

PRODUCT'S INSTRUCTION MANUAL



Model Number ■ **MULTI CUTTER – BASIC KIT(MP21-3-B)**

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**ORIGINAL INSTRUCTION PROVIDED
BY MANPA TOOLS**



**PLEASE READ THE COMPLETE MANUAL FOR SAFETY
BEFORE USING THIS TOOL**



1. Product composition & specification



Multi Cutter – Basic Kit Contents

- ① Multi cutter Housing & 3" Circular Cutter 8mm
- ② Body & Safety Cover
- ③ Wide Handle
- ④ 4" Safety Cover
- ⑤ Drive Gear
- ⑥ Adapter Ring 42.50 & 44.00
- ⑦ Torx Wrench & L Wrench
- ⑧ Spanner
- ⑨ Timing Belt 200 XL

Note : text, diagrams and data are correct at time of printing. In the interests of continuous improvement of our products, technical specifications are subject to alteration without prior notice

TECHNICAL SPECIFICATIONS :

Max. Blade diameter : 100 mm @ 4" Wheel

Max. Carving depth : 35 mm @ 4" Wheel

Max. RPM : 15,000 rpm @ extension spindle

Power : 630 ~750 Watt

Model : MP21-3-B

Disc Bore size : 16.03 mm

Weight : 0.8 Kg (without angle grinder)

Overall Length : 200 mm

Working width : 20 mm @ 3" Wheel

Blade width : 8 mm

Number of teeth : 3 EA @ 3" Wheel

2. Manufacture information

- Manufacturer : Manpatools Corporation

- Country of manufacture : Made in Republic of Korea

- Address : 700-20 Manse-ro, Yangseong-myeon, Anseong, Gyeonggi-do, Korea, 17502

- Telephone : (Tel) +82-31-676-9212 (Phone) +82-10-8777-5735

- Website : www.manpatools.com

- Contact : info@manpatools.com

3-2. Grinder Model & Spindle Size

Note : text, diagrams and data are correct at time of printing. In the interests of continuous improvement of our products, technical specifications are subject to alteration without prior notice.

Depending on Angle grinder Maker's Product's change in their improvement, Angle grinder model written below can be changed and can't install.

Please check the website for continuous updating information.
www.manaptools.com

ORIGINAL PRODUCTS INSPECTED & PROVIDED BY MANPA TOOLS



M10 Spindle Size :

Bosch : GWS 6-100, GWS 7-100, GWS 750-100 etc

Makita : GA4030K, GA4030, GA4530K, GA4530, GA4534, GA4530X, 9557NB, 9556NB, 9558PB, 9557PB, 9565PCV, GA4542C, XAG042Z, XAG09Z, XAG11Z, XAG16Z, XAG20Z, XAG17ZU, XAG21ZU.

DeWalt : DCG405B, DWE4011, DWE4012, DWE4120, DWE4120N

Milwaukee : 2783-20(22,22HD), 2781-20(21,22,22HD), 2980-20(21-22), 2981-20(21,22)

M14 Spindle Size :

Bosch : 1375A, GWS8-45, GWS9-45, GWS18V-45

Makita : GA4030K, GA4030, GA4530K, GA4530, GA4534, GA4530X, 9557NB, 9556NB, 9558PB, 9557PB, 9565PCV, GA4542C, XAG042Z, XAG09Z, XAG11Z, XAG16Z, XAG20Z, XAG17ZU, XAG21ZU.

DeWalt : DCG405B, DWE4011, DWE4012, DWE4120, DWE4120N

Milwaukee : 2783-20(22,22HD), 2781-20(21,22,22HD), 2980-20(21-22), 2981-20(21,22)

5/8"-11 Spindle Size :

Bosch : 1375A, GWS8-45, GWS9-45, GWS18V-45

Makita : GA4030K, GA4030, GA4530K, GA4530, GA4534, GA4530X, 9557NB, 9556NB, 9558PB, 9557PB, 9565PCV, GA4542C, XAG042Z, XAG09Z, XAG11Z, XAG16Z, XAG20Z, XAG17ZU, XAG21ZU.

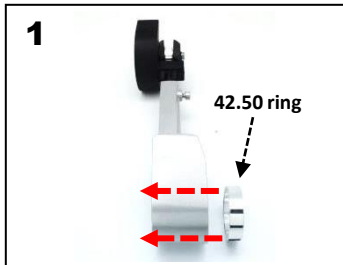
DeWalt : DCG405B, DWE4011, DWE4012, DWE4120, DWE4120N

Milwaukee : 2783-20(22,22HD), 2781-20(21,22,22HD), 2980-20(21-22), 2981-20(21,22)

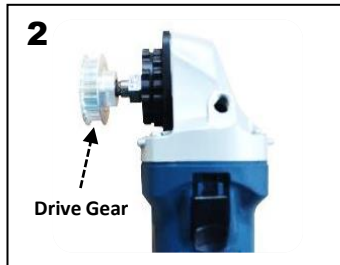
3-2. Unpacking and Assembly

Note : Please check your angle grinder maker and follow the instruction.
The assemble method is the same from No.4

Bosch & Makita



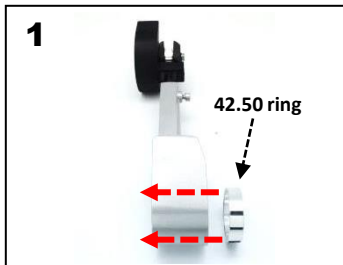
Put the ring($\phi 42.50$) into the body.
If tight, loosen the bolts on the body.



Set the drive gear on the spindle.
(Install in the same direction as the above picture.)

Note : Please tighten firmly, by locking grinder spindle & using a Crescent/adjustable wrench

Milwaukee



Put the ring($\phi 42.50$) into the body.
If tight, loosen the bolts on the body.

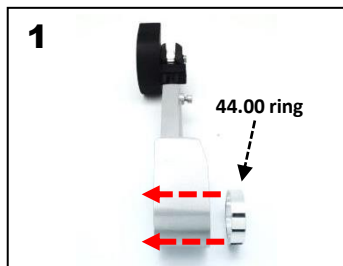


Remove the Lock Lever & Guard Release.



Set extension washer first. Then Set the drive gear on the spindle.
(Install in the same direction as the above picture.)

Dewalt



Put the ring($\phi 44.00$) into the body.
If tight, loosen the bolts on the body.



Remove the Lock Lever & Guard Release.



Set extension washer first. Then Set the drive gear on the spindle.
(Install in the same direction as the above picture.)

3-3. Unpacking and Assembly

4-1



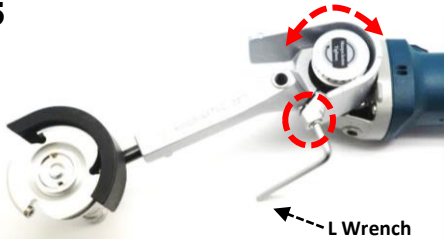
Attach the body to Angle grinder

4-2



Make sure the body is set, so it is firmly bottomed & there is no gap in between the body and grinder.

5



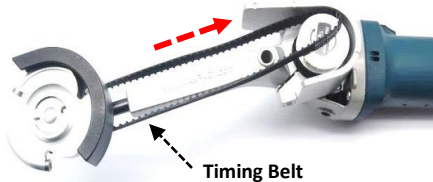
Adjust preferred angle(15-30°).
and fasten the body bolt with L wrench.

6



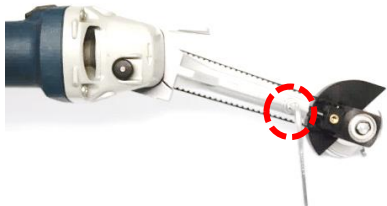
Loosen the belt tension / fixing bolt with L wrench.
Make sure that the extension spring is inside.

7



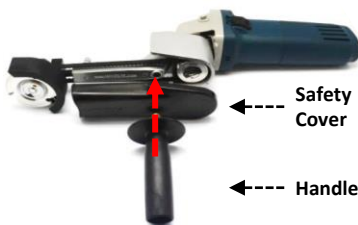
First, hook the belt on the housing gear. Then
hook it on the drive gear. Pull the belt towards
Drive gear.

8



Tighten the belt tension / fixing bolt again.

9



Attach Safety cover to the body and attach the
handle to Body. (Make sure to put handle &
Safety cover on right position.)

10

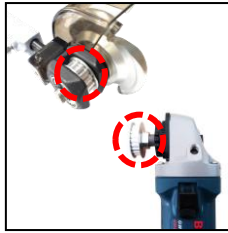


Assembly is completed.

4. Maintenance



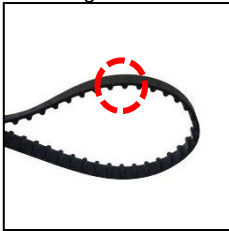
► On the top of the gear, There are **two Socket set screw** on them. Periodically check and tighten if it's loosen.



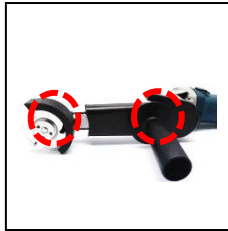
► Keep the belt drive gears clean of foreign material such as rosin and sawdust.



► Periodically check for **loosen bolts** and **worn carbide cutter**. If so, Please tighten the bolts & replace carbide cutter.



► Check the timing belt conveyor section for wear. If worn, Please replace new one.



► Check that the safety cover is installed securely.



► Check that the body and the grinder are in complete contact & secure.

4-1. How to replace the Carbide

Replacing and setting blade and carbide teeth

For an optimum operation of tools, the blade and carbide teeth must be properly set up and sharp. When the blade is worn out, use the Torx(Star) wrench provided to replace the carbide teeth. Replacement instructions are as follows.

- Image 1 is the exploded Image of wheel and carbide teeth. First, clean off any debris from the surface where carbide teeth will be placed. And remove the carbide teeth retaining bolts.
- Place the carbide teeth on the wheel, and use Torx(Star) wrench to fasten the bolt tightly.
- Set up all 3 carbide teethes in the same way.

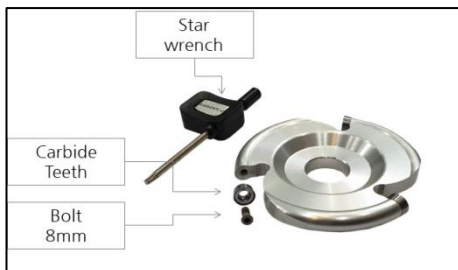


Image 1. Exploded view of wheel and carbide teeth



Image 2. Carbide teeth installed on the wheel

4-2. How to change the blade

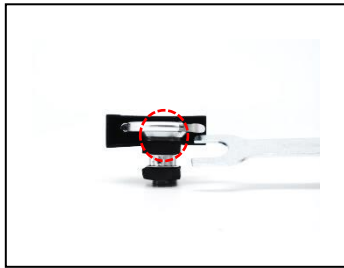


Image 1.

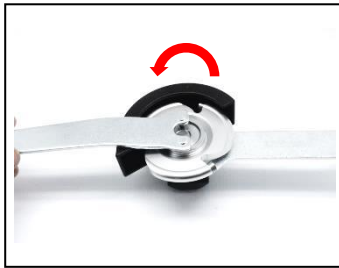


Image 2.



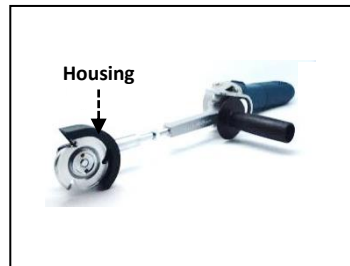
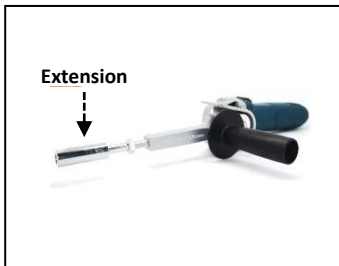
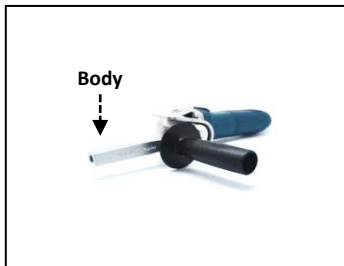
Image 3.

In order to use various wheel, the head and blade need to be separated and the new blade must be correctly set up. To replace the head and wheel, use the grinder spanner and Special U-spanner provided with the product, and follow below instructions.

- Prepare grinder spanner and special spanner.
- Hold the beveled area (behind blades) with Special spanner as seen in Image 1.
- Use grinder spanner to hold the nut and loosen counterclockwise as seen in Image 2.
- Image 3 shows the head as separated. Install the blade to replace, and fasten in the reverse order.
- When installing Various size wheel, make sure to choose appropriate size of safety cover too.

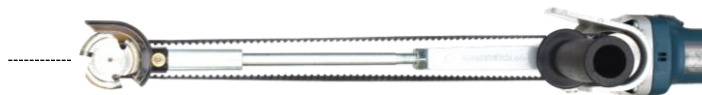
WARNING : When using different types of blades, you must use the genuine blades manufactured by Manpatools. Blades in the market have different regulations that working without properly installing may result in an accident.

4-3. How to attach the Extension bar

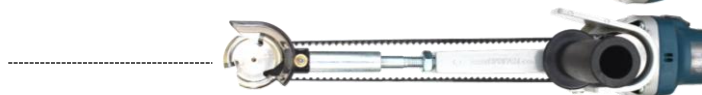


- After removing the housing from the body, attach the Extension bar in the middle.
- Attach the belt and tighten the housing fixing bolts. Always attach and use the handle.
- Always use appropriate Timing belt.

• Long Length : 348mm



• Middle Length : 270mm



• Basic Length : 200mm



5. Safety instruction

Use of tools is recommended by someone at least 18 years old or older with the experience of using grinder in woodcraft or woodcarving industry

Also, always follow the safety precautions during use. If you never used a grinder, we recommend that you receive instructions and safety training from someone that can handle grinder proficiently.

- a. Before supplying power, ensure that the on/off switch is in the OFF position and check if bolts in each part are securely fixed, and the belt safety cover and handles are installed properly. Hold the handle on the body with the left hand, hold the grinder with the right hand, and supply power while holding it safely with both hands.
- b. When the power is turned on, the power is delivered from drive gear to vertical gear where the blade is, through the timing belt. After it starts to operate, check if timing belt delivers power properly, and begin carving by getting the blade close to the surface of wood.
- c. Check for any debris like pebbles or sand on wood and remove during work. Also, be careful with kickback.
- d. During operation, if the tool is forcibly used, the teeth of the timing belt may be worn or cut off. Work safely by giving enough time for the tool to carve out the wood.
- e. When done with work or pausing, turn the power off and hold the grinder with both hands until the residual rotation finishes. Put it down when it completely stops.
- f. Always unplug when not working.

WARNING : Read the product guide provided with the product, and follow all precautions. Please do not discard the product guide but keep it.



READ ALL INSTRUCTIONS

- ▶ Always wear safety goggles or safety glasses. Use a dust mask and wear hearing protection always. Be sure to wear all safety equipment before working.
- ▶ Work in a neat outfit. Remove loose clothing, ties, jewelry, etc. from your body. Keep your long hair tidy. Also wear shoes that can prevent slipping.
- ▶ Never use power tools if you are tired, sick, distracted, or under the influence of drugs or alcohol.
- ▶ Keep your workspace clean. Also, please remove in advance anything that may interfere with work.
- ▶ To ensure safe operation, fasten the workpiece securely with a clamp or vise before starting work.
- ▶ Before you plug in any power tool, make sure the power switch is off.
- ▶ Check that all protective equipment mounted on the tool is fitted
- ▶ Always turn off and unplug the tool before you make any adjustments or change accessories.
- ▶ Never use any accessory except those specifically supplied or recommended by the manufacturer.
- ▶ Never use power tools in wet or damp conditions. Also in a dark place.
- ▶ Never use a tool that is damaged or malfunctioning in any way.
- ▶ Make sure cutters are clean, sharp and keep it securely in place. Never use broken or worn blades.
- ▶ Do not rush to work. Always pay attention. Do not distract you from anything.
- ▶ When using hand-held power tools, always keep a firm grip with both hands. Losing control creates a hazardous situation.
- ▶ Always use the right tool for the right job. No substitutions allowed.
- ▶ Always unplug, clean and store the tool in a safe, dry place.
- ▶ Make sure that the cutter blade or the belt is not in direct contact with the user. Contact may lead to serious injury.
- ▶ Please be aware that the cutter can generate rebound force (kick back) due to its rotation direction.

6. Safety precautions

Please read and understand all safety precautions, instructions, explanations and specifications provided with this product thoroughly for safe work and accident prevention.

a. Work area safety

- Always keep the work area clean.
- Always keep the light in work area bright.
- Always keep the work area well ventilated.
- Do not work in the environment with explosion hazard.
- Restrict access of people near the work area.



b. Electrical appliance safety

- When using electric tools, clean off any debris in the socket, and check for any damages on the wire. If any damage is discovered, replace the wire and use.
- Do not modify electric tool, and work safety according to the instructions provided by the electric tool.
- Do not expose electric tool to rain or wet environment, and do not use if exposed. It may result in accident due to electric shock.
- Always unplug when inspecting or not using electric tool.

c. Personal safety

- When working, wear all safety equipment such as mask, goggles, gloves and safety clothing. Safety equipment can protect the body and reduce damage from any possible accident.
- When working, fasten the woodwork. securely so it doesn't shake or fall.
- When inspecting or transporting the tool, always unplug.
- Always use the tool carefully and safely at the best condition. Stop operation if you feel tired or under the influence of alcohol or drug. Resume after getting enough rest.
- Be careful not to get the body in contact with the blade or belt. It may result in severe injury.
- Do not leave the tool unattended while rotating.
- Do not become careless once you become familiar with the tool. Carelessness may lead to another accident.
- After work, always clean the tool and the work area.



d. Safety matters about tools

- Please maintain the rotation speed of blade at above 11000RPM. If the rotation speed of blade is lowered, the surface of wood may not be smooth, and may bear too much load on blade and carbide teeth.
- Do not remove any safety devices or parts installed on tools, but use them together. It can prevent any sudden accidents and protect your body.
- In case of any abnormality while using the product, stop immediately and inspect the product. If repair is needed, inquire qualified personnel or designated repair shops.
- If consumables are worn out or parts are broken, please use authentic parts.



7. Kick back

It is the phenomenon where the blade moves forcefully to the direction that the user does not want as the part of blade that rotates in reverse direction touches the object. The reverse direction of rotating blade as seen in Image 1 is called kickback zone. When this part gets in contact with the object, the undesired part. An instant kickback may damage the object, blade and the belt, or even result in an accident in the worst scenario. Kickback occurs as a result of misuse of electric tool and inaccurate operation procedure, and understanding proper precautions given below can avoid accidents in advance.

- Always be aware of the kickback zone and safety zone when working. Use the blade in safety zone to perform desired work without kickbacks.
- Always install the safety handle on tools. It can safely prevent and resist any sudden recoiling of kickback using the body structure.
- It can particularly occur easily in corners, narrow or deep spaces, so please use extra caution.
- Do not use blades other than those provided by Manpatools. If blade breaks due to kickback, the fragment may cause injury.
- Fasten the structure securely so it doesn't move. If it moves during work, it may be in contact with the kickback zone and create a kickback.

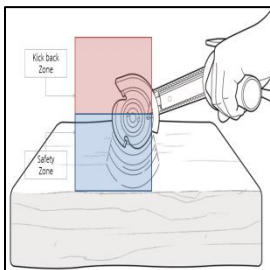


Image 1.
Kickback zone

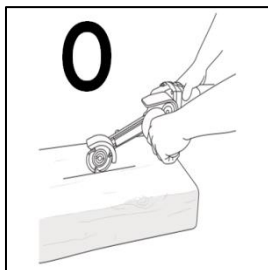


Image 2.
Prevent kickback by
holding safety handle

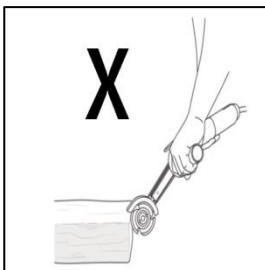


Image 3.
Use caution when
working on corners

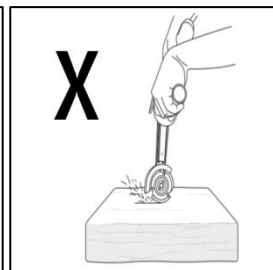


Image 4.
Kickback occurs when
vertical working