

The Centerdisc CDI™ disc filter is primarily designed for fiber recovery from white water and broke thickening of medium to large flows.

The Centerdisc CDI is insensitive to concentration and freeness variations and suits most pulp and paper grades.

## Key Benefits

- Ability to handle high freeness applications
- Ability to handle high feed consistencies
- Ability to handle large flows
- User-friendly operation
- Open grid segment

## Ability to Handle High Freeness and High Consistency Applications

The Centerdisc CDI filter's ability to handle high freeness and high consistency grades makes it flexible to process variations, and allows the surrounding process equipment to be smaller. Such ability is derived from the unique open rotor design.

Segments are mounted onto cross channels connected to axial channels. The discharge trough is placed in the center of the filter. The design allows the thick, high freeness pulp fiber mat to fall directly into the discharge vat. The agitating effect of the cross channels makes the Centerdisc CDI filter ideal for high freeness pulp as the mixture will not sediment.

In addition, the Centerdisc CDI filter produces consistent pulp quality in an efficient process with variations in input. Other benefits derived from the open rotor design are high capacity, minimum space requirements, low maintenance costs and operational reliability.

## Ability to Handle Large Flows

The unique rotor design also enables the Centerdisc CDI to handle, for disc filters, extreme high flows. This feature makes it possible to use



Fig. 1 – The Centerdisc CDI disc filter.

disc filters in applications where traditionally only drum deckers have been used.

## Simple Operation and Maintenance

The Centerdisc CDI filter is designed with both the operator and the mechanic in mind. Filter segments, sealings and bearings are easily accessible from outside the filter. Standard components are used for drives and bearings.

## Easy Cleaning of Segments

The open grid segment design with over 90% open area eliminates the risk of pulp and debris accumulating inside the sector. This design allows the fabric to be cleaned from both the outside and inside by a spray water jet through the open sector. This keeps the cloth cleaned longer which improves effectiveness.

## Working Principle

The feed suspension enters the filter vat via the full length headbox and is uniformly distributed. The pulp mat starts to form under gravity, ensuring optimal dewatering characteristics. The filtrate is drained via the open-grid sectors and the cross channels to the corresponding axial chan-

nels. The axial channels are connected to a spider formed by inclined channels. The spider is connected to a suction box with a valve for setting the split between cloudy, clear filtrate and super clear filtrate.

Clear and super clear filtrates are formed under negative pressure. When the sectors have emerged from the suspension, they are drained and the pulp mat is dewatered under negative pressure. The fiber mat is knocked off at the top by a water spray and falls directly into the centrally located discharge trough. The filter cloth is cleaned by an oscillating water spray before the filtration procedure starts over again.

The concept of a rotor with axial channels provides a continuous agitation in the vat, resulting in a uniform stock consistency. The inclined channel design prevents the forming of air pockets when the segments are submerged, thus allowing better mat formation and unrestricted filtrate flow.

## Material

- All wetted parts are made of high grade stainless steel.
- Filter cloth and zipper of Polypropylene as standard; Kynar and stainless steel as option.

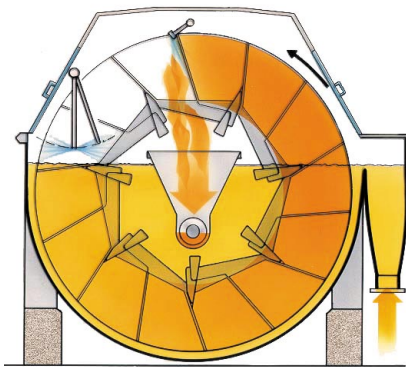


Fig. 2 Working principle of the Centerdisc CDI.

## Available Auxiliary Equipment

- Foundation
- Platform
- Instrumentation.

## Patents

The design is protected by patents and patent pendings.

## Dimensions

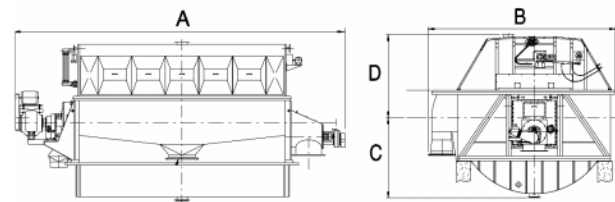


Fig. 3 Dimensions

### CENTERDISC CDI 4

Size	B, mm	C, mm	D, mm
CDI 4	5410	2450	2300
CDI 5	7100	3000	2884
CDI 5.5	7400	3200	3035

### CENTERDISC CDI 5

No. of discs	6	12	18	21
Pitch	250/325	250/325	250/325	250
A, mm	4710/5410	6210/7035	7710/8985	8460
Area, m <sup>2</sup>	118	236	355	414
Oper. weight, t	40/52	53/69	67/87	74

### CENTERDISC CDI 5.5

No. of discs	10	16	22	26	29
Pitch	250/325	250/325	250/325	250	250
A, mm	7217/7891	8217/9881	10217/11831	11257	12007
Area, m <sup>2</sup>	272	544	748	884	986
Oper. weight, t	85/112	118/160	151/202	173	190