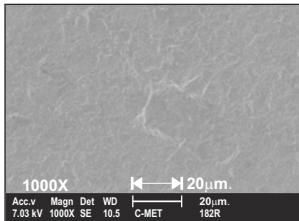


Surface Roughness :

Thread guides, to perform best, need **the correct surface roughness and topography**. Each of the materials we offer is finished to the correct roughness needed, not necessarily the lowest one.

Our ceramic parts can be supplied in these finishes:

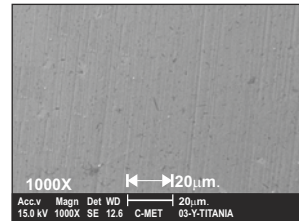
- 1) **Smooth Satin Finish :** This is a rumbled matt surface, with a light sheen. Roughness will be about 0.6 µRa or less.
- 2) **Normal polished :** Surface finished to 0.25-0.4 µRa.
- 3) **Super polished :** Surface finished to low Ra values, e.g. 0.1 µ.Ra.
- 4) **Diamond polished, with low friction properties.** Normally diamond polishing increases the contact area between the yarn and the ceramic. In this polishing method, both the roughness and the contact area are reduced, leading to lower friction. This is available only in A997 Alumina grade.



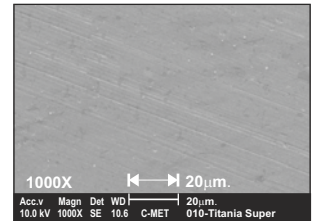
Alumina (A997) - Rumbled Smooth Satin Finish.



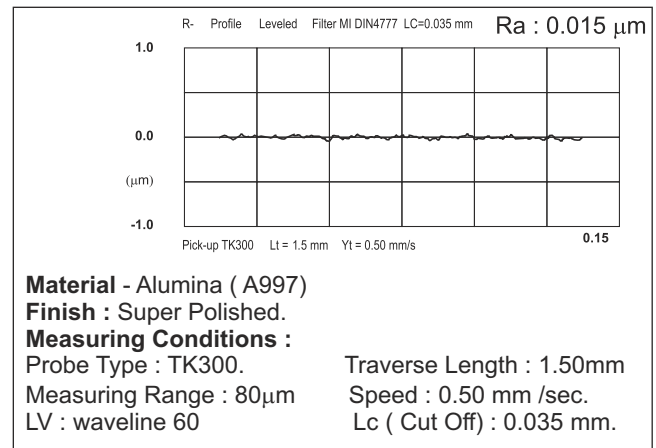
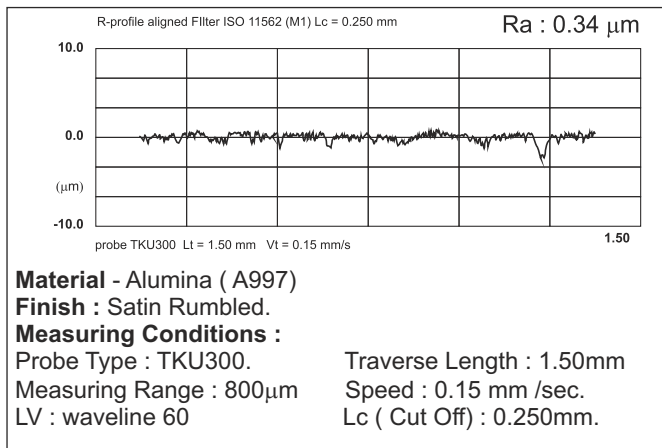
Alumina (A997) - Normal Polished..



Titania (T07) - Normal Polished



Titania (T07) - Super Polished.



Dimensional Tolerances:

Injection-moulded parts are given a small taper on the sides and in bores, to ease ejection of the part from the mould. Ceramic parts warp a little during firing.

As-fired ceramic parts have a tolerance of $\pm 2\%$ of the dimension or ± 0.2 mm, whichever is greater. Closer tolerances are achieved by grinding and lapping. The table below indicates the tolerances that we offer. Grinding has to be done by diamond tools and is a costly operation.

Measurement	As fired	Ground	High Precision Ground
0-10 mm	± 0.2 mm	± 0.05	± 2 microns
>10-50 mm	$\pm 2\%$	± 0.05	± 2 microns
>50 mm	$\pm 2\%$	± 0.10	± 4 microns
Ovality	2% of diameter	0.1% of diameter	2 microns
Straightness	2% of length	0.1% of length	0.01% of length

FREQUENTLY ASKED QUESTIONS

Why does Snow form on the ceramic guides on our machines?

Snow formation occurs if the ceramic guide is abrading the yarn. The resulting powder collects on the guide surface. The causes are- wrong material selection, improper polishing, surface porosity, sharp edges in yarn contact area.

Why is the yarn filamenting and breaking (B.F.) on our machines?

This occurs when the ceramic guide surface has tiny cracks, sharp edges, pits, or pimples in the yarn contact area.

Why is the yarn slipping and looping in my winder?

The usual cause is too low roughness.

Why is the ceramic guide getting hot and damaging the yarn?

The usual causes are wrong material selection, high friction and sticking due to non-optimal polishing.