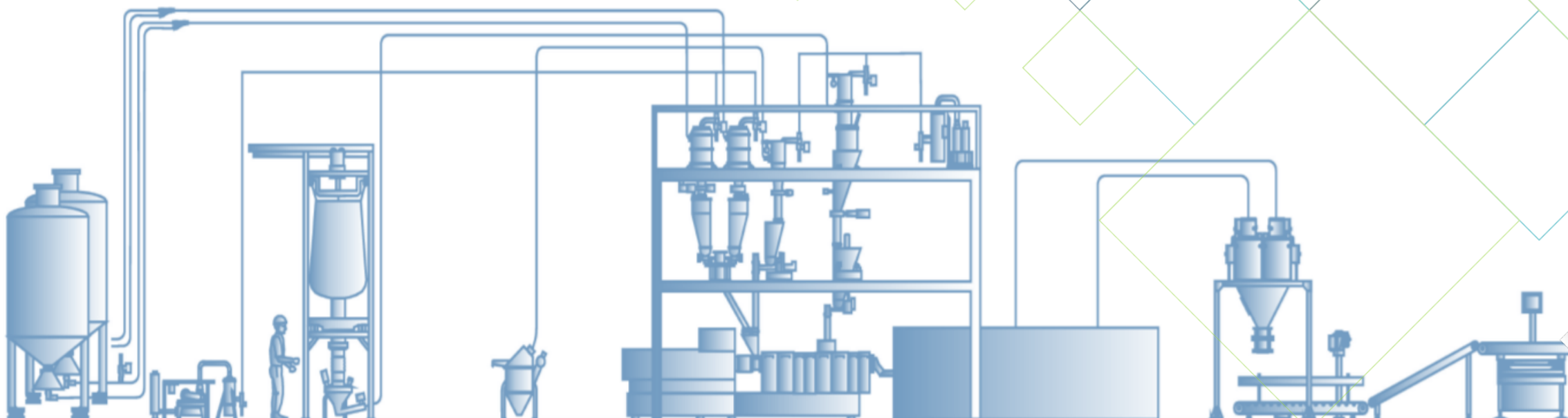
Case introduction





4 Bag to Tote unloading station 吨包卸料站

- Dust-free sealing
- Three-dimensional conveying
- Gentle conveying
- Eco-friendly and energy-saving





FOUR

产品简介

Product introduction



Advantages of the UNITFINE Ton Bag Unloading Station:

Designed for the unpacking and unloading of various ton bag materials (powder, granular) operations, the station offers distinct advantages over manual bag opening and material loading. It eliminates dust leakage, reduces labor, improves efficiency, minimizes material waste, and provides a safe and convenient working environment. Materials fall into the hopper by gravity and are conveyed downward by a fan, completing the bag unpacking and unloading process.

Typical materials suitable for this system include carbon black, calcium hydrogen phosphate, calcium carbonate, titanium dioxide, plastic particles, sugar, salt, and other powder and granular materials of various sizes, used in chemical, pharmaceutical, food, and food raw materials.



FOUR

设备参数

Equipment parameters



Voltage	380V
Input Power	3-4KW
Air pressure required	0.8Mpa
Lifting weight	1-3T
Lifting Height	1-5M
Lifting Distance	1-4M
Equipment weight	1.5T
Dimension	1800x1800x4400mm
Applicable products	Powders,granules
Humidity	0-50RH%
Working Temperature	-10°C-40°C
Granules sizes	0.2um-10mm
Capacity	20T/H-30T/H

Note: Detailed parameters are subject to actual conditions.



FOUR

案例介绍

Case introduction





公司简介

Company Profile



UNITFINE Intelligent Technology primarily focuses on the research and manufacturing of conveying equipment, including small automatic unpacking machines, dust-free tube chain conveyors, dust-free feeding stations, weighing systems, and spray drying mainframes. The supporting equipment includes waste bag collectors, dust collectors, vacuum loading machines, and unstacking machines. UNITFINE conveying machinery is suitable for the transport of powder and granular materials of various chemical, building, and food raw materials. This includes but is not limited to various powders and granular materials such as carbon black, calcium hydrogen phosphate, calcium carbonate, urea, gypsum, sugar, salt, rice, plastic particles, and more. UNITFINE is committed to helping users "reduce labor costs, enhance production automation; eliminate dust pollution, and protect the environment and health.

UNITFINE Intelligent Technology primarily focuses on the research and manufacturing of conveying equipment, including small automatic unpacking machines, dust-free tube chain conveyors, dust-free feeding stations, weighing systems, and spray drying mainframes. The supporting equipment includes waste bag collectors, dust collectors, vacuum loading machines, and unstacking machines. UNITFINE conveying machinery is suitable for the transport of powder and granular materials of various chemical, building, and food raw materials. This includes but is not limited to various powders and granular materials such as carbon black, calcium hydrogen phosphate, calcium carbonate, urea, gypsum, sugar, salt, rice, plastic particles, and more. UNITFINE is committed to helping users "reduce labor costs, enhance production automation; eliminate dust pollution, and protect the environment and health.





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