Case Study

Bag Welding Machine
44 times longer service life and a substantial reduction in production shutdown

The seamer is a part of a filling line and welds together plastic bags by the means of a set of heated jaws. The bearings accommodate the hinge function of the welding jaws.

**Problem**
This application is demanding due to the sequential running pattern. The bearing never rotate but oscillate 60 degrees back and forth in a hinge like motion. This sequence mode challenges standard bearings due to the generating of micro pitting which lead to premature bearing failure.

**Solution**
CeramicSpeed bearings are made with ceramic balls and not steel balls like conventionally bearings. These ceramic balls have an increased hardness which means that the contact area between the ball and the track is reduced, which leads to lower friction, higher potential speeds and less energy wasted. The hardness and extremely smooth surface also means that the balls are far more durable than steel balls.

**Result**
After implementing CeramicSpeed bearings on this application the service life of the bearings has increased 44 times. This along with a reduction in production shut down has saved the company for many maintenance costs.

**Technical Highlights**
- Rotation speed : > 20 RPM (60 degrees) rotation
- Bearing temperature: 40°C - 50°C
- Contaminated environment with dust particles