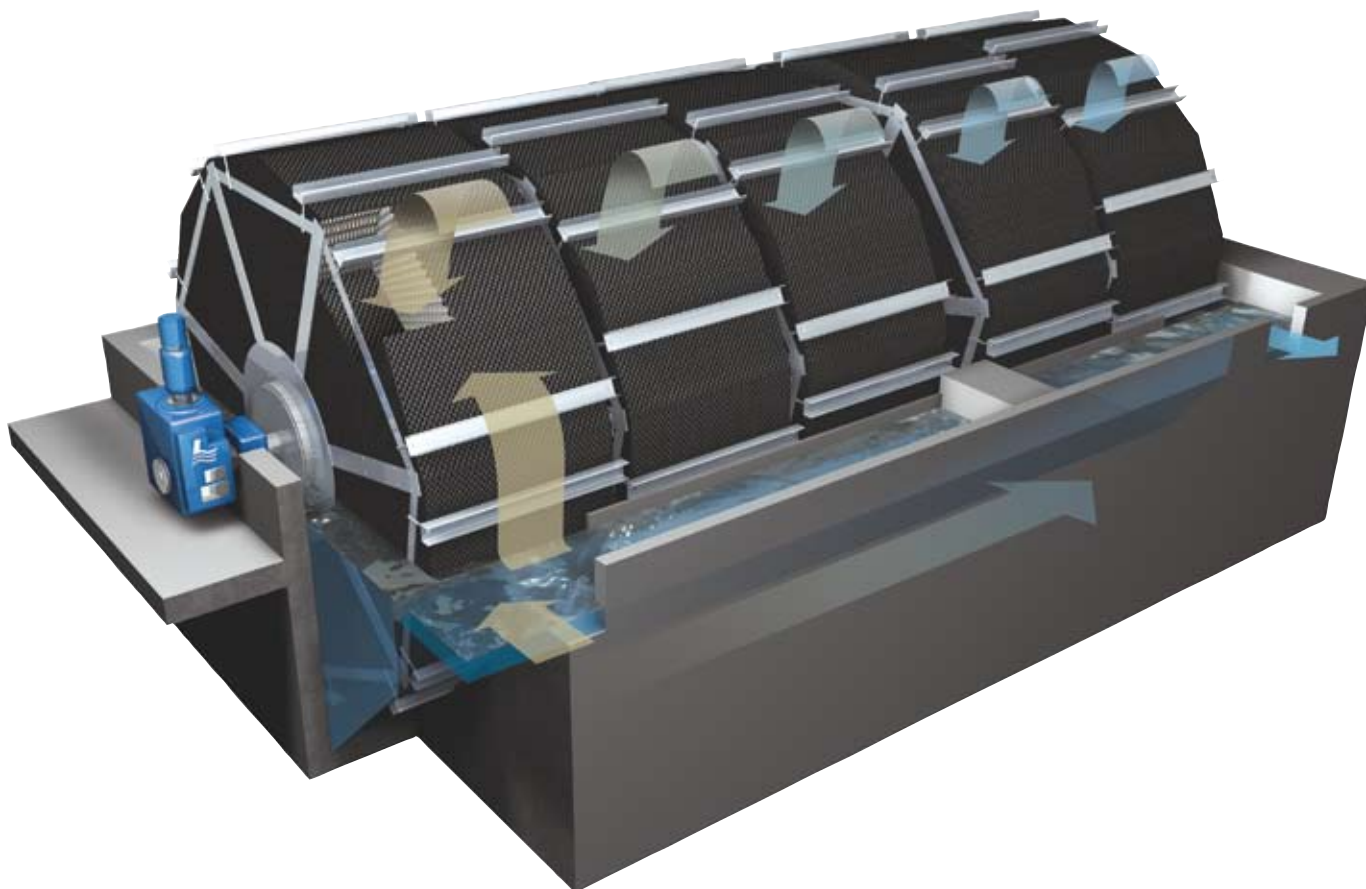


NOVATEK™ ROTATING BIOLOGICAL CONTACTOR (RBC)



Läckeby Products NovaTek™ RBC is designed for treatment of waste water from municipal and industrial sewage works. The design is based on more than 20 years of experience from deliveries to plants worldwide. NovaTek™ Biorotor is as capable as other equipment for biological processes, but needs less space. A LCC-analysis also shows that it is a attractive solution compared to alternative systems.

Function

The waste water is led to a vessel in which a biorotor rotates with a speed of 1-2 rpm. The slow rotation means small mechanical stress and minimized splashing and formation of aerosols. Approximately 40 % of the biorotor surface is under water. During the rotation the organic compounds are broken down by micro-organisms that grow on the active biomedica material. The structure of the biomedica material ensures extremely good flow without clogging. Required oxygen is absorbed by the micro organisms from the surrounding the air. The biological skin falls continuously due to the shearing force between the water and the biological skin. Loose biological skin is separated in a following sedimentation basin and then transferred to the sludge treatment. If the biological process is followed by chemical precipitation, no intermediate sedimentation is needed as return sludge pumping is not required.

Technical design

- Circular tube with mounting system for active biomedica
- Bearing mounted shaft ends
- Triangular plastic sections fixed in the mounting system
- Shaft of varnished steel
- Mounted details of warm galvanized steel
- Active plastic biomedica of polypropene
- Compact and flexible design
- Easy installation
- Minimal maintenance

Process advantages

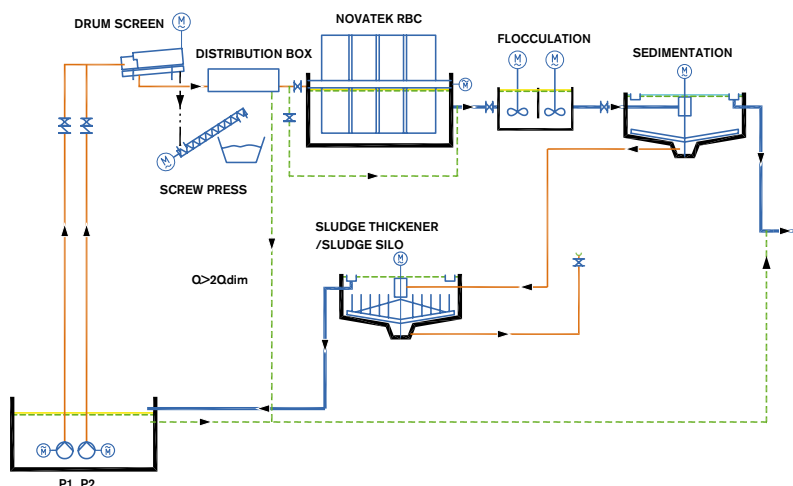
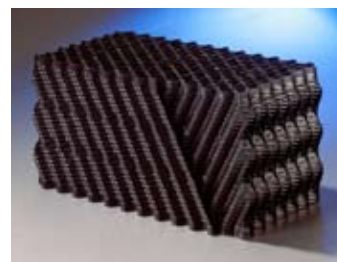
- Insensitive to high temporary loads
- Low energy consumption
- Low maintenance costs
- Less splash and aerosol formation
- Few components:
 - No pump for recycling of sludge
 - No aeration equipment

Applications

- Municipal sewage plants
 - New plants or existing, overloaded plants
- Industrial sewage plants
 - Slaughter-houses, dairies, breweries, petroleum and pulp industries
- Can be dimensioned for far reaching nitrifications
- Degrading of toxic substances and COD

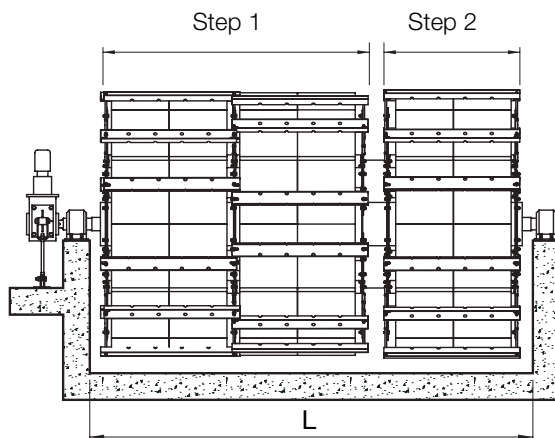
Design

The NovaTek™ RBC is built around a circular, seamless steel tube with both ends mounted in spherical roller bearings. The RBC rotates by an Helical-Bevel gear unit with integrated motor, which gives a compact unit with energy efficient operation. A mounting system is installed around the shaft. The purpose of the mounting system is to fix the rotor's active component; the biological media, that is placed in the segments around the shaft. The biological media is a material with high specific surface.



For maximum separation, we recommend a fine separator, type Roto-Sieve® drum, before the RBC process.

Dimensions



Rotor type	Diameter	Number of pe*	L
1 step	2.5 m	1100	4000
	3.0 m	1600	4000
	3.6 m	2300	4000
2 steps	2.5 m	1900	7200
	3.0 m	2700	7200
	3.6 m	3900	7200
3 steps	2.5 m	1700	8000
	3.0 m	2400	8000
	3.6 m	3600	8000

The above table shows important dimensions of some standard sizes.

* Population equivalent

References

Läckeby Products has more than 20 years of experience of dimensioning, production and installation of the NovaTek™ RBC. There are more than 80 installed units with a total of more than five million operational hours.

Läckeby Products offers in-house development, design and production of rotating biological contactors. Coordinated competence and production results in high quality of service and delivery. Läckeby Products can participate already in the planning stage and take responsibility for the whole project from dimensioning to installation. By our involvement in the planning stage we can offer a total process guarantee.

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