Selection

PREMIUM Line +

Low maintenance heavy-duty rod ends and spherical-plain bearings with integrated self-aligning roller bearings – Types BRTM, BRTF and WLT
The design based on the structure of a self aligning roller bearing is preferably used for high speed, wide tilting angles or rotating movements under high loads. Compared with rod ends and spherical-plain bearings with self-aligning ball bearings, rod ends and spherical-plain bearings with self-aligning roller bearings have essentially higher basic load ratings. These rod ends and spherical-plain bearings with long-term lubrication are maintenance-free under normal operating conditions. Lubrication fittings are provided for lubrication (does not apply for the spherical-plain bearings) in case of rough operations and maximum loads.
To avoid incompatibility with the production lubrication, we recommend lubricating with an aluminium-complex-soap-grease. Shields on both sides prevent dirt particles from penetrating into the bearing. The rod ends and spherical-plain bearings with self-aligning roller bearings are, just as the design with self-aligning ball bearings, subjected to a special heat treatment to obtain a raceway hardness adapted to the antifriction bearings, ensuring at the same time a high stability with changing loads.

Low maintenance heavy-duty rod ends and spherical-plain bearings with integrated self-aligning roller bearings – Types BRM, BRF, PM, PF and WLK
This design is especially suitable for high speeds, large swivelling angles or rotating movements with relatively low or medium loads. Prominent technical features are the low bearing friction, long-term greasing as well as the sealing against rough dirt penetration by means of shields on both sides. Under normal operating conditions the rod ends and spherical-plain bearings are maintenance-free. Lubrication fittings (does not apply for the spherical-plain bearings) are provided for lubrication in case of rough operations and maximum loads. To avoid incompatibility with the production lubrication, we recommend lubrication with a aluminium-complex-soap-grease. A special heat treatment procedure confers the rod end housing a raceway hardness adapted to the antifriction bearing, ensuring at the same time high stability with changing loads.

Heavy-duty system linkages
We provide solutions individualised to the customer with our DURBAL® heavy-duty system linkages. We can build all of our products from the Premium-, Classic- and Basic -Line into these system linkages. So we have a large number of possible solutions at hand to meet your needs.

CLASSIC Line ✕

Maintenance free heavy-duty rod ends and heavy-duty spherical-plain bearings with DURBAL–GLIDE – Types BEM, BEF, EM, EF, BEMA, BEFA, EMA, EFA, GLK, GLKS, GLE and GLG
The maintenance free rod ends and spherical-plain bearings in this design series are used for small swivelling or tilting movements at low speeds. They stand out for their high load ability and can also be used for shock like loads. The hard-chrome plated or stainless steel joint ball glides on a special glass fibre reinforced plastic sliding bearing – DURBAL®-Glide –, shell which among other things is made of PTFE to minimize friction. The design ensures that they are absolutely maintenance free and also practically free of play. The compound used has the favourable secondary advantage to absorb any foreign particles and to enclose them that no damage may occur.

Maintenance required heavy-duty rod ends with pressed spherical-plain bearings with DURBAL–GLIDE – Types BEMN, BEFN, EMN and EFN
The maintenance required rod ends in this design are used for alternating loads or shock loads and are preferred when large swivel movements may occure. They are suitable for rotating movements to a limited extent only.
Here as well, the hard-chrome plated joint ball (BEFN/BEMN) provides effective protection against corrosion which ensures that the function of the rod end will not be affected by a corroded ball surface under humid operating conditions.

All sizes of the series (BEM, BEF, EM, EF, BEMN, BEFN, EMN, EFN) are mainly forged and tempered or stainless steel housing. The housing of our aluminum rod ends (BEMA, BEFA, EMA, EFA) are turned from a high-strength aluminum. All these shows extremely high loads.

BASIC Line ○

Maintenance free and maintenance required standard rod ends, spherical-plain bearings, hydraulic rod ends and accessories
The standard rod ends, spherical-plain bearings and hydraulic rod ends are standardized, ready-to-install machine elements, which transmit static and dynamic forces generated by oscillating, tilt and rotating movements. The extensive selection comprises the following gliding combinations with all of the usual features:
- steel / steel
- steel / bearing brass
- steel / bearing brass-PTFE composite

These standard products are distinguished by high precision and dependability as well as by an outstanding cost-benefit ratio.

Selection / Basic load ratings

PREMIUM Line +

Static basic load rating of antifriction bearing rod ends and spherical-plain bearings
The static basic load rating $\mathbf{C}_0$ of an antifriction bearing rod end and spherical-plain bearing corresponds to that of a static radial load causing a lasting overall deformation of 1/10.000 of the roller body diameter at the contact point most highly stressed between roller body and raceway.

Dynamic basic load rating of antifriction bearing rod ends and spherical-plain bearings
The dynamic basic load rating **C** of an antifriction bearing rod end and spherical-plain bearing is the external radial load, unchangeable in size and direction, at which 90 % of a large quantity of obviously identical rod ends will reach or exceed 1 million of rotations or swivelling movements.

CLASSIC Line ✕

Static basic load rating of plain bearing rod ends and spherical-plain bearings
The static basic load rating $\mathbf{C}_0$ of a plain bearing rod end corresponds to the static radial load that does not yet cause a lasting deformation at the weakest housing section. It contains up to 1.2 fold security compared to the yield stress of the material used for the rod end housing.

Dynamic basic load rating of sliding bearing rod ends and spherical-plain bearings
The dynamic basic load rating **C** is a variable applied in estimating the expected operating life of dynamically stressed sliding bearing rod ends and spherical-plain bearings.

BASIC Line ○

Static basic load rating for plain bearing rod ends and spherical-plain bearings
The maximal admissible load of a rod end or spherical-plain bearing is specified by the static load rating $\mathbf{C}_0$ that is indicated in the catalog. The static load rating $\mathbf{C}_0$ of a rod end or spherical-plain bearing corresponds to the static radial load that does not yet cause a lasting deformation at the weakest housing section of the rod end or spherical-plain bearing during standstill.

In all cases the user has to coordinate the theoretical selection criteria with the concrete installation situation and check the suitability of the rod end respectively spherical-plain bearing. In this context the user has to define sufficient security factors and maintenance intervals. Whenever the load is defined at the upper limit of the load rating DURBAL Metallwarenfabrik GmbH is recommending to use DURBAL®-heavy-duty rod ends or spherical-plain bearings from our series Premium- or Classic-Line.

Dynamic basic load rating of sliding bearing rod ends and spherical-plain bearings
The dynamic basic load rating **C** is a variable applied in estimating the expected operating life of dynamically stressed sliding bearing rod ends and spherical-plain bearings.

Our specialists are happy to advise you.

IMPORTANT NOTE

Basic load ratings always depend on the definitions they are based on. For this reason it is not always possible to compare basic load rating data supplied by different manufactures.