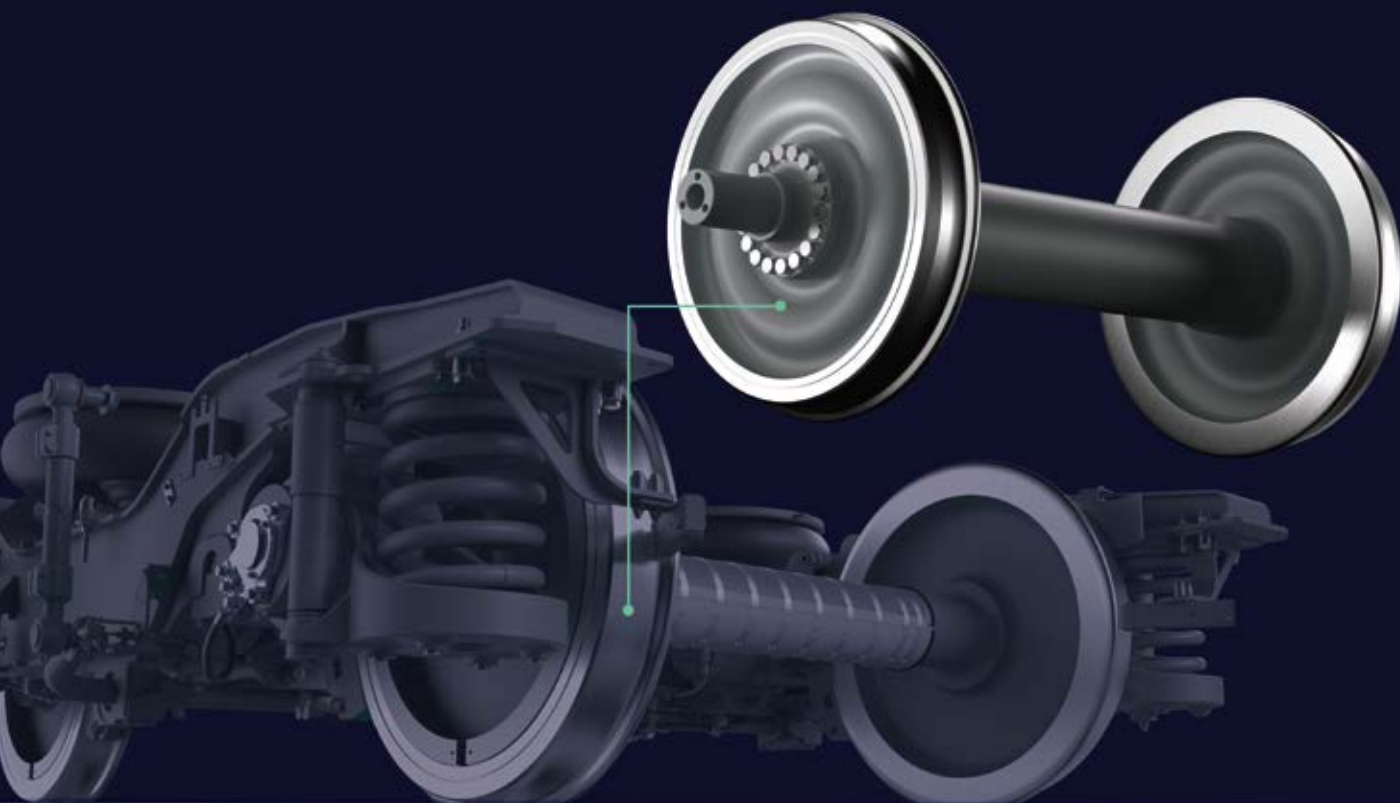




MOCOMP

Lightweight wheelset with bolted wheels

The development activities of MoComp® are focused on the ongoing optimization of railway components. The innovative design of the lightweight trailing axle offers solutions for two major challenges in railway rolling stock manufacture: a substantial weight reduction and a potential improvement of operating safety and cost-efficiency. These are achieved through consistent lightweight construction and by the use of alternative materials, resulting in a weight reduction of over 15 percent compared to the conventional design that uses solid materials. This corresponds to a reduction in unsprung mass of 150 to 200 kg per wheelset. Additionally this leads to energy and CO₂ savings, and furthermore greatly reduces the track load.

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Integrated pressure sensor

An optional pressure sensor can be integrated that constantly measures the air pressure in the shaft, making a significant contribution to operational safety monitoring.

Cost-efficient maintenance

As a further benefit, the trailing axle is easy to maintain. Thanks to its modular design (bolted wheel, shaft, and axle journal), it's much simpler to service.

Thanks to the bolted design, wheel and axle journal assembly and disassembly can be efficiently performed in terms of time and cost. The risk of damaging the wheelset during the assembly process is also eliminated. These components can be selectively replaced if damage occurs.

Product features

Reduced unsprung mass

- Weight reduced by 150 to 200 kg per wheelset

Economical maintenance and assembly

- Easy wheel mounting without a wheelset press
- Possibility of reducing resource-intensive ultrasound tests thanks to internal pressure measurement
- CO₂ savings

References

Y25 freight cars / test operation in Austria



Technical data

Parameter	Value	Implemented in prototypes (Y25)	Standards
Wheel load	10–25 t	25 t	EN 13103-1
Speed	> 120 km/h	120 km/h	
Braking load, block braked wheel	Depending on the design	50 kW for 45 min (TSI WAG)	EN 13979-1
Shaft material	S690	EA1N	EN 13261 / EN 10297-1
Wheel material	ER8 / ER9 / AAR-C	ER7	EN 13262
Weight	Design-dependent	913 kg	

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