



## Tradesman Twin DC Bench Grinder

Operator's Manual



# ***Cuttermasters***



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## **Specifications**

Model #	TT12
Motor Ratings	120V, 60Hz, 10A
Wheel Mount	Six inch 1A1
Net Weight without wheels	21 lbs



## Important Safety Rules

**DANGER** Failure to observe any of the following instructions could result in severe personal injury to tool user and bystanders or cause damage to tool and property

**WARNING-** Read, understand and observe all instructions in this manual before using or operating the tool for which it is written and supplied. Ensure that anyone who is to use the tool has read and understood the instructions provided.

- Always wear eye protection that complies with a recognized standard (CSA or ANSI).
- Wear a mask or respirator when dust is generated.
- Same dust created by power grinding contains chemicals that may cause cancer, birth defects or other harm. Some examples of these chemicals are: lead from lead-based paint, crystalline silica from bricks, cement and other masonry products, and arsenic and chromium from chemically treated lumber. To reduce exposure to these chemicals, work in a well-ventilated area; use approved safety equipment; and use dust masks that are specially designed to filter out microscopic particles.
- Keep bystanders out of the work area while operating the tool.
- **WARNING!** Always ensure that the work area is clear of any flammable materials, liquids or gasses, because the use of this tool may create sparks.
- Tighten grinding wheel locking nuts, securing bolts and guards.
- During each start-up, stand to one side of the grinder and switch it 'On'. Let the grinder operate at full speed for approximately one minute so that any undetected flaws or cracks will become apparent.
- Keep guards in place and working properly.
- Keep hands clear of grinding wheels.
- Never reach behind or beneath the grinding wheels.
- Unplug from power supply before adjusting or servicing. The grinding wheels continue to rotate after the tool is switched off. Always allow wheels to stop before adjusting or servicing.
- To avoid electric shock, **DO NOT** use in damp conditions or expose to rain.
- When fitting a new grinding wheel, always check that the stated maximum RPM meets or exceeds that stated on the grinder. Also check the new wheel for damage such as flaws or cracks.
- If the wheel appears satisfactory, fit it to the grinder.
- When a new grinding wheel has been fitted, stand to one side of the grinder and switch it 'On'. Let the grinder operate at full speed for approximately one minute so that any undetected flaws or cracks will become apparent.
- Use only accessories that are recommended by the manufacturer for your model.
- **DO NOT** attempt to cut anything with the grinding wheel.
- Grounded tools must be plugged into an outlet that has been properly installed and grounded in accordance with all local codes and ordinances. Never remove the grounding prong from the plug or modify it in any way. Do not use adaptor plugs. If in doubt as to whether the outlet is properly grounded, consult a qualified electrician.
- Do not use the tool when tired or under the influence of drugs, alcohol or medication.

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- Do not wear loose clothing or jewellery. Keep hair tied back.
- Ensure the power switch is off prior to plugging in the tool.
- **WARNING!** Replace cracked grinding wheels immediately.
- **Do not overtighten spindle nuts.**
- **Adjust tool rests whenever necessary to maintain a distance of 1/8" (3.2 mm) from the grinding wheel.**
- Service on these tools should only be performed by an authorized, qualified technician.

## Operating Instructions

### Before You Start - Electrical

In the event of a malfunction or short circuit, grounding provides the path of least resistance for electrical current, and reduces the risk of electric shock for the operator. This tool is equipped with an electric cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching outlet that is properly installed and grounded in accordance with ALL local codes and ordinances. .

**DO NOT MODIFY THE PLUG PROVIDED.** If it will not fit the outlet, have the proper outlet installed by an electrician.

**IMPROPER CONNECTION** of the equipment grounding conductor can result in increased risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, **DO NOT** connect the equipment grounding conductor to a live terminal.

**CHECK** with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure if the tool is properly grounded.

### Use of Extension Cords

**USE ONLY THREE-WIRED EXTENSION CORDS** that have 3-prong plugs and 3-holed outlets that accept the tool's plug. Repair or replace damaged or worn cords immediately.

Be sure your extension cord is properly wired and in good condition. Do not use damaged extension cords. Always replace a damaged extension cord.

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. The table below shows the correct size to use according to the cord length and the amperage draw of the tool (specified on the nameplate). When in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord. (AWG = American Wire Gauge).

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Use a separate electrical circuit for your tools. This circuit should not be less than a #12 gauge wire, and should be protected with a 15 A time-lag fuse or breaker. Before connecting the molar to the power line, ensure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor's nameplate. Running at a lower voltage will damage the motor, and this damage is not covered' by warranty.

Ampere Rating		Minimum Gauge for Extension Cords (AWG) (when using 120 volts only)					
		Total Length of Cord in Feet meters					
More Than	Not more Than	25' 7.6m)	50' 15m	100' 30.4m)	150' 45.7m)		
0	6	18	16	16	14	12	
6	10	18	16	14	12	12	
10	12	16	16	14	12	12	
12	16	14	12	Not Recommended			

## Before You Start - Assembly and Installation

### Mounting the Grinder to the Workbench

Before attempting to use this grinder, it must be properly mounted to a workbench or grinding stand.

**CAUTION** Bench grinders vibrate. Grinder movement during high-speed rotation may cause injury or damage to the workpiece or operator. Mount the grinder securely to a sturdy workbench or grinding stand.

1. Position the grinder on the workbench.
2. Mark the workbench through the two mounting holes located in the grinder base.
3. Drill holes in the workbench at the marks.
4. Using two long bolts, washers, locking washers and nuts, as shown (not supplied), secure the grinder to the workbench.

### Tool Rest Adjustments and Installation

Mount the tool rests to the work rest bracket using the two hex screws and washers.

Before tightening the bolts, adjust the gap between the grinding wheel and the work rest to a maximum of  $\frac{1}{8}$ th (3.2 mm). Tighten securely.

To prevent the workpiece from being pulled and caught between the tool rest and the wheel, readjust the tool rest position whenever necessary to maintain the  $\frac{1}{8}$ th (3.2 mm) distance.

1. Loosen, but do not remove, the bolt holding the tool rest arm.
2. Slide the tool rest arm in or out to achieve a  $\frac{1}{8}$ " (3.2 mm) distance from the grinding wheel surface.
3. Retighten the bolt holding the tool rest arm.

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## Using Your Grinder

### ON/OFF

The ON/OFF power switch is located on the front of the grinder.

1. Press the green button marked with a vertical bar to turn the grinder on.
2. Press the red button marked with a circle to turn the grinder off.

## Grinder-Specific Safety Rules

### Before Grinding:

The grinder is a safe tool when used properly. In addition to the safety instructions in this manual, the most important safety consideration is to use common sense at all times. What may be safe in one situation may not be safe in another. Read the following to help protect yourself before using the grinder.

- Ensure that wheel guards are in place.
- Always check the adjustments of the tool rests before you turn the grinder on.
- Routinely check that the set screw on the hub is tight.
- Routinely check that the three hub cap bolts are tight and the wheel runs true.
- Test Run - Stand to the side of the grinder when you turn it on and allow it to run for one full minute prior to EVERY use.
- Ensure that you have mounted your grinder securely, and that you have performed the test run instructions in this manual.
- Remember that grinding often produces sparks that could ignite flammable materials or substances.
- DO NOT allow anyone to stand in the path of the sparks.
- DO NOT grind near flammable liquids or gasses.
- Wear proper protective clothing. Remember that particles flying off of a grinding wheel will be traveling very fast - prepare for this. Wear safety glasses or a face shield, a dust mask, earplugs, a leather apron and heavy leather boots.
- Do not wear loose clothing that could get caught in the machine.
- DO NOT lean into the workpiece in a manner that may cause your hands to move into the spinning wheel if the workpiece slips.
- Concentrate on the task at hand. STOP grinding if there are distractions.

## General Instructions

- Adjust the tool rest to accommodate large or unusually shaped workpieces.
- Always keep the workpiece moving across the face of the grinding wheel. Grinding continuously with the machine plugged into a power outlet, stand to the side of the grinding wheel and turn the switch to the ON position.
- Allow the machine to run for at least 1 full minute to ensure that the grinding wheel is safe and then move to the front of the machine.
- Grasp the workpiece lightly, and properly support it on the tool rest.
- Place the workpiece against the front surface of the wheel with moderate pressure, moving back and forth in a steady, even motion.
- When you are ready to stop the grinder, move the ON/OFF switch to the OFF position. At that point, DO NOT continue grinding, and DO NOT manually stop the grinding wheel with your workpiece.

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**CAUTION:** Size of part to be machined (or ground): The workpiece to be machined must be at least large enough to be held securely with two hands  
Larger workpieces must also be of a size and shape that they can be held securely without slipping during the grinding process.

## **Maintenance**

WARNING! Turn the power switch "OFF" and disconnect the plug from the outlet prior to adjusting or maintaining the grinder. DO NOT attempt to repair or maintain the electrical components of the motor. Take the grinder to a qualified service technician for this type of maintenance.

It is important to routinely check that the set screw on the hub is tight and also that the three hub cap bolts are tight and the wheel is running true.

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