



Division of McNish Corporation

Walker Process Equipment

Equipment For The Water & Wastewater Industry

Aurora, IL

General Bulletin

- *Sludge Collection*
- *Sludge Digestion*
- *Biological Process*
- *Grit Removal*
- *Grease & Skimmings*
- *Water Treatment*



Circular Collectors



Chain and Flight Collectors



Anaerobic Digestion Systems



Scum Concentration



Rotating Biological Contactors



Grit Removal



Solids Contact Clarifiers

SLUDGE COLLECTION

CIRCULAR collector mechanisms by Walker Process, from the most basic type of bridge or pier supported mechanism to those with the most complex and demanding specifications for thickeners, solids contact or flocculating units are designed in strict adherence to engineering design codes, specifications and the unique needs of the user.



All circular collector mechanisms by Walker Process are provided with drive units made in our own manufacturing facility. During the late 1990s we raised to a new level the specifiable reliability for drive units by developing the industry's only truly **Precision Split Internal Spur Gear Drive** with replaceable race inserts and a main gear constructed of grade 120-90-02 ductile iron to achieve unequalled corrosion resistance. All spur gear drives meet AGMA quality class 6 and are certifiable to the latest ANSI/AGMA standards.



Precision Drive Assembly

MECHANISM TYPES AND SPECIAL FEATURES:

Plow Type that utilize conventional straight blade flights or spiral flights.

Rapid (Hydraulic) **Sludge Removal** type utilizing individual sludge pipes or tapered suction headers.

Optional Features include: Energy Dissipating Influent Wells, Custom Designed Bridges and Platforms, Ducking Skimmers, Full Radius Scum Skimmers and Troughs, Corner-Sweeps and many more.

RECTANGULAR collector mechanisms utilizing the conventional chain and flight arrangement are available in a wide range of sizes and features to meet current design standards. Walker Process rectangular collector mechanisms are available with non-corrosive stainless steel chain but are more commonly provided with our exclusive **Hydrolink** plastic chain and non-metallic flights to provide a superior combination of high-strength, durability, ease of assembly and design efficiency.



Ancillary equipment includes flight cross collectors, helicoid sludge concentration and collection screws, a variety of skimming devices including pipe type and helical scum skimmers.

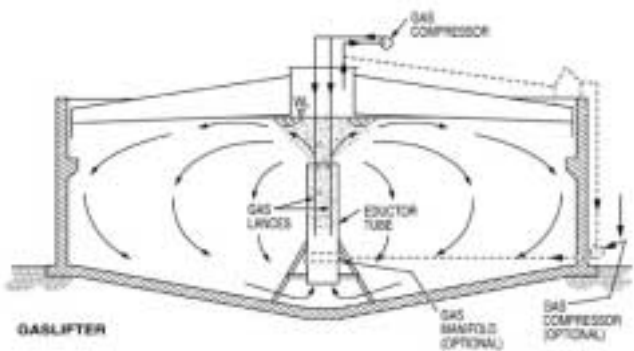
SLUDGE DIGESTION

ANAEROBIC SYSTEMS

COVERS for anaerobic digesters include conventional arched beam, truss supported or membrane type **Fixed** covers, **Floating** covers, **GasHolders** and **Combination** floating-gasholder types. Several options are available for guiding vertical movement of covers including vertical or spiral guides.



MIXING systems include Walker's time tested and proven **GasLifter** - a confined-gas system that provides the most efficient and complete mixing available for anaerobic digesters.



HEATING Walker's tube-in-tube **HeatX** heat exchangers and combination boiler-heat exchanger units provide an efficient and reliable means of heating digesters. All Walker Process HeatX units are designed, tested, inspected and stamped in compliance with ASME requirements.

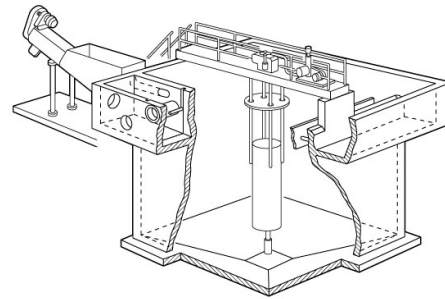


AEROBIC SLUDGE DIGESTION The RollAer provides mixing and oxygen for stabilization of waste activated or mixtures of trickling filter and primary sludges. These units are thoroughly tested and field-tested to provide long life and reliability.



GRIT REMOVAL

Rolling Grit equipment from Walker Process provides a total system for grit removal and dewatering. A centrally located eductor tube induces a rolling action that maintains organics in suspension while causing settled grit to be carried to a center hopper where an airlift pump transfers the grit to an inclined screw **GritWasher** external to the basin. The **RollingGrit** system provides effective grit removal and preaeration without any moving parts.

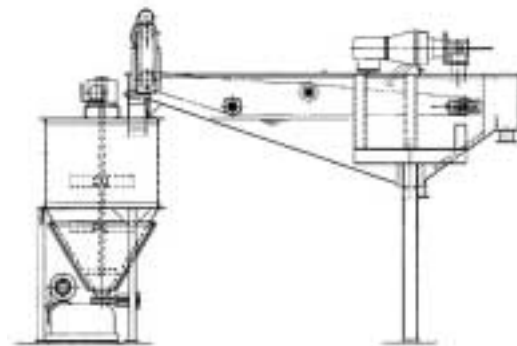


Hydro-Separators are rugged outwardly scraping circular collectors with influent flow deflectors and provided with either a inclined helicoid screw or a chain and flight type dragout mechanism for grit removal.

Self-Elevating grit collectors are heavy-duty V-bucket type collector/elevators for use in removing grit from either aerated or non-aerated detention basins.

GREASE & SKIMMINGS PREPARATION

Grease Preparation Systems provide for removal of water from skimmings and storage for further processing or ultimate disposal. The system includes a two step process that involves pumping scum through a grinder to a rectangular separation tank that is provided with a chain and flight collector to skim the greasy material for discharge to one or two day tanks. The day tank is used for storage and equipped with heating elements and a mixer to further reduce the moisture content of the collected scum or grease.



BIOLOGICAL PROCESS EQUIPMENT

EnviroDisc™ ROTATING BIOLOGICAL CONTACTORS (RBC) provide highly efficient fixed film BOD and ammonia removal with low energy usage and maintenance requirements. In the RBC process, wastewater flows through shallow tanks containing the partially submerged, rotating shafts where biomass is carried on the media for reduction of pollutants.



The **EnviroDisc** utilizes a framework to support the removable media. The shaft is 30-inch diameter pipe with a 3/4-inch thick wall. This is the largest shaft available and is structurally superior to any other in the marketplace to provide a rugged design capable of an extended fatigue life. The EnviroDisc also utilizes either a direct, shaft mounted drive or v-belt arrangement and is commonly furnished with fiberglass enclosures.

ROTARY DISTRIBUTORS Reaction driven rotary distributors are available for flow rates from 700 to 20,000 gpm. Walker Process designed distributors in either mast or mast-tub configuration are the highest quality units available in the industry.



POTABLE WATER TREATMENT EQUIPMENT

SOLIDS CONTACT CLARIFIERS

The **MC ClariFlow** provides a superior combination of rapid mix, flocculation, settling and collection within one basin.



INSTOMIX - INLINE FLASH CHEMICAL MIXER

provides high-energy flash-mixing to instantaneously (within milliseconds) disperse dilute coagulant and flocculant solutions into raw water flow.



TRAY AERATORS provide for the release of carbon dioxide, hydrogen sulfide, or other gases ahead of clarifiers.



OUR COMMITMENT TO THE WATER AND WASTEWATER INDUSTRY

Walker Process is totally dedicated to designing and manufacturing equipment for the Water and Wastewater Industry. During the early years Walker Process engineers developed many of the devices, systems and techniques that are the basis of equipment design standards today. Today, we continue to refine our over half-century of experience of innovative design and manufacturing techniques based on input from users, consultants, suppliers, and our in-house engineering staff to provide value, low cost, and the highest quality standards in the Industry.

We offer a full range of standard designs and are a proven industry leader when it comes to custom designed equipment. Our engineers can handle the most demanding design requirements including custom fit details, seismic design and special material considerations.



The Aurora, Illinois complex consists of a 95,000 square foot office and manufacturing facility on six-acres of property. Our demand for quality includes a requirement for 100% inspection of all components produced, including those structural components made by all outside fabricators.

All of our products are sold directly or through sales representatives. We offer assistance with equipment sizing and writing or reviewing specifications and drawings. A Project Manager handles each contract, engineering is performed by our own staff of engineers, manufacturing of all key components is done in our own manufacturing facility and field service is always finalized by a qualified and experienced field service technician.

Please visit our website www.walker-process.com for local representatives and more information about our capabilities.

GRIT REMOVAL

RollingGrit
GritWasher
HydroSeparator

BIOLOGICAL PROCESS

EnviroDisc® RBC - Rotating
Biological Contactor
Rotary Distributors

SKIMMING

HeliSkim
RotoDip Skimmer
GreasePrep - Skimmings &
Grease Preparation Systems

SEDIMENTATION & THICKENING

Circular Collectors & Thickeners
Bridge Supported
Pier Supported
Plow Type, Spiral Flights, MultiDraw,
SightWell
UniMix Flocculating Clarifiers
Spur Gear Drives (Precision Class 6)
Rectangular Collector Mechanisms
HeliThickener

SOLIDS CONTACT CLARIFIERS

MC ClariFlow
RollFlow™ Clarifier

SLUDGE DIGESTION

Covers – Fixed, Floating,
GasHolder, Combination Cover
GasLifter Digester-Mixer
HeatX – Heat Exchanger, Boiler,
Combination Units

RollAer - For Aerobic Digestion

WATER TREATMENT

Solids Contact Clarifier Type MC
Flocculating Clarifier Type UC
Paddle Flocculators
UniMix Flocculators
InstoMix Flash Mixer
Cascade Tray Aerators
