



Mega-SCRAPER

Sludge Removal System

Proven ... Process ... Performance



Drive Assembly



Scraper Blades



Energy Transfer Triangle Assembly



Since being established in 1962, Jim Myers & Sons, Inc. (JMS) has grown continually and today is recognized as one of the nation's leading designers and manufacturers of water and wastewater treatment equipment and systems. We have reached this point by incorporating equal parts innovation, quality and reliability into every component bearing the JMS name. We maintain that leadership position through one of the most comprehensive, solution-driven product offerings available.



Utilizing the latest software for BIM-compliant mechanical and structural design with commercial and proprietary analysis programs, our professional engineering staff makes concepts reality by providing solutions to complex problems.



True to our roots, our 72,000 sq. ft. Charlotte facility is the site for all fabrication, manufacturing, machining, and testing. There, the JMS commitment to excellence, a part of our DNA, manifests itself every day with the promise to continue for generations to come.

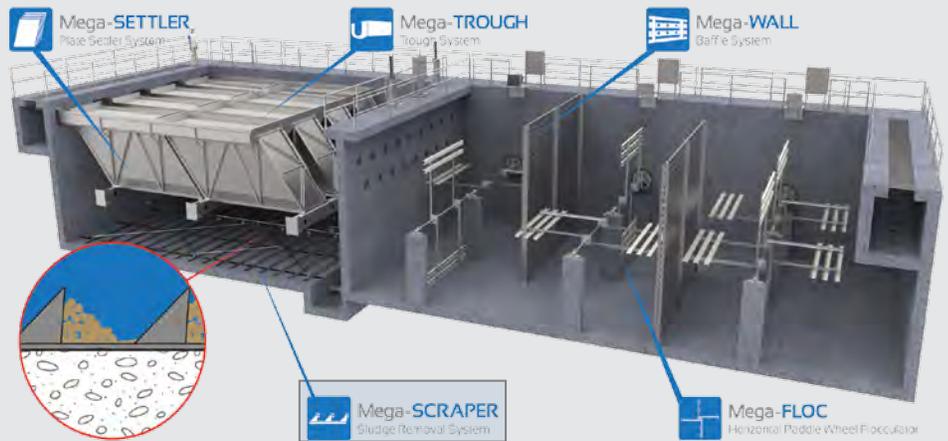


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Proven ... Process ... Performance

It is not possible to sum up in a few words what has taken better than half a century to achieve, but these three come the closest. Our Mega-SCRAPER (Sludge Removal System) design is already **proven** in applications throughout the U.S. and abroad. JMS in-depth knowledge of both the water and wastewater treatment markets allows us to fully understand your **process** and provide solutions like the Mega-SCRAPER, solutions designed with operational efficiency in mind. Like all JMS products, our Mega-SCRAPER offers an unsurpassed level of **performance** geared around the longest possible component life and the lowest maintenance demands of any comparable system.

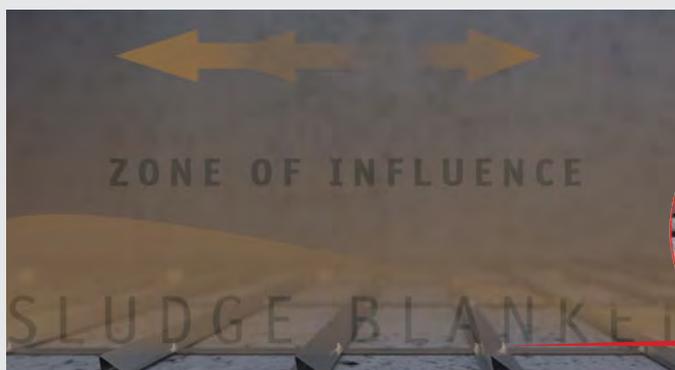
Just three words: Proven, Process, Performance, speak volumes. JMS has the answers you want, the solutions you need, and the support you deserve.



Sludge Removal

Sedimentation basins are a key part of the water treatment process as they prepare water for final filtration. Excessive buildup of sludge can lead to turbidity issues, loss of effective tank volume, and can negatively affect downstream membranes and/or filters. The Mega-SCRAPER, a simple and reliable answer to sludge removal needs, was developed by JMS design engineers using proven design concepts developed over half a century of experience in outfitting sedimentation basins.

The JMS Mega-SCRAPER hydro-dynamically designed blades and reciprocating motion produce a thickening effect of the sludge blanket while creating a zone of influence that moves solids toward the sludge collection pit. On the forward stroke this blade design transports sludge forward, and slides under the blanket without disturbance of the sedimentation process on the reverse stroke. The speed of the reverse stroke is 2-3 times the forward stroke speed. Based on sound principles, but flexible by design, it is applicable in both water and wastewater sedimentation systems.



Underwater Workhorse

The Mega-SCRAPER is a high-performance, low profile system able to achieve full basin coverage for rectangular basins in new or existing facilities. The all stainless steel structure has been designed for ease in both installation and maintenance, and it is perfect for installation beneath JMS Mega-SETTLER (Plate Settler Systems). With its straight-forward design, routine inspection and maintenance on submerged parts is greatly reduced, and service life extended. It truly is ... an underwater workhorse.

Advantages: Mega-SCRAPER

Process Advantages

- Scraper blade design maximizes sludge movement toward the sludge pit with minimum disturbance of the sludge blanket, reducing sludge volume
- Reciprocating motion produces a thickening effect of the sludge blanket
- Customizable for 100% coverage of new or existing basins, suitable for use with JMS Mega-SETTLER systems

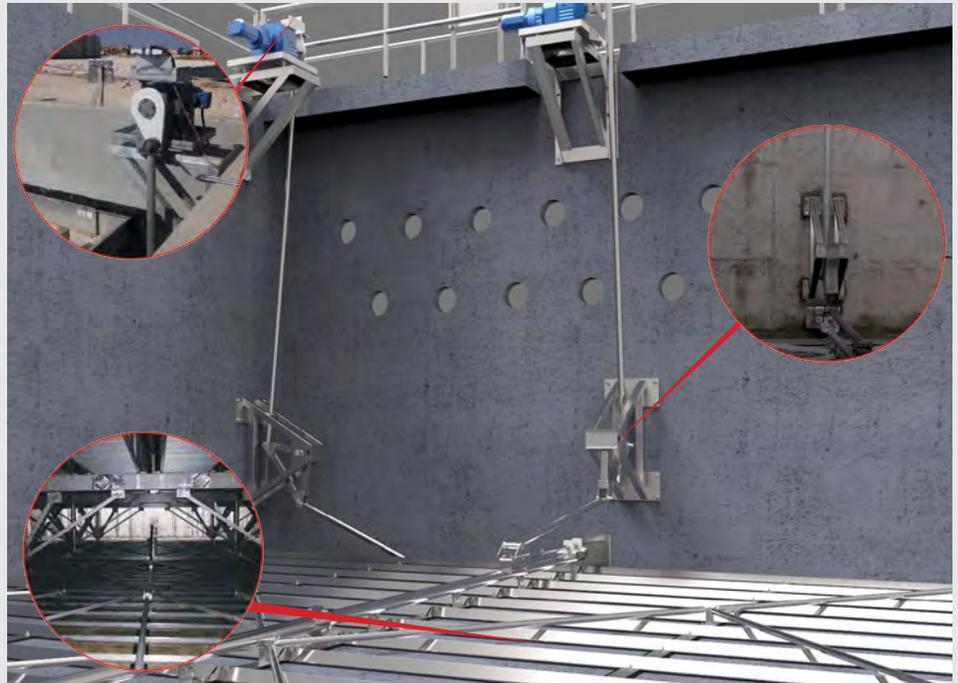
- Optimized energy transfer triangle for maximum torque development

Maintenance Advantages

- Easy installation with no on-site welding or cutting needed
- Robust design for reliable continuous or intermittent operation
- Minimal moving parts means low maintenance needs
- All stainless steel and UHMWPE materials of construction

Experience Advantages

- JMS 50+ year legacy of outfitting sedimentation basins
- Uses proven JMS design enhancements critical to the longevity of the system
- Made in the USA



Mega-SCRAPER with Energy Transfer Triangle, Drive Assembly, Scraper Blades

Mega-Drive

The Mega-SCRAPER robust design allows for intermittent or continuous operation without excessive wear, and maximum torque development. A specialized energy transfer triangle attached to the vertical connection shaft and motion transfer rod, transfers energy to the scraper assembly. Sludge removal is generally set on an intermittent basis, but frequency and speed can be easily adjusted for changes in sludge characteristics. All units are available with either a hydraulic (power pack and drive cylinder) or electro-mechanical drive assembly (applicable to most systems).

Working the Floor

Mega-SCRAPER blades and scraper assembly are reinforced with diagonal cross members for additional strength, and ready for installation without field welding or cutting. Having minimal moving parts, the stainless steel scraper assembly slides back and forth on low friction polyethylene glide strips installed on the basin floor under stainless steel glide bars. Little to no modification is required on existing tanks prior to installation. JMS can design and manufacture systems for any size rectangular basin, even those containing obstructions, resulting in optimal 100% basin coverage.

Taking Control

Each Mega-SCRAPER control panel, the “brains” of the operation, is protected by NEMA 4X stainless steel enclosures and can be customized to meet specific project needs. Utilizing the latest in technology, our skilled electronics technicians can outfit any unit with PLC’s, SCADA compatible controls, and VFD’s. A human interface module on the panel door allows for easy operator access to monitor, adjust, and control the unit. Scraper blade speed and stroke frequency can be easily controlled, and JMS includes three pre-programmed protocols for quick process optimization.



Mega-SCRAPER With Human Interface Module (Above)



Success Stories

JMS was proud to supply made in the USA equipment for a USAID project in Mafrag Jordan. Mafrag is located in northern Jordan, and is served by the Mafrag WWTP. Bidders were allowed based on their resources and technical experience with projects of similar scope. With over 50 years of experience in outfitting treatment plants, JMS was well equipped to make sound equipment recommendations.

JMS was awarded this project which included supplying our Mega-SCRAPER and Mega-SETTLER systems. Special care was taken in pre-shipment testing, and packaging for the long trip to Jordan. Receiving and construction arrangements were made by the Jordan branch of N.A. Water Systems, a Veolia Company.

According to the Project Manager from N.A. Water Systems, Ian Parkinson, the Mega-SCRAPER unit arrived onsite in great shape and assembled well. He had significant praise for both the JMS workmanship and Service Manager who visited the site to work with the installing contractor and plant operators on start-up, testing, and training. Subsequent results have been equally impressive, with smooth, trouble-free operation for local operators.



System Integration

In addition to Mega-SCRAPER, JMS expertise extends to a host of other products and systems listed at right. Having such a broad and varied range of experience means your water and wastewater needs, whether individual component or full system, are understood. Optimized efficiency and process performance are yours for the asking. **Contact JMS today.**



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"Making a Difference for Generations"



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