MAR

CYLINDRICAL GRINDING MACHINES

TITAN

PASSION FOR GRINDING

THE UNIVERSAL FOR EVERY NEED

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ID CARD

TITAN is a cylindrical grinding machine for external or internal diameters with mobile table, modular size and suitable for machining pieces up to 1,000-1,500 or 2,000 mm. of length and a rotating diameter of 360 or 460 mm.

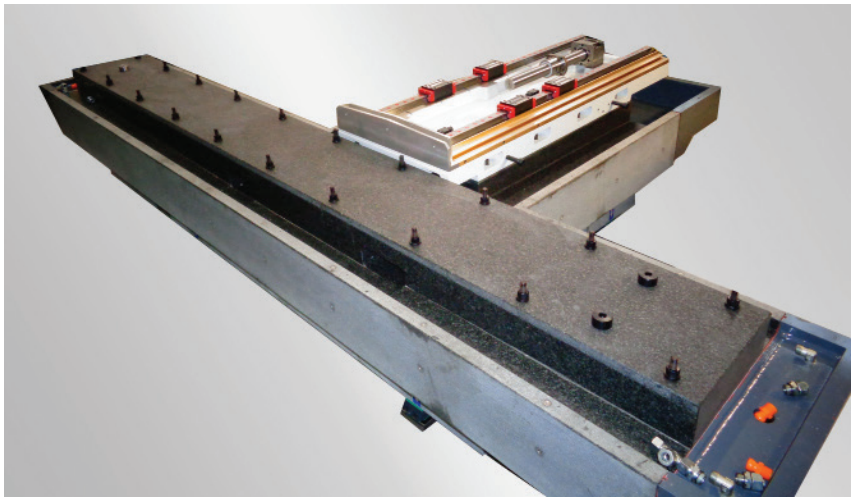
TECHNICAL SPECIFICATIONS

GENERAL DATA				
Max. grindable lenght	1000	1500	2000	mm.
Centres height (standard / optional)		180 / 230*		mm.
Max. rotating diameter		360 / 460*		mm.
Max. load between centres		200 / 300*		kg.
Max load in overhang machining		150 / 250*		kg.
Machine weight	8000	8500	9000	kg.
WHEEL HEAD – "X" AXIS				
Axis travel		420		mm.
Max. axis speed		12		m/min.
Axis resolution		0,0001		mm.
Standard transducer		absolute linear encoder		
MOBILE TABLE – "Z" AXIS				
Axis travel	1330	1830	2330	mm.
Max. axis speed		12		m/min.
Axis resolution		0,0001		mm.
Standard transducer		absolute linear encoder		
TORQUE UNIVERSAL WORHEAD				
Mounting taper		5 / 6*		Morse
External taper		5 / 6*		ASA
Max. speed		800		rpm
Spindle torque output		80 / 120*		Nm.
Standard transducer		absolute encoder		
TAILSTOCK				
Sleeve diameter		60 / 80*		mm.
Sleeve stroke		60 / 120*		mm.
Mounting taper		4 / 5*		Morse
Max. weight between pointes		60 (spring) / 300 (hydraulic)*		kg.
Cilindricity correction range		+ / - 0,15		mm.

*Option

THE STARTING BLOCK

The **TITAN** machine bed is made from a block of natural granite, worked in Italy with the same accuracy of the best measuring instruments. Only starting from here we can get the best precision and durability over time.

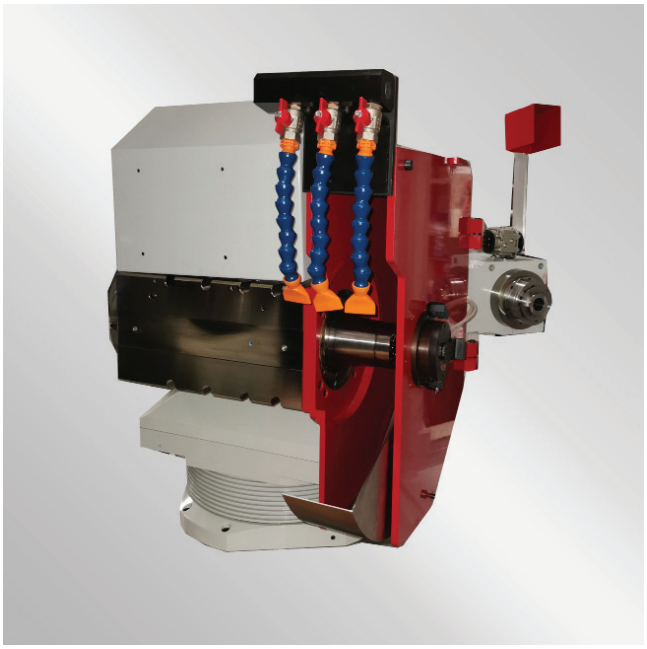


MODULAR GRINDING

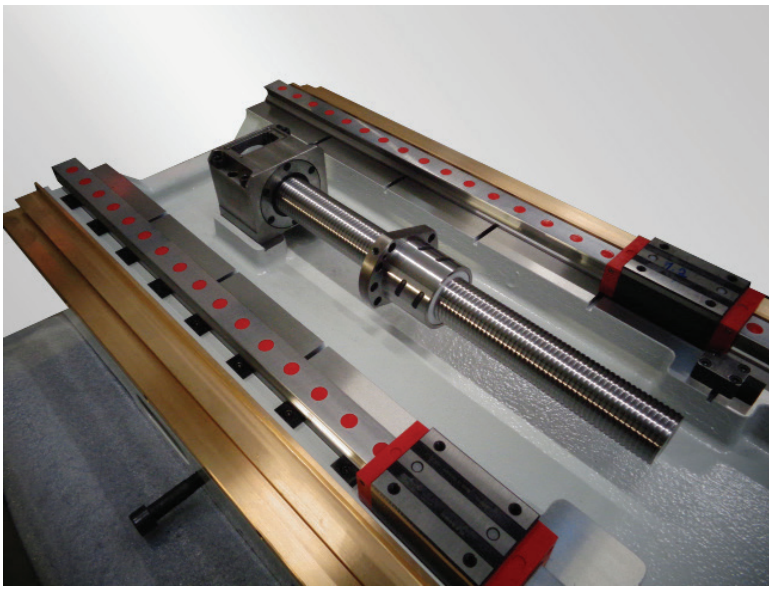
3 sizes available (1000-1500-2000) to carry out all your projects. In each version the base is widely dimensioned to contain all the configurations of **TITAN**.

FLEXIBLE UNIT

The grinding wheel axis is equipped with a Torque rotating turret with micrometric angular movement.
Its modularity allows the assembly of internal and external tools for complex machining and special profiles.



THE KINEMATICS AS YOU WANT



Both the transverse axis (X) and the longitudinal axis (Z) can be equipped with a brushless motor coupled with ball recirculating screws or with linear motors, controlled by optical linear scale. The support groups are built to use the system preferred by the customer.

WITH YOUR RIGHT HEAD

TITAN is born with a universal Torque workhead with integrated angular position control.
This allows the continuous positioning of the spindle to face all the possible processes. The two available heights (180 and 230 mm) allows the rotation of pieces up to 460 mm. in diameter and 150 Kg. in live grinding.

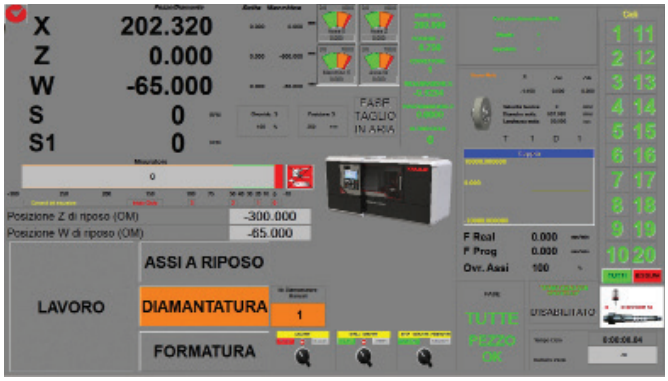
ALL-IN-ONE TAILSTOCK

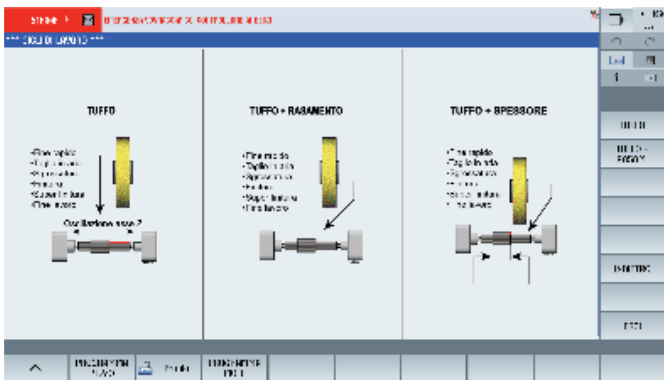
The **TITAN** tailstock unit has everything you need: movement manually controlled by lever or automatically by pedal; the centre pressure can be adjusted by spring or hydraulic force.
The cylindricity correction of the pieces is made by a practical knob equipped with an optical scale. The movement of the group along the table takes place through a rack that facilitates the operator in the setup operations.

PROCESS CONTROL

The hardware of the CN package can be Fagor or Siemens, and includes motor drives, drives and machine management peripherals. Digital technology always integrates free telediagnosis, so that we can be by your side without making you wait either a second. Industry 4.0 has never been so close!

THE SOFTWARE FOR EVERYONE





We have developed our management software internally, to provide you a simple, complete and reliable user interface.
To use **TITAN** you do not need high mechanical skills, our software with touch screen interface simplifies the programming of work cycles.

ACCESSORIES FOR EVERY NEED

MAR collaborates with the most important companies in the market to provide you with all the devices that make the difference. Whether it's integrated measurement systems, equipment for workpiece or loading processes, on **TITAN** there is space for everything.

CUSTOMER CARE

On **TITAN**, attention to the customer goes from different points: a pleasant and simple design, a great machine inspectability and a simple and clear arrangement of all components.
In addition to this we continuously improve the best technologies on the market, with the intent to free the customer from complex and confusing operations.

Thanks to the field buses and the on-board diagnostics we can communicate in real time with the customer to identify and correct every problem of use.
We also offer a scheduled maintenance service to maintain the quality of your machine over time.

MAR
CYLINDRICAL GRINDING MACHINES

HISTORY

Mar srl was born in San Marino in June 2015 from the intuition of 5 friends with the same decades of experience in cylindrical grinding machines.
The three initial activities of assembly, assistance and overhaul of automatic machine tools are soon joined by the re-engineering and design of increasingly complex groups. In 2017 the idea was born to design and produce completely new grinding machines: flexible and modular machines, performing and accessible to all customers. Two lines are then launched into production: the innovative TITAN, THE UNIVERSAL FOR EVERY NEED, a true family of universal grinding machines in three sizes, and the efficient X, THE COMPACT MOUNTING MOBILE, in size 1000. In 2020 “X500” comes out, compact version with mobile carriages for minimizing production spaces.

THE STRATEGY

Democratic precision. Maximize customer satisfaction by providing adjustments designed to ensure high quality and a quick return on investment,
achieved with excellent skills, with innovation and attention to design, always supporting the customer, even in the re-engineering of the installed machine park.

THE TEAM

The team is composed of highly skilled technical experts who deal with the design, construction, overhaul / reengineering, and technical assistance of round grinding machines. MAR strongly believes in the value of people, and every one of our employees comes constantly
made up of more experienced technicians to create a cohesive and autonomous group in their skills. Every single employee, with his / her own acquired experiences, allows MAR to operate on every specific sector of the machines, both in mechanical and electronic field and software.

ASSEMBLY ACTIVITIES

The assembly activity, the founding pillar of MAR, continues in a completely independent department that operates “on behalf of third parties”, addressing manufacturers of automatic machines and systems that require competent and reliable labor.
Procurement, engineering and reverse engineering activities are also available on-demand.

HEADQUARTERS

Approximately 1,500 square meters are destined for the production area, divided into several zones used for specialized assembly and a tool room equipped with the machine tools necessary to perform the most important and delicate processes.
A large automated parts warehouse to cope with to the needs of our customers and a modern and functional office area for designers, commercial and administrative, complete the location.

CIRCULAR ECONOMY
VALUE DURABLE
INNOVATION
EXCEPTIONAL COMPETENCES
PEOPLE, NOT NUMBERS

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