

Turning machines A500



ARINSTEIN
Werkzeugmaschinen

DESIGN FEATURES

- The bed is a welded steel construction that is filled with special sand so as to provide more rigidity against vibration and sound absorption, and also to reduce thermal deformations.
- Moveable units are provided with linear roller-type guidelines (similar to THK) that ensure high precision of traveling and longer lifetime of the lathe.
- Feed drives include ball screws and digital AC motors supplied by Siemens.
- The headstock supplied by EMCO, Austria, is a cast case with ribbed surface so as to reduce thermal deformations; inside the headstock a spindle runs on high precision roll bearings.
- Angle of the spindle is controlled by means of a special sensor.
- The 2nd spindle (optional) is a motor spindle by Siemens, which is installed on movable carriage instead of the tailstock.
- All the movable components are located inside the cabin so as to ensure safe operation of the machine; guidelines of the movable units are protected against chips and emulsion.
- Thanks to the slanted position of the reach-over carriage, chips are dropped to the conveyor located in the front part of the machine.
- The hydraulic system is integrated into one module which includes a tank with an inbuilt gear pump, an air heat exchanger, distribution, control and measuring devices.
- The control console is equipped with a flat color display, keyboard and a flywheel.
- The CNC Sinumerik 840D is compatible with the programming standards of DIN/ISO.



SPECIFICATION OF CNC

- Linear and circular interpolation.
- Data editing for program input and modification.
- Graphical testing of part programs.
- Radius and length compensation.
- Cycles of deep drilling, tapping, groove milling, selection and contouring of rectangular, round and any other pockets.
- Mirror machining.
- Scaling ratio.
- Program rotation and shift.
- Axis travel alignment by means of potentiometer, 0–120%.
- Spindle speed alignment by means of potentiometer, 50–120%.



A500 MODIFICATIONS

TECHNICAL DATA			
			
MODIFICATION	A500.1	A500.2	A500.3
Swing over bed	570 mm	570 mm	570 mm
Maximum turning diameter (for a length 170 mm)	520 mm	520 mm	520 mm
Swing over cross slide	375 mm	375 mm	375 mm
Distance between centers	1000/1500/2000 mm	1000/1500/2000 mm	2000 mm
X-axis travel	310 mm	310 mm	310 mm
Z-axis travel	1000/1500/2000 mm	1000/1500/2000 mm	1000 mm
Y-axis travel (option)	±50 mm	±50 mm	±50 mm
Maximum part length	1000/1500/2000 mm	900/1400/1900 mm	1900 mm
Maximum workpiece weight flying	250 kg	250 kg	250 kg
Maximum workpiece weight between centers	600/800/1000 mm	600/800/1000 mm	900 mm
Distance between chuck end-face and center of gravity	-	175 mm	175 mm
HEADSTOCK			
Spindle nose according to DIN 55026	A2-8	A2-8	A2-8
Chuck diameter	315 mm	315 mm	315 mm
Spindle bore	103 mm	103 mm	103 mm
Hole in draw tube	90 mm	90 mm	90 mm
Speed range	40... 3000 rpm	40... 3000 rpm	40... 3000 rpm
MAIN DRIVE			
AC-motor	Fanuc (Siemens)	Fanuc (Siemens)	Fanuc (Siemens)
Power S1/S6	30/37 (28/43) kW	30/37 (28/43) kW	30/37 (28/43) kW
ZF double reduction gear (1:4) (option)	-	-	-
Maximum torque on spindle (without ZF-reducer)	500/620 (535/800) Nm	500/620 (535/800) Nm	500/620 (535/800) Nm
Maximum torque on spindle (with ZF-reducer)	1500(1800) Nm	1500(1800) Nm	1500(1800) Nm
FEED DRIVE SYSTEM			
Maximum feed force in X and Y axis	7500 N	7500 N	7500 N
Maximum feed force in Z axis	11000 N	11000 N	11000 N
Rapid traverse	20 m/min	20 m/min	20 m/min
TOOL TURRET			
Number of tool stations/ including driven (option)	12/12	12/12	12/12
Tool shank according to DIN 69880	VDI 40	VDI 40	VDI 40
Maximum torque on tool (Fanuc/Siemens)	43/34 Nm	43/34 Nm	43/34 Nm
Maximum power (Fanuc/Siemens)	5,5/12,7 kW	5,5/12,7 kW	5,5/12,7 kW
Maximum rotary speed (Fanuc/Siemens)	4000/3600 rpm	4000/3600 rpm	4000/3600 rpm
C-AXIS (option)			
Minimum spindle indexing angle	0,01 degrees	0,01 degrees	0,01 degrees
Maximum torque (Fanuc/Siemens)	500 Nm	500 Nm	500 Nm
Maximum rotary speed	80 rpm	80 rpm	80 rpm
TAILSTOCK			
Taper hole	MK5	MK5	MK5
Maximum application force, (tailstock without sleeve)	11000 N	11000 N	11000 N
Sleeve diameter/stroke	100/140 mm	100/140 mm	100/140 mm
Axial/radial sleeve load	5000/7500 N	5000/7500 N	5000/7500 N
STEADY REST (option)			
Gripping diameter	8... 105/15... 170/35... 250 mm		
DIMENSIONS			
Height, width	2360/2230 mm	2360/2230 mm	2360/2230 mm
Length with chip conveyor	5360/5960/6550 mm	5360/5960/6550 mm	6550 mm
Weight with chip conveyor	11000/13000/15000 kg	11000/13000/15000 kg	15000 kg

REFERENCES

EUROPE

Akcan Makine Sanayii Ltd. Sti.,	Turkey
Ambold Pressen & Maschinenbau GmbH,	Germany
ARO Schweisstechnologien GmbH,	Germany
Artem Works,	Russia
Emtec Ltd.	UK
NPO Energomash	Russia
JSV Elemash,	Russia
Forelli Pietro SpA,	Italy
FPM Srl.,	Italy
JSV Izhmash,	Russia
John Deere Werke,	Germany
Kupol Works,	Russia
Mannesmann Demag GmbH,	Germany
Marcel's Maschinen AG,	Swiss
Sverdlov Works,	Russia
Seversky Pipe Works,	Russia
Maskin-Importen ApS,	Denmark
Metalexport Ltd,	Polen
NKMZ,	Ukraine
Pnevmostrojmashina,	Russia
RD Machine Outils,	France
San Miguel S.L.,	Spain
Siegfried Jacob Metallwerke,	Germany
JSV Tvel,	Russia
Ural Optomechanical Works,	Russia
Uralvagonzavod,	Russia

AMERICA

Power Engineering & Manufacturing, Inc.,	USA
Stan Canada Inc.,	Canada
Supfina Machine Co., Inc.,	USA
The Gear Works,	USA

AFRICA

Piston Trading LLC,	UEA
Hestico Ltd.,	South Afrika

ASIA

Lianpad Co Ltd,	India
Mega Motors Company,	Iran
VIT Co. Ltd,	Vietnam

AUSTRALIA

GE Aircraft Engines,	Australia
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