

## COMPONENTS AND CHARACTERISTICS

Each RBC consists of:

**Hollow drive shaft** made of carbon steel, sandblasted and epoxy coated. At both support ends it is heat treated and normalized.

**Radial structure** assembled with bolts and suitable for bearing the panels load, avoiding stress concentration points.

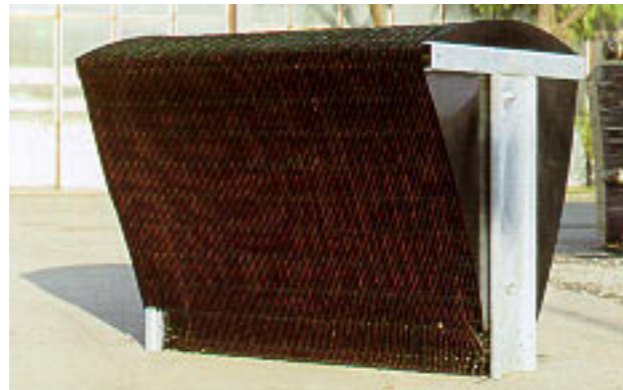
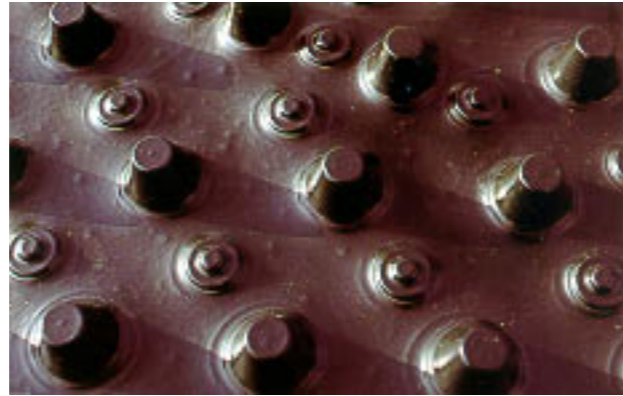
The structure is divided in **sections** that permit the RBC to be subdivided into stages. Each section is also divided into **sectors** to allow the assembling or disassembling of the panels on site without removing the drive shaft.

**Panels of high density polyethylene** treated with carbon black to prevent the crystallizing effect of ultraviolet rays. They come in three sizes: "standard", "medium" and "high density" to obtain the maximum panel surface, compatible with the process.

**Motor gear reducer** directly coupled to the shaft with service

factor suitable for operation 24 hours/day, and protected by special paint for the worst operating conditions.

**Shaft supports** on tilting bearings, protected by special labyrinth seals.



### TECHNICAL DATA

MODEL	D 3600 C	D 3600 M	D 3600 L	D 4000 C	D 4000 M	D 4000 L	D 2300 C	D 2300 M
External shaft diameter (mm)	762	762	762	762	762	762	240	240
Shaft length (mm)	4721	6827	8693	4966	6985	9026	2507	3590
Overall diameter (mm)	3600	3600	3600	4000	4000	4000	2300	2300
Overall length (mm)	5632	7724	10322	5877	8281	10322	3370	4410
Installed power (kW)	4	4	5.5	4	5.5	5.5	1.1	2.2
Number of sectors	2	3	4	2	3	4	2	3
Number of sectors/sections	8	8	8	8	8	8	4	4
<b>PANEL TYPE</b>								
Standard m <sup>2</sup> /panels equivalent area	4645	6967	9290	5650	8475	11300	1150	1725
Medium m <sup>2</sup> /panels equivalent area	5575	8360	11150	6910	10365	13820	1380	2070
High density m <sup>2</sup> /panels equivalent area	6967	10450	13935	8475	12713	16950	1725	2587

*Not binding data. The Company is allowed to make any modification or improve the unit without notice.*

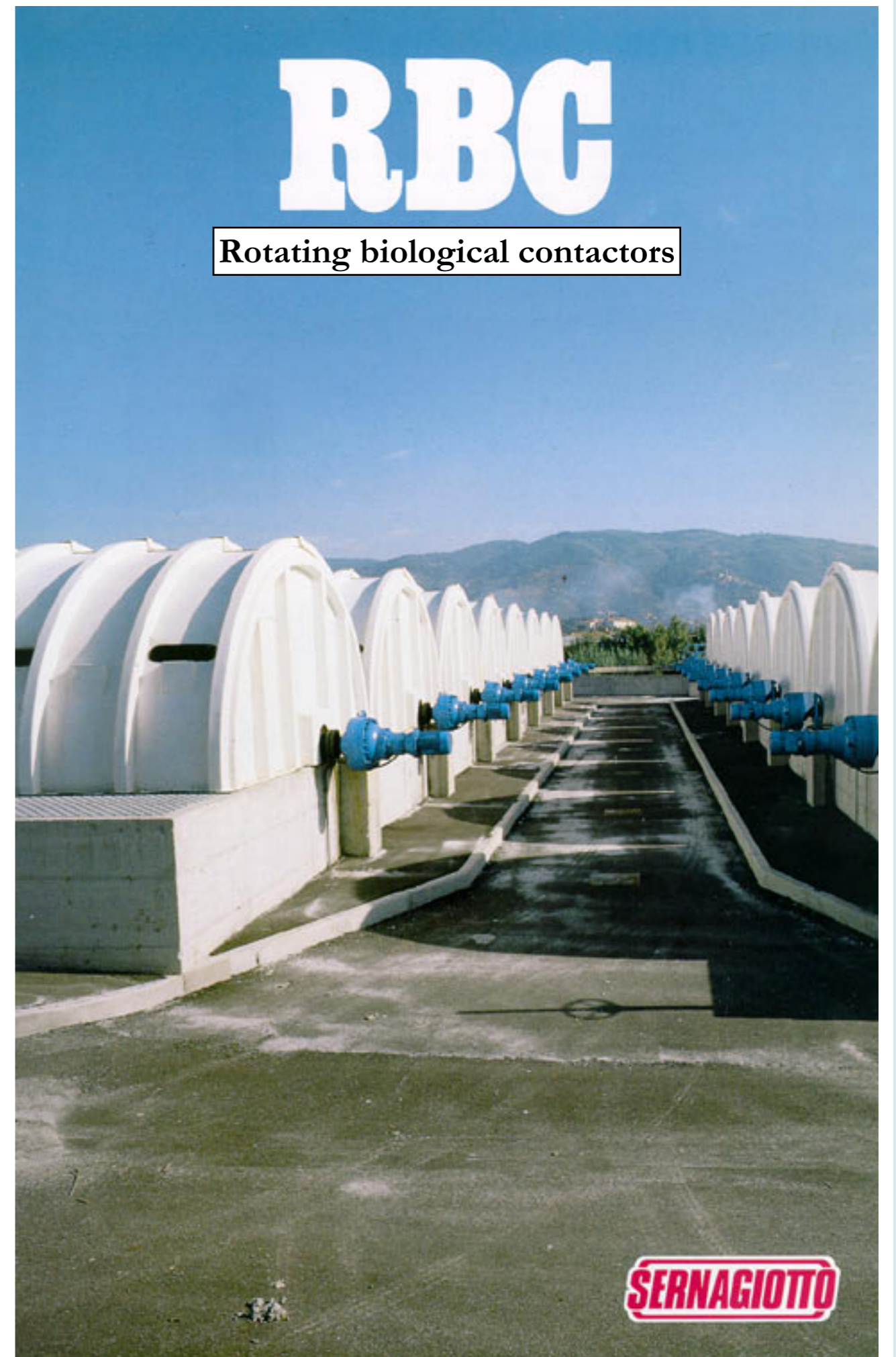
**SERNAGIOTTO**

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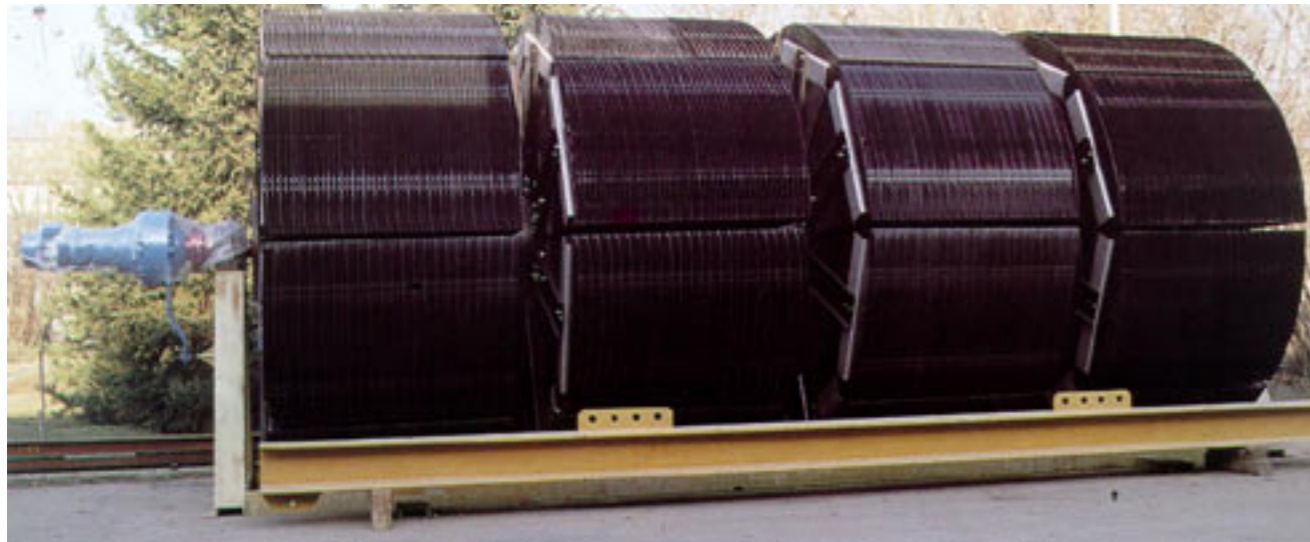


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## OPERATION PRINCIPLE

The **RBC** or **biodisc** is a simple and reliable unit for reducing by biodegradation the BOD and for nitrifying civil, industrial waste waters. It is put into slow rotation and partially submerged in tanks through which the sewage to be treated is flowing. The RBC discs media come into contact alternatively with the waste water and the air. The purification process is carried out by biomass of microorganisms which grow a thin film on the disc media. The biomass bacteria feed on the organic waste and the oxygen from the surrounding environment helps in the metabolic degradation of the organic matter. The final result is

the high performance elimination of the polluting matter. The overgrowth of biomass shears itself periodically and spontaneously following precise biokinetic principles. The sludge is then separated from the water by means of a settling process.



## ADVANTAGES

- No need of sludge recycling
- Self adjusting process
- Small need of dissolved oxygen control in the treatment tank
- High elasticity for organic and hydraulic load peaks
- Very low noise level and limited environmental impact



## INSTALLATION

Rotating biological contactors (RBC) are available in many sizes and models, suitable for dealing with the needs both in small and large plants. They are capable of treating effluents of big towns or factories. RBC are installed in concrete tanks with plates to anchor the RBC supports and the motor reducer torque-arm. One or more RBC can be fitted into one tank. The waste water flow can be either perpendicular or parallel to the axis of rotation. RBCs require a site sheltered from the light, in order to prevent algae growth that can damage the process. If installed in the open air, a fiberglass cover is available for all models. It consists of pre-fabricated components and includes head walls, inspection windows and air intakes. Suitable fiberglass walls are available to subdivide the tank into stages. They are fitted on stainless steel guides, fixed to the concrete tank, and easily removable if necessary.



- Models D 2300 L and D 2300 C are available in package version too. They are particularly suitable for:
- Small villages
  - Campings
  - Hospitals
  - Restaurants
  - Small industries
  - Small breeding farm