Reduce solids handling costs and improve downstream treatment efficiency.
The Hydro-Sludge® Screen is an in-line pressurized device that screens tramp material from sludge and dewateres the material in one operation. The enclosed system reduces odor problems and has no washwater requirements.

Applications
- Screening primary, secondary, and combined sludges
- Septage receiving
- Industrial screening from direct tanker, pumped feed, or combined sludges
- Maritime ship-board preliminary treatment

Benefits
- Screening removal and dewatering in one operation
- Fully automatic for continuous or intermittent screening of sludges with varying dry solids content
- Enclosed system minimizes odors
- No wash water requirements
- Standard rugged cast iron feed and discharge ends withstand high torque loads, optionally available in stainless steel
- Durable stellite tipped screw provides better screen cleaning
- Reinforced dewatering zone screen
- PLC based controls and HMI are easy to use and operator friendly
- Maintenance friendly reverse function, inlet access hatch, extended discharge area

How it Works
The components of the Hydro-Sludge® Screen are the inlet, screening zone, pressing zone and the screenings discharge area. The unscreened sludge is pumped to the inlet and directed into the screening zone. Sludge flows through the perforated screen and exits via a flanged connection. Non-compressible solids larger than the 0.2 in. (5mm) perforations are retained within the screen basket and transported to the dewatering zone by the rotating screw. The separated solids are further concentrated in the pressing zone, transported by the pressing screw, and compacted into a plug under gradually increasing compression. This is achieved by the regulation of the backpressure cone against the compacted screenings. Liquid from the pressing zone is drained through the fine perforations, and fed back with the drained sludge from the inlet screens.

As the screenings plug is formed, the drive load increases pushing the screenings against the backpressure cone. The drive load is monitored and converted to a pneumatic pressure, which adjusts the backpressure on the cone to release solids. The dewatered solids fall through the screenings outlet and are collected in a solids receptacle for final disposal. Unit operations are controlled by a PLC control panel with an HMI screen. Adjustments to operating parameters are easily made at the unit.

Cleaner Sludge Gives You More Options
Removing grit and rags results in sludge that can be treated using the most advanced processes and provides more cost-effective disposal options. Able to handle a dry solids capacity up to 9%, the system delivers screenings at up to 40% Total Solids, the Hydro-Sludge® Screen removes, compacts, and dewateres coarse material in sludge to reduce the costs of solids handling and transport and improve the quality of your sludge.
Maintenance Friendly Features
With a range of screen sizes, the Hydro-Sludge® screen reduces loading on downstream processes and improves overall treatment effectiveness. The system removes solids early on in the process that would otherwise reduce downstream sludge treatment efficiency and minimizes the potential for clogging.

The reverse function, access hatch, and extended discharge area makes routine inspection, cleaning, and maintenance activities quick, simple, and safe.

The self-lubricating sleeve on the retention cone eliminates the need for greasing and keeps the motor load consistent. Increased retention cone travel allows easy access to clean out the screenings plug during infrequent screen replacement.

A bolted end plate on the discharge end allows easy access and replacement of the retention cone without the need to drain or split the machine.

How it Works
• Flow enters through the center of a sludge inlet
• Sludge passes through the perforations and exits via the sludge outlet, while the screenings are trapped inside
• A rotating screw moves the screenings off the inside of the drum to the pressing zone
• In the pressing zone, screenings are pressed against a retention cone which is balanced against the drive load of the screw
• Dewatered screenings are discharged by gravity via the screenings outlet

Throughput

<table>
<thead>
<tr>
<th>% Dry Solids Content</th>
<th>Throughput - gpm (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td>660 (42)</td>
</tr>
<tr>
<td>2</td>
<td>485 (31)</td>
</tr>
<tr>
<td>3</td>
<td>420 (26)</td>
</tr>
<tr>
<td>4</td>
<td>350 (22)</td>
</tr>
<tr>
<td>5</td>
<td>330 (21)</td>
</tr>
<tr>
<td>6</td>
<td>310 (19)</td>
</tr>
<tr>
<td>7</td>
<td>265 (17)</td>
</tr>
<tr>
<td>8</td>
<td>240 (15)</td>
</tr>
<tr>
<td>9</td>
<td>220 (14)</td>
</tr>
</tbody>
</table>

Dimensions In. (M) 26” x 37” x 160” (0.6 x 0.9 x 4.1)

The figures in the table above are based on flows through a two directional 5 mm (0.20”) perforated screen and should be used as a guide only. Other site specific factors such as the content of the coarse material, etc. will influence performance.