

1.1. Structure and Features of the Link Ball®

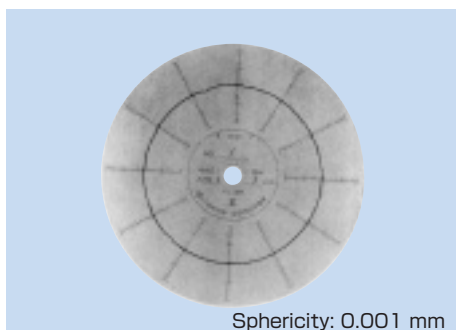
With the **THK** Link Ball, a highly accurate bearing steel ball used in the spherical area is first encased in the holder by die cast molding, and then is specially welded with the shank. This unique process enables the mirror surface of the steel ball to be transferred or duplicated on the spherical surface inside the holder to ensure full contact between the ball and the holder. As a result, smooth motion is achieved with a minimum clearance.

● Compact Design

Model AL has an adequately firm and yet extremely compact shape because of highly balanced design. Together with use of an A-1 alloy, the compact design has achieved weight saving. Thus, this model is optimal for use in the stabilizer connecting rod and the transmission control of automobiles.

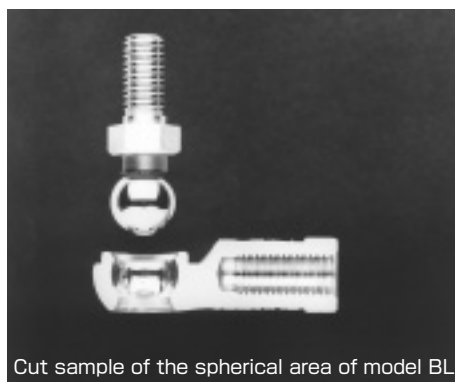
● Achieves Sphericity of 0.001 mm

The spherical surface of the shank ball is transferred on the inner surface of the holder while maintaining the sphericity of the bearing steel ball. This allows smooth motion to be achieved with a minimum clearance and provides favorable operability and feel to the link motion.

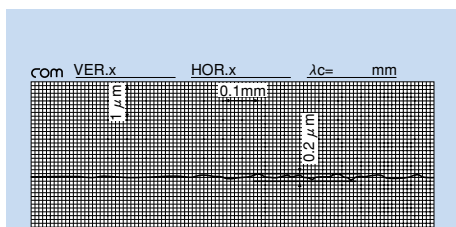


Sphericity: 0.001 mm

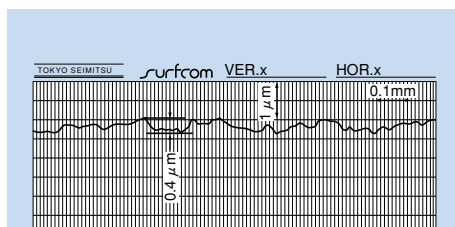
Sphericity of the spherical surface of the ball shank



Cut sample of the spherical area of model BL



Roughness of the spherical surface of the ball shank



Roughness of the spherical surface of the holder

●Two Types of Holder Material

Model AL uses the newly developed high-strength aluminum alloy "A-1 Alloy" (see page T-8), which is light and highly resistant to wear.

Models BL, RBL and RBI use the proven, high-strength zinc alloy (see page T-9).

●High Lubricity

Since models AL and BL and those models attached with boots contain grease, they have high lubricity and increased wear resistance.

●Large Hexagonal Bolt Seat

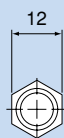
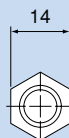
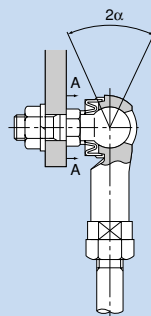
The hexagonal bolt seat of the shank has the same dimensions as the seating surface for small hexagon head bolts in accordance with automotive specifications. This prevents the seating surface from sinking and ensures a stable link motion mechanism.

●Lightweight, High Strength

Use of the A-1 Alloy enables the Link Ball to achieve mechanical strength approximately twice that of the commonly used aluminum die cast material ADC 12, or almost equal to the high-strength zinc alloy, while maintaining aluminum alloys' advantages: lightweight and corrosion resistance.

●Equipped with a Boot for Protection against Muddy Water

Use of a boot with high trackability in the ball shank prevents muddy water from entering the spherical area even in a muddy atmosphere. Accordingly, those types equipped with boots are used also in outdoor applications and automobile parts under the chassis. For details, see the muddy water test data (pages T-14 and 15).



Model AL10 Model equivalent
Model BL10 to similar product
A-A cross section

Jaw Span for Wrenching