

PIPE(TUBE) CUTTER Of Best Technology

# -Cutter Manual

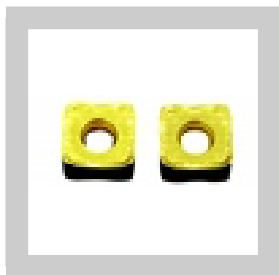
(  - CM4\_M /  - CM4\_OD )



## SAFETY PRECAUTIONS

Thanks for choosing the S-Cutter.

Make sure that you carefully read and fully understand the Manual to use the device correctly and keep yourself and your properties safe.



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## SAFETY PRECAUTIONS



- 01 Keep workplace clean and well-lit at all times.**  
An untidy or dark workplace may cause accidents.
- 02 Consider your work environment.**  
Do not let it wet.  
Do not use in humid place.  
Install bright lighting in the work place.  
Do not use the machine near the flammable liquids or gases.
- 03 Keep yourself safe from electric shock.**  
Do not touch the grounded parts(i.e. Water pipes, heaters, ranges, refrigerators).  
Ensure the grounding wire is properly connected to the ground and use it.
- 04 Keep out any unauthorized persons.**  
Do not let the outsiders contact with tool or extension cord.  
Do not let visitors access to the work area.
- 05 Keep the product safe.**  
Cut off the power when the tool is not in use, and keep it where it is not accessible to outsiders.
- 06 Do NOT operate at overload.**  
More efficient and safe operations are enabled within a permitted power range.
- 07 Always use the proper tools.**  
Use the standard parts and components provided by the head office.  
Do not use the tool for purposes other than their intended use or in places away from the working range.
- 08 Dress properly.**  
Do not wear loose clothing or jewelry.  
You may be hurt by the moving parts of the tool.  
It is recommended to wear non-slip footwear for outdoor work.
- 09 Be sure to wear safety glasses and protective gloves.**  
Wearing safety gear such as goggles and gloves can reduce the risk of bodily injury.  
Flying chips can do serious damage to the eyes or cause a burn.



**10 Do NOT abuse the cord.**

Do not drag the product by pulling the electric cord.

Do not unplug the cable by pulling the cord itself.

Keep the cord safe from heat, oil and sharp edges.

**11 Install the anti-scattering protector of cutting chips.**

Fire might occur if cutting chips touch the inflammable, and burning might occur if it touches the body.

spattering chips during work might cause injury to other workers around the working spot.

**12 Pay attention to your work.**

Please note the fall and cut piping pinch.

**13 Manage the product carefully.**

Keep the product clean and efficient for safe operation.

Manage with the proper lubricant, apply a corrosion inhibitor to prevent corrosion when not in use for a long time.

When replacing the management regulations and tools, comply with the instructions.

Check plugs and wires regularly and contact experts to repair the damage.

Check connection cables regularly and replace damaged parts.

Keep the control board dry and avoid getting oil or grease.

**14 Remove from power source.**

When not in use, checked or replaced, turn off the switch.

**15 Please check before operation.**

Make sure that the tool(insert tip) has been tightened.

**16 Be careful of operating the machine accidentally.**

Do not carry when the power is connected.

When turning on, make sure that the operation switch is off.

**17 Electrical cable for connection outdoors.**

Use the authorized extension poser cord with a qualifying mark.

Do not connect the currently used cable to other equipment.

Have a separate circuit breaker.

**18 Be cautious all the time.**

Observe work process and process accordingly.

Do not use this product if the concentration is blurred,

Do not operate by force the cutting speed and rotational speed.

**19 Make sure that there is no damage on the product.**

Check the safety device and examine thoroughly that the mildly damaged parts now function normally before resuming the use of the tool.

Check if the Product got stuck, or the parts are damaged.

The complete operation of the tool is not guaranteed unless all parts are normally assembled, and all requirements are met.

Unless otherwise stated in the Manual, the damaged safety device or parts are repaired or replaced at the customer service center.

**20 Caution!**

For your safety, use the parts and tools indicated on the manual or recommended by the manufacturer.

Use of other parts or additional tools that are not recommended on the manual and catalog may occur accidents.

**21 Repair request to the experts**

For your safety, use the tools and accessories specified in the Manual or recommended by the distributor. The use of other tools and accessories not mentioned in the Manual or catalogue may result in bodily injury.



## Must-Follow Rules



- ➡ The instructions in this user manual contains information that is important to the safe use of this product.  
Not following these instructions can cause death, serious injury, and massive property damage.
- ➡ For safety, the instructions are divided into 'WARNING' and 'CAUTION' depending on degree of risk, and the details are as follows:

Symbol		Description
	Warning	※ There is a high possibility of serious injury or death when the instructions are violated.
	Caution	※ There is a possibility of serious injury or death when the instructions are violated. ※ There is a possibility of device failure or degradation when the instructions are violated.

- ➡ Precautions were recorded to prevent an accident that might easily occur while using or handling the Product and execute operations safely.  
The safety warnings and cautions cannot cover all conditions or situations that can take place during operation. Therefore, remain focused during operation or storing. Read and fully understand the Manual to prevent an accident.
- ➡ **Special safety precautions**  
'WARNING' or 'CAUTION' mark makes a user stay alert because there is a possibility of hazards under particular conditions.



## Warning

- **Do not pour water or cutting fluid.**  
Due to water or other liquids on the electric motor, electric shock, or death may occur.
- **Do not use tools in wet conditions or rain.**  
Serious injury or death may occur by electric shock.
- **Avoid fingers, hands or clothes to touch the blade while operating.**  
When fingers, hands, or other body parts stuck in the machine, it may occur serious injury.
- **Avoid fingers, hands or other body parts to touch where pipe and roller meet while operating.**  
When fingers, hands, or other body parts stuck in the machine, it may occur serious injury.
- **Before supplying power to the product, be sure to turn off the operation switch.**  
Plugging in with the switch on may cause sudden rotation and occur serious injury.
- **Do not let any part of body to touch the compression device of product.**  
Serious injury may result.
- **Make sure to wear safety equipment.**  
Chips generated during the operation may scatter and cause serious eye injury.



## Caution

- **Be sure to apply our supplied product and insert tip only for their intended uses.**  
Use only products certified for their quality (state-certified or higher-quality) in the event there is difficulty in procuring our products and accessories.  
If violated, performance degradation and serious injury may occur.
- **Do not leave the product rotated.**  
workers may result in bodily injury.
- **Place cutting chips safely.**  
When cutting chips meet flammable substances, it may cause fire and burns.
- **Wear gloves and long-sleeved clothes to wear.**  
Scattering chips can cause burns.
- **Use Extension cord as short as possible.**  
If too long or too thin, it may cause overload.
- **Operation before commissioning.**  
Check the machine before use for safety.



## Instruction before use



### 1. Check the electric leakage breaker

Make sure the system is powered on the circuit breaker is installed.

Check if an electric leakage breaker (ELB) with rated capacity is installed in all electric units.

Make sure that the ground wire is connected to the powered system.

### 2. Extension power cord

If an electrical outlet is not nearby, use an extension power cord.

Choose a proper one in terms of length and thickness, considering the flow of electricity. If it is too long or thin, voltage increases, causing overload.

Use a short power cord as much as possible.

※ Specification of the extension cord has to be at least  $2.0\text{mm}^2 \times 3C$  (250V-16A).



If an electric power cord is damaged, it must be repaired or replaced with a new one immediately.

### 3. Check the power

Check the power supply stated on the nameplate and use the proper power source.

### 4. Check the switch is off



Unaware that the switch is turned on, the number of accidents due to a sudden rotation of the plug is inserted in the power being.



## - CM4\_M

### Portable hand bevel and coating removal

Bevel capacity : 0-90°, 0-14C

Pipe/plate : coating removal(zinc coating) and bevel processing





# How to Use S-CM4\_M

## How to Use S-CM4\_M

### Instructions Before Use

Please read about how to use manual provided by the headquarter or suppliers.

Users must be educated before use.

Make sure to remove the power when changing the insert tip.

Be sure to use consumables(such as insert tip) for this equipment that are provided by us.

Make sure to confirm the voltage and install the electric leakage breaker with rated capacity.

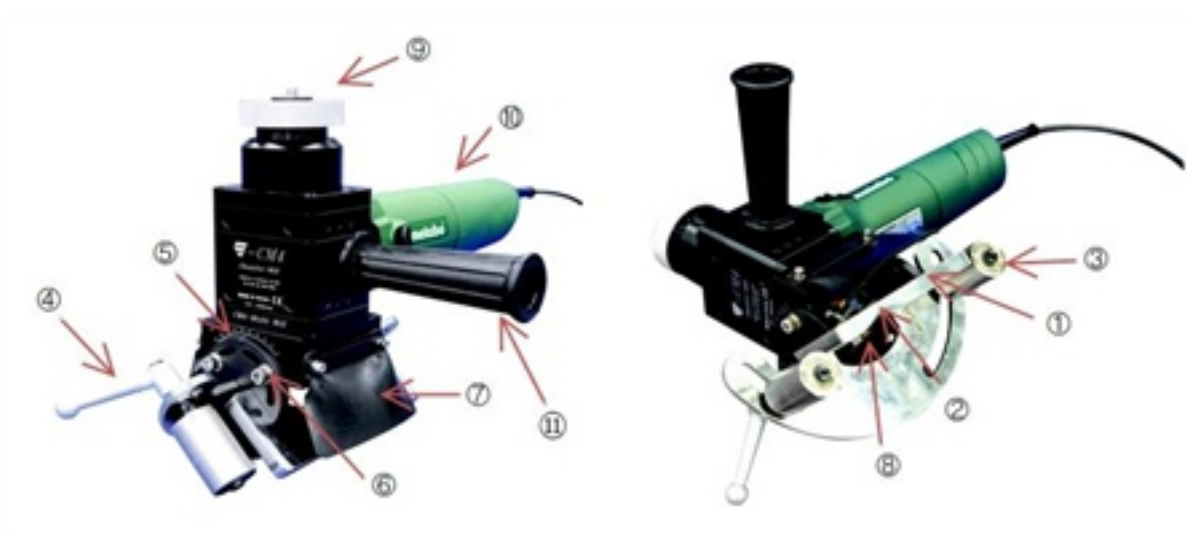
Make sure to wear protective equipment such as protective glasses before work.

Beware of burns by gearbox in case of prolonged use.

## INDEX

01. Name and function of the parts
02. Accessories
03. How to adjust the bevel angle
04. How to adjust the guide roll
05. How to adjust the processing depth
06. How to change the insert tip
07. How to use the S-CM4\_M
08. Product specifications

## 1. Name and function of the parts



NO	Name	Function
1	Guide	Processing guide
2	Guide groove	Selecting the optimal area when processing
3	Guide roll	Providing the convenience of work
4	Roll fixing lever	Fixing the guide roll
5	Goniometer	Bevel angle adjustment marking
6	Angle adjusting bolt	Guide plate fixing bolt
7	Rubber sheet	Prevention of flame and chip scattering
8	Insert tip	Insert tip(4ea)
9	Adjustable handle	Processing depth adjustment
10	Operating motor(handle)	Operating motor
11	Auxiliary handle	Handle(attachable on left and right side)



## 2. Accessories



### ● Standard accessories

Star wrench : For changing the insert tip(T15).

Hexagon wrench : For tightening the angle adjusting bolt(5mm).

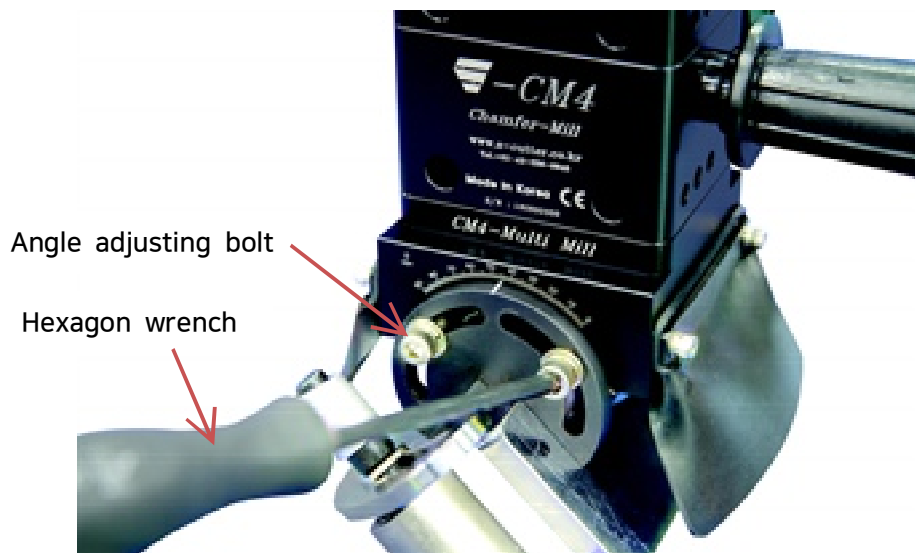
Auxiliary handle : Installed to the side of equipment when using with both hands.

### ● Optional accessory

Insert tip : Including the tip box, 10EA/Box

### 3. How to adjust the bevel angle

3-1. Loosen all 4 angle adjusting bolts by using hexagon wrench.



3-2. After loosening angle adjusting bolts(4ea), set the guide into the desired angle by looking at the goniometer, and then tighten the angle adjusting bolts(4ea).

e.g)

[Angle processing]

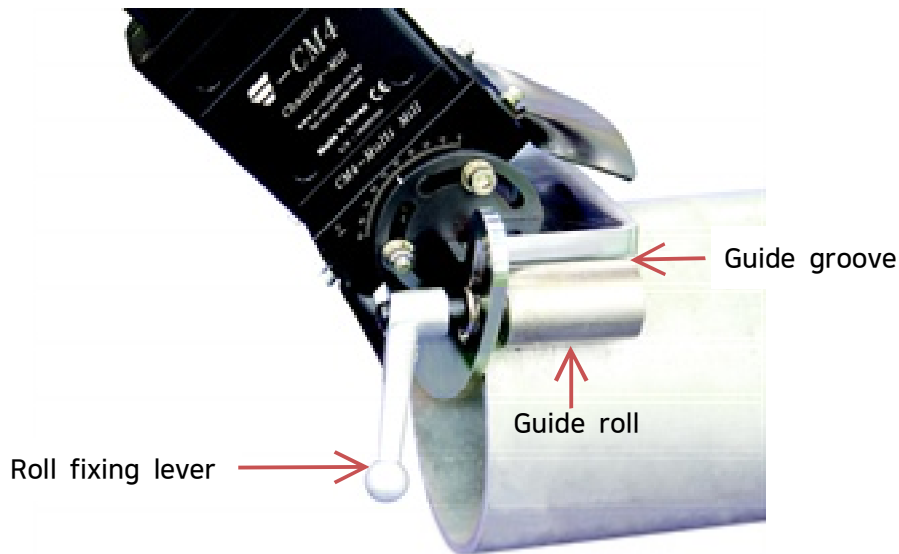
[Flat(surface) processing]





#### 4. How to adjust the guide roll

- 4-1. Put the guide groove to the top of pipe at first, place on the external surface of pipe by loosening the roll fixing lever as shown in the picture, and tighten the roll fixing lever firmly(refer to Ref.7 for detailed processing method).

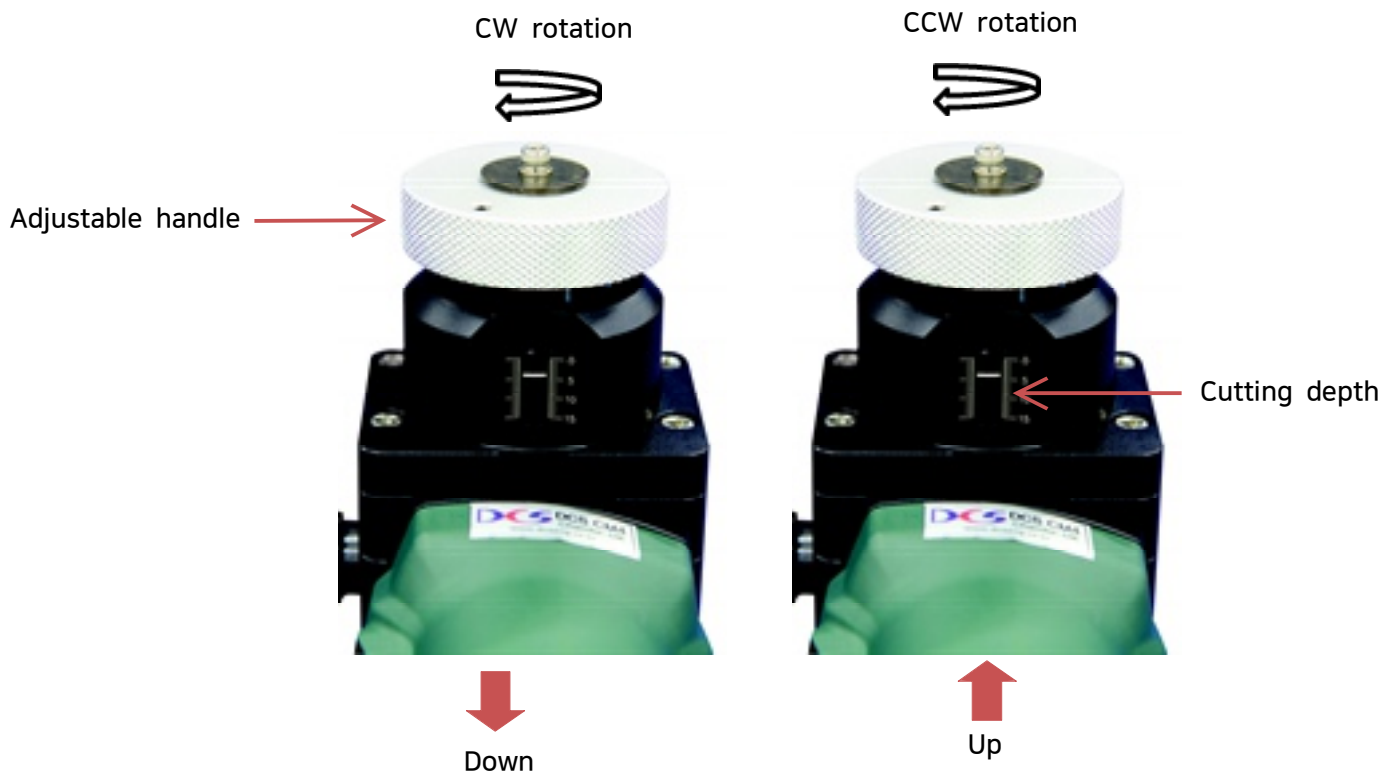


- 4-2. Roll fixing lever rotates freely when lifted into the axial direction as shown in the picture below, and location of lever can be adjusted comfortably.



## 5. How to adjust the processing depth

Insert tip is ascended or descended by rotating the adjusting wheel as shown in the picture(refer to Ref.7 for detailed processing method).



Ref.1) In case of processing depth by adjusting wheel, accurate depth value of entry can be obtained through processing depth marking on the back of equipment as shown in the picture below. (1mm = 1marking)

※ Use it for the reference since the actual processing depth is relative in accordance with the size of pipe(O.D).

Ref.2) Adjusting wheel is a ball plunger type and detailed adjustment of processing depth is available due to the 0.05mm pitch design per each marking.

Ref.3) Processing depth of S-CM4 can be adjusted arbitrarily even during the operation.

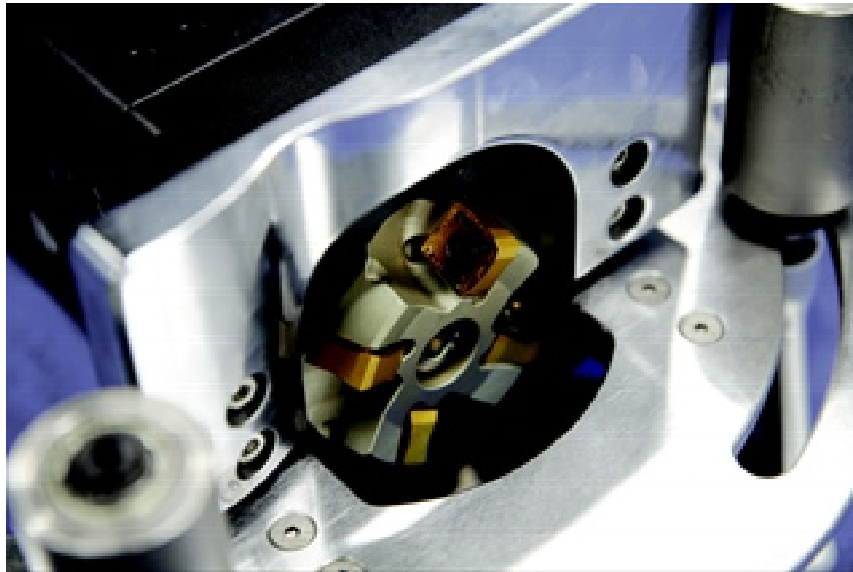
Ref.4) S-CM4 has up to 15mm of processing depth, but increasing the thickness by 5mm will increase the life of insert tip, decrease the breakdown incidence rate and use the product safely, rather than processing deeply from the beginning.



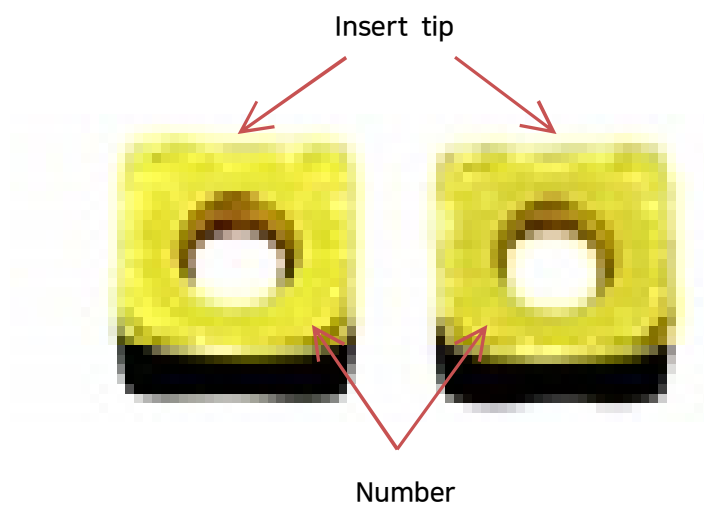
## 6. How to change the insert tip

**6-1.** As shown in the picture, insert tip can be changed by loosening the bolt of insert tip with star wrench provided as a standard component.

※ Reference) It is easier to work after descending the equipment by rotating the adjusting wheel clockwise on full lock.



**6-2.** All 8 surfaces of insert tip on the front and back can be used as shown in the picture, and one insert tip can be used 8 times.





## 7. How to use S-CM4\_M

### 7-1. Work order

Checking the tip → checking the angle(width) → returning to tool → adjusting the guide → adjusting the tool by operating the equipment while it is on the pipe → working after checking the final processing value → continuing(repeating) the work

#### 1) Checking the tip

Check whether all 4 insert tips are installed well.

#### 2) Checking the angle(width)

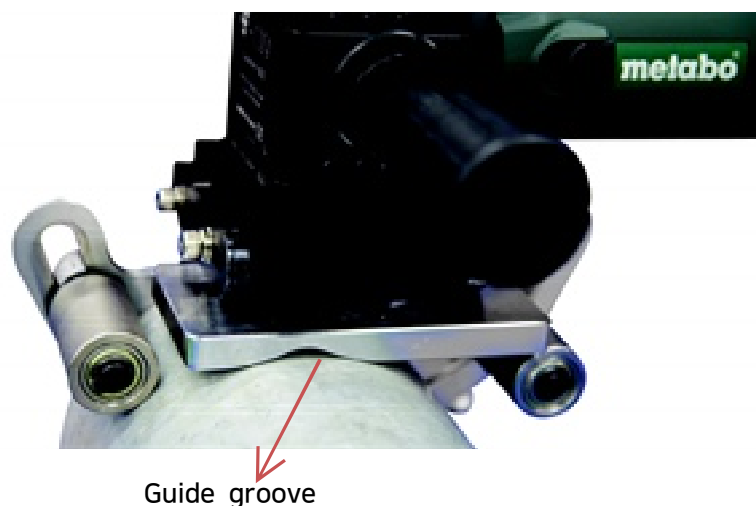
Check the marking of angle or width in accordance with the work condition.

#### 3) Returning to tool

Return the insert tip to the end as much as possible.

#### 4) Adjusting the guide roll

- Adjust the guide groove to the surface of pipe as shown in the picture below.
- Even thick processing is available if the top surface of pipe is placed on the guide groove when the equipment is approached to the pipe. (This is the important part to suggest the optimal processing position during processing of the pipe.)





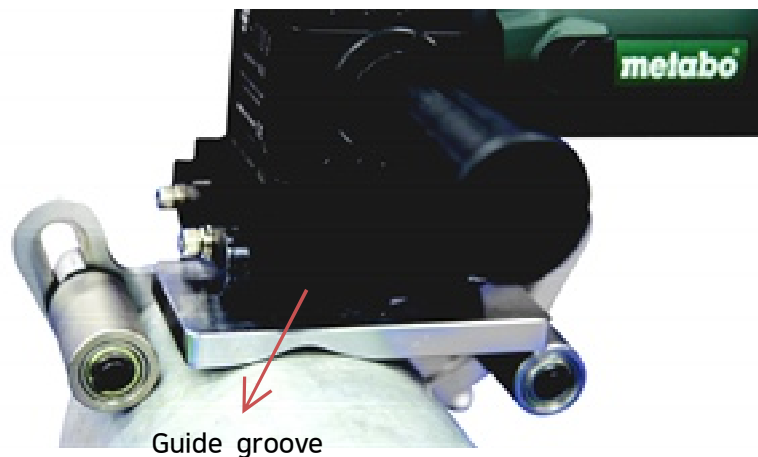
- 5) Adjusting the tool by operating the equipment while it is on the pipe
- Switch for the operation of equipment should not be adjusted while attaching the pipe, but adjust the switch while holding it in hand.
  - After the placement of equipment on pipe, check whether insert tip is attaching the surface of pipe by rotating the adjusting wheel gradually. It becomes a standard to obtain the accurate processing depth since the depth value of insert tip attaching the outside diameter of pipe initially is relative.
  - Rotate the adjusting wheel and descend the insert tip to the desired depth based on the moment that the insert tip and pipe are attaching(refer to explanation of No.5 for the adjusting method).
- 6) Working after checking the final processing value  
[Bevel processing]
- When beveling the pipe, attach the guide rolls at the back and in front to the surface of pipe and process the processing through the introduction of guide roll as shown in the picture below.



- In case of bevel processing, force into the vertical angle direction(diagonal direction of pipe) for the processing when forcing on the equipment while following the guide of the guide rolls at the back and in front.

[Surface processing]

- In case of surface processing, attach the guide groove to the pipe, and maintain the horizontality by attaching the front guide roll or back guide roll to the pipe in accordance with the direction of force(equal work is available when guide groove is attaching to the top of pipe).



## 7-2. Continuing(repeating) the work

- Work can be repeated without setting up again if the process is same.
- ※ However, introduction to the pipe (basic material) slowly after operating the equipment. Rapid introduction might cause break of insert tip and equipment breakdown since insert tip is more projected than the guide.

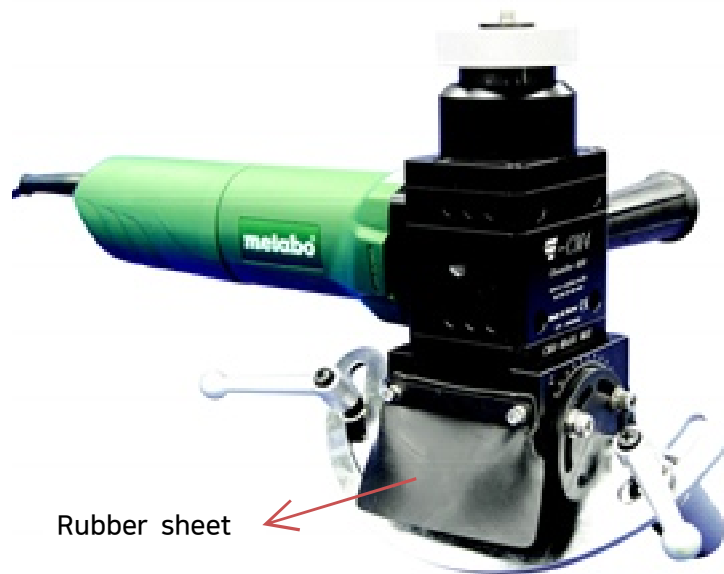
## 7-3. Using auxiliary handle

- Auxiliary handle is used for the safe and accurate work by holding or pressing the equipment not to shake, and working with both hands by installing the auxiliary handle is recommended, only except in a special situation.
- Auxiliary handle has female screw for the tightening in the center of each side of equipment, and the user can select the side for installation.



#### 7-4. Checking the adherence of rubber sheet

- Rubber sheet adheres on the side of equipment as shown in the picture below, and it blocks the chip or flame scattering while using the equipment.
- Please check whether the rubber sheet is installed before starting the work, and purchase the rubber sheet again by calling the head office or local branch if it is damaged.



## 8. Product specifications

- S-CM4\_M cannot adjust the width during surface(flat) processing of pipe/plate, and 26mm of width is fixed as shown in the machine specification processing capacity below {90°(surface)}. Please use S-CM4\_OD if width adjustment is needed.
- Please refer to the machine specification table or contact the head office for the details about the processing capacity.

### ● Machine specifications

Work capacity	Processing type	Pipe	Minimum O.D	1 inch(25A)	
			Maximum O.D	No limit	
		Plate	No limit		
	Materials	General steel, stainless, plastic, etc.			
	Depth adjustment	One-touch method (loosening prevention ball plunger method)			
	Processing depth	0.05mm as a minimum unit			
Machine capacity	Processing angle	0-90°			
	Penetrating angle	75°			
	Processing depth	Minimum is 0.05mm, maximum is 15mm			
	Processing capacity	Bevel angle	Thickness		Width (mm)
		0° (cross section)	15		15
		15°	16		17
		30°	19		22
		45°	14		20
		60°	10		22
		75°	8		31
	90° (surface)	5		26	
Machine specification	Total weight	6.0Kg			
	Output	AC200-220V/50-60Hz/1050W			
	Size	85×85×185H			
	Effectiveness factor	4EA(S501306-CM4-780) - possible to use 8 surfaces			

- Design and specification of this product are the version as of August 2014.
- The data may be subject to change for product improvement without a prior notice.
- Be sure to read through safety precautions described in the user manual and the equipment before using our products.



## - CM4\_OD

### Pipe/plate coating removal machine

Processing capacity : 48mm of maximum width,

15mm of maximum depth

Pipe/plate : coating(zinc coating) removal and flat processing



# How to Use S-CM4\_OD

## How to Use S-CM4\_OD

### Instructions Before Use

Please read about how to use manual provided by the headquarter or suppliers.

Users must be educated before use.

Make sure to remove the power when changing the insert tip.

Be sure to use consumables(such as insert tip) for this equipment that are provided by us.

Make sure to confirm the voltage and install the electric leakage breaker with rated capacity.

Make sure to wear protective equipment such as protective glasses before work.

Beware of burns by gearbox in case of prolonged use.

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01. Name and function of the parts
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03. How to adjust the processing width
04. How to adjust the guide roll
05. How to adjust the processing depth
06. How to change the insert tip
07. How to use the S-CM4\_OD
08. Product specifications



## 1. Name and function of the parts



NO	Name	Function
1	Guide	Processing guide
2	Guide roll	Selecting the optimal area when processing
3	Roll fixing lever	Fixing the guide roll
4	Processing width adjustment marking	Flat processing reference marking
5	Processing width adjustment bolt	Guide plate fixing bolt
6	Rubber sheet	Prevention of flame and chip scattering
7	Adjustable wheel	Processing depth adjustment
8	Operating motor(handle)	Operating motor
9	Auxiliary handle	Handle(attachable on left and right side)



## 2. Standard parts

Same as S-CM4\_M (refer to explanation of No.2)

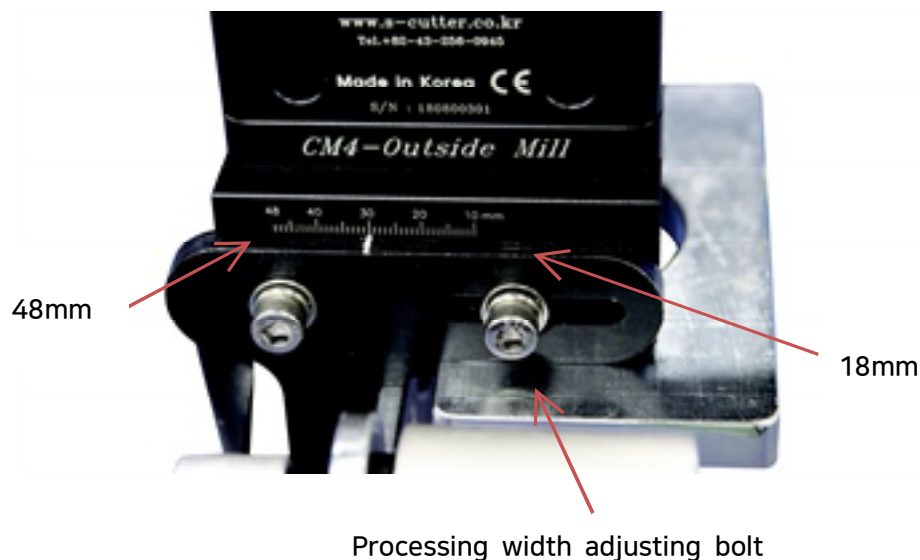
## 3. How to adjust the processing width

3-1. Loosen all 4 processing width adjustment bolts by using T-hex wrench.

Processing width adjusting bolt



3-2. Move the guide into the desired width by looking at the processing width adjustment marking, and tighten the processing width adjustment bolts(4ea) firmly. Distance that a guide of S-CM4\_OD can be moved for the width adjustment is from minimum 18mm to maximum 48mm.





#### 4. How to adjust the guide roll

Same as S-CM4\_M (refer to explanation of No.4)

#### 5. How to adjust the processing depth

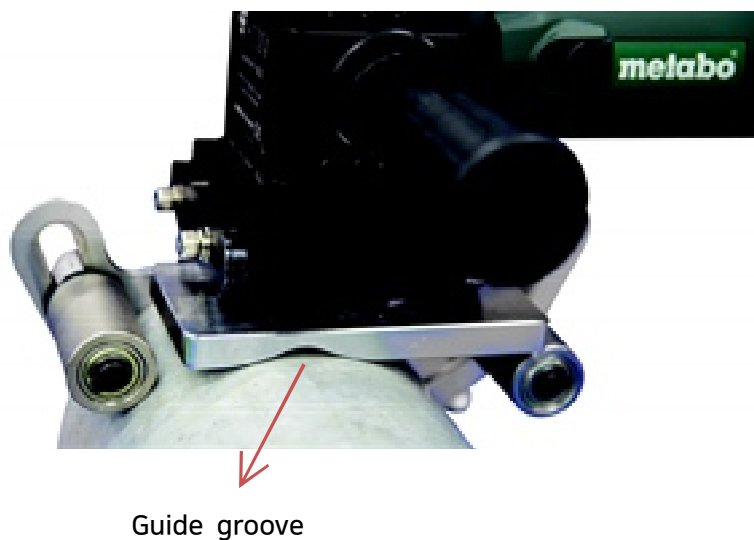
Same as S-CM4\_M (refer to explanation of No.5)

#### 6. How to change the insert tip

Same as S-CM4\_M (refer to explanation of No.6)

#### 7. How to use S-CM4\_OD

Same as S-CM4\_M (refer to explanation of No.7)



## 8. Product specifications

- During the flat processing of plate and pipe with S-CM4\_OD, it does not match with processing width marking certainly. In other words, maximum processing width is smaller for the pipes with smaller diameter compared to the pipes with larger diameter even after the processing with the same processing depth since the contacting section of insert tip is different in accordance with the diameter of pipe. Values of maximum processing width per diameter of pipes are entered into the data for the machine specification processing capacity(pipe), and you can use it as a processing reference value.
- Please refer to the machine specification table or contact the head office for the details about the processing capacity.
- Machine Specifications

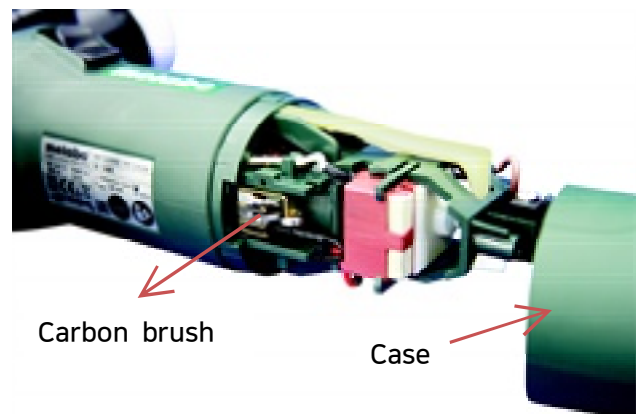
Work capacity	Processing type	Pipe	Minimum O.D	1inch(25A)
			Maximum O.D	No limit
	Plate	No limit		
	Materials	General steel, stainless, plastic, etc.		
	Depth adjustment	One-touch method (loosening prevention, ball plunger method)		
Processing depth	0.05mm as a minimum unit			
Machine capacity	Processing angle	0-90°		
	Penetrating angle	75°		
	Processing depth	Minimum is 0.05mm, maximum is 15mm		
	Processing capacity	Processing material		Width (mm)
		Plate	Minimum	18
			Maximum	48
		Pipe (When processing 0.3mm)	50A	27
			100A	29
			200A	31
			300A	33
500A	43			
Machine specification	Total weight	6.0Kg		
	Output	AC 200-220V/50-60Hz/1050W		
	Size	85×85×185H		
	Effectiveness factor	4EA(S501306-CM4-780) - Possible to use 4 surfaces		

- Design and specification of this product are the version as of August 2014.
- The data may be subject to change for product improvement without a prior notice.
- Be sure to read through safety precautions described in the user manual and the equipment before using our products.



## 9. Maintenance and inspection

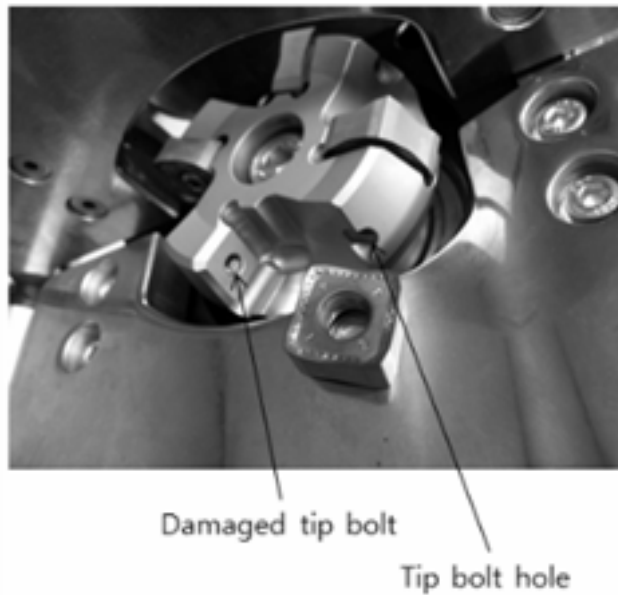
1. Be fully aware of the cautions for the safe usage.
2. When maintaining or inspecting, please remove the power plug
3. Inspection of the screw device for each part.  
Regularly check that the device on each part where the screw is loosened. If screws are loosen, tighten firmly. It is very dangerous to leave them loose.
4. S-CM4 requires the regular inspection and replace since it is a brush motor type.
5. Do not keep the equipment in a moist area(risk of electrical short).
6. Be cautious with handling since drop or impact is the cause of equipment breakdown.
7. Disconnect the power during the equipment inspection or while the equipment is not being used.
8. Carbon brush inspection and changing method
  - 8-1. As shown in the picture, loosen the (+) type screw tightened to the bottom of motor, and open the motor by pulling the cover of motor toward the bottom.



- 8-2. Replace the carbon brush if it is worn out after the inspection, and make sure the cover is reinstalled before using.

## 9. Action to take when tip bolt is damaged

- 9-1. If the tip bolt is damaged due to the carelessness, overload, accumulation of fatigue, etc. as shown in the picture below, it is easily removed through the counterclockwise rotation toward the edge of damaged tip bolt by using a sharp material, such as a gimlet, knife, etc., instead of hitting with a hammer or welding.




- 9-2. Also, the damaged tip bolt might be removed by tightening the same bolt (M4-20mm and above) at the back of the damaged tip bolt(same hole).
- 9-3. If the tip bolt is not removed with the methods above, please apply for the after service, and we will send the tip bolt quickly if you contact us when you don't have a tip bolt.

# Quality Warranty



It guarantees as below.

1. This product have passed the thorough quality inspection of DCSENG CO.,LTD.
2. When the product is damaged in a normal operation, the product will be repaired free of charge for one year in the purchasing place or service center in accordance with the contents of this certificate.
3. But, the return delivery fee will be charged. Malfunction of the product after the warranty period completed or occurred by customer's carelessness, can be repaired or replaced at a minimum cost.
4. However, malfunction due to change of use, abnormal wear, using parts from other companies, or repair in other A/S center may not be covered by the warranty certificate.
5. Repair cost will be charged in these cases;
  - Damage caused by the negligence of the user
  - Failure caused by not following precautions outlined in this product
  - Failure due to unreasonable repair and renovation.
6. The warranty certificate must be accompanies when repairing.
7. This certificate is not reissued.

Product Name	 <b>-Cutter</b>	Warranty Period	1 year from purchase date
Model No.	<input type="checkbox"/> S-CM4_M <input type="checkbox"/> S-CM4_OD	Purchase Date	20   /   /   /
Serial No.		Date of Manufacture	20   /   /   /
Customer Address		Name	
		Tel.	
Dealer Address (Shop Name)		Name	

※ Fill out the blank when selling products.

**DCSENG** DCSENG CO., LTD.  
<http://www.dcseng.co.kr>

Address : 23-22, Jukjeon-3gil, Hyeondo-myeon, Cheongju-si,  
 Chungcheongbuk-do, 28214, Republic of Korea  
 TEL : +82-43-256-0945 / Fax : +82-43-256-0946  
 E-mail : sales@dcseng.co.kr

PIPE(TUBE) CUTTER Of Best Technology



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W [www.dcseng.co.kr](http://www.dcseng.co.kr) [www.s-cutter.co.kr](http://www.s-cutter.co.kr)