STRONG3000

TECHNICAL DATA SHEET

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PRETREATMENT

Industrial Washing Systems

Industrial washing systems clean machining oil, grease, swarf and scale off parts before coating. In a multi-stage spray tunnel, degreasing, rinsing and an optional iron phosphate or nano-ceramic conversion coating run in one flow, preparing a sound adhesion base for powder coating and enamel.

Open online

strong3000.com/en/products/industrial-washing/



KEY FIGURES

Type	Stages	Chemistry	Bath temperature
Tunnel type, multi-stage spray washing	**3 – 6 stages: degreasing → rinse → conversion coating → rinse → DI water**	**Detergent degreasing; optional iron phosphate / nano-ceramic**	**40 – 60 °C**

OVERVIEW

No Coating Without a Clean Surface.

Oil, grease, metal chips and oxide scale that build up on parts during machining, pressing and handling are the biggest enemy of coating adhesion. Industrial washing systems systematically remove these contaminants using chemical detergent, controlled temperature and pressurized water.

Configurable from a single booth to a multi-stage tunnel washer; operates as the first step of a pretreatment line or as a standalone cleaning station. Can be integrated with STRONG3000 pretreatment and powder coating lines.



HOW IT WORKS

From the Hanger to the Tunnel, from the Tunnel to Drying.

1. **Entering the tunnel**
   Parts are hung on hangers and enter the washing tunnel on the conveyor; the line keeps moving.
2. **Detergent wash**
   Heated detergent solution is sprayed under pressure from the nozzles, lifting oil, grease and swarf off the surface.
3. **Collection and reuse**
   Solution running off the parts collects in the tank under the tunnel and is pumped back to the nozzles.
4. **Rinsing and conversion coating**
   Each chemical stage is followed by a clean-water rinse. An iron phosphate or nano-ceramic stage is added as required; the final rinse uses DI water.
5. **Drying, ready to coat**
   Parts pass through the drying oven and move on to the coating booth clean and dry.



On site: parts entering the washing tunnel on the conveyor

KEY BENEFITS

A Spotless Start.

Oil & Grease Removal
Effectively removes machining oils and grease.

Scale & Chip Removal
Separates oxide scale and metal chips from the surface.

Hot Water & Pressure
Deep cleaning with controlled temperature and pressure.

Adhesion Base
Consistent coating adhesion on a clean surface.

Multi-Stage Tunnel
Degreasing, rinsing, conversion coating and drying in one flow.

Phosphate / Nano-Ceramic
Iron phosphate or heavy-metal-free nano-ceramic conversion coating, as required.

GALLERY

Take a Closer Look.





TECHNICAL SPECIFICATIONS

Industrial Washing — Technical Specifications.

Values are typical ranges; final values are confirmed per project by STRONG3000 engineering.

Type	Tunnel type, multi-stage spray washing
Stages	3 – 6 stages: degreasing → rinse → conversion coating → rinse → DI water
Chemistry	Detergent degreasing; optional iron phosphate / nano-ceramic
Bath temperature	40 – 60 °C
Final rinse	DI water, conductivity < 30 µS/cm
Heating	Heat exchanger — natural gas / electric
Control	PLC + touchscreen — temperature, dosing, conveyor interlock

WHY STRONG3000?

The Engineering Difference.

We don't sell equipment and walk away; we stay with your line from design through commissioning and beyond.

Integrated Engineering

Machinery, electrical, automation and software under one roof — not sourced and assembled.

In-House Technology

Smart AI and OWL are original STRONG3000 technologies developed in-house.

Proven Experience

25+ years of engineering; installation, commissioning and service in 40+ countries.

24/7 Support

Phone, remote connection and 24/7 live support via WhatsApp.

Quotes & Technical Consulting

Tell us about your part, capacity and process. A STRONG3000 engineer will get back to you with a tailored proposal.

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FOR A QUOTE, PREPARE

- Product to Be Coated
- Max. Part Dimensions
- Required Capacity
- Number of Colors
- Daily Color Changes
- Coating Process
- Project Timeline

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