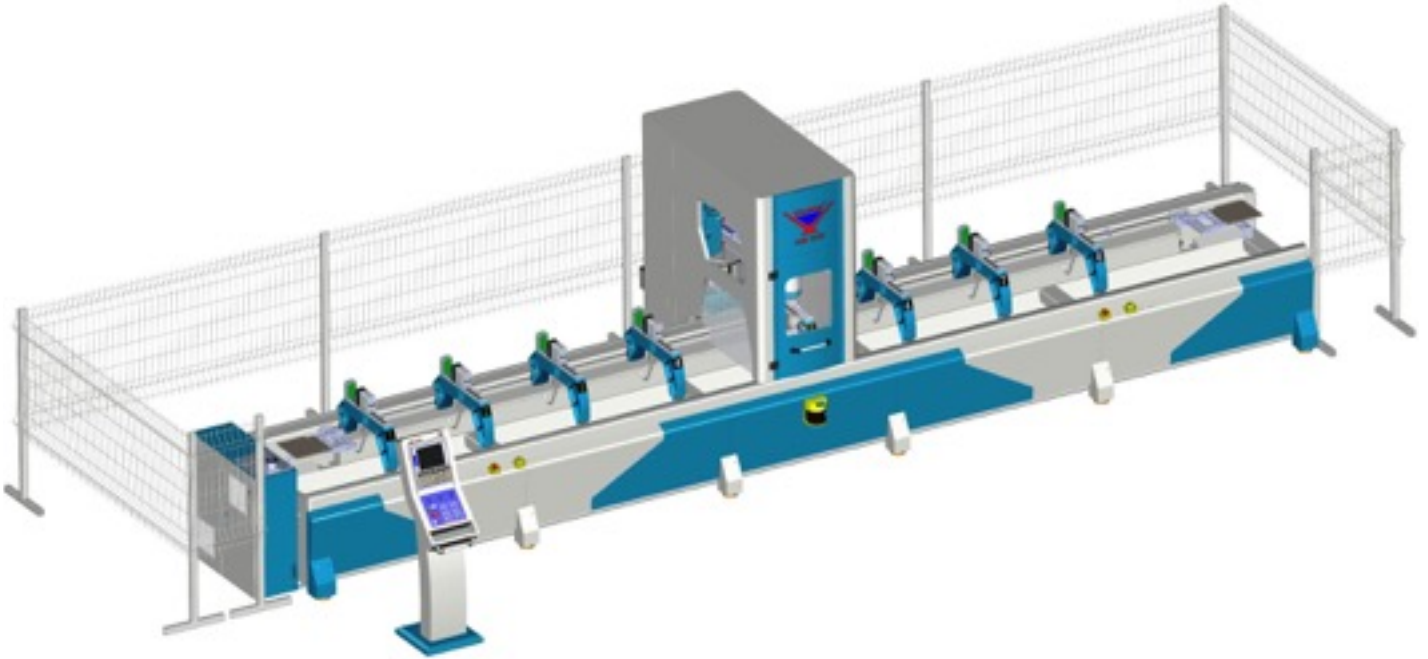


AIM 7510 5-AXIS ALUMINIUM PROFILE PROCESSING CENTER



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1. OVERWIEV

AIM 7510 is a 5-axis servo controlled machining center, which is designed to perform drilling, grooving, notching, tapping, saw milling, etc. on all kinds of aluminum & PVC profiles, light alloys in general and thin walled steel profiles.

Efficient and economic processing on the six sides of the profiles is possible with this fully automatic machining center.

The moveable turret type of tool magazine equipped with 12 standard tools provides a fast tool change. It is housed in the mobile gantry to minimize the tool change time. An additional magazine for the saw blade with 350 mm (14") dia. ensures the ease of machining on the exterior applications of the profiles.

The machine can be used in tandem mode, a work method that allows machine stop times to be reduced to a minimum as it allows work piece change time (loading/unloading) to be run "while the machine is operating.

Automatic clamp recognition and clamp positioning is available. The machine can be operated as two stations with separated working zones to avoid the loss of loading & unloading time.

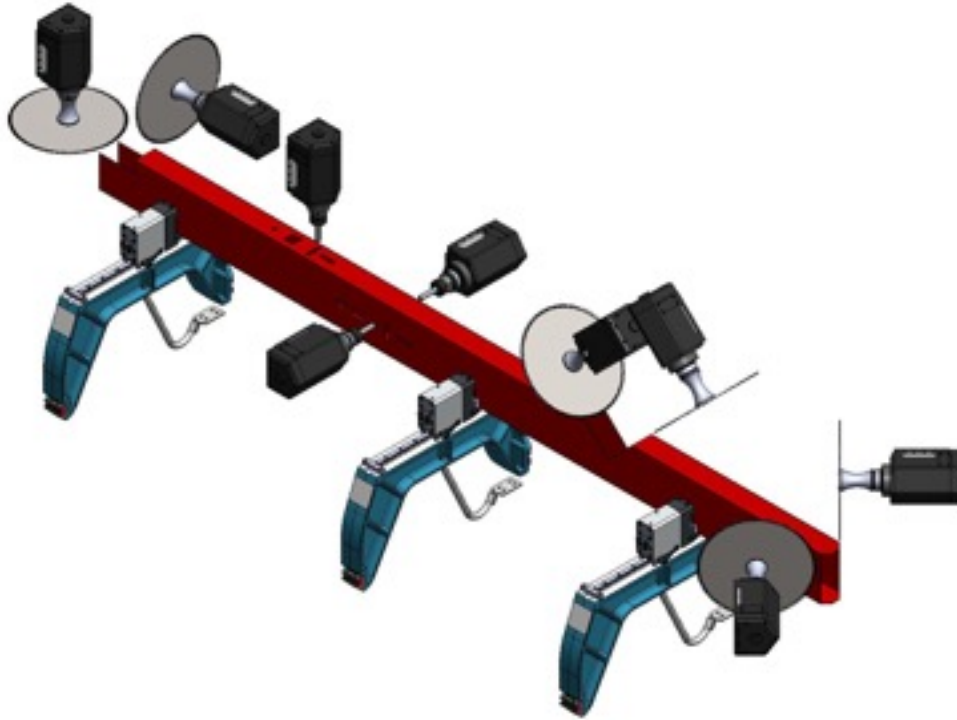
Machine is produced with steel profiles and sheet, and designed for the agronomy that allows operator easy installation of work pieces by hand.

Metal parts are painted with Electrostatic Powder Paint which provides resistance against corrosion. Front section of machine is covered with moving door with transparent plexiglass windows so that operator can easily follow the machining process of work piece. This door also provides safety for operator.

2. TECHNICAL INFORMATION

2.1 General Features:

- CNC automation system providing motion control at 5-axis
- Uninterrupted machining property by means of the tandem mode to prevent waste of time
- 2 x separate magazine unit for 12 standard tools and 1 for saw blade with 350 mm dia.
- Solid steel construction of the body and dynamic performance gantry
- Automatic clamp recognition and clamp positioning are available
- Tapping feature up to M8
- Special sound insulation cabinet around the machining center
- CNC controlled spray tool lubrication system
- 8 x automatic clamps used for grabbing the work piece firmly
- 2 x pneumatic rests used for resetting the work piece in X direction
- Hand held controller allows you to prove the job before running at speed
- Optimum operational safety guaranteed by 3-zone field scanner system
- 10" color touch screen
- Program import via USB flash memory stick
- Standard ISO 'G' code programming language
- Automatic central guide lubrication system
- LED lighting in the cabinet
- Multi-language support



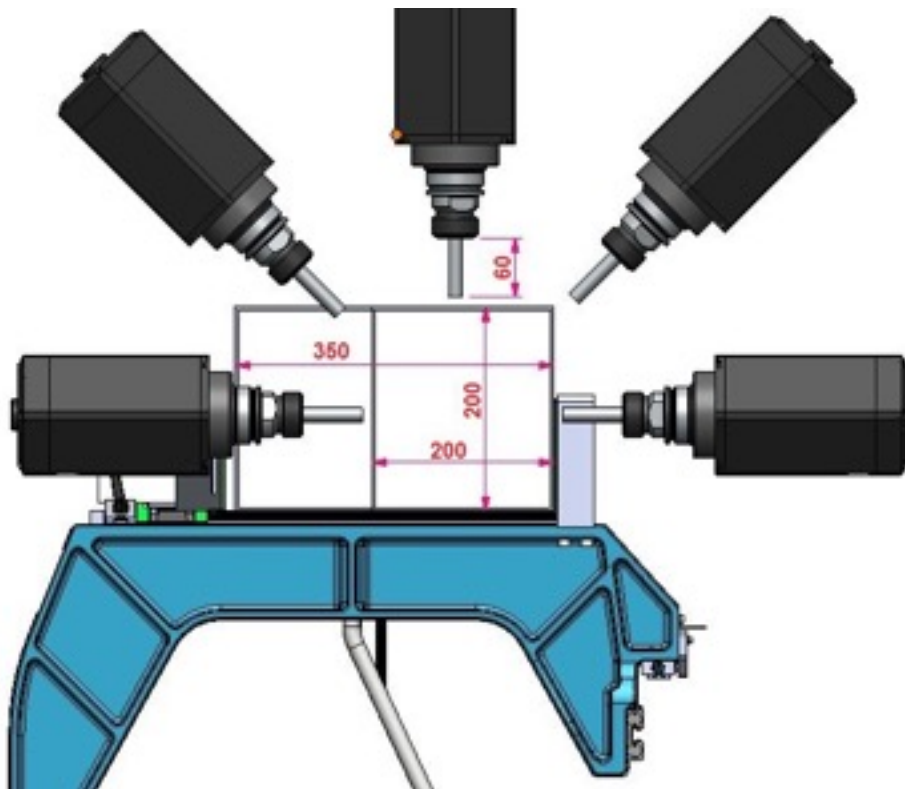
2-1 Technical Features

WORKING CAPACITY	
X-axis (mm)	7000 (23 ft)
Y-axis (mm)	*350 (14")
Z-axis (mm)	200 (8")
C-axis (mm)	+180° / -180°
A-axis ()	+110° / -110°
ELECTRO SPINDLE	
Max. speed (R.P.M))	20,000
Max. power with S6 (kW)	8.7
Spindle taper	HSK F- 63
AUTOMATIC TOOL MAGAZINE	
Tool capacity	12+1
Automatic tool magazine type	turret type
Saw blade dia. (mm)	350 (14")
Max. tool weight (kg)	3 (6.6 lbs)
FUNCTIONS	
Multi-piece operations (holes, slots, notching, saw blade cuts, taping)	
MACHINABLE FACES	
With straight tool (top + side faces + ends)	1+2+2
With blade tool (top + side faces + ends)	1+2+2

FEEDRATE	
Axis speed (m/min.)	X-axis: 60m (197')/min, Y-axis: 60m (197')/min, Z-axis: 19m (62')/min, A-axis: 240°/s, C-axis : 240°/s
5-axis servo motors (kW)	X-axis:1.5 / Y-axis:0.4 / Z-axis:1.5 / A-axis:0.2 / C-axis : 0.4
GENERAL	
Net / gross weight (kg)	
Net / packing dimensions (WxLxH) (mm)	3150 x 10100 x 2255 / 2050 x 9065 x 2255 (10.3'x33'x7.4' / 6.7'x29.7'x7.4')
Air supply required (bar)	6 (90 psi)
Voltage-frequency	400V 3P-50/60Hz (208-220-240V 3P)
Total power (kW)	15
WORKPIECE CLAMPING	
Standard number of vices	8
Max. loadable number of the vices	10
Vice positioning through the X-axis	Automatic

YILMAZ reserves the right to carry out modifications without prior notice

* In case of front side milling it is 200 mm (8")

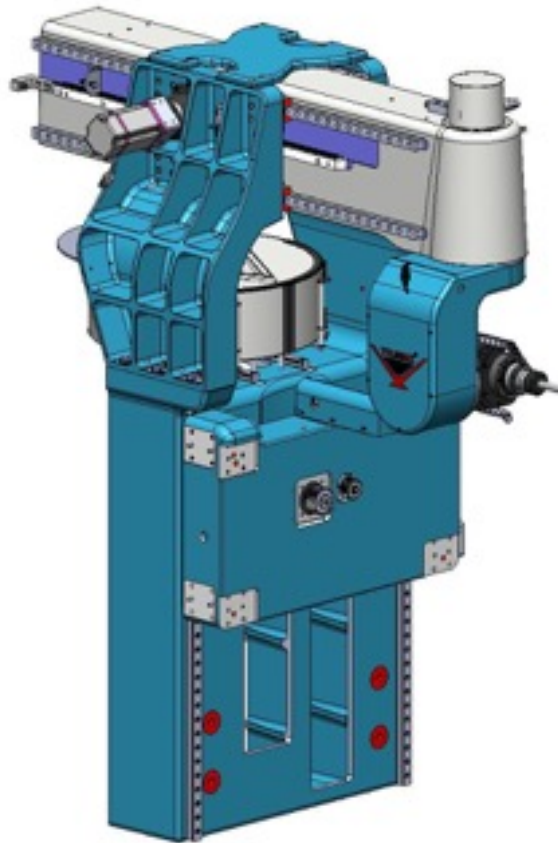


	TOTAL POWER							kg	kg
AIM 7510	15 kW	3000 r.p.m	D=350 max. (8") d: 30 mm	Ømax: 63 mm	6 Bar	250 lt/ min	W= 2050 H= 2255 L = 9065		

3. FEATURES OF PROCESSING CENTER

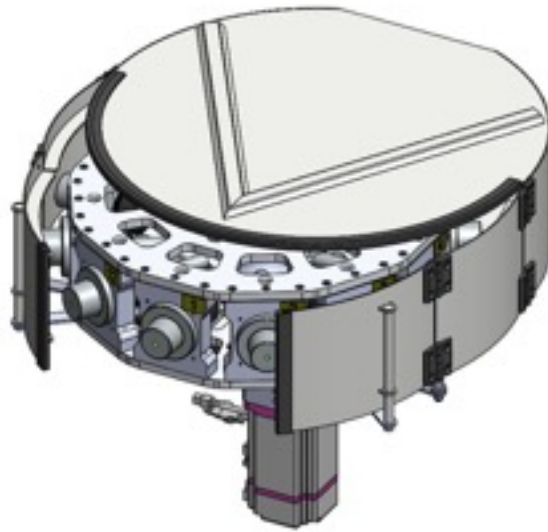
The parts of processing center are as following,

- Single piece of mono bloc processing center produced by aluminum casting

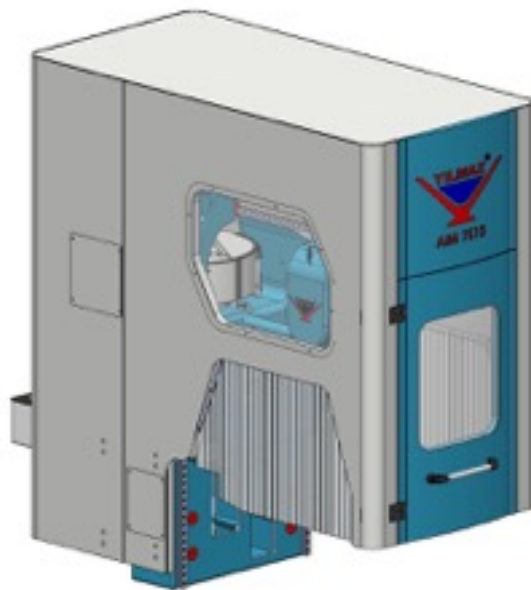


Main Milling Unit: 8.7 kW (max), 20.000 R.P.M HSD motor
Machining accuracy (X,Y,Z) : +/- 0.05 mm

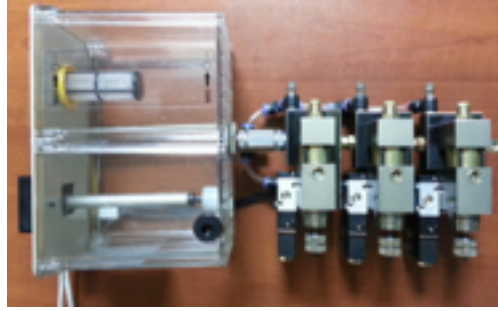
-
- Magazine on which 12 pieces of tool sets can be placed & protection cover



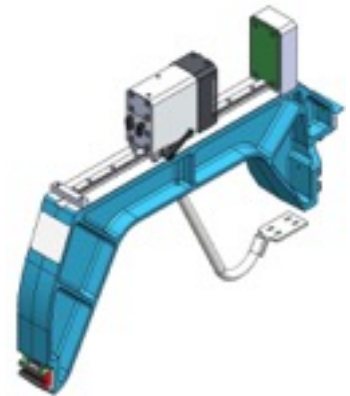
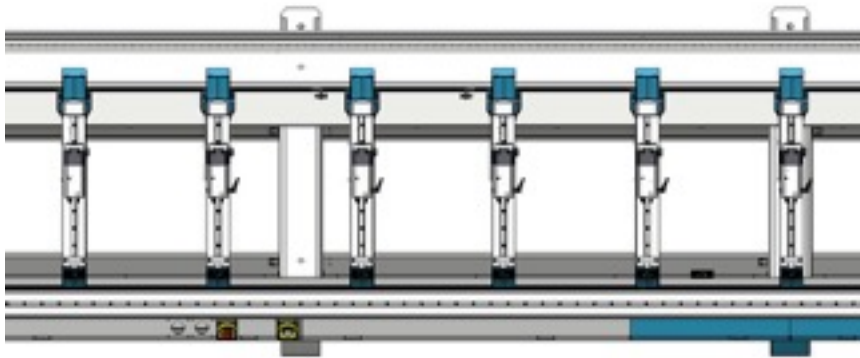
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- Noise isolation cabinet around the machining head



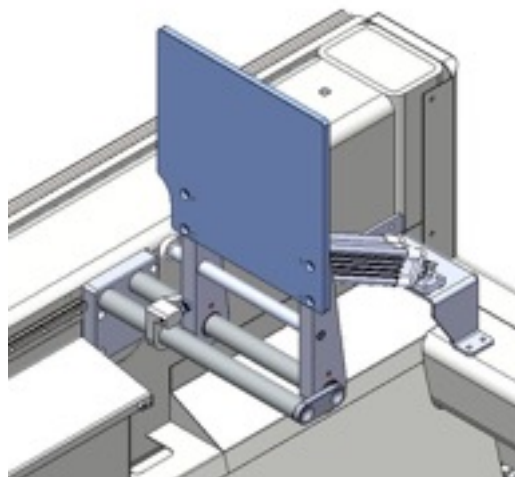
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- Tool cooling unit with PLC controller



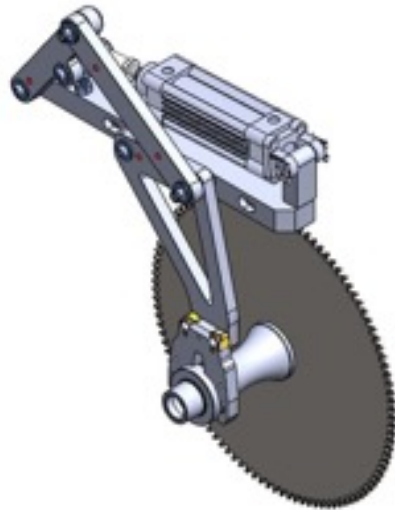
- 8 pieces of automatically operated clamps to hold the workpiece



- 2 pieces of pneumatically operated supports to determine the reference of workpiece in X- direction



- Saw magazine for Ø350 (14") saw blade



4. MAIN SPINDLE

Spindle is of HSD brand, having 4 poles, power of 7 kW, rotating speed of 14.000 rpm, HSK F63 certification. The power of spindle depending on the rotation speed is provided below.



5. PROGRAMMING

CAMPROX CamQuix software allows generating of customer specific operations with ISO G codes, and then program can be transmitted to machine.

ISO programming language not only provides ease of programming for any kind of machine operations (drilling, slotting, sawing, tapping etc.) but also convenience in management of all machine functions such as automatic vise repositioning, etc.

The diagram illustrates the camQuix software architecture. At the top, it lists supported CAD systems: SolidWorks (Solid Edge, Inventor, CATIA, NX), AutoCAD (2D CAD, 3D CAD), and MicroStation. Below this, it shows data flow from 'Construction Data' to 'camQuix' and 'cadXtract'. The 'camQuix' block is connected to a 'Post Processor' block, which supports various CNC systems like DMG, DMU, DMU, ACP, DMU, MCA, etc. Below the post-processor, it lists supported CNC types: CNC Milling Center, CNC Turning Center, CNC Saw or Center, and CNC Router. The diagram also includes sections for 'camQuix Service Contract' (Free Updates, Comprehensive Support, Training & Consulting) and 'camQuix Product Service' (Free machine integration, on-site training, integration of barcode reader, individual post-processor). A QR code is provided for more information. The camQuix logo is prominently displayed on the right side of the diagram.

camQuix a modern CAM software for profile processing

This section provides a detailed overview of camQuix's capabilities. It highlights the software's ability to enable direct control and precise optimization of all CNC machines in a user's workshop. Key features include:

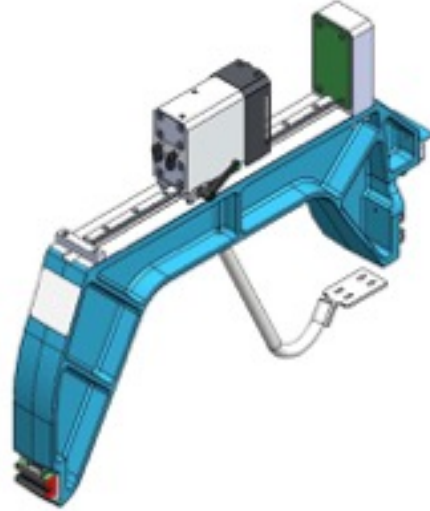
- Support for all important construction data:** Import/Export for all important construction data, including parameterizable template programs.
- Machine independent programming in one CAM:** Machine independent programming in one CAM, enabling flexible adaptation to your production process.
- Programming:** User-friendly programming interface with a clear and intuitive design, allowing for easy learning and use. It supports the creation of complex programs for various CNC machines.
- Data Import:** The software is designed for the most common data formats and supports the exchange of data between different CAD systems. It can import data from various sources, including 2D and 3D CAD files, and supports the use of external libraries.
- Tool Assignment:** The software provides a clear and intuitive interface for tool assignment, allowing users to define tool paths and parameters for different tools and machines.
- Post-Processor:** The software includes a powerful post-processor that generates G-code for various CNC machines. It supports the use of different post-processor templates and allows for easy customization to meet specific machine requirements.

6. PROFILE CLAMPING SYSTEM

Profile clamping system is composed of 8 clamps. Each 4 of 8 clamps are operated at the same time by different hand buttons. The main purpose of utilizing the tree clamps at a time is to allow processing of two different profiles simultaneously on machine bed.

Clamps are covered with teflon material in order not to leave scratches on profiles.

Clamps can be repositioned automatically by machine depending on the processes, performed on workpiece by means of CAMPROX software.



7. ACCURACY OF PROCESSING CENTER

The machine has a repeatable point accuracy of ± 0.05 mm/meter. The positioning accuracy is ± 0.05 mm.

8. DECLARATION OF CE, UL AND CSA CONFORMITY

Machine is delivered in accordance with UL & CSA safety directives, and delivered with CE sign and Certificate of CE Conformity to the customer. (Machine complies with the AT 2006/42EC, EN ISO 12100, 2006/95-EC Low Voltage Equipment, 2004/108-EC Electromagnetic Compatibility and EN 60204-1 standards).

9. PROJECT MANAGEMENT

Machine is developed depending on the needs of customer and in accordance with Yilmaz Makine Quality Procedures.

1. Design

When order is confirmed, technical properties of equipment in quotation is detailed together with customer. Non-standard parts are designed by Research and Development (R&D) Department of Yilmaz Makine. Standard parts are provided under the control of qualified R&D personnel.

2. Manufacturing and Assembly

Based on the design documents, parts, which are not standard, will be manufactured and controlled by Yilmaz Makine. Machine will be assembled later.

3. Internal Tests

Having completed the assembly of machine, machine is tested according to Internal Test Procedure. These tests include mechanical checks, setting up different software parameters, machine tests, repeatability- accuracy tests, electrical and safety tests.

4. Installation and Commissioning

Installation and commissioning will be decided.

5. Training

Yilmaz Makine shall provide necessary training to customer.

The content of the training is as following;

- Presentation of Processing Center and parts
- ISO programming language
- Maintenance of Processing Center
- Support for programming the customer specific operation

Customer should assign an operator, who will be responsible of efficient operation and maintenance of machine, for this training.

10. DOCUMENTATION

Machine is delivered with the following documents to customer:

- AIM User and Maintenance Manuals
- Electrical and Pneumatic Connection Documents
- Programming Guide
- CAMPROX Software Guide

11. TERMS OF SALE

1. Guarantee

YILMAZ Makine Sanayi ve Ticaret Limited Sirketi asserts that all machines are manufactured in accordance with international standards and tested before delivery.

Guarantee period is 24 months from the date of shipment and it does not cover electrical equipment.

Items under guarantee:

- All faults and failed parts, due to manufacturing processes in factory, are fixed and or replaced without any payment (Notice that the delivery cost of parts are invoice to customer).
- In case the faults or failed parts of machine is fixed or replaced by our technical service, transportation, accommodation and daily allowance of technical personnel is under responsibility of customer.

Guarantee does not cover any kind of faults due to following conditions.

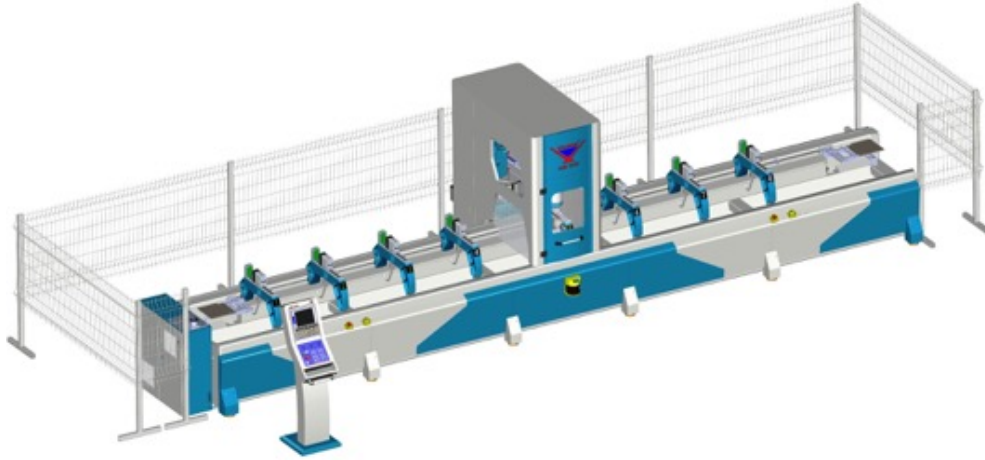
- Not following the instructions in user manual
- Wrong electrical supply
- Misusage or using the machine other than what it is designed for
- Using unqualified or non-original machining tools
- Programming faults
- Not cleaning the machine or not applying protective maintenance on machine
- Any damage while replacing the machine in shop or carrying the machine to another production plant
- Natural disasters (lightning, fire, flood)
- Any damage when failed machine is forced to operate.

2. Equipment and Service Included in Quotation

Equipment and services included in proposal are listed below:

Mechanical Parts

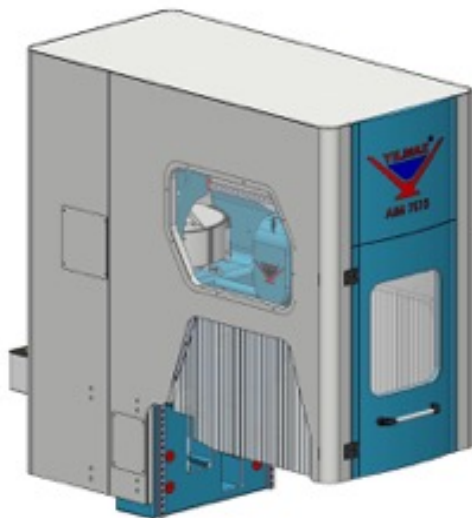
1 pc of 5-Axis machine processing center having 7120 mm (23.4 ft) machining capacity



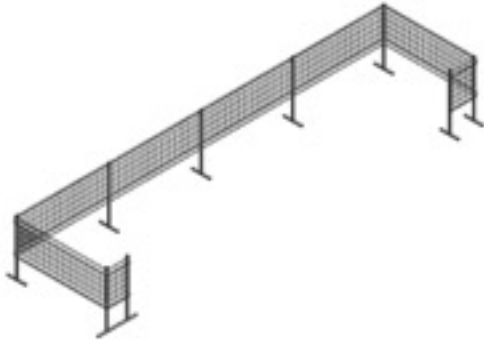
1 pc of 3 zone LASER field scanner system



1 pc of protection cabinet around machining head



1 set of safety fence around the machine



Software and Accessories

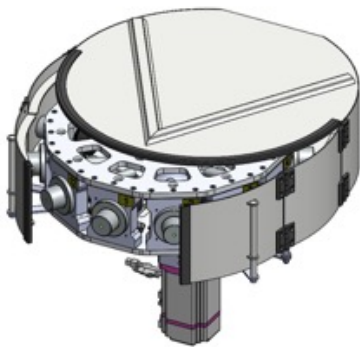
1 pc. of DELTA operating system



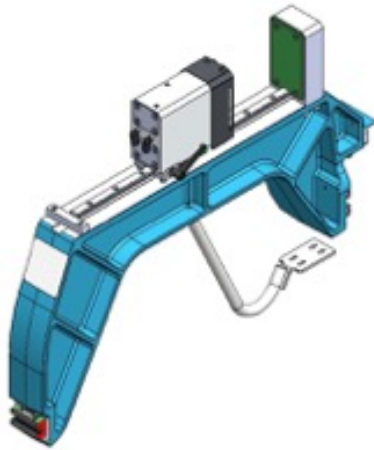
1 pc CAMPROX CamQuix for 5-Axis Milling Center



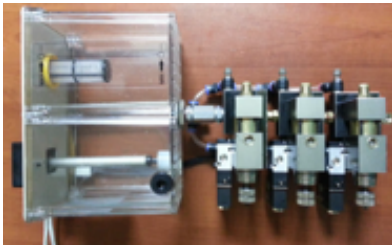
1 pc of 12 Tool capacity magazine (without tool adaptor and tools)



8 pcs of profile holding clamps



1 set of misty coolant spray system



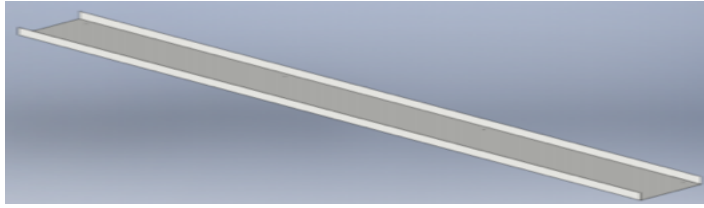
1 pc of automatic machine lubrication system



1 set of tool holder setup kit (assembled)



1 set of chip pan (assembled)



11.3 Optional equipment & parts

PART #	PICTURE	STOCK CODE	PART NAME
1		3UA920030-0050	AIM 7510 TOOL & APARATUS KIT -6 pc cutters (2 pc. Ø5, 1 pc. Ø6, 1 pc. Ø8, 1 pc. Ø10, 1 pc. Ø12) -12 pc. HSK F63 Tool holders -6 pc. Collets (3 pc. Ø5-6, 1 pc. Ø7-8, 1 pc. Ø9-10, 1 pc. Ø11-12) -12 pc. mold height
3		1SK050000-0038	Ø 5*15 L50-Z1 SINGLE FLUTE CARBIDE BIT
4		1SK050000-0039	Ø 6*18 L57-Z1 SINGLE FLUTE CARBIDE BIT
5		1SK050000-0040	Ø 8*20 L63-Z1 SINGLE FLUTE CARBIDE BIT
6		1SK050000-0018	Ø 10*72-Z2 DOUBLE FLUTE CARBIDE BIT
7		1SK050000-0072	Ø 12*83-Z2 DOUBLE FLUTE CARBIDE BIT
8		1SK050000-0056	Ø13-Z2 DOUBLE FLUTE CARBIDE BIT
9		3UA920030-0031	AIM 7510 HSK F63 Ø350 (14") SPECIAL SAW BLADE KIT

10		1SK050000-0256	HSK F63 TOOL HOLDER
11		1SK050000-0023	ER 32 COLLET FOR Ø5-6
12		1SK050000-0057	ER 32 COLLET FOR Ø7-8
13		1SK050000-0024	ER 32 COLLET FOR Ø9-10
14		1SK050000-0073	ER 32 COLLET FOR Ø11-12
15		1SK050000-0058	ER 32 COLLET FOR Ø13-14
16		1SK050000-0048	ER 32 COLLET FOR Ø19-20
17		2TU013210-0196	MOULD HEIGHT PART (12 pcs)
18		3UA920030-0009	AIM 7510 CLAMPING UNIT
19		1SK400000-0001	DIGITAL TOOL LENGTH MEASUREMENT GAUGE (300 mm/ 12")
20		3UA740030-0045	TAPPING CHUCK (M4-M8)

21		3UA920030-0025	AIM 7510 CHIP BELT CONVEYOR
22		1SK010000-0003	SAW BLADE Ø350 (14")x3,2x30mm Z108
23		1EL180000-0047	ET3U-16kVA IN 3x208-220-240V / OUT 3x400V PE TRANSFORMER
24		1EL180000-0510	C/A3-020A VOLTAGE STABILIZER (20 KVA)
25		1EL070003-0030	CRD/H04 MISTRAZE OIL MIST BLOWER
26		1TC100001-0050	AIM 7510 (2740) TOOL CAR
27		1TC100001-0060	DELL T 1700 WORKSTATION PC FOR CAM APPLICATIONS
28		3UA920030-0035	AIM 7510 HIGH SAFETY FENCE
29		3UA740030-0500	DOUBLE ACTING PRESSURE VALVES FOR CLAMPS

30		0AA020000-0842	CADXTRACT PROGRAM (3D STEP FILE IMPORT)
31		1EL320000-0011	BARCODE READER (QD2130) (CAB-327 - RS 232)

11.4 Equipment and Services Excluded from Proposal

The below equipment and services are excluded in price proposal.

- Customer is responsible for electrical and pneumatic connections of machine before delivery
- Customized Clamps
- Customer specific machining software
- Shipment