

**Featuring the Industry's Most Advanced and Fully Optimized Process Options, Including:**

- Activated Sludge Technology
- Selector Technology
- Membrane Bioreactor
- Aerobic Digestion to achieve Class "B" Biosolids
- Nitrification/Denitrification
- Tertiary and Ultrafiltration
- Phosphorus Removal
- Disinfection Systems

**Ashbrook Simon-Hartley Also Provides a Comprehensive Line of Fully Optimized Equipment and Systems, Including:**

- Aeration Basins and Equipment, Including Diffused Aeration Systems
- Membrane Bioreactors
- Clarifiers
- Liquid/Solids Separation Technologies
  - Tertiary Filtration
    - ▲ Denitrification
    - ▲ Rapid Rate/Gravity Sand
    - ▲ Continuous Backwash
  - Ultrafiltration Membrane
  - High Performance Belt Filter Press Technologies
  - High Performance Belt Thickeners
  - Advanced Centrifuge Technologies
- Disinfection
  - Solution Feeders
  - Ultra-Violet
- Pasteurization and Digestion to Achieve Class "A" Biosolids
- Flow Equalization
- Primary Treatment
- Lift Stations
- Bar Screens and Grit Collection
- Electrical Controls & Automated Systems (PLC and SCADA)
- Ground Water Contamination Remediation
- Industrial Process Wastewater Treatment
- Advanced Flow Control Technologies
  - Sluice Gates and Weir Gates
  - Flap Valves (Rigid and Flexible)
  - Stop Logs and Gates
- Mobile Dewatering

**Plus, Comprehensive Installation Services As Well As Optimized Rebuilds, Retrofits and Spare Parts.**

The products pictured, described, or listed in this publication are illustrative only and are subject to change as appropriate.

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ENCLOSED  
**AQUAbelt**®



# ENCLOSED AQUAbelt®

Maximum thickening with minimum installation and operational requirements



**ZONE APPROACH OPTIMIZES THICKENING PROCESS**

CONDITIONING  
ADVANCED FLOCCULATION  
GRAVITY THICKENING  
RAMP CONTROLLED EXTENDED THICKENING

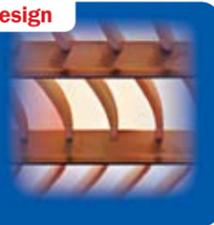
## Large Retention Tank

The exceptionally large retention tank allows the flocculation process to be optimized in a quiescent state. This improves thickening capabilities and optimizes polymer effectiveness.



## Optimized Wiper Bar Design

The specialized, high-density polyethylene wiper bars employed in the AQUAbelt® gravity drainage zone are optimally spaced to facilitate filtrate removal.



**NO PNEUMATICS  
NO HYDRAULICS**

## Belt Tensioning/Alignment

Thickening belt on the Enclosed AQUAbelt® is self-aligning due to the machine design. Tensioning is set at start up with no daily adjustment required. Easy to operate, easier to maintain.



**NO SUMP  
REQUIRED**

## Easy to Install

The Enclosed AQUAbelt® requires very little civil work because there is no sump. You can just "bring it in", level it up, run plumbing and electrical and it's ready to operate.

## PAPERMACHINE-QUALITY BELT WASH SYSTEM

The filter belt wash station on the Enclosed AQUAbelt® is fitted with a papermachine-quality wash system. Internal cleaning brushes are provided at the cleaning station to keep the shower nozzles open and free flowing. A recycle system option is available when enhanced capture rates are needed.



## Optimized Frame Design

Employing the science of *finite element analysis*, frame components are optimized to ensure rigidity and accurate permanent alignment. Strategically located access ports allow visual inspection of all internal components. The frame is constructed of stainless steel.



## ARMORDILLO® Thickening Belts



The AQUAbelt® is provided with ARMORDILLO® thickening belts. Application specific weaves and materials are available to optimize liquid/solids separation.

## Choice of Drive Technologies

The Enclosed AQUAbelt® is available with mechanically variable drives or electronically variable frequency controller based drive technology.

**VARIABLE SPEED DRIVES**

**ELECTRONICALLY VARIABLE DRIVES**



The Enclosed AQUAbelt® control center employs advanced digital, programmable logic circuits to automate operation and minimize the need for operator attentions, which controls process activities, facilitates ease-of-use, and ensures operational safety. As an option, this panel can be supplied with a manual relay logic circuit.



**Operator-Friendly Control Center**



**GRAVITY THICKENING ZONE**

The arrangement of the AQUAbelt® gravity thickening zone ensures the even distribution of the conditioned slurry over the effective width of the moving filter belt.



## Individually Adjustable Chicanes

AQUAbelt® chicanes are individually adjustable for optimum plowing efficiency and pivot automatically to allow obstructions to pass without damming.

## Odor Hood Optional

Optional Odor Hood allows for totally enclosed operation.



**LIFETIME-RATED BEARINGS**



The Enclosed AQUAbelt® is equipped with lifetime rated bearings. Each bearing is protected from contaminants with triple-labyrinth seals.

**PROPRIETARY POLYMER MIXER**



The AQUAbelt® is equipped with a proprietary, variable orifice, in-line polymer mixer. This advanced, non-clog, static mixer is known for its adjustable throat, which provides for application specific mixing energy optimization. Additionally, by virtue of its in-line configuration, mixing energy and retention time, can be optimized independently providing the highest level of performance while using the industry's lowest polymer dosage rates.

## Optimized Roller Design

The strength of the rollers on the Enclosed AQUAbelt® are optimized through the use of specialized forged-end construction. The drive roller is coated with Buna N and the non-drive roller is epoxy coated for corrosion resistance.

## Patented Adjustable Ramp

The unique AQUAbelt® ramping device allows the percentage-of-thickened-solids level to be precisely adjusted and fine tuned while operating. This provides the user with full process flexibility. No other technology can match this capability.



The premium belt scraper employed on the AQUAbelt® effectively removes lumped or partially embedded solids from the belt and serves to extend belt life, while preempting solids carryback.

**Belt Scraper**