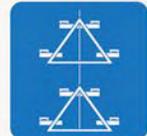


50 YEARS OF EXCELLENCE

JMS

JIM MYERS & SONS, INC.



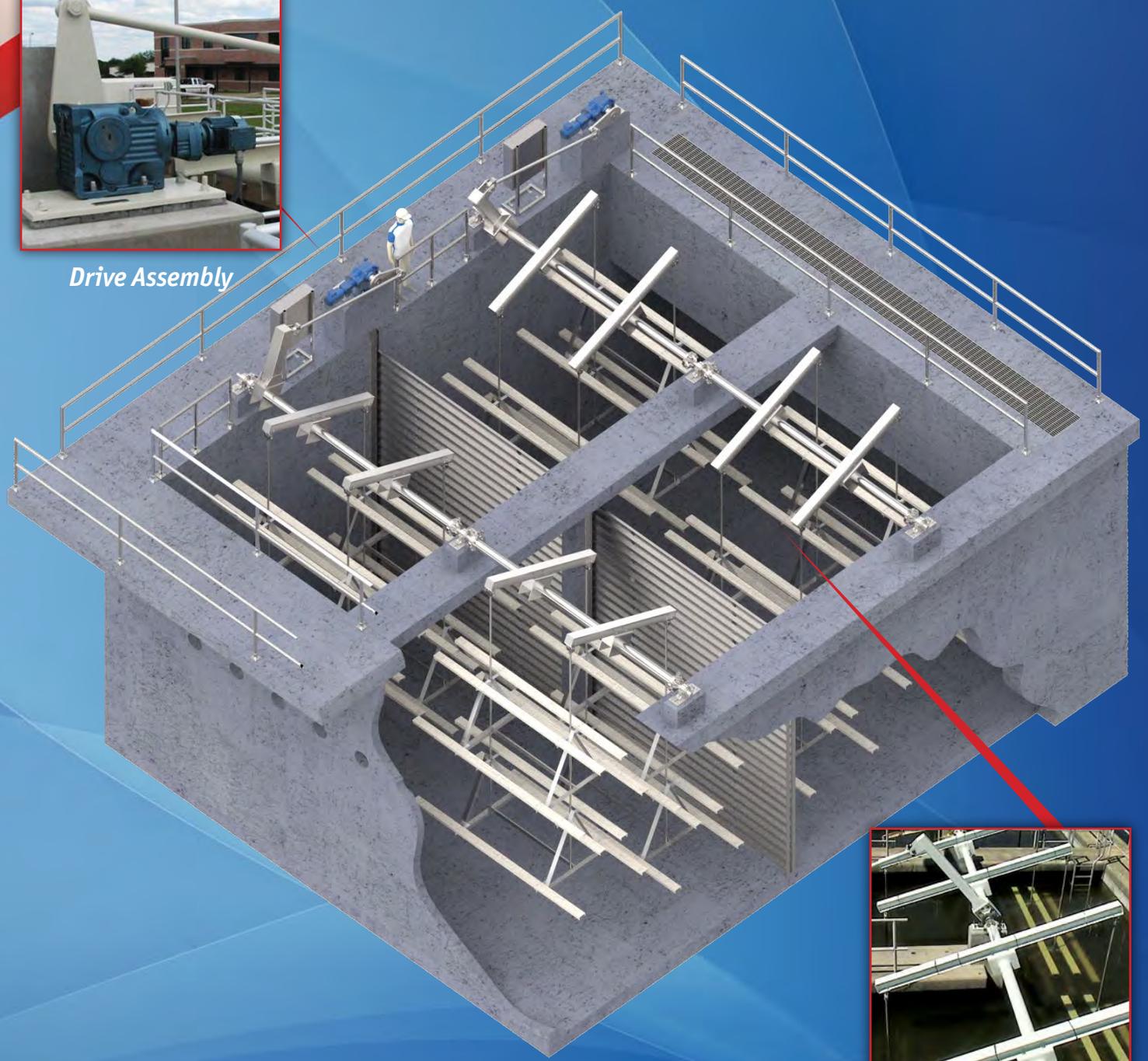
Mega-FLOC

Walking Beam Flocculator

Proven ... Process ... Performance



Drive Assembly



Paddle Assembly

J I M M Y E R S & S O N S , I N C .



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.

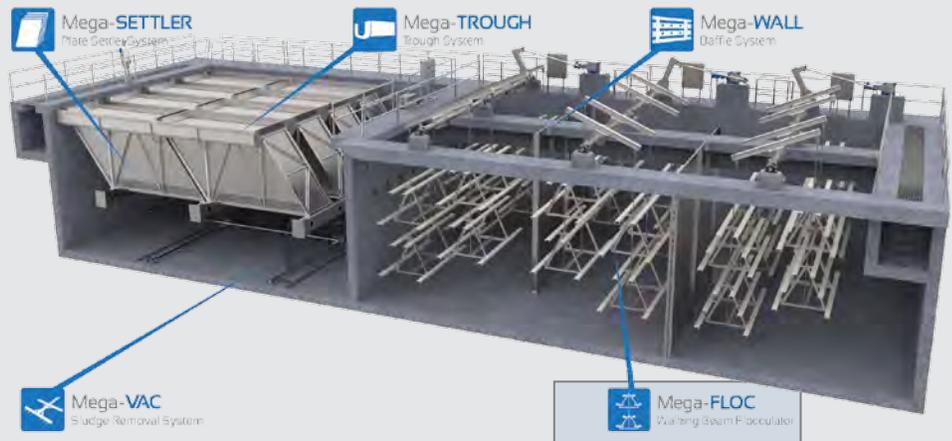


Mega-FLOC
Walking Beam Flocculator

Proven ... Process ... Performance

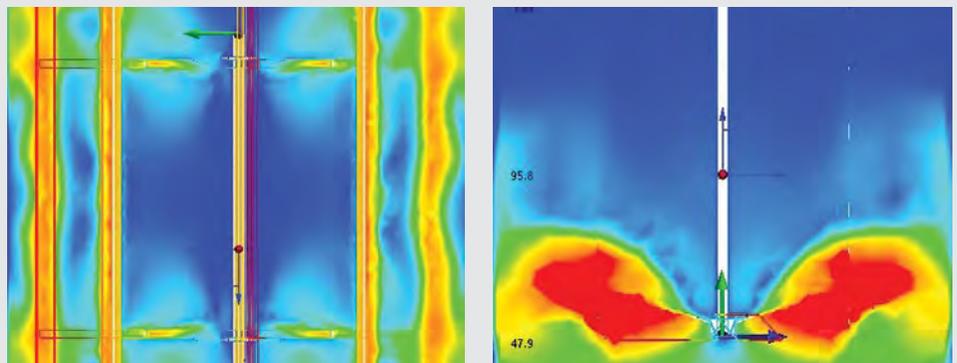
It is not possible to sum up in a few words what has taken better than half a century to achieve, but these three come closest. Our Mega-FLOC (Walking Beam Flocculator) design has already **proven** itself in successful applications throughout the U.S. and abroad. JMS in-depth knowledge of both the water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

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



Process Harmony

One of the key components in the water pre-treatment process, flocculation is most effective when the functions of fluid motion, differential settling, and velocity gradient (during each stage of the process) work in harmony to achieve the ultimate goal: maximizing agglomeration for either settling or filtration. This concept of harmony is at the heart of JMS Mega-FLOC (WBF) design. With more surface area than comparable turbine or impeller type units, Paddle Wheel Flocculators can operate at lower speeds, while still achieving the desired velocity gradient. Lower speeds mean measurably reduced operating costs, never at the expense of performance. The lower tip speed (an industry standard 3 feet per second [FPS] for paddle wheels, versus 10 FPS for turbine and impeller units) coupled with the increased surface area, reduces floc shear while providing a broader homogeneous mixing action. Dead mixing zones and high shear areas in the basin, common in alternative systems are all but eliminated (as seen in the CFD examples below).



CFD Examples of Paddle Wheel (left) and Turbine/Impeller Type (right)

Why Go "Walking"?

When process needs demand optimum flocculation performance, JMS offers its Mega-FLOC (WBF). One of the most effective and reliable systems available today, JMS walking beam flocculators combine vertical and linear movement to maximize Brownian motion, encouraging floc formation in the basin. The risk of mass rotation, common to impeller style systems, is eliminated, as are laminar flow and short-circuiting. JMS has provided more (WBF) than any other manufacturer and has the proven, proprietary knowledge to design a system to meet your needs.

Advantages: Mega-FLOC (WBF)

Maintenance Advantages

- All moving parts are above the water line
- Minimal wear items (no chains, stuffing boxes, bottom steady guides, etc.)
- All bearings are heavy duty roller bearings

Process Advantages

- Oscillating motion ideal for flocculation
- Eliminates mass rotation present in all other flocculation equipment
- Varying tip speeds throughout a given cycle promotes high-level floc formation

Experience Advantages

- JMS is the leading supplier of Walking Beam Flocculators
- The JMS design has been used to upgrade many existing systems
- Proven process design based on numerous installations and field testing

All About the Motion

JMS Mega-FLOC (WBF) uses reciprocating vertical paddle motion to achieve the wide range of velocities needed to maximize flocculation. Linear paddle velocities vary cyclically from zero feet per second to an adjustable maximum rate deemed ideal for effective solids flocculation without risk of floc shear. An upstroke suction lift on the bottom of the basin prevents floc fallout and aids in seeding the newly forming floc, while a downstroke generates turbulence to aid the production of robust floc particles. As motion is continuously transmitted to all areas of the basin, dead spots are eliminated.



Rogers, AR Mega-FLOC (WBF) Installation

Getting Your Bearings

Bearings are unquestionably the silent workhorses of any complex piece of equipment and JMS has taken special care to upgrade this component for full-time operation. To achieve the unique Mega-FLOC (WBF) oscillating stroke, all motion is transferred through heavy duty roller bearings located above the liquid level. Drop arms are connected to both ends of a series of walking beams by clevis and pin connected to a pillow block roller bearing. The walking beams, spaced laterally on horizontal drive shafts, are mounted on piers by self-aligning bearing assemblies. Pillow block roller bearings (used on both walking beams and connecting rods) are anchored using stainless steel baseplate assemblies.

Flexibility Through Design

JMS Mega-FLOC (WBF) provides for the ultimate in flexibility. With their unique design, they are adaptable to any size or shape basin. The WBF design is particularly useful in basins with a high depth to length ratio, where achieving uniform mixing can be an issue. JMS designers use their proprietary design program to size each Mega-FLOC (WBF) based on load requirements. The length of the beam is determined based on the geometry required to achieve process requirements and specific basin dimensions. All shaft systems are designed for minimum deflection under maximum shear stress as defined by the combination of bending and torsional stresses under full operating load.

JMS in Control

Because no two operations are alike, we custom-configure JMS controls to best meet each client's unique system requirements. Utilizing the latest technology, our team of seasoned electronics technicians (working in a UL-approved assembly environment) constructs each panel, quality testing it throughout fabrication. In addition, a rigorous routine of point-to-point wiring testing and power-up verification is done before final approval and certification for delivery.



Rogers, AR Mega-FLOC (WBF) Control Panel



Mega-TREATMENT
Water Treatment Systems



Success Stories

The town of Quitman, AR is located in the picturesque Ozark Mounains. Known for great fishing lakes and streams, the area's abundant surface water provides adequate intake capacity for the Lonoke White Water Treatment Plant. With the need to service 80,000 residents and a vision for growth, groundbreaking for this new 10 MGD water plant took place in 2010.

Under the professional guidance of Crist Engineers, equipment selection was made based on supplier qualifications and experience. JMS, with plenty of both, also had the advantage of working with the engineering firm on another successful Arkansas project. When all the bids were in, JMS was asked to supply their Mega-FLOC (WBF) and Mega-SETTLER Plate Settler System.

Now in full-time operation, Lonoke White Water Project is considered a great success. Plant manager David Liles, brought in to run the operation, expresses his pleasure with the low maintenance nature of the JMS equipment. He has found he prefers the low shear mixing action of the Mega-FLOC (WBF) over the rapid mix units he had worked with at another plant. With the durability of JMS equipment, this plant looks forward to years of trouble-free performance.



System Integration

In addition to Mega-FLOC (WBF), JMS expertise extends to a host of other products and systems shown 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.



Mega-FLOCS
Paddle Wheel Flocculators



Mega-FLOC
Horizontal Paddle Wheel Flocculator



Mega-FLOC
Vertical Paddle Wheel Flocculator



Mega-FLOC
Walking Beam Flocculator



Mega-SETTLER
Plate Settler System



Mega-VAC
Sludge Removal System



Mega-SCRAPER
Sludge Removal System



Mega-SYSTEM
Packaged Plate Settler System



Mega-WALL
Baffle System



Mega-TROUGH
Trough System



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"Making a Difference for Generations"

Your JMS Sales Representative: