

Rotating distributor.

VA Teknik Rotating Distributor for Trickling Filters is a well-known and high-end product for the Waste Water Treatment market.



VA Teknik Sweden

Towards a cleaner world

www.vateknik.se

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Energy efficient waste water treatment is the future. Biological treatment and nitrogen ammonia removal by use of trickling filters is both an environmental friendly and cost efficient process. Trickling filters are returning in popularity due to the fact that activated sludge processes are significantly higher in operational costs than a pump required for operating a rotating distributor.

VA Teknik rotating distributors for trickling filters are a premium class distributor designed for excellent performance and can handle high variation flowrates. The distributor operates together with all kinds of filter media.

Advantages

Low operational cost, excellent Life Cycle Cost (LCC) and low maintenance.

Activated sludge processes demand skilled staff and the operational cost is significantly higher than with a trickling filter. The operation of the trickling filter does not demand specific process or chemical engineering skills and the staff only need to operate the pump. For those treatment plants with high variation in the flow there are solutions involving recirculation to control the flow. Electrical drive units are available to control the wetting rate.

Our rotating distributor together with structured media has a proven track record and outstanding performance.

Use

Rotating distributors are used to evenly distribute wastewater over a bed of filter media at municipal waste water treatment plants and at industrial water treatment plants. The treatment process is either biological or nitrogen ammonia removal or a combination of both as separate units.

Function

The wastewater is fed by gravity flow if the surrounding land allows or is pumped up into the distributor center. The water is then led into the distributor arms at a pre-defined rate. The water flows up through nozzles on top of the distributor arms and flows through our nozzle's distribution channel and is spread over the media by a patented spoon. The nozzle's shape creates a rotation force that makes the distributor self-rotating.

All distributors come with an easy access cleaning hatch at the periphery of the distributor arms.

The required amount of arms is engineered to suit the wetting rate required to achieve the effluent demands.

The quantity of distribution nozzles on each arm and their positioning is engineered with consideration to the varying forces, flows and losses that exist in a rotating system handling water.

The Head loss in our distributor design is very low.

The rotation speed can be regulated by turning some of the nozzles in the opposite direction of rotation or by means of an electrical drive unit controlled by a variable frequency drive.

The center, the arm and ancillary items are all designed with consideration taken to the forces and losses that occur in the system.



Media for trickling filter

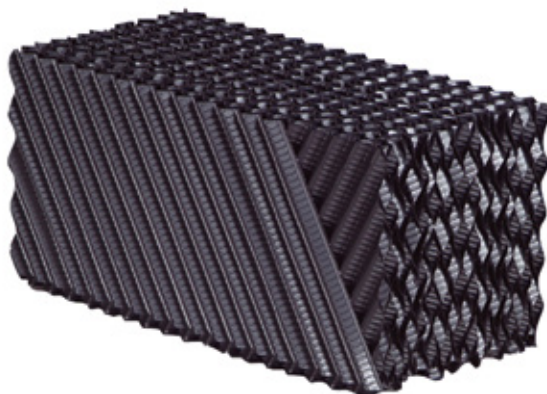
There is a wide range of different filter media some are more suitable than others, there are cross fluted structured media, vertical flow media, random media, extruded net tubes, stone media etc.

VA Teknik cooperates with experts in the field and provides support in engineering for all kind of processes where trickling filters are an option.

Specifications

The rotating distributors are made in stainless steel AISI304 with a designed life starting from <20y and above.

Industrial plants with high corrosion environments or sea-water treatment plants are all available through higher steel grades such as AISI316L or EN1.4547



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