Drive technology TODAY

HANSA-PARK – service for roller coaster drive technology

Overview

Industrial gear units and comprehensive service for one of Europe's most state-of-the-art roller coasters – "The Oath of KÄRNAN" promises HANSA-PARK visitors an adrenalin-fueled XXL experience, with SEW-EURODRIVE working behind the scenes to ensure their safety.



SEW EURODRIVE

Customers

HANSA-PARK

Location: Sierksdorf (Germany)

Sector: Rides/theme parks & attractions

Application: Drive technology for "The Oath of KÄRNAN" roller coaster

Customer requirements

Reliable drive technology for "The Oath of KÄRNAN" roller coaster

One single supplier to contact for all drive technology and service operations

Designed for a ten-year operating period

Chain lift capable of lifting a fully loaded train vertically at a speed of 3 m/s

Breakaway torques that are difficult to determine factored in

Three trains, each holding 16 passengers, in operation simultaneously

Uncompromising focus on operational safety and availability

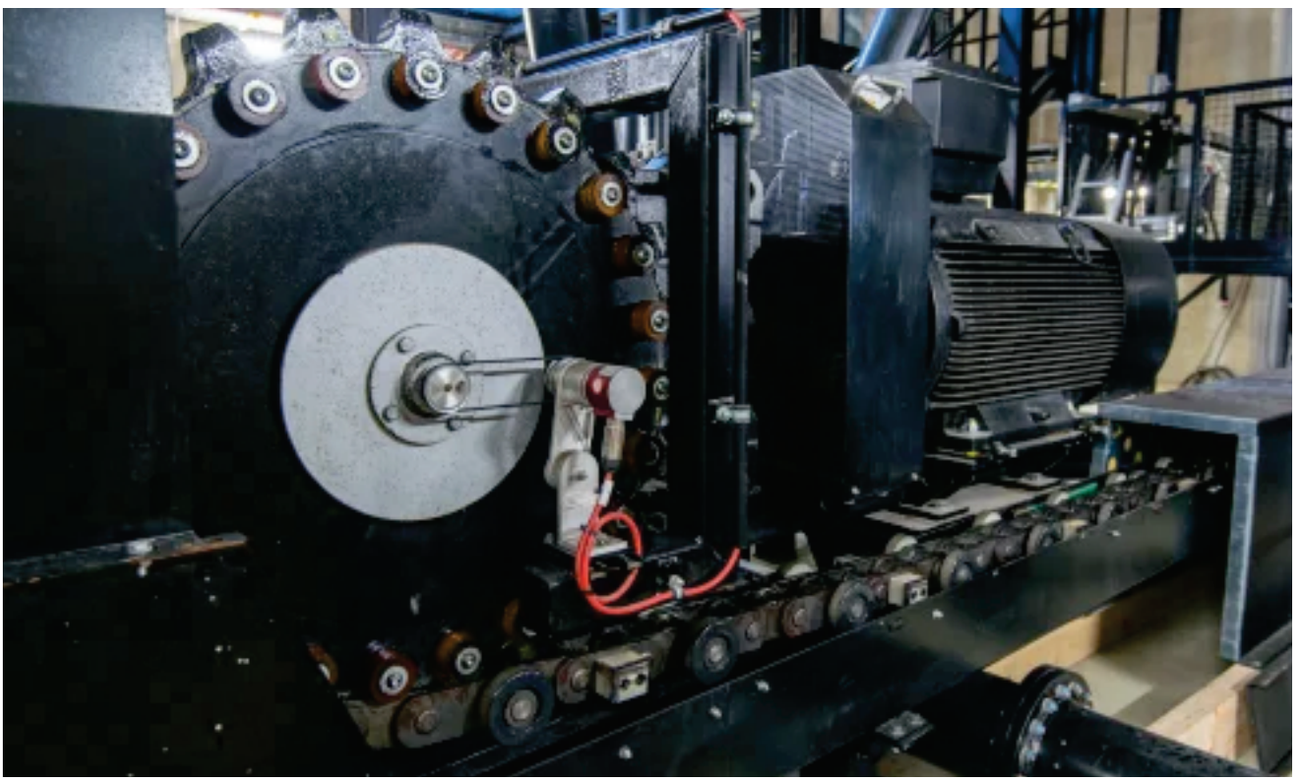
Quick service and supply of replacement parts ensured

"The Oath of KÄRNAN" at HANSA-PARK

Plummeting vertically at a top speed of 127 kilometers per hour – a globally unique reverse freefall from a height of over 77 meters in the dark – "The Oath of KÄRNAN" at HANSA-PARK, near Lübeck in Germany, marks a new chapter in roller coaster history. Industrial gear units, frequency inverters, and motors from SEW-EURODRIVE create a customized combined drive technology and service solution that ensures excellent system availability, delivers a high level of safety, and satisfies thrill-seekers.



Starting point a reverse freefall from a height of over 60 m in the roller coaster's tower



79 kN torque – the X3 KS 200 industrial gear unit behind the sprocket

SEW EURODRIVE

Solution

A gear oil cooling system rounded off the all-in drive solution

Motor-gear unit combination for the chain lift

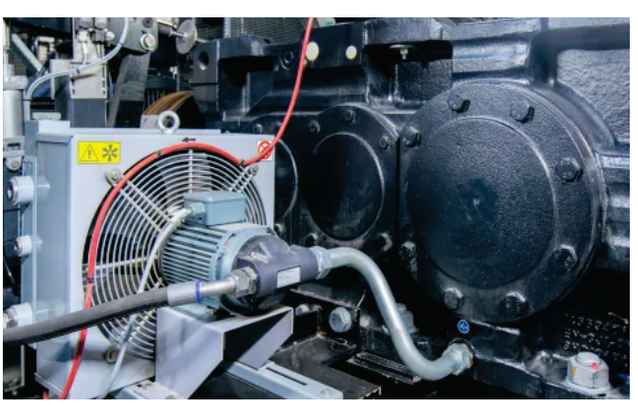
- X3 KS 200 industrial gear unit with nominal torque of 79 kN
- Bevel-helical gear unit with solid shaft and low-noise gearing
- 400 kW AC motor in the IE2 energy efficiency class
- Frequency inverter clocked at 6 kHz for low noise levels
- Energy reserve for breakaway torques and reliable operation
- Gear oil cooling system

Five additional drives to reach the chain lift

- Each with a power rating of 22 kW
- Gearmotors in the IE2 energy efficiency class
- MOVIDRIVE® B frequency inverters

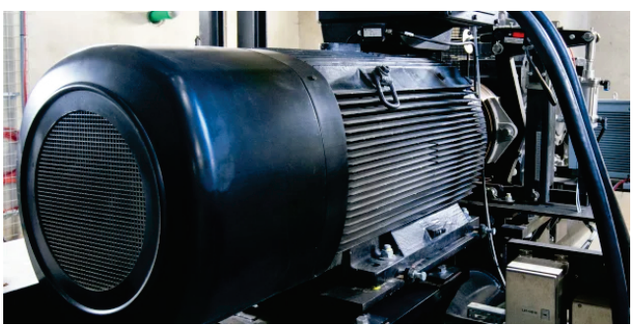
Service concept covering the entire system life cycle

- Requirements analysis and conceptual design
- Planning & engineering
- Startup
- Annual end-of-season gear unit inspection
- Examination with an inspection scope and oil analysis
- Regional field service for rapid response

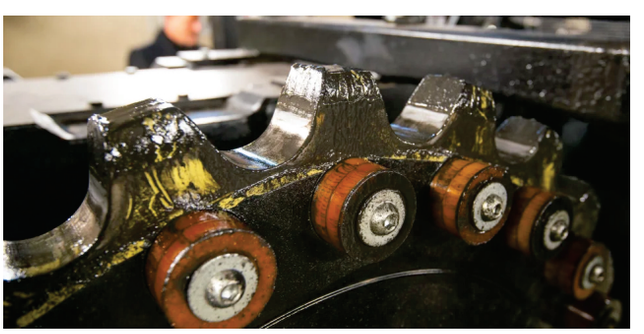


Customer benefits

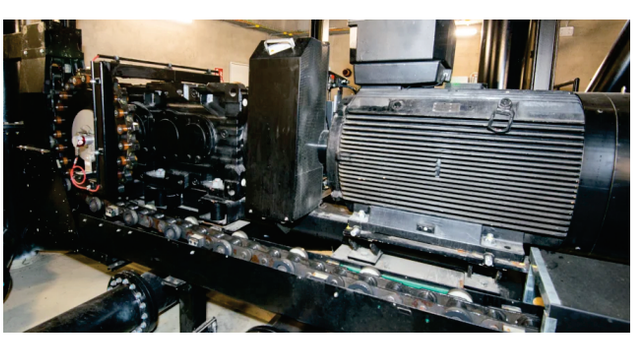
- Safe operation and reliable functioning
- Drive technology with enhanced availability and a longer service life
- Lower motor and gear unit noise levels for a more enjoyable visitor experience
- Attraction always available to visitors
- Standardized switch cabinets facilitate day-to-day maintenance
- Straightforward ongoing drive maintenance and repair



Drive package with 400 kW AC motor – assembled at SEW in Bruchsal



Sprocket



X3 KS 200 industrial gear unit