



De Groot
bewerkingsmachines



Technical description

Biesse Rover A 2243 FT

With infeed and outfeed system

Brand:	BIESSE
Type:	Rover A 2243 FT
Year:	2017
Condition:	Used
M.No.:	14427
Ref. No:	EXG030726
Location:	Netherlands
Available:	Direct
Export price:	€ 130.000,- EXW Warehouse Rosmalen Netherlands
Loading:	Included (on trailer)

**= Subject to availability of the new machine*

01. Machine bed and frame are made of welded and stabilized steel. The machine has a fixed base frame with the X-movement of the very heavily constructed crossbar at the rear from left to right. The Y movement of the machining unit is forward and backward across the cross guide. The Z-movement is the high-low setting of the machining unit over the cross guide. The movement of the three machine axes takes place on precision ground guides with moving linear blocks with revolving balls on them.



02. Work table, reference points, multi-zone and material handling

02A. The work surface consists of a grid table with dimensions of 4,300 x 2,205 mm. The grid table has a grid of 30 mm and vacuum openings of 9 mm in a grid of 150 mm in the X and Y directions.

02B. The grid table is equipped with 2 pneumatic zero point cams on the left and right side, and 2 pneumatic zero point lines at the front and 2 zero point lines at the rear. The grid table is also equipped with two high-precision stops at the front (1 left front and 1 right front) to accurately position materials if they are loaded manually.

02C. The work table is equipped with the Multizone system. This means that the work table is divided into 12 segments which can be switched independently of each other from the vacuum control. For details see technical layouts.

02D. Input and output automation equipped with label machine.

The machine is equipped with an automatic input of materials. For this purpose, a scissor table is placed on the left side of the machine, which is positioned under a CNC machine - controlled arm (see photo).



The operator places the pallet with materials in the scissor table (max weight 6 tons, stack height max 560 mm)

After the scissor table has been positioned, the material is automatically aligned by the CNC-controlled arm, using the roller system mounted on it. After alignment, labelling of the materials will take place. For this purpose, a label printer with label applicator has been placed on the CNC-controlled arm to be able to stick the label on the material (0-90 degrees).

After the materials have been labelled on the input table, the CNC-controlled arm takes the material to the transfer section using vacuum suction units, after which the bridge construction of the Rover AG takes over the transport. The vacuum pistons on the CNC-controlled arm are equipped with a double circuit to disconnect porous materials.

The bridge construction of the Rover AG is equipped with vacuum suction units in the Y direction, which take over the material to be processed and transport it further to the machine work table.

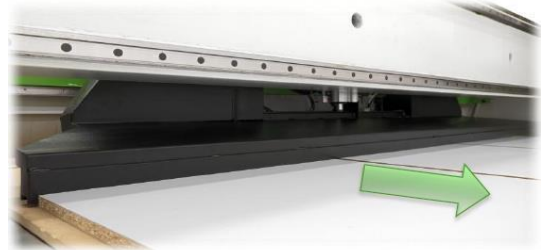


The thickness of material that can be automatically loaded/unloaded is 3 – 50 mm, assuming a suction plate of 8-25 mm.

After milling the materials, the machine can slide the milled material onto the discharge conveyor belt with a length of 4,800 mm using a shearing system (sweeper arm). Max length to be executed 4,300 mm.

This sweeper arm is controlled by a servo motor and ball screw to the correct height to discharge materials, so not pneumatically. This makes it possible to process thin materials (min. 3 mm) and increases the extraction quality of the sweeper arm.

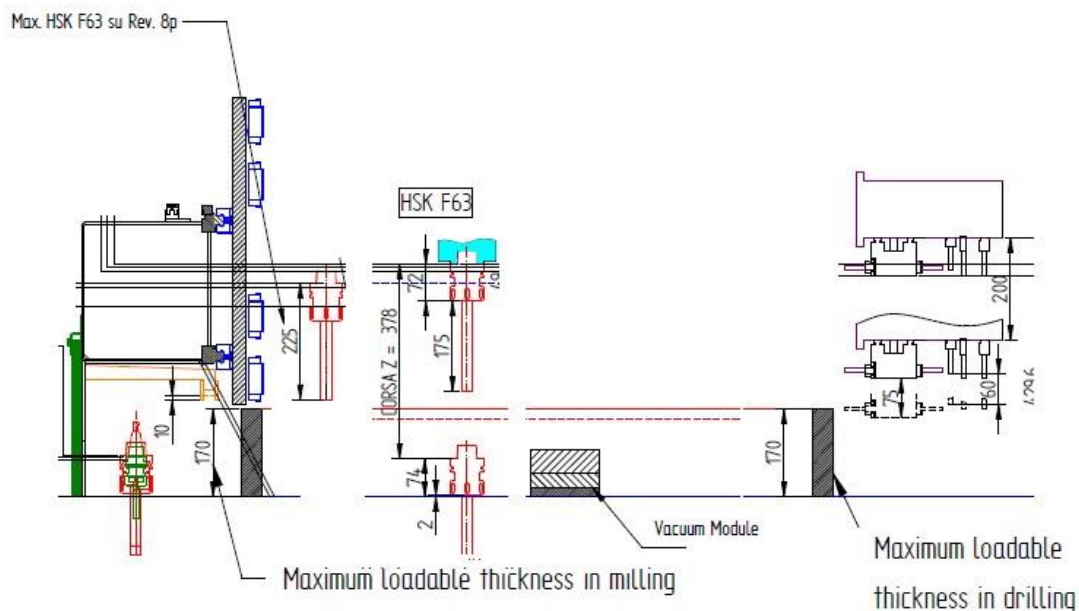
The output conveyor belt is equipped with an extraction option to vacuum materials clean during transport on the discharge conveyor belt. A collection point for dust extraction has also been placed at the end of the discharge conveyor belt.



03. 03 Working range and control of the axes

03A. The working range of the machine between the zero points is 4,300 x 2,205 x 170 mm.

03B. The stroke of the machine in X: 5,580 mm, in Y: 2,917 mm in Z: 378 mm.



03C. The speed on the X-axis: 85 m/min, on the Y-axis: 60 m/min.

03D. The speed on the Z axis is programmable between 0 and 20 m/min.

03E. The axes are driven by brushless digital DC servo motors. The X-axis and Y-axis are moved by a servo motor with a precision rack and pinion with a pre-stressed helically ground gear for backlash elimination.

03F. The Z axis is moved by a servo motor with a precision recirculating spindle with ball screw nut. This axis is locked in the event of a power failure.

04. Machine control and management

04A. The control of the machine axes is completely digital, which has a number of important advantages:

- Higher milling speeds with greater accuracy due to greater data transport speed.
- Higher reliability due to the elimination of a lot of wiring that is typical for analogue systems. (data via one central cable)

04B. CNC numerical control type BH660.

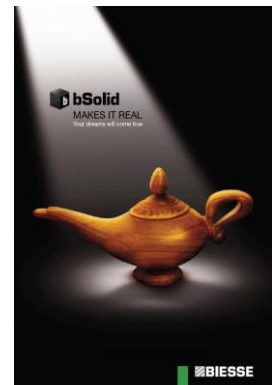
This control offers the following options.

- Continuous CNC control with microprocessor, specially designed for machine centers based on a standard P.C. equipped with a very user-friendly menu-driven software.
- Modular flexible structure consisting of:
- The main computer which is equipped with the latest technology regarding processor, memory, hard drive, etc.
- Windows 7
- The control panel with 19" color monitor.
- An alphanumeric software keyboard for starting the main functions.
- An extra standard keyboard with standard mouse.

05. Programming by bSolid software.

The Biesse software bSolid Base is included for programming the machine, including the modules below. Machine license and office license with 1 USB key.

- bNest module for nesting programs from a full board.



06 Control box.

All further control components are housed in a special cabinet, which is connected to the machine frame (position see layout), which is equipped with air conditioning.

07. Processing unit

The processing unit of the machine is equipped with:

07A. A vertical milling motor with a power of 13.2 kW (17.7 hp) with an HSK-63F recording. This milling motor is equipped with a controlled extractor hood to achieve optimal results regardless of the tool length. The milling motor is also prepared for the subsequent installation of a CNC-controlled rotary axis (C-axis) for controlling any right-angled aggregates in the horizontal plane. The milling motor is already equipped with a steel ring with recesses to allow the use of any angled aggregates. These aggregates are then used in the position as they are placed in the exchanger.



07B. A drilling unit BH10L with ten independent vertical drilling spindles, arranged in an L-shape. Six spindles in the X direction and four spindles in the Y direction. The center distance of the spindles is 32 mm. The speed of the drilling unit is infinitely adjustable up to 6000 rpm to achieve a perfect result with different materials.

07C. A tool changing magazine at the rear of the milling motor, consisting of an 8-position turret changer. This changer runs with the processing unit in the X and Y directions. From here the milling motor can change the tools.

08. Milling motor control

1 static frequency converter that allows the milling motors to be infinitely programmed in speed, with motor braking and left/right rotation of the milling motor, and control of the drilling unit.

09. Length measuring system for milling tools

A measuring system to measure the length of the cutters used. When inserting tools into the machine, you can activate the function for measuring the length of the cutter. The milling motor will use the tool to activate a micro sensor mounted on a pressure plate. The length of the cutter is then automatically adjusted in the tool list. This ensures perfect adjustment of the tools.



10. Central pneumatics and lubrication system.

10A. Centralized pneumatic system, consisting of a filter unit, pressure regulator, lubrication system and a minimum pressure switch.

10B. Centralized automatic lubrication system for fully automatic lubrication of the machine shafts, guides, racks and ball screws. This lubrication is under the control of the control, which is also provided with a signal on the screen if insufficient lubricant is present.

11. Vacuum pumps and valves.

Three vacuum pumps, each with a capacity of 300 m³/hour, complete with valves to apply vacuum to the workpiece. These are claw pumps with maximum suction power and minimal maintenance costs during the life of the machine.

12. Remote control.

The portable control unit is designed as a console with display and compact keyboard, which allows a number of important functions to be performed:

- Resetting the machine axes.
- Manual movement of all axes of the machine.
- Adjusting the speed of the machine.
- Controlling the speed of the milling motor and drilling unit
- Selecting the drill spindles for tool changes.
- Perform tool change cycles of the milling motor.
- Selection of reference stops
- Start, pause or stop programs
- Controlling the vertical movement of the extractor hood of the milling motor to view the machining during a test run.



14. General.

14A. Tools and special clamping jigs are not included in the quotation.

14B. Working pressure for air 7 kg/cm².

14C. Voltage 380 Volt, 50 Hz.

14D. In accordance with the CE guidelines, the machine is equipped with:

- Photocell protection on the front.
- Mechanical stops and safety switches to protect the operator.
- Protective cover over the processing unit.
- Safety fencing at the rear and sides.

(All changes, mistakes in technical data, info and prices reserved. Availability subject to prior sales. No guarantee on printed data!)

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