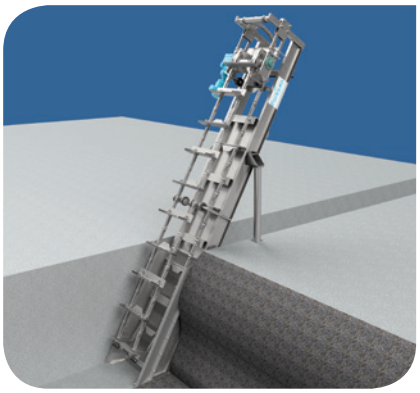
Parkson™
Treating Water Right

Municipal Water and Wastewater Treatment

- Screenings & Headworks
- Biological Treatment
- Separations & Filtration
- Biosolids Management

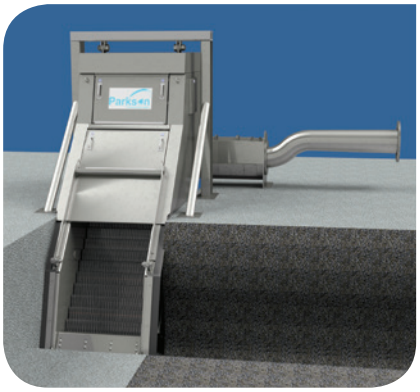
Screenings & Headworks



Aqua Caiman™ - NEW PRODUCT
In-Channel Articulating Rake Screen

Parkson offers an array of municipal in-channel screens to suit any need - high capture rates, low maintenance, economical and manufactured in the USA. The Aqua Caiman™ represents the next generation of articulating rake screens. This low maintenance screen provides unmatched durability and ease of operation.

- Capable of handling large solids
- No bottom bearings, no moving parts below water surface
- *True-Track*™ chain positioner allows for adjustment without a hoist
- *True-Engage*™ design allows for 100% rake engagement



Aqua Rhino™ - NEW PRODUCT
In-Channel Escalating Screen

The Aqua Rhino™ represents the next generation of escalating screens. It is the most durable step screen on the market with a robust design and advanced drive systems.

- Economical – high performance in a cost-efficient package
- Direct drive linkage system, no chain drive
- Reduced grit buildup with minimal toe space and optional wash bar
- Designed to be easily maintained
- Optional lifting bar to pivot the screen out of channel for routine maintenance

Aqua Guard®
In-Channel Self-Cleaning Moving Media Screen

Introduced over 40 years ago, the Aqua Guard® is the original filter element screen. With 1000s of installations, it continues to be a proven design with high capture rates.

- Economical model (AGMN) and robust model (AGS)
- Two screening surface options –
  - » 3-dimensional element screen
  - » Stainless steel perforated (PF) screen
- UltraClean™- **RECENT INOVATION**
  - » Decreased maintenance
  - » Improved cleaning resulting in increased capture rates
  - » Improved machine access

Hycor® Rotoshear®
Internally-Fed Rotating Wedgewire Drum Screen

The Rotoshear® is often utilized as a headworks screen and is a proven, high-capacity fine screening technology. It is frequently used for pretreatment and primary treatment to replace primary clarifiers, as well as sludge screening. EZ-Care™ features include quick disconnect nozzles for spray wash and entirely lube-free drive system and trunnion wheels.

- Available in 12 models with custom features
- Made entirely of 304 and 316 stainless steel
- Can be equipped for automatic on and off operation
- Openings range in size from 0.01” to 0.10”
- Hydraulic capacities from 450 GPM to 13,000+ GPM

Hycor® Rotoshear® PF

Pre-Membrane Screen

The Rotoshear® Perforated Plate Drum Screen offers diverse media options to meet various screening needs. Its superior capture efficiency makes it the ideal choice for pre-membrane screening. The screens are outfitted with EZ-Care™ features, which reduce operator maintenance and affiliated costs.

- Sealed bearings
- Drive chain requires no additional lubrication
- 1mm-3mm screen openings with perforated plate
- Headbox design easily handles flow variations and surges

Hycor® Rotostrainer®

Externally-Fed Rotary Wedgewire Screen

Introduced over 30 years ago, the Rotostrainer® is the original self-cleaning and externally-fed wedgewire screen. It offers an oversized headbox with sufficient weir length to allow for 100% bypass in overflow situations. The screen features a heavy-duty, corrosion resistant stainless steel chassis and wedgewire screening cylinder. The Rotostrainer handles difficult solids, such as scum and oily and greasy materials, extremely well.

- Opening sizes from 0.01” to 0.10”
- Single unit capacity up to 7,800 GPM
- Automatic doctor blade cleaner to facilitate solids removal
- External bearing and removable headbox simplify maintenance

Hycor® Helisieve® M

In-Channel Fine Screen

The Helisieve® M combines fine screening, conveying and dewatering to create a highly economical system that produces screenings dry enough without need for an additional dewatering press. The heart of the system is a shaftless spiral with brush in the screen basket area to keep the screen clean. Screened solids are conveyed out of the channel, dewatered and discharged into a dumpster/conveyor.

- Capacities up to 8 MGD with screen openings available in 1/8’ or 1/4” diameter
- In-tank septage pre-treatment
- Full and easy access to compaction zone
- Available in 35 and 45 degree installation angles

Hycor® Combi®

Packaged Headworks System

The Hycor® Combi® is an all-in-one headworks solution that integrates fine screening, screenings dewatering and grit handling in a single, pre-fabricated stainless steel unit. The system is designed for sewage or septage pretreatment at the wastewater treatment plant.

- Screen openings available in 1/8” or 1/4” diameter
- Lowest installation costs
- Completely enclosed to minimize odors
- Variable intelligent control options

Hycor® Hydroscreen
Bi-Wave Static Screen

The Hydroscreen offers proven and reliable performance in liquid/solid separation. It is used as both a fine screen for pretreatment and grit dewatering equipment in wastewater treatment plants.

– Bi-wave panel design provides highest available capacity
– Opening sizes from 0.01" to 0.10"
– Hydraulic capacities from 70 GPM to 2,700+ GPM
– Reduces downtime and maintenance costs

Aqua WashPress®
Dewatering Screw Press

The Aqua WashPress® economically and effectively washes and dewaters screenings from in-channel and rotating screens in a variety of applications. A stainless steel housing encompasses an inner cylinder where washing, compacting and dewatering occur. Volume and weight are reduced prior to disposal.

– Available in 8", 10", 12" and 17" spiral diameters
– Reduces odors caused by entrained organics
– Custom length/height of discharge piping

Hycor® Helixpress®
Shaftless Spiral Dewatering Press

The Helixpress® is the cost-effective solution for dewatering screenings collected by any type of screen. It's an all-in-one conveyor, compactor and dewaterer that reduces weight and volume, ultimately decreasing hauling and disposal costs.

– Designed to handle over 150 cu. ft./hr.
– Multiple screens can discharge into a single Helixpress® unit
– Conveys solids up to 30 ft. and up to 20 degree angle

Hycor® Helicon®
Shaftless Spiral Conveyor

Used in conjunction with other Parkson™ equipment, Helicon® provides a solids management system that conveys screened solids to washing or dewatering and ultimately, to disposal.

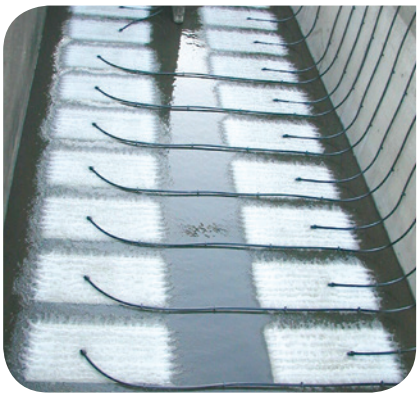
– Fully enclosed to contain odors and eliminate spills
– Complete stainless steel system
– Shaftless spiral provides clear, unrestricted throughput

Biological Treatment

Biolac®
Long Sludge Age Process

The Biolac® System is a proven, long sludge age process that reliably provides complete nitrification in a very simple-to-build plant.

– Cost-effectively upgrade existing lagoons to nitrification
– Simple total N removal with cyclic aeration using Wave-Ox™ Plus ammonia based control, eliminating MLSS recycle and separate stages
– Biological P removal with Bio-P zone
– Extremely stable and simple to operate
– 40+ day solids retention time (SRT) ensures maximum stability and minimal production of biosolids



HiOx® Messner®
Aeration Panel

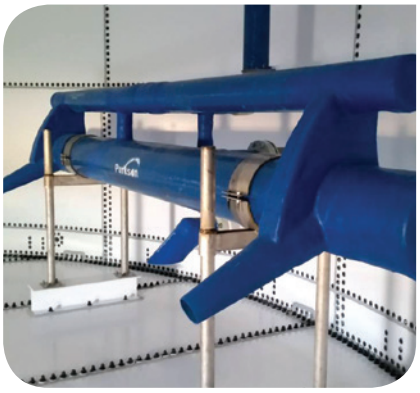
The HiOx® Messner® Aeration Panel provides a unique combination of very high oxygen transfer efficiency with materials of construction that consistently last much longer than conventional fine bubble diffusers.

– Ultra-fine bubble aeration
– Power savings
– Lowest installation cost
– Easy operation and maintenance
– Panel design requires less hardware than standard diffusers

EcoCycle SBR™
Sequencing Batch Reactor

The EcoCycle SBR™ is a batch treatment process where all treatment steps occur within the same reactor. A typical system includes two or more treatment tanks so as one tank is filling, the other tank(s) are processing and clarifying. A normal treatment cycle will include fill, react, settle, decant, and idle steps.

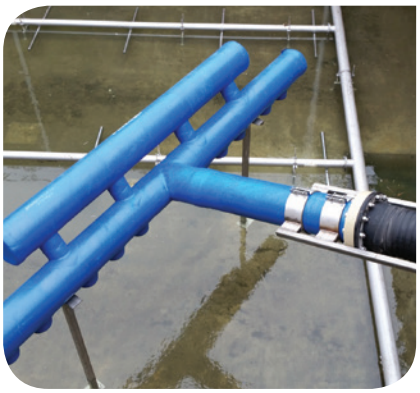
– Ideal for biological nitrogen and phosphorus removal
– PLC control system continuously monitors oxygen levels to optimize energy efficiency
– Small footprint with no separate clarifiers or return sludge piping



VariOx™
Jet Aerator

The VariOx™ Jet Aerator utilizes a combination of motive liquid and blower air to create a high-energy jet plume for mixing and oxygen transfer. The jets can be operated without the blowers or with variable blower input while still maintaining a complete mix condition within the tank. This feature enhances process control and energy optimization.

– Ideal for biological nutrient removal applications where anoxic mix is required
– Fabricated from FRP with stainless steel supports
– Highly robust, operating life of > 25 years



DynaCanter™
Decanter

The DynaCanter™ is a floating style decanter that is used to remove treated effluent (Model ED) or supernatant (Model SD) from the upper portion of the treatment tank. The decanter utilizes a flex joint to allow vertical articulation as water levels change. Water is collected from below the surface to preclude floating material.

– Ideal for sequencing batch reactors, aerobic digester thickening
– No electro-mechanical components located inside the tank
– FRP and stainless steel construction provide years of maintenance-free operation

EquaReact®
Combined Equalization and Treatment System

The EquaReact® system is a unique process incorporating hydraulic flow equalization and multi-stage biological treatment to enhance nutrient removal capability. The combined treatment can be applied to virtually any activated sludge biological process train (two-stage MLE, multi-stage Bardenpho, MBR, MBBR, IFAS, and more) to produce the same advantages.

– Reduces footprint, capital cost, and energy
– Provides biological treatment with 24/7 equalization
– Provides total N and P removal
– Improves system performance and treatment efficiency

EquaJet®
High-Efficiency Nitrogen Removal via Jet System

EquaJet® is an unrivaled system that utilizes jet aeration for mixing and recycle flow transfer, between tanks, using the same motive recirculation pump. The design improves biological nitrogen removal, while reducing energy consumption and capital costs. See photo of Parkson's VariOx™ jet aeration system above for additional reference.

– Ideal for municipal, industrial, or combined flows
– Better treatment performance with maximized mixed liquor recycle rate
– Ideal for retrofits and upgrades to numerous processes

DynaSand® Denite Filter
Enhanced Nutrient Removal Filtration System

DynaSand® Denite provides a single-step solution to remove nitrates (NO3) and nitrites (NO2) in order to meet low effluent nutrient limits. The DynaSand filter achieves denitrification performance with less energy and in a smaller footprint than alternative conventional technologies. When combined with EcoWash®, significant operational cost savings associated with supplemental carbon are also realized.

– Effluent TN limits < 3 mg/l
– Simultaneous total N and P removal
– Low operating costs
– Small footprint

Separations & Filtration

DynaSand® EcoWash®

Continuous or Intermittent Backwash Filter

The DynaSand® EcoWash® filter delivers improved effluent quality over conventional filter systems, while simultaneously lowering treatment chemical consumption, increasing net water production and saving energy.

Proven performance and reliability for:

- Water reuse
- Ultra-low phosphorus removal
- Denitrification
- Suspended solids reduction

DynaSand® D2

Advanced Filtration System

The DynaSand D2® filter achieves enhanced effluent quality by providing a two-stage filtration system when targeting water quality, originally thought only possible via membrane filtration.

Proven performance and reliability for:

- Desalination
- RO pretreatment (SDI < 3)
- Ultra-low phosphorus (<0.02 mg/l)
- Ultra-low nitrogen (< 3 mg/l TN)

Lamella®

LGS and LGS(T)

Parkson's legacy Lamella® Gravity Settler (LGS), Lamella Gravity Settler Thickener (LGST) and Lamella Plate Pack designs are the most economical sedimentation options preferred by engineers and designers for the superior, high-capacity patented EcoFlow® design. Lamella enables municipalities to process 25% more throughput for the same footprint of traditional units.

- Filter backwash water
- Membrane backwash water
- Enhanced nutrient removal (ENR); P-removal
- Primary clarification
- Customized flocculation tanks
- Potable water- NSF 61 approved
- Compact designs; 90% smaller footprint than sedimentation basins

Plate Pack

Clarification Technology with EcoFlow®

Parkson's efficient and proprietary flow distribution design guarantees our plate pack clarifiers operate with the lowest hydraulic mal-distribution in the industry. All plate pack units are sold with the patented Lamella EcoFlow® technology, allowing engineers to design at 100% of plate utilization.

- Compact designs; require up to 1/10th lower sedimentation basin footprint
- Ideal for new municipal installations or expansions
- Variety of plate pack MOC, providing unmatched operating and cost flexibility
- High-capacity plate settlers ranging from 5 MGD to 150 MGD

Biosolids Management

ThickTech™

Rotary Drum Thickener

The ThickTech™ Rotary Drum Thickener (RDT) is the industry leading sludge thickener. Its performance is unmatched, with sludge volume reduction of 90% and a 98% capture rate- all achieved with very low polymer use. Fabricated of stainless steel and utilizing a woven wire mesh screen, it is engineered to provide years of reliable service.

- Low requirements for horsepower, water consumption and polymer usage
- Compact footprint
- 20+ years of operation and hundreds of installations
- Used as a pre-thickener to increase capacity of other dewatering equipment

THERMO-SYSTEM®

Active Solar Sludge Dryer

With over 250 installations on six continents, the THERMO-SYSTEM® Active Solar Sludge Dryer has proven to be a very reliable and energy efficient technology for drying all types of liquid or dewatered municipal sludges. The automated drying process uses solar radiation as its main energy source, resulting in very low operational costs.

- Class A end-product maximizes sludge disposal options
- Installations range in size from 0.2 MGD to 80 MGD
- Environmentally-friendly, green technology
- Low maintenance requirements

Parkson™
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Fort Lauderdale
Chicago
Kansas City
Denver
Dubai

1.888.PARKSON
technology@parkson.com
www.parkson.com

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