



Automated Drying Solutions

Belt Vacuum Continuous Dryer

Overview

Overview of Belt Vacuum Continuous Dryer

Belt Vacuum Continuous Dryer

a

high efficiency, low temperature, conduction type & vacuum continuous drying equipment

b

good operation environment, continuous import and export under vacuum

c

high degree of automation, low labor intensity, low energy consumption and low production cost

d

high recoverability of solvent and product & reduced the running cost

e

automatic, thorough and quick cleaning

f

widely used in chemical industry, medicine, food, agricultural products and Chinese medicine processing industries

Characteristic

Characteristics of Belt Vacuum Continuous Dryer



GMP Standard

meeting the GMP hygienic requirements to realize drying by finishing continuous charging, discharging and grinding under vacuum condition



Easy to Operate

high-degree automation with PLC automatic programming control



Adjustable Parameter

optimizing temperature vacuum degree and speed of the drying process to achieve the best economic benefits



Quality

unchanged thermal sensitivity of materials, recoverability of 95% solvent



No Destruction of Material Property

no destruction of the crystal material, the thermal sensitive material and the oxidation of the material



CIP Cleaning

CIP automatic online cleaning system with various cleaning methods

Advantage

Advantages of Belt Vacuum Continuous Dryer



High Quality

No air contact
Free chemical Oxidation
No destruction of crystal
Product yield up to 99%
Solvent recovery 95%

Soft Drying

Dry temperature
No mechanical impact
No air
Short stay

Economic Environment Protection

Lowest steam power consumption
No dust, solvent
No pollution
Direct packaging of discharging

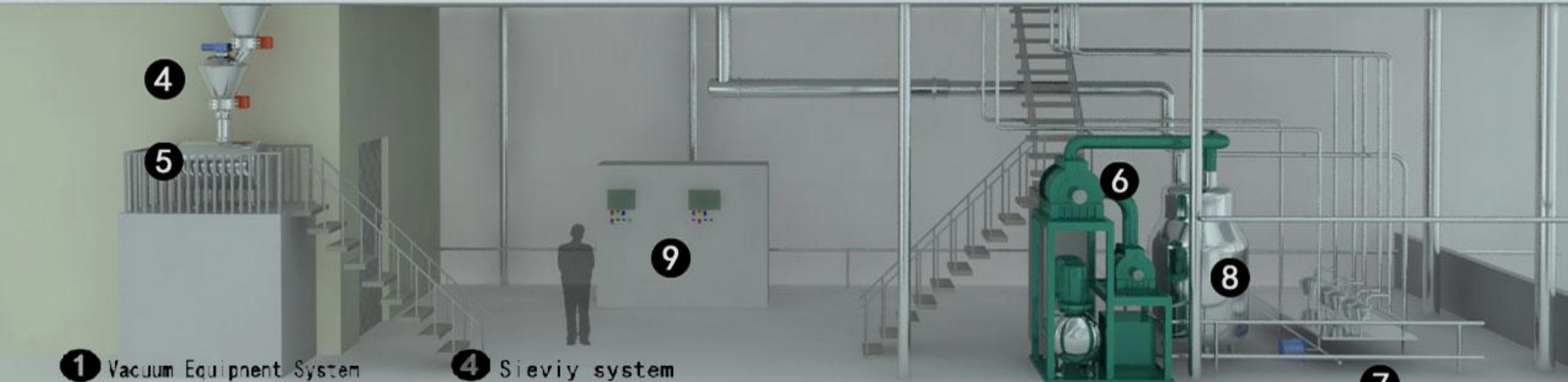
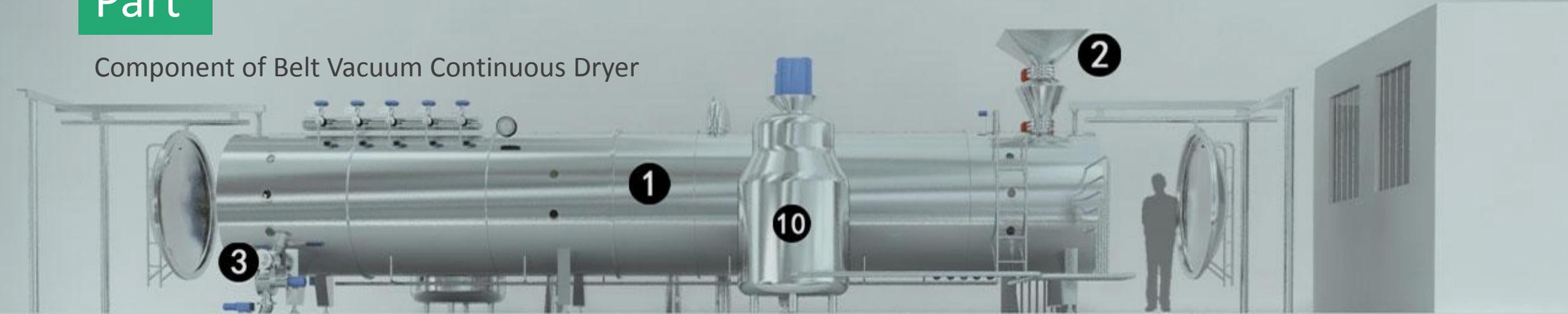
Automatic production

PLC automatic programming control
Automatic omnidirectional cleaning

[Click to learn more](#)

Part

Component of Belt Vacuum Continuous Dryer



1 Vacuum Equipment System

2 Feed system

3 grindy System

4 Sieviy system

5 Product collection system

6 Vacuum condensing ssystem

7 Heating and cooling systems

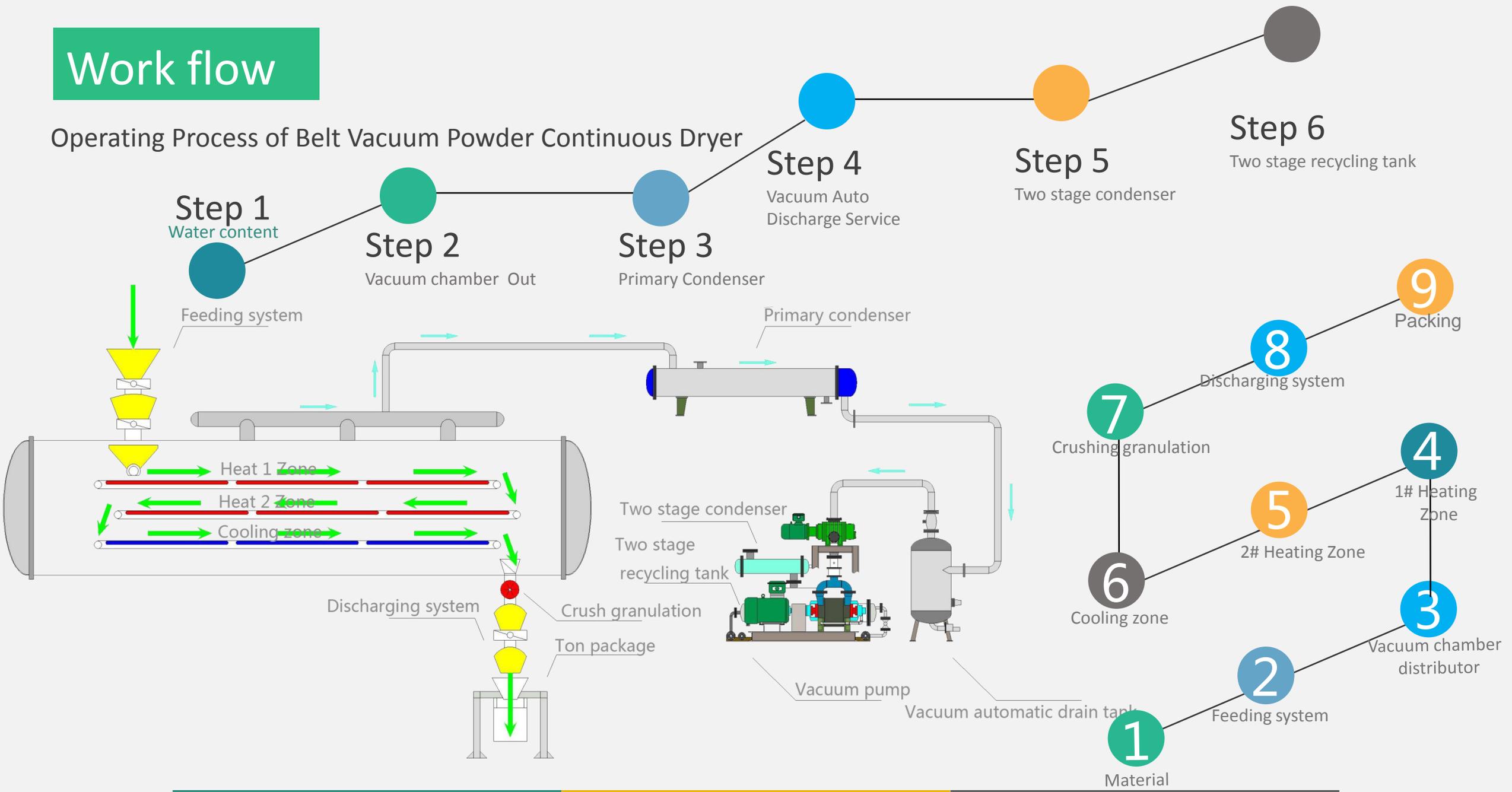
8 CIP cleaning system

9 Operating systems

10 Liquid feed system

Work flow

Operating Process of Belt Vacuum Powder Continuous Dryer



Application

Applicable Scope of Belt Vacuum Powder Continuous Dryer



Food

food additives and
chemical raw materials
for food



Medicine

various kinds of
powders, crystals,
granules etc.



Chemical Engineering

oxidizable, explosive,
strongly stimulation
and highly toxic
materials



And more

products containing
various recyclable
solvents

Work flow

Operating Process of Belt vacuum Liquid Continuous Dryer

Step 1
Water content

Step 2
Vacuum chamber Out

Step 3
Primary condenser

Step 4
Vacuum Auto Discharge device

Step 5
Two stage condenser

Step 6
Two stage recycling tank

9

Packing

8

Discharging system

7

Crushing granulation

4

1# Heating Zone

5

2# Heating Zone

6

Cooling zone

2

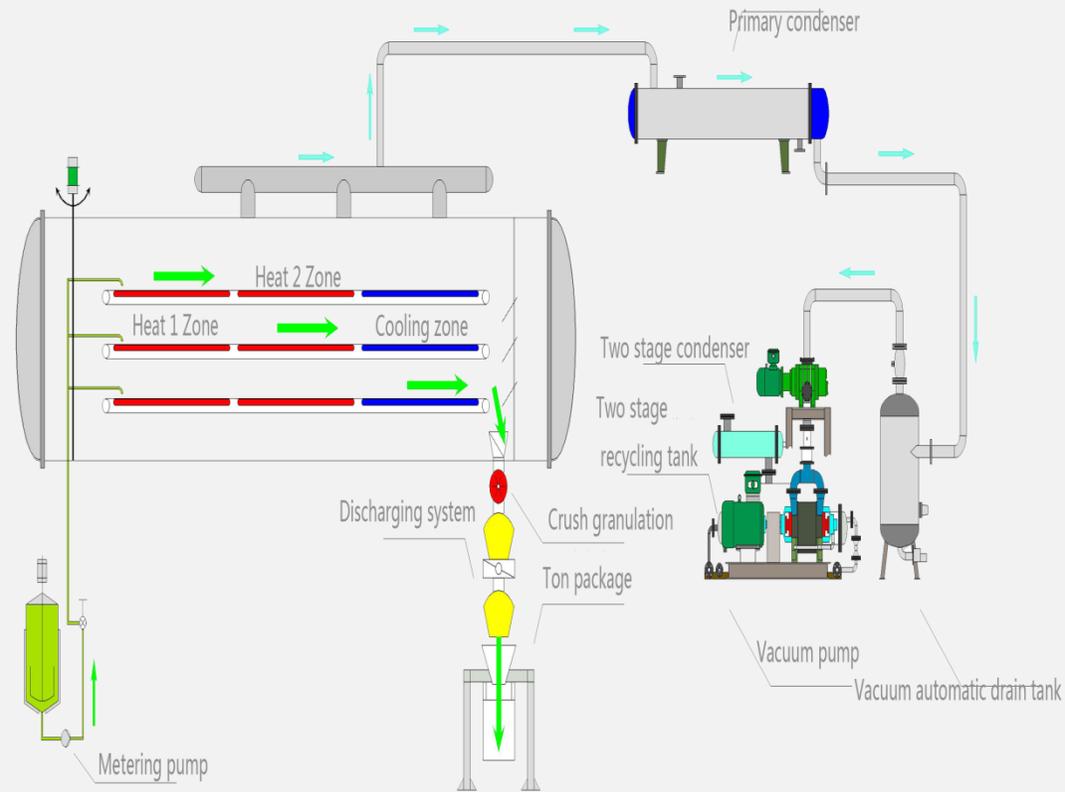
Metering Pump Vacuum Chamber

3

Vacuum Chamber Distributor

1

Material



Application

Applicable Scope of Belt Vacuum Liquid Continuous Dryer



Instant Coffee

liquid drying of coffee



Fresh Juice

liquid drying of
vegetables and fruit



Chinese Traditional
Medicine Extract

High concentration,
high viscosity extract



Plant Extract

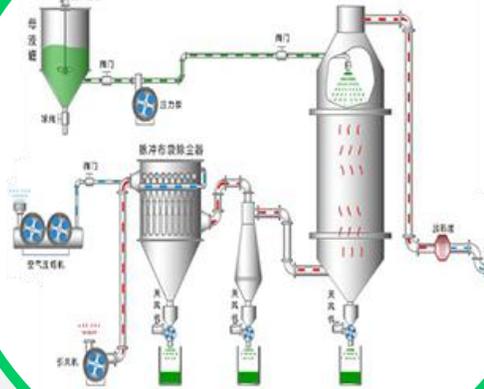
Biological preparation
plant extract

Contrast

Comparison Between Spray Dryer and Belt Vacuum Continuous Dryer

Spray Dryer

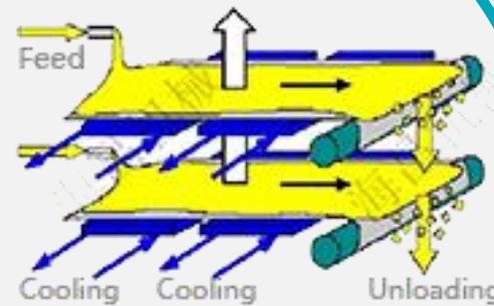
- ☐ spraying under high pressure
- ☐ sticking to the wall
- ☐ strong wind shear force
- ☐ product loss and quality damage



VS

Belt Vacuum Continuous Dryer

- ☐ Smooth conveyer drying
- ☐ no mechanical pressure impact
- ☐ not sticky to the wall

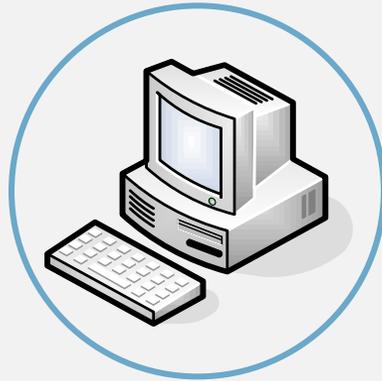


Automation

High Degree of Automation, Continuous and Stable Production of Equipment



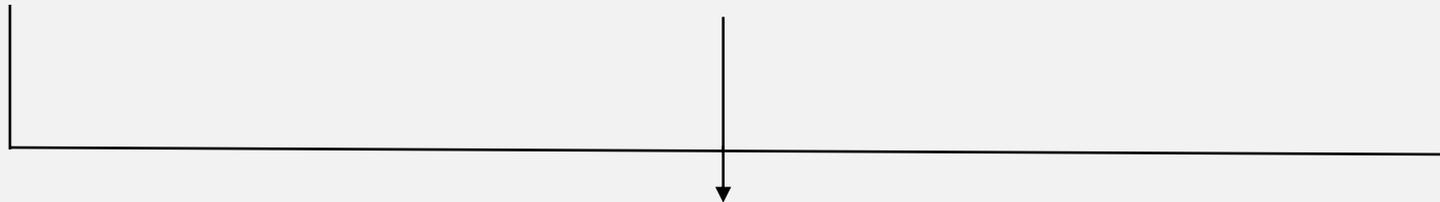
Touch Screen



Remote Control



Intelligent Monitoring



Safer and More Reliable

Adjustable Parameter

Controlled by Parameters to Ensure Different Requirements

Feed Control

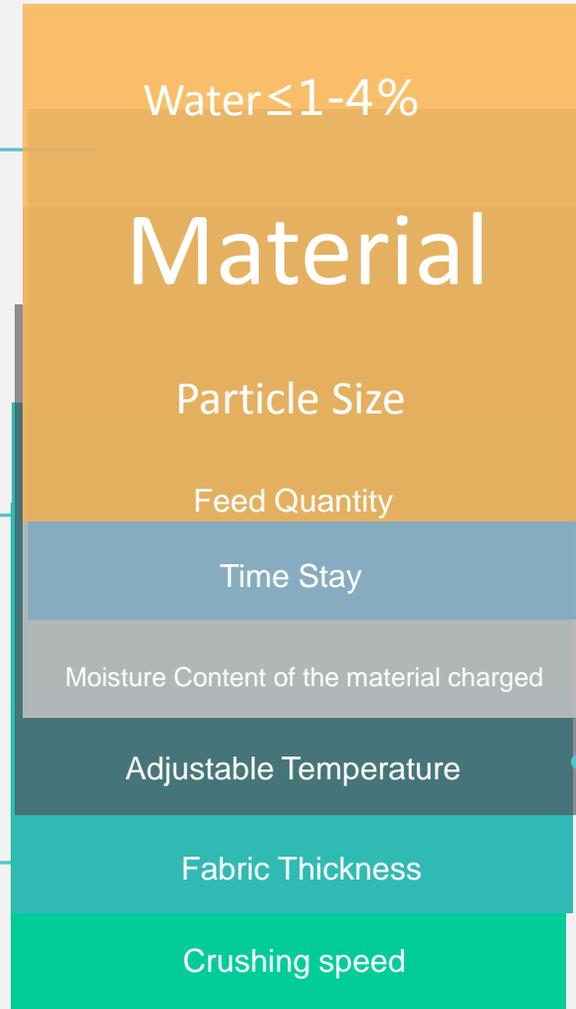
feed crushing control material particle size
Feeding time controlled feed quantity
Metering pump control feed rate

Vacuum Degree (90-99)Kpa

controlling the vacuum degree in the warehouse to ensure the material moisture

Fabric Thickness (3-30mm)

adjustable height of material and material thickness



Conveyer Belt Speed(0-50Hz)

adjustable speed and thickness of each conveyer belt

Heating Temperature (40-180)°C

adjustable temperature of each layer, heated gradient and bottom cooling

Crush

adjustable grinding speed, controlled uniform size of the particles

Selection

Selection of Belt Vacuum Continuous Dryer for Powder

HCF Belt Vacuum Continuous Dryer										
Basic Parameters/Model	HCF6.5-3	HCF15-3	HCF30-5	HCF50-5	HCF80-5	HC100-7	HCF120-7	HCF160-7	HCF200-11	HCF220-11
Heating Area(m ²)	3	6	20	35	70	100	135	160	200	220
Water Evaporation Capacity(kg/h)	5~10	10~20	25~35	40~60	70~90	90~120	110~130	150~180	180~210	210~230
Number of Drying Bed(layer)	3	3	5	5	5	7	7	9	11	11
Drying Temperature Range(°C)	40~180									
Heating and Cooling Zone	2 Heating Zone		4 Heating Zone		6 Heating Zone		8 Heating Zone		10 Heating Zone	
	Cooling Zone		Cooling Zone		Cooling Zone		Cooling Zone		Cooling Zone	
Moisture Content of the Material Charged (%)	20~30									
Moisture Content of the Dried Charged (%)	≤ 1~4									
Discharging Form	Screwing grinding and sieving (20~200 meshes)with adjustable discharging									
Heating Media	Superheated water,vapor,conduction oil									
Equipment Dimensions(mm)	6500x1200 x2200	6500x1900 x2500	9500x1900x 2500	12000x2200 x2800	12000x2600 x3000	12500x2600 x3000	17500x260 0x3000	17500x300 0x3000	17500x3200 x3200	19500x3200 x3200
Total installed power(kw)	18	24	30	34	36	40	45	48	50	58
Operating Pressure of the cleaning system(MPa)	0.5—1.0									
Yield of Dried Product(kg/h)	30~60	60~100	100~150	150~220	200~300	250~350	300~400	350~450	400~600	500~800
Notes	1.The yield is calculated based on 70%content at 90°C drying temperature with dry power containing about ≤4% moisture. In case the dried liquid is water, specific gravity of the dry power is determined to be 1. The yield will be larger if the drid liquid is solvent.									
	2. All techincal parameters are for reference only depending on the materical conditions,and our company has the right to change them without further notice.									

Selection

Selection of Belt Vacuum Continuous Dryer for Liquid

HCY Belt Vacuum Continuous Dryer									
Basic Parameters/Model	HCY3-2	HCY6-3	HCY20-4	HACY35-5	HCY70-6	HCY100-7	HCY135-8	HCY160-9	HCY200-10
Heating Area(m ²)	3	6	20	35	70	100	135	160	200
Cooling Area(m ²)	1.5	2.5	3.5	10	15	20	27	30	35
Water Evaporation Capacity(kg/h)	3~5	5~10	15~30	30~45	55~80	90~110	120~150	150~180	180~220
Number of Drying Bed(layer)	2	3	4	5	6	7	8	9	10
Drying Temperature Range(°C)	40~180								
Heating and Cooling Zone	2 Heating Zone		3 Heating Zone		4 Heating Zone		5 Heating Zone		
	Cooling Zone		Cooling Zone		Cooling Zone		Cooling Zone		
Moisture Content of the Material Charged (%)	20~30								
Moisture Content of the Dried Charged (%)	≤ 1~4								
Discharging Form	Screwing grinding and sieving (20~200 meshes)with adjustable discharging								
Heating Media	Superheated water,vapor,conduction oil								
Equipment Dimensions(mm)	6500×1900× 2500	7000×2000× 2500	11000×2200× 2800	12500×2200× 2800	12500×2400× 2800	17000×2600× 3000	17500×2800× 3200	18000×3200× ×3200	18500×3200× 3500
Total installed power(kw)	20	30	35	39	45	50	55	60	67
Operating Pressure of the cleaning system(MPa)	0.5—1.0								
Yield of Dried Product(kg/h)	3~8	8~15	15~30	30~50	50~80	90~120	120~150	150~180	180~220
Notes	①The yield is calculated based on 70% content at 90°C drying temperature with dry power containing about ≤4% moisture, In case the dried liquid is water,specific gravity of the dry power is determined to be 1,The yield will be larger if thye dried liquid is solvent .								
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Our case

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Continuous Dryer



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Belt Vacuum
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About Us

Wuxi Haichang Machinery Co., Ltd.



Wuxi Haichang Machinery Co., Ltd. is an enterprise specialized in manufacturing drying, crystallizing and granulating & tableting equipment for such industries as pharmacy, food, chemical engineering and and biochemistry.

Our Products

National Leading Automated Drying Solution Supplier



Spherical Dryer



Belt Vacuum Powder
Continuous Dryer



Belt Vacuum Liquid
Continuous Dryer



PTFE Lining

Customer



Part of Our Clients

Customer First ,
Part customers

The image displays a grid of logos for various companies. The logos are arranged in three rows and four columns. The first row includes BASF (The Chemical Company), DU PONT, wilmar, and Sinopec. The second row includes TQC, 3F, SANONDA, and ABA CHEM. The third row includes Amtech BIOTECH, BIOLUTUS, BGF, and Lianhetech.

Thank You!



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