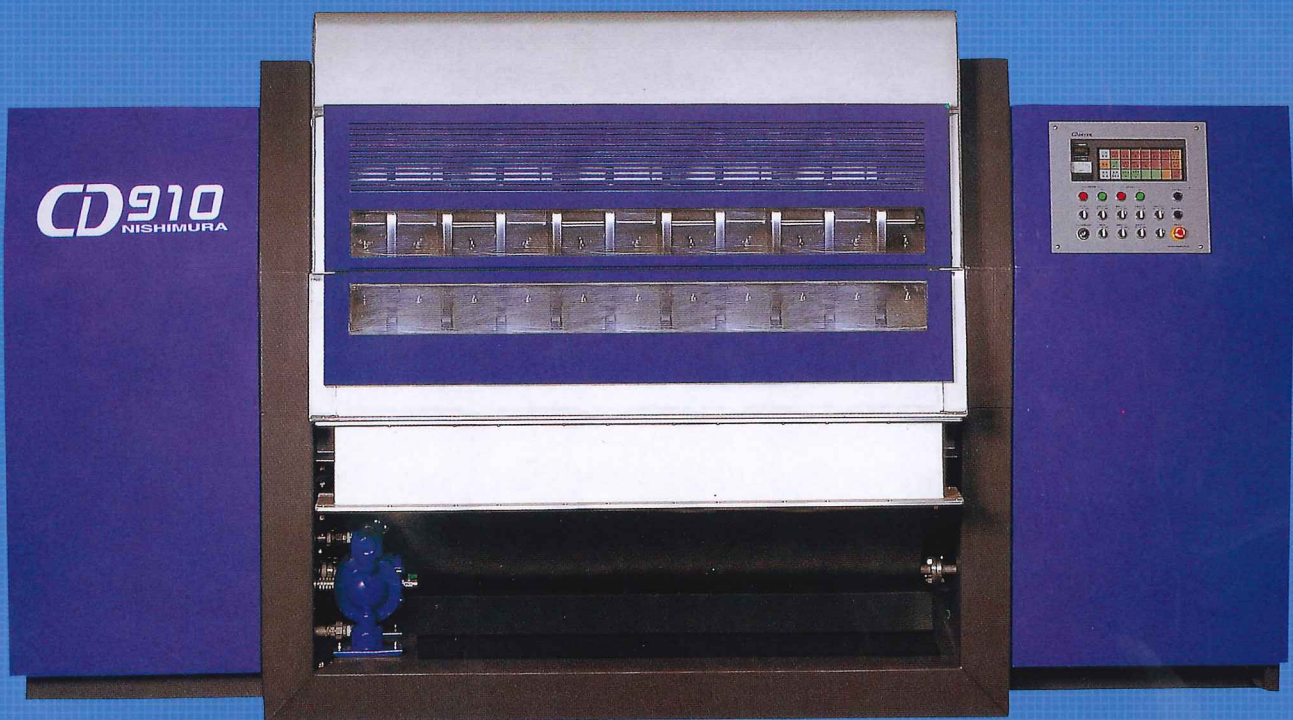


HIGH PERFORMANCE CONCENTRATION · DRYING

Compact Disc Dryer

CD DRYER



Nishimura Works Co., Ltd.

Compact Disc Dryer



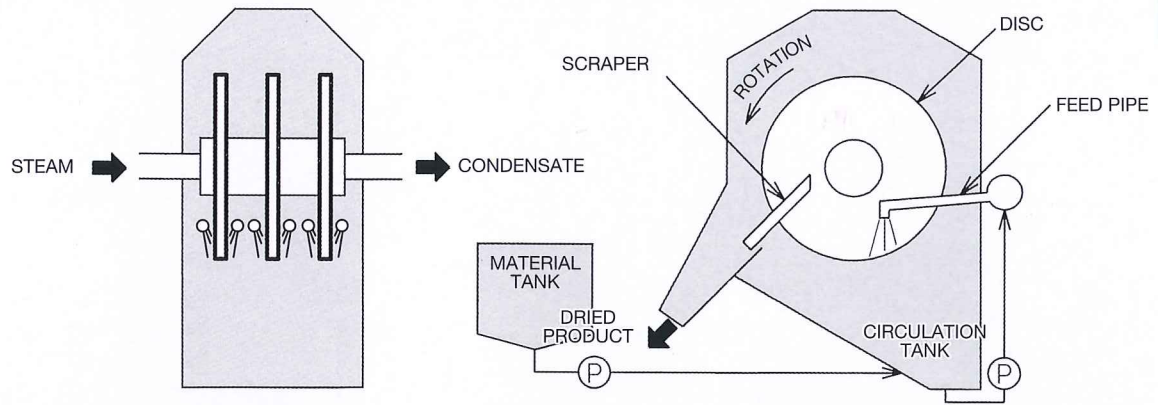
CD DRYERS belong to the category of conductive heating dryers which indirectly heat and dry materials through conduction. Drum type dryers and cylinder dryers used at paper mills also belong to the same category.

Unlike conventional dryers, the CD DRYERS do not make use of the circumferential surface of its cylindrical drum, but both sides of its hollow disc as conductive surfaces.

While developing the CD DRYER, we have made it a basic principle to raise the over-all heat transfer coefficient in designing a high performance dryer with the understanding that dryers are nothing but heat exchangers in principle.

Consequently, an evaporation capacity of 200kg/m²h water at 20°C or over and over-all heat transfer coefficient of 2000kcal/m²h°C have been achieved. The high performance of the CD DRYER is a revolutionary development for the conductive heating type dryer.

CONSTRUCTION

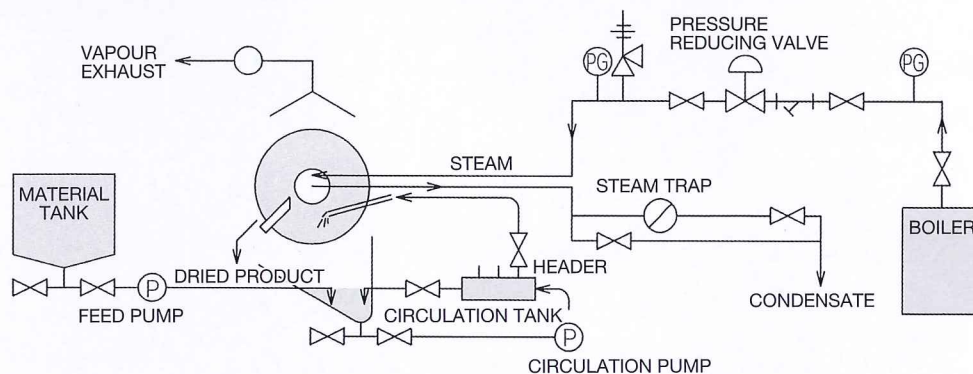


Flow of Drying Operations

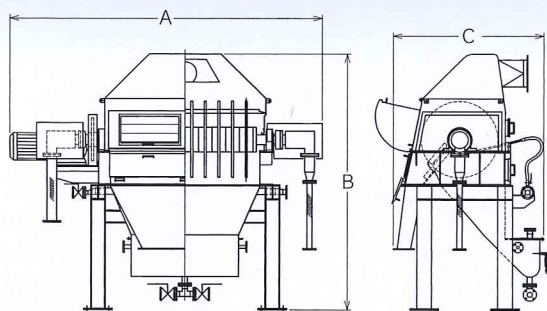
1. The material in material tank is supplied to the circulation tank.
2. The material in the circulation tank is sprayed over the disc surface by the circulation pump through the header.
3. The material deposited on the disc surface is scraped off by means of a scraper as it is dried while the disc is rotating. The material which has failed to deposit over the disc surface is recycled to the circulation tank to be supplied again.
4. The rotating speed of the disc is freely changeable by means of an inverter while the machine is in operation, enabling optimum control of moisture content in the material. The material can be either concentrated or dried to a powder.



STANDARD FLOW DIAGRAM



SPECIFICATION



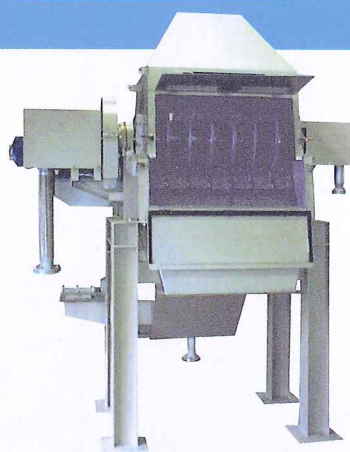
		CD-500	CD-903	CD-906	CD-908	CD-910	CD-912	CD-1306	CD-1308	CD-1310	CD-1312	CD-1316
DISC DIAMETER mm		540	900				1,300					
DISK NUMBER		1	1 ~ 12				6 ~ 16					
DRYING AREA (PER 1 DISC)		0.4	1				2					
DRYING AREA m ²		0.4	1 ~ 12				12 ~ 32					
measurement mm	A	1,390	2,070	2,690	3,070	3,490	3,940	3,680	4,130	4,580	4,980	5,780
	B	2,180	2,440	2,940	2,940	2,940	2,940	4,700	4,700	4,700	4,700	4,700
	C	1,820	1,770	1,770	1,770	1,770	1,770	2,250	2,250	2,250	2,250	2,250

MAIN LINEUP

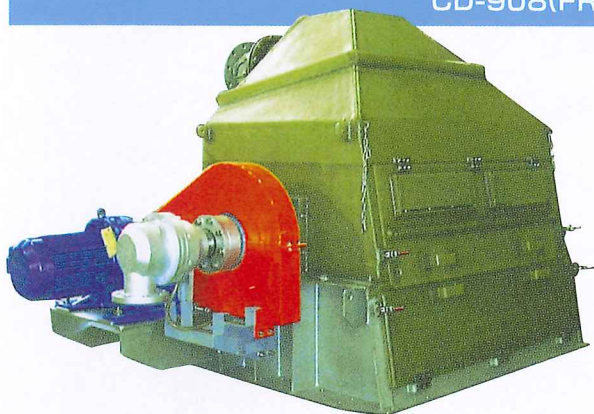
CD-500



CD-906



CD-908(FRP)



CD-1316



Features

◎HIGH PERFORMANCE:

Compared with the conventional type drum dryer (of our make), the CD DRYER has recorded a capacity per m² two times higher on average experiments of more than 50 types of materials.

◎COMPACT

Because the CD DRYER uses both surfaces of its thin disc, it requires a plane area that is approx. 40% of the area required by the conventional dryer, as shown in the diagram below.

◎ENERGY SAVING /HIGH EFFICIENCY:

While in general, conductive heating types of dryers have a higher thermal efficiency, the CD DRYER gives a much smaller heat loss thanks to its compact size and is able to operate at an efficiency as high as 80 to 85%.

Further, owing to the light weight of the heating unit, even the larger size of CD DRYER is ready to operate within five minutes after steam has been charged.

◎LESS THERMAL DECOMPOSITION OF MATERIAL:

Damage to the material due to high-temperature heat can be reduced because heating time is as short as 3 to 30 seconds.

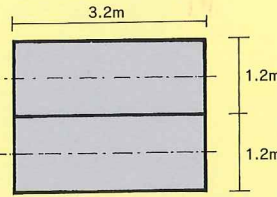
◎CURTAILMENT OF PROCESS:

Because it is possible to dry the material in its original liquid form to the form of powder at a heat, anterior and posterior processes in conventional methods can be curtailed remarkable.

Three processes of concentration, drying and pulverization are reduced to one process when employing this CD DRYER.

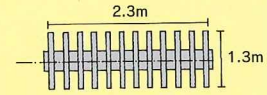
DRUM DRYER(double drums)

Heat transfer area(24.0m²)
plane area(7.68m²)













CD DRYER

Heat transfer area(24.0m²)
plane area(3.0m²)



* Moreover, while the per-m² capacity is twice as high, the installation area is reduced to one fifth.

APPLICATION

	Water contents (%W.B.)		Steam pressure (MPa)	Amount of original liquid (kg/m ² h)	Amount of dried product (kg/m ² h)	
	original liquid	dried product				
Ceramics	67	0.2	0.3	100	33	
Ferrite	60	0.1	0.3	175	70	
Pigment	70	3.0	0.1	54	17	
Beer yeast	88	5.0	0.3	80	10	
Distillation residue of liquor	91	11.0	0.3	60	6	
Waste milk beverage	89	1.2	0.15	29	3	
Water-soluble paint	98	10.0	0.13	63	1	
Waste resist	88	4.0	0.25	36	5	
High concentrated salt water	80	10.0	0.25	48	11	
Waste water-soluble oil	88	17.0	0.3	52	8	

INQUIRY

You are cordially requested to provide us with following information when you inquire about our CD DRYER.

① Name of material to be treated

.....

② Water content of original liquid

.....

③ Water content to be retained in dried product

.....

④ Amount of material to be treated

.....

⑤ Physical properties of original liquid

.....

⑥ Pressure and temperature of working steam

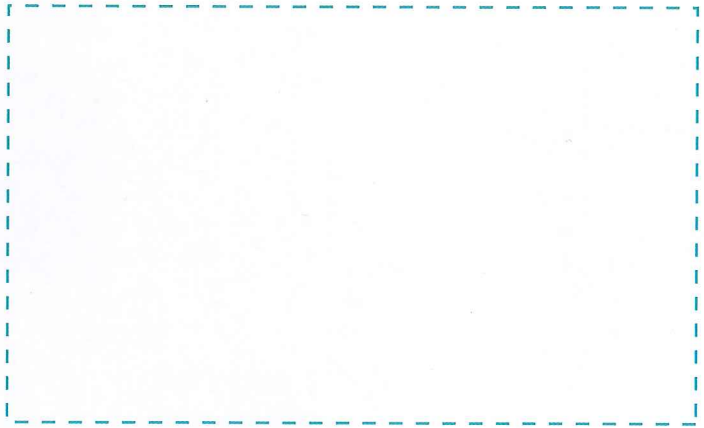
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⑦ Other as necessary

.....

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Based on this information a drying test may be conducted, using a test dryer. Records of previous drying tests may be available unless they are classified. Feel free to ask us for such information.



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