

CASE STUDY

**LOW-MAINTENANCE AND
ROBUST RUBBER
IMPACT ROLLER**

**RELIABLE PROTECTION
FOR WASTE DISPOSAL VEHICLES
DESPITE COST PRESSURE**



CLIENT'S PROFILE

Company:

ZÖLLER-KIPPER GmbH

Headquarters:

Mainz, Germany

Size:

2,500 employees

Year of foundation:

1947

Branche:

Vehicle construction

Produkte:

Waste disposal vehicles and lifter systems

CHALLENGE

Needed: Tough and reliable protection for waste containers

Search for an elastic material which is dimensionally stable at the same time

Cost efficient material and manufacturing process required



SOLUTION

The installed steel shaft is covered by an elastic impact roller

Perfect material selection thanks to comprehensive knowledge of materials

Subsequent adjustment of material and manufacturing process to optimize costs



RESULT

Waste containers remain intact

No more complaints to the waste management

Price and delivery time improvements



CHALLENGE



COSTS DUE TO DAMAGE MUST BE REDUCED

They are the busy machines that empty the garbage from our garbage cans at least once a week: waste disposal vehicles!

ZÖLLER-KIPPER GmbH from Mainz is Europe's largest manufacturer of hydraulic lift and tipping vehicles for waste emptying and collection. Zöller turned to its supplier of many years, Jäger Gummi und Kunststoff GmbH with which they jointly developed some of the articles that are installed in the so-called "lifter".

A lifter is the area responsible for lifting and emptying the garbage cans - usually at the rear of a garbage truck. This time Zöller needed a component that would provide the refuse collection vehicles with special protection.

This is because when the waste container was lifted to the top and emptied in the waste disposal vehicle, it struck the top of the vehicle's stop, which could not absorb the impact. For this reason, Zöller needed a protective jacket for the steel shafts used in the process.

CHALLENGE

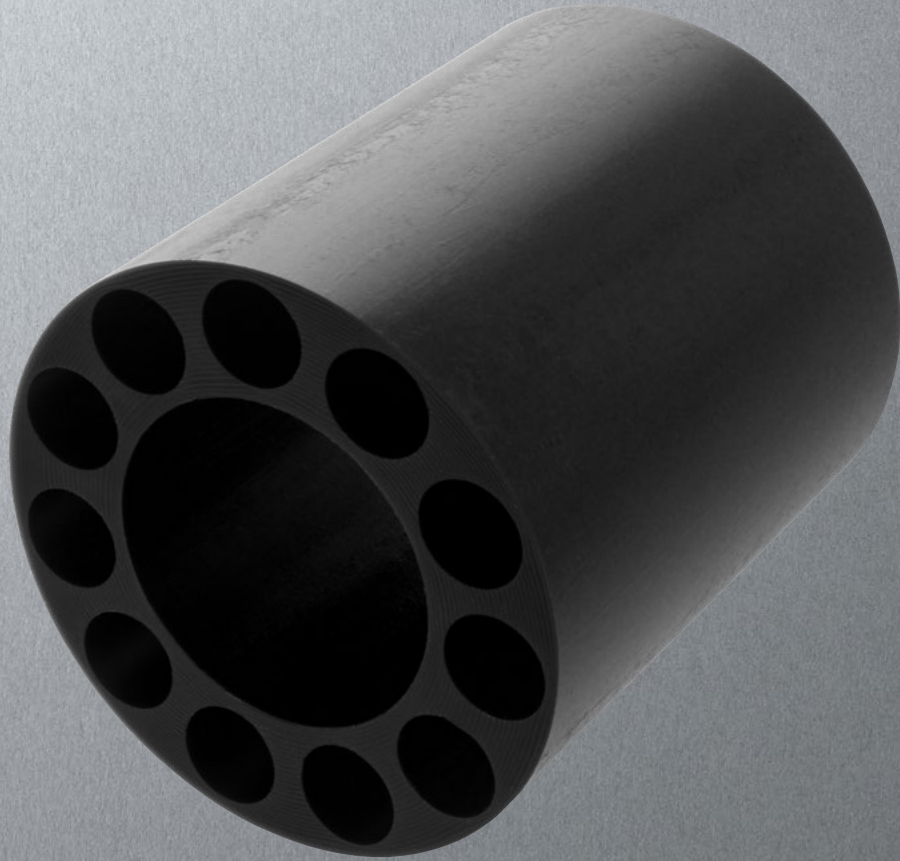


WANTED: LONG-LASTING PROTECTION FOR WASTE CONTAINERS

The steel shafts must be encased so that a spring effect is achieved. In this way, waste containers would no longer be damaged and vehicle operators would no longer be exposed to the risk of injury from the defective garbage cans.

After the materials experts at Jäger Gummi und Kunststoff tested various materials and geometries, they first produced a PU molded part that fitted the shaft perfectly. They test-

ed various hollow chambers and hardness levels. They then created a mold for casting polyurethane. The prototypes of the impact roller were subjected to several practical tests on vehicles with full waste containers. Despite the technically successful solution, the customer wanted a different solution as the PU component was very cost-intensive due to the casting process. Jäger therefore developed an alternative.



ROBUST AND COST-EFFECTIVE IMPACT ROLLER FOR WASTE DISPOSAL VEHICLES

The Jäger engineers thought ahead and produced an EPDM profile of identical construction. Thanks to its good resistance to weathering, EPDM is particularly suitable for outdoor applications, such as in waste disposal vehicles. In addition, the elastic material is an inexpensive yet durable material. The unit price could also be reduced, due to the of the EPDM component's fast extrusion process.

The new solution went into series production after it had been thoroughly tested and approved in joint practical tests at the customer's site.

RESULT



WELL-PROTECTED WASTE CONTAINERS

Thanks to the EPDM solution, production times for the impact roller have been reduced and Jäger Gummi und Kunststoff is able to always rapidly deliver the component to Zöller.

With the elastic impact roller on the steel shaft, the waste containers are now protected from scratches and wear. In addition, the vehicle price remains low thanks to the cost-effective EPDM

solution. The disposal companies now save the additional costs of customer complaints and frequent replacement of waste containers while maintaining the low vehicle price. Last but not least, the house owners are happy about intact and nice-looking waste garbage cans.



CONTACT



Oliver Geißler
Location Frankfurt

+49 618 - 194 03 15

o.geissler@jaeger-gk.de

www.jaeger-gk.de

Jäger Gummi und Kunststoff GmbH
Wilhelm-Röntgen-Straße 28
63477 Maintal
Germany