



HAZEMAG
Rapid Dryer | HRD





HRD | thermally - mild drying

Application

The thermal drying (*water vaporisation*) in the rapid dryer provides for diverse application in a wide spectrum of materials including:

Clay and loam, limestone chippings, puzzuolana, iron ore, aluminium hydroxide, gypsum (natural, chemical, flue gas), fluorspar, bauxite, ...

These materials mostly comprise moist filter cake (25-30% moisture) or pasty products and must be dried down to given values of moisture, defined by following steps of the material processing.

Process | Procedure

Hot gas and feed material are passing the dryer in parallel flow. The feed material is mechanical agitated with the flow blades mounted on the two shafts. Therefore the material is optimally broken up and dispersed. This results in a thermally-mild drying within short time, without overheating the material and thereby causing material damages.

Hot gas

Generally, drying gases are provided by a hot gas generator fuelled with oil or natural gas. The hot flue gas temperature is between 500°C and 800°C.

Structure

The rapid dryer consists of frame, housing lower part, housing upper part, hot gas nozzles, exhaust gas nozzles and drive units.

In the housing lower part two rotating agitator shafts are assembled. The dryer is partially protected against wear with a lining in the interior compartment. The agitator shafts are equipped with throw arms on which throw blades are bolted. The shaft bearings at the feeder side are cooled with water, if required. Internal height adjustable compartment walls control the dwell time of the feed material.





Moist untreated material



Dry end product



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Type	Agitator Shaft Dimensions [mm]	max. Water Vaporisation* [kg/h]
HRD 0630	590 x 3.000	670
HRD 0637	590 x 3.740	800
HRD 0837	780 x 3.740	1.400
HRD 0940	900 x 4.040	2.800
HRD 0946	900 x 4.640	3.800
HRD 1051	1.050 x 5.060	5.100
HRD 1061	1.050 x 6.080	6.600
HRD 1261	1.240 x 6.080	10.000 / 13.500
HRD 1861	1.800 x 6.080	17.000 / 21.000
HRD 2170	2.100 x 7.040	27.000

* depending on feed material size distribution and density



Rapid Dryer | HRD - HAZEMAG is the specialist

