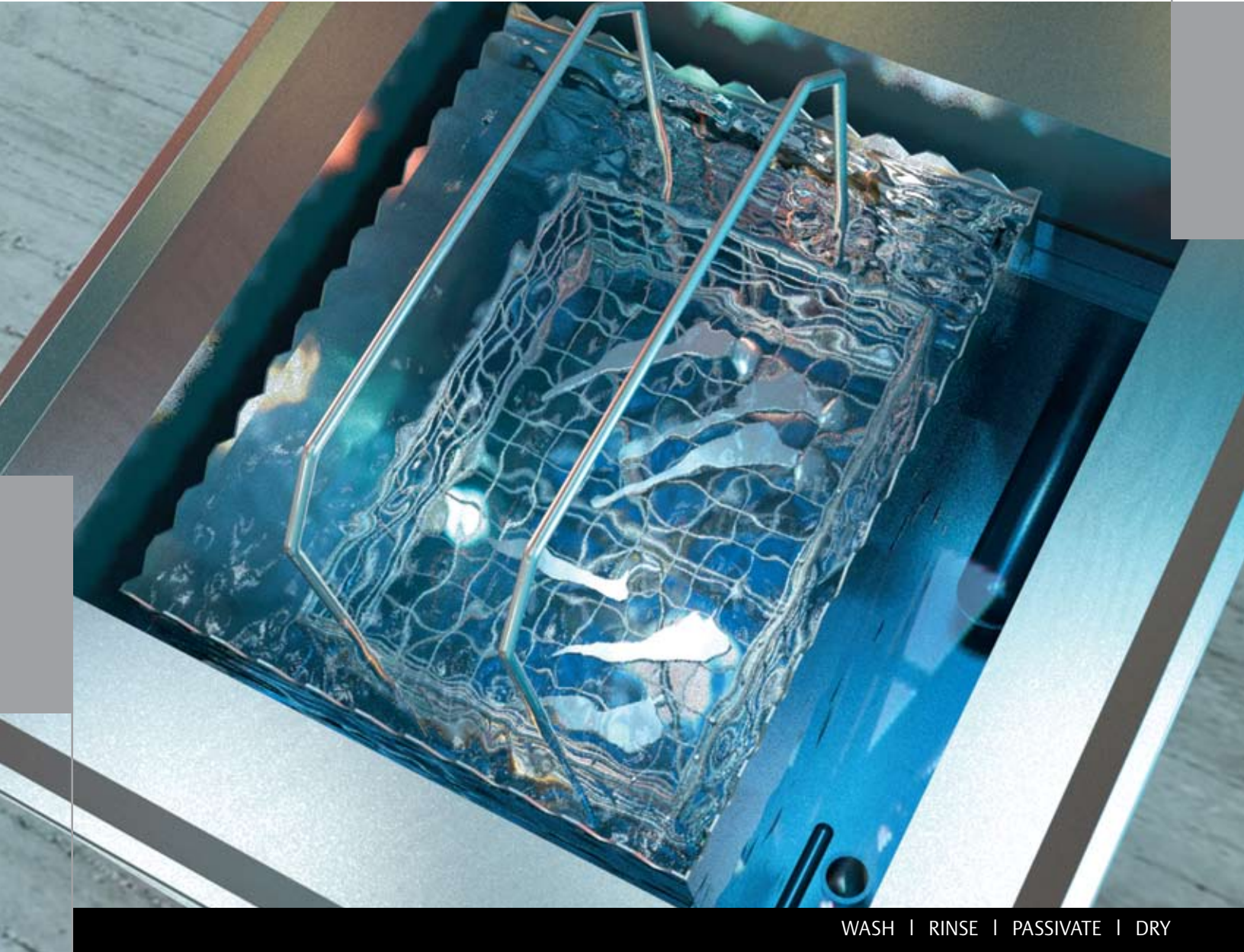


BRANSON



WASH | RINSE | PASSIVATE | DRY

Benchmark Precision Aqueous Cleaning Systems

Modular Design, Superior Clean,
Unwavering Service



EMERSON
Industrial Automation

The Standard By Which All Others Are Judged

The Branson Benchmark sets the standards by which all others are measured, incorporating the latest in cleaning technology, a modular approach, and an uncommon level of service.

The Benchmark is Branson's flagship aqueous ultrasonic cleaning system, a culmination of over 60 years of experience. So much more than just a piece of equipment, the Benchmark is a process solution customized to your precision cleaning needs.



With the Benchmark comes an unyielding commitment to service. Branson's team of international support professionals and national service technicians delivers a dedicated level of attention from the very first handshake — whether you require assistance with sales, applications or repairs.



Aerospace

Industries Served



Optics

The Benchmark is designed from an end-user point of view, accommodating virtually any application or industry. With a proven track record of nearly two

decades, the Benchmark has become the system of choice for the medical, pharmaceutical, electronics, optics, automotive, aerospace and defense industries.



Automotive

Quality You Can Rely On, Year After Year

Since 1961, Branson has been a world leader in the development of ultrasonic precision cleaning equipment. Continually evolving, always innovating, we stand strongly — and proudly — behind the Benchmark.

Medical

As with all Branson equipment, the Benchmark is built in North America. Stainless steel construction is used throughout the system including structural components. Benchmark Series units are resistant to corrosive

environments and process chemistry, and they are generally compatible with clean room environments. Inside and out, the Benchmark is built to stand the test of time.



Electronics

Built Around Your Needs

Branson's professionally staffed applications laboratory assists in selecting the process and equipment needed to meet your requirements. For those without a cleaning specification or process in place,

we'll perform testing in order to develop a cleaning process (wash, rinse and dry steps) — a process that's *guaranteed* if you purchase Branson equipment based on those recommendations.



Pharmaceutical

Superior by Design

The uniqueness of Benchmark cleaning systems starts with the modular design. Configured exactly as required for your particular need, the design is determined by tank size, process requirements (wash, rinse, dry, etc.), dwell time per process step, and the type of automation used.

Standard Tank Sizes

- 12 x 16 x 12" Deep (~10 gallon)
- 16 x 20 x 16" Deep (~20 gallon)
- 20 x 24 x 20" Deep (~40 gallon)
- 20 x 32 x 20" Deep (~55 gallon)

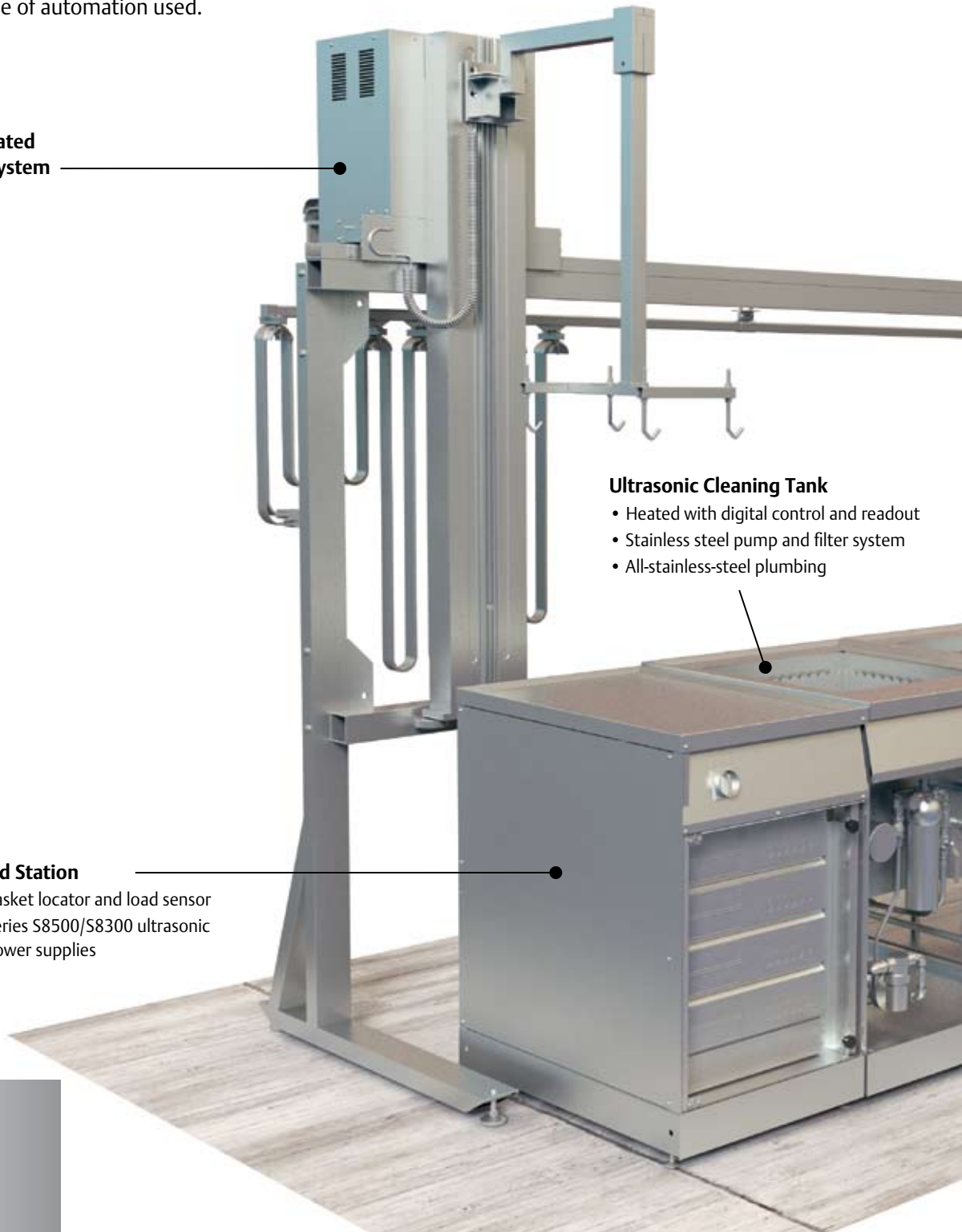
TDR Automated Transport System

Load Station

- Basket locator and load sensor
- Series S8500/S8300 ultrasonic power supplies

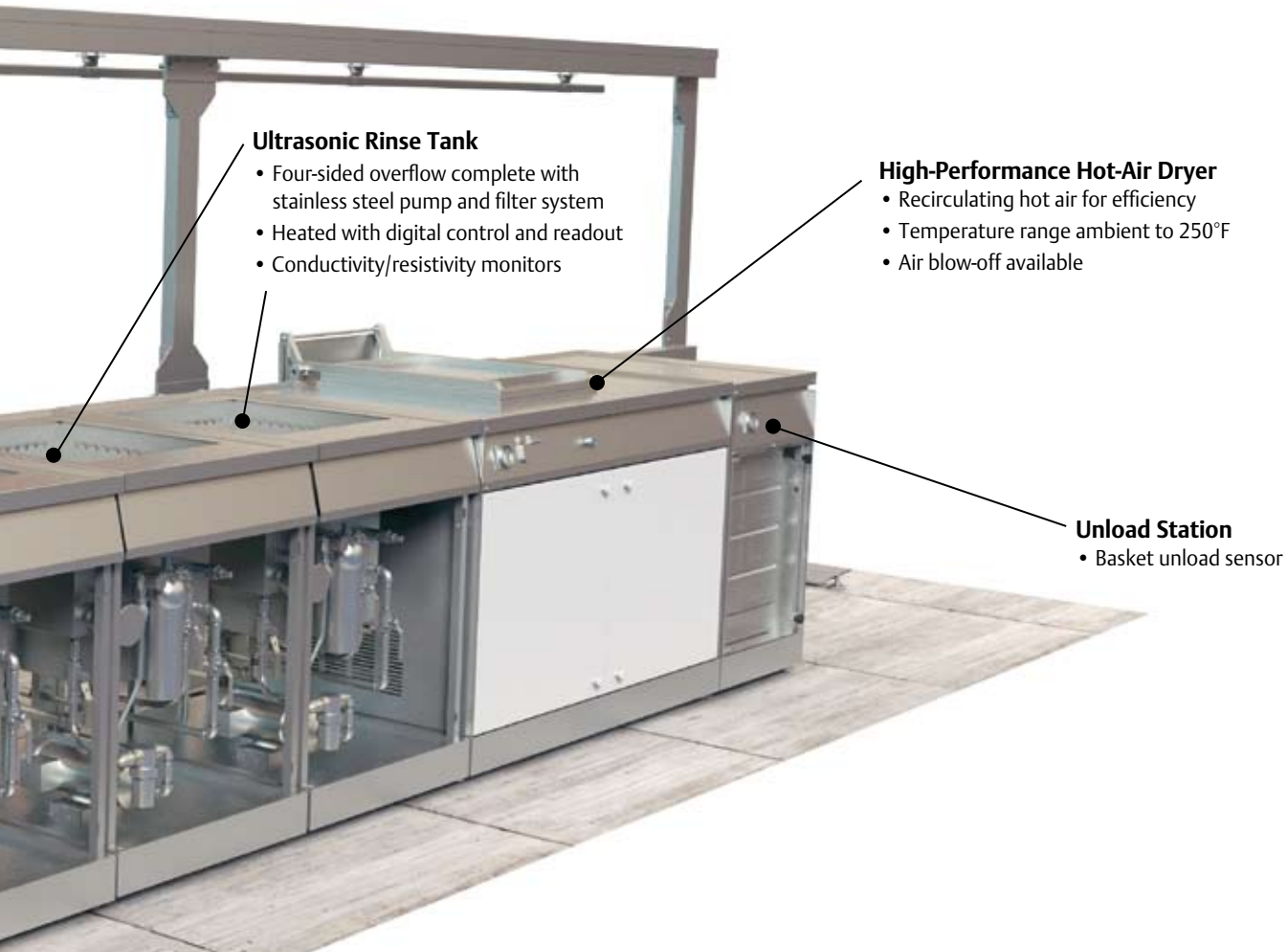
Ultrasonic Cleaning Tank

- Heated with digital control and readout
- Stainless steel pump and filter system
- All-stainless-steel plumbing



Standard Features

- 1 to 14 process stations
- All-stainless-steel construction, including frame, tanks, drip pans, lift-off covers, countertop and plumbing
- Recessed countertop for fluid spill containment
- User-friendly front-mounted control panel with digital temperature controllers and watertight switches
- Low voltage electrical controls
- Direct-bonded piezoelectric ultrasonic transducers
- S8300/S8500 sweep-frequency ultrasonic generators, available in 25 kHz to 170 kHz
- Screw-in stainless steel heaters
- Low liquid level safety shutoff for ultrasonics, pumps and heaters
- Easy access to routine maintenance components
- Automation interface



Ultrasonic Rinse Tank

- Four-sided overflow complete with stainless steel pump and filter system
- Heated with digital control and readout
- Conductivity/resistivity monitors

High-Performance Hot-Air Dryer

- Recirculating hot air for efficiency
- Temperature range ambient to 250°F
- Air blow-off available

Unload Station

- Basket unload sensor

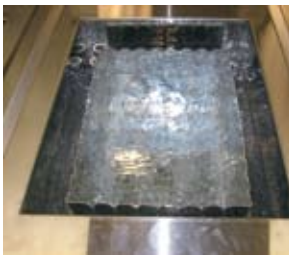
Build a Custom Workflow

Virtually any combination of cleaning, rinsing, passivation and drying modules is available to create a custom workflow. Individual modules are selected to form a continuous cleaning process tailored to the specific needs of *your* applications, not pre-configured, which may hinder your ability to properly clean delicate components or expand as your cleaning requirements change.

Benchmark Modules

A choice of up to 14 stations, individual cleaning, rinsing, passivation and drying modules allows you to assemble and form a continuous cleaning system. Although wash, rinse and passivation modules typically

include ultrasonic transducers, filtration/recirculation and solution heating, several options are available for enhanced cleaning capabilities.



Wash – Various cleaning chemistries are used depending on the application.



Rinse – High-quality water is used for residue- and spot-free parts.



Passivate – Acid treatment is available for additional corrosion resistance.



Dry – Typically, drying is accomplished via re-circulated hot air with optional HEPA filtration.

Process Control & Data Acquisition



With the addition of an industrial PLC, all system functions can be controlled and monitored either locally or remotely. Basket bar coding can be added, eliminating manual operator input. Data acquisition can include bath operating temperatures, dwell times, liquid levels, pump flow rates, filter pressures, solution pH, conductivity, resistivity and ultrasonic power levels, etc., providing data that can be stored and retrieved as required.



Automation

Two-Dimensional Robot (TDR)

The Branson TDR Series two-dimensional robots are microprocessor- or PLC-based systems designed for automated cleaning. Ruggedly constructed, they're appropriate for use in either production or clean room environments. The systems are available in two standard load capacities of 15 kg and 50 kg (plus fixture weight) and a variety of configurations to accommodate most production needs.



Support Equipment



Oil Coalescer

The oil coalescer is designed to effectively separate oily soils from the cleaning solutions, extending their useful life. The oil coalescer is a completely self-contained unit consisting of a receiver tank to accept incoming solution, a stainless steel pump, a pre-filter and a coalescing element.

Deionized Water System

The Branson Aquafier is a compact, fully configured industrial water purification system that produces high-quality rinse water at rates up to 5 gpm.

Used in either a single pass or closed-loop configuration, the Aquafiers can produce high-quality rinse water at 17 megohms resistivity. The unit uses commercially available beds for easy regeneration or replacement.



Benchmark System Configuration Options

Optional Features

- Automation
- PLC controls with operator interface
- SECS/GEM or CAMX communication protocol
- Remote-mounted electrical control box
- Data acquisition
- Bar-code or RFID
- Custom tank sizes
- Plastic tanks
- Sanitary plumbing
- Exhaust hoods for acid or corrosive fume removal
- Coved-corner electropolished stainless steel tanks
- Semi-aqueous wash tank for use with low-flashpoint chemistry
- Side-mounted ultrasonic transducers
- Single-sided or four-sided overflow rinse tanks
- Hastelloy-C tank or immersible transducer construction
- Spray rinse tanks
- Externally mounted heaters
- Conductivity/resistivity controls for rinse water control
- Auto-fill and drain system
- Air diaphragm pumps
- Hinged or removable stainless steel cabinet doors
- Timers
- Power-operated covers
- Basket agitation system
- Basket rotation system
- Rust-inhibit module
- HEPA filter for hot-air dryer
- Air blow-off for hot-air dryer
- Vacuum dryer
- Slow-pull dryer
- Load and unload stations with basket sensors
- In-feed and out-feed conveyors
- Full system enclosure, with or without HEPA filtration

ISO9001 and 14001 Certifications

Branson is the industry leader in the design, development, manufacture, and marketing of precision cleaning — the only company of such high caliber worldwide. We are committed to providing solutions to the needs of our customers, and providing the latest in technology, both in products and processes. Our global organization provides us with the resources and the facilities to support our customers on a worldwide basis.

BRANSON

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