

A-II-8 Noise

- Appropriate design and highly accurate processing technology contribute to reducing noise of NSK linear guides.
- Fig. II-8-1 is a noise-level data plot. The product of D_w (mm) ball diameter of linear guide and travel speed V (m/min) is shown on the abscissa. The noise level is shown on the ordinate.
- The plot indicates that the noise levels remain within a narrow straight belt irrespective of the linear guide type (LH25 through LH65 are plotted here).
- Noise level can be estimated; find the ball diameter from the linear guide model number, then incorporate a travel speed.

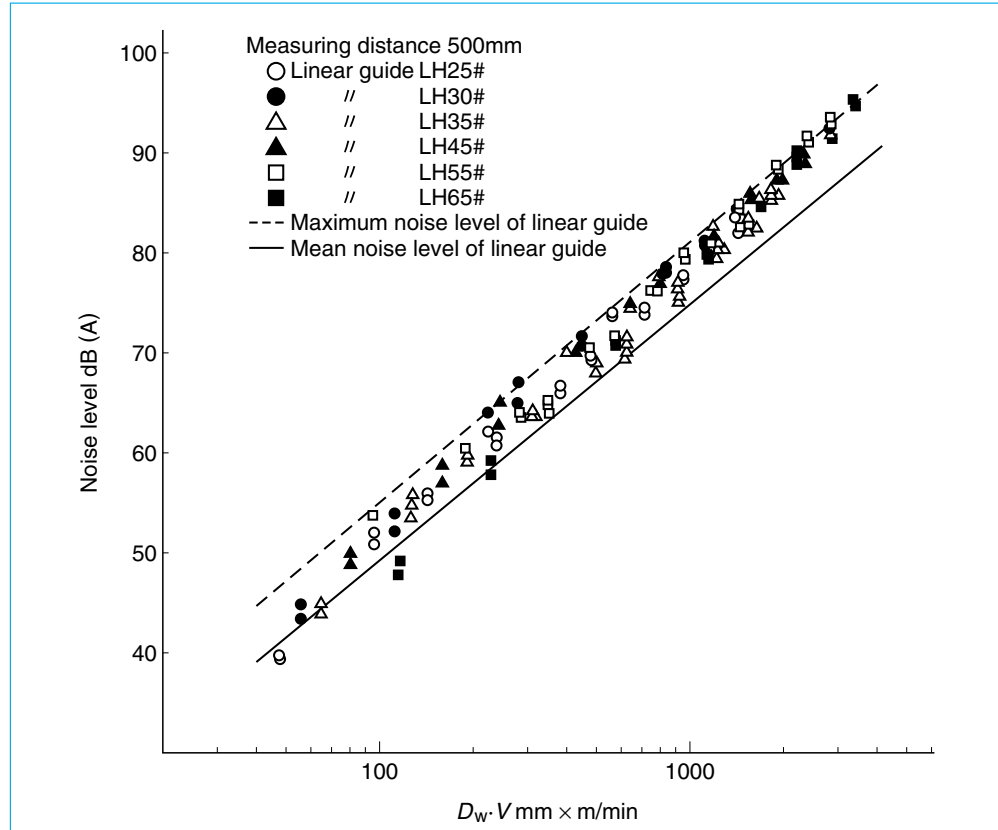


Fig. II-8-1 Noise levels of linear guides

Example of estimate

LS30, and the travel speed is 100 m/min.

$D_w = 4.762$; $V = 100$ m/min

Therefore,

$D_w \cdot V = 4.762 \times 100 = 476.2$

Therefore, from Fig. II-8-1, the noise level is 66 ~ 72dB (A).

A-II-9 Arrangement and Mounting of Linear Guide

A-II-9.1 Arrangement

- For NSK linear guide, the datum face of the rail and of the ball slide are marked with either a "datum face groove" or with an "arrow."
- In case that two or more linear guides are used together, one linear guide is designated as a reference side guide, and the rest is adjusting side guide(s). The reference side rail has its reference number, serial number, and "KL" mark on the opposite side of the datum face (Fig. II-9-1).
- When the datum faces of the reference side rail and ball slides are pressed to their mounting datum faces respectively, the variation of distance (mounting width W_2 or W_3) between the datum faces of the rails and that of the ball slides must be a minimum and therefore, it is specified as the standard.
- (Fig. II-9-2 and II-9-3)
- The ways to indicate the datum faces of LE and LU Series are shown in Table II-9-1.

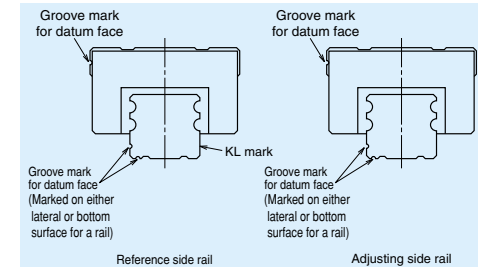


Fig. II-9-1

Example of arrangement

- Arrangement of the linear guide must be determined taking into account the table position, its direction (horizontal, vertical, inclined, hanging from the ceiling), stroke, the size of bed and the table in the equipment as a whole. Table II-9-2 shows a common arrangement examples, and features/precautions for each case.

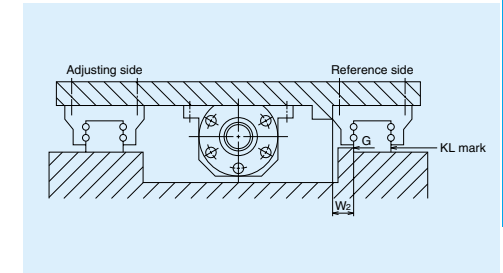


Fig. II-9-2 Most common setting of the reference side rail

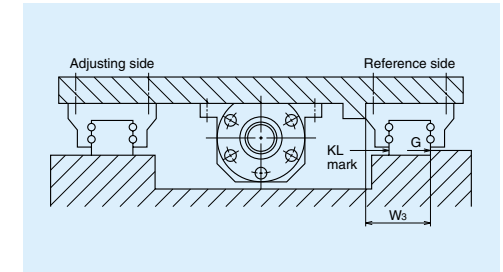


Fig. II-9-3 Setting of the reference side rail in certain occasions

Table II-9.1 Marks on the rail datum faces in LE, LU Series

Model No.	LU05, 07, 09	LU12, 15	LE15
Material	LU05, 07, 09, 12		LE09, 12 (with a ball retainer)
Special high carbon steel			
Stainless steel			