



Microfinish of Balls, Cups and Discs

SPHERO



Microfinish Task

Flexible machining of form and surfaces of spherical parts



Microfinish Advantages

Minimizing of the surface roughness and improving roundness, thus ensuring a better ball-socket fit and further reducing friction and wear



Special Machine Features

- Workpiece interchangeability across small or large production series without time-consuming categorization
- Flexible machine tooling and thus ability to finish both ceramic and metal based (e.g. Cobalt-Chromium) components
- Flexible finishing of balls, cups and flat surfaces as an option
- Optional addition of gauging systems or various automatic loading systems



User-friendly machine design

Flexible machine tooling





Swivel-mounted workpiece spindle

MicroSens force-controlled tool spindle

Polishing process can be integrated

SPHERO

MACHINE DATA

Machining \varnothing : up to 75 mm
 Workpiece spindle: 0 – 2,000 min⁻¹
 Tool spindle: 1,500 – 15,000 min⁻¹
 Tool changer: up to 10 tools

TYPICAL RESULTS

Workpiece	Roundness	Roughness
Endoprosthesis (ball and cup)	1 – 2 μm	Ra \leq 0.03 μm
Spherical washers	2.0 μm	Ra \leq 0.03 μm
Slide shoes	2.5 μm	Ra \leq 0.08 μm
Ball valves and seats	3 – 6 μm	Ra \leq 0.03 μm



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