



SWIFT EASY AND ECONOMIC

CNC MULTISLIDE AUTOMATIC LATHE

MODELS: MAGNA 16 / 26 / 36



- SIMULTANEOUS MACHINING FROM DIFFERENT SLIDES • VERY QUICK MACHINING CYCLES
- VERY QUICK SETTING UP OF THE MACHINE
- EASY LEARNING AND PROGRAMMING OF THE EXCLUSIVE MUPEM CNC.
- EXCELLENT SURFACE FINISHING • DIFFERENT SECOND OPERATIONS

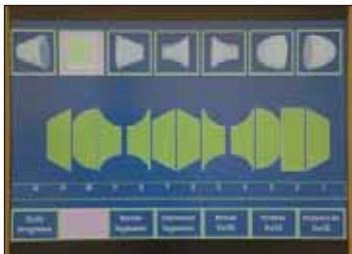




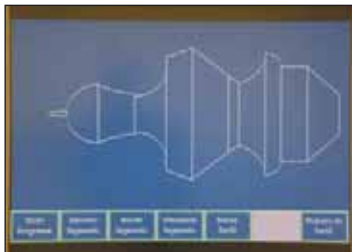
PARTICULARITIES: MAGNA 16 / 26 / 36



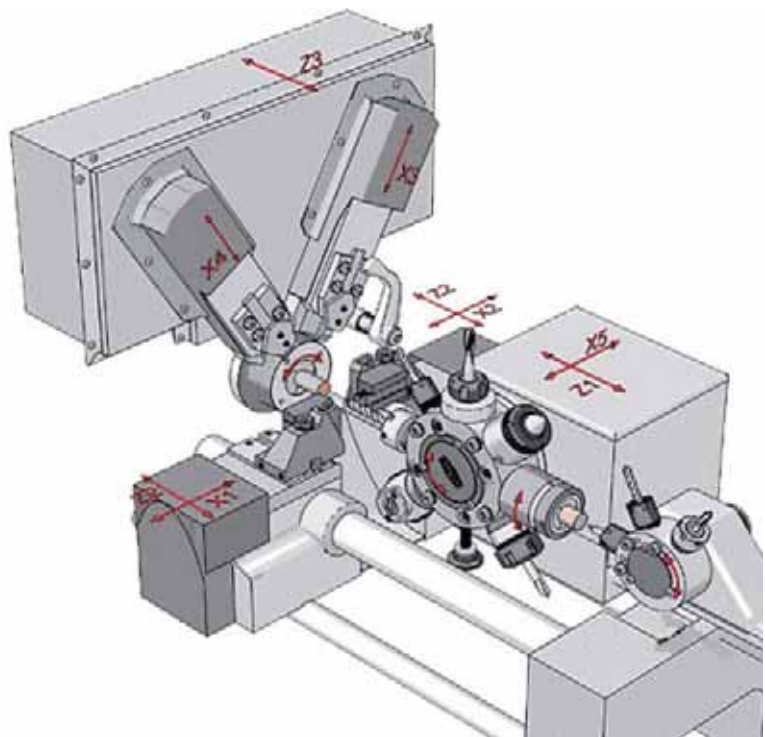
MAIN SCREEN



SEGMENTS



WORKPIECE PROFILE

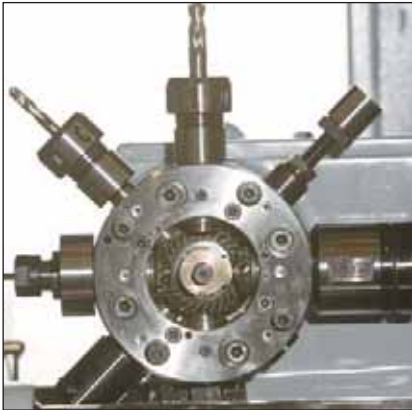


- Cast iron bed widely designed to absorb machining vibrations.
- Simultaneous control for up to 9 axis.
- Two CNC slides available for multipass turning.
- Extra swift electrical turret with intelligent indexing.
- Multiaxis and interactive programming system.
- Simple profile programming thanks to its integrated CAD system.
- Predefined machining cycles.
- Wide capacity memory for program storing.

AXIS	STROKE	DESCRIPTION
Z1	130 mm	AXIAL STROKE OF THE TURRET
Z2	130 mm	AXIAL STROKE OF THE HORIZONTAL SLIDES
Z3	100 mm	AXIAL STROKE OF THE VERTICAL SLIDES
X1	50 mm	RADIAL STROKE OF THE FRONT HORIZONTAL SLIDE
X2	50 mm	RADIAL STROKE OF THE REAR HORIZONTAL SLIDE
X3	50 mm	RADIAL STROKE OF THE REAR VERTICAL SLIDE
X4	50 mm	RADIAL STROKE OF THE FRONT VERTICAL SLIDE
X5	-5/+20 mm	RADIAL STROKE OF THE TURRET
S1-S2		MAIN SPINDLE AND PICK UP SYNCHRONISATION



OPTIONAL ATTACHMENTS



ROTATING TOOLS FOR THE TURRET

This option allows to use $\varnothing 1\frac{1}{4}$ " shank rotating tools along with a pick up device on four stations of this turret. The pick up device is helpful for cutting off without nozzles and necessary to work with the second operations unit.

These rotating tools are AC operated with variable speed up to 6.000 rpm and 1,3 kW power allowing the following machining operations :

- Differential tapping (without inverting the spindle spinning direction)
- Fast drilling
- Drilling and tapping on the back side of the part
- Various millings

PICK UP DEVICE AND SECOND OPERATIONS UNIT

The pick up device integrates a collet whose diameter is given by the workpiece geometry with a maximum capacity of $\varnothing 26$ mm. This device spins synchronously with the main spindle in order to catch the part without marking it so that it can be cut off without nozzles.

Once the part has been cut off, it may be either dropped into the part catcher or (by indexing the turret 180°) finished on its back side on the second operation unit opposite to the main spindle.



POLYGONAL TURNING / THREAD MILLING DEVICE

We may cut polygons into a bar or even mill threads on it thanks to this special device that works by generation. With only one device and only by swapping a set of gears, we may achieve both operations.

Thanks to the axial stroke of the slides, it is possible to cut polygons in multipass works.

Since it is a very quick and efficient device, it is widely spread in screw cutting shops.

VERTICAL SLIDES WITH AXIAL STROKE

From now on, and as an option, we may have both vertical slides moving along the "Z" axis (Z3) in 100 mm. Combined with the standard radial stroke of these slides, the MAGNA's possibilities are definitely overboosted.

Now this machine is capable to make turnings and threads by using the vertical and the horizontal slides.



MAGNA: PROFITABILITY + QUICKNESS + RELIABILITY + ERGONOMY

PERFECTION, EASYNES AND HIGH TECHNOLOGY

The ground machine equipment consists in two vertical slides, two horizontal slides with longitudinal movement and an eight position turret with bidirectional indexing system by the shortest way.

The positioning of the working axis allows the possibility of working simultaneously with 3 or 4 tools on the workpiece.

Crashes when working simultaneously with more than one tool are avoided thanks to the optimal positioning of the different working axis along with the dedicated software control feature.

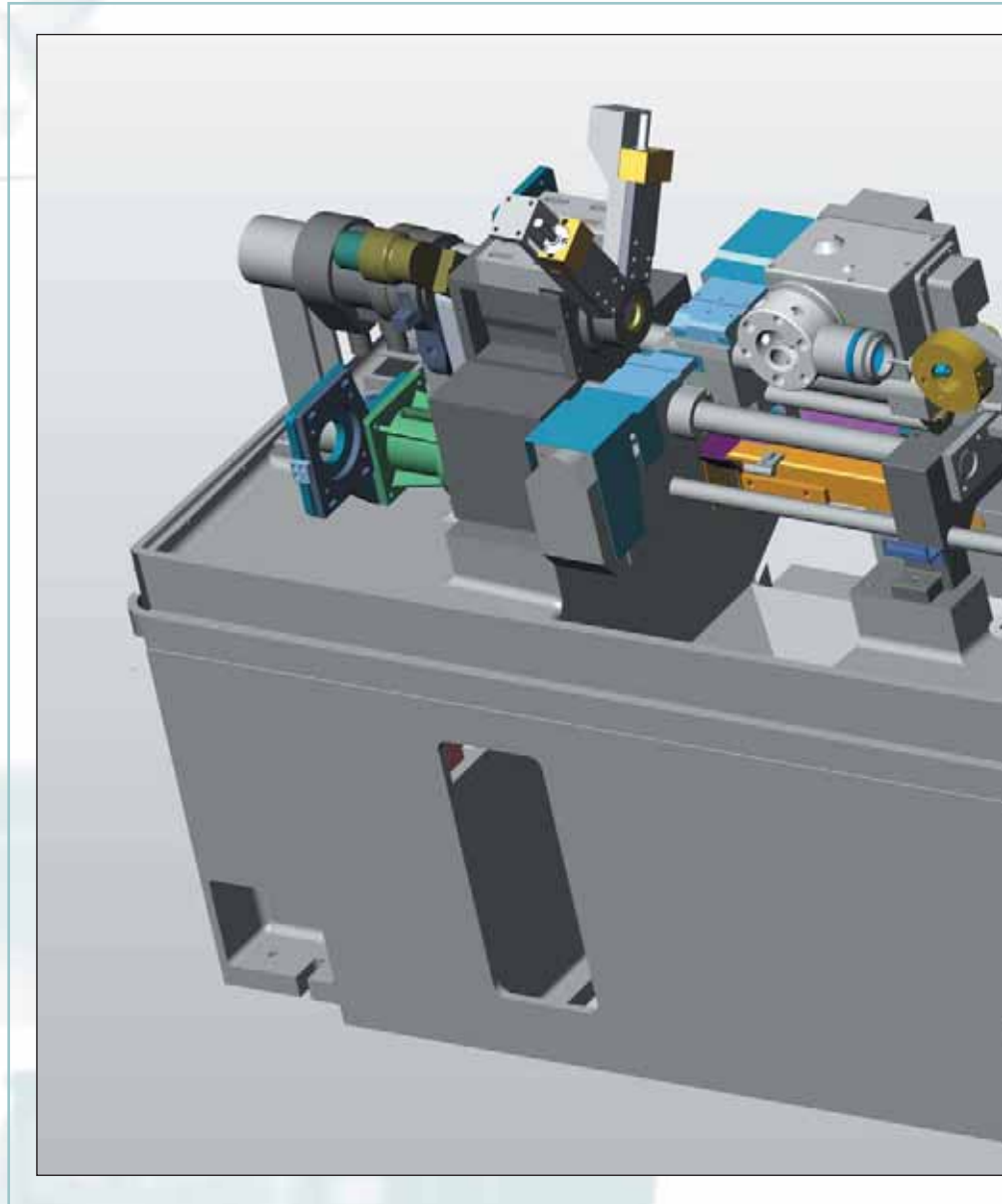
The four slides make possible the machining by plunge cutting, long turning, profiling, threading, etc, always by using standard tooling.

Its particular structure and strength allow to remove a large amount of material either by plunge cutting or by turning.

MAGNA VERSATILITY

Only with the ground machine equipment, 4 slides and an 8 positions turret, this machine is already very versatile and competitive.

But optionally, the turret may be fitted with rotating tools and a pick up device to enhance this machine possibilities.



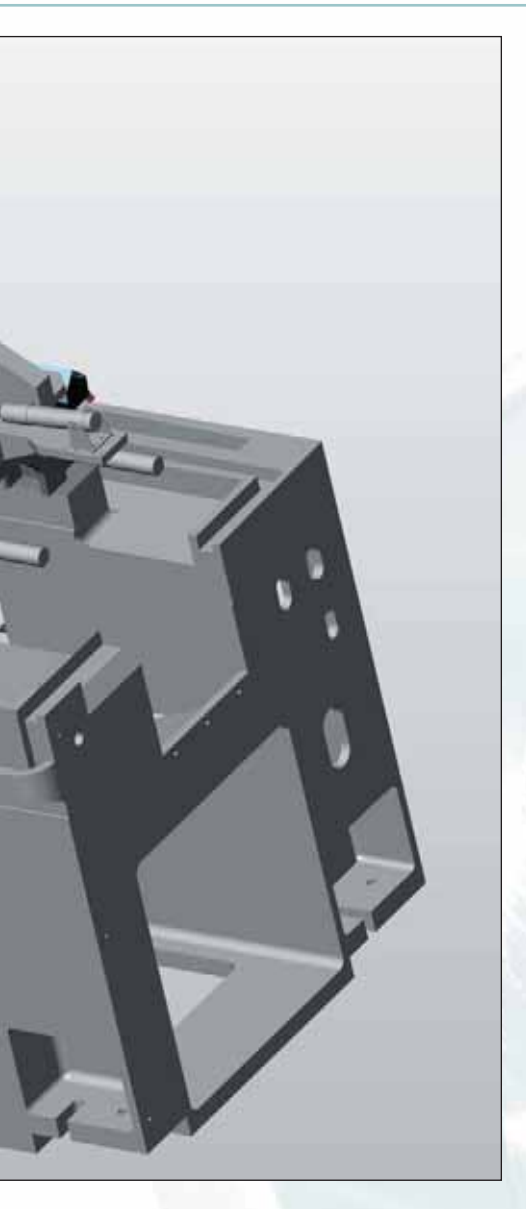
MULTIAXIS NUMERICAL CONTROL

MAGNA's high flexibility is reached thanks to its multiaxis control system making easy and quickly available all the machining possibilities to reach the shortest machining cycles.

- The touch screen guides the operator through the program edition process, specially with its integrated CAD system which allows the edition of the workpiece profile in an easy and straight way.

- An interactive diagnostics screen allows real time monitoring of the Input/Output signals.
- All operative features of the machine are always available from the ground machine:

- Multiaxis interpolation
- Workpiece profile edition
- Different machining cycles
- Anticrash control feature
- Parts counter
- Wide memory capacity for program storing
- Complete machining control



AXIS OPERATION

Each of the slides integrates an independent control unit with supervising logic feature. The result is a perfect component integration making easy the management of the axis.

Axis are really compact allowing more room to the working area.

The power transmission is straight and short, which allows a highly dynamic design giving a very high power.

• HEADSTOCK

The spindle is integrated in a symmetric headstock allowing an excellent heat protection to the spindle in order to keep optimal tolerances on the machined workpieces.

• MAIN SPINDLE

Widely dimensionated and particularly rigid, the main spindle is fitted into the headstock with high precision and preloaded angular contact bearings to avoid looseness under hard working conditions. Bearings are lubricated for life and need no servicing.

In case of machining soft materials (plastics, etc.) or small diameter bars, it would be possible to obtain higher cutting speeds than those recommended herein. Our Engineers will study your case.

• MAIN SPINDLE OPERATIONS

The AC vectorial operation gives a very high torque to the spindle from the very start of the spinning.

The variable spinning speed allows the optimal cutting speed for turning with profiling tools and standard carbide inserts when deburring, finishing and cutting off, reducing machining cycles and improving surface quality of your workpieces.

CYLINDRICAL GUIDES

We specially care for these cylindrical guides. Built with alloy steel, tempered and nitridated to 1000 Vickers hardness and then grinded and honed, these guides are granted for life.

A perfect sliding is granted by the GLICODUR sleeves perfectly protected by static scratchers and the automatic lubricating system.

This combination of linear and cylindrical guides has been widely used and tested and allows high precision levels in the machining.

BED

MAGNA's bed is made of stabilized cast iron capable to absorb all machining vibrations allowing good surface finishing and high repeatability rates. We have also cared for acoustic levels keeping them well into the admitted levels.

HORIZONTAL SLIDES

Both horizontal slides, well structured and sized, are capable to move along the "Z" and "X" axis allowing the linear and circular interpolation between both axis in order to achieve complex profile turnings like conical threading, etc.

It is also possible to machine by plunge-cutting, thread milling and multipass polygon turning.

EIGHT POSITIONS TURRET WITH RADIAL AXIS

As an option, besides the turret motorisation, the machine may be fitted with a 25 mm stroke radial axis on the turret (X5). This new feature enhances the MAGNA's possibilities to achieve eccentric drills, internal and external turning and threading.

Moreover, if we choose to fit the machine with the pick up and the second operations unit, we may have the workpiece machined on its back side avoiding a second operation on another machine.

This turret is electrically operated by an ultra quick bidirectional indexing system with HIRTH teeth locking, and has 4 $\varnothing 1\frac{1}{4}$ " holes for fitting rotary tools and 4 $\varnothing 3/4$ " for static tool holders.



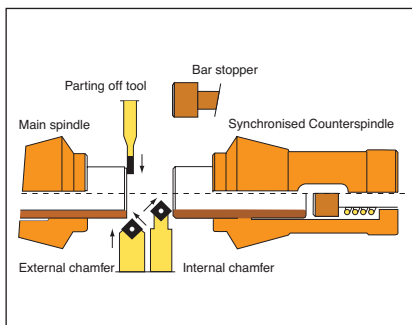
MORE OPTIONS

CROSS DRILLING / MILLING DEVICE

As an optional attachment, MAGNA may be equipped with a cross drilling / milling device either on the front slide or on the rear slide. Along with the stop and positioning of the main spindle, which is also optional, we may achieve cross drilling,

tapping or even milling along the workpiece.

If a GE FANUC 16i-T / FAGOR 8070 T control is chosen, helicoidal grooves may also be machined with the help of the "C" axis.



SYNCHRONOUS COUNTERSPINDLE

The more stylish workpieces or tube cutting and chamfering are not a trouble for the MAGNA model. Instead of the main turret we may fit the machine with a synchronous counterspindle, CNC controlled, with an axial stroke of 130mm.

Moreover, if the workpiece is considerably long, the counterspindle is fitted so that the finished workpiece may be extracted from the right side of the machine.

COMPREHENSIVE ATTACHMENT LIST

- Rotating tools for the turret
- Pick up devices max capacity \varnothing 26 and \varnothing 32 mm
- Second operation unit up to three working stations
- Stop and positioning of the main spindle
- Polygonal turning / thread milling device for the rear slide
- CNC polygonal turning / thread milling device (only for 26 / 36)
- Cross drilling / milling device on the rear slide
- Cross drilling / milling device on the front slide
- Hydraulic bar clamping system (only for 26 / 36)
- Vertical slides with axial stroke of 100 mm
- Part catcher and extractor
- X5 axis for the turret
- Screw chip conveyor
- Normal chip conveyor
- Drilling and tapping double spindle device
- Oil mist extractor
- Hydraulic bar feeders
- Automatic bar feeders
- Wide range of tool holders
- GE FANUC 16i - TB / FAGOR 8070 T controls available with "C" axis control.
- Other special equipment for any machining need.



TECHNICAL FEATURES

TECHNICAL FEATURES	MAGNA 16	MAGNA 26	MAGNA 36
HEADSTOCK			
ROUND BAR MAX. CAPACITY (mm)	16	26	36
MAX. SPINDLE SPEED (RPM)	8.500	6.000	4.500
MAIN SPINDLE OPERATION			
OPERATION TYPE	AC ASYNCHRONOUS WITH CONTINUOUS SPEED VARIATION		
STANDARD POWER	5,5 kW		
TURRET			
TOOLS NUMBER	8		
TOOL SHANKS BORE	3 de 3/4" [19,05 mm] / 3 de 1 1/4" [31,75 mm]		
MAX. AXIAL STROKE	130 mm		
MAX. RADIAL STROKE	25 mm (-5/20)		
CONSECUTIVE STATIONS INDEXING TIME	0,4 s		
ROTATING TOOLS			
NUMBER OF LIVE TOOLS	4		
LIVE TOOLS POWER	1,3 kW		
MAX. SPEED (RPM)	6.000		
VERTICAL SLIDES			
MAX. STROKE	50 mm		
RAPID TRAVERSE	15 m/min		
MAX. FEED FORCE	2.450 N		
VERTICAL SLIDES WITH AXIAL STROKE (OPTIONAL)			
MAX. RADIAL STROKE	50 mm		
MAX. AXIAL STROKE	100 mm		
RAPID TRAVERSE	15 m/min		
FEED FORCE	2450 N		
HORIZONTAL SLIDES			
AXIAL STROKE	130 mm		
FEED FORCE	6790 N		
RAPID TRAVERSE	15 m/min		
RADIAL STROKE	50 mm		
RAPID TRAVERSE	15 m/min		
FEED FORCE	2450 N		
SECOND OPERATIONS SYSTEM			
NEEDS ROTATING TOOLS			
NEEDS PICK UP			
CHOICE AMONG ONE, TWO OR THREE WORKING STATIONS			
SYNCHRONISED COUNTERSPINDLE			
AXIAL STROKE	130 mm		
MAX. COLLET CAPACITY	36 mm		
MAX. MACHINING LENGHT	130 mm		
COOLING SYSTEM			
TANK CAPACITY	80 l		
FLOW	30 l/min.		
PRESSURE	1,5 bar		
DIMENSIONS			
AREA ON THE WORKSHOP	2.100 X 1.400 mm ²		
HEIGHT	1.600 mm		
SPINDLE CENTRE HEIGHT ABOVE THE GROUND	1.120 mm		
APPROX. WEIGHT	1.800 kg		



MANUFACTURING RANGE



OMEGA

CURRENT MACHINES RANGE

- CNC MULTISLIDES AUTOMATIC LATHES
- AUTOMATIC BAR FEEDERS
- HANDLING SYSTEMS
- AUTOMATIC LATHES
- MULTISPINDLE LATHES
- CNC LATHES



TWIN



MIKRA



SUPRA



DEBA

These technical specifications may vary without notice due to our continuous improvement policy.



MAGNA



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