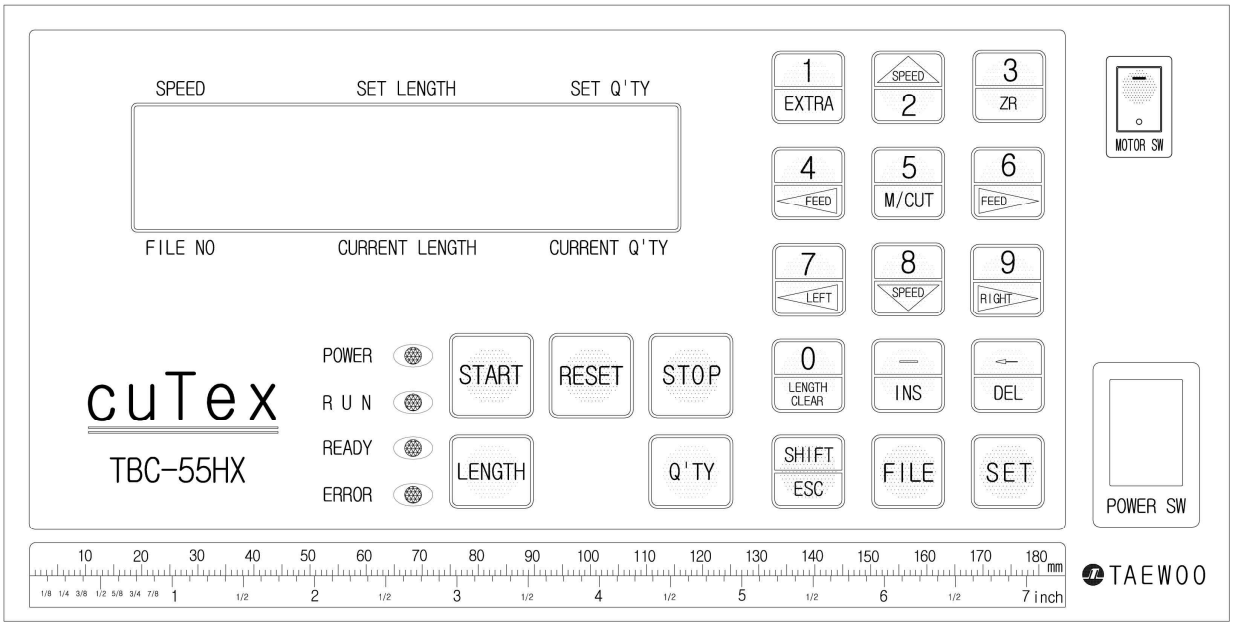
cuTex®

RIBBON TAPE AUTOMATIC ANGLE CUTTER

TBC-55HX

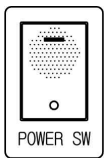
TAEWOO CO., LTD.

How to operate TBC-55HX



1. An example (Cutting length : 70mm, Cutting quantity : 120 pcs)

▷ Turn on the POWER SW.



▷ Turn on the MOTOR SW.

▷ Set the temperature.(It is normally used at 250°~350℃. About 5 minutes after turn-on & set it, it will be reached to set-temperature. (For more detail, refer to the appended "How to use temperature Controller KX4")

※ Caution : When a work is over, set the temperature at zero and turn the cooling fan 10 minutes or so and power off.

▷ Set cutting length. (Press the following buttons in order.)

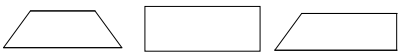
☞ LENGTH ⇒ SET ⇒ 7 LEFT ⇒ 0 LENGTH CLEAR ⇒ SET

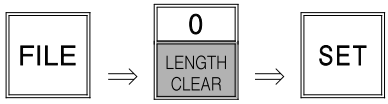
▷ Set cutting quantity.

☞ Q'TY ⇒ 1 EXTRA ⇒ SPEED 2 ⇒ 0 LENGTH CLEAR ⇒ SET

▷ Cutting angle function number.

※ Caution : 1. A scale is meaned 1°.
2. Left, right side angle can set max. 50°,
Straight Max. 65mm , Oblique Max. 45mm

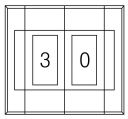
☞  : Select function no. "0".



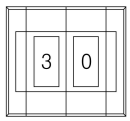
Ex.1)

(Left angle) 

(Right angle)



Left side angle



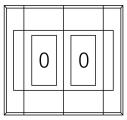
Right side angle

If you want to cut left, right angle as 30°, please select function no. "0" and set left, right side angle as 30°.

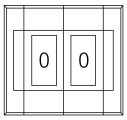
Ex.2)

(Vertical) 

(Vertical)



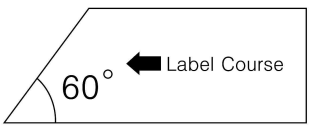
Left side angle



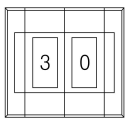
Right side angle

If you want to cut vertical angle, please select function no. "0" and set left, right side angle as 0°. (This angle is possible in all function no.)

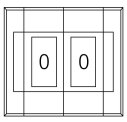
Ex.3)

(Left angle) 

(Right angle)



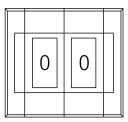
Left side angle



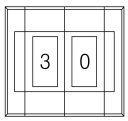
Right side angle

(Left angle) 

(Right angle)



Left side angle

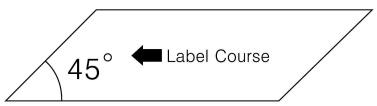


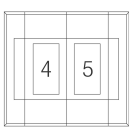
Right side angle

If you want to cut one side angle 30°, the other side angle 0°,
please select function no. "0" and set left or right side angle as each 30° & 0°.
set left, right side angle as 0°. (This angle is possible in all function no.)

☞  : Select function no. "1"

Ex.)

(Left angle) 



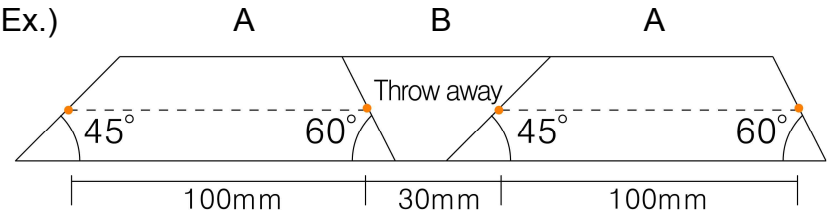
left side angle

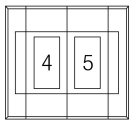
As figure, if you want to cut it as 45°, please select function no. "1" and set left side angle as 45°

☞ ▱ ▭ : Select function no. "2"

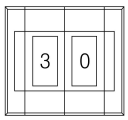
FILE ⇒ 1 EXTRA ⇒ SET

Ex.)





Left side angle



Right side angle

※ Cutting length : 100mm, Throw-away parts : 30mm

☞ LENGTH ⇒ SET ⇒ 1 EXTRA ⇒ 0 LENGTH CLEAR ⇒ 0 LENGTH CLEAR ⇒ SET **(A parts)**

☞ 6 FEED ⇒ SET ⇒ 3 ZR ⇒ 0 LENGTH CLEAR **(B part)** ⇒ SET

▷ Press START button.

☞ START

2. Key functions

0 LENGTH CLEAR : Current length on display will be back to “0” at a stop.

RESET : All of current length and current q‘ty on display will be back to "0".

5 M/CUT : Moving knife only.

① to cut the material for test.
② to take out the material jammed between knife blades.
③ for balancing of knife blades in exchange.

1 EXTRA : Cutting additional one.

SHIFT
ESC : Restoring to normal condition in ERROR(red LED) and inputting parameter or program.

4 FEED 6 FEED : to move the roller manually for mounting the material on the machine or for feeding it forwards or backwards.

SPEED
2 — Speed up (The current speed appears on the left-upside of LCD display with "%". Normal speed : 50%, Maximum speed : 100%)

*** Speed up & down is possible in any time(operation or stop) and set-speed will not be changed even though you press RESET button or power off & on.**

8 SPEED — Speed up (The current speed appears on the left-upside of LCD display with "%". Normal speed : 50%, Maximum speed : 0%)

*** Speed up & down is possible in any time(operation or stop) and set-speed will not be changed even though you press RESET button or power off & on.**

3 ZR : The origin returning function. (Knife bit is returned to vertical.)

← DEL : To correct wrong data.

7 LEFT : Left manual angle.

9 RIGHT : Right manual angle.

: to prevent the cut material from clinging to the knife blade.
(This switch is installed to Model TBC-50H, TBC-50SH, TBC-50HX, TBC-55HX only.)

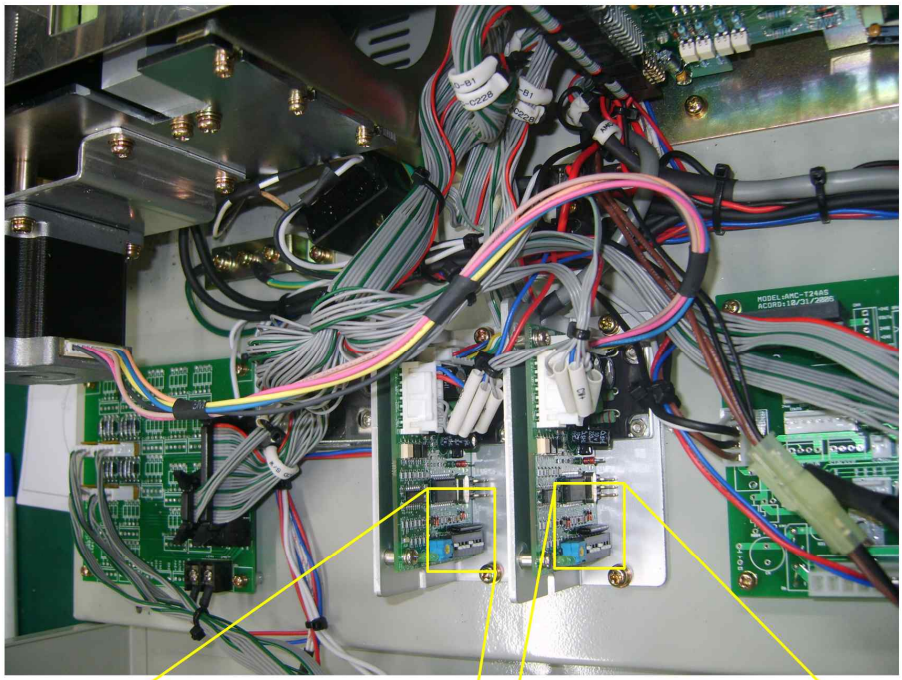
3. Specification

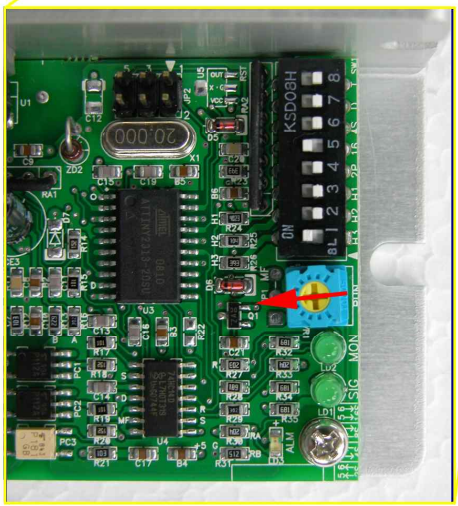
Model Name	Main Cutting Materials	Cutting Knife	Power Supply	Max. Cutting Width(Tape)	Range of Cutting Length	Cutting Q'ty/min. (Length: 50mm)	Machine Size (Net Weight)
TBC-55HX (Automatic Angle cutter)	Ribbon Tape	Hot	AC110/ 220V 50/60Hz	Straight: 65mm Oblique: 45mm (45° basis)	40mm～ 300M	60 ～ 70 cuts	1010×420×460 (28.5kg)

4. Caution for use

- Before use, please confirm the voltage and make ground(earth) connection. (Static-electricity will be reduced to a half.)
- Do not access hands or any object close to the working knife. (for safety)
- When the knife blade becomes dull, please use it after grinding with the grinding machine. (Please do not let the unskilled person grind manually or install the knife blade.)
- Please contact following address for further information.

DR BOARD SETTING VALUE
(TBC-55HX)





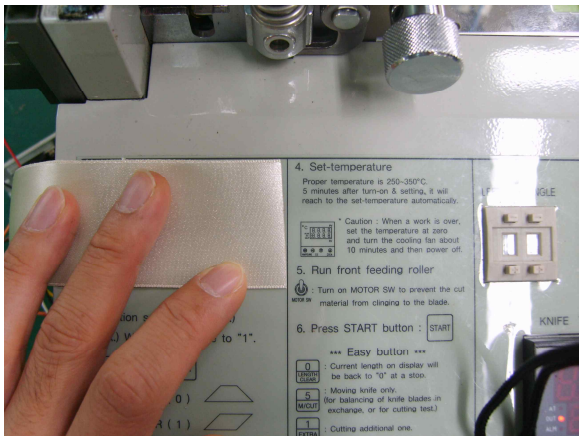
DR BOARD THAT CONNECTED
TO ANGLE MOTOR

DR BOARD THAT CONNECTED
TO STEPPING MOTOR

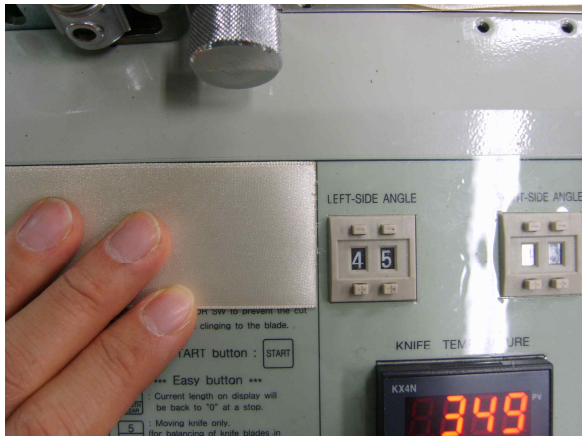
KNIFE ANGLE RE-ALIGNMENT

TO MAKE RIGHT (90) DEGREES.

Referring to below images, if your cut result looks like below-left image, it means the knife angle is not correct 90 degrees. You need to re-alignment knife angle to get below-right cut result.

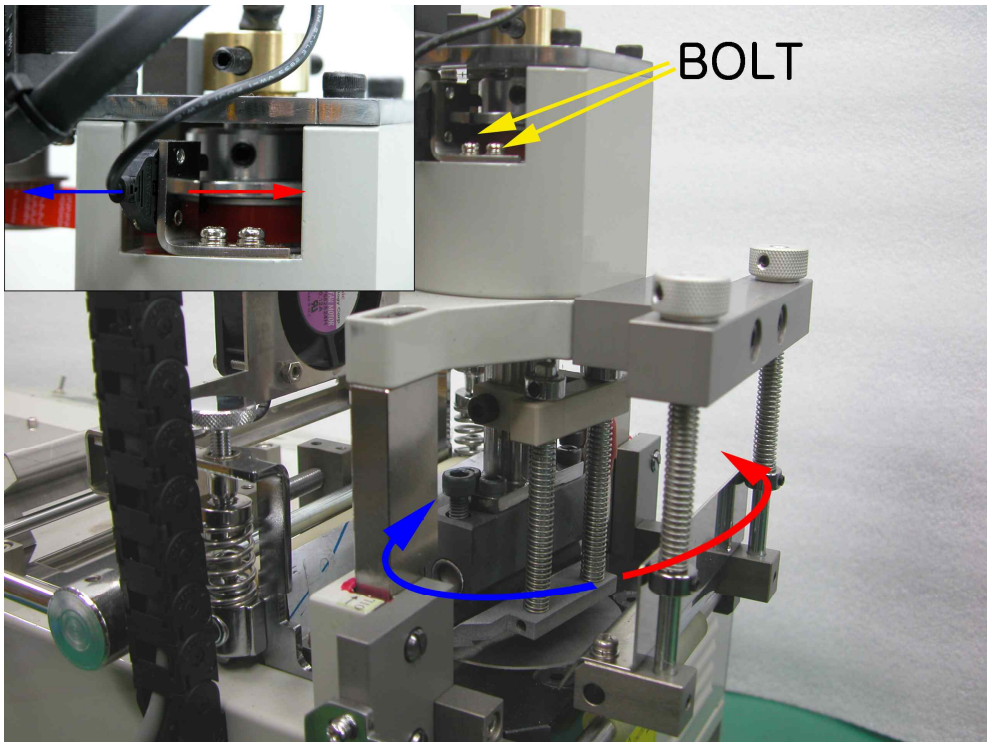


<It is not right (90) degrees>



< right (90) angle >

Referring to below image, please release bolts to move angle - sensor (#B-7).
If you move it to CW (Blue color, clock wise), the knife will move further to CW (Blue color, clock wise).
If you move it to CCW (Red color, counter clock wise), the knife will move further to CCW.

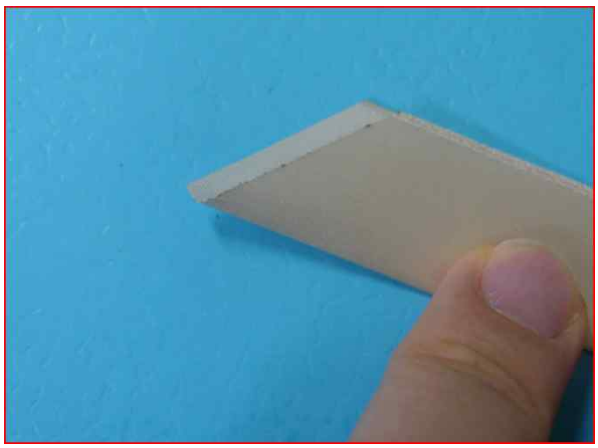


Referring to your cut result, please move sensor little by little.
After doing above, please fix bolts again.

TO MAKE RIBBON FEED ON THE MIDDLE LANE TO HOT KNIFE.

If you find there are length-differentiations between cut results.
It may be caused by that ribbon does not feed on the middle lane to hot knife.
Please refer to below images, they help you make ribbon feed on the middle lane to hot knife.

Easily you can check if it feeds on the middle lane to knife by referring to below images.
Cut ribbon in V shape and you can fold it.


<You did not put ribbon on the middle>

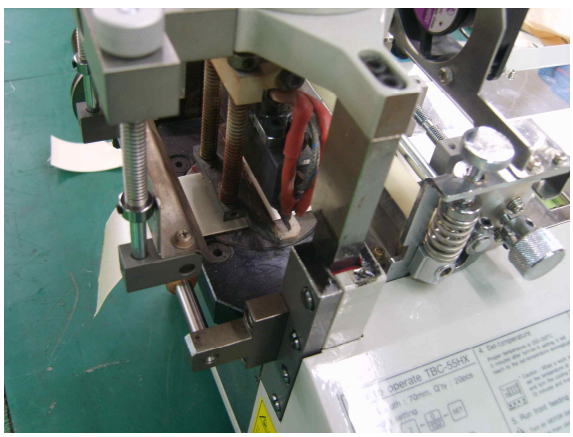

<You did put ribbon on the middle>

Like upper-left image, the folded line cannot meet apex of cut ribbon, you did not put ribbon on the middle lane to knife. You need to adjust material guide to put ribbon on the middle lane, referring to below.

How to cut ribbon in V shape.

Press feed-button 

to feed ribbon about 10cm long.

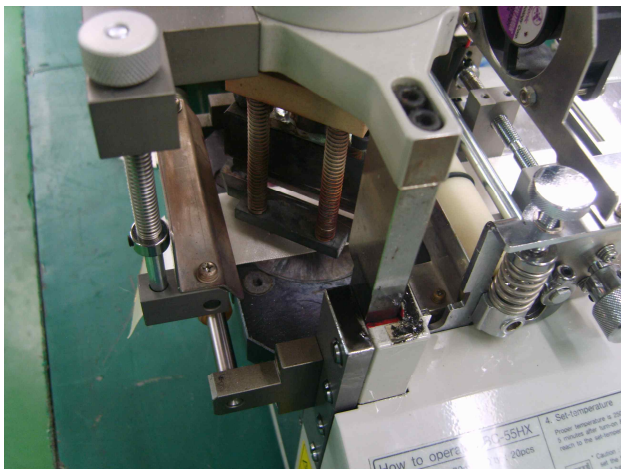


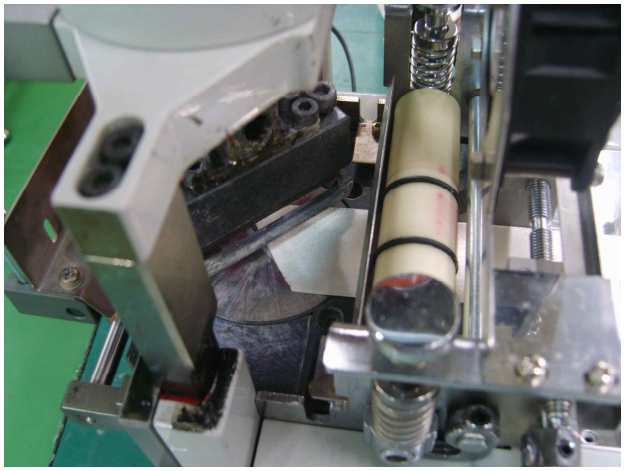
And then press 7/LEFT button 

to rotate knife left side. (like below-left image)

And then please press 5 M / 

CUT button, to cut / make a mark on ribbon.





And then please press 9/RIGH

And press 9/RIGHT button, to rotate 

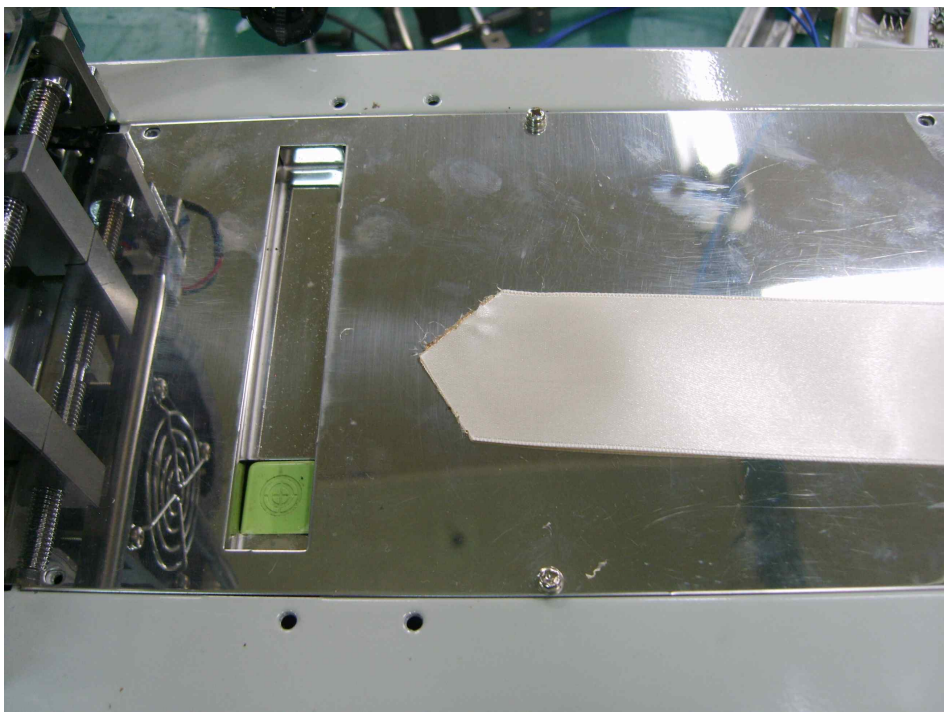
knife right side,

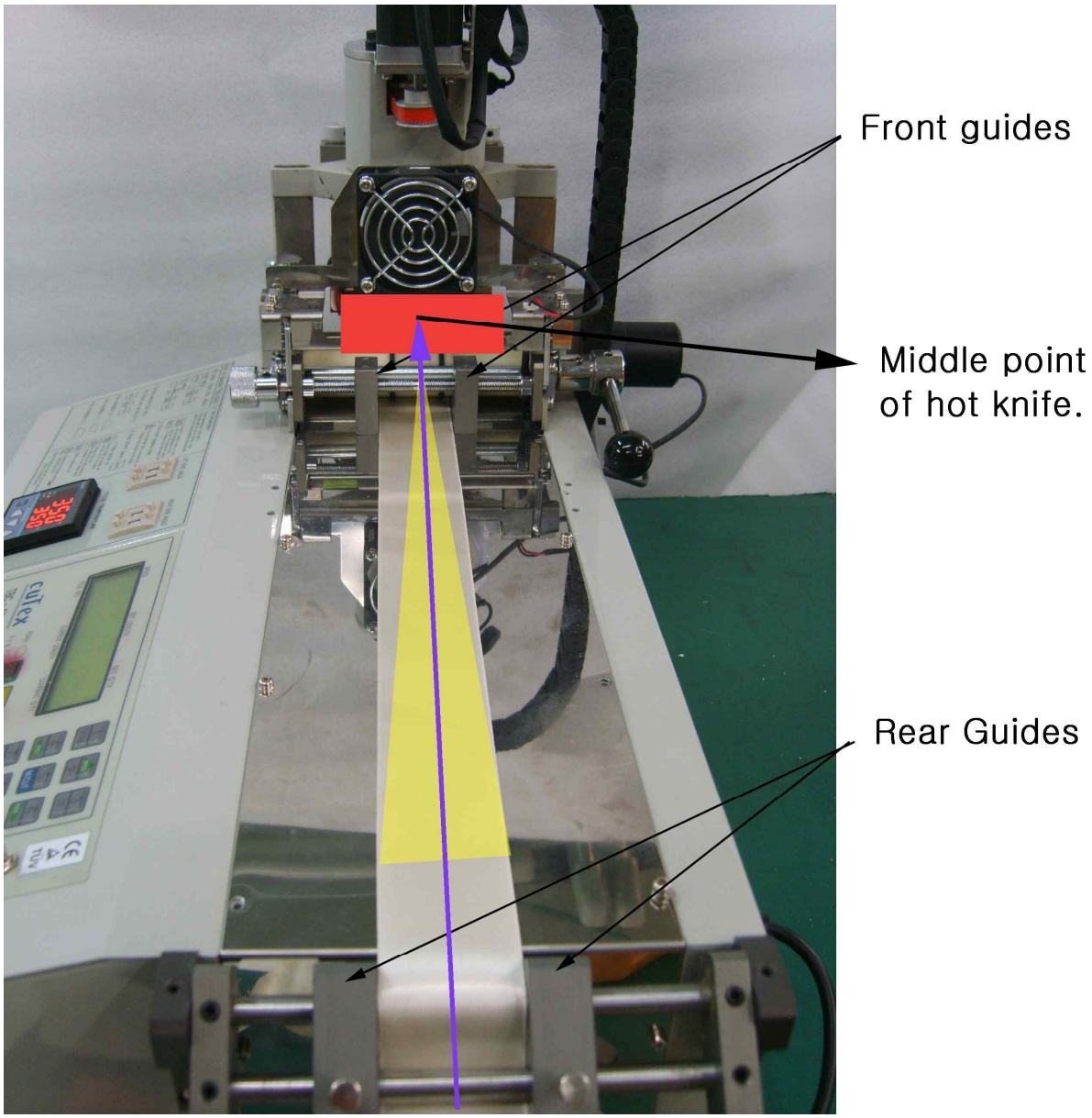
referring to above-right image.

And then press 5 M/CUT button, 

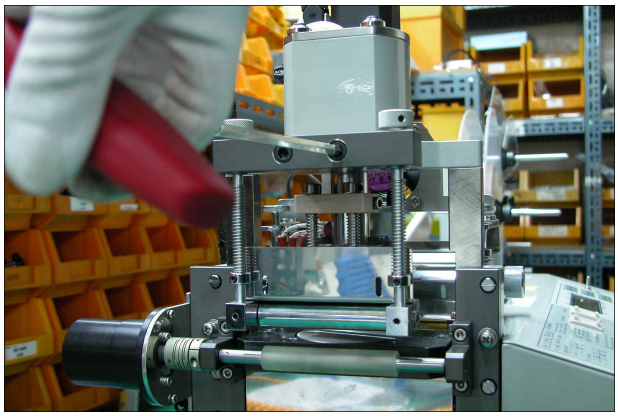
to cut ribbon or make a mark on ribbon.

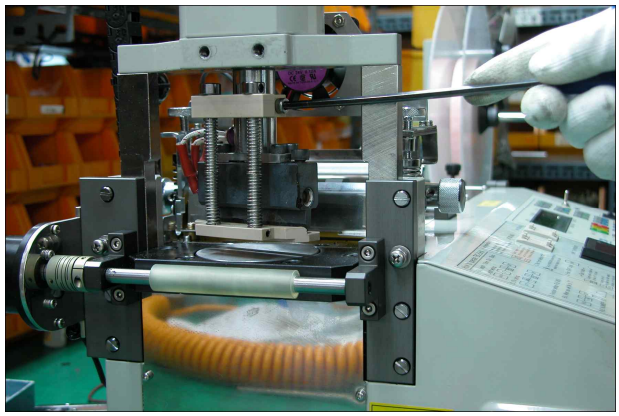
After doing above, you can get V shape cut ribbon, as below.




Front guides
Middle point
of hot knife.
Rear Guides

How to exchange a Knife, Heater





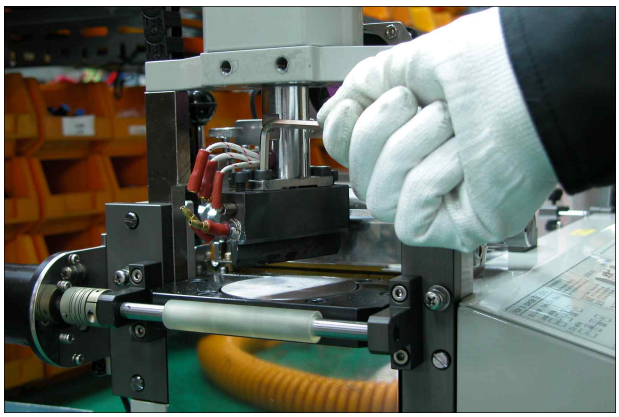
① Turn off power.

② Disassemble front feeding device by 5mm-wrench.

③ Disassemble stopper by 4mm-wrench.

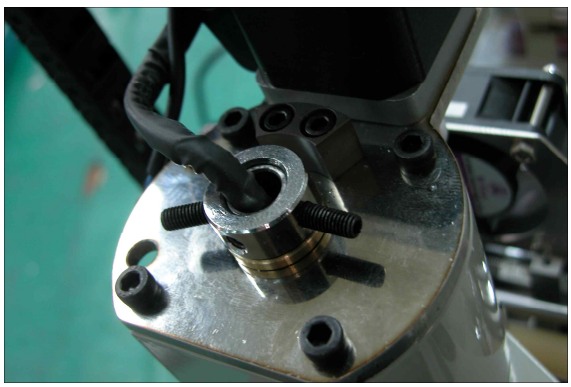
④ Unscrew heater fixing bolt by 5mm -wrench

⑤ Exchange heater after opening heater connecting line.



⑥ Exchange knife after unscrewing upper knife bolt.

※Caution



Don't turn the screw (Adjusting angle). It can happen wrong working.

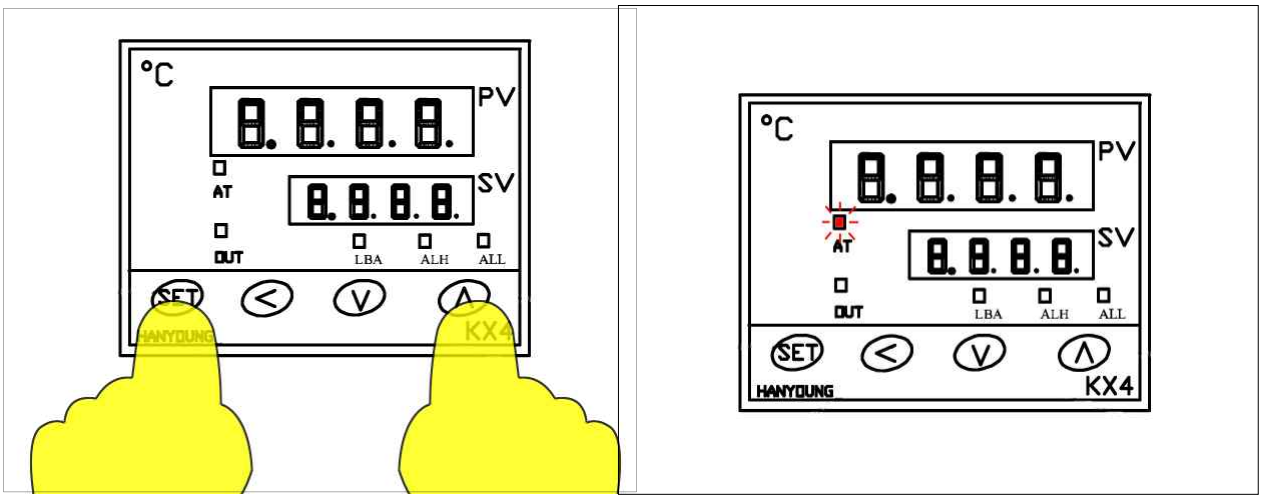
HOW TO DO AUTO-TUNING

After changing a part or parts (temp. sensor or heater or temp. controller), you can experience that there are much temperature-deviation between set temperature(SV) and present temperature(PV).
In this case, by auto-tuning, you can reduce temperature-deviation between SV and PV.

Please do follow steps for auto-tuning.

- Referring manual, please set your common temperature. (ex, 300℃)

- After PV's reaching set temperature, press "SET" and "∧" simultaneously.
(referring to below image(left))
If so, with AT lamp blinks, auto-tuning begins.

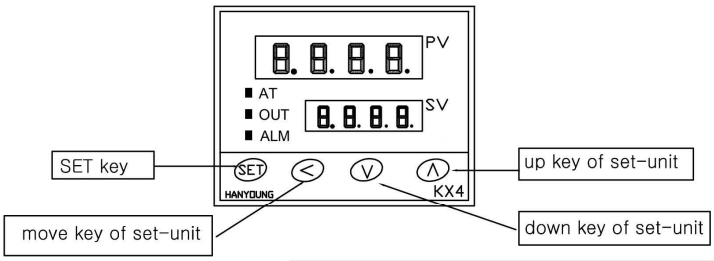


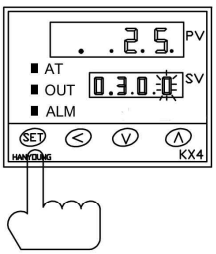
- After finishing auto-tuning, AT lamp will turn off.

- While auto-tuning, if you want to stop auto-tuning, plesae press "SET" and "∧" simultaneously. If so, AT lamp turns off and auto-tuning stops.

- If you change SV (set temperature) during auto-tuning, auto-tuning stops and temp. controller will use previous parameter.

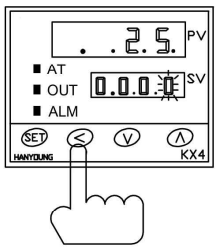
(How to use Temperature Controller KX4)



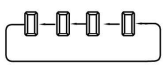


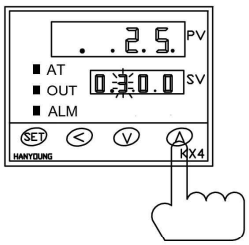
When you power on the controller, PV shows current room temperature and SV shows set temperature.
Recommendation is 250℃～350℃.
After turn-on & set, within 10 minutes, it reaches to set temperature.

① You can enter set mode by pressing (SET) key, you may see one cipher blinks. It means it can be changed.

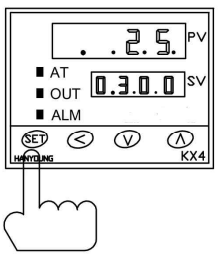


② By pressing (<) key, you can move between numbers of four ciphers. as follows.





③ Set desirous temperature by pressing (∧) and (∨) keys.(i.e :300℃).
Set-temperature will be increased by (∧) key and it will decreased by (∨) key.



④ After finshing setting, press (SET) key once more. Then, it stops blinking. And the controller will return to auto-tuning mode.

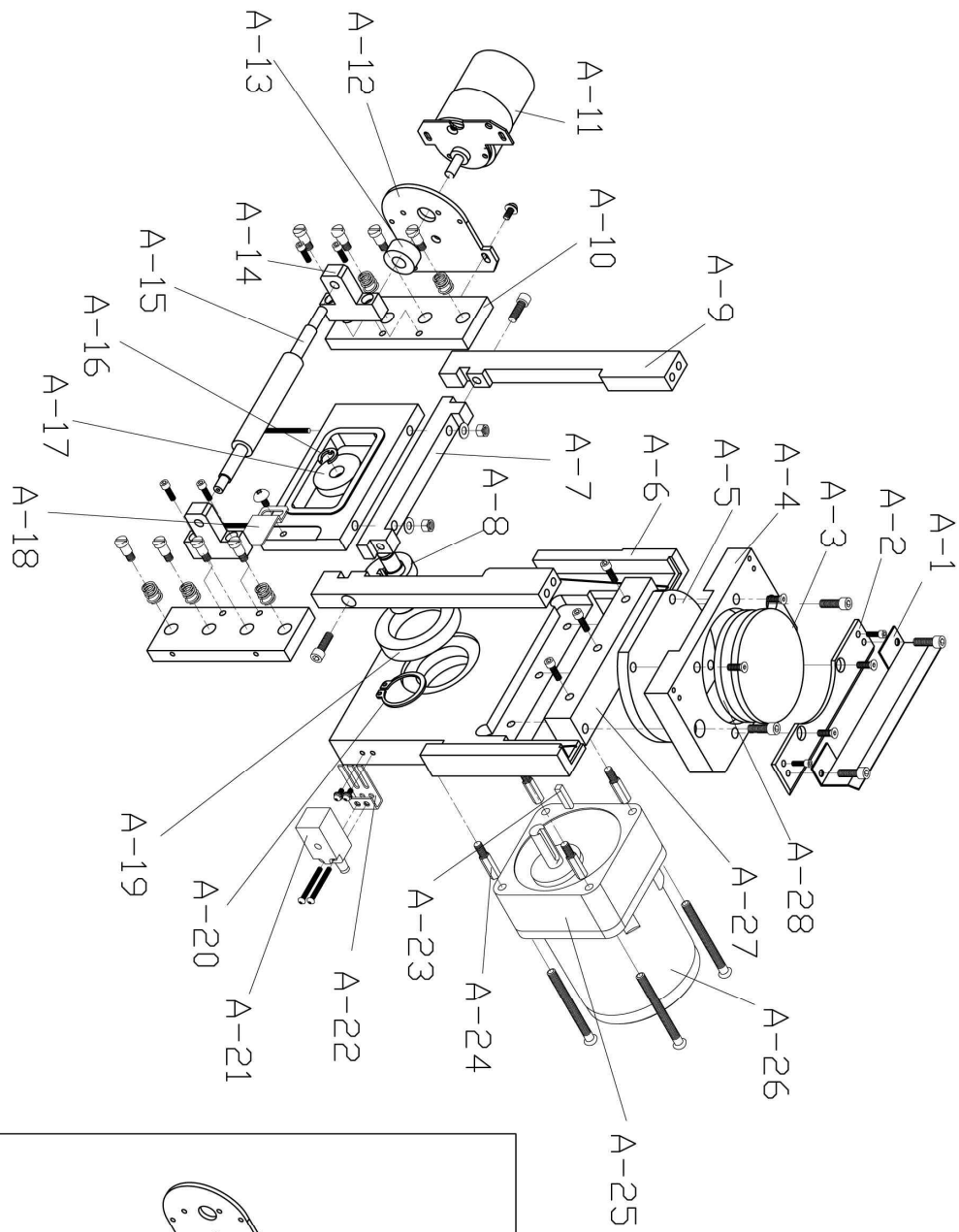
⚠ CAUTION
At beginning, when you power on, there will be some variation in temperature. But it will be automatically reached to the set temperature soon.

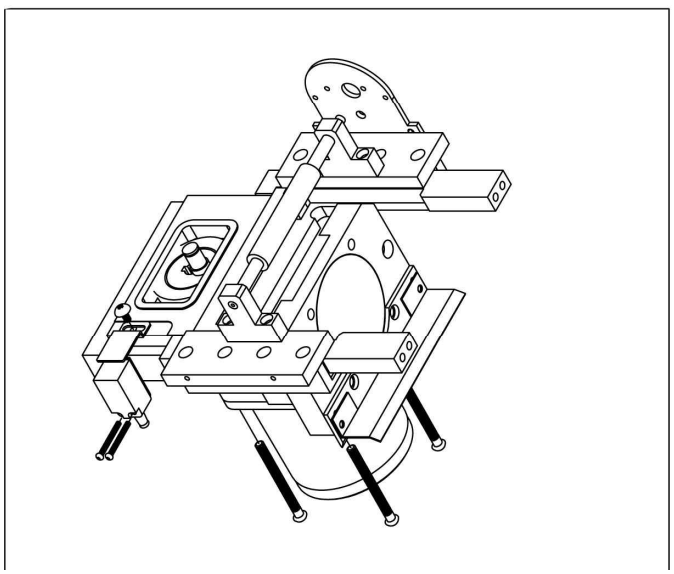
Trouble-shooting of TBC-50 series

No	Troubles		Appicable model	Causes & Measures
1	No power supply		All models	- Check if electric cord is connected well. - Check if the fuse blows out or not.
2	Power is on, but no work	Feeding roller doesn't work.	All models	- Check if there is inserted any alien substance in roller. - If current length on display is changed, exchange drive board. - If current length on display is not changed, exchange Control board(MB).
		Knife doesn't work.	All models	- Check if pressure plates of upper knife are too much fastened or not.
		LCD display doesn't work.	All models	- After opening the cover, check the connetion. (especially between Operation & MB board)
		All functions don't work	Al models	- Check if auto-stop device lies down. If any, raise it up.
3	Material is not cut.		Hot cutter (H, LH, SH, HX)	- Check if temperature goes up to set-degree. - Check if knife blades are even(parallel).
4	Material is cut onesidedly.		All models	- Check if blades are damaged or weared. - After making both knives close each other by M/CUT button and check if they are even or not. (If they are not even, adjust them by bolts)
5	Cut-length is different from set-length.		All models	- Test cutting after loosening material from the reel by hand or attaching feeding device.
6	It cuts before the cutting line of labels.		Label cutter (S, SH)	- Move the sensor towards knife side as long as the difference by pushing.
7	It cuts after the cutting line of labels.		Label cutter (S, SH)	- Move the sensor towards counter-knife side as long as the difference by pushing.
8	ERROR on LCD & LED	ERROR CODE [064] >Sensor check Er	Label cutter (S, SH)	- Trouble in Mark sensor → · Check if the sensor is connected well or not. · Check if the sensor is adjusted well or not. (FILE NO 001) · Check if it is label problem or not.
		ERROR CODE [065] >CUT I/O Error!	All models	- Trouble in cutting motor or cutting sensor → · Upper knife moves 1~3 sec. and ERROR on display. Check the connection of cutting sensor. If not, exchange the cutting sensor. · Upper knife doesn't move and ERROR on display. Exchange the cutting motor or drive board.
		STOP INPUT !! CHECK STOP INP!	All models	- Auto stop device is pressed down or shortage. → raise up the device and check shortage.
		(C)ACORD CTRL-OP AMC-T3KA VER1.7D	All models	- Bad connected ROM → Press ROM by hand or connect it again. (If not, change MB board)
		ERROR CODE[065] >CHECK CODE[003]	All models	- Change of FILE 003 in program by noise or mis-operation → Initialize the controller. ※ **How to Initialize**(programs to be initial) : press **SET**+**SHIFT/ESC** buttons and **RESET** button at the same time. (Press **RESET** later than other two keys.)
9	Operator feels electric current in touch of machine.		All models	- Connect the earth cord(green) to any bolt of backside of machine.

※ A/S center : TEL +82 31 521 6904~7, FAX +82 31 521 6908

TBC-55HX Part Drawing A (Cutting part)

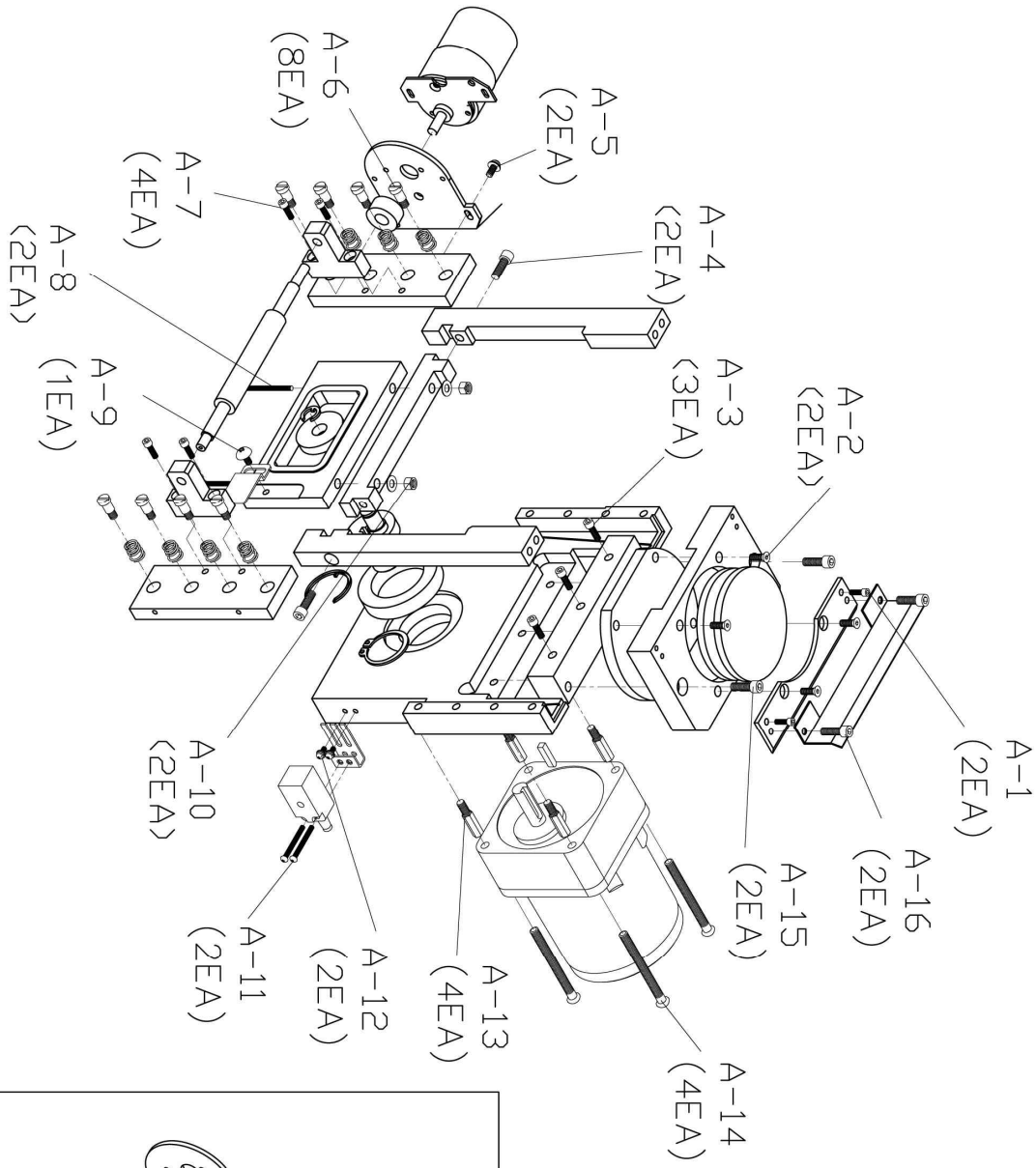


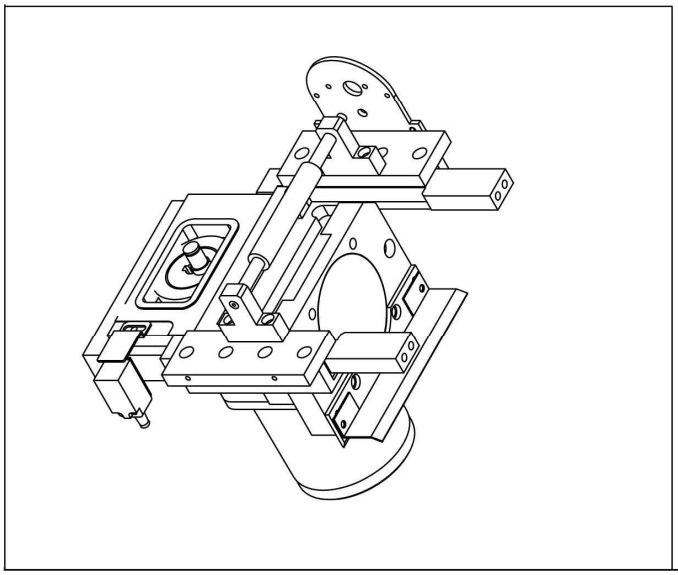


TBC-55HX Part List A (Cutting part)

Part No.	Description	Part No.	Description
A-1	STOPPER	A-21	PROXIMITY SENSOR
A-2	ROLLER SPACER	A-22	PROXIMITY SENSOR BRACKET
A-3	LOWER HEATING PLATE	A-23	KEY
A-4	LOWER KNIFE BRACKET	A-24	MOROT SUPPORT
A-5	LOWER KNIEF HEIGHT BRACKET	A-25	REDUCTION GEAR(9:1)
A-6	LOWER KNIFE CASE	A-26	CUTTING MOTOR(25W)
A-7	UPPER KNIFE SET	A-27	LOWER KNIFE FIXING PLATE
A-8	CRANK	A-28	SILICONE PLATE
A-9	UPPER KNIFE FRAME SET		
A-10	PRESSURE PLATE		
A-11	STEPPING MOTOR		
A-12	DC MOTOR		
A-13	COUPLING		
A-14	FRONT FEEDING ROLLER BRACKET		
A-15	FRONT FEEDING ROLLER		
A-16	SNAP RING		
A-17	BEARING (6300)		
A-18	E RING		
A-19	BEARING (6004)		
A-20	SNAP RING		

TBC-55HX Part Drawing A (Bolt/Bearing)

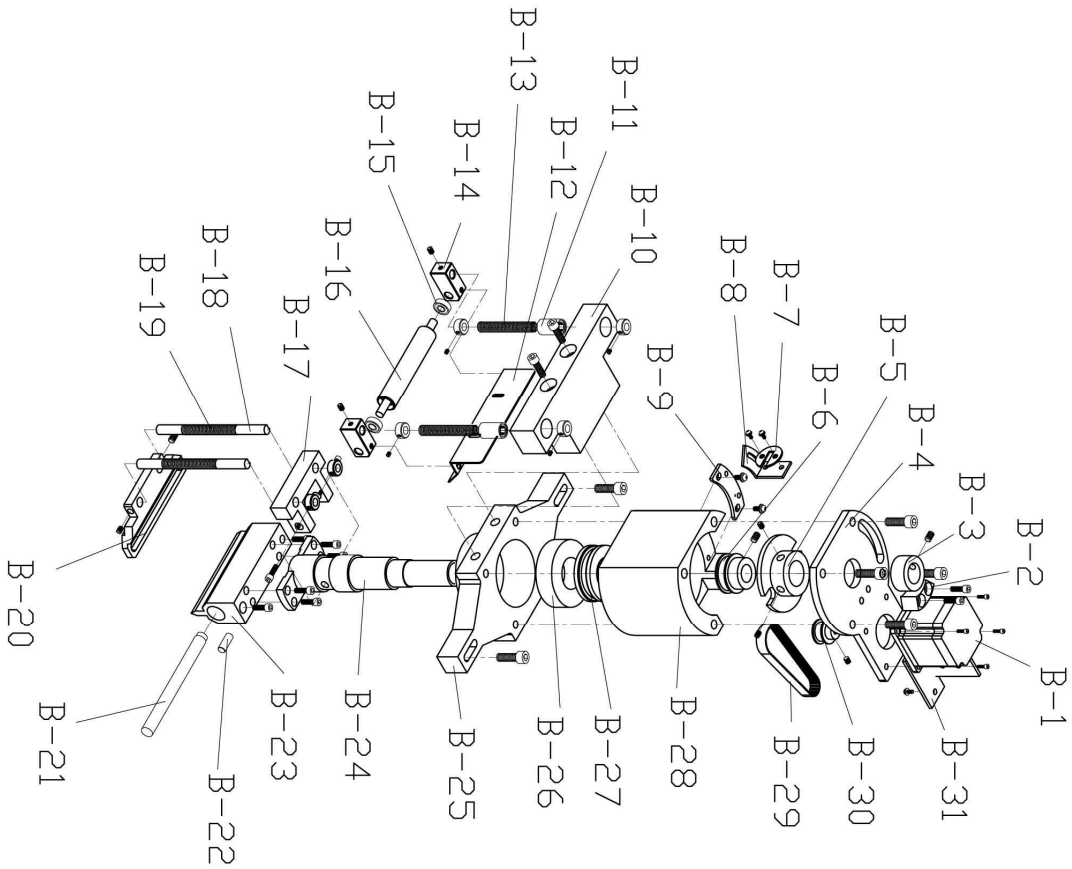


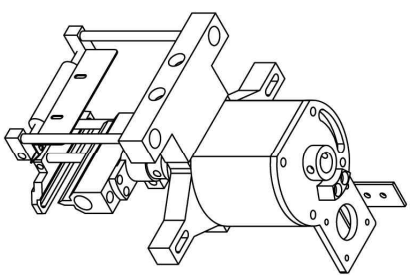


TBC-55HX Part List A (Bolt/Bearing)

Part No.	Description	Part No.	Description
A-1	Sem's Bolt M3*8		
A-2	Flat Head Bolt 6*15		
A-3	Hexagon socket Head Cap Screws M5*25		
A-4	Hexagon socket Head Cap Screws M5*20		
A-5	SUS M3*10		
A-6	Pressure Control Bolt		
A-7	Hexagon Socket Head Cap Screws SUS M6*15		
A-8	Hexagon Socket Head Cap Screws M6*85		
A-9	Round Head Bolt M4*5		
A-10	Nut M6		
A-11	Sem's Bolt M3*25		
A-12	Sem's Bolt M3*8		
A-13	Motor Support		
A-14	M5*45		
A-15	Hexagon Socket Head Cap Screws M6*20		
A-16	Sem's Bolt M3*12		

TBC-55HX Part Drawing B (Cutting part)

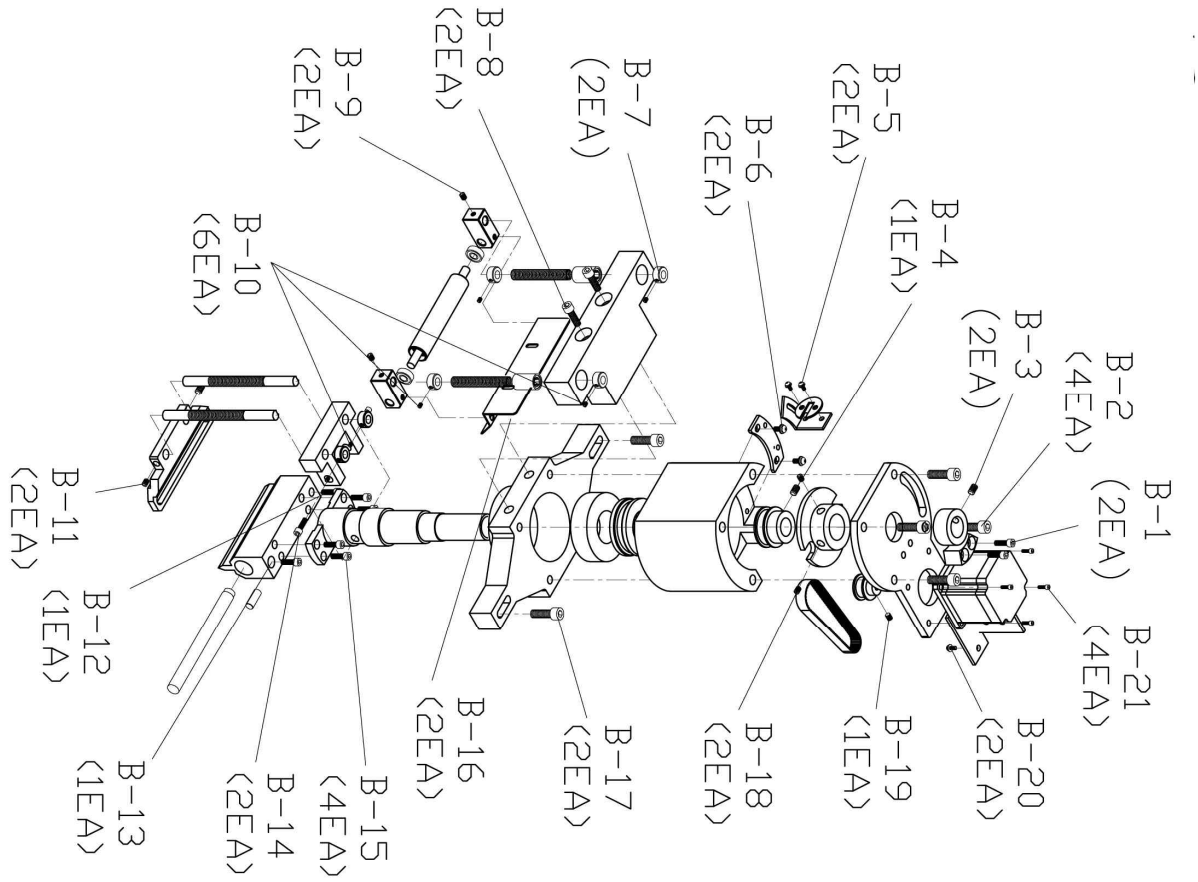


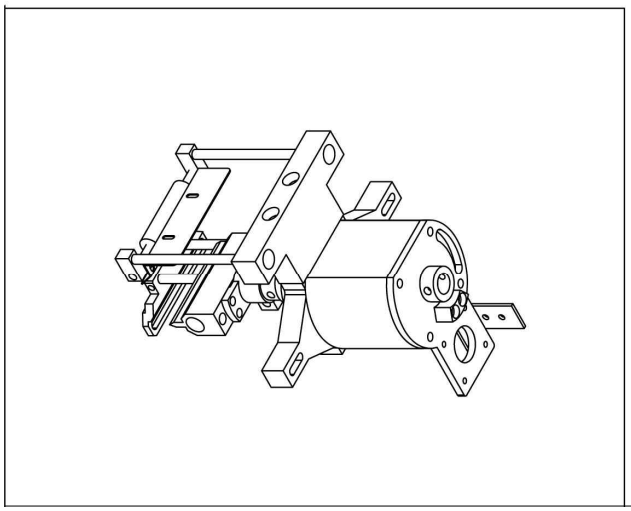


TBC-55HX Part List B (Cutting part)

Part No.	Description	Part No.	Description
B-1	STEPPING MOTOR	B-21	HEATER
B-2	ROTATE AXIS END CAP	B-22	SENSOR
B-3	ANGLE CONTROL COLLAR	B-23	ROTARY HOT KNIFE
B-4	ROTATE AXIS BRACKET	B-24	AXIS OF ROTATION
B-5	ROTATE AXIS	B-25	UPPER KNIFE CASE BASE
B-6	ORIGIN ANGLE DETECTING SENSORRING	B-26	BEARING (6004)
B-7	ORIGIN ANGLE SENSOR	B-27	THRUST BEARING (51203)
B-8	ORIGIN ANGLE SENSOR BRACKET	B-28	AXIS OF ROTATION COVER
B-9	ORIGIN ANGLE SENSOR BRACKET	B-29	TIMING BELT (91MXL)
B-10	FRONT LM GUIDE	B-30	AXIS OF MOTOR ROTATION
B-11	LMBEARING (LM6)	B-31	CABLE CHAIN BRACKET
B-12	PRESSING PLATE COVER		
B-13	SPRING		
B-14	ROLLER FIXING BRACKET		
B-15	BEARING (686)		
B-16	PRESSING ROLLER		
B-17	PRESSING DEVICE STOPPER		
B-18	PRESSING DEVICE VERTICAL AXIS		
B-19	VERTICAL AXIS SPRING		
B-20	PRESSING UNIT STOPPER		

TBC-55HX Part Drawing B (Bolt/Bearing)

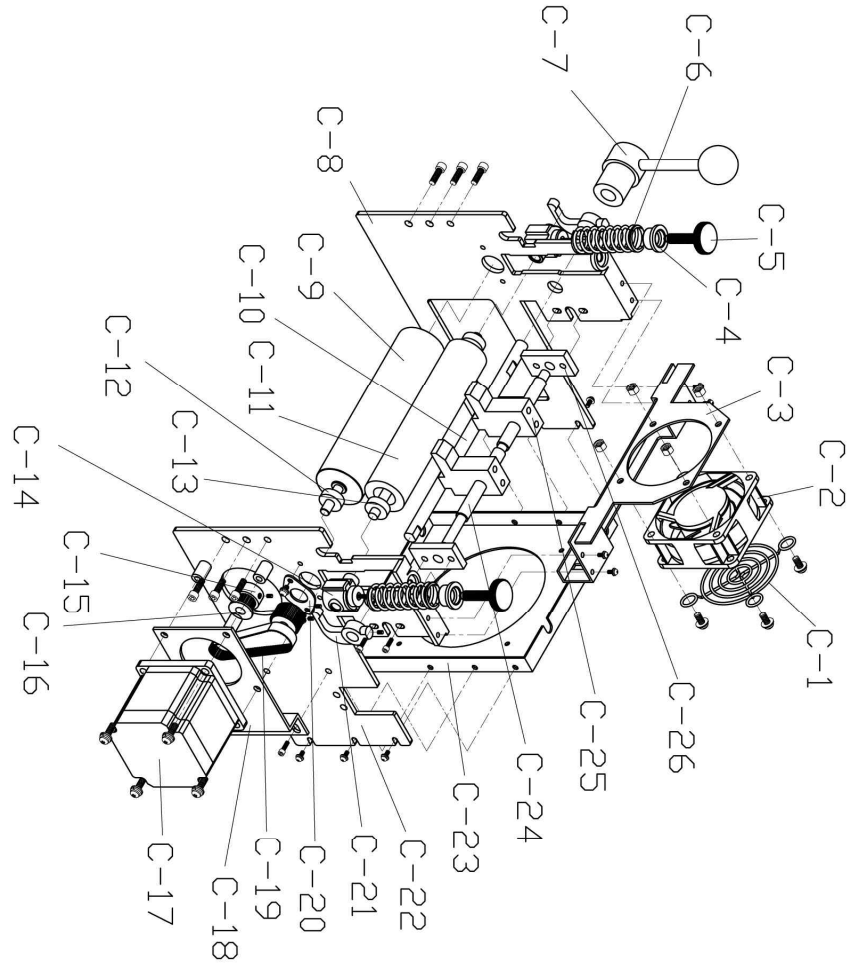


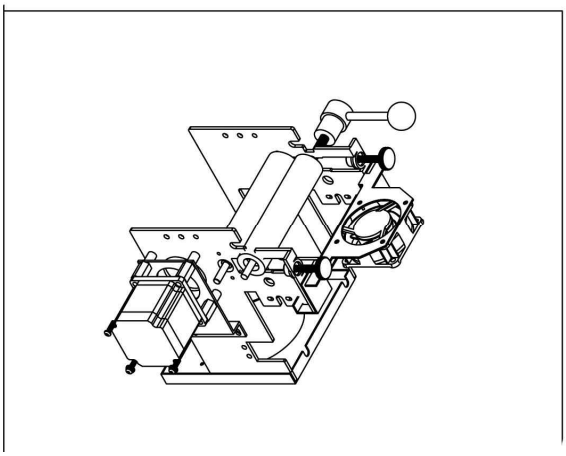


TBC-55HX Part List B (Bolt/Bearing)

Part No.	Description	Part No.	Description
B-1	SUS M4*12	B-21	Hexagon Socket Head Cap Screws M6*20
B-2	Hexagon Socket Head Cap Screws M6*85		
B-3	Hexagon Socket Button Head Screws M5*15		
B-4	Hexagon Socket Button Head Screws M4*8		
B-5	Sem's Bolt M3*8		
B-6	Sem's Bolt M3*6		
B-7	Hexagon Socket Button Head Screws M3*4		
B-8	Hexagon Socket Head Cap Screws M6*45		
B-9	Hexagon Socket Button Head Screws M3*4		
B-10	Hexagon Socket Button Head Screws M3*4		
B-11	Hexagon Socket Button Head Screws M3*8		
B-12	Hexagon Socket Head Cap Screws M5*15		
B-13	Hexagon Socket Head Cap Screws M5*15		
B-14	Hexagon Socket Head Cap Screws M5*15		
B-15	Hexagon Socket Head Cap Screws M5*15		
B-16	SUS M4*6		
B-17	Hexagon Socket Head Cap Screws M5*15		
B-18	Hexagon Socket Button Head Screws M4*8		
B-19	Hexagon Socket Countersank Head Screws M4*8		
B-20	Sem's Bolt M3*6, M3*10		

TBC-55HX Part Drawing C (Feeding part)

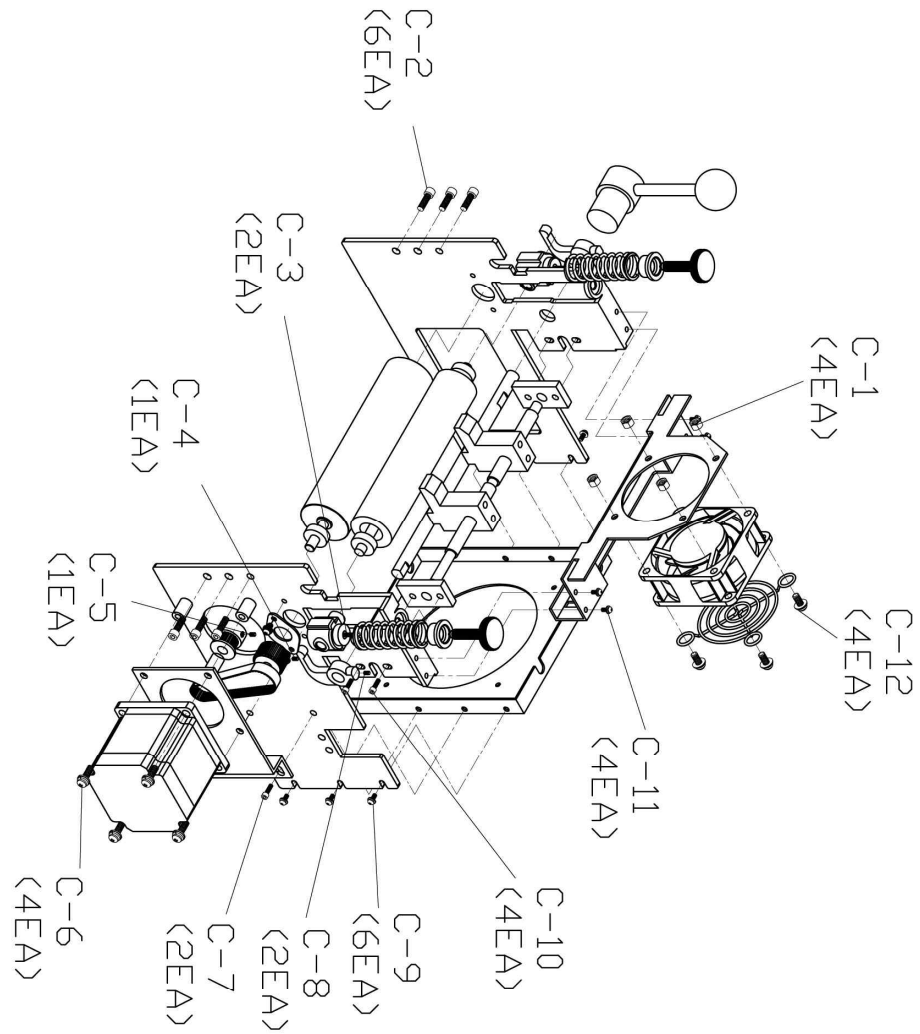


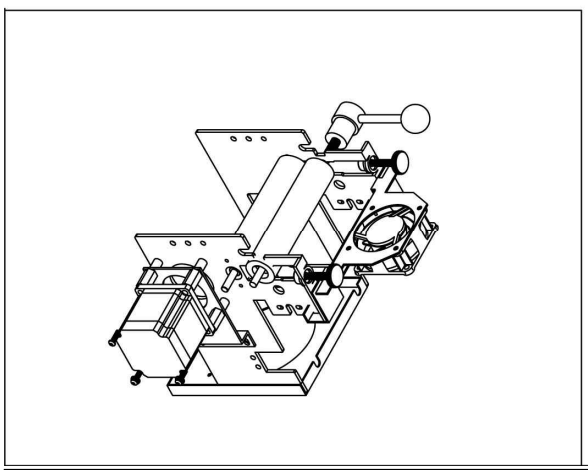


TBC-55HX Part List C (Feeding part)

Part No.	Description	Part No.	Description
C-1	FAN COVER	C-21	SLIDE LEVER
C-2	FAN	C-22	RIGHT ROLLER BRACKET
C-3	COVER	C-23	ROLLER BRACKET SPACER
C-4	SPRING COVER	C-24	MATERIAL GUIDE SHAFT
C-5	KNOB BOLT	C-25	MATERIAL GUIDE
C-6	PRESSURE SPRING	C-26	MATERIAL GUIDE BRACKET
C-7	HANDLE	*C-17-1	CONNECTOR CODE FOR STEPPING MOTOR
C-8	LEFT ROLLER BRACKET		
C-9	LOWER ROLLER		
C-10	LEVER SHAFT		
C-11	UPPERROLLER		
C-12	BEARING		
C-13	BEARING		
C-14	UPPER ROLLER SLIDE BLOCK		
C-15	TIME PULLEY(STEPPING MOTOR)		
C-16	TIME PULLEY(LOWER ROLLER)		
C-17	STEPPING MOTOR		
C-18	HEAT BLOCKER		
C-19	TIMING BLET(MXL75)		
C-20	BEARING COVER		

TBC-55HX Part Drawing C (Bolt/Bearing)

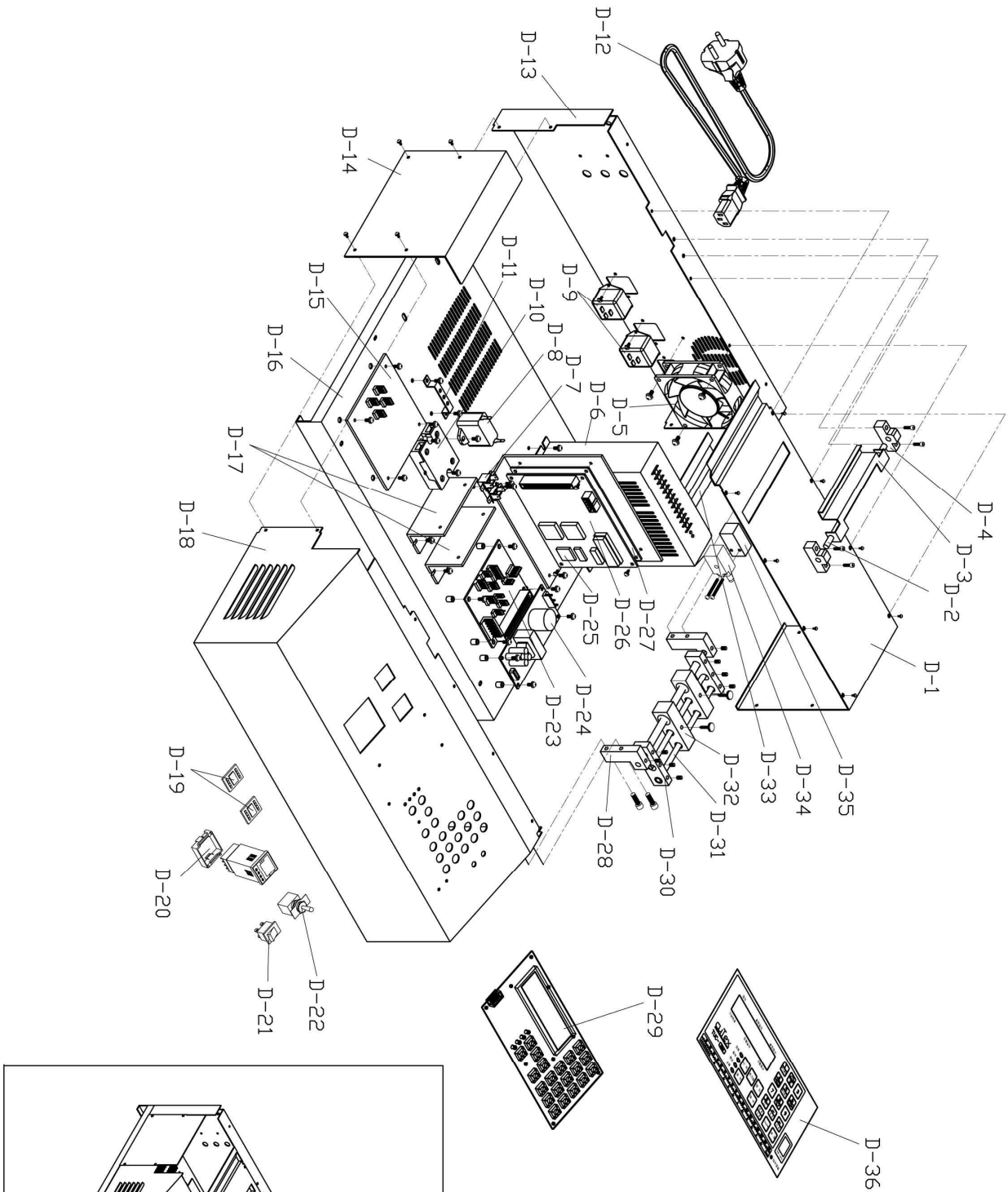




TBC-55HX Part List C (Bolt/Bearing)

Part No.	Description	Part No.	Description
C-1	NUT M4		
C-2	Sem's Bolt M4*10		
C-3	SUS M4*10		
C-4	Sem's Bolt M3*8		
C-5	HexagonSocket ButtonHeadScrewsM4*8		
C-6	Sem's Bolt M4*12		
C-7	Sem's Bolt M4*8		
C-8	Sem's Bolt M3*8		
C-9	Sem's Bolt M3*10		
C-10	SUS M4*12		
C-11	SUS M4*8		
C-12	SUS M4*30		

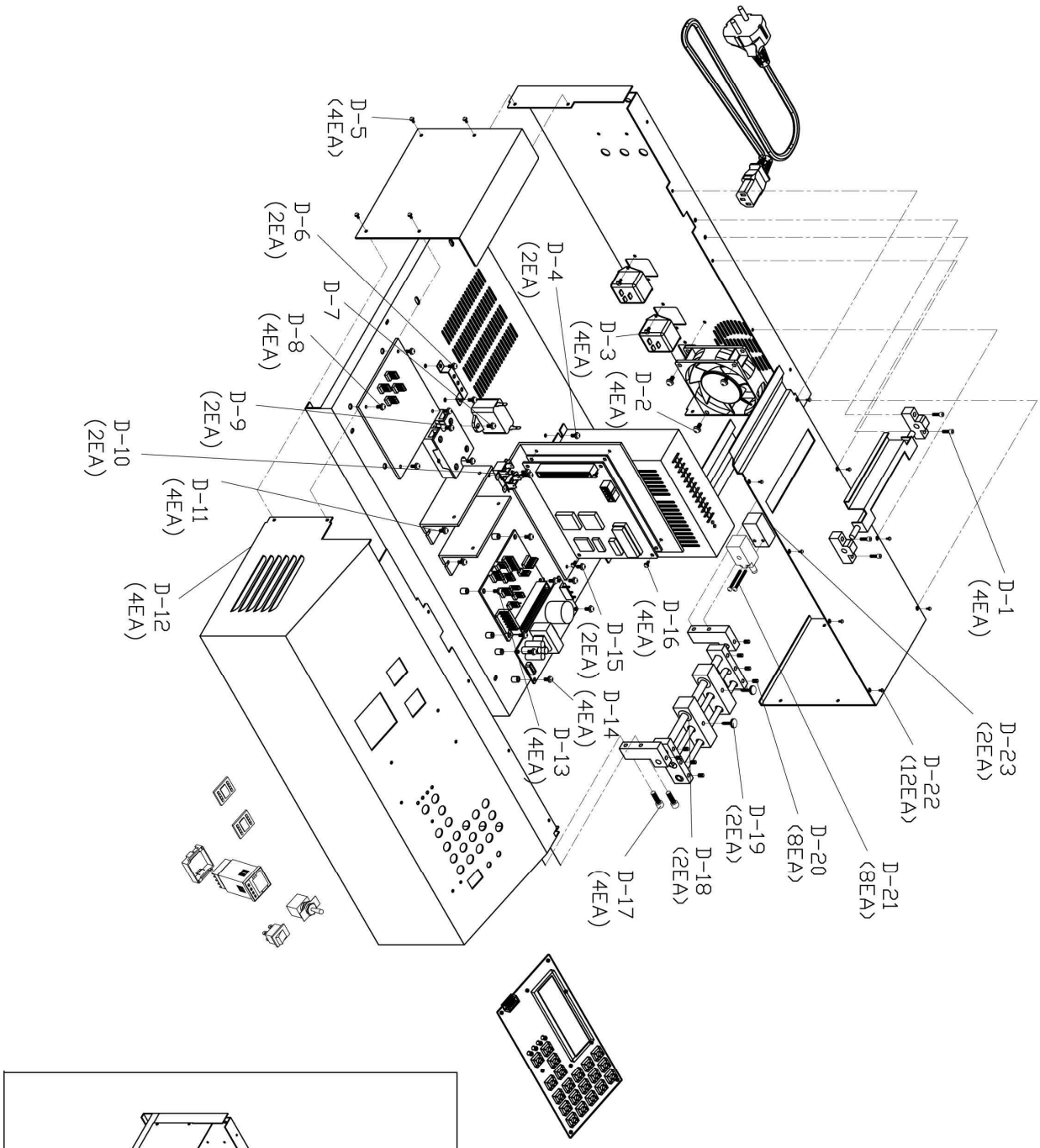
TBC-55HX Part Drawing D

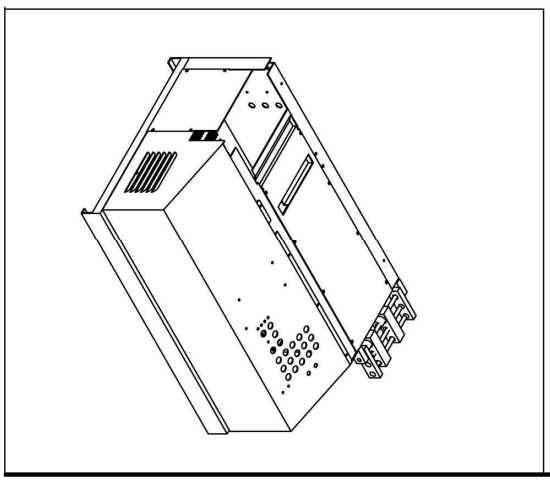


TBC-55HX Part List D

Part No.	Description	Part No.	Description
D-1	UPPER GUIDE PLATE	D-21	POWER SWITCH
D-2	STOP UNIT SHAFT	D-22	TOGGLE SWITCH(DC MOTOR)
D-3	MATERIAL DETECTOR	D-23	I/O BOARD
D-4	STOP UNIT PLATE	D-24	SMPS (5V)
D-5	FAN (AC220V)	D-25	ROM
D-6	SMPS (24V)	D-26	MAIN BOARD
D-7	TERMINAL	D-27	MAIN BOARD FIXINIG BRACKET
D-8	CONDENSER	D-28	REAR GUIDE BRACKET
D-9	CONNECTER	D-29	OP BOARD
D-10	SSR	D-30	MATERIAL GUIDE
D-11	EARTH PLATE	D-31	TENSION GUIDE
D-12	POWER CABLE	D-32	GUIDE BRACKET
D-13	LEFT COVER	D-33	COVER
D-14	FRONT COVER	D-34	MATERIAL DETECTOR
D-15	ANGLE STTING PCB	D-35	STOP UNIT BRACKET
D-16	BASE	D-36	KEY PAD
D-17	DRIVE BOARD		
D-18	CONTROL COVER		
D-19	ROTARY S/W(ANGLE SETTING)		
D-20	TEMPERATURE CONTROLLER		

TBC-55HX Part Drawing D(Bolt/Bearing)





TBC-55HX Part List D (Bolt/Bearing)

Part No.	Description	Part No.	Description
D-1	SUS Hexagon Socket Head Cap Screws M4*10	D-21	Sem's Bolt M3*25
D-2	Sem's Bolt M3*6	D-22	Sem's Bolt SUS(Gilding)M3*6
D-3	Hexagon Socket Countersank Head Screws SUS M3*6	D-23	Clamping Bolt Sem's Bolt M4*10
D-4	Sem's Bolt M4*6		
D-5	SUS Sem's Bolt M3*6		
D-6	Sem's Bolt M4*6		
D-7	Sem's Bolt M4*6		
D-8	Sem's Bolt M3*6		
D-9	Sem's Bolt M4*6		
D-10	Sem's Bolt M4*12		
D-11	Sem's Bolt M4*6		
D-12	Sem's Bolt M4*6		
D-13	Sem's Bolt M3*6		
D-14	Sem's Bolt M3*6		
D-15	Sem's Bolt M4*6		
D-16	Sem's Bolt M3*6		
D-17	SUS Hexagon Socket Head Cap Screws M4*15		
D-18	Needle B/G LM8		
D-19	Hand Grip Bolt		
D-20	Hexagon Socket Head Cap Screws M4*8		

Please contact following address for further information.

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