SAM®
GRIT DEWATERING SCREW
**PRINCIPLE OF OPERATION**

The SAM dewatering screw is designed to separate the grit from the grit / water mixture coming from the grit chamber.

The mixture enters the system through an air separator (A) or cyclone separator (A), and falls into the inlet hopper (B), where a constant volume of water is maintained via an overflow weir. This area acts effectively as a classifier letting the grit settle to the bottom. An overflow pipe connection (C) is provided to return the degritted water to the grit chamber influent channel.

The slow rotation of the shafted Archimedes screw (D) dewateres the accumulated grit as it moves it up the trough (E) to the discharge outlet (F).

When extracted from a grit chamber via pump or air lift, the grit slurry contains a high percentage of water and may include some measure of organic material. The SAM grit dewatering screw is designed to return water and organics to the process stream while delivering dry, clean grit at the discharge. Pumped applications incorporate a hydro-cyclone to reduce water content by up to 90% while also serving an organics separation role. The resulting concentrated grit slurry is then deposited into the SAM dewatering screw which further cleans the grit and reduces water content. In air lift applications, an air separation valve is used in lieu of the hydro-cyclone. The SAM grit dewatering screw produces dewatered grit containing a minimum of organic material, reducing odor and facilitating material handling. With over 200 units in service, the SAM grit dewatering screw is a proven, reliable component of John Meunier’s grit removal systems.

### Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions</th>
<th>H.P</th>
<th>Capacity</th>
<th>Shipping Weight</th>
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<td></td>
<td>Screw Lenght</td>
<td>Screw Diameter</td>
<td>Feed</td>
<td>Discharge</td>
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FEATURES OF THE SAM®

• Totally pre-assembled and tested.
• Very simple and robust design.
• Provides grit with very little free water.
• Uses Archimedes screw with shaft.
• Minimum operating and maintenance costs.
• No screw to trough contact eliminates need for liner.
• Available in epoxy painted carbon steel and stainless steel construction.
• Completely enclosed system controls odor.
• Supplied with air separator or cyclone separator.
• Unique trough design promotes high level dewatering.
• John Meunier’s superior application engineering, support and service.

YOUR PRETREATMENT SPECIALIST

John Meunier offers a complete line of headworks solutions
John Meunier Inc. has been serving North-American municipalities and industries since 1948 by offering them complete water and wastewater treatment solutions. With our state-of-the-art technologies, efficient products and team of seasoned professionals, we design solutions to perfectly match the needs of our clients.

John Meunier Inc. is a subsidiary of Veolia Water Solutions & Technologies, the Veolia Water division which designs and manufactures technological solutions for water and wastewater treatment. Veolia Water is the world leader in water services, serving over 110 million people worldwide with close to 68,000 employees.

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