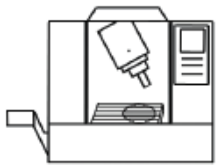


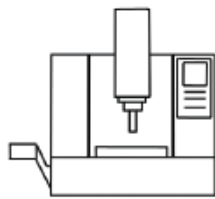


# Products Guide |



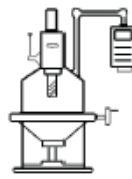
**5axis**

**Machining Centres**



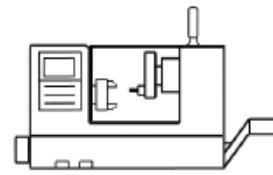
**Vertical**

**Machining Centres**



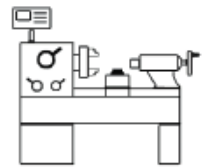
**Toolroom**

**Milling Machines**



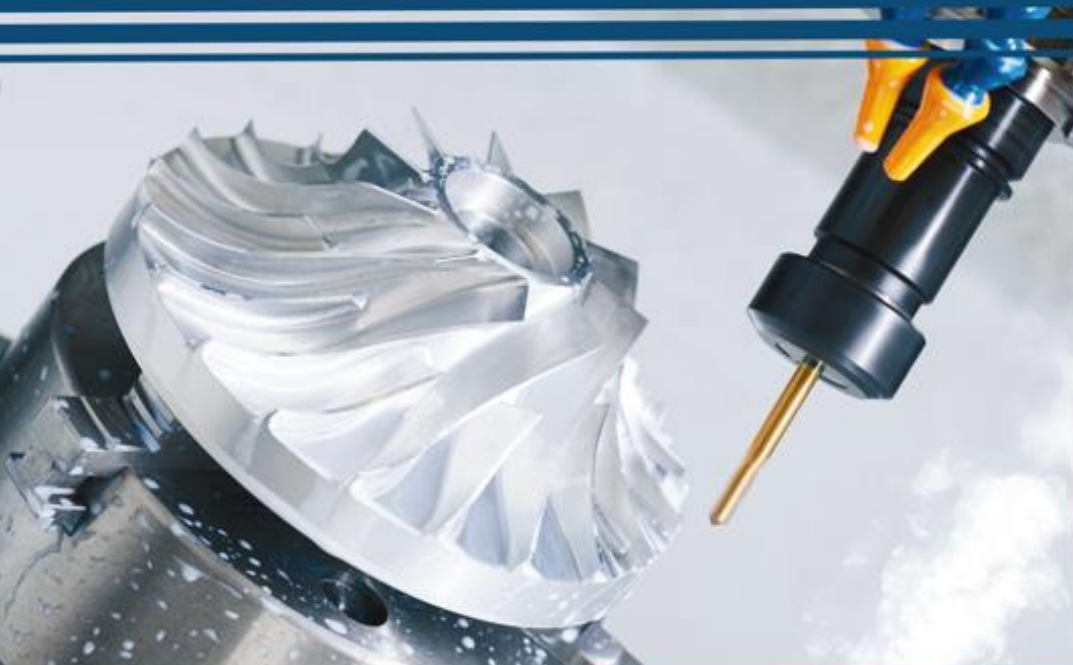
**Slant Bed**

**CNC Lathes**



**Flat Bed Cycle Lathes**

**Universal Lathes**





## ABOUT US...

Fabryka Obrabiarek Precyzyjnych AVIA S.A. Warsaw, Poland (Machine Tool Factory AVIA S.A.) was founded in 1902 and is one from the oldest Polish industrial plants. For the past 70 years, AVIA has been one of the leading Polish manufacturers of high-quality, precision machine tools. Today, our brand is widely recognized in Europe, especially in Germany, where we have over 4,500 installations.

The most important advantage of our machine tools is their versatility. This is a key element of all machines, enabling our customers to produce a wider range of different workpieces and use modern technology.

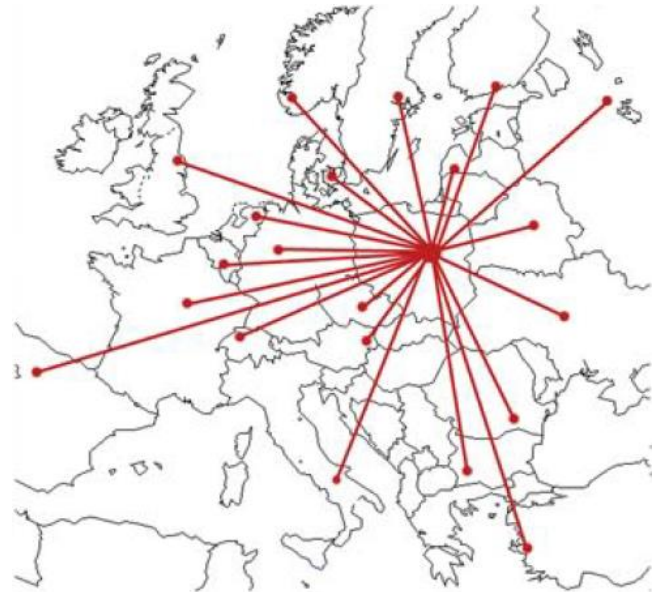
The current AVIA product range includes Vertical Machining Centres, 5-Axis Universal Machining Centres, CNC and Conventional Toolroom Milling Machines and CNC slant bed lathes.

Development innovations of AVIA are 5-axis milling and turning centres, lathes with cyclic control and universal lathes.

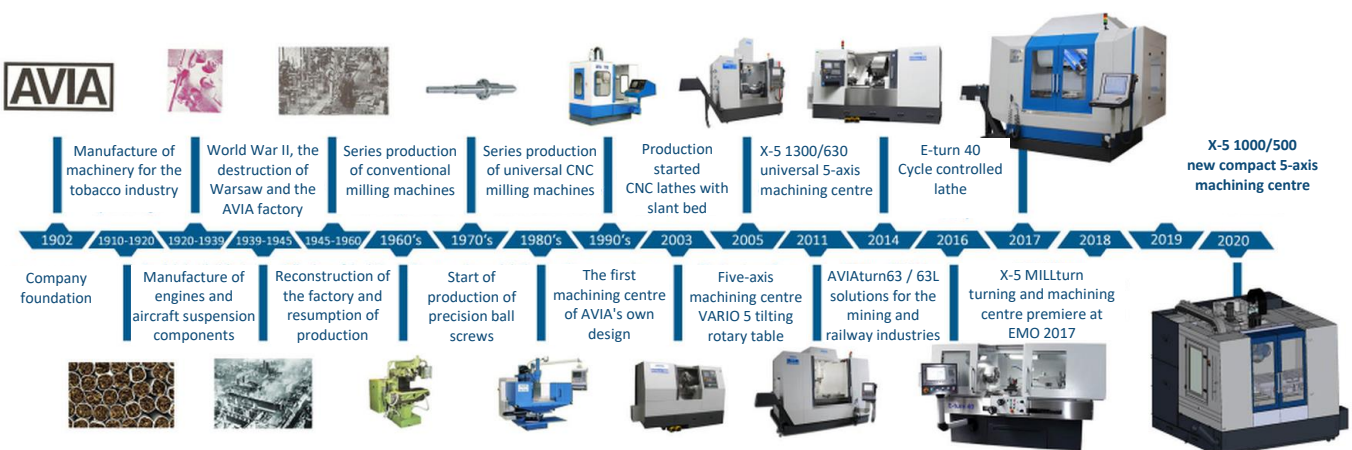
We do not just focus on assembling machines. We manufacture all the most important parts of our machines, such as ball screws, spindles, sheet metal covers, and electrical cabinets and test ourselves all the key machining processes of our machines.

The long-term stable and precise performance of our machines and the availability of spare parts for many years are important advantages of AVIA.

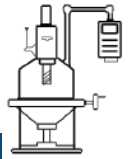
Many AVIA machines are not available on the market. Our customers have been using them for many years.



## AVIA history timeline ...



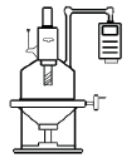
## Universal milling machines FNX 30



Technical data		FNX 30P	FNX 30P NC	FNX 30N
Work table dimension	mm	315 x 710		315 x 710
Max. table load	Kg	200		200
Longitudinal travel of table (X)	mm	400		400
Cross travel (Y)	mm	315		315
Vertical travel (Z)	mm	350		350
Spindle taper	ISO	40		40
Tool holder	DIN	2080		2080
Vertical spindle speeds step less	rpm	3000		3000
Horizontal spindle speeds	rpm	3000		3000
Spindle power	kW	5,5 /-		5,5 / 7,5
Spindle torque	Nm	47,7 /-		45 / 78
Feed rate control		Steeples		Steeples
Feed rate X / Y / Z	m/min	2 / 2 / 2		6 / 6 / 3
Rapid traverse X / Y / Z	m/min	5 / 5 / 2,5		6 / 6 / 3
Quill travel	mm	80		80
Swivel head angle	°	±45°		±45°
Control		Manual machine with Heidenhain DRO ND523	Straight cut and cycles Heidenhain TNC 128	CNC control Heidenhain TNC620
Weight	kg		1 700	1 750



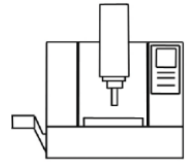
## Universal milling machines FNE 40



Technical data		FNE 40P	FNE 40P NC	FNE 40N
Work table dimension	mm	400 x 800		400 x 800
Max. table load	kg	400		400
Longitudinal travel of table (X)	mm	620		620
Cross travel (Y)	mm	420		420
Vertical travel (Z)	mm	400		400
Spindle taper	ISO	40		40
Tool holder	DIN	69871A		69871A
Vertical spindle speeds step less	rpm	4000 / 8000		4000 / 8000
Horizontal spindle speeds	rpm	4000		4000
Spindle power	kW	5,5 /-		5,5 / 9,5
Spindle torque	Nm	147 /-		145 / 252
Feed rate control		Steeples		Steeples
Feed rate X / Y / Z	m/min	2 / 2 / 2		10 / 10 / 6
Rapid traverse X / Y / Z	m/min	5 / 5 / 4		10 / 10 / 6
Quill travel	mm	80		80
Swivel head angle	°	±45°		±45°
Control		Manual machine with Heidenhain DRO ND523	Straight cut and cycles Heidenhain TNC 128	CNC control Heidenhain TNC620
Weight	kg		1 900	2100

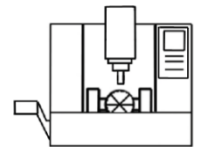


## Vertical machining centres



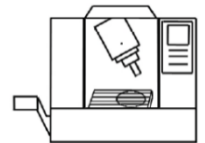
Technical data		VMC 650 V	VMC 800 V	VMC 1000 V	VMC 1300
Working table	mm	800 x 540	1000 x 540	1200 x 540	1500 x 710
Max. table load	kg	700	850	1 000	1 500
Travel X axis	mm	650	800	1 000	1 300
Travel Y axis	mm		600		700
Travel Z axis	mm		620		620
Spindle taper	type		ISO 40 HSK 63A		ISO 40 ISO 50
Spindle speed	rpm		15 000 24 000		10 000 / 15 000 6 000 / 8 000
ATC capacity	pcs	30 / 50	30 / 50	30 / 50	40
CNC system	type	HEIDENHAIN TNC 620 HSCI / TNC640 HSCI / SIEMENS 828 / 840D			
Weight	kg	4 400	4 950	5 300	9 300

## 5 axis vertical machining centres



Technical data		VARIO 5	VARIO 5HS
Working table	mm	Ø450	Ø450
Max. table load	kg	400	400
Travel X axis	mm	500	500
Travel Y axis	mm	600	600
Travel Z axis	mm	460	460
Tilting A	°	+110°/-110°	+110°/-110°
Rotation C		360°	360°
Spindle taper	type	ISO 40	HSK63A
Spindle speed	rpm	10 000 / 15 000	24 000
Feed rate X/Y/Z	m/min	0-42/42/42	0-42/42/42
Rotation speed A, C	type	60 / 120	60 / 120
ATC capacity	pcs	30	30
CNC system	type	HEIDENHAIN TNC 640 HSCI	
Weight	kg	5 300	5 300

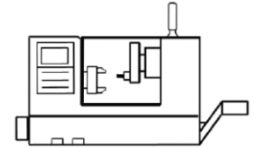
## 5 axis universal machining centres



Technical data		X-5 1300/630	X-5 Blademaker	X-5 MILLturn	X-5 1000/500
Work table /rotary	mm	1500 x 710 / Ø630	1500 x 710 / Ø400	1500 x 710 / 630	1200 x 540 / Ø500
Max. load /rotary	kg	1000 / 700	1000 / 400	1000 / 700	700 / 300
Travel X axis	mm	1300	1300	1300	1000
Travel Y axis	mm	700	700	700	540
Travel Z axis	mm	710	810	710	540 V / 640 H
Tilting B	°	+115°/-85°	+115°/-85°	+115°/-85°	+110°/-85°
Rotation		360° (axis C)	360° (axis A)	360° (axis C)	360° (axis C)
Spindle taper	type	HSK63A	HSK63A	HSK63A	ISO 40
Spindle speed			18 000 / 10 000 / 24 000		15 000
Feed rate X/Y/Z	m/min		0-24/24/24		0 - 35/35/35
Rotation speed C (A)	rpm	25	(16,7)	500	100
Rotation speed B	rpm	33	33	33	30
ATC capacity	pcs	40	40	40	40
Technological functionality		5 axis milling	5 axis milling	5 axis milling + turning	5 axis milling
CNC control	type	HEIDENHAIN TNC 640 HSCI			
Weight	kg	12 800	12 800	12 800	5 500



## Slant bed CNC lathes

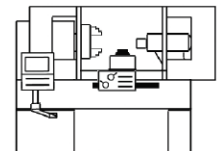


Technical data		AVIATurn 35	AVIATurn 50	AVIATurn 63
Max. turning diameter over bed covers	mm	350	500	630
Max. turning diameter over cross carri.	mm	350	445	445
Max. turning length	mm	600	700	1400/2500
Max. bar capacity	mm	65	80	90-360
Travel X axis	mm	-10/210	-10/360	-20/405
Travel Y axis	mm	±50	±65	±65
Travel Z axis	mm	600	830	1440
Spindle speed	rpm	5 000	3 500	2 800
3-jaw chuck diameter	mm	210 / 250	315 / 400	400 / 500
Spindle power	kW	15	37	55
Spindle torque	Nm	171	548	1266
Turret stations / live tooling	pcs	12 / 12	12 / 12	12 / 6
Tool disc standard	pcs	VDI 30 / BMT 55	VDI 40 / BMT 65	VDI 50 / BMT 75
CNC system	type		FANUC / SIEMENS	
Weight	kg	3850-4000	7000-8500	8500 – 13000

\* Important options for AVIATurn 35/50/63:

1. C axis, driven tools
2. Y axis
3. Sub spindle

## Flat bed cycle lathes



Technical data		E-Turn 40
Swing over bed	mm	440
Swing over cross carriage	mm	230
Distance between centres	mm	1000 / 1500
Max. turning diameter over bed	mm	400
Width of bed	mm	330
Spindle nose DIN 55027		Size 6
Spindle bore	mm	66
Spindle speed	rpm	3 500
Spindle power	kW	17
Spindle torque	Nm	272
Travel X axis	mm	235
Travel Z axis	mm	1000 / 1510
Standard tool post	type	Multifix B
Tailstock taper	MK	4
Tailstock quill diameter	mm	65
Tailstock quill travel	mm	120
Heidenhain CNC System	mm	TNC 620 Pilot
Weight	kg	2 200



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