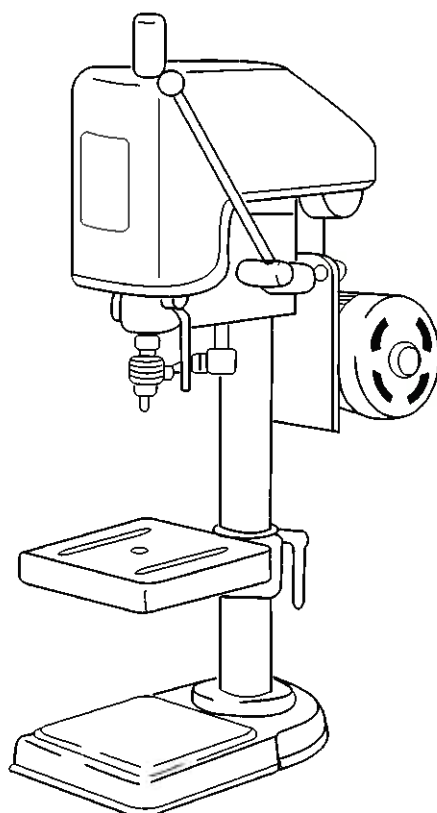


KIRA

Bench type Tapping Machine KRT-10 INSTRUCTION MANUAL



▲ CAUTION



- ◆ *This instruction manual includes important information for using the KRT-10 properly and safely.
Be sure to read and understand this document before using the bench type tapping machine.*

KIRA CORPORATION




DOC1-1C-EOM10-2

PREFACE

Thank you for purchasing the Model KRT-10 KIRA Bench type Tapping Machine. This instruction manual uses a number of illustrations to help your understanding. Be sure to read and understand the instruction manual before starting the KRT-10 operations. Place the manual in a location where it can be accessed whenever necessary.

SIGNAL WORDS

The signal words as used in this instruction manual and on the KRT-10 represent the following three levels of hazards:







 DANGER	<p>◆ Indicates an imminently hazardous situation which, if not a voided, will result in death or serious injury.</p>
 WARNING	<p>◆ Indicates a potentially hazardous situation which, if not avoided, could result in death or serious Injury.</p>
 CAUTION	<p>◆ Indicates a potentially hazardous situation which, if not avoided, many result in minor or moderate injury, or property damage to the equipment.</p>







NOTE

Indicates something that must be considered in handling the equipment.

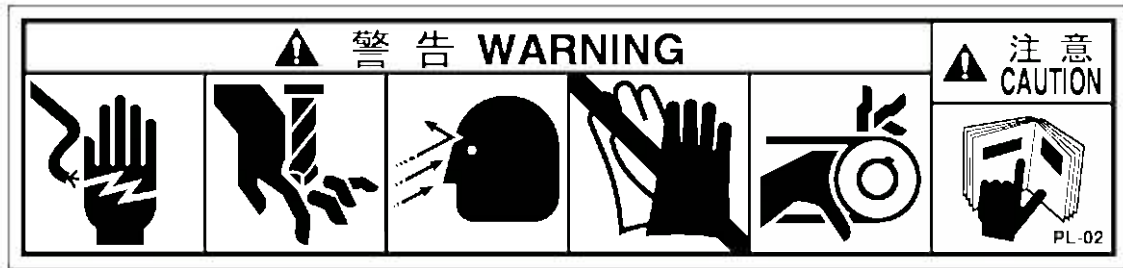
ICONS

This instruction manual uses the following icons to raise your attention:

Caution (including Danger and Warning)		Electric shock
		Injured by spindle or tool
		Flied out
		Caught in rotating part
		Fire
		Get caught in belt

Caution		Other general cautions
	Prohibition	
		Do not disassemble
		Do not wear gloves
Compulsion		Refer to instruction manual
		Ground

DESCRIPTION OF SIGNAL-WORD LABELS



[Risk of electrical shock]

High voltage runs in the electric control cabinet. Getting an electric shock may result in death.

Therefore, before opening the door on the electric control cabinet, be sure to shut off the main power.



[Warning of electrical shock label]

There might be had an electric shock because high voltage runs in the electric control cabinet if the control panel is opened carelessly or is attached with a wet hand.

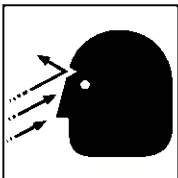
Don't open or remove the portion which is attached this label.



[Risk of injured by spindle]

The spindle has a sharp cutter that rotates at a high speed. Touching the spindle during its rotation results in serious injury like severing. Therefore, do not put your hand or foot close to the rotating spindle.

Even if the spindle stops, do not touch it with a bare hand.



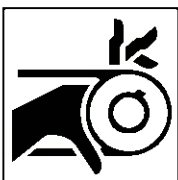
[Risk of eye injury]

"Chips / cutting oil / broken tools" are scattered during processing. There is a chance to injuring eyes or face. The protection glasses must be worn while operating machine.



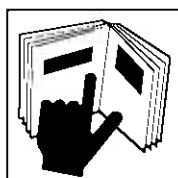
[Must not wear gloves while operating machine]

There is a chance to be injured by the rotating objects of machine pulls or rolls up the glove.



[Must not operating machine without covers]

There is a chance the rotating belt catches fingers or hands, if operate machine with opening cover etc. If the fingers or the hands are stuck in the belt, stop the machine immediately and turn off the main power. Then rotate the belt by hand in order to release the stuck fingers or hands. Turn off main power when open cover etc.



[Be sure to read and understand the contents of this manual before operating]

Improper operations may cause unexpected accidents or machine malfunctions. If the Instruction Manual is lost, please contact your dealer for purchasing new one.

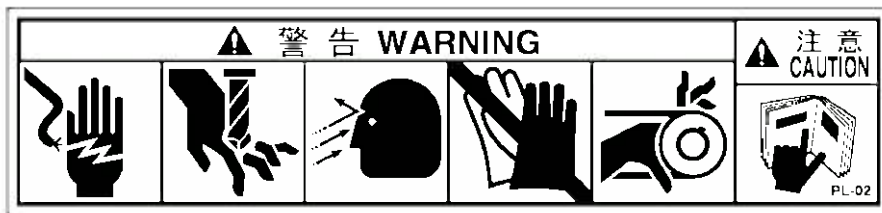
LOCATIONS FOR STICKING SIGNAL-WORD LABELS

⚠ DANGER

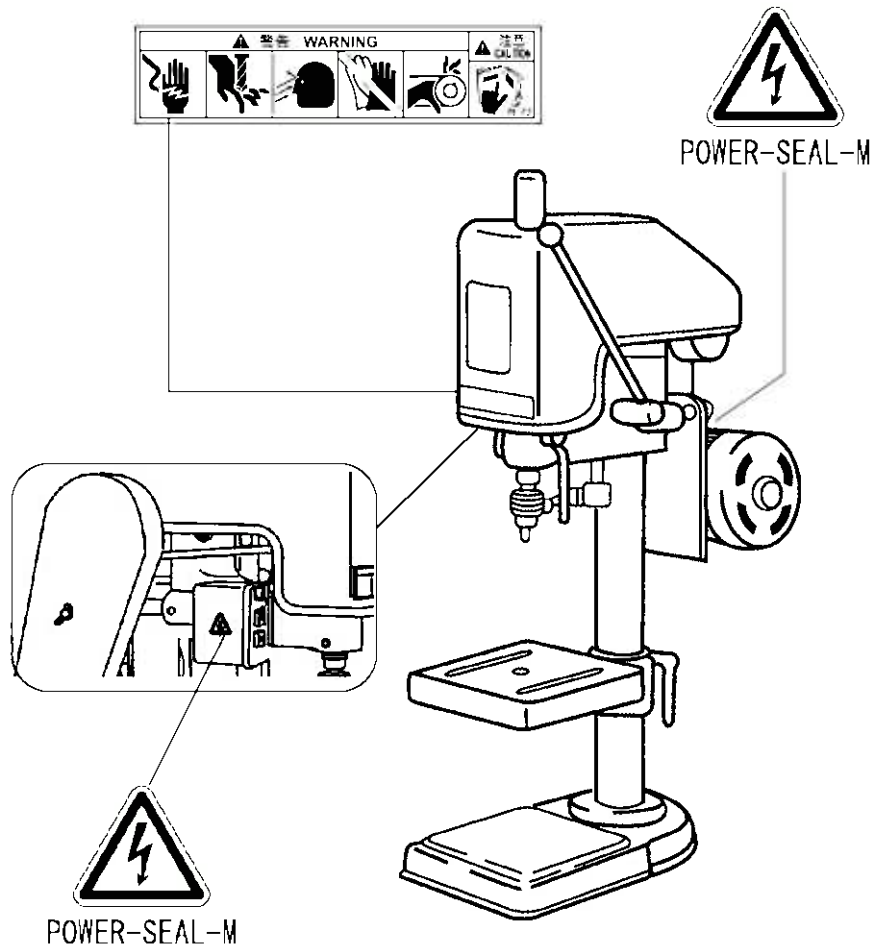
◆ Do not use the equipment when any of its signal-word labels is partially or totally broken, peeled off, or has a faded color. This may result in serious damage.

- * Two different kinds of warning labels are stuck on the equipment.
- * If the warning label is broken, peeled, or discolored, contact your dealer with its label number.

LABEL No. : PL-02



【Model】 KRT-10



SAFETY PRECAUTIONS

⚠ DANGER



- ◆ The main power must be shut down, before opening the door on the electric control cabinet.
- ◆ Do not operate switches by a wet hands.

⚠ WARNING



- ◆ Do not touch the spindle or chips during the operation. Especially, the cutter is very sharp. Do not touch it, even if the spindle is not rotating.



- ◆ Do not approach all fours to belt while rotating, may be caught in the belt.
- ◆ Do not operate machine with opening cover etc.
- ◆ Be careful not to punch hand between pulley and belt while belt changing operation.
- ◆ Turn off main power when open cover etc.



- ◆ Do not wear the gloves during operation absolutely. Your gloves and hands may get stuck in the rotating part of the machine.



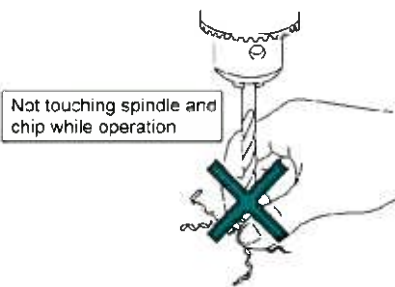
- ◆ The KRT-10 may suddenly start moving after it temporarily stops during the operation. Therefore, do not access the equipment without verifying its present state.



- ◆ If cutting oil attaches to your working wear, clean it off because it may catch fire.
- ◆ Exercise care in handling cutting oil. For example, in order to prevent fire occurring with cutting oil, do not use water-insoluble cutting oil when carrying out operation. If the floor is made of wood, use sufficient care for fire because it is liable to catch fire. And please confirm the location of fire extinguisher before operation start.

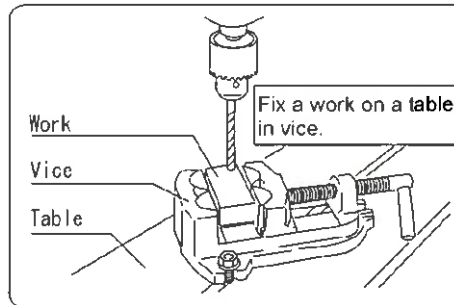


- ◆ To remove chip stuck on a tool, stop the spindle; checking that its rotation has completely stopped; and then brush off the chip while wearing protective glasses, and please do not touch cutting chips barehanded.



⚠ WARNING

- ◆ Be sure to fix the workpiece to the table using a vise, etc.
If machining is carried out without fixing the workpiece, it would be rotated or lifted up to cause very dangerous situation.



- ◆ Please be careful to the handling of a work. Letting it fall on your foot will result in a bone fracture or a similar injury.



- ◆ Be sure to ground the equipment.
But, do not connect the grounding to the gas pipe and steel frame which have insufficient grounding.



- ◆ Be sure to connect the wire of power to the power supply in which a leakage breaker is set.
- ◆ Do not install the drilling machine outdoors, in the location where is much moisture, where is splashed by water, or where is exposed to direct sunlight.
- ◆ Do not use the machine in the location where is flammable liquid or gas.



- ◆ Confirm the position of button to stop spindle rotation immediately.
- ◆ Stop the machine and shut off the power before "Maintenance & inspection" or "Changing tool, cutter or fixture".
If any hazardous situation may be predicted, also shut off the power.
- ◆ Set up the caution plate in a conspicuous place around the service panel and the control box while working in order to prevent somebody turns on the power suddenly.



- ◆ Install the tooling and the cutter firmly to the normal position by appropriate procedures. Loosely or too much tighten is dangerous. Follow the procedures mentioned in manual.



- ◆ Before turning ON the power, check that the maintenance tools such as chuck handle, wrench, center drift etc. have been removed.

▲ CAUTION



- ◆ Be sure to follow the instructions given in this document, including the operation guidelines.
- ◆ Do not use the KRT-10 for any purpose other than specified in manuals.
- ◆ Do not use the machine for any purpose of cutting wooden material and similar material
- ◆ This model is vertical type, and install to strong working table etc to prevent overturning.



- ◆ Do not carry out disassembling or modifying by yourself.
- ◆ Use the KRT-10 at the specified frequency and voltage.



- ◆ Check no damage on covers and other parts before operation.
- ◆ Clean up the machine and wipe up the cutting oil around the machine after operations. Then add the lubrication oil to the designated points.
- ◆ Perform maintenance / inspection regularly.



- ◆ Making operations with wearing appropriate clothes, safety shoes, safety glasses and other protective equipment.

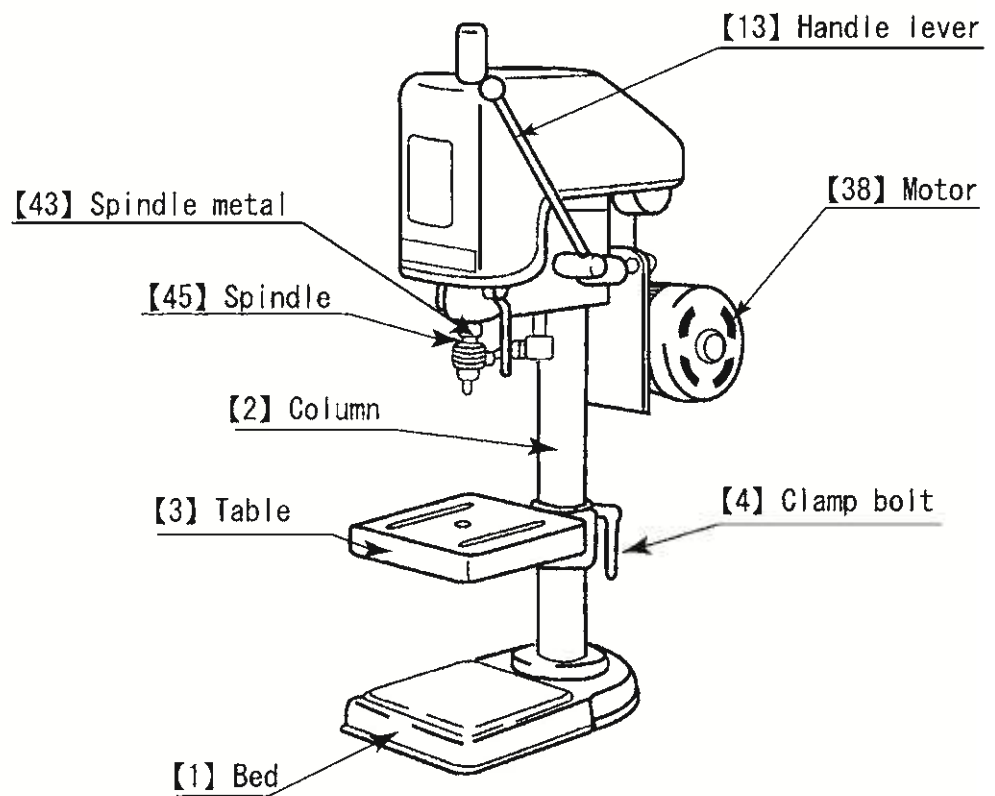
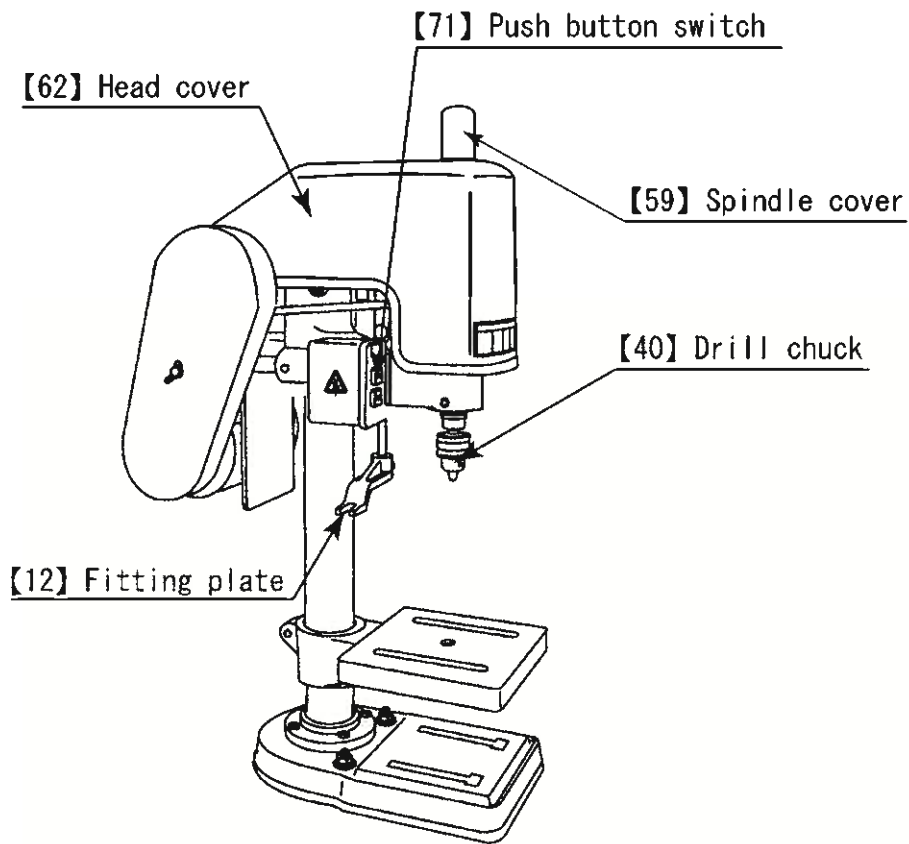


- ◆ Do not operate the machine other than the person in charge of operation.
- ◆ Do not make uncertain operation or procedure.
- ◆ Do not place something not related to operations on the machine or around it.
- ◆ Shut off the power in case of power failure.
- ◆ Shut off the power while the machine is out of use.
- ◆ If the spindle crashes on the workpiece, stop the operation immediately. Then contact your dealer or KIRA Corporation for asking recovery procedures.
- ◆ If you found any abnormal condition on the machine, stop the operation immediately. Then contact your dealer or KIRA Corporation.

- CONTENTS -

PREFACE	1
SIGNAL WORDS	1
ICONS	1
DESCRIPTION OF SIGNAL-WORD LABELS	2
LOCATIONS FOR STICKING	
SIGNAL-WORD LABELS	3
SAFETY PRECAUTIONS	4
CONTENTS	7
1. NAMES OF VARIOUS PARTS	8
2. SPECIFICATIONS	9
3. USE APPLICATION	9
4. PREPARATIONS FOR OPERATION	10
5. CHECKS BEFORE OPERATION	11
6. TAPPING OPERATION	12
7. ADJUSTMENT AND EXPLANATION	13
OF EACH PART	
8. MAINTENANCE AND CHECK	14
9. DIMENSION	15
10. PARTS LIST	16
11. DISPOSAL AND RESELLING	19
12. WARRANTY	20

1. NAMES OF VARIOUS PARTS



※A number of a name of each part please refer to parts list.

2. SPECIFICATIONS

Unit : mm

Model		KRT-10	
Swing		254	
Tapping capacity	S45C	M2~5	
	FC200	M2~6	
Max. distance spindle to Table		295	
Max. distance spindle to base		389	
Up-and-down motion of spindle		40	
Spindle taper		JT1	
Size of a table		196×196	
Spindle speed (min ⁻¹)	50Hz	Cut	480 850
		Return	580 1050
	60Hz	Cut	580 1050
		Return	700 1250
Power supply		Three phase 200V 50/60Hz	
Drive motor		0.25kW 4P (Open type)	
Type of V-Belt		K-57 A-24	
Machine total height		809	
Net weight(kg)		45	
Dimension of base		210×362	

3. USE APPLICATION

Tapping of various materials, S45C(steel),FC200(Cast iron) ,etc.

4. PREPARATIONS FOR OPERATION

(1) Installation

Install the machine on the smooth top working table which is reserved enough space for making inspection and maintenance. There are two holes ($\phi 12\text{mm}$) on bed [1], and fix the machine to the working table by bolts using the two holes.

(2) Power supply

Power supply voltage is the three phase 200V. Confirm the capacity and the voltage on the specification plate of motor.

(3) Wiping off rust prevention paint.

Wiping off the rust prevention paint of column [2], bed [3], table [1] and spindle [43]

(4) Refilling of lubrication oil

Refill the lubricating oil to following points.

Lubrication point	Method	Quantity of oil	Brand name	Cycle
Fill opening	Manually	4~6drops	Shell Tonna Oil S3M68	Once/1 week
Oil cup	Manually	4~6drops	Shell Tonna Oil S3M68	Once/1 week
Other sliding and rotating part	Manually	2~3drops	Shell Tonna Oil S3M68	Sometimes
Clutch for reverse rotation "A"	Applied	Proper amount	Shell Alvania Grease HDX	Once/1 month
Clutch for forward rotation "B"	Applied	Proper amount	Shell Alvania Grease HDX	Once/1 month
Clutch shifter part "C"	Applied	Proper amount	Shell Alvania Grease HDX	Once/1 month

*Please refer to Figure of page 11.

*Applicable oil and grease are listed Shell brand. If you use other brand oil and grease, please use equivalent oil and grease as the above table.

(5) Installation of Drill chuck

1. Please wipe up oil and grease of spindle taper, chuck arbor and taper hole of drill chuck well.
2. Please put drill chuck into chuck arbor tightly after 3 pawls of a drill chuck pulls in.
3. Please put chuck arbor with chuck into spindle taper, hit with a wooden hammer and install it tightly.

CAUTION

- ◆ *If oil or grease is attached at tapered portion or inset is insufficient, chuck falls off from spindle and very dangerous.
(If chuck falls off, and scratch at taper portion, spindle can not use.)*

(6) Confirmation of V belt

Please open head cover [62], and confirm whether V belt is installed properly.

Please refer to (1) Adjustment of belt tension of "section 7". Adjustment and explanation of each part for the procedure of belt installation and adjustment.

After confirmation of the belt, please be sure to close the head cover.

5. CHECK BEFORE OPERATION

(1) The check of power supply

Please check once again that power supply voltage is the same as specification plate of the motor.

(2) Push button switch

There is push button switch at left hand side of the machine, performs "ON" and "OFF" of motor. If ON is pushed, Spindle motor will start, and if OFF is pushed, it will stop.

(3) Connection of power supply

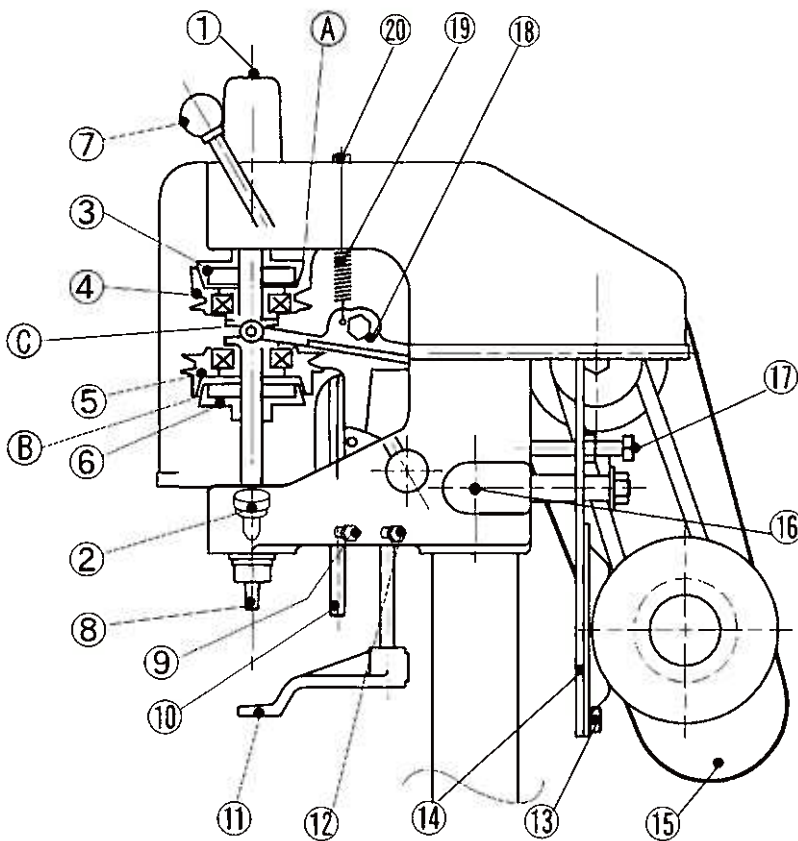
Four-core cap tire cord with 2m length is prepared. Please connect 3 wires to power supply breaker after confirm that "OFF" button is pushed. Green color wire is earthed wire, please connect to ground.

⚠ CAUTION

- ◆ Make sure turn off the power supply breaker and "OFF" of push button is pushed before connect power supply cable.
- ◆ Please connect earthed line (green) to ground by all means.
- ◆ Please connect power supply cable to the earth leakage breaker.

(4) Confirmation of the direction of spindle rotation

If spindle rotates counterclockwise direction to see from above of machine when "ON" push button is pushed, connection is right. If spindle rotates clockwise direction, please replace two wires of three wires (R.S.T) after turn off power supply breaker.



①	Fill opening
②	Oil cup
③	Clutch for reverse rotation
④	Pulley for reverse rotation
⑤	Pulley for forward rotation
⑥	Clutch for forward rotation
⑦	Spindle operational handle
⑧	Spindle
⑨	Stopper fixing bolt
⑩	Stopper
⑪	Set plate
⑫	Set plate fixing bolt
⑬	Motor fixing bolt
⑭	Motor bracket
⑮	Motor
⑯	Bolt
⑰	Belt tension adjustment bolt
⑱	Clutch control lever
⑳	Tension spring
㉑	Spring adjusting nut

6. TAPPING OPERATION

(1) Installation of tap

Please install tap to the chuck using 3 holes tightly without run-out.

(2) Fixing of workpiece

Please fix workpiece to table that distance between tap end and workpiece should be within 10mm by moving the table up and down. Please set that the set plate "11" touches to top face of workpiece and tap position comes to notch of the set plate end. This set plate prevents turning and lifting workpiece while tapping operation, and set to approaches to the workpiece as close as possible with keeping space for loading and unloading of workpiece, then tighten by set plate fixing bolt "12".

(1) The check of power supply

When "ON" push button switch is pushed, spindle rotates reverse direction. As Tension spring "19" pulls Clutch control lever "18" and Clutch for reverse rotation "3" and taper clutch of Pulley for reverse rotation "4" start working, spindle rotates reverse direction. When tap pushes to tap drill hole by moving down Spindle operation handle "7", the taper clutch "4" "3" stops working, and Pulley for forward rotation "5" and taper clutch of Clutch for forward rotation "6" start working, then spindle rotation changes to forward direction. Therefore tap goes into the drill hole by lead of tap, and can make thread. Please keep power to move down Spindle operation handle "7" while tap operation. If the moving down power is not enough, working of taper clutch of "5" and "6" stops and spindle rotation stops. The bigger size tap requires bigger power.

When stopper "18" is set according to required tap depth in advance and Clutch control lever "18" pushes Stopper "10", moving of spindle operation handle is stopped and working of taper clutch "5" "6" stops, and spindle rotation stops. After that, when move Spindle operation handle to upper direction, taper clutch "3" "4" starts working and start spindle rotation to reverse direction, and tap comes out by power of tension spring "19" and spindle moves to original position.

If you stop moving down Spindle operation handle while tap operation, spindle rotation stops. And if you move Spindle operation handle to upper side, spindle rotates reverse direction. Therefore, both of small tap and bigger tap can operate safely in manual control. Meanwhile, operator must familiarize machine operation and manual control.

CAUTION

- ◆ Do not touch rotation part by any means (drill, chips etc.)
Hand is pinched and it is very dangerous.

7. ADJUSTMENT AND EXPLANATION OF EACH PART

(1) Adjustment of belt tension

The belt between pulley for reverse rotation “4” and pulley for forward rotation “5” is set particularly, and belt tension is changed by position of pulleys as the two pulleys moves up and down. If belt tension is tight, machine may have some malfunction like switching of forward/reverse rotation comes bad and movement of spindle up and down comes hard etc. Please keep slack situation as much as possible. If tap machining does not work well due to belt slack, please adjust belt tension to tight a little.

After loosen two bolts “16” (each one at both side), If Belt tension adjustment bolt “17” is tighten, belt tension comes tight, and if Belt tension bolt is loosened, belt tension comes slack. Please tighten two bolts “16” absolutely after adjustment of belt tension and also please tighten Belt tension bolt “17” as well.

The belt of motor side can shift 2 steps. Outer side is low speed, and Inner side is high speed. When best tension adjusts, please loosen of motor fixing bolts “13” (4 pcs.) and move the motor “15” up and down. When belt position change, it is not necessary to move the motor. It is much easier to remove the belt from big pulley, and set the belt from small pulley.

CAUTION

◆ Please be careful and do not pinch between belt and pulley your hand when set and adjust belt.

(2) Adjustment of spring

The spring “19” is tension spring which works pulley for reverse rotation “3”, and to protect that spindle move down. Please adjust tension to use easily. When the nut “20” is rotated to right side, tension is increased. Please tighten two nuts to protect loose after adjustment.

(3) Adjustment of stopper

Stopper “10” is fixed by Stopper fixing bolt “9”. Clutch control lever “18” hits to upper end of the stopper, and spindle down movement value is fixed. If stopper position is fixed according to tapping depth, same tapping working is repeated easily.

(4) Adjustment of work set plate

Set plate “11” is fixed by Set plate fixing bolt “12”. This Set plate uses to prevent lifting of workpiece by pulling force while tapping operation. Please set that tap position comes inside of notch of the set plate end, and set to approaches to the workpiece as close as possible with keeping space for loading and unloading of workpiece.

(5) Adjustment of the table height

Please arrange Table [3] (Parts list) height for easy to work. If you rotate Spindle operation handle “7” after loosen handle clamp bolt [4], table moves up or down. Please tighten the handle clamp bolt [4] firmly after finish adjustment of table height. If tapping operation is done in case of loosened the handle clamp bolt, table may be slant or moved, screw hole may have angle. Please be sure to tighten the handle clamp bolt [4] firmly.

8. MAINTENANCE AND CHECK

CAUTION

- ◆ *When you finish work or check machine, please push "OFF" of push button switch to stop Motor certainly. And please turn off power supply breaker.*

(1) Please clean chips etc. finely after finish working.

(2) Please refuel lubricating oil according to section 4-(4) before operation start.

Fill opening "1" and Oil cup "2" are refueling to oilless metal of spindle, and Please refuel 4 or 5 drops once a week. And please also refuel other handle shaft, slide and rotating parts timely.

Please apply grease to the following points once a month.

- A, Taper portion of Clutch for reverse rotation
- B, Taper portion of Clutch for forward rotation
- C, Clutch shifter part

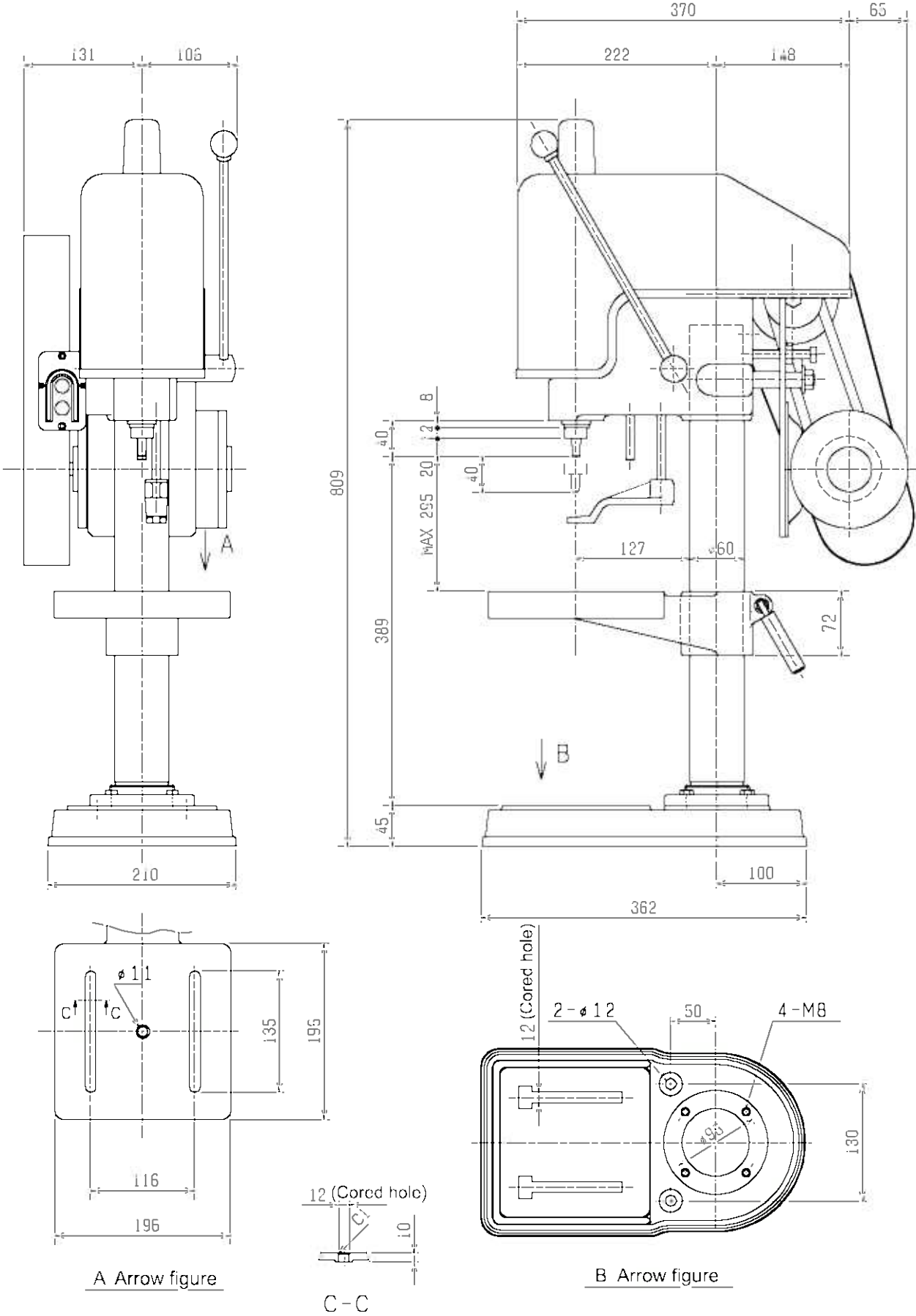
(3) Checking of Various Parts

Please check condition of V belt, spindle up and down movement and abnormal noise of rotation part sometimes before start working. If you find any abnormal portion, please repair it.

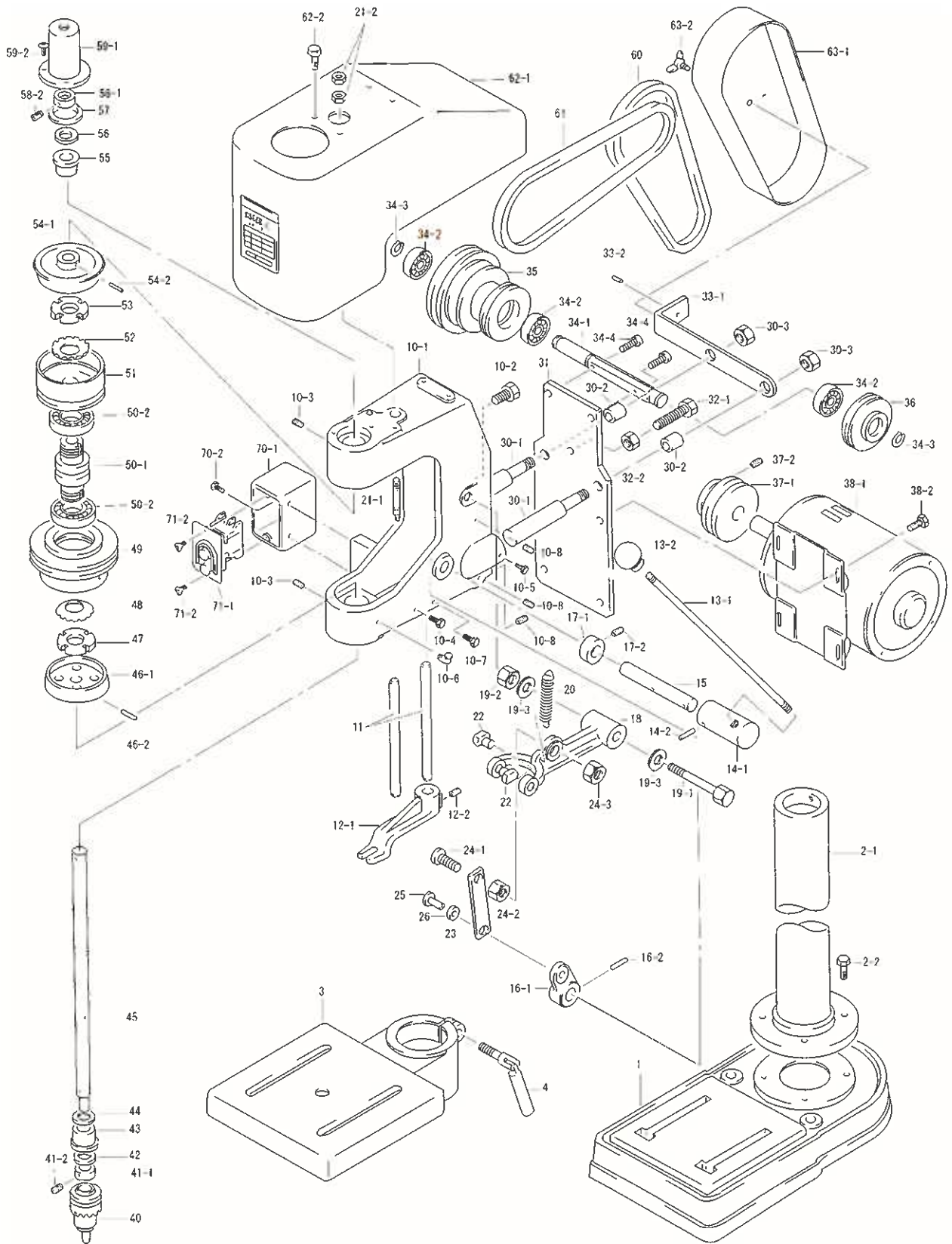
CAUTION

- ◆ *Do not run the machine with the cover open.*
- ◆ *When electric power failure, please push " OFF " button of push button switch.*
- ◆ *Do not use this machine while operator wears gloves.*

9. DIMENSION



1 0. PARTS LIST



NO	Spec	Parts number	Part name	Remark	Q'ty
1		KN-1-B	Bed		1
2-1		1C-1010	Column		1
2-2		BT1-M08*025	Hex. bolt	M8*25	4
3		KN-4-E	Table		1
4		AS1-R-8	Clamp bolt with handle		1
10-1		1C-2001-H	Head		1
10-2		BT1-M08*020	Hex. bolt	M8*20	1
10-3		BTA-M06*015-K	Hex. socket head stop screw	M6*15 (Cup point)	2
10-4		BT1-M06*040	Hex. bolt	M6*40	1
10-5		BT1-M06*015	Hex. bolt	M6*15	2
10-6		LCC-#214-M20*PT1/8	Oil cup	PT1/8	1
10-7		BT1-M06*025	Hex. bolt	M6*25	1
10-8		BTA-M08*010K	Hex. socket head stop screw	M8*10 (Cup point)	3
11		1C-2227	Stopper		2
12-1		1C-2710	Set plate		1
12-2		BTA-M06*010-K	Hex. socket head stop screw	M6*10 (Cup point)	1
13-1		1C-2224	Lever		1
13-2		KN-41-A	Knob		1
14-1		1C-2223	Handle body		1
14-2		PN3-05*030	Spring pin	5*28	1
15		1C-2221	Shifter shaft		1
16-1		1C-2222	Shifter		1
16-2		PN3-05*030	Spring pin	5*28	1
17-1		1C-2229	Collar		1
17-2		BTA-M06*008-K	Hex. socket head stop screw	M6*08 (Cup point)	1
18		1C-2201	Clutch arm		1
19-1		BT1-M10*090	Hex. bolt	M10*90	1
19-2		NT1-M10	Hex. nut	M10	1
19-3		ZG1-M10-U	Plain washer	M10	2
20		1C-2205	Spring		1
21-1		1C-2206	Balance screw		1
21-2		NT1-M08	Hex. nut	M8	2
22		1C-2208	Shifter piece		2
23		1C-2215	Pin		1
24-1		BT1-M12*035-K-109	Hex. high tension bolt	M12*35	1
24-2		NT1-M12	Hex. nut	M12	1
24-3		NT1-M12-3	Hex. nut	M12	1
25		1C-2216	Pin		1
26		COL1-008012006B	Collar (1)	1C-2220(Previous)	1
30-1		1C-2321	Tension lever		2
30-2		1C-2336	Collar		2
30-3		NT1-M12	Hex. nut	M12	2
31		1C-2334	Motor bracket		1
32-1		BT1-M10*080-Z	Hex. bolt(Continuous thread)	M10*80	1
32-2		NT1-M10	Hex. nut	M10	1
33-1		1C-2612-2B	Belt cover holder		1
33-2		PN3-04*010	Spring pin	4*10	1
34-1		1C-2316-1	Pulley shaft	(17H*172)	1
34-2		BE1-6202ZZ	Ball bearing	6202ZZ	3
34-3		RG1-S015	Stop ring	S15	2
34-4		BT2-M06*025	Hex. socket head bolt	M6*25	2

10. PARTS LIST

NO	Spec	Parts number	Part name	Remark	Q'ty
35		1C-2310	Pulley		1
36		1C-2311	Tension pulley		1
37-1		1C-2332-A	Motor pulley		1
37-2		BTA-M06*008-K	Hex. socket head stop screw	M6*8 (Cup screw)	1
38-1	252	MO1-0.25KW*4*200A	Motor	IK-SBKK8	1
38-2		BTI-M06*012-M	Cross recessed head hex. flange bolt	M6*12	4
40		TO1-#1-6.5mm	Drill chuck		1
41-1		1C-2102	Collar		1
41-2		BTA-M06*006-K	Hex. socket head stop screw	M6*6 (Cup screw)	1
42		1C-2107	Felt ring		1
43		1C-2104	Spindle metal		1
44		1C-2107	Felt ring		1
45		1C-2101	Spindle	(ϕ 19*365)	1
46-1		1C-2301-B	Clutch		1
46-2		PN3-04.5*026	Spring pin	4.5*26	1
47		NT3-AN05	Bearing nut	AN05	1
48		ZG5-AW05	Bearing washer	AW05	1
49		1C-2304-B	Pulley		1
50-1		1C-2307-B	Sleeve		1
50-2		BE1-6205ZZ	Ball bearing	6205ZZ	2
51		1C-2305-A	Pulley		1
52		ZG5-AW05	Bearing washer	AW05	1
53		NT3-AN05	Bearing nut	AN05	1
54-1		1C-2302-B	Clutch		1
54-2		PN3-04.5*026	Spring pin	4.5*26	1
55		1C-2104	Spindle metal		1
56		1C-2107	Felt ring		1
57		1C-2108	Felt ring		1
58-1		1C-2102	Collar		1
58-2		BTA-M06*006-K	Hex. socket head stop screw	M6*6 (Cup point)	1
59-1		1C-2105	Spindle cover		1
59-2		BT6-M04*008	Cross recessed head machine screw	M4*8	3
60		BL1-A-24	V Belt	A-24 (Accessory)	1
61		BL1-K-57	V Belt	K-57	1
62-1		1C-2601-2A	Head cover		1
62-2		BTI-M06*012-M	Cross recessed head hex. Flange bolt	M6*12	4
63-1		1C-2611-2	Motor pulley cover		1
63-2		BT3-M06*010-U	Butterfly bolt	M6*10	1
70-1		1C-2711-A	Box		1
70-2		BTH-M04*010-P3-M	Cross recessed head upset bolt	M4*10	2
71-1		KI-2702-2	Push button switch	BSP215NB3KRC	1
71-2		BT7-M04*008	Countersunk head screw	M4*8	2

11. DISPOSAL AND RESELLING

11.1. Disposal

□ Please handle the following items as industrial wastes in accordance with regulation of your country.

(1) Cutting oil and lubrication oil

(2) Chip

(3) Tools

(4) Main unit

□ For disposing of them, contact us.

11.2 Reselling

CAUTION

- ◆ *To resell the KRT-10 to any other party, strictly observe the following instructions:
Be sure to hand the Instruction Manual to that new user.
See the chapter indicating the locations of signal-word labels and make sure that all the labels are in place.
If the Instruction Manual or any of the signal-word labels is missing, be sure to contact us to obtain it.
Before reselling the KRT-10, contact us without fail.*

- ◆ *You, as purchaser of this machine, agree to follow the procedures for the export or transfer of the machine, under the Foreign Exchange and Foreign Trade Law, when you export or transfer the machine abroad.
This machine was produced to meet the law and specifications in your country (or area).
You, as purchaser of the machine, are not allowed to re-sell, re-export, or re-transfer the machine to any party in the country (or area) which has different law and specifications from those in your country.*

12. WARRANTY

12.1. Free Repairs

- 1) If a malfunction or a failure occurs during the normal use strictly based on the operation guidelines (given in the Instruction Manual), the Instruction Manual, the signal-word labels, and other instructions, then it is repaired free of charge within the warranty period.
- 2) Our warranty only covers the delivered main unit and does not apply to any loss and/or damage, direct or indirect, resulting from such malfunction or failure.
- 3) The warranty remains valid for one year after the delivery with your acceptance.

12.2 Charged repairs

- The repairs after the warranty period and those in the following cases within the warranty period are charged to you:
 - 1) A malfunction, failure, or damage has resulted from the misuse of the KRT-10; or from the modification or repair made without obtaining our consent.
 - 2) A malfunction, failure, or damage has resulted from fire, acts of God, lightning, abnormal voltage, or any other unpredictable situation.
 - 3) A malfunction, failure, or damage has resulted from your improper handling such as falling during the transportation or transfer by you.
 - 4) A malfunction, failure, or damage has occurred because you have failed to follow the operation guidelines.
 - 5) Consumable items have been used up, worn out, or otherwise have deteriorated after the normal use.

12.3. Locations for contact

Sales Department of Main Office :

TOMIYOSI SHINDEN, KIRA-CHO NISHIO-CITY, AICHI PREF.,
444-0592, JAPAN

TEL 81-563-32-0100 FAX 81-563-32-3241

E-Mail :<info@kiracorp.co.jp>

KIRA CORPORATION

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KIRA