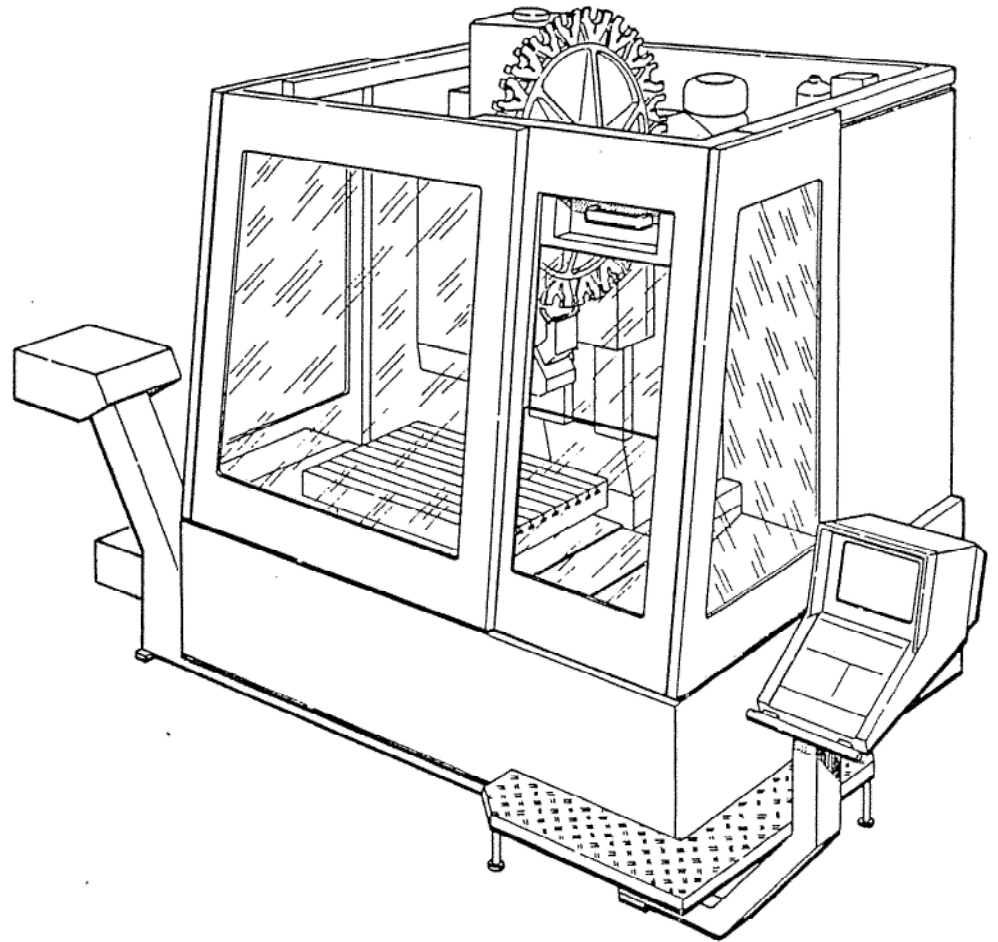


Operator's manual

Nr. 76,053122



MAHOMAT
SERIE 531

MAHO
MAHOMAT

1 BEFORE PUTTING THE MACHINE INTO OPERATION

2 GENERAL DESCRIPTION OF THE MACHINE

3 OPERATION OF THE MACHINE

4 WORK TABLES

5 CONTROL

6 ACCESSORIES / EXTENSION STAGES

7 MAINTENANCE

8 DIAGRAMS AND LIST OF SPARE PARTS

9 DISASSEMBLY INSTRUCTIONS

TABLE OF CONTENTS Serie 531

	Sheet
BEFORE PUTTING MACHINE INTO OPERATION	
Important hints	1.01-1
Transporting the machine	1.02-1 1.02-2
Erecting the machine	1.03-1 up to 1.03-3
Erecting the cooling lubricant plant	1.03-4
Erection plan and work-space calculation	1.04-1
Machine dimensions	1.04-1
Removing the rust preventing agent	1.08-1
Connecting to the electric mains	1.10-1
Putting into operation-checklist	1.11-1
GENERAL DESCRIPTION OF THE MACHINE	
Technical data	2.01-1 2.01-2
Survey of machine-designation of the main machine components	2.02-1
Designation of the machine components	2.02-2 up to 2.02-10
The directions of movement	2.03-1
Control station	2.04-1
Control station - function of the operating elements	2.04-2
Hand-operated control desk	2.04-5
Transmission layout - feed drive	2.10-1
Power diagram and torque diagram main drive.....	2.10-1
Function of the safety brake	2.11-1
OPERATION OF THE MACHINE	
Function test/trial run	3.01-1 3.01-2

TABLE OF CONTENTS Series 531

	Sheet
Vertical workspindle	3.04-1
Automatic clamping of tool	3.12-1
	up to 3.12-3
Checking the clamping bolt.....	3.13-2
Tool shank-dimensions	3.13-3
Tool-limiting dimensions	3.13-4
Tool magazine	3.13-7
	3.13-8
Tool changer	3.14-3
Setting back the machine slides manually, after contacting the EMERGENCY STOP cams	3.15-1
EMERGENCY STOP devices	3.16-1
Hydraulic circuit diagram	3.18-1
	3.18-1.1
Hydraulic system	3.18-3
	3.18-4
Pneumatic diagram	3.19-1
Pneumatic system	3.19-4
	3.19-5
Automatic centralized lubrication chart	3.20-1
	3.20-1.1
Automatic centralized lubrication	3.20-3
	up to 3.20-5
Cooling lubricant plant	3.22-1
	3.22-2
Chip conveyor	3.23-1
Measures in case of malfunction	3.25-1
Interference signalling device	3.25-2
	3.25-3

TABLE OF CONTENTS Series 531

	Sheet
MAINTENANCE	
Important hints.....	7.01-1
Lubrication of the machine.....	7.02-1
Lubricating instructions.....	7.03-1
Recommended lubricants	7.06-1
Instruction regarding lubricants.....	7.06-2
Selection table for lubricants	7.06-3
Cooling lubricants	7.07-1 up to 7.07-4
Maintenance chart	7.20-1 7.20-2
Survey of maintenance work on the mechanic and hydraulic systems.....	7.21-1
Survey of maintenance work on electric and electronic systems	7.22-1
Checking/Correcting the play/taper gibs.....	7.30-1 to 7.30-6
Replacing the toothed belts for feed drive.....	7.33-1 to 7.33-4
Replacing the ribbed V-belts for the tool magazine drive.....	7.33-8
Inspection and maintenance of the ribbed V-belts.....	7.33-9
Replacing the toothed belts for the main drive.....	7.34-1 7.34-2
Readjusting the collet chucks of the automatic tool clamping device.....	7.35-1
Maintenance of the hydraulic system.....	7.50-1 to 7.50-3
Maintenance of the accumulators.....	7.50-5 to 7.50-9
Maintenance of the pneumatic system.....	7.51-1 7.51-2
Maintenance of the cooling lubricant system.....	7.52-1
Maintenance of the tool magazine.....	7.54-1 to 7.54-3

TABLE OF CONTENTS Series 531

	Sheet
DIAGRAMS AND LISTS OF SPARE PARTS	
Hints for ordering spare parts.....	8.00-1
List of spare parts and wearing parts (electronic data processing-printout)	
Diagram of antifriction bearings.....	8.30-1 8.30-2
List of antifriction bearings (electronic data processing-printout)	
DISASSEMBLY INSTRUCTIONS	
Main motor.....	9.01-1 9.01-2
Disassembly of the motor for the feed drives in the X, Y, Z-axis.....	9.08-1 up to.... 9.08-3
Adjustment of the safety clutches.....	9.09-1 9.09-3