

## 4. Permissible Static Moment $M_0$

When an LM system receives a moment, the rolling elements on both ends receive the maximum stress due to uneven distribution of the stress on the rolling elements within the LM system.

The permissible static moment ( $M_0$ ) means the moment with constant direction and magnitude, under which the sum of the permanent deformation of the rolling element and the permanent deformation of the raceway accounts for 0.0001 times of the rolling element's diameter in the contact area where the maximum stress is applied.

With an LM system, the permissible static moment is defined in three directions:  $M_A$ ,  $M_B$  and  $M_C$ . Thus, the permissible static moment is considered the limit of the static moment applied.

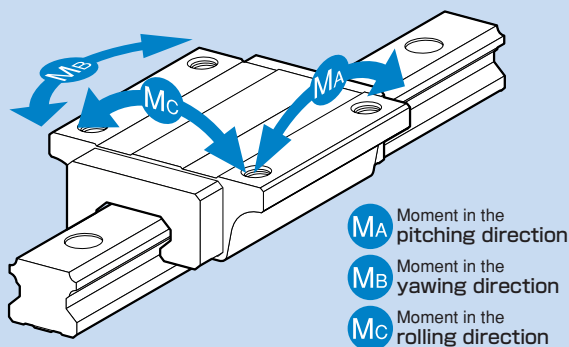


Fig. 1 Directions of Moment