

▼ A solid experience

▼ Attention to details

▼ Customized solutions

FIMAT has been operating in the Machine Tools market for more than 30 years. The Company started its activities with retrofits and overhauling of machines tools for the automotive industry. The experience gained over the years, the technical knowledge and the skills of its personnel, beside the support of important and selected suppliers, has allowed to FIMAT to conquer its own market spots and to propose as Machine Tools Maker. Nowadays, FIMAT operates in a recently renewed 3.000 m² building, studied for all the needs of designing, management, assembling and testing of the Machines that FIMAT constructs.



ST-1 TRIPOD GRINDING MACHINE

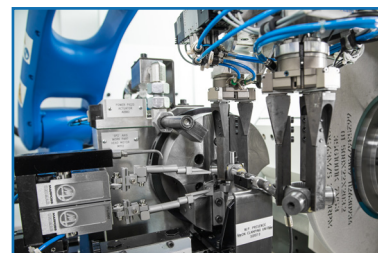
The ST-1 is the newborn machine for FIMAT that has recently started its journey into the tricky process of Tripod pegs finishing. This process is tricky because of the particular shape of the pegs, that resemble a bean, and of the very small tolerances required by the customers. FIMAT, with its experience in grinding, decided to face this challenge, adding one more difficulty: trying to offer to customers a competitive cycle time.



Fast

Precise

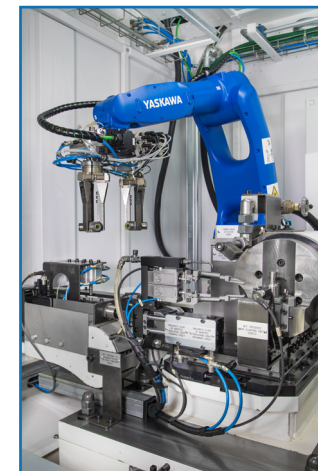
Compact



The brand new Grinding Machine for Tripod Pegs

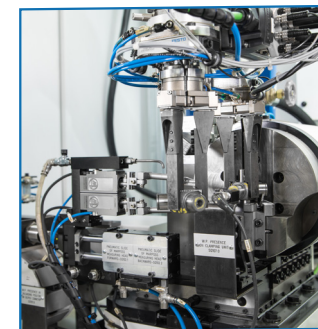
ACHIEVING THE PEG SHAPE

The pegs can be round-shaped or bean-shaped, being this second the most difficult form to achieve, due to the high speed interpolation between the rotating workpart and the position of the grinding wheel. In order to get the required result, the grinding wheel slide is driven by a linear motor controlled by a high resolution absolute scale, thus granting the high dynamic and precision required by the process.



DESIGN FEATURES

The St-1 can be set up to use both conventional and CBN grinding wheels. In the first case the machine features a 18kW high-frequency spindle that allows cutting speed up to 80m/s. The wheel is dressed by a plunging diamond roller. In the second case, the wheel is driven by a 24kW spindle for cutting speed up to 100m/s.



Dressing is carried out by an interpolating diamond roller.

The workhead is driven by a direct drive torque motor for better precision and stiffness. Workpart clamping is fully electric, delivering up to 4.5kN of clamping force.

Coolant can be either cutting oil or water+oil.

A robot, integrated inside of the machine and with a IP67 protection level, is in charge of loading, unloading and indexing the tripod. The software matches the last Industry 4.0 requirements for connectivity and data remote controlling.

GENERAL FEATURES

Weight	7700 kg
Dimensions	2200x1400x2100 mm
Numerical control	Siemens 840D SL
Loading system	Yaskawa GP7 Robot
Coolant type	Cutting oil or emulsion

WHEEL SLIDE AXIS

Drive	Siemens 1FN3 linear motor
Stroke	200 mm
Max Feed	15 m/min
Positioning control	Heidenhain absolute scale

WORKPART SPINDLE

Drive	Technai direct drive torque motor - 64 Nm
Max speed	1200 mm
Clamping type	Electrical
Clamping force	15 kN

GRINDING WHEEL SPINDLE	CONVENTIONAL WHEEL	CBN WHEEL
Drive	18 kW high-frequency spindle	24 kW high-frequency spindle
Max speed	5000 rpm	6000 rpm
Max cutting speed	80 m/s	100 m/s
Max wheel diameter	610 mm	400 mm
Min wheel diameter	400 mm	400 mm

Worldwide solutions

FIMAT
MACHINE TOOLS

30
years experience

IMPRESA
ASSOCIATA
UCIMU



Our best customers



RENAULT
Passion for life



CLAAS



FIAT CHRYSLER AUTOMOBILES



GETRAG



GKN Driveline



REFIL



MAGNET MARELLI

oerlikon
graziano



PIAGGIO
GROUP



PSA
GROUPE

REDUCTOR PM
MANUFACTURE OF COMPONENTS



LEONARDO



Volkswagen



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FIMAT
MACHINE TOOLS

ST-1 TRIPOD GRINDING MACHINE



THE BRAND NEW GRINDING MACHINE FOR TRIPOD PEGS