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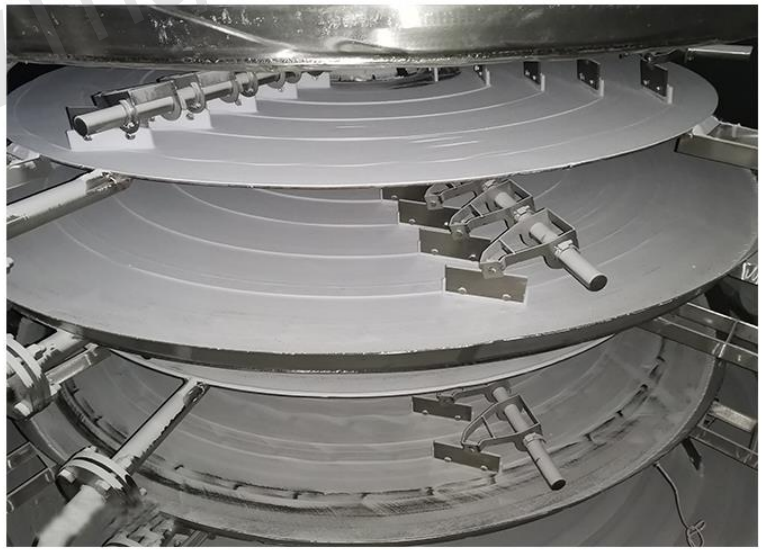
PLG Series Tray Continuum Dryer



Description

PLG Tray Continuum Dryer is a kind of high-efficiency transmission-type equipment for continuous drying. Its unique structure and WORKING PRINCIPLE determine its characteristics of high thermal efficiency, low energy consumption, small land occupation, simple configuration, convenient control and good operating environment. It is widely used in drying of industries of chemical, pharmaceutical, pesticide, food, forage, agricultural processing and so on.

Application

Organic chemicals, inorganic chemicals, medicine, food, forage, fertilizer.

Features

1. Easy regulation and good applicability.

The residence time of materials can be accurately adjusted. Single flow of material without back-mixing; even drying and stable quality, no need to re-mix.

2. Simple and easy operation.

Through a special endoscope large inspection door, it is possible to have a very carefully cleaning and observation within the device.

3. Low energy consumption.

Using conductive heat to dry, with high thermal efficiency and low energy consumption.

4. Good operating environment; recyclable solvents and dust emissions all meet the requirements.

5. Easy installation and small covering area

The dryer leaves the factory and is transported as a whole. What you need to do is just to hoist it into position. It is very easy to be installed. Because the drying tray is arranged in layers and installed vertically, even large drying area still consumes little area.

Working Principle

Wet materials are continuously fed by feeder onto the drying tray on the first layer of upper portion of the dryer; rake arm with rake on it will make rotary movement to continuously stir the materials. Along the index spiral line, the materials flow through the surface of the drying tray. Materials in the small plate are transferred to the outer edge, where they fall onto the outer edge of big plate below. In the big plate the materials move to the inside and fall onto the small plate on the next layer from the mouth in the middle. Small and big plates are arranged up and down alternatively, making the materials flow through the whole dryer consistently. In the form of saturated steam, hot water or thermal oil, heating medium are pumped into the hollow drying tray, entering from one end and exported from the other end. Dried materials fall into the bottom and are transferred to the outlet by rake and then discharged. The moisture escapes from the materials and exhausts from the outlet at the top. Moisture in vacuum tray dryer is exhausted from vacuum pump on the top. The dried materials discharged from bottom can be packed directly. By equipping auxiliary equipment such as finned heater,

solvent recovery condensers, sack-duster, dry material backmixer and induced draft fan, its drying capacity can be increased, and it can be used to dry paste and heat-sensitive materials and operate heat decomposition and reaction, meanwhile more easily recovering solvent.

Technical Characteristics

1. Drying Tray

Design pressure: generally 0.4MPa, up to 1.6MPa.

Maximum operating pressure: generally≤0.4MPa, up to 1.6MPa.

Heating medium: steam, hot water, thermal oil. When the temperature of drying tray is 100 oC, it uses hot water to do heat; hen the temperature reaches 100oC~150oC, it uses saturated steam≤0.4MPa or superheated steam to do heat; when the temperature is 150oC~320oC it uses heating conducting oil to do heat; when the temperature surpasses 320oC, it uses electric, oil or molten salt to do heat.

2. Material Transport System

Rotate speed of main spindle: 1-10 rpm, electromagnetism or variable frequency can achieve stepless speed.

Rake arm: each drying tray has 2 to 8 rake arms fixed on the spindle.

Rake leaves: spliced on the rake arm, it can float with the tray to keep in contact with materials. It has many forms.

Roller: for materials easy to get caked or requiring drying, a roller in appropriate place can enhance heat transfer and drying process.

3. Its shell has three types of constant pressure, sealed and vacuum

Type of constant pressure: cylindrical or octagonal, two structures of whole and dimidiate. Main channel for heating medium can both be inside or outside the shell.

Type of sealed: cylindrical. It can withstand the internal pressure of 5 Kpa. Main channel for heating medium can both be inside or outside the shell.

Type of vacuum: cylindrical. Its design pressure is 0.1 Mpa. Main channel for heating medium is inside the shell.

4. Air Heater

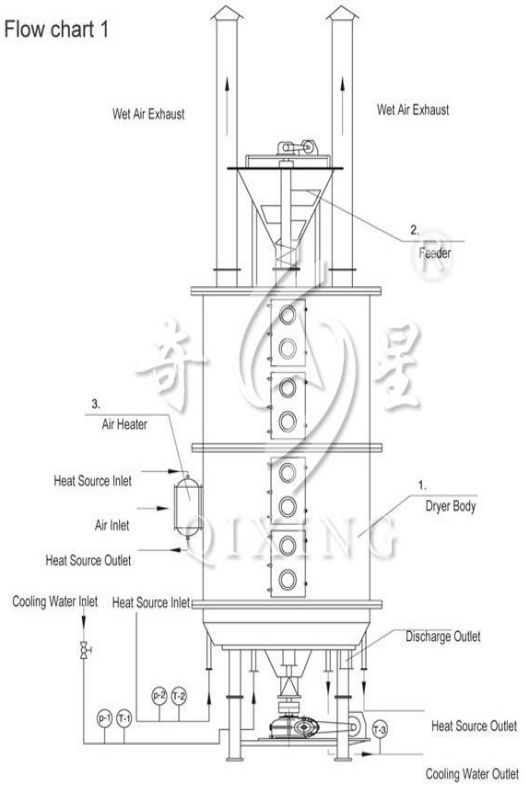
Generally it is used in the case of a large amount of evaporation to increase drying efficiency.

TECHNICAL PARAMETERS

Item Model	Diameter(mm)	Height (mm)	Drying Area (m²)	Power(kw)
1200/4	Φ1850	2718	3.3	1
1200/6		3138	4.9	
1200/8		3558	6.6	1.5
1200/10		3978	8.2	
1200/12		4398	9.9	2.2
1500/6	Φ2100	3022	8	
1500/8		3442	10.7	
1500/10		3862	13.4	
1500/12		4282	16.1	3
1500/14		4702	18.8	
1500/16		5122	21.5	
2200/6	Φ2900	3319	18.5	
2200/8		3739	24.6	
2200/10		4159	30.8	4
2200/12		4579	36.9	
2200/14		4999	43.1	5.5
2200/16		5419	19.3	
2200/18		5839	55.4	7.5
2200/20		6259	61.6	
2200/22		6679	67.7	11
2200/24		7099	73.9	
2200/26		7519	80	
2500/6	Φ3150	3319	26.3	3
2500/8		3739	35	
2500/10		4159	43.8	5.5
2500/12		4579	52.5	
2500/14		4999	61.3	7.5
2500/16		5419	70	
2500/18		5839	78.8	11
2500/20		6259	87.5	
2500/22		6679	96.3	
2500/24		7099	105	13
2500/26		7519	113.8	
3000/8	Φ3800	4050	48	11
3000/10		4650	60	
3000/12		5250	72	
3000/14		5850	84	
3000/16		6450	96	
3000/18		7050	108	13
3000/20		7650	120	
3000/22		8250	132	
3000/24		8850	144	
3000/26		9450	156	15
3000/28		10050	168	

More Photos

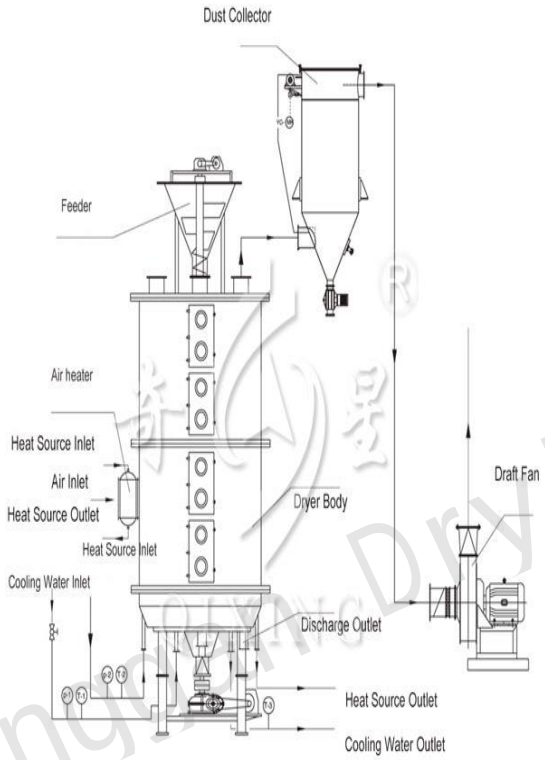
Flow chart 1



This production process is suitable for the material that doesn't have special requirements.

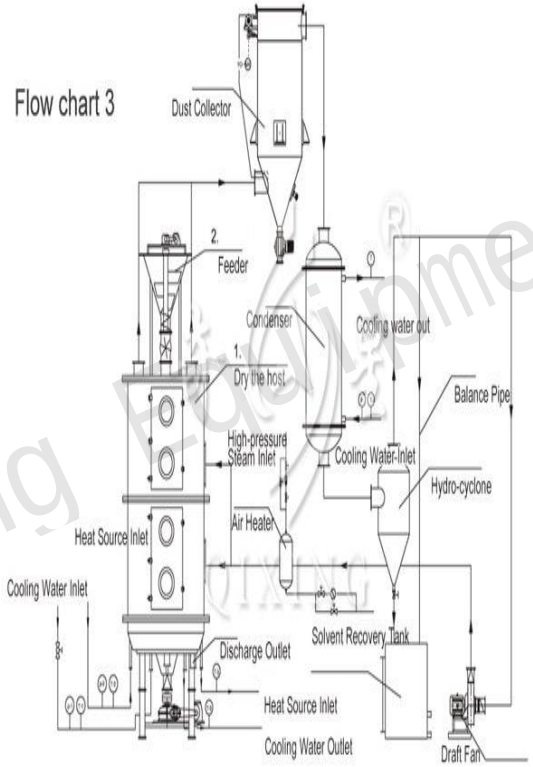
Notes:The air heater is usually used to meet larger evaporation capacity requirements in order to increase drying efficiency.

Flow chart 2



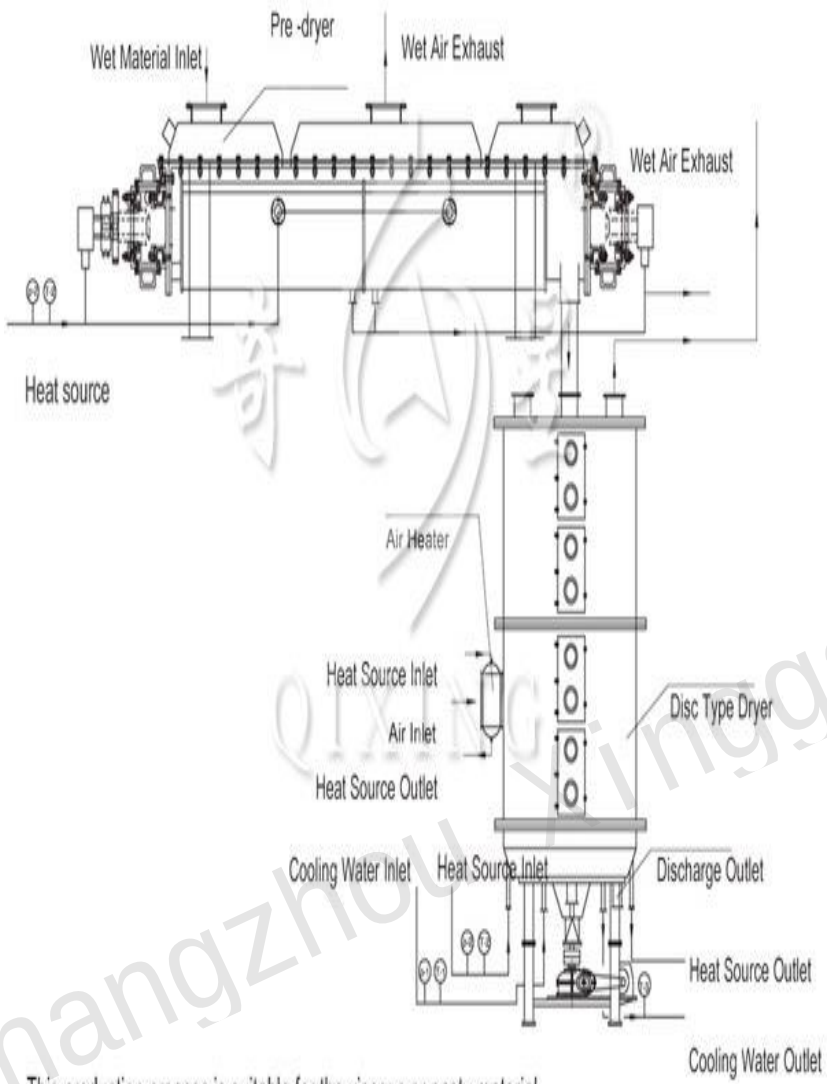
This production process is suitable for the powder material that required recycling or contents some harmful elements.

Flow chart 3



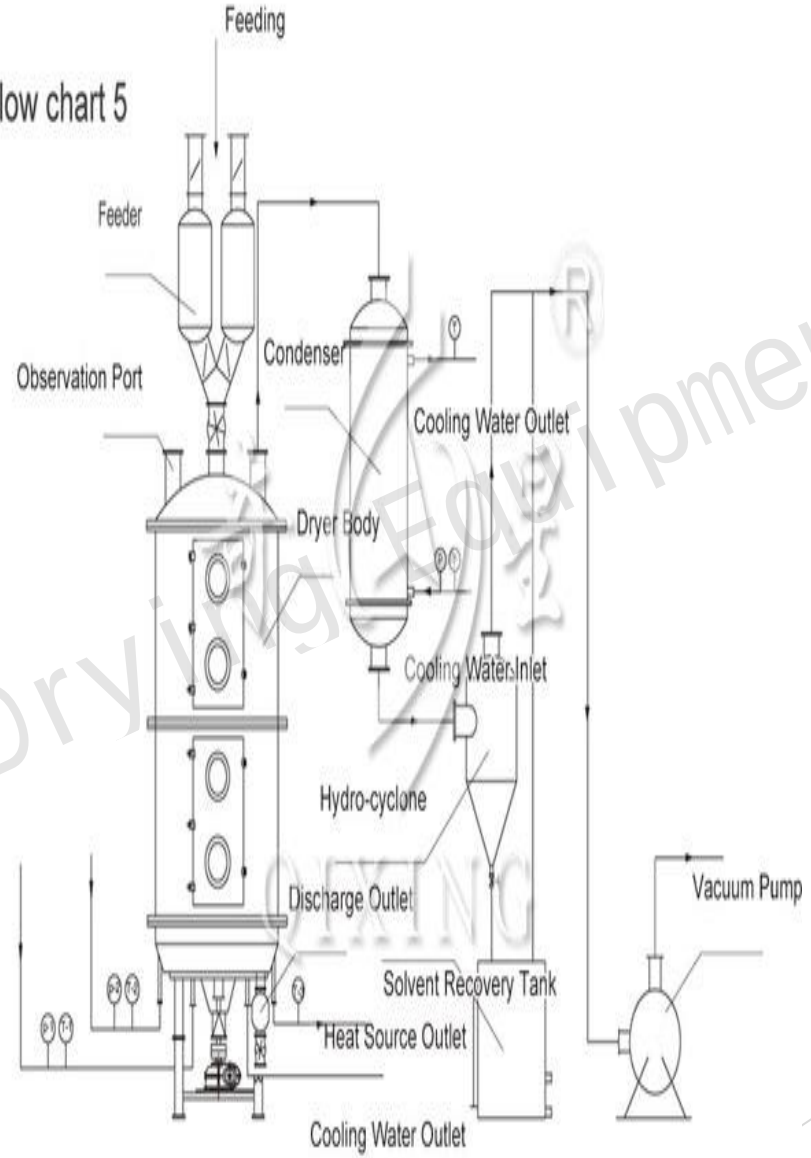
This production process is suitable for the material that required to recovery evaporated solvent or the occasion that required no gas leak out.

Flow chart 4



This production process is suitable for the viscous or pasty material.

Flow chart 5



This production process is suitable for the heat sensitive materials.