

INSTRUCTION MANUAL

PNEUMATIC CHAMFERING TOOL

Please read this manual carefully before you attempt to use your tool so that you may use it properly and safely.

MINI BEVELER

Model AMB-0307, AMBL-0307

PROFESSIONAL TOOL



AMB-0307



AMBL-0307

Specifications

Model		AMB-0307	AMBL-0307
Maximum Operating Pressure		0.6 MPa	0.6 MPa
Air Consumption (No Load)		0.9 m ³ /min	0.9 m ³ /min
Rated Speed (No Load)		14000 min ⁻¹	14000 min ⁻¹
Chamfering Capacity	Stainless Steel	0~3C, 2R, 3R, 4R	
	Mild Steel	0~7C, 2R, 3R, 4R	
Chamfer Angle		15~45 °	
Mass (Weight)		2.9 kg	2.9 kg
Sound Pressure Level		87 dB(A)	87 dB(A)
Sound Power Level		98 dB(A)	98 dB(A)
Vibration Level [Uncertainty K]	Body	4.1 m/s ² [0.9 m/s ²]	4.1 m/s ² [0.9 m/s ²]
	Handle	6.3 m/s ² [1.10 m/s ²]	6.3 m/s ² [1.10 m/s ²]
Thread Size of Air Inlet		Rc3/8	Rc3/8

Due to continuous product development/improvement the specifications and configurations in this document are subject to change without prior notice.



NITTO KOHKI

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Keep the manual handy – so you can use it whenever necessary.

Original Instructions

Thank you very much for your purchase of this **Nitto Kohki products**.

Before using your tool, please read this manual carefully so that you may use it properly to get the most out of it.

Please keep the manual handy - so you can use it whenever necessary.

- **English** : Please ask your dealer or distributor for instruction manual in local language(s).
- **German** : Bitte fragen Sie Ihren Händler nach eine Betriebsanleitung in Landessprache.
- **French** : S'il vous plait, veuillez demandez á votre fournisseur de manuel instruction en langue locale.
- **Spanish** : Por favor, cantacte con su distribuidor para el manual de instrucciones en español.
- **Portuguese** : Por favor pessa ao seo agente ou distribuidor o manual de instrucces ih linguagen local.
- **Italian** : Per Manuale Istruzioni in lingua locale Vi preghiamo di rivolgervi al rivenditore o distributore.
- **Dutch** : Vraag uw handelaar om een nederladstalige gebruiksaanwijzing.
- **Swedish** : Be er lokala Åtreförsäljare eller distributör om manualer pá svenska.
- **Danish** : Venligst henvend Dem til den danske distributør for instructions manualer.
- **Polish** : Proszę pytać swojego dealera lub dystrybutora o instrukcje obsługi w języku localnym.
- **中文** : 請向當地供應商或經銷商詢問中文使用說明書

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PICTOGRAM



Warning: It might be dangerous to operate the tool if the instructions supplied are not followed.



Using this tool improperly could result in serious injury. Read the instruction manual before use.



Always wear suitable eye protection.



Always wear suitable hearing protection.



Always wear respiratory protective equipment (PPE).



Always wear protective gloves for protection of hands from Vibration and Shock.

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Bản quyền nội dung thuộc về **NITTO KOHKI**



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The following Safety notations are used throughout the manual to highlight safety precautions for the user and for the tool.



WARNING:

Indicates a potentially hazardous situation which, if not avoided by following the instructions given, could result in death or serious injury.



CAUTION:

Indicates a potentially hazardous situation which, if not avoided by following the instructions given, could result in injury or material damage.

Please note, however, that failure to observe safety precautions under the “**Caution**” category could result in a serious occurrence depending on the situation: please observe all safety precautions in the manual.

Caution: Important precautions for tool setup, operation and maintenance.

IMPORTANT SAFETY INSTRUCTIONS

When using the tool, please observe the safety precautions below to prevent possible accident or injury.

GENERAL: TOOLS

WARNING

TO OPERATORS

- **Wear proper clothing for the type of work being done.**
Take care so that clothing, ties, hair, etc. will not become entangled with the moving parts. If items become entangled it will cause the operator to be pulled towards the tool and lead to possible cause of accident or injury.
- **Always wear suitable eye protection.**
Vision correction glasses are not safety glasses. Always wear appropriate safety glasses when doing your job.
- **Always wear suitable hearing protection.**
- **Wear respiratory protective equipment (PPE).**
Wear respiratory protective equipment (PPE) when working in an environment where dust particles are generated in operation.
- **Always wear suitable protective gloves.**
- **Avoid working posture that is too stressful.**
Always ensure a firm footing and well balanced posture.
- **Do not operate the tool if you are too tired.**
- **Never touch any moving parts of the tool when running.**

ABOUT WORK AREA

- **Keep the work area clean.**
Cluttered work areas (e.g. workbench) invite accidents.
- **Carefully select the work area.**
Do not expose tool to rain.
Do not use tool in a wet or soaked area.
See that the work area is adequately illuminated.
- **Never work near inflammable liquid or in a potentially explosive atmosphere.**
- **Keep children away from the work area.**
Keep children and unauthorized people away from the work area to avoid accident or injury.

BEFORE OPERATION

- **Inspect tool before use.**
Before using, check that screws are securely tightened, that any protective cover or guard is securely in place, other parts are free from damage and that the tool runs as it should.
Check that moving parts are properly adjusted for positioning and tightened, that parts are free from damage and properly mounted, and that all other parts are in good condition for normal operation.
Should you find any damage to the protective cover or other part, replace it in accordance with the Operation Manual. If there are no instructions in the Manual, please contact the sales agent through which you have purchased your tool or an authorized dealer near you for repair.
Likewise, if a switch failure occurs, contact sales agent through which you have purchased your tool or an authorized dealer near you for repair. .
Do not use the tool if it does not start or stop with the start/stop switch.
- **Securely mount cutter**
An improperly mounted cutter may fly out, causing possible damage to the tool or injury to the operator.
- **Always remove spanner, wrench, etc., once adjustment has been made with them.**
- **Use a tool appropriate for the application.**
Avoid heavy-duty application that is beyond the capacity of tool.
- **Do not use the tool for purposes other than what it is designed for.**
- **Do not abuse tool.**
Use tool in accordance with the specifications: you'll get the most out of it while ensuring safety.
- **Securely fasten workpiece in place.**
Use a vice or clamp to securely fasten the workpiece in place. It is much safer this way than holding it in your hand, allowing you to operate the tool with both hands.

ABOUT HANDLING

- **How to store tool.**
When the tool is not used, store it in a dry area and out of reach of children.
- **How to carry tool.**
Do not touch the start switch while the tool is being carried.
- **Do not leave the tool unattended while it is running.**
Turn off the start switch and disconnect the tool from power source. Do not leave the work area until the tool comes to a complete stop.

MAINTENANCE/SERVICE

- **Do not take apart or modify tool.**

Disassembly or modification carried out without the supervision of a qualified or authorized service engineer could result in an accident or injury.

- **Inspect cutting tool and accessories, etc.**

Always check to see that cutting tool and accessories, etc. are in good operating condition without damage or deterioration before you mount them on the tool. Should you find any damage to an accessory or part, please contact sales agent through which you have purchased your tool or an authorized dealer near you for repair.

- **Check parts for damage.**

When you have found damage to accessory or other part, carefully check the damaged part to determine the extent of influence it has upon the functions of the tool – that is, determine whether it can still perform its normal functions.

Check to see that the linkage of the moving parts is OK, that all parts are OK without damage, that they are properly mounted, and that the tool functions normally. Should you find any damage to an accessory or part that may hamper proper functioning of the tool, please contact sales agent through which you have purchased your tool or an authorized dealer near you for repair.

- **Have your tool repaired at an authorized Nitto Service Center.**

For repair or parts replacement, please contact the sales agent through which you have purchased your tool or an authorized dealer near you.

- **Use only Nitto genuine parts.**

Use of improper parts may result in serious accident. To obtain a Nitto genuine part, consult this Manual or contact the sales agent from which you have purchased your tool directly.

- **Do not detach label or nameplate from tool.**

When a label/nameplate gets damaged, worn or becomes missing, contact the sales agent through which you have purchased your tool or Nitto Kohki Co. Ltd, directly for a replacement.

DISPOSAL

- When a tool is taken permanently out of service, it is advised that the tool is disassembled, degreased and parts separated by material and recycled locally in the appropriate manner.

GENERAL: PNEUMATIC TOOLS

WARNING

- **Use appropriate air pressure.**

Excessively high air pressure will increase the tool number of revolutions or strokes causing not only potential premature failure/breakage but could also lead to an unexpected accident or injury.

- **Connect tool to air supply line.**

There are various types of pipes running in a factory in addition to the pneumatic line (such as oxygen, nitrogen, gas and water). For this reason, always ensure that you are connecting to the pneumatic line.

- **Start tool properly.**

Turn the start switch OFF before connecting to the air supply line.

- **Always disconnect the tool from the air supply line before putting on/taking off any accessory and prior to carrying out any maintenance work.**

- **Avoid exposure to exhaust air.**

Pneumatic tool exhaust air contains oil and contaminated moisture. Make sure the exhaust air is not directed towards your face or anyone else within the work area.

- **Keep tool off electricity.**

This pneumatic tool is not electrically insulated. To avoid a potential electric shock do not use where there is a possibility of coming into contact with live electricity.

CAUTION

- **Handle tool carefully.**

Abusive use of tool could invite failure or accident. Do not throw, drop or shock the tool.

- **Handle connecting hose carefully.**

Do not carry the tool by the connecting hose. Do not pull the connecting hose to disconnect.

INSTRUCTIONS FOR THIS TOOL

About Your Tool

WARNING

- Always turn off the air supply and supply hose beforehand whenever replacing Indexable Insert.
- To replace the Indexable Insert after using, do not touch with bare hands as the Indexable Insert and holder are heated at high temperature.
- Use our original Indexable Inserts.
- Do not use the worn or damaged Indexable Insert.

1. USAGE

This tool is for chamfering workpieces with a Indexable Insert.

2. CHECK THE CONTENTS OF THE PACKAGE

Check the contents and make sure that the tool does not have any damage which may have occurred during transportation. The contents should correspond to the list as follows. In case of damage/missing parts, please contact the sales agent from whom you purchased the tool.

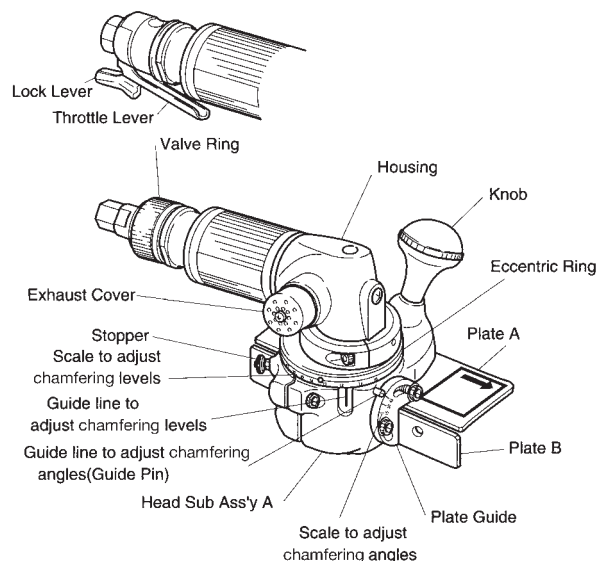
AMB-0307

Package Contents	Qty	Check
MINI BEVELER	1	
Knob	1	
Hex. Socket Screw Key 4	1	
Indexable Insert 12.7 with Hole	1	
Hex. Socket Screw Key 3	1	
Hex. Nut M8	2	
Hex. Socket Set Screw 8×25 Special	2	
Spanner T-15F	1	
Bushing R3/8×NPT3/8	1	
Instruction Manual	1	
Caution for Use	1	

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Package Contents	Qty	Check
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Bushing R3/8×NPT3/8	1	
Instruction Manual	1	
Declaration of Conformity	1	
Caution for Use	1	

3. NAME OF PARTS



4. AIR SUPPLY

4-1. Air Pressure (Fig.1)

Adjust air pressure with the air regulator to the appropriate level for the pneumatic tool used.

Air pressure that is too low will stop the tool from operating at full capacity.

Air pressure that is too high may cause damage to the tool.

4-2. Air Line (Fig.1)

Use a 9.5 mm (3/8") I. D. connecting hose between the compressor and the tool.

Drained water, etc., if flown into the tool, could cause tool failure. Install an air filter between the compressor and the tool.

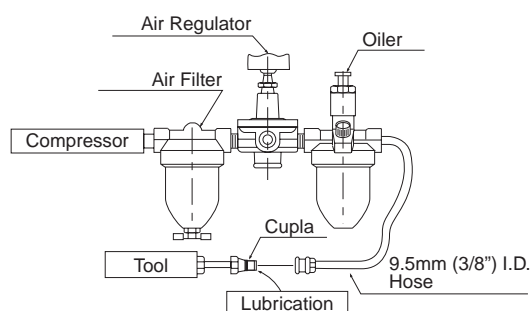


Fig. 1

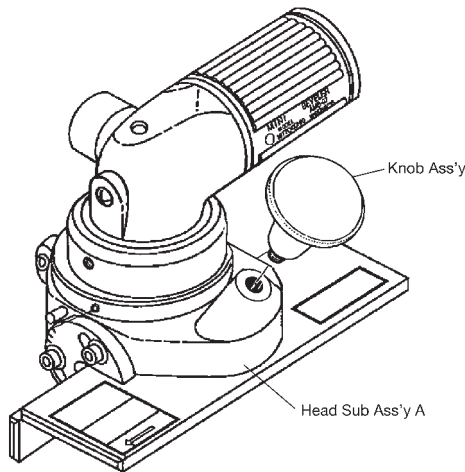
4-3. Lubrication (Fig.1)

Install an oiler between the compressor and the tool. Use the machine oil ISO VG-10. Failure to lubricate as required may result in damage to the tool. Use of oil that is too thick will reduce the performance of the tool.

5. PREPARATION

5-1. Attaching The Knob Ass'y

Screw the Knob Ass'y in the Head Sub Ass'y A.



6. HOW TO OPERATE THE TOOL

6-1. Start and Stop

AMB-0307

To start, pushing the Valve Ring forward and turn it counterclockwise (Fig. 2).

To stop, turn the Valve Ring to "OFF" position (Fig. 3).

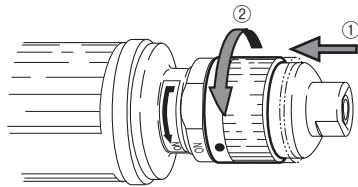


Fig. 2

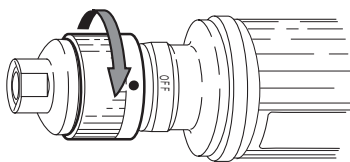


Fig. 3

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To start, hold down the Lock Lever, then grasp the Throttle Lever.

To stop, release the Throttle Lever.

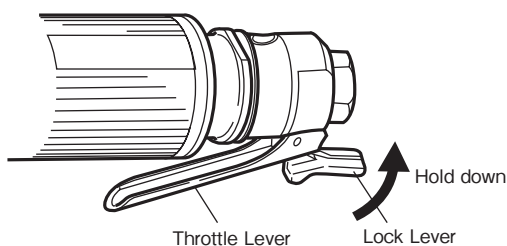


Fig. 4

6-2. How To Adjust Chamfering Levels

⚠ WARNING

Be sure to remove the air hose from the tool beforehand whenever adjusting chamfering levels.

The max. chamfering capacity:

Stainless Steel 3C

Mild Steel 7C

(1) Loosen the Hex. Socket Head Cap Screw ① of the Head ④ (Fig. 5).

(2) Turn the Head ④ to match the Guide line of Head ④ with the scale of Eccentric Ring ③ (Fig. 5, Fig. 6).

- The level guide is only for reference. If accurate chamfering is required, set the tool at a chamfering level about 0.5 smaller than the desired one. Try a test cut. Then adjust the tool for accurate chamfering.

In the case of Mild Steel.

You can select chamfering levels from 0 to 7C freely. The maximum chamfering capacity for one-cut is 4C. For 4C to 7C, chamfer a workpiece twice or three times.

(Ex. 7C: 4C → 5.5C → 7C Total 3 times)

In the case of Stainless Steel.

You can select chamfering levels from 0 to 3C freely. Chamfer the desired volume at a time without dividing the chamfering jog to several times

- If the Head ④ is in difficult position to work with loosen the Hex. Socket Set Screw ② of Eccentric Ring ③ to adjust the Head ④ in a proper position. After adjustment, tighten the Hex. Socket Set Screw ② firmly to prevent becoming loose during operation (Fig. 5).

(3) Firmly install the Head on the end of Eccentric Ring without making any clearance and tighten the Hex. Socket Head Cap Screw ① (Fig. 5).

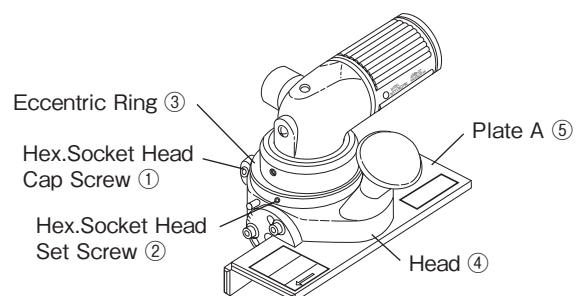


Fig. 5

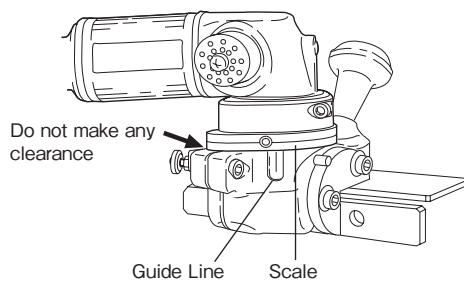


Fig. 6

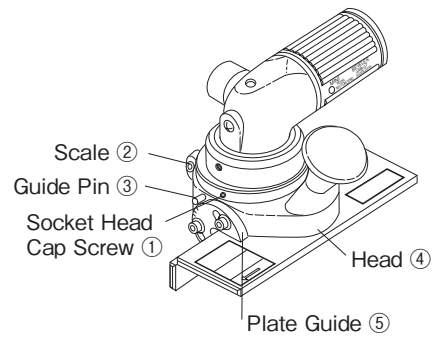


Fig. 8

6-3. Adjustment of Radius Chamfering in Amount

- (1) Fix a radius chamfering Indexable Inserts.
- (2) Loosen the Hex. Socket Head Cap Screw ① of the Head ④ (Fig. 5).
- (3) Turning the Head, match the scale of the Eccentric Ring with the guide line according to the size of the radius chamfering Indexable Inserts.
- (4) Set the Head ④ to the edge of Eccentric Ring ③ without clearance (Fig. 5).
- (5) Conduct a test cutting. Readjust the Hex. Socket Head Cap Screw of the Head, so that sizes A and B become identical.

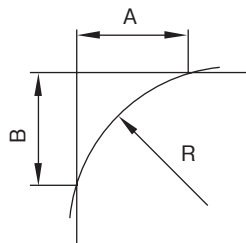


Fig. 7

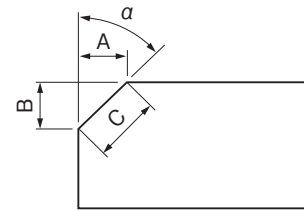


Fig. 9

Chamfering Angle	Stainless Steel (mm)			Mild Steel (mm)		
	A	B	C	A	B	C
45°	3	3	4.2	7	7	9.9
30°	2.2	3.8	4.4	4	7	8.1
15°	1	3.8	3.9	2.2	8	8.3

Fig. 10

6-4. How To Adjust Chamfering Angle

WARNING

Be sure to remove the air hose from the tool beforehand whenever adjusting chamfering angle.

- (1) Loosen the Hex. Socket Head Cap Screws ① (4 pcs) on both ends on the Plate Guide ⑤ of Head ④. (Fig. 8)
 - (2) Move the Plate Guide ⑤ so that the scale of desired angle can align to the Guide Pin ③.
 - (3) Tighten the Hex. Socket Head Cap Screws ①.
- The tool has the limit of chamfering width which depends on a chamfering angle. (Fig. 9, Fig. 10)

6-5. Before Cutting

- (1) When you start to work from the corner as shown in Fig. 11, cut off the corner first with grinder etc., then start.

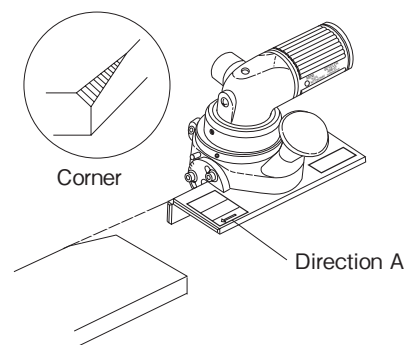


Fig. 11

- (2) Before start chamfering, make sure that the Valve is set on and the Indexable Insert is rotating. Then, apply the tool to the workpieces. The Indexable Inserts may be damaged if the Valve is set on after Indexable Inserts are pressed on the workpieces or they may also be damaged if they are pressed to the workpieces abruptly.

6-6. Feeding Speed

Be sure you should avoid quick feeding or heavy shock. Please refer to Fig. 12.

Stainless Steel	3cm/sec
Mild Steel	2cm/sec

Fig. 12

6-7. When Exhaust Freezes

When you continuously chamfer more than 1m, the number of the rotation of the tool sometimes becomes fewer because of frozen exhaust. Since the fewer number of rotation leads to the damage of the Indexable Inserts, machine the workpiece of more than 1m as shown in Fig. 13. If it shows the sign of frozen exhaust, put away the rotating tool from the workpiece for the period of 3 seconds. The rotation will return to the original.

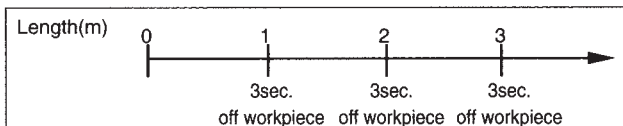


Fig. 13

6-8. How To Operation

⚠ WARNING

- Always turn off the air supply and disconnect the air supply hose when not in use.
- The workpieces should be fixed as much as while working possible.

- (1) Select the chamfering level.
- (2) Make sure that the Valve is set at "OFF" position and connect the air hose to the tool.
- (3) Hold the Housing up. Start the tool.
- (4) Hold the Housing and Knob firmly. Apply the tool on to the workpiece along with the direction A (shown on the Plate A) carefully.

- In case of chamfering stainless steel, chamfer deep to the desired chamfering level by one span of operation. Repeat of chamfering makes the life of Indexable Insert shorter.

6-9. Radius Chamfering

- By using radius chamfering Indexable Inserts, radius chamfering job can be done.

- Radius cutting Indexable Insert is an optional accessory.

- (1) Select the radius chamfering.
- (2) Make sure that the Valve is set at "OFF" position and connect the air hose to the tool.
- (3) Hold the Housing up. Start the tool.
- (4) Hold the Housing and Knob firmly. Apply the tool on to the workpiece along with the direction A (shown on the Plate A) carefully.

✳On Tangential Line Cutting

- Because of the constructional reason, it is possible to make a radius tangential line cutting on the side facing the Plate B by adjusting the Head, but impossible on the upper side facing the Plate A. For making a radius tangential line cutting on the upper side, conduct in a following manner.

- (1) Place the tool on workpiece with Plate A on upper surface of workpiece and Plate B on side surface, as indicated in Fig.14. Then, turn the Eccentric Ring to adjust the Indexable Inserts to cut properly side surface, and conduct the first cut (see Fig.15).
- (2) Next, placing Plate A on side surface and Plate B on upper surface, conduct the second cut.
- (3) In this case, slight seam may be left in center of chamfered surface (Fig.16).

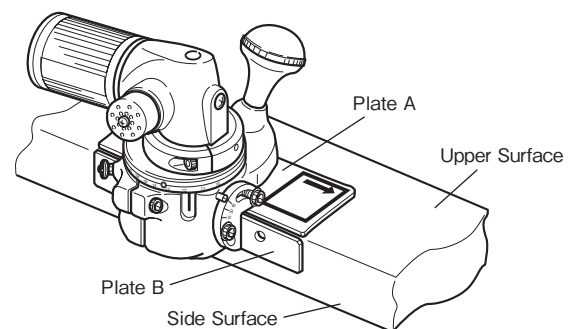


Fig. 14

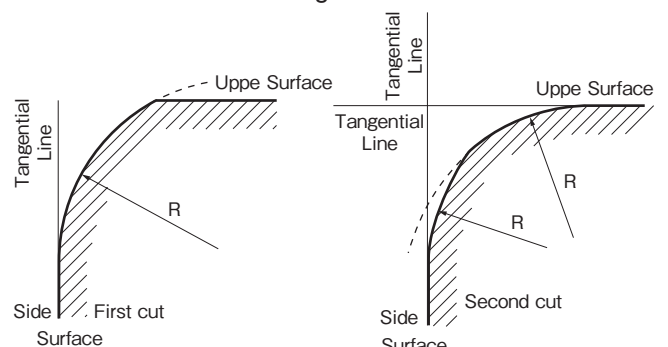


Fig. 15

Fig. 16

6-10. How To Chamfer Outer Diameter

WARNING

Be sure to remove the air hose beforehand whenever the accessories are attached or removed.

The tool can be used on the workpieces at the minimum diameter of 300mm by adjusting dimension A of both Hex. Socket Set Screws (8×25 special) ① in either direction. (Fig. 17)

Remember that this operation requires the workpieces of at least 12mm length. (Fig. 18)

(1) In the case of constant R (Circle), install two Hex. Socket Set Screws (8×25 special) ① on plate B and tighten with Hex. Nuts M8 ②. Make sure that the dimension A of the left and the right screws are equal.

(2) In the case of variable R (Oval), remove one of the two Hex. Socket Set Screws (8×25 special) ①.

● Remember that chamfering level changes depending on the radii in this case.

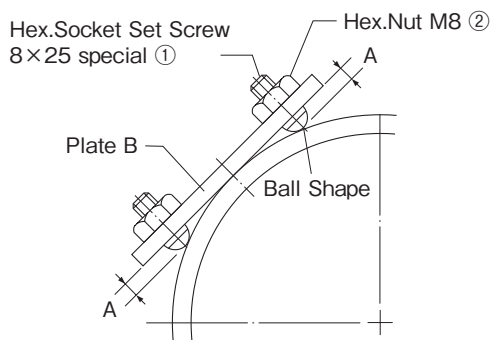


Fig. 17

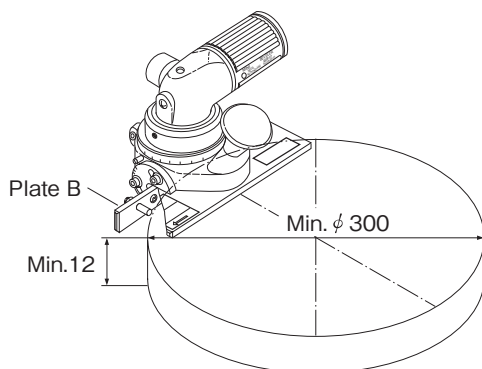


Fig. 18

7. HOW TO REPLACE INDEXABLE INSERT

WARNING

● Always turn off the air supply and disconnect the air supply hose.

● Bear in mind that Indexable Insert and Holder are much heated right after the operation.

(1) Loosen the Hex. Socket Head Cap Screw ① of the Head ② (Fig. 19).

(2) While pulling the Stopper ③ remove the Head ②.

(3) Unscrew the Indexable Insert Set Screw ⑤ with the Spanner T-15F ④ (or Spanner T-15D ⑥) and remove the Indexable Insert.

(4) Install a new Indexable Insert (or changing the side of Indexable Insert) paying attention to its shape.

(5) While keep pulling the Stopper ③, install the Head ② on the body.

(6) Firmly install the Head ② on the end of Eccentric Ring ⑦ without making any clearance and tighten the Hex. Socket Head Cap Screw ①.

● Spanner T-15D ⑥ (TQ01683) is available as optional accessory so that the Indexable Insert Set Screw ⑤ can be removed efficiently.

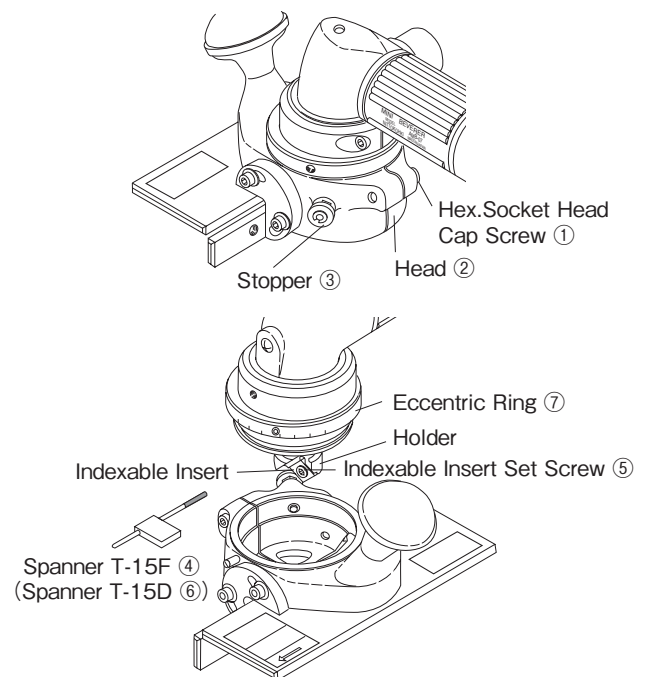


Fig. 19

8. CONDITION FOR USE

Burn-out chips suggest that either the feed speed is too slow or the Indexable Insert has worn-out. Change the cutting conditions or check the conditions of the Indexable Insert.

9. THREAD SIZE OF HOSE FITTING

The product comes with a metal fitting with Rc (metric) thread. Connect the Bushing R thread x NPT thread included as standard accessories, if you would like to have American NPT thread instead.

10. STORAGE



CAUTION

When tool is not used, store it out of reach of children.

Avoid storing the tool in a location subject to high humidity. If the tool is left as it is used, residual moisture on the inside can cause rusting. Before storing, and after operation, oil the tool at the air inlet with machine oil ISO VG-10 and run it for a short time.

11. ORDERING SERVICE PARTS

- For further operational and handling information or for replacement of parts and components, contact the company from whom you purchased the tool or an authorized dealer.
- In ordering parts and components give each part number, part name and quantity required.
- Use only NITTO genuine parts.

12. OPTIONAL PARTS

Part No.	Description	Qty
TB01159	Indexable Insert 12.7 with Hole Ass'y	10 pcs
TB01791	Indexable Insert 12.7 Ass'y sq. R2	10 pcs
TB01651	Indexable Insert 12.7 Ass'y sq. R3	10 pcs
TB01790	Indexable Insert 12.7 Ass'y sq. R4	10 pcs
TQ01683	Spanner T-15D	1 pc.
TB02539	Attachment for Small Dia. Pipe ※	1 set

※ For Steel Pipe Out. Dia. 80mm – 200mm