



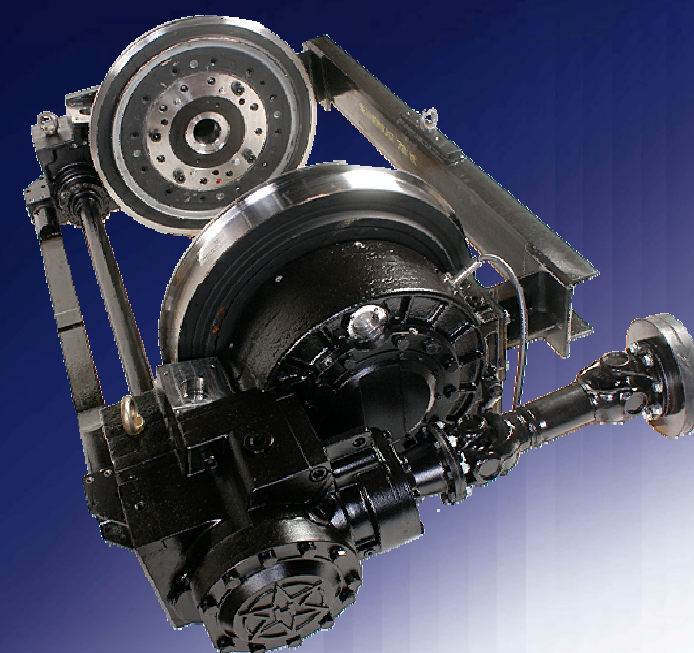
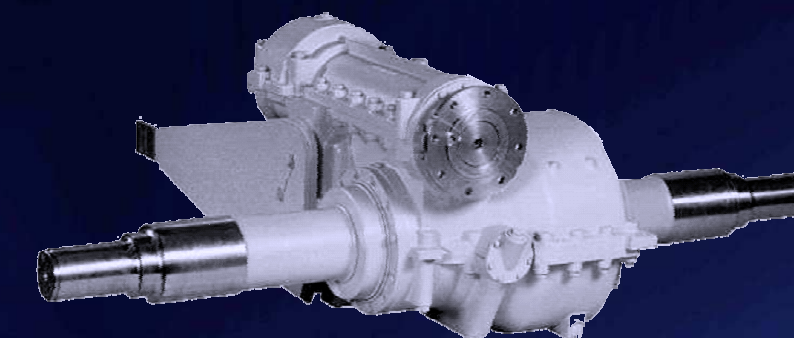
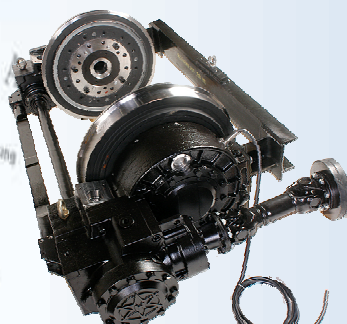
Latest production technology and in house heat treatment ensure the reliability of our products.






DURUTRAIL®

Gearboxes and Gear Sets for Locomotives and Trams

EXCELLENCE
since 1918
in Gearboxes

We create motion!



-  DURUMAX® -Extruder Gearboxes
-  MUTAX® Worm Gear Sets
MUTAX® Worm Gearboxes
-  DURUTRAIL® Railway Technology
-  DURUHIT® Special Gearboxes
-  Job Order Production & Heat-Treatment

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DURUTRAIL® 10/2006

HENSCHEL
Power Transmission®

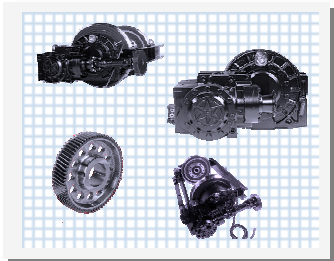


Excellence in Railway Technology from long Tradition!

1810	Founding of the company "Gießerei und Maschinenfabrik Kassel" by G. Chr. Carl Henschel (1759 - 1835)
1837	Commissioning of the plant at Holländischer Platz with the name "Henschel & Sohn, Casse!"
1848	First Henschel-Locomotive named "Drache" (Dragon) Carl Anton Henschel (1780 - 1861) starts with built up of locomotives Expansions of operation by Oscar Henschel (1837 - 1894)
1899	5.000. locomotive had been produced
1910	Centenary of the company Henschel, 10.000. locomotive had been produced
1923	20.000. locomotive had been produced
1931	Taking over the locomotive-manufacturing of Hannoversche Maschinenfabrik AG, Hannomag, Hannover (seit 1846); Henschel rises up to the biggest manufacturer of locomotives
1960	150-birthday; 30.000. Henschel-Locomotive had been produced for Ghana
1976	Renamed in: "Thyssen Industrie AG Henschel" (shortform: Thyssen Henschel); 32.000. Locomotive had been produced for Egypt
1990	Founding a new company with Asea Brown Boveri under contribution of the locomotive part of Henschel and Wagon Union Renamed in: "ABB HENSCHEL AG" (3.600 employees and 500 million Euro sales volume)
1991	Delivery of the 33.000 Henschel-Locomotive ICE-traction unit to the German National Railways (Deutsche Bundesbahn) The standard gearbox program had been sold to Flender. The manufacture of gearboxes, which is specialised into worm gearboxes, extruder gearboxes, locomotive axle gearboxes and custom gearboxes, remains to Henschel in Kassel.
2002	Renamed in "Henschel Industrietechnik GmbH" with products Power Transmission, Mixing Technology and Handling Systems.
2003	KERO Holding AG takes over Henschel Industrietechnik GmbH from ThyssenKrupp Technologies AG
2004	Spin-off Henschel Antriebstechnik GmbH



HENSCHEL Antriebstechnik GmbH has its headquarter in Kassel, located in the center of Germany.
HENSCHEL, a company with a longstanding tradition, was founded in Kassel in 1810, their activities in building gearboxes started 1918. Henschel gearboxes are used worldwide for a variety of applications and are a synonym for quality, reliability and performance. In many areas we are viewed as the trendsetter of the industry.
Precedence has been set for efficiency and reliability, yet keeping economy of scale as the highest priority. Our quality standards and the close relationships with our customers made us a dependable partner, acknowledged worldwide. Henschel stands for power of innovation and top-notch quality project engineering. Our products are constantly improved or newly developed to set the assessment objectives for the future.



Tram Traction System for Low-Floor Tram in Zagreb, Croatia



- Maximum speed: 70 km/h
- Continuous rating: 3x2x65 kW
- Year of construction: 2004

Product Overview

Single stage bevel gearbox AK

Details		Range
axle load in tons		10 to 20 t
axle shaft Ø	D	160 to 200 mm
ratio	i	2,4 to 3,8



Two stage helical-bevel gearbox AKV

Details		Range
axle load in tons		10 to 15 t
axle shaft Ø	D	160 to 170 mm
ratio	i	2,6 to 5,5



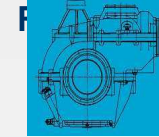
Two stage helical-bevel gearbox ATV

Details		Range
axle load in tons		16 to 24 t
axle shaft Ø	D	180 to 220 mm
ratio	i	2,9 to 4,72



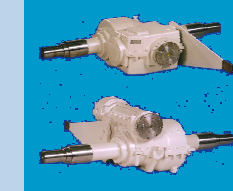
Two stage helical-bevel gearbox

Details		Range
axle load in tons		18 to 24 t
axle shaft Ø	D	180 to 220 mm
ratio	i	5,1 to 7,86



Two stage resp. three stage helical-bevel gearbox RKS-SO as well as RSKS-SO

Details RKS-SO		Range
axle load in tons		20 t
axle shaft Ø	D	200 mm
ratio	i	3,18



Details RSKS-SO		Range
axle load in tons		20 t
axle shaft Ø	D	200 mm
ratio	i	3,72 - 6,2

Damage Analysis and Overhaul

