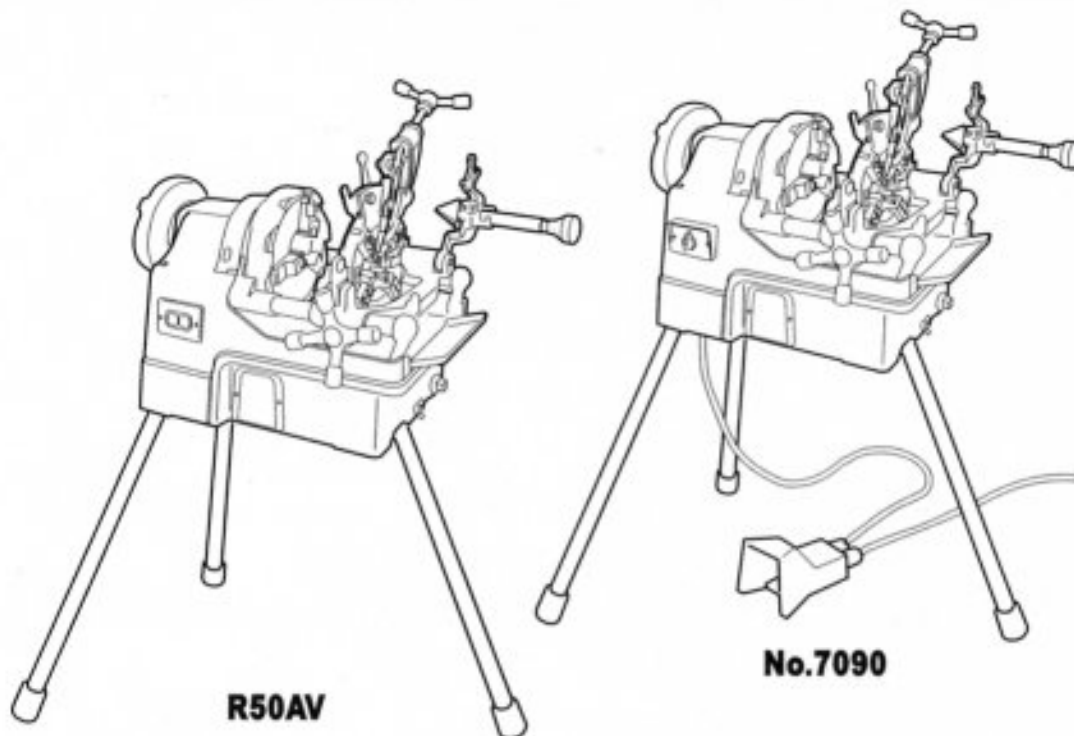


# R50AV / No.7090

WHEELER REX

OPERATION MANUAL



Be sure to read this  
Instruction Manual before  
using the machine

- Request -

- Be sure to hand this instruction manual to the user.
- Carefully read through this instruction manual before using the machine, to ensure safe and effective use of the machine.
- Be sure to keep this instruction manual where the operator can read it whenever necessary.

Purchasing date:                      Year                      Month

Sales agent:

- Surely observe the [Safety Rules] described below, to prevent accidents such as fires, electric shock and injuries.
- Carefully read these [Safety Rules] before using the machine, and operate the machine according to the instructions.
- Do not treat the machine in methods other than as described in this instruction manual.

## CONTENTS

1.Safe operation .....	1
2.Notices in using R50AV .....	3
3.Name of each part, Standard specifications, Accessories ...	6
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Definitions of **▲ WARNING** and **▲ CAUTION**

In this instruction manual, notices are divided into **▲ WARNING** and **▲ CAUTION**  
**▲ WARNING** : shows contents of possibility causing death or heavy injuries of users, in handling the machine incorrectly.

**▲ CAUTION** : shows contents of possibility causing injuries of users or possibility causing only physical damages, in handling the machine incorrectly.

Even in items described in [ **▲ CAUTION** ], serious results might be invited in some conditions.

Surely observe both of them, since the contents are greatly significant for safety.

- When this instruction manual is lost or damaged, promptly order a replacement from our agent or sales agent.

- Parts being used or specifications are subject to change without prior notice, due to improvements in quality, performance or safety standards. In this case, the contents, photographs, illustrations, etc. of this manual may not agree with the product.

---

 **WARNING**

- 1) Apply correct voltage of power supply being used.
  - Be sure to use voltage indicated as rated voltage in the main unit name plate or the instruction manual. If voltage different from the indicated voltage is used, heating, smoking or firing may occur.
- 2) Check on OFF of the switch, before inserting the plug to the power supply plug socket.
  - If the plug is inserted to the power supply in switch ON state, the machine may start operation abruptly, liable to cause unexpected accidents. Be sure to check on switch OFF.
- 3) Take notice for preventing electric shock.
  - Do not touch the plug by wet hands.
  - Do not use the machine in rain or at places where water enters easily into the machine inside.
  - Be sure to ground the earth. Electric shock might occur.
- 4) Take notice of environment conditions of the work site.
  - Do not use the machine in rain, humid places, wet places or places where water enters easily into the machine inside. Humidity will lower insulation of the motor and cause electric shock.
  - Do not use at places affected by flammable fluids or gases, such as gasoline and thinner. Firing or explosion might occur.
- 5) Use designated accessories and attachments.
  - Do not use accessories and attachments other than those designated in the instruction manual or our catalogs. Accidents or injuries might be caused.
- 6) In the following cases, turn OFF the main unit switch and pull out the plug from the power supply plug socket.
  - In case the machine is not used or parts are changed, repaired, cleaned or inspected.
  - In case accessories are changed.
  - In case hazards are expected. (including electric power failure)

If the plug is being inserted, the main unit starts operation unexpectedly, causing accidents.
- 7) If abnormality is sensed, immediately stop operation.
  - When operation of the machine is not smooth or abnormalities such as abnormal smell, vibration and noise are detected during running, immediately stop operation of the machine.
  - By checking symptoms with the items of [Troubleshooting Methods] in the instruction manual, observe corresponding instructions. If the machine is being used continuously, heating, smoking or firing might occur, causing accidents and injuries.
  - If heating or smoking of the main unit occurred, do not overhaul but ask for inspection and repair.
- 8) Keep the working site clean.
  - Take care for always ordering well the working table and the working site, and keeping high illuminance. Disordered site and working table are liable to cause accidents.
- 9) Do not let people other than the workers come near the machine.
  - Do not let people other than workers touch the main unit or the power supply cord or operate the machine.
  - Do not let people other than workers enter the working site. Among others, take care of children. Injuries might occur.
- 10) Do not use the machine forcibly.
  - Do not use the machine in usage not designated. Operate according to the capacity of the main unit, for assuring safe and effective operation. Forced operation causes not only damages of the products but also accidents.
  - Do not use the machine in the way causing motor locking, liable to cause smoking and firing.
- 11) Wear neat clothing in working.
  - Do not wear neck tie, clothes with open sleeves, loose clothes, ornaments such as necklace, etc., to prevent inclusion into the rotating part.
  - In working outdoors, it is recommendable to wear rubber globes and shoes with stoppers. Slippery globes and shoes are liable to cause injuries.
  - Cover long hairs with caps and hair covers, to prevent inclusion into the rotating part.
  - Wear safety caps, safety shoes, etc. according to working environment.

 **WARNING**

- 12) Do not work in unnatural posture.
  - Keep footings firmly and keep balance, to prevent overturning and injuries.
- 13) Remove tools such as a wrench.
  - Before turning ON the switch, check that tools used for inspection and adjustment are removed. If operation is made when tools are left, accidents and injuries may occur.
- 14) Perform operation with great care.
  - Carefully work with great consideration to handling methods, working methods and surrounding conditions. Carelessness will cause accidents and injuries.
  - Do not operate the machine when concentration is lowered in case of being tired, drinking alcohol, being sick, affected by medicines, etc., to prevent accidents and injuries.
- 15) Do not treat the power supply cord carelessly.
  - Do not carry the product by holding the cord, and pull out the plug from the plug socket by pulling the cord.
  - Do not bring the cord near heated objects, fats & oils, cutters and objects with acute edges.
  - Take consideration into wiring places to prevent treading the cord, pulling the cord or applying unnecessary force up to damage the cord.  
Electric shock, short-circuit may occur, causing firing.
- 16) Take careful maintenance daily.
  - In changing accessories and parts, observe the instruction manual.
  - Periodically inspect the power supply cord and plug. If damaged, request repair to yoursales agent or our sales branch.  
Electric shock and short-circuit may occur.
  - In case extension cord is used, inspect the cord periodically, and if damaged, replace. In case extension cords are used outdoors, use extension cords for outdoor use, to prevent electric shock or short-circuit and firing.
  - Keep the gripping parts dry and clean not to be attached by oil and grease. Slipping may cause injuries.
- 17) Check for damaged parts.
  - Before using the machine, carefully check for damages of the protection cover and other parts, and check on normal operation and exertion of specified functions.
  - Check for abnormalities such as in adjustment of movable parts, tightening state, damage of parts, fitting state and conditions of all parts affecting operation.
  - Do not use the machines causing damages of the plug and cord.  
Electric shock and short-circuit may occur, causing firing.
  - Do not use machines not started and stopped by switches.
  - In replacing or repairing broken protection cover and other parts, observe the instruction manual. In case instruction is not specified in the instruction manual, request your sales agent or our sales branch for repairing.
- 18) When the machine is not used, carefully store it.
  - Store at dry place not touched by children and locked by the key.
- 19) As for overhauling and repair of the machine, request to special agents.
  - Our products comply with corresponding safety standards. Do not remodel.
  - As for repair, be sure to asks for repair to your sales agent or out sales branch. If repair is made by unskilled persons with less knowledge on repair, sufficient performances can not be exerted and further, accidents and injuries may be invited.

## 2. Notices in using R50A

### ● Threading work

#### ▲ WARNING

- ① Take care in handling the blades.
  - Take special care in handling the blades such as chaser, reamer, pipe cutter and carbide cutter, to prevent accidents and injuries by handling incorrectly.
- ② Do not put your hands and face near the rotating parts during operating.
  - Inclusion into rotating parts and chips cause accidents and injuries.
- ③ Do not perform the next work until rotation stops completely.
  - In turning OFF the switch, rotation does not stop instantly. Perform the next work after checking on complete stopping, to prevent biting causing accidents and injuries.
- ④ Do not wear gloves during operating.
  - Biting into the rotating parts and blades causes accidents and injuries.
- ⑤ Do not leave the machine rotating.
  - Other persons may be injured.
- ⑥ If dropping or hitting occurred by mistake, carefully check for breakage, cracks and deformation of the machine.
  - If abnormalities are detected, request inspection and repair to your sales agent or our company sales office. Using the machine as it is continuously causes troubles of the machine, accidents and injuries.
- ⑦ Do not touch the chaser and chips just after threading work.
  - Temperature of the chaser and chips is raised very high just after threading, causing burns and injuries.
- ⑧ Die head and chaser
  - Use the die head and chaser matching with diameter of the pipe to be threaded.
  - Be sure to use only the R50A die head and dies. The die heads and dies for other models cannot be used with R50A.
  - Fit the die head correctly to the shuttle bench.
  - Before starting working, set the die head to threading state, turn ON the switch and check on correct supplying of threading oil fluid from the die head (Oil fluid is applied to the chaser), to prevent incorrect threading of the pipe, troubles of the machine, accidents and injuries.
- ⑨ Be sure to observe the threading start position.
  - In threading, start the shuttle bench from the right side of the red line put on the pipe receive on the front side (in viewing from the machine working position).
  - If the shuttle bench is not started from the correct position, the die head hits the main unit during threading, causing troubles of the machine, accidents and injuries.
- ⑩ Use the pipe support in threading long size pipes.
  - In threading long size pipes, use the pipe support to prevent vibration due to warping during rotating and instability of the machine due to material weight.
  - If the pipe support is not provided, threading can not be made correctly or troubles of the machine, accidents and injuries occur.
- ⑪ Surely fit the accessories according to the Instruction Manual.
  - Insufficient fitting causes dropping and falling of the units, accidents and injuries.

**● In case of threading oil fluid for stainless steel pipes****▲ WARNING**

- ① Do not burn the oil fluid
  - This oil fluid contains chlorine compound, and generates toxic chlorine gas by burning.
  - (Emergency treatment) Carry the person affected by the toxic gas to a place with fresh air and receive medical check.
- ② Treating waste oil and waste cases
  - Treating methods are stipulated by laws and regulations. Treat according to the laws and regulations on waste disposal and cleaning.
  - When uncertain, consult with your sales agent or our company sales office for treatment.

**▲ CAUTION**

- ① In treating, wear goggles.
  - Touching to the eyes may cause inflammation.
  - (Emergency treatment) Wash eyes with clean water for about 15 minutes, and receive medical check.
- ② In treating, wear protection gloves.
  - Touching to the skin may cause inflammation.
  - (Emergency treatment) Carefully wash the touched part with water and soap.
- ③ In treating, take care not to suck oil mist and steam.
  - Sucking oil mist and steam may cause sick feeling.
  - (Emergency treatment) Carry the person to a place with fresh air, cover the body with blanket, etc. to keep warm and restful, and receive medical check.
- ④ Do not drink the oil fluid.
  - Drinking may cause loose bowels and vomiting.
  - (Emergency treatment) Do not let the person vomit forcibly, and immediately receive medical check.
- ⑤ Do not put the oil fluid at places easily taken by small children.
- ⑥ Do not thin the oil fluid, or mix the oil fluid with threading oil fluids of other companies.
- ⑦ When water is mixed during using threading oil fluid and color is changed to milky white or the oil fluid is deteriorated excessively and finished surface is worsened, change to new oil fluid promptly.
- ⑧ The oil fluid is classified in Class 4 No.3 Petroleums, Hazardous Materials Grade III in Laws & Institutions and Regulations on hazardous materials in Fire Protection Law. Take special care for firing.
- ⑨ Storing method
  - Close the lid after using, for preventing entry of dust, water, etc.
  - Since the oil fluid is chemical, store in dark place not exposed to direct sun light.

**● Chamfering work****▲ WARNING**

- ① Since the reamer blade tip is acute, do not touch it directly with hands, to prevent injuries.

**● In case of threading oil fluid for water supply pipes and water-immiscible cutting fluid for threading****▲ CAUTION**

- ① In treating, wear goggles.  
· Touching to the eyes may cause inflammation.  
(Emergency treatment) Wash eyes with clean water for about 15 minutes, and receive medical check.
- ② In treating, wear protection gloves.  
· Touching to the skin may cause inflammation.  
(Emergency treatment) Carefully wash the touched part with water and soap.
- ③ In treating, take care not to suck oil mist and steam.  
· Sucking oil mist and steam may cause sick feeling.  
(Emergency treatment) Carry the person to a place with fresh air, cover the body with blanket, etc. to keep warm and restful, and receive medical check.
- ④ Do not thin the oil fluid, or mix the oil fluid with threading oil fluids of other companies.
- ⑤ When water is mixed during using threading oil fluid and color is changed to milky white or the oil fluid is deteriorated excessively and finished surface is worsened, change to new oil fluid promptly.
- ⑥ Do not drink the oil fluid.  
· Drinking may cause loose bowels and vomiting.  
(Emergency treatment) Do not let the person vomit forcibly, and immediately receive medical check.
- ⑦ Do not put the oil fluid at places easily taken by small children.
- ⑧ The oil fluid is classified in Class 4 No.3 Petroleum, Hazardous Materials Grade III in Laws & Institutions and Regulations on hazardous materials in Fire Protection Law. Take special care for firing.
- ⑨ Storing method  
· Close the lid after using, for preventing entry of dust, water, etc.  
· Since the oil fluid is chemical, store in dark place not exposed to direct sun light.
- ⑩ Treating waste oil and waste cases  
· Treating methods are stipulated by laws and regulations. Treat according to the laws and regulations on waste disposal and cleaning.  
· When uncertain, consult with your sales agent or our company sales office for treatment.
- ⑪ Notices in drums (200 L)  
· Do not apply pressure to vacant drums, to prevent bursting.  
· Do not perform welding, heating, drilling and cutting to the drums, to prevent bursting and firing due to residues.

# Name of each part, Standard specifications, Accessories

## Name of each part

### R50A

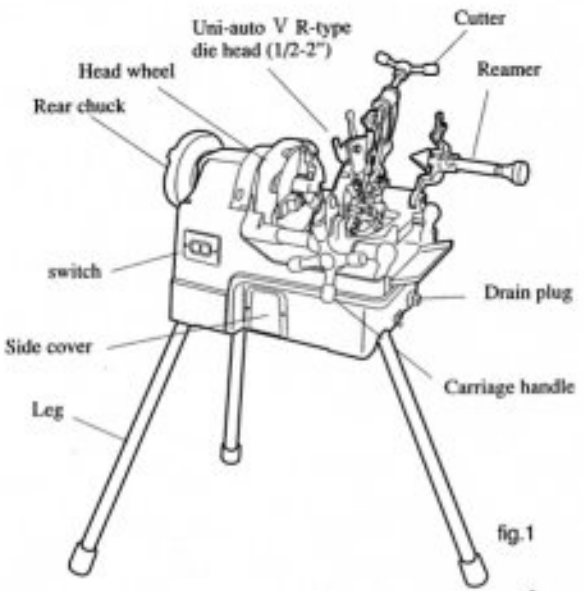


fig.1

### No.7090

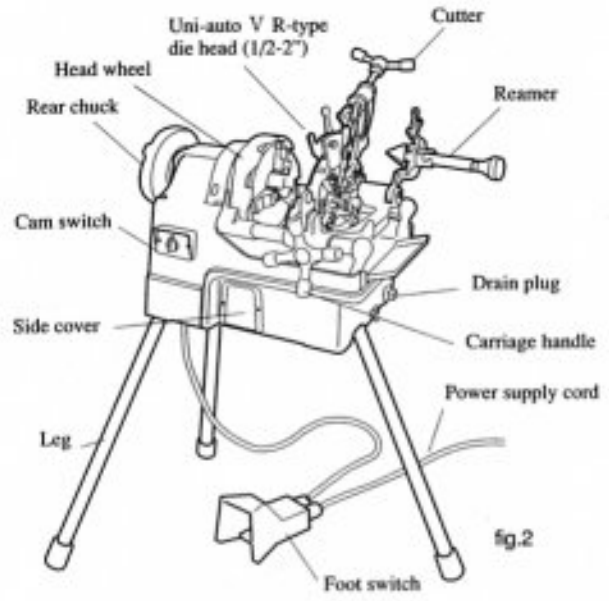


fig.2

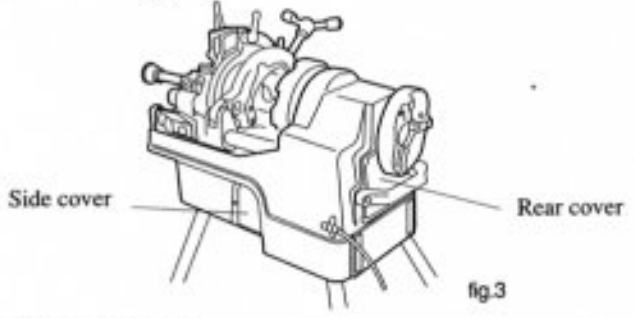


fig.3

## Standard specifications

Item	Model No.	R50AV
Threading capacity		1/2~2" (Threading, cutting, reaming)
Voltage		AC 120,220V
Motor		Single phase 700W series motor
Rotation speed		40 r.p.m
Net weight		104 lbs (47kg)
Dimensions		630 (L) × 380 (W) × 390 (H) mm

## Accessories

Die head	Uni-auto V R-type (1/2-2") one	(*Standard die head and dies of this model are interchangeable with RIDGID threading machines.)
Dies	R-type (1/2-3/4"), (1-2") one set each	
Stand	3 legs	
Tool box	Hexagonal keys : 2.5, 3, 4, 5, 6 mm 4ps.  Carbon brush : 1set (with auto-stop)	



## 4. Working preparation

### ■ Transportation

It is necessary to drain off the oil during transportation.

1. Insert a short pipe and close the chuck firmly.
2. Grip the pipe with the cutter for cutting, fix the carriage, and carry the pipe.

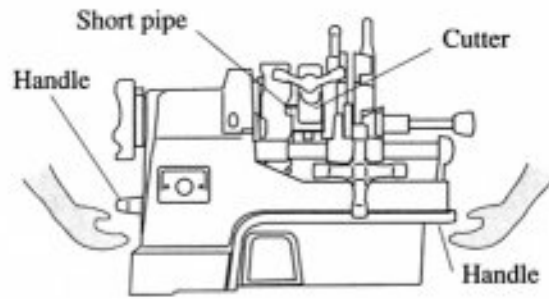


fig.4

### ■ Setting Up

1. When setting up the machine, the legs should be adjusted with the rear chuck higher than the hammer chuck so that oil does not flow back down the pipe being cut.

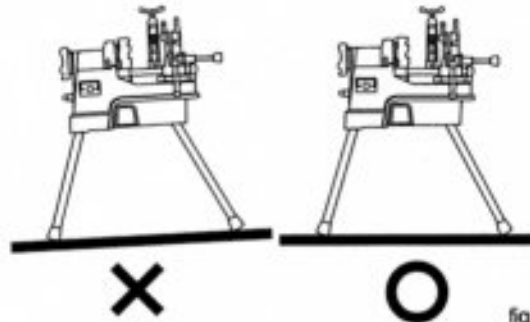


fig.5

2. Remove the tank upper cover, and check that the level of the oil adequately covers the strainer.

3. Set the oil cover and scrap receiver in the right position.

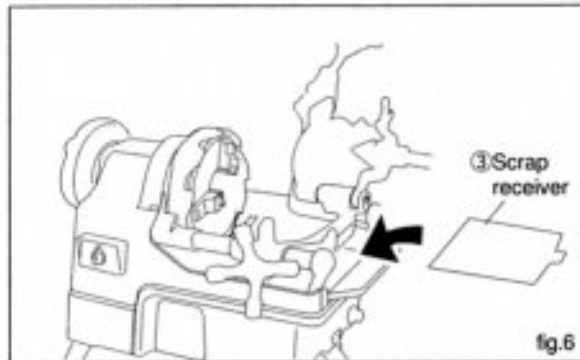


fig.6

### ■ Put down the die head

2. Fit the die head to the machine.

- ①. Adjust the die head post to the carriage fitting hole, and while moving the die head, push it until hitting the carriage.
- ②. Put down the die head and check on correct setting.

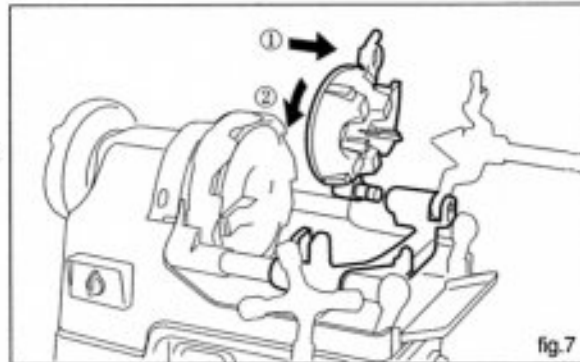


fig.7

## 4. Working preparation

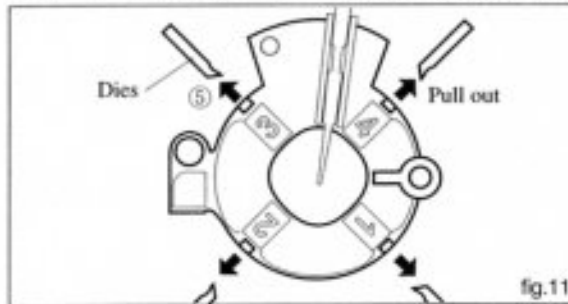
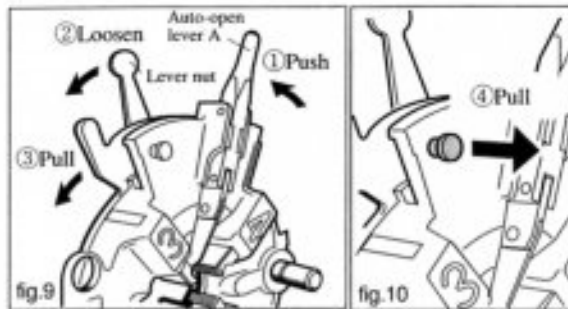
### Removal and Replacement of the Dies

#### Removing the dies

Push the auto-open lever A in the direction of the arrow (①) and put the die head into the open position.

Loosen the lever nut by turning in the arrow (②) and fully turn the cam plate in the direction of the dies-open position.(③)

Next, pull the knob (④) and open the cam plate as far as the release position, and then remove the dies from the diehead.(⑤)

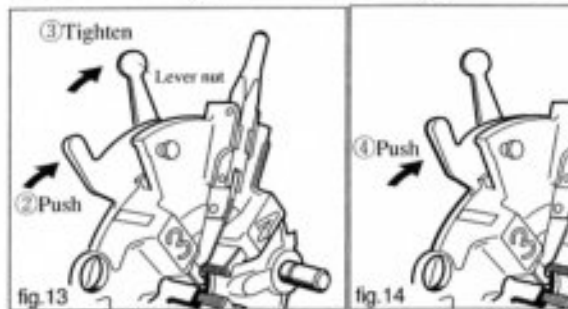
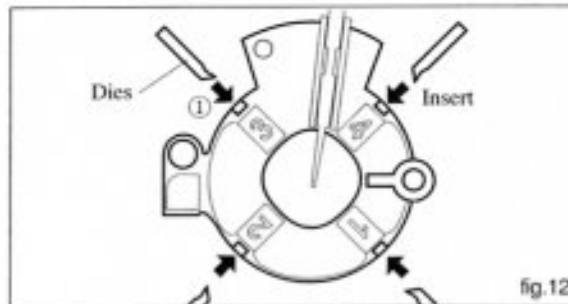


#### Replacing the dies

Insert each die into its corresponding slot number in the die head as far as the line marked on the die.(①)

Turn the cam plate in the direction of the die-set (②) and tighten the lever nut on the appropriate pipe size position.(③)

Next push the cam plate upwards in the direction of the die-set and set in position.(④)



### CAUTION

Be sure to use only the R50A die head and dies. The die heads and dies for other models cannot be used with R50A.

## ■ Setting the pipe

1. Open both chucks wider than the size of the pipe to be cut and insert the pipe from the rear chuck side where possible.
2. Close the rear chuck and, holding the pipe in your right hand, close the hammer chuck to grip the pipe. Jerk the hand-wheel sharply towards you to lock.
3. A sharp jerk in the opposite direction will release the pipe after cutting has been completed.

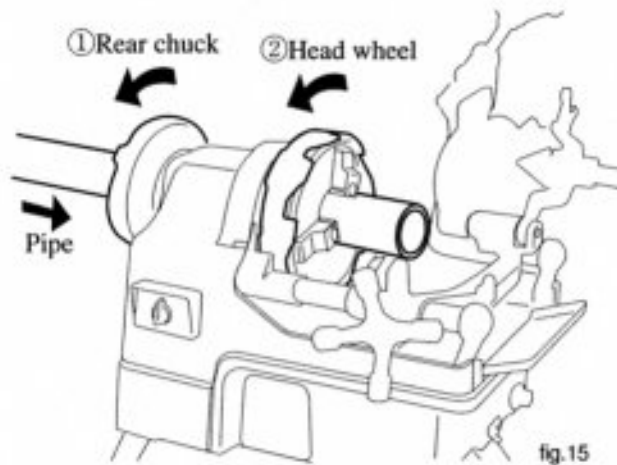


fig.15

## ■ Hints for Short-pipes

Setting a short pipe (which does not reach the rear chuck).

With the hammer chuck slightly loose, move the pipe into contact with the dies as shown in the diagram.

This will help hold the pipe on center while the hammer chuck is tightened. In this way a smooth taper cut is ensured every time.

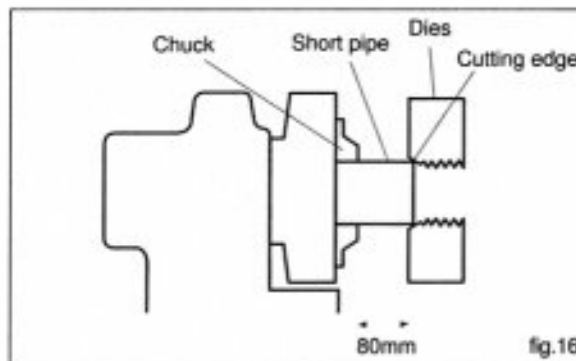


fig.16

## ■ Long-pipe

In case of long size pipes.

In case of threading long size pipes, use the pipe support to prevent vibration during rotating due to warping or instability of the machine due to material weight.

If the pipe support is not provided, threading can not be made correctly, or the machine is troubled, causing accidents and injuries.

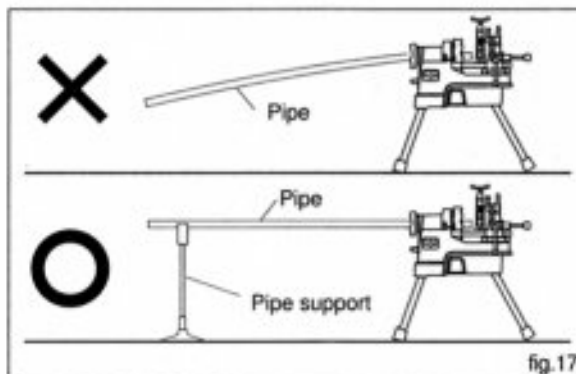


fig.17

# 4. Working preparation

## ■ Switch, Pipe cutting, Reaming

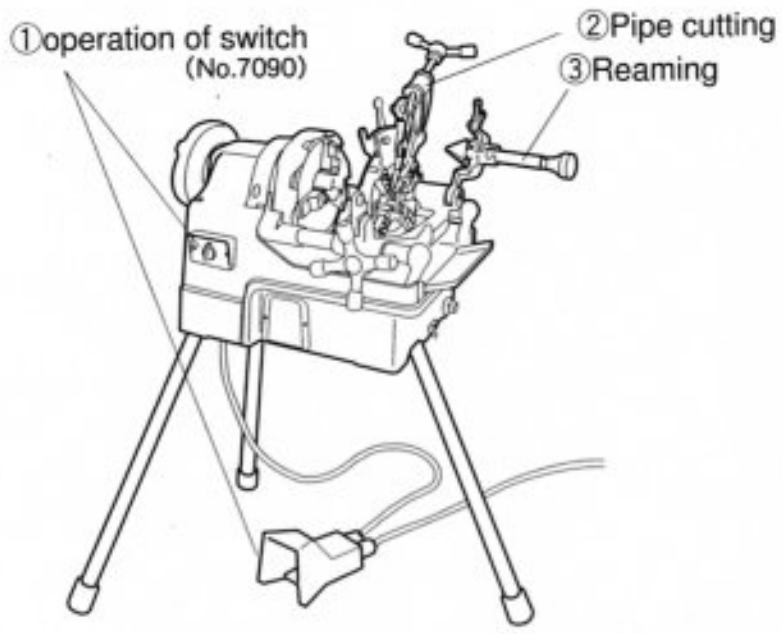


fig.18

### Power supply

Before using, check the voltage on the nameplate. Use only an AC power supply and always ground the machine before use. If an extension cord is used, it must be as short as possible and of sufficient capacity for the power supplied.

### ▲ CAUTION

Before connecting the plug socket, check that the machine switch is turned OFF, to prevent abrupt moving, causing injuries and accidents.

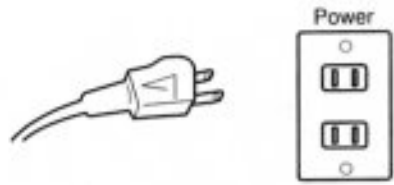


fig.19

## For No.7090 only

### ① Operation of switch

Both forward and reverse are operated by switch. Cutting oil is supplied for both directions.

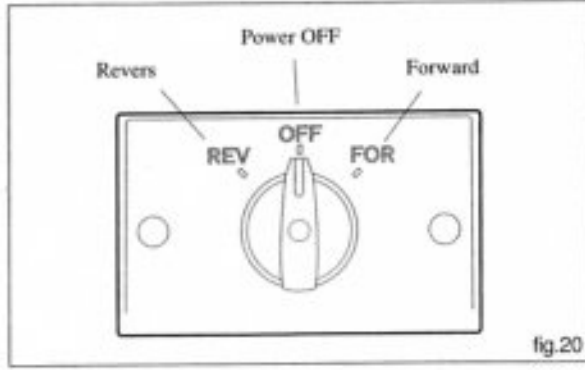


fig.20

## ② Pipe cutting

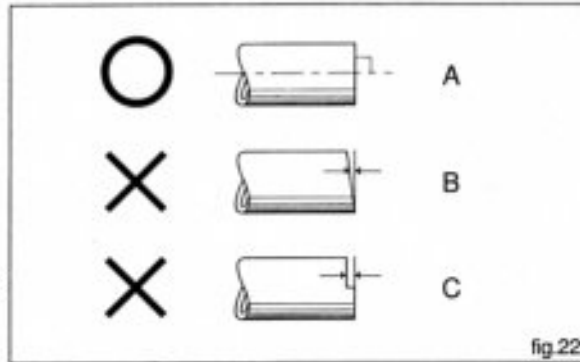
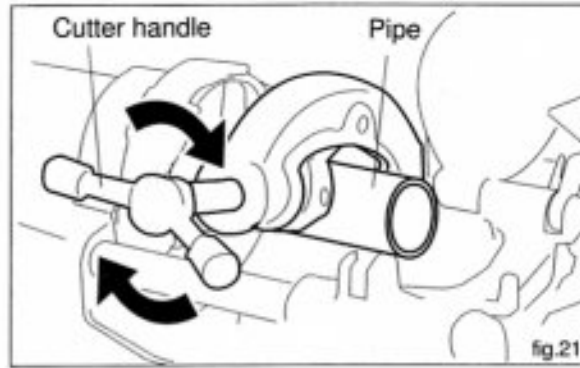
1. Raise the die head and reamer out of the way and set the pipe at the length to be cut.
2. Open the pipe cutter wider than the diameter of the pipe and lower it into position.
3. Tighten by turning the handle to the right until the cutter wheel firmly engages the pipe, (see diagram 21), start the machine, and turn the handle 1/4 of a revolution for each revolution of the pipe being cut until the pipe is completely cut.

### Warning:

If the cutter handle is turned too violently, when the cutter wheel cuts into pipe, it can distort the shape of the pipe.

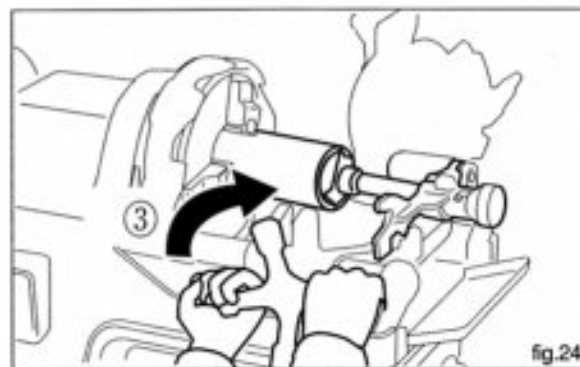
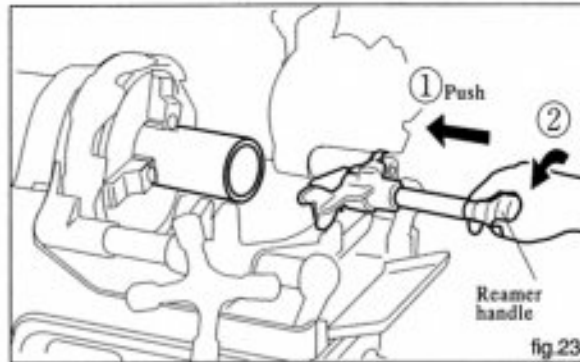
### ■ Special Cut Grinder Precautions

We strongly recommend that only the pipe cutter attached to the machine be used to cut pipes that are to be threaded. If a grinder is used, make sure that the cut face is square and without steps as in diagram 22.



## ③ Reaming

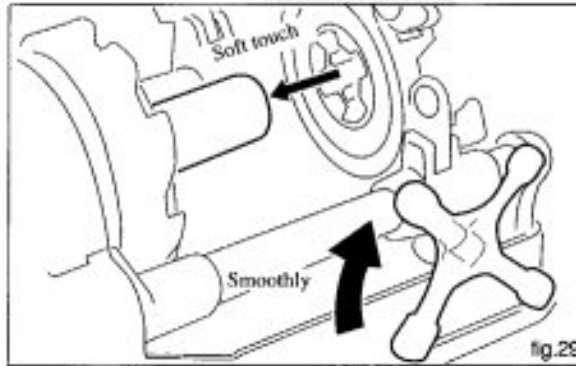
1. When cutting is complete, raise the cutter out of the way. Lower reamer arm and push the reamer handle toward the pipe.
2. Long-chucked pipe can sometimes be reamed with the reamer handle in the recessed position.
3. Lock the reamer in position by turning the reamer handle anti-clockwise.
4. Start the machine and turn the carriage handle to the right to advance the reamer.
5. When reaming is complete turn off the machine, retract the reamer handle and raise the reamer arm into the rest position.



## 4. Working preparation

### ■ Precautions for Threading

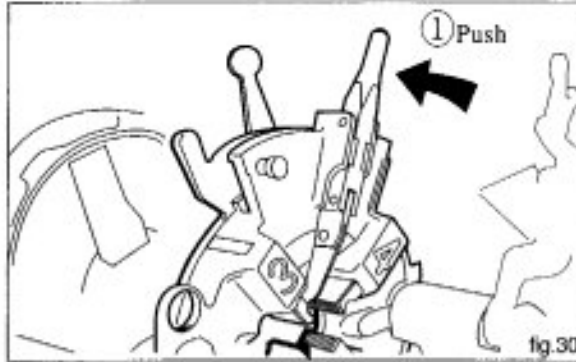
1. As the dies come into contact with the pipe, the lever should be turned with gradually increasing strength until the dies are biting firmly. After the dies fully engage the pipe they will travel smoothly by themselves, but optimum cutting will be assured if the lever is turned with slight pressure to keep pace with die movement.



#### ▲ CAUTION

If the machine suddenly stops during threading, turn off immediately (a delay will result in the motor burning up).

2. To stop threading, turn the auto-open lever to the left.



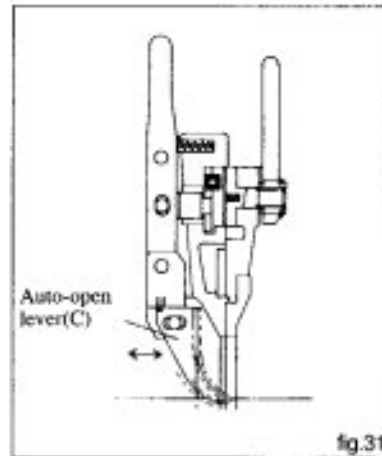
### ■ Adjustment of the Threading Length

A device for adjustment of the threading length is attached. Use this for making threads of the desired length as follows.

Adjustable capacity    1-2" (3 threads)  
                              1/2-3/4" (4 threads)

### ■ Method of Adjustment

1. Loosen the socket head cap screw on the auto-open lever (C).
2. Move the auto-open lever to the right for longer threads or to the left for shorter threads as indicated by the arrows in the diagram.
3. Retighten the socket head cap screw.



## MAINTENANCE

Rex products are made with the finest materials throughout, but even the best needs attention sometimes. To ensure a long and trouble-free working life for your machine, we recommend the following maintenance procedures.

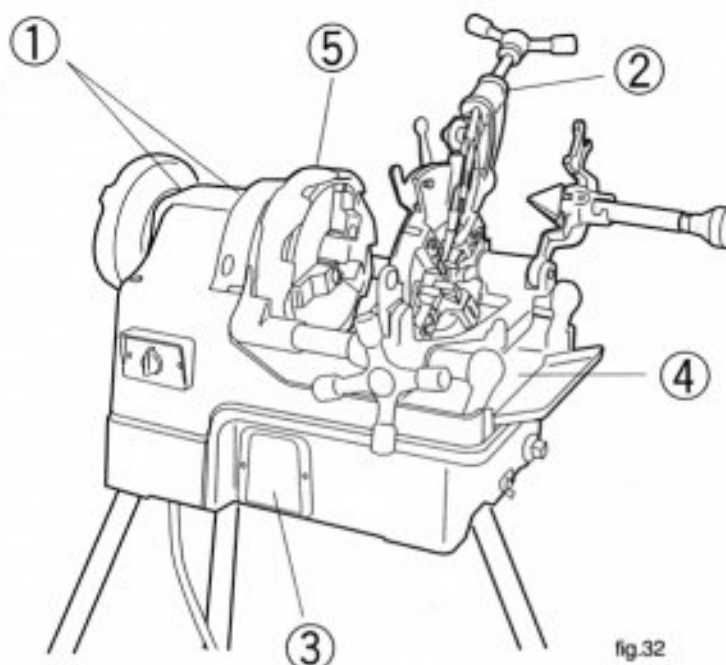


fig.32

### ① Main Shaft Lubrication

The main shaft bearings are made with specially designed oiled metal, but should be lubricated once every six months with spindle oil or machine oil to ensure smooth running.

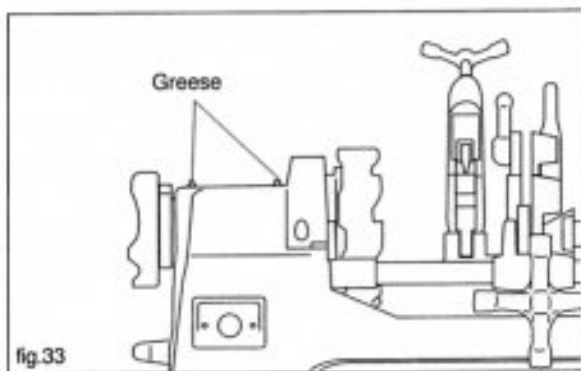


fig.33

### ② Pipe Cutter Lubrication

The cutter feed screw and the rollers need to be oiled once a day with spindle oil. Lack of oil not only makes use more difficult, but detracts from the efficiency of the machine.

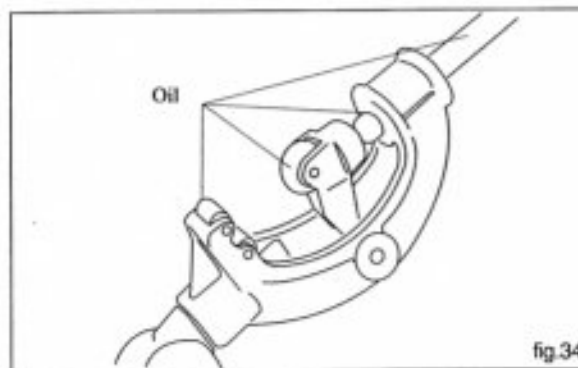


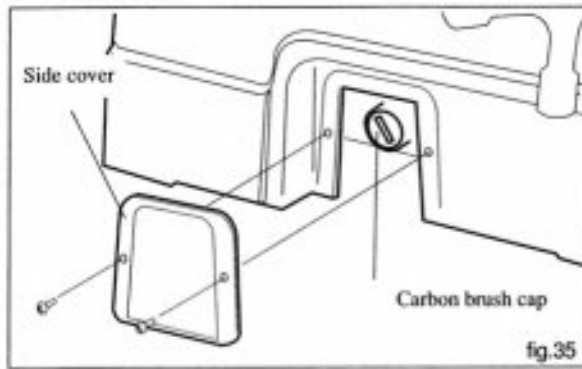
fig.34

**③ Carbon brushes with Automatic Cut-off**

This machine employs carbon brushes with an automatic cut-off facility. If the working life of the brushes (approx. 250 hrs.) is exceeded, safe operation of the machine is assured as the motor will stop automatically.

**■ Changing the Brushes:**

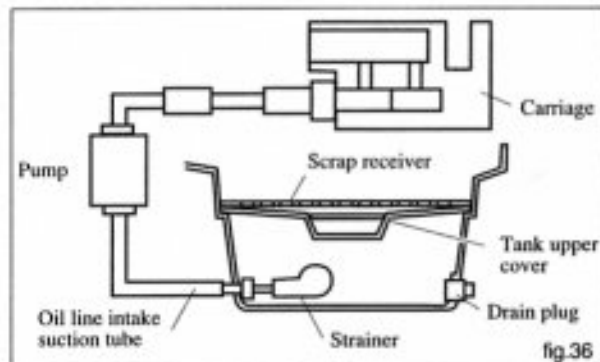
1. Always change both carbon brushes at the same time.
2. Ensure the motor is off before changing the brushes.
3. Remove the side covers, turn the carbon brush caps to the left using a minus screw driver and remove the brushes.

**④ Keep oil system Clean As Follows****■ Keep Oil System Clean As Follows**

1. Drain oil and check for contamination.
2. Remove and clean scrap receiver, tank upper cover, oil pot and strainer, and clean the oil tank.  
If the oil system is kept clean, this will prolong the working life of the gear-pump.
3. After cleaning the tank, put some sealing substance on the plug to decrease any possibility of leakage.

**■ Cutting Oil System**

1. Be sure oil flows freely. See that there is enough oil in the tank and all oil lines are free from obstruction.
2. If oil becomes discolored or contaminated, drain the tank and refill with fresh cutting oil.
3. Clean oil pot after every 8 to 12 hours of actual use.
4. During thread cutting operations, small chips from the threads will accumulate in the tank so efficient cleaning is essential once a month to ensure proper operation of threading machine.

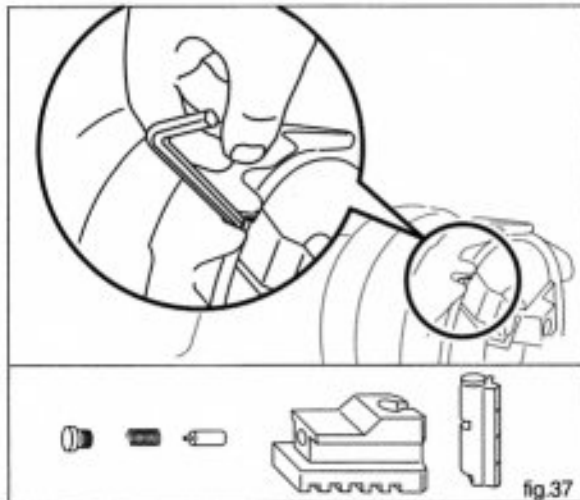
**⑤ Hammer Chuck Structure and Maintenance**

The hammer chuck jaw incorporates 4 parts and when the teeth on the jaw inserts become worn and fail to hold pipe or rod during threading, replace the entire set of jaw inserts.

Remove the hex socket set screw.

As shown in the illustration opposite, the hammer chuck is fixed to main shaft by six socket head cap screws.

Because loosening of these bolts affects threading, be sure to keep these six bolts permanently tight.





When abnormalities occur in products, examine the following and inform your sales agent or our sales division.

**▲ WARNING**

In the case of indications, or problems not dealt with below, do not overhaul or repair by yourself, but request and servicing from our sales agent or sales division.  
If repair is made by persons with no knowledge and skill for repairs, optimum performance cannot be obtained, and also accidents and injuries can occur.

Trouble		Cause	Correction
Not operating in turning ON the switch.	The motor is not running.	The power supply plug is disconnected.	Insert the power supply plug into the plug socket.
		The carbon is worn.	Replace to a new one according to the procedures in P.15.
		Voltage is low.	Check on voltage .
		The motor is burned.	Repair is necessary.
	The switch is damaged.	Repair is necessary.	
	The motor is running.	The gear is broken.	Repair is necessary.
Rotation of the main shaft is defective.		Voltage is low.	Check on voltage .
		The motor is burned.	Repair is necessary.
Not stopped immediately even in turning OFF the switch.		The carbon is worn.	Replace to a new one according to the procedures in P.14.
		The lead wire is disconnected.	Repair is necessary.
Oil does not supplied.		Oil amount is low.	Replenish oil.
		Chips are clogged.	Remove chips in the oil tank.
		The die head is not fitted correctly.	Fit the die head to correct position.
Oil drops from the pipe back side, etc.		The back scroll side is set lowly.	Set the back scroll side to be high.
The die head can not be fit.		Chips are attached.	The die head touches the pipe piece, etc. on the tank top cover
		Remove chips attaching to the die head fitting shaft and hole.	Remove the pipe piece, etc.
The movable part does not move smoothly		Chips are clogged.	Remove chips.
The chaser is not engaged to the pipe.		The chaser is worn.	Replace to a new one.
		The chaser is chipped.	Replace to a new one.
		The chaser is fit to incorrect position.	Fit the chaser according to the die head No.
Threading can not be made correctly.	Thick, Thin	The die head is not adjusted correctly.	Adjust the die head according to the procedures in P.13.
	Long, Short	The die head is not adjusted correctly.	Adjust the die head according to the procedures in P.13.
		The chaser is worn.	Replace to a new one.
		The chaser is chipped.	Replace to a new one.
		Thread cutting oil is deteriorated.	Replace to new thread cutting oil.
		The chaser is fit to incorrect position.	Fit the chaser according to the die head No.

## 7. In requesting repairs

This machine is produced with great precision; therefore, when not operating normally, never repair it by yourself, but ask us for repair.

If parts are required or questions arise, please make inquiries to us.

## 8. Optional Accessories

■ Cutting oil: Miyagawa 50W (water soluble)  
Miyagawa 246

■ Pipe support

■ Nipple Attachment

Anyone can make a nipple-It's so simple. There are a wide range of nipple attachments. Full instructions supplied in accompanying manual.

Nipple attachment size(inch)	1/2	3/4	1	1 1/4	1 1/2	2
Minimum length of nipples(mm)	45	50	55	65	65	70

