

THK Original Grease

AFG Grease

- Base oil: high-grade synthetic oil
- Consistency enhancer: urea-based



AFG Grease is a high-grade grease for ball screws that uses high-grade synthetic oil as its base and a urea-based grease as its consistency enhancer. This ensures that it has superior low heat-generating properties, allowing for use over a wide temperature range—from low to high temperatures.

[Features]

(1) Low heat generation

Since the viscous resistance is low, the grease generates only a minimal level of heat even during high-speed operation.

(2) Low torque properties

Features a low base oil kinematic viscosity, making it ideal for ball screws.

(3) Water resistance

AFG Grease is a highly water-resistant grease that is less vulnerable to softening and reductions in extreme pressure resistance due to moisture penetration.

[Representative Physical Properties]

Item	Representative value	Test method
Consistency enhancer	Urea-based	
Base oil	High-grade synthetic oil	
Base oil kinematic viscosity: mm ² /s (40°C)	25	JIS K 2220 23
Worked penetration (25°C, 60 W)	285	JIS K 2220 7
Mixing stability (100,000 W)	329	JIS K 2220 15
Dropping point: °C	261	JIS K 2220 8
Evaporation amount: mass% (99°C, 22 h)	0.2	JIS K 2220 10
Oil separation rate: mass% (100°C, 24 h)	0.5	JIS K 2220 11
Copper plate corrosion (B method, 100°C, 24 h)	Accepted	JIS K 2220 9
Low-temperature torque: mN·m (−20°C)	Starting	JIS K 2220 18
	Rotational	
4-ball testing (welding load): N	3089	ASTM D2596
Service temperature range: °C	−45 to 160	
Color	Brown	

A24-18 THK



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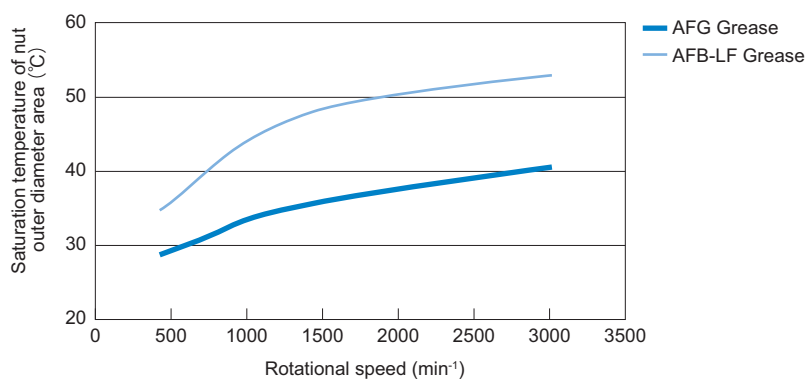
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[Low Heat Generation Test Data]

Test conditions

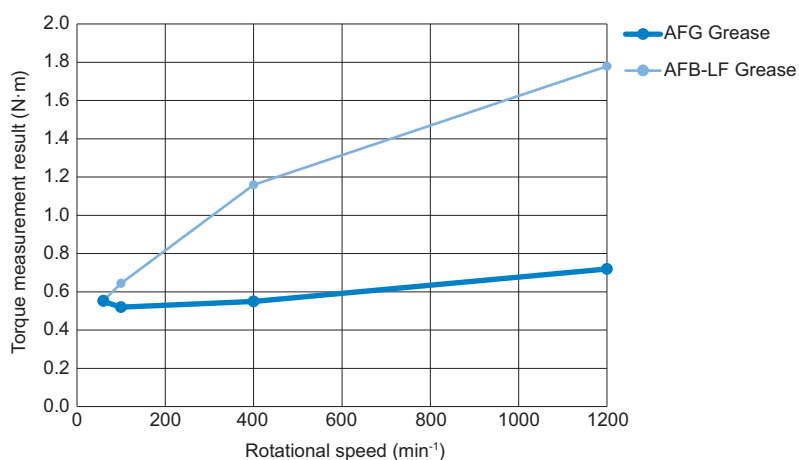
Item	Description
Tested model	SBN3210-7RRG0+1094LC5 (Pre-load only)
Rotational speed	400 to 3000 min ⁻¹
Grease quantity	12 cm ³ (initial lubrication only)
Temperature measurement point	Nut outer diameter area



[Ball Screw Torque Data]

Test conditions

Item	Description
Tested model	SBN3210-7RRG0+1094LC5 (Pre-load only)
Rotational speed	2 to 1200 min ⁻¹
Amount of lubricant injected	13 cm ³ (initial lubrication only)



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