



**KAPPSTEIN**

**BIKE TECHNOLOGY**



8Bar Team Fixed42 World Championships 2017 Berlin • Photo: Stefan Haehnel



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Kristina Vogel at the European Championships • Photo: Roberto Bettini / BettiniPhoto



## SPROCKET

The Kappstein Sprocket was developed to realize a new design theory - the "round-teeth-design". Due to the new design it offers a lot of advantages. One of the most obvious feature of the Kappstein are the round teeth in comparison to conventional sprockets. Furthermore, the innovative sprockets are CNC machined by using only highest quality stainless steel. The consequence of this new design is much higher longevity for the sprocket as well as the connected components. Additional this new design leads to a higher power transmission. With the integrated holes [15T-19T] the product is also quite light, the 16T version for example only weighs 49 grams. A real premium component.

## FACTS

- Round-Teeth-Design
- 630 stainless steel
- 1.370" x 24 TPI threading
- 1/2 x 1/8" Inch
- CNC machined
- laser engraved
- 12T-19T [1/2"x1/8"]
- 12T-17T [1/2"x11/128"]



KAPPSTEIN

PRO LINE

53177075 78  
KAPPASTEIN  
MADE IN GERMANY

Kappstein provides Ruphus chainrings for all 8Bar bikes • Photo: Stefan Haehnel



## RUPHUS

With the newly designed „Ruphus“ named chainring, Kappstein closes a gap and offers besides their proven sprocket also a solution for the crankset. CNC machined out of a 5mm 7075T6 aluminum plate the chainring is very stiff and light. It has 6 different CNC machined steps which leads to a very interesting and unique look with lots of details to explore. With only 99 grams (49T) and a great stiffness this chainring is a must have for every one that values design and performance. Even for our friends on fixed gear bikes this chainring is a pretty good solution to optimize the drive train and to realize their full potential. The 8bar Team around Stefan Schott, the leader of the team, has been riding the chainring in all fixed gear events since 2016. This valuable experience of all these professional guys will be used in the continuous development of our products.

## FACTS

- 7075/T6 aluminum
- 49T, 51T
- BCD: 5 x 144mm
- CNC-machined
- anodized: deep black & nato olive\*
- 100% Made in Germany
- Round-Teeth-Design
- extremely smooth
- durable

\*special anodized. Extrem hard surface which is three times more durable than normal anodized



World Champion Kristina Vogel riding Kappsteins ProLine • Photo: Kappstein



## ELITE CHAINRING

The Elite chain ring is a special chain ring that was developed in close collaboration with FES (Institute for the Research and Development of Sports Equipment). More and more track cyclists are riding larger ratios to improve their performances. For large chain rings its most important to pay special attention to the stiffness. We developed a chain ring with a special strutting to achieve a perfect balance between stiffness and weight. The material we use is the hard 7075/T6 aluminum. We finished the Elite chain rings with a special coating, so that the chain can easily slide through the tooth-valleys. It was our main target to reduce the frictional loss to a minimum – et Voilà!

### FACTS

- bolt circle: 5 x 144 mm
- 50T, 52-60T
- 7075/T6 aluminium
- CNC-shaped
- Round-Teeth-Design
- extreme stiffness
- minimal weight
- 56T = 114g
- special coating; hard-eloxyd
- 100% Made in Germany





David van Eerd riding Kappsteins ProLine at the Fixed42 race • Photo: Stefan Haehnel



## KAPPSTEIN PROLINE

„Pro Line“ stands for a new product line, which has been specifically developed for the competitive sport and its extremely high demands. All products with the add-on „Pro Line“ have been optimized for a specific application. A variety of areas can be optimized which can include weight, stiffness, function, surface treatment or the material itself. The first product of this series will be a new sprocket and chainrings, which was developed together with Institute for the Research and Development of Sports Equipment (FES). We designed a special sprocket which is compatible with the narrower 11-speed chain. This product has been developed for the German national track cycling team for the Olympic games in Rio 2016. The endurance athletes as well the sprinters will ride this product in training and of course in their respective competitions.

/// PRO LINE

### PRO LINE PRODUCTS

- Sprocket ProLine
- Elite chainring
- Ruphus ProLine



The Silent Freewheel Hub developed by Kappstein • Photo: Kappstein

SFfourty2  
DEVELOPED BY KAPPSTEIN

SFthirty5  
DEVELOPED BY KAPPSTEIN

## SILENT FREEWHEEL HUB

Besides the Silent Freewheel Sprocket, the Silent Freewheel Hub is a new addition to the Kappstein product portfolio. This Silent freewheel hub uses an innovative adaptation of the traditional roller freewheel concept and ensures silent operation of the hub. Additionally, it provides instant engagement offering an unmatched and exciting ride feeling. With the integration of this mechanism into a ready-to-mount hub body and the opportunity to combine this hub with any standard sprockets or disc brakes, it opens up many new application possibilities like Urban, Trekking and Mountain-biking. The hub will be available in different versions and can be combined with quick release skewer or through axles.

## FACTS

- number of spokes: 28/32
- axle: 12x142mm; 5x135mm
- freehub body: 11-speed, Singlespeed
- compatibility: Shimano, Sram, Campagnolo
- 6-Bolt ready for disc brakes
- weight: 440g (135mm)
- instant traction
- nearly soundless





Urwahn Stadtfuchs equipped with the Kappstein Doppio • Photo: Urwahn Bikes

## DOPPIO CX & DOPPIO BX

The Doppio Bottom Bracket Drive System by Kappstein is a milestone in the era of bottom bracket drive systems for bicycles. By using high precision components and low tolerances, Kappstein succeeded in developing a solid and with little more than 1cm, one of the smallest planetary gear system on the market. Moreover Kappstein has been successful in providing a gearbox with two different types of shifting. Depending on the version it is possible to switch between the two gears by using the shifter on the handlebar [Doppio CX] or by doing a short back-kick with the crank, the so called "kickshift" function [Doppio BX].

The gear ratio for both versions is 1:1,57. Due to the compatibility with any 68/73mm BSC/BSA bottom bracket, different fields of application are imaginable. Most planetary gears consist of 3 or 4 planets, the Kappstein planetary gear has 6 planets! As a result, the attrition is reduced and the durability extends.

## FACTS

- 2-Gear Bottom Bracket Drive System
- gear ratio: 1 : 1,57
- chain line: 43,5mm
- Q-Factor: 185mm
- 4 x 104mm bolt circle
- gearshift: wire or "kick-shift"
- JIS square
- compatible with BSC/BSA bottom brackets
- 6 planets - CNC-machined
- for city, urban, eBikes, trekking





The Doppio with shifter developed by Kappstein • Photo: Kappstein



## DOPPIO 2 SPEED SHIFTER

The Doppio 2 speed shifter is one of the smallest and smartest on the market. It keeps the handlebar super clean and gives every bike a special touch.

### FACTS

- material: aluminum
- weight: 25g
- compatible with all handlebars

## DOPPIO CRANKSET

The suitable crankset was specially designed for the Doppio. It combines a classic look with a lightweight design and harmonizes perfectly with the Doppio gearbox.

### FACTS

- material: aluminum
- JIS-Square
- weight: 420g

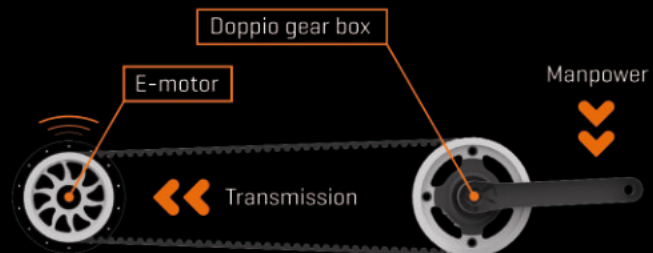




## DYNAMIC FLOW CONCEPT

The "Dynamic Flow Concept" describes a drive principle that is characterized by the composition of the gear box and the motor. By combining different rear engines from Kappstein or third parties with the Doppio gearbox as the front shifting system, the transmission of forces [dynamic flux of force] from driver to road is very effective on the one hand.

On the other hand the wearout on every single components is minimized because the Engine behind the transmission has no direct influence on the switching process.



## KAPPSTEIN MOTORS

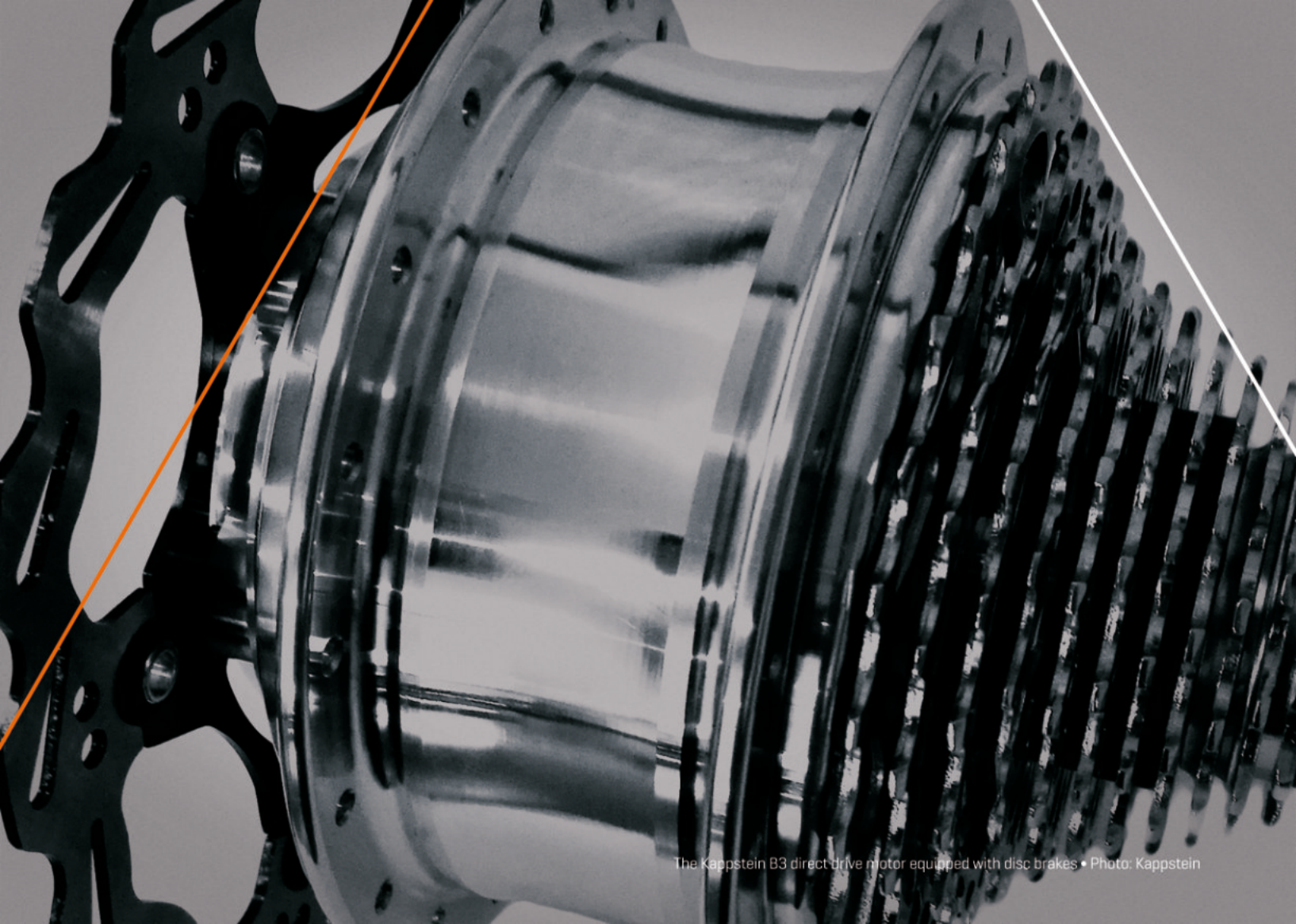
The newly developed Kappstein motors can be considered quite revolutionary in the field of rear motors for pedelecs. Kappstein offers innovative direct drive motors with a 3 speed gearing system as well as motors with a very low weight (2,4 kg).

All motors are equipped with an internal controller and torque sensor.

Therefore, the drive system is very compact, easy to use and offers a very smooth ride.

Kappstein's ambition is to provide a one stop solution: the motor, the display and the battery. This is mostly a non-standard solution. Every customer is offered an individual package tailored to their needs. Individualism and customizing are the keywords for our co-operation. We are working on the finalization of the package and looking forward to presenting it soon.

If you have any questions feel free to contact our sales-team.



The Kappstein B3 direct drive motor equipped with disc brakes • Photo: Kappstein



<b>Nominal Voltage</b>	36 V
<b>Nominal Capacity</b>	150 W / 350 W
<b>Maximum Output</b>	400 W
<b>Weight</b>	2,7 kg (2,3 kg light version)
<b>Diameter (PCD)</b>	110 mm
<b>Torque</b>	20 Nm - 25 Nm
<b>Type</b>	BLDC direct drive hub Motor
<b>Spokes</b>	28, 32, 36
<b>Protection Class</b>	IP55
<b>O.L.D.</b>	135 mm (quick release) / 142 mm (thru axle)
<b>Efficiency</b>	86 %
<b>Brake</b>	Kappstein disc brake adapter
<b>Axle</b>	M10 bolt on or thru axle
<b>Color</b>	black, silver
<b>Sensors</b>	internal (torque, heat) & internal controller
<b>Communication</b>	CAN Bus
<b>AOB</b>	no screws, very clean no noise (silent freewheel)



<b>Nominal Voltage</b>	36 V
<b>Nominal Capacity</b>	250 W
<b>Maximum Output</b>	adjustable
<b>Weight</b>	4,2 kg
<b>Diameter (PCD)</b>	168,5 mm
<b>Torque</b>	40 Nm
<b>Type</b>	BLDC direct drive hub Motor
<b>Spokes</b>	28, 32, 36
<b>Protection Class</b>	IP55
<b>O.L.D.</b>	135mm / 150 mm
<b>Efficiency</b>	85 %
<b>Brake</b>	6-bolt adapter
<b>Axle</b>	M10 bolt on
<b>Color</b>	black, silver
<b>Sensors</b>	internal (torque, heat) & internal controller
<b>Communication</b>	U-Art
<b>AOB</b>	no screws, very clean E-switch no noise (silent freewheel)



<b>Nominal Voltage</b>	36 V
<b>Nominal Capacity</b>	250 W
<b>Maximum Output</b>	adjustable
<b>Weight</b>	5,8 kg
<b>Diameter (PCD)</b>	183 mm
<b>Torque</b>	40 Nm
<b>Type</b>	BLDC direct drive hub Motor
<b>Spokes</b>	28, 32, 36
<b>Protection Class</b>	IP55
<b>O.L.D.</b>	135mm / 150 mm
<b>Efficiency</b>	85 %
<b>Brake</b>	6-bolt adapter
<b>Axle</b>	M10 bolt on
<b>Color</b>	black, silver
<b>Sensors</b>	internal (torque, heat) & internal controller
<b>Communication</b>	U-Art, CAN Bus
<b>AOB</b>	no screws, very clean Internal Kappstein 3 speed hub E-switch no noise (silent freewheel)



TU-57-01-014

The Kappstein production shed in Gotha, Thuringia • Photo: Kappstein

**KAPPSTEIN**

BIKE TECHNOLOGY

Kappstein GmbH & Co. KG is an innovative company specializing in electric bike motors and premium bike components. Over the last years Kappstein gained a lot of experience in developing and producing high-quality bike components as well as electric-drive-systems. At the turn of the century the founders of Kappstein worked with one of the largest bike producers in Europe to supply a large quantity of motors. As one of the first ebike motor producers in the market, Kappstein significantly influenced the market. Still today this motor is being used and is offered in an upgrade version along with three other innovative new motors. What started in Australia has now shifted to Germany due to the close proximity to the important European market for bikes and components.

## CONTACT

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