

We are the leading experts in manufacturing
“**Roller Bearing**” in Taiwan.

SYI
gives you the
“**Custom-Made**”
Roller bearings

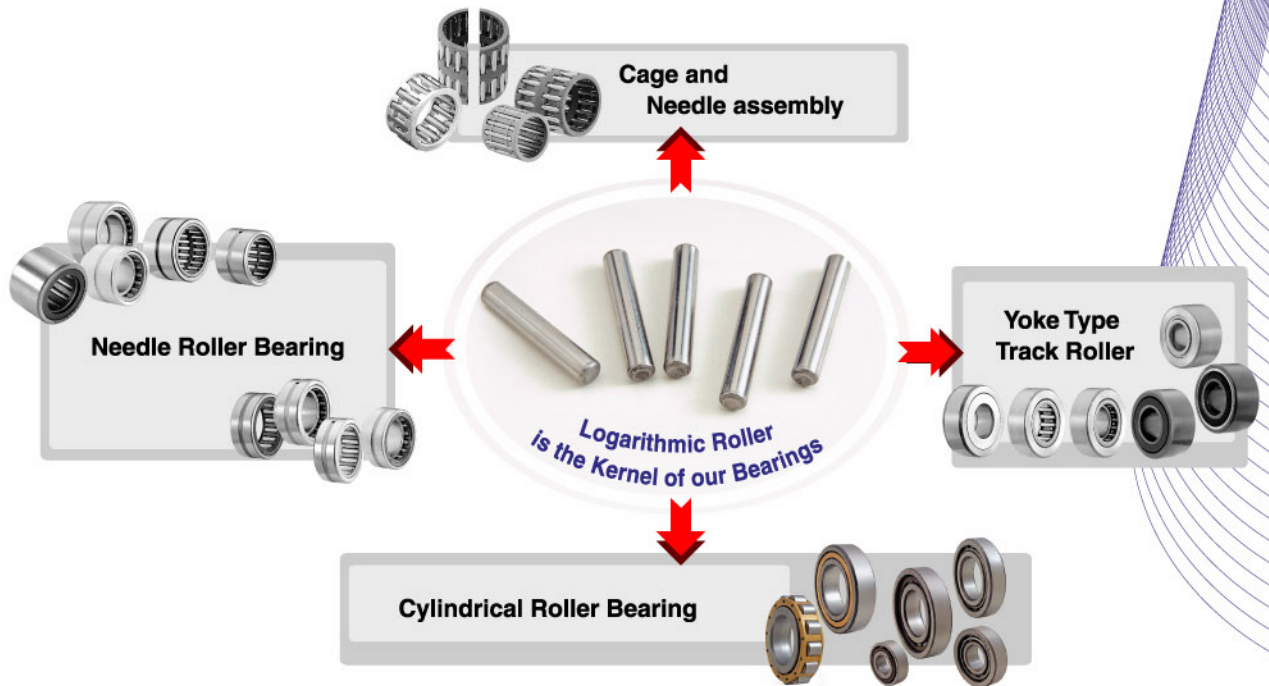
SYI Logarithmic Roller Feature

SYI can provide "Custom-Made" bearing to meet your special demands. The design is based on your desired radial loading and rotational speed.

This whole new Cylindrical Roller features following characteristics

- ★ Improved load carrying capacity.
- ★ Reduced friction and starting torque.
- ★ Reduced wear and maintenance.
- ★ Reduced failure in misalignment.
- ★ Reduced acoustic and vibration level.
- ★ Extend bearing life up to three times of originals.
- ★ Improved operating reliability and safety.

Logarithmic Roller is the Kernel of our Bearings



Why

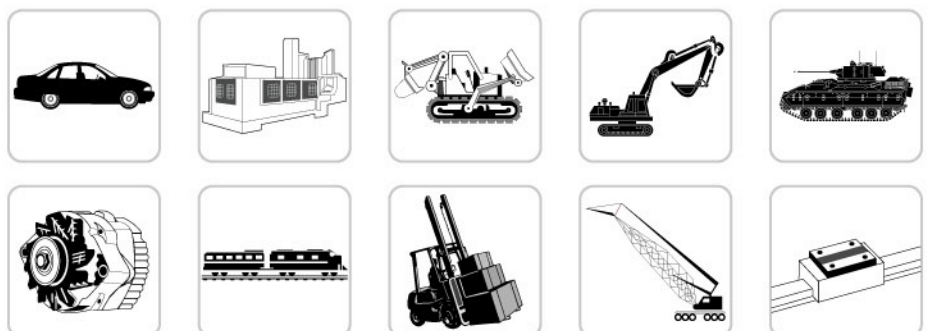
SYI bring you the BEST quality bearing



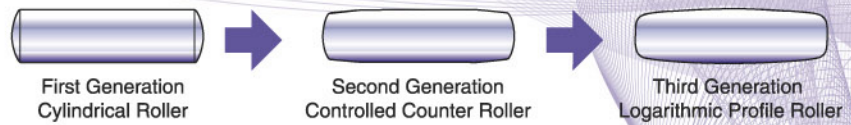
- Supplier experience for World TOP 500 OEM
- New production site and facility in 2007
- ISO 9001:2000 and TS16949:2002 Certified
- Complete test instruments ensure our excellent quality
- More than 30 Years experience in Bearing manufacturing

Product Application:

This New Logarithmic Roller not only fits in the bearing industry but also the linear contact parts that needs heavy duty.



The evolution of Cylindrical Roller:



Roller comparison chart

Roller Evolution Feature	First Generation Cylindrical Roller	Second Generation Controlled Counter Roller	Third Generation Logarithmic Profile Roller
Rating life	The edge effect will cause damage	The arc of the Roller can ease off the edge effect	Can completely eliminate the edge effect and reduce the pressure of the Roller. The fatigue life can be three times of the Controlled Counter Roller. See Figure(2)
Radial pressure See Fig(1)	The pressure distribution is not constant. And will cause edge effect.	Better pressure distribution than normal Cylindrical Roller.	As shown in Figure(1) The pressure is about 50% lower than Controlled Counter Roller.
Thin film Lubrication	The rotation under heavy duty and low speed is a "dry" contact.	Can only improve the lubrication at edge of Roller.	The entire Roller can be rotated smoothly. See Figure(3)
Rotation under misalignment and tilt	Poorest operation condition will cause damage to the bearing.	The damage to the bearing can be slightly improved.	Can improve the wear of the bearing and raceway. According to the experiment made by SYI, we have the data that the wear could be 66% less compared to Controlled Counter Roller. See Figure(4)
Vibration and Acoustic	Worst	Normal	Due to the better distribution of the pressure, and lubrication. The vibration and acoustic levels can be improved apparently.
Other effect	N/A	N/A	The rigidity can be strengthened.

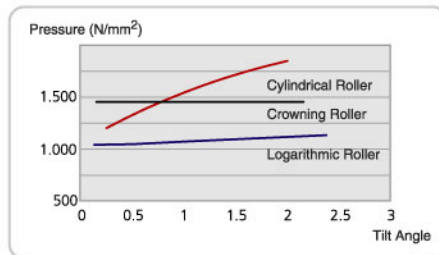


Figure (1). Maximum pressure of different Roller under variation tilt angle

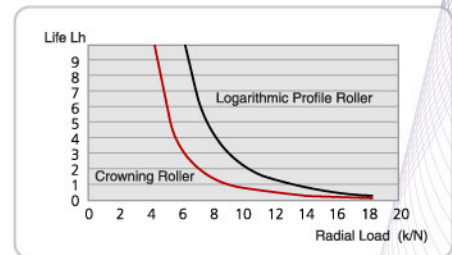


Figure (2). Basic rating life of different Roller

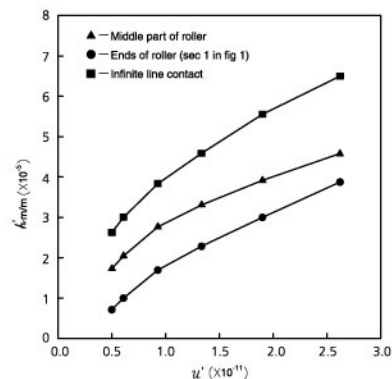


Figure (3). Minimum film thickness under different speeds

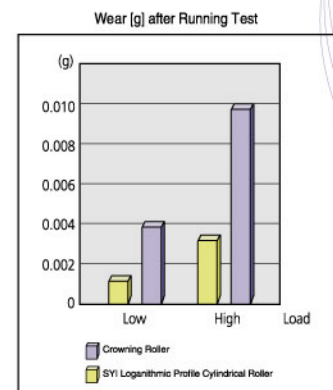


Figure (4). Wear of mating raceway made from SCM415

Note: All figures mentioned in this article are subject to change due to different bearing type, model, manufacturing precision, raw material and the heat treatment.