

SKF Energy Efficient deep groove ball bearings with shields

Features

- Optimized internal geometry
- Patented polymer cage
- Shielded and greased for life
- Low friction, long-life grease
- Wide temperature grease: -50 °C to +150 °C

Benefits

- At least 30% lower bearing friction for reduced energy use
- Shielded and greased for life for reduced maintenance
- Reduced operating temperature and extended bearing service life
- Reduced total costs of ownership
- Dimensionally interchangeable with standard bearings

Applications

- Idler rollers for mining, port and power plant conveyors



Cut conveyor energy consumption and operating costs

Each kilometer of a typical bulk conveyor needs some 6 000 bearings to keep idler rollers rolling. Each bearing exerts a small degree of frictional drag on the drive motors, and the combined frictional losses from all of the bearings add up to a very significant part of the total power consumed by the motors to drive the conveyor.

SKF Energy Efficient (E2) deep groove ball bearings with shields on both sides provide a proven way to reduce frictional losses, and in turn, conveyor energy costs.

Shielded SKF E2 bearings typically operate with at least 30% less friction than equivalent SKF Explorer bearings, and the reduction can be even more significant when compared to other manufacturers. Installed across thousands of idler rollers, SKF E2 bearings could significantly cut conveyor energy consumption and costs – mines or quarries with more than 100 000 bearings could save millions of dollars annually.

In light- to medium-load applications, bearing service life is almost always limited by grease life. Thanks to their specially-formulated grease and reduced operating temperature, shielded SKF E2 bearings can offer increased service life compared to conventional bearings. Greased for life and protected by shields on both sides, SKF E2 bearings help reduce conveyor maintenance. And replacing conventional conveyor bearings with SKF E2 bearings is an upgrade that can pay big dividends.





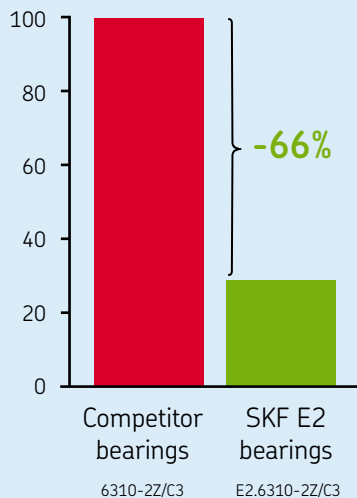
Conveyor OEM puts SKF to the test

To determine the energy efficiency of SKF E2 deep groove ball bearings vs. conventional bearings, a European conveyor manufacturer conducted a roll resistance test according to DIN 22112-3 specification.

The OEM tested bearings on 4 conveyor idler rollers – 2 equipped with conventional bearings, and 2 equipped with SKF E2 bearings. As **diagram 1** illustrates, the results weren't even close – SKF E2 bearings slashed frictional losses by 66%.

Diagram 1

Friction reduction test results at 650 r/min according to DIN 22112-3

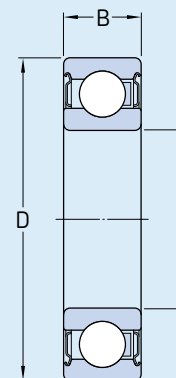


SKF E2 savings potential

In a typical conveyor application equipped with 120 000 idler bearings, over the course of 12 months, SKF E2 deep groove ball bearings generated a savings of up to 20 GWh and 6 700 tonnes of CO₂, which could potentially lead to savings of as high as \$2 million.

SKF E2 for conveyors – product data

Principal dimensions			Basic load ratings		Fatigue load limit P _u	Mass	Designations
d	D	B	dynamic C	static C ₀			
mm			kN		kN	kg	–
35	80	21	33,8	19,0	0,82	0,48	E2.6307-2Z
40	90	23	41,0	24,0	1,02	0,65	E2.6308-2Z
45	100	25	52,7	31,5	1,34	0,87	E2.6309-2Z
50	110	27	62,4	38,0	1,63	1,1	E2.6310-2Z
55	120	29	71,5	45,0	1,90	1,4	E2.6311-2Z
60	130	31	81,9	52,0	2,20	1,8	E2.6312-2Z



The bearings shown here are only part of the total assortment. Additional information is available online at www.skf.com/bearings and in SKF Rolling bearings catalogue.

