



**TAURUS
CRACO**

282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

Features:

- **Structure:**

The machine is composed by :

- * A 900 mm wide stabilised and deeply ribbed frame, with constant section designed to grant the maximum rigidity and straightness of all the loading conditions in time.
- * Mobile upright with a high degree of rigidity (section 650 x 750 mm)
- * Revolver-type spindle-holder head that slides in direction Z on the mobile upright

- **Movement of Axes:**

Linear Axes:

All elements slide along oversized REXROTH / MANNESMANN ball blocks that grant absolute rigidity and reliability in time.

All movements are controlled by brushless motors (that do not need any maintenance) and high precision preloaded ball screws, which allow translation speeds up to 60m/min.

The lubrication of all screws and bushings is automatic, completely managed by NC and a control-sensor checks the whole procedure.

Rotating Axes:

The two rotating movements of the head (axis B and C) are continuous and interpolated and are controlled, without any clearance and periodical adjustments, by two high-precision gear boxes.

- **Spindle Holder Head**

Type 2 :

One double-exit electrospindles. The electrospindle is equipped in the shaft end (diam. 40 mm) with 2 tool-connections with presetting fence.

Available versions: 10,0 HP / ER 32

Type 2+1 :

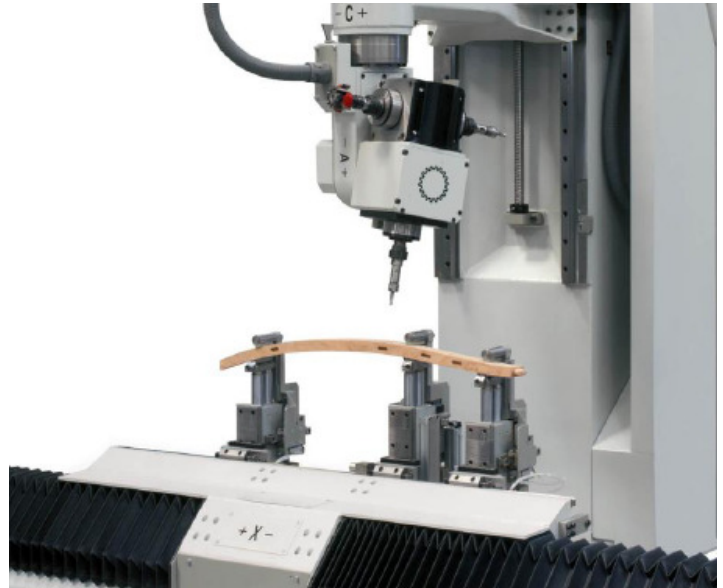
One double-exit electrospindles. The electrospindle is equipped in the shaft end (diam. 40 mm) with 2 tool-connections with presetting fence. Plus one electrospindle with single exit, aligned at 90° towards the other spindle.

Available versions: 10,0 HP / ER 32

Type 2+2 :

Two double-exit electrospindles. The electrospindles are equipped in the shaft end (diam. 40 mm) with 2 tool-connections with presetting fence.

Available versions: 10,0 HP / ER 32



'Type 2' Spindle Holder Head



'Type 2+1' Spindle Holder Head



'Type 2+2' Spindle Holder Head



**TAURUS
CRACO**

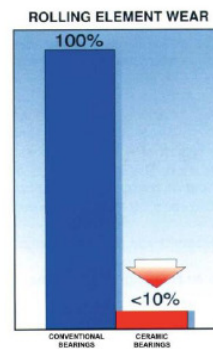
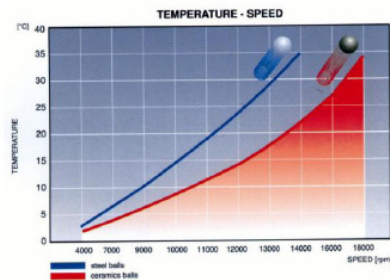
282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

Features:

- The reliability of the spindles and their working life are granted by ceramic bearings, that are a standard equipment of all our machining centres.
- All electrospindles run at a very high power and are controlled by an electronic inverter, which rotates at a speed ranging between 0 and 24000 RPM in case of power Hp 10 (18.000 RPM for higher powers).
- We advise to equip the machine with a second inverter (option) in order to speed up the change from the spindle you are using to the next one (from 6-7 seconds to 1 second). Electrospindles can rotate clockwise or anticlockwise.
- The maximum power is already performed at a speed of 12.000 RPM and can remain unchanged up to 24.000 RPM.
- Whichever head type is used, the NC, through the "Power Control" function, automatically reduces the speed of the axes when absorbed power is above 160% of the rated power.



• Tool maximum diameter and maximum length according to configuration:

• JET 2+1

- * Motor 10,0 HP
- * Max diam. 200 mm.
- * Length 250 mm

• Standard equipment:

- * 2 nuts for chucks ER32
- * 2 chucks ER32

• JET 2+2

- * Motor 10,0 HP
- * Max diam. 200 mm
- * Length 250 mm





**TAURUS
CRACO**

282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

Features:

• BCK : TOOL HOLDER SHAFT

- The high rigidity and high precision BCK shaft, with conical tang, can be mounted on the spindle without chuck.
- It is supplied complete with nut, counter nut and blocking key.

ER 32 – M10 with shaft Ø25 mm and length 55 mm or 85 mm, end with threaded bore M10 for tool connection, right or left rotation.

ER 32 – ER 20 with shaft Ø 25 mm and length 55 mm or 85 mm, end with ER 20 chuck for tool connection, only right rotation.

• STANDARD CLAMPS

- Only 1 set up of clamps, even for machining of right and left pieces.
- Reference system with manual loading :
 - The references for the machining are always on the superior side and on the clamps side, as consequence the machining are always made from the top and from the back part of the camps.
- Adjustable clamps along axes X and Z

• Full Automatic Positioning of Clamps :

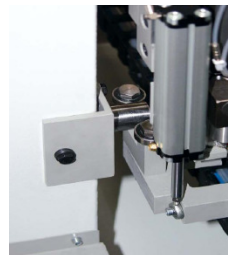
- Automatic positioning along axes X controlled by NC and managed from PITGAGORA
- Automatic positioning along axes Z controlled by NC and managed from PITGAGORA

• Clamping with vacuum:

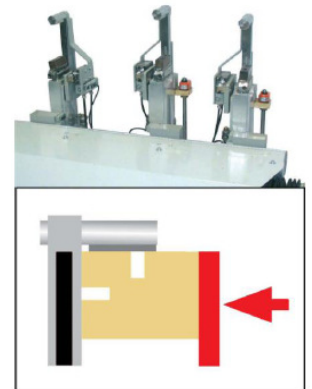
Tables (beams) used as support for the templates, in order to clamp the pieces with vacuum (300 x 120 mm)



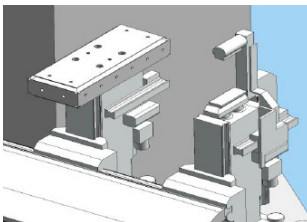
Only 1 set up of clamps, even for machining of right and left pieces.



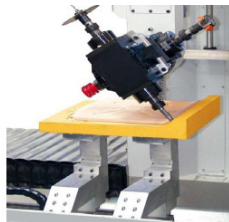
X Axes Automatic Positioning



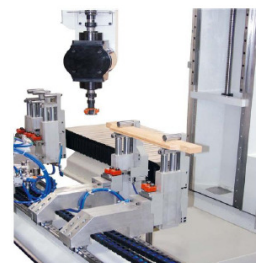
Reference system with manual loading .



Clamping with Vacuum



Z Axes Automatic Positioning



Adjustable clamps along axes X and Z



**TAURUS
CRACO**

282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

Features:

• **AUTOMATIC HOPPER FEEDER:**

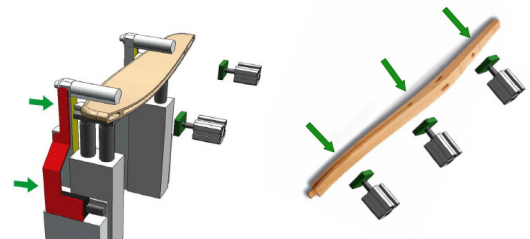
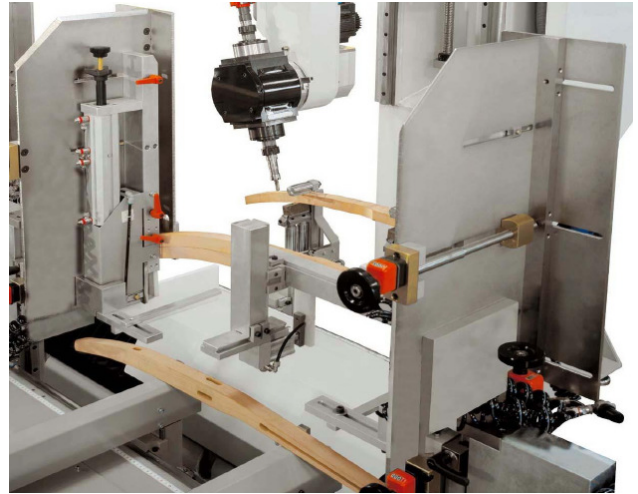
- The pieces are aligned with the curve in vertical position, after they have been referred in the length into the hopper feeder. They are coupled by the clamps, referring the superior side and one of the lateral sides. In this way, with only one set up of the hopper feeder and the clamps, left and right pieces can be machined, even using only one hopper feeder.
- Clamps adjustable in height with inclinable top for bent pieces
- Bent pieces can be automatically loaded and unloaded without need of specific templates
- Basement for clamps moveable in X and Y direction, interpolated and controlled from the NC, in order to assure a precise and fast loading / unloading of the pieces
- Pneumatic references for left and right pieces, fixed on the clamps and controlled by the NC
- The movements for loading and unloading are synchronized, in order to avoid collisions between machined pieces and pieces to be loaded
- Unloading of pieces on guides with a height from the floor of 1200 mm. (hydraulic movement) aligned in front of the operator, which is in the best position to collect and check the quality of the pieces

• **PATENTED "DOUBLE SIDE" REFERENCE SYSTEM:**

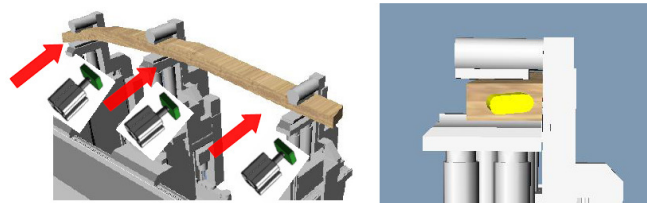
- In this case the reference side is the hopper feeder. The lateral pushers of the clamps are pushing the piece against the cylinders placed on the hopper feeder
- In this case the reference side is the back part of the clamps. The cylinders placed on the hopper feeder are pushing the piece against the clamps.
- This patented system allows to refer the pieces to their upper side and to the hopper feeder side or clamps side. Due to the patented system, it is possible to load into the same hopper feeder left and right pieces, using two different reference sides.

• **ELECTRIC CABINET:**

- The electric cabinet is standard equipped with :
 - Air conditioner
 - Full dust protection



Reference Side—Hopper Feeder



Reference Side—Back Part of Clamps



**TAURUS
CRACO**

282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

Features:

• NUMERICAL CONTROL:

The "full digital" OSAI numerical control + business PC, allows the best use of the machining centre thanks to its high standard functions, which are necessary to fully exploit CNC machines.

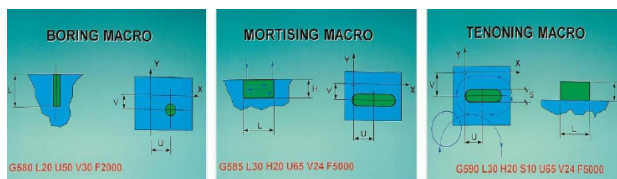
- simultaneous management of 4 processes;
- 32 MB CNC DRAM memory
- Integrated Ethernet connection
- 2 GB CNC HDU memory available for programs memorisation;
- RTCP: This control allows the pieces to be programmed both as regards the tool point and the head centre, besides granting the verticality to the surface that has to be machined;
- UPR: programming pieces on bent surfaces. All machining phases programmed on the table plane are automatically transferred to a bent plane;
- VFF: high precision contouring
- 4 serial connections,
- parallel connection

The standard version also includes:

- User's interface: business PC
- Operative system WINDOWS XP PRO
- 250 GB HDU available for programs stocking
- Microprocessor core 2 3,16 Ghz
- Colour Monitor 15"
- 2 GB RAM
- Standard Keyboard with standard mouse
- 1 Ethernet connection
- 8 USB connection;

• PROGRAMING SYSTEM:

- All machining centres can be easily programmed, according to the customer's needs, with different programming systems. The basic version includes both ISO and Self-Learning programming systems.
- Both systems can use all parametric programs (MACRO), created by BACCI (tenoning; mortising-boring; cutting-boring; cutting-milling-boring, etc.)
- Machinings on inclined surfaces are programmed exactly as machinings on horizontal surfaces. The OSAI NC infact identifies automatically the inclined working area which is perpendicular to the tool.





**TAURUS
CRACO**

282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

Features:

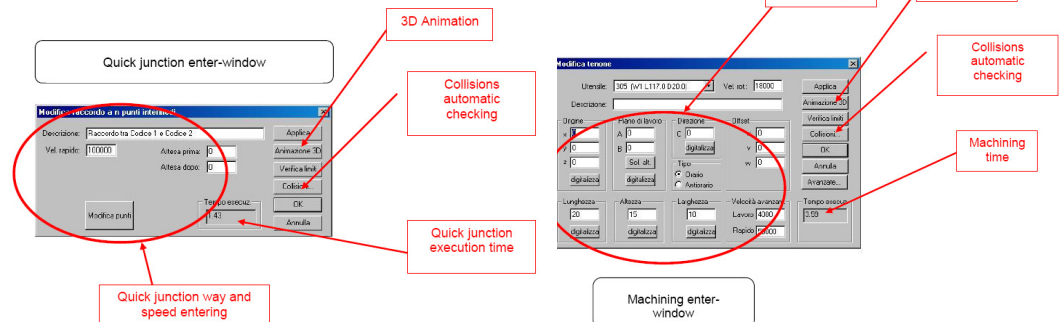
• MICROSCRIBE:

this device allows to digitize the surfaces of a wooden sample and then export the file into a CAD/CAM system in order to get the program.



• PITAGORA BASIC:

- PITAGORA is an intelligent CAM system, very easy to be used but with all the necessary power to perform the required operations, created for the programming of Bacci CNC machining centres.
- Now it is offering even more: it can be used as single environment, in order to program and optimize all Bacci CNC machining centres. After having empowered the possibility to import ISO codes created by any CAD CAM on the market (AlphaCam, MasterCam, Pro-E,...), using PITAGORA it is now possible:
 - To get CN programs easily, quickly and with the highest optimization level as regards machine output. This drastically lowers the programming times, also for no expert software men, in order to obtain without efforts optimal results.
 - To optimize at the best the programs created by standard CAD CAM systems as regards output and to exploit all the machine potentialities: the production times can be reduced up to 50% after these programs have been optimized by PITAGORA.
 - To use at the best the high-level technical features of Bacci machining centres and to exploit the high speeds, accelerations and powers of the axes, through advanced functions "jerk limitation" and "smoothing" of working and speed trajectories. All this without wasting the machine reliability and long life.
- PITAGORA is a pure and original WINDOWS® software, with a familiar interface, simple to be used allowing quicker performances.
- Based on OpenGL® graphics and calculation engine developed by Bacci, PITAGORA supplies with tridimensional and dynamic images to fully prevent collisions and with CN programs that are developed with practical and intelligent devices and therefore they can be optimised to get to the best machine output rates.
- The zooming function, the possibility to completely visualize the piece and the machine, making them bigger and rotate in any moment of the programming process, allow to view out collisions in order to get to a precise and reliable result: such checking is even totally automatized, and for the software man is sufficient to follow up the PITAGORA instructions in order to have best results without errors.





**TAURUS
CRACO**

282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

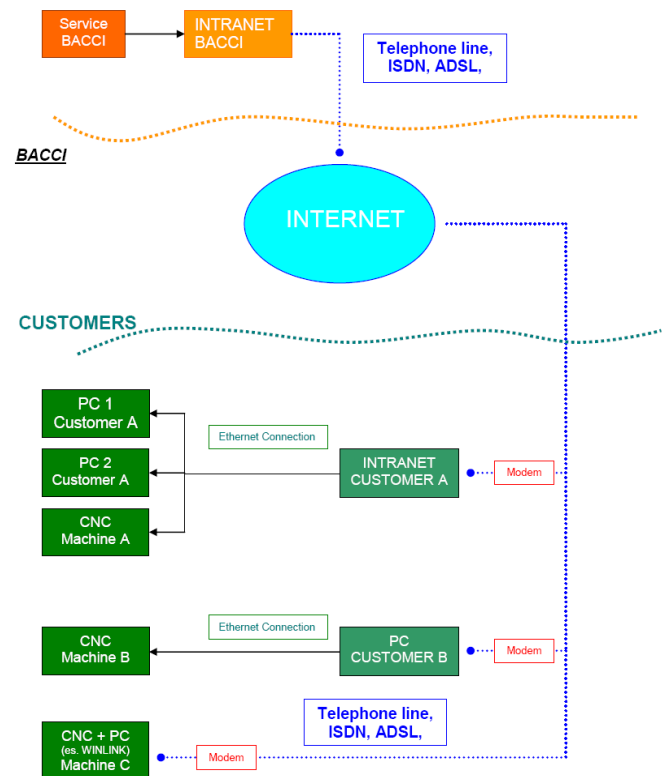
Features:

• TELESERVICE:

- This feature allows customers who have one of BACCI machining centres to receive direct assistance from BACCI SERVICE, by using all hardware and software technologies that the INTERNET/INTRANET world puts at our disposal; using the INTERNET we can promptly reveal a failure and easily indicate the operations to be performed for its solution, transmitting digital data such as video, documents, drawings and all other information.
- Remote connections between BACCI and end users are made by using INTERNET and INTRANET technologies ("internal" company informatic nets): see attached drawing.
- In order to have Teleservice (A,B or C) the customer must necessary have an Internet connection to be made by modem and a telephone line ISDN, ADSL or HDSL.
- The remote connection between the numerical control installed on the machining centre and BACCI Service allows even the monitoring of the machine itself: it can be "telecontrolled" by BACCI Service, which can also verify possible error messages and I/O status on the NC; BACCI technicians can also check the system and reveal damages to the HW or SW system of the Numerical Control, with the possibility to reset on-line the software and analyse the PLC.
- By using the above mentioned connection types, the customer can even install a web-cam to simplify the monitoring and display of mechanical parts, electrical components and plants.
- Therefore BACCI TeleService allows to act directly on the machining centre.
- Times for monitoring and evaluation/solution of failures are extremely reduced.
- Teleservice therefore represents a powerful and fast tool for all Customers, with a remarkable improvement of technical assistance on machines that have gained an even more strategical role in all companies.

Technical Features & Equipment:

- Interpolated axes: 5
- Axes stroke X: 1800mm
- N° 1 Operating Head type "2+2" with N° 2 double-exit spindle 10 HP each exit (total 4 tools exit available), tool connection ER32, ceramical bearings, RPM 18.000
- N° 2 Electronic inverters to control independently the spindles RPM
- N° 4 clamps tiltable & adjustable in height clamps 9for straight & bent pieces). Same clamps set-up for RH & LH chair legs (Double Referencing System—Patented by Bacci)
- Working table 1400mm (max. distance between 2 opposite clamps)
- Semi-automatic positioning of the clamps managed by PITAGORA
- N° 2 automatic hopperfeed





**TAURUS
CRACO**

282 Orenda Road West, Brampton, ON L6T 4X6
905-451-8430 / 800-386-5222
www.tauruscraco.com
sales@tauruscraco.com
parts@tauruscraco.com



Model JET-1800 / 5 Axes CNC Machining Centre with Automatic Hopperfeed

Technical Features & Equipment:

- N°4 Pneumatic unloaders (2 each hopperfeed)
- N° 1 full digital Numeric Control OSAI + WINMEDIA
- N° 1 air conditioner for electrical cabinet
- Programming Optimizing CAM software PITAGORA (Bacci exclusive)
- Teleservice through Internet Connection
- Tools not included
- N°2 BCK toolholder included
- Installation of the machine at customer's factory and training on programming provided by P.Bacci engineer NOT included (as per terms below)
- Safety Perimetral Protection as per CE rules NOT included

Specifications:

Interpolated Axes	n° 5
<u>AXES STROKES</u>	
Longitudinal Axis X	1800mm
Transversal Axis Y	1300 mm
Vertical Axis Z	650 mm
Axis A	Unlimited
Axis B	260°
<u>MAX. SECTION OF MANUAL LOADED PIECES</u>	
Max. width	250 mm
Max. height	100 mm
<u>MAX. SECTION OF AUTOMATIC LOADED PIECES</u>	
Max. width	150 mm (200 optional)
Max. height	60 mm (100 optional)
ACCELERATION	10 m/sec ²
ELECTROSPINDLES	Power 10 HP / 7.5 Kw

Overall dimensions with CE perimetral protection 3900x2000x2850mm

PRICE: \$

Optional Equipment:

- | | |
|--|-----------------|
| • N°1 Clamp with Fully NC Automatic Positioning | INCLUDED |
| • N°1 special toolholder shafts BCK (x2) | INCLUDED |
| • Safety Perimetral protection, Conformity to CE rules | INCLUDED |
| • Installation & Training | INCLUDED |
- A Taurus Craco Technician will be at customer's factory for 2 weeks to install the machine, provide a training on the programming to customers technician and to start-up the production (boarding & lodging expenses for Bacci engineer at customer's charge)