



# ITT

## ITT and the Cycle of Water

### Wastewater Solutions

How water is treated after it has served its many commercial, industrial and individual needs will affect the balance of nature and human development.

With chronic freshwater shortages affecting nearly 3 billion people, turning wastewater into clean water is a worthy goal.

ITT is deeply involved in the cycle of water and plays a key role in the treatment of this most natural resource. We understand the scope and urgency of cleaning wastewater – either for reuse or return to its source. With breakthrough technologies and deep applications knowledge, ITT deploys talented people and the broadest range of innovative wastewater solutions to communities around the world.



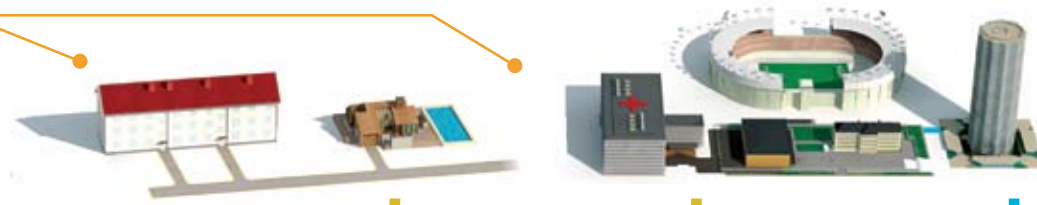
Pumps | Mixers | Aeration | Disinfection | SBR | MBR | Tertiary Filtration | Nutrient Removal

*Engineered for life*

# Wastewater Solutions from ITT

## RESIDENTIAL / COMMERCIAL

- Sump, effluent, sewage removal and drainage pump systems
- Packaged grinder systems
- Turnkey micro-pump/grinder stations



## STORMWATER & WASTEWATER COLLECTION / LIFT STATIONS / EQUALIZATION TANKS

- Hydroejectors and air / water ejectors
- Compact mixers
- Submersible pump systems
- Solids-handling, dry-pit non-clog pumps
- Chemical handling pumps
- High-rate chlorine dosing, control & measurement systems



## [ MUNICIPAL WASTEWATER TREATMENT SYSTEM ]

### PRIMARY TREATMENT

- Submersible and dry-mount pumps and submersible mixers for a wide range of applications including raw influent pumping, settling tanks, digestion tanks, aeration tanks, clarifiers, storage tanks and chemical polishing
- Monitoring and control systems to supervise plant operations
- Circular clarifiers for primary clarification

### SLUDGE

- Submersible, dry-pit non-clog, and progressive cavity pumps, submersible mixers and submersible macerators for complete sludge handling solutions
- Interface level and sludge density monitors



### SECONDARY TREATMENT

- Ceramic and membrane fine bubble aeration systems, stainless steel coarse bubble diffusers and in-place cleaning systems
- Submersible pump and mixer systems
- Sequencing Batch Reactor (SBR) systems
- Dual-stage Membrane Bioreactor (MBR) system
- Waste and return activated sludge pumps
- Air/water ejectors
- Dry-pit non-clog pumps for transfer of activated sludge
- Monitoring and control instrumentation
- Floating siphon secondary clarifier

## CONVENTIONAL BIOLOGICAL TREATMENT

- Technologies including ceramic and membrane fine bubble aeration systems, stainless steel coarse bubble diffusers and in-place cleaning systems
- Submersible and dry-pit non-clog pumps and mixer systems used in traditional activated sludge process

### TERTIARY TREATMENT

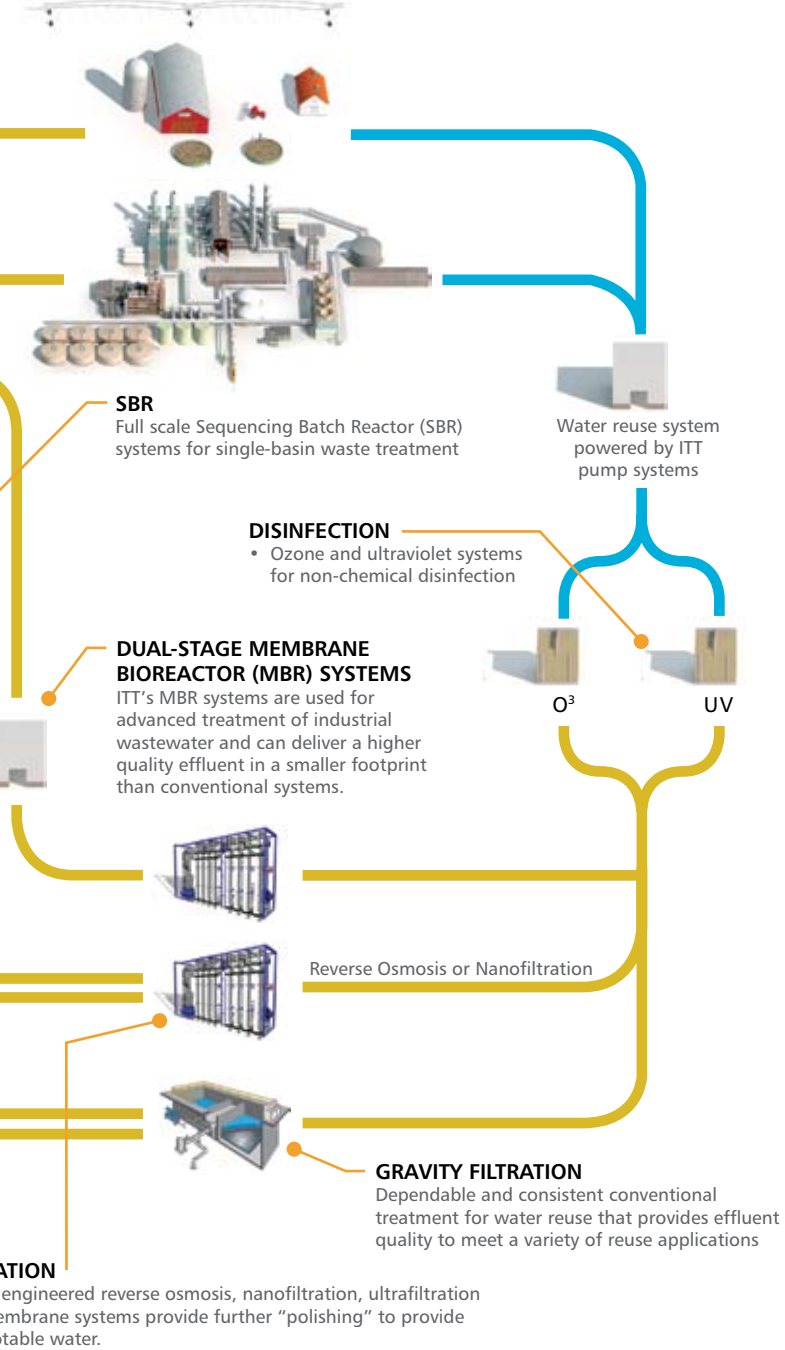
- Mixed liquid recirculation (MLR) high flow head propeller pumps for optimal advanced biological process control
- Ozone and ultraviolet systems for non-chemical disinfection
- Chlorine dosing, control & measurement systems
- Tertiary membrane filtration using microfiltration and ultrafiltration
- Wide range of chemical pumps for chemical injection and transfer applications
- Monitoring and control of suspended solids
- Tertiary filtration using gravity filters
- Deep bed filtration for phosphorus removal and denitrification

### WATER RETURN / WATER REUSE

- Skid-mounted, packaged water booster pumps and stations
- Submersible and dry-mount pump systems

## [ INDUSTRIAL/AGRICULTURE WATER REUSE ]

A wide range of ITT technologies helps treat complex industrial / agricultural waste streams on-site, allowing companies to recover valuable materials and reduce costs associated with traditional disposal options.



## The Cycle of Wastewater

Once clean water has served its human needs, effluent stations equipped with ITT pumps and mixers move wastewater to treatment facilities where our submersible pumps, monitoring & control equipment and mixers are integral to wastewater treatment and sludge processing plants. The fundamental task of biological wastewater treatment – the breaking down and removal of contaminants – is then achieved using ITT’s advanced aeration, sequence batch reactor and membrane bioreactor systems. Before the water is returned to nature, our ozone, ultraviolet and chlorine disinfection systems are employed to protect users of our water environment. ITT’s tertiary treatment and reverse osmosis membrane systems can also be used to re-purify the water, making it suitable for recharging groundwater aquifers or reuse in a wide variety of applications.

## Systems Solutions

ITT is the world’s premier provider of water and wastewater treatment solutions, and a leading provider of pumps and related technologies for municipal, industrial, and commercial customers.

In the cycle of water, ITT provides global customers with total systems solutions. Customers engaging our broad range of technologies and applications expertise experience dramatically lower energy consumption, less maintenance and lower overall life cycle costs.

For more information on wastewater solutions from ITT: [www.ittwastewater.com](http://www.ittwastewater.com)



# ITT

## ITT Fluid Technology at a Glance

### Industrial Process

Pumps and valves for industrial, mining, pulp and paper, chemical and petroleum processing, and high-purity systems for biopharmaceutical applications.

### Residential & Commercial Water

Pumps, systems and accessories for water wells, pressure boosters, agricultural and irrigation applications, HVAC systems, boiler controls, flood control and fire protection.

### Water & Wastewater

Submersible pump systems for water and wastewater control, and biological filtration and disinfection treatment systems for municipal, industrial and commercial applications.

For more information about ITT's fluid solutions:  
[www.ittfluidbusiness.com](http://www.ittfluidbusiness.com)  
[www.itt.com](http://www.itt.com)

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