



Countertrack (SX) Joints



Only GKN Automotive can do this: patented OE joint technology in the aftermarket

SPIDAN[®]
Original GKN Parts

Ideas in Motion ➤

The perfect replacement joint: OE-compliant in all properties

When selecting an adequate replacement joint, it is important that all properties conform to those of the OE joint. Therefore, check carefully:

- Is the maximum bending angle of the OE joint reached?
- Does the replacement joint have the same design (size, diameter, weight)?
- Does the replacement joint transmit the same torque in every steering angle?
- What is its Noise Vibration Harshness behavior under load?

Only the replacement joint from the OE supplier can fulfil all these performance features at once. Only GKN Automotive offers the new Countertrack technology in the independent aftermarket.

Decades of expertise

The first use of a modern constant velocity joint system in the Mini made GKN Automotive a pioneer in the 1950s. During the next decades our technology centres developed innovation after innovation. Each one brought with it an improvement in vehicle performance and driving comfort.

SX-Countertrack-Technologie:



Rzeppa fixed joint (RF joint)

- Torque range 900–4,600 Nm
- Max. articulation angle 47°
- Circular ball tracks



Angular Contact (AC) fixed joint

- Torque range 900–4,600 Nm
- Max. articulation angle 47°
- Elliptical ball tracks



Countertrack (SX8) fixed joint

- Torque range 2,900–5,100 Nm
- Max. articulation angle 52°
- S-shaped ball tracks

GKN Countertrack joints –opposition is good!

SX joints are distinguished by a characteristic S-shaped track profile and counter-running ball tracks –hence the name „Countertrack“.

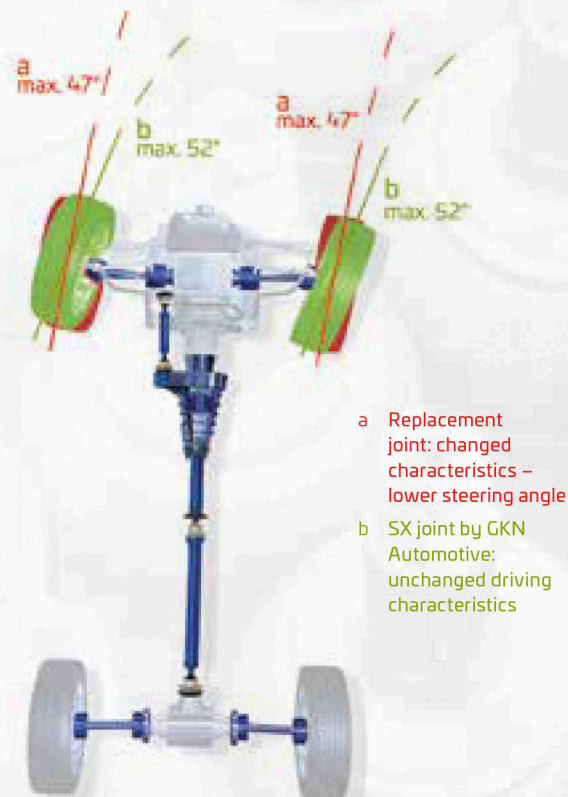
This innovative design makes it possible to reduce internal friction, heat and size, as well as increase transmissible torque and maximum deflection angle.





Unchanged driving characteristics with our SX joint

- Deflection angle corresponding to that of the OE joint
- Identical steering geometry
- Similar maximum steering angle
- Unchanged performance with the same joint dimensions



Main features of the SX8 fixed joint

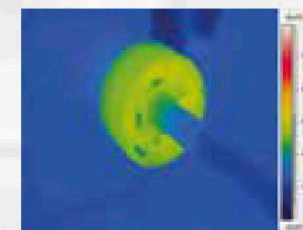
- Absorption/transmission of up to 25% more torque due to the reduced temperature level
- Max. deflection angle of 52°
- Eight balls for powerful counter-rotating principle
- Durable and robust TPE sealing system



The yellow contour shows the S-shaped profile of the ball track. The arrows show the opposite opening direction of the ball tracks in the Countertrack joint.

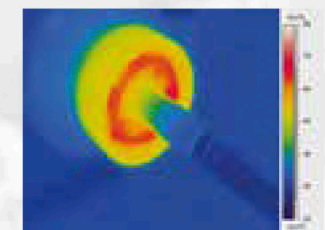
Compared to the Rzeppa joint:

- Power loss reduced by 50-60%
- Weight reduction of 15% with higher performance values
- Size reduced by 8%
- Considerably reduced temperature-level under load



Countertrack™

Heat development at ball-cage contact (approx. 52 °C)



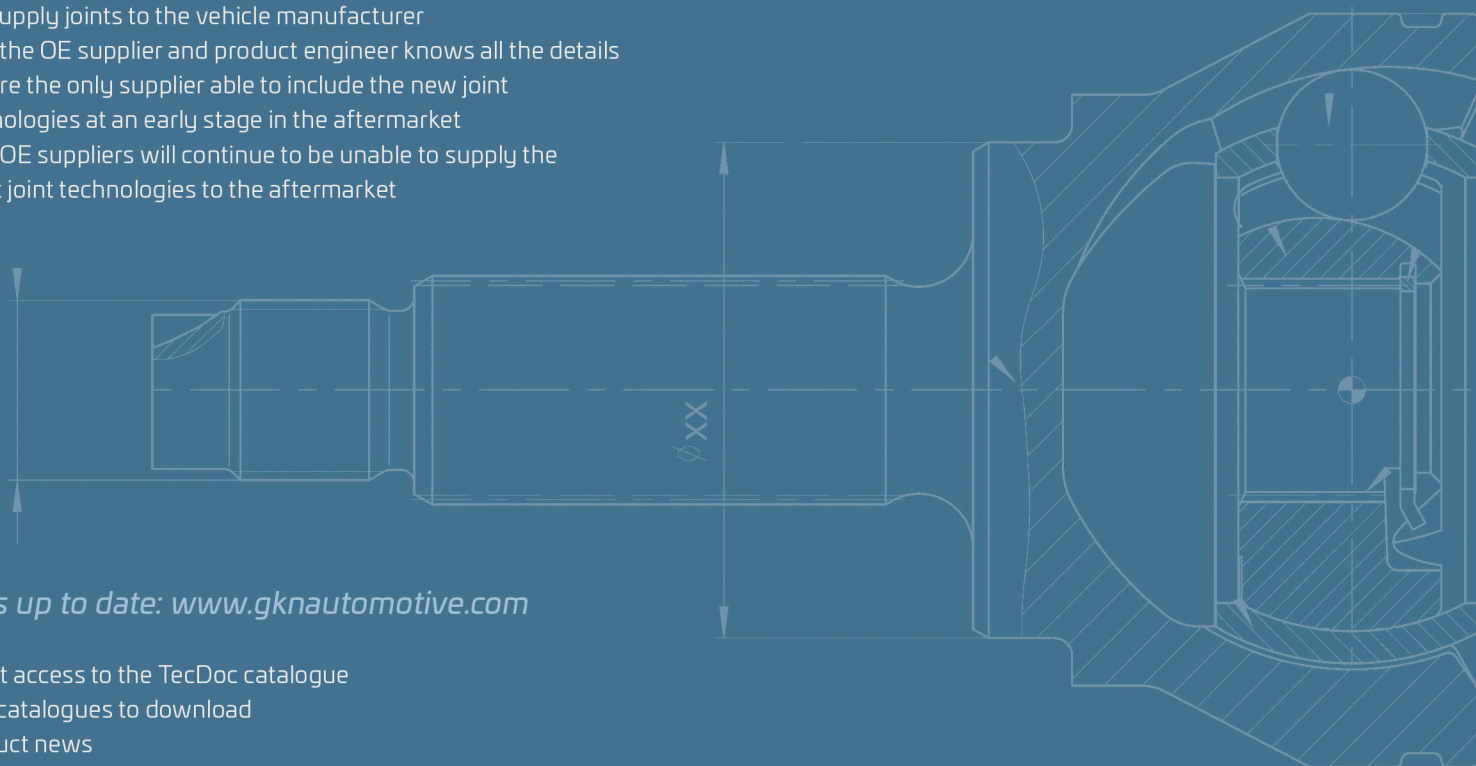
Rzeppa

Heat development at ball cage and ball track (approx. 68 °C)



GKN Automotive: a partner for the future

- We supply joints to the vehicle manufacturer
- Only the OE supplier and product engineer knows all the details
- We are the only supplier able to include the new joint technologies at an early stage in the aftermarket
- Non-OE suppliers will continue to be unable to supply the latest joint technologies to the aftermarket



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