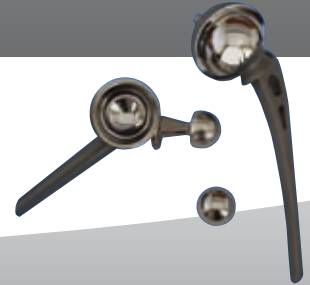


Finishing & Polishing of Balls and Cups

for Hip and Spinal Implants



Task

Improvement of roughness and roundness of different types of metal and ceramic balls and cups



Watch the demo video on **YouTube** :
Scan QR code or search for "EndoStar"

Highlights

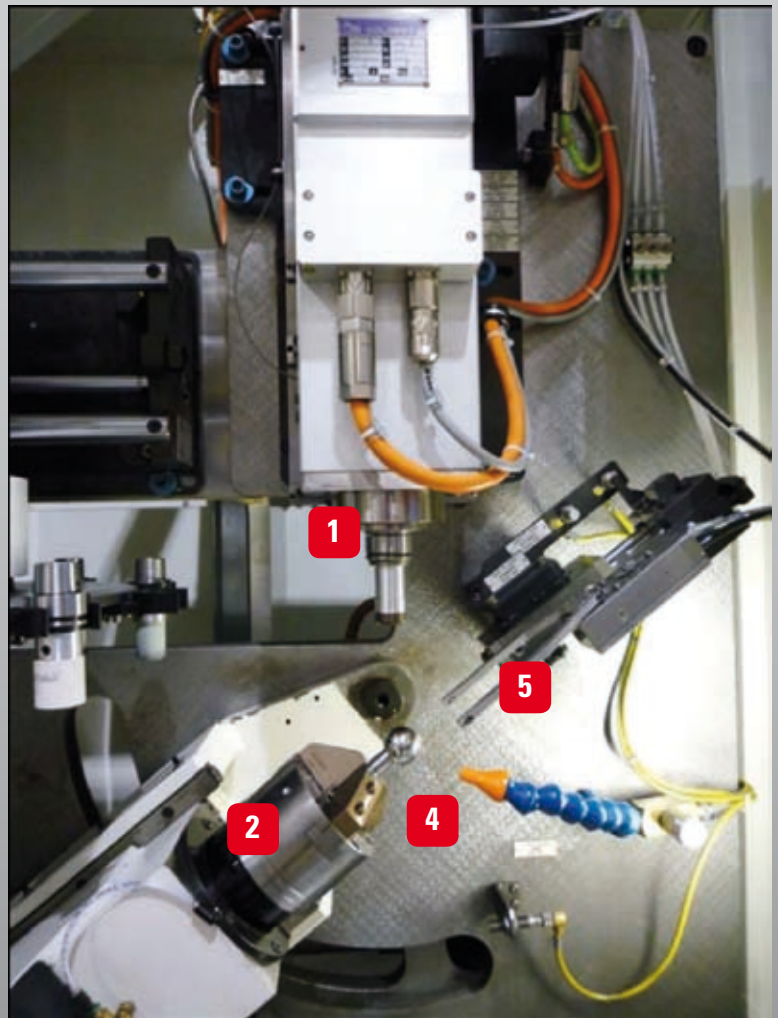
- ✓ Top quality results via multi-step machining in single chuck
- ✓ Flexible machining of balls and cups made out of metal or ceramic
- ✓ Compact and ergonomic vertical design
- ✓ Easy change-over



Workpiece specifications (example: ball)		
	Before Microfinish	After Microfinish
Roughness (Ra)	Ground or turned	0.02 μm
Diameter	28.4 mm	27.9 +/- 0.005 mm
Roundness (equator)	---	< 0.002 mm
Cycle time	2 – 4 minutes	

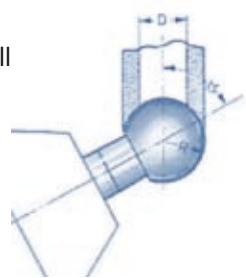
Solution

- Tool spindle [1] with up to 15,000 rpm and **MicroSens** force control for stable process
- Workpiece spindle [2] with up to 2,000 rpm on longitudinal slide with 150 mm feed for machining cups and approaching the ball centerpoint for optimal stock removal; swivel range from 0 – 90° via programme, also during process for polishing
- Fully automatic tool changer (HSK 40) [3] with up to 10 tools (CBN, diamond and conventional) for multi-step machining or storing tools for different part types
- Workpiece specific reception for balls and cups [4]; easy manual loading
- Gauging device [5] for controlling diameter in-process or before and after machining, optionally with axial workpiece positioning
- Special tool-feed programme for cup machining

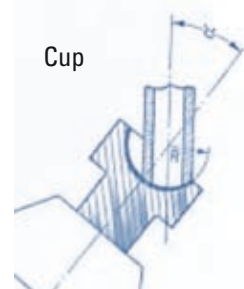


Machining Concept

Ball



Cup



Overview

Vertical design provides excellent accessibility while integration of electrical cabinet and filter ensures minimal floor space requirements



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