TERAL

Vibration and noise control
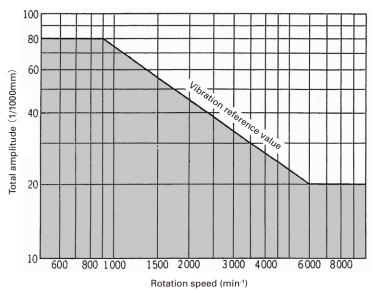
1-1. Vibration control

● Vibration tolerance graphs (according to JIS B 8301)

The vibration of the pump is based on the vibration reference value shown in Fig. 1 of JIS B 8301 Appendix as shown below.

Horizontal pump : Vibration at bearing center

Vertical pump : Vibration at the center of the upper bearing of the motor

Remarks
Horizontal pump: Vibration at bearing center
Vertical pump: Vibration at the center of the upper bearing of the motor

Fig-1. Appendix 2 Fig-1.
Vibration reference value

<Reference>
Relation between total amplitude and vibration speed V

$$a = \frac{V \times 6 \times 10^4}{\pi \times n}$$

a : Total amplitude (μm)
V : Vibrating speed (mm/s)
n : Rotation speed (min^{-1})

1-2. Noise control

● Pump noise

Pumping noise refers to the noise values on the side 1m.

Pump noise is a composite of various frequencies, and the noise spectrum (frequency analysis table) is the sound pressure level measured at the center frequency of each frequency band.

The sound level meter has A and C frequency weighting. The sound level is measured using the A-weighting, which corresponds well to the loudness level and the feeling of noise, and the frequency analysis uses the C-weighting, whose measured value almost matches the sound pressure level.
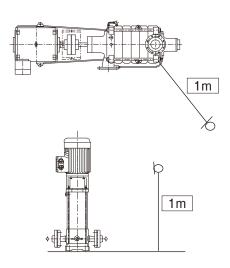

Fig.2