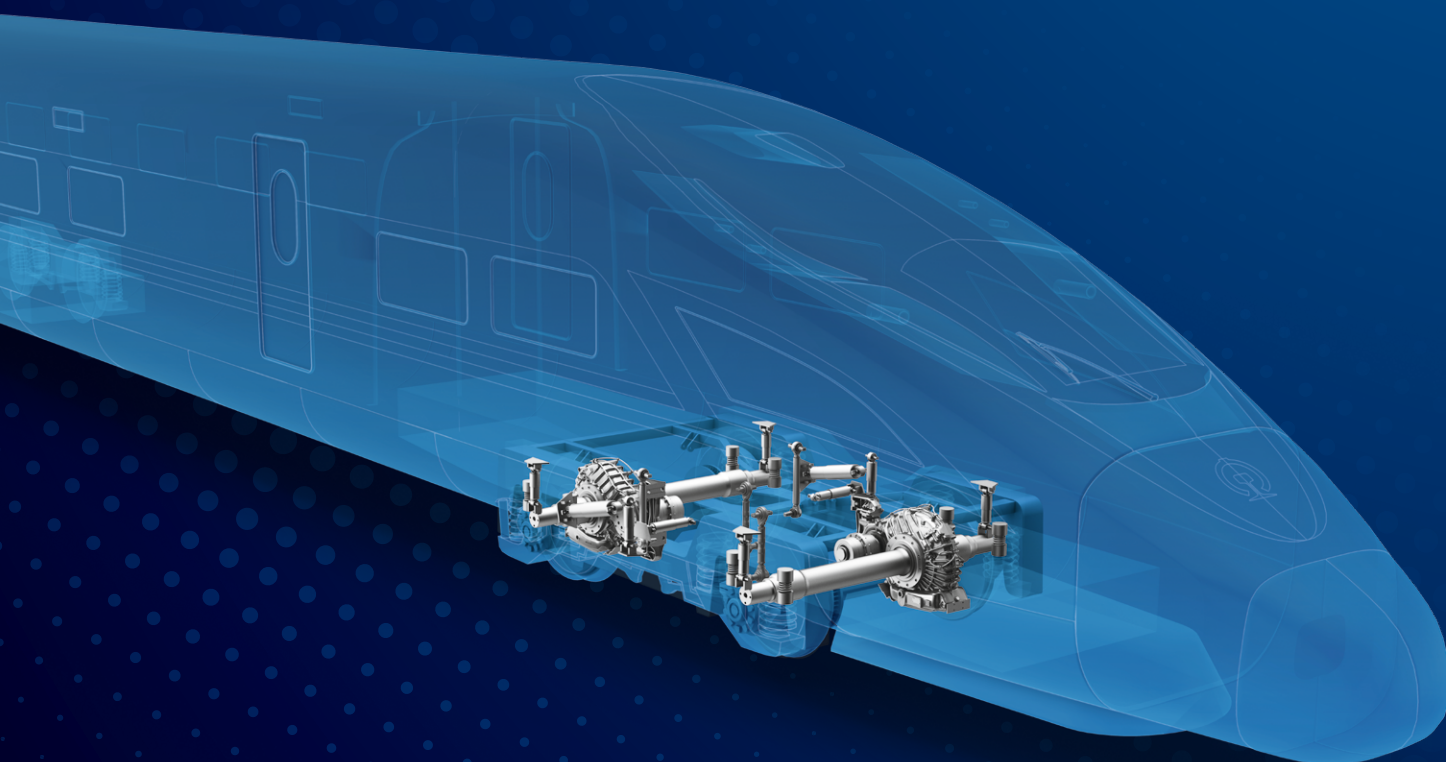




# ZF Highspeed Gearboxes

Helical gear drives for highspeed trains



# With high speed into the future

High velocity, flexibility, reliability, comfort, cost-effectiveness and safety – these are the essential characteristics of the ZF Highspeed Gearboxes for highspeed trains.

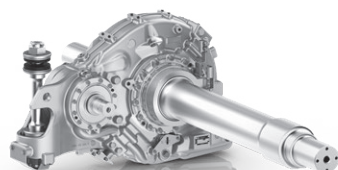
Average train speeds are rising all the time and with them, the demands placed on modern train transmissions with respect to safety, comfort, and cost-effectiveness. When speeds exceed 250 kilometers per hour, the materials are subjected to extreme strain. ZF Highspeed Gearboxes are especially designed for this application. They are designed for the train generations of the future for top speeds of 250 to 450 km/h, thanks to its modular assembly principle which can be flexibly adapted to customer requirements.

## Highlights

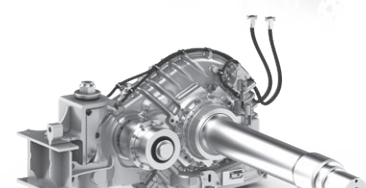
- Single-stage drive
- Robust aluminum housing
- New, improved labyrinth technology
- Bearing temperature monitoring optional
- Accelerometer optional
- Optimized oil supply
- Low bearing temperature
- High efficiency
- Low noise emission
- Optimized gearbox weight



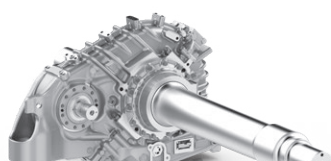
Highspeed CRH380



Highspeed KDZ7-250



Highspeed CW350D



Highspeed CR450

ZF Highspeed Gearboxes are already successfully in operation with almost

**14,000**  units

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	CRH380	KDZ7-250	CW350D	CR450
<b>Input torque [Nm]</b>	3,157	2,212	3,179	3,194
<b>Motor nominal power [kW]</b>	615	350	650	750
<b>Ratio [i]</b>	2.42	3.59	2.52	2.21
<b>Center distance [mm]</b>	380	370	382	382
<b>Weight approx. [kg]</b>	327	300	288	280
<b>Max. speed [km/h]</b>	420	275	380	450
<b>Max. operating speed [km/h]</b>	380	250	350	400