

Features of the Cross-Roller Guide/Ball Guide

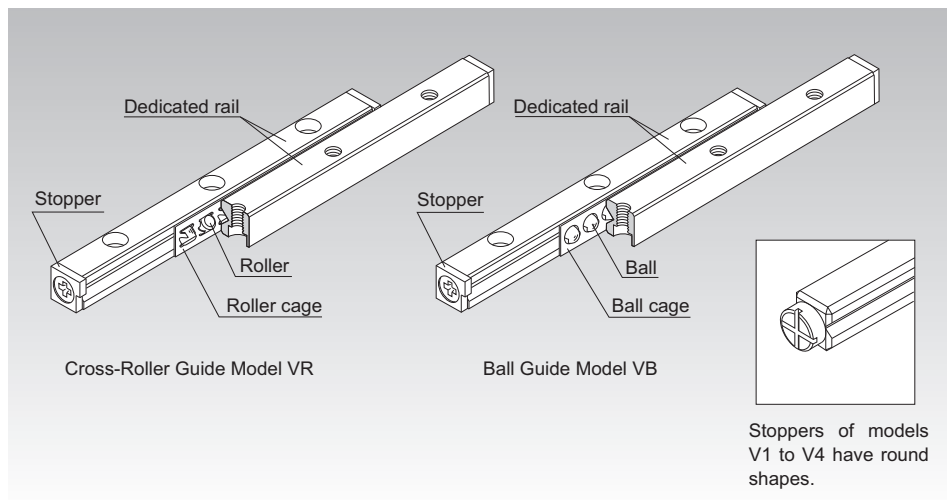


Fig.1 Structure of Cross-Roller Guide Model VR and Ball Guide Model VB

Structure and Features

In the Model VR, precision rollers are orthogonally aligned one after another in a roller cage that is combined with a dedicated rail that has a raceway cut into a 90° V-shaped groove. When two cross-roller guides are mounted in parallel, they are capable of receiving loads in four directions. In addition, the cross-roller guide can be given a preload to achieve a clearance-free, highly rigid, and smooth slide mechanism.

Model VB is a low-friction, high-accuracy, finite LM system consisting of precision steel balls, arranged in short pitches in a ball cage model B, and a dedicated rail model V.

The Cross-Roller Guide and the Ball Guide are used in the slide unit of various devices such as OA equipment and its peripherals, measuring instruments, precision equipment including a printed circuit board drilling machine, optic measuring machines, optic stages, handling mechanisms and X-Ray machines.

Features and Types

Types of the Cross-Roller Guide/Ball Guide

[Long Service Life, High Rigidity]

With a unique roller retaining mechanism, the effective contact length of the rollers is 1.7 times greater than the conventional type. Furthermore, the roller pitch interval is short and a sufficient number of rollers are installed, thereby doubling the rigidity and increasing the service life by a factor of 6. As a result, a safety-oriented design against vibrations and impacts, which commonly occur in ordinary linear motion mechanisms, can be achieved.

[Smooth Motion]

With model VR, the rollers are individually held in a cage and roller pockets formed on the cage are in surface contact with the rollers to increase grease retention. Thus, smooth motion with little wear and friction is achieved.

[Highly Corrosion Resistant]

Model VR series and model VB series both include types made of stainless steel, which is highly corrosion resistant.

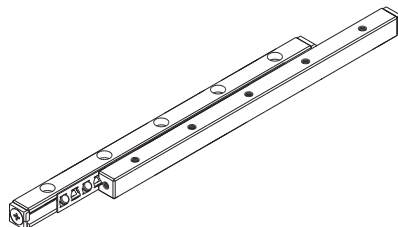
Types of the Cross-Roller Guide/Ball Guide

Types and Features

Cross-Roller Guide Model VR

Specification Table⇒ **A7-8**

A compact, highly rigid LM system whose roller cage holding precision rollers orthogonally aligned one after another travels by half the stroke on a V-shaped groove formed on a rail.

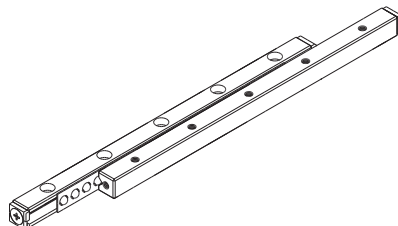


Model VR

Ball Guide Model VB

Specification Table⇒ **A7-26**

A low-friction, highly accurate LM system whose ball cage holding precision balls in short pitches travels by half the stroke on a V-shaped groove formed on a rail.



Model VB