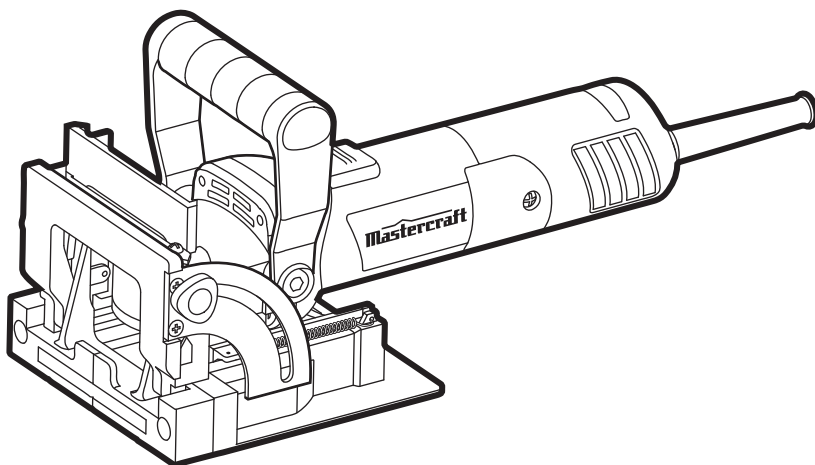


model no. 054-8106-4

**Mastercraft**<sup>®</sup> MD

## BISCUIT JOINER



**IMPORTANT:**

Read and understand this instruction manual thoroughly before using the product.

**INSTRUCTION  
MANUAL**

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**NOTE:**

If any parts are missing or damaged, or if you have any questions, please call our toll-free helpline at 1-800-689-9928.

**SAVE THESE INSTRUCTIONS**

- This manual contains important safety and operating instructions. Read all instructions and follow them with use of this product.

**TECHNICAL SPECIFICATION**

Rated power input	5A
Rated voltage	120 V~, 60 Hz
No-load speed	11,000 RPM
Max cutting depth	45/64" (18 mm)
Adjustable height	3/16 to 1 3/8" (5 to 35 mm)
Cutting angle	0° – 90°
Biscuit sizes	#0, #10, #20
Tool weight	6 lb 6 oz (2.9 kg)
Noise level	81.3 dB(A)
Vibration	$a_{\text{H}} = 7.4 \text{ m/s}^2$ , $K=1.5$

**SAFETY GUIDELINES****WARNING!**

Safety symbols in this instruction manual are used to flag possible dangers. The safety symbols and their explanations require your full understanding. The safety warnings do not, by themselves, eliminate any danger, nor are they substitutes for proper accident prevention measures.

**WARNING!**

This safety alert symbol indicates caution, warning, or danger. Failure to obey a safety warning can result in serious injury to yourself or others. To reduce the risk of injury, fire, or electric shock, always follow the safety precautions.

**KNOW YOUR TOOL**

To operate this tool, carefully read this instruction manual and all labels affixed to the biscuit joiner before using. Keep this manual available for future reference.

**IMPORTANT**

This tool should only be serviced by a qualified service technician. For more information, call the toll-free helpline at 1-800-689-9928.

**READ ALL INSTRUCTIONS THOROUGHLY****SAVE THESE INSTRUCTIONS****GENERAL POWER TOOL SAFETY WARNINGS****WARNING!**

Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.**

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

**WORK AREA SAFETY**

- **Keep the 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.** Power tools create sparks, which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

**ELECTRICAL SAFETY**

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a ground-fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

**PERSONAL SAFETY**

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure that the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure that these are connected and properly used.** Use of these devices can reduce dust-related hazards.

**POWER TOOL USE AND CARE**

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and more safely at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories, tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

**SERVICE**

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

**SAFETY GUIDELINES FOR BISCUIT JOINER**

- **Blades must be rated for at least the speed marked on the tool.** Blades running over the rated speed can fly apart and cause injury.
- **Always use the guard.** The guard protects the operator from broken blade fragments and unintentional contact with the blade.
- **Hold the power tool by its insulated gripping surfaces, because the blade may contact its own cord.** Cutting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- **Always use correctly sized blades with the fitting mounting bore.** Blades that do not fit to the mounting components of the biscuit joiner rotate irregularly and lead to loss of control.
- **Do not use blunt or damaged blade.** Blunt or damaged blades cause increased friction, can become jammed and lead to imbalance.
- **Before putting into operation, check that the guard is retracting freely.**
- **Always wear hearing protection when operating the biscuit joiner.**

- The label on your tool may include the following symbols. The symbols and their definitions are as follows:

V ..... Volts

A ..... Amperes

Hz ..... Hertz

W ..... Watts

min ..... Minutes

~ ..... Alternating current

— ..... Direct current

$n_0$  ..... No-load speed

□ ..... Class II Construction

.../min ..... Revolutions or reciprocation per minute

⏏ ..... Grounding terminal

BPM ..... Beats per minute

⚠ ..... WARNING – To reduce the risk of injury, user must read instruction manual.

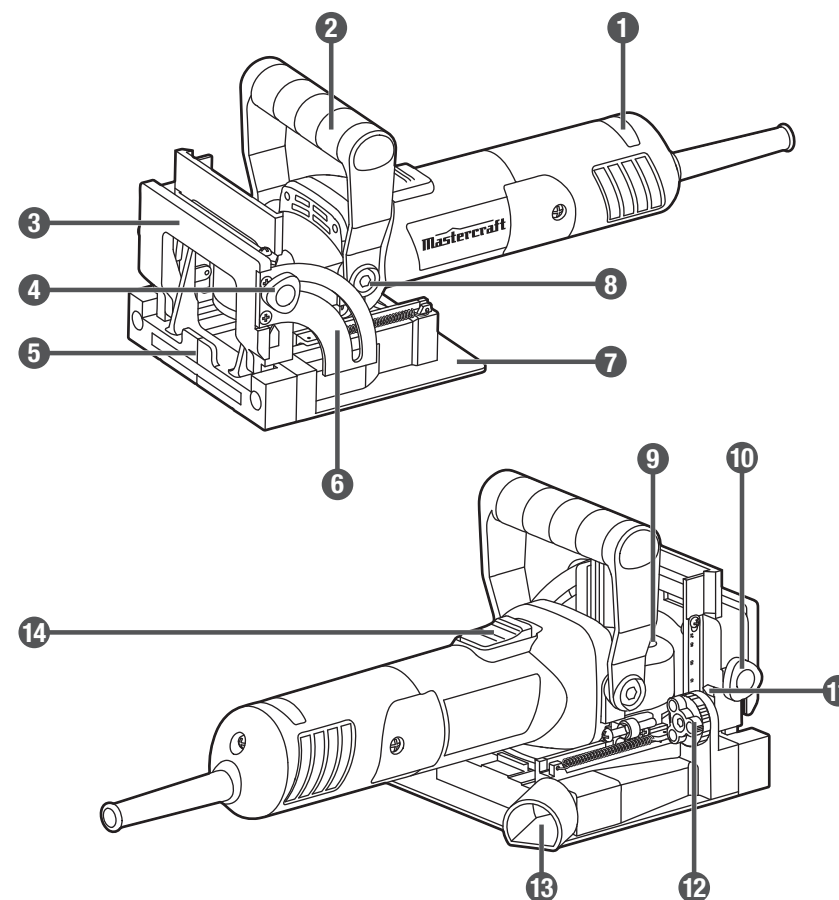
👁 ..... WARNING – To reduce the risk of injury always wear eye protection.

👂 ..... WARNING – To reduce the risk of injury always wear ear protection.

#### PACKAGE CONTENTS:

Biscuit joiner, hex key, blade wrench, 4" (10 cm) blade, dust bag and instruction manual.

#### KEY PARTS DIAGRAM



#### WARNING!

- Remove the biscuit joiner from the package and examine it carefully. Do not discard the carton or any packaging material until all parts have been examined.

No.	Description
1	Live-tool indicator light
2	Auxiliary handle
3	Angle-guide plate
4	Angle-adjustment locking knob
5	Centre mark
6	Angle scale
7	Blade cover

No.	Description
8	Auxiliary handle locking bolt
9	Spindle-lock button
10	Height-adjustment locking knob
11	Height indicator
12	Cutting-depth stopper
13	Dust-exhaust port
14	On/off switch

## ASSEMBLY INSTRUCTIONS

## THE LIVE-TOOL INDICATOR LIGHT

The biscuit joiner is equipped with a live-tool indicator light. When the tool is plugged into an electrical supply, the live-tool indicator light will illuminate to remind you that the tool is plugged in. When the tool is unplugged, the indicator light will turn off.

## ADJUSTING THE DEPTH OF CUT (fig 1)

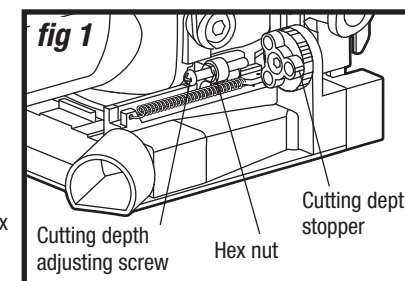
Four different cutting depths can be preset.

Refer to the table below for the correspondence between the sizes marked on the cutting depth stopper and the biscuit size.

Fine adjustments to the cutting depth can be made by turning the adjusting screw after loosening the hex nut. This may become necessary after the blade has been re-sharpened a few times.

Set the cutting-depth stopper to match the size below:

Size on cutting-depth stopper	0	10	20	M
Biscuit size	0	10	20	/
Depth of groove	8 mm	10 mm	12.3 mm	18 mm



## WARNING!

- Do not allow familiarity with the biscuit joiner to cause a lack of alertness. A fraction of a second of carelessness is enough to cause severe injury.



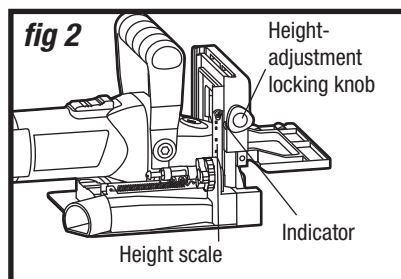
## WARNING!

- Never connect the biscuit joiner to a power source when you are assembling parts, making adjustments, installing or removing blade, cleaning, or when it is not in use. Disconnecting the biscuit joiner will prevent accidental starting, which could cause serious personal injury.

**ADJUSTING THE HEIGHT OF CUT (fig 2)**

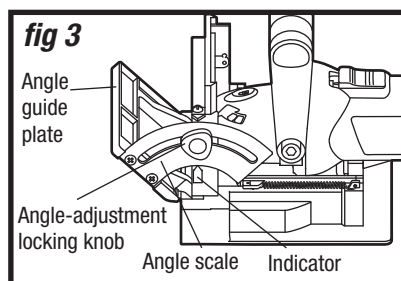
The angle guide height can be moved up and down to adjust the position of the blade in relation to the top of the workpiece.

1. Loosen the height-adjustment locking knob.
2. Move the angle guide up and down until the indicator points to the desired height on the height scale.
3. Securely tighten the height-adjustment locking knob. The height scale indicates the distance from the top of the workpiece to the centre of the blade.

**ADJUSTING THE CUTTING ANGLE (fig 3)**

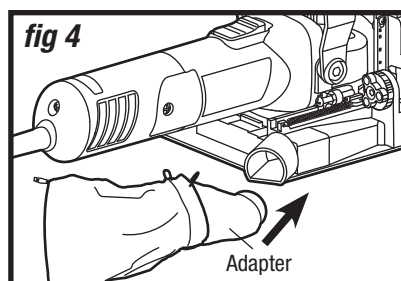
Most biscuit joining applications require the blade to cut into the workpiece at a 90° angle. In special cases, such as mitre joints, it is necessary to insert the biscuit at a different angle. Adjust the cutting angles as follows:

1. Loosen the angle-adjustment locking knob, and tilt the angle guide plate until the indicator points to the desired angle on the angle scale.
2. Securely tighten the angle-adjustment locking knob.

**DUST COLLECTION (fig 4)**

Attach the dust bag to the dust-exhaust port. When the dust bag is about half full, turn off the tool and unplug it. Remove the dust bag from the tool. Unzip the dust bag and empty it.

Alternatively you can attach a suitable vacuum cleaner to the dust bag adapter.

**OPERATION INSTRUCTIONS****TURNING THE BISCUIT JOINER ON/OFF**

To turn on the biscuit joiner, slide the switch toward the "I" (ON) position. For continuous operation, press the front of the switch to lock it.

To turn it off, press the rear of the switch; the switch will return to the "O" (OFF) position automatically.

**HOW TO MAKE JOINTS**

To make joints, proceed as follows:

1. Fit the two workpieces together as they will appear in the finished joint position (refer to fig a-e).
2. Use a pencil to mark the centre of the intended biscuit grooves on the workpiece.
3. **For Corner Joint and T Joint:** Clamp the vertical workpiece to the workbench (fig a1).
4. **For Mitre Joint:** Clamp one workpiece to the workbench with the mitred edge facing up (fig c1).
5. **For Frame Joint and Edge-To-Edge Joint:** Clamp one workpiece to the workbench (fig d1).
6. Set the depth of cut according to the size of the biscuit to be used. Refer to the table in the "Adjusting the depth of cut" section.
7. Adjust the angle guide height so that the blade is centred in the board thickness.
8. Align the centre mark on the base with the pencil line on the workpiece.
9. Turn on the tool and gently push it forward in order to extend the blade into the workpiece.
10. Gently pull the tool back to its original position after the cutting depth adjusting screw reaches the cutting-depth stopper.
11. **For Corner Joint and T Joint:** Clamp the horizontal workpiece to the workbench (fig a2 and fig b2).
12. **For Mitre Joint:** Clamp the other workpiece to the workbench with the mitred edge facing up (fig c2).
13. **For Frame Joint and Edge-To-Edge Joint:** Clamp the other workpiece to the workbench (fig d2 and fig e2).
14. Repeat the steps 6 – 8 to make the cuts in the second workpiece.

**NOTICE:**

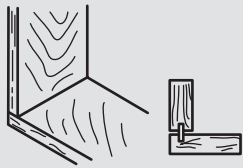
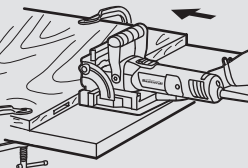
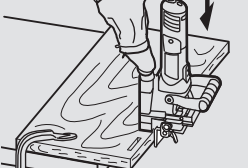
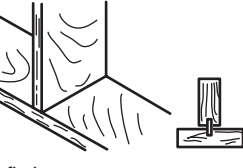
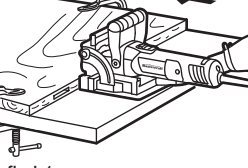
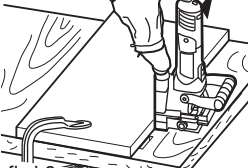
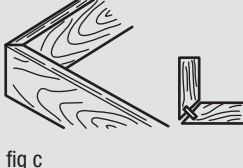
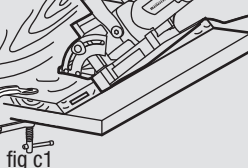
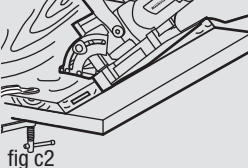

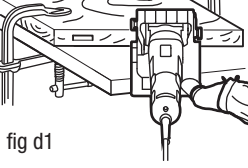
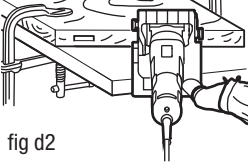
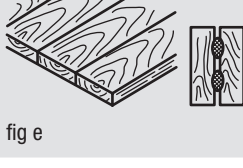
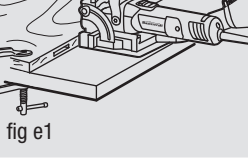
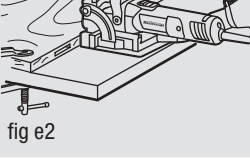
- The centres of the grooves should be at least 50 mm (2") from the outer edge of the workpieces.
- Allow 100 mm – 150 mm (4" – 6") between grooves in applications that require multiple biscuits.

**WARNING!**

- The dust that is produced while cutting can be detrimental to health, flammable, or explosive. Suitable safety measures are required. Examples: Some types of dust are known to cause cancer. Always wear a dust mask.

**WARNING!**

- Before plugging in the tool, always check to see that the on/off switch is in the "OFF" position and actuates properly.
- Always clamp the workpiece to the workbench before each operation.

Joint Type	Joint Illustration	Cutting the First Workpiece	Cutting the Second Workpiece
Corner Joint	 fig a	 fig a1	 fig a2
T Joint	 fig b	 fig b1	 fig b2
Mitre Joint	 fig c	 fig c1	 fig c2
Frame Joint	 fig d	 fig d1	 fig d2
Edge-To-Edge Joint	 fig e	 fig e1	 fig e2

**MAINTENANCE****BEFORE EACH USE**

1. Inspect the biscuit joiner, the on/off switch, the cord and the accessories for damage.
2. Check for damaged, missing, or worn parts.
3. Check for loose screws, misalignment or binding of moving parts, or any other condition that may affect the operation.
4. If abnormal vibration or noise occurs, turn the tool off immediately and have the problem corrected before further use.
5. Unplug the tool from power source before cleaning or performing any maintenance.

**CLEANING**

Unplug the tool from power source before cleaning or performing any maintenance. Regularly clean the dust and debris from the tool with compressed air or a brush. Using compressed air may be the most effective cleaning method. Always wear safety goggles when cleaning tools using compressed air.

**LUBRICATION**

All of the bearings in this tool are lubricated with a sufficient amount of high-grade lubricant for the life of the unit under normal conditions. Therefore, no further lubrication is required.

**WARNING!**

- Do not let brake fluids, gasoline and petroleum-based products, penetrating oil, etc. come into contact with plastic parts. These substances contain chemicals that can damage, weaken, or destroy plastic.
- When servicing, use only identical replacement parts. The use of any other parts may create a hazard or cause damage to the product.
- Use only accessories that are recommended for this biscuit joiner by the manufacturer. Accessories that may be suitable for one tool may become hazardous when used with another tool.
- To ensure safety and reliability, all repairs should be performed by a qualified service technician.
- If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.



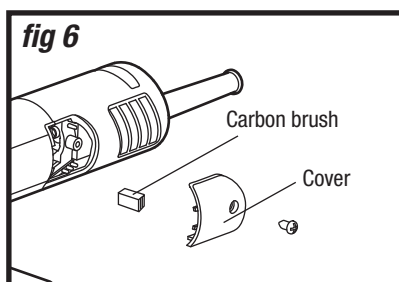
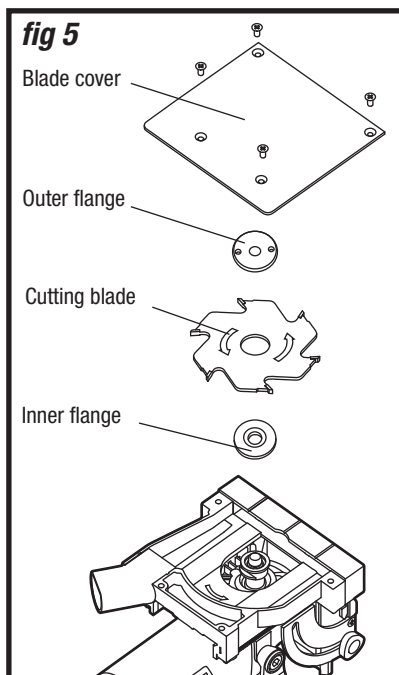
**REPLACING THE BLADE (fig 5)**

1. Unplug the biscuit joiner from the power supply.
2. Loosen the 4 screws with a screwdriver to open the blade cover.
3. Press the spindle-lock button and loosen the outer flange using the blade wrench.
4. Place a new cutting blade on the spindle, taking care that direction of rotation indicated on the blade corresponds with the arrow indicator on the tool.
5. Press the spindle-lock button and tighten the outer flange with the blade wrench.
6. Reinstall the blade cover.

**REPLACING THE CARBON BRUSHES (fig 6)**

Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

Use a screwdriver to loosen the screw and remove the cover. Release the spring, take out the worn carbon brushes and insert the new ones. Reset the spring to fix the carbon brush and secure the cover. Make sure the groove on the carbon brush points towards outside of the tool.



**NOTE:** Always check the depth of cutting after replacing the blade. Readjust it if necessary.

**TROUBLESHOOTING**

Problem	Possible Causes	Solution
The biscuit joiner does not start	Not connected to power source	Plug the biscuit joiner into a power source
The blade binds or smokes from friction	Blade is dull	Replace with a new sharp blade
	Blade is on backwards	Install the blade correctly

If the problem remains unsolved after performing the checks described above, call the toll-free helpline at 1-800-689-9928.

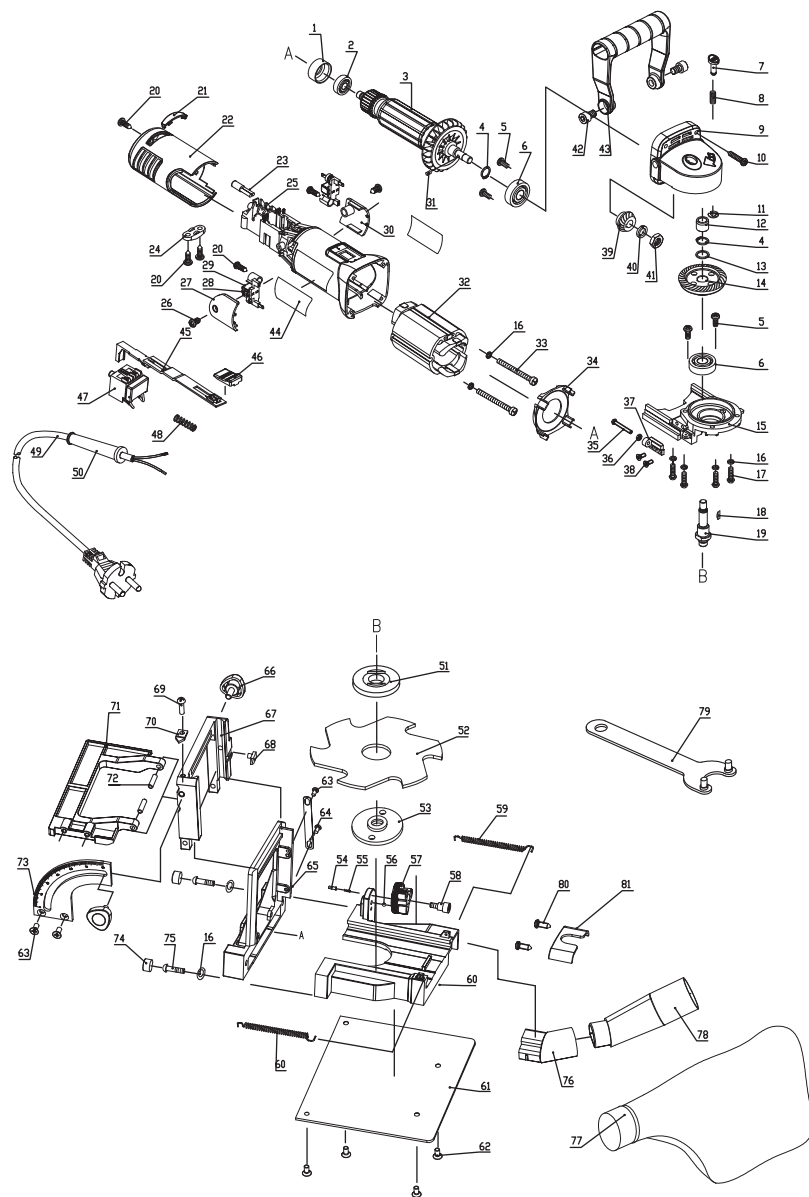
**WARNING!**

- Make sure that the rotation direction on the blade corresponds with the indicator on the tool.

**CAUTION!**

- The flat surface of the outer flange must point outwards.

## EXPLODED VIEW



No.	Part No.	Description
1	5481064001	Bearing set
2	5481064002	Bearing
3	5481064003	Armature
4	5481064004	Check ring
5	5481064005	Screw
6	5481064006	Bearing
7	5481064007	Stop pin
8	5481064008	Spring
9	5481064009	Gear box
10	5481064010	Screw
11	5481064011	Check ring
12	5481064012	Bearing
13	5481064013	Spring washer
14	5481064014	Gear
15	5481064015	Front cap
16	5481064016	Spring washer
17	5481064017	Screw
18	5481064018	Wood ruff-key
19	5481064019	Spindle
20	5481064020	Screw
21	5481064021	Cover
22	5481064022	Back cap
23	5481064023	Light
24	5481064024	Cord clamp
25	5481064025	Housing
26	5481064026	Screw
27	5481064027	Right brush cover
28	5481064028	Brush
29	5481064029	Brush holder
30	5481064030	Left brush cover

No.	Part No.	Description
31	5481064031	Roller
32	5481064032	Stator
33	5481064033	Screw
34	5481064034	Fan guide
35	5481064035	Screw
36	5481064036	Nut
37	5481064037	Depth base block
38	5481064038	Screw
39	5481064039	Pinion
40	5481064040	Spring washer
41	5481064041	Nut
42	5481064042	Screw
43	5481064043	Front handle
44	5481064044	Label
45	5481064045	Switch drawbar
46	5481064046	Switch button
47	5481064047	Switch
48	5481064049	Spring
49	5481064050	Plug
50	5481064051	Cord armor
51	5481064052	Flange
52	5481064053	Grinding wheel
53	5481064054	Flange unt
54	5481064055	Screw
55	5481064056	Spring
56	5481064057	Steel ball
57	5481064058	Setting wheel
58	5481064059	Screw
59	5481064060	Spring
60	5481064061	Slide plate

If the problem remains unsolved after performing the checks described above, call the toll-free helpline at 1-800-689-9928.

No.	Part No.	Description
61	5481064062	Base plate
62	5481064063	Screw
63	5481064064	Screw
64	5481064065	Depth mark
65	5481064066	Support stand board
66	5481064067	Knob
67	5481064068	Angle fence
68	5481064069	Depth pointer
69	5481064070	Screw
70	5481064071	Angle pointer
71	5481064072	Pivot bracket

If the problem remains unsolved after performing the checks described above, call the toll-free helpline at 1-800-689-9928.

No.	Part No.	Description
72	5481064073	Dowel
73	5481064074	Angle ruler
74	5481064075	Cap
75	5481064076	Screw
76	5481064077	Entrance for dust
77	5481064078	Dust bag
78	5481064079	Oblique pipe
79	5481064080	Wrench
80	5481064081	Screw
81	5481064082	Cover



This Mastercraft product is guaranteed for a period of **3 years from the date of original retail purchase** against defects in workmanship and materials, except for the following components:

- a) Component A: Batteries, chargers and carrying case, which are guaranteed for a period of 2 years from the date of original retail purchase against defects in workmanship and materials;
- b) Component B: Accessories, which are guaranteed for a period of 1 year from the date of original retail purchase against defects in workmanship and materials.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any costs of labour relating thereto.

#### These warranties are subject to the following conditions and limitations:

- a) a bill of sale verifying the purchase and purchase date must be provided;
- b) this warranty will not apply to any product or part thereof which is worn or broken or which has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions) or which is being used for industrial, professional, commercial or rental purposes;
- c) this warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product that are expected to become inoperative or unusable after a reasonable period of use;
- d) this warranty will not apply to routine maintenance and consumable items such as, but not limited to, fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;
- e) this warranty will not apply where damage is caused by repairs made or attempted by others (i.e. persons not authorized by the manufacturer);
- f) this warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);
- g) this warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or any repairs or alterations have been made or attempted by unauthorized persons;

- h) this warranty will not apply to normal deterioration of the exterior finish, such as, but not limited to, scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and
- i) this warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

**Additional Limitations**

This warranty applies only to the original purchaser and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including, without limitation, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

**Notice to Consumer**

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

Made in China

Imported by

Mastercraft Canada Toronto, Canada M4S 2B8