Cylindrical roller bearings
with disc cage or spacers

Semi-locating bearings
Cylindrical roller bearings LSL1923 and ZSL1923 are semi-locating bearings. Semi-locating bearings can support not only high radial forces but also axial forces in one direction and can therefore guide shafts axially in one direction. They act as non-locating bearings in the opposite direction.
The bearings have two ribs on the outer ring and one rib on the inner ring.
Due to the large number of rolling elements and their dimensions, LSL and ZSL bearings have very high radial load carrying capacity. They can also withstand high shock loads and vibrations.
Due to the low frictional torque and the low level of heat generation, the bearings are characterised by high limiting speeds. In addition, the optimum heat dissipation ensures thermally stable conditions in the bearing.

With disc cage
In cylindrical roller bearings LSL1923, an externally-guided flat brass disc cage prevents the cylindrical rollers from coming into contact with each other during rolling.
The cage has pockets to accommodate the rolling elements. The rolling elements are guided between the ribs on the outer ring. Due to its low mass, the cage is subjected to only minimal strain under acceleration.
The outer ring is axially split and held together by fasteners.

With spacers
In cylindrical roller bearings ZSL1923, plastic spacers prevent the cylindrical rollers from coming into contact with each other during rolling.
The spacers are designed such that the rolling element set is self-retaining, so the bearing and inner ring can be mounted separately. The spacers are guided axially between the two outer ring ribs.

Axial displacement
The outer and inner ring can be axially displaced relative to each other in one direction only by the dimension “s” stated in the dimension table.

Sealing
The cylindrical roller bearings are open on both sides.

Lubrication
They can be lubricated via the end faces with grease or oil.

Special design for vibratory machinery
In addition to high basic dynamic load ratings and thus long rating life values, bearings in vibratory machinery must also be able to compensate or support considerable shaft tilting due to load or misalignment. The bearings LSL and ZSL are therefore also available by agreement in the BIR design. In these bearings, the inner ring raceway is ground slightly spherical.