

Instruction Sheet

Table of Contents

Caution - Safety – read first !	1
1 Description	2
1.1 Specification	3
2 Installation	4
2.1 Tool preparation	4
2.2 Components preparation.....	4
2.2.1 Modify on machine cover.....	5
2.2.2 Remove machine front cover.....	6
2.2.3 Open machine cover.....	6
2.3 Replace Ejector blade	7
2.4 Install Centering Unit.....	8
2.5 Install Detection Unit	9
2.6 Install F.R.L & line pipe	12
2.7 Connection between machine and Centering Unit	13
3 Activate Centering Device.....	13
3.1 Connect air supply	13
3.2 Setting to machine	14

Caution - Safety – read first !

Please comply with below caution when operate this equipment.



Do be wearing protection when operating



Shut machine before maintaining



DON'T modify the equipment without TE permit



DON'T wear ill-suited which may cause any stuck by machine



DON'T try to put hands into machine

1 Description

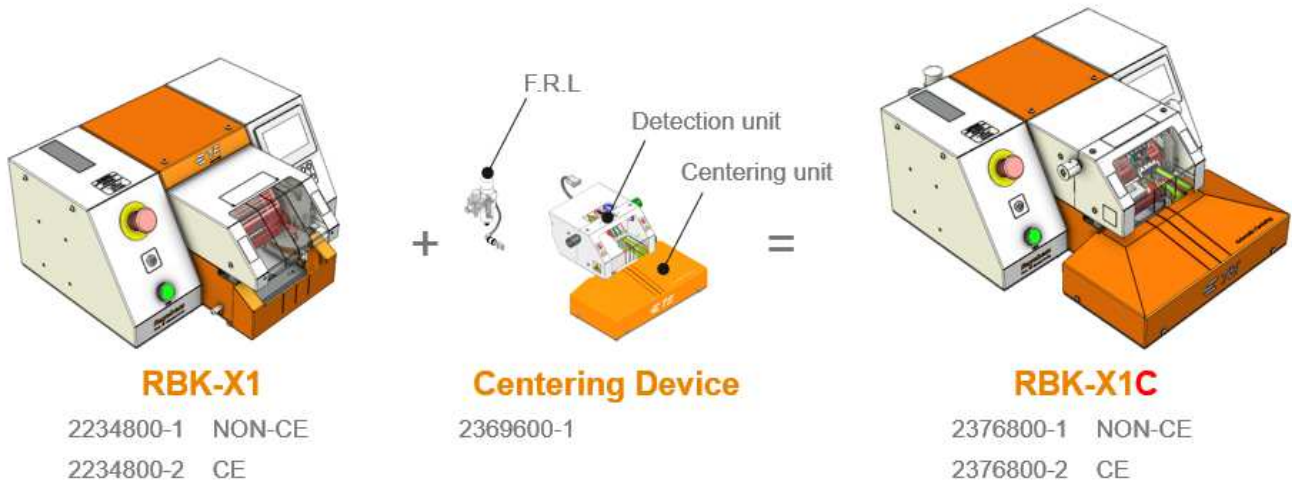


Fig.1 General View

This manual shows how to upgrade RBK-X1 to RBK-X1C by installing the **Centering Device**.

The Centering Device is an optional add-on device that can only be added to the RBK-X1 Heat Shrink Machine. It ensures the correct position of the tubing and the wire splice before the heat shrink process starts.

For the RBK-X1C customer manual, refer to [409-35021](#) (non-CE version) or [409-35022](#) (CE version)

1.1 Specification

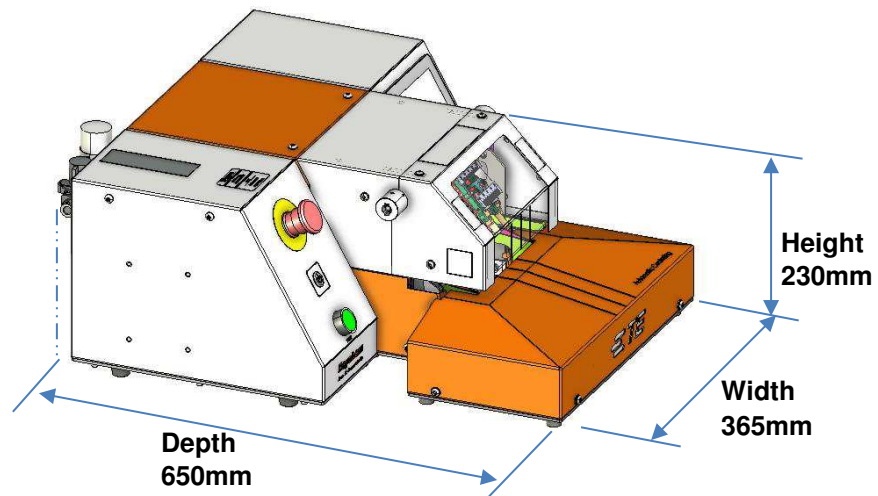


Fig.2 Dimension of RBK-X1C

Table 1 – General Parameters

Model Designation	Centering Device
Power supply	24V DC from RBK-X1
Air supply	4~6 bar, (Pipe OD 10mm)
Machine size	See Fig.2
Max. Tubing Size	OD 19mm, Length 60mm
Ambient operating Environment	Temperature: 5 to 40 °C Relative humidity: 50%~90%
Net Weight	8 Kg

2 Installation

2.1 Tool preparation

Before installation, prepare below tools.



Screwdriver



Allen key



Wrench

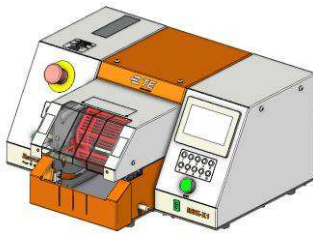


Container

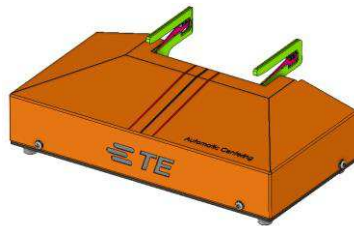
Fig.3 Tools

2.2 Components preparation

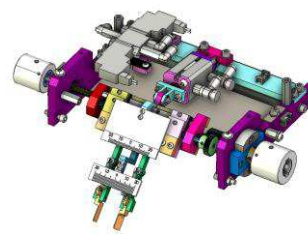
Before we start upgradation, make sure you have below components.



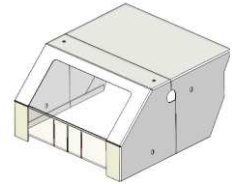
RBK-X1 base machine



Centering Unit



Detection Unit



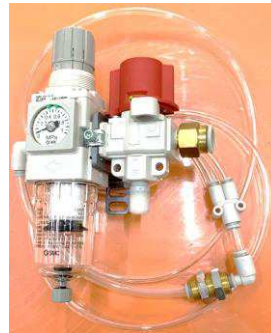
Top front cover



Ejector blade



hardware



F.R.L & pipe



Connection cable

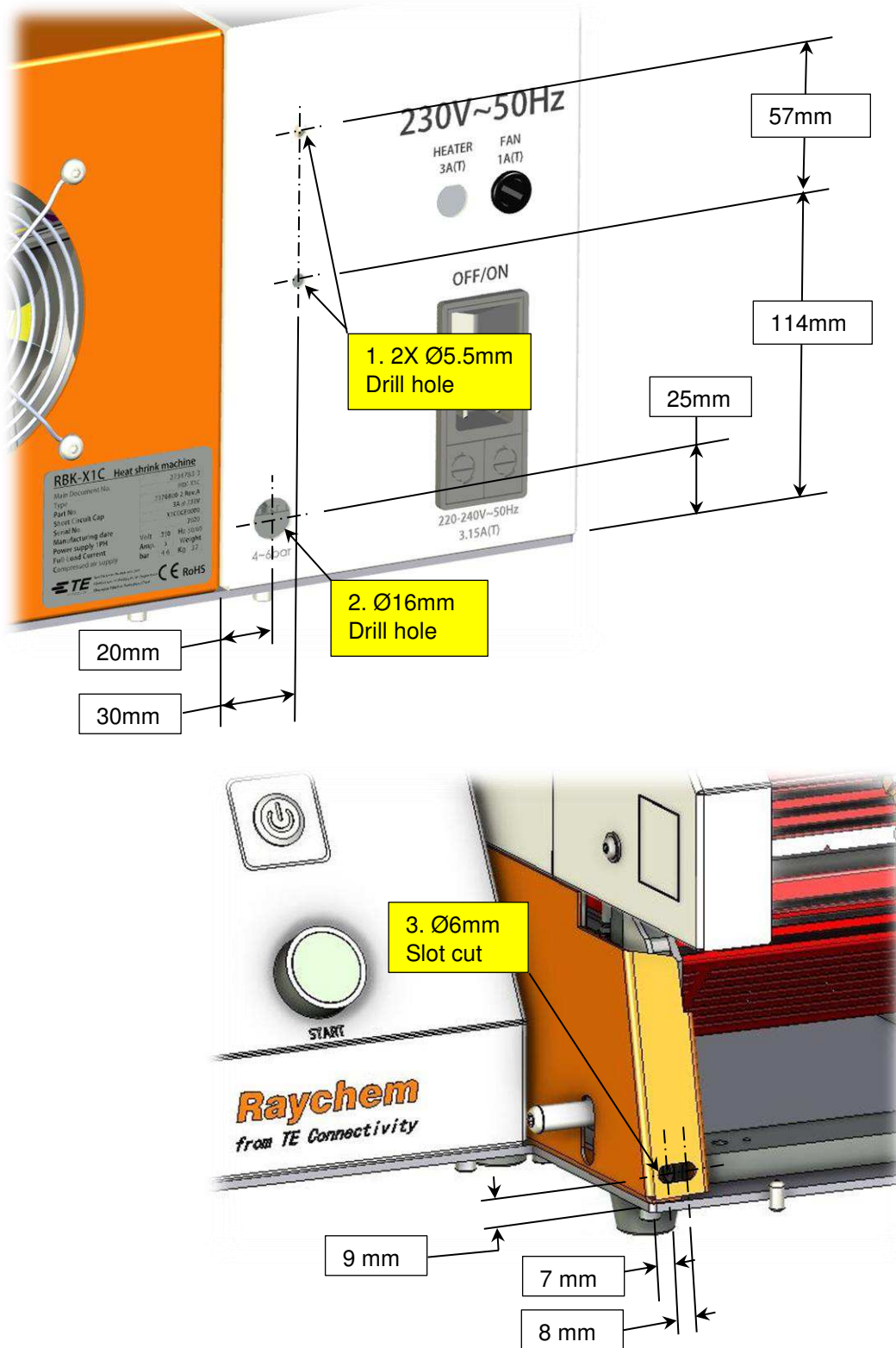


Extension cable

Fig.4 Machine & Centering Device package

2.2.1 Modify on machine cover

For those old version (SN: CRX10001~CRX10030; CRX1CE0001~CRX1CE0005) RBK-X1 base machine, need to modify on machine cover before install the Centering Device components. See below capture.



2.2.2 Remove machine front cover

Remove the 2 cover from base machine. (Centering Device won't need these 2 cover any more.)

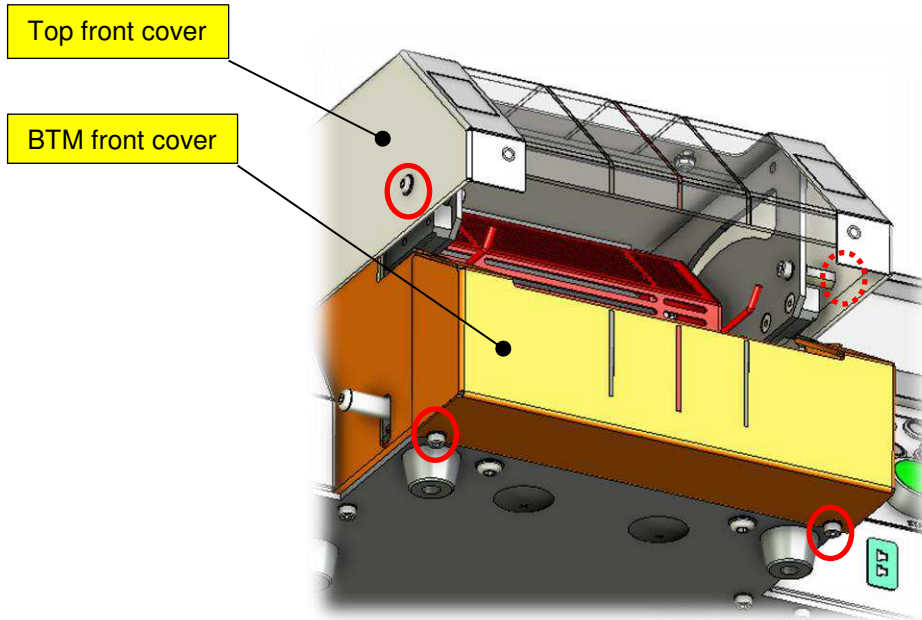


Fig.5 Machine top front cover & BTM front cover

2.2.3 Open machine cover

Lay machine down like below capture, and remove the cover mounting screws, then open the left cover & right cover & rear cover carefully.

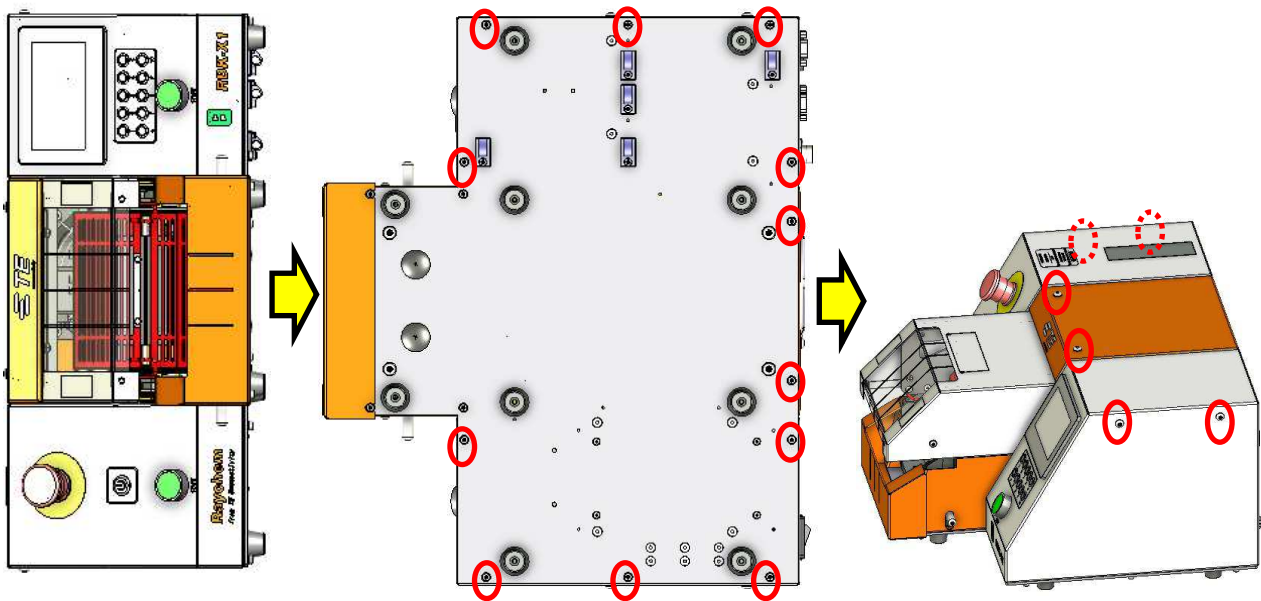


Fig.6 Remove cover screw

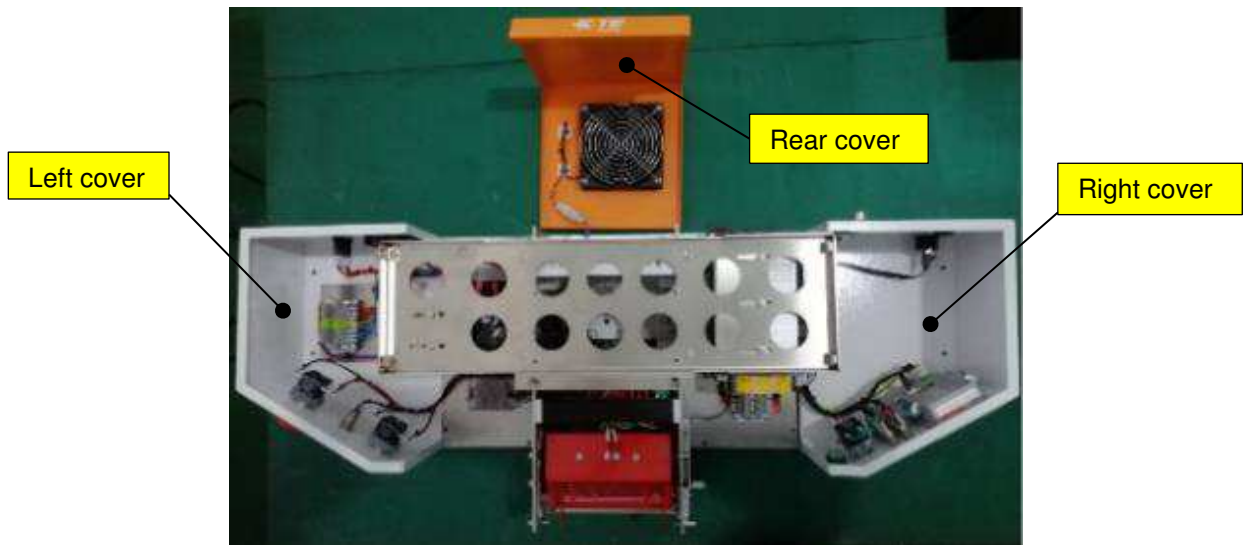
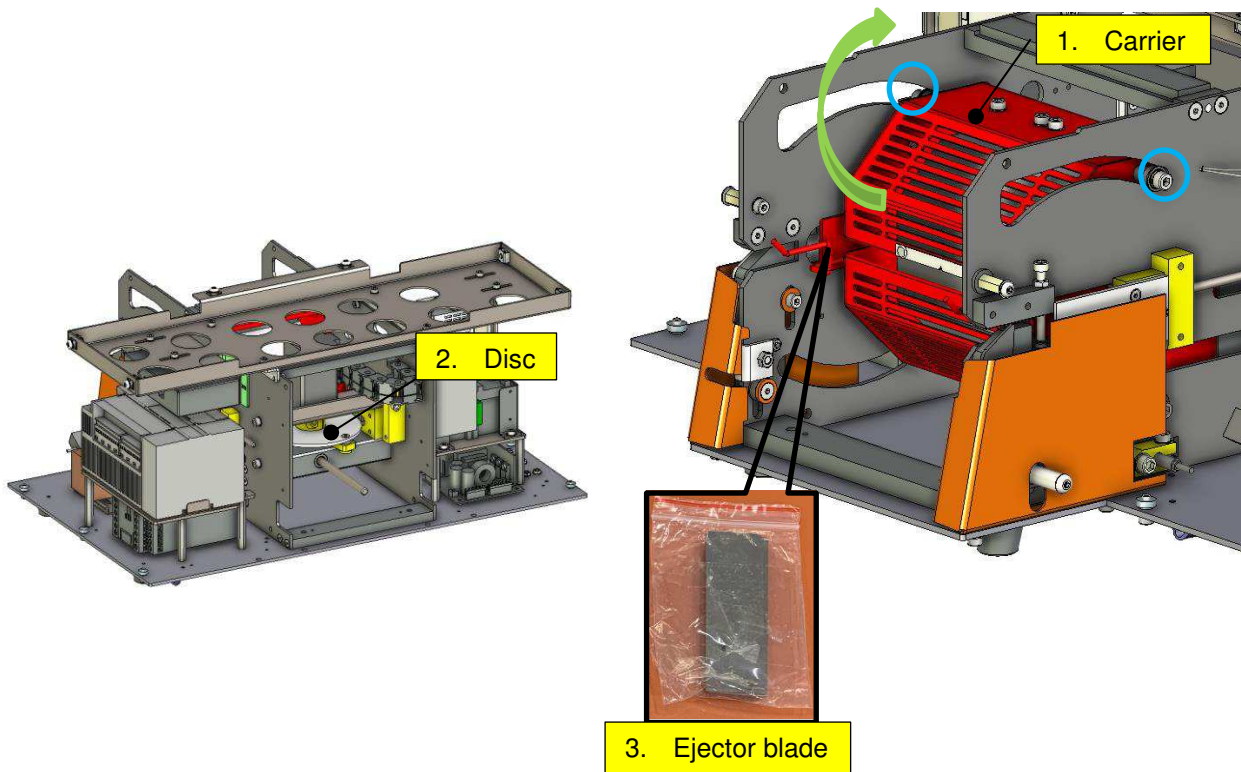


Fig.7 Open cover

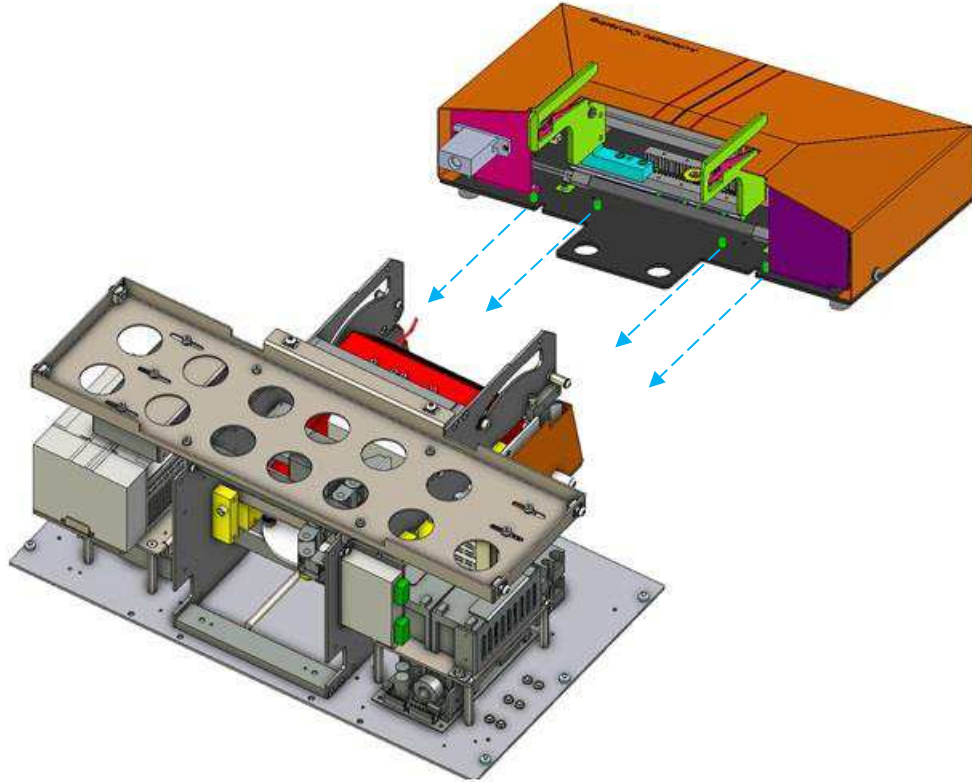
2.3 Replace Ejector blade

1. Rotate Disc manually, allow the ejector blade moving forward.
2. Remove the 2X Carrier mounting screw, and lift the top carrier
3. Replace the 2X Ejector blade, with the new Ejector blade which pack in the Centering Device.
4. Restore the carrier mounting screws.

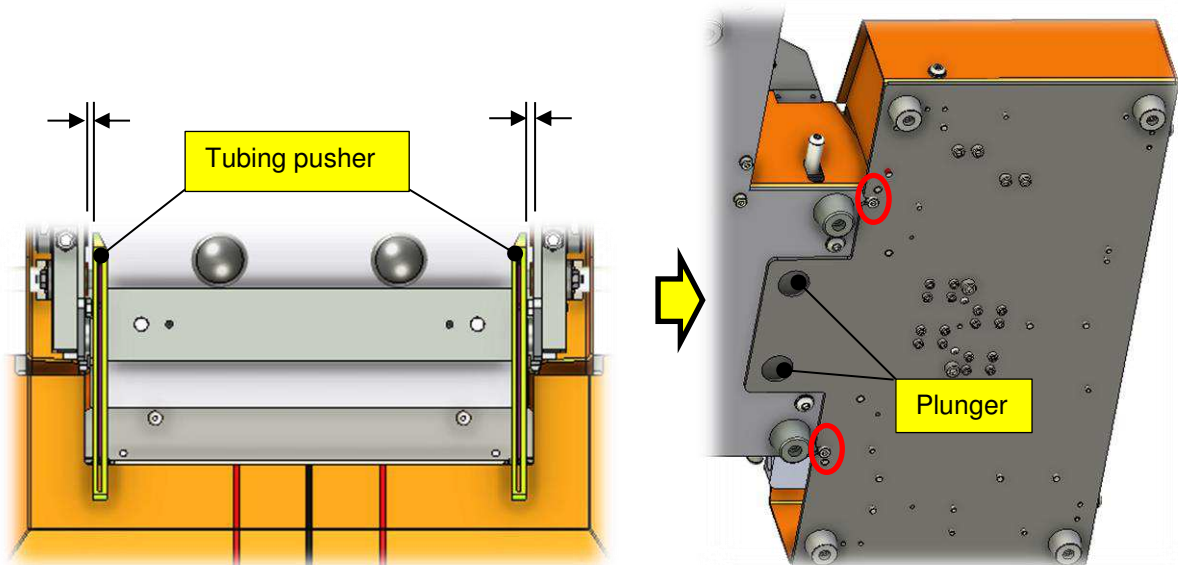


2.4 Install Centering Unit

1. Place the Centering Unit in front of machine, with the 4X guide pins can lean on machine base plate front.

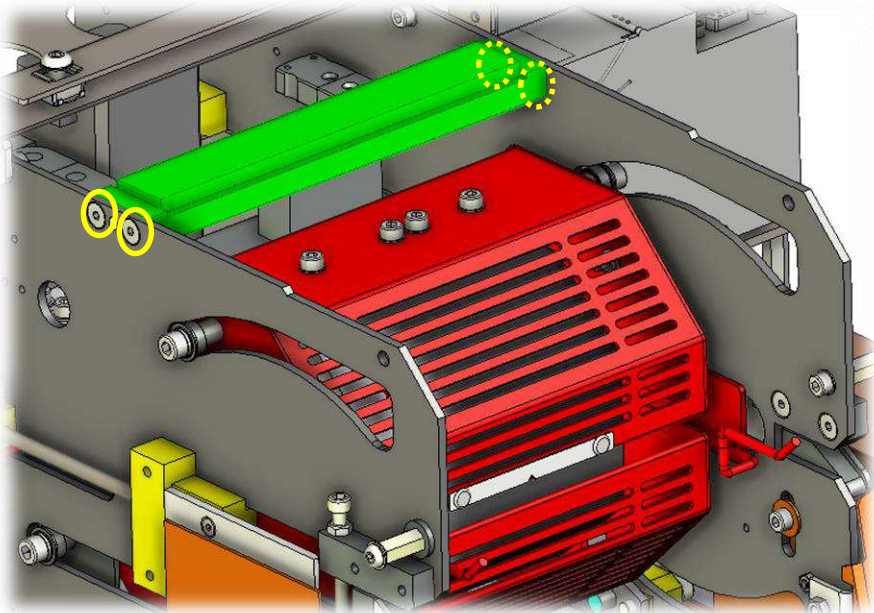


2. Push the left and right tubing pusher to sides, then check if they have the same gap with machine wall. Fix the 2X mounting screws on the bottom. (Remove the plungers from machine base plate and fill them back onto the Centering Device base plate holes.)

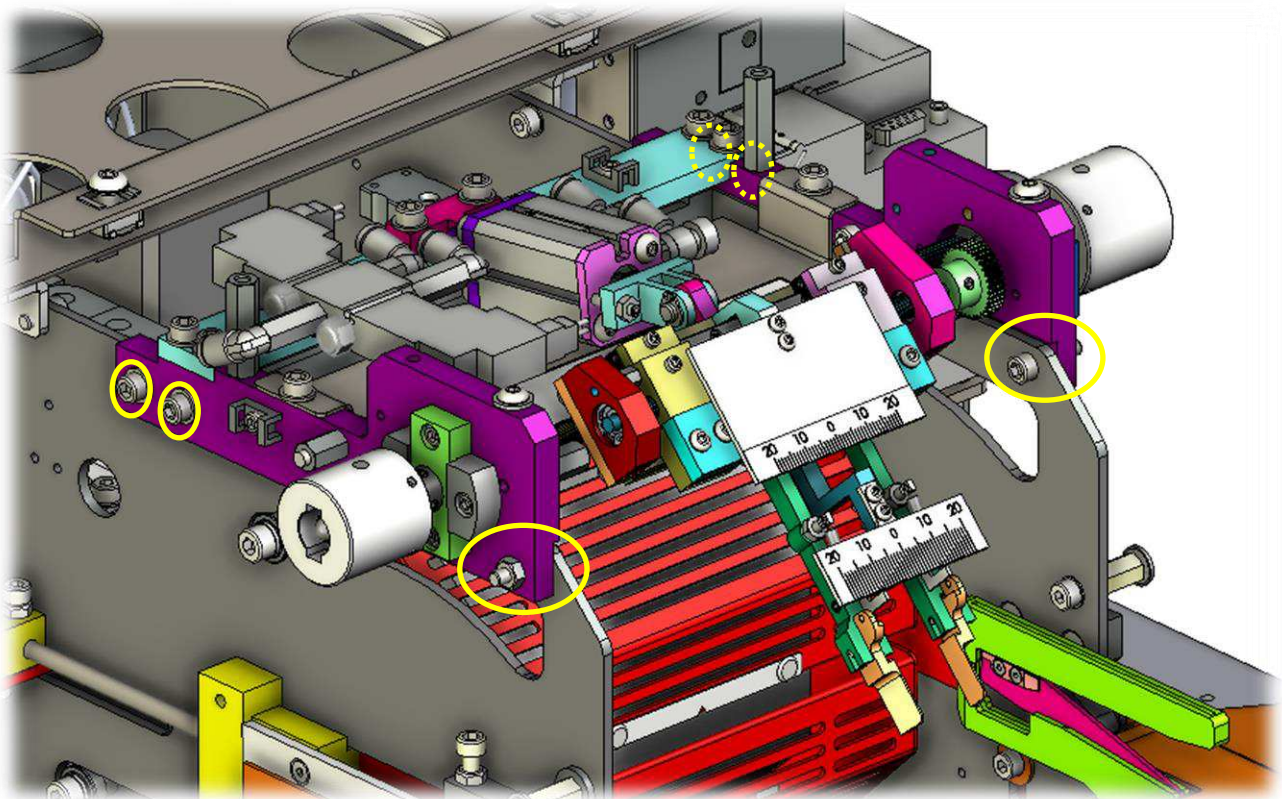


2.5 Install Detection Unit

1. Remove the 4x mounting screw of the highlight bridge. (Don't need to remove the highlight bridge.)



2. Place the Detection Unit onto the machine frame like capture below, then fix the 6x mounting screw.

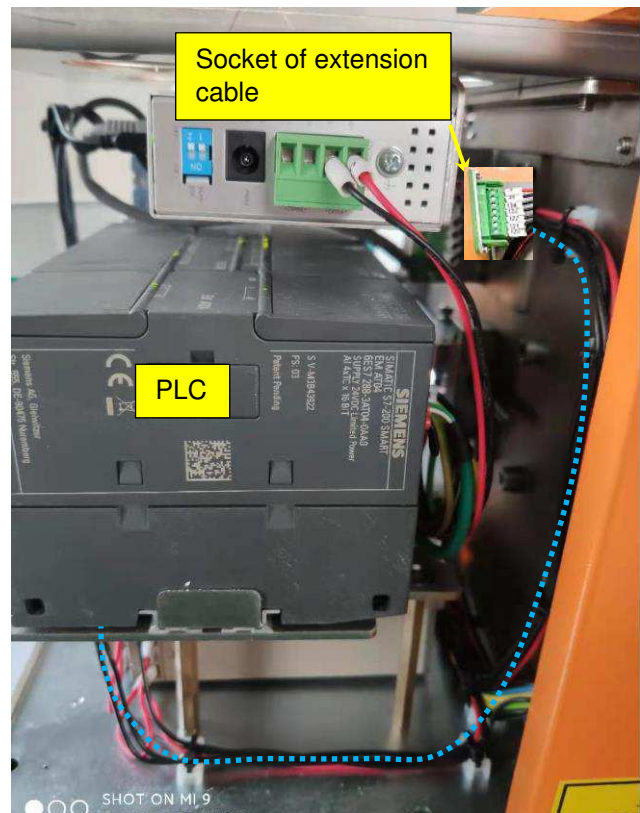
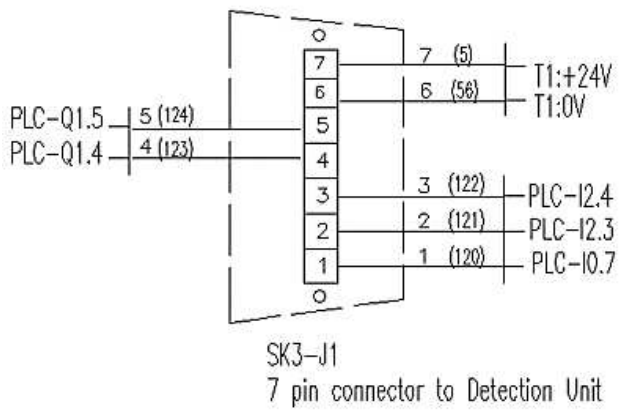


3. Connection from Detection Unit to machine.

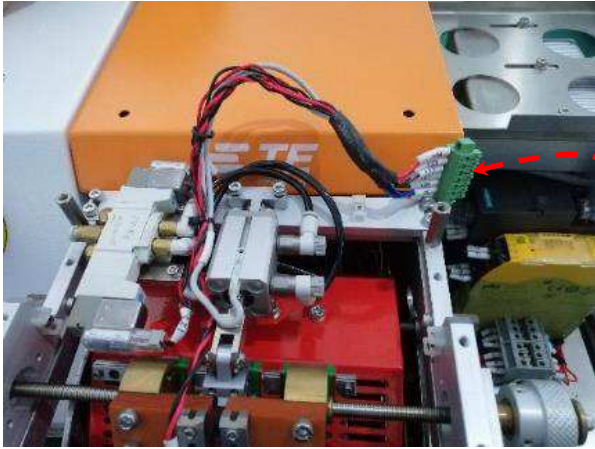
- i. Find the extension cable from package.



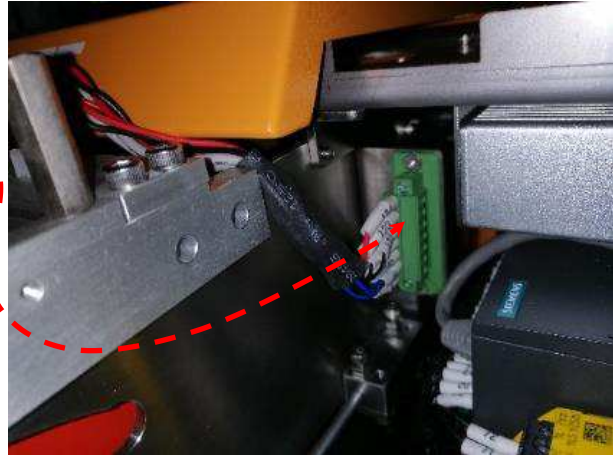
- ii. Connection the terminal end (7 point) to PLC (in machine right cover), according to the schematic below.



- iii. Connect the Socket (extension cable) with Plug (Detection Unit) like below capture, then fix the connector in suitable place by tie-wraps and fix base, and make sure the cable won't affect the movement of machine. Location refer to below capture.



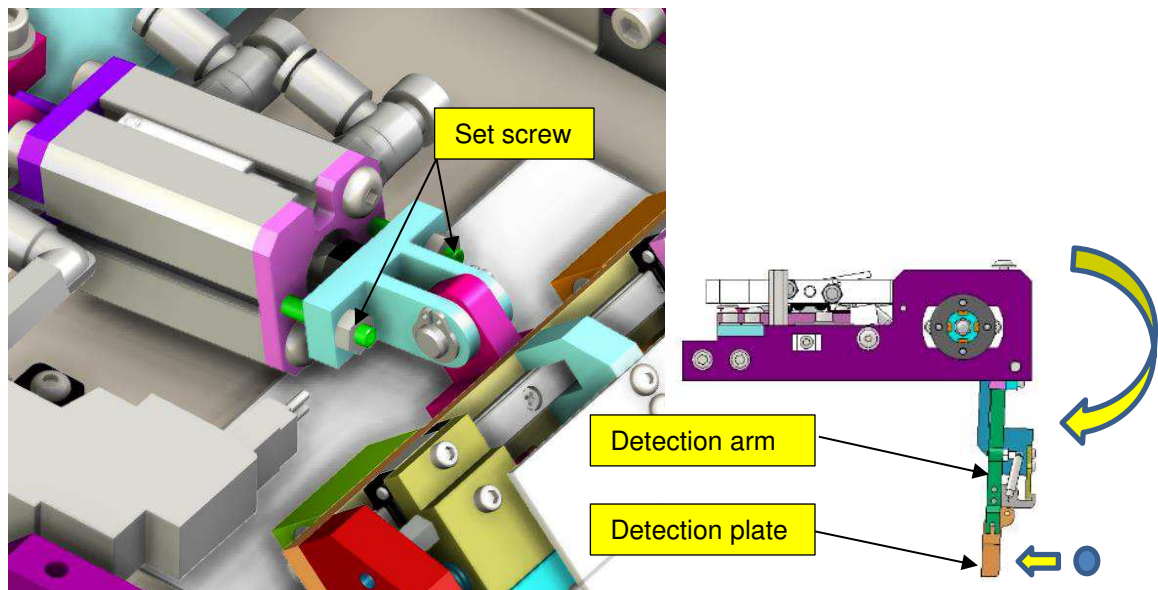
Plug (Detection Unit)



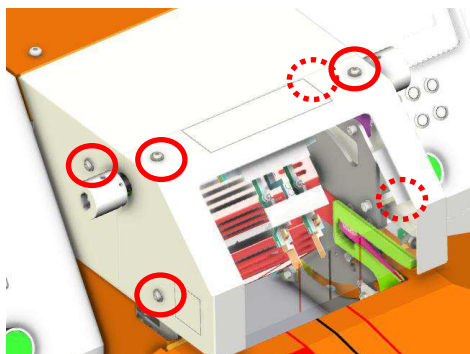
Socket (connection cable)

- 4. Adjust on Detection Unit.

Allow the detection arm fall to vertical, then insert a cable into heating chamber, checking the cable can 100% contact with detection plate successfully. If not, adjust the set screw, to adjust the swing angle of detection arm.

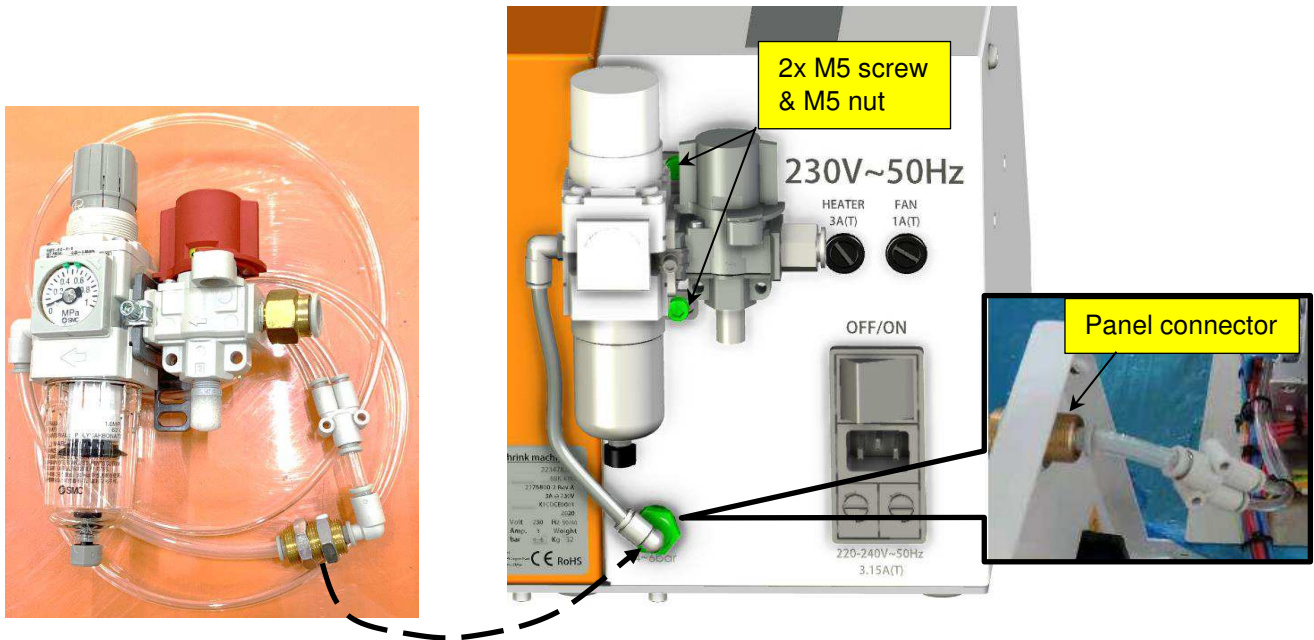


- 5. Install the cover, by the M4 screw with plastic gasket.

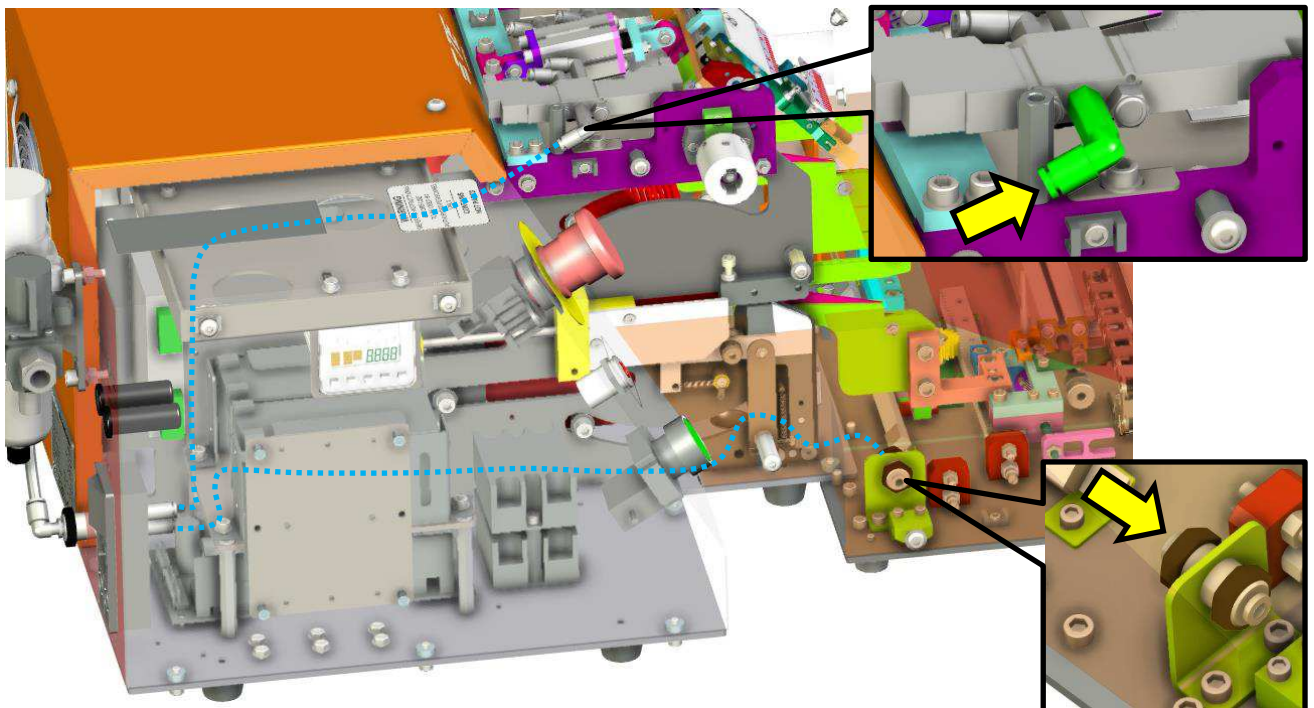


2.6 Install F.R.L & line pipe

1. Assemble the F.R.L onto the rear side of machine left cover, by the 2X M5 screw

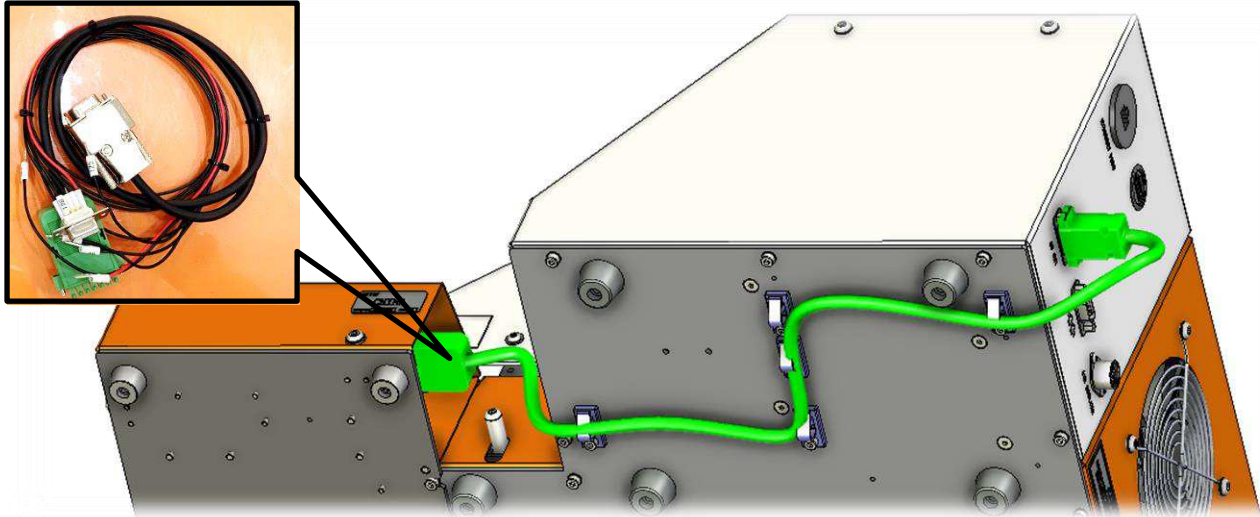


2. Connect the 2X output pipe with Detection Unit & Centering Unit. Fix the pipe in suitable position by tie-wraps. Rotate Disc for cycles, double check the pipe won't affect the movement of machine.



2.7 Connection between machine and Centering Unit

Find the connection cable from Centering Device package, then connect the to the machine. Fix the cable under machine base plate, by the tie-wraps and fix base.



3 Activate Centering Device

3.1 Connect air supply

Connect the pipe (4~6 bar, pipe OD 10mm), then switch ON air supply.

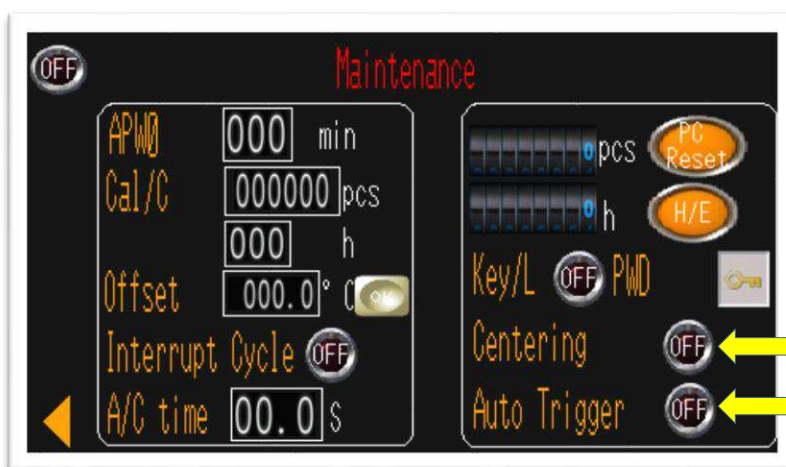


3.2 Setting to machine

1. Make sure the software of the machine is the latest. If not, click on below link to download the latest program and update machine software (HMI & PLC).

<https://teams.connect.te.com/sites/ATSHEngineering/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2Fsites%2FATSHEngineering%2FShared%20Documents%2FHeat%20Shrink%20Machine%2FRBK%2DX1%2FSoftware&FolderCTID=0x012000704C4B3B7B15974BAF7DB5CC9CC19E27&View=%7BDD51CAD2%2D0A9E%2D42FB%2DA5C3%2D52FFF25875BF%7D>

2. Power ON machine and login on with authority B (password: 12345), access to Maintenance page. Switch ON the below 2 icon.



- Centering** Centering Device switch. When it was showing ON, Centering Device is activated.
- Auto Trigger** Turn on this icon while Centering Device activated, cycle can be run automatically without press on both start button. DON'T use this function for production, since a cycle start without hands on start button, operator could have chance to put hands into machine, that may cause crushing.

3. Turn back to Main interface. Machine is ready for operation. Refer to document 409-35021, section 4.2.8 about how to operate the RBK-X1 with auto Centering function.