

STORCH keeps the world clean

**Garbage Bin Cleaning
by MRS Storch GmbH**

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The logo features the word "STORCH" in a large, bold, white, italicized sans-serif font. To its right, the phrase "keeps the world clean" is written in a smaller, white, italicized sans-serif font. The entire text is set against a blue background with a pattern of white water droplets of various sizes. A white horizontal line is positioned above the text.

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Introduction

The Germany based MRS Storch GmbH:

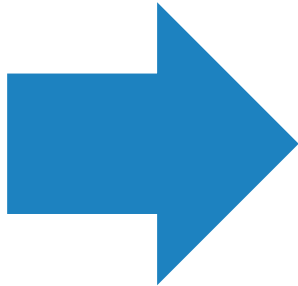
- Founded in 1990 in Rosenheim, near Munich in Bavaria.
- Today: ~ 30 employees
- Inventor of a unique, patented, mobile *on-truck* bin cleaning system
- Serves communities, property management & public waste management companies
- Cleans all common types of bins and containers
- Cleans about 3.5 million garbage bins p.a. in Germany

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Hygienic Aspects

Common garbage collection trucks are emptying bins, but leave them not tidily.

Problem: Organic waste residues remain in the emptied bin



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Hygienic Aspects

- High outdoor temperatures breed toxic bacteria, virus, spores and germs.
- Waste residues are attracting cockroaches, rats, etc.
- Waste residues cause unpleasant odor emissions
- Waste residues, as bio aerosols, can cause serious sicknesses.
- **Solution:** proper and frequent cleaning of all containers and bins.

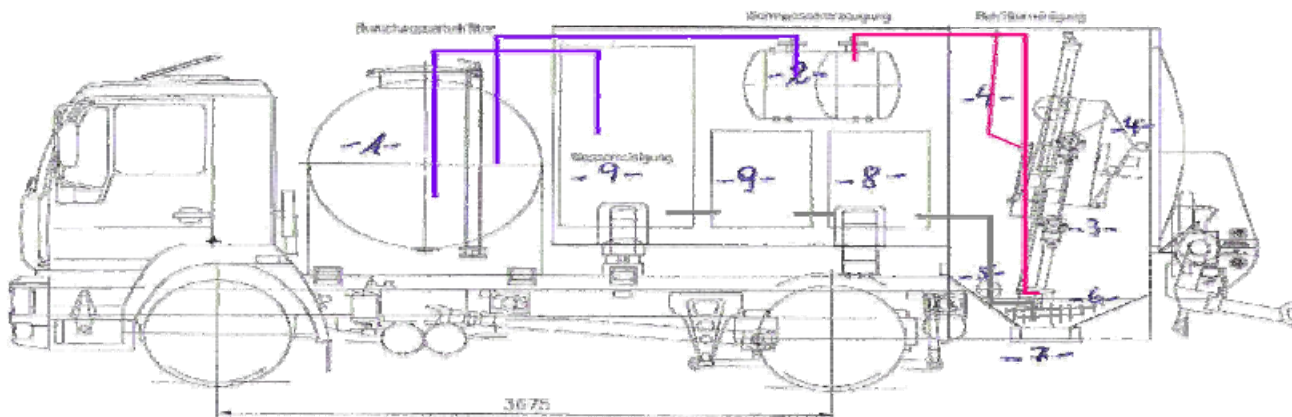
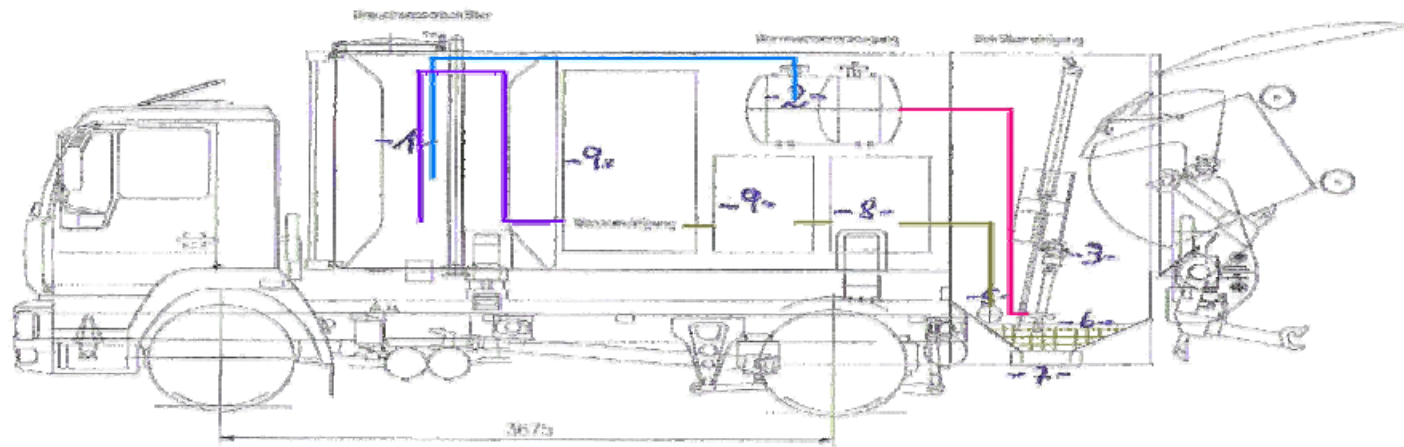
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The Solution: Storch Truck with Washing Chamber



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The Solution: Storch Truck with Washing Chamber



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Cleaning Results

Before



After



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Cleaning Results

Before



After



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Technical Aspects

Storch's bin cleaning systems are capable to clean ...

... all common bin sizes:

- from 40 liter to 1,1 m³
- from inside and outside

... all common bin types:

- bins for residual waste
- bio-waste containers
- yellow bins
- paper banks
- bottle banks

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Operational fields

The Storch system can be operated

- **at a municipality's work yard**
→ Capacity: 800 bins per day (8 working hours)
- **while following a garbage collection truck**
→ Capacity: 600 bins per day (8 working hours)
- **at a site of a commercial client, e.g. hotel facilities**
→ Capacity: flexible – depends on action time

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Technical Aspects

Storch offers two systems:

(please note: both systems feature similar qualities in terms of bin sizes, types and amount)

Basic system **SMBR – 4**

- Open system
- 7000 liter tank
- No recycling of water
- Inner cleaning only
- Cold water cleaning
- Easy maintenance
- Easy handling
- Electro magnetic bin-clutches
- Mechanical technique

Advanced system **SMBR – 6**

- Closed system
- high operational safety
- 3000 liter tank
- Build in recycling unit
- Inner and outside cleaning
- Hot water cleaning
- Easy handling
- State-of-the-Art technologies
- Hydraulic engines
- Vacuum bin-clutches

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SMBR-6 System



MAN (TGM or TGA; Type 18.332BB)

The new and closed SMBR-6 System comes now with a Waste-Water-Recycling-Unit and has been designed to match the chassis frames of MAN or Mercedes Benz Trucks.

Only the sludge chamber needs to be disposed. That saves natural resources and is environmental friendly.

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Environmental Aspects of Advanced System SMBR-6

- Ecological cleaning process
- Built-in waste water recycling units
- Less water consumption compared to cleaning bins with common water hose
- Closed system: no smell; no emission of wastewater
- Bins being washed inside / outside
- Washed bins are free of bacteria
- No water contact of staff with the washing water/ sewage

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SMBR-4 System



Mercedes Benz (Actros / Axor Type 1833)

The open SMBR-4 System (without Waste-Water-Recycling-Unit) comes with an enlarged fresh water tank of 7000 liters to provide enough fresh water for one shift of 8 working hours or 600 bins of 120 – 240 liters load capacity. The output depends on the local conditions.

A blue banner with water droplets and the text "STORCH keeps the world clean" in white, bold, italicized font.

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Commercial Aspects

In general, costs can be recovered by

- **Tax charges, e.g. per households**
- **User fees, e.g. per day, per bin**
(potential users are, e.g. hotels, property management firms, etc)
- **Combination of both taxes and fees**

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Excerpt from List of References

Cities +200.000 inhabitants: Munich (1,2 million inhabitants),
Recklinghausen, Ulm, Augsburg, Duisburg, Bochum, Wuppertal

Smaller Cities: Wetter, Gevelsberg, Schwelm, Greven,
Ennepetal, Kaufbeuren, Aschheim, Ismaning, Hall, Telfs, Rum,
Kitzbühel, Marktgemeinde Kirchberg, Haar, Rosenheim, Senden,
Schweinfurt, Wörgel, Sölden, Zwickau, Herdecke, Castrop –
Rauxel, Bad Waldsee

Counties of: Traunstein, Waldshut – Tiengen, Stendal,
Vogtland,
Aue, Tauberbischofsheim, Rosenheim, Zwickau, Stadt Herdecke,
Castrop-Rauxel, Zwickau, Starnberg, Dachau, Ravensburg

(3,5 Million bins per year in total)

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Contact