



RENTAFILL

FILLING EQUIPMENT HIRE

OPERATING INSTRUCTIONS



MODEL: RTS-15 Ultrasonic Tube sealer

Dec 2021

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2 Introduction to RTS-15 Ultrasonic tube sealer.

The RTS-15 Tube sealer utilises Ultra Sonic Technology to provide a highly professional sealed and trimmed tube.

This Heavy-Duty Tube Sealing Machine is suitable for toothpaste, cosmetics, medicines, food, industrial supplies etc.

It uses the energy produced by high-speed vibration (ultrasonic) friction to create heat and melt the plastic tube rapidly, welding it together under pneumatic mechanical pressure, forming the sealing patterns of the tool head. This machine also has the capability to imprint date and batch codes in the seal (if installed).

WARNING!



RTS-15 TUBE SEALER HAS PNEUMATIC COMPONENTS IN PARTICULAR THE MOULD AND TRIMMER CYLINDERS. PLEASE TAKE PARTICULAR NOTICE OF THE CRUSH WARNING LABELS AND ENSURE ALL OPERATORS HAVE FULLY READ THE INSTRUCTION MANUAL BEFORE USE.

MISUSE OF THE MACHINE OR FAILURE TO COMPLY WITH THE INSTRUCTIONS WITHIN COULD RESULT IN SERIOUS INJURY.

NEVER OPERATE THE MACHINE WITHOUT GUARDS IN PLACE.

ALWAYS ENSURE THE MACHINE IS TURNED OFF WHEN MAKING ADJUSTMENTS TO THE MOULDS AND/OR TRIMMER.

NEVER OPEN THE SIDE COVERS OF THE MACHINE WHILST CONNECTED TO MAINS POWER.

IT IS ALSO RECOMMENDED THAT THE COMPANY OR PERSONS IN POSSESSION OF THE EQUIPMENT DO THEIR OWN RISK ASSESSMENT AND INSTALL ANY MEASURES OF GUARDING THAT THEY DEEM NECESSARY FOR THE SAFETY OF THE OPERATORS AND THE ENVIRONMENT TO WHICH THE EQUIPMENT WILL BE USED.

3 SETUP PROCEDURE

3.1 CONNECTION OF COMPRESSED AIR SUPPLY

RTS-15 Tube sealer requires 80psi (0.5 mpa) continuous air pressure.

In the case where the machine has been delivered to you in a crate, you may be required to fix the air regulator to the outside of the machine and push in the quick connect connection to the R/H side of the regulator. This is due to the risk of damage in transit.

Connect compressed air supply line, via an inlet connection fitting on the Air Pressure Regulator/Filter Unit located on the left rear corner of the machine.

The machine's pneumatic components DO NOT REQUIRE LUBRICATION, therefore the compressed air supply to the machine should NOT have an oil lubricator in the line.

Your machine should have come pre-set to approx. 80psi on the regulator (0.5 mpa). If not please ensure to adjust to suit.

3.2 CONNECTION OF 10AMP POWER SUPPLY.

Before connecting power please ensure switch ON/OFF on the front of the machine is in the off position.

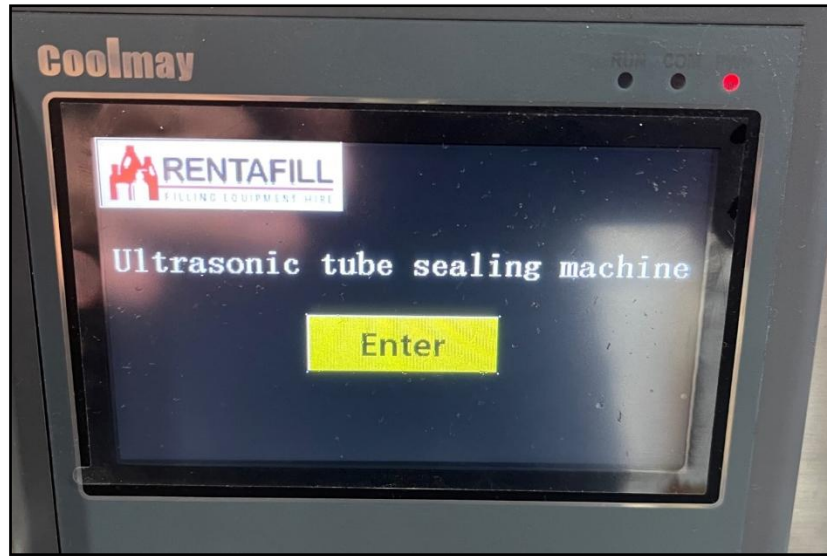


3.3 INITIAL STARTUP

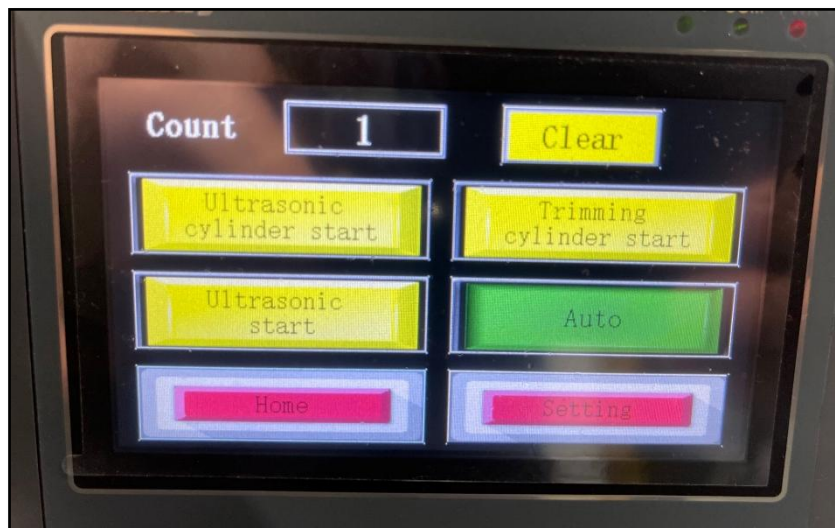
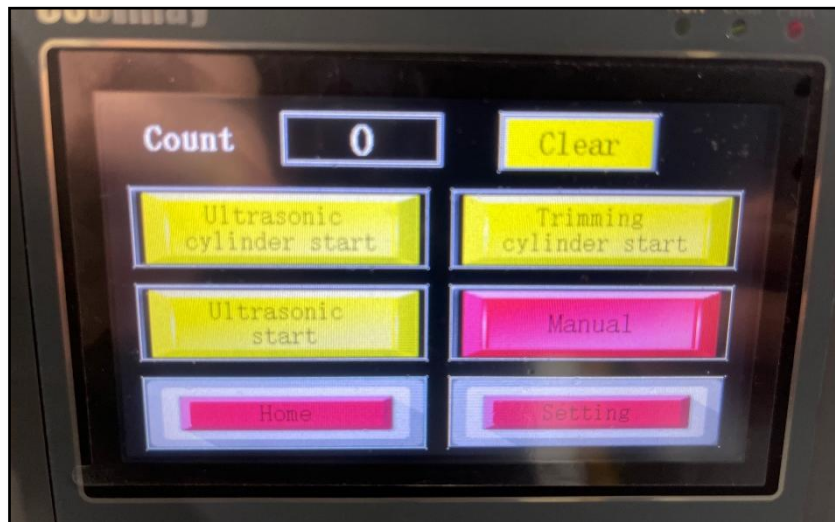
Once you have the air and 10-amp power connected. Proceed to ensure the mushroom Emergency Stop is not depressed and switch the ON/OFF to the ON position.

PLEASE NOTE: If you send RENTAFILL sample tubes before HIRE or PURCHASE of the RTS-15 Tube Sealer, the machine would have been factory set to suit your given tubes. Please ensure to not make further adjustments before first testing with the current settings.

PLC Screen will power up and give you an option for English or Chinese. Select the preferred language.

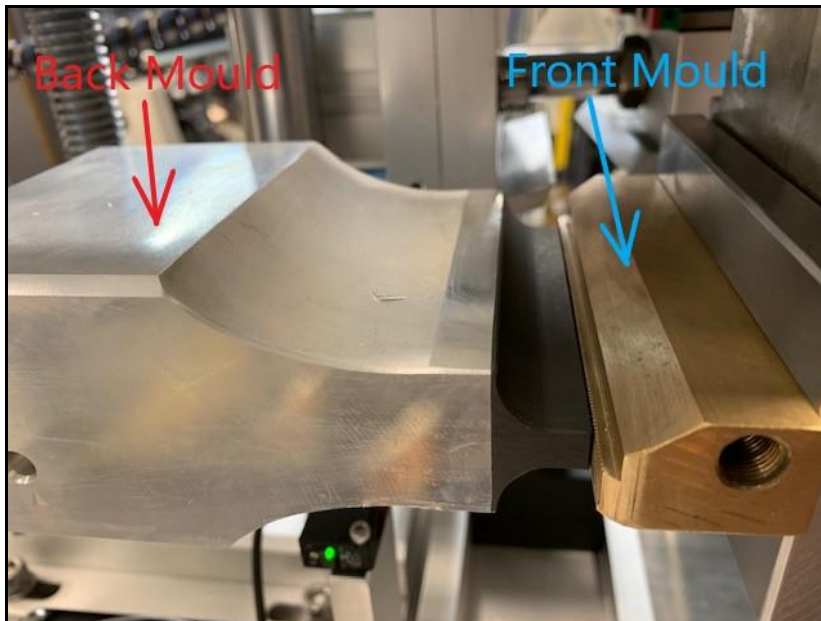


3.4 MAIN PLC FEATURES



ULTRASONIC CYLINDER START

In **"MANUAL"** mode once pressed will activate the pneumatics on the ultrasonic head which will bring the 2 moulds together (FRONT & BACK moulds). In **"AUTO"** mode this button is not active.

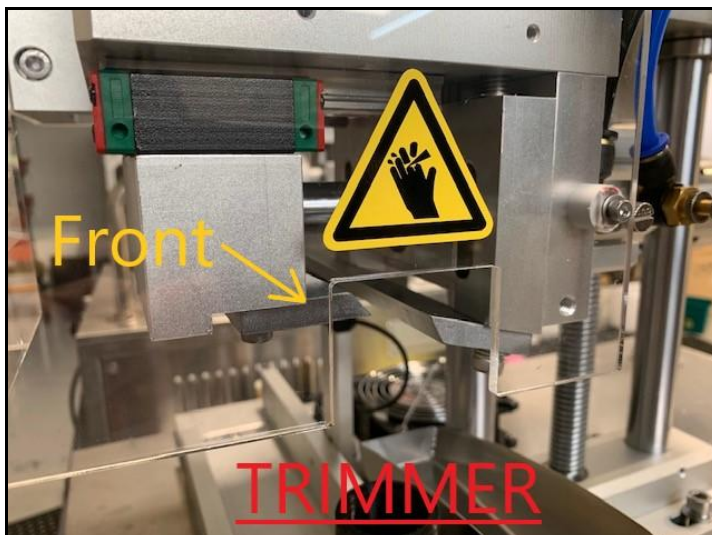


3.4.1 ULTRASONIC START

In **"MANUAL"** mode once pressed will activate the Ultrasonics, you will hear a slight high-pitched vibration of the ultrasonics working. In **"AUTO"** mode this button is not active.

3.4.2 TRIMMING CYLINDER START

In **"MANUAL"** mode once pressed will activate the trimmer/cutter, you will see the front cutter move in on first press of the button, out when you press again. In **"AUTO"** mode this button is not active.



3.4.3 COUNT

The count is the number of tubes you have sealed and can be cleared to reset the counter. This is so you can track the number of tubes sealed in a given batch. Simply press **"CLEAR"** to

reset back to “0”.

3.4.4 TIME SETTINGS

Pressing “Time settings” will take you to a new window.

Time settings control the time of each action through the welding process whilst in “AUTO” mode. Time delays are not active in Manual mode.



3.4.4.1 Delay time

Delay time is the time taken from when the sensors are activated (in AUTO mode) to when the Ultrasonic cylinder is activated.

3.4.4.2 Welding Time

Weld time is the amount of actual time the Ultrasonics are active for. As per above picture 0.80 = 0.8 of a second. Increase or decrease the weld time to suit the tube you are sealing.

Weld time is a critical adjustment and the most important to get right. Too much weld time will melt holes in your tubes and too little will result in the tubes not correctly sealing.

3.4.4.3 Hold Time

Hold time is the time the Ultrasonic cylinder is active after the weld time has completed. This is also best understood as the time the moulds are holding the melted plastic to create the finished moulded pattern.

Please note: *It is advisable to set the hold time greater than weld time. Setting the hold time less may cause the moulds to pull apart the seal on the release of the Ultrasonic cylinders.*

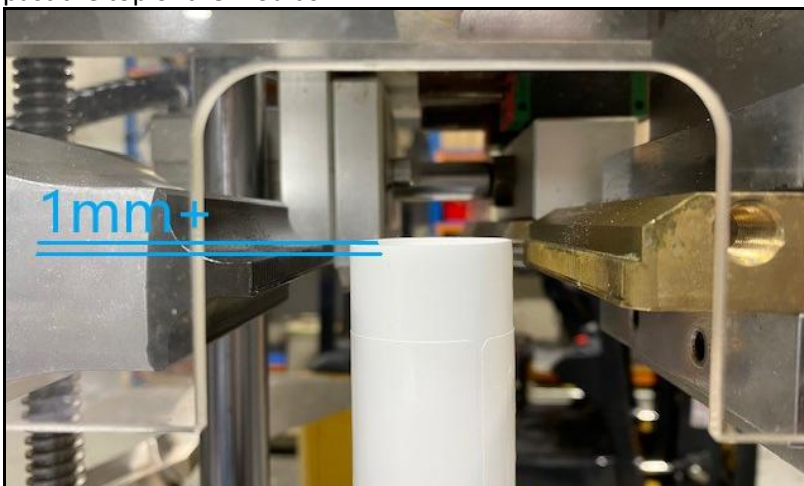
4 ADJUSTING THE HEIGHT

Height adjustment is done by unlocking the large locking handles on the R/H side of the machine.



Once unlocked: wind the large handle wheel on top of the machine left or right to adjust the height of the welding mould and trimmer to suit the desired height.

For best results, it is recommended to adjust the height so there is a minimum of 1mm of tube past the top of the moulds.



Once you have set the desired height, tighten the locking handles.

5 CHECKING AND ADJUSTING THE MOULD GAP

Adjusting the mould gap is critical to getting the correct finish and seal on your tubes.

Mould gap is the gap between both moulds when the Ultrasonic cylinders are activated i.e. moulds are together and the air is on.



WARNING: *ensure moulds never touch. Operating the machine with incorrect adjustment will result in damage to the moulds. If damaged, moulds will need to be replaced.*

Correct adjustment is to have “no more” than the thickness of one side of the tube wall gap. “Single thickness of the tube”

Turn machine on and activate the Ultrasonic start in “Manual” mode. This will bring the moulds together.

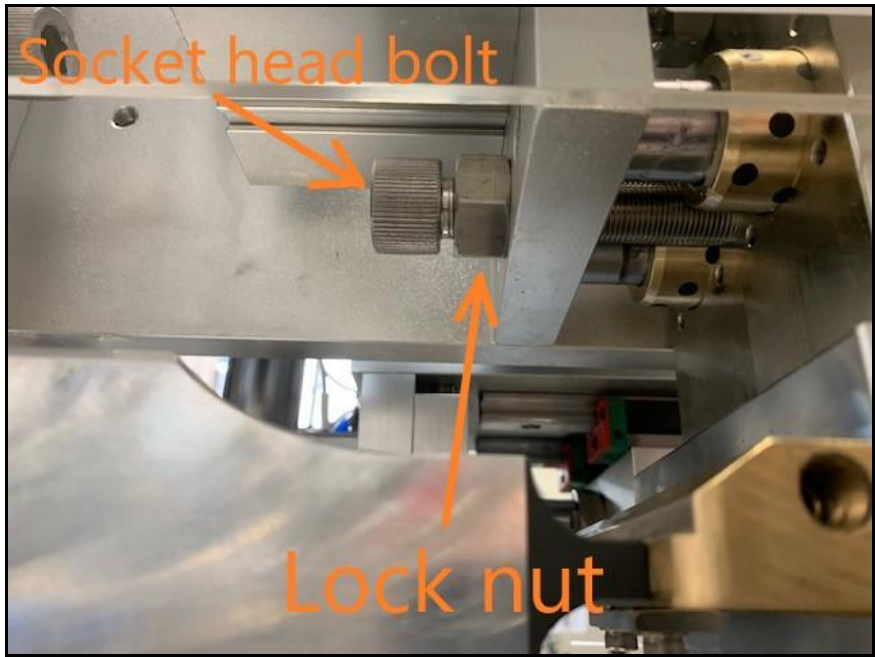


Test by cutting the end of a tube and seeing if you can place the flattened tube between the moulds. A correct adjustment will show to have some drag on the tube when sliding between the moulds.

If you need to make adjustments, “turn the machine off” loosen the front locking nut and wind the socket head screw in or out by very small amounts. Tighten the locknut and re-start the machine and test the gap. (In “MANUAL” mode)

You may need to continue these steps until you get the correct adjustment.

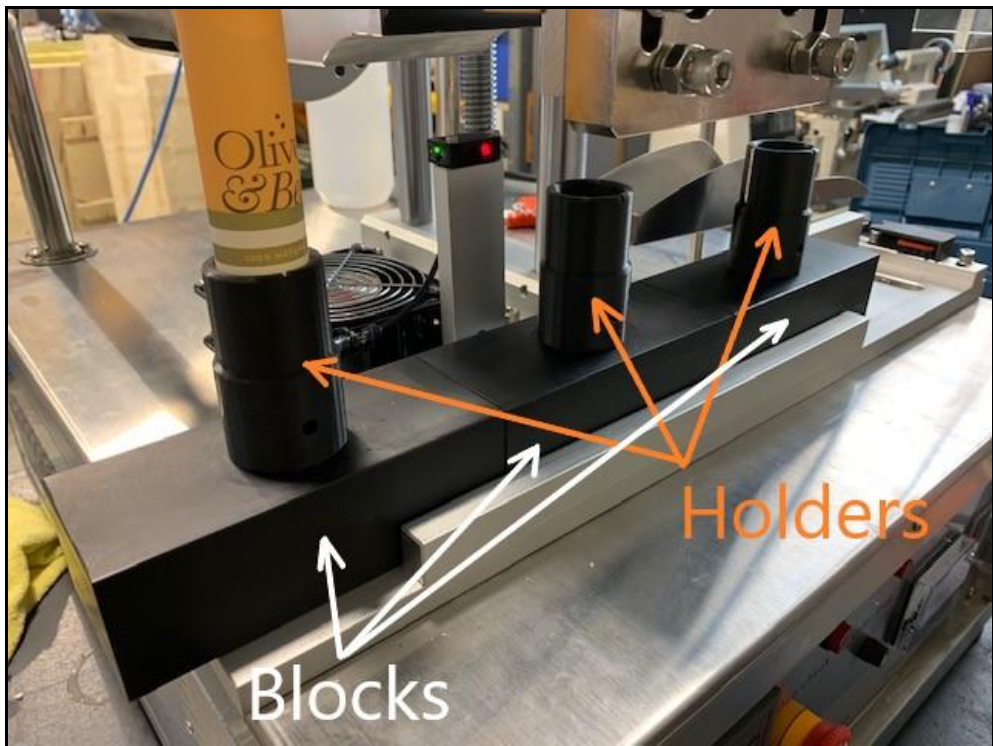
Adjusting the machine in the ON position is not recommended as could result in injury to the user.



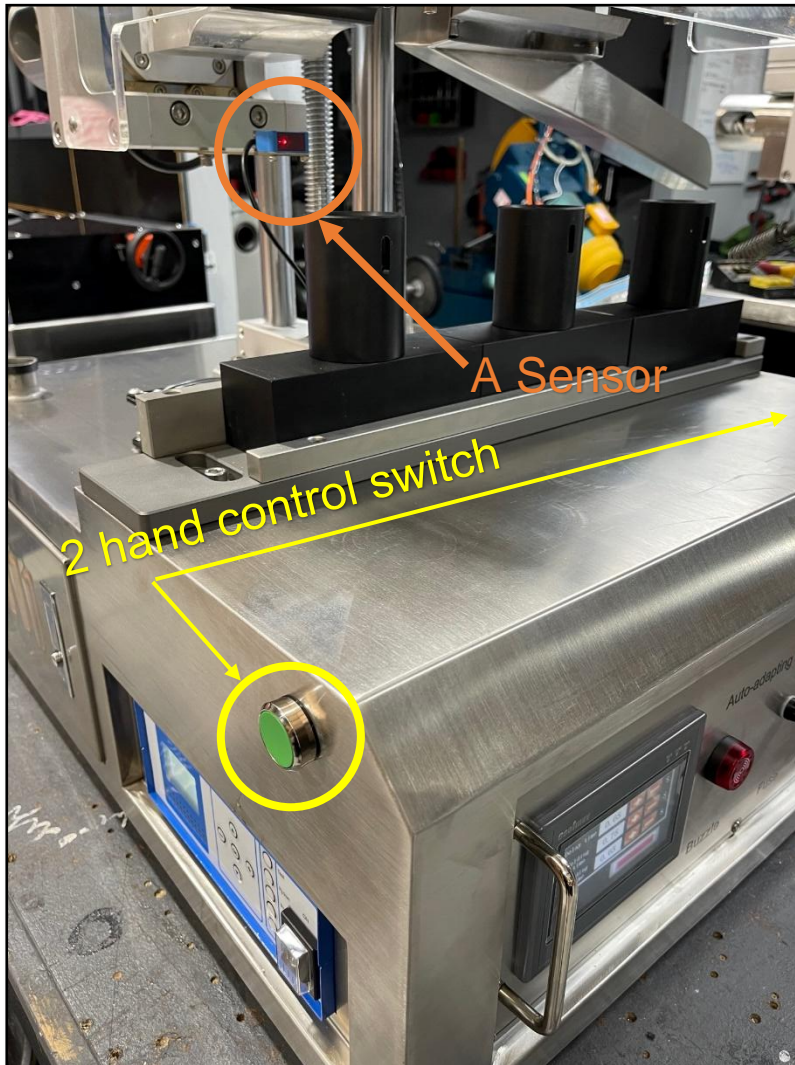
6 UNDERSTANDING THE FEED

The feed is what we call the method/process you need to use to push the tubes (holders) thru the machine.

Feed comprises of 3x blocks and 3x holders.



Feed works by activating the 2 sensors (sensor A & 2x hand control switches) simultaneously. For this to occur you MUST have all 3 blocks together against the right hand stop.



7 ADJUSTING THE A SENSOR

A sensor is required to ensure there is a tube in the holder before activating the sealing process. This sensor should be adjusted so the red sensor light is hitting your tube just above the holder. Position all blocks in place and against the far right stop, adjust A sensor to suit.

PLEASE ENSURE MACHINE IS IN “MANUAL” OPERATION BEFORE ADJUSTING.

In some models, the sensor is positioned above the moulds. This will be due to the tube size being too short to enable locating under the moulds.

The sensor will show orange and green light if correctly adjusted.

8 2 HAND CONTROL SWITCHES

Newer 2021 & 2022 model RTS-15 tube sealers are fitted with 2 hand control switches to ensure safer operation of the sealer.

To operate the machine – the machine must receive a signal from both control buttons and the A sensor.

10 CHECKING AND ADJUSTING THE WELD TIME

Once you have adjusted the machine to suit the height and thickness of your tube it is time to run a test on the weld time and adjust to suit.

Depending on the diameter of your tube and the thickness of the tube walls will determine the final weld time required.

The best practice is to start your weld time at 0.50 and adjust + or – from that point.



A correct weld will show (as above) a nice clean mould in the tube and sides (outer edges) will show a small amount of curve to it.

Squeeze test will ensure the tube is correctly sealed. It is also recommended you perform the occasional squeeze test whilst sealing tubes.



Over-welding will show as very rounded outer edges, splatter to the top of the tube and/or holes in the bottom seam.

Please note: you may need to adjust weld time to suit ambient temperature conditions. I.e. 5 deg morning start will require a higher weld time to a 20 deg day. You may also require to adjust the weld time down if using the machine for a prolonged period, this is due to the moulds getting hot from use.

Important: Product contamination to the moulds can be caused by product from the filling process touching on the top sealing surface of the tube. When sealed the product splatters over the mould area and contaminates the moulds. If this occurs it will affect the quality of the seal. Turn the machine off and clean mould surfaces with a spirit based product and allow time to dry.

11 BATCH CODE OR DATE STAMP

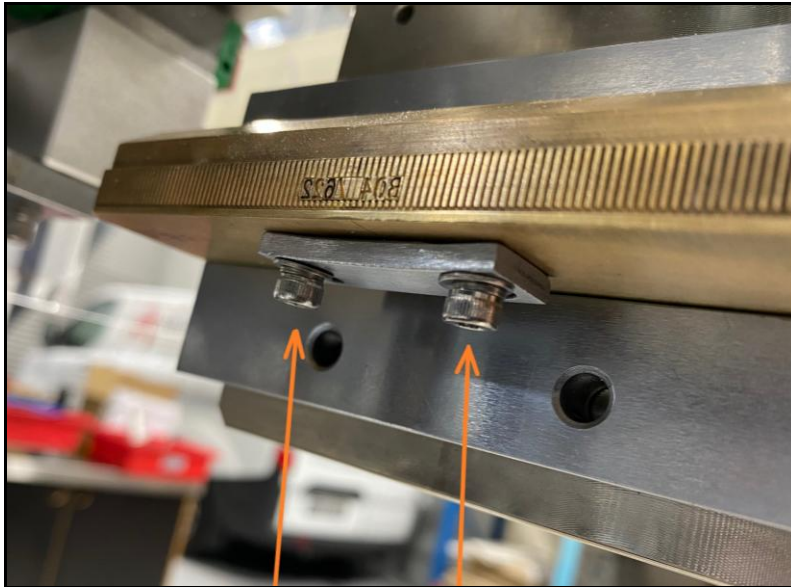
Machines fitted with the 8-digit code mould

Replacing and/or changing the code stamp in the mould can be done whilst the mould is attached to the machine.

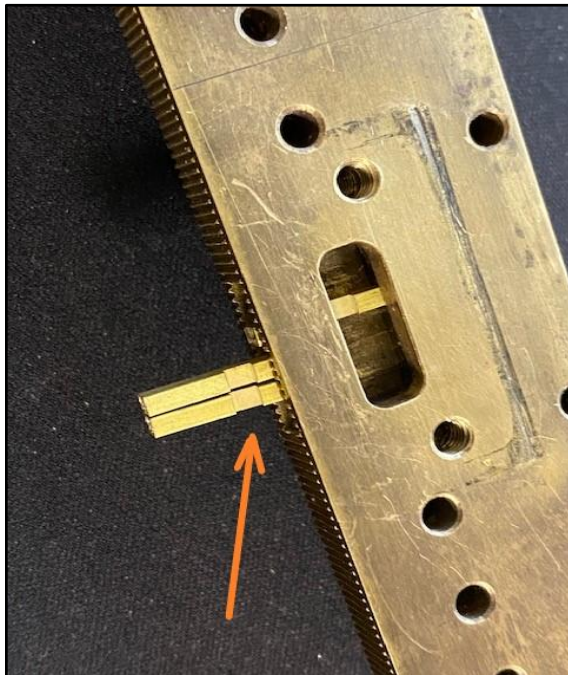


WARNING: Ensure machine is unplugged from the power source and the air is disconnected before proceeding.

Loosen the 2x socket head screws from the underside of the code mould. Remove the silver locking plate that holds the code in place.



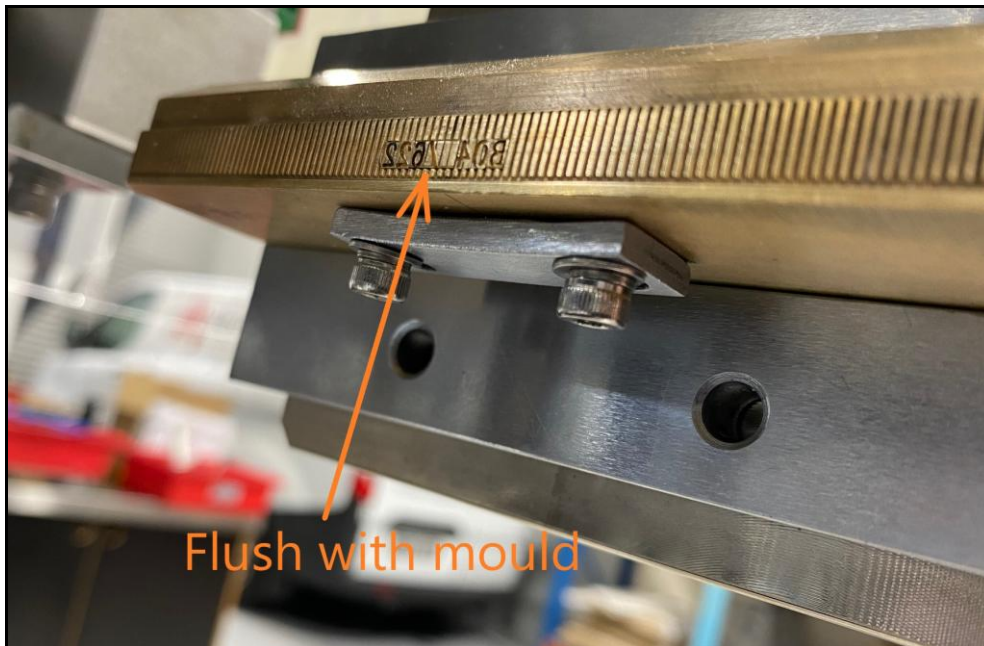
Using a flat blade screwdriver push out the letters/numbers from within the hole where locking plate was removed.



Replace the 8x digits, noting the notch is facing the elongated hole on the underside.

Once you have all 8 digits in place, reinstall the locking plate.

Before tightening the 2x socket head screws, ensure that none of the digits protrudes past the face of the mould. If they stick out past the face of the mould it will create a messy result on the final seal and could also result in the digits touching the back mould and causing damage to the surface of the mould.



12 MAINTENANCE

RTS-15 Maintenance should be performed under visual inspection daily.



WARNING: *Ensure machine is unplugged from the power source and the air is disconnected before proceeding.*

Checking for:

- Water in air regulator.
- Ensure adequate grease on the bearing rods in both the Ultrasonic and the up/down Z adjustment rods.
- Check moulds for excessive wear.
- Check any exposed electrical components for damage.
- Check all Perspex guards are secure and show no signs of damage.
- Check all air fittings and lines for leakage and/or visual damage.
- Check all socket head bolts on the cutter and mould heads are tight.
- Check moulds and cutters are clean and show no sign of product contamination.

13 PROBLEM-SOLVING

- **Will not power up when plugged into mains power**
 - Check mushroom emergency stop (rotate clock ways to release)
 - Check fuse in the front panel
- **Power is on but the machine will not activate in "AUTO" mode**
 - Check all Perspex covers are attached and sensors on Perspex covers are pressed.
 - Check (A) sensor is showing orange when the tube is in place.
 - Check (B) sensor for damage or if it has been knocked and not operational.
 - Ensure all 3x blocks are together before activating the B sensor **Error! Reference source not found.**
- **Ultrasonics make very loud high pitched noise more than normal.**
 - Check the gap between the moulds **Error! Reference source not found.**
 - Check all bolts around the ultrasonics for any loose items.
- **Machine powers up but Ultrasonic moulds will not close.**
 - Check air is connected, and the pressure is above 60psi
- **My tubes will not seal.**
 - Check weld time and adjust to suit
 - Check mould gap and ensure is less than the thickness of one of the walls of your tube.
 - Inspect the surface of both moulds for damage
 - Inspect moulds for product contamination. If contamination exists clean with a spirit based product and allow time for it to dry.
- **Mould pattern on my tubes is messy and not as pictured above.**
 - Inspect the surface of both moulds for damage
 - Check the weld time, increase and/or decrease weld time. Too much weld time and the tube will show as messy, too little will show as a partial print of the mould.
 - Check mould gap and ensure is less than the thickness of one of the walls of your tube.

14 SPECIFICATIONS

RTS-15 ULTRASONIC TUBE SEALING MACHINE.

Model:	RTS-15 HX-003
Make:	RENTAFILL
Origin of manufacture:	China
Power supply:	240V 50Hz
Ultrasonic power:	2000w
Weight:	110kg
Air req:	80psi rec
Dimensions W/D/H:	60 x 78 x 105cm
Product rate (estimate):	10 ~ 15 tubes/min

RTS-15 tube sealer is imported by SMICP PTY LTD T/A Rentafill.

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