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Powermatic 209 (1791296)

Powermatic 20-Inch Planer Instruction Manual

Model 209 (1791296)

Brand: Powermatic

1. Product Overview

The Powermatic 20-Inch Planer, Model 209, is a heavy-duty woodworking machine designed for precise material removal and surface finishing. It features a robust 5-HP motor and a 20-inch planing capacity, suitable for demanding tasks. This planer is equipped with a straight knife cutterhead and offers multiple feed rate options for versatile operation.

Key Features:

- **Cutterhead:** Four high-speed steel straight knives for clean, smooth cuts.
- **Feed Rates:** Standard 24 and 31 FPM, with an included gear for lower speeds of 16 and 20 FPM.
- **Working Area:** Cast iron table with extensions provides a 55-1/2 inch x 20 inch working surface.
- **Snipe Reduction:** Chip breaker and pressure bar are designed to minimize snipe.
- **Rollers:** Serrated steel infeed roller and smooth steel outfeed roller support a maximum depth of cut of 1/8 inch and a maximum planing thickness of 8 inches.
- **Mobility:** Integrated locking casters and pull-out lifting rods for easy movement within the workshop.
- **Adjustments:** Chrome-plated, ergonomic handwheel for smooth and easy adjustments.



Image 1.1: The Powermatic 20-Inch Planer, Model 209, showcasing its robust construction and design.

2. Setup and Installation

2.1 Unpacking and Placement

Carefully unpack the planer and all its components. The machine weighs 770 pounds, so ensure adequate lifting equipment and personnel are available. Place the planer on a stable, level surface in your workshop. The integrated locking casters and pull-out lifting rods facilitate positioning.



Image 2.1: The Powermatic 209 Planer, highlighting its design for shop mobility with integrated casters.

2.2 Electrical Connection

The planer requires a 230V, 1-phase power supply. Ensure your electrical system can support the 5 HP motor and 23 Amps. Consult a qualified electrician for proper wiring if necessary. The video below demonstrates the starting procedure using the buss bar.

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Video 2.1: This video provides instructions on how to start Powermatic Planers using the buss bar, demonstrating the electrical connection and initial power-up sequence.

2.3 Dust Collection

Connect a dust collection system to the 5-inch dust port to maintain a clean working environment and optimize planer performance. Efficient dust collection is crucial for safety and machine longevity.

2.4 Extension Tables

Attach the cast iron extension tables as per the manual's instructions to expand the workpiece support area, especially for larger materials.

3. Operating Instructions

3.1 Adjusting Planing Thickness

Use the chrome-plated, ergonomic handwheel to adjust the planing thickness. The precision ground and polished cast iron table rides on four steel columns, providing stable support for the workpiece during height adjustments. Locking knobs can be mounted to either side of the table for convenience.



Image 3.1: Detail of the planer's height adjustment mechanism and locking knobs.

3.2 Selecting Feed Rate

The planer offers two standard feed speeds: 24 and 31 feet per minute (FPM). An included gear allows for conversion to lower speeds of 16 and 20 FPM. Select the appropriate feed rate based on the material type and desired finish. The 2-speed oil bath gearbox transmits full power to the feed rollers.



Image 3.2: View of the planer's feed rate adjustment mechanism, showing the gears and chain drive.

3.3 Feeding Material

Ensure the workpiece is free of foreign objects. Feed the material smoothly into the planer. The corrugated infeed and fine groove outfeed rollers ensure a consistent feed. Anti-kickback fingers and a pressure bar are positioned close to the cutterhead for safety and to achieve an exceptional finish.



Image 3.3: Close-up of the four-blade straight knife cutterhead, responsible for material removal.

4. Maintenance

4.1 General Cleaning

Regularly clean the planer, especially after use, to remove sawdust and debris. Ensure the dust port and internal channels are clear to maintain efficient dust extraction.

4.2 Knife Inspection and Replacement

Periodically inspect the four high-speed steel knives for sharpness and damage. Dull or chipped knives can lead to poor finish quality and increased motor strain. Replace knives as needed, following the instructions in the full product manual. A knife setting gauge is included for accurate installation.

4.3 Lubrication

The gearbox operates in an oil bath; ensure proper oil levels are maintained as specified in the comprehensive manual. Other moving parts may require periodic lubrication.

4.4 Belt Inspection

Inspect the three V-belts that run on multi-groove pulleys for wear and tension. Replace worn belts to ensure optimal power transmission to the cutterhead.



Image 4.1: The three V-belts and multi-groove pulleys that drive the planer's cutterhead.

5. Troubleshooting

For specific troubleshooting steps regarding operational issues, unusual noises, or performance problems, please refer to the complete product manual provided with your Powermatic 20-Inch Planer. Common issues often relate to dull knives, improper feed rates, or insufficient dust collection.

If problems persist, contact Powermatic customer support for assistance.

6. Specifications

Specification	Value
Brand	Powermatic
Model Number	1791296 (Model 209)
Material	Alloy Steel, Cast Iron
Product Dimensions (L x W x H)	36.75" x 26" x 41.38"
Item Weight	770 pounds
UPC	662755500602
Power Source	Corded Electric
Input Voltage	230 volts AC
Amperage	23 A
Maximum Rotational Speed	5000 rpm
Cutting Width	20 inches
Maximum Cutting Depth	0.09 inches (1/8 inch)

7. Warranty and Support

The Powermatic 20-Inch Planer, Model 209, comes with a**5-Year Manufacturer Warranty**. This warranty covers defects in materials and workmanship under normal use. For detailed terms and conditions, please refer to the warranty card included with your product or visit the official Powermatic website.



Image 7.1: Powermatic 5-Year Warranty emblem.

For technical support, parts, or warranty claims, please contact Powermatic customer service. Keep your model number (1791296) and UPC (662755500602) readily available when contacting support.

You can find more information and contact details on the officialPowermatic Store.

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