

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.

Ashbrook Simon-Hartley®, Winklepress®, ECO-THERM®, Klampress® and Aquabell® are registered trademarks of Ashbrook Simon-Hartley Operations LP. BIO-plus®, IMAS®, Strata-Sand™ and SBR-plus™, are trademarks of Ashbrook Simon-Hartley Operations LP. Pro-View™ and Gen-Tec™ are service marks of Ashbrook Simon-Hartley Operations LP.
© 2007 Ashbrook Simon-Hartley Operations LP
Printed in U.S.A.



Try the eAnswers Cyber-Space Option

For more information:
Visit our website at
www.as-h.com

In North America—
Contact Ashbrook Simon-Hartley
at 800-362-9041
Fax: 281-449-1324
Address: 11600 East Hardy
Houston, TX 77093-1098



In Europe, Asia, and the Africas—
Contact Ashbrook Simon-Hartley Ltd.
at +44 (0) 1782 578650
Fax: +44 (0) 1782 260534
Address: 10/11 Brindley Court
Lyndale Business Park
Newcastle-under-Lyme
Staffordshire
ST5 9QH UK

In South America—
Contact Ashbrook Chile S.A.
at +56 (2) 224 7858
Fax: +56 (2) 224 9525
Address: Avenida Presidente Kennedy 5757
Torre Oriente, Oficina 501
Comuna de Las Condes
Santiago, Chile

BIO-plus™



Ashbrook Simon-Hartley®

BIO-PLUS™ TECHNOLOGIES

ASHBROOK SIMON-HARTLEY® BIO-PLUS™ TECHNOLOGY

is the global leader in wastewater treatment technology expertise and process knowledge. Ashbrook Simon-Hartley® utilizes a comprehensive selection of process options—and combines these with an extensive knowledge of biological wastewater treatment science and engineering. This assures exacting, customized results that are optimized to meet your specific requirements.

The BIO-PLUS™ process creates the ideal environment for efficiently meeting your specific influent parameters and effluent requirements, even as they change throughout the months and years. Results are achieved quickly and economically using the proprietary Ashbrook Simon-Hartley® Pro-View™ Kinetic Modeling Software and the Ashbrook Simon-Hartley® Gen-Tec™ pre-engineering database technology.

The ideal combination of biological science and technological knowledge, the BIO-PLUS™ process is an efficient, economical, reliable wastewater treatment system that will transform *the influent you have into the effluent you need*—GUARANTEED.



Specific process results are guaranteed—an Ashbrook Simon-Hartley® exclusive.

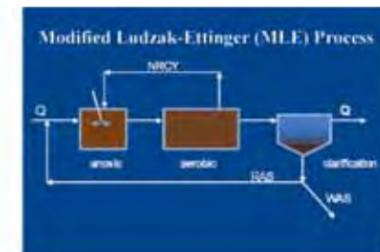


Activated Sludge Technologies

Ashbrook Simon-Hartley® is the leader in optimizing wastewater treatment technologies. This assures you efficient, customized treatment processes that meet your specific treatment objectives. BIO-PLUS™ processes utilize both aerobic and anaerobic reactors, as appropriate, along with other key processing technologies. The globally recognized expertise of Ashbrook Simon-Hartley® regarding how and when to apply these technologies, and the knowledge of the biology behind the processes, assure guaranteed process results.



Optimized Biological Treatment Options



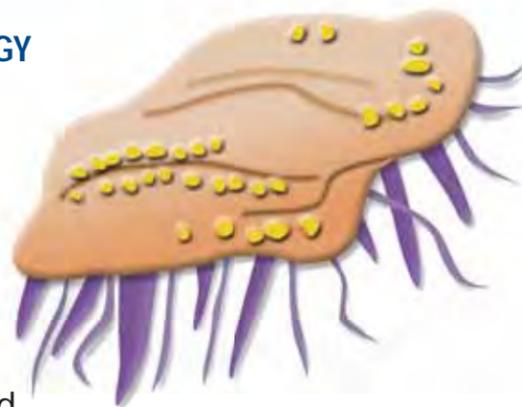
Pro-View™ Kinetic Modeling Software

The proprietary Ashbrook Simon-Hartley® Pro-View™ Kinetic Modeling Software allows a virtual vision of all treatment interactions—even before construction begins. The advanced interactive features of Pro-View™ allow you to view, customize, and optimize your treatment processes, based on actual and potential influent parameters.



Biological Nutrient Removal System (BNR)

Ashbrook Simon-Hartley® expertise in process and engineering sciences provides the wastewater treatment industry with multiple options to achieve levels of nutrient removal once thought possible only by chemical precipitation and/or tertiary filtration. The Ashbrook Simon-Hartley® BNR technology, in combination with biological expertise based on decades of wastewater treatment experience, assures optimum selection of all nitrogen and phosphorus removal options, based on your wastewater characterization.



Sequencing Batch Reactor Systems (SBR)

Ashbrook Simon-Hartley® advanced SBR Systems are designed to consistently meet specific effluent requirements in a true batch or semi-batch basis within a single or multiple reactor configuration. This patented and proprietary technology requires a minimum of space while assuring minimum operational and maintenance costs. The Ashbrook Simon-Hartley® patented SBR decanter optimizes performance while eliminating the decanter limitations common to typical SBR systems.

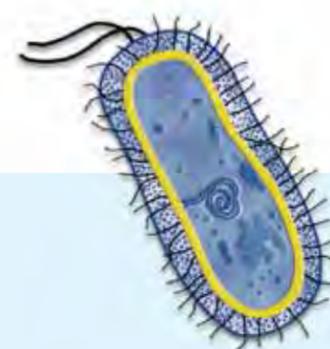
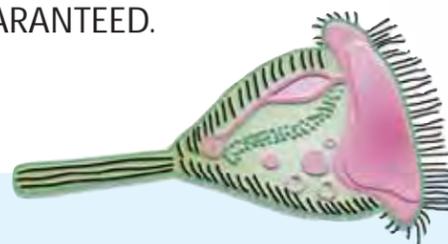


Tertiary Filtration Systems

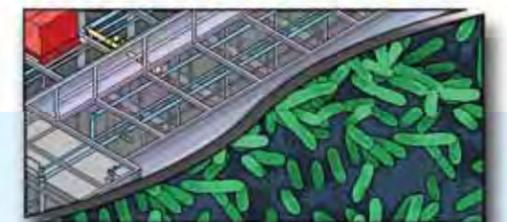
Ashbrook Simon-Hartley® provides true coarse-to-fine sand filtration as well as advanced membrane technologies. Proprietary Strata-Sand™ technology provides continuous, steady-state operation in a multigrade, deep bed, downflow design. Spira-Sep membrane technology brings the durability and capabilities of spiral membrane structure to wastewater ultrafiltration applications.

Disinfection Options

Chlorination is provided where appropriate and is combined with dechlorination when the toxic effect of chlorinated effluents interfere with reuse or discharge to receiving waters. In circumstances where a physical rather than a chemical-disinfecting agent is appropriate, advanced Ashbrook Simon-Hartley® UV technology offers an effective environmentally inert option.



BIOLOGY & TECHNOLOGY



IN HARMONY

BIO-plus™

Optimized engineering makes high-efficiency treatment processes cost-effective.

Full-Access Safety Handrails

All Ashbrook Simon-Hartley® treatment reactors are provided with full-access safety handrails. These handrails incorporate safety-proven wrap-around design and are available in aluminum, stainless steel, or painted steel—either round or square tubing. All railing has been subjected to finite element analysis to guarantee safety and maximum long-term durability.



Optimized Aeration Systems

Ashbrook Simon-Hartley® BIO-PLUS™ technology utilizes a fully engineered aeration system—complete with drop pipes and high-efficiency diffusers. This proven system, based on a no-clog trouble-free diffuser design, optimizes processing efficiency while minimizing operational costs.

Aeration systems include blowers, all mains, valves, meters, and associated fittings, with optional coarse or fine bubble aeration, depending on process and site-specific demands.

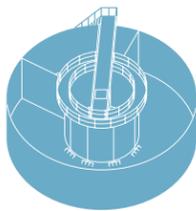
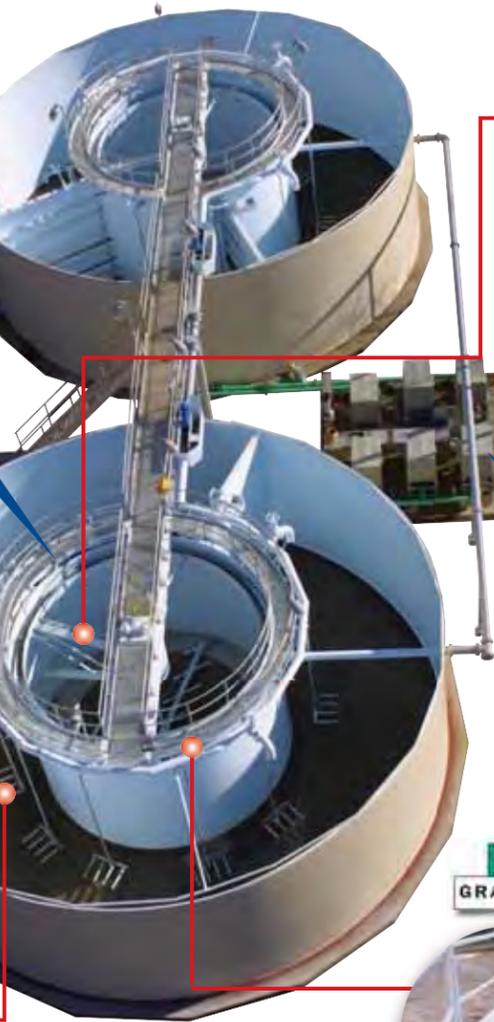
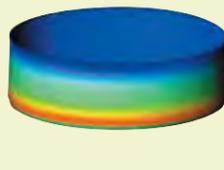


Advanced Finite Element Analysis

To assure optimization of structural integrity, advanced Finite Element Analysis is applied to all structural components of BIO-PLUS™ treatment plants, both individually and as complete, assembled systems.

Von Mises

8.519e+003	2.971e+004
7.809e+003	2.724e+004
7.099e+003	2.477e+004
6.389e+003	2.229e+004
5.679e+003	1.982e+004
4.970e+003	1.735e+004
4.260e+003	1.488e+004
3.550e+003	1.240e+004
2.840e+003	9.930e+003
2.130e+003	7.458e+003
1.420e+003	4.985e+003
7.099e+002	2.513e+003
0.000e+000	4.028e+001



Industry's Most Reliable Scum Beach

The Ashbrook Simon-Hartley® scum beach (with optional full or portal design) is easily accessible and provides the industry's most reliable method of scum removal.



Economical, Reliable Blower Systems

Economical and dependable support for the BIO-PLUS™ aeration system is provided by appropriately sized and precision engineered Ashbrook Simon-Hartley® blower systems. Included are all associated controls, piping and wiring.



Fully Engineered Staircase Assemblies



Ashbrook Simon-Hartley® staircase assemblies are engineered for optimum safety and durability. To meet your needs, assemblies are offered with straight or spiral staircases. Both options include high-traction treads and integral handrails.

Long-Life Clarifier Drives

Ashbrook Simon-Hartley® clarifier drives technology ensures long-life, reliability, and low-maintenance operation.



Wide Selection of Coatings

Ashbrook Simon-Hartley® treatment systems are offered with a wide selection of long-lasting and attractive coatings. Based on years of treatment plant experience and engineering expertise, Ashbrook Simon-Hartley® can make specific recommendations to assure that the demands of your operating environment are met.



HIGHLY EFFECTIVE SCRAPER MECHANISMS

Sludge removal from the clarifier tank is achieved with optimum effectiveness by the Ashbrook Simon-Hartley® scraper, offered with optional straight or spiral scraper mechanisms. All scraper components are engineered to optimize sludge removal efficiency.



Customized Plant Configuration

Using computer-aided design technology, Ashbrook Simon-Hartley® can work with you to design optimized plant configurations, based on process demands, personnel, and work-area dimensions and layout.

Total Installation Responsibility—And More

To assure optimized installation and operation, Ashbrook Simon-Hartley® provides process-system specific installation services of all treatment system components, excepting only the foundation and power supply. When requested, Ashbrook Simon-Hartley® also can provide comprehensive facility engineering and construction services—including all civil, mechanical, and process engineering, as well as all construction trades. Full facility management and operation also can be provided on a contractual basis.

OPTIMIZED GRATING PACKAGES



Ashbrook Simon-Hartley® grating packages are engineered to optimize access and safety. Available in aluminum, fiberglass reinforced plastic (FRP), or stainless steel, they offer maximum durability under all process and environmental conditions.

SELECTOR TECHNOLOGIES

To assure that you meet all your required discharge nutrient parameters, Ashbrook Simon-Hartley® offers a variety of advanced selector technologies with mixing options to achieve simultaneous nitrification-denitrification.

SEQUENCING BATCH REACTOR SYSTEMS

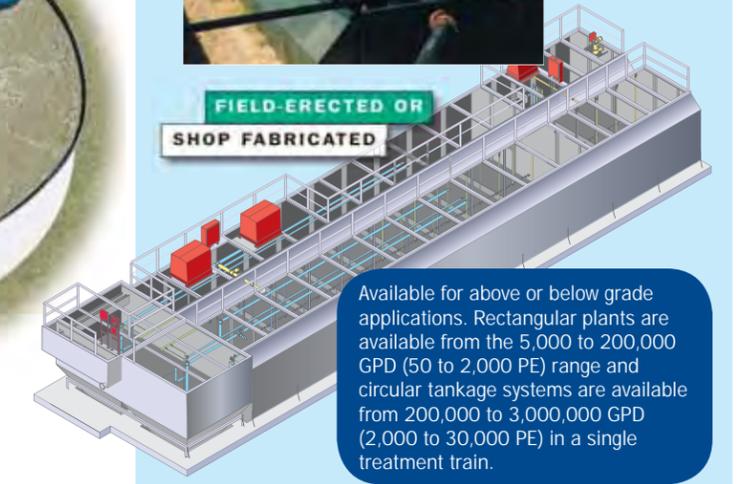


Advanced patented Ashbrook Simon-Hartley® SBR technology is available in single or multiple reactor configurations designed to meet your specific effluent requirements.

CIRCULAR AND RECTANGULAR TANKAGE



FIELD-ERECTED OR SHOP FABRICATED



Available for above or below grade applications. Rectangular plants are available from the 5,000 to 200,000 GPD (50 to 2,000 PE) range and circular tankage systems are available from 200,000 to 3,000,000 GPD (2,000 to 30,000 PE) in a single treatment train.

BIO-plus™

Process Knowledge and Engineering Support

COMPREHENSIVE CAPABILITIES — Ashbrook Simon-Hartley® is the acknowledged global technology leader in the optimization of wastewater treatment processing. Providing the most effective and cost-efficient solutions for municipal and industrial applications, Ashbrook Simon-Hartley® supplies comprehensive technological expertise, process know-how, and engineering support to customers and the engineering community worldwide.

Because of the breadth and depth of the Ashbrook Simon-Hartley® knowledge base, Ashbrook Simon-Hartley® can provide broad process guarantees. This allows you to have the peace-of-mind associated with “risk free” problem solving.



Optimized Process Engineering

Process engineering—prior to, during, and after installation—can be provided by Ashbrook Simon-Hartley® engineers. Included is optimization of flow rates, influent pumping systems, piping, and transfer systems, among many other process design and engineering aspects.

Comprehensive Support

To facilitate installation of treatment systems, Ashbrook Simon-Hartley® can provide complete turnkey facilities at any scale and at any location in the world from primary treatment through chlorination and tertiary filtration.

Technical Support

Ashbrook Simon-Hartley® can provide the process and technical support you need as an engineer/builder to expeditiously prepare plans, permit applications, proposals, and to complete complex specialized facilities.

Mechanical and Electrical Engineering Support

Ashbrook Simon-Hartley® engineers are available to provide you with complete installation, maintenance, upgrading, and retrofit support associated with blowers, pumps, motors, and all other treatment system components and control options.

Civil Engineering Support

Comprehensive civil engineering support is available through Ashbrook Simon-Hartley®, including all excavation, earthworks, concrete, foundation construction, etc.

**Ashbrook
Simon-Hartley®**

Meets Your Specific Process Requirements—GUARANTEED



STRATA SAND™
Tertiary Filtration



WIKKLEPRESS™



KLAMPRESS™



AQUAbelt™



Coplastix



ECO-THERM™
Sludge Pasteurization



SBR-plus™

