

## CD Dryer

Contact dryer for suspensions and solutions





# Production of dry substances from suspensions and solutions

The CD Dryer is an indirectly heated contact dryer. The solids are dried by heat conduction from a steam-heated disc to the liquid product applied to the disc. The advantage over other contact dryers lies in particular in the significantly higher heat transfer surface with simultaneous small space requirement.

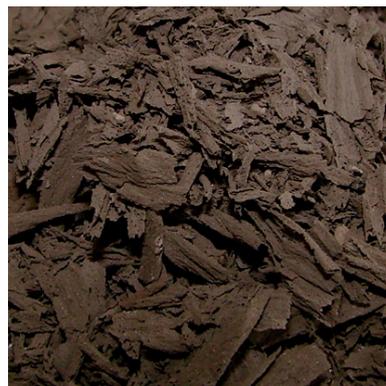
Compared to convective dryers, contact dryers have lower heat losses with the warm exhaust air flows. The resulting vapor is removed with a high water vapor concentration. This results in lower steam consumption than with convection dryers.

## The advantages at a glance

|   |                                    |  |
|---|------------------------------------|--|
|  | <p>ENHANCED PROCESS MONITORING</p> | <p>Simple process monitoring during system operation through the use of laminated safety glass in the swiveling hood on the machine front, intelligent system control.</p>   |
|  | <p>COMPACT DESIGN</p>              | <p>Efficient contact drying due to internally heatable disk assemblies. 60% smaller installation area of the discs compared to drums.</p>  |
|  | <p>OPTIMAL ACCESS</p>              | <p>Covering of all rotating and hot machine parts, service openings for extended access, integrated steam control system including safety valve.</p>   |
|  | <p>SIMPLE HANDLING</p>             | <p>Intuitive operation of the touch panel for Retrieve and modify the current machine- /Process parameters.</p>  |
|  | <p>SMALL INSTALLATION AREA</p>     | <p>Intuitive operation of the touch panel to access and change the current machine/process parameters.</p>   |
|  | <p>ENHANCED SAFETY</p>             | <p>Separate access to steam fittings, drive, circulation pump and rotary feed-through incl. pedestal bearing. Sight glass on the back and integrated working light for optical control during dryer operation.</p> |

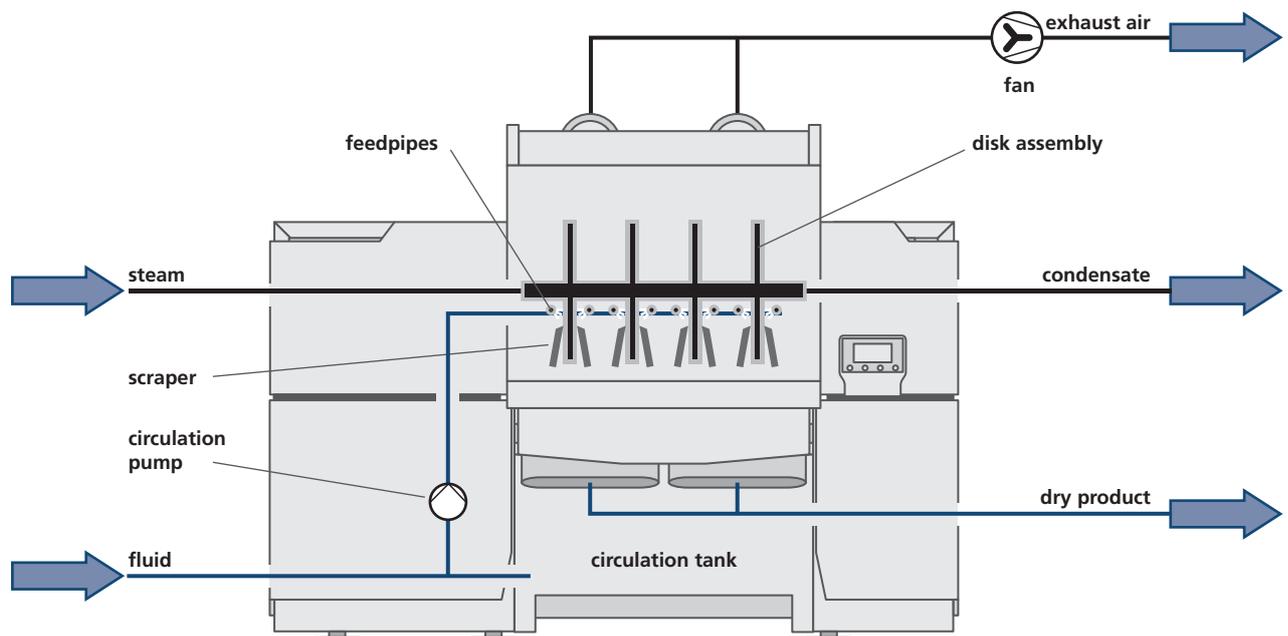
## Fields of application

- Industrial waste water
- Ferrites
- Ceramic
- Pigments
- Polymers
- Mineral sludge, bentonite sludge
- China clay sludge
- Brewery waste water
- Gelatine
- Fish water
- Raw egg
- Graphite
- Copper sulfate
- Wolfram sludge
- Silica
- Tin-loaded waste water
- Indium Hydroxide
- Zinc ferrite
- Resin
- Yeast
- Distillation residues
- Water-soluble paint effluents
- Landfill leachate
- Saline solutions
- Grain residues
- Fodder additives
- Activated sludge
- Fermentation concentrate
- Algae suspensions



## How it works

- The liquid is pumped from the product tank into the circulation tank.
- The suspension/solution is then pumped to the individual feed pipes by means of a circulation pump.
- Each feed pipe feeds the liquid product onto one side of the heated rotating discs.
- Excess liquid runs back into the circulation tank.
- The solvent contained in the liquid product (e.g. water) evaporates during one turn of the disc.
- The dried solid adhering to the heated disc is subsequently scraped off with knives.
- The degree of drying of the end product can be influenced by the speed of the discs.
- The resulting dry product is transported out of the dryer via the product discharge.
- It is also possible to concentrate liquids without producing a dry product.
- Depending on the material properties of the product in use, the dry material created can have different forms. The exact product behavior can be analyzed with the aid of a pilot plant in Allgair's testcenter



## Robust technology and compact design

The process chamber in the middle area of the dryer is made of high-quality stainless steel and serves as an enclosure for the disk assembly and as a separating device to the technical rooms on the left and right side of the dryer. The hood with windows made of laminated safety glass (LSG) can be pivoted upwards for easy process monitoring and easy access to the process chamber for cleaning work when open. The machine status is transmitted to the system operator via a multicolored light in the glass front. An additional luminaire is located above the disk assemblies to illuminate the process chamber. Vapor extraction

takes place through the exhaust air spigots, which are oriented backwards on the upper part of the process chamber. The produced dry material falls into containers or conveyors via a product discharge chute.

A modern process control system with a large touch panel visualizes the operating status of the CD Dryer. The control software has various operating levels for standard operation and operator intervention or for repair and maintenance. Remote maintenance is possible.



## Optimum accessibility for maintenance purposes

Large, hinged doors ensure very good access to the technical areas for maintenance and repair purposes.

The disk unit is very robust and can be adapted in different versions to the product properties with regard to abrasion and corrosion. Various materials and different surface coatings are available. Due to their special, slim design, the disk units enable very good heat transfer, which is reflected in the efficiency of the drying process.



Overview table of sizes and characteristic dryer properties

| Types                             |        |                | CD-500   | CD-902 | CD-904 | CD-906 | CD-908 | CD-910 | CD-912 | CD-1306 | CD-1308 | CD-1310 | CD-1312 | CD-1312 | CD-1316 |
|-----------------------------------|--------|----------------|----------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| Disk diameter                     |        | m              | 0.54     | 0.9    |        |        |        |        | 1.3    |         |         |         |         |         |         |
| Number of disks                   |        |                | 1        | 2-12   |        |        |        |        | 6-16   |         |         |         |         |         |         |
| Heat transfer area per disk       |        | m <sup>2</sup> | 0.4      | 1      |        |        |        |        | 2      |         |         |         |         |         |         |
| Total heat transfer area          |        | m <sup>2</sup> | 0.4      | 2-12   |        |        |        |        | 12-32  |         |         |         |         |         |         |
| Water evaporation (max. values) * |        | kg/h           | 80-4,000 |        |        |        |        |        |        |         |         |         |         |         |         |
| Dimensions ** closed              | Width  | m              | 1.20     | 2.99   | 3.63   |        | 4.27   |        | 4.20   | 5.00    |         | 5.80    |         |         |         |
|                                   | Height | m              | 2.25     | 2.74   | 2.74   |        | 2.74   |        | 3.50   | 3.50    |         | 3.50    |         |         |         |
|                                   | Depth  | m              | 1.98     | 1.98   | 1.98   |        | 1.98   |        | 2.60   | 2.60    |         | 2.60    |         |         |         |
| Dimensions ** open                | Width  | m              | 1.20     | 4.55   | 5.19   |        | 5.83   |        | 6.00   | 6.80    |         | 7.60    |         |         |         |
|                                   | Height | m              | 2.25     | 3.03   | 3.03   |        | 3.03   |        | 4.00   | 4.00    |         | 4.00    |         |         |         |
|                                   | Depth  | m              | 2.10     | 3.07   | 3.07   |        | 3.07   |        | 3.80   | 3.80    |         | 3.80    |         |         |         |

\* Depending on the product to be dried and the moisture content. Values are to be understood as a rough orientation.

\*\* The dimensions may vary depending on the optional design of the drying system.

# ALLGAIER

Allgaier-Group

## ALLGAIER Process Technology GmbH

Ulmer Str. 75  
73066 Uhingen  
Germany  
Phone: +49 7161 301-175  
Fax: +49 7161 34268  
process-technology@allgaier-group.com



## Mogensen GmbH & Co. KG

Kronskamp 126  
22880 Wedel  
Germany  
Phone: +49 4103 8042-0  
Fax: +49 4103 8042-40  
info@mogensen.de



## Fredrik Mogensen AB

Hjo:  
Sveavägen 26 | 54421 Hjo | Sweden  
Phone: +46 503 323 40 | Fax: +46 503 13878  
Malmö:  
Gustav Adolfs torg 41 | 21139 Malmö | Sweden  
Phone: +46 503 323 40  
info@mogensen.se



## ALLGAIER MOGENSEN SLU

C/ Téllez, 24 - Oficina 4A  
28007 Madrid  
Spain  
Phone: +34 91 5776277  
Fax: +34 91 5757495  
info@almo.es



## ALLGAIER PROCESS TECHNOLOGY, INC.

Ohio:  
9780 Windisch Road | West Chester, Ohio | 45069 USA  
Utah:  
942 E North Union Ave., Suite A201 | Midvale, UT | 84047 USA  
Phone: +1 513 453 6990  
info@almoprocess.com



[www.allgaier-process-technology.com](http://www.allgaier-process-technology.com)