



## WASHOVER SHOES

Drillstar Industries washover shoes (also known as rotary shoes or mill shoes) are available in a wide range of dimensions and threads.

They come in 12 types, each designed for a specific application. The design chosen will depend on the material to mill, and on whether the shoe should cut on the bottom, on the OD, on the ID or on any combination of these. These tools have an extended lifespan due to the special treatment applied before hardfacing. They can be stabilized upon request.

Shoes can be dressed with your choice of TOPLOY or custom hardfacing.

### Serrated Shoes

Serrated shoes (types S, SE, SI, SEI) are ideal for cutting and cleaning equipment from the outside when there is little or no metal to mill. They are made of high-quality steel, and the tungsten carbide grains used for hardfacing are hand-picked to provide maximum abrasion and durability.

These shoes are also available with hardened steel teeth instead of tungsten carbide hardfacing, for fast cutting soft formation.

The number and design of the teeth can be customized to suit your needs.



**Type S**  
cutting on bottom only.



**Type SE**  
cutting on bottom and OD



**Type SI**  
cutting on bottom and ID



**Type SEI**  
cutting on bottom, OD and ID

### Wavy bottom shoes

Wavy bottom shoes (type W, WE, WI, WEI) are used mainly for removing pieces of metal stuck on the outside of the fish. They are particularly suited for difficult washovers involving milling metal debris, cutting stabilizer blades, etc. The tool bottom is specially designed to allow maximum mud flow.



**Type W**  
cutting on bottom only.



**Type WE**  
cutting on bottom and OD



**Type WI**  
cutting on bottom and ID



**Type WEI**  
cutting on bottom, OD and ID



## Flat bottom shoes

Flat bottom shoes (type F, FE, FI, FEI) are used to mill pieces of metal stuck on the outside of the fish. They are able to withstand much more weight than other types of shoes, and can cut through stabilizer blades, hole opener arms and other hardened metal parts.



**Type F**  
cutting on bottom only.



**Type FE**  
cutting on bottom and OD



**Type FI**  
cutting on bottom and ID



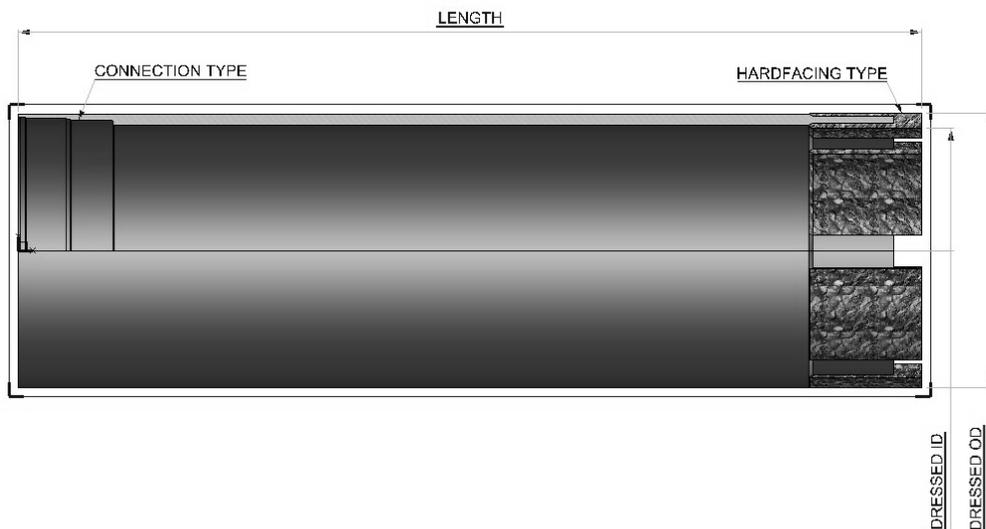
**Type FEI**  
cutting on bottom, OD and ID

### When ordering, please specify:

- Dressed OD and ID.
- Top connection.
- Type of shoe.
- Type of hardfacing.
- Any custom dimension.
- Any custom feature.



*Serrated and flat bottom shoes packed for delivery*



*All products made in France by Drillstar Industries*