

HIGH PRECISION  
MACHINES

MATERIAL  
REMOVAL

# Forest-Liné Flexiax<sup>V</sup>

5-axis Machining Centers



Focusing on innovation in roughing and finishing hard material complex parts, Fives designs dedicated extra compact 5-axis machining centers.

- Milling center or mill turn machining center
- High stiffness and accuracy
- High torque electrical spindle
- High pressure and flowrate coolant processing
- Secure process
- Stand-alone or FMS configuration

Forest-Liné Modumill <sup>Ti</sup>



Vertical spindle  
Mobile horizontal table

Forest-Liné Powermill <sup>Ti</sup>



Horizontal spindle  
Moving vertical table

Relying on technological mastery and expertise in manufacturing 5-axis machining centers, Forest-Liné Flexiax integrates all parameters to process hard materials machining.

Modern, robust and precise, Forest-Liné Flexiax is specifically adapted to the working of hard materials.

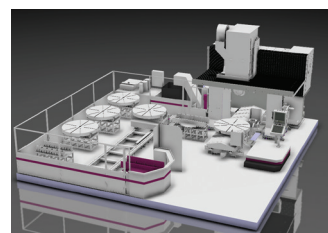
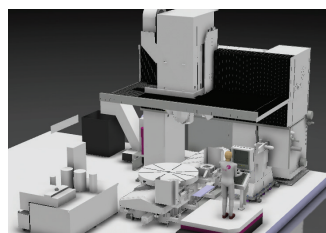
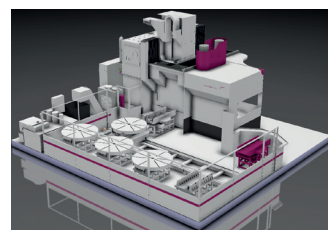
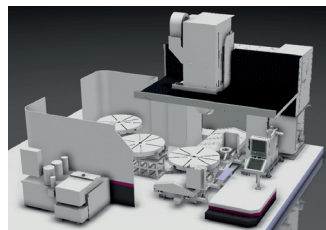
- Rigid construction for enhanced performance
- Patented “constant overhang ram” to ensure high stiffness and accuracy
- High-torque, high-powered 5-axis electro spindle
- High-pressure, high-flow coolant system for increased speed and productivity
- High chip removal

To meet requirements in titanium and hard material machining, Forest-Liné Flexiax offers standard solutions to secure process.

- 3D-model for simulation software
- Automatic Tool Changer with tool management
- Direct measuring system
- Part touch probe
- Spindle expansion compensation
- Tool breakage control
- Adaptive control and power monitoring

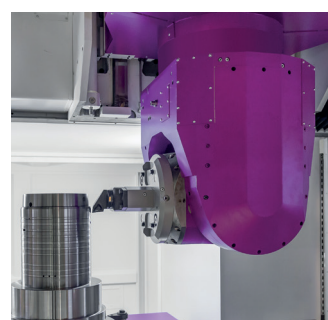
#### FEATURES

- CNC: Siemens 840D sl / HEIDENHAIN iTNC
- Eco design
- CE certification
- 2-year full warranty



#### Pallet system


Table equipped from “zero point” systems to automatic pallet systems with shuttle.



#### Smart way to switch from milling to turning mode:

In turning mode (option) the spindle holder is equipped with an automatic effector changing device. The turning effector will be mounted on the spindle holder. It allows to use the turning tools independently of the milling spindle.

- High accuracy
- High torque electro spindle
- Handling large range of high parts

Specifications	Forest-Liné Flexiax 
Work area (Pallet)	Ø 1,6 m
Load	5,000 kg
Strokes (X / Y / Z)	1,95 m / 2 m / 1 m
Strokes	(C/A) - N x 360° / ± 110°
Spindle	Electrospindle HS5
Power	105 kW
Torque	1,000 Nm
Speed	10,000 rpm

#### SOME REFERENCES

Airbus — Snecma — Figeac-Aero — General Electric — DCNS — Mecachrome — Sabca

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