



## Chain Drive Systems for Two-Wheel Vehicles

Our systems expertise is your benefit

**SCHAEFFLER**



## Schaeffler: Your systems partner

Schaeffler is a renowned supplier to the automotive industry. We are one of only a small number of companies in the world with a complete range of chains for automotive applications. For timing drive systems, we supply specially designed roller bush chains, roller chains, and inverted tooth chains. What is more, we support our customers by developing and manufacturing all ancillary components for chain drives, including tensioners, chain guides, and chain sprockets.

We also implement our systems expertise on the two-wheel vehicle market. For instance, we have created a new and even narrower high-performance inverted tooth chain for motorcycles based on our established INA I632 range of chains. When expanded into complete systems, our components offer a full range of technically and economically perfect solutions for two-wheel vehicle timing drives.



## Products and service: We are there for you!

In keeping with our motto “In the region, for the region”, we provide a full range of engineering support, manufacturing, and services for chain drive systems in your area and work together with you locally to develop exactly the solutions you need for your market. Our local manufacturing facilities enable us to provide just-in-time deliveries, rapid response times, and service right at the customer’s doorstep.

### Schaeffler motorcycle sector: Engineering Centers all over the world

Wherever motorcycles are built – we are nearby with the know-how and resources of our international group of companies, because successful teamwork starts in the development phase.





# Complete System Solution

## Chain guides

made from low-friction,  
heat-stabilized plastic

- Always the correct solution for all design space and rigidity requirements

## Sprockets

available in a machined  
or sintered version

- For very high demands in terms of quality and cost-effectiveness

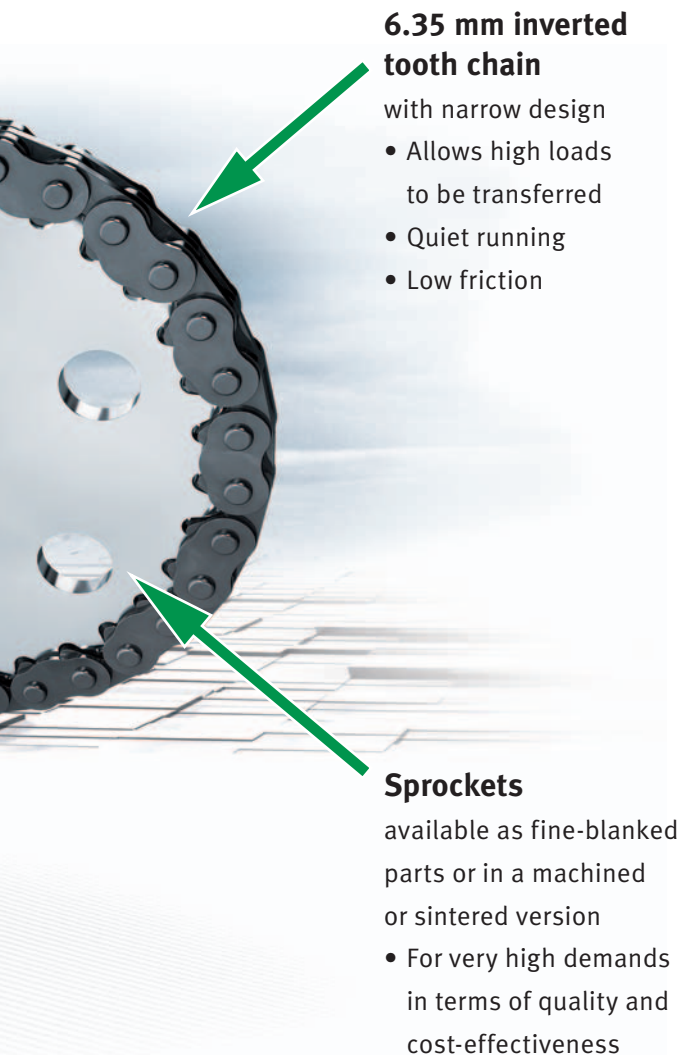
## Integrated mechanical chain tensioner unit

an intelligent solution for optimum system control

- Reduced weight and design space requirements
- Quiet running with low friction
- Maintenance-free
- Easy to install



# Everything from one source



### **6.35 mm inverted tooth chain**

with narrow design

- Allows high loads to be transferred
- Quiet running
- Low friction

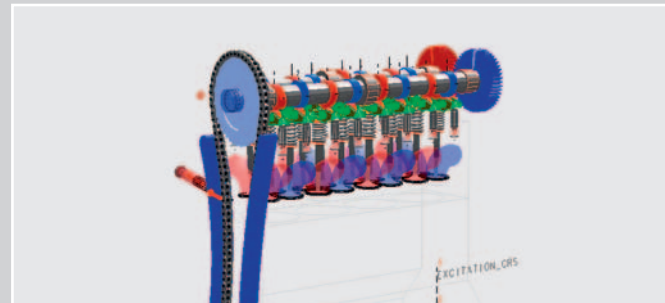
### **Sprockets**

available as fine-blanked parts or in a machined or sintered version

- For very high demands in terms of quality and cost-effectiveness

## **Systems expertise in product development**

Every single chain drive component is developed using state-of-the-art calculation and simulation processes. The overall system is then analyzed using process simulations and FEM, and improvements made to the design. The system is put through a comprehensive series of tests – as a stand-alone, in combination with the adjacent construction, and as part of a complete vehicle – through which the calculated results are verified and further optimizations made. Only then does volume production begin.

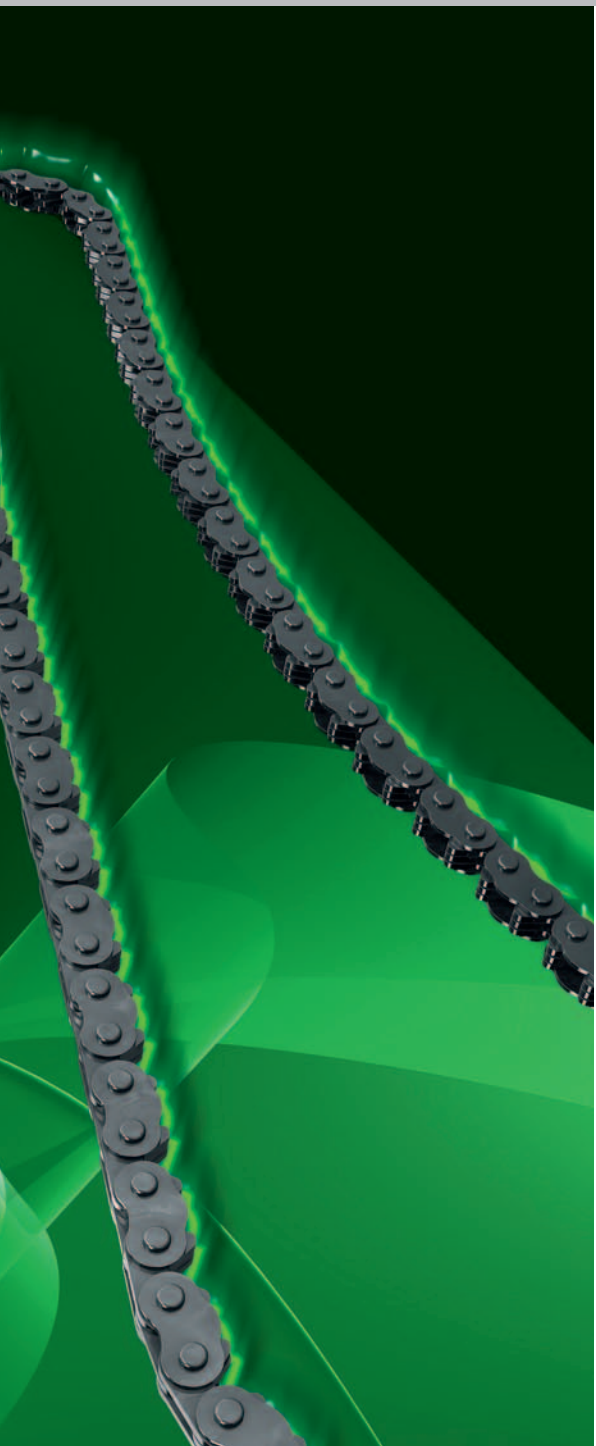


Simulation with chain drive system and ancillary components



System test inside an engine on a Schaeffler test stand

# High-Performance Inverted Tooth Chain

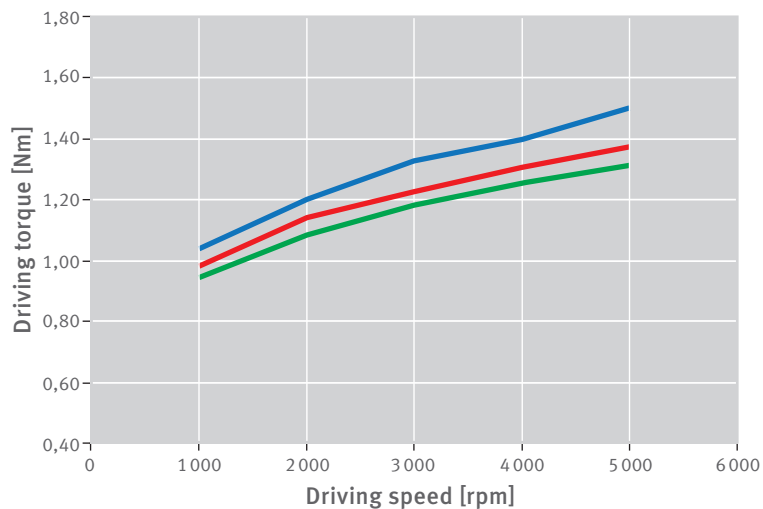


## Innovative: Extra-narrow inverted tooth chain

Timing chains have firmly established themselves in modern timing drives that are subjected to high loads. With the INA I632 IC Narrow, Schaeffler has now developed an especially narrow inverted tooth chain that offers numerous advantages for high-speed motorcycle applications:

- Reduced noise and friction
- Resistant to wear
- Long operating life
- Can be used as a 1:1 replacement for 6.35 mm “Type 92” inverted tooth chains with 2 × 3 plate lacing

## LOW FRICTION



INA I632 IC

Competitor 1

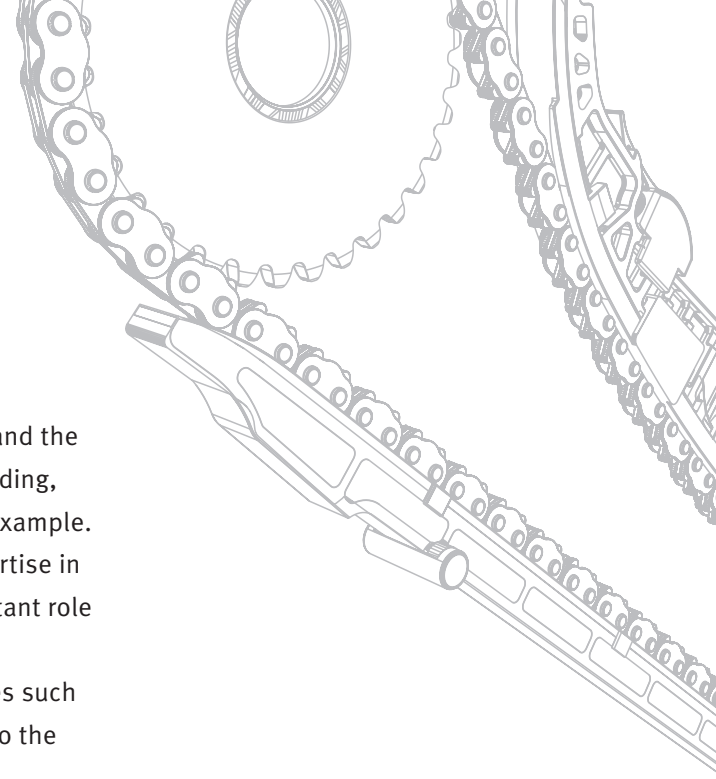
Competitor 2

## Proven advantages for the customer

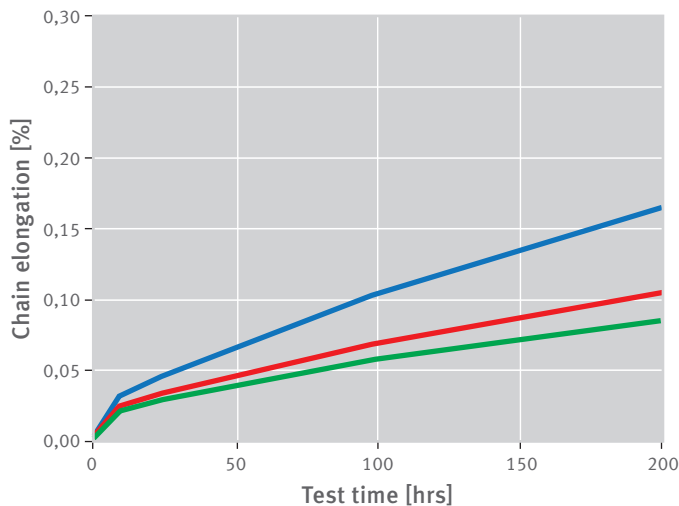
**LOW FRICTION** – thanks to the special tooth geometry and the manufacturing expertise we put into the stamping, grinding, pin manufacturing, and heat treatment processes, for example.

**WEAR RESISTANT** – the innovative design and our expertise in materials and manufacturing technology play an important role here.

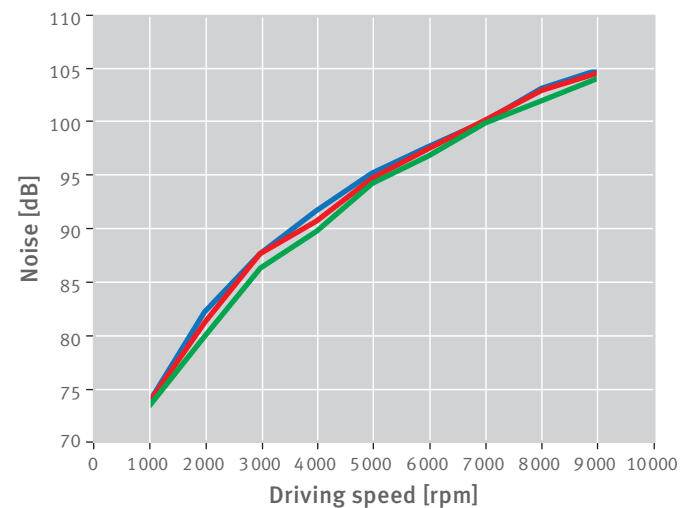
**QUIET** – noises and vibrations are minimized by features such as the damped, smooth meshing of the chain plates into the sprocket teeth.



### WEAR RESISTANT



### QUIET



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