

Handling

Rolling bearings, rolling bearing parts and Arcanol rolling bearing greases are high quality goods and thus require careful handling.

Storage of rolling bearings

The performance capability of modern rolling bearings lies at the boundaries of what is technically feasible. The materials, dimensional and geometrical tolerances, surface quality and lubrication have been optimised for maximum levels of function, which means that even slight deviations in functional areas, such as those caused by corrosion, can impair the performance capacity. In order to realise the full performance capability of rolling bearings, it is essential to match the anti-corrosion protection, packaging, storage and handling to each other. The anti-corrosion protection and packaging are a constituent part of the bearing and are thus optimised so that they preserve all characteristics of the product at the same time as far as possible. In addition to protecting the surface against corrosion, this includes emergency running lubrication, friction, lubricant compatibility, noise behaviour, resistance to ageing and compatibility with rolling bearing components (cage and seal material).

Storage conditions for rolling bearings

As a basic prerequisite, parts must be stored in a closed storage area which cannot be affected by any aggressive media, such as exhaust gases from vehicles or gases, mist or aerosols of acids, lyes or salts. Direct sunlight should be avoided since, apart from the harmful effects of UV radiation, it can lead to wide temperature fluctuations in the packaging. The temperature should be constant and air humidity should be as low as possible. Jumps in temperature and increased humidity lead to condensation.

The following conditions must be fulfilled: frost-free storage, i.e. at a temperature \bullet „ +5 °C (to prevent formation of white frost, a limit of +2 °C is permissible for a maximum of 12 hours per day). maximum temperature +40 °C (to prevent excessive drainage of anti-corrosion oils) relative humidity \bullet f 65% (if changes in temperature occur, a limit of 70 °C is permissible up to 12 hours per day). The temperature and humidity must be continuously monitored. This can be carried out using a data logger. The measurements must be taken at intervals of no more than 2 hours. At least 2 measurement points must be selected: the highest point and the lowest point in the vicinity of an external wall at which the goods can be stored.

Storage periods for rolling bearings

Rolling bearings should not be stored for longer than 3 years. This applies both to open and to greased bearings with sealing shields or washers. In particular, specifically greased rolling bearings should not be stored for too long, since the chemical-physical behaviour of greases may change during storage. Even if the minimum performance capacity remains, the safety reserves of the grease may have diminished. In general, rolling bearings can be used even after their permissible storage period has been exceeded if the storage conditions during storage and transport were observed. If the conditions are not fulfilled, shorter storage periods must be anticipated. If the periods are exceeded, it is recommended that the bearing should be checked for corrosion, the condition of the anti-corrosion oil and the condition of the grease before it is used.