

**Components produced by Precision Rotary Swaging:
Bike Spokes**

blank
Ø 4 x 122

Operation 1
customer

Head forming

Operation 2
FELSS

Swaging

Operation 3
customer

milling, thread forming,
facing and chamfering

Workpiece:

Material: Aluminium

Blank: Bar Ø 4.0 x 122 mm

Manufacturing requirement:

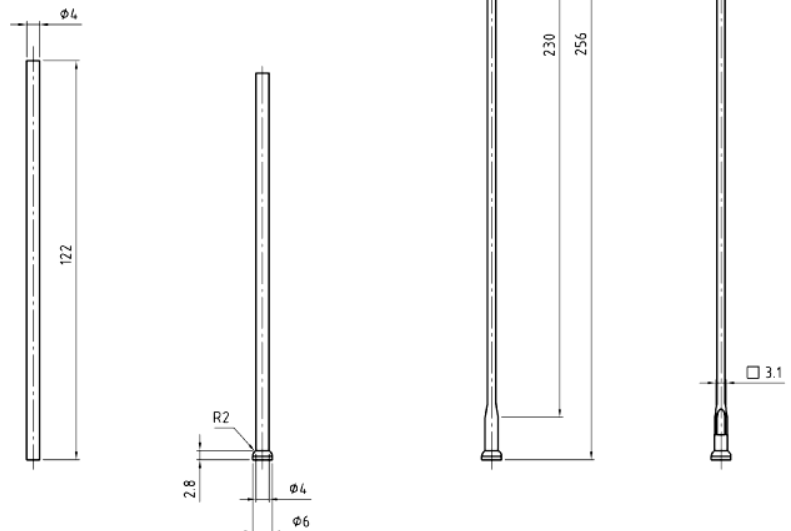
Rotary swaging of middle section

Previous technique:

Machining / pressing

Operation sequence:

1. Head forming
2. Rotary Swaging of middle section
- 3.1. Hexagon milling
- 3.2. Thread-forming
- 3.3. Facing and chamfering



Advantages:

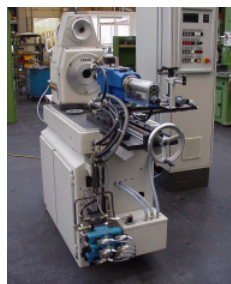
- Chipless forming, therefore high material savings of up to 60% compared to machining
- Highest precision
- Cycle time only 20 sec
- Excellent surface finish
- Improvement of mechanical properties
- Minimum machining
- Favourable grain structure

Machine description:

Single-station rotary swaging machine

Production rate:

Cycle time: approx. 20 sec



Machine:

Model: HA 16-1 VUE

Required floor space including sound enclosure: (L x W x H)

approx. 3,000 x 2,000 x 2,000 mm

Weight: approx. 1,200 kg

Required power: approx. 6 kW