Industrial Water and Wastewater Treatment
Industry benefits from recycling, reusing and minimizing waste

All industrial processors use water and generate waste. Having appropriate treatment at the right place in a process makes a meaningful difference in operating efficiency, cost and profitability.

Efficient pre-treatment of the water results in the appropriate water for a given process, adjusted for a given application. With effective in-process and effluent water treatment, water and waste can be recycled and recovered.

The proper selection of treatment technology is critical. At Parkson, we’ve worked across multiple industries, helping treat water for 50 years. With more than 25,000 installations worldwide, and extensive process knowledge, industry can confidently partner with Parkson for proven and environmentally sustainable water and wastewater treatment technologies.

Applications

**Water Pre-treatment**
- Intake water treatment
- Surface water treatment
- Contact filtration
- Iron/Manganese removal
- Membrane pre-treatment

**In-process**
- Product recovery
- By-product recovery
- Process water recycling
- Process improvement
- Reduced water usage

**Wastewater Treatment**
- Physical-chemical treatment
- Pre-treatment
- Primary treatment
- Secondary treatment
- Tertiary treatment
- Effluent/greywater recycle

Aeration/Biological Treatment • Clarification • Dewatering • Filtration • Oil-Water Separation • Screening • Sludge/Biosolids Management

Parkson equipment and custom systems are designed and built to withstand the demands of an industrial environment. Heavy solids loadings, surges and 24/7 production schedules are considerations used in selecting, sizing and integrating specific components and systems to meet customer requirements. Selecting the most effective and economical system can only be accomplished with a wide range of component equipment. Parkson’s experience guarantees that you won’t pay for more than you need today, but have the ability to expand your system when volume grows.

**Industries Served**

Agriculture
Aquaculture
Automotive
Aviation
Beverage
Brewery
Cement
Cheese
Chemical Processing
Coal
Cosmetics
Dairy
Distillery
Energy Processing
Fishery
Food
Foundry
Meat
Metal Finishing
Mining
Petroleum
Pharmaceutical
Plastics
Poultry
Power
Pulp and Paper
Railroad
Rendering
Slaughterhouse
Steel
Tanning
Tar sands
Textile
Winery
Zoo
Aerat/Biological Treatment

Biolac® Wastewater Treatment System

- Aircraft deicing fluid run-off • Beverage bottling • Chemical processing • Food processing • Meat processing • Pulp and Paper

- Low-loaded activated sludge process with extended retention time / High oxygen transfer efficiency delivery system / Exceptional, controlled mixing energy / Low energy consumption / Simple system construction / Installed in concrete tanks or earthen basins, either lined or unlined / Internal or external clarifiers / Efficient sludge removal

Biolac® Wave Oxidation Nutrient Removal Process

- Beverage bottling • Chemical processing • Food processing • Meat processing • Pulp and Paper

- Enhanced biological phosphorus removal / Nitrifies and denitrifies wastewater without recycle pumping / Alkalinity recovery / Single basin operation / Multiple treatment zones / Low energy consumption / Minimal operator attention

HiOx® UltraFlex Aeration System

- Chemical processing • Food processing • Meat processing • Pulp and Paper

- Aeration efficiency 2-4 times greater than conventional systems / Ultra-fine bubble technology / Individual air feed piping to each panel / Highest clean and dirty water oxygen transfer efficiency / Lowest operation and maintenance costs / Lowest lifetime cost

Clarification

Lamella® Gravity Settler (/Thickener)

- Blowdown treatment • Chemical processing • Filter backwash • Food processing • Industrial wastewater • Metal finishing • Mill scale • Mining • Plant effluent • Scrubber waste • Water treatment

- The original inclined plate clarifier / Thousands of units installed since 1971 / Performance proven / Compact design minimizes hydraulic disturbances / Factory assembled / Proprietary flow distribution system / Few moving parts / Low maintenance requirements / Ideal for surface water or wastewater

LPC Plate Clarifier Low Flows Inclined Plate Clarifier

- 5 to 400 USgpm • Wash water recycle • Industrial process water • Water reuse applications • Wastewater

- Settles out suspended solids / Compact size for limited space / Integral flocculation / mixing tanks / PVC removable settling plates / Access hatch / Sludge sampling ports
Dewatering

Filter Press

Chemical separation processes • Filter backwash • Filtering of fruit juices, wine, vegetable oils and flavor extracts • Industrial laundries • Metal finishing • Paint sludge • Petrochemical • Stone cutting • Tanneries, textile waste

Recessed chamber design / Gasketed, non-gasketed, membrane plates / Manual, semi-automatic, automatic plate shifters / No moving parts during filtration / Wetted parts are stable, polymeric materials / Minimal operator attention required / Long life with low maintenance / Wide variety of unit sizes and chamber depths

Helixpress® Shaftless Spiral Dewatering Press

Fruit and vegetable by-products • Paunch • Pen waste • Rejects dewatering

Dewatering press and solids conveying unit / Dewater against back pressure door / Shaftless spiral with no discharge end bearing / Varying lengths and multiple feed inlets available / Dewater a variety of solids to Paint Filter Test specifications

Filtration

DynaSand® Continuous, Upflow Granular Media Filter

Chemical processing • Cooling tower blowdown • Denitrification • Effluent polishing • Ground water • Metal finishing • Membrane pre-treatment • Mill scale • Phosphorus removal • Process effluent • Seal water • Surface water

The original continuous, upflow sand filter / Performance proven / Thousands of units installed since 1978 / Self-cleaning / Reduces space requirements / Reduces installation costs / Eliminates costly ancillary components / No moving parts / Low maintenance requirements / Continuous contact filtration / Packaged and concrete units available

DynaSand D2® Advanced Filtration System

Algae removal • Boiler feed water treatment • Combined N and P removal • Membrane pre-treatment • Phosphorus removal • T.O.C. removal

High solids capacity / No moving parts / Continuously cleaned sand bed / Even flow distribution / Low operating and maintenance costs / Extremely low power consumption / Average reject effluent of 0.5%
Oil-Water Separation

**SRC and SRM Slant-Rib Oil-Water Separators**

- Compressor condensate
- Fueling facilities
- Groundwater remediation
- Industrial effluent treatment
- Stormwater runoff
- Tank farms
- Wash or rinse water
- Vehicle, rail maintenance

Coalescing plate pack design / Gravity separation / Removes free, non-emulsified oil / Settles out tramp solids / Carbon steel tank construction / Available in smaller flow FRP design / High throughput / Efficient separation / Coalescing separation processes twice the flow in 20% less volume

**Screening**

**Aqua Guard® Bar/Filter Screen**

- Flume water
- Intake water
- Mill/plant effluent
- Plastics removal
- Wash water

Self-cleaning, filter element screen / Elements made of tough precision-injection molded HIPS resin / Protruding hooks catch large solids / Fine screening / Intermittent operation / Medium to deep channels

**Aqua Guard® PF Perforated Plate Media Screen**

- Flume water
- Intake water
- Mill/plant effluent
- Plastics removal
- Wash water

Aqua Guard screen design with perforated plate media / No submerged bearings / Low power consumption / Self-cleaning / Intermittent operation / All moving parts can be maintained from above water level / Ability to build pre-coat

**Helisieve® Screening, Conveying, Dewatering System**

- Mill/plant effluent
- Pen waste
- Plastics removal
- Pressure screen rejects
- U-drain screening

Self-cleaning, perforated media channel screen / Shaftless spiral conveyor / Back-pressure dewatering conveyor / Heavy-duty brush cleans screening surface / Stainless steel outer housing / Pivot feature / Alloy steel shaftless spiral / No submerged bearings / Ideal for gravity flows / Available as in-tank units
**Hydroscreen** Static Screen

Broke thickening • Flume water • Peeler water • Plant effluent • Rejects thickening • Stock thickening • Wash water • Wood room effluent

Unique bi-wave, wedgewire screen panel / All stainless steel construction / Exclusive drip lip to discharge drier solids / Handles fibrous and non-greasy solids / Easily handles widely varying feed conditions / Multiple sizes and screen openings available

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**Rotomesh** Fine Rotary Drum Screen

Food processing • Membrane pre-treatment • Plant/mill effluent • Product recovery • Scrubber water screening

Self-cleaning rotary drum screen / Fine stainless steel wire mesh or perforated screen media / Internally-fed medlow headbox / Rugged construction / Proven trunnion wheel design / Water spray system for automatic screen cleaning / Sturdy, long life, low maintenance / Easy to change screen media / Fully enclosed

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**Rotoshear** Internally-fed Rotary Wedgewire Screen

Flume water recirculation • Food processing wastewater • Hot oil • Kill floor • Log vat water • Mill/plant effluent • Peeler water • Primary feather and offal • Rejects thickening • Secondary poultry • Silt water • Stock thickening • Tripe washer effluent • Wash water • Wood room effluent

Self-cleaning rotary drum screen / Wedgewire screen media / Spray bars keep screen surface clean / Heavy-duty stainless steel construction / Medlow headbox / Ideal for a wide range of flows and solids loading / Easily handles fibrous, granular and greasy solids / Heavy duty model available for heavier solids loading

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**Rotostrainer** Externally-fed Rotary Wedgewire Screen

Blood screening • Chiller water • Cook and wash water • Flume water • Food processing wastewater • Plant effluent • Rinse water • Scalder water • Secondary poultry

Self-cleaning rotary drum screen / Wedgewire screen media / Doctor blade keeps screen surface clean / Heavy-duty stainless steel construction / Ideal for a wide range of flows and solids loading / Handles sticky, greasy material without blinding / Multiple sizes and designs / Optional automatic doctor blade cleaner
SuperScraper® Sludge Removal System

Industrial process water • Pulp and Paper effluent treatment • Surface water treatment

Low-profile sludge removal system /
Easily adapted to existing basins /
Thickens sludge as it operates /
Few moving parts / Low maintenance /
Reliable operation / Does not disrupt sedimentation process

THERMO-SYSTEM® Active Solar Sludge Dryer

Biogas process effluent • Brushwood drying • Coffee wastewater • Firewood drying • Greywater • Medical wastewater • Packaging and Paper wastewater • Sawn timber drying • Slick • Winery wastewater

Low energy consumption / Up to 95% of drying energy provided by the sun /
Green technology / A significant reduction in carbon footprint / Low operational cost /
Minimal movable parts in direct contact with sludge / Robust, simple / Safe and easy to operate / Proven on large and small scale operation / Available fully automated / Works in most climates

ThickTech™ Rotary Drum Thickener

Alum sludge thickening • Biological sludge thickening • Digester sludge thickening • Primary sludge thickening

Self-cleaning wire mesh sludge thickening system / Patented tangential low shear floc tank / Screen cylinder with four distinct thickening zones / High pressure, self-cleaning spray assembly / High capture rates / Low polymer usage / Ninety-eight percent capture rate

Parkson Facts

• 50 years of process experience
• High-performance integrated solutions
• In-house engineering
• ISO 9001-2008 certified
• Single source accountability
• Customer-focused service, support and maintenance
Parkson is a full-service partner

Parkson is committed to protecting the environment and helping industry remain compliant with regulations.

Parkson's industrial sales team and local representatives will work closely with you – combining technology, knowledge and experience – to select the most appropriate, efficient and cost-effective technology.

**Leasing**

Parkson can provide tax-exempt leasing options and can fund 100% of wastewater treatment plant equipment, equipment engineering and equipment installation purchases through financial partners. The leasing option allows you to avoid capital expenses with low monthly fees.

**Laboratory Testing**

Parkson’s Water Research Facility uses laboratory testing to help determine design criteria and sizing for Parkson products and facilitate performance guarantees. Some of the tests we perform include filtration tests, jar tests (settling and dewatering), treatability tests and analyses such as total solids, total suspended solids, volatile solids, turbidity, alkalinity and pH, and material composition. Laboratory tests help our Services Group with start-up, pilots, and chemical pre-treatment optimization.

**Pilot Testing**

Parkson owns a pilot fleet of equipment for rental. On-site pilot testing allows you to become better acquainted with the product technology and verify how efficiently the plant’s requirements will be met. Pilot units also allow for the comparison of different technologies for water and wastewater treatment within your plant.

**Services**

Parkson’s Services Group combines in-depth product knowledge with engineering expertise to keep your products running efficiently, year after year. Start-up services include classroom and hands-on operation and maintenance training. Once in operation, the Services Group supports you with OEM parts, trouble-shooting assistance, on-site retraining, operation/process reviews, preventative maintenance programs, product retrofit and rebuilds, and repair supervision.