

King Canada KC-690

King Canada KC-690 6-Inch Bench Grinder Instruction Manual

Model: KC-690

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, setup, and maintenance of your King Canada KC-690 6-Inch Bench Grinder. The KC-690 model is designed with increased wheel-to-body clearance, facilitating the grinding of longer objects and complex shapes. It features a direct-drive motor, eliminating the need for brushes or belts, and includes permanently lubricated motor bearings for extended life. For user safety, it is equipped with adjustable, shatter-resistant plastic eye shields and removable wheel covers for simplified wheel changes. The grinder comes complete with adjustable tool rests and both 36-grit and 60-grit grinding wheels.

2. IMPORTANT SAFETY INSTRUCTIONS

Always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury when using this power tool.

- **Read the Manual:** Familiarize yourself with all instructions and warnings before operating the grinder.
- **Wear Eye Protection:** Always wear safety glasses or a face shield to protect against flying debris.
- **Secure Workpiece:** Ensure the workpiece is firmly held against the tool rest to prevent kickback.
- **Maintain Clear Work Area:** Keep the work area clean and well-lit. Cluttered areas invite accidents.
- **Avoid Loose Clothing:** Do not wear loose clothing, gloves, neckties, or jewelry that can get caught in moving parts.
- **Use Correct Grinding Wheel:** Ensure the grinding wheel is appropriate for the task and is securely mounted.
- **Inspect Before Use:** Check for damaged parts, misalignment, or any condition that may affect operation.
- **Unplug When Not in Use:** Disconnect the grinder from the power source before making adjustments, changing accessories, or storing.
- **Do Not Overreach:** Maintain proper footing and balance at all times.
- **Keep Guards in Place:** Ensure all safety guards and shields are properly installed and functioning.

3. COMPONENTS OVERVIEW

The King Canada KC-690 Bench Grinder consists of several key components designed for efficient and safe grinding operations. Understanding these parts is crucial for proper setup and use.



Figure 1: Overall view of the King Canada KC-690 6-Inch Bench Grinder, showcasing its compact design and dual grinding wheels with protective shields.



Figure 2: Side view highlighting the power switch (red) and the adjustable, shatter-resistant eye shield, which provides protection during operation.

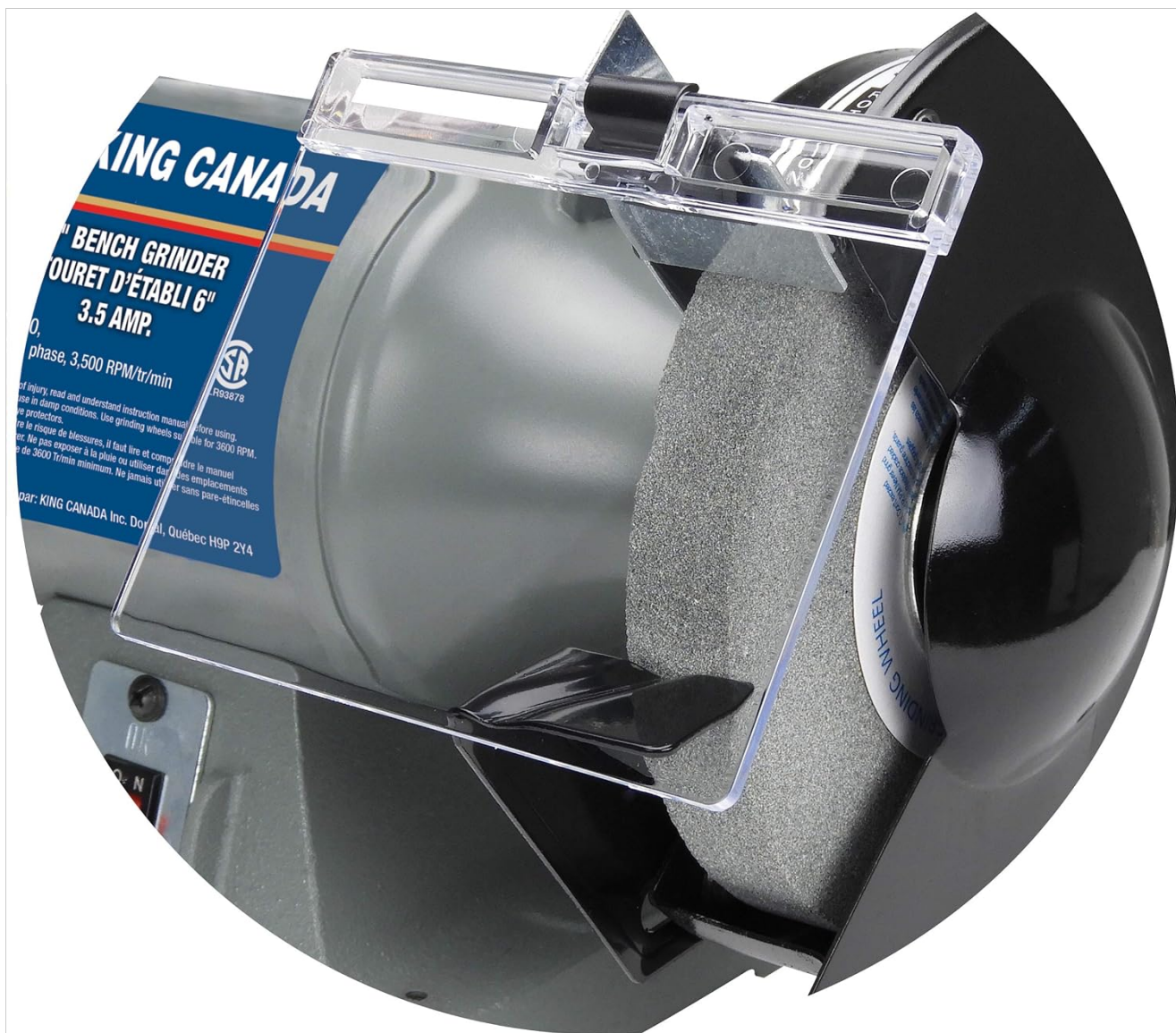


Figure 3: Detailed view of one grinding wheel, its protective cover, the adjustable tool rest, and the clear eye shield, demonstrating the setup for precise grinding.

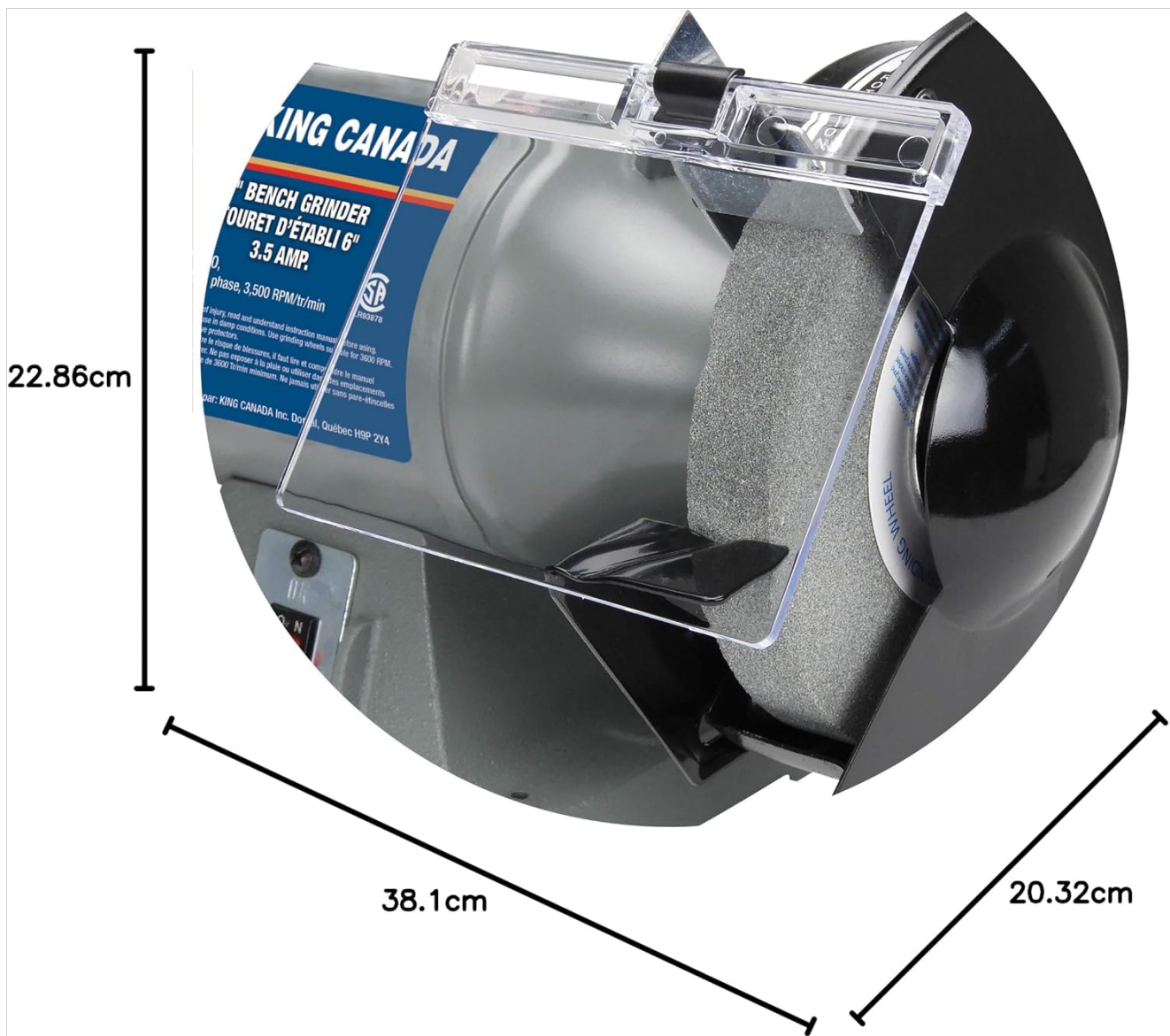


Figure 4: Illustration showing the key dimensions of the King Canada KC-690 Bench Grinder, including length (38.1 cm), width (22.86 cm), and height (20.32 cm).

4. SETUP AND ASSEMBLY

Before operating your bench grinder, proper assembly and setup are crucial for safety and performance.

1. **Unpacking:** Carefully remove all components from the packaging. Inspect for any shipping damage.
2. **Mounting:** Securely mount the bench grinder to a sturdy workbench using bolts through the base holes. This prevents movement during operation.
3. **Install Grinding Wheels:** The grinder comes with 36-grit and 60-grit wheels. Ensure they are properly seated on the arbor and secured with the provided flanges and nuts. Do not overtighten.
4. **Attach Wheel Covers:** Install the removable wheel covers over the grinding wheels.
5. **Adjust Tool Rests:** Position the adjustable tool rests approximately 1/16 inch (1.5 mm) from the grinding wheel surface. Ensure they are level with the center of the wheel.
6. **Install Eye Shields:** Attach the adjustable "Easy Clip" shatter-resistant plastic eye shields. Adjust them to provide maximum protection without obstructing your view of the workpiece.
7. **Power Connection:** Connect the grinder to a grounded 110V, 1 phase, 60 HZ power outlet.

5. OPERATING INSTRUCTIONS

Follow these guidelines for safe and effective use of your bench grinder.

- **Pre-Operation Check:** Before starting, ensure all guards, eye shields, and tool rests are correctly positioned and secure. Verify the grinding wheels are not cracked or damaged.
- **Starting the Grinder:** Turn on the grinder using the power switch. Allow the wheels to reach full speed before beginning any grinding operation.
- **Grinding Technique:** Hold the workpiece firmly against the tool rest and gently bring it into contact with the rotating grinding wheel. Apply light, even pressure.
- **Avoid Overheating:** Do not apply excessive pressure, as this can overheat the workpiece and damage the grinding wheel. Dip the workpiece in water periodically if it becomes too hot.
- **Use Appropriate Wheel:** Use the coarse (36-grit) wheel for rough shaping and material removal, and the fine (60-grit) wheel for sharpening and finishing.
- **Grinding on Wheel Face:** Always grind on the face of the wheel, never on the side, as this can cause the wheel to break.
- **Stopping the Grinder:** Turn off the power switch and wait for the wheels to come to a complete stop before leaving the machine or performing any adjustments.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your King Canada KC-690 Bench Grinder.

- **Cleaning:** Keep the grinder clean and free of dust and debris. Use a brush or compressed air to remove grinding dust from the motor vents.
- **Wheel Dressing:** Periodically dress the grinding wheels with a wheel dresser to maintain their shape and expose fresh abrasive surfaces. This improves grinding efficiency and safety.
- **Wheel Replacement:** Replace grinding wheels when they become worn down to 1/2 inch (12.7 mm) of their original diameter, or if they become cracked or damaged. Always use wheels rated for the grinder's RPM.
- **Tool Rest Adjustment:** Regularly check and adjust the tool rests to maintain the 1/16 inch (1.5 mm) clearance from the grinding wheel.
- **Eye Shield Inspection:** Inspect eye shields for cracks or excessive scratching. Replace if visibility is impaired.
- **Motor Bearings:** The motor bearings are permanently lubricated and do not require additional lubrication.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your bench grinder.

Problem	Possible Cause	Solution
Grinder does not start	No power; Faulty switch; Motor issue	Check power cord and outlet; Test switch; Consult qualified technician
Excessive vibration	Unbalanced wheel; Loose mounting; Worn bearings	Dress or replace wheel; Tighten mounting bolts; Consult qualified technician
Grinding wheel not cutting efficiently	Glazed or loaded wheel; Incorrect grit	Dress the grinding wheel; Use appropriate grit for the material
Motor overheats	Excessive load; Blocked ventilation	Reduce grinding pressure; Clear motor vents; Allow motor to cool

Problem	Possible Cause	Solution
Sparks are excessive or inconsistent	Improper tool rest adjustment; Incorrect grinding angle	Adjust tool rest to 1/16 inch from wheel; Adjust grinding angle

8. TECHNICAL SPECIFICATIONS

Detailed specifications for the King Canada KC-690 Bench Grinder.

Feature	Specification
Model	KC-690
Wheel Size	6 inches x 3/4 inches
Motor	3.5 AMP
RPM (Revolutions Per Minute)	3,500
Voltage	110V, 1 phase, 60 HZ
Product Dimensions (L x W x H)	38.1 cm x 22.86 cm x 20.32 cm (15 in x 9 in x 8 in)
Item Weight	7.48 kg (16.5 lbs)
Material	Plastic (shields), Metal (body)
Power Source	Corded Electric
Included Components	Adjustable tool rests, 36-grit grinding wheel, 60-grit grinding wheel

9. WARRANTY INFORMATION

The King Canada KC-690 Bench Grinder is covered by a **2-year manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. For specific terms and conditions, or to initiate a warranty claim, please contact King Canada customer support.

King Canada - Quality Tools for Professionals
For further assistance, please visit the [King Canada Store](#).

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