



ZL300 Intelligent softgel tumbler dryer



ZL300 intelligent soft gel tumbler dryer combines the working principle of common tumbler dryers in the market and the rotary dehumidifier this product was designed developed and tested 3 years ago. It is a totally new optimized and designed intelligent dryer this machine is the combination of shaping, drying and polishing.

There is a checking internet of Things---which is combined with load cell, humidity sensor and temperature sensor inside the machine, so the weight, temperature and humidity of each cage can be controlled by PLC touch screen the working principle of the machine is. the air inside the cage blows to the surface of the soft gel via circulating fan, and takes away the water inside the gelatin film, And then, dehumidify by the first grade surface air cooler (the condensate water will be drained out through internal pipelines) and then dehumidify the cage again by the rotary dehumidifier, and at last, the return air produced by the second grade surface air cooler will cool the cage, forming a circulation inside the cage.

Because it is a circulation inside the cage, the effective curve control of the soft gel by PLC can be guaranteed

ZL300 intelligent soft gel tumbler dryer possesses the following advantages

1. Energy saving: This machine is composed by 3 units (6 cages) and the total power is 30KW the average power consumption is 60%-70% and the average electricity consumption is around 20 kw. And about 3~4 times power can be saved compared with conventional tumbler dryers.
2. Reduction of labors, in conventional drying process, soft gel drying trays should be used after 1.5~2 hours drying inside the tumbler dryer and during the first 5 hours, the soft gel should be turned manually every half an hour By using this ZL300 intelligent soft gel tumbler dryer four labors can be saved in 24 hours (3 shifts)

3. Reduction of floor space: ZL300 intelligent soft gel tumbler dryer can do the shaping and drying work at the same time, and it just needs 6*11m floor space, so, compared with conventional drying process, 50-100 m2 space can be saved. By using this machine, the problem can be solved that plant extension cannot meet the production increasing requests for many old factories.

4. Reduction of drying time effectively It needs 16-22 drying hours in conventional drying process. ZL300 intelligent soft gel tumbler dryer installed rotary dehumidifier units itself imported from Sweden) the humidifying space is relatively small. And the interaction of the soft gel from different cages can be avoided, because the humidity and temperature control in each cage is relatively independent. So, by this way the drying time can be decreased to 8-12 hours.

5. Humidity and temperature and material weight can be controlled on line: During the production, the humidity and temperature can be adjusted according to the products, and the weight of the material in each cage can be adjusted, and the forward and reverse of the cage can be controlled automatically so the weight of the material inside each cage can be almost the same in general. The water content left inside the gelatin film after drying can be observed on line.

6. Reduction of cost of production and investment: Because of the reduction of drying time, the labors and the floor space, the cost of production can be lowered widely

Technical Parameters:

fan power	2 * 0.75kw = 1.5kw	transducer control
regenerative sir electric heating	9 * 0.8kw =7.2kw 3 * 0.8kw = 2.4kw	solid state relay depend on the actual product need of 40%
dehumidifying plate design air-flux	1600 m ³ /h	ventilating frequency 900times/h
dehumidification water	24kg/8h	depend on the dehumidification curve, drain to the drain
power supply	AC380V	3 phase 4 lines
compressed air	4kp	
cooling water unit	concentrated supply	
volume of cage	250,000 * 2 = 500,000	2.2kw multiply by numbers of unit
regenerative wet and hot air	8#olive 400 m3/h	
dimension	l2400mm * w1280mm * h1670mm	drain out of workshop
workshop enviroment	ordinary state	drying circularly inside the cage