

## The maintenance free solution for industrial robots

Due to strong customer demands for maintenance freedom, KUKA Robotics decided to redesign their bearing arrangement of the robot balancing system. The customer demands were met by changing to sealed spherical roller bearings BS2-2208-2CS/VT143C and BS2-2211-2CS/VT143C. These greased-for-life bearing units from SKF will be used in their new generation of industrial robots, the KR 2000 series.

KUKA Roboter GmbH is an IWKA Group company and ranks among the world's leading manufacturers of industrial robots. The company's core competencies are the development, production and sales of industrial robots, controllers, software and linear units as well as customer support. The standard robot is mainly used for car manufacturing but there is also a palletizing model and one shelf-mounted model.

### Sealed Explorer advantages

- Longer service life
- High load carrying capacity
- Space saving (compact sealed unit)
- Easier and safer handling
- Environmentally friendly



Earlier, bushings and needle bearings were used together with external seals and covers. They were later replaced by open spherical roller bearings together with Nilos seals and covers. This enabled longer service intervals and a more compact bearing arrangement. However, the external seals sometimes caused difficult handling. Grease had to be replaced frequently thus requiring more maintenance from the end users.

With the new ready-to-mount bearing unit, both mounting and dismounting is quicker and safer and

less stock is needed due to less components in the arrangement. The sealed bearing arrangement is also environmentally friendly with negligible grease consumption.

### Operating conditions

Position: In the rear joint of the balancing system

Bearing: BS2-2208-2CS/VT143C (2 pcs.)

Bearing load:  $F_r$  up to 25 kN

Speed: Maximum 19°/s.

Oscillating angle: Maximum +14,5°

Operating temperature: 10 to 50 °C

Position: In the front joint of the balancing system

Bearing: BS2-2211-2CS/VT143C

Bearing load:  $F_r$  up to 50 kN

Speed: Maximum 95°/s.

Oscillating angle: Maximum +75°