

Product Overview

Modular Dip Paint Stripping System



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1 Modular Dip Paint Stripping System

When using chemical paint stripping the **dipping method** provides a gentle, safe and easy way to paint strip metallic components, steel, aluminum, non-ferrous metals and as of late even plastic parts.

The stripping objects, such as rims, bike or motorcycle frames, hooks or hangers, and also complex components from re-manufacturing, such as turbocharger or motor housing, brake boosters and other parts from the automotive sector, are entirely enclosed by the stripping agent when using the dipping method. This procedure offers a thorough method to efficiently remove different coatings from metallic materials.

The **modular dip paint stripping system** by **SMiTO-Technic** is especially designed for chemical dip tank paint stripping. It is possible to individually customize the system in order to meet a wide variety of customer requirements regarding different materials, object sizes, quantity or quality conditions.

The entire paint stripping process, **paint stripping – rinsing – transportation of goods** (by hand, semi- or fully automatic), can be taken into account.

A well-designed dip paint stripping system ensures process safety and reliability, it requires low maintenance and it is cost-efficient.

1.1 Paint Stripping Dip Tank – TB Series

The dip tanks of the TB series, which were especially designed for chemical dip paint stripping, form the basis of the modular dip paint stripping system.

The robust systems are completely made of stainless steel and comply with the water management law (WHG) by their integrated safety collection tray. All TB series dip tanks are CE-compliant. The system is operated via the control panel at the electrical cabinet. The temperature of the chemical paint stripping agent in use plays an important role in reaching an optimal process time. Therefore all tanks are equipped with electrical heating which indirectly warms up the paint stripping agents to operating temperatures up to max. 120°C. All dip paint stripping systems are isolated in order to reduce heat loss. A circulation unit ensures constant bath movement and consistent temperature.

Temperature is controlled by a Siemens control unit. Overheating is prevented by the safety temperature limiter. Monitoring the filling level in the dip tank and leakage detection by sensor are further safety devices.





Paint Stripping Dip Tank TB Series

Features:




- completely in stainless steel, isolated
- integrated safety collection tray, leakage detection by sensor
- electric heating, indirect
- paint stripping agents with operating temperatures up to 120°C
- circulation by efficient IE2 engine
- electrical cabinet with operating panel
- Siemens control (PLC and integrated display) for temperature control
- safety temperature limiter
- monitoring of filling level
- CE conformity

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1.1.1 Options

Options	TB200 	TB400 	TB1000 
Lid (stainless steel, isolated, gas spring)	✓	✓	✓ Hand winch
Lifting unit	●	✓	✓
Mountable on transport rolls	✓	✓	●
Expandable to multi dip tank system	●	✓	✓
Configurable as rinsing tank	✓	✓	✓
Exhaust air extraction	●	✓	✓
Filter	✓	✓	✓
Rotation unit 	✓	✓	●

1.1.2 Overview technical data

	External dimensions: - (L x W x H) - H with open lid	Useable inner dimensions: - (L x W x H)	- Filling volume - empty weight	Electrical data: - power (kW) - connection value (V / Hz)
TB200 	- 1250x950x1600 mm - 1930 mm	- 600x650x650 mm	- max. 358 l - 200 kg	- 3,2 kW - 3~/ 400 V / 50 Hz
TB400 	- 1800x950x1600 mm - 1930 mm	- 1200x650x650 mm	- max. 600 l - 350 kg	- 5,5 kW - 3~/ 400 V / 50 Hz
TB1000 	- 2710x1150x1650 mm - 1930 mm	- 2000x650x650 mm	- max. 1000 l - 680 kg	- 10 kW - 3~/ 400 V / 50 Hz

1.2 Manual Lifting Unit for TB400/1000



It is possible to extend the paint stripping dip tanks TB400 and TB1000 by a manual lifting unit.

This ensures that paint stripping parts are loaded and unloaded in and out of the system at an ideal ergonomic working height. Direct contact with the chemical agents is reduced to a minimum, the entire operating procedure becomes safe and easy to handle.

1.2.1 Lifting unit, individual components

	<p>Lifting portal with:</p> <ul style="list-style-type: none"> - side guiding rails - lifting beam - hand winch - anti-drop device - lift: 650 mm 		<p>Goods carrier with:</p> <ul style="list-style-type: none"> - integrated lid - completely in stainless steel - special loading racks such as grid tray, rack for rims/wheels or hook holders
Lifting portal		Goods carrier	

By employing the smooth-running hand winch the goods carrier with integrated lid and loading rack is lifted out of the dip tank and lowered.

An additional anti-drop device automatically clicks into place when reaching the upper end position and keeps the goods carrier in its loading/unloading position. It is possible to load work pieces such as rims, hooks and hangers, and the like, while direct contact with chemical agents is avoided.



1.2.2 Technical data

	Goods carrier: Loading capacity	Goods carrier: Loading volume (L x B x H)	Dimensions Lifting Unit (L x B x H)	Total height incl. TB
Lifting Unit HE400	- max. 150 kg	- 1090x585x600 mm	- 2250x915x1080 mm (Length incl. Winch)	- ca. 2160 mm
Lifting Unit HE1000	- max. 300 kg	- 1990x585x600 mm	- 3150x915x1080 mm (Length incl. Winch)	- ca. 2160 mm

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1.3 Exhaust Air / Extraction

With the lid closed the paint stripping dip tanks are completely tight – both as basic version or with integrated lid in the goods carrier. Chemical vapors and odor formation only arise if the tank is open. In order to remove these vapors or odors, it is possible to install an air extraction hood which is either connected to the customer’s on-site exhaust air system, or which is available with an exhaust air box and appropriate connection material. The extraction hood is either attached to the lifting unit or to the ceiling (installed by customer).



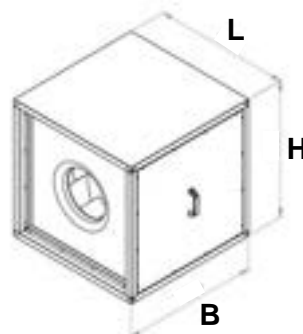
1.3.1 Air extraction hood



	Dimensions (L x W x H)
Air extraction hood SH2100 (for TB400)	2100 x 1000 x 450 mm
Air extraction hood SH3000 (for TB1000)	3000 x 1000 x 450 mm

1.3.2 Exhaust air box

	Volume flow rate m³/h	External dimensions (L x W x H)	Connection Ø mm
Exhaust air box 3300	3340	500 x 500 x 500 mm	315
Exhaust air box 4200	4225	500 x 500 x 500 mm	315
Exhaust air box 8100	7800	700 x 700 x 700 mm	400



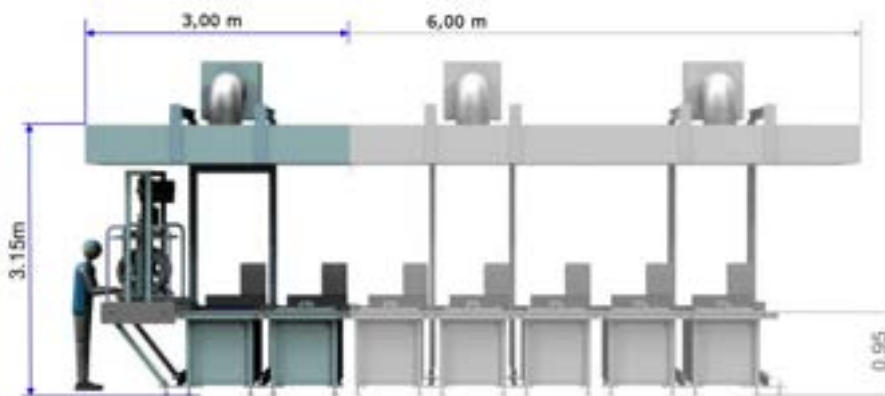
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1.4 Multi Dip Tank System

Looking at the entire chemical paint stripping process, it always consists of at least two steps. After paint stripping in the dip tank the chemical agent has to be removed from the parts by a rinsing procedure. Depending on the application it is possible to add further processing steps such as “derusting”, or subsequent processes such as “passivating”. The transportation of goods between the different processing steps must be safe and easy to manage.

It is possible to combine the basic modules TB400 and TB1000 to create an arbitrary **multi dip tank** arrangement which meets the requirements of **paint stripping – rinsing – goods transportation – air extraction** as one complete system.

Based on a basic configuration consisting of 2 dip tanks, the semi-automatic transport system, and a rinsing and draining station, the system is expandable with up to 8 dip tanks, transportation trolley system and air extraction option.



Side view:
expandable multi dip tank system with air extraction unit (optional)



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1.4.1 Multi dip tank system, individual components

<p>TB series dip tanks (TB400 or TB1000)</p> <p>A multi dip tank system consists of at least 2 dip tanks and it is expandable up to 8 dip tanks.</p> <p>They are used according to customer requirements.</p> <p>It is possible to fill the dip tanks with different chemical agents in order to perform subsequent processing steps such as further paint stripping processes, rinsing or passivating.</p> <p>The classic combination of a multi dip tank system consists of 2 dip tanks, one for paint stripping and one for rinsing (please refer to TSB400/TSB1000).</p>	
<p>Basic equipment multi dip tank system</p> <p>Consisting of:</p> <ul style="list-style-type: none"> • transportation portal in stainless steel with electrical lifting unit • special lifting beam in stainless steel • drip/drain and rinsing station in stainless steel • portal guides with connection parts, and end stops for the dip tanks • visual process display for each tank • drain sheets between dip tanks 	
<p>Goods carrier</p> <p>with integrated lid completely in stainless steel with integrated loading racks, i.e.</p> <p>Grid tray for TB400: loading capacity max.150 kg loading volume (LxWxH) 1100 x 580 x 640 mm</p> <p>Grid tray for TB1000: loading capacity max.300 kg loading volume (LxWxH) 1920 x 580 x 640 mm</p>	

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1.5 Transport Trolley System

The transport system is available for safe and simple transportation of stripping goods. This system includes a transport trolley and movable loading racks.

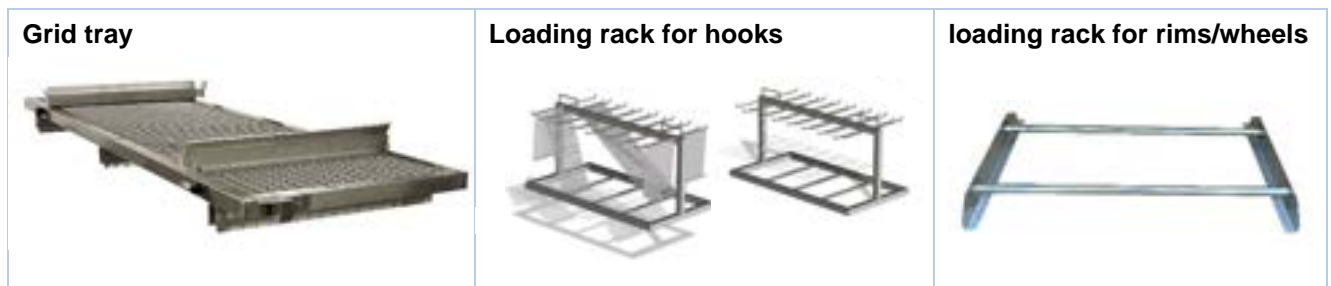
1.5.1 Transport trolley

The transport trolley is adjusted to the height of the upper position which is reached by the goods carrier in the lifting unit, or to the working height of the loading/unloading stations of the multi dip tank system, respectively. Guiding devices ensure that the trolley is accurately positioned at the side of the dip tank or the loading/unloading station. To prevent the transport trolley from rolling, the trolley is equipped with two swivel castors with locking brakes.



1.5.2 Goods carrier inserts / loading racks

A guide rail system provides safe and easy movement of the goods carrier with paint stripping parts between transport trolley and dip tank system. Depending on the components or parts to be paint stripped, different kinds of loading racks are available.



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1.6 Rinsing Dip Tank TSB400/TSB1000





After chemical paint stripping with the dipping method the paint stripped parts need to be rinsed thoroughly in order to remove any stripping agent. For this purpose, the modular dip tank system provides the rinsing dip tanks TSB400/TSB1000 which match the dimensions of the paint stripping dip tanks TB 400 and TB1000, respectively.

The rinsing tanks are completely made of stainless steel and comply with the water management law (WHG) by their integrated safety collection tray. A mechanical drain prevents overflow if too much rinsing water has been filled in. Constant bath circulation ensures a perfect result of rinsing. As an option, the tank can be heated up to 60°C. The TSB rinsing tank series is designed for integration in a multi dip tank system.

Rinsing Dip Tank TSB Series Features:

- completely in stainless steel,
- dimensions match TB (dip tank) series
- integrated safety collection tray, leakage detection by sensor
- constant bath circulation
- can be integrated in multi dip tank systems
- monitoring of filling level via mechanical drain
- CE conformity
- optional: heating up to 60°C

	External dimensions: - (L x W x H) - H with open lid	Useable inner dimensions: - (L x W x H)	Filling volume - empty weight
TB400 	- 1800x950x1200 mm - 1930 mm	- 1200x650x650 mm	- max. 600 l - ca. 320 kg
TB1000 	- 2710x1150x1200 mm - 1930 mm	- 2000x650x650 mm	- max. 1000 l - ca. 600 kg







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1.7 Accessory Equipment

	fits with TB200	fits with TB400	fits with TB1000
			
Swivel castor Set (4 swivel castors, 2 x with locking brake) 	✓	✓	●
Grid tray, stainless steel 	✓	✓	✓
Rack for rims, stainless steel 	✓	✓	✓
Sink GRP, 400 l 	✓	✓	●
Safety collection tray for sink 	✓	✓	●
Cleaning scraper 	✓	✓	✓
Transport trolley 	●	✓	✓

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<p>Other accessories</p>		
<p>Barrel pump, complete set</p>		
<p>Flake net</p>		
<p>Hand shower</p>		
<p>Mobile pump cart PW</p>		
<p>Filter options</p>	<p>Flake collection container (FFB)</p> 	<p>Filter unit (FE)</p> 

**Modular
Dip Paint Stripping System**



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