

## nTRIBO<sup>™</sup> – Tribological Coatings for Complex Shapes

Tribological coatings are widely used in increasing the life time of wear and friction surfaces by improving friction, wearing and lubrication properties of tools and machine parts. Coatings can be done with several thin film methods, each having their own benefits and limitations. Conventional methods include sol-gel, Physical Vapor Deposition (PVD) and Chemical Vapor Deposition (CVD) techniques. None of these methods are able to deposit uniform films on complex shapes.



Coating thickness uniformity with different methods

Beneq nTRIBO – coating method is a highly accurate gas-phase thin film method offering extremely uniform and smooth coatings on objects of any shape. nTRIBO – coatings have excellent adhesion to most surfaces and can be deposited at low temperatures starting from  $60^{\circ}$ C.

nTRIBO – coatings can be done on various materials, including:

- Metals
- Ceramics
- Glass
- Plastics





The nTRIBO process is an economical and flexible batch process capable of coating thousands of objects (drills, wire guides, nozzles etc.) in single batch. Beneq provides a turnkey solution with the nTRIBO coating system TFS 500.



## Main benefits of nTRIBO:

- Extremely uniform coating on complex shapes
- Excellent coating adhesion to the surface
- Highly smooth coating
- Low process temperature
- Robust and reliable process

nTRIBO<sup>™</sup> is a trademark of Beneq Oy.