ergil®

An Äager Brand

Multimedia Filter

Äager

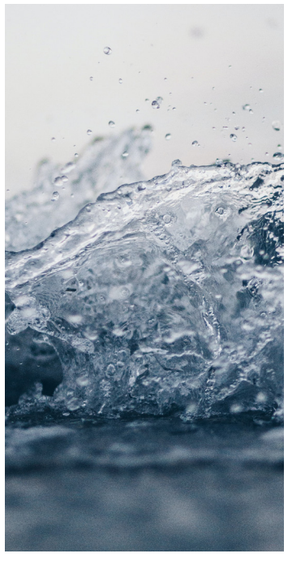
Multimedia
Filter Systems

Globally, over 80 percent of all wastewater is discharged without treatment.(According to 2017 UN World Water Development Report, Wastewater: The Untapped Resource)

In the countries that do have water treatment facilities, they use various methods to treat water with one common goal:

Purify water as much as possible and send it back into the environment to keep humans and the Earth safe and thriving.

Need for Wastewater Treatment and Ergil Sand & Multimedia Filter



Most human activities that use water produce wastewater. For the overall demand for water grows, the quantity of wastewater produced and its overall pollution load are continuously increasing across the globe.

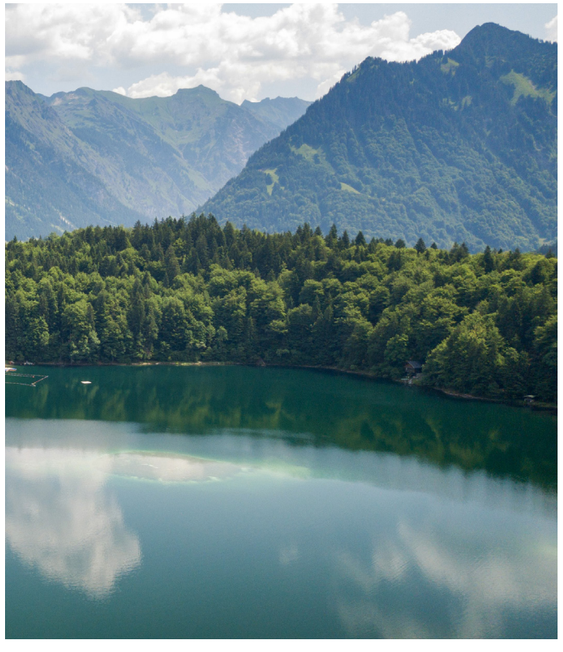
In all but the most highly developed countries, the vast majority of wastewater is released directly to the environment without adequate treatment, with detrimental impacts on human health, economic productivity, the quality of ambient freshwater resources, and ecosystems.

As Ergil, we are here to help our clients to solve this problem, we are adding value both to facilities and humanity&nature also.

Why Choose
Ergil® Multimedia Filter?

In the face of ever-growing demand, wastewater is gaining momentum as a reliable alternative source of water, shifting the paradigm of wastewater management from ‘treatment and disposal’ to ‘reuse, recycle and resource recovery’.

The main goal of wastewater treatment facilities is to protect humans and the ecosystem from harmful and toxic elements found in wastewater.



Water treatment facilities were designed to speed up the natural process of purifying water because the natural process is overloaded. Ergil Multimedia Filters are designed for this aim elaborately.

Structure of **Ergil®** **Multimedia Filter**

Multimedia filter systems are part of waste water treatment systems and we are applying Ergil's engineering and manufacturing expertise to serve the highest quality product for our customers.

Ergil products provide the removal of suspended substances such as clay, silt, organic and inorganic substances, dissolved color organic compounds and micro-organisms that cause turbidity (measurement with nephelometer). It can be designed in different sizes and according to different filtering features.

1. **Water Inlet**
   Water to be processed gets in from that area.
2. **Outer Vessel**
   This is basically a pressure vessel and it helps to keep together media layers.
3. **Medias**
   Media layers might be different minerals such as anthracite, sand, garnet etc.
4. **Valves**
   Valves are used to control water flow and to help back-washing.
5. **Sub-Fill Support Bed**
   It is used to balance the media layers and not to fall apart.
6. **Water Outlet**
   Processed water gets out from that area as clean water.
7. **Nozzles**
   Water flows through out the nozzles.

How To Use **Multimedia Filter?**

It provides filtration in processes and many industrial establishments where water use is high. It is used to prevent waste of water by enabling the re-use of the water in the process and also helps to obtain the water in the required quality.

Applications:

- Phosphorus removal
- Desalination, pre-treatment with reverse osmosis
- Cooling water filtration and waste water treatment
- Drinking water from dirty boreholes
- Rainwater and gray water treatment
- Copper and zinc removal from water
- Iron-manganese removal (in textile, plastic, paper, leather and food industry)
- Arsenic removal from water
- Calcite-dolomite (remineralization) process

Industries:

- Food Industry
- Slaughterhouse
- Olive Oil
- Pickles
- Milk and Dairy Products
- Vegetable Fruit Washing
- Aquaculture
- Chemical Industry
- Coating
- Paper
- Paint
- Medicine
- Fertilizer
- Cosmetics
- Textile Industry
- Leather Industry
- Mining Enterprises
- Hospitals
- Ship Dismantling Enterprises

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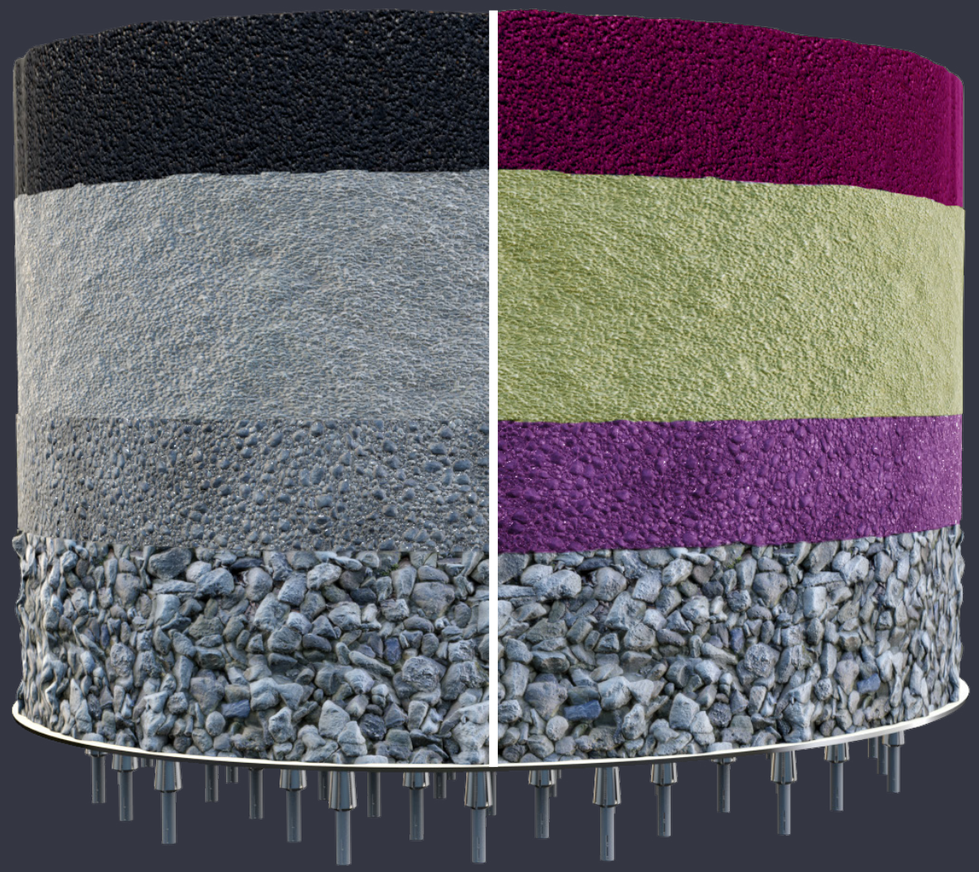


Nozzles

Nozzle selection is another important part for the multimedia filters. Related to the water which will be filtered, shape and the size of the nozzles would be changed.

As Ergil, we spend serious time and effort with our engineering and R&D departments to be able to reach optimum outputs to obtain extraordinary results.

Medias

Antiricite

Anthracite is a natural mineral used as a top layer filtration mineral in multimedia sand filters.

Dolomite

Dolomite is a granular calcium carbonate filtration media with a particle size of 1 to 2 mm. It shows superior performance to limestones due to its micro-crystalline structure.

Gravel

It is used as a support medium to filter sand and coal in water filters. It must have the required hardness properties for maximum efficiency.

Garnet

It is a high hardness and high density granular filter media. It is used as a substrate in a dual-media filter system with sand, gravel and anthracite.

Quartz

It is used as a filtration medium or substrate depending on the suspended solid particle size and application.

Activated Carbon

Activated carbon is used to remove chlorinated hydrocarbons and trihalomethanes, disinfection by-products, volatile organics, pesticides and micro-pollutants that cause taste and odor in drinking water.

Materials in the nature have their own language and we speak the same language with them!

To eliminate the unwanted elements in the water, different layers are being used with different thickness levels, also different goods are chosen.

That requires critical calculations and engineering effort, so Ergil's expert engineers and technicians are here for that.

After a careful analysis about the content of the water, usage of different materials is decided and calculations are made.

We promise to serve the best result for each time and we guarantee to reach the desired water quality after the process.

Compact Solution
as Whole Package

Chemical Dosing

A chemical dosing system is a facility for automated injection of reagents into a wastewater network for the control of septicity and odour emissions.

Raw Feed Water Tank

Raw feed water tanks are used to hold the overflow and displacement water and supply backwash water.

Carbon Filter

The activated carbon filter used in water treatment systems prevents the hydrocarbon adsorption capacity of free chlorine and other impurities from reaching the ion exchange resins and reverse osmosis membranes in process water treatment.

Ion Exchange Filter

They are systems in which ion exchange is provided by using resin and practically all ions in the water are removed. Water quality and economy vary depending on many factors such as ion exchange type and regeneration mode.

Reverse Osmosis System

The reverse osmosis process is based on the principle of equalizing the ion concentrations of two solutions with different ion concentrations and a semipermeable membrane between them.

UV Sterilizer

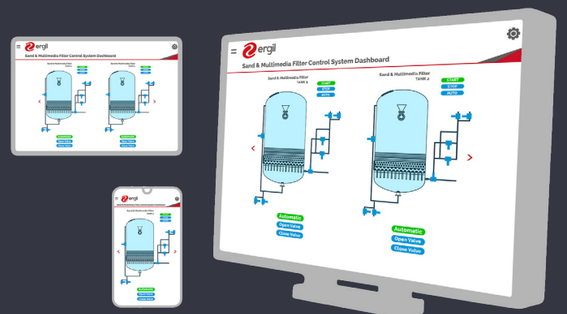
Thanks to the ultraviolet lamp placed in a tube-like glass case, a dosed UV light is given to the water entering the device. These ultraviolet rays cause microorganisms to become ineffective by disrupting their DNA structure. In this way, an average disinfection efficiency of 99.90% is achieved.

ASME SETTING THE STANDARD DIN

It is produced in accordance with the pressure vessel regulation.

Fully Automated
Systems

Are you interested to control your multimedia filter systems operations automatically and monitor operations from your control room? System can also be monitored and controlled from our smart Appand send SMS or e-mail notifications.



Automated Backwashing

Automatically the backwashing process and it helps that system can work properly.

Filtration starts when water passes through the diffuser and contact the media.

After Sales
Support

1 Flawless Working Process

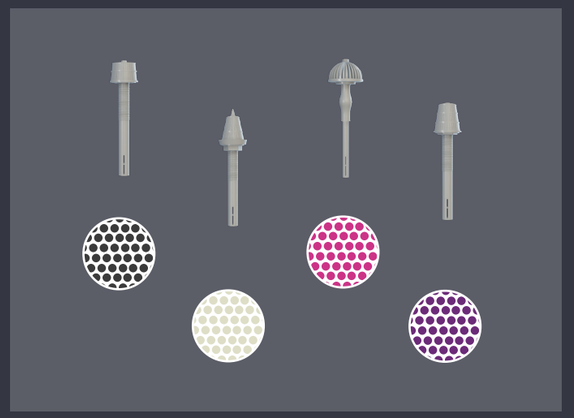
ERGIL provides full automated multimedia filters that can be integrated into your existing control system. Having an automated system helps you to reduce man power manual help, accident risks and equipment hazards. Behind the all products we produce, there is 40 years engineering expertise and insights we get from hundreds of happy customers around the globe.

2 Periodical Maintenance

All industrial products need periodic maintenance after they are used, and this need should be supported by a solid engineering experience. After Ergil provides you with the appropriate solution for your needs, it also provides the necessary periodic maintenance support for you to use your product for many years. Thanks to our advanced CRM system, maintenance days are automatically reminded to you and tracked.

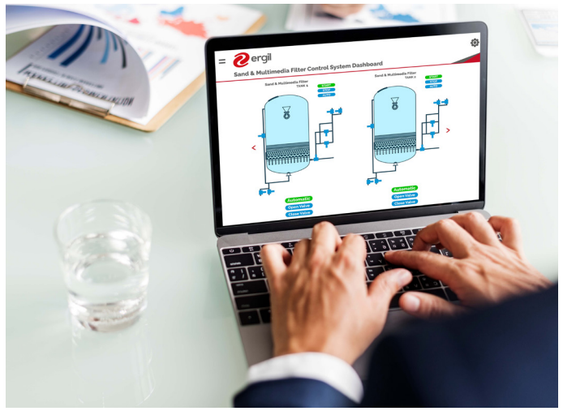
3 Spare Parts Supply

Ergil offers the spare part support you need to continue using your Multimedia System safely and with maximum performance. It is our priority that your production is not interrupted. For this reason, our technical team regularly checks the stocks of spare parts required for your product. When your need arises, Ergil can supply spare parts in the fastest and most trouble-free way.



4 Performance Evaluation

After the supply of your product, we cooperate with you for the performance evaluation of your product as an after-sales service. Periodically, product performance evaluation is made.



5 Capacity Change Consultancy

Production needs change over time. We are with you when you go to increase capacity or when additional processes are added to your system. Our engineers prepare an analysis of your existing Multimedia filter system and your optimum needs are determined.

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brochure series

Multimedia
Filter

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