



## Honeycomb Dehumidifier

SD-40H-D

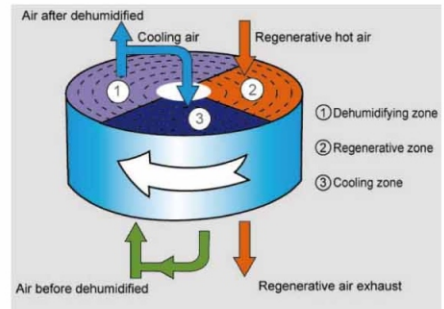
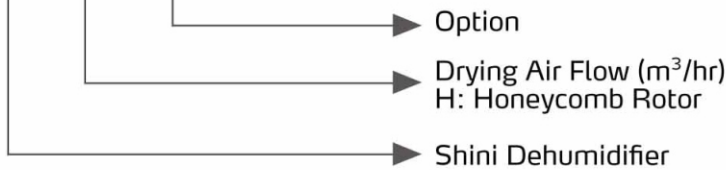


Refer carefully to this manual before operation.

# SD-H Series

## ■ Coding Principle

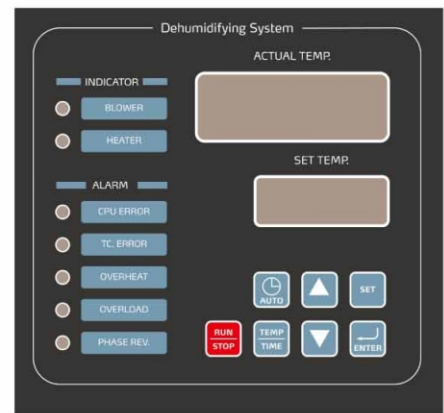
SD-xxxH-xxx



Honeycomb Rotor Working Principle

## ■ Features

- Adopts P.I.D. temperature controller to accurately control regenerative temperature.
- The dehumidifying system of the SD-H series features coolers to ensure a low return air temperature and low dew-point.
- Inbuilt return air filter ensures no contamination to the honeycomb.
- It is better to adopt molecular sieve structure honeycomb than silica gel adsorption one in dehumidifying.



Control Panel

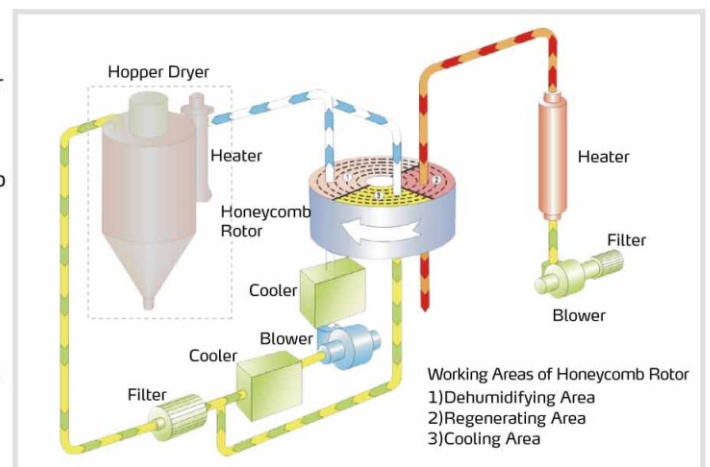
## ■ Application

SD-H series honeycomb dehumidifiers are mainly used to dry hygroscopic engineering plastics. A honeycomb-rotor is used to offer effective drying, which under ideal conditions, can supply dehumidified dry air with dew-point lower than -40°C/-40°F, the largest of which can provide dry air up to a quantity of 4,000 m<sup>3</sup>/hr.

### What is honeycomb rotor?

The main part of honeycomb rotor is made by ceramic fiber and organic additives, sintered under high temperature with molecular sieve or silica gel as basic material to bond together with inside of honeycomb to form the honeycomb-like structure. Unlike common desiccant or rotary molecular sieve, then, when aging, will produce dust, followed by process air to drying hopper, to pollute plastic material. Honeycomb rotor offers unlimited long service life and can be cleaned and not like usual molecular sieve which is easy to get saturated or requiring regular replacement. The moisture of return air is quickly absorbed by molecular sieves when passing through numerous holes within honeycomb rotor. So when coming out of rotor, can form low dew-point dry air. Regenerating and dehumidifying have similar principle and run simultaneously. The only difference is that the two process winds are in opposite direction.

### System Flow Chart



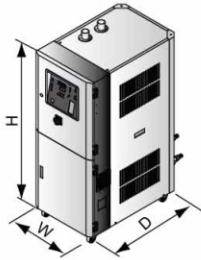


## ■ Drying Capacity

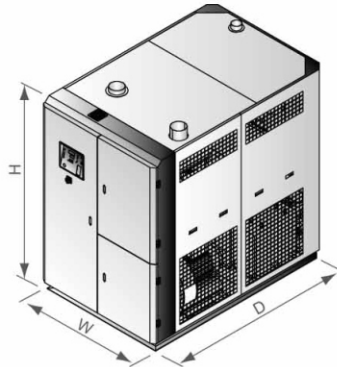
Material	Drying Temp. (°C)	Drying Time (hr)	Specific Heat (kcal/kg.°C)	Bulk Density (kg/L)	Moisture Content before Drying (%)	Moisture Content after Drying (%)	Drying capacity (kg/hr)										
							SD-40H	80H	120H	200H	400H	700H	1000H	1500H	2000H	3000H	4000H
ABS	80	2-3	0.34	0.6	0.3	0.02	16	27	35	105	210	355	425	710	1065	1500	1600
CA	75	2-3	0.5	0.5	1	0.02	12	22	30	90	180	295	355	590	885	1200	1330
CAB	75	2-3	0.5	0.5	0.8	0.02	12	22	30	90	180	295	355	590	885	1200	1330
CP	75	2-3	0.6	0.6	1	0.02	16	27	35	106	210	355	425	710	1060	1500	1600
LCP	150	4	0.6	0.6	0.04	0.02	11	20	27	80	160	265	320	530	800	1150	1200
POM	100	2	0.35	0.6	0.2	0.02	24	40	53	160	320	530	640	1060	1600	1800	2400
PMMA	80	3	0.35	0.65	0.5	0.02	17	29	38	115	230	383	460	767	1150	1530	1730
IONOMER	90	3-4	0.55	0.5	0.1	0.04	10	17	22	66	133	220	265	442	663	750	1000
PA6/6.6/6.10	75	4-6	0.4	0.65	1	0.05	9	14	19	58	115	192	230	383	575	960	1040
PA11	75	4-5	0.58	0.65	1	0.05	10	17	23	69	138	230	275	460	690	780	1150
PA12	75	4-5	0.28	0.65	1	0.05	10	17	23	69	138	230	275	460	690	780	1150
PC	120	2-3	0.28	0.7	0.3	0.01	19	31	41	124	250	413	495	826	1238	1400	1860
PU	90	2-3	0.45	0.65	0.3	0.02	17	29	38	115	230	383	460	767	1150	1530	2080
PBT	130	3-4	0.3-0.5	0.7	0.2	0.02	13	23	31	93	186	310	372	620	930	1100	1600
PE	90	1	0.55	0.6	0.01	<0.01	47	80	106	318	637	1062	1275	2125	3185	3600	4800
PEI	150	3-4	0.6	0.6	0.25	0.02	11	20	27	80	160	265	320	530	800	1030	1370
PET	160	4-6	0.3-0.5	0.85	0.2	0.05	11	19	25	75	150	250	300	500	750	1150	1360
PETG	70	3-4	0.6	0.6	0.5	0.02	11	20	27	80	160	265	320	530	800	1030	1370
PEN	170	5	0.85	0.85	0.1	0.05	13	23	30	90	180	300	360	600	900	1150	1360
PES	150	4	0.7	0.7	0.8	0.02	13	23	30	90	180	300	360	600	900	1050	1400
PMMA	80	3	0.65	0.65	0.5	0.02	17	29	38	115	230	385	460	765	1150	1530	1730
PPO	110	1-2	0.4	0.5	0.1	0.04	19	33	44	133	265	440	530	885	1330	1730	2660
PPS	150	3-4	0.6	0.6	0.1	0.02	11	20	27	80	160	265	320	530	800	1030	1370
PI	120	2	0.27	0.6	0.4	0.02	24	40	53	160	320	530	640	1060	1600	1800	2400
PP	90	1	0.46	0.5	0.1	0.02	39	66	88	265	530	885	1060	1770	2655	3500	4000
PS(GP)	80	1	0.28	0.5	0.1	0.02	39	66	88	265	531	885	1062	1770	2655	3500	4000
PSU	120	3-4	0.31	0.65	0.3	0.02	12	22	29	85	173	290	345	575	865	1300	1485
PVC	70	1-2	0.2	0.5	0.1	0.02	19	33	44	135	265	442	530	885	1330	1730	2660
SAN(AS)	80	1-2	0.32	0.5	0.1	0.05	19	33	44	135	265	442	530	885	1330	1730	2660
TPE	110	3	0.7	0.7	0.1	0.02	18	30	40	125	250	413	495	826	1238	1650	1860

# SD-H Series

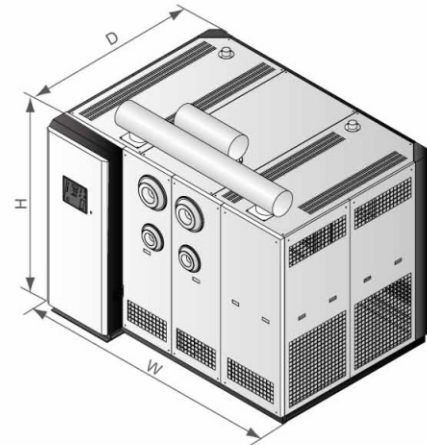
## Outline Drawings



SD-40H-700H



SD-1000H-2000H



SD-3000H-4000H

## Specifications

Model	SD-	40H	80H	120H	200H	400H	700H	1000H	1500H	2000H	3000H	4000H	
Rege. Heater (kW)		3	3	3	4	7.2	10	15	28	28	32	56	
Rege. Blower (kW, 50/60Hz)		0.4/0.4	0.4/0.4	0.4/0.4	0.4/0.5	0.75/0.9	1.5/0.8	3.75/4.7	7.5/8.6	7.5/8.6	9/11	5.5×2/6.3×2	
Process Heater* (kW)		4	6	6	12	18	24	32	58	80	96	128	
Process Blower (kW, 50/60Hz)		0.12/0.12	0.75/0.9	0.75/0.9	1.5/1.8	3.75/4.5	7.5/8.6	13/16	9×2/11×2	13×2/15×2	13×3/15×3	13×4/15×4	
Drying Air Quantity (m <sup>3</sup> /hr, 50/60Hz)		40/47	80/95	120/130	200/220	400/450	700/780	1000/1150	1500/1750	2000/2300	3000/3400	4000/4500	
Pipe Dia. (inch)		2	2	2	2.5	3	4	5	6	8	8	12	
Cooling Water Quantity	L/min	5	10	15	30	50	80	120	180	240	360	480	
	gal/min	1.32	2.6	4	8	13.2	21	31.7	47.6	63.4	95	126.8	
Dimension	H	mm	1260	1360	1360	1560	1745	1935	2145	2060	2060	2240	2060
		inch	49.6	53.5	53.5	61.4	68.7	76.2	84.4	81.1	81.1	88.2	81.1
	W	mm	510	530	530	660	700	900	1300	1410	1410	2035	2750
		inch	20	20.9	20.9	26	27.6	35.4	51.2	55.5	55.5	80.1	108.3
D	mm	860	820	820	1050	1255	1380	1550	2150	2150	2160	2250	
	inch	33.9	32.3	32.3	41.3	49.4	54.3	61	84.6	84.6	85	88.6	
Weight	kg	145	170	170	265	330	480	700	1010	1300	1600	2200	
	lb	320	375	375	584	728	1058	1543	2227	2866	3527	4850	

- Notes: 1) Plastic materials can be fully dried by drying air with dew-point temperature  $\leq -20^{\circ}\text{C}$ . We reserve the right to change specifications without prior notice.  
 2) \*\*\* Stands for drying heater is optional equipment for working with "European type" hoppers.  
 3) Power: 3 $\Phi$ , 230/400/460/575VAC, 50/60Hz.

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