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› [BEILOCKERY](#) /

› BEILOCKERY RCOG-16V Drilling and Milling Machine User Manual

BEILOCKERY RCOG-16V

BEILOCKERY RCOG-16V Drilling and Milling Machine User Manual

Model: RCOG-16V

1. INTRODUCTION

This manual provides essential information for the safe and effective operation, setup, and maintenance of the BEILOCKERY RCOG-16V Drilling and Milling Machine. Read and understand all instructions and safety warnings before operating the machine. Keep this manual for future reference.

2. SAFETY INSTRUCTIONS

Always prioritize safety when operating machinery. Failure to follow safety guidelines can result in serious injury or damage to the equipment.

- Wear appropriate personal protective equipment (PPE), including safety glasses, hearing protection, and suitable work attire.
- Ensure the work area is clean, well-lit, and free from obstructions.
- Securely fasten the workpiece using appropriate clamps or vises before beginning any operation.
- Never leave the machine unattended while it is running.
- Disconnect power before performing any maintenance, adjustments, or tool changes.
- Keep hands and fingers clear of moving parts, cutting tools, and the spindle area.
- Do not operate the machine if you are fatigued or under the influence of drugs or alcohol.
- Ensure proper ventilation to avoid inhaling dust or fumes.
- The transparent acrylic baffle should always be in place during operation to prevent splashing fragments.

3. PRODUCT OVERVIEW

The BEILOCKERY RCOG-16V is a versatile drilling and milling machine designed for metal and woodworking tasks. It features a 600W brushless motor, variable speed control, and an all-metal construction for durability and precision.



This image provides various perspectives of the BEILOCKERY RCOG-16V, showcasing its design and construction from different sides.



These images provide additional views of the BEILOCKERY RCOG-16V, illustrating its overall structure.

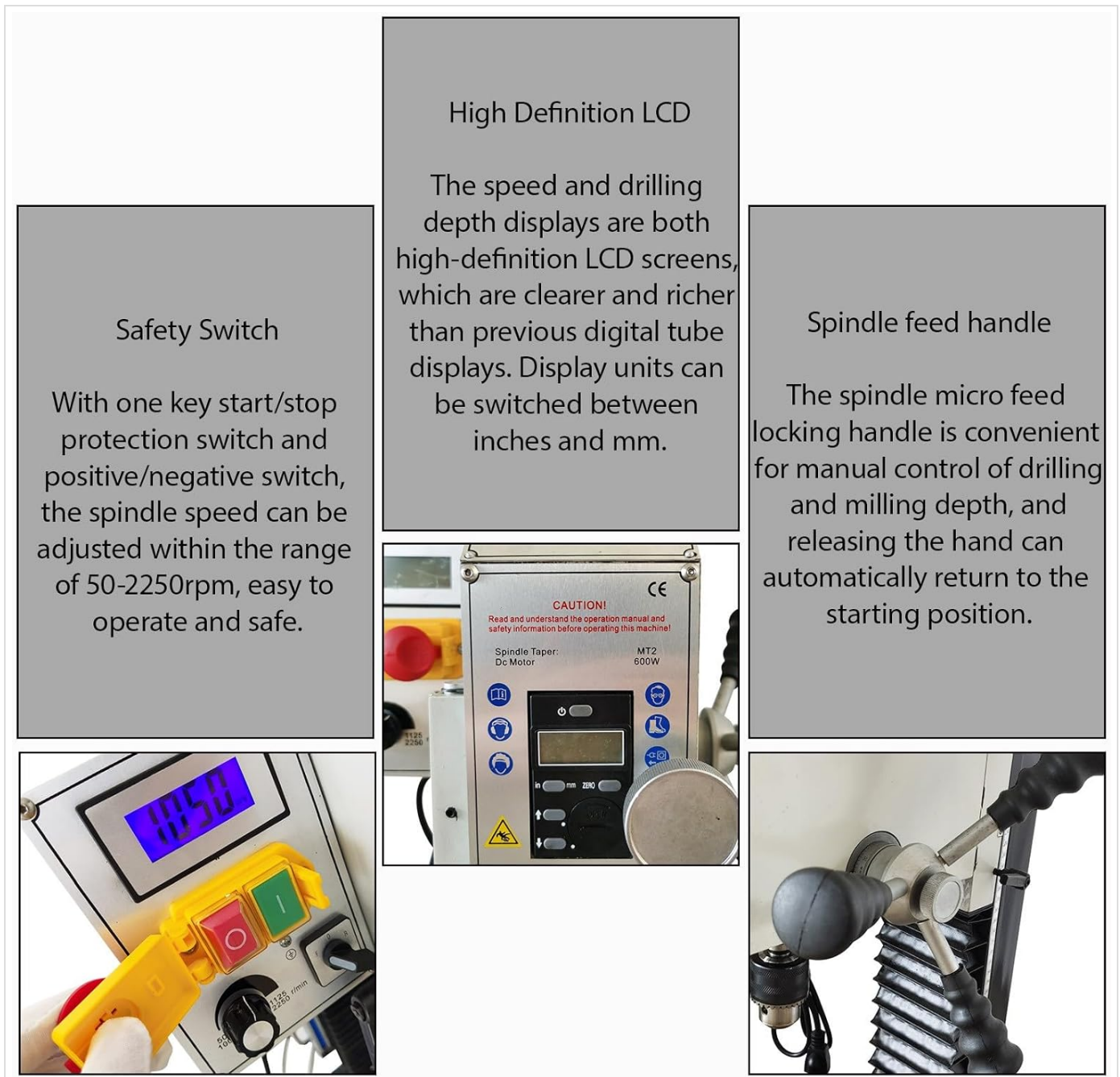
Key Features:

- **All-Metal Construction:** Integrated spindle and brass gear design for enhanced vibration resistance and wear durability.
- **600W Brushless Motor:** High-power motor for continuous operation, smooth performance, low noise, and extended service life.
- **Precise Control:** Equipped with precision scales and adjustment devices for accurate machining. Note: This machine uses metric scales.

- **Adjustable Speed:** Spindle speed range of 50-2250 RPM, allowing adjustment for various materials and processing requirements.
- **Multifunctional:** Capable of drilling, milling, precision part processing, sample processing, and model making.

4. COMPONENTS AND CONTROLS

Familiarize yourself with the main components and controls of the RCOG-16V machine.



This image details key control features. The High Definition LCD displays speed and drilling depth, switchable between inches and millimeters. The Safety Switch provides one-key start/stop and spindle speed adjustment (50-2250rpm). The Spindle Feed Handle allows for manual control of drilling and milling depth, returning automatically to the start position.

Brushless Motor

The motor power is up to 600W! Adopting high-quality brushless motors with overload and overheating protection functions, the speed can reach 2250RPM, featuring high efficiency, low energy consumption, low noise, long lifespan, and low maintenance costs.



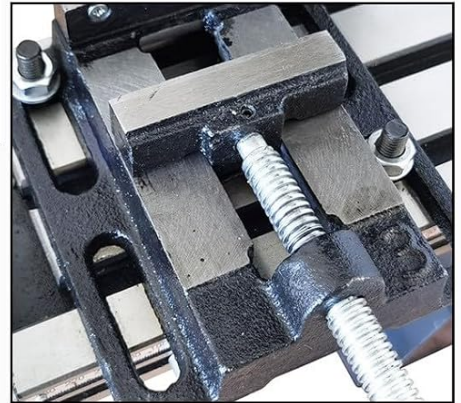
Tiltable machine head

The machine head can be tilted left and right by loosening the fixing screws of the machine head, with a tilt angle range of up to 90°, which is convenient for drilling and milling operations at special angles.



Bench Clamp

The workbench is equipped with clamps, which facilitate the clamping of different objects for processing, saving time and effort.



This image highlights the 600W Brushless Motor, offering high efficiency and low noise. It also shows the Tiltable Machine Head, which can be angled up to ± 90 degrees for specialized operations, and the Bench Clamp for securing workpieces.

- **High Definition LCD:** Displays spindle speed and drilling depth. Units can be switched between inches and millimeters.
- **Safety Switch:** Main power control for starting and stopping the machine. Includes spindle speed adjustment.
- **Spindle Feed Handle:** Used for manual micro-feed control of the spindle for drilling and milling depth. It automatically returns to the starting position when released.
- **Brushless Motor:** The 600W motor provides power for various operations.
- **Tiltable Machine Head:** The head can be tilted left and right up to ± 90 degrees by loosening fixing screws, allowing for angled drilling and milling.
- **Bench Clamp:** Used to secure workpieces to the workbench.
- **Baffle:** A transparent acrylic shield that rotates to prevent processing fragments from splashing.

5. SPECIFICATIONS



Model: RCOG-16V
Voltage: AC110V/60Hz
Motor power: 600W brushless motor
X axis stroke: 8.66"(220mm)
Y axis stroke: 6.30"(160mm)
Z axis stroke: 8.27"(210mm)
Spindle incline Angle: $\pm 90^\circ$
(The nose can actually rotate 360 degrees)
Max. drilling diameter: 0.63"(16mm)
Max. Face screening capacity: 2.05"(52mm)
Max. vertical milling capacity: 0.63"(16mm)
Distance from spindle to table: 13.8"(350mm)
Spindle taper: MT2
Spindle stroke: 2.05"(52mm)
The Range of spindle speeds: 50-2250rpm
Table size: 19.68"*5.51"(500mm*140mm)
T groove width: 0.39"(10mm)

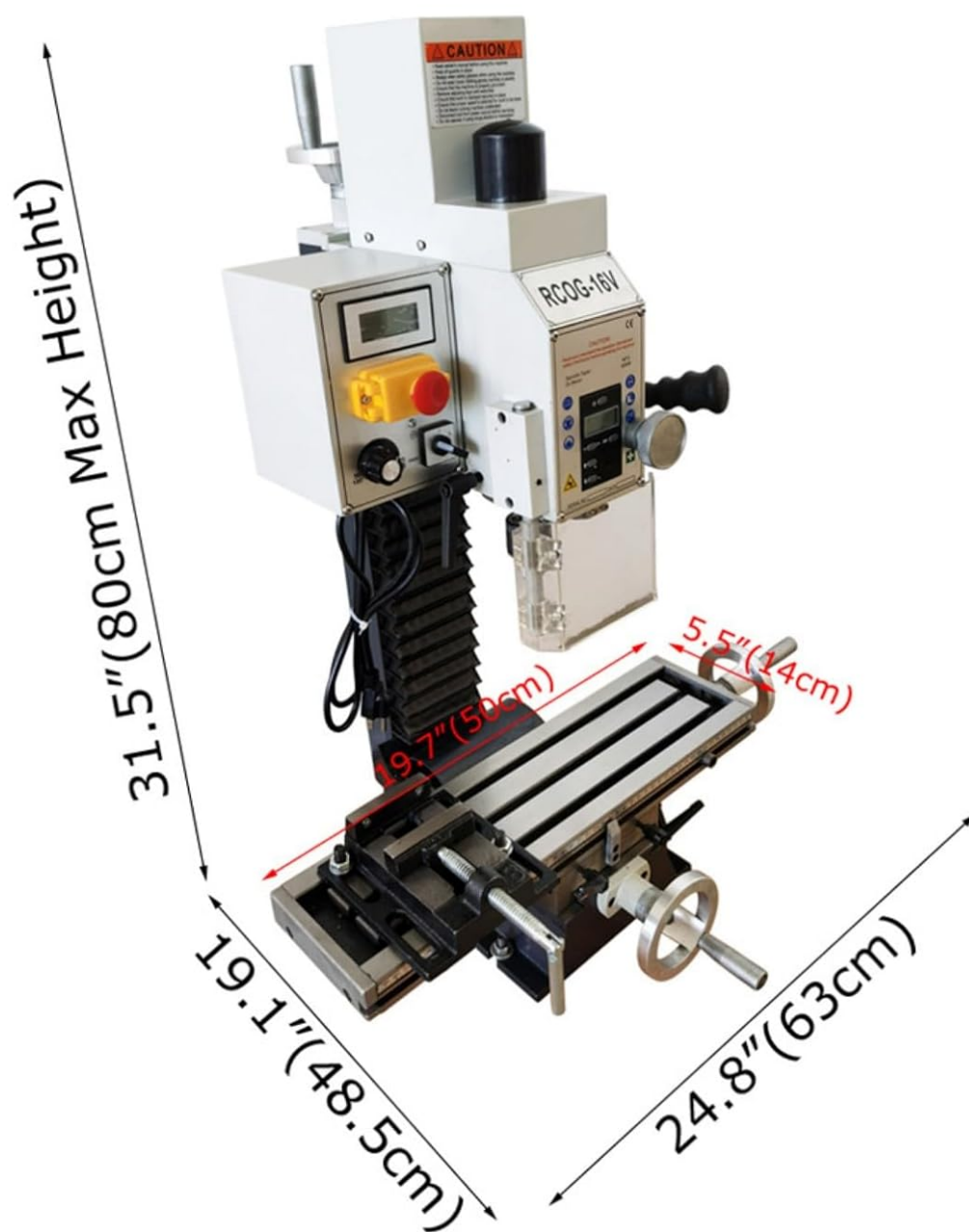
Baffle
By rotating the acrylic transparent baffle, you can clearly observe the processing process, and it can also effectively prevent processing fragments from splashing onto the face, ensuring personal safety.

This image provides a summary of the RCOG-16V's technical parameters, including model, voltage, motor power, axis strokes, spindle incline, drilling/milling capacities, spindle taper, speed range, and table size. It also shows the transparent acrylic baffle, designed to prevent processing fragments from splashing.

Parameter	Value
Model	RCOG-16V
Voltage	AC110V/60Hz
Motor Power	600W Brushless Motor
X-axis Stroke	8.66" (220mm)
Y-axis Stroke	6.30" (160mm)

Parameter	Value
Z-axis Stroke	8.27" (210mm)
Spindle Incline Angle	±90° (360° rotation possible)
Max. Drilling Diameter	0.63" (16mm)
Max. Face Milling Capacity	2.05" (52mm)
Max. Vertical Milling Capacity	0.63" (16mm)
Distance from Spindle to Table	13.8" (350mm)
Spindle Taper	MT2
Spindle Stroke	2.05" (52mm)
Spindle Speed Range	50-2250rpm
Table Size	19.68" x 5.51" (500mm x 140mm)
T-groove Width	0.39" (10mm)
Net Weight	163.1 LB (74kg)
Gross Weight	195.1 LB (88.5kg)
Product Dimensions	24.8 x 19.1 x 31.5 inches
Part Number	S028417
UPC	198462854238

Package size: 23.6"*19.7"*30.3"(60cm*50cm*77cm)
Net weight/Gross weight: 163.1LB(74kg)/195.1LB(88.5kg)



This image illustrates the BEILOCKERY RCOG-16V machine, highlighting its overall dimensions: 31.5 inches (80cm) maximum height, 19.1 inches (48.5cm) depth, and 24.8 inches (63cm) width. The table size is 19.68 inches (50cm) by 5.51 inches (14cm).

6. UNPACKING AND SETUP

6.1 Unpacking

1. Carefully remove the machine and all accessories from the packaging.
2. Inspect all components for any signs of damage during transit. Contact customer support immediately if any damage is found.
3. Retain packaging materials for potential future transport or returns.

6.2 Placement

- Place the machine on a sturdy, level workbench capable of supporting its weight (approx. 195.1 lbs / 88.5 kg gross weight).
- Ensure adequate clearance around the machine for safe operation and maintenance.
- Connect the machine to a grounded AC110V/60Hz power outlet.

7. OPERATION

7.1 Basic Operation

1. Ensure the workpiece is securely clamped to the table.
2. Select the appropriate cutting tool and install it correctly into the spindle taper (MT2).
3. Turn on the machine using the safety switch.
4. Adjust the spindle speed using the control knob on the safety switch panel.

7.2 Speed Adjustment

The spindle speed can be adjusted continuously within the range of 50-2250 RPM. Refer to material guidelines and tool specifications for optimal speed settings. The High Definition LCD will display the current speed.

7.3 Drilling Operations

1. Install the drill chuck and desired drill bit.
2. Position the workpiece and align the drill bit with the desired drilling point.
3. Adjust the spindle speed.
4. Slowly lower the spindle using the spindle feed handle, applying steady pressure.
5. Monitor the drilling depth on the LCD.

7.4 Milling Operations

1. Install the appropriate milling cutter.
2. Position the workpiece and adjust the X, Y, and Z axes for the desired cut.
3. Adjust the spindle speed.
4. Engage the milling cutter with the workpiece, making shallow passes as needed.

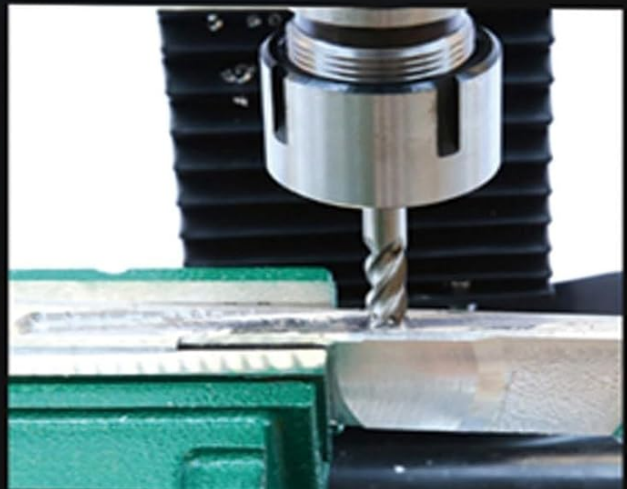
7.5 Spindle Head Tilting

For angled operations, loosen the fixing screws on the machine head. Tilt the head to the desired angle (up to ± 90 degrees) and securely tighten the screws before operation.

Application



Drilling Function



Slotting Function



Plane milling Function



Chamfering Function

This image demonstrates the versatile applications of the machine, including drilling holes, creating slots, performing plane milling on surfaces, and chamfering edges.

7.6 Operation Videos

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Demonstration of the BEILOCKERY RCOG-16V Drilling and Milling Machine in operation, showcasing its functionality.

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A short video illustrating the precision and control capabilities of the RCOG-16V machine during a task.

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Overview of the BEILOCKERY RCOG-16V's features and how they contribute to efficient metalworking.

8. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your machine.

- **Cleaning:** After each use, clean the machine thoroughly, removing all chips, dust, and debris. Use a brush or vacuum; avoid compressed air directly into sensitive components.
- **Lubrication:** Periodically lubricate moving parts, such as lead screws and slide ways, according to the manufacturer's recommendations. Use the provided oil can for this purpose.
- **Inspection:** Regularly inspect all fasteners, belts, and electrical connections. Tighten any loose fasteners and replace worn components as necessary.
- **Tool Care:** Keep cutting tools sharp and clean. Dull tools can lead to poor performance and increased wear on the machine.

9. TROUBLESHOOTING

This section addresses common issues you might encounter. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
Machine does not power on	No power supply; Safety switch off; Emergency stop engaged	Check power connection; Ensure safety switch is ON; Disengage emergency stop button
Spindle not rotating	Motor issue; Speed setting too low; Overload protection activated	Check motor connections; Increase speed setting; Allow motor to cool if overloaded
Excessive vibration or noise	Loose components; Unbalanced workpiece/tool; Worn bearings	Tighten all fasteners; Ensure workpiece/tool is balanced; Inspect and replace bearings if necessary
Poor cutting performance	Dull cutting tool; Incorrect speed/feed rate; Improper tool installation	Replace or sharpen tool; Adjust speed/feed rate; Reinstall tool correctly

10. INCLUDED ITEMS

The following items are included with your BEILOCKERY RCOG-16V Drilling and Milling Machine:



This image displays the items included with the machine: an operator's manual, milling chuck set, drill chuck, drill chuck retaining pin, bench clamp, fork wrenches, drill chuck wrench, oil can, cross screwdriver, straight screwdriver, and hexagon wrenches.

- Drilling and Milling Machine (RCOG-16V) x1
- Milling Chuck Set x1
- Drill Chuck x1
- Drill Chuck Retaining Pin x1
- Bench Clamp x1
- Fork Wrench x2
- Drill Chuck Wrench x1
- Oil Can x1
- Cross Screwdriver x1
- Straight Screwdriver x1
- Hexagon Wrench x4
- English Manual x1

11. WARRANTY AND SUPPORT

For warranty information, technical support, or replacement parts, please contact BEILOCKERY customer service. Refer to your purchase documentation for specific warranty terms and contact details.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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