

"F3A COMPACT"

Dimensions - Fast - Economic - Compact



ENGLISH

PROMAK

Working Centers Manufacturing

Electro spindles

The structure and the rigidity of F3A Compact allow to use electro spindles from 5,5 to 12 KW until 36.000 rpm. The standard equipment provides one 5,5 KW electro spindle 18.000 rpm.

Automatic and Analogic Presetting

Projected by Promak, it is a useful Kit where a continuous tools change is required and also if you need a control on tools' breaking.

It is programmable by Part Program, it presets the tool height and it can preview the tool breaking. Its REPEATABILITY is about 0,01 mm; it is assembled near the tool change to reduce idle time.

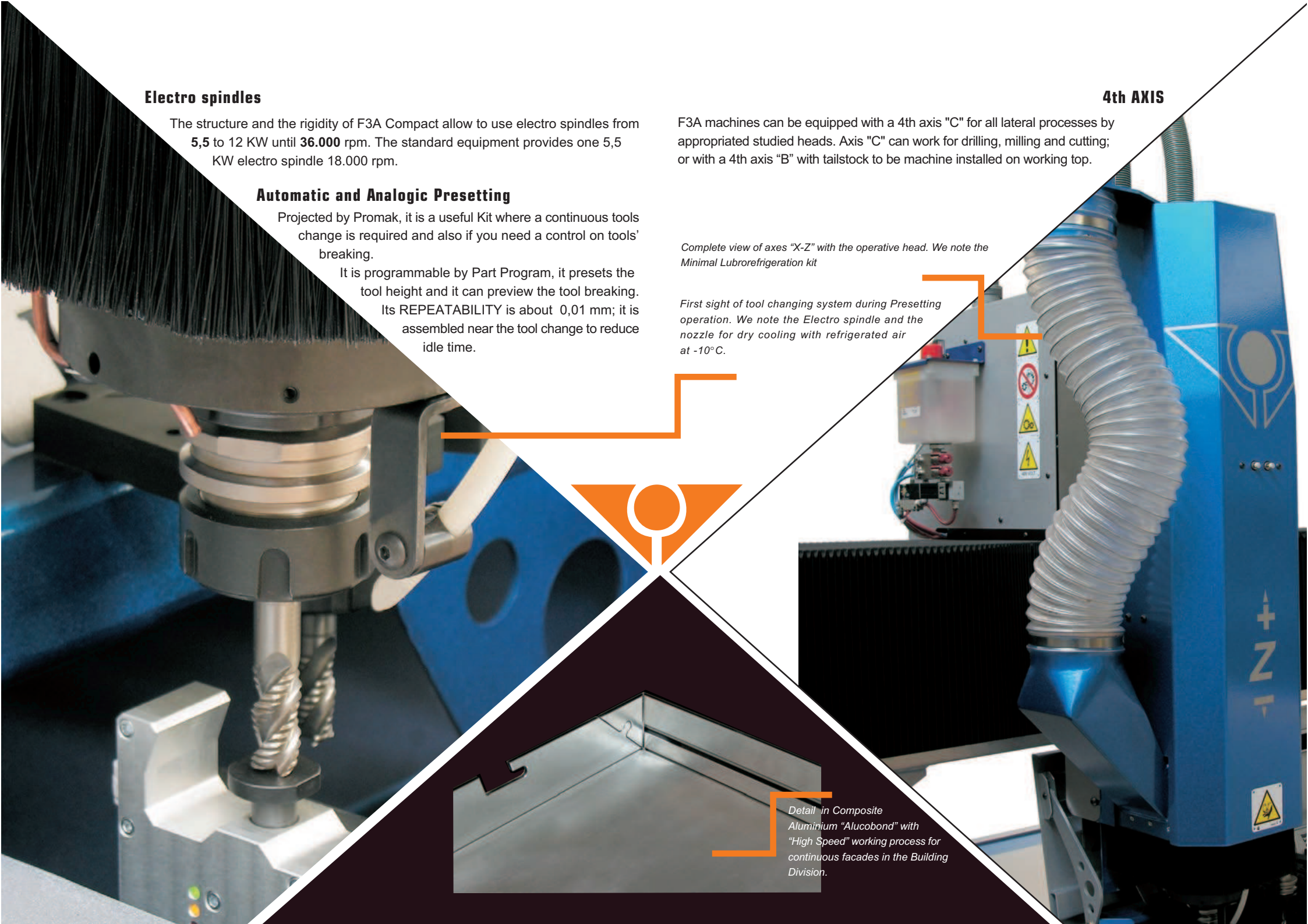
4th AXIS

F3A machines can be equipped with a 4th axis "C" for all lateral processes by appropriated studied heads. Axis "C" can work for drilling, milling and cutting; or with a 4th axis "B" with tailstock to be machine installed on working top.

Complete view of axes "X-Z" with the operative head. We note the Minimal Lubrorefrigeration kit

First sight of tool changing system during Presetting operation. We note the Electro spindle and the nozzle for dry cooling with refrigerated air at -10°C.

Detail in Composite Aluminium "Alucobond" with "High Speed" working process for continuous facades in the Building Division.





Tool changing

This Working Centre is equipped with a plane tool change at 10 or 16 positions. It is possible to equip the machine with two tool changers, the first one on the front side and the second one on the back side of the machine, for a total change of 32 tools. We decided to offer a double tool change for a more slender and easy-to-use operative head during hunting machining.

- Tool Changing 2
- Vacuum Symplex Top
- Control Panel
- Transpiration Top
- Axis "Z"
- Aspiration



Control desk

The ergonomic control desk, integrated with the whole Working Centre, can be moved on both sides of the machine leaving the operation spaces free. The control desk is complete of all services and program keys, and has a CN for the control and management of the machine. As optional it is possible to install on board a PC for Cad Cam programming.

Numeric control

Compact Working Centres are equipped with a digital numeric control OSAI 110. By request, as optional, it is possible to have the model 510 Win Media with industrial PC for the direct CAD CAM programming.

Precision Aluminium

Particular for Mechanic
and Automation Division



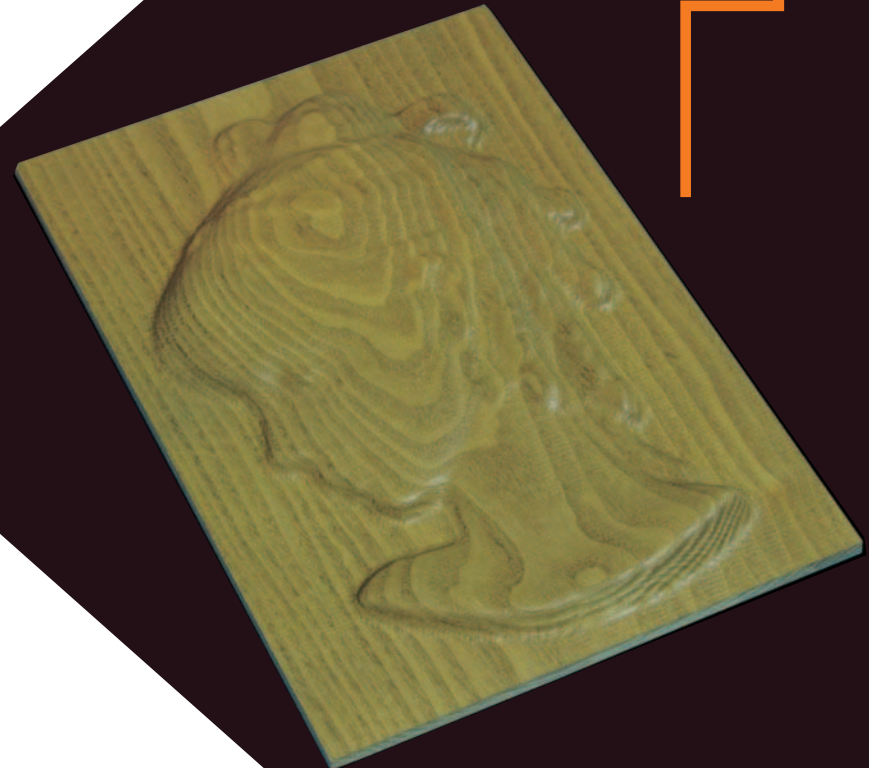
- Aspiration Group
- Vacuum pumps
- Electric board
- Tool Changing 1
- Axis "Y"
- Axis "X"



Aspiration group

Realized for a good cleaning during the working phase, the aspiration group is particularly indicated to take away heavy chips like the Aluminium ones. The aspiration force is given from a fan at high prevalence complete of a dust filter and optical window for the filling control. Compact is equipped on its head with a Carter for the protection of the electro spindle including an automatic system for the aspiration opening.

Face of a woman realized with a 3D working process for the Artistic Division



Blocking system

It is managed by a vacuum process fed by powerful pumps installed on steel support expressly designed for an easy use and check. Promak in co-operation with customers developed vacuum blocking systems for different material and shapes. Some examples: blocking of the expanded rubber, sealing of a panel through vacuum oozing, blocking of the drawing profile. An immense range of optional kit can be useful for specific requirements.

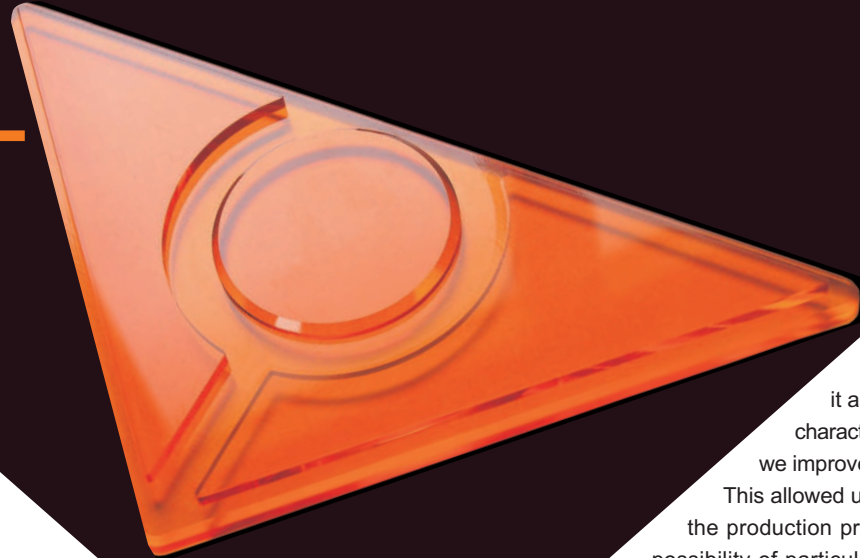
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Divisions

Compact is a Working Centre studied for important investments and for customers demanding speed and precision. This Working Centre Compact is particularly indicated for the production in series of big panels in the Divisions of Publicity, Building, Fashion accessories, Mechanics and in Divisions requiring good building typology, excellent performances, reduced dimensions.

*Detail in Metacrylate
with lucid-wire working process.*



Materials

The materials to work are Aluminium, Resins, Plastics, Wood, Rubber in the nature of compact, composites and layers.

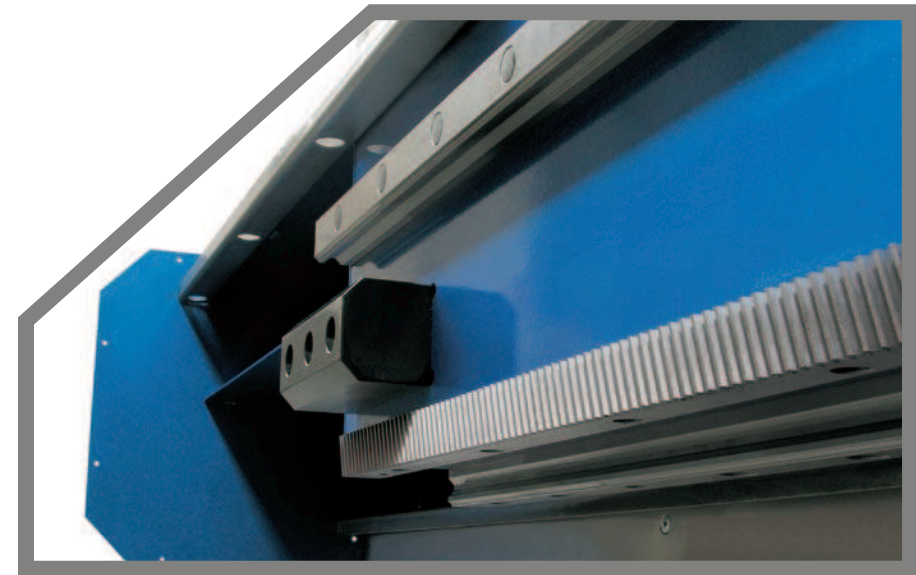
Manufacturing technique

The basement is completely made of steel, structural tubular with finishing metal plates. The working area goes in "X" from 1500 to 2500 mm while in "Y" from 3000 to 12000 mm thanks to a particular modularity of the project. All the movements of the machine are guaranteed by big-sections guides with 4 ball screws sliders. The movements of axis X-Y are at pinion-rack of precision, while Z is with screws at re-rotation of sphere with pre-charged bracket. All motors are Brushless type. All the components of the movement are lubricated by an automatic centralized system completely managed by the CN with intervention parameters, while links and transmission snail are "Long life" grease lubricated.

3 axes

Strong points

Conceived from the experience of the model F3A Concept, the Working Centre Compact has been produced with reduced powers, but with an excellent quality/price relationship. The strong points of this Working Centre remain the excellent performances on working areas of big dimensions, the elevated speeds of execution and the blocking system of the piece. The available range of working tops confers it a remarkable flexibility in blocking a great variety of materials characterized by alternative working processes. After several studies, we improved this model reducing its dimensions, as its name suggests. This allowed us to improve the accessibility to the Working Centre making the production processes easier. Also for this Working Centre there is the possibility of particular configurations, in order to satisfy the most demanding customers.



"Y" axes transmission detail, with double guide at 90°.

F3A COMPACT

Technical characteristics:

Numeric control:-----	OSAI 110, on demand 510 WINMEDIA
Type CN: -----	Digital
Electro Spindle Power:-----	5,5 (Std) - 8 - 9 - 12 KW
Electro Spindle RPM: -----	0 - 36.000
Electro Spindle connection: -----	ISO30 - HSK 40 - HSK 63
Plane Tool Changing:-----	(14 Positions HSK 63) (16 Positions ISO 30 and HSK 40)
Plane tool changing time: -----	8 sec. 14 sec. shaving-shaving
Installed power: -----	24-32 Kw (according configuration)
Vacuum pump power: -----	7,5 Kw
Aspiration group power: -----	4 Kw
Rapids axis X-Y: -----	60.000 mm/min
Rapids axis Z -----	40.000 mm/min
Rapids axis C -----	40 rpm
Max Working speed: -----	36.000 mm/min
Stroke axis X: -----	1.550 (on demand) -2.050 ±20 mm
Stroke axis Y: -----	2050-3050-4050-6.100-8.100 ±20 mm
Stroke axis Z (Distance Mandrel nose - machine top): -----	425 ±1 mm
Max clearance below the gantry (With working top 15 mm) -----	300 mm
Max workable piece (from machine top) : -----	210 mm
Working top height: -----	900 mm

Weights:

2015-----	2.750 Kg
3020-----	3.200 Kg
4020-----	3.750 Kg
6020-----	4.600 Kg
8020-----	5.400 Kg

Overall dimensions:

2015-----	2.930 x (2.450 ¹ - 3.100 ²) x 2.600
3020-----	4.600 x (2.450 ¹ - 3.100 ²) x 2.600
4020-----	5.600 x (2.450 ¹ - 3.100 ²) x 2.600
6020-----	7.900 x (2.450 ¹ - 3.100 ²) x 2.600
8020-----	10.300 x (2.450 ¹ - 3.100 ²) x 2.600

Remarks : 1) Disassembled - 2) Assembled

Minimum height required at installation: -----4.000 mm

Precision:

Temperature:-----	20°C
Setting: -----	= <0,03
Repeatability of setting: -----	= <0,02 / <0,04 end of life
Resolution: -----	0,001
Circular interpolation: -----	= <0,04 F2000 diameter 75



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