

**ENDEMIC**  
— PROCESS ENGINEERING —

# ENRODISC® FILTER



ENDEMIC

ENRODISC ROTARY MICRO-DISC FILTER EXCELLENCE IN  
CARBON-NEUTRAL EFFLUENT FILTRATION TECHNOLOGY

ENDEMIC is the high-tech manufacturing company of the ÇEVTAŞ Group



## TECHNICAL SPECIFICATIONS

### ENDEMIC Rotary Micro Disc Filter

ENRODISC® FILTER is a compact, mechanical, and self-cleaning filter unit designed to optimize efficiency without consuming energy under normal operating conditions. It automatically rotates when the filter surface reaches maximum clogging due to accumulated solids, ensuring continuous filtration.

#### High-Efficiency Filtration

**Compact and Innovative Design:** The ENRODISC® FILTER boasts a high filtration area within a compact structure, making it ideal for tertiary wastewater and industrial process water applications. Its advanced design facilitates faster particle separation during the self-cleaning process, thereby increasing filtration capacity.

**Versatile Filter Surfaces:** The filter utilizes either polyester fabric or stainless steel surfaces, with mesh sizes ranging from 10-100 µm. Each disc comprises two micro-filter panels that can be easily assembled and removed, simplifying maintenance. Simple Operation

**Effluent Treatment:** Effluent is fed by gravity into the central drum, passing through the filter panels from inside to outside. Solids are retained inside the discs, while purified water flows to an external tank or basin.

**Automatic Rotation:** Under normal conditions, up to 65% of the discs are submerged. They remain stationary until clogging occurs, then rotate automatically to initiate the self-cleaning process when the water level reaches a maximum threshold. Self-Cleaning Mechanism

**Backwash Process:** As solids accumulate, the water level rises, triggering the backwash process. The discs rotate, and the blinded surfaces are cleaned using pressurized filtered water with counter-current and pressure nozzles. Solids are then discharged into the collector flume and removed.

**Easy Maintenance:** Cleaning nozzles are designed for easy maintenance and replacement. Filter panels can be swiftly replaced without draining the tank or removing the filter, thanks to the locking screws on the cover. Turnkey System

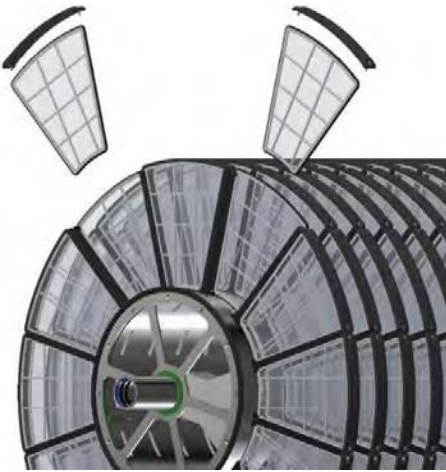
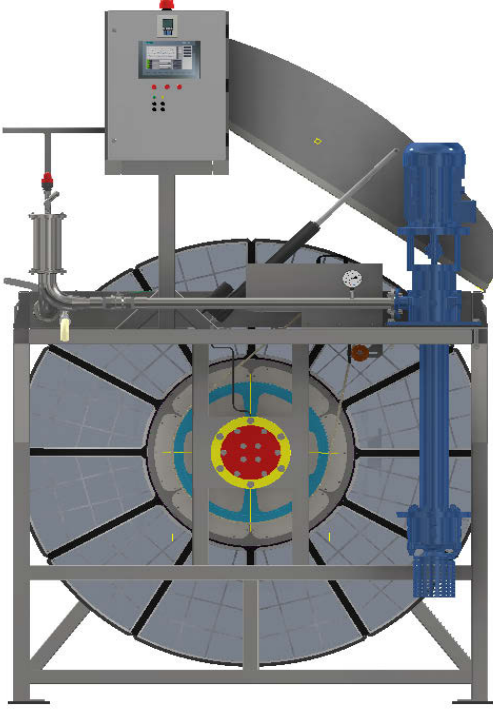
**Fully Equipped Delivery:** The ENRODISC® FILTER is delivered as a turnkey system, complete with a backwash system including a pump, piping, and spray nozzles. Maintenance of the spray nozzles is automated with linear actuators for the nozzle bar and top cover.

**Adjustable and Automated:** The distribution drum is driven by a gear motor with adjustable rotation speed via frequency control. An electrical panel oversees all operational processes automatically.

#### Quality Assurance

Endemic is certified with ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 10002:2018, and CE, ensuring high-quality products and excellent customer support. The ENRODISC® FILTER complies with the EC Machinery Directive and is welded to European standards.

Experience the efficiency and reliability of ENRODISC® FILTER for your filtration needs with the assurance of top-tier quality and performance.



ISO 45001:2018



ISO 9001:2015 ISO 14001:2015





## "HEAVY DUTY" DESIGN

ENRODISC® FILTER utilizes surface filtration with an inside-out flow path for optimal efficiency. Influent enters the central drum and flows into the filter segments by gravity. The disks, partially submerged, allow solid materials to be directed to the waste flume. Solids accumulate on the inside filter surface and are backwashed using counter-current spray nozzles. The disc rotation is limited to the backwash process, optimizing energy usage.

## HIGH EFFICIENCY BACKWASHING SYSTEM

Captured solids are effectively removed using a positive pressure spray cleaning system. This backwash cycle is automatically triggered by a level sensor in the inlet channel, ensuring efficient operation during filtration. The spray mechanism thoroughly cleans the filter surface, and the Enrodisc's design minimizes lifecycle costs with fewer moving parts and reduced energy demands for backwashing.



## MODIFICATION OR UPGRADING OF EXISTING PLANTS

Disc filters offer a versatile solution for upgrading existing filtration systems. They can be integrated into current concrete structures and existing tanks, enhancing efficiency without extensive modifications. Upgrades can be easily achieved by replacing the filter panels and washing system, providing a cost-effective and seamless improvement to your filtration infrastructure.

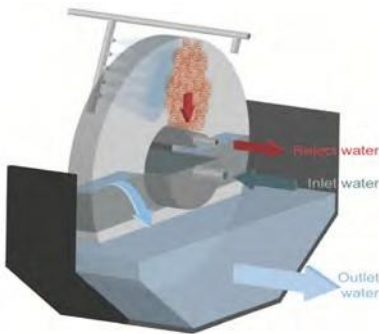
## TYPICAL APPLICATIONS

- Municipal and industrial tertiary filtration,
- Wastewater reuse,
- Purification of industrial process water,
- Pulp and paper industry,
- Recirculation of steel industry cooling water.

## FILTRATION PROCESS

Water to be filtered enters the rotor drum and flows by gravity into the disc filter. It then passes through openings in the drum and through the filter cloth, where solids are retained, and clean water exits. This simple yet efficient process ensures effective filtration with minimal energy consumption.

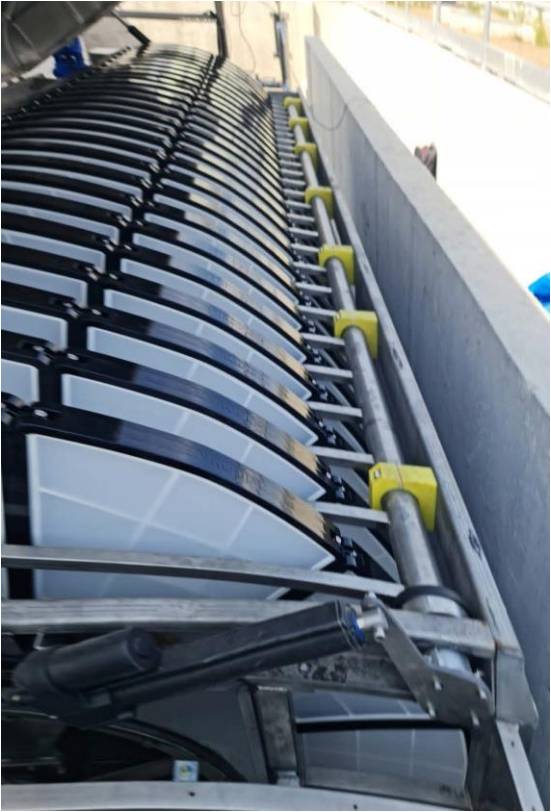
1. Suspended Solids Separation: Suspended solids are separated from the water and accumulate on the inside of the filter cloth.
2. Automatic Rotation: When the water level inside the filter rises to a preset point, the disc filter begins to rotate, initiating the backwash period.
3. Backwash Cleaning: High-pressure backwash spray nozzles remove the accumulated suspended solids, directing them into the reject flume located inside the central drum. The suspended solids are then discharged through the reject pipe.
4. Submerged Disc Area: During operation, 65% of the disc area is submerged, providing a large surface area for efficient water flow and filtration.



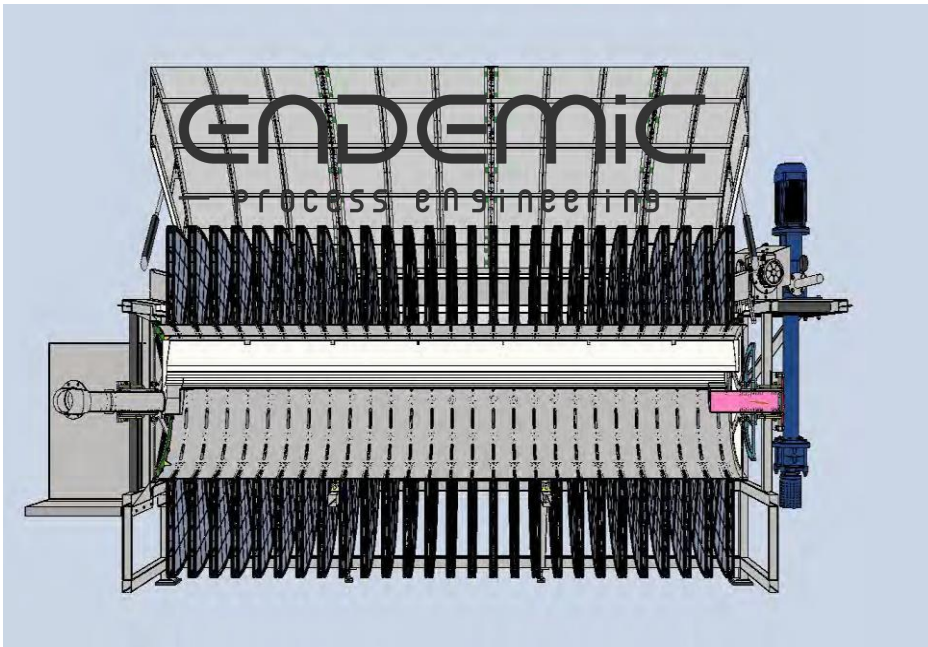
## MAIN FEATURES OF ENRODISC® FILTER

- DISC does not consist of single SEGMENTS (modules). Each SEGMENT (module) consists of 2 PANELS and a total of 12 SEGMENTS creates a DISC,
- Maximum 40 DISCs can be installed,
- Minimum energy consumption and limited headloss,
- Minimum backwash water consumption,
- Modular design with maximum flexibility for different effluent requirements,
- Easy replacement of filter panels,
- Replacement of filter panels is 70% more economical, only panels are replaced instead of segments,
- Polyester cloth or stainless steel filtration material,
- The panels are made of high-strength thermoplastic material frames.
- Concrete basin and steel tank versions,
- Made in AISI 304 or 316 stainless steel,
- Completely enclosed unit with removable and modular cover,
- Covers and nozzle bundle are opened/closed automatically with linear actuators,
- Simple and automatic control system with minimal instrumentation,
- Due to the nozzle material characteristics, the discs can be washed on the machine with a chemical solution,
- 100 micron particle filter is placed on the backwash line to prevent nozzle clogging,
- During washing, the RPM of the discs can be adjusted by frequency control,
- In case of request, a stepped outlet weir can be placed in the reinforced concrete pool (or the tank's clean water outlet), and in this case, a cover with an actuator is not required,
- Automatic and manual modes of operation,
- Aesthetic structure.

## ENRODIS MOST RECENT REFERENCE APPLICATION

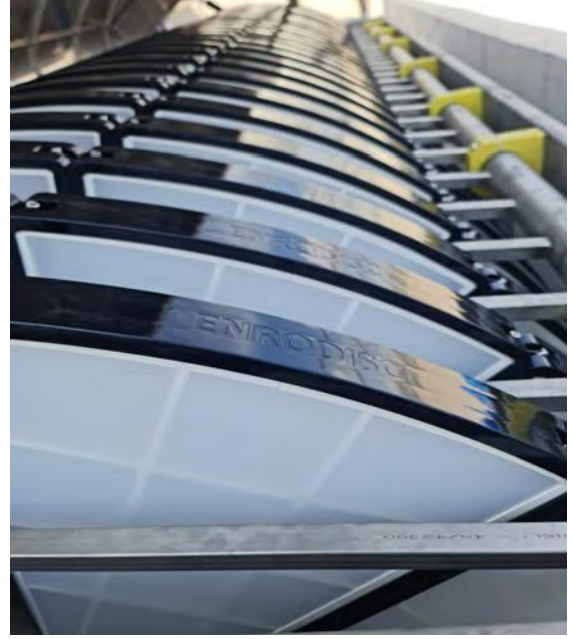


**WWTP, TOKAT, NIKSAR, TURKIYE, FUNDED BY IPA**



**Custom Enrodisc Design for IPA Project, 1000 cubic meter per hour secondary effluent filtering.**

# ENRODISC® FILTER







QA-AC-6127/22

QA TECHNİK - UYGUNLUK ONAYI

QA TECHNİK - ATTESTATION OF CONFORMITY

MAKİNA EMNİYETİ YÖNETMELİĞİ (2006/42/AT)  
MACHINERY DIRECTIVE (2006/42/EC)

ENDEMİC FİTO FARMA BİYOTEKNOLOJİ SAN. VE TİC. A.Ş.  
OUDULLU 058. MH. DES-110 SK. D.20 BLOK NO:42. DİMRANIYE  
İSTANBUL / TÜRKİYE

OrOnTamm1  
Description of the Product/Product Part

FİLTRELER  
FILTERS

Markası  
Product Commercial Brand

ENDEMİC

OrOn Tipi  
Product Type

MİKRO DİSK FİLTRE, TAMBUR ELEK, DİSK ELEK  
MICRO DISC FILTER, DRUM FILTER, ROTARY DISC FILTER

Uygulanabilir AT Direktifleri  
Applicable EC Directives

2006/42/AT  
2006/42/EC

Uygulanabilir Harmonize Standartlar  
Uygulanabilir Ulusal Standartlar  
Ve Teknik Spesifikasyonlar  
Applicable Harmonized Standards/  
Applicable National Technical standards

TS EN ISO 12100:2010, TS EN 60204-1

Rapor No & Rapor Tarihi  
Report No & Report Date

M-LVD-2226/22, 09.12.2022

Bu belge incelemesi yapılan OrOn lasarım için geçerlidir. OrOn için değiştirilmesi halinde bu belge geçersizliğini kaybeder. OrOnun değiştirilmesiyle ilgili sorumluluk üretici firmaya aittir.  
The Present certificate is valid just for the analysed product design. The certificate shall lose its validity in case of any changes in the product. Ultimate responsibility related with conformity of product with directive/directives, belongs to manufacturer.

İlgili Üreticiler ve/veya alimci/uzmanlar  
Ultimate responsibility regarding the affixing of

CE işaretini düzenleyen ilgili mevzuatın gerektirdiği şartları karşılamak üzere.

Sertifika Yayın Tarihi : 12.12.2022  
Certificate Issue Date : 12.12.2022  
Geçerlilik Tarihi : 12.12.2023  
Validity Date :

ALİŞİRE QA ULUSLARARASI TEKNİK  
KONTROL VE SİZİLEŞTİRME A.Ş.  
BAĞIRKANCI MAH. AK. ZAFERİNE SOY.  
A. BLOK KAT: 10. KAT / ATATÜRK  
İSTANBUL / TÜRKİYE  
Tel : 0212 572 40 10-11/12  
Fax : 0212 572 40 14  
www.alisireqa.com



L. Murat YILMAZ  
Yönetim Kurulu Başkanı  
Chairman Of Executive Board

endemic  
Endermic FİTO FARMA BİYOTEKNOLOJİ  
Sanay ve Ticaret A.Ş.

CE

## DECLARATION OF CONFORMITY - CE

WE HERE DECLARE MANUFACTURER / EU REPRESENTATIVE:

ENDEMİC FİTO FARMA BİYOTEKNOLOJİ SANAYİ VE TİCARET ANONİM ŞİRKETİ

Dudullu OSB Mah. DES-110 Sk. No:42 Omraniye - İSTANBUL / TÜRKİYE

That following described product in our delivered version complies with the appropriate basic safety and health requirements of the Directive 2006/42/EC (Machinery Directive) based on its design and type, as brought in circulation by us. In case alteration of the product, not agreed upon by us, this declaration will lose its validity.

Description of the Product : MICRO DISC FILTER  
Product Commercial Brand : ENDEMİC  
Product Type : Rotary Type Micro Disc Filter  
Standard s : EN ISO 12100: 2010, EN ISO 60204-1  
Applicable EC Directives : 2006/42/EC (Machinery Directive)

### MANUFACTURER AUTHORIZED SIGNATURE

Name/ Function : BURAK ATOM OKUMUS / General Manager  
Location / Date : TÜRKİYE / 21.02.2023  
Signature

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## WARRANTY CERTIFICATE

### MANUFACTURER

NAME : ENDEMİC FİTO FARMA BİYOTEKNOLOJİ SANAYİ VE TİCARET ANONİM ŞİRKETİ  
ADDRESS : Dudullu OSB Mah. DES-110 Sk. No :42 Omraniye İSTANBUL / TÜRKİYE  
PHONE : 02164151014- 02164 891258-59

PRODUCT NAME : MICRO DISC FILTER  
MODEL & S/N : ENRODISC- 27p  
WARRANTY PERIOD : 24 Months

### WARRANTY CONDITIONS

- This equipment are under the manufacturer's warranty for the period mentioned above against design and production defects.
- This warranty does not apply to damage caused by accidents, negligence or misuse.

### MANUFACTURER AUTHORIZED SIGNATURE

Name/ Function : BURAK ATOM OKUMUS / General Manager  
Location / Date :  
Signature :

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## CERTIFICATE OF ORIGIN AND QUALITY

For equipment and accessories issued by manufacturing company.

PRODUCT NAME : MICRO DISC FILTER  
MODEL & S/N : ENRODISC-27p  
TYPE : Rotary Type Micro Disc Filter  
SUPPLIER NAME : ENDEMİC FİTO FARMA BİYOTEKNOLOJİ SANAYİ VE TİCARET ANONİM ŞİRKETİ  
SUPPLIER ADDRESS : Dudullu OSB Mah. DES-110 Sk. No:42 Omraniye İSTANBUL / TÜRKİYE  
MATERIAL : Drum & Frame: AISI316, Disc Segment: ABS, Filter Panel Frame: PP  
COUNTRY OF ORIGIN : TÜRKİYE

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THEREFORE, WE CONFIRM THAT THE PRODUCT AND ACCESSORIES LISTED ABOVE HAVE BEEN PRODUCED IN THE BEST CONDITIONS. ALL MATERIALS ARE THE BEST QUALITY, AND THE MANUFACTURING PROCESS WAS MONITORED ALL THE STAGES.

### MANUFACTURER AUTHORIZED SIGNATURE

Name/ Function : BURAK ATOM OKUMUS / General Manager  
Location / Date : TÜRKİYE / 21.02.2023  
Signature :