

Wastewater Treatment Solutions



MOYNO

Always the Right Solution™

A History of Performance

For more than 65 years, Moyno® progressing cavity pumps have been successfully applied and widely used worldwide in the industrial and municipal wastewater treatment industry. Throughout these years, Moyno has pioneered the design and application of the progressing cavity principle to continually enhance operational performance and to innovate wastewater treatment pumping solutions. Moyno provides:

- An effective combination of products, process solutions and service support programs to keep plant operations running smoothly and efficiently with little downtime and minimal maintenance.
- A broad standard product offering as well as custom product design capabilities to meet critical application requirements.
- Extensive equipment packaging and high quality unit assembly capabilities to ensure specification compliance and operational effectiveness.



These Moyno pumps were installed in the early 1960s to feed sludge to a belt filter press for dewatering. Moyno pumps deliver a steady, consistent flow of material to any dewatering device, which is a critical aspect of dewatering efficiency. With a rugged drive train design and advanced rotor/stator technology, Moyno pumps deliver years of trouble-free performance.

Ultra-Technology® Innovations

What sets Moyno apart from all others? Moyno is able to deliver superior pumping performance and greater overall customer value because of its proprietary Ultra-Technologies. These include:

- **Ultra-Shield®** rotor coatings that allow Moyno pumps to maintain peak pump performance under highly abrasive and/or corrosive service conditions.
- **Ultra-Pro®** rotor/stator configurations that add versatility in matching flow rate and pressure capability to application requirements.
- **Ultra-Flex®** stator elastomers that are formulated to meet specific fluid conditions for peak operating efficiency, longer life and less maintenance.
- **Ultra-Drive®** technologies that provide multiple drive train designs including crown-gear joints as well as sealed and open pin joints for optimum performance in varying application conditions.
- **Ultra-Feed®** rotor configurations designed to enhance the flow of high solids content materials and optimize volumetric efficiency.
- **Ultra-Serv®** service programs that include precise equipment selection and engineering support, accurate submittal packages, comprehensive O&M manuals, start-up, training, pump repair services and quick parts shipments for trouble-free performance and less downtime.



The Moyno 2000 HS system is a significant technology advancement for the wastewater treatment industry. It can pump filter cake further distances with higher volumetric efficiencies than any other progressing cavity pump.

While Moyno's Ultra-Technologies are the latest break-through innovations, the Company has an extensive

history of industry "firsts" that include:

- The gear-type drive configuration that has evolved into the patented Moyno 2000 pump that is recognized as the most rugged and dependable performer in the wastewater treatment industry. All others compare themselves against the Moyno 2000 pump.
- The first open throat hopper with a "bridge breaker" option to help feed filter cake.
- The patented 2000 HS system that sets new standards for handling high solids filter cakes with its twin-screw auger and Ultra-Feed G4 progressing cavity pump.
- More than 40 other patents for progressing cavity pump technology advancements.



The Moyno Annihilator utilizes advanced, proprietary cutting technology in shredding solid objects and materials that are often suspended in raw wastewater to reduce them to a more manageable size. They are available in flanged and open channel configurations.

Applied Technology

To ensure effective wastewater treatment application solutions, Moyno has:

- The experience to properly apply its innovative technology to meet and exceed all application requirements.
- Volumes of field-proven application information that has been compiled over 65 years, ensuring the best product selection.
- The capability to deliver exceptional performance, longer life and lower costs.



The Moyno 2000 G3 filter cake pump has proven to outperform and outlast all other pumping alternatives in dewatered sludge cake applications.



The low shear pumping characteristics of the Moyno pump make it ideal for polymer metering applications.



Pump, base, drive, hoppers, controls ... Moyno has extensive experience in building complete pumping units like the one pictured here handling dewatered sludge.



Moyno Pipeliner single shaft grinders reduce solids to a consistent, manageable size to prevent clogging, ragging and damage to downstream equipment.



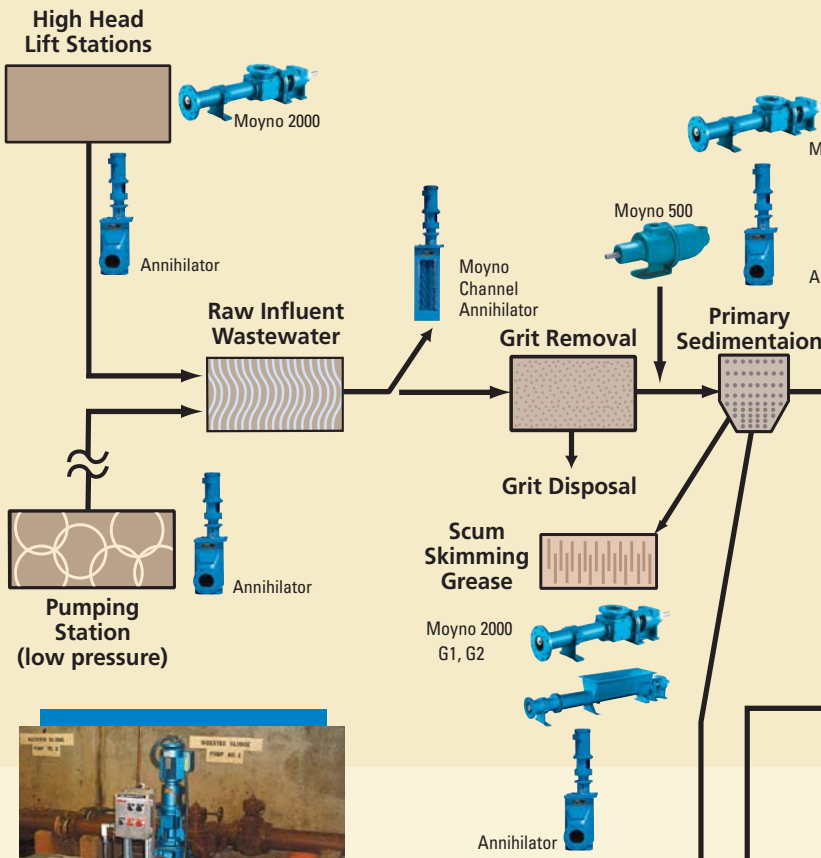
This Moyno 2000 G2 scum transfer pumping system was specifically designed for one of the largest wastewater treatment plants in the midwest United States. Moyno engineers worked closely with city engineers to design and manufacture 18 systems to satisfy specific, critical application requirements.



A Moyno Pipeliner grinder and a 2000 pump are teamed in this primary sludge transfer application. Moyno has the breadth of product offering needed to provide effective, packaged application solutions.

Moyno Products Provide Reliable Performance

PRIMARY TREATMENT/SOLIDS SEPARATION

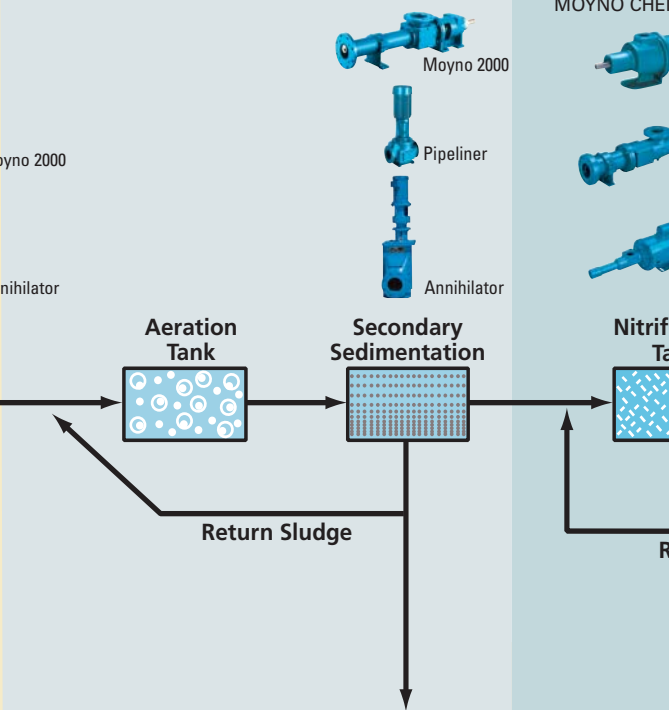


For sludge transfer, Moyno's proprietary Ultra-Shield rotor coatings and Ultra-Flex stator elastomers provide superior performance and longer life under highly abrasive conditions.

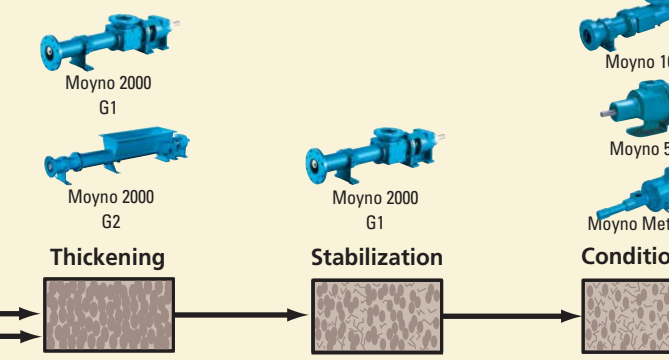


Moyno pumps provide years of trouble-free service in a broad range of sludge handling applications under varying conditions.

SECONDARY TREATMENT



SLUDGE PROCESS DISPOSAL



- Gravity Belt
- Gravity Thickening
- Dissolved Air Flotation
- Centrifuge
- Rotary Drums

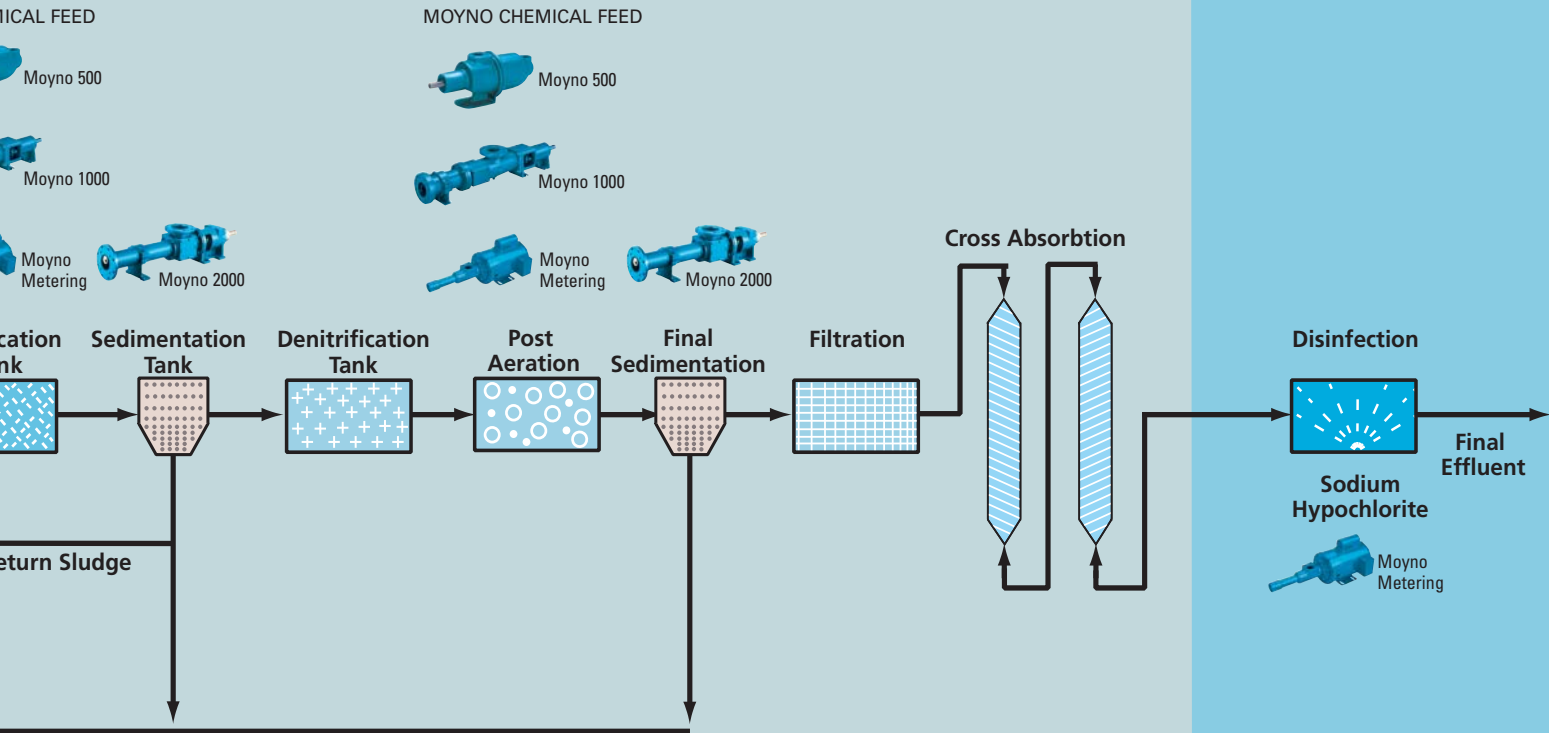
- Aerobic Digestion
- Anaerobic Digestion
- Sludge Lagoons
- Imhoff Tanks
- Composting

- Polymer Addition
- Chemical Conditioning
- Heat Treatment

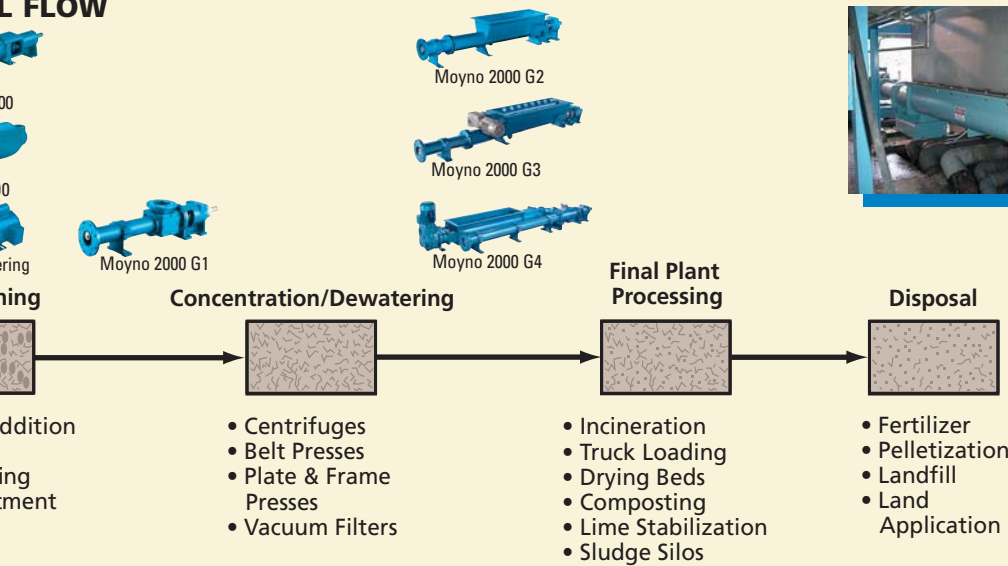
Throughout the Wastewater Treatment Process

TERTIARY TREATMENT

DISINFECTION



SOLID FLOW



The Moyno 2000 HS System with twin-screw feeder (see inset photo) and proprietary Ultra-Feed rotor can handle a higher percentage of solids than any other PC pump based system to minimize processing costs.



These Moyno 2000 centrifuge feed pumps utilize heavy-duty bearings and the rugged Ultra-Drive gear-type drive train for reliable performance 24 hours a day, 7 days a week.

Replacement Parts Accessibility



Genuine Moyno replacement parts ensure that Moyno pumps continue to provide the original performance and the longevity you deserve.

Moyno maintains the largest in-field inventory of progressing cavity pump parts in North America. The Moyno **NetLink™ System** electronically connects the inventories of all stocking distributors to enhance accessibility to the Moyno part you need and reduce process delays. Often imitated but never duplicated, genuine Moyno replacement parts:

- Precisely and consistently meet all Moyno quality standards, manufacturing tolerances and ISO 9001 certified control processes.
- Were proven to provide superior tensile strength and abrasion resistance in competitive testing, to provide optimal performance and long service life.

Technical Support Services



Moyno has significant, state-of-the-art development labs and customer test facilities that are used to verify performance projections.

Moyno invests continuously in its **Research and Development Programs** to:

- Keep a steady stream of new technology innovations flowing into the wastewater treatment plants.
- Ensure reliable performance and high standards of product quality.
- Substantiate its claims, backing its promises with proven, factual test data.

In addition, Moyno offers an advanced **Customer Test Facility** that allows materials to be pumped under actual application conditions to:

- Determine material compatibility,

the effect of abrasion and maximum viscosity handling capabilities.

- Confirm product performance promises for peace of mind that comes from working with Moyno.

Need further reassurance? Moyno also offers a **Trial Pump Program** that:

- Allows you to test an actual Moyno pump in your own facility for a specified period of time.
- Enables you to verify overall process system performance.

Moyno has redefined the expectations for service in the wastewater treatment industry with its **Certified Service Facility (CSF) Program**.

Initiated in 1994 as part of the Ultra-Serv technologies, the program was established to:

- Provide efficient start-up as well as superior maintenance and training programs.
- Ensure that Moyno distributors maintain high standards of performance that include equipment and staffing, mobile service, an extensive inventory of genuine Moyno replacement pumps and parts, and factory-trained technicians.
- Provide you with expert product selection assistance and preventative maintenance programs as well as warranted pump repair services and start-up support.



Support for wastewater treatment plant maintenance personnel is readily available from Moyno's Certified Service Facilities.

Extensive Moyno Product Line



Moyno 2000 HS System

- Handles filter cakes with a higher percentage of solids at higher pressures than any other PC pump
- Twin-screw feeder for positive fill
- Moyno 2000 G4 with enhanced Ultra-Feed rotor
- Advanced controls package



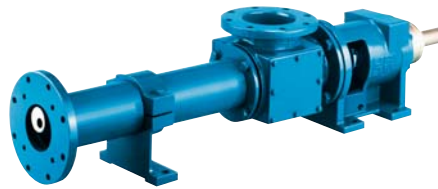
Moyno 1000 Pump

- Sealed and lubricated pin joint drive train
- Available in standard flange, open throat and close coupled configurations
- Handles polymer, sludges, lime slurries and other chemical feed applications

Moyno 500 Pump



- Compact, light-weight utility pump
- Handles sampling and chemical feed applications



Moyno 2000 Pump

- Crowned gear universal joint drive assembly with patented seals - the most rugged and reliable in the industry
- Optimized pumping elements with Ultra-Shield rotor coatings and Ultra-Flex stator elastomers
- Flanged, Open Throat and Bridge Breaker models handle waste sludges and filter cakes



Moyno Metering Pump

- Pulsationless, repeatable flow rates
- Available in bare shaft, close coupled and motorized configurations
- Handles polymer, sodium hypochlorite and other chemical feed applications



Moyno 2000 CC Pump

- Ultra-Drive optimized gear joint design
- Ultra-Pro optimized rotor/stator geometry for pumping efficiency
- Economical option for handling abrasive sludges



Moyno Grinders

- Annihilator™ twin shaft grinder with patented spacer/cutter assembly
- Reduces solids in raw influent wastewater and primary sedimentation applications



- Pipeliner™ single shaft grinder with self-adjusting cutters
- Reduces solids and eliminates rags to ensure consistent particle size in secondary sedimentation applications

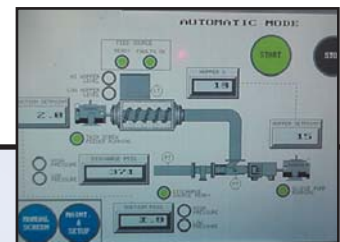
Options to Suit Your Application



Moyno provides an extensive range of performance-enhancing options to meet exact application needs. A sampling of these options include the:



- Fiber Deflector to prevent pump ragging that can lead to downtime due to blockage
- Shaft Sleeve to protect drive shaft from wear in highly abrasive applications



- Flush Gland that permits controlled leakage of process or flush fluid
- Control Packages like the advanced, integrated touch screen packages found on the 2000 HS system and run-dry fluid detection and control packages

Moyno ... The Right Solution for Wastewater Treatment Applications

When it comes to handling wastewater treatment applications, Moyno provides significant advantages that can reduce your downtime, increase cost savings and enhance operational productivity. These advantages include:

- High quality, well-engineered products that provide superior performance and longevity for reduced maintenance downtime and low total cost of ownership.
- Wastewater treatment process knowledge and application expertise that ensures the right solution for even the most difficult applications.
- Dedicated in-house professionals who know how to interpret specifications, construct equipment scopes of supply, quotations and documentation with unparalleled service and support.
- Experienced, seasoned representatives readily available to provide a full range of services and technical support.
- Proprietary Ultra-Technologies that separate Moyno products and services from all others.
- An extended warranty program that is unmatched in the industry to reassure your confidence in Moyno.



For information about Moyno products or for technical assistance, contact:

Moyno, Inc.
P.O. Box 960
Springfield, OH 45501-0960
U.S.A.
Telephone: 1-877-4UMOYNO
Facsimile: 937-327-3572
E-Mail: mipinfo@moyno.com

www.moyno.com

Bulletin 300



Note: Information contained herein is subject to change without notice. Before making a final product selection, please contact your Moyno representative.

Your Moyno Authorized Distributor/Representative is: