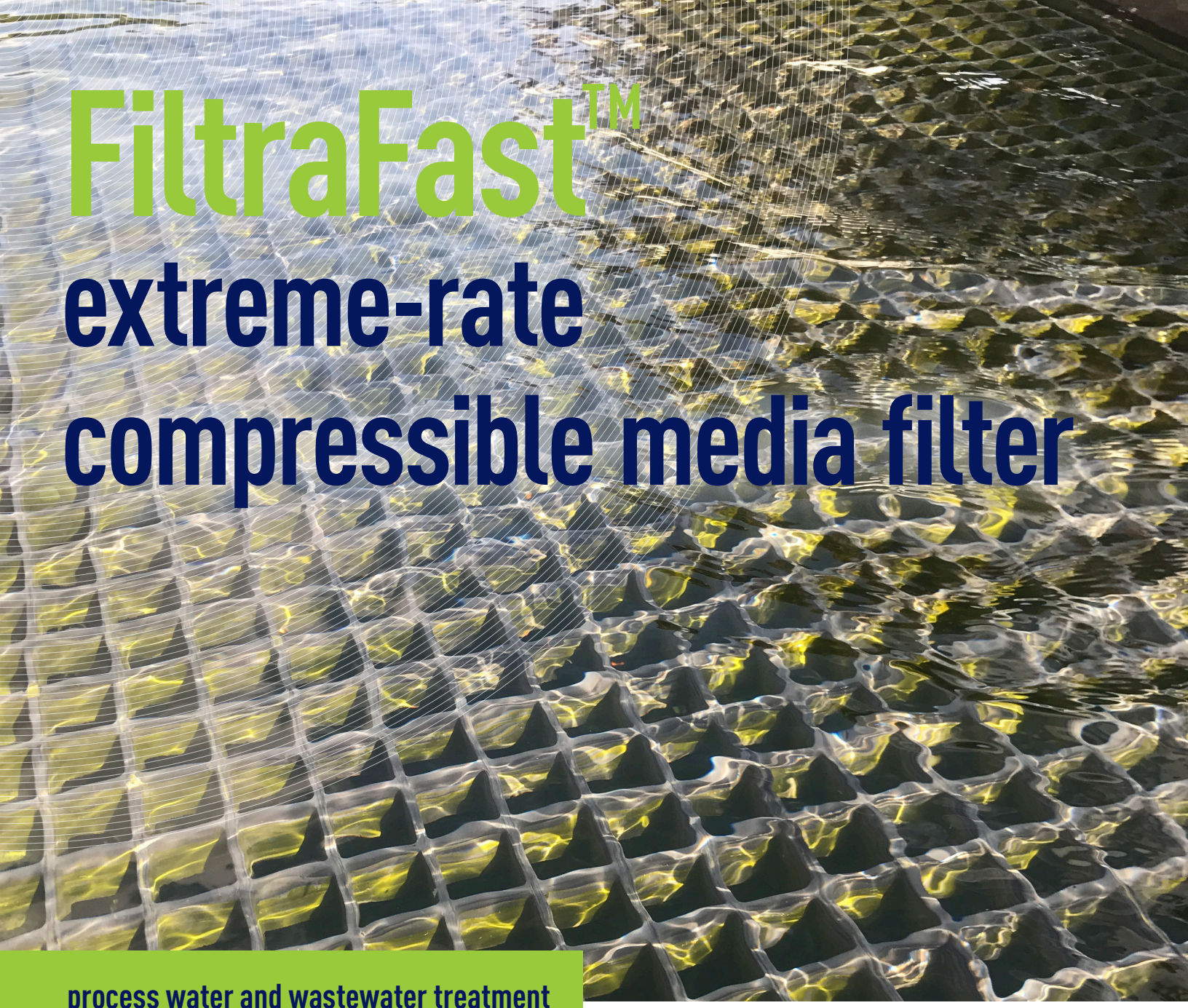


FiltraFast™ extreme-rate compressible media filter

process water and wastewater treatment

APPLICATIONS
- industrial process and wastewater
- tertiary wastewater

FEATURES
- compressible media lighter than sand
- no mechanical compression or moving parts
- long media life between 7-10 years
- extreme loading rates (20-40 gpm/ft^2)
- proprietary controls
- gravity or pressurized design
- effluent TSS < 5 mg/L & turbidity < 2 NTU
- < 3% water loss

Downflow compressible media filter achieves up to 10 times the hydraulic loading rate compared to conventional filters

ready for the resource revolution

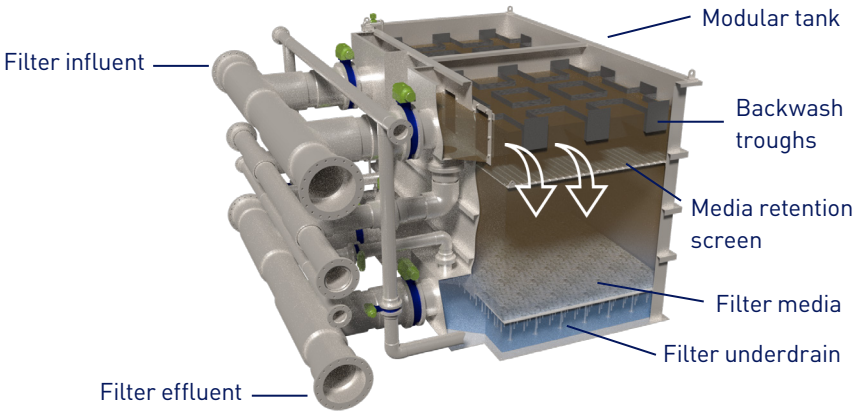
suez

about FiltraFast™

FiltraFast™ is a high-rate downflow gravity or pressure filter that uses a unique compressible media. The filter only uses hydraulic loading to create the required media porosity without any mechanical compressing devices. A proprietary backwash sequence enables maximum recovery, extends media life, and limits energy consumption. This process 1) significantly reduces the footprint compared to sand filters, and 2) reduces maintenance and replacement costs required by disc filters, and other compressible media filters.

how it works

filtration: Raw water enters the filter through the top and then flows downward. The hydraulic load compresses the media and creates an ideal medium porosity to retain solids and turbidity. Solids and turbidity are captured by the media and the filtrate then exits through the nozzles at the bottom of the filter.



Filtration Mode

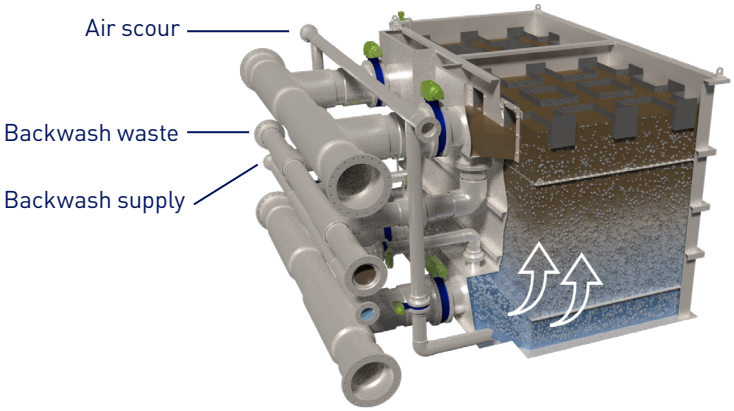
backwash:

Phase 1: compressed air is injected at 15 scfm/ft² plus water at 10 gpm/ft² for 3 minutes to uncompress the filter media bed.

Phase 2: media is washed using compressed air at 10 scfm/ft² and water at 10 gpm/ft² for 20 minutes.

Phase 3: air is removed from the media by pumping water at 10 gpm/ft² for 5 minutes.

Phase 4: air is purged from the filter plenum for 2 minutes.



Backwash Mode

about the media

- Polymeric fibers and beads
- Lower density than sand minimizes energy used for backwash
- Porosity adjusted by the flow to achieve required water quality

uncompressed media

compressed media

SUEZ has selected and qualified the best media to reach optimum filtration and backwash performances with extended media life.

A qualification process has been implemented to continuously guarantee quality.

benefits

- **Compact footprint**
- **Excellent effluent quality**
- **Low waste volume**
- **Low energy consumption**
- **Easy maintenance**
- **Reduced overall cost**

FiltraFast™ design configurations

FiltraFast™ is available in different configurations and will be customized to your application. SUEZ leverages the proven design of its 1,000+ gravity and pressure filters worldwide to provide both optimal design and performance.

SUEZ can also modify specifications of FiltraFast™ to offer different options in tank material, automation, and ancillaries. Based on project requirements, the units can be either fully shop-assembled and delivered or site erected.

Filter Configuration	Size	Unit Capacity
Concrete gravity filter	Various design options available	Up to 15,000 gpm (22 mgd)
Packaged gravity filter	• Single to multi-cell • Up to 120 ft² / cell	Up to 8,000 gpm (11 mgd)
Pressure filter	Up to 12 ft. diameter	Up to 4,500 gpm (7 mgd)

case studies

FiltraFast™ pilot unit

background

As part of the FiltraFast™ development program, SUEZ performed an extensive pilot test program with a municipality for tertiary filtration in Virginia.

solution

FiltraFast™ unit with a 9 ft² cell was tested for a filtration capacity of 270-360 gpm.

key results

- 60 days filtration below Title 22* requirements
  - TSS effluent < 5 mg/L
  - Effluent turbidity < 2NTU
- Flow up to 40 gpm/ft²
- 2.7% water loss
- Backwash water flow 10 gpm/ft² and air flow 10 scfm

*Title 22 certification pending

FiltraFast™ reduces treatment line footprint in mining project

background

A soil remediation operator in a dense urban area selected FiltraFast™ to operate within the treatment line for process wash water.

Solids removal was required from 2,200 gpm of dissolved air flotation effluent before GAC polishing and within a limited footprint.

solution

Shop-built FiltraFast™ unit with two 8 ft x 8 ft. cells.

key results

- More than 50% footprint reduction within facility
- Modular design reduces total cost
- TSS effluent < 5 mg/L

SUEZ

FiltraFast™

extreme-rate compressible media filter

integrated treatment solutions

As a full treatment line specialist, SUEZ draws upon a broad portfolio of proven technologies to assist industries and municipalities in meeting their water and waste water treatment challenges. We provide integrated equipment solutions and services for a wide range of applications:

- **industrial water and wastewater**
- **municipal drinking water**
- **municipal wastewater**
- **biosolids management**

We also offer global expertise in the design, build, operation and maintenance of water treatment plants and systems, all delivered to your specific demands.

piloting

SUEZ in North America offers pilot systems and services for this and many other of our product offerings. Pilot studies are a practical means of optimizing physical-chemical and biological process designs and offer the client several benefits, such as:

- **proof of system reliability**
- **optimal design conditions for the full-scale system**
- **raw water lab analysis**
- **regulatory approval**

Please contact us if you would like to learn more about pilot studies for this system.

services

Aftermarket

SUEZ in North America sells parts and components for most SUEZ brand equipment as well as parts for demineralizers, thickeners, nozzles, pressure filters, and valves. We offer reliable spare parts at competitive prices. We maintain records of previous installations to quickly identify your requirements. Many items are shipped directly from stock for quick delivery.

Rebuilds, Retrofits and Upgrades

SUEZ in North America offers cost-effective rebuilds and upgrades for SUEZ provided systems, no matter what year they were built. If you are interested in an economical alternative to installing a whole new system, contact us for a proposal.

If interested in this product, check out some of our complementary products:

- **Accelator®**
- **ABW®**
- **Aquadaf®**
- **Densadeg®**
- **Densadeg XRC™**
- **Superpulsator®**
- **Ferazur®/Mangazur®**
- **Smartrack®**

contact

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