MF 800C

Deep drilling machine for blocks and mechanical parts up to 2 tonnes

IMSA®

Specialists in Precision Gundrilling

Gun drilling capabilities

Deep drilling machine for blocks, plates and mechanical parts up to 2-4 tonnes. The IMSA deep hole drilling machine MF800C can also be used to drill off-center deep holes in cylindrical parts.
The deep drilling operations on a specific machine as MF800C are much more efficient than drilling on a non-specific machine.
Straight orthogonal drilling for the (3-axes) machine basic version, equipped with fixed table size 800x800mm, load 4.000 kg.
Straight and angled drilling (4-axes) for the machine equipped with the optional rotary table, size 600x600mm, load 4.000kg.
Horizontal axis X=800mm, vertical axis Y=500mm.

Drilling method: gun drill tool.
Optimal drilling diameters: 4 - 18 mm solid.
Drilling depth in single operation max. 800 mm
Drilling spindle 7 kW (S1), 6.000 rpm.
Milling/tapping Kit ER32, in option, to be mounted on the frontal head.

Read a technical introduction to deep drilling:
https://www.imsaitaly.com/en/articles/the-deep-drilling-process

MF800C on IMSA website
https://www.imsaitaly.com/en/mf800c

CNC

HEIDENHAIN CNC with deep drilling cycles developed in team by IMSA/ Heidenhain engineers.

Specific IMSA functions for deep drilling process control:

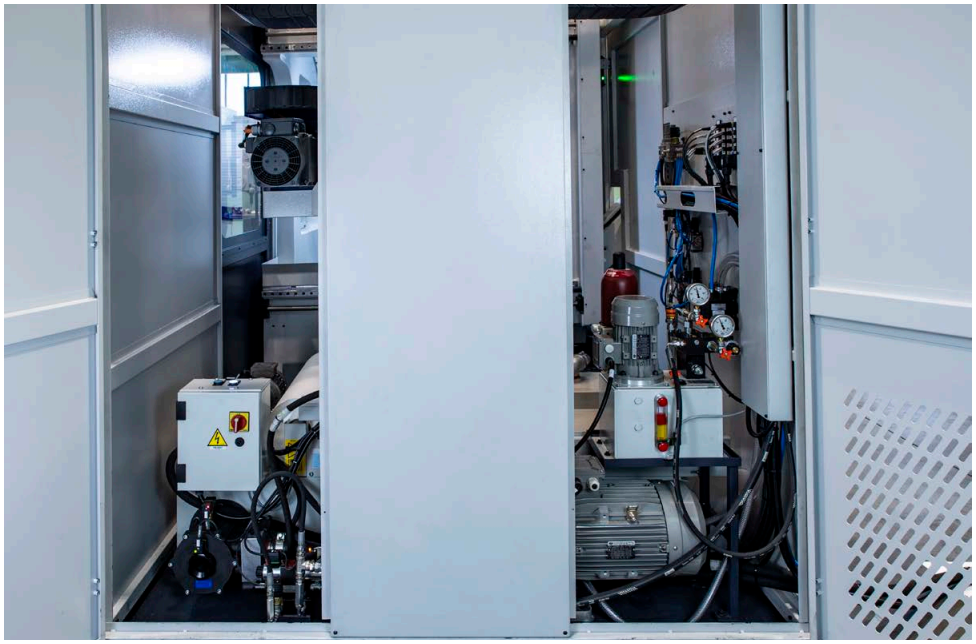
- Electronic workpiece approach
- Electronic check against gundrill-breaking, by reading the cutting effort
- Special coordinate transformation function for angled machining (in the machine version with optional rotary table).

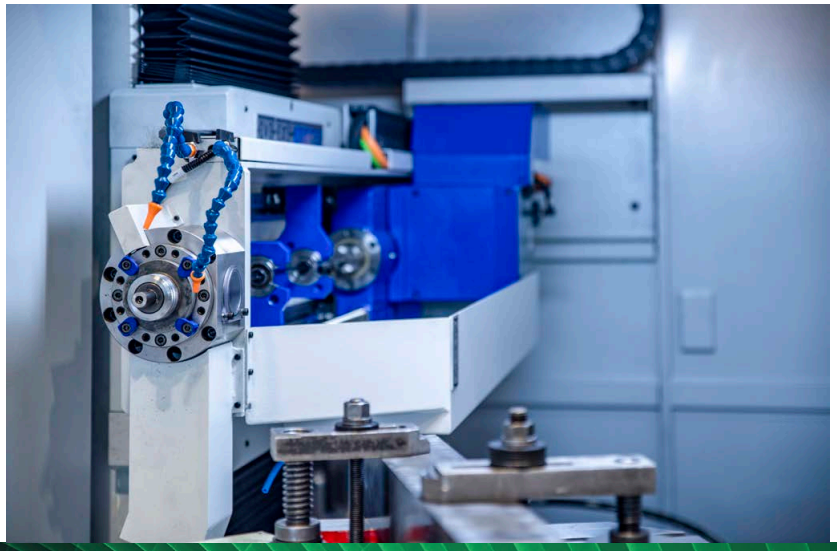
Accurate oil control

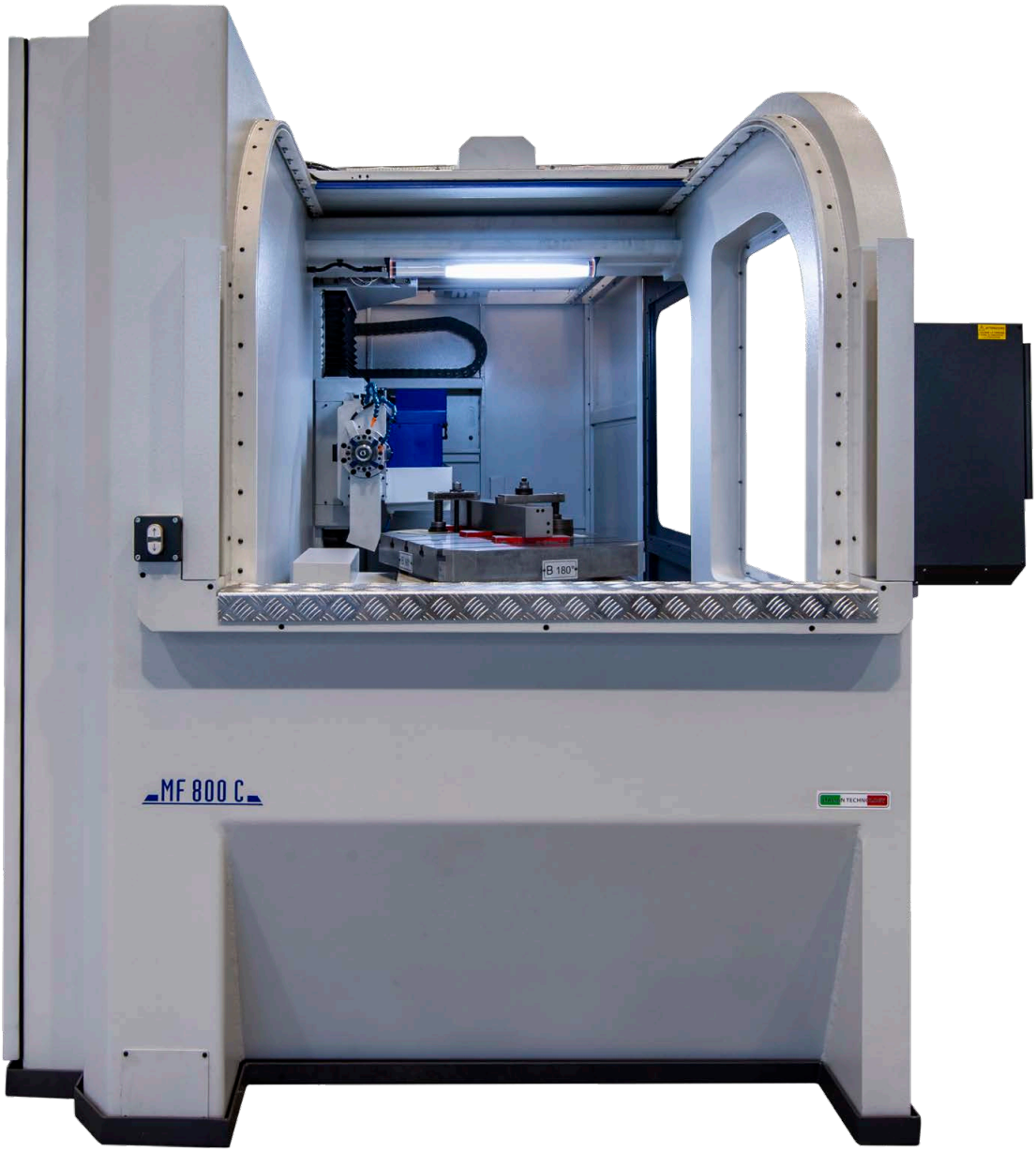
Temperature, pressure and oil cleanliness are fundamental parameters to ensure continuous trouble-free gundrilling operations.
For this reason the MF800C is equipped with the best solutions that can automatically manage those three parameters to the most suitable value:

- for oil supply to the gundrill: a high-pressure motor/pump assembly continuously manages pressure and flow according to cutting parameters.
- for oil clarification: a 25-micron automatic filtering system with in non-woven fabric. Built-in oil filtering system and pumps, inside the machine enclosure.
- for oil cooling: a heat exchanger. The chiller is on a parallel oil circuit, and can be flexibly positioned around the machine.

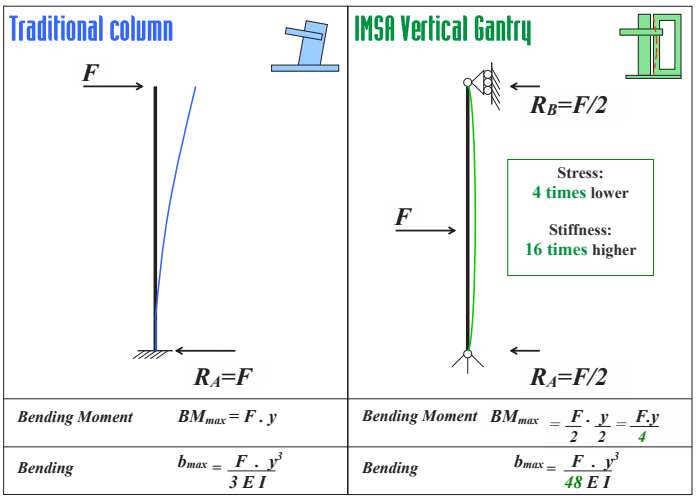
Floor pans included in standard machine configuration.
Chip conveyor included in standard machine configuration.






MF 800 C


V
Z
B 0°
Y



The Structure

Vertical gantry column structure, resulting in better rigidity: bending moment 4 times lower than in traditional structure, 16 times higher rigidity.

These numerical values are analytically obtained from the comparison of the static scheme and the related stress.

The gantry column ensures the best performances all along the Y axes travel.

The machine is conceived with a “shell-like” structure.

That is, the machine self-supporting structure integrates table and gantry column, and requires no foundations.

A modern coverage encloses the whole machine, so that oil is contained inside the machine and cleanliness of the workshop area is ensured.

The frontal flex-aluminum door ensures spacious loading access for work piece loading with hall crane or fork lift.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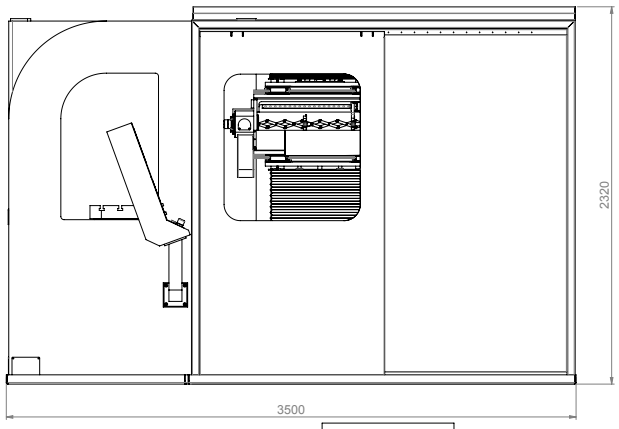
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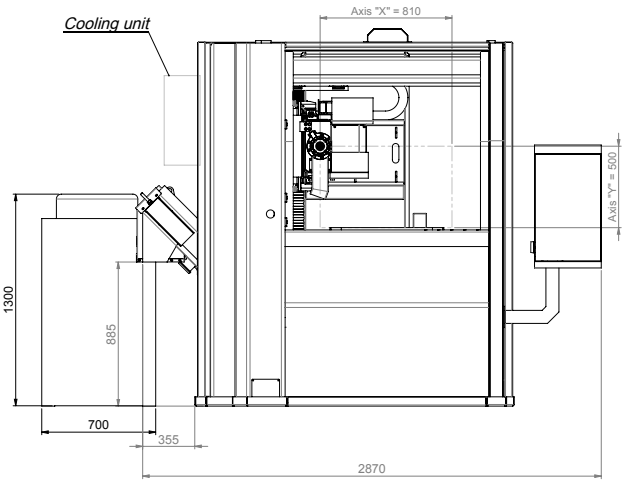
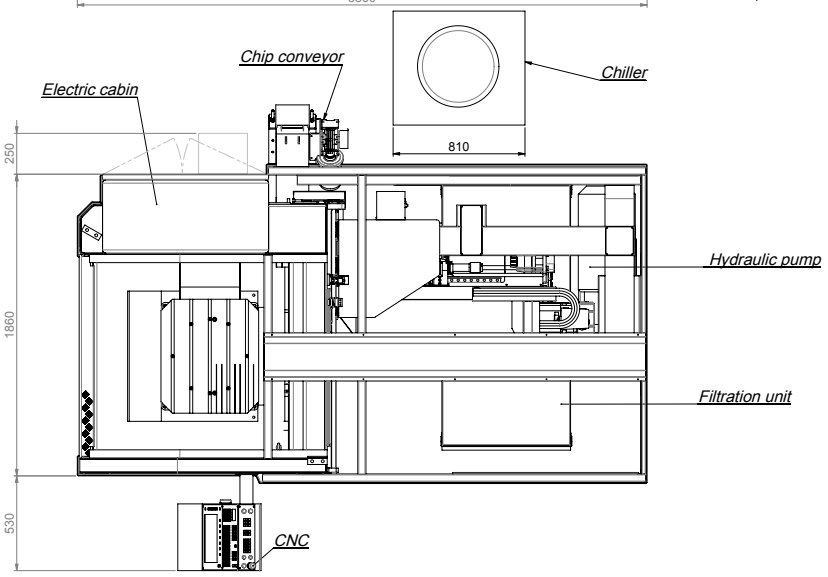
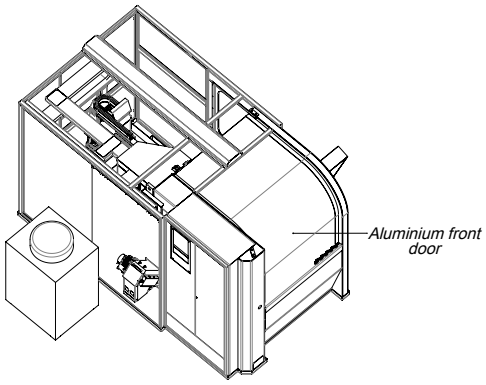

Cooling unit
Axis "X" = 810
Axis "Y" = 500
1300
885
700
355
2870


Chip conveyor
Chiller
Electric cabin
810
250
1860
530
Hydraulic pump
Filtration unit
CNC


Aluminium front door

https://www.imsaitaly.com/en/mf800c

We can assist you in determining the most appropriate solution for your drilling needs. Technical data can be modified for improvements without notice.

LINEAR MOVEMENTS

Maximum drilling depth, in single operation	V axis	800 mm
Column horizontal movement (Gantry)	X axis	800 mm
Headstock vertical movement	Y axis	500 mm
Headstock approach to work part	Z axis	300 mm
Axes rapid feed rate		0 - 10.000 mm/min

DRILLING SPINDLE

Optimal drilling diameter, without pre-hole, min. - max.	4 - 18 mm
Spindle speed (adjustable)	6.000 rpm
Spindle motor power	(S1) 7,0 kW

OIL

Oil pump motor power	(S1) 4 kW
Max. oil pressure	max. 80 bar
Max. oil flow, self-regulated	max. 50 lt/min
Temperature, adjustable	27 - 32°C
Oil filter degree	max. 25 µ

[OPTION] HEAD ER32 FOR TAPPING AND LIGHT MILLING

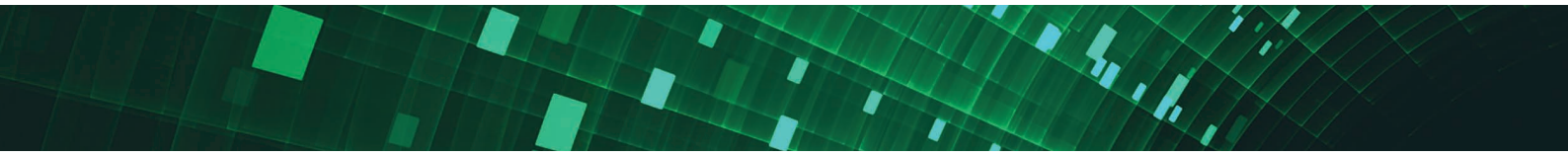
Rigid tapping in steel 2311/2312	M16
Oil external lubrication, with M function	8 bar

STANDARD TABLE

Standard fixed table size	800 x 800 mm
Max. table load	4.000 kg

[OPTION] CNC ROTARY TABLE

Cnc rotary table size		600 x 600 mm
Max. table load		2.000 kg
Table rotation, infinite position	B axis	360.000 pos./rev.



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