

Overhaul with New CNC of forging machine GFM SX-16

(year of manufacture – 1974)

1. SCOPE OF DELIVERY

- Pos. 1.1** Engineering work in order to mantle a new control system, including mechanic and hydraulic adaption as well as documentation.
- Pos. 1.2** New control system Siemens SIMATIC based on TIA (Totally Integrated Automation).
- This control system is specially developed and optimized for such kind of a machine tool. Program input is done interactively via LCD-screen monitor on the control panel. All forging programs and settings are stored on the integrated memory.
The program input is done directly on the control panel with a touch-pad or a memory stick.
- This new Siemens control replaces the existing control as well as the control panel with following advantages:
- quick and easy program change to the intended blank type
 - graphical user interface
 - simple input of basic dimensions
 - measuring resolution of 0,01 mm (for forging diameter)
 - diagnostic system with clear text display
 - acceleration and deceleration control
 - integrated PLC control system (Profibus) and free programmable control
 - control panel based on LCD-screen system to maintain machine settings
 - display of alarms and messages
- The Siemens control consists of:
System unit with an integrated power supply including system software pre-tested and pre-mounted.
- Pos. 1.3** Set of spare parts in order to exchange the existing servo valves, pressure sensors, proportional valves, mounting plates and installation material for axis A,B,R and L.
- Pos. 1.4** Set of mechanical parts for position feedback consisting of:
- measuring system for measuring chuck head position
 - adaption parts for the measuring system of hammer adjustment
- Pos. 1.5** Complete new control cabinet including motor control based on electric diagram SX-16 consisting of:
- transformer

TECHNICAL SPECIFICATIONS

- battery back up
- cables, plugs and wiring material
- contactors
- soft start SIEMENS
- main switch, etc.

MECHANICAL OVERHAUL

The mechanical overhaul consists of the following:

- Group 01** Gear box
- Exchange of all bearings and sealing including the main pinion motor
- Group 02** Forging box
- Exchange of 16pc. bushings, sliding bands and several sealings
- Group 04** Hammer adjustment
- Exchange of several bearings and seals
- Group 06** Piping
- Checking and repair of all necessary pipes
 - Exchange all rubber piping
- Group 08** Chuckhead
- Exchange of all sealings with some mechanical part damaged
- Group 09** Chuck head bed
- Exchange strip
 - Checking the rails guide
 - New cover protection guide
- Group 22** Cooling water
- Exchange of heat exchanger for hydraulic and lubrication
- Group 24+30** Loading and unloading system
- Checking and repair
- Group 5+33** Lubrication and hydraulic
- Exchange of hydraulic and lubrication pump coupling
 - Exchange of all sealings for all hydraulic cylinders
 - Retrofit pumps and servo valves

TECHNICAL SPECIFICATIONS

- Group 39** Block support
- Exchange bolt and rollers

Machine will be painted as new condition: removing old painting.