

BOR

全浸没式滤布转盘过滤器

BOR Ful-Submerged Rotary Disc Filter



产品简介 / PRODUCT DESCRIPTION

BOR全浸没式滤布转盘过滤器，由多个水平安装的旋转过滤盘组成，每个过滤转盘由以偶数的扇形过滤板组合而成，转盘上装有可方便拆卸的滤布，滤布材质为纤维，滤布的过滤孔径一般在10um。

BOR Ful-submerged rotary disc filter is consist of several rotary filter discs, which are string together and vertically mounted inside the tank. Every rotary disc is formed of even number fan-shaped plates, covers with detachable fiber cloth of 10um.

设备特点 / CHARACTERISTICS

01

设备的处理效果良好，性能稳定且出水水质稳定，进水可以承受60-80mg/L高悬浮物的冲击。
Good performance and stable permeate quality, the feed water SS can be up to 60-80mg/L.

02

产品运用模块化设计，运行及维护简单，滤布更换快捷方便。
Modular design for simply installation and maintenance, quickreplacement of disc cloth.

03

设备具有占地面积小、运行可靠和低能耗等优点。
Space and energy saving, reliable in operation.

04

系统工作运行全部实行自动化操作。
Fully automatic operation.

05

设备运行水头损失小，滤布前后水头损失不超过300mm，可以有效节约能源，减少浪费。
System head loss is no more than 0.3m.

06

过滤精度高（5-20um），可根据需要定制。
High filtration precision, disc cloth micron rating from 5um to 20um according to requirements.

产品应用 / APPLICATION

- ✔ 用于污水处理出水水质从一级B提升为一级A标准。
- ✔ 用于污水的深度处理，设置于常规二级污水处理系统之后或设置于常规二级污水处理的二沉池中，主要去除总悬浮固体，结合投加药剂可去除部分磷、浊度、COD等污染物。
- ✔ 冷却水、循环水的制备和旁滤处理。

- ✔ Upgrading of sewage treatment from grade I B to grade I A.
- ✔ Filter is used after the secondary sewage treatment system or in the secondary sedimentation tank for advanced treatment of sewage. Its function mainly to remove the suspended solids, part of the phosphorus, turbidity and COD etc.
- ✔ Production and filtration of circulating cooling water.



BOR 全浸没式滤布转盘过滤器

BOR Ful-Submerged Rotary Disc Filter



工作原理 / WORKING PRINCIPLE

纤维转盘滤池的运行包括了过滤、反冲洗、排泥三种状态。

a. 过滤: 污水重力流进入滤池，滤池中装配有布水堰。滤布是采用全淹没式，污水经过滤布外侧面进入，过滤液通过中空管收集，重力流通过出水堰排出滤池。整个过程都是连续式工作。

b. 清洗: 过滤中部分污泥吸附于滤布外侧，逐渐形成污泥层。随着滤布上污泥的积聚过滤阻力逐渐增加，滤池水位也随逐渐升高。设备通过传感器监测池内液位变化。当该池内液位到达清洗设定值（高水位）时，PLC即可启动反抽吸泵，开始清洗过程。清洗时，滤池可连续过滤。

过滤期间，过滤转盘处于静态，有利于污泥的池底沉积。清洗期间，过滤转盘以1转/2分钟的速度旋转。抽吸泵负压抽吸滤布表面，吸除滤布上积聚的污泥颗粒，过滤转盘内的水自里向外被同时抽吸，并对滤布起反清洗作用。瞬时冲洗面积仅占全过滤转盘面积的1%左右。反冲洗过程为间歇。

清洗时，2个滤盘为一组，通过自动切换抽吸泵管道上的电动阀控制，纤维转盘滤池一个完整的清洗过程中各组的清洗交替进行，其间抽吸泵的工作是连续的。当进水水质突然之间恶化，池内液位迅速上升到反洗液位，清洗时同时启动所有反冲洗泵，可同时对几组过滤转盘进行反冲洗，直至反冲洗周期恢复正常。

c. 排泥系统: 纤维转盘滤池的过滤转盘下设有斗形池底，以利于池底污泥的收集。污泥池底沉积减少了滤布上的污泥量，可延长过滤时间，减少反洗水量。经过一段时间时间的运行，PLC启动排泥泵，通过池底穿孔排泥管将污泥回流至厂区排水系统。其中，排泥间隔时间及排泥历时可以根据现场情况调整。

The operation of the rotary disc filter is consist of filtering, cleaning and sludge discharge processes.

a. Filtering: Raw water fills into the filter tank through the inlet, filter discs are fully immersed into raw water, clean water pass through the cloth from outside to inside, collects to the hollow pipe and flows out under water pressure, the filtering process is continuous.

b. Cleaning: With the accumulation of particles and solids outside the filter cloth, tank water level gradually raised. When the water level reaches a predetermined line of cleaning, PLC starts the suction pump and begins cleaning process. Filter continuous filtering process during cleaning.

During the filtering process, filter discs are in static state, which is conducive to sludge sedimentation. Once start of cleaning cycle, filter discs rotate at a speed of 0.5RPM, the suction pump started, clean water inside the cloth begins back washing the cloth. The instantaneous cleaning area accounts for about 1% of the total area. The cleaning process is intermittent.

During the cleaning process, every 2 filter discs are in a group, each group proceeds cleaning alternately by switching the electric valves automatically on the suction manifold, untill finished of a complete cleaning cycle. The suction pump continous working during the cleaning cycle. If the feed water quality deteriorates suddenly, the water level in the tank will rapidly rises to the cleaning level. PLC will starts all the suction pumps, to start cleaning process for several groups at the same time, until the cleaning cycle returns to normal.

c. Sludge Discharge System: Funnel type bottom is conducive for sludge collecting. Sedimentation has reduced sludge on filter cloth, which prolongs filtration cycle and reduces cleaning water consumption. Once start of the cleaning cycle, PLC starts the pump and discharges sludges, the duration and time interval of sludge discharge is adjustable on PLC.



BOR 全浸没式滤布转盘过滤器

BOR Ful-Submerged Rotary Disc Filter



设备组成 / COMPONENTS

滤池: 可采用钢混结构或不锈钢等材加工方形结构滤池。

滤盘: 纤维滤布或不锈钢滤布及垂直中空管骨架组成。

反洗装置: 反抽吸泵组和滤盘转动机构。

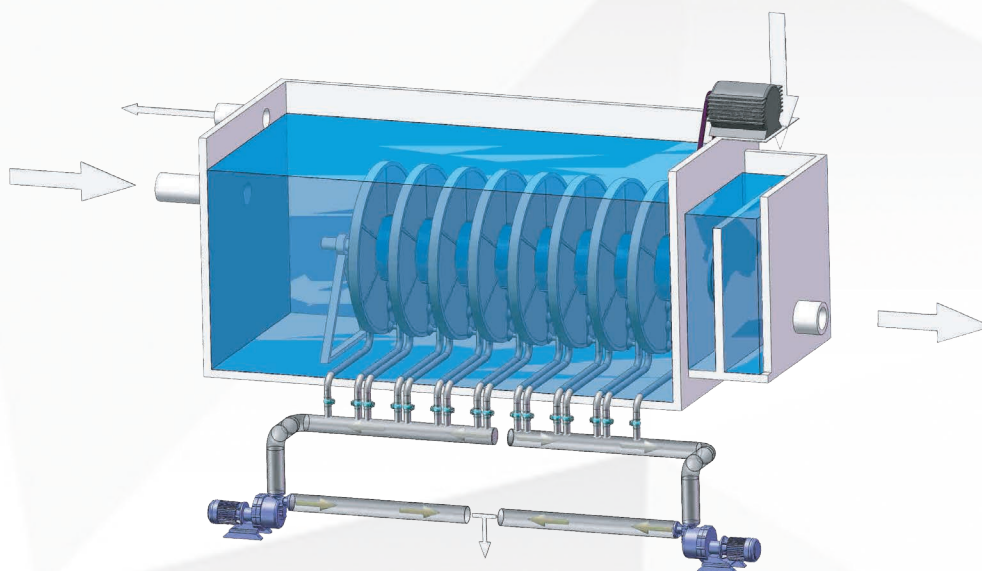
排泥装置: 锥形泥斗便于污泥的沉淀及收集。

Filter tank: steel-concrete square structure, optional for stainless steel according to requirement.

Filter disc: consist of fiber or stainless steel cloth and tubular framework.

Backflushing device: backwashing pump and rotating mechanism.

Sludge discharge device: conical hopper is convenient for sludge precipitation and collection.



型号 Model	水泥池型 (C) CP type- concrete pond mounting (C)			不锈钢箱体型 (S) ST type- stainless steel tank (S)		
	L (mm)	W (mm)	H (mm)	L (mm)	W (mm)	H (mm)
BOR/F D8002C&S	2000	2600	3500	3500	2400	3000
BOR/F D8004C&S	2650	2600	3500	4100	2400	3000
BOR/F D8006C&S	3250	2600	3500	4800	2400	3000
BOR/F D8008C&S	3850	2600	3500	5500	2400	3000
BOR/F D8010C&S	4450	2600	3500	6100	2400	3000
BOR/F D8012C&S	5050	2600	3500	6700	2400	3000
BOR/F D8014C&S	5650	2600	3500	7300	2400	3000
BOR/F D8016C&S	6250	2600	3500	7900	2400	3000
BOR/F D8018C&S	6850	2600	3500	8500	2400	3000

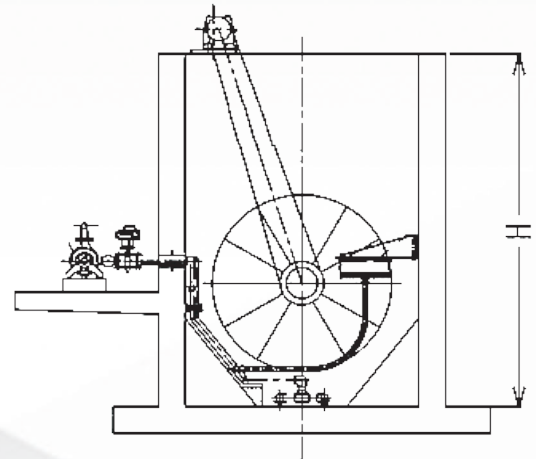
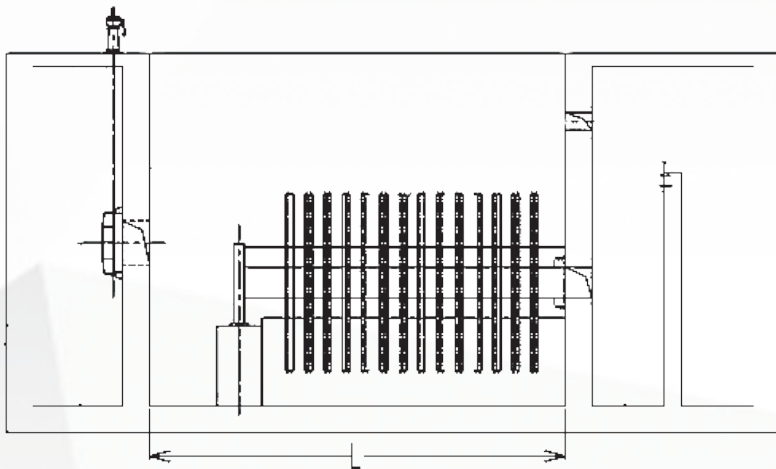


BOR 全浸没式滤布转盘过滤器

BOR Ful-Submerged Rotary Disc Filter



BOWNT
PURIFICATION IN ACTION



处理流量 / Capacity	30~42m ³ /h (单盘 for a single disc)
滤盘直径 / Disc Diameter	Φ2000mm
滤盘数 / Number of Discs	2~20
过滤面积 / Filtration Area	4.5m ² (单盘 for a single disc)
滤速 / Filtration Velocity	8~15m/h/m ²
进水水质 / Feed Water Quality	SS≤30mg/L
出水水质 / Permeate Quality	SS≤10mg/L
滤盘材质 / Disc material	增强型工程塑料 / Reinforced Engineering Plastic
滤布材质 / Cloth Material	纤维滤布 / Fiber Cloth
本体材质 / Body Material	不锈钢 / SS
反洗驱动功率 / Motor Power	0.75KW
反洗泵功率 / Backwashing Pump Power	2.2KW
清洗水量 / Backwashing Water Consumption	35m ³ /h 2盘 (for every 2 discs)
水头损失 / Head Loss	50~250mm
反洗周期 / Backwashing Cycle	0~60 min
工作压力 / Operating Pressure	重力过滤 / Gravity filtration

