

8. Radial Clearance

The radial clearance of an LM Guide indicates the travel distance in the radial direction in the middle of the LM block when the LM rail is fixed and the LM block is lightly moved up and down in the middle of the LM rail in the longitudinal direction.

The radial clearance is classified into normal clearance and negative clearances C1 (light preload) and C0 (medium preload). They can be selected according to the application and their values are standardized for each type.

Since the radial clearance of an LM Guide significantly affects the running parallelism, load carrying capacity and rigidity, it is particularly important to select an appropriate clearance according to the application. In general, selection of a negative clearance while taking into account possible vibrations and/or impact caused by reciprocating motion will favorably affect the service life and the accuracy.