



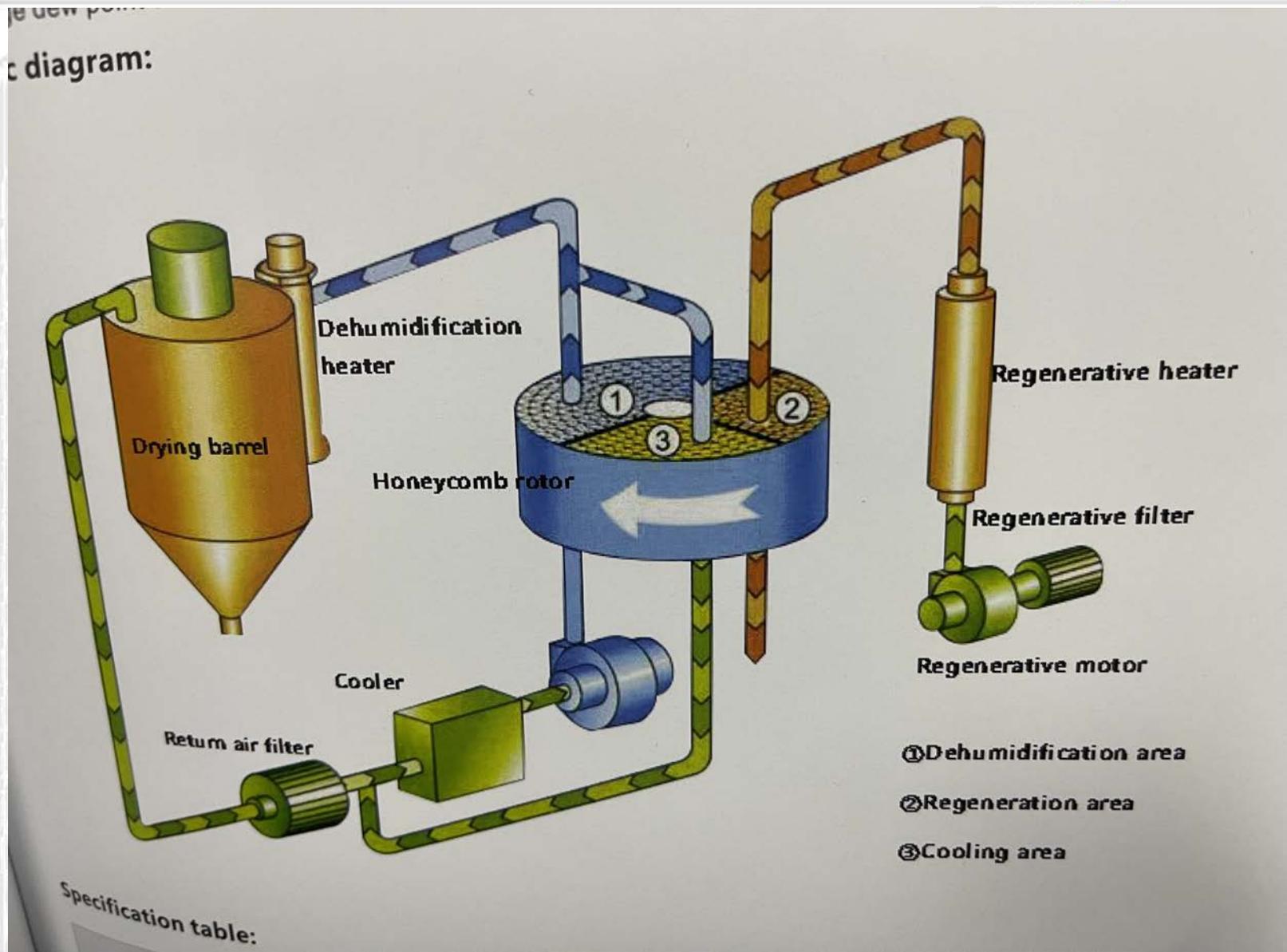
# Introduction and application of dehumidifying dryer



The hot and humid air returned from the drying bucket is cooled and blow into the honeycomb rotor. The moisture in the air is absorbed by the rotor at the same time.

As the rotor rotates, the moisture in the air is continuously absorbed and desorbed for discharge, and finally air with a stable low dew point is formed, which is heated to the drying temperature required by the plastic material and then blow into the drying bucket to form a closed circulation loop

# working principle



# working principle honeycomb rotor

The main part of the honeycomb rotor is composed of the ceramic honeycomb made of ceramic fibers and organic additives. Molecular sieve and silicone rubber are used as basic materials, which undergo high-temperature crystallization and sintering until their surface becomes hard and strongly adsorbed inside the honeycomb

(Dew point), also known as dew point humidity, refers to the temperature at which the gaseous water contained in the air reaches saturation and condenses into liquid water at a fixed pressure. At this temperature, condensed liquid water if floating in the air is called fog; when it sticks to a solid surface, it is called dew, hence the name is dew point.

The dew point of raw materials after dehumidification and drying is generally -40~-50 degrees

PPM is (ppm is part per million), for example 1ppm is one in a million, 150ppm is one hundred and fifty in a million and so on

(100ppm = 100 g water/ton material)

The moisture content of gas pipe PE is lower than 0.01%, Liansu index is less than 200ppm( less than 100ppm is ideal), other industries require is 300ppm

The drying temperature of PET is relatively high, about 160 degrees

# selection of type parameter

Raw material	drying temperature	drying time (h)	stacking density (kg/l)	moisture content of dehumidification( %)	water content after dehumidification (%)	drying ability
--------------	--------------------	-----------------	-------------------------	--	--	----------------

原料	干燥温度	干燥时间 (h)	堆积密度 (kg/L)	除湿前含水率 (%)	除湿后含水率 (%)	干燥能力 (kg/h)					
						400H	700H	1000H	2000H	3000H	4000H
ABS	80	2~3	0.6	0.3	0.02	210	355	425	1065	1500	1600
CA	75	2~3	0.5	1	0.02	180	295	355	885	1200	1330
CAB	75	2~3	0.5	0.8	0.02	180	295	355	885	1200	1330
CP	75	2~3	0.6	1	0.02	210	355	425	1060	1500	1600
LCP	150	4	0.6	0.04	0.02	160	265	320	800	1150	1200
POM	100	2	0.6	0.2	0.02	320	530	640	1600	1800	2400
PMMA	80	3	0.65	0.5	0.02	230	383	460	1150	1530	1730
IONOMER	90	3~4	0.5	0.1	0.04	33	220	265	663	750	1000
PA6/66/610	75	4~6	0.65	1	0.05	115	192	230	575	960	1040
PA11	75	4~5	0.65	1	0.05	138	230	275	690	780	1150
PA2	75	4~5	0.65	1	0.05	138	230	275	690	780	1150
PC	120	2~3	0.7	0.3	0.01	250	43	495	1238	1400	1860
PU	90	2~3	0.65	0.3	0.02	230	383	460	1150	1530	2080
PBT	80	3~4	0.7	0.2	0.02	186	310	372	930	1100	1600
PE	90	1	0.6	0.01	<0.01	637	1062	1275	3185	3600	4800
PEI	50	3~4	0.6	0.25	0.02	160	265	320	800	30	1370
PET	160	4~6	0.85	0.2	0.05	150	250	300	750	1150	360
PETG	70	3~4	0.6	0.5	0.02	160	265	320	800	1030	370
PEN	T70	5	0.85	0.1	0.05	180	300	360	900	1150	860
PES	150	4	0.7	0.8	0.02	180	300	360	900	50	1400
PMMA	80	3	0.65	0.5	0.02	230	385	460	1150	1530	1730
PPO	10	1~2	0.5	0.1	0.04	265	440	530	1830	730	2660
PPS	150	3~4	0.6	0.1	0.02	160	265	320	800	1080	370
PI	120	2	0.6	0.4	0.02	320	530	640	1600	1800	2400
PP	90	1	0.5	0.1	0.02	530	885	60	2655	3500	4000
PS GP)	80	1	0.5	0.1	0.02	531	885	62	2655	3500	4000
PSU	120	3~4	0.65	0.3	0.02		290	35	865	3300	1485
PVC	70	1~2	0.5	0.1	0.02	265	40	530	B30	1730	2660
SANIAS	80	1~2	0.5	0.1	0.05	265	44	0.3	130	1730	2660
TPE	10	3	0.7	0.1	0.02	250	40	495	138	1650	860

# selection of type - dehumidify and drying' s corresponding table

**Specification table:**

Model	Dry air flow rate(m <sup>3</sup> /hr)	Drying bucket capacity (L)	Drying fan (kw)	Regenerative fan (kw)	Regenerative electric heater(kw)	Electric drying heater (kw)	Conveying tube (inch)
LSDD-400H/600L	400	600	4	0.7	8	18	3"
LSDD-700H/900L	700	900	5.5	1.6	12	18	4"
LSDD-700H/1200	700	1200	5.5	1.6	12	24	4"
LSDD-1000H/2000L	1000	2000	7.5	3	15	36	5"
LSDD-2000H/3000L	2000	3000	11	4	24	48	6"
LSDD-2000H/4000L	2000	4000	11	4	24	60	6"
LSDD-3000H/6000L	300	6000	7.5x2	3x2	24x2	96	8"
LSDD-4000H/6000L	4000	6000	11x2	3x2	24x2	96	8"
LSDD-4000H/8000L	4000	8000	11x2	3x2	24x2	120	8"

1. structure is two layers
2. pipe is arrangement is neat
3. honeycomb rotor is import from japan

