



ScrubPac™
The Complete Scrubber System Package

 **BIONOMIC**
industries



ScrubPac™ - The Complete Scrubber System Package

ScrubPac™ skid-mounted scrubber systems are custom designed to fully solve your air pollution problem. Ready to install when it arrives at your site, ScrubPac™ provides a practical and economical solution to treating your air emissions. Available in the most comprehensive range of scrubber types, auxiliary components and construction materials, ScrubPac™ systems are engineered to meet the most demanding applications. Whether your requirements call for contaminant removal or recovery, your precise requirements are met with a ScrubPac™ system.

A ScrubPac™ For Every Application

For Hazardous Air Pollutants (HAP's) and mixed contaminant streams from toxic gases to submicron particulate, a ScrubPac™ system can be designed to achieve the right removal efficiency needed to comply with EPA and state regulations.

ScrubPac™ systems are operating today in hundreds of applications incorporating an impressive array of standard and advanced air pollution control technologies. These systems, ranging in size from 10 through 50,000 acfm, are capturing and cleaning up emissions from process and emergency vents, storage tanks, dryers, production/finishing line operations, wastewater treatment, high temperature incinerator off gases and a host of other sources.

ScrubPac™ systems are successfully removing hard to scrub gases including:

- **Volatile Organic Compounds (VOC's) - alcohols, formaldehyde, phenols, propylene/ethylene oxides, aldehydes, toluene and others**
- **nitrogen oxides**
- **hydrogen sulfide and organo-sulfur compounds**
- **Gaseous phase generated submicron particulate**

ScrubPac™ systems are recovering and reconcentrating:

- **ammonia**
- **halogenated acids**
- **nitrogen oxide as nitric acid**

Patented and advanced specialty scrubbing liquid chemistries, processes, devices, as well as biological microorganisms, enables ScrubPac™ to meet the most demanding applications.

Performance



This ScrubPac™ removes ethylene carbonate submicron particulate and hard to scrub gaseous ethylene oxide from a dryer exhaust with over 99.9% efficiency. A special chemical reagent maintained at a precise temperature is used as the scrubbing solution.



The Many ScrubPac™ Benefits

ScrubPac™ offers more key advantages than any other system supply concept or package. Through the expert integration of all necessary components into one carefully crafted system, ScrubPac™ provides you with a complete, cost-effective solution with these proven benefits:



In continuous operation for over 4 years with no downtime, this ScrubPac™ using a unique fiber bed scrubber design successfully removes extremely fine alkali mist from a steel strip cleaning line.

Performance

- Fully guaranteed
- Meets or exceeds EPA control technology standards
- Over 25 state-of-the-art and advanced scrubber designs and technologies providing the highest removal efficiency possible on the widest range of pollutants

Reliability

- Expertly selected system components designed to work together
- Factory preassembled and run tested
- Designed for minimal maintenance
- Field proven in hundreds of applications

Maximum Value

- Fully-engineered - requiring only utility and process connections
- Fast, easy installation and start-up
- Less costly than field-erected systems
- Highest quality construction, meets latest codes and standards
- Rigorous quality control procedures implemented through all phases of manufacture and assembly
- Engineered to withstand years of rugged service

Reliability





ScrubPac™ Flexible Design Choices

ScrubPac™ systems are engineered to precisely fit the individual requirements of each application. The widest array of design choices are available to meet virtually any specific need. These include:

- Batch or continuous modes of operation
- Available in all materials of construction
- Semi- or fully-automatic system operation
- Pretreatment options including high-temperature gas quenchers, VOC condensers and super saturators for fine particulate capture
- Choice of proven standard or custom specified mechanical components, instrumentation and controls
- Local or remote system control/monitoring schemes
- Special spill containment skids
- Individual skidded subassemblies for large systems or hard-to-fit spaces

Maximum Value

ScrubPac™ Installations Speak For Themselves

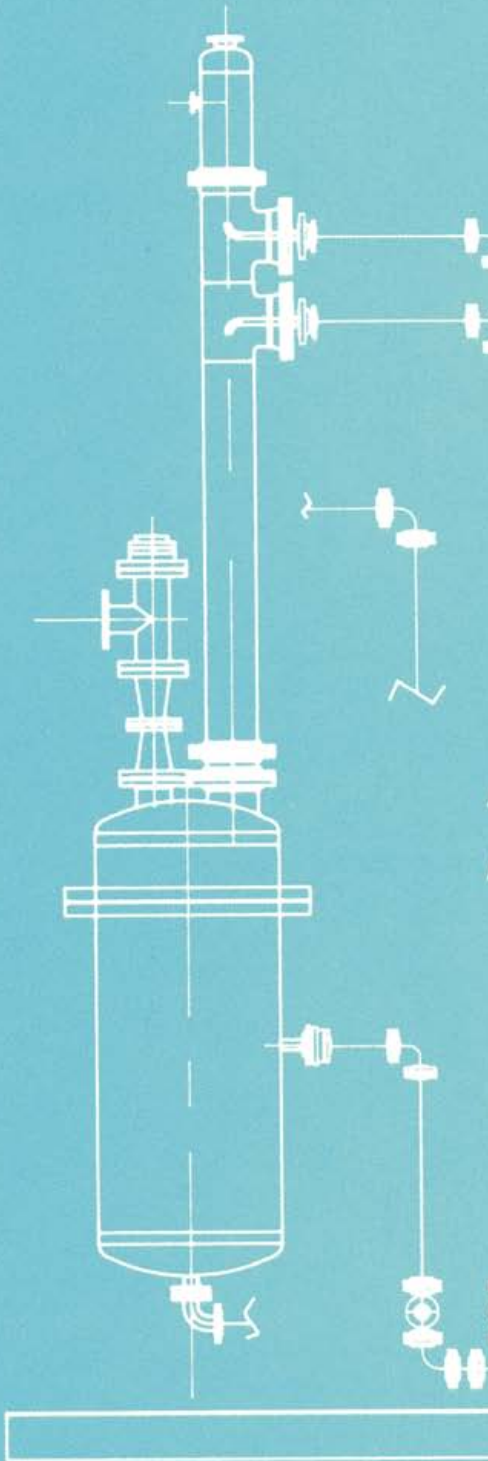
Engineering firms, consultants and end users alike select ScrubPac™ to solve their tough air pollution problems. These professionals rely on our extensive knowledge of scrubbing technology and systems engineering to provide reliable and effective solutions. The experience and hands-on knowledge that comes from thousands of successful hours of operation from hundreds of ScrubPac™ systems is engineered into every ScrubPac™. In the chemical, pharmaceutical, pulp and paper, waste treatment, metallurgical, steel, food processing and general manufacturing industries, ScrubPac™ systems can be found operating and providing an unparalleled level of excellence in air emissions control.



This ScrubPac™ is designed to quench and remove high temperature 1600°F hydrochloric acid gas emitted from a hazardous waste treatment reactor. Designed for completely automatic operation, the unit was engineered, manufactured, installed and operational in just 10 weeks.



The Bionomic ScrubPac™ Commitment

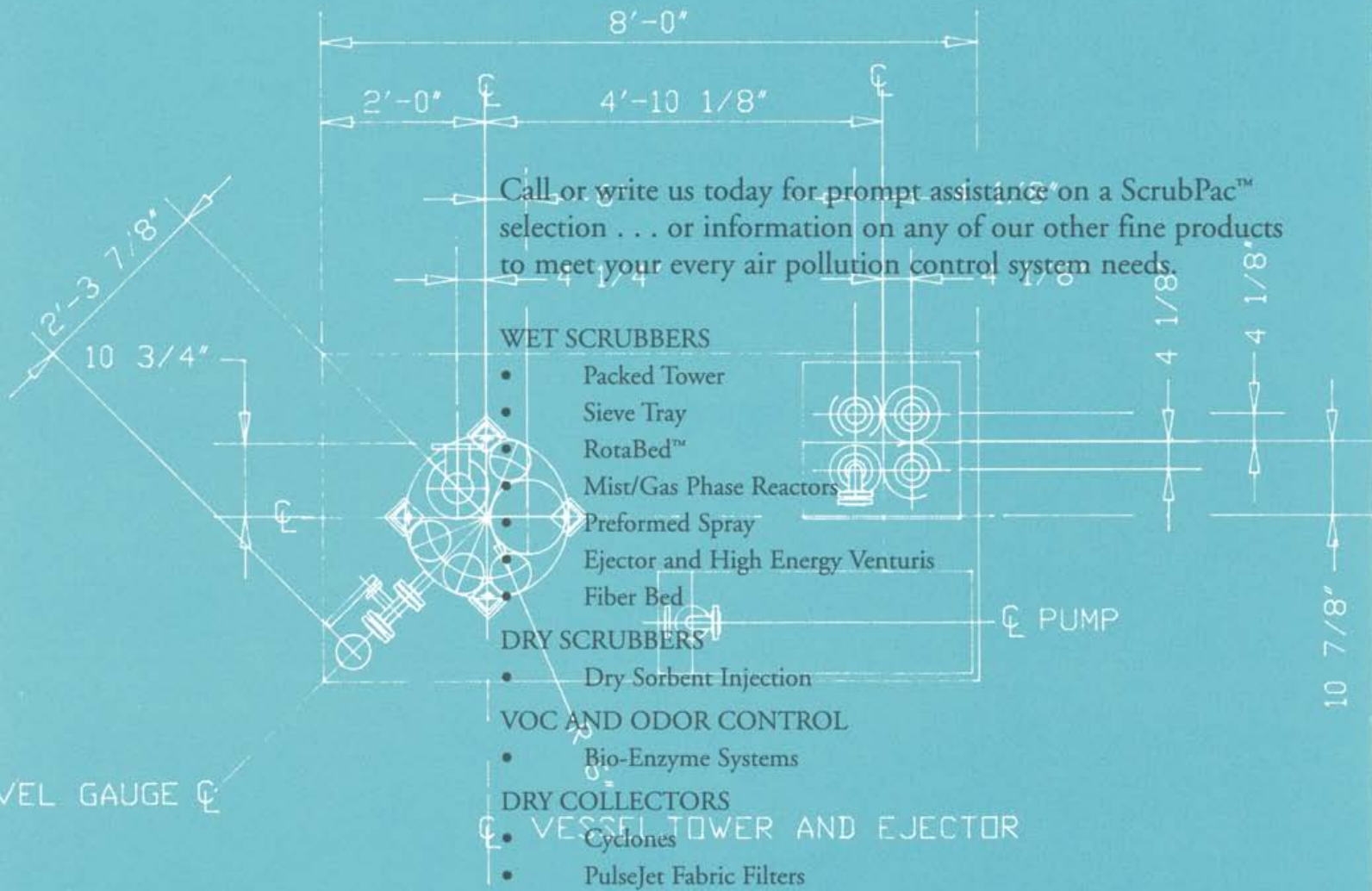


At Bionomic Industries, we believe our most important asset is our customer, and we are committed to providing total customer satisfaction with ScrubPac™. Long after a ScrubPac™ system is sold and operating, we maintain contact with you because long-term reliable performance of our equipment is the standard by which we measure our success. In fact, we rely to a large degree on feedback from our customers to determine ways to refine and improve ScrubPac™.

As the leader in providing complete skid-mounted packaged scrubber systems, we are committed to continuously develop more advanced system designs and innovative technologies to meet emerging emission standards. Our ongoing quality improvement program ensures you the latest cost benefits and improvements are incorporated into each ScrubPac™ system. Advanced CAD (computer-aided design) and in-house developed highly sophisticated computer programs carry the quality commitment of ScrubPac™ to the maximum extent possible.

Our commitment begins with a team approach to solving emission problems. From the start, an applications engineer works closely with you to tailor a ScrubPac™ system to meet your individual site, emission treatment and process needs. After a ScrubPac™ system is selected, an experienced project engineer takes full responsibility in overseeing your ScrubPac™ system through all phases of design, manufacture, testing and shipment. When the system arrives at the site, our field services group can supply and coordinate a specific program to fulfill your requirements for installation supervision, start up assistance or hands on training.

Bionomic Industries has been providing ScrubPac™ air pollution solutions for over 15 years to a wide range of industries. Because of our commitment to product excellence, ScrubPac™ continues to be the preferred packaged scrubber system for clients that demand the best.



BIONOMIC industries

“Superior Engineered Pollution Control Systems
with Unequaled Performance”

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