



## Rotary swaging machine RK25

The rotary swaging machine RK25 is used for:

- reduction, calibration and rotary swaging of pipe sections
- reduction, calibration and rotary swaging of sleeves

The rotary swaging machine guarantees a form-fit connection which helps achieve, among other things, better strain-relief or tightness.

For workers of rotationally symmetric components the rotary swaging machine RK25 represents a consistent enhancement of existing systems for the rotary swaging of pipes & pipe ends, as well as for the rotary swaging of sleeves, shells, armatures and many other applications.

A typical example is the implementation of sensor sleeves which mechanically protect connection leads from being pulled out and seal them at the same time (IP67 possible). This procedure also allows crimping of plugs into sensor sleeves. Wall thicknesses of 0.2 mm up to 1.0 mm with a diameter of 3 – 25 mm are possible, depending on the material.

### Machine setup

The handling of the rotary swaging machine is very simple. The work piece is inserted into the opening, usually positioned with the help of a chuck or a gripper, which assures that it does not move while the jaws move in stages axially towards the work piece. After each pressing process, the jaws are turned by a variable degree. This ensures a completely round form according to the given die diameter.

The corresponding working parameters can be stored and managed in the machine control system. The user interface allows easy and logical operation. All essential processes are electronically monitored and the data is stored in the control system. This ensures high process safety and reproducibility.

[for more information on the machine setup of rotary swaging machine RK25. see here](#)

#### Basic machine

- basic module for the reception of all functional components consists of:
- base panel with vertical assembly block
- drive system: 2 servomotors with toothed belt discs/toothed belt (2 CNC axes)
- recirculating ball screw with screw nut and double thrust bearings, adaption to shaft guide of cone ring for infeed of tools
- main ball screw mounted free of play by means of spring system for reception of tool holding disc
- includes protection cover with gas spring, handle and security sensor
- swaging head can be equipped with 6/8/12 dies
- servo drive enables exact control over driving parts

#### Positioning unit: chuck or gripper

- manually with longitudinal slide to admit straining module. Driven by crank and trapezoidal thread spindle TR24x5. Positioning with help of counting module.
- motor-driven with longitudinal slide to admit straining module. Driven by servomotor and trapezoidal thread spindle TR24x5.

#### Chuck module

- draw tube with chuck reception and end cone fitted on positioning unit
- a standard chuck is used for the straining of the work piece
- chuck geometry is adjustable to work piece
- position of component part in chuck can be adjusted with the help of a stopper
- stopper available with parts sensor
- chucking power adjustable by motor current

#### Gripper module

- electric gripper fitted on positioning unit

- special gripper jaws are used for the straining of the work piece
- position of component part in chuck can be adjusted with the help of a stopper
- stopper available with parts sensor
- chucking power adjustable by motor current

#### Protection measures

- protection door at front of forming head; easy insertion of parts guaranteed
- front protection also available with light grid
- includes protection cover with gas spring, handle and security sensor over drive system
- emergency stop immediately stops all movements

#### Control system / Software

- VIPA Speed7 SPS with user panel Siemens TP700 comfort; S7 and TIA portal V13
- data sets selectable via user panel (by means of bar code scanner if desired)
- data bank for product specific parameters
- 3 access levels for machine control (user, service and administrator)
- language can be chosen as requested (default German and English, other languages with extra charge)
- control cabinet installed into frame

#### Frame

- holds all machine components
- welded and coated steel frame with 4 rotatable wheels, 2 with locking brake
- aluminium section optional

#### Machine documents

- documentation, hazard analysis, CE mark

## Optional components – additions

The standard rotary swaging machine RK25 can be equipped with different optional additions and functions to upgrade it, for example, to a semiautomatic rotary swaging machine with process monitoring.

[for more information on components and additions to rotary swaging machine RK25, see here](#)

## Models – RK25

### Manual positioning chuck / gripper

- manually with longitudinal slide to admit straining module. Driven by crank and trapezoidal thread spindle. Positioning with help of counting module.
- A standard chuck is used for straining of work piece
- chuck geometry can be adjusted to work piece



## Motor-driven positioning chuck / gripper

- motor-driven with longitudinal slide to admit straining module. crank and trapezoidal thread spindle. Positioning with help of counting module
- a standard chuck is used for the straining of the work piece
- chuck geometry can be adjusted to work piece
- can be programmed for several swaging positions per swaging process in order to form the work piece



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## Height adjustable frame

- desktop mounted on height adjustable legs
- height adjustable up to 300 mm
- 4 rotatable wheels, 2 with locking brake



## Light curtain

- Safeguards free access for equipping the SegmentFormer
- With obstacle detection
- Initial acceptance carried out

## Nonstandard models

- machine can be adjusted according to requirements
- integration of machine into entire machine complex possible
- further alternatives possible

## Technical data

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### Rotary Swaging Machine RK25

|                     |                            |   |
|---------------------|----------------------------|---|
| Measurements        | Standard                   | 1.000 x 1.000 x 1.400 mm (length x width x height)) |
| Die data            | number of swaging jaws     | 6/8/12  |
|                     | swaging jaws               | hardened  |
|                     | possible swaging diameter  | 3 – 25 mm   |
|                     | max. crimp width           | up to 15 mm   |
|                     | possible wall thickness    | 0,2 – 1 mm  |
| Power supply        | net 3 x L / PE 400V / 50Hz |   |
| Output              | 3 kVA                      |   |
| Current             | 8,2 A                      |   |
| Pre-fuse            | Max. 16 A                  |   |
| Cable cross section | 5 x 2,5mm $\leq$           |   |
| Compressed air      | not required               |   |

|            |                 |  |
|------------|-----------------|--|
| Weight     | Ca. 350 kg      |  |
| Cycle time | ca. 10 – 20 sec | depending on diameter and swaging step |

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