

ADT-Tank Lines

Automated Immersion Systems

Proceco's ADT tank lines are multi-stage immersion systems designed for wet dip processes used for parts cleaning, metal surface treatment, and flaw detection. Based on a common design platform, each system is custom engineered for a specific process and workpieces.

Degreasing, metal etching, anodizing and phosphating are just some of the processes handled by Proceco's ADT tank lines across the aviation, automotive and general manufacturing industries. Proceco provides a complete solutions approach from initial concept to turnkey installation.

Our systems offer automation, process control, dynamic scheduling, traceability, as well as a variety of fluid management and part handling options to meet your exact needs. This makes Proceco's ADT tank lines completely flexible; ideal for processing components in manufacturing as well as in maintenance, repair and overhaul.

When you invest in a Proceco ADT tank line, you significantly increase production output, process quality and consistency, resulting in reduced operating costs.



5-stage automated immersion line with cleaning and paint stripping of armored vehicle engine components

PROCECO

The Proceco Difference

Proceco's engineering team will evaluate your application and production requirements in order to design the best system to fit your needs. We integrate the necessary technologies to enhance performance, improve efficiency, and extend solution life.

Proceco has extensive experience in engineering innovative systems for cleaning and surface treatment applications that use aqueous-based solutions. There are many advantages to choosing Proceco systems:

- Custom-designed to meet your exact requirements
- Process know-how
- Integration expertise
- ISO 9001:2000 quality management system
- Turnkey installations
- Fast lead time and project management



6-stage automated ultrasonic immersion degreasing line featuring automatic basket loading/unloading and convection drying.

Energy Efficient Design

Proceco believes in energy efficiency. When sizing pumps, ventilation, and water utilization, we pay specific attention to all the elements that have an impact on energy consumption.

We offer thick thermal insulation for all our heated processes, and tank covers to preserve energy. Our process control system is designed to conserve energy by avoiding overheating of tanks, and by opening covers only when necessary for the shortest time possible. Covers can also be interlocked with ventilation to reduce heat losses.

Proceco also offers closed-loop cascading rinses, solution reclaim, and filtration to reduce water usage.

System Features

- Process flexibility
- Stainless-steel and plastic / FRP tanks to suit solution chemistry
- Rugged construction
- Service connections and equipment located at rear for ease of maintenance
- Automated and semi-automated processes
- Automatic solution level control
- Digital temperature controls
- Heavy soil, oil and grease removal capabilities
- Ergonomic and easy to operate
- OSHA compliant safety guarding
- Factory testing

Applications

Surface Treatment

- Anodizing
- Degreasing
- Decontamination
- Deoxidizing
- Desmutting
- Etching
- FPI
- Passivation
- Pickling
- Phosphating
- Rust-inhibiting

Cleaning

- Degreasing
- Pre-cleaning
- Precision cleaning
- Rinsing

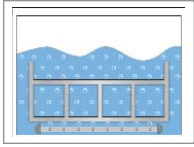
Solvent Free

At Proceco, you will find the system you need for your component MRO and manufacturing processes.

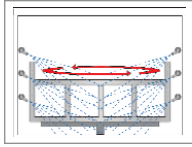
Proceco Immersion Systems Integrate Various Technologies

Multi-Stage Design

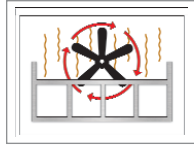
Based on your needs, pre-engineered processes are combined with automatic part transfer and process control to create your tailor-made multi-stage immersion line. Systems can include a wide range of processes such as:



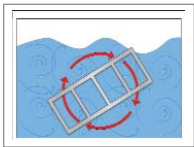
Air sparge agitation



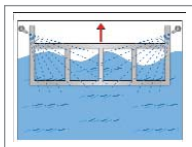
Rotation with spray



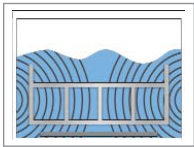
Convection drying



Rotation agitation

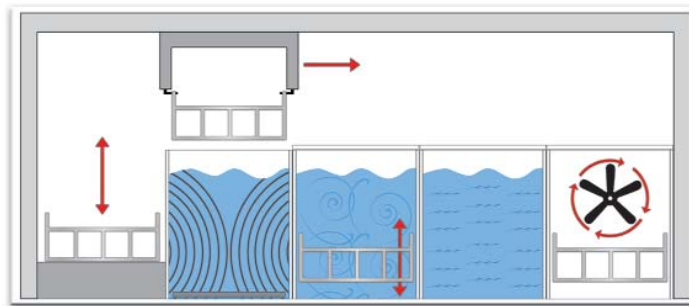


Immersion and spray



Ultrasonics

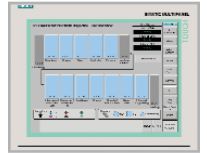
- Also:**
- Pump / eductor agitation
 - Vertical oscillation
 - And more!



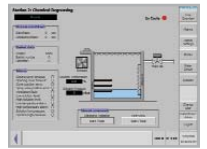
Process Control

Our automation engineers are trained in Siemens, Allen Bradley or soft PLC to offer you complete process control as you need it.

Systems overview to monitor process parameters, workpiece flow, and error messages.



Detailed information about individual stations can be displayed for close process monitoring.



Manual controls are available at each station for system flexibility and maintenance.



Automatic Part Transfer

Fixtures or baskets are automatically transferred through the process based on pre-programmed recipes. Simple or dynamic scheduling can be added to maximize production efficiency. Proceco offers various transfer systems:



Overhead hoists: Located above the machine, supported by a dual-side, heavy-duty structural frame. Capacity up to 5,000 lbs.



Cantilever hoists: Located on the side of the machine and supported by a heavy-duty structural frame. Capacity up to 1,000 lbs.



Automatic part loading / unloading: Conveyors or other technologies can be added to increase productivity or for seamless integration into your production line.

Additional Options & Equipment

A wide range of options and auxiliary equipment can be integrated with the system to enhance its capabilities and extend solution life:

- Electrical, steam or gas / hydronic heating systems
- Solution filtration
- Oil removal and sludge removal (#1)
- Water conditioning
- Waste water treatment (#2)
- Air handling
- Automated tank covers
- Safety enclosures
- Remote diagnostics
- Data collection
- Cooling
- Automatic dosing
- Manual touch-up tools (#3)
- Special part fixtures and racks
- Tank clean-out doors
- Operator platforms
- Ⓢ, Ⓤ, ⒸE compliant



Typical Immersion Systems



4-stage automated ultrasonic immersion cleaning line featuring basket oscillation, convection drying, and RO water generation.

- Aircraft jet engine maintenance



7-stage automated immersion line featuring aluminum etching, desmutting, and anodizing with DI water generation.

- Aircraft propeller overhaul



10-stage manual immersion line featuring pump / eductor agitation, degreasing and heat scale removal.

- Aircraft jet engine maintenance



12-stage automated fluorescent penetrant inspection FPI and degreasing tank line

- Aircraft turbine engine parts manufacturing



7-stage automated immersion line featuring parts cleaning, phosphating, and drying stages in a fully enclosed system.

- Air-conditioning compressor manufacturing



7-stage automated immersion line featuring power spray cleaning, deoxidizing, and automatic loading / unloading.

- Large diesel cylinder head repair