



Fabryka Obrabiarek Precyzyjnych AVIA S.A.

QUALITY

DRIVES

PROFITS



WERKZEUGMASCHINEN / MACHINE TOOLS | WERKZEUGTECHNIK / TOOL TECHNOLOGY | INGENIEURLEISTUNGEN / ENGINEERING

PRODUCT
GUIDE

AVIAturn



CNC LATHES



AVIAturn HIGHLIGHTS

- » The machines can be equipped with a semi or fully automatic bar feed.
- » CNC control FANUC 0i-TF or optionally SIEMENS 828D.
- » The design of the machine with the spindle as a C-axis and the tool turret with driven tools also allows drilling and milling work to be carried out.
- » With 15 kW main motor, 251 Nm, 5,000 rpm spindle speeds and 25 / 30 m/min rapid traverse
- » X / Z, these machines offer all the prerequisites for efficient machining.
- » The carefully mounted spindle runs in high-precision bearings.
- » The 12 station - VDI tool turret with driven tools makes it possible to mount axially and radially driven tool holders.
- » The heavily ribbed outer walls of the headstock to achieve good temperature behavior.
- » The guideways and the turret are protected from chips by metal covers.
- » The working area is fully protected by the completely closed cabin.
- » Any chips that occur are routed directly to the chip tray or, optionally, to the chip conveyor.

High efficiency slant bed CNC lathe
with turret

STANDARD EQUIPMENT

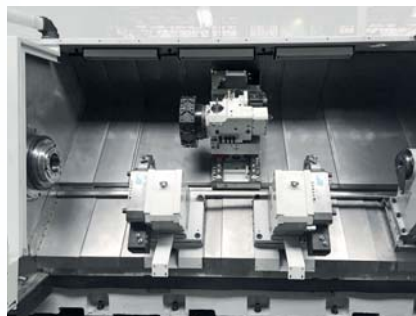
- » FANUC Oi-TF CNC control with Manual Guide dialog programming and 15" monitor.
- » Digital drives and motors.
- » Linear guides in the X, Z and Y axes
- » Stainless steel telescopic covers.
- » Ball screw with double nut.
- » Automatic central lubrication.
- » 12-position VDI tool turret with servo drive.
- » Main spindle 5.000 rpm with high torque.
- » Self-centering power 3-jaw chuck $\varnothing 210$ mm with a set of hard and soft jaws and through-feed cylinder.
- » Water cooling system through the turret.
- » Electronic handwheel.
- » Full enclosure with LED lighting.
- » Control cabinet heat exchanger.
- » Interface RS 232, Ethernet and interface PCMCIA, optional USB.
- » CE Declaration of Conformity.
- » Installation elements.

SPECIAL ACCESSORIES A.O.

- » Siemens 828D control.
- » Turret with BMT standard tool holder instead of VDI.
- » Live center MT 5 long.
- » Live center MT 5 short.
- » Tool probe with automatic arm and measuring cycles.
- » High pressure coolant system 20 bar with additional 20 micron filter.
- » Manual coolant gun for cleaning work.
- » Hinge conveyor.
- » 3-jaw chuck $\varnothing 250$ instead of chuck $\varnothing 210$ with a set of soft top jaws.
- » Collet chuck $\varnothing 4$ to 60 mm with collets type 185E.
- » Bar gripper GF 80-ZV30 (VDI 30) + gripper jaws.
- » Parts catcher with container.
- » Bar feeder.
- » Oil mist separator.
- » Oil/coolant separator.
- » VDI tool holders with equipment.
- » 3D model.
- » Synchronized optional rotation.
- » Positioning Software.



▲ TOOL PROBE



▲ STEADY REST



▲ TOOL TURRET



▲ TELESCOPIC COVERS



▲ FOLLOWING REST



▲ HEAVILY RIBBED CONSTRUCTION

TECHNICAL DATA	AVIAturn 35	AVIAturn 35M AVIAturn 35MY	AVIAturn 35SMY AVIAturn 35SM	AVIAturn 45	AVIAturn 45M AVIAturn 45MY
TURNING RANGES					
Max turning diameter [mm]	350	350	350	400	400
Max. turning diameter over support [mm]	350	350	350	400	400
Max. turning length [mm]	600	580	580	670	620
Max bar diameter [mm]	65	65	65	80	80
SPINDLE					
			M-SPINDLE	S-SPINDLE	
Spindle nose [Type]	A2-6	A2-6	A2-6	A2-5	A2-8
Max rpm [rpm]	5000	5000	5000	6000	4000
3-jaw chuck diameter [mm]	210	210	210	169	250
Spindle bore [mm]	75,5	75,5	75,5	-	93,5
FANUC					
Spindle motor power S1 / S3 (25%) [kW]	11 / 15	11 / 15	11 / 15	7,5 / 11	15 / 18,5
Spindle torque S1 / S3 (25%) [Nm]	126 / 171	126 / 171	126 / 171	47,75 / 70	251 / 415
SIEMENS (Option)					
Spindle motor power S1/S3 (60%) [kW]	13,5 / 16,2	13,5 / 16,2	13,5 / 16,2	8 / 9,7	-
Spindle torque S1/S3 [Nm]	157 / 189	157 / 189	157 / 189	52 / 62	-
AXES TRAVEL					
X-Axis [mm]	-10 / 210	-60 / 180	-10 / 180	314	318
		-55 / 185	-10/185	-	310
Z-Axis [mm]	610	600	600	650	650
Z2-Axis [mm]	-	-	-	520	-
Y-Axis [mm]	-	-	+/-50	-	-
		+/-50	+/-50	-	+/-50
FEEDS					
Rapid traverse X / Z / X1 / Z2 [m/min]	25 / 30 / - / -	25 / 30 / - / -	25 / 30 / - / 30	30 / 30 / - / -	30 / 30 / - / -
		25 / 30 / 11 / -	25 / 30 / 11 / 30		30 / 30 / 30 / -
FEED MOTORS (FANUC)					
Motor power X / Z / X1 / Z2 [kW]	1,8 / 1,8 / - / -	1,8 / 1,8 / - / -	1,8 / 1,8 / - / 1,8	1,8 / 1,8 / - / -	1,8 / 1,8 / - / -
		1,8 / 1,8 / 1,8 / -	1,8 / 1,8 / 1,8 / 1,8		1,8 / 1,8 / 1,8 / -
Torque X / Z / X1 / Z2 [Nm]	11 / 11 / - / -	11 / 11 / - / -	11 / 11 / - / 11	11 / 11 / - / -	11 / 11 / - / -
		11 / 11 / 11 / -	11 / 11 / 11 / 11		11 / 11 / 11 / -
Feed force X / Z / X1 / Z2 [N]	6220 / 5184 / - / -	6220 / 5184 / - / -	6220 / 5184 / - / 5184	6220 / 5184 / - / -	6220 / 5184 / - / -
		6220 / 5184 / 6220 / -	6220 / 5184 / 6220 / 5184		6220 / 5184 / 6220 / -
FEED MOTORS (SIEMENS)					
Motor power X / Z / X1 / Z2 [kW]	2,3 / 1,9 / - / -	2,3 / 1,9 / - / -	2,3 / 1,9 / - / 1,8	2,3 / 1,9 / - / -	2,3 / 1,9 / - / -
		2,3 / 1,9 / 2,3 / -	2,3 / 1,9 / 2,3 / 1,8		2,3 / 1,9 / 2,3 / -
Torque X / Z / X1 / Z2 [Nm]	11 / 11 / - / -	11 / 11 / - / -	11 / 11 / - / 8,5	11 / 11 / - / -	11 / 11 / - / -
		11 / 11 / 11 / -	11 / 11 / 11 / 8,5		11 / 11 / 11 / -
Feed force X / Z / X1 / Z2 [N]	6220 / 5180 / - / -	6220 / 5180 / - / -	6220 / 5180 / - / 2827	6220 / 5180 / - / -	6220 / 5180 / - / -
		6220 / 5180 / 6220 / -	6220 / 5180 / 6220 / 2827		6220 / 5180 / 6220 / - / -
REVOLVER					
Amount of positions [Pcs]	12	12	12	12	12
Tool holder [Type]	STANDARD	VDI 30	VDI 30	VDI 40	VDI 40
	OPTION	BMT 55	BMT 55	BMT 65	BMT 65
Number of powered places [Pcs]	-	12	12	12	12
Max. tool cross-section [mm]	20 x 20	20 x 20	20 x 20	25 x 25	25 x 25
Max. diameter of boring bar holder [mm]	32	32	32	40	40
Max speed of driven tools [rpm]	-	5000	5000	-	5000
Max. engine power on the driven holder (S1) [kW]	FANUC	-	4,82	-	5,50
	SIEMENS	-	4,50	4,50	4,50
Max. torque on the driven holder (S1) [Nm]	FANUC	-	18	-	26
	SIEMENS	-	20	20	20
TAILSTOCK					
Drive	hydraulic	hydraulic	-	hydraulic	hydraulisch
Travel [mm]	500	500	-	600	600
Down force [N]	5000	5000	-	5000	5000
Quill [MT]	MT5	MT5	-	MT5	MT5
CNC-CONTROL					
Standard	FANUC	Oi-TF 15,6"	Oi-TF 15,6"	Oi-TF 15,6"	Oi-TF 15,6"
Option	SIEMENS	828D 15,6"	828D 15,6"	828D 15,6"	828D 15,6"
GENERAL DATA					
Overall dimensions L x W x H [mm]	2860 x 1660 x 2120	2860 x 1660 x 2120	2860 x 1660 x 2120	4200 x 1900 x 2300	4200 x 1900 x 2300
Weight [Kg]	3850	3900	4100	4100	4200
Overall power [kVA]	FANUC	26	28	36	54
	SIEMENS	28	28	33	54
Power used [kVA]	FANUC	22	24	31	45
	SIEMENS	24	24	24	45
Power supply	3 x 400 V / 50Hz	3 x 400 V / 50Hz	3 x 400 V / 50Hz	3 x 400 V / 50Hz	3 x 400 V / 50Hz



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