



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

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## MACHINE DATA

Machining $\varnothing$ :	up to 75 mm
Workpiece spindle:	0 – 2,000 min <sup>-1</sup>
Tool spindle:	1,500 – 15,000 min <sup>-1</sup>
Tool changer:	up to 10 tools

## TYPICAL RESULTS

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

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