

# Superfinishing Machines | Business Case Study

## Superfinisher Solutions for Automotive Part Manufacturer in USA

**Global Manufacturer's Requirements:** A US-based Tier 1 manufacturer contacted LPR Global with specific needs for automotive parts manufacturing equipment. They needed to superfinish shock absorber piston rods with post chrome plating.

The diameter of the workpieces ranged from 11 mm to 25 mm, with lengths of 100 mm to 640 mm, and chrome-plated length between 50 mm and 440 mm. The required surface roughness after superfinishing was maximum Ra 0.05  $\mu\text{m}$  with a diameter tolerance of +/- 0.001 mm.

**LPR's Superfinisher Solution:** We worked closely with the manufacturer's engineering and technical teams to develop a solution that precisely met their surface roughness and tolerance requirements. The hydraulic stone system was equipped with eight sets of hydraulic stone guides. The feeding system included a trimming belt and pulley controlled by an inverter motor.

The oscillation head's ball-stroke system provided 1 mm to 5 mm oscillation strokes controlled by an inverter motor. As per the client's safety standards for electric control, our machine was equipped with Allen Bradley PLC and Schmersal safety relay modules.

