

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 length	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	11000	14000	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 WHEELHEAD

Mounting taper	5 / 6 *	Morse
External taper	5 / 6 *	ASA
Max. speed	800	rpm
Spindle torque output	80 / 120 *	Nm.
Standard transducer	encoder	

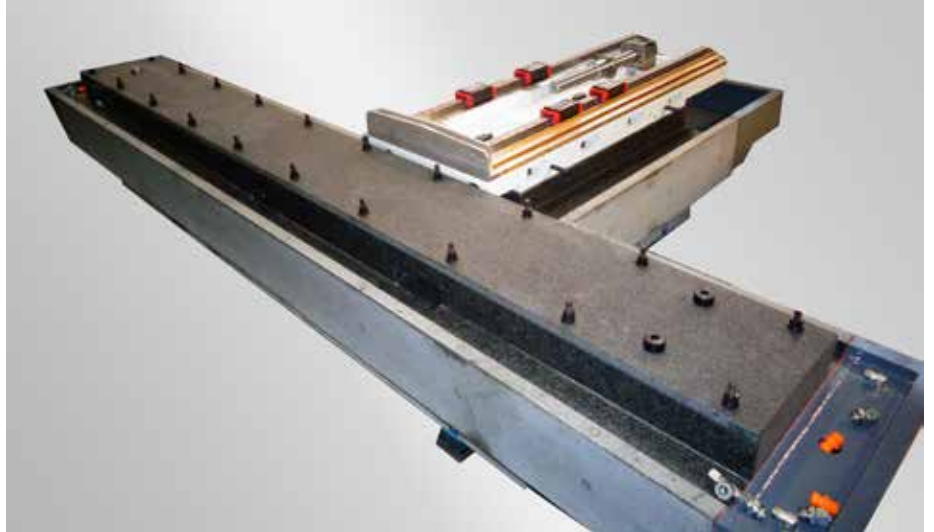
TAILSTOCK

Sleeve diameter	60 / 95 *	mm.
Sleeve stroke	60 / 170 *	mm.
Mounting taper	4 / 5 *	Morse
Max. weight between pointes	60 (spring) / 300 (hydraulic) *	kg.
Cylindricity 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 length sizes available (1000 - 1500 - 2000) to realize all your projects.

In each version the base is amply sized to accommodate all **TITAN** configurations. The tip height can also be selected to satisfy every need.

FLEXIBLE UNIT

The grinding wheel axis is equipped with a Torque rotating turret (B axis) with micrometric angular movement and free positioning. Its modularity allows the assembly of internal and external tools for complex machining and particular profiles. The diameter of external grinding wheels can reach 610 mm.



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



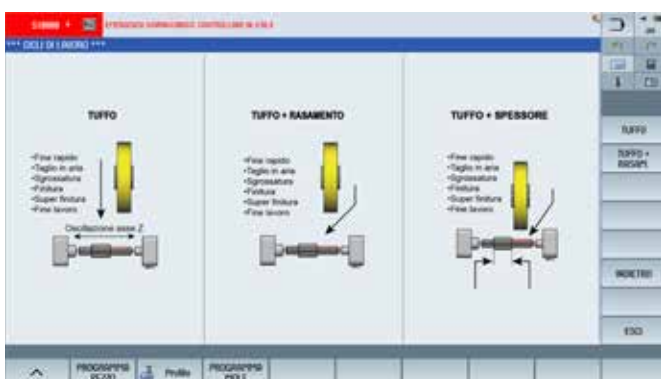
The **TITAN** tailstock unit has everything you need: movement manually controlled by lever or automatically by pedal; the centre pressure can be adjusted by spring or hydraulic force. The cylindricity correction of the pieces is made by a practical knob equipped with an optical scale. The movement of 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 motors, drives and peripherals machine management. Digital technology always integrates the free remote diagnosis, so as to allow us to be at your side without making you wait even a minute second. Industry 4.0 has never been so close!



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 sector to be able to provide you with all the customizations that make the difference. In addition to automatic loading systems, integrated measuring devices, piece holding equipment or dressing spindles, it is also possible to rely on **MAR** for process expertise, specific training courses and tailor-made services. On **TITAN** there is room for everything.



CUSTOMER CARE

On **TITAN**, attention to the customer passes through several points: a design pleasant and simple, great inspectionability of the machine and a simple and clear layout of all the components. In addition to this, we continuously implement the best technologies on the market, with the aim of freeing the customer from operations complex and confusing. Thanks to fieldbuses and diagnostics


on board we can communicate in real time with the customer for identify and correct each usage problem. We also offer a service scheduled maintenance to maintain the quality of your machine over time.



EXTERNAL, INTERNAL AND UNIVERSAL GRINDING MACHINES



MAR srl was born in San Marino in June 2015 from the intuition of 5 friends with the same decades of experience in precision mechanics. In 2017 the idea of designing and producing completely new grinding machines was born: flexible and modular machines, high-performance and accessible to all customers, united by modern technologies such as natural granite bases, linear motors and customized software interface. The standard production range covers grinding needs for external, internal and universal diameters up to 2,000 mm. in length.

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VERTICAL GRINDING MACHINES AND SPECIAL APPLICATIONS



FEF, owned by the Fumagalli brothers, was founded in 1967 and was the first Italian tangential grinding machine company to introduce the CNC as early as 1980. FEF grinding machines have always used the most innovative technologies to adapt to the multiple requests of its customers. The technologies used range from the hydrostatic support system developed entirely by FEF, to linear motors, Torque axes and the use of electrospindles built specifically for individual applications.

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AUTOMOTIVE AND HIGH PRODUCTION GRINDING MACHINES



SAGITECH was born in Alessandria in 2015, providing technological support in the cylindrical grinding machines sector. In 2021 it expands with a new operational form and becomes part of a group of companies all operating in the sector of cylindrical grinding machines and special applications. As part of group synergies, SAGITECH operates mainly in the sector of production cylindrical grinding machines with high-speed tools.

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