



 **BIESSE**AMERICA

ROVER A 1531 FT

NBC-AUTO LABEL

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ROVER A 1531 FT NBC

9090715 - 9090751

Nested Based Machining Center



The Biesse Rover A G-FT represents the latest technological advancement in machining centers. It is engineered to process solid woods, plastics and non ferrous metals such as aluminum and composite materials including Corian™.

Designed to play a critical role in today's work cells and Just-In-Time manufacturing environments, the Rover A G-FT is unsurpassed in productivity, safety, reliability and operational efficiency in its class. The Rover A G-FT is manufactured by Biesse, a world leader in panel processing equipment which is supported in North America by Biesse America and Biesse Canada, totally owned subsidiaries of Biesse

As guarantee of the quality of its products and services, BIESSE has been certified ISO 9001 since 1995 and works in accordance with the UNI EN ISO 9001:2000 norms. Most of the technological components assembled on the machining centres is produced by companies of the Biesse Group or by world-wide known companies included in the Biesse "Register of Qualified Suppliers", which have strictly cooperated with Biesse through the years.

The running tests of each machining centre include the following stages:

- ✓ Intermediate control of operating units and pre-assembled components;
- ✓ Non-stop running test for the simulation of workings, for a minimum period of 10 hours;
- ✓ Control of X and Y axes precision and positioning repeatability by means of an interferometric laser (VDI/3441 norm);
- ✓ Gauging of the X and Y axes through a software function: the values detected during the laser tests are elaborated by the N.C. and transmitted to the axes drives in order to improve the positioning precision;
- ✓ Functional tests for routing and boring operations on panels positioned on all the machine origins.

Structure

All the machine structural components have been designed with a CAD product for solid modeling which allows to determine the possible structural distortions caused by static and dynamic loads. The correct dimensions of the most critical components are elaborated by a software for finite elements structural calculation which, by simulating the work conditions, allows to determine the most stressed areas which need strengthening.

This definition of the machine structure grants maximum rigidity, high precision in time and refined finish to BIESSE machining centres, even during heavy-duty phases.

The machine base consists of a single component made up of thick electrowelded steel sheets, suitably strengthened in the most stressed areas.

The upright, mobile in the longitudinal direction (X axis) consists of a single electrowelded steel structural work: thick steel sheets and strengthening transversal elements allow to reduce to the minimum the distortions produced by the use of the machining centre. The mobile upright is stabilized before being machined, in order to release the tension accumulated during the welding phase. High precision is granted by the fact that the upright is machined with a single positioning on the machine tool.

The transversal carriage (Y axis) and the vertical carriage (Z axis) consist of a casting in aluminium light alloy; they are stabilized and then machined on the machine tool with a single positioning.

Machine frame

The machine frame is made of thick electrowelded steel sheets, properly strengthened in the most stressed areas.

The mechanical machining are performed in a single setup to ensure maximum accuracy.

Upright beam

The upright beam, mobile in the longitudinal direction (X axis) is made of electrowelded steel with gantry structure: thick steel sheets and reinforcing transversal elements grants a higher rigidity and allow to obtain the maximum accuracy.

Transversal and vertical carriages

The transversal carriage (Y axis) and the vertical carriage (Z axis) are made of an aluminum light alloy casting which is stabilized and then machined in a single setup for maximum precision.

Axes drives and motor systems

Biesse uses Brushless motors, controlled by digital axes drives.

The interfacing between axes drives and numerical control is digital.

The digital system Mechatrolink allows the following:

- ✓ Higher machining speed, since a portion of the toolpath is controlled by the axis drive instead of the numerical control
- ✓ Higher working precision, thanks to a faster data processing
- ✓ Higher reliability, thanks to a reduced wiring system which eliminates electrical interferences that may occur on analog systems
- ✓ Reduced machine stops and downtime, thanks to the errors diagnostic with explanatory messages displayed directly on the N.C.

X and Y axes transmission system

For the operating unit movements along the longitudinal axis (X axis) and transversal axis (Y axis), Biesse uses the solution with pinion, rack with helical teeth and a precision reducer with single pinion.

Both rack and pinions are built in accuracy class 6 (DIN 3962 norm).

The mobile upright beam has two independent motors, one on each side of the machine frame.

Z axis transmission

As the operating unit moves in the vertical direction (Z axis), BIESSE uses the ball-screw system in accuracy class ISO 5 with preloaded nut for backlash compensation and repeatability in positioning precision. The movement is transmitted to the screw through a flexible joint

Axes Guides

All axes moves on tempered and rectified steel linear guides by preloaded recirculating balls bearings.

Each balls bearing is equipped with 4 sliding gaskets of which 2 internal and 2 external, to protect the bearing from chips and dust intrusion.

Manual Centralized Lubrication System

The centralized lubrication system with 2 greasing points allows, using the pump supplied with the machine, to manually convey the grease to:

- ✓ Recirculating balls bearings of the X, Y and Z axes
- ✓ Rack and pinions system of the X and Y transmissions
- ✓ Ballscrew nut of the Z axis transmission

A warning appears on the screen signaling the lubrication needed

7022320 Sliding front door for machine safety coverage in replacement of the fixed door of basic machine.

It allows the maximum operator accessibility to the front operating groups.

A safety device forbid the machine starting when the door is opened.

7000205 Automatic Lubrication System

At each set time interval, adjustable in the numerical control, the pump automatically sends the lubricant to the machine moving parts (linear guides and bearings, recirculating ball screws), with no machine downtime and no operator's intervention.

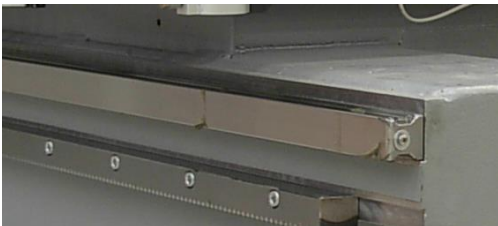
When the quantity of lubricant in the tank reaches the minimum, a warning message appears on the NC screen.

The automatic pump send grease to the following items:

- ✓ Recirculating balls bearings of the X, Y and Z axes
- ✓ Rack and pinions system of the X and Y transmissions
- ✓ Ballscrew nut of the Z axis transmissiom



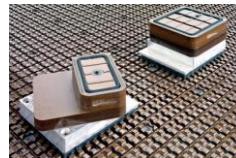
7022319 X axes linear guides seal cover strips



WORK AREA

FT Work Table – High Flow

The work table is in stratified phenolic, it includes a vacuum clamping system for the pieces and has a 30 mm pitch grid for the rapid placement of the vacuum modules. The entire work table is covered with vacuum channels (D = 10 mm) with 150 mm centerdistance, and is equipped with patented plugs for a quick removal. It can be configured based on need (pitch 30 mm) with M8 threaded inserts for jig installation or other clamping equipment.



Pod Ready Table (pods not included)

Working areas

The machine has 1 working area with 2 left origins, 1 front and 1 rear.

Pneumatic reference stops

The machine's origins are determined by a set of stops with pneumatic movement which grants maximum positioning precision.

The base machine includes:

- ✓ 2 pin reference stops for rear LH area
- ✓ 3 pin reference stops for front LH area
- ✓ 2 side stops (LH side)

7350920 Reference stops and origins for RIGHT area

Allows to execute programs with panel's reference side on the right.

Inclusive of:

- ✓ 2 rear stops for RIGHT area
- ✓ 3 front stops for RIGHT area
- ✓ 2 RIGHT side stops
- ✓ Supporting column for RIGHT origin program start
- ✓ Foot pedal for RIGHT origins vacuum locking activation

The additional stops, with pneumatic lowering, creates 2 additional origins for the correct reference of panels. The stops are automatically raised based on origin selection.

The pieces to be executed on the right origins are locked by pressing the pedal placed near the area to be activated.

* For single machine requires the increment of 7 sensors for the detection of lowered stops, if selected

* For machine with automatic loading and unloading system (Sweeping Arm) requires the increment of 6 or 8 sensors for the detection of lowered stops, if selected

Vacuum system and locking zones

The vacuum system allow to convey vacuum in the working areas in order to lock the piece in place during machining operations.

A buffer chamber grants a constant and high level of vacuum ensuring a quick spread on the worktable during locking cycle and maximum vacuum force during machining operations.

The worktable is divided in 2 locking zones to optimize locking of panels with smaller dimension.

Vacuum locking is activated by the provided foot pedal.

7351007 8 zones Multizone vacuum system

The FT working table is divided into independent zones, each of which is automatically activated by the NC according the size and position of the programmed panel, granting the best vacuum optimization.

It allows the locking of panels with different dimensions minimizing vacuum dispersion, without any operator intervention.

Prearranged for the connection of 300 m3/h vacuum pumps

The machine is prearranged in order to connect the selected quantity of vacuum pumps until a maximum of 3, including electrical components, vacuum distribution pipes, 1 analogic and 1 digital vacuum meter.

The digital vacuum meter splits the vacuum minimum level, used during the spoilboard surfacing operation, from the higher level used during the standard production.

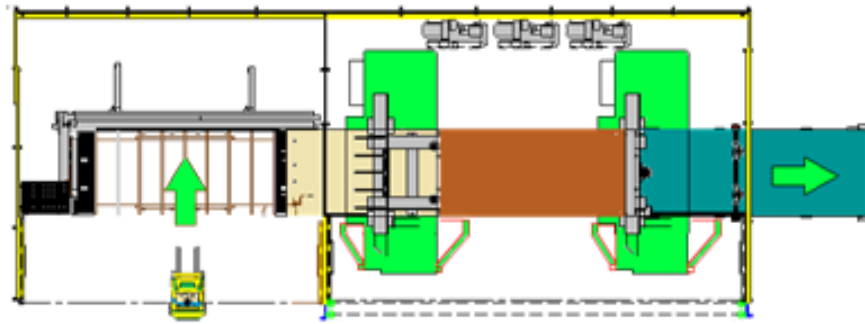
* If the pump is not selected, the machine will have no prearrangement

7300999 Vacuum pump 300 m3/h rotary claw (Qty.2)

Oil-Free operation through non-contacting claws which grants high efficiency without the need of lubrication.

Rotary claws pumps maintain a constant efficiency over-time and it doesn't require expensive maintenance services.

Flow rate: 300 m3/h at 50Hz; 360 m3/h at 60Hz



7200329 Automatic Load and Unload Unit

Inclusive of:

- ✓ Sweeping arm for panel unloading and spoilboard cleaning
- ✓ Loading Vacuum cups system with blowing double circuit for transpirant panels
- ✓ Linear reference stops for piece containment during unloading cycle
- ✓ Sensors for the detection of lowered stops
- ✓ Pneumatic vertical movement of the safety strips
- ✓ Dust collection for panel's bottom side positioned at the end of the worktable
- ✓ Prearrangement for Scissor Lift, Loading tables and Lifting table
- ✓ Prearrangement for Loading stations type A and B
- ✓ Prearrangement for Unloading belt

The loading vacuum cups system is capable to pick a pre-aligned panel from the Scissor Lift, Loading tables or Lifting table, and position it automatically on a machine origin for a correct processing.

The unit is made vacuum cups along the Y axis with automatic activation based on panel's dimension.

It is possible to automatically load up to 3 panels with three consecutive single loading cycles.

The Sweeping Arm can automatically unload the processed panel on the Unloading belt positioned beside the machine.

Simultaneously to the unloading operation, the Sweeping Arm is capable to clean the spoilboard, allowing the loading of the next panel without performing any manual cleaning operation.

The linear reference stops act as a guide for the worked pieces and avoid any part to fall from the table during unloading operations

At the end of the worktable, an automatically activated dust collection port, positioned at panel's bottom side, grants a better cleaning of the finished components.

If the unloading belt is NOT purchased together with the machine, an additional button pad with 2-hands control to ensure the safety of the operator during the unloading cycle is provided.

The system is not designed to load/unload gloss and/or delicate material without any possible scratching, to reduce the possibility to damage those kind of panels we suggest to use the blowing unit for air flotation table which anyway doesn't grant to completely avoid the problem.

Technical specifications:

- ✓ Thickness of single panel unloading: from 9 to 50mm
- ✓ Maximum thickness of multiple panels loading: 20mm
- ✓ Maximum thickness of multiple panels unloading: 60mm
- ✓ Spoilboard thickness: from 8 to 25mm
- ✓ Maximum unloading weight: 200Kg
- ✓ Minimum loadable Y axis dimension of the panel: 800mm

* The unloading of thin pieces or panels with thickness between 3 and 9 mm requires the upgrade for NC positioned Sweeping Arm

7200330 Loading Station Type B Size 1536

The Type B Loading Station is the most advanced loading system of the Rover FT machine line and offers the possibility to automatically apply labels to the panels (option).

Compatible with:

Conf. 1 - Front Loading - Workflow from Left to Right

Conf. 4 - Rear Loading - Workflow from Right to Left

Inclusive of:

- ✓ Loading station with automatic alignment along X and Y
- ✓ Machine Connection frame with MDF table
- ✓ Additional safety fences and photocells kit
- ✓ Prearrangement for automatic adhesive label printing and application system

The loading station with automatic alignment along X and Y is capable of correctly position the top panel of the stack and eventually to perform the application of adhesive labels.

The panel alignment and labels application operations are performed in hidden time while the machine is already processing the previously loaded panel.

Since the panel is aligned along X and Y, the machine loading operation is performed in a single movement, with a consequent cycle time reduction.

- ✓ The additional safety devices for the Loading Station allow to perform stack loading with the forklift in safety, while the machine is working.
- ✓ *Requires Conf. 1 or 4 to determine the workflow
- ✓ *Not compatible with thin panels below 9mm and/or transpiring panels
- ✓ *Scissor Lift, Loading tables and Lifting table NOT included
- ✓ *Requires the Automatic Loading and Unloading System

7200217 Upgrade for Steel Connection Frame with Wheels for Loading Station Type B

The frame, made of steel, is equipped with freewheels which reduces panel's friction during the loading cycle.

- ✓ The wheels of the same row have a pitch of 102mm.
- ✓ Replaces the Machine connection frame with MDF table.
- ✓ *Requires the Loading station type B

7200322 Automatic Adhesive Label Printing and Application System with 0-90° Rotation for Loading Station Type B

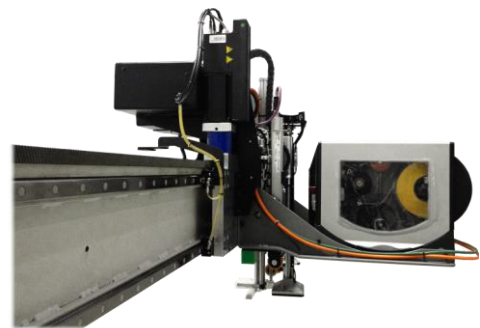
Inclusive of Label Printer and Label application device.

The printer, mounted on the Y axis of the Loading station type B, applies labels in hidden time while the machine is processing the previously labelled panel.

The system is capable to process labels information generated through BiesseNest or an external software (approved by Biesse) and apply adhesive labels in the programmed position to avoid any damage during the routing operation.

The labels layout and contained information can be customized through the supplied software.

- ✓ Technical specifications:
- ✓ Minimum label dimension = 50x50mm
- ✓ Maximum label dimension = 100x100mm
- ✓ Printer resolution = 200dpi



7200281 Scissor Lift - Size 1531 / 1536

Single scissor version

The Scissor Lift consists of a top frame for panels stack positioning that can be accessed by a forklift and a lifting system moved by a piston and hydraulic pump system.

Combined with the type A or B Loading stations, the Scissor Lift is capable to lift the stack to the correct quote for alignment and machine loading operations.

The Scissor Lift is equipped with a plate with levelling feet for correct installation and alignment with the machine.

*Panel's dimension along X must be equal or greater of the dimension along Y

7200336 Outfeed Belt Conveyor

Outfeed belt conveyor length 3560mm

Inclusive of:

- ✓ Supporting frame in electrowelded metal structural work
- ✓ Motorized unloading belt controlled by the machine's N.C.
- ✓ Safety devices

The Outfeed Belt Conveyor can receive the nested components from the machine and move them outside the working area, dramatically reducing the idle time between the execution of a program and the following one and therefore increasing machine's productivity.

During the unloading cycle the belt is moved to reduce friction and prevent panel's drag. At the end of the conveyor belt, a photocell stops the movement when the panels reaches the end.

The Outfeed Belt Conveyor is accessible from 3 sides for an easy and ergonomic unloading operation, furthermore it is possible to manually activate the belt's movement through a pedal until the remaining panels reaches the photocell allowing to perform the unloading operation completely from the far end of the belt conveyor.

Combined with the Automatic Loading and Unloading system, the Outfeed Belt Conveyor allows the machine to perform the loading and unloading operations simultaneously, increasing cell's productivity.

* Maximum unloadable panel 3100mm

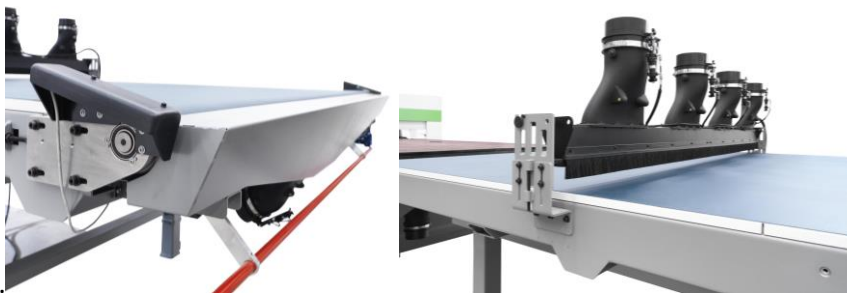
* It includes the brackets for pieces and off-cuts containment

7200284 Dust collection system for Outfeed belt conveyor

The dust collection system for Outfeed belt conveyor includes 2 dust collection ports of which one positioned on the conveyor belt top side, and one positioned at the end of the conveyor belt.

The top dust collection port clean the panel's top face and inside the grooves generated by the machining, the dust collection port positioned at the end of the Outfeed belt conveyor collects the dust left on the conveyor and avoids accumulation on the ground.

The dust collection system is automatically activated when the Outfeed belt conveyor is moving.



WORK UNITS

7212840 Electrospindle 13.2 kW (17.7 HP) - HSK-F63 Air Cooled

The innovative 13.2 kW (17.7 HP) Electrospindle, HSK-F63 adaptor, air cooled on the Rover machines is manufactured by HSD (High Speed Development), a Biesse Group company.

Benefits for the customer of the HSD technology:

✓ **INCREASED PRODUCTIVITY with:**

- 11 kW (14.7 HP)/from 12,000 to 15,000 rpm in S1 duty
- 13.2 kW (17.7 HP)/from 12,000 to 15,000 rpm in S6 duty
- Efficient cooling system.



✓ **PRECISION AND QUALITY MACHINING**

- The electrospindles on the Rover machining centers are attached directly at Z-axis carriage and extremely close to the Y-axis beam. This solution guarantees superior rigidity and is completely unaffected by the thermal expansions always present when the electrospindles are attached to the boring block effecting precision.
- Pneumatic stroke is on a prismatic linear guide for maximum strength and precision

✓ **HIGH PERFORMANCES AND FLEXIBILITY with**

- Programmable rotation speeds from 1,000 to 24,000 rpm
- RH and LH programmable rotation
- Dust hood has 6 pos., CNC adjusted for optimum dust collection in any working conditions.

✓ **REDUCED MAINTANANCE with**

- Cartridge construction which allow for easy core replacement.
- Ceramic bearings, which are less susceptible to thermal elasticity than steel bearings, thus providing increased life

✓ **FLANGE FOR THE ASSEMBLY OF AGGREGATES ON AN ELECTROSPINDLE**

- Prearrangement for the assembly of a 360° operating unit (C Axes)
- Air Nozzle
- The dust extraction gate is automatically closed when the electrospindle is not working.

Inverter

Inverter for electrospindle and boring head with power output adequate to the selected configuration.
Static frequency converter.

Inclusive of:

- ✓ Display for frequency visualization
- ✓ Display for tool rotation speed visualization
- ✓ Display for diagnostic messages
- ✓ Automatic control of tool rotation deceleration
- ✓ Brake resistor for power dissipation
- ✓ N.C. programmable tool rotation speed

7550008 Tool Presetter

Digital device for tool length measurement by contact plate.

The device checks the tool length and updates the values in the tool schedule of Numerical Control.

The diameter of the contact plate is 130mm.

We recommend the use of the blowing device for the cleaning of the reading surface.

The measurable lengths (min/max) must be verified on the specific layout.

*Includes a special toolholder for the device setting



7212874 Blowing unit with 4 nozzles for electrospindle

The unit is made of 4 manually adjustable nozzles, positioned every 90°, capable of blowing compressed air during machining operations and increase dust collection efficiency.

The nozzles are installed on the dust collection hood support and are equipped with taps so as to provide the maximum flexibility in the selection of blowing orientation and position.

The unit is strongly suggested for nesting applications.

In machines with multiple electrospindles the slot has to be specified.

*Requires ISO or HSK electrospindle

7212197 Additional Z axis carriage for front operating units, with pneumatic stroke

The descent of the carriage is controlled by a pneumatic movement which lowers the front carriage from the rear one.

The boring unit is fixed directly to the front Z carriage, which vertical movement is pneumatically controlled. The presence of the additional Z carriage allows the future installation of front operating units.

7200404 BH18 Boring Block with Automatic Lubrication

18 vertical independent spindles boring block Working unit which can be equipped with 10 independent tools for single and multiple borings on the top face of the panel.

The spindles have a RH/LH alternated rotation and are driven by precision helical ground teeth gears which grants minimum noise emission and maximum machining accuracy.

The boring head is equipped with a manual lubrication system to be performed at a set time through the greasing pump, and it's reminded by a warning message on the N.C. screen.

The head is air cooled.

The unit is equipped with an automatic lubrication system: at each time interval, programmable through the numerical control, a pump automatically sends the lubricant to the boring head, with no machine downtime and no operator's intervention.

The spindles are driven by 1 inverter controlled motor (motor power 1.7 kW at 2800 rpm - 3 kW at 6000 rpm): the spindles rotation speed is programmable up to 6000 rpm to perform fast drilling cycles and reduce machining time.

Furthermore it is possible to program the correct rotation speed based on the tool and material to be processed.

The boring head is equipped with a dedicated dust collection hood which is automatically activated when the unit is in operation

7291167 16 positions Revolver Toolchanger, positioned on the X axis carriage

Onboard of the X axis carriage, allows to store up to 16 tools always available on each position of the machine and to perform toolchanging operations in a short time.

Technical specifications:

- ✓ Wheelbase between grippers: 114mm
- ✓ Maximum loadable tools: 16 with 110mm maximum diameter
- ✓ Loadable aggregates: Refer to the toolchanger layout
- ✓ Maximum tool diameter: Refer to the toolchanger layout
- ✓ Maximum tool length: Refer to the toolchanger layout
- ✓ Maximum weight of a tool or aggregate inclusive of the tool: 7.5Kg
- ✓ Maximum total weight: 55Kg

If the standard chip deflector is loaded on the toolchanger, the two adjacent grippers must be manually removed.

*Incompatible with the 14 or 21 positions chain toolchanger, positioned on the X axis carriage

7291182 Tool changer rotary 8 positions, moving on the Y axis

Onboard of the Y axis carriage, allows to store up to 8 tools always available on each position of the machine and to perform a tool change while the machine is executing other operations which not involve the electrospindle, in example drilling cycles, reducing the overall cycle time and therefore increasing productivity.

Technical specifications:

- ✓ Wheelbase between grippers: 113mm
- ✓ Maximum loadable tools: 8 with 110mm maximum diameter
- ✓ Loadable aggregates: Refer to the toolchanger layout
- ✓ Maximum tool diameter: Refer to the toolchanger layout
- ✓ Maximum tool length: Refer to the toolchanger layout
- ✓ Maximum weight of a tool or aggregate inclusive of the tool: 7.5Kg
- ✓ Maximum total weight: 32Kg



Numerical Control

Control cabinet with Windows-based PC and control system card BH660.

Thanks to the new Biesse technology WRT (Windows Real Time) the machine is controlled directly by the PC and any other proprietary hardware component becomes unnecessary. This solution extends the performances of Windows 7 by making it work in real time.

Since the software that controls the machine runs directly on a personal computer and not on a dedicated hardware device, the system architecture is greatly simplified, granting greater performance and reliability.

- ✓ Keyboard
- ✓ Mouse
- ✓ DVD reader
- ✓ USB ports
- ✓ Ethernet card for network connection to an office PC

The technical specifications above may be subject to updates without prior notification.

Since the personal computer controls the machine processes BIESSE does not allow the installation of additional non-authorized software, under penalty of losing warranty.



Software

Statistic report

Machine statistics is a software environment capable of collecting general information on machine events in order to monitor productivity and reliability over time.

Customers can choose directly which events to be recorded, for example the machine set-up, production, authorized pauses, lubrication cycles, etc.

Emergency recovery procedure

This function allows operators to restart an interrupted working due to a machine emergency stop. The program restarts exactly from where it was interrupted, by following a specific procedure. The working can be restarted when the emergency stop happened during:

- ✓ A routing cycle with the electrospindle
- ✓ A drilling cycle with the boring head
- ✓ A cutting cycle with a blade
- ✓ An automatic tool changing cycle
- ✓ Any ISO instruction programmed movement

The introduction of this functionality avoids the need to discard half-finished components, which sometimes are made of valuable materials (rare woods, etc.). It also allows operators to save time in case of long programs execution.

Tool life calculation function

The NC memorizes the distance covered by each routing tool and compares it to a value set by the operator.

When this set value is reached, a persistent warning message is displayed on the screen.

This message will be displayed each time a given tool has reached the value set by the operator.

An hardware output (alternate or continuous, chosen by the customer) allows the connection of an external device (for instance a flashing light or a siren) which will be activated when the message appears on the screen.

bSolid

The software package running in Windows environment allows to design the final product, define its machinings, define working table set-up, simulate the part machinings on the 3D machine model and generate the machine needed programs.

It provides the following functionalities:

✓ 2D CAD environment complete of:

- Commands for geometries and text designing on planes and 2D faces complete with the typical tools for design (lines, polylines, arcs, circles, ellipses,) and for design modifications (move, rotate, scale, mirror)
- Dimensioning tools
- Design of custom vertical, inclined and curved faces starting from designed geometries
- Fully parametric mode (capability to hook objects to the piece with formulas and conditions)

✓ General file management tools (copy, paste, undo / redo) and design visualization tools (zoom, view rotation, orthogonal view on customized faces) always available

✓ DXF, CIX and BPP file import

✓ Commands for routing, boring and cuts design on horizontal, vertical, inclined and curved faces with the capability to work on these faces in a 2D simplified way (therefore the 4 axis machining)

✓ Commands for 2D simple pockets design (such as slots on the piece)

✓ Program design “Wizard” : innovative command for the automatic creation of programs based on rules of automatic association between geometry and tools

✓ Independent management of multiple machines

✓ Management of 5 axis machining only in positioning

✓ Management of probing cycles

✓ Customized macro creation

✓ 3D workpiece simulation with visualization of material removal

✓ Tool management environment complete of :

- Custom tool design (routers, drill-bits, saw blades and their 3D shape)
- Aggregate definition and set-up ()
- Definition and tooling of aggregates (either price list available as generics)
- Chip deflector design
- Tool copy and search
- Definition of chip deflectors
- Copy and search for tools (routers, drill-bits and saw blade), aggregates and chip deflectors
- Working sequence definition
- Environment for rule definition of automatic machinings

✓ Machine toolchanger 3D graphic environment : it allows to equip or take off the machine toolchangers with tool, aggregate or chip deflectors immediately showing and checking their dimensions

✓ Working table 3D graphic environment including:

- Current machine real and faithful 3D model view
- Vacuum modules and clamps stock management
- Realistic movement of working tables and carriages
- Working table semi-automatic positioning and its configuration parameters

(This command is an aid and does not replace the machine tooling, as it has limitations. Therefore you should always run a simulation of the program on the machine before running it)

✓ Realistic simulation of workpiece on the machine worktable able to :

- Simulate the real machine dynamics without actually run the machine itself
- Simulate in 3D graphics the part machining with material removal view
- Check any kind of collision between all machine components : tools, electrosplindles, aggregates, working tables, carriages, vacuum modules, Uniclamp modules and working piece anticipating every possible mistake on the actual process (warning : it doesn't exist any type of control on the actual working table set-up, the kind and position of each locking support are borne by the operator)
- Calculate the workpiece execution real time on the machine

* PC minimum requirements : PC Intel Core duo 2 2,0 Ghz; 3 GB RAM; nVidia with 256 MB RAM Graphic Card; Resolution of 1280x800 16M colours; 2 GB of hard disk free space

* PC recommended requirements: PC Intel Core i7 3,4 Ghz; 8 GB RAM; nVidia Quadro with 1 GB RAM Graphic Card; Resolution 1680x1050 16M colours; 5 GB of hard disk free space

Safety Non EC Protections

Inclusive of:

- ✓ Front vertical safety photocell
- ✓ Software position control for operator protection
- ✓ Safety fence H=2m on three sides of the machine
- ✓ Operating unit cover, made of structural and protective sheet metal
- ✓ Left safety flaps positioned on machine beam
- ✓ Safety flaps positioned on the machine cover
- ✓ Transparent panel in crushproof polycarbonate allowing operators to work in total safety since it grants maximum visibility
- ✓ Emergency push-button positioned on the front side of the machine frame
- ✓ Emergency push-button positioned on the N.C. electrical cabinet
- ✓ Emergency push button positioned on the hand-held control keyboard

7022331 EC safety system for machine with loading/unloading

The solution complies with the essential requirements of applicable European Directives:

- Machine Directive 2006/42/CE
- Electromagnetic Compatibility Directive 2004/108/CE
- Low Voltage Directive 2006/95/CE.

Inclusive of:

- Perimeter safety fences of 2 m height around 3 sides of the nesting cell for a greater distance from any moving part
- Anti-climb over barriers on RH and LF machine sides
- Additional hardware control unit for safety systems
- Vertical photocells for the operator front side access control of machine and loading table (only for type A cell)
- Horizontal photocells for the operator front side access control of loading table (only for type B cell)
- Safety fence side access doors with automatic gates locking and anti-panic system
- Dynamic control of tool's rotation and unlocking
- EC declaration of conformity

7570062 Autotransformer for voltages different from 380/400/415 V - 50/60 Hz

Air conditioner for electrical cabinet

It allows:

- ✓ The perfect working of all the electronic components inside the electric cabinet, even at very high temperatures, up to 40°C (104°F);
- ✓ A dust-free environment, since there are no aeration fans.

Manuals

- ✓ Installation instructions
- ✓ User's manual
- ✓ Software instructions
- ✓ Pneumatic and wiring diagrams
- ✓ CD InDocs containing the spare parts catalogue
- ✓ Machine installation form

Maintenance equipment

- ✓ Device for locking and unlocking tools from tool-holders;
- ✓ set of wrenches;
- ✓ greasing pump;
- ✓ grease for the lubrication of ball bushings;
- ✓ grease for the lubrication of boring head and aggregates.

Service

Teleservice

It allows an immediate and direct access to the machine numerical control via network. In this way it is possible to check machine data, user programs, input/output signals and system variables, and to install software updates, therefore granting:

- ✓ Real-time service intervention
- ✓ Quicker problem solving
- ✓ Consistent reduction of machine downtime
- ✓ Real-time software updates

The teleservice support is free of charge for the whole warranty period.

User documentation

- ✓ Installation instructions
- ✓ Machine user manual
- ✓ Software user manual instructions
- ✓ Pneumatic and electrical diagrams
- ✓ InDocs CD containing the spare parts catalogue
- ✓ Factory assembling and testing declaration

Maintenance equipment

- ✓ Device for locking and unlocking tools from tool-holders
- ✓ Set of wrenches
- ✓ Greasing pump
- ✓ Grease for linear guides, rack and pinion lubrication
- ✓ Grease for boring head and aggregates lubrication

7510105 Uninterruptible Power Supply Unit (UPS) for the Machine PC

In case of a power outage the unit allow to operate the PC for 5 to 10 minutes based on working conditions in order to save data.



7530392 bSolid

The software package running in Windows environment allows to design the final product, define its machinings, define working table set-up, simulate the part machinings on the 3D machine model and generate the machine needed programs.

It provides the following functionalities:

- ✓ 2D CAD environment complete of :
- ✓ Commands for geometries and text designing on planes and 2D faces complete with the typical tools for design (lines, polylines, arcs, circles, ellipses,) and for design modifications (move, rotate, scale, mirror)
- ✓ Dimensioning tools

- ✓ Design of custom vertical, inclined and curved faces starting from designed geometries
 - ✓ Fully parametric mode (capability to hook objects to the piece with formulas and conditions)
 - ✓ General file management tools (copy, paste, undo / redo) and design visualization tools (zoom, view rotation, orthogonal view on customized faces) always available
 - ✓ DXF, CIX and BPP file import
 - ✓ Commands for routing, boring and cuts design on horizontal, vertical, inclined and curved faces with the capability to work on these faces in a 2D simplified way (therefore the 4 axis machining)
 - ✓ Commands for 2D simple pockets design (such as slots on the piece)
 - ✓ Program design "Wizard" : innovative command for the automatic creation of programs based on rules of automatic association between geometry and tools
 - ✓ Independent management of multiple machines
 - ✓ Management of 5 axis machining only in positioning
 - ✓ Management of probing cycles
 - ✓ Customized macro creation
 - ✓ 3D workpiece simulation with visualization of material removal
 - ✓ Tool management environment complete of :
 - Custom tool design (routers, drill-bits, saw blades and their 3D shape)
 - Aggregate definition and set-up ()
 - Definition and tooling of aggregates (either price list available as generics)
 - Chip deflector design
 - Tool copy and search
 - Definition of chip deflectors
 - Copy and search for tools (routers, drill-bits and saw blade), aggregates and chip deflectors
 - Working sequence definition
 - Environment for rule definition of automatic machinings
 - ✓ Machine toolchanger 3D graphic environment : it allows to equip or take off the machine toolchangers with tool, aggregate or chip deflectors immediately showing and checking their dimensions
 - ✓ Working table 3D graphic environment including:
 - Current machine real and faithful 3D model view
 - Vacuum modules and clamps stock management
 - Realistic movement of working tables and carriages
 - Working table semi-automatic positioning and its configuration parameters
- (This command is an aid and does not replace the machine tooling, as it has limitations. Therefore you should always run a simulation of the program on the machine before running it)**
- ✓ Realistic simulation of workpiece on the machine worktable able to :
 - Simulate the real machine dynamics without actually run the machine itself
 - Simulate in 3D graphics the part machining with material removal view
 - Check any kind of collision between all machine components : tools, electrosplindles, aggregates, working tables, carriages, vacuum modules, Uniclamp modules and working piece anticipating every possible mistake on the actual process (warning : it doesn't exist any type of control on the actual working table set-up, the kind and position of each locking support are borne by the operator)
 - Calculate the workpiece execution real time on the machine

* PC minimum requirements : PC Intel Core duo 2 2,0 Ghz; 3 GB RAM; nVidia with 256 MB RAM Graphic Card; Resolution of 1280x800 16M colours; 2 GB of hard disk free space

* PC recommended requirements: PC Intel Core i7 3,4 Ghz; 8 GB RAM; nVidia Quadro with 1 GB RAM Graphic Card; Resolution 1680x1050 16M colours; 5 GB of hard disk free space

7530409 bNest

Software Module for Nesting Process Applications

bNest allows to create nesting projects including the item list with related quantities to be produced and the list of boards to be used with the target of minimize the used material and the machining timings. The optimization process result is a list of bSolid programs (.bSolid) containing all the machinings of parts positioned inside the used boards.

It includes the following features:

Environment for manual nesting project creation

- ✓ It's possible to add or take items off an existing nesting project, optimize or delete them, check the nesting optimized cut layouts

Data import from ERP or external design application

- ✓ A standard solution as spreadsheet file (.csv format) is used in order to keep easy the data exchange between software applications
- ✓ The imported data will be used for production and labelling as well
- ✓ The import rules are configurable thus they can easily adapt to customer needs

Item, board and material management

- ✓ Dedicated environments where the operator can edit, check and fix all the information of parts, boards and materials
- ✓ The item registry describes the item properties (dimensions, material, program, parameters)
- ✓ The material registry lists all usable materials. The material registry can be filled in also with a data import from the company ERP system (through .csv files)
- ✓ bNest will automatically split the list of processable items in groups according material, thickness and grain.

Supported formats

- ✓ It's possible to import the following file formats : bSolid, cix, bpp, cid, dxf (in the bNest compatible format)

Free-shape nesting

- ✓ The nesting of free-form shape is supported

Integration with bSolid

- ✓ It's possible to create items directly in the bSolid Cad-Cam environment joining each designed program with the materials defined by the operator
- ✓ It allows to open the nesting results when the operator needs to edit, simulate or get the machining cycles times.

Off-cuts crumbling

- ✓ Using specific parameters it's possible to break the cut-off parts in order to simplify their offloading by the operator.

Cleaning cycles

- ✓ It's possible to add to the nesting results one or more cleaning cycles using the sweeping arm

Labelling:

- ✓ Automatic management of label applier or manual label printing with dedicated touch-screen device
- ✓ Only for automatic management, it's possible to automatically optimize the label positions in order to avoid any label scratch or damage during the router machining

Manual management of re-usable material:

- ✓ Manual definition of re-usable parts (dimensions, material, grain and thickness)
- ✓ Manual integration of available re-usable parts for their use in any nesting projects

Automatic management of re-usable material:

- ✓ bNest provides the automatic definition of the material not used in the nesting layouts(re-usable part creation) and the labelling of re-usable defined parts (using a dedicated label editor)

**** It requires the dedicated module for re-usable part management***

Machining sequence

- ✓ the machinings are listed in the right order able to minimize both the tool-changers and
- ✓ the machine movements leaving as last the through machinings for optimize the vacuum part locking
- ✓ It's possible to create machining sequence in order to separate the parts from the smallest to the widest ones

Project report:

- ✓ On each project it's possible to see statistic information as quantity of used boards and used material percentage

7530213 Additional License for bSolid

It allows the installation and the use of bSolid on 1 additional PC station.

- ✓ It includes 1 hardware USB key for software activation
- ✓ It requires the bSolid software

7530214 Extra license for a Single Additional bSolid Module.

It allows the installation and the use of one or more additional bSolid modules on 1 PC station enabled by the extra key included in the bSolid additional license.

- ✓ Quantity depending from the quantity of additional modules selected
- ✓ It requires the additional license for bSolid

Warranty

BSPS Premium 12 MONTHS PARTS – 12 MONTHS LABOR

12 Months Parts warranty is included with this offer. Biesse guarantees the replacement and/or repair of any defective **Parts** during the 12 month warranty period which begins upon machine delivery, or, upon installation if included. As for any other aspect not expressly modified by this Section please refer to Article 12 of Biesse America Terms and Conditions of Sale. It is understood and agreed that, except for the modifications contained herein, the above mentioned Article 12 shall remain in full force and effect.

12 Months Labor warranty is included. Our remote services, including phone, email, and web-based support, have proven to provide the most immediate and efficient technical support to our Customers. In the event that **Onsite Services** are required after initial remote support, Biesse is engaged to send a Certified Technician to your premises free of charge. Customers are obliged to cooperate with Biesse to avoid unnecessary onsite services for minor repairs.

Life Time Phone Support is completely free of charge and available 24/7 at 877-5-BIESSE.

Training

BGABTR05



Biesse America provides a comprehensive, 5-day, introductory training on Biesse Works programming techniques. Prior to the delivery of the machine, two people will attend the training class at our Charlotte, NC Training Center at no additional charge, where training is given in a classroom setting.

Airfares, hotel, meals and other will be at customer expense.

Participants must have basic computers skills and knowledge on how to use Windows operating systems.

Additional trainees may be added at a flat rate of \$895 each.

Hands-on training is not included. The installing technician will provide hands-on, machine operation and maintenance training at the customer's facility during installation if installation is included.

Installation BGAB012

The first phase of installation (BGABTR05) consists of a session of classroom training in our Biesse America Training Center in Charlotte, NC. The second phase of installation (BGABINS) consists of up to 120 hours of onsite machine installation and refresher training to reinforce the first phase of training. In the mutual interest to have a successful installation within the 120 hours, it is very important that the Customer and Biesse America are aware and agree on the following duties.

Biesse America Duties:

- ✓ Provide comprehensive training in Biesse America's Training Center located in Charlotte NC
- ✓ Advise and register Customer in advance for training sessions
- ✓ Unpack machine, level, and anchor to the floor
- ✓ Install the Machine according to the manufacturer checklist (when installation is included)
- ✓ Set the machine to operating conditions
- ✓ Train Customer on Machine operating procedures
- ✓ Review and train operators on Machine safety and maintenance procedures
- ✓ Review process to order replacement parts

Customer Duties:

- ✓ Attend operator and programmer training session in Biesse America Training Center in Charlotte, NC
- ✓ Prepare the floor where machine will be placed in accordance to Biesse Specifications
- ✓ Offload and position Machine in location to be installed, with Machine maintaining machine in original packaging
- ✓ Provide the Labor Force and handling equipment (crane, forklift, etc.) to unload, uncrate and position the machine
- ✓ Provide the tools and material required for anchoring machine to the floor (hammer-drill and bit)
- ✓ Contract a Licensed Electrician to complete the electrical connection to the machine
- ✓ Complete an electrical ground as it is mandatory and necessary
- ✓ Provide, install and complete Dust extraction and final connection to the machine as specified in the machine data
- ✓ Complete Pneumatic connection ready as specified in the machine data
- ✓ Phone line connection for Tele-Service
- ✓ Customer is obliged to complete and have ready all items above prior to arrival of Biesse Technician for the installation (when included). Extended installation time due to incomplete pre-installation Customer Duties will be at Customer expense.

Not Included (please call for cost estimates):

- ✓ Onsite programming training, application training or programming of customer pattern/samples
 - ✓ Networking
 - ✓ 3rd Party software integration
 - ✓ Material needed for testing (panels, tooling, etc)
 - ✓ Local electrical requirements such as UL may require inspection by an independent agency, and the cost of any inspection and certification will be the responsibility of the customer (The machine is built in compliance with the International Electrical Code (IEC-204))
- Additional training, exceeding the included installation hours, can be provided on site at standard technician daily rates plus expenses.

Delivery

Delivery to Customer location is included (unless otherwise indicated). Price includes standard delivery for machines in stock. Standard delivery for stock machines is 2 weeks following executed Order Confirmation and receipt of 30% deposit. Requests for express delivery for stock machines must be indicated at the time of order to ensure proper handling. Requests for express delivery will accrue additional charges and such charges will be indicated in the Order Confirmation. Express rates vary by model and final destination.



Special Financing Terms Available

At Biesse, our goal is to help you reach your production goals and Biesse Finance offers special financing options that make it easy and affordable to obtain new equipment.

Because every business is unique, we offer flexible payment structures based on your individual circumstances and credit history. We offer an outstanding program, developed by finance professionals with extensive experience and a variety of payment options. Contact us today.

Choose from:

- ✓ No Money Down
- ✓ 12 Months at ½ payments
- ✓ \$99 for 6 months

**Eliminate Cash
Flow Worries!**

Contact Me Now!



Stan Ragley, Finance Manager
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biesseamerica.com

Biesse America | 4110 Meadow Oak Drive | Charlotte, NC 28208 | 1 877 824 3773 | marketing@biesseamerica.com

BIESSEAMERICA
/ FINANCE



BUSINESS	BUSINESS NAME/LESSEE			TELEPHONE ()		
	STREET ADDRESS			FAX ()		
	CITY/STATE/ZIP		COUNTY	MOBILE ()		
	TYPE OF BUSINESS		BUSINESS START DATE	YRS UNDER CURRENT OWNERSHIP	FED. TAX I.D.	
	LOCATION OF EQUIPMENT (STREET/CITY/STATE/ZIP/COUNTY)			E-MAIL ADDRESS		
	CONTACT NAME:		ANNUAL SALES	EXEMPT FROM STATE SALES/USE TAX?	HAS COMPANY/OWNER(S) EVER DECLARED BANKRUPTCY?	
By signing below, the undersigned individual, who is either a principal of the credit applicant or a personal guarantor of its obligations, authorizes lessor and/or debtor and their affiliates, successors or its designee (and any assignee or potential assignee thereof) to obtain consumer credit reports relating to his/her individual credit history and/or creditworthiness. Such authorization shall extend to obtaining a credit profile in considering this application and subsequently for the purposes of update, renewal or extension of such credit or additional credit and for reviewing or collecting the resulting account. A photostat or facsimile copy of this authorization shall be valid as the original. By signature below, I/we affirm my/our identity as the respective individual(s) identified in this application.						
OWNERSHIP	PROPRIETORSHIP PARTNERSHIP C-CORP S-CORP NON-PROFIT LLC			STATE OF INCORPORATION		
	PRINCIPAL S NAME		TITLE	SOCIAL SECURITY NUMBER	HOME PHONE	% OF OWNERSHIP
	HOME ADDRESS (STREET) (CITY) (STATE) (ZIP CODE)			Own Rent	How Long?	SIGNATURE: 
	PRINCIPAL S NAME		TITLE	SOCIAL SECURITY NUMBER	HOME PHONE	% OF OWNERSHIP
	HOME ADDRESS (STREET) (CITY) (STATE) (ZIP CODE)			Own Rent	How Long?	SIGNATURE: 
BANK REFERENCES	BANK		BRANCH/CITY	CONTACT	TELEPHONE ()	
	ACCOUNT UNDER THE NAME OF		ACCOUNT NUMBER		CHECKING []	SAVINGS [] LOAN []
	BANK		BRANCH/CITY	CONTACT	TELEPHONE ()	
	ACCOUNT UNDER THE NAME OF		ACCOUNT NUMBER		CHECKING []	SAVINGS [] LOAN []
LOANS/LEASES	LOAN/LEASING COMPANY		ORIGINAL LOAN/LEASE AMOUNT		TELEPHONE ()	
	START DATE (MONTH/YEAR)		TERM/MONTHLY PAYMENT		ACCOUNT NUMBER	
	LOAN/LEASING COMPANY		ORIGINAL LOAN/LEASE AMOUNT		TELEPHONE ()	
	START DATE (MONTH/YEAR)		TERM/MONTHLY PAYMENT		ACCOUNT NUMBER	
TRADE REFERENCES	COMPANY NAME		ADDRESS		CONTACT	TELEPHONE
	LANDLORD/MORTGAGEE					
TRANSACTION SUMMARY	Equipment Cost (exclusive of sales tax)		Term		Payment	Purchase Option
	Supplier of Equipment		Contact		Phone Number	New [] Used [] If used, yr. of mfgr.
	Equipment Description (Mfg., Model Number., S/N, -Attach Sales Order if Available)					

CREDIT RELEASE AUTHORIZATION

I hereby certify that the information contained in this lease application is true and accurate and I hereby authorize our banks, trade references, and financial institutions the right to release credit information. In states where permissible, I hereby authorize the filing and recording of UCC financing Statements showing the Secured Party's interest in the equipment and grant the Secured Party the right to execute Lessee's/debtors name thereto. A photostat copy of this authorization shall be as valid as the original.

SIGNATURE _____ Title _____ Date _____

The Federal Equal Credit Opportunity Act prohibits creditors from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status, age (provided the applicant has the capacity to enter into a binding contract), because all or part of the applicant's income derives from any public assistance program or because the applicant has in good faith exercised any right under the Consumer Credit Protection Act. The federal agency that administers compliance with this law is the Federal Trade Commission Equal Credit Opportunity, Washington, D.C. 20580. If your application for business credit is denied, you have the right to a written statement of the specific reasons for the denial. To obtain the statement, please contact Lessor set forth above within 60 days from the date you are notified or our decision. We will send you a written statement of reasons for the denial within 30 days for receiving your request for the statement.

Notice: To help the government fight the funding of terrorism and money laundering activities, U.S. Federal law requires financial institutions to obtain, verify and record information that identifies each person (individuals or businesses) who opens an account. What this means for you: When you open an account or add any additional service, we will ask you for your name, address and taxpayer identification number that will allow us to identify you. We may also ask to see other identifying documents.

Sales Conditions

Sold To:	Ship To:
Address:	Address:
City	City
State Zip	State Zip
Phone: Fax:	Phone: Fax:
Email:	Email:

Machine Price \$ 211,600.00

Delivery, installation, and training are included. State & Local Taxes NOT included.

The price on this proposal is related to the specific machine composition and is valid only for fourteen (14) days and is subject to sale. Prices beyond the 14 day validity are subject to change based on stock availability and foreign exchange market rates. Tooling and rigging costs are not included. This quotation replaces all previous written and verbal understandings, and the specifications and representations contained herein are the sole understanding between your Company and Biesse America.

Additional Options

Qty	Code	Description	Unit Price	Total
			Subtotal	
		Machine price		
		Total purchase price		

Payment Conditions

☐ **Standard Payment Terms:** 30% Down, 60% Prior to Shipment, 10% 30 Days After Delivery

☐ **Equipment Lease:** P.O. from Financial Institution, Terms contingent upon Biesse Management Approval.

☐ I would like to be contacted by Biesse Finance Representative on how to finance this machine at a low monthly payment of **\$ 4,063.22** (OAC, based on 60 month term).

Estimated Delivery Date: / / 20

Voltage: / 60 Hz / 3 Phase	Warranty:	Production:
Salesman:	Distributor:	Distributor Salesman:
Comments/Special Requests:		

Terms and Conditions of Sale

The foregoing proposal by BIESSE AMERICA and/or its Affiliates ("Seller") for the sale of certain machines or other items ("machines" or "goods") is subject to the following terms and conditions:

1. **CONTRACT FORMATION.** The machines that are subject of this Agreement tend to be expensive, complex and subject to varying availability. Accordingly, statements by sales personnel as well as data and descriptions regarding machines and installations are subject to change, and therefore they are not binding upon Seller unless and until expressed in a written order acceptance or confirmation as described in this paragraph, and such acceptance or confirmation is received by Buyer. **Seller will be bound only upon an agreement comprised of an order from Buyer and a written acceptance or confirmation by Seller, signed by an authorized Officer of Seller. Buyer acknowledges that it has been advised that no agent, employee, representative or dealer of Seller has any authority to bind Seller to any affirmation, promise, representation, or warranty concerning any of the products and, unless such affirmation, promise, representation, or warranty is specifically set forth in this Agreement, it does not form a basis of this bargain and shall not be enforceable against Seller.** All understandings between the parties shall be as set forth in those documents, provided that these terms and conditions shall be deemed incorporated in the contract between Seller and Buyer. Seller objects to any terms and conditions in an order from Buyer which vary the terms hereof (for clarification, an "acknowledgement" of an order is not an acceptance.) Unless otherwise agreed in writing, Buyer's acceptance of delivery of any part of the goods sold hereunder, or any payment by Buyer for such goods shall constitute Buyer's acceptance of all terms and conditions herein. In any event the machine shall be accepted if Buyer begins using it for production.

2. **DELIVERY, SHIPMENT, TITLE, RISK OF LOSS AND CLAIMS.** Delivery of goods covered hereby shall be F.O.B. at the port of entry nearest the Buyer unless otherwise specified by the Seller. Seller may, at its option, ship all of the goods covered hereby at one time or in portions from time to time. Seller shall make reasonable efforts to ship goods for delivery on or about the time stated or estimated on the confirmation of order, although time shall not be of the essence with regard to delivery of the goods. Under no circumstances will Seller be responsible for or incur any liability for damages, costs or expenses of any nature (whether general, consequential, as a penalty or as liquidated damages or otherwise) due to any delays in delivery or failure to make delivery at an agreed or specified time. Unless otherwise agreed in writing, Seller shall have absolute discretion as to mode and routing of shipments. **Title and ownership to the goods shall remain with the Seller until Seller has received full payment therefore.** Risk of loss of the goods shall pass to the Buyer upon identification of the goods to the contract. Responsibility for, and expense of preparing and filing, claims against carriers for loss or damage to goods in transit shall be that of Seller, unless F.O.B. point is something other than Buyer's facility.

3. **PRICE ADJUSTMENT.** The prices of goods covered hereby are based on the current price levels of Seller's supplies who are manufacturers of goods. In the event that, between the date of the order confirmation and the date of delivery of the goods, the cost of the goods to Seller is increased by an increase in supplier's price level, then, unless otherwise specified in the order confirmation, Buyer agrees that the amount of such increase shall be added to the price of the goods. The price to be paid by Buyer for such item shall be adjusted in the same percentage that the price level of Seller's supplies for such item increases. Should there be changes adverse to Seller in currency exchange rates or in import duties or transportation costs affecting the goods sold hereunder between the date of the order confirmation and the date of delivery of the goods, Seller may adjust the price to be paid by Buyer for goods sold hereunder, in the same percentage that the currency exchange shall have changed and may add the amount by which duties and transportation costs change.

4. **ADVANCE PAYMENTS.** Seller will start execution of the order only upon receipt of the advance sum agreed at the time of order confirmation. Should the Buyer cancel the order or unreasonably delay delivery, the Seller will retain the advance sum. Should compensation for the damages exceed the sum, the Buyer will have to pay the excess costs. No interest shall be payable upon advance payments or deposits to Buyer.

5. **CANCELLATION.** Orders frequently require a significant commitment by Seller during the period prior to delivery. An order by Buyer shall not be withdrawn for thirty (30) days to allow time for issuance of an order confirmation. After delivery of an order confirmation as described in paragraph 1, Buyer may not cancel or unreasonably delay delivery or acceptance of goods. If delivery or acceptance is unreasonably delayed by Buyer, or if the order is cancelled other than in accordance with these terms and conditions, Buyer shall pay the agreed price of the goods, and Buyer shall pay reasonable charges of Seller in handling and storing the goods which have been identified to Buyer.

6. **TERMINATION.** Upon written notice to Buyer, Seller may cancel this Agreement, while retaining its rights to possible damages, in the event Buyer ceases conducting business in the normal course, admits its insolvency, makes an assignment for the benefit of creditors or becomes the subject of any judicial or administrative proceedings in bankruptcy, receivership or reorganization.

7. **FORCE MAJEURE.** Seller shall have no liability for any non-performance or delay in performance caused by circumstances beyond Seller's control including, but not limited to, acts of God, fire, flood, war, government action, accident, labor trouble or shortage, inability to obtain material, equipment or transportation, or failure of Seller's suppliers to furnish the goods.

8. **SUPERVISION OF SETTING UP AND STARTING GOODS.** Upon request, Seller will provide a superintendent of its own selection to supervise the setting up and starting of goods. Buyer shall pay Seller for services and all expenses of the superintendent which are connected with such supervision. In providing a superintendent to supervise the setting up and starting of the goods, Seller accepts no responsibility for material and equipment or for the acts of persons furnished by Buyer. Upon request and instruction from Buyer, Seller will install machines that it sells; however, costs of installation will be charged to Buyer unless otherwise agreed and confirmed in writing by an authorized Officer of Seller. Seller shall make reasonable efforts to install goods on or about the time agreed upon between the parties, although time shall not be of the essence with regard to installation of the goods. **Under no circumstances will Seller be responsible for or incur any liability for damages, costs or expenses of any nature (whether general, consequential, as a penalty or as liquidated damages or otherwise) due to any delays in installation or failure to install at an agreed or specified time.**

9. **TAXES.** Buyer agrees to pay all personal property, sales, excise, use and other taxes applicable to the sale, purchase, storage, erection, use or ownership of the goods covered hereby regardless of whether such taxes are invoiced by Seller.

10. **PAYMENT TERMS.** All payments shall be made at the office of Seller in Charlotte, North Carolina, and payment shall not be deemed to have been made until so received by Seller. Unless otherwise agreed upon in writing by an authorized Officer of Seller, all machines must be paid in full immediately upon delivery of the goods. Should Buyer fail to pay any amount due to Seller, Seller may suspend any and all business with Buyer, **including with reference to goods and/or equipment not within the scope of this Agreement**, and may refrain from providing technical assistance and services to Buyer including telephone and on-site support and sale of parts (regardless if otherwise due pursuant to a warranty), until any and all outstanding amount including penalty, attorney fees and interest due to Seller is paid in full. Under no circumstance may Buyer set off any claim of any nature against payment for goods or services ordered by Buyer and delivered to Buyer, and any claims of Buyer allegedly giving rise to such setoff shall be waived if setoff is attempted or asserted. Any payment not made to Seller when due shall accrue interest at the annual rate of twelve percent (12%) computed for the actual period of such delinquency.

11. **NO LIABILITY TO THIRD PERSONS.** Seller shall not be liable whatsoever to Buyer for any claim or action by any third party arising out of, or alleged to rise out of, the delivery of goods covered hereby, the presence of Seller's employees on Buyer's premises in connection with this agreement or out of the use, by Buyer, or third parties, of the goods covered hereby. Buyer shall defend, indemnify and hold harmless Seller from any and all such claims, provided that such indemnification shall not apply to claims asserted by technicians contracted by Seller to perform services, unless the claim arises from an act or omission of Buyer or third parties. Third Parties shall be deemed to include, without limitation, employees of Buyer as well as all third parties not connected with Buyer or Seller.

12. **REMEDIES OF BUYER AND LIMITATION OF WARRANTIES.** Seller warrants that the goods sold hereunder shall be free, for a period of twelve months or 2200 hours of operation (whichever comes first) from the date of delivery to the Buyer, from defects in material and workmanship existing at the time of delivery to Buyer. During the warranty period, Seller will repair and replace the parts which are defective, due to bad materials or due to construction faults. Seller may, at his option, repair or replace any defective goods,

or pay the reasonable costs thereof, in the event that Buyer notifies it in writing to Seller within thirty (30) days after discovery of such defect. Seller shall have no obligation to remedy any defect except upon delivery of the defective part or parts to Seller in Charlotte, North Carolina. The Seller will not be obligated to provide anything further than repair or replacement of parts. The repair, replacement, or payment in the manner described above shall be the exclusive remedy of Buyer for breach of Seller's warranty. The warranty does not apply to damage or breakage caused in whole or in part by lack of operating skill, negligence or improper use of the machine by the Buyer. It is expressly agreed that Buyer shall have no right of recovery against Seller or any part of all the goods covered hereby. The aforementioned warranties of Seller shall be void if: (a) the goods are repaired, disassembled to any extent or changed by any person other than a technician expressly authorized by Seller and contracted by, or through, Seller; (b) safety devices are altered, modified or disabled by Buyer; c) the failure is attributable to software, tooling, accessories or ancillary equipment not sold by Seller. (Note that authorized dealers of Seller may sell such items with the knowledge of Seller; however, such items are not within the scope of Seller's warranty.) Except as specifically provided in a written warranty statement provided with the products, The foregoing warranties of Seller shall not limit Buyer's recourse against a manufacturer of goods sold hereunder for any warranty extended by such manufacturer. The warranty of any manufacturer shall not be deemed to be the warranty of Seller. **This warranty does not apply to goods that are sold with the understanding that they are used or exchanged. Buyer should receive a separate document describing the limited warranty for such goods.**

13. **GOODS MODIFICATION.** Under no circumstances will Seller accept/authorize for the goods' safety standards to be modified and/or disabled. Seller will not authorize or allow service by its employees and/or representatives (and/or third parties) on goods with modified and/or disabled safety devices. Therefore, Buyer hereby expressly authorizes in advance Seller's employees and/or representatives to restore the goods to their original safety conditions any time Seller employees and/or representatives discover that the goods safety is compromised, without need for prior approval. Buyer will bear the cost of such restoration. Buyer hereby acknowledges and agrees that any Buyer's act (including without limitation any act by its employees and/or representatives) compromising the goods safety will cause the immediate suspension of the warranty for the goods at issue. Any denial or refusal by Buyer to have the safety conditions restored as above will automatically cause the immediate suspension of the maintenance agreement, which will return into effect once the restoring of the safety conditions has been authorized by the Buyer. Buyer agrees to hold Seller harmless and indemnify Seller for any accident that may occur on goods with safety devices that were accidentally, negligently or willfully disabled/modified or which Buyer refused to restore to their original safety conditions.

14. **INDEMNIFICATION.** Buyer hereby represents that it owns a valid license as regards any and all material and/or samples for which it requests a template or specialized work. Buyer further agrees to indemnify, defend and hold harmless Seller, its directors, officers, employees and agents, and defend any third party action or threat of action, claim, demand, cause of action, debt or liability, including reasonable attorneys' fees, to the extent that such action is based upon a claim that any of the Buyer samples provided by Buyer for reproduction, or other material provided by Buyer, infringes or violates any rights of third parties, including, without limitation, rights of publicity, rights of privacy, United States patents or other patents recognized by a treaty to which the United States is a signatory, copyrights, trademarks, trade secrets and/or licenses.

15. **COMPLIANCE WITH LAWS.** Unless otherwise expressly agreed in a writing signed by Seller and Buyer, Seller shall not be liable to Buyer for, and Buyer agrees to indemnify and defend and hold Seller harmless from any liability arising or alleged to arise out of any failure of the goods covered hereby to conform to any federal, state or local law, order regulation, or standard period.

16. **INSPECTION AND CLAIMS.** Buyer shall inspect the Goods immediately on receipt and shall, within ten (10) days thereafter, give written notice to the Seller of any claim that the Goods do not conform to the terms of the contract. The goods shall be deemed to conform and the Buyer shall be bound to accept the goods upon the earlier of (a) the passage of such ten (10) day period without notice being given, or (b) any use of the goods for production. Upon such acceptance, if payment has not already been made, Buyer shall immediately pay for the goods in full. Seller shall not be liable for any claim for damages resulting from the installation or use by the Buyer of non-conforming, damaged or defective Goods.

17. **LIMITATION OF LIABILITY:** TO THE FULLEST EXTENT PERMITTED BY LAW, SELLER SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE SET UP, USE OR INABILITY TO USE ANY OF THE GOODS, INCLUDING WITHOUT LIMITATION (1) LOSS OF USE; (2) LOSS OF PRODUCTION; (3) LOSS OF OPPORTUNITY; (4) LOSS OF MARKET VALUE; (5) LOSS OF INCOME; (6) PERSONAL OR BODILY INJURY OF ANY KIND (INCLUDING PHYSICAL OR MENTAL PAIN AND SUFFERING AND EMOTIONAL DISTRESS), MEDICAL, HOSPITAL, OR REHABILITATION EXPENSES; OR (7) DAMAGE TO PERSONAL PROPERTY, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME STATES/JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATIONS MAY NOT APPLY. THE SOLE REMEDY OF THE BUYER FOR ANY BREACH OF THIS AGREEMENT BY SELLER SHALL BE FOR THE REFUND OF ANY SUMS PAID FOR GOODS AND SERVICES NOT DELIVERED BY SELLER AND AS PROVIDED UNDER THE LIMITED WARRANTY IF PROVIDED. SELLER SHALL NOT BE LIABLE FOR ANY OTHER DAMAGES WHATSOEVER.

18. **STATUTE OF LIMITATIONS.** No suit may be brought by Buyer for any breach of Seller or any other claim arising out of this contract after one (1) year from the date of delivery of the goods covered hereby.

19. **GOVERNING LAW, VENUE.** This contract shall be deemed to have been made in the State of North Carolina, and any action arising out of it shall be resolved in the state or federal courts having within their jurisdiction Mecklenburg County, North Carolina.

20. **MEDIATION AND ARBITRATION.** If a dispute arises out of or related to this contract, or the breach thereof, and if the dispute cannot be settled through negotiation, the parties agree first to try in good faith to settle the dispute by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures before resorting to arbitration. In the event such mediation fails, the parties hereby agree submit any controversy or claim arising out of or relating to this Agreement, or the breach thereof, to arbitration pursuant to the Commercial Rules of the American Arbitration Association ("AAA"), as modified herein. At least one arbitrator ("the technical arbitrator") shall have technical knowledge derived from experience in the sale or operation of complex production machinery. The arbitrator may be appointed by the AAA if the parties are unable to agree upon arbitrators, and the AAA may dispense with allowing parties to reject a technical arbitrator without cause. Upon the initiation of an arbitration claim, Seller shall be allowed access to the machine at issue to allow its personnel and experts at any reasonable time to examine and test the machine. If payment is withheld based upon an alleged setoff, the arbitrator(s) shall, within thirty (30) days of appointment conduct a hearing and order payment of the setoff amount. The arbitrator shall strictly apply the terms of this Agreement and shall not be authorized to award any remedy, except as stated in this Agreement or expressly consented in writing by the party against whom the remedy is granted. All mediation and arbitration proceedings held pursuant to this arbitration provision shall be conducted in Charlotte, North Carolina. This arbitration provision shall not limit the right of either party during any dispute, claim or controversy to seek, use and employ ancillary, provisional or preliminary rights and/or remedies, judicial or otherwise, for the purposes of realizing upon, preserving, protecting, foreclosing upon or proceeding under forcible entry and detainer for possession of any personal property, and any such action shall not be deemed an election of remedies. This includes, without limitation, obtaining injunctive relief or a temporary restraining order, invoking a power of sale under any security agreement, deed of trust or mortgage, obtaining a writ of attachment, order for claim and delivery or imposition of a receivership or exercising rights relating to personal property, including taking or disposing of such property with or without judicial purposes pursuant to Article 5 of the Uniform Commercial Code. The Federal Arbitration Act (Title 9 of the United States Code) shall apply to the construction, interpretation, and enforcement of this arbitration provision.

21. **NO SELLER INTEREST IN FINANCING.** Although Seller has allowed an entity (Biesse-America Leasing or Intermac Leasing) which provides lease or other financing for Seller's products to use "Biesse" or "Intermac" in its trade name and Seller may provide information about such entity as a convenience to customers, Buyer acknowledges that Seller has no interest in such entity and is in no way responsible for its operation.

22. **RESERVATION OF RIGHTS.** No failure of Seller to insist upon or compel compliance by Buyer with any of the terms, provisions or conditions hereof shall be construed as a waiver by Seller of its right to insist upon compliance therewith in the future.

23. **COMPLETE AGREEMENT: MODIFICATION.** The provisions hereof are intended as a complete and exclusive statement of the terms of the agreement between Seller and Buyer. This agreement may not be modified, rescinded, or cancelled and no waiver by Seller of any claim or right hereunder shall be effective, except by writing signed by an officer of Seller. This Contract will be binding on the parties and their respective heirs, personal representatives, successors, and permitted assigns, and will inure to their benefit.

24. **ACCEPTANCE OF CONDITIONS.** The Buyer declares explicitly that, after having read the Seller's Sales Conditions in full, he accepts them unconditionally. The parties to this Contract represent that they have negotiated and understand its provisions and agree that no presumptions should be made against the drafter.

25. **SUCCESSORS AND ASSIGNS.** Buyer may not assign this Agreement (including by operation of law) without the prior written consent of Seller. Any such attempt to assign shall be null and void. This Contract will be binding on the parties and their respective heirs, personal representatives, successors, and permitted assigns, and will inure to their benefit. Nothing in the Agreement is intended to or shall confer on any Person other than the parties hereto or their respective permitted successors or assigns, any rights or remedies under or by reason of this Agreement.

26. **SECURITY INTEREST.** To secure the payment of purchase price and any other amounts due to Seller from Buyer under the terms of this agreement, Buyer hereby grants to Seller (as Secured Party) a purchase money security interest in the Goods and the Proceeds thereof. Buyer hereby gives Seller the authorization to sign and file a financing statement (UCC I Form) securing the Interest of Seller to the goods. To enforce Seller's security interest, Seller shall have all of the rights and remedies available to a secured party under the Uniform Commercial Code and other applicable laws, including but not limited to the following rights: to enter Buyer's premises or any other place where the Goods may be and take possession of assemble, and collect the same; to require Buyer to assemble the Goods and make the same available at a place designated by Seller to allow Seller to take possession or dispose of the Goods; to retain the Goods in satisfaction of the obligations of Buyer thereunder to sell. In one or more transactions and from time to time thereafter, all or part of the Goods at public or private sale, and to purchase at any sale, public or private (and all sales may be at such price or prices, upon such terms, by such terms, by such methods, and manner, and at such time and place as Seller shall determine, provided that the same are commercially reasonable); and to give any required notice to Buyer by mailing it, postage prepaid, at least five (5) days before the event, if any, which is the subject of the notice, to Buyer's business address as it appears hereon. Buyer acknowledges that this is a Commercial Transaction arising out of the sales of Goods for business purposes, and, upon Buyer's failure to pay the purchase price, Seller may seek an immediate writ of possession from a court of appropriate jurisdiction without prior notice or hearing. Buyer hereby waives any and all rights which Buyer may have to notice or hearing prior to seizure of the Goods following default in payment of the purchase price when due.

27. **SEVERABILITY.** If a provision of this Contract is determined to be unenforceable in any respect, the enforceability of the provision in any other respect and of the remaining provisions of this Contract will not be impaired.

NOTE

- CERTAIN LIMITED WARRANTIES ARE EXPRESSLY PROVIDED HEREIN OR IN AN ORDER CONFIRMATION. SELLER DISCLAIMS ALL OTHER WARRANTIES WHATSOEVER, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED.
- This quote or proposal is for evaluation by a potential customer. IT IS NOT AN OFFER OF A CONTRACT, AND IT IS SUBJECT TO CONDITIONS AND AVAILABILITY THAT MAY EXIST AT THE TIME THAT THE CUSTOMER DESIRES TO PLACE AN ORDER. Upon receipt of an order, BIESSE AMERICA will consider all factors and either contact the customer for modification or accept the order in a formal writing. Accordingly, NO CONTRACT SHALL EXIST UNTIL AN ORDER HAS BEEN ACCEPTED BY BIESSE AMERICA IN A WRITING SIGNED BY AT LEAST ONE OF ITS AUTHORIZED OFFICERS.
- Any order will be subject to the Standard Terms and Conditions of Biesse America attached above.

I have read and understood all terms and conditions of this Quote, consisting of pages 1-28 and I hereby agree to place an order, subject to these Terms & Conditions.

Quote acknowledged by:

Signature: _____

Print Name: _____

Title: _____

Date: _____



Service & Parts

Direct, seamless co-ordination of service requests between Service and Parts. Support for Key Customers by dedicated Biesse personnel, either in-house and/or at the customer's site.

Biesse Service

- ✓ Machine and system installation and commissioning.
- ✓ Training centre dedicated to Biesse Field engineers, subsidiary and dealer personnel; client training directly at client's site.
- ✓ Overhaul, upgrade, repair and maintenance.
- ✓ Remote troubleshooting and diagnostics.
- ✓ Software upgrade.

Biesse Parts

- ✓ Original Biesse spares and spare kits customised for different machine models.
- ✓ Spare part identification support.
- ✓ Offices of DHL, UPS and GLS logistics partners located within the Biesse spare part warehouse, with multiple daily pick-ups.
- ✓ Order fulfilment time optimised thanks to a global distribution network with de-localised, automated warehouses.

Biesse Group

In

1 industrial group, 4 divisions and 8 production sites.

How

€ 14 million p/a in R&D and 200 patents registered.

Where

30 branches and 300 agents/selected dealers.

With

customers in 120 countries, manufacturers of furniture, design items and door/window frames, producers of elements for the building, nautical and aerospace industries.

We

2,800 employees throughout the world.

Biesse Group is a multinational leader in the technology for processing wood, glass, stone, plastic and metal.

Founded in Pesaro in 1969, by Giancarlo Selci, the company has been listed on the Stock Exchange (STAR segment) since June 2001.

 **BIESSEGROUP**

 **BIESSE**

 **INTERMAC**

 **DIAMUT**

MECHATRONICS

