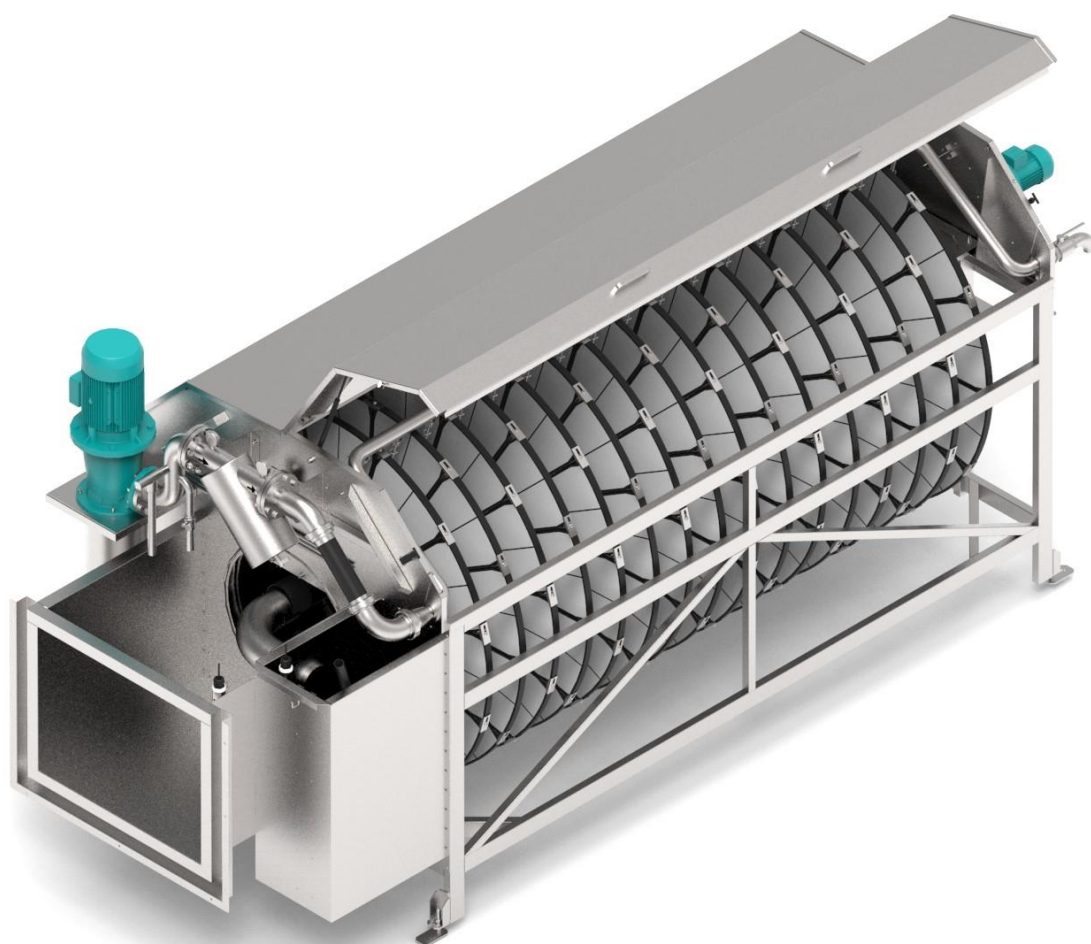


ALL
FOR
WATER

IN-EKO[®]
TEAM

Disc filter



V20200304

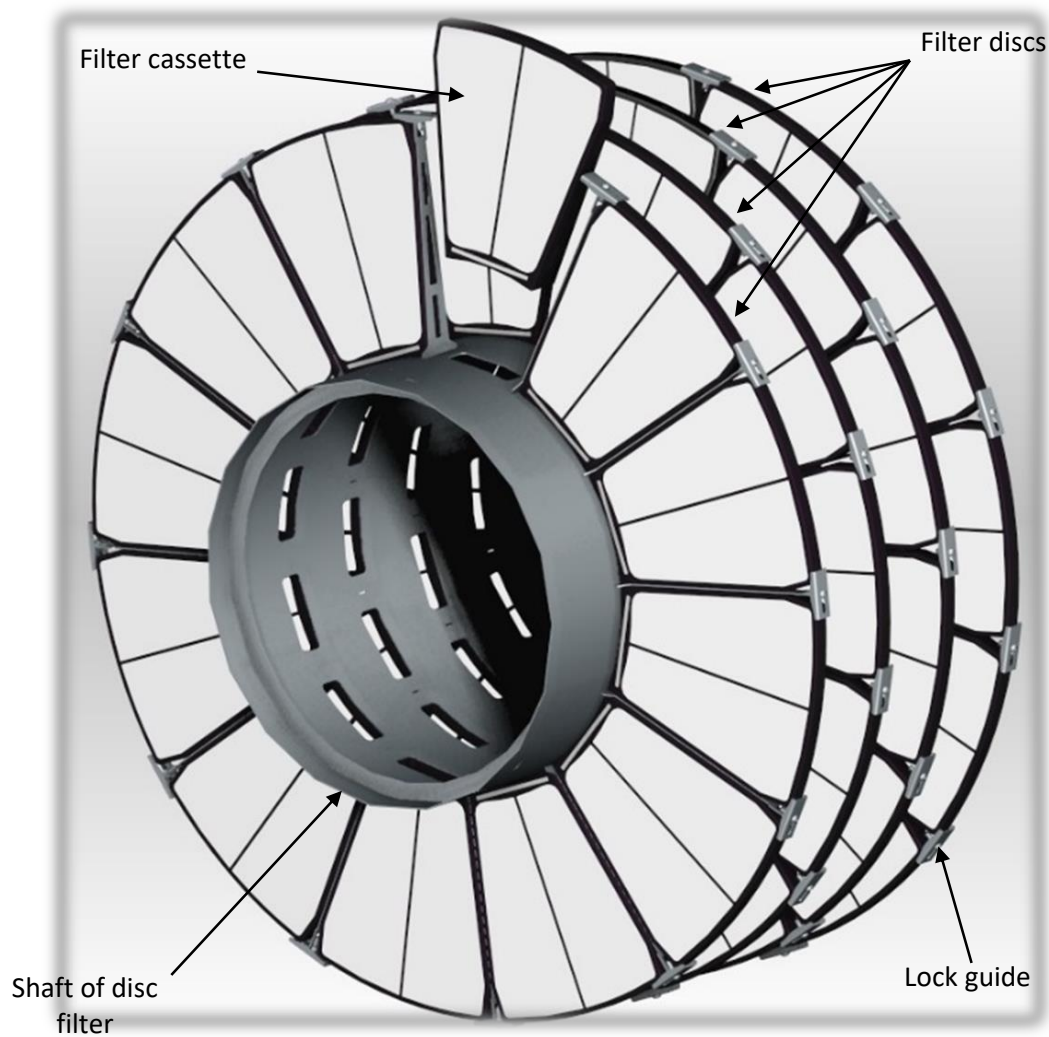


Fig. 7 Disc filter shaft

If the cassettes get damaged, it is possible to change it, see Changing filter cassettes page 53.

switchboard and its distance from the filter must be known when the unit is ordered.

! Filters must be protected from low temperatures during their operation. If filters are used outside, precautions must be taken to prevent water from freezing. It could lead to damage which the manufacturer does not provide responsibility. The precautions must be consulted with IN-EKO TEAM designers before ordering the unit. **!**

If the filter is installed outside, precautions must be taken to prevent damage caused by atmospheric electricity (e.g. lightning).

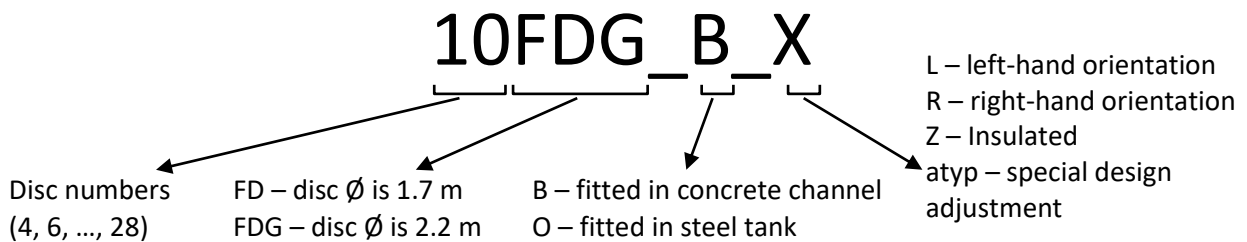
Preparation of the site

The unit is placed on a horizontal solid big foundation base (concrete channel, concrete plate/foot, metal structure).

Check the sizes of the concrete channel if they correspond with the Technical drawing.

It is necessary to ensure that there is enough space around the filter and above, including enough space for a lifting device, to enable handling the unit during assembly and maintenance service.

Type designation



Note: the filter orientation is defined by the filter cover opening side. When water flows through the filter from left to right, it is right-hand orientation and vice versa (see Fig. below).



Fig. 19 Right-hand orientation of the filter

Filter size

Filter size is given by the number of filter cassettes fitted to the shaft of the disc filter. Each disc consists of 12 cassettes; see Table 1 (p. 18). The diameter of the disc is 1.7m for FD and 2.2m for FDG.

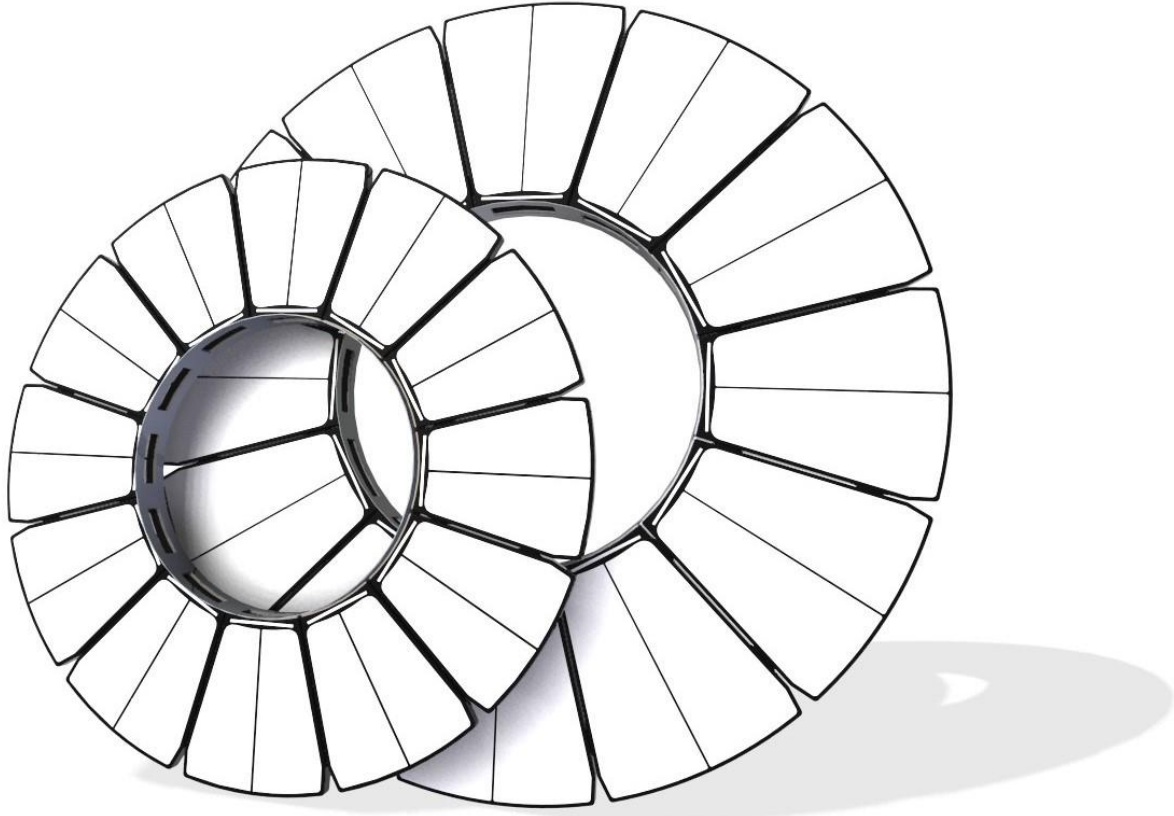


Fig. 20 Disc sizes (FD, FDG)

FILTER TYPE	NUMBER OF DISCS	TOTAL NUMBER OF CASSETTES
4FD	4	48
4FDG		
6FD	6	72
6FDG		
10FD	10	120
10FDG		
16FD	16	192
16FDG		
24FD	24	288
24FDG		
28FD	28	336
28FDG		

Table 1 Filter size

Changing filter cassettes

Changing filter cassettes is easy and fast. No fixture is removable from the rotary part of the disc filter. Fixtures are easily accessible and are placed only on the circumference of the disc. It is therefore not necessary to change the cassettes in the centre of the discs but it can be comfortably done on the disc circumference. As the fixtures are not removable, it is not necessary to hold them in hand when changing cassettes and thus there is no risk that the screws could fall down inside the bottom part of the filter usually filled with water, where they could not be reached.



Before you start changing the cassettes, the main circuit breaker must be switched off in the switchboard!



If it is necessary to change more cassettes at the same time, it does not matter in which order the cassettes are removed and replaced.

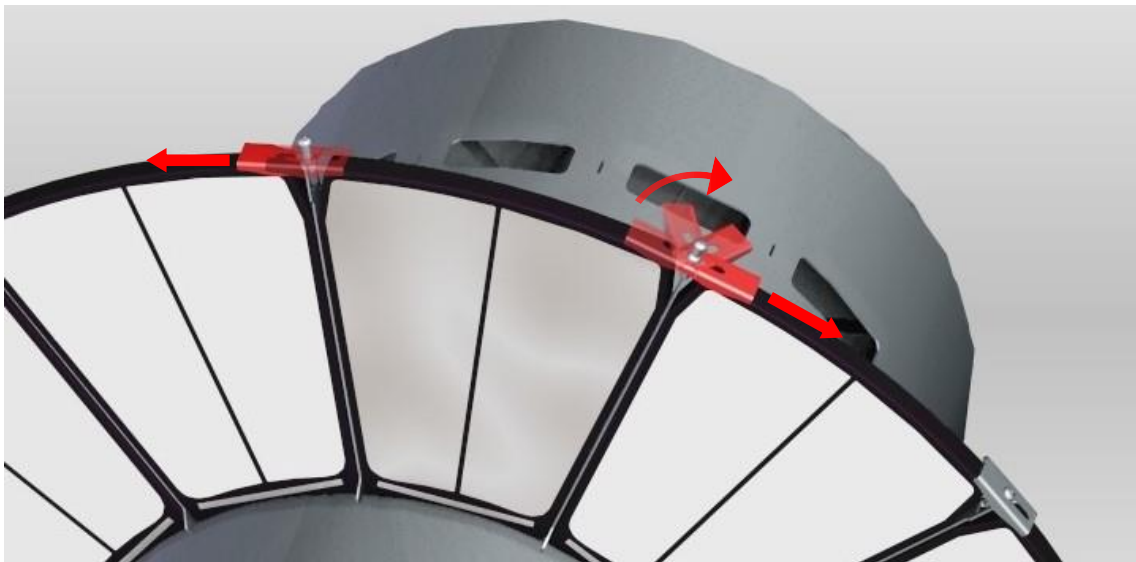


When loosening and tightening screws, it is necessary to apply the torque force of **5 to 8 Nm**, to avoid damaging the screw in the end position and its subsequent fall to the tank. Hence it is recommended to use an acudrill to loosen or tighten screws because torque can be preset.



1. Use a hex key (6 mm) to loosen the bolts on the (damaged) cassette. Do not remove the bolts completely, but only loosen them so it is possible to manhandle the lock guides.

2. Move the lock guides on the side so it is possible to remove the cassette.

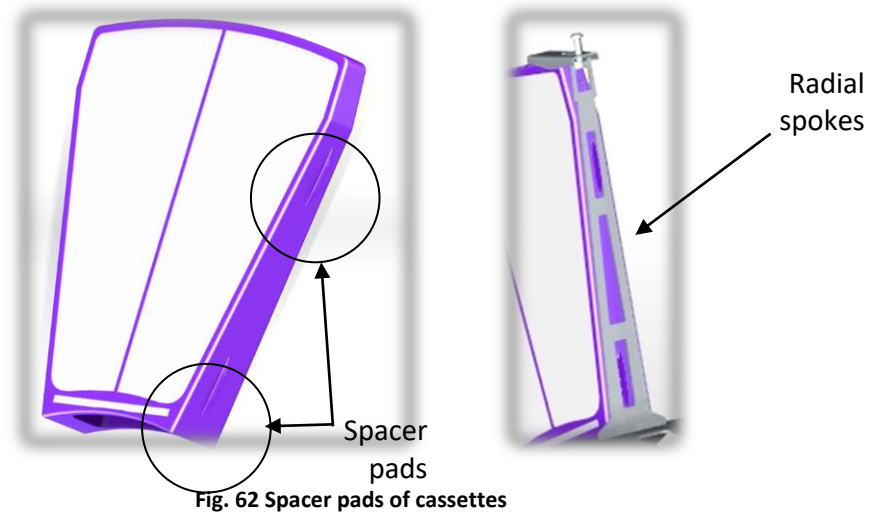


3. Remove the cassette with both hands.

Fitting the cassette back in place is done in the reverse order. Put a new cassette in place of the damaged one, restore the lock guide and tighten the bolts using 5-8 Nm torque.

It is necessary to make sure the

cassettes are precisely in their place. To ensure this, they are spacer pads which will fit in openings in radial spokes.



Troubleshooting

! Turn off the main circuit breaker when performing any maintenance work on the filter and secure with a padlock! !

Backwash system is not working correctly

The most important aspect for the correct functioning of the filter is to make sure that the nozzles are functioning correctly. Therefore the nozzles must be regularly checked for blockage and that the water jets are of the right shape. See Regular checkson page 44.

If the water jets do not show the right shape or one of the nozzles does not function correctly, it is necessary to clean it according to the instructions in chapter Backwash system – maintenance and cleaning, Cleaning nozzles. If water does not spout out of nozzles with a strong jet, it is necessary to clean the whole backwash system.

Continuous rotation of the shaft of the disc filter

It can be caused by the following:

- The filter is overloaded with an excessive amount of detritus in the influent water. Once the quantity of detritus is decreased, normal function is restored.
- Improper function of the backwash system (for restoring see Backwash system is not working correctly, p. 55).
- Filter mesh is clogged with either grease or becomes gradually clogged due to a long operation. This can be eliminated by switching the filter to continuous run for the period of 30 to 60 minutes. If the problem remains, the cloth can be either sprayed with degreasants, chemical agents or changed completely.
- The level probe in front of the filter is clogged. For Probe cleaning see p. 53.
- The filter is switched to continuous operation.
- Exceeded capacity of the filter.
- Very fine particles with size similar to that of the filter mesh.