



Fabryka Obrabiarek Precyzyjnych AVIA S.A.



QUALITY

DRIVES

PROFITS

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

PRODUCT
GUIDE

FNX



TOOL MILLING MACHINES



FNX HIGHLIGHTS

- » Stiff, compact and stable construction
- » Variable spindle speeds
- » Highest accuracy and smooth running thanks to play-free AVIA ball screws in X, Y, Z
- » Simultaneous milling in X and Y
- » Pivoting and centrally located control panel
- » Milling and deep drilling without thanks to the movable quill and swiveling head

**The most user-friendly milling machine
Avia has ever produced**

STANDARD EQUIPMENT

- » Digital display 3-axes Heidenhain ND 5023 (FNX 30P)
- » Conventional handwheels X, Y, Z
- » CNC control Heidenhain TNC 620 (FNX 30N)
- » Enclosure of the work area
- » Ball screws for X, Y and Z axes
- » Safety handwheels in all axes
- » Lubrication of axis und ball screws with grease
- » Vertical milling head with swivel device
- » Fixed angle table 710 x 315 mm with clamping surface
- » LED machine light
- » Protective bellows for the horizontal guideways
- » Protective bellows with aluminum slats for vertical guideways
- » Coolant system with electric pump
- » CE Declaration of Conformity

SPECIAL ACCESSORIES

- » Electronic handwheel with cable HR 510 Heidenhain (FNX 30N)
- » Workpiece measuring probe with cable TS260 Heidenhain (FNX 30N)
- » Activation for probe support TNC 620 (FNX 30N)
- » DXF converter TNC620 (FNX 30N)
- » Dividing head with 3-jaw chuck 160 mm and tailstock
- » Rotary table D=200 mm
- » Table DSE 250 x 315 x 125 mm
- » Steady for horizontal milling



▲ CONVENTIONAL HANDWHEELS X, Y, Z



▲ WORKING SPACE



▲ DIGITAL DISPLAY 3 AXES



▲ VERTICAL MILLING HEAD



▲ BALL SCREWS X, Y, Z



▲ FIXED ANGLE TABLE

TECHNICAL DATA		FNX 30P	FNX 30N
FIXED ANGLE TABLE			
Clamping surface	mm	315 x 710	315 x 710
T-slots: number / width / spacing	mm	5 / 14 / 63	5 / 14 / 63
Max. table load	kg	200	200
VERTICAL TABLE			
Clamping surface	mm	235 x 350	235 x 350
T-slots: number / width / spacing	mm	2 / 14 / 126	2 / 14 / 126
TRAVELS			
Longitudinal travel X	mm	400	400
Cross travel Y	mm	315	315
Vertical travel Z	mm	350	350
Min / Max distance from spindle nose to table	mm	100 / 450	100 / 450
FEEDS			
Regulation		stepless	stepless
Feed speed X / Y	m/min	2	2
Feed speed Z	m/min	2	2
Rapid traverse X / Y (only in manual mode)	m/min	5	5
Rapid traverse Z (only in manual mode)	m/min	2,5	3
TORQUE FEED MOTORS			
Motor X / Y	MANUFACTURER	REXROTH	HEIDENHAIN
Motor Z	MANUFACTURER	REXROTH	HEIDENHAIN
Torque X / Y	Nm	4,45	4,6
Torque Z	Nm	7,15	5,9
Feed forces X / Y	N	5000	5200
Feed forces Z	N	13200	10300
VERTICAL AND HORIZONTAL SPINDLE			
Spindle taper	ISO	40	40
Tool holder	DIN	2080	2080
Max. speed vertical spindle	rpm	3000	3000
Max. speed horizontal spindle	rpm	3000	3000
Spindle rotation range	rpm	70 - 3000	70 - 3000
Regulation		stepless	stepless
Tool loosening and clamping in the spindle		manual	manual
Power spindle motor S1 / S6 (25%)	kW	5,5 / -	5,5 / 9,5
Spindle torque S1 / S6 (25%)	Nm	47,5 / -	47,5 / 78,5
VERTICAL HEAD			
Max. swivel angle	Deg	+/- 45	+/- 45
Manual travel of the quill	mm	80	80
DRO		HEIDENHAIN ND 5023	-
CNC Control		-	HEIDENHAIN TNC 620 HSCI
GENERAL DATA			
Positioning accuracy	mm	-	+/- 0,010
Repeatability	mm	-	0,005
Overall dimensions X / Y / Z	mm	1520 / 1250 / 1950 1520 / 1250 / 1950	1580 / 2390 / 2100 1580 / 2390 / 2100
Weight	kg	1700	1700
Total installed power	kVA	8	13
Power supply	V	3 x 400	3 x 400
Frequency	Hz	50	50



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