

# **Ceramic U-guides for WINGS FDY**

Key to performance



# Keep yarn on its path with original U-guides

Oerlikon Barmag is your only source for original ceramic U-guides designed specifically for WINGS FDY. These come in different colors (usually white, sometimes darker and opaque). Regardless of their color, the original ceramics have the same standard of quality.

Similar ceramic U-guides are also available on the open market, but these have inherently different characteristics that are not immediately visible. These other ceramics will influence the WINGS FDY process and product quality.

## Separating the wheat from the chaff

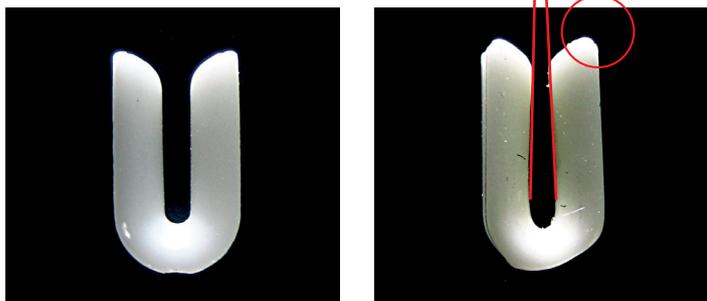
The differentiating factors between original and other ceramics are explained below.

### Geometry

The U-guides supplied by Oerlikon Barmag precisely fit into components such as the air guiding unit, the cutter unit and the intermingling unit. Oerlikon Barmag has customized the particular geometry to ensure smooth yarn running and there are no yarn breakages, etc.

Low-quality U-guides have

- Different length of arms
- Non-parallel arms
- Sharp edges at the end of the arms



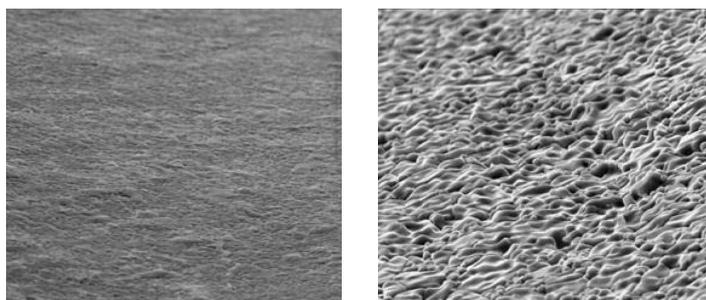
Oerlikon Barmag (left) and competitor U-guides can easily be distinguished from each other.

### Hardness and density

The hardness and density affect the lifetime of the U-guide. Original ceramic U-guides have the highest hardness properties (regardless of color). Lower hardness means that their lifetime is shorter, they are more brittle and break more easily.

### Surface structure

The surface structure determines the friction, abrasion and yarn treatment and has a huge impact on the product quality. Oerlikon Barmag U-guides have a vastly superior surface structure compared to other U-guides available on the market. Oerlikon Barmag U-guides have a very smooth surface with fine pores. U-guides from other manufacturers have a very rough surface with coarse pores.



SEM RE of Oerlikon Barmag (left) and competitor ceramics images show the difference of the surface structure

### Friction

The frictional coefficient is a result of the surface structure. The U-guides supplied by Oerlikon Barmag are designed to generate the lowest possible friction between the ceramics and the filaments. This low friction enables the WINGS FDY process to run smoothly. Higher friction from other U-guides results in more fluff, more yarn breaks and a non-uniform dye-pickup. Oerlikon Barmag's U-guides have a frictional coefficient that is superior to other ceramics on the market. Laboratory comparisons show that European and Japanese ceramics have a 15-25% higher frictional coefficient than Oerlikon Barmag U-guides. For U-guides from the open market the friction is up to 33% higher.

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