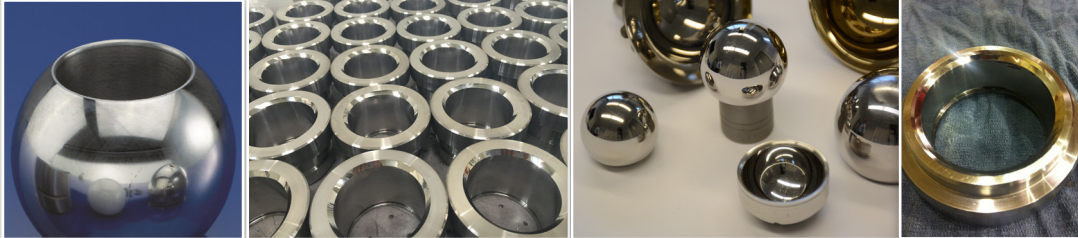


Thielenhaus Microfinish Solutions For The Valve-Industry



Your Tasks

- Reduction of the high post-processing to reach target of leakage
- Reduction of unit costs
- Minimization of varying quality due to a not automated process

Your Microfinish Pros

- Higher leakage-tightness of the components by minimal shape deviation as well as a perfect surface-topography
- Time for post-processing no longer necessary
- Higher load-bearing capacity and durability of the components
- A reproducible and controlled process

Our Microfinish Solutions



Thielenhaus Sphero

The Sphero is the platform of Thielenhaus providing the best solutions for flexible microfinish of spherical parts. Using the Sphero you will achieve not only a perfect surface but also an ideal shape. It features an automatic tool changer for up to ten tools.



Thielenhaus MicroStar 312

The Thielenhaus MicroStar can be used both for the machining of spherical and plane surfaces. Compared to the Sphero, the MicroStar 312 is able to deal with bigger workpieces.



Thielenhaus Sphero Mini

The compact and mobile attachment device for microfinishing is adaptable to many machines. It optimizes the roundness and the quality of the surface within μm -range.

THIELENHAUS
MICROFINISH



Your Contact Person

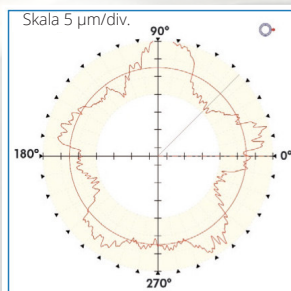
Yannick Kettler
T: +49 (0) 202 481 215
kettler@thielenhaus.com
www.thielenhaus.com

Microfinish At Its Best.

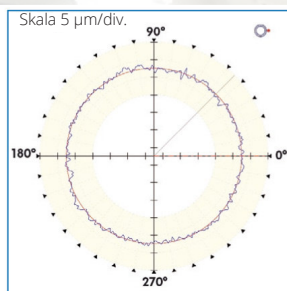
Developed For the Tasks Of the Valve-Industry.

- Applying our machines, you do not only get an optimal surface but also a perfect shape
- The up to 90° tiltable workpiece-spindle of both the Sphero and the MicroStar 312, as well as the force-controlled tool-spindle ensure maximum reliability when machining balls, spheres and plane surfaces
- The microfinishing of ceramic or metallic parts, with or without hard-coating, minimizes surface-roughness and improves roundness at the same time. This ensures an optimal fit and the resulting tightness as well as a reduction in friction and wear.

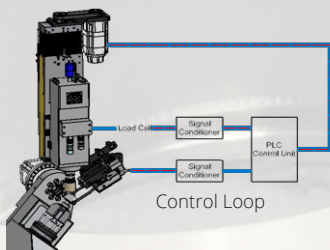
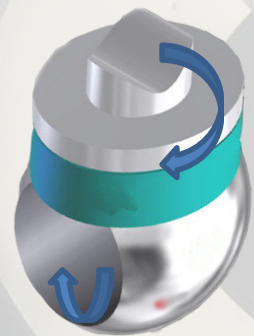
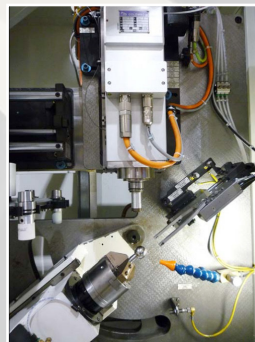
MicroSens | Leading Microfinish-Technology by Thielenhaus



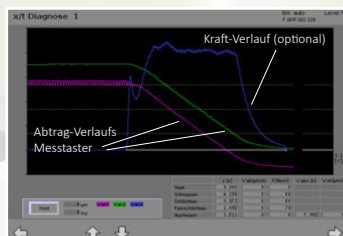
Before Microfinish
RONt 18 µm



After Microfinish
RONt 3,5 µm



Control Loop



Force Control And Removal Measurement

- A force-sensor automatically measures the machining force between tool and workpiece and transmits these data to the control
- The control regulates the feed speed as you can see on the graphic on the left. The result is a perfect process, featuring for minimal tool wear and highest workpiece quality.
- Clogging of the tool is reliably avoided
- The described force-controlled-process, safeguarded by many patents, can be visualised on a screen
- The machine is provided with an in-process dimensional control which, in addition the diameter-control, also detects the existing ball centerpoint of the pre-processing



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