



Fabryka Obrabiarek Precyzyjnych AVIA S.A.



QUALITY

DRIVES

PROFITS

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

PRODUCT
GUIDE

VMC



MACHINING CENTERS



VMC HIGHLIGHTS

- » The high accuracy of the axis drives thanks to the CNC direct servo system.
- » AVIA ball screws in all three axes with linear guideways.
- » Increased workspace but small footprint with APC preparation.
- » The 2.5 seconds 30 or 50 tool changer.
- » The highest rigidity of the spindle thanks to double front and rear bearings.
- » Speed of 15.000 rpm.
- » Spindle thermal stabilization thanks to Oil / Air lubrication system.
- » Spindle orientation and tapping without compensating chuck.
- » Effective chip management.
- » The automatic central lubrication.
- » CNC Heidenhain TNC 620 / TNC 640 or Siemens 828D.

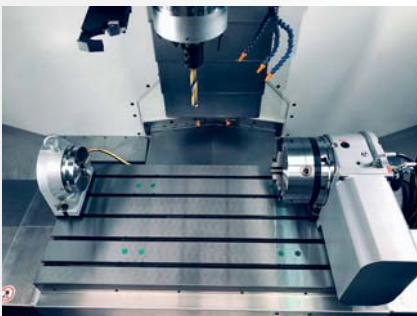
AVIA's best VMC ever produced

STANDARD EQUIPMENT

- » Heidenhain CNC system TNC 620
- » Direct drive 15,000 rpm with thermal stabilization
- » Portable electronic handwheel
- » Stainless steel cover under machine doors
- » Enclosure of the pumps
- » Chip flushing system
- » Dual arm tool changer with 30 slots
- » Chip conveyor screw
- » Complete coolant system distributed around the spindle
- » Working space with LED lighting
- » Compressed air with coolant gun
- » Full enclosure with APC preparation
- » Spindle blow-out device
- » Transport device
- » CE Declaration of Conformity

SPECIAL ACCESSOIRES A.O.

- » Cooling through spindle 20 bar
- » Cooling by spindle 20-50-70 bar with high pressure station
- » Paper filter system
- » Mechanical oil separator
- » Oil mist separator with filter
- » Coolant curtain around the spindle for dusty machining
- » Compressed air cooling through spindle 5 bar with CTS
- » Compressed air cooling 5 bar with air nozzles
- » ATC 50 chain type
- » Scraper or hinged chip conveyor
- » Heidenhain linear scales for X / Y / Z
- » Compressed air system for linear scales
- » DXF converter
- » Workpiece probe
- » Tool probe
- » 4 and 5-axis CNC rotary table D200 / 250 / 320 with tailstock and chuck
- » Spindle BT40
- » CAD/CAM models
- » Automatic pallet changer APC



▲ CNC ROTARY TABLE



▲ DIRECT DRIVE 15,000 RPM



▲ INCREASED WORKSPACE



▲ 50 SLOTS TOOL CHANGER



▲ ROBUST COMPONENTS



▲ HEIDENHAIN CNC SYSTEM

TECHNICAL DATA		VMC 650 V	VMC 800 V	VMC 1000 V	VMC 1200 V
WORKTABLE					
Clamping surface	mm	800 x 550	1000 x 550	1200 x 550	1400 x 550
T-slots: number / width / spacing	mm	5 / 18 / 100	5 / 18 / 100	5 / 18 / 100	5 / 18 / 100
Maximum table load	kg	700	850	1000	1200
TRAVEL					
Longitudinalway X	mm	650	800	1000	1200
Crossway Y	mm	600	600	600	600
Verticalway Z	mm	620	620	620	620
SPINDLE					
Maximum spindle speeds	rpm	15 000	15 000	15 000	15 000
Spindle cone	ISO	ISO 40	ISO 40	ISO 40	ISO 40
Spindle bearing lubrication	Type	Oil mist	Oil mist	Oil mist	Oil mist
Main drive power S1 / S6 (25%)	kW	10 / 17	10 / 17	10 / 17	10 / 17
Torque main drive S1 / S6 (25%)	Nm	64 / 108	64 / 108	64 / 108	64 / 108
Min. / Max. distance spindle nose - table	mm	120 / 740	120 / 740	120 / 740	120 / 740
TOOL MAGAZINE					
Tool changer	Typ	Double Gripper ATC	Double Gripper ATC	Double Gripper ATC	Double Gripper ATC
Number of tools standard / option	Slots	30 / 50	30 / 50	30 / 50	30 / 50
Tool change time tool to tool	Sec.	2,5	2,5	2,5	2,5
Max. tool diameter standard / option	mm	85 / 130	85 / 130	85 / 130	85 / 130
Max tool weight	kg	7	7	7	7
Max tool length	mm	300	300	300	300
FEEDS					
Feedrate X / Y / Z	m/min	0 – 35 / 35 / 35	0 – 35 / 35 / 35	0 – 35 / 35 / 35	0 – 35 / 35 / 35
Rapid traverse speed X / Y / Z	m/min	35 / 35 / 35	35 / 35 / 35	35 / 35 / 35	35 / 35 / 35
CNC-CONTROL					
Standard	Heidenhain	TNC 620	TNC 620	TNC 620	TNC 620
Option	Heidenhain	TNC 640	TNC 640	TNC 640	TNC 640
Option	Siemens	828D	828D	828D	828D
GENERAL INFORMATION					
Positioning accuracy	mm	±0,004	±0,004	±0,004	±0,004
Repeatability	mm	0,004	0,004	0,004	0,004
Total installed power	kVA	27	27	27	27
APC preparation	Standard	Standard	Standard	Standard	Standard
Dimensions X / Y / Z	mm	2785 / 2720 / 3030	3065 / 2720 / 3030	3065 / 2720 / 3065	3065 / 2720 / 3065
Weight approx.	kg	4600	5150	5500	5900



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