

Bosch WS 650

Bosch WS 650 Professional Angle Grinder User Manual

Model: WS 650

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, setup, and maintenance of your Bosch WS 650 Professional Angle Grinder. Please read these instructions carefully before using the tool and keep them for future reference. Proper use and adherence to safety guidelines will ensure optimal performance and prolong the life of your angle grinder.

2. GENERAL SAFETY INSTRUCTIONS

WARNING: Read all safety warnings, instructions, illustrations, and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

- **Work Area Safety:** Keep work area clean and well-lit. Cluttered or dark areas invite accidents. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Electrical Safety:** Power tool plugs must match the outlet. Never modify the plug in any way. Avoid body contact with earthed or grounded surfaces.
- **Personal Safety:** Always wear eye protection. Use personal protective equipment such as dust masks, non-skid safety shoes, hard hats, or hearing protection for appropriate conditions. Stay alert, watch what you are doing, and use common sense when operating a power tool.
- **Power Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools. Store idle power tools out of the reach of children.
- **Kickback and Related Warnings:** Kickback is a sudden reaction to a pinched or snagged rotating wheel. Always maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces.
- **Specific Grinder Safety:** Always use the protective guard. Ensure the wheel is correctly mounted and tightened before use. Do not use damaged accessories.

3. PRODUCT OVERVIEW AND COMPONENTS

The Bosch WS 650 Professional Angle Grinder is designed for grinding and cutting various materials. Familiarize yourself with its components before operation.



This image displays the Bosch WS 650 Professional Angle Grinder along with its standard accessories: the main grinder unit, an auxiliary side handle, a protective grinding guard, and a spanner wrench for disc changes.

Included Components:

- Bosch WS 650 Angle Grinder Unit
- Auxiliary Side Handle
- Protective Grinding Guard
- Spanner Wrench
- Inner and Outer Clamping Flanges

4. SETUP

4.1 Attaching the Auxiliary Handle

The auxiliary handle can be screwed into either the left or right side of the gear head, depending on your working preference and application. Ensure it is tightened securely before use to maintain control of the tool.

4.2 Mounting the Protective Guard

1. Ensure the tool is disconnected from the power supply.
2. Place the protective guard onto the collar of the gear head.

3. Adjust the guard to ensure maximum protection for the operator, covering the grinding or cutting disc as much as possible.
4. Tighten the clamping screw on the guard firmly to secure it in position. Never operate the angle grinder without the protective guard properly installed.

4.3 Mounting and Changing Grinding/Cutting Discs

1. Disconnect the tool from the power supply.
2. Press and hold the spindle lock button.
3. Place the inner clamping flange onto the spindle.
4. Position the grinding or cutting disc onto the inner flange, ensuring it sits flat.
5. Screw on the outer clamping flange and tighten it firmly using the provided spanner wrench.
6. To remove a disc, reverse these steps. Always ensure the disc is suitable for the material and application, and that its maximum permissible speed is higher than the tool's no-load speed.

5. OPERATING INSTRUCTIONS

5.1 Switching On and Off

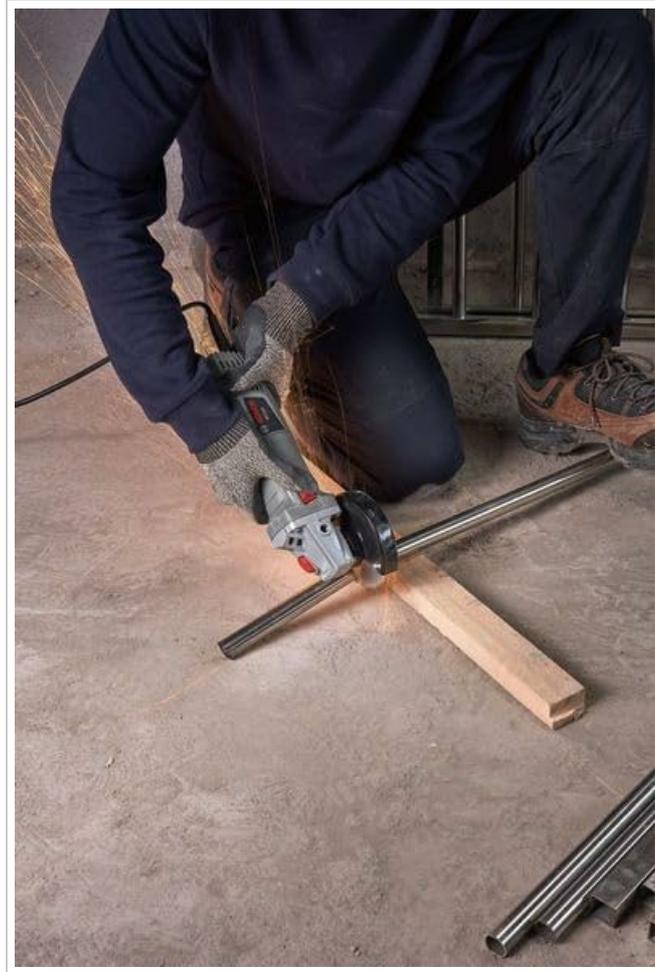
- **To Switch On:** Push the switch button forward. For continuous operation, press the switch button further forward until it locks into place.
- **To Switch Off:** For continuous operation, press the rear part of the switch button. For non-continuous operation, release the switch button.

5.2 Grinding and Cutting Techniques

Always hold the angle grinder firmly with both hands. Allow the disc to reach full speed before contacting the workpiece. Apply moderate, consistent pressure. Avoid excessive pressure, which can reduce disc life and tool performance.



A person wearing protective gloves and safety shoes is shown operating the Bosch WS 650 Angle Grinder to cut through metal rebar, illustrating a typical application of the tool. Sparks are visible during the cutting process.



This image shows an individual using the Bosch WS 650 Angle Grinder to cut a metal pipe, which is secured on a wooden block. The user is wearing protective gloves, demonstrating safe operation practices.

- **Grinding:** Hold the tool at an angle of approximately 15-30 degrees to the workpiece. Move the tool back and forth to ensure even material removal.
- **Cutting:** For cutting, hold the tool at a 90-degree angle to the workpiece. Apply steady, even pressure. Do not tilt the cutting disc, as this can cause it to jam or break.
- **Overload Protection:** If the tool becomes overloaded, the motor speed will decrease. Reduce pressure to allow the tool to recover.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your angle grinder.

- **Cleaning:** Keep the ventilation slots of the tool clean to prevent overheating. Use a soft brush or compressed air to remove dust and debris.
- **Carbon Brushes:** The motor is equipped with carbon brushes. If the tool shows reduced performance or stops working, the carbon brushes may need replacement. This should be performed by a qualified service technician.
- **Power Cord:** Regularly inspect the power cord for any damage. If damaged, have it replaced by an authorized service center to avoid electrical hazards.
- **Storage:** Store the angle grinder in a dry, secure place, out of reach of children and away from direct sunlight or extreme temperatures.

7. TROUBLESHOOTING

Refer to this section for common issues and their solutions.

Problem	Possible Cause	Solution
Tool does not start	No power supply; Faulty switch; Worn carbon brushes	Check power connection and outlet; Ensure switch is fully engaged; Have carbon brushes checked/replaced by service technician.
Excessive vibration	Damaged or improperly mounted disc; Loose clamping flanges	Inspect disc for damage and replace if necessary; Ensure disc is correctly mounted and flanges are tightened.
Reduced performance/Overheating	Blocked ventilation slots; Overloading the tool; Worn carbon brushes	Clean ventilation slots; Reduce pressure on workpiece; Have carbon brushes checked/replaced.

8. TECHNICAL SPECIFICATIONS

Key technical data for the Bosch WS 650 Professional Angle Grinder:

Specification	Value
Model	WS 650
Rated Input Power	650 W
No-load Speed	12,000 rpm
Disc Diameter	100 mm
Voltage, Electrical	230 V
Power Output	300 W
Grinding Spindle Thread	M10
Main Handle Type	Barrel
Weight	1.8 kg
Switch Type	Lockable Switch
Product Dimensions (L x W x H)	25L x 18W x 35H Centimeters
Power Source	Corded Electric
Manufacturer	BOSCH

9. WARRANTY AND SUPPORT

For warranty information, service, or technical assistance, please contact your local authorized Bosch service center or visit the official Bosch website. Keep your purchase receipt as proof of purchase for any warranty claims.

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