



## Sealed, self-aligning bearings for continuous casters

### Benefits:

- Extended bearing service life
- Increased productivity
- Less planned and unplanned stops
- Reduced grease consumption

### Another SKF solution for improving roll line service life

In continuous casters, thermal variations in the roll frequently induce internal thrust loads on the bearings, eventually resulting in bearing failure. Additionally, bearing lubricants can contaminate the water cooling system, increasing the risk of blocked water-spray nozzles and ultimately, blocked roll lines or breakdowns. To help protect against these conditions and extend roll line service life, SKF offers sealed, self-aligning bearings for continuous casters.

### A sealed, self-aligning bearing system

The SKF sealed, self-aligning bearing system for continuous casters consists of a sealed spherical roller bearing in the locating position and a sealed CARB toroidal roller bearing in the non-locating one.

The CARB bearing accommodates axial displacement of the shaft within the bearing. This eliminates the problem of induced axial loads, which is common in conventional bearing systems, where the outer ring needs to move on its seat in the housing.

The combination also offers a very high load-carrying capacity, even under caster roll line deflection. The results are improved reliability and increased bearing system life.

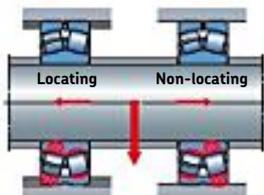


### Sealed-for-life for a longer, more productive service life

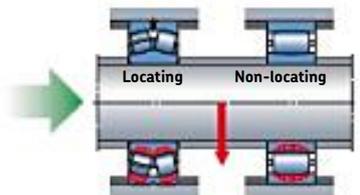
SKF sealed self-aligning bearings are delivered with the appropriate type and quantity of grease. As proper lubrication contributes to optimal bearing service life, customers can expect increased productivity through less maintenance and fewer stops.

SKF sealed-for-life bearings also reduce grease consumption and costs. A typical two-strand caster can save more than 20 tonnes of grease per year. Less lubricant consumption means reduced risk of contamination of the water cooling system, less hazardous waste and lower disposal costs.

Conventional self-aligning bearing system



SKF self-aligning bearing system



For more information about SKF products and solutions for the metals industry, contact your SKF representative.



## Increase the return on your maintenance investment with SKF

The whole idea behind the SKF 360° Solution is to help you get more out of your plant machinery and equipment investment. This may mean lowering your maintenance costs, raising your productivity, or both! Here's an example of the SKF 360° Solution at work in the metals industry.

### Applying SKF knowledge engineering to improve machine reliability and efficiency in the metals industry

Few environments can match the demands placed on equipment used in the metals industry, from continuous casters and vessels to traveling cranes and ventilation systems. SKF engineers work closely with steel mills to meet application challenges and deliver benefits they need to stay competitive.

These benefits include increased machine reliability, extended maintenance intervals and reduced costs, increased productivity, reduced energy consumption and optimized life cycle costing. Below is just one example of how SKF knowledge engineering helped a metals industry customer improve efficiency and profitability.

### SKF saves Italian steel producer more than 500 000 euros annually

With several companies involved in iron and steel production, the Riva Group is the sector leader in Italy, sixth in Europe, and ninth in the world. ILVA Taranto is the group's largest plant, with a production capacity of 12 million tonnes of steel per year. When plant managers wanted to reduce total operating costs and increase plant availability, they turned to SKF.

#### The challenge

The plant houses six converters and five continuous slab casting machines. Each caster operates with hundreds of bearings and consumes between 30 and 70 tonnes of grease per year. To help ILVA Taranto achieve its larger goals, SKF sought to extend service life and cut grease consumption for the plant's thousands of caster bearings.



#### The SKF solution

Initially, SKF replaced all open bearings in one caster with sealed, spherical roller bearings and CARB toroidal roller bearings. Subsequently, all casters were fitted with this SKF sealed, self-aligning bearing system.

#### The results

ILVA Taranto's annual grease consumption dropped by up to 47 tonnes per caster and bearing consumption fell by an average of 40 percent. These reductions resulted in annual cost savings of 105 000 euros per caster. Reduced cooling water cleaning costs helped the plant achieve additional savings.

In the end, the SKF sealed, self-aligning bearing system helped boost plant availability and productivity by achieving double the service life of the conventional open bearing system that it replaced.

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