

## 2.1. Structure and Features of the Miniature Stroke

Miniature Stroke model MST consists of an ST shaft, ball cage and nut. These components can freely be combined according to the application.

The sectional shape is small, the clearance is minimal and the motion is extremely light and smooth. Accordingly, model MST can be used in a variety of small, precision measuring equipment such as optic measuring instruments' spindle, pen plotter, OA equipment, computer terminals, automatic scale, digital length measuring machine and solenoid valve.

### ●Highly accurate bearing

Precision steel balls (sphericity in mutual difference: 0.0003 mm) compliant with JIS B 1501 are incorporated in a copper alloy ball cage to ensure high accuracy.

The ball cage serves to prevent the balls from falling off with a unique ball-retaining design.

### ●Highly durable bearing

The nut of the ST shaft uses a selected material, and is heat-treated and ground. In addition, the raceways are finished with ultra precision. The rows of balls are densely arranged in the ball cage, and the balls are placed so that the ball raceways do not overlap with each other. It enables this model to be used over a long period without wear and to demonstrate high durability.

### ●Compact bearing

Use of a combination of balls with a 1-mm diameter and a thin nut allows a small sectional shape and space-saving design.

### ●Bearing with extremely low frictional resistance

Since the balls are in point-contact with the raceways, rolling loss is minimal and rolling motion with low-friction is achieved.