



Chains and sprockets for the

# Amusement Park Industry

Industry Solutions



## The KettenWulf Group worldwide



**The main factory in Kückelheim not only houses the company headquarters, but also the KettenWulf Engineering Centre. Here we provide worldwide support for customers in all technical issues.**

**Kückelheim, with a production area of 30,000 square meters and a staff of roughly 550, is the largest production facility of the KettenWulf Group.**

For over 90 years, KettenWulf, as an expanding global company, has stood for quality, reliability and flexibility. More than 1400 employees develop, produce and market customized solutions in the field of conveying and drive technology at ten locations across Europe, America, Australia and Asia. All around the globe, KettenWulf is your strategic partner when it comes to delivering optional product quality.

Whether the Sauerland, Hangzhou, Atlanta, Sydney or Pune – as an international company with worldwide operations, our employees are always at your service to meet your unique business needs and to provide you with industry leading technical support.

Trust, loyalty and commitment – these values are what KettenWulf stands for. As a medium-sized family-run company, cultivating a strong, personalized partnership with both our customers and suppliers is our highest priority.



**Top:**  
The Chinese production and sales facility in Hangzhou

**Bottom:**  
Assembly and sales facility in Atlanta, USA



**KettenWulf offers innovative conveyor chain technology for all applications in the amusement park industry.**



## We are partners of the amusement park industry

For decades notable equipment manufacturers have selected KettenWulf drive and conveyor systems. Parks and ride manufacturers trust KettenWulf, because we understand the needs and requirements of the amusement park industry.

KettenWulf combines the expertise of each department, from research & development, to production and assembly, in order to provide the best product customized for your individual transport and conveying needs. Through our extensive experience and knowledge gathered from working with various industries, we can provide innovative, economical and environmentally responsible solutions.

Our customers are already benefiting from the use of our low-maintenance, lube free technologies and noise reduction systems.

## Chains for roller coasters



High chain speeds and the resulting dynamic loads in conjunction with external ambient influences are decisive factors for the use of conveyor chains in roller coaster lift systems.

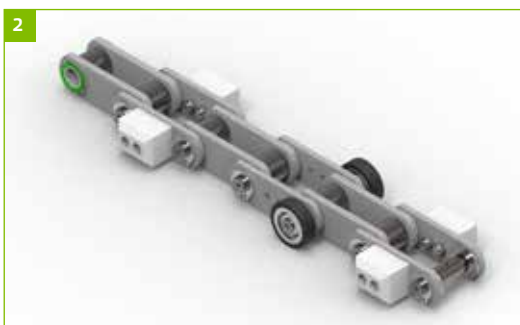
- » High-strength, tempered materials
- » Optimal heat treatment for wear reduction
- » High pitch accuracy
- » High pitch hole quality to support the dynamic loads
- » Use of ultrasonic tested raw material and magnetic particle testing of the components according to DIN EN standards
- » *Optional:* Use of ultrasonic tested raw material and magnetic particle testing of the components according to DIN EN standards

Machined pitch holes and optimized press fits between the individual chain components, i.e. outer link plate and pin as well as inner link plate and bush, have become a quality standard for most of our roller coaster chains.

**Illustration 1:**  
Standard lift chain  
with protection roller



**Illustration 2:**  
Lift chain with guide  
blocks, plastic outboard  
roller with ball bearing



**Illustration 3:**  
Lift chain with guide  
blocks, steel outboard  
roller with ball bearing



Moreover, the chains can be supplied with lubrication system and special KW sealing system, different types of guide blocks and, if requested, various anti-corrosion coatings, customized outboard rollers.

## Chains for water rides

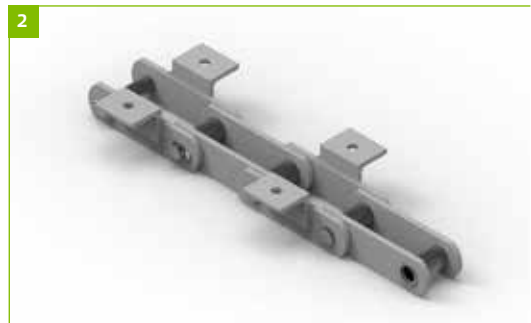
Permanent contact with corrosive media, low construction heights and special attachment angles are typical design features of water ride chains. We have the right solutions for exactly these ambient influences.

- » A selection of different anti-corrosion coatings
- » Use of stainless steel materials
- » Use of slide bearings
- » Optimal heat treatment, especially of stainless steel
- » KettenWulf sealing system
- » Customized attachment angles
- » Customized solutions for every application

**Illustration 1:**  
Water ride chain  
with welded  
attachment angle



**Illustration 2:**  
Water ride chain with  
welded attachment  
angle and slide  
bearing in chain joint



## KettenWulf's unique sealing system

After many years of experience in designing and supplying chains for various applications with a high diversity of different and complex environmental conditions, KettenWulf has designed the most reliable sealing system.

Features:

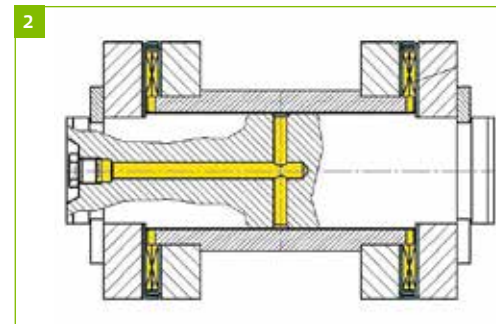
- » Initial lubrication during assembly in the chain joint
- » Stainless steel cover not only protects the seal but it is an integral part of the labyrinth system

The KettenWulf sealing system has helped many customers to decrease wear while increasing the lifetime of the chain in the most demanding applications worldwide.

- » Seal with herringbone design increases sealing action preventing material from entering the chain joint

**Illustration 1:**  
Sandwich-sealing system with interior lip sealing

**Illustration 2:**  
Combination of lubrication system with sandwich-sealing



## Sprockets with noise dampening system

The noise that occurs while the chain engages into the sprocket is often disturbing and irritating. To reduce the noise efficiently and to improve the working conditions, KettenWulf has developed different noise dampening systems. These systems ensure that the chain joints are smoothly guided into the tooth gap, which leads to a considerable

noise reduction. The selection of the most suitable noise damping system depends on the respective application.

Impacts and vibrations are reduced especially when using high speed chains. The sprockets can be mounted vibration-damped additionally.

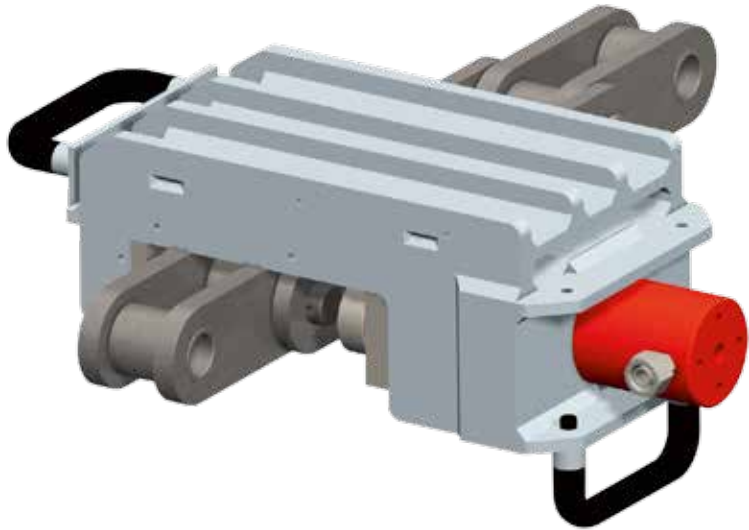
**Illustration 1:**  
Sprocket with noise dampening system

**Illustration 2:**  
Sprocket with noise dampening system



## Assembly tools

To ensure safe and professional assembly, we supply matching assembly/disassembly presses with operating instructions and CE declaration, optionally with the necessary hydraulic components.



## Quality and service

The success of the KettenWulf Group is based on a long-term relationship with satisfied customers. In order to guarantee a constantly high product quality, KettenWulf implemented and operates a quality management system according to DIN EN ISO 9001:2008 in all departments and processes within the different KettenWulf production sites. Besides the KettenWulf Group not only offers standard product certificates as per EN 10204 but also quality certificates with customized contents considering the demands and requirements of our customers.

### **Our service portfolio includes:**

- » Technical support during the design and engineering period
- » Availability of test equipment at our premises, e.g. tensile test machines up to 3000kN, Charpy test equipment, vibrophores for fatigue testing up to 150kN, hardness testers, etc.
- » Support during installation on site including supervisor activities
- » Creation of status reports and wear analyses by inspecting chain samples returned from site
- » Welding according to DIN EN ISO 3834-2 and DIN EN 1090-1/-2

**Illustration 1:**  
Quality check



**Illustration 2:**  
Breaking load test  
up to 3000 kN



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