

A scenic landscape photograph of a large, clear lake with mountains in the background under a blue sky with white clouds. The water is very clear, showing the rocky bottom. The text is overlaid on the lower half of the image.

# John Meunier Products Screenings Removal System





# A long tradition in excellence

**John Meunier products have been serving North American municipalities and industries since 1948.**

With a wide range of technologies, we design, manufacture and service wastewater treatment plants, offering complete solutions with a wide range of highly efficient screening and grit removal equipment.

There are more than fifteen hundred units installed across North America.



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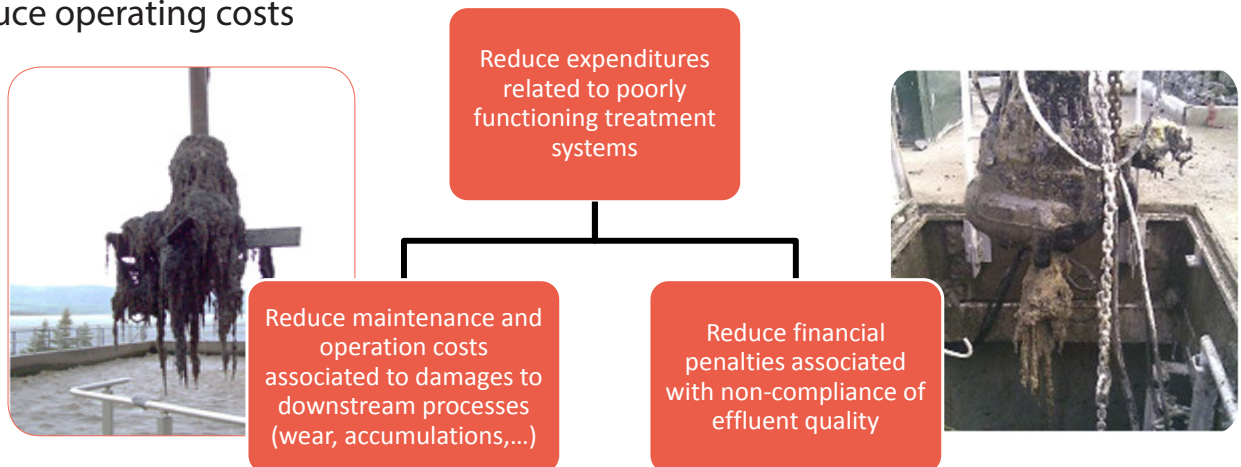


# Objectives of Screenings Removal

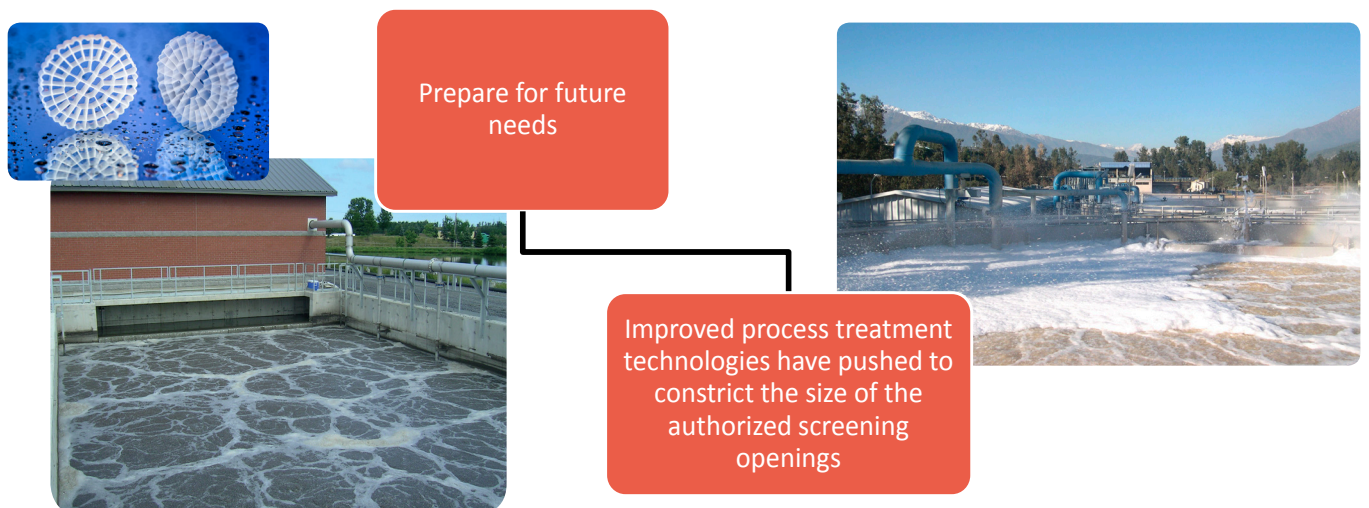
## 1. Increase process results



## 2. Reduce operating costs

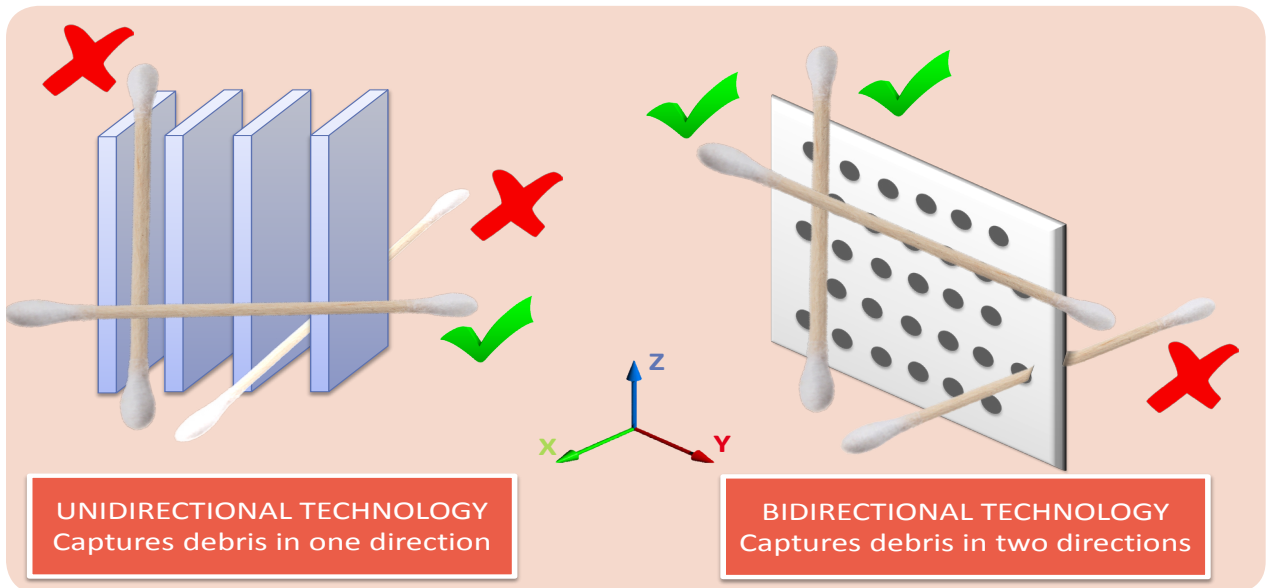


## 3. Protect process treatment equipment



# Screenings Capture

## Unidirectional vs Bidirectional Technologies

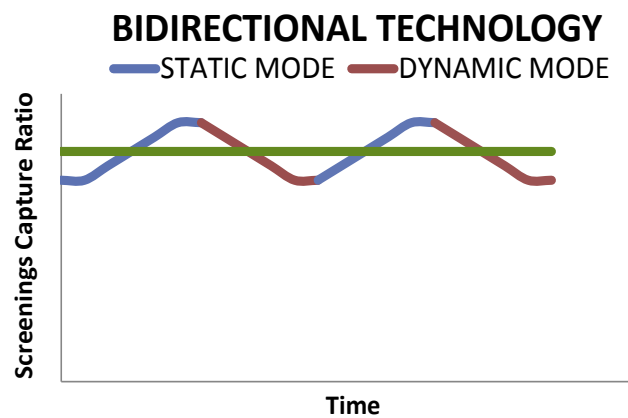
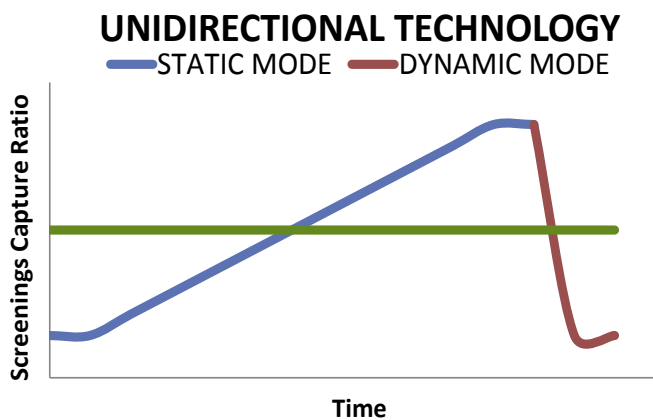


### SCREENINGS CAPTURE RATIO (SCR) BY SCREEN TYPE \*

Fine Screen Technology (6 mm)		SCR
1	Center Flow Perforated Plate Screens (Band Screens)	75% - 85%
2	Flow-Through Perforated Plate Screens	70% - 85%
3	Combined Screens – Perforated or Slot	30% - 65%
4	Step Screens	30% - 40%
5	Slot / Bar Screens	30% - 35%

\* UK Water Industry Research Limited, *Inlet Screen Evaluation*, Year 3 Comparative Report

## Operation Mode vs Screen Technology



# Coarse Screens

## CONT-FLO® Type CF Vertical Bar Screen



The concept involves a reciprocal movement of the drive system to generate the raking motion of the single rake arm. The main feature of the screen is to be back clean front discharge. The screen mechanism is assembled prior to shipment within a monobloc type frame. The raking method allows the bars to be free at the top and consequently prevents jamming of solids within the bar spacings. This concept provides for higher capture rates. This coarse type screen is ideal for the first stage of pretreatment, such as pump stations, or in places where footprint is limited.

Up to 78 MGD (295 MLD)	Bar spacing down to 1/2" (12 mm)	Vertical
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## CONT-FLO® Type ER Multi-Rake Bar Screen



The rake drive mechanism is of the travelling endless chain type. The main feature is the front cleaning of the screen. The multiple rakes laterally attached to heavy duty chains ensure the capability to rapidly remove high volumes of solids. The screen mechanism is assembled prior to shipment within a monobloc type frame.

Up to 25 MGD (95 MLD)	Bar spacing down to 1/4" (6 mm)	75°
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## CONT-FLO® Type SSR Step Screen



The design of this screen is based on the use of two sets of thin flat bars shaped like a staircase from where the name «Step-Screen» originates. One set is stationary and the other one, driven by a cam system, is mobile. Its oscillatory movement provides back cleaning of the stationary steps. All mechanical components are assembled prior to shipment within a monobloc frame. The installation requires little clearance above the operating floor.

Up to 15 MGD (57 MLD)	Bar spacing down to 1/8" (3 mm)	45°
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# Fine Screens

## ESCALATOR® Fine Screen



The pre-assembled unit's design is of the endless mobile belt type, using multiple panels with holes. It gives highly efficient fine screening in any direction. Structural shelf on perforated panels lifts larger «unmattable» solids. Panels are carried on heavy duty chains. The self-adjusting system of the rotating brush provides an annual average capture rate increase of at least 20% resulting in a reduction of plant workround costs.

Up to 78 MGD (295 MLD)	Perforations 5/64"; 1/8"; 1/2" (2 mm; 3 mm; 6 mm)	45° 60° 75°
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## ROTARC® Type SB Shaftless Spiral Fine Screen



The technology relies on the use of a slow rotating shaftless inclined spiral, pre-assembled prior to shipment. The unit consists of a stationary screen to retain the debris from the ongoing flow, brushes mounted on the first few screw flights for basket cleaning and a transport zone to convey them up to the discharge point where it can include washing and compaction. The basket seal design ensures reliability of the solids capture threshold.

The unit can include a compaction screen. The screen is also supplied with replaceable bush sections, replaceable wear bars, pivoting device, spray wash system for flights and screenings washing and for filtrate flushing.

Up to 7.9 MGD (30 MLD)	Perforations 5/64"; 1/8"; 1/2" (2 mm; 3 mm; 6 mm)	35° 45° 90°
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## ROTARC® Type SD Rotary Drum Fine Screen



The design uses of a rotating screen shaped like a drum and a conveying spiral, all assembled prior to shipment. As the flow passes through the perforations the solids progressively accumulate. The rotation brings the solids to fall into the conveying section where they are transported to be discharged. The special drum screen seal arrangement ensures a very high capture performance even with the presence of fibers and hairs.

Up to 50 MGD (189 MLD)	Perforations 5/64"; 1/8"; 1/2" (2 mm; 3 mm; 6 mm)	35°
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# Screenings Handling Equipment

## ROTOPAC® Type RPW Screw Washer Compactor



The single stage design is based on the use of a slow rotating spiral inserted into a perforated tube suitable for filtrate drainage. The screw receives solids from the screen, conveys them through dewatering, washing and compaction zones to finally expel them in a non-dripping dry state. The addition of wash water increases the rate of return of washable organics with the filtrate to the main flow stream through a common drainage point. This pre-assembled unit eliminates problems associated with foul odor and unsanitary handling.

Up to 140 ft <sup>3</sup> /h (4 m <sup>3</sup> /h)	Ø8" (Ø200 mm) Ø12" (Ø300 mm)
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## ROTOPAC® Type RCW Dual-Stage Screw Washer Compactor



The dual stage design is based on the use of a slow rotating spiral inserted into a perforated tube suitable for filtrate drainage. The screw receives solids from the screen, conveys them through dewatering, washing and compaction zones to finally expel them in a non-dripping dry state. The forward-reverse motion of the screw plus the addition of water into the feed hopper increases the rate of return of washable organics with the filtrate to the main flow stream. This pre-assembled unit eliminates problems associated with foul odor and unsanitary handling.

Up to 420 ft <sup>3</sup> /h (12 m <sup>3</sup> /h)	Ø16" (Ø400 mm)
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# Screenings Handling Equipment

## ROTOPAC® Type RLK Shaftless Screw Conveyor



The design is based on the use of a slow rotating spiral inserted into a "U" shaped trough. The screw receives the material and transports it along stainless steel trough to ensure a discharge in the original state. This pre-assembled unit can eliminate problems associated with foul odor and unsanitary handling.

Up to 800 ft <sup>3</sup> /h (23 m <sup>3</sup> /h)	Ø6" (Ø150 mm) Ø24" (Ø600 mm)	Up to 66 ft (20 m)
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## ROTOPAC® Type RDW Shaftless Screw Compactor



The single stage design is based on the use of a slow rotating shaftless spiral inserted into a trough provided with perforated area suitable for filtrate drainage. The screw receives solids from the screen, conveys through dewatering, washing and compaction zones to finally expel them in a non-dripping dry state. The addition of wash water increases the rate of return of washable organics with the filtrate to the main flow stream through the common drainage point. This pre-assembled unit eliminates problems associated with foul odor and unsanitary handling.

Up to 175 ft <sup>3</sup> /h (5 m <sup>3</sup> /h)	Ø8" (Ø200 mm) Ø12" (Ø300 mm)	Up to 40 ft (12 m)
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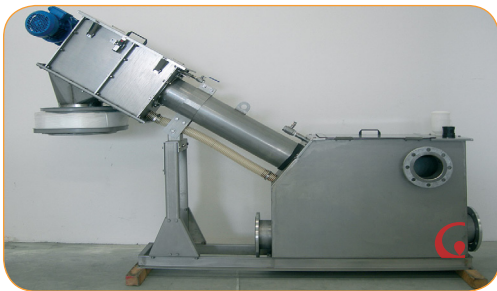
# Combined Systems

## SEPRAPAC® Type PCS Combined Pretreatment System



The concept integrates two or three devices for screenings removal, grit separation and FOG removal. The wastewater mixture passes first through a screenings removal, washing and compaction process stage. The flow then crosses the second stage chamber for grit separation. The settled matter is conveyed horizontally to a grit hopper where an inclined extraction screw achieves washing and dewatering or particles along the transit path to the ejection point. The optional third process step is performed in an adjacent lateral compartment where air is injected to achieve FOG removal. The small footprint of this all-in-one pre-assembled package system makes it quick and easy to install.

## SEPRAPAC® Type SRS / SCS Septage Combined System



Type SRS

The perforated basket screen is mounted in a self-standing tank. It is equipped with a tank washing system to dilute the influent and direct solids to the screen media.



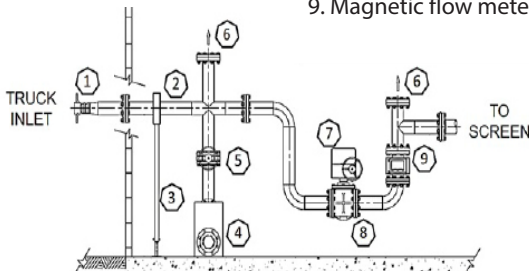
Type SCS

All-in-one unit including screenings and grit removal handling, with optional fat and grease removal.

### Applicable Options for a Complete Package System

#### Inlet Piping Package

1. Inlet quick connect
2. Inlet pipe
3. Adjustable support
4. Rock trap
5. Knife slide gate
6. Inspection cover
7. Electric actuator
8. Plug valve
9. Magnetic flow meter



#### Other Optional Instrumentation

This can include, but is not limited to in-line grinder, pH probes and controllers, ammonia probes and controllers, automatic samplers and temperature probes.



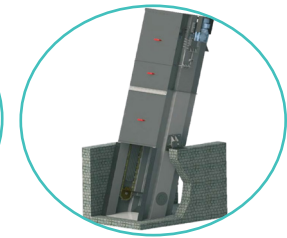
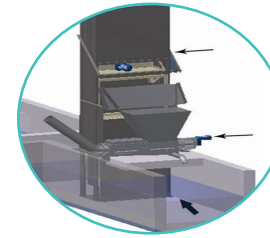
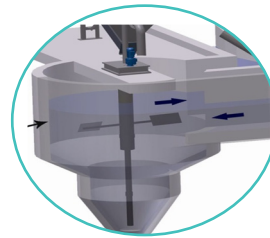
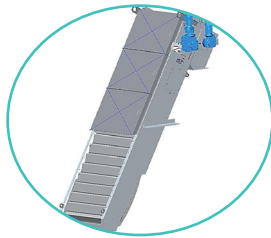
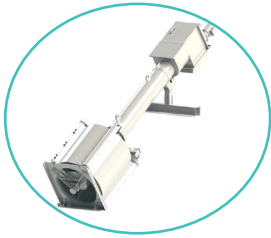
#### Data Logging

Logging and monitoring system that tracks flow data and records user information.





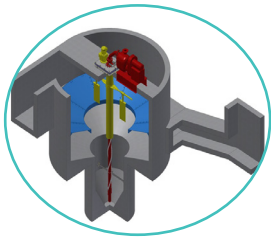
# The Complete John Meunier Headworks Set-up



Coarse and Fine Screens, bar type  
 CONT-FLO® type CF Vertical Bar Screen  
 CONT-FLO® type ER Multi-Rake Bar Screen

Fine Screens, mobile screening plate type  
 ESCALATOR® Fine Screen  
 ROTARC® type SD Rotary Drum Fine Screen

Fine Screens, stationary screening plate type  
 ROTARC® type SB Shaftless Spiral Fine Screen



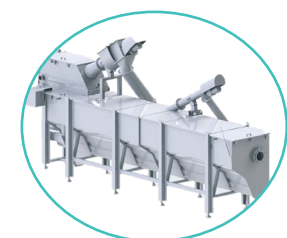
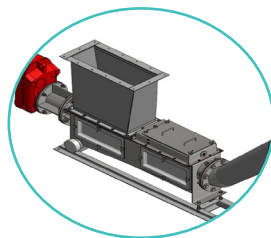
## Solids' Handling

ROTOPAC® type RPW Screw Washer Compactor  
 ROTOPAC® type RCW Dual-Stage Screw Washer Compactor  
 ROTOPAC® type RDW Shaftless Screw Compactor  
 ROTOPAC® type RLK Screw Conveyor



## Grit Removal Systems

MECTAN® Vortex Grit Removal System  
 SAM® type GDS Grit Dewatering Screw  
 SAM® type GFW Grit Washer



## Combined Systems

SEPRAPAC® type PCS Pretreatment Combined System  
 SEPRAPAC® type SRS/SCS Septage Combined System

Veolia Water Technologies Canada is the final choice for the design, manufacture and servicing of wastewater pretreatment works. We target excellence and innovation. We also invest in R&D to meet growing environmental regulations and market needs.

### Quebec

4105 Sartelon  
 St-Laurent, Quebec  
 H4S 2B3 - Canada  
 T : 514 334 7230  
 F : 514 334 5070

### Offices

### Ontario

2000 Argentia Road  
 Plaza IV, suite 430  
 Mississauga, ON  
 L5N 1W1 - Canada  
 T : 905 286 4846  
 F : 905 286 0488

# Resourcing the world

## **Veolia Water Technologies**

4105 Sartelon • St-Laurent, Quebec • H4S 2B3 Canada

tel: 514-334-7230 • fax: 514-334-5070

[sales@veolia.com](mailto:sales@veolia.com) • [www.veoliawatertechnologies.ca](http://www.veoliawatertechnologies.ca)