

MECCANICA
Italy

Fabbrica Italiana
Macchine Utensili Portatili Multifunzione

from 1991

MADE IN ITALY



Over
20
Years of
"Excellence"





Portable Multifunction facing lathe/milling machine – Radial Drill

Facing lathe/milling machine Fmax

PORTABLE CHIP REMOVAL MACHINE TOOL

Designed to carry out multiple facing operations, on flat surfaces or on more levels, on big bodies of axial symmetry, having cylindrical cavities with big diameters.

CREATED TO CARRY OUT “ON-SITE” MACHINING; it makes up for the impossibility and/or the economic as well as the logistic difficulty, of moving these big bodies and the components connected to them from their location.

It is suitable, for how it has been created to carry out operations such as facing, internal and external bevelling, and with the proper tools, the creation of concentric and/or spiral cylindrical grooves, as well as the preparation of edges and chamfers for welding.

It can also be used as a radial drill, essential for precision drilling of flanges, in various diameter ranges.

The entire machining and movement system **is handled electronically through** the interactions with various transducers, that allow for a constant monitoring and setting of the cutting and feeding parameters.

Horizontal as well as vertical assembly, machining in every position and for any type of surface at various and multiple levels of finishing. The entire assembly/support system is modular; it can be composed according to the various diametrical needs.

Carries out operations of:

- GENERAL FLANGE FACING
- MILLING
- TURNING
- BORING
- DRILLING (ELECTRONIC DIVIDING HEAD FOR CIRCULAR SERIES) OPERATIONS
- CREATING OF CIRCULAR POCKETS
- TAPPING
- GROOVING
- PLUNGING
- PREPARATION OF CHAMFERS
- WELDING
- OXYGEN CUTTING



FMax Control Panel

Designed to guarantee the maximum reliability and ergonomics, the Fmax Controller combines design and handiness in one solution. The control panel is adjustable in height and inclination according to the operator's needs, granting the maximum comfort for maneuverability and legibility.

There are 4 areas of control, one for each movement of the machine:

[S] – milling rotation.

[R] – machine rotation.

[X] – radial feed.

[Z] – axial feed.

For each movement, it is possible to set the direction and speed independently; All the speeds, those of translation [mm/min] as well as of rotation [rpm], are continuously monitored in an independent way. The translations are manageable through the “**Fast Feed Switch**”, and for each one, there is a **STATUS** display for the diagnostics of the functioning status. Each control area, is supplied with a **S.T.P** led bar, thanks to which it is possible to verify the current working load. When the **S.T.P** led bar flashes, it warns the operator that the machine is overloaded, giving the possibility to modify the cutting parameters properly.

In the version with **the electronic divider/positioner** for circular series of holes, the controller is equipped with an additional alphanumeric **LCD display**, 3 more switches and a signal led tower. By indicating the number of holes and the diameter on which they need to be equally distributed, this optional accessory, positions the machine on the exact coordinates on which each hole will have to be placed; The alternate switching of the 3 colors, along with the acoustic signals, continuously guides and updates the operators, who are far away from the controller, on the working status in progress.



F Max 800

Portable Multifunction facing lathe/milling machine – Radial Drill



General Technical Characteristics

Single phase power		220 V - 50 Hz
Diameter of facing	mm	≅ 350 - ≅ 800
Centring axis diameter	mm	50
Tool holder arm	mm	600
Radial stroke	mm	180
Axial stroke	mm	40
Rotation motor of the arm		DC / CONFORM TO EC NORMS
Milling Tool Rotation Motor		DC / CONFORM TO EC NORMS
Axial movement system		Manual
Radial movement system		DC / CONFORM TO EC NORMS
Max Torque on Rot. of Arm		4500 Nm (5 rpm)
Max Torque on Rot. of Milling Tool Ax		70 Nm (1500 rpm)
Max rotation speed	rpm	5
Rotating head		360°

- **FACING LATHE /MILLING MACHINE**
- **3 AXIS**
- **MOVEMENT AROUND THE CENTRING AND SUPPORT AXIS**
- **ELECTRONIC CONTROL PANEL WITH DIAGNOSTIC DISPLAY**

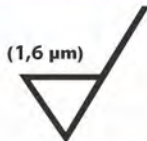
Machining Diameter

With standard equipment
From ø 350 mm
to over ø 800 mm

Prearrangement for

- **TURNING**
- **DRILLING**

Surface Roughness



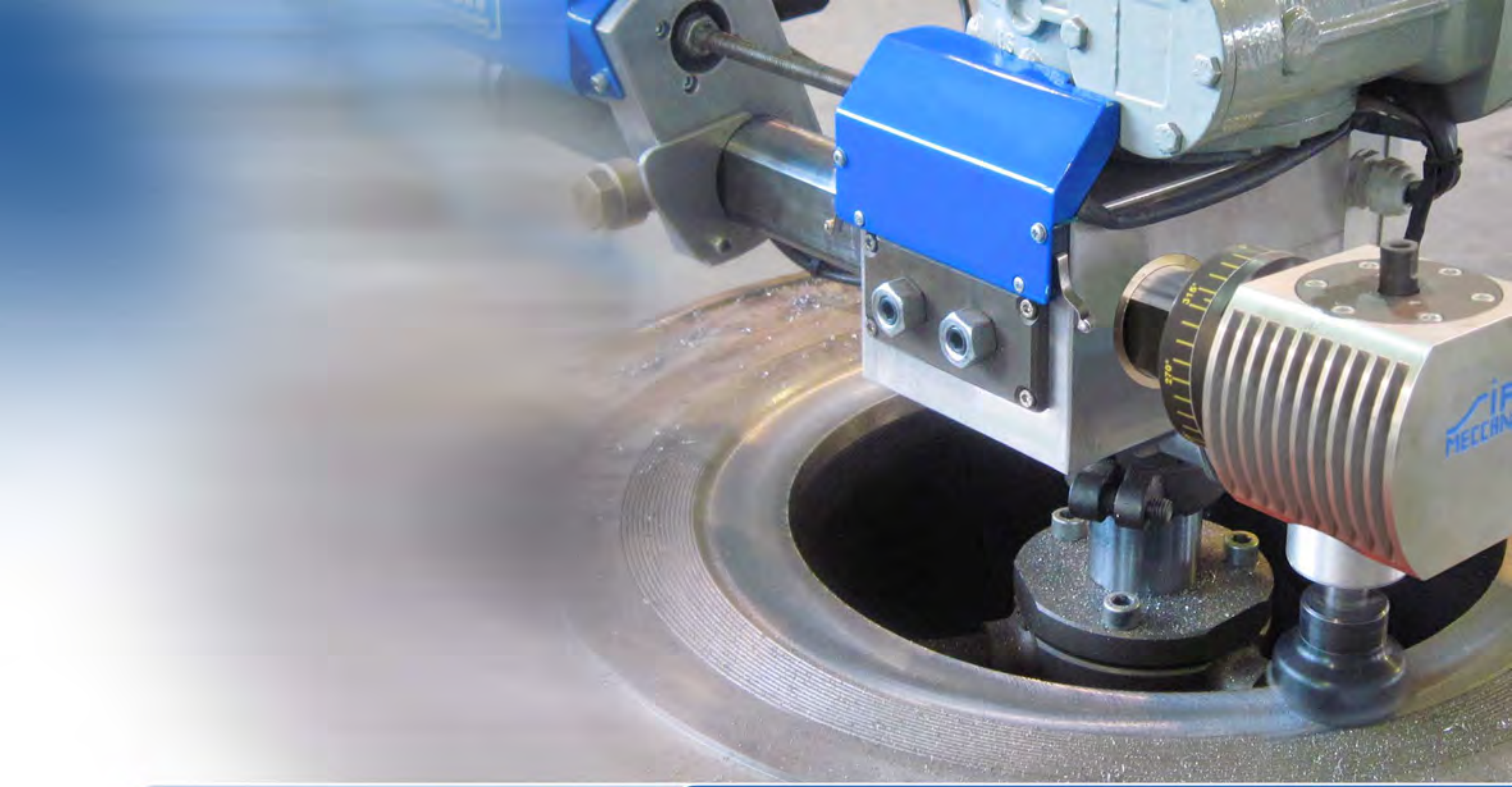
Certified Test



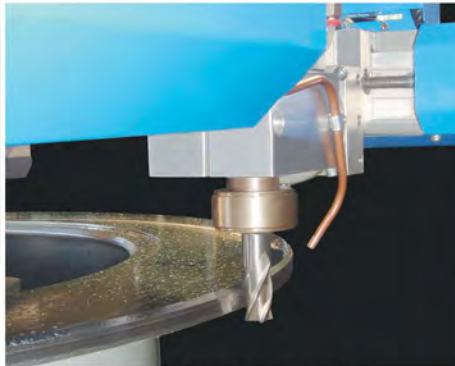
CERTIFIED TEST ON STEEL C45

Diameter	mm	Ø 800
Cutting Depth	mm	1 mm
Feed Speed	mm/min	400





MAXIMUM HANDINESS



Countering job through candle milling machine

Creation of gasket housing (MILLING MACHINE with inserts of 60mm)



MANAGEABILITY,
MINIMUM ENCUMBRANCES.

F Max 1500

Portable Multifunction facing lathe/milling machine – Radial Drill



General Technical Characteristics

Single phase power		220 V - 50 Hz
Diameter of facing	mm	≅ 400 - ≅ 1500
Centring axis diameter	mm	100
Tool holder arm	mm	800
Radial stroke	mm	400
Axial stroke	mm	150
Rotation motor of the arm		DC/ CONFORM TO EC NORMS
Milling Tool Rotation Motor		AC/ CONFORM TO EC NORMS
Axial movement system		DC/ CONFORM TO EC NORMS
Radial movement system		DC/ CONFORM TO EC NORMS
Max Torque on Rot. of Arm		14000 Nm (0,87 rpm)
Max Torque on Rot. of Milling Tool Ax		30 Nm (700 rpm)
Max rotation speed	rpm	0.87
Rotating head		360°

- **FACING LATHE /MILLING MACHINE**
- **3 AXIS.**
- **MOVEMENT AROUND THE CENTRING AND SUPPORT AXIS.**
- **ELECTRONIC CONTROL PANEL WITH DIAGNOSTIC DISPLAY.**
- **DIGITAL POSITIONER AND VISUALIZATION OF RADIAL AND AXIAL STROKES**

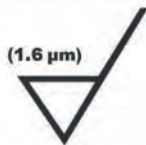
Machining Diameter

With standard equipment
From ø 400 mm
to over ø 1500 mm

Prearrangement for

- **CALIBRATED DRILLING.**
- **CREATION OF "CIRCULAR POCKETS".**
- **CIRCULAR MIG WELDING.**
- **CIRCULAR OXYGEN CUTTING.**

Surface Roughness



Certified Test



CERTIFIED TEST ON STEEL C45

Diameter	mm	1500
Cutting Depth	mm	1 mm
Feed Speed	mm/min	300





PROFESSIONAL



GUARANTEES THE BEST
CHIP REMOVAL IN THE FASTEST WAY.

F Max 3000

Portable Multifunction facing lathe/milling machine – Radial Drill




General Technical Characteristics

Single phase power		220 V - 50 HZ
Diameter of facing	mm	≅ 1000 - ≅ 3000
Mod. centring fasten & supp.	mm	800 - 3000
Tool holder arm	mm	Max 1500
Radial stroke	mm	250
Axial stroke	mm	80
Rotation motor of the arm		AC/ THREE-PHASE CONFORM TO EC NORMS
Milling Tool Rotation Motor		AC/ THREE-PHASE CONFORM TO EC NORMS
Axial movement system		CC Norma CE
Radial movement system		CC Norma CE
Max Torque on Rot. of Arm		37000 Nm
Tilting head		- 45° a + 20°
Rotating head		360°
Max Torque on Rot. of Milling Tool Ax		30 Nm
Max rotation speed	rpm	3.1


Machining Diameter

With standard equipment
**From ø1000mm
 to over ø 3000 mm**


Surface Roughness

 (1.6 µm)

Planarity Tolerance

 (0.3 mm)

Radial Oscillation Tolerance

 (0.05 mm)

Certified Test



CERTIFIED TEST ON STEEL C45

Diameter	mm	Ø 3000
Cutting Depth	mm	1
Feed Speed	mm/min	350

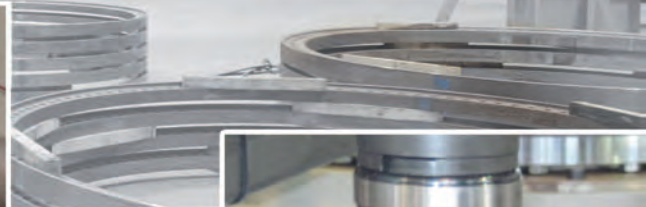
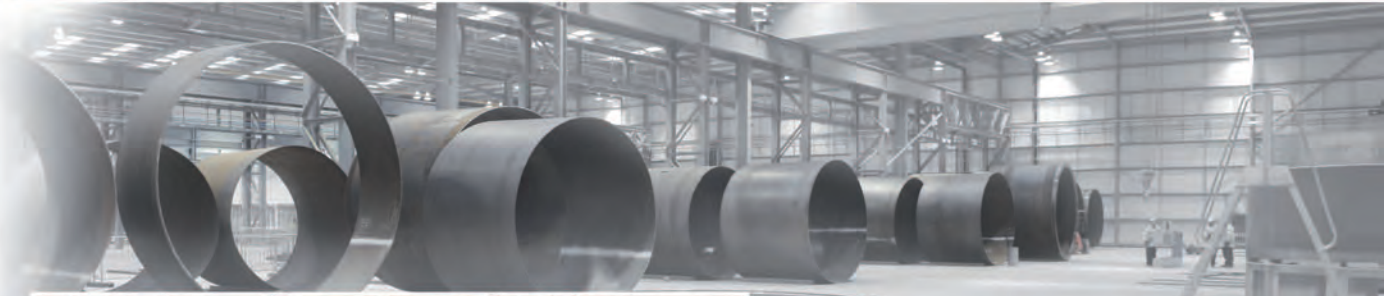
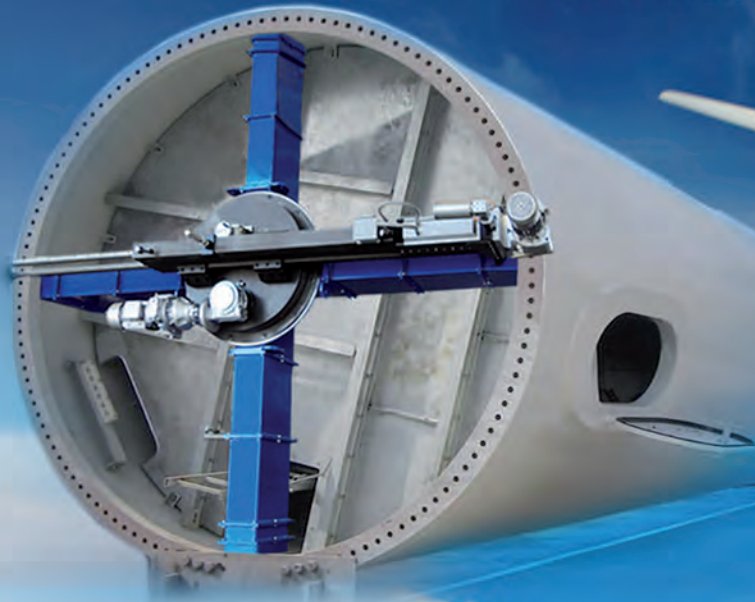
- **FACING LATHE /MILLING MACHINE**
- **3 AXIS**
- **MOVEMENT ON THE ROTATION MECHANICAL SLEWING BEARINGS**
- **CAST IRON DOVETAIL GUIDES**
- **NEW GENERATION ELECTRONIC CONTROLLER WITH DIAGNOSTIC DISPLAY AND DIVIDING HARDWARE / ELECTRONIC POSITIONING**
- **MECHANICAL SET UP FOR THE ARM POSITIONING CONFIGURATION / COUNTER-WEIGHT**
- **POSSIBILITY TO ASSEMBLE A MILLING HEAD AT 2 SPEED RATES**
- **DIGITAL POSITIONER AND VISUALIZATION OF RADIAL AND AXIAL STROKES**

Prearrangement for

- **TURNING OPERATIONS**
- **CALIBRATED DRILLING ON CIRCULAR SERIES**
- **TAPPING ON CIRCULAR SERIES**
- **CREATION OF "CIRCULAR POCKETS"**
- **CIRCULAR MIG WELDING**
- **CIRCULAR OXYGEN CUTTING**



...as **BLUE** as the sky



Tapping Operation M36X3

UNBEATABLE



NO FEAR FOR HARD JOBS



4000/6000

Portable Multifunction facing lathe/milling machine – Radial Drill



General Technical Characteristics

FMAX 4000

FMAX 6000

Single phase power	mm	220 V - 50 HZ	220 V - 50 HZ
Diameter of facing	mm	≅1500 - ≅4500	≅1900 - ≅6000
Mod. centring fasten & supp.	mm	1400 - 4500	1800 - 6000
Tool holder arm	mm	Max 2000	Max 3000
Radial stroke	mm	250	250
Axial stroke	mm	200	200
Rotation motor of the arm		AC/THREE-PHASE CONFORM TO EC NORMS	AC/THREE-PHASE CONFORM TO EC NORMS
Milling Tool Rotation Motor		AC/THREE-PHASE CONFORM TO EC NORMS	AC/THREE-PHASE CONFORM TO EC NORMS
Axial movement system		DC/ CONFORM TO EC NORMS	DC/ CONFORM TO EC NORMS
Radial movement system		DC/ CONFORM TO EC NORMS	DC/ CONFORM TO EC NORMS
Max Torque on Rot. of Arm		20000 Nm	22000 Nm
Max Torque on Rot. of Milling Tool Ax		30 Nm	30 Nm
Max rotation speed	rpm	0.90	0.92
Tilting head		- 45° a + 20°	- 45° a + 20°
Rotating head		360°	360°

Machining Diameter

FMAX 4000

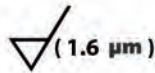
FMAX 6000

With standard equipment

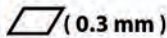
from \varnothing 1500 mm
to over \varnothing 4500 mm

from \varnothing 1900 mm
to over \varnothing 6000 mm

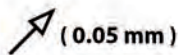
Surface Roughness



Planarity Tolerance



Radial Oscillation Tolerance



Certified Test



CERTIFIED TEST ON STEEL C45

	mm	\varnothing 4500	\varnothing 6000
Diameter	mm	\varnothing 4500	\varnothing 6000
Cutting Depth	mm	1	1
Feed Speed	mm/min	350	350

FMAX 4000 FMAX 6000

- FACING LATHE /MILLING MACHINE
- 3 AXIS
- MOVEMENT ON THE ROTATION MECHANICAL SLEWING BEARINGS
- CAST IRON DOVETAIL GUIDES
- NEW GENERATION ELECTRONIC CONTROLLER WITH DIAGNOSTIC DISPLAY AND DIVIDING HARDWARE / ELECTRONIC POSITIONING
- MECHANICAL SET UP FOR THE ARM POSITIONING CONFIGURATION / COUNTER-WEIGHT
- POSSIBILITY TO ASSEMBLE A MILLING HEAD AT 2 SPEED RATES
- DIGITAL POSITIONER AND VISUALIZATION OF RADIAL AND AXIAL STROKES

Prearrangement for

- TURNING OPERATIONS
- CALIBRATED DRILLING ON CIRCULAR SERIES
- TAPPING ON CIRCULAR SERIES
- CREATION OF "CIRCULAR POCKETS"
- CIRCULAR MIG WELDING
- CIRCULAR OXYGEN CUTTING



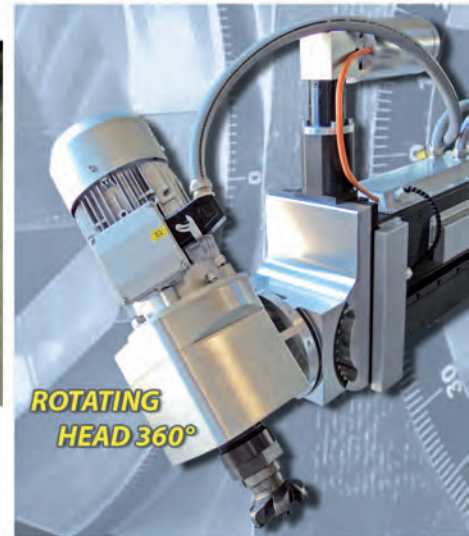
RESPECT OF THE TOLERANCES



Creation of "CIRCULAR POCKETS"



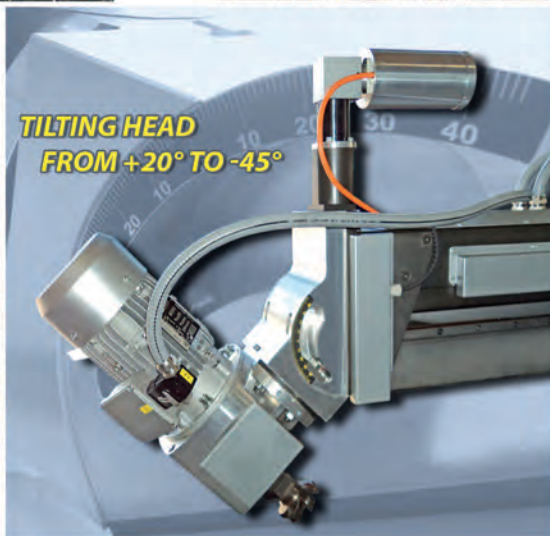
OXYGEN CUTTING



ROTATING HEAD 360°



DRILLING



TILTING HEAD FROM +20° TO -45°



OVERLAY WELDING

EXTRAORDINARILY PRECISE



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