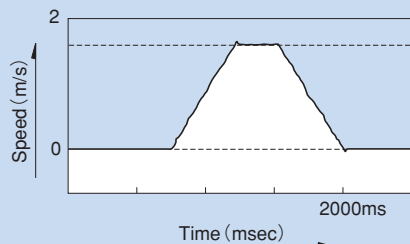


1.5. Capable of Fast Feed

Since the Ball Screw is highly efficient and generates little heat, it is capable of fast feed.

Example of High Speed

Fig. 7 shows a speed diagram for a large-lead rolled Ball Screw operating at 2 m/s.



Maximum speed 2m/s

(Ball Screw rotation speed: 2,000 min⁻¹)

Ball Screw

Large-lead rolled Ball Screw

WTF3060 (shaft diameter: 30 mm; lead: 60 mm)

Guide surface

LM Guide: model SR25W

Fig. 7 Speed Diagram

Example of Heat Generation

Fig. 9 shows data on heat generation from the screw shaft when a Ball Screw is used in an operating pattern indicated in Fig. 8.

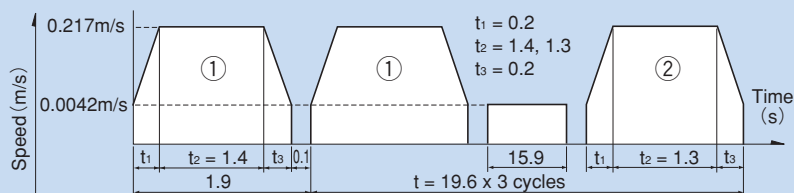


Fig. 8 Operating Pattern

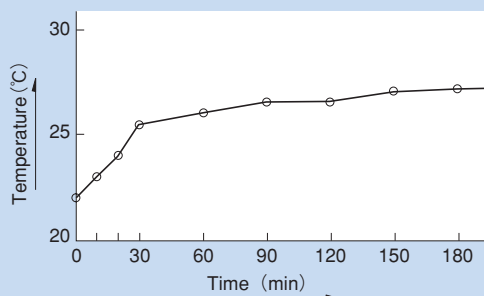


Fig. 9 Ball Screw Heat Generation Data

Ball Screw

Double-nut precision Ball Screw

Model BNFN4010-5

(Shaft diameter: 40 mm; lead: 10 mm; applied preload: 2,700 N)

Maximum speed: 0.217m/s(13m/min)

(Ball Screw rotation speed: 1,300 min⁻¹)

Low speed 0.0042m/s(0.25m/min)

(Ball Screw rotation speed: 25 min⁻¹)

Guide surface

LM Guide model HSR35CA

Lubricant

Lithium-based grease (No. 2)