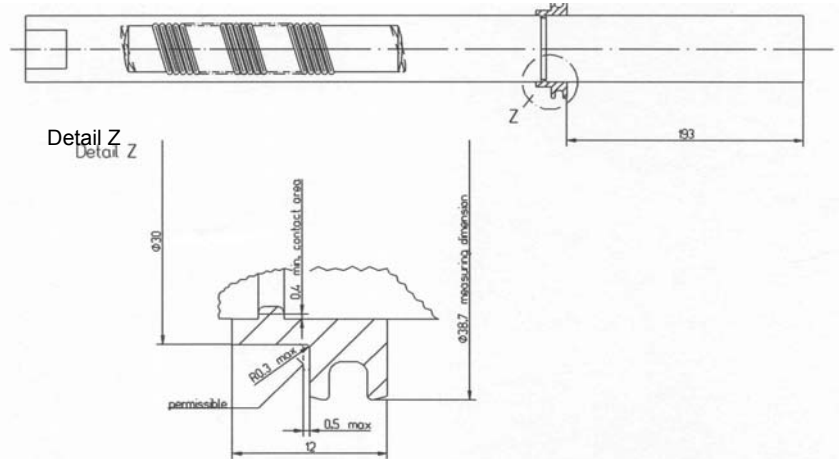


Components produced by Precision Rotary Swaging:
Piston on Steering Rack



95-0062/M

Workpiece:

Steering rack: Steel C 35 with round groove, hardened and ground

Piston: Steel C 15, pre-turned with through bore

Manufacturing requirement:

Fixing piston on steering rack by rotary swaging

Previous technique:

Rolling

Operation sequence:

1. Separate feeding of pistons and steering racks
2. Control: groove on steering rack
3. Assembling of piston onto steering rack
4. Positioning of piston and fixing by rotary swaging
5. Control: reduced dia. at piston and position of piston on steering rack

Advantages:

- Good dimensional accuracy
- Well filled locating groove
- Firm fixing
- Fully automatic process
- 100 % control

Machine description:

Automatic Precision Rotary Swaging Line consisting of:

- 1 measuring and assembling station
- 1 swaging station
- 1 measuring device

Production rate:

Cycle time: approx. 15 sec.
 (= 4 pieces/min.)

Machine:

Model: HA 40-2 VUE

Required floor space without sound enclosure: (L x W x H)
 approx. 6800 x 5800 x 2600 mm

Weight: approx. 7,000 kg

Required power: approx. 20 kW