

HCD Honeycomb–Matrix Drying System

The most effective way to consistently dry plastic pellets



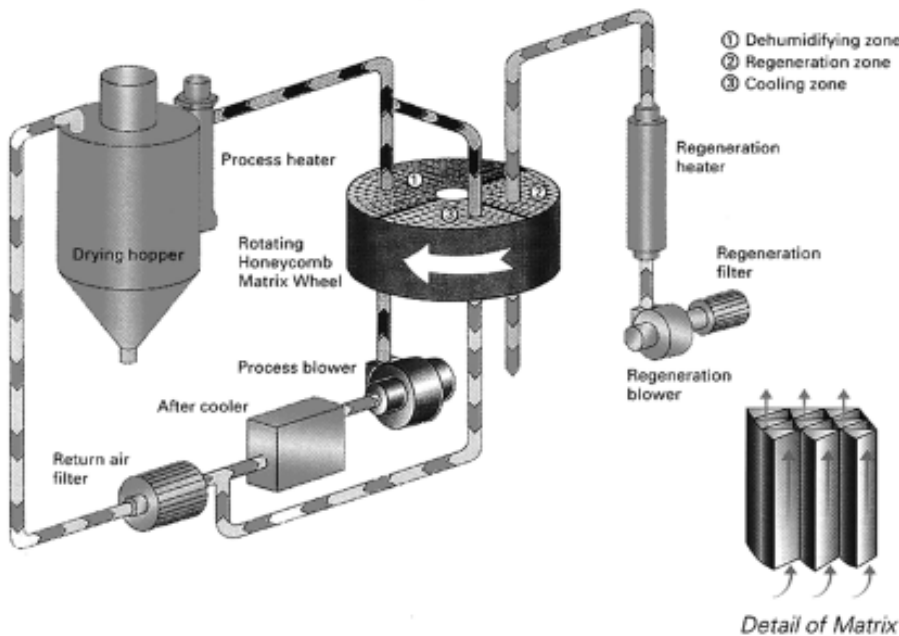
The Matrix

HCD Honeycomb dryers use the Rotating Honeycomb principle to provide the most consistent drying yet possible. The Honeycomb rotor slowly turns while cycles of dehumidification, regeneration and cooling occur simultaneously. This drying system provides a constantly lower dewpoint than any desiccant, compressed air, vacuum or other dryer available today.

Because this unique system operates continuous in drying mode, it is able to maintain dewpoints of -58° F (-50° C), continuously.

The closed-loop circuit design eliminates the risk of moisture re-absorption and is ideal for drying large quantities of hygroscopic material.

The Dehumidifying Design



The Honeycomb Principle

The heart of the system is the Honeycomb Matrix Wheel. The Wheel has a series of air passages or channels that form the Matrix. The passages inside the Wheel are coated with molecular sieves and silica gel that are strongly bonded to ceramic fibers inside the rotor by special chemical crystallization.

When the Honeycomb Matrix Wheel contacts damp air, it soaks up moisture. When heated, it releases the moisture to the regeneration airstream.

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The Process Circuit

A high-pressure blower draws moist air from the top of the hopper and through the after-cooler into the Honeycomb Matrix Wheel through the return air filter. Moisture is extracted from the air and stored in the Honeycomb Matrix Wheel. The dry air is heated and blown into the bottom of the drying hopper. Because the Matrix Wheel is desiccant-free, there is no dust sent from the dryer into the material.

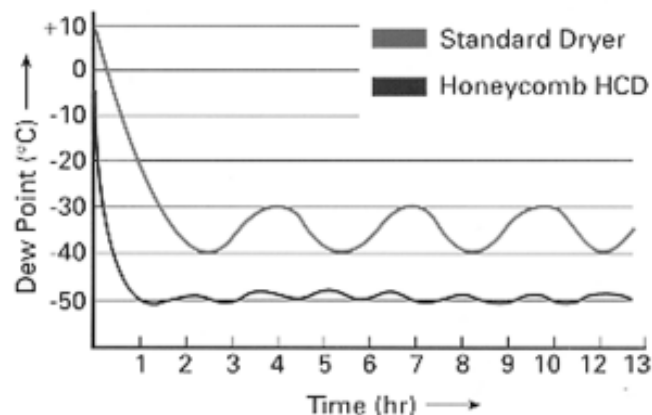
The Regeneration Circuit

The regeneration phase removes moisture from the Honeycomb Matrix Wheel. The regeneration blower draws ambient air to the regeneration heater. The air is heated to approximately 360° F (182° C) and forced through the

channels in the Honeycomb Matrix, which releases its moisture into the hot air stream. The moist, regenerated air is vented out.

To cool the regenerated section of rotors, some of the dried but unheated process air is diverted through the Matrix.

The process, regeneration and cooling cycles occur simultaneously on different sections of the Wheel. A small drive motor turns the Honeycomb Matrix Wheel at the precise time required for the drying conditions.



Specifications

Model Number	Dry Air Flow Rate (m3/h)	Dry Air Flow Rate CFM	Process Blower (hp)	Regen. Blower (hp)	Regen. Heater (kW)	In/Out Pipe Diameter (inch)	PRICE	Dimensions (in)
HCD50	50	30	.5	.06	2.5	1.5	\$6615.00	25.6(L)x23.6(W)x43.3(H)
HCD100	100	60	1.0	.06	3.8	2.5	\$7880.00	30.1(L)x30.1(W)x61.2(H)
HCD180	180	105	2.5	.5	5.2	2.5	\$10,100.00	30.1(L)x30.1(W)x61.2(H)
HCD300	300	175	5.0	.5	9.5	3.0	\$12,600.00	34.1(L)x34.1(W)x73.0(H)
HCD400	400	235	7.4	1.0	13.0	3.0	\$14,950.00	34.1(L)x34.1(W)x73.0(H)

Specify Voltage When Ordering

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